

Silergy Catalog









DC/DC
AC/DC
PMIC
Battery
Module

Lighting
Backlighting
Amplifier
Power Switch
ESD
ADDA
Sensor
Motor
Light Sensor
LDO
Audio
Timing
Gauge
BMS
Metering

Q1 2026



SILERGY SELECTION GUIDE

Silergy Corp was founded in 2008 and completed its IPO in 2013. By pursuing technology innovation and global expansion, Silergy has become the performance leader in the analog IC industry with annual growth rate of over 30% in the pasts 10 years.

The main products include: DC/DC, AC/DC, PMIC, LED lighting, BMS, light sensor, motor driver, audio power amplifier, power module, protection switch, Energy measurement, metering and signal chains solutions.

Silergy has the industry-leading process technology to design innovative mixed-signal and analog IC. Our products are widely used in automotive, industrial, consumer, computing and telecom equipment. We have always been committed to providing our customers with better performance and higher reliability analog IC.

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DC/DC

Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	V_{REF} Accuracy	Quiescent Current (μA)	MOSFET (Ron H/L) (mΩ)	SST	Temp Range	PG	Output Discharge	Feature/ Special Function	Package
SQ28072ART	2.5	5.5	2	1.5	0.6	±1.5%	21	45/35	600μs Internal	-40°C to 125°C		√	PFM, Hic-cup SCP	SOT563
SQ28053QWC	2.75	5.5	3	1.5	0.6	±2.0%		85/50	External	-40°C to 125°C		√	CCM, Hic-cup SCP	QFN1.5×1.5-7
SQ28703SYD	2.5	6	3	2.4	0.8	±1.5%	23	31/23	0.8ms Internal	-40°C to 125°C	√	√	Hic-cup SCP	DFN2×2-7
SQ28003DQD	2.5	5.5	3	2.2	0.6	±1.0%	21	38/30	2ms Internal	-40°C to 125°C	√	√	PFM, Hic-cup SCP	DFN1.5×1.5-6
SQ28903BAT	2.8	6	3	2.2	0.6	±1.0%	38	65/25	0.5ms Internal	-40°C to 125°C	√	√	PWM or PFM Hic-cup SCP	SOT583
SQ28004DQD	2.5	5.5	4	2.2	0.6	±1.0%	21	38/30	2ms Internal	-40°C to 125°C	√	√	PFM, Hic-cup SCP	DFN1.5×1.5-6
SQ28704SYD	2.5	6	4	2.4	0.6	±1.5%	23	25/17	0.8ms Internal	-40°C to 125°C	√	√	Hic-cup SCP	DFN2×2-7
SQ28706SYD	2.5	6	6	1	0.6	±1.5%	23	22/12	0.8ms Internal	-40°C to 125°C	√	√	Hic-cup SCP	DFN2×2-7
SQ28906QDC	2.95	6	6	0.2~2	0.6	±1.0%		12/12	External	-40°C to 125°C	√		CCM, External COMP, Hic-cup SCP	QFN3×3-16
SQ28956WEQ	0.8	6	6	0.6/1	0.4	±1.0%		18/10	1.6ms Internal	-40°C to 125°C	√	√	PFM or FCCM Hic-cup SCP	QFN3.5×4-20

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8018ADFC	2.5	5.5	0.45	/	0.6	±2%	400/200	1.5	DFN2×2-8	Power Good Indicator, Ultra Low Quiescent Current
SY8851DFC	2.2	5.5	0.5	1	1.2	±1.5%	280/120	0.4	DFN2×2-8	Power Good Indicator, Output Auto Discharge
SY8078BDTC	1.85	5.5	0.6	3	0.4	±2%	350/250	40	DFN1.45×1-6	
SY8088IAAC	2.5	5.5	1	1.5	0.6	±1.5%	260/170	50	SOT23-5	Output Auto Discharge
SY8088A1AAC	2.5	5.5	1	1.5	0.6	±1.5%	260/160	50	SOT23-5	
SY8080AAC	2.5	5.5	1	3	0.6	±2%	270/160	40	SOT23-5	
SY8077AAC	2.5	6.5	1	1.5	0.6	±2%	260/170	40	SOT23-5	
SY80091ART	2.5	5.5	1	1.5	0.6	±1.5%	170/100	55	SOT563	Power Good Indicator, Auto recovery Protection, Output Auto Discharge
SY8891ARC	2.5	5.5	1	1.5	0.6	±1.5%	170/100	55	SOT563	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY8891EARC	2.5	5.5	1	1.5	0.6	±1.5%	170/100	/	SOT563	Power Good Indicator, FCCM, Hic-cup SCP, Auto Discharge
SY8061IDEC	2.5	5.5	1	1.5	0.6	±1.5%	220/130	50	DFN2×2-6	Auto Discharge
SY8081DQC	2.5	5.5	1	2.5	0.6	±2%	230/150	40	DFN1.5×1.5-6	Output Auto Discharge

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Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8871BDFC	2.4	6	1	1	1.2	±1.5%	300/130	400nA@STB=0 15μA @STB=1	DFN2×2-8	Power Good Indicator, ultra low I_Q, Hic-cup SCP, Auto Discharge
SY8841ARC	2.6	5.5	1.5	2		±1%	180/100	55	SOT563	Output Auto Discharge
SY8842QWC	2.6	5.5	1.5	2	0.6	±1%	180/100	55	QFN1.5×1.5-7	Power Good Indicator, Auto Discharge
SY8089A1AAC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-5	Output Auto Discharge
SY8089IAAC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-5	Latch-off Protection
SY8089E1AAC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	/	SOT23-5	Hic-cup SCP, Auto Discharge
SY8002A1ABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator, Hic-cup Protection
SY8002IABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator, Latch-off Protection
SY8002E1ABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	/	SOT23-6	Power Good Indicator, Hic-cup SCP, Output Auto Discharge
SY8032IABC	2.7	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator
SY8892ARC	2.5	5.5	2	1.5	0.6	±1.5%	125/75	55	SOT563	Power Good Indicator, Hic-cup SCP, Auto-discharge
NEW SY8892BARC	2.5	5.5	2	1.5	0.6	±1.5%	125/75	55	SOT563	100% Dropout Operation, Hic-cup SCP, Auto discharge
SY8892EARC	2.5	5.5	2	1.5	0.6	±1.5%	125/75	/	SOT563	Power Good Indicator, Hic-cup SCP, Forced PWM, Auto Discharge
SY80072ART	2.5	5.5	2	1.5	0.6	±1.5% (-40~125℃)	45/35	21	SOT563	PFM Mode for Light Load Efficiency, Auto Discharge, ultra low I_Q
SY80075ART	2.5	5.5	2	1.5	0.6	±1%	45/35	21	SOT563	100% Dropout Operation, Power Good Indicator, Output Auto-Discharge Function
SY80002DQD	2.5	5.5	2	2.2	0.6	±1%	35/25	23	DFN1.5×1.5-6	100% Dropout Operation, Power Good Indicator, Output Auto Discharge Function
NEW SY80082AAT	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-5	100% Dropout Operation, Hic-cup SCP, Auto discharge
SY80073ART	2.5	5.5	3	1.5	0.6	±1.5% (-40~125℃)	45/35	21	SOT563	PFM Mode for Light Load Efficiency, Auto Discharge, ultra low I_Q
SY80083ABT	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	W/I PG, PFM, 100% Dropout Operation
SY80063ABC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	Power Good Indicator, Latch off Protection, Auto Discharge
SY80063AABC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY80063EABC	2.5	5.5	3	1	0.6	±1.5%	85/60	/	SOT23-6	Power Good Indicator, Hic-cup SCP, Forced PWM, Auto Discharge

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Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY80033DFD	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Auto-Recovery Protection, Output Auto Discharge
SY80033LDFD	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Latch-off Protection, Output Auto Discharge
SY8883DFC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Latch off Protection, Auto Discharge
SY8883ADFC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY8883EDFC	2.5	5.5	3	1	0.6	±1.5%	85/60	/	DFN2×2-8	Power Good Indicator, Hic-cup SCP, Forced PWM, Auto Discharge
SY8003CDFC	2.7	5.5	3	3	0.6	±2%	100/80	55	DFN2×2-8	Power Good Indicator
SY8893ARC	2.5	5.5	3	1.2	0.6	±1.5%	100/60	50	SOT563	Power Good Indicator, Output Auto Discharge
SY8893LARC	2.5	5.5	3	1.2	0.6	±1.5%	100/60	50	SOT563	Power Good Indicator, Latch-off Protection, Output Auto Discharge
SY8893EARC	2.5	5.5	3	1.2	0.6	±1.5%	100/60	/	SOT563	Power Good Indicator, Hic-cup SCP, Forced PWM, Output Auto Discharge
SY8053DBC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN3×3-10	Power Good Indicator, Latch off Protection, Auto Discharge
SY80083AAT	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-5	Auto-Recovery Protection, Output Auto Discharge, MSL1
SY8843QWC	2.7	5.5	3	1.5	0.6	±1%	85/50	65	QFN1.5×1.5-7	Power Good Indicator, Auto Discharge
SY8843LQWC	2.7	5.5	3	1.5	0.6	±1%	85/50	65	QFN1.5×1.5-7	Power Good Indicator, Auto Discharge
SY8859QWC	2.7	5.5	3	1	0.6	±1%	85/50	55	QFN1.5×1.5-7	Power Good Indicator, Light Load Mode Selection
SY8859LQWC	2.7	5.5	3	1	0.6	±1%	85/50	55	QFN1.5×1.5-7	Power Good Indicator, Light Load Mode Selection
SY80053DQC	2.4	5.5	3	2.2	0.6	±1%	35/25	16	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge, PFM Mode
SY80053BDQD	2.5	5.5	3	2.2	0.45	±1%	35/25	16	DFN1.5×1.5-6	Power Good Indicator, Auto-Recovery Protection, Output Auto-Discharge, Support 0.5V Output for LPDDR5
SY80003DQD	2.5	5.5	3	2.2	0.6	±1%	38/30	21	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge
SY80003EDQD	2.5	5.5	3	2.2	0.6	±1%	38/30	/	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP, Auto-recovery OVP/OTP, Forced CCM, Output Auto Discharge
SY80054DQC	2.4	5.5	4	2.2	0.6	±1%	35/25	16	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge, PFM Mode
SY80004DQD	2.5	5.5	4	2.2	0.6	±1%	38/30	21	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge
SY8884ADFC	2.5	5.5	4	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Hic-cup SCP, Auto Discharge

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Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8824BAIC	2.6	5.5	4	1.8	/	±1%	70/40	80	TSOT23-8	Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV Steps; Default 1.15V Output Voltage
SY8824CAIC	2.6	5.5	4	1.8	/	±1%	70/40	80	TSOT23-8	Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV Steps; Default 1.05V Output Voltage
SY8047QDC	2.5	5.5	4	1.25	0.6	±1.5%	75/55	18	QFN3×3-16	Power Good Indicator
SY8057DQDC	2.5	5.5	4	1	/	±1%	70/40	30	QFN3×3-16	Power Good Indicator, VID control, Latch OVP/SCP/OTP, 4A Continuous, 7A Peak Load Current
SY8057FQDC	2.5	5.5	4	1	/	±1%	70/40	30	QFN3×3-16	Power Good Indicator, VID control, Latch-off OVP/SCP/OTP, 4A Continuous, 7A Peak Load Current
SY8856DFC	2.7	5.5	4	3	0.6	±1.5%	35/15	60	DFN2×2-8	Power Good Indicator
SY80704SYC	2.5	6	4	2.4	0.6	±1.5% (-40~125℃)	25/17	23	DFN2×2-7	Auto Discharge, hic-cup SCP
SY8825QUC	2.5	5.5	5	2	0.6	±1.5%	55/35	18	QFN2×1.5-8	Power Good Indicator
SY80706SYC	2.5	6	6	1	0.6	±1.5% (-40~125℃)	22/12	23	DFN2×2-7	Auto Discharge, hic-cup SCP
SY8036DBC	2.7	5.5	6	1	0.6	±1.5%	50/40	150	DFN3×3-10	Power Good Indicator, EXT SS
SY8816DFC	2.75	6	6	1.2	0.6	±1.5%	35/15	60	DFN2×2-8	Power Good Indicator, OCP/UVLO/OTP Protections
SY8876DFC	2.7	6.5	6	1.2	0.6	±1.5%	38/15	60	DFN2×2-8	Power Good Indicator, OCP/UVLO/OTP
SY8827KPKC	2.5	5.5	6	2.4		±1.5%	28/17	65	CSP1.56×1.96-20	I^2C Programmable V_{OUT}: 0.7125V~ 1.5V in 12.5mV steps, ADDR: 1000001x
SY8810QQC	2.7	5.5	12	1.5		±1%	12/6	95	QFN3×3-12	Programmable Output Voltage: 0.6V to 1.5V in 11mV steps
SY8030LDEC*	2.5	5.5	0.6	2.25	0.6	±1.5%	300/200	50	DFN2×2-6	
SY8088AAC*	2.5	5.5	1	1.5	0.6	±2%	260/170	40	SOT23-5	
SY8088LACC*	2.5	5.5	1	1.5	0.6	±2%	260/170	40	TSOT23-5	
SY8010DEC*	2.5	5.5	1	1.5	0.6	±1.5%	200/150	50	DFN2×2-6	
SY8011ADQC*	2.5	5.5	1	1.5	0.6	±2%	230/150	40	DFN1.5×1.5-6	
SY8061ADEC*	2.5	5.5	1	1.5	0.6	±2%	260/170	60	DFN2×2-6	Auto Discharge
SY8065LABC*	2.5	5.5	1	1.5	0.6	±2%	250/200	90	SOT23-6	Power Good Indicator
SY8071AAC*	2.5	5.5	1	2	0.6	±2%	260/170	40	SOT23-5	

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Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8011BDQC*	2.5	5.5	1.5	1.5	0.6	±2%	210/130	60	DFN1.5×1.5-6	
SY8030DEC*	2.5	5.5	1.5	2.25	0.6	±1.5%	200/150	50	DFN2×2-6	Ext Mode
SY8002EABC*	2.7	5.5	2	1	0.6	±2%	110/80	/	SOT23-6	Power Good Indicator, Force PWM
SY8003LDFC*	2.7	5.5	2	1	0.6	±2%	120/90	55	DFN2×2-8	Power Good Indicator
SY8079PABC*	2.7	6.5	2	1	0.6	±2%	125/95	55	SOT23-6	Power Good Indicator, Non-latch off OVP
SY8079AAC*	2.7	6.5	2	1	0.6	±2%	125/95	55	SOT23-5	3A Peak Load Current
SY8089AAAC*	2.7	5.5	2	1	0.6	±2%	110/80	55	SOT23-5	Non Latch off Protection
SY8089AAC*	2.7	5.5	2	1	0.6	±2%	110/80	55	SOT23-5	Latch off Protection
SY8032ABC*	2.7	5.5	2.5	1	0.6	±2%	100/80	80	SOT23-6	Power Good Indicator
SY8032EABC*	2.7	5.5	2.5	1	0.6	±2%	100/80	/	SOT23-6	Power Good Indicator, Force CCM
SY8003DFC*	2.7	5.5	3	1	0.6	±2%	110/80	55	DFN2×2-8	Power Good Indicator, Latch SCP/OVP
SY8003EDFC*	2.7	5.5	3	1	0.6	±2%	110/80	-	DFN2×2-8	Power Good Indicator, Force CCM
SY8003FDFC*	2.7	5.5	3	1	0.6	±1.5%	110/80	/	DFN2×2-8	Power Good Indicator
SY8003GDFC*	2.7	5.5	3	1	0.6	±1.5%	110/80	55	DFN2×2-8	Power Good Indicator, Latch SCP/OVP
SY8043AQDC*	2.7	5.5	3	1.25	0.6	±2%	75/55	18	DFN3×3-16	Power Good Indicator
SY8047LQDC*	2.5	5.5	3	1.25	0.6	±2%	75/55	18	QFN3×3-16	Power Good Indicator
SY8823QUC*	2.5	5.5	3.5	2	0.6	±1.5%	55/35	18	QFN2×1.5-8	Power Good Indicator
SY8057QDC*	2.5	5.5	4	1	/	/	70/40	30	QFN3×3-16	Power Good Indicator, VID control, Latch OVP/SCP/OTP
SY8057BQDC*	2.5	5.5	4	1	/	±1%	70/40	30	QFN3×3-16	Power Good Indicator, VID control, Latch OVP/SCP/OTP, 4A Continuous, 7A Peak Load Current

** Not recommended for new design*

Dual Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8092ADBC	2.5	5.5	1A x2	2	0.6	±2%	220/180	35	DFN3x3-10	Individual EN
SY8831AIC	2.5	5.5	1A x2	1.5	0.6	±2%	260/180	45/55	TSOT23-8	Individual EN
SY8832AIC	2.5	5.5	2A x2	2	0.6	±2%	125/100	35/45	TSOT23-8	Individual EN
SY8024DCC	2.7	5.5	3A x2	1.5	0.6	±2%	105/85	80	DFN3x3-12	Individual EN
SY8821SAC	2.5	5.5	1A/1.5A	2	0.6	±2%	125/100	45	DFN2x1.5-8	Individual EN
SY8821BSAC	2.3	5.5	1Ax2	2	0.6	±2%	125/100	45	DFN2×1.5-8	Individual EN

Back

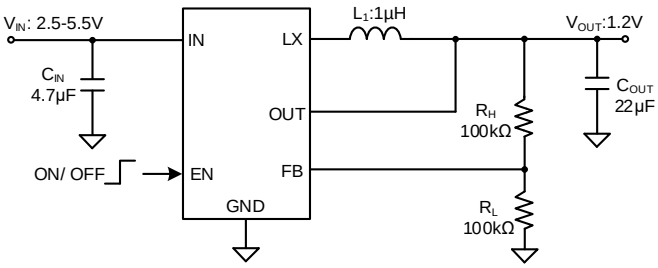
SQ28072ART - 21μA Ultra Low IQ, 1.5MHz, 2A Sync Buck

Features

- Voltage-output, Current-sense Amplifier
- 2.5V to 5.5V Input Voltage Range
- Ultra-Fast Load Transient Speed
- Low RDS(ON) for Internal Switches (Top/Bottom) 45mΩ /35mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- ±1.0% Feedback or Output Voltage Accuracy Over 0°C~ 85°C Temperature Range
- ±1.5% Feedback or Output Voltage Accuracy Over -40°C ~125°C Temperature Range
- PFM Mode for Light Load Efficiency
- 21μA Operating Quiescent Current
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: SOT563

Applications

- Portable Electronics
- Industrial PC
- Smart Phone



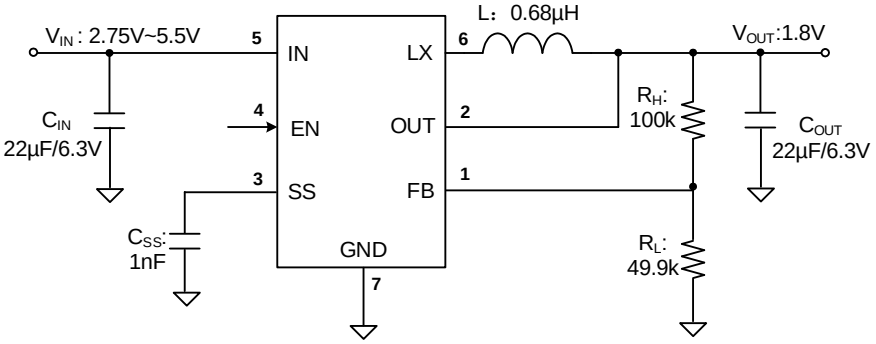
SQ28053QWC - High Efficiency 1.5MHz, 3A Ultra Fast Dynamic Response Sync Buck

Features

- 2.75~5.5V Input Voltage Range
- Ultra Fast Load Transient Speed
- Low RDS(ON) for Internal Switches (Top/Bottom) 85mΩ /50mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- External Soft-start Limits the Inrush Current
- CCM Only Operation
- Reliable Short Circuit Protection: Hic-cup Mode
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5×1.5-7

Applications

- Smart Phone
- LCD TV
- Set Top Box
- Mini-notebook PC



Back

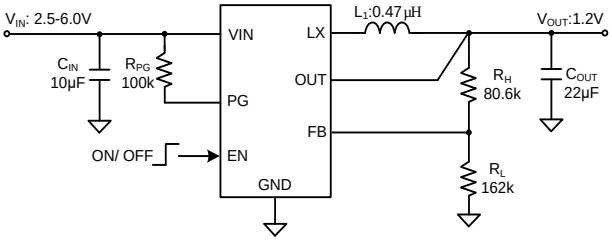
SQ28703SYD/SQ28704SYD/SQ28706SYD

- High Efficiency, 1M/2.4MHz, 3A/4A/6A Sync Buck

Features

- 2.5~6.0V Input Voltage Range
- 23μA Low Quiescent Current(SQ28703/28706)
- Low $R_{DS(ON)}$ for Internal Switches
- Instant PWM Control Achieve Ultra Fast Dynamic Response
- 2.4MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Drop Out Operation
- Output Auto Discharge Function
- Hiccup Mode for Short Circuit Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN2×2-7

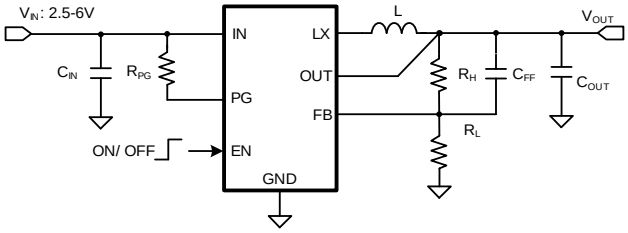
SQ28703/6



Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone

SQ28704



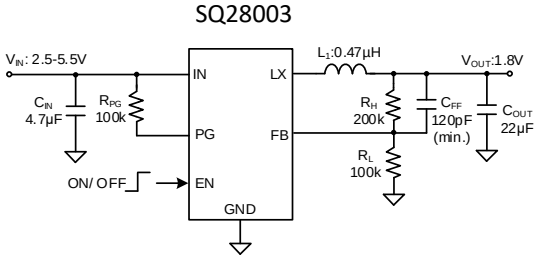
SQ28003/SQ28004DQD

- 21μA Ultra Low IQ, 3A/4A, 2.2MHz Sync Buck

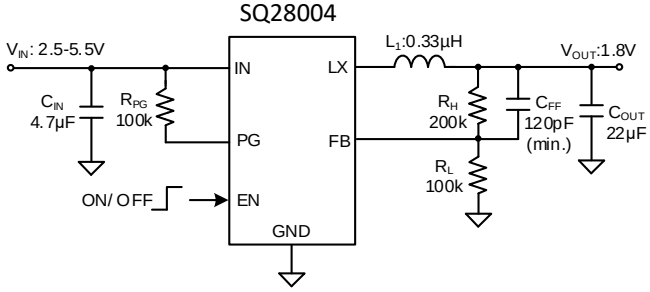
Features

- 2.5V to 5.5V Input Voltage Range
- Ultra-Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Power MOSFETs
- High Switching Frequency 2.2MHz ±1% Feedback or Output Voltage Accuracy (Full Temperature Range)
- PFM Mode for Light Load Efficiency
- 21μA Operating Quiescent Current
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Power Good Indicator
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.5×1.5-6

SQ28003



SQ28004



Applications

- Portable Electronics
- Notebooks and Desktop PCs
- Smart Phones

Back

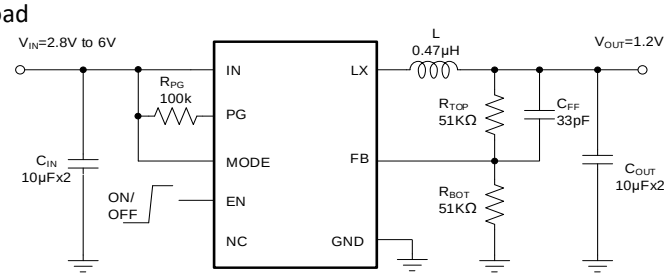
SQ28903BAT - High-Efficiency, 6V, 3A 2.2MHz Synchronous Step-Down Regulator

Features

- 2.8V~6V Input Voltage Range
- Up to 3A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 65mΩ/25mΩ
- Constant Frequency Peak Current Mode Control
- 38μA Quiescent Current (Typ.)
- 2.5μA Shutdown Current (Typ.)
- ±1% 0.6V Reference Over -40°C to +125°C
- 2.2MHz Switching Frequency
- Internal Soft-Start Limits Inrush Current
- Forced PWM or PFM Operation Selectable in Light Load
- 100% Duty Cycle Dropout Operation
- Spread Spectrum Clocking
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Compact SOT583 Package

Applications

- Low-Voltage I/O System Power
- Portable and Mobile Devices
- Battery-Powered Devices



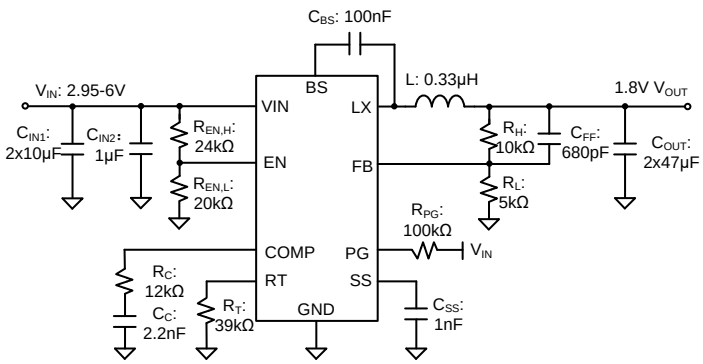
SQ28906QDC - 21μA Ultra Low IQ, 3A, 2.2MHz Sync Buck

Features

- Input Voltage Range: 2.95V to 6V
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 12mΩ/12mΩ
- 0.6V ±1% Voltage Reference Over Temperature Range (T_J: -40°C to 125°C)
- 200kHz to 2MHz Switching Frequency
- CCM Only Operation
- Start-up with Pre-biased Voltage
- Adjustable Input Voltage UVLO by EN
- External Soft-start Limits the Inrush Current
- Power Good Indicator
- Hic-cup Mode Output Short Circuit Protection
- Over Temperature Protection with Auto recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN3×3-16

Applications

- Telecom
- Server



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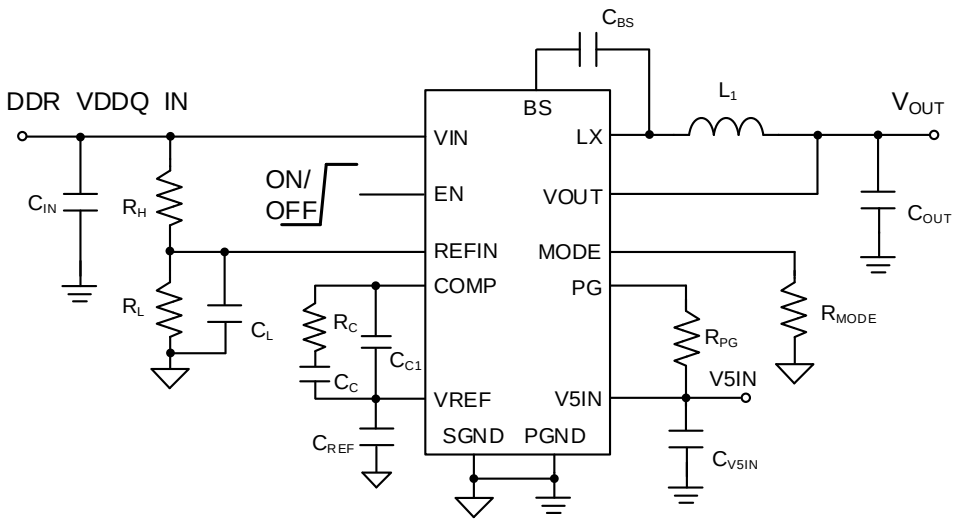
SQ28956WEQ - Continuous Source- or Sink-Current, 6A, 6V Input High-Efficiency Sync Buck

Features

- 0.8V to 6V Input Voltage Range
- 6A Continuous Output Source or Sink Current
- Internal 18mΩ Power Switch and 10mΩ Sync Rectifier
- Accurate ±1% Output Voltage
- Fast Transient Response
- 600kHz and 1000kHz Operating Frequency
- Adjustable 0.4 to 1.2V Output Voltage
- Selectable Peak-, Valley-, and Reverse-Current Limit
- Selectable Automatic High-Efficiency Discontinuous Operating Mode at Light Loads
- Output Voltage Tracking Using an External Voltage Reference
- Internal Soft-Start Limits Inrush Current
- Smooth Pre-Biased Startup
- Power-Good Indicator
- Auto-Recovery for Input Undervoltage (UVLO), Output Undervoltage (UVP), Output Overvoltage (OVP) and Overtemperature (OTP) Conditions
- MSL-3 Compliant
- Package: QFN3.5mm×4mm

Applications

- Memory Termination Regulator for DDR/DDR2/DDR3/DDR3L/DDR4
- V_{TT} Termination

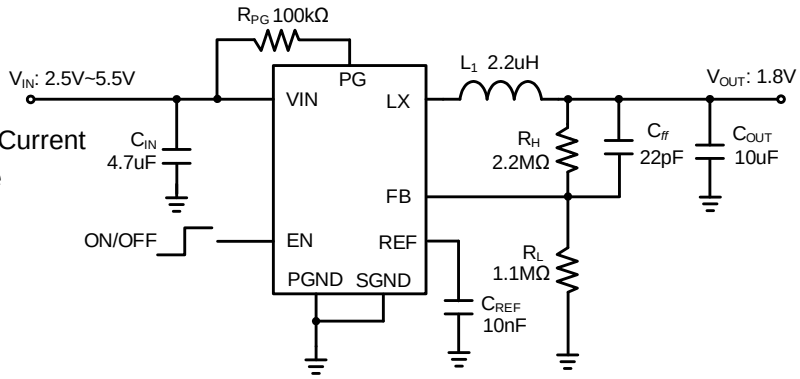


Back

SY8018ADFC - High Efficiency, 1.5μA Ultra Low Quiescent Current, Synchronous Step Down Regulator

Features

- 2.5~5.5V Input Voltage Range
- 1.5μA Typical Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) : 0.4/0.2Ω
- Typical 450mA Peak Current Limit
- Internal Soft-start Limits the Inrush Current
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8



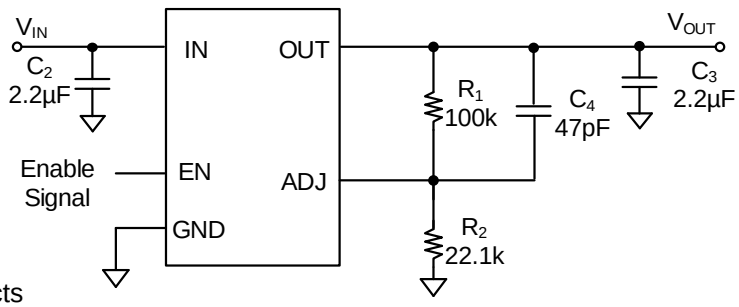
Applications

- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Care Products

SY8851DFC - 400nA Low-IQ, 5.5V, 500mA, 1MHz Synchronous Step-Down Regulator

Features

- 2.2~5.5V Input Voltage Range
- Ultra Low Quiescent Current Down to 400nA
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 280mΩ /120mΩ
- Instant PWM Control to Achieve Ultra Fast Load Transient Speed.
- High Switching Frequency 1.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Power Good Indicator
- Hiccup Mode for Output Short Circuit Protection
- 100% Drop Out Operation
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8



Applications

- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Ware Products

Back

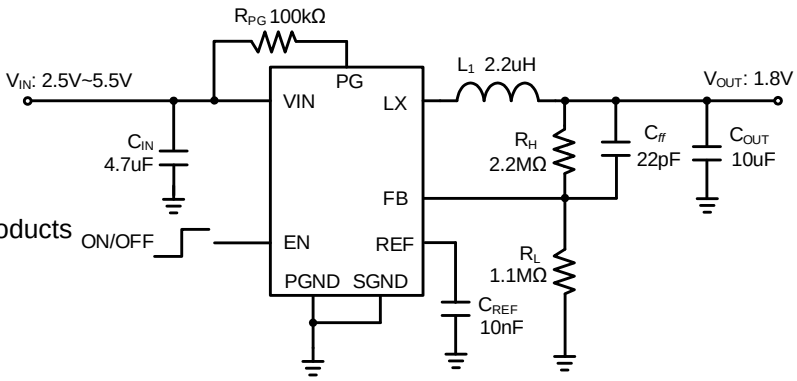
SY8078BDTC - High Efficiency3.0MHz, 0.6A Synchronous Step Down Regulator

Features

- 2.5~5.5V Input Voltage Range
- 1.5μA Typical Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) : 0.4/0.2Ω
- Typical 450mA Peak Current Limit
- Internal Soft-start Limits the Inrush Current
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Care Products



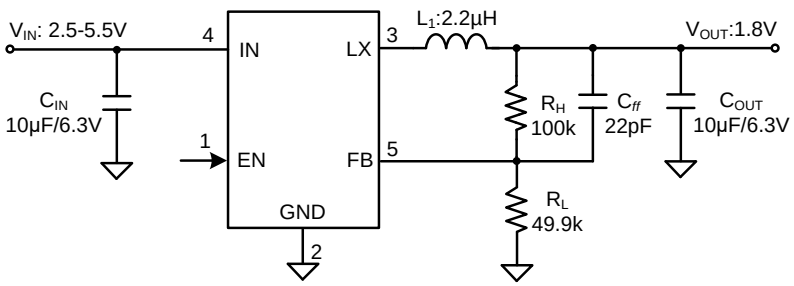
SY8088IAAC - High-Efficiency, 1.5MHz,1A Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 1A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 260mΩ Top, 160mΩ Bottom
- Low 50μA Quiescent Current
- High 1.5MHz Switching Frequency Minimizes Required External Components
- Constant-Off-Time and Peak-Current-Mode Control
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-5

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart phone



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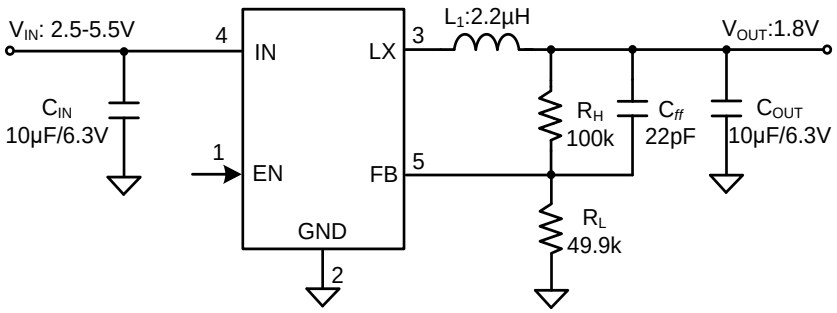
SY8088A1AAC - High Efficiency, 1.5MHz, 1ASynchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 260mΩ /160mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Reliable Short Circuit Protection
- Without Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone



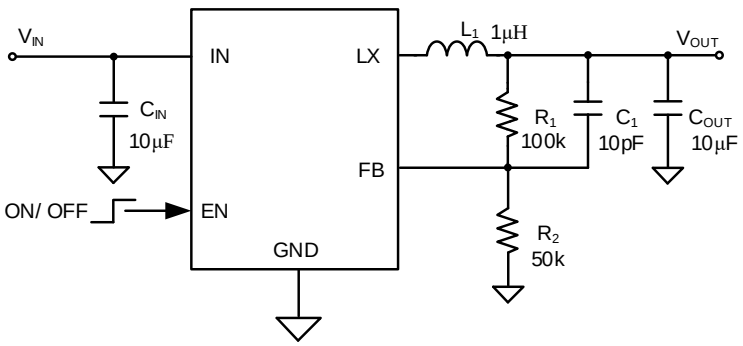
SY8080AAC - High Efficiency 3MHz, 1A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom) 270mΩ/160mΩ
- 2.5~5.5V input voltage range
- High switching frequency 3.0MHz minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Compact package: SOT23-5

Applications

- Portable Navigation Device
- Set Top Box
- USB Dongle
- General DescriptionMedia Player
- Smart phone

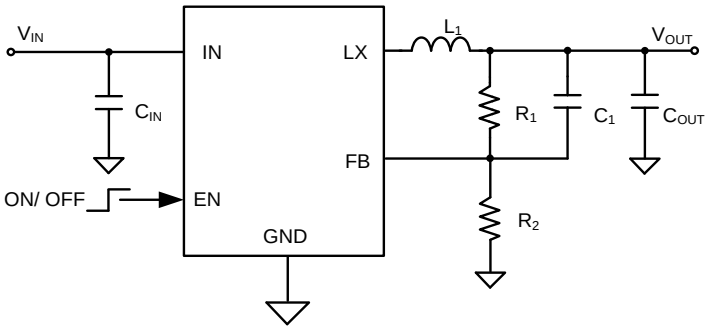


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SY8077AAC - High Efficiency 1.5MHz, 1A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom) 260mΩ/170mΩ
- 2.5~6.5V input voltage range
- 40μA typical quiescent current
- High light load efficiency
- High switching frequency 1.5MHz minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Compact package: SOT23-5



Applications

- Portable Navigation Device
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

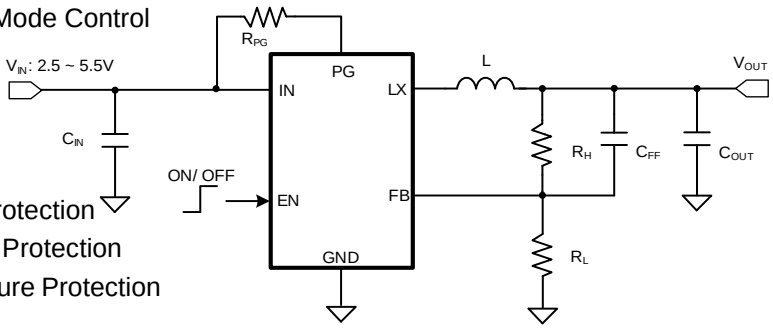
SY80091ART - High Efficiency 3MHz, 1A Synchronous Step Down Regulator

Features

- Low RDS(ON) for Internal MOSFETs: 170mΩ Top, 100mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 1A Output Current
- ±1.5% 0.6V Reference
- PFM Light Load Operation
- Internal Soft-Start Limits the Inrush Current
- 1.5MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Output Auto Discharge Function
- Power Good Indicator
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT563
- Moisture Sensitivity Level (MSL): 1

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone

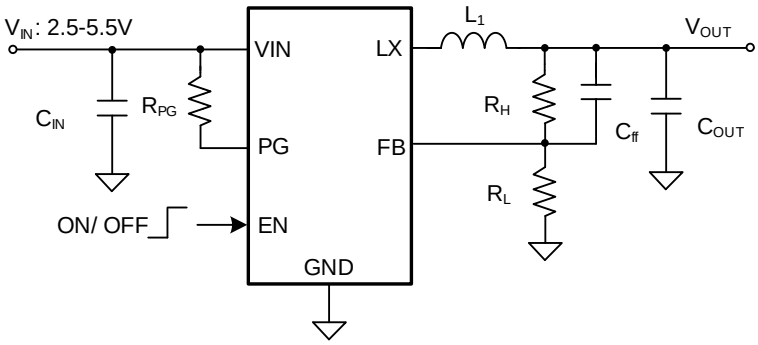


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SY8891ARC - High Efficiency 3MHz, 1A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 1A Output Current
- 55μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches: 170mΩ Top, 100mΩ Bottom
- 1.5MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT563



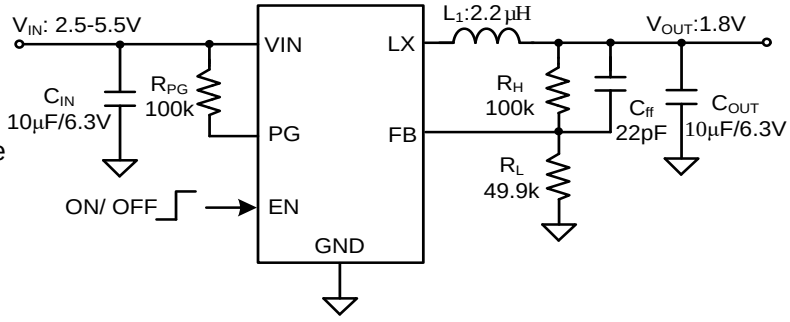
Applications

- Set-Top Boxes
- USB Dongles
- Media Players
- Smartphones

SY8891EARC - High Efficiency, 1.5MHz, 5.5V/1A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range.
- Low $R_{DS(ON)}$ for Internal Switches (top/bottom) 170mΩ /100mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Forced PWM Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



Applications

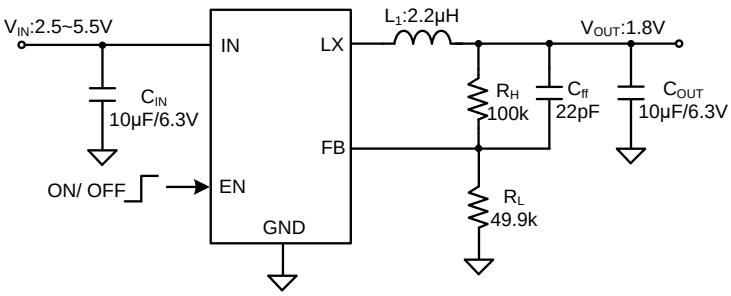
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone

Back

SY8061IDEC - High Efficiency, 1.5MHz, 1A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 220mΩ /130mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Reliable Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-6



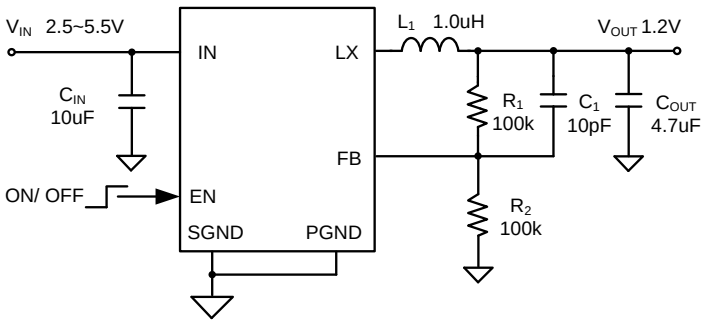
Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

SY8081DQC - High Efficiency 2.5MHz, 1A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom) 230mΩ/150mΩ
- 2.5~5.5V input voltage range
- High switching frequency 2.5MHz minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Output auto discharge function
- Compact package: DFN1.5x1.5-6



Applications

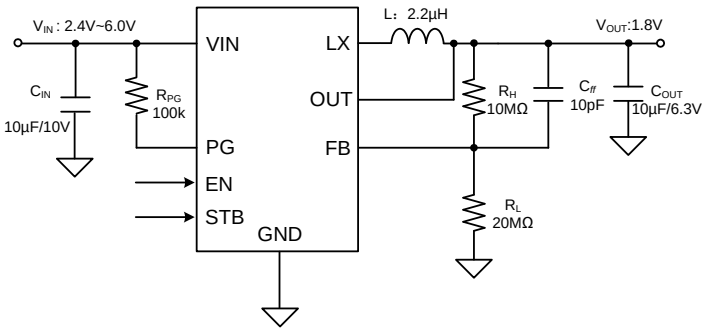
- Portable Navigation Device
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

Back

SY8871BDFC - 400nA ultra low IQ, 1.0MHz, 1.0A continuous Synchronous Step Down Regulator

Features

- 2.4~6.0V Input Voltage Range
- Ultra Low Quiescent Current Down to 400nA
- Low $R_{DS(ON)}$ for the Internal Switches (Top/Bottom) 300mΩ /130mΩ
- Instant PWM Control to Achieve the Ultra Fast Load Transient Speed
- High Switching Frequency 1.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Power Good Indicator
- Hiccup Mode for Output Short Circuit Protection
- 100% Drop Out Operation
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8



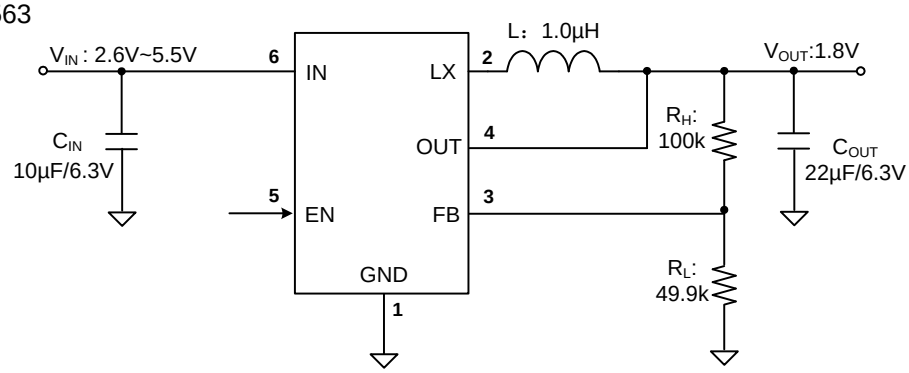
Applications

- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Ware Products

SY8841ARC - High Efficiency 2.0MHz, 1.5A Synchronous Step Down Regulator

Features

- 2.6~5.5V Input Voltage Range
- 55μA Low Quiescent Current
- Ultra Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 180mΩ /100mΩ
- High Switching Frequency 2.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



Applications

- Smart Phone
- Net PC
- Mini-notebook PC
- Access Point Router

Back

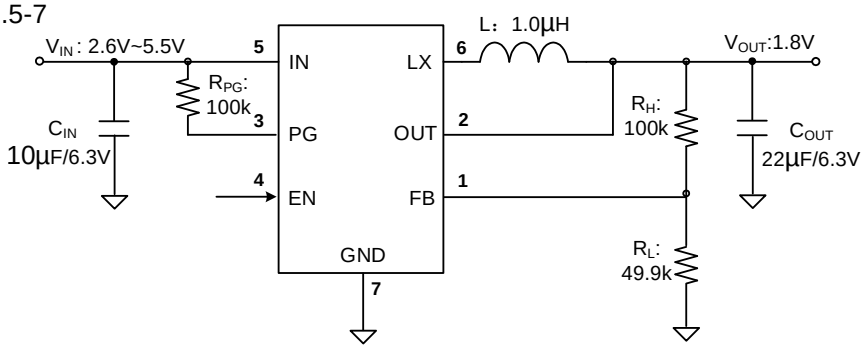
SY8842QWC - High Efficiency 2.0MHz, 1.5A Synchronous Step Down Regulator

Features

- 2.6~5.5V Input Voltage Range
- 55μA Low Quiescent Current
- Ultra Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 180mΩ /100mΩ
- High Switching Frequency 2.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Power Good Indicator
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5x1.5-7

Applications

- Smart Phone
- Net PC
- Mini-notebook PC
- Access Point Router



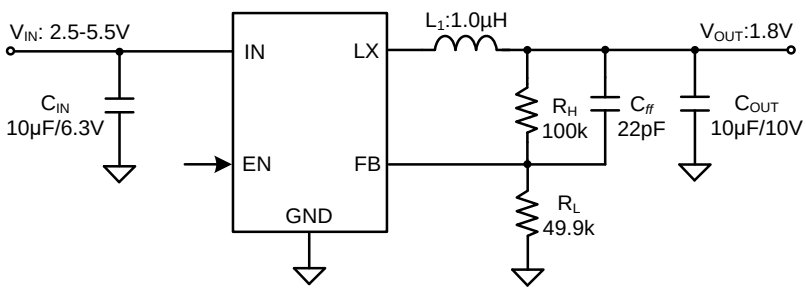
SY8089A1AAC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130mΩ /85mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone

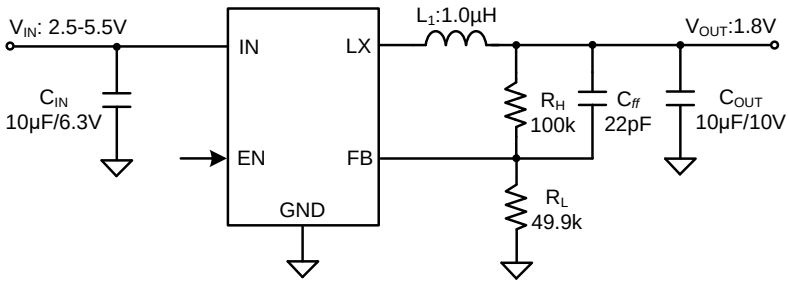


Back

SY8089IAAC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130mΩ /85mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Reliable Latch off Function When:
  - Output Short
  - Thermal Shutdown
  - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5



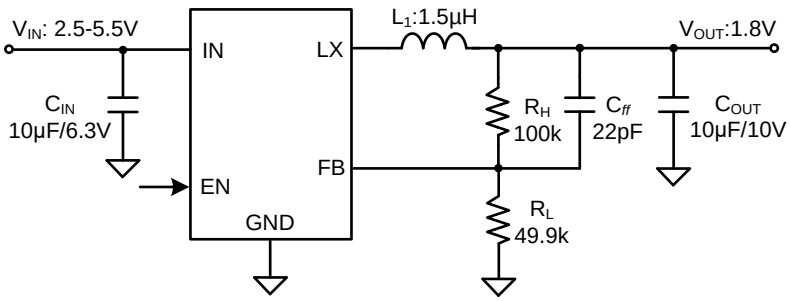
Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

SY8089E1AAC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130mΩ /85mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Forced PWM Operation
- 100% Dropout Operation
- Hiccup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5



Applications

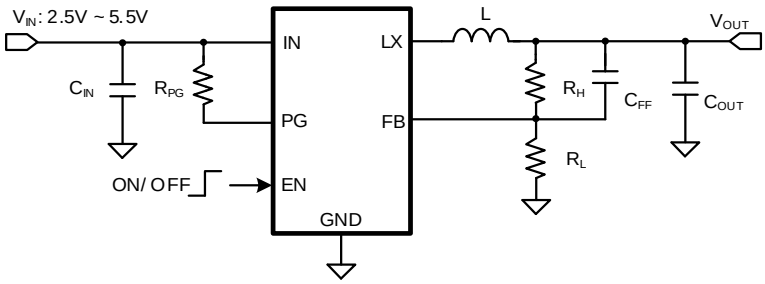
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

Back

SY8002A1ABC - High Efficiency, 1.5MHz, 5.5V, 2A Synchronous Buck Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches: 130mΩ Top, 85mΩ Bottom
- 2.5V ~ 5.5V Input Voltage Range
- Up to 2A Output Current
- 50μA Low Quiescent Current
- 1.5MHz High Switching Frequency Minimizes Required External Components
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



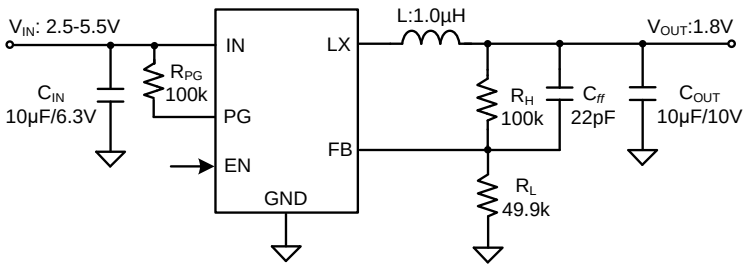
Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smartphone

SY8002IABC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130mΩ /85mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
  - Output Short
  - Thermal Shutdown
  - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6



Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

Back

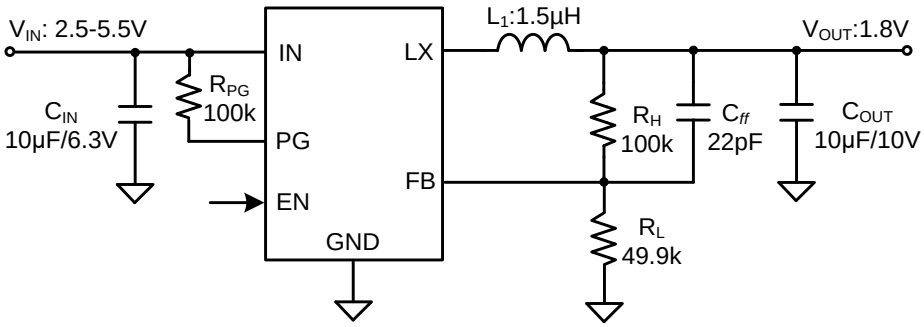
SY8002E1ABC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130mΩ /85mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Forced PWM Operation
- 100% Dropout Operation
- Hiccup for Short Circuit Protection
- Power Good Indicator
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone



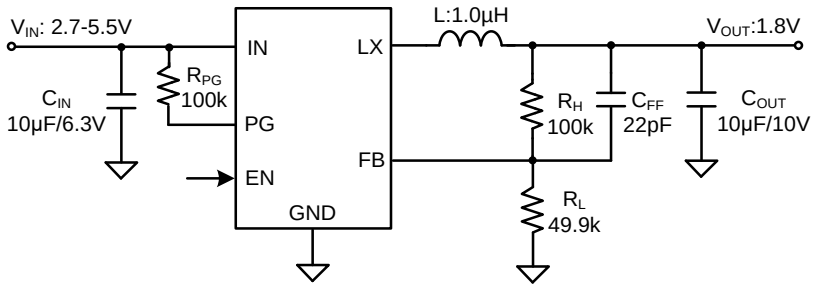
SY8032IABC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.7V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130mΩ /85mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Reliable Short Circuit Protection
- Power Good Indicator
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



Back

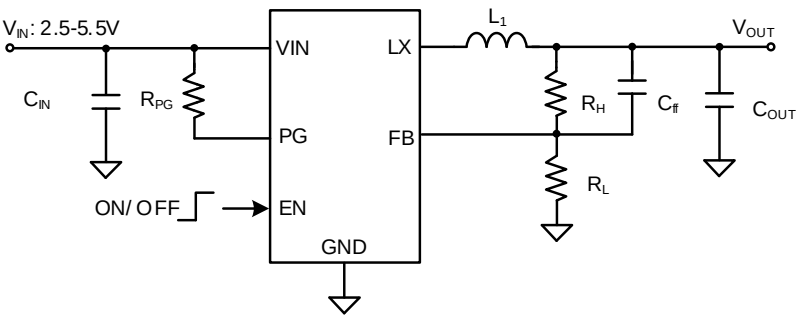
SY8892ARC - High-Efficiency, 1.5MHz 2A Synchronous Step-Down Regulator

Features

- 2.5V–5.5V Input Voltage Range
- Up to 2A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 125mΩ Top, 75mΩ Bottom
- Low 55μA Quiescent Current
- High 1.5MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact SOT563 Package

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smartphone



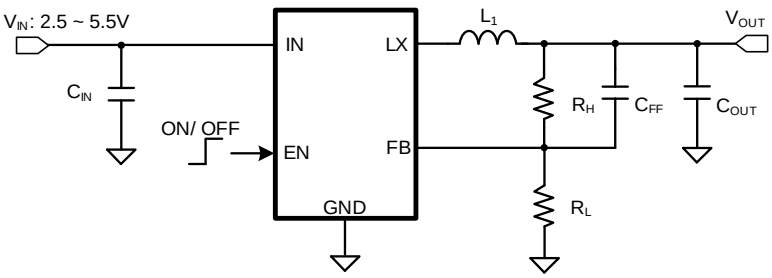
SY8892BARC - High Efficiency, 1.5MHz, 2A, 5.5V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 125mΩ Top, 75mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 2A Output Current
- ±1.5% 0.6V Reference
- PFM Light Load Operation
- Internal Soft-Start Limits the Inrush Current
- 1.5MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT563
- Moisture Sensitivity Level (MSL): 1

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone



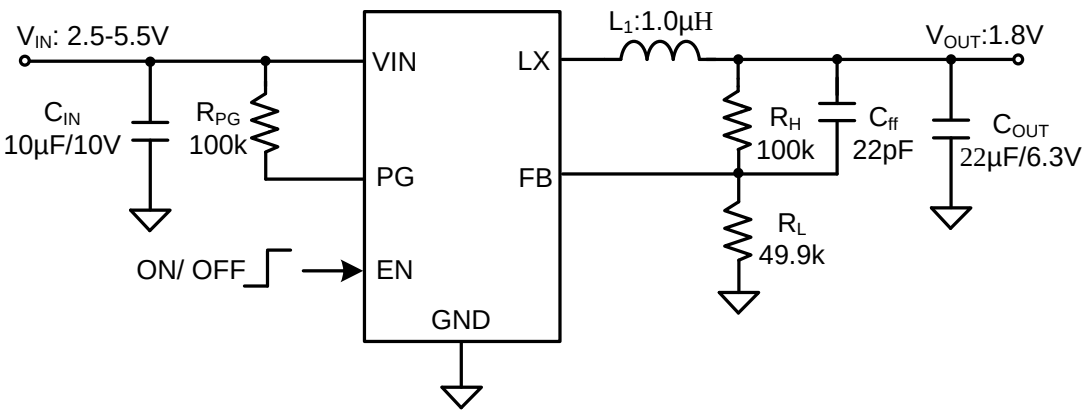
Back

Features

- 2.5V to 5.5V Input Voltage Range.
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 125mΩ /75mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Forced PWM Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



Back

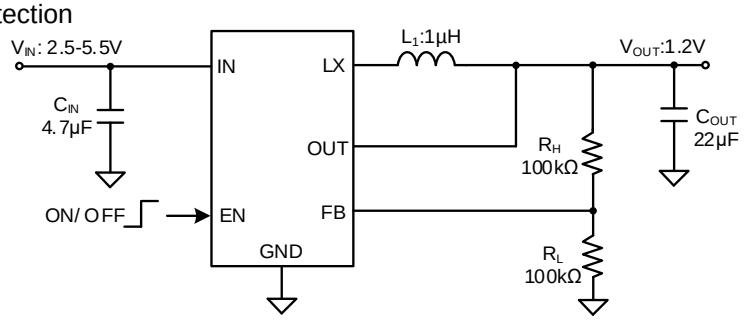
SY80072ART - 21μA Ultra Low IQ, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Ultra-Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 45mΩ /35mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- ±1.0% Feedback or Output Voltage Accuracy Over 0° C~ 85° C Temperature Range
- ±1.5% Feedback or Output Voltage Accuracy Over -40° C ~125° C Temperature Range
- PFM Mode for Light Load Efficiency
- 21μA Operating Quiescent Current
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: SOT563

Applications

- Portable Electronics
- Industrial PC
- Smart Phone



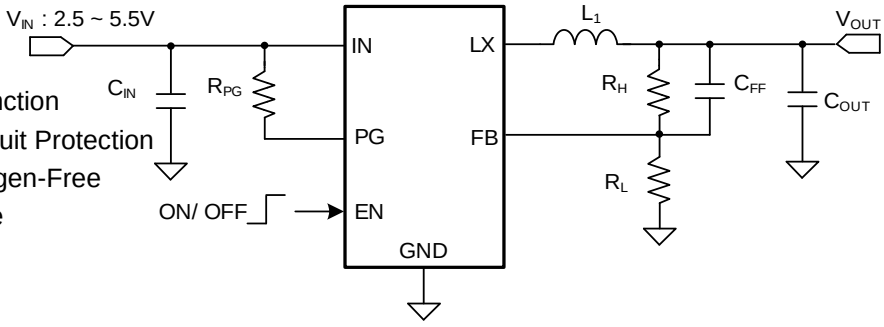
SY80075ART - 21μA low IQ, 5.5V, 2A, 1.5MHz Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 45mΩ Top, 35mΩ Bottom
- 2.5V ~ 5.5V Input Voltage Range
- Up to 2A Output Current
- Constant On-Time and Ripple-Based Control
- 21μA Quiescent Current
- High 1.5MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Output Auto-Discharge Function
- Hiccup Mode for Short Circuit Protection
- RoHS-Compliant and Halogen-Free
- Compact SOT563 Package

Applications

- Portable Electronics
- Industrial PC
- Smart Phone



Back

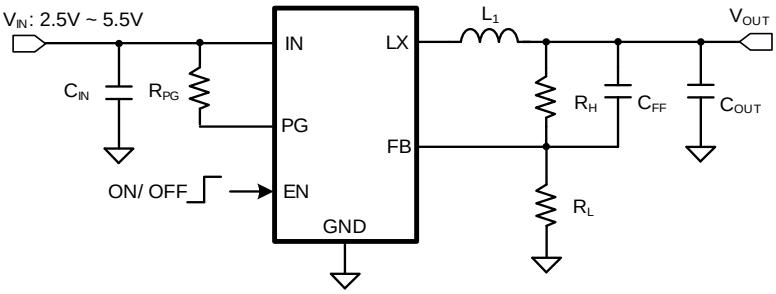
SY80002DQD - High Efficiency, 2.2MHz, 2A, 5.5V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 35mΩ Top, 25mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 2A Output Current
- ±1% 0.6V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 2.2MHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-based Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Power Good Indicator
- Output Auto Discharge Function
- Cycle-by-Cycle Peak and Valley Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN1.5×1.5-6
- Moisture Sensitivity Level (MSL): 1

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone



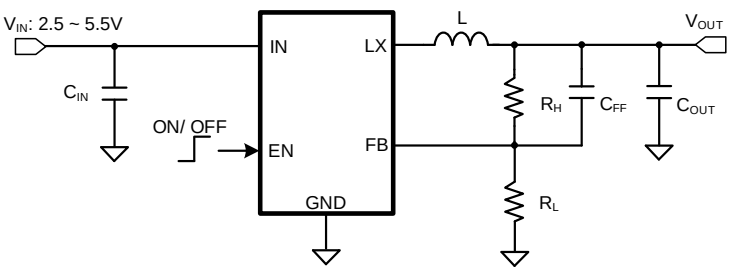
SY80082AAT - High Efficiency, 1.5MHz, 2A, 5.5V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 130mΩ Top, 85mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 2A Output Current
- ±1.5% 0.6V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 1.5MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-5

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone



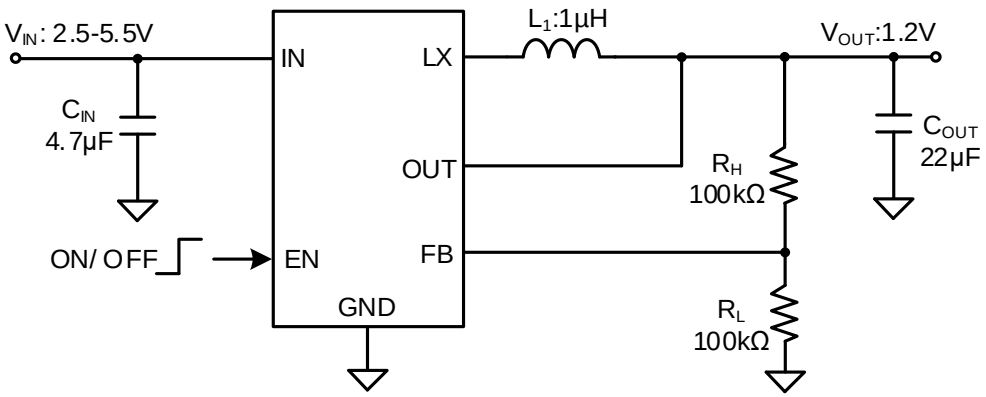
Back

Features

- 2.5V to 5.5V Input Voltage Range
- Ultra-Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 45mΩ /35mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- ±1.0% Feedback or Output Voltage Accuracy Over 0° C~ 85° C Temperature Range
- ±1.5% Feedback or Output Voltage Accuracy Over -40° C ~125° C Temperature Range
- PFM Mode for Light Load Efficiency
- 21μA Operating Quiescent Current
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: SOT563

Applications

- Portable Electronics
- Industrial PC
- Smart Phone



Back

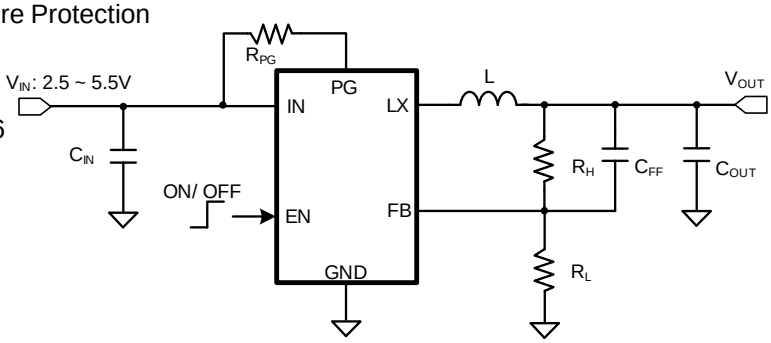
SY80083ABT - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 85mΩ Top, 60mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- ±1.5% 0.6V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 1MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Power Good Indicator for SY80083ABT
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-5/SOT23-6

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone



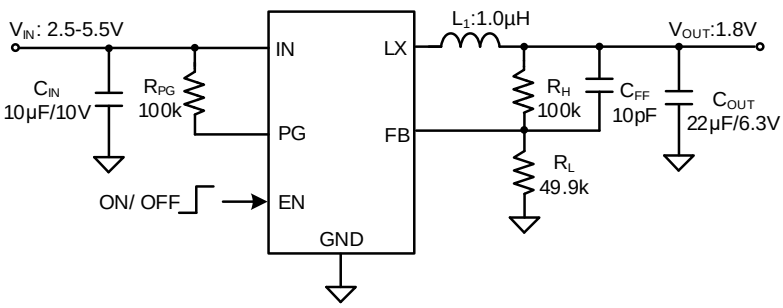
SY80063ABC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 55μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85mΩ /60mΩ
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
  - Output Under Voltage
  - Thermal Shutdown
  - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



Back

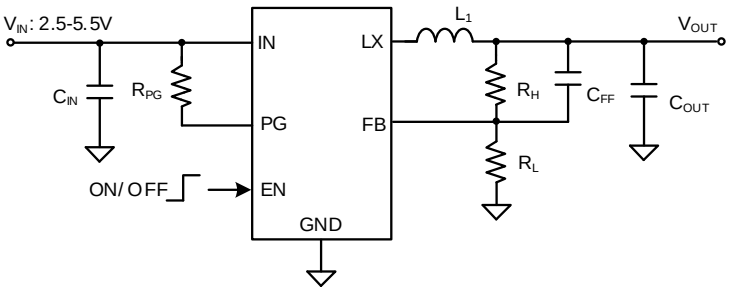
SY80063AABC - High-Efficiency, 1MHz, 3A Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 3A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 85mΩ Top, 60mΩ Bottom
- Low 50μA Quiescent Current
- High 1MHz Switching Frequency Minimizes Required External Components
- Constant-Off-Time and Peak-Current-Mode Control
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



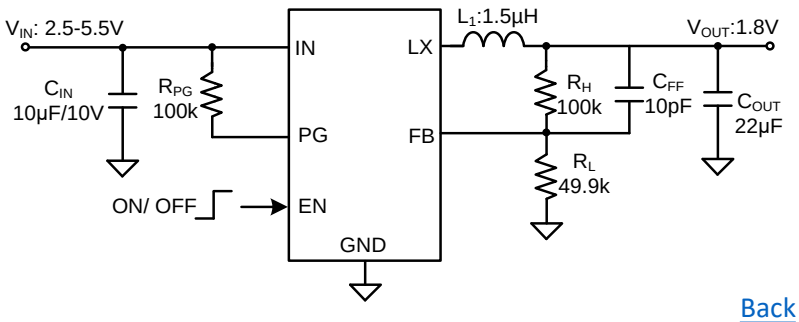
SY80063EABC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85mΩ /60mΩ
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



Back

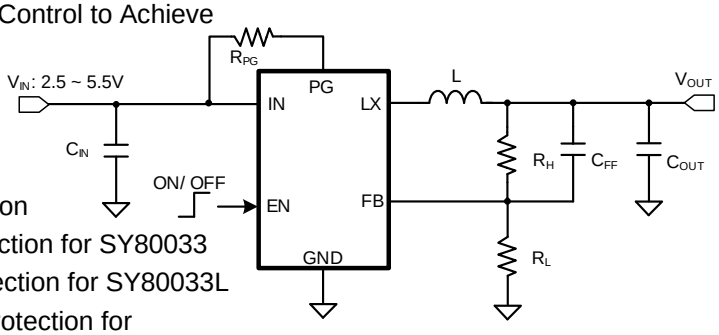
SY80033DFD/SY80033LDFD - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 85mΩ Top, 60mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- ±1.5% 0.6V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 1MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Power Good Indicator
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection for SY80033
- Latch-off Mode Output Under Voltage Protection for SY80033L
- Auto-Recovery Mode Over Temperature Protection for SY80033
- Latch-off Mode Over Temperature Protection for SY80033L
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN2×2-8

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone



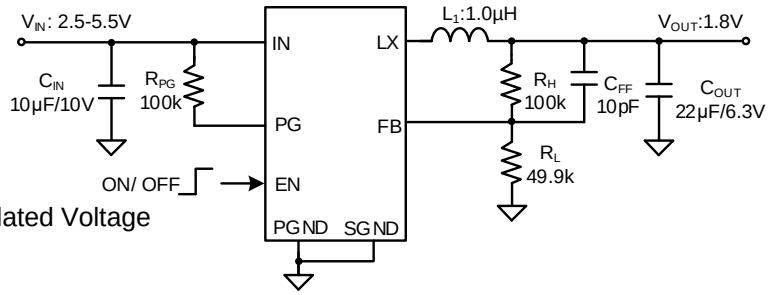
SY8883DFC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 55μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85mΩ /60mΩ
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
  - Output Under Voltage
  - Thermal Shutdown
  - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2×2-8

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



Back

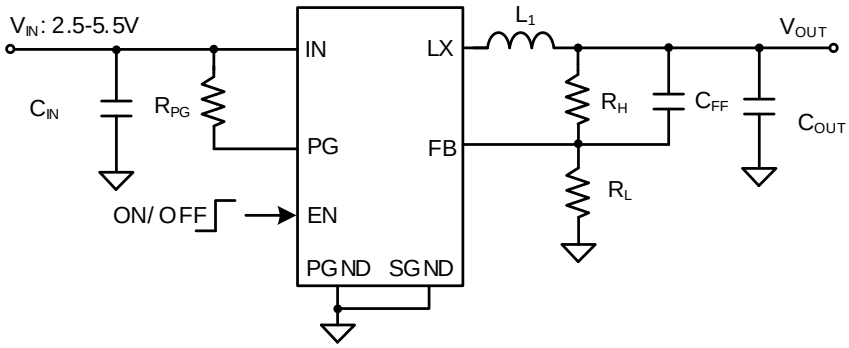
SY8883ADFC - High-Efficiency, 1MHz, 3A Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 3A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 85mΩ Top, 60mΩ Bottom
- Low 55μA Quiescent Current
- High 1MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN2x2-8

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smartphone



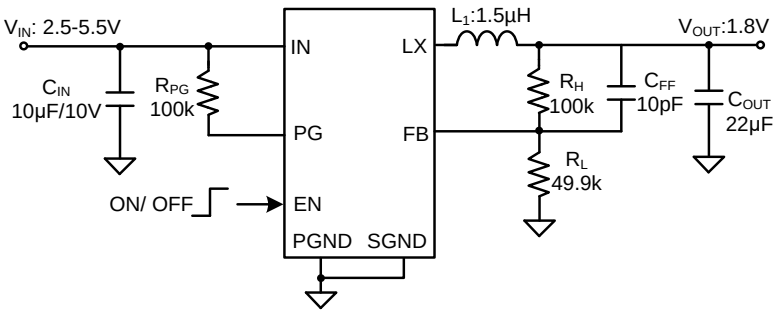
SY8883EDFC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85mΩ /60mΩ
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone

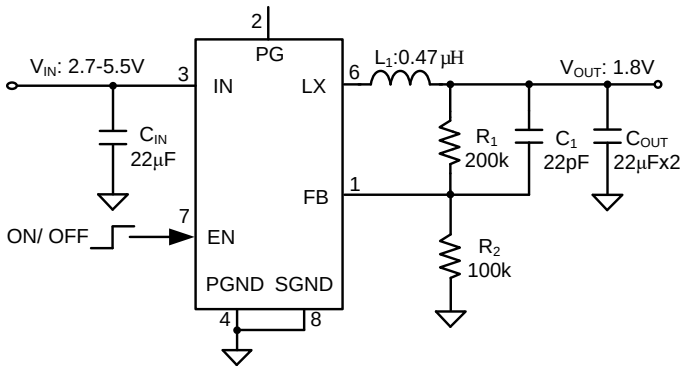


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SY8003CDFC - High Efficiency 5.5V, 3A Continuous, 3MHz Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches
- (Top/Bottom):110mΩ/80mΩ
- 3A Continuous Load Current Capability
- 2.7-5.5V Input Voltage Range
- High Switching Frequency Minimizes the External Components: 3MHz
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Protection
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8



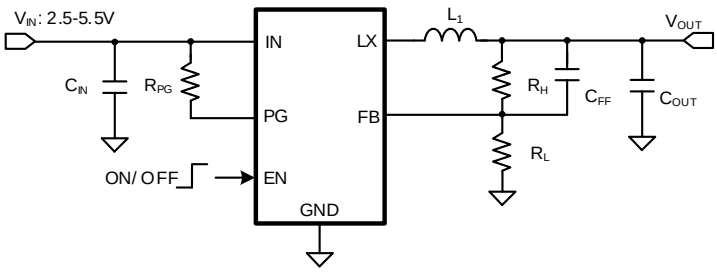
Applications

- LCD TV
- Set Top Box
- Net PC
- Mini-Notebook PC
- Access Point Router

SY8893ARC - High-Efficiency, 5.5V, 3A, 1.2MHz Synchronous Step-Down Regulator

Features

- 2.5V~5.5V Input Voltage Range
- Up to 3A Output Current
- Constant Off-time and Peak Current Mode Control
- Low $R_{DS(ON)}$ for Internal Switches: 100mΩ Top, 60mΩ Bottom
- Low 50μA Quiescent Current
- High 1.2MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact SOT563 Package



Applications

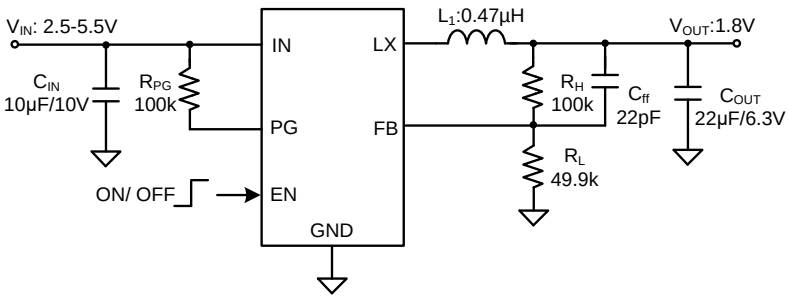
- Set-Top Box
- USB Dongle
- Media Player
- Smartphone

Back

SY8893LARC - High Efficiency, 1.2MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 100mΩ /60mΩ
- High Switching Frequency 1.2MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
  - Output Under Voltage
  - Thermal Shutdown
  - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



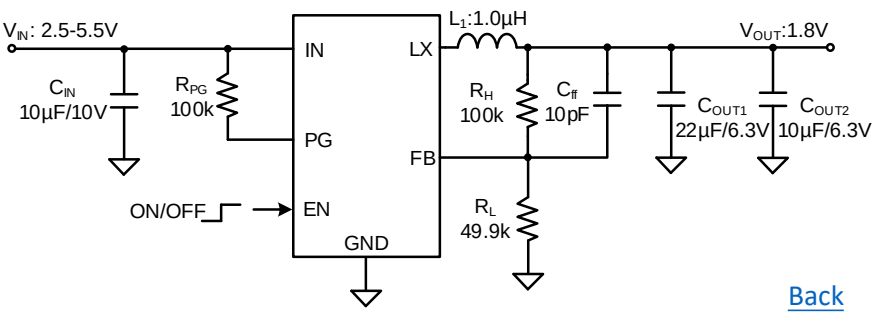
Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

SY8893EARC - High Efficiency, 1.2MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 100mΩ /60mΩ
- High Switching Frequency 1.2MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Forced PWM Operation
- 100% Dropout Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

Back

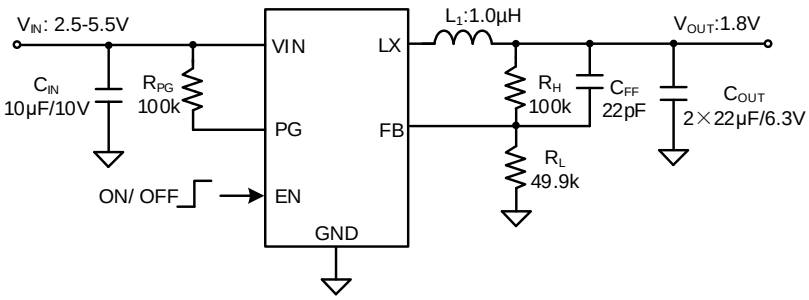
SY8053DBC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 55μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85mΩ /60mΩ
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
  - Output Under Voltage
  - Thermal Shutdown
  - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN3x3-10

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



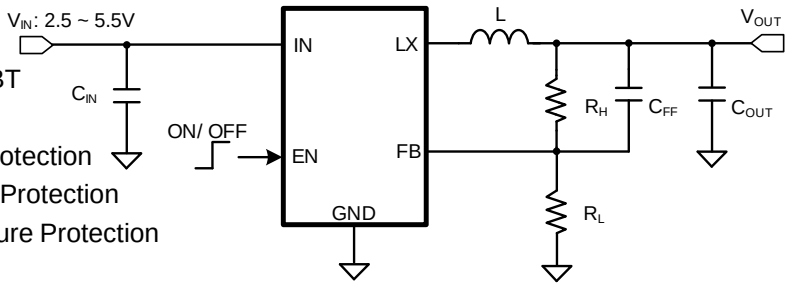
SY80083AAT - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 85mΩ Top, 60mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- ±1.5% 0.6V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 1MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Power Good Indicator for SY80083ABT
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-5/SOT23-6

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone



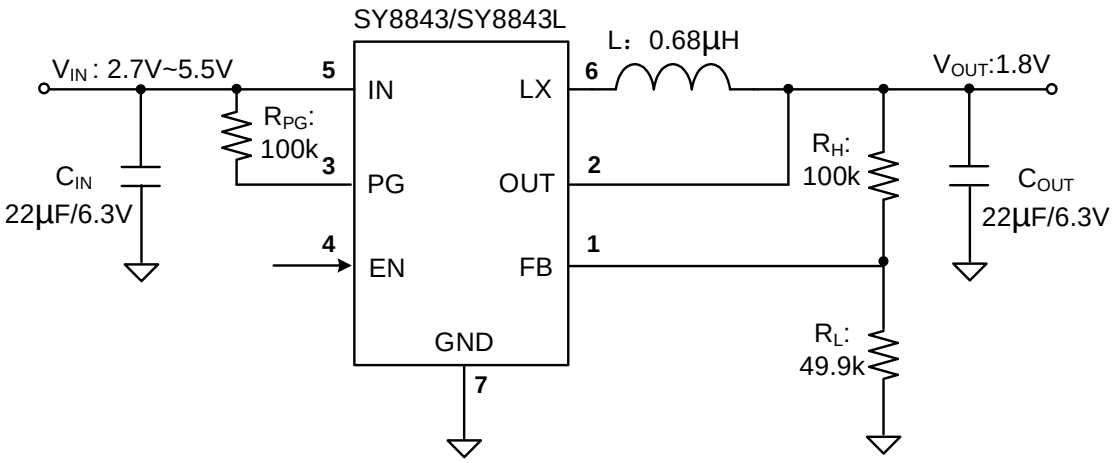
Back

Features

- 2.7~5.5V Input Voltage Range
- 65μA Low Quiescent Current
- Ultra Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 85mΩ /50mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Reliable Short Circuit Protection
  - SY8843: Hic-cup Mode Protection
  - SY8843L: Latch Off Protection
- Reliable OVP and OTP Protection
  - SY8843: No Latch Off Protection
  - SY8843L: Latch Off Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5x1.5-7

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone

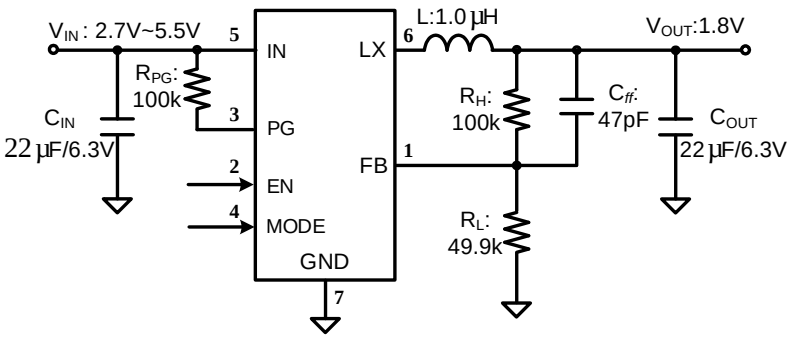


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SY8859QWC - High Efficiency 1.0MHz, 3A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 85mΩ /50mΩ
- 2.7~5.5V Input Voltage Range
- 55μA Low Quiescent Current
- Ultra Fast Load Transient Speed
- High Switching Frequency 1.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Reliable Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5x1.5-7



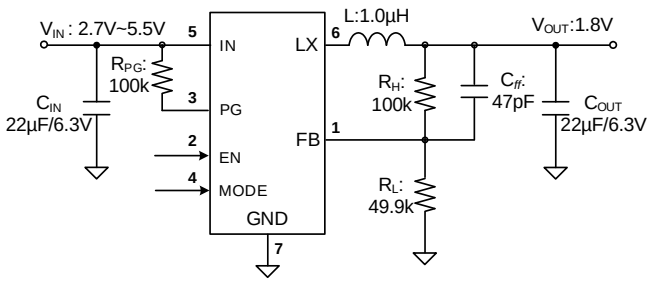
Applications

- Smart Phone
- LCD TV
- Set Top Box
- Mini-Notebook PC
- Access Point Router

SY8859LQWC - High Efficiency 1.0MHz, 3A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 85mΩ /50mΩ
- 2.7~5.5V Input Voltage Range
- 55μA Low Quiescent Current
- Ultra Fast Load Transient Speed
- High Switching Frequency 1.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Reliable Latch off Function When:
  - Output Short
  - Thermal Shutdown
  - Output Voltage> 120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5x1.5-7



Applications

- Smart Phone
- LCD TV
- Set Top Box
- Mini-Notebook PC
- Access Point Router

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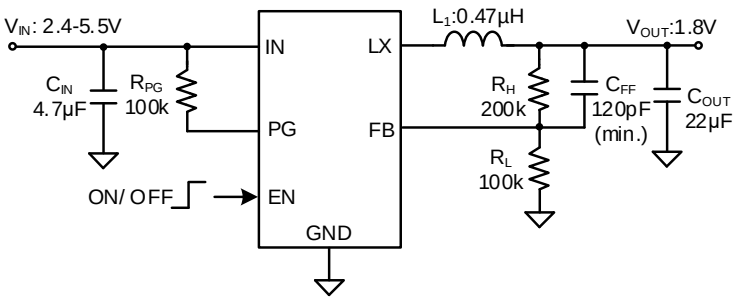
SY80053DQC - 16μA Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- 2.4V to 5.5V Input Voltage Range
- Ultra-fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom):35mΩ /25mΩ
- High Switching Frequency 2.2MHz Minimizes the External Components
- ±1% Feedback or Output Voltage Accuracy
- (Full Temperature Range)
- PFM Mode for Light Load Efficiency
- 16μA Operating Quiescent Current
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Power Good Indicator
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.5x1.5-6

Applications

- Portable Electronics
- Industrial PC
- Smart Phone



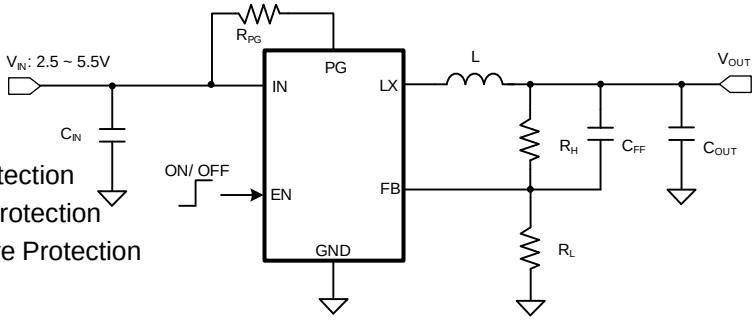
SY80053BDQD - 16μA Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- Low RDS(ON) for Internal MOSFETs: 35mΩ Top, 25mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- ±1% 0.45V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 2.2MHz Switching Frequency Minimizes the External Components
- Advanced Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Power Good Indicator
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN1.5 1.5-6

Applications

- Portable Electronics
- Industrial PC
- Smart Phone



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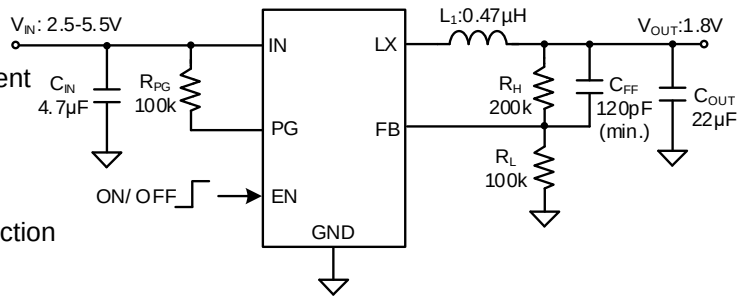
SY80003DQD - 21μA Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Ultra-Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom):
- 38mΩ /30mΩ
- High Switching Frequency 2.2MHz Minimizes the External Components
- ±1% Feedback or Output Voltage Accuracy (Full Temperature Range)
- PFM Mode for Light Load Efficiency-
- 21μA Operating Quiescent Current
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Power Good Indicator
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.5x1.5-6

Applications

- Portable Electronics
- Industrial PC
- Smart Phone



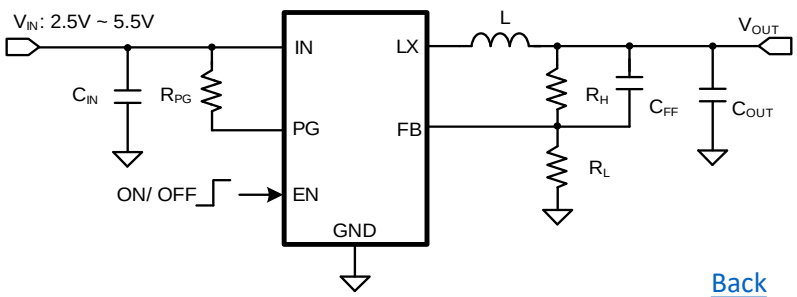
SY80003EDQD - 21μA Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 38mΩ Top, 30mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- ±1% 0.6V Reference over Temperature from -40° C to 125° C
- 2.2MHz High Switching Frequency Minimizes the External Components
- Advanced Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Forced Continuous Conduction Mode (FCCM) Operation
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Cycle-by-Cycle Valley, Peak and Reverse Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN1.5x1.5-6

Applications

- Portable Electronics
- Industrial PC
- Smart Phone

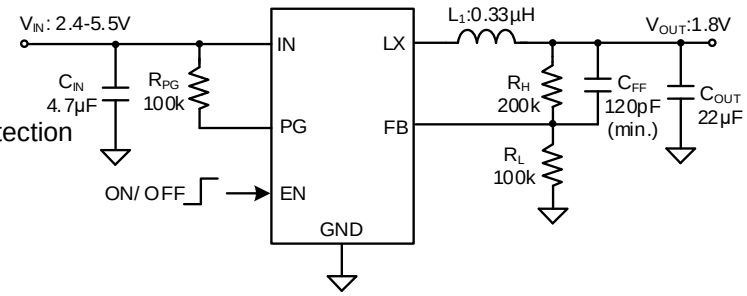


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SY80054DQC - 16μA Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- 2.4V to 5.5V Input Voltage Range
- Ultra-fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom):35mΩ /25mΩ
- High Switching Frequency 2.2MHz Minimizes the External Components
- ±1% Feedback or Output Voltage Accuracy
- (Full Temperature Range)
- PFM Mode for Light Load Efficiency
- 16μA Operating Quiescent Current
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Power Good Indicator
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.5x1.5-6



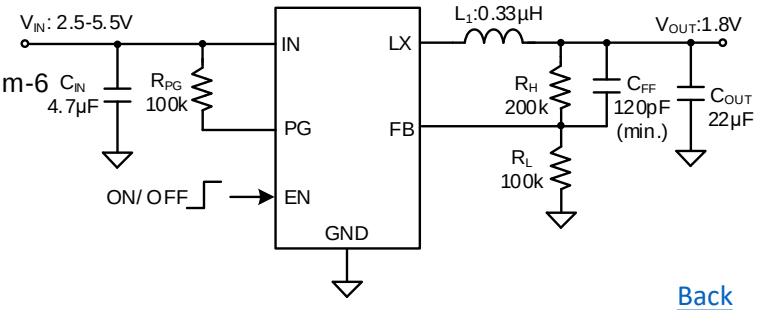
Applications

- Portable Electronics
- Industrial PC
- Smart Phone

SY80004DQD - 21μA Ultra-Low IQ, 2.2MHz Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Fast Load-Transient Response
- Low $R_{DS(ON)}$ for Internal Switches: 38mΩ Top, 30mΩ Bottom
- 2.2MHz Switching Frequency
- ±1% Output Voltage Accuracy (Full Temperature Range)
- PFM Mode for Light-Load Efficiency
- 21μA Operating Quiescent Current
- Internal Soft-Start Limits Inrush Current
- 100% Duty Cycle Enables Dropout Operation
- Output Auto-Discharge Function
- Power-Good Indicator
- Autorecovery for Short-Circuit, Overvoltage, and Overtemperature Protection
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN1.5mm x 1.5mm-6



Applications

- Portable Electronics
- Industrial PC
- Smart Phone

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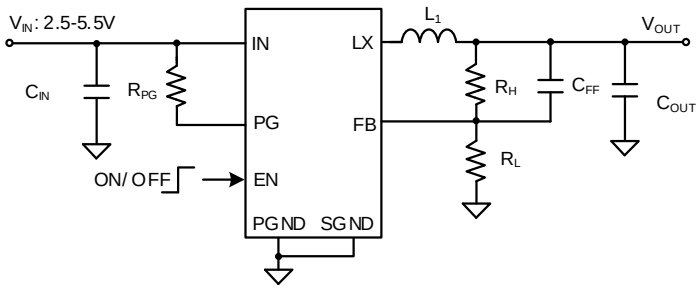
SY8884ADFC - High-Efficiency, 1MHz, 4A Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 4A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 85mΩ Top, 60mΩ Bottom
- Low 55μA Quiescent Current
- High 1MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN2x2-8

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smartphone



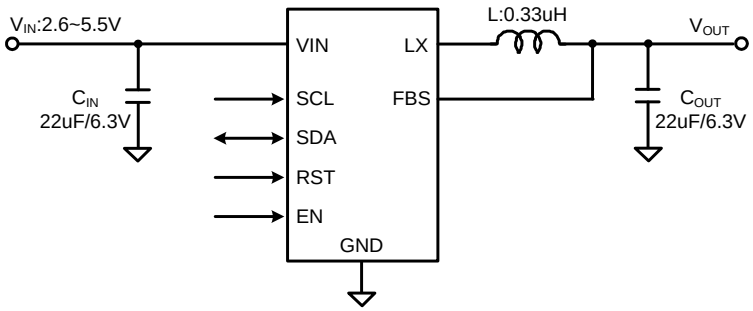
SY8824BAIC - 4A, 1.8MHz, I2C Programmable Synchronous Step Down Regulator

Features

- 2.6V to 5.5V input voltage range
- Fixed frequency operation: 1.8MHz
- Low $R_{DS(ON)}$ for internal switches (top/bottom): 70mΩ/40mΩ
- Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV/step
- Default 1.15V output voltage
- 4A output current capability
- Capable for 0.33μH inductor and 22μF Ceramic Capacitor
- PFM/PWM operation for optimum increased efficiency
- OVP/OCP/UVLO/OTP protections
- Compact package: TSOT23-8

Applications

- Smart phone
- MID



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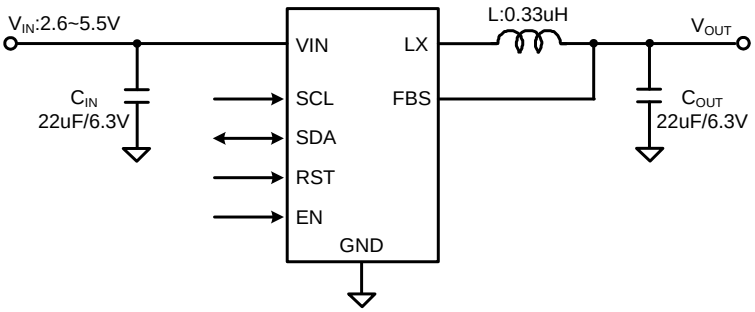
SY8824CAIC - 4A, 1.8MHz, I2C Programmable Synchronous Step Down Regulator

Features

- 2.6V to 5.5V Input Voltage Range
- Fixed Frequency Operation: 1.8MHz
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 70mΩ/40mΩ
- Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV Steps
- Default 1.05V Output Voltage
- 4A Output Current Capability
- Capable for 0.33μH Inductor and 22μF Ceramic Capacitor
- PFM/PWM Operation for Optimum Increased Efficiency
- OVP/OCP/UVLO/OTP Protections
- RoHs Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- Smart Phone
- MID



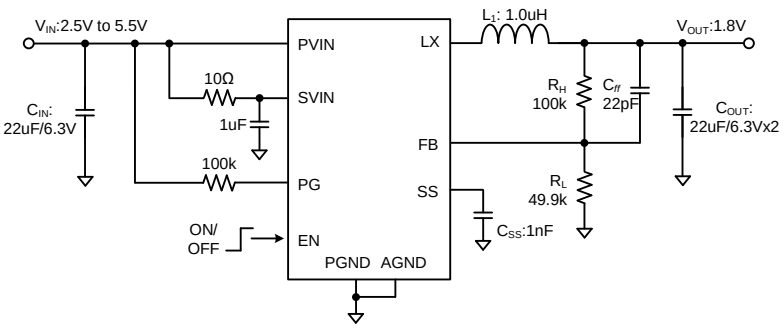
SY8047QDC - Ultra Low Quiescent Current 1.25MHz, 4A Sync Buck

Features

- Input Voltage Range: 2.5V to 5.5V
- 1.25MHz Switching Frequency
- Max Output Current: 4.0A
- Peak Current Mode Control for the Fast Transient Speed
- 100% Drop Out Function
- Typical 18μA Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 75mΩ/55mΩ
- Hic-cup Mode Protection for Hard Short Condition
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x3-16

Applications

- Set Top Box
- Net PC
- Mini-Notebook PC
- Access Point Router



Back

SY8057DQDC/SY8057FQDC

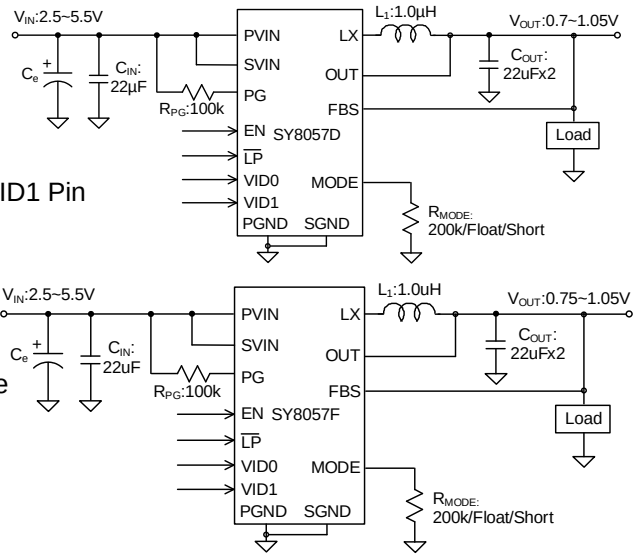
- High Efficiency Buck with Low Power Mode & Output Voltage Selection

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 70mΩ / 40mΩ
- 4A Continuous, 7A Peak Load Current Capability
- ±1% Output Voltage Accuracy at PWM Mode
- PFM Mode at Light Load for High Efficiency
- Selectable Fixed Output Voltage Through VID0, VID1 Pin
- Support for Low Power Mode Logic Input
- Typical 30μA Typical Quiescent Current
- Ultra Fast Load Transient Performance
- Flexible MODE Pull Down Resistor to Program the Required Power Rail
- Power Good Indicator
- OVP/SCP/OTP Latch-off Protection
- Compact Package: QFN3x3-16

Applications

- NB Application



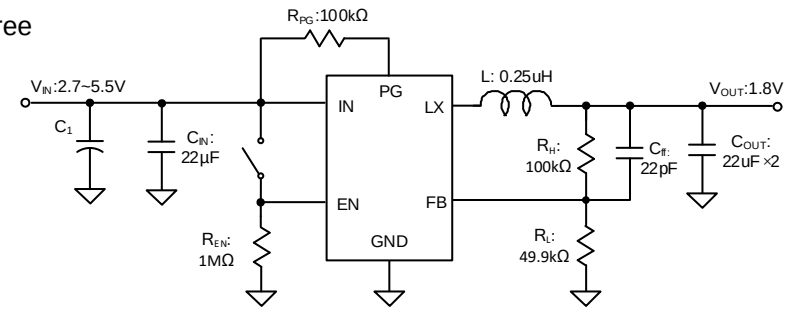
SY8856DFC - 3MHz, 4A Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 35/15 mΩ
- 2.7-5.5V Input Voltage Range
- 3MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Up to 92% Efficiency
- 4A Continuous Output Current Capability
- Shutdown Mode Draws<0.1μA Supply Current
- 100% Dropout Operation
- Power Good Indicator
- OCP/UVLO/OTP Protections
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

- High definition Set Top Box
- LCD TV
- Notebook PC



Back

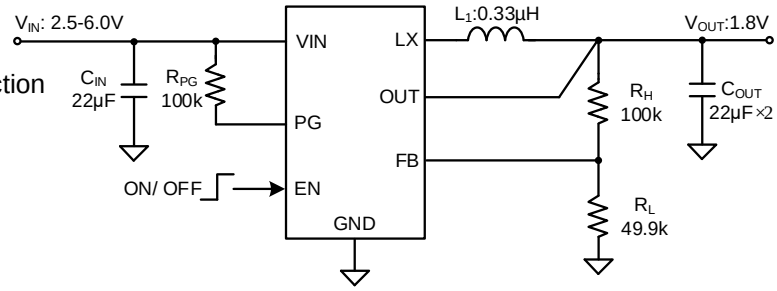
SY80704SYC - 2.4MHz, 4A Sync Buck

Features

- 2.5~6.0V Input Voltage Range
- 23μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 25mΩ /17mΩ
- Instant PWM Control Achieve Ultra Fast Dynamic Response
- 2.4MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Drop Out Operation
- Output Auto Discharge Function
- Hiccup Mode for Short Circuit Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-7

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



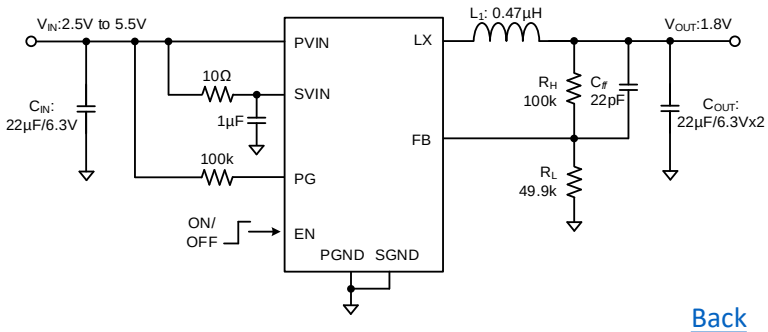
SY8825QUC - Ultra Low Quiescent Current 2.0MHz, 5A Sync Buck

Features

- Input Voltage Range: 2.5V to 5.5V
- 2.0 MHz Switching Frequency
- 5A Maximum Output Current
- Peak Current Mode Control for the Fast Transient Speed
- 100% Drop Out Function
- Typical 18μA Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 55mΩ/35mΩ
- Hic-cup Mode Protection for Hard Short Condition
- RoHS Compliant and Halogen Free
- Compact Package: QFN2x1.5-8

Applications

- Set Top Box
- Net PC
- Mini-Notebook PC
- Access Point Router



Back

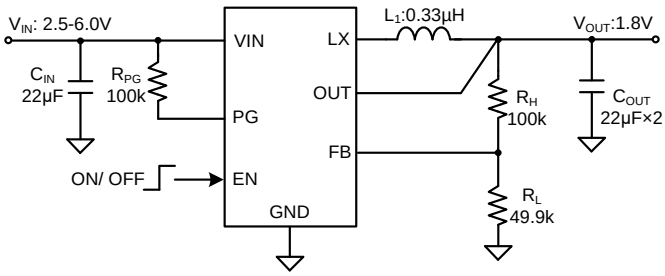
SY80706SYC - 1MHz, 6A Sync Buck

Features

- 2.5~6.0V Input Voltage Range
- 23μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 22mΩ /12mΩ
- Instant PWM Control Achieve Ultra Fast Dynamic Response
- 1.0MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Drop Out Operation
- Output Auto Discharge Function
- Hic-cup Mode for Short Circuit Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-7

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



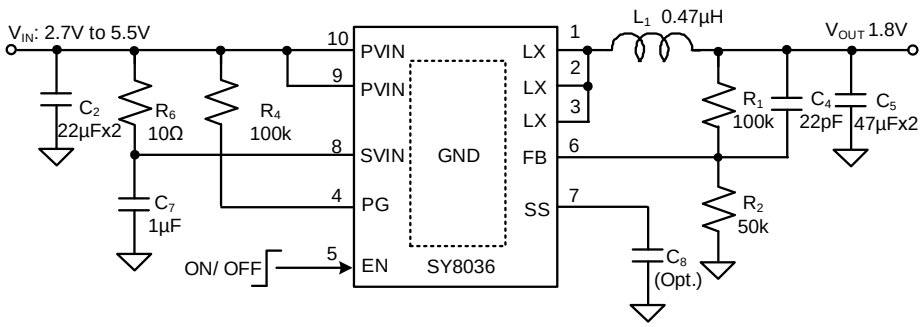
SY8036DBC - 1MHz, 5.5V/6A Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 40/30mΩ
- Input Voltage Range: 2.7-5.5V
- 1 MHz Switching Frequency Minimizes External Components
- External Adjustable Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- RoHS Compliant and Halogen Free
- Compact Package: DFN3x3-10

Applications

- LCD TV
- Access Point Router
- Notebook PC
- Server



Back

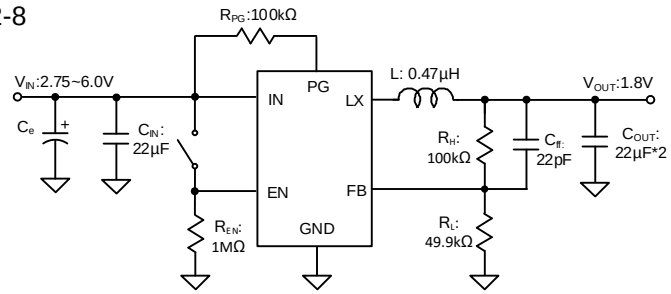
SY8816DFC -1.2MHz, 6A /6.5V Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 38/15 mΩ
- 2.7-6.5V Input Voltage Range
- 1.2 MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Up to 94% Efficiency
- 6A Continuous Output Current Capability
- Shutdown Mode Draws<0.1μA Supply Current
- 100% Dropout Operation
- Power Good Indicator
- OCP/UVLO/OTP Protections
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

- High definition Set Top Box
- LCD TV
- Notebook PC



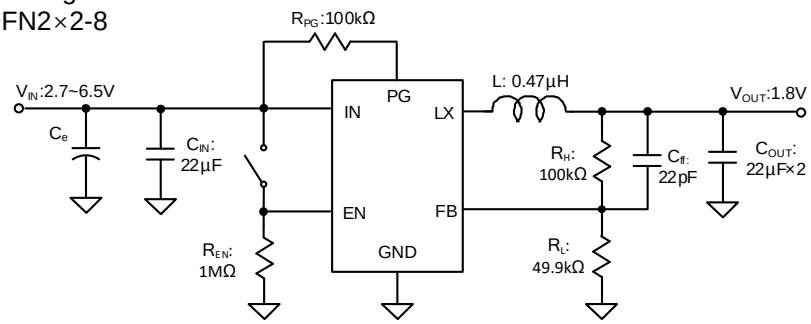
SY8876DFC - 6.5V, 6A, 1.2MHz Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 38/15 mΩ
- 2.7-6.5V Input Voltage Range
- 1.2 MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Up to 94% Efficiency
- 6A Continuous Output Current Capability
- Shutdown Mode Draws<0.1μA Supply Current
- 100% Dropout Operation
- Power Good Indicator
- OCP/UVLO/OTP Protections
- RoHS Compliant and Halogen Free
- Compact Package: DFN2×2-8

Applications

- High Definition Set Top Box
- LCD TV
- Notebook PC



Back

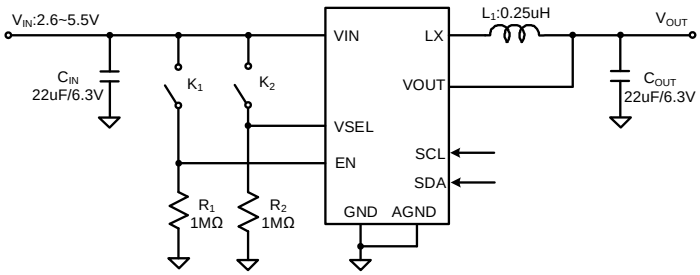
SY8827KPKC -12A, 1.5MHz, I2C Programmable, with VOUT Remote Sense Sync Buck

Features

- 2.7V to 5.5V Input Voltage Range
- Pseudo-constant Frequency: 1.5MHz
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 12mΩ/6mΩ
- Programmable Output Voltage: 0.6V to 1.5V in 10mV Steps
- 12A Continuous, 15A Peak Load Current Capability
- Capable for 0.25μH Inductor and 2×22μF Ceramic Capacitor
- PFM/PWM Operation for Optimum Increased Efficiency
- Remote Sensing at Point of Load Side
- 2 Different I^2C Address Selectable
- I^2C Interface Support 100kHz Standard Mode and 400kHz Fast Mode
- Thermal Shutdown with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x3-12

Applications

- Smart-phone
- Web-tablets



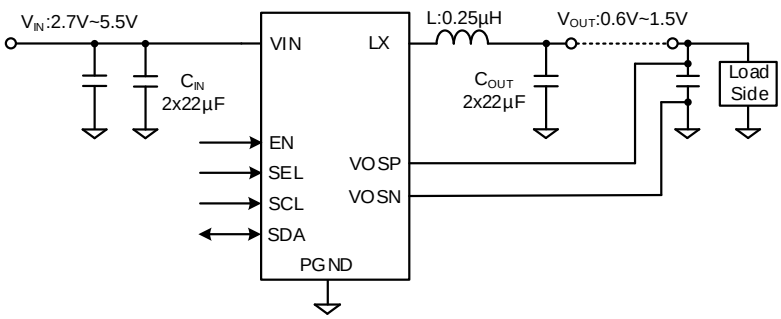
SY8810QQC - 12A, 1.5MHz, I2C Programmable, with VOUT Remote Sense Synchronous Step Down Regulator

Features

- 2.7V to 5.5V Input Voltage Range
- Pseudo-constant Frequency: 1.5MHz
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 12mΩ/6mΩ
- Programmable Output Voltage: 0.6V to 1.5V in 10mV Steps
- 12A Continuous, 15A Peak Load Current Capability
- Capable for 0.25μH Inductor and 2x22μF Ceramic Capacitor
- PFM/PWM Operation for Optimum Increased Efficiency
- Remote Sensing at Point of Load Side
- 2 Different I2C Address Selectable
- I2C Interface Support 100kHz Standard Mode and 400kHz Fast Mode
- Thermal Shutdown with Auto Recovery
- Compact Package: QFN3x3-12

Applications

- Smart-phone
- Web-tablets

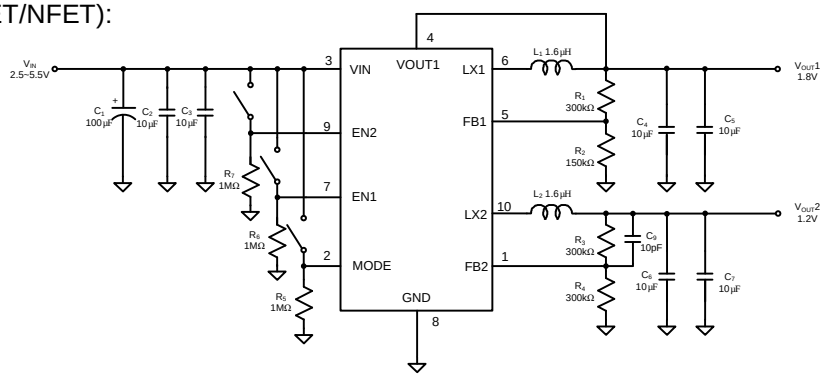


Back

SY8092ADBC - 5.5V, Dual 1A, 2MHz Sync Buck

Features

•Input range: 2.5V to 5.5V
•2MHz switching frequency
•180° out of phase operation
•Output current: 1A per channel
•+/-1% DC output voltage accuracy at forced PWM mode
•Low Quiescent Current: <35uA when both channels are enabled
•Low $R_{DS(ON)}$ for internal switches (PFET/NFET): 220mΩ/180mΩ
•Internal softstart
•100% dropout operation
•RoHS Compliant and Halogen Free
•Compact package: DFN3x3-10



Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players

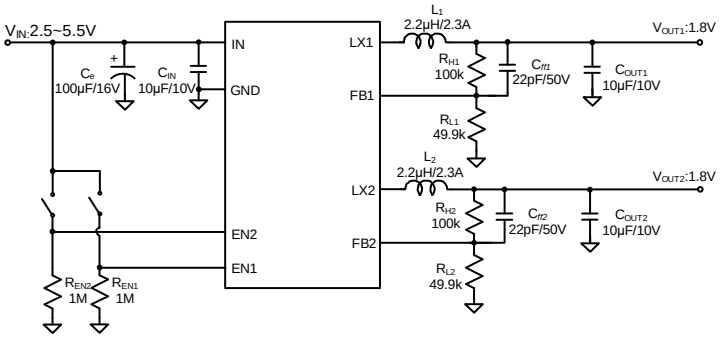
SY8831AIC - Dual 1A, 1.5MHz Sync Buck

Features

- 2.5V to 5.5V Input Voltage
- 1.5MHz Switching Frequency
- 180° Out of Phase Operation
- Output Current: 1A per Channel
- Quiescent Current: Typical 55μA for both Channels
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 260mΩ/180mΩ
- Internal Soft-start
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players



Back

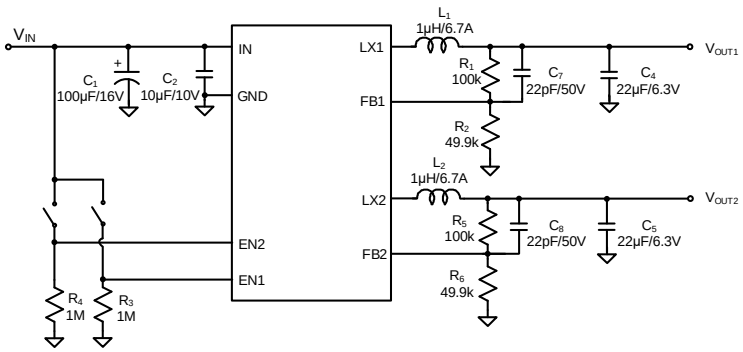
SY8832AIC - Dual 2A, 2MHz Sync Buck

Features

- 2.5V to 5.5V Input Voltage
- 2MHz Switching Frequency
- 180° Out of Phase Operation
- Output Current: 2A per Channel
- Low Quiescent Current: <45μA for Both Channels
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 125mΩ/100mΩ
- Internal Soft-start
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players



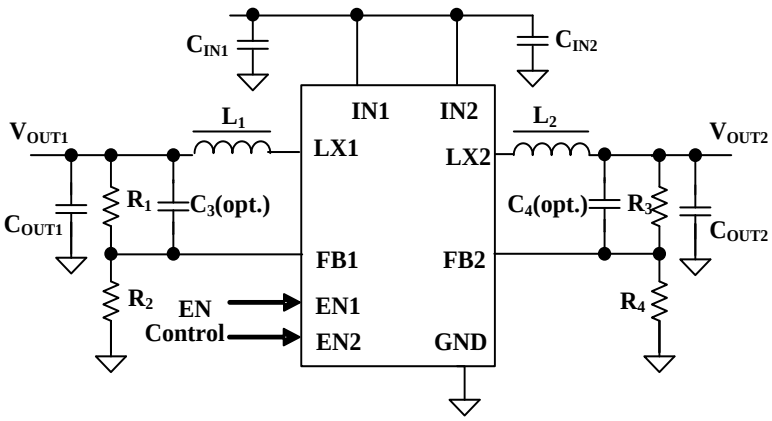
SY8024DCC - Dual 3A, 1.5MHz Sync Buck

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom): 105/85mΩ
- 2.7-5.5V input voltage range
- 1.5MHz switching frequency minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Compact and thermally enhanced package: DFN3x3-12

Applications

- WiFi Card
- LCD TV
- GPS
- Access Point Router
- Smart Phone



Back

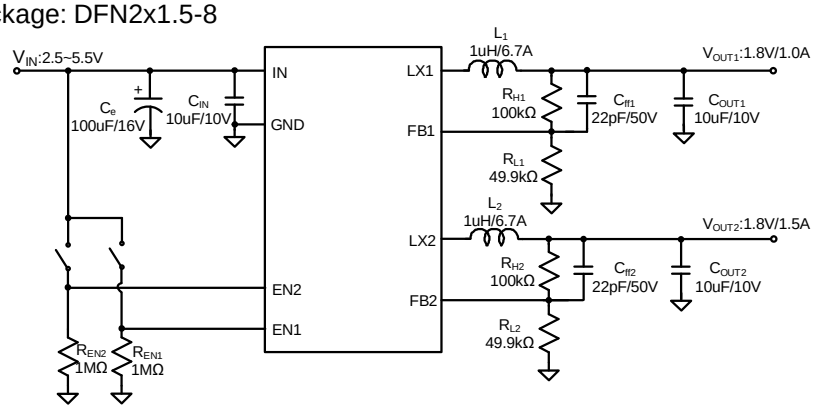
SY8821SAC - Dual 1A/1.5A, 2MHz Sync Buck

Features

- Input Range: 2.5V to 5.5V Input Voltage
- 2MHz Switching Frequency
- 180° out of Phase Operation
- Output Current: 1.0A for Channel 1
- 1.5A for Channel 2
- Low Quiescent Current: <45uA for both channels
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 125mΩ/100mΩ
- Internal soft-start
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x1.5-8

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players



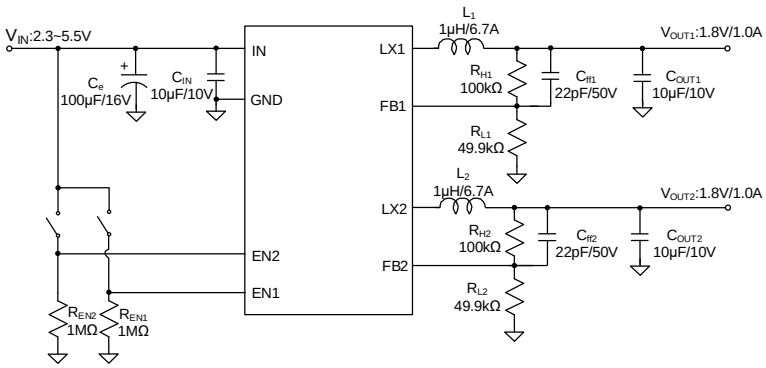
SY8821BSAC - Dual 1A, 2MHz Sync Buck

Features

- 2.3V to 5.5V Input Voltage
- 2MHz Switching Frequency
- 180° Out of Phase Operation
- Output Current: 1.0A for Each Channel
- Low Quiescent Current: Typical 45μA for
- Both Channels
- Low RDS(ON) for Internal Switches
- (PFET/NFET): 125mΩ/100mΩ
- Internal Soft-start
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x1.5-8

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players



Back

Single Output Step down (Buck) Converter VIN Max ≥ 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	V_{REF} Accuracy	Quiescent Current (μA)	MOSFET (Ron H/L) (mΩ)	SST	Temp Range	PG	Output Discharge	Feature/ Special Function	Package
SQ27000SXC	7	100	0.6	0.2~1	1.225	±2.0%	/	500/285	2ms Internal	-40°C to 125°C			FCCM, Programmable Switching Frequency Range: 200kHz ~600kHz	DFN4×4-8
SQ27000FCC	7	100	0.6	0.2~0.6	1.225	±2.0%	/	500/285	2ms Internal	-40°C to 125°C			FCCM, Programmable Switching Frequency Range: 200kHz ~600kHz	SO8E
SQ27001FCC	7	100	1	0.2~0.6	1.225	±2.0%	/	500/240	Internal	-40°C to 125°C			Programmable Switching Frequency Range: 200kHz ~600kHz	SO8E
SQ27692FCC	4.5	60	2	0.1~1	0.8	±1.0%	100	175/	2ms Internal	-40°C to 125°C	√		Hic-cup SCP	SO8E
SQ20953AIC	4.5	30	3	0.5~2.5	0.6	±3%	19	110/70	1ms Internal	-40°C to 125°C			Hic-cup SCP	TSOT23-8
SQ27403FCA	4.2	40	3.5	0.3~2.2	0.6	±2.0%	18	115/80	1ms Internal	-40°C to 105°C	√		Hic-cup SCP	SO8E
SQ27693FCP	4.5	60	3.5	0.1~2.5	0.8	±1.0%	152	95/	2ms Internal	-40°C to 125°C			Accurate Feedback Set Point: 0.8V ±1% from -40°C to 125°C	SO8E
SQ29004RHQ	5.2	18	4	2	0.6	±1.83%	75	50/25	Programmable	-40°C to 125°C	√		Programmable Soft-start	QFN2.5×2.5-16
SQ27695TOD	4.5	60	5	0.1~2.5	0.8	±1.0%	152	95/	Internal & Adjustable	-40°C to 125°C	√	√	Hiccup Mode for UVP, Asynchronous Buck	DFN4×4-10
SQ20056RAC	4	23	6	0.6	0.6	±1.0%	120	38/19	1.3ms Internal		√	√	Power Good Indicator, Hic-cup SCP, PFM/PWM	QFN3×3-20
SQ29063BWYQ	2.85	16	6	0.66/ 1.1/2.2	0.9	±1.0%	850	22.1/8.1	Programmable	-40°C to 125°C	√	√	Programmable Valley Current Limit & Soft-start, Latch-off Protection, PFM/FCCM	QFN2×3-14
SQ27506XNQ	3.5	36	6	0.3~2.3	1	±1.0%	11.5	41/21	Internal	-40°C to 125°C	√	√	Synchronization to External Clock, Spread Spectrum Function, EN On/Off Control with Accurate Threshold, Adjustable LX Rising Time	QFN3.5×4-14

Back

Single Output Step down (Buck) Converter VIN Max ≥ 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	V_{REF} Accuracy	Quiescent Current (μA)	MOSFET (Ron H/L) (mΩ)	SST	Temp Range	PG	Output Discharge	Feature/ Special Function	Package
SQ29066BWYQ	2.85	16	6	0.66/ 1.1/2.2	0.6	±1.0%	850	22.1/8.1	Programmable	-40°C to 125°C	√	√	Programmable Valley Current Limit & Soft-start, Hic-cup Protection, PFM/FCCM	QFN2×3-14
SQ29066EWYQ	2.85	16	6	0.66/ 1.1/2.2	0.6	±1.0%	850	22.1/8.1	Programmable	-40°C to 125°C	√	√	Programmable Valley Current Limit & Soft-start, Hic-cup Protection, PFM/FCCM, Optimized Discharge Logic	QFN2x3-14
SQ20058RAC	4	23	8	0.6	0.6	±1.0%	120	22/11	1.1ms Internal		√	√	Power Good Indicator, Hic-cup SCP, PFM/PWM	QFN3×3-20
SQ29047WZQ	4.5	17	12	0.4/0.8 /1.2	0.6	±1.0%	600	9.8/4.5	Internal & Adjustable	-40°C to 125°C	√	√	Power Good Indicator, pre-bias startup, FCCM/PFM	QFN3.5× 3.5-18
SQ29047BWZQ	4.5	17	12	0.4/0.8 /1.2	0.6	±1.0%	600	9.8/4.5	Internal & Adjustable	-40°C to 125°C	√	√	Power Good Indicator, pre-bias startup, FCCM/PFM, Ultra fast load transient	QFN3.5× 3.5-18
SQ29047CWZQ	4.5	17	12	0.4/0.8 /1.2	0.6	±1.0%	600	9.8/4.5	Internal & Adjustable	-40°C to 125°C	√	√	Power Good Indicator, pre-bias startup, FCCM/PFM, Low ripple voltage at PFM	QFN3.5× 3.5-18
SQ29012VDC	2.7	16	12	0.6/0.8 /1.0	0.6	±1.0%	650	12.6/4.3	Internal & Adjustable	-40°C to 125°C	√	√	Remote sense, seamless ILMT, pre-bias startup, FCCM/PFM	QFN3x4-19
SQ29068TXQ	2.7	16	12	0.6/0.8 /1.0	0.9	±1.0%	650	13.3/3.8	Internal & Adjustable	-40°C to 125°C	√	√	Remote sense, seamless ILMT, pre-bias startup, Ultra fast load transient, OSM, Output tracking, Latch off for UVP, OVP, OTP	QFN3×4-21
SQ29069TXQ	2.7	16	12	0.6/0.8 /1.0	0.6	±1.0%	650	13.3/3.8	Internal & Adjustable	-40°C to 125°C	√	√	Remote sense, seamless ILMT, pre-bias startup, Ultra fast load transient, OSM, Output tracking	QFN3×4-21
SQ29072TXQ	2.7	16	12	0.6/0.8 /1.0	0.6	±1.0%	650	12.6/4.3	Internal & Adjustable	-40°C to 125°C	√	√	Remote sense, seamless ILMT, pre-bias startup	QFN3x4-21

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Single Output Step down (Buck) Converter VIN Max ≥ 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	V_{REF} Accuracy	Quiescent Current (μA)	MOSFET (Ron H/L) (mΩ)	SST	Temp Range	PG	Output Discharge	Feature/ Special Function	Package
SQ29071TXQ	2.7	16	20	0.6/0.8 /1.0	0.6	±1.0%	650	8.6/2.5	Internal & Adjustable	-40°C to 125°C	√	√	Remote sense, seamless ILMT, pre-bias startup, Ultra fast load transient, OSM, Output tracking	QFN3×4-21
SQ29070TXQ	2.7	16	20	0.6/0.8 /1	0.9	±1.0%	650	8.6/2.5	Adjustable	-40°C to 125°C	√	√	High Efficiency 16V/20A Synchronous Step-Down Regulator, Programmable Valley Current Limit & Soft-start, Latch-off Protection	QFN3×4-21
SQ29020VDC	2.9	16	20	0.6/0.8 /1.0	0.6	±1.0%	550	7.5/2.4	Internal & Adjustable	-40°C to 125°C	√	√	Remote sense, seamless ILMT, pre-bias startup, FCCM/PFM	QFN3x4-19
SQ29080TXQ	2.9	16	20	0.6/0.8 /1.0	0.6	±1.0%	550	7.5/2.4	Internal & Adjustable	-40°C to 125°C	√	√	Remote sense, seamless ILMT, pre-bias startup, FCCM/PFM	QFN3x4-21
SQ29090VDQ	2.9	16	20	0.6/0.8 /1.0	0.6	±1.0%	550	8.6/2.5	Internal & Adjustable	-40°C to125°C	√	√	Remote sense, seamless ILMT, pre-bias startup, FCCM/PFM	QFN3x4-19
SQ29090TXQ	2.9	16	20	0.6/0.8 /1.0	0.6	±1.0%	550	8.6/2.5	Internal & Adjustable	-40°C to 125°C	√	√	Remote sense, seamless ILMT, pre-bias startup, FCCM/PFM	QFN3x4-21
SQ25821NIG	3	16	15/ per phase	0.4~ 1.8	0.4	±1.0% (Vref≥ 600mV)	4000	9/4	Adjustable	-40°C to 125°C	√	√	Stackable Dual Phase Synchronous Step-down Converter, PMBus Compatible Interface, Black-Box Function	LGA6×6-42
SQ29051DFD	4.5	18	1.5	0.75	0.8	±1.0%	140	80/40	Internal & Adjustable	-40°C to 125°C	√	√	Power Good Indicator, Auto-Recovery Protection, Cycle by Cycle Bottom and Peak Current Limit	DFN2x2-8
SQ20903QDQ (Controller)	4.5	19	/	0.5	0.6	±1.0%	1mA (max.)	/	Programmable	-40°C to 125°C	√	√	Programmable Soft-start/ Switching frequency/Over current limit, USM or FCCM	QFN3x3-16
SQ29045NDG	6	16	45	0.4/ 0.6/0.8 /1.0	0.35	±1.0%	/	3/0.9	Programmable	-40°C to 125°C	√	√	Flexible configurations via PMBus interface	LGA5x6-30

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Single Output Step down (Buck) Converter VIN Max ≥ 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8121B1ABC	4.5	18	2	1.4	0.6	±1.5%	130/105	/	SOT23-6	Hic-cup SCP, FCCM
SY8121C1ABC	4.2	18	2	1.2	0.6	±1.5%	130/105	250	SOT23-6	Hic-cup SCP
SY81057ABT	4.5	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	PFM, hic-cup UVP, auto-recovery OTP, Support smooth startup with pre-biased output
SY81057BABT	4.5	18	2	1.4	0.6	±1.5%	130/105	200	SOT23-6	FCCM mode， Auto recovery Protection, Stable with 10μF COUT
SY81057CABT	4.5	18	2	1.2	0.6	±1.5%	130/105	200	SOT23-6	PFM mode， Auto recovery Protection, Stable with 10μF COUT
SY81057EABT	4.5	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	FCCM, hic-cup UVP, auto-recovery OTP, Support smooth startup with pre-biased output
SY81057TABT	4.5	18	2	0.5	0.765	±1%	130/105	200	SOT23-6	Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit, Auto-Recovery Protection, MSL1
SY81102ABT	4.5	18	2	0.5	0.6	±1%	130/105	200	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
SY81102BABT	4.5	18	2	1.4	0.6	±1.5%	130/105	NA	SOT23-6	FCCM, Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit, Auto-Recovery Protection, Stable with 10μF C_{OUT}, MSL1
SY81102CABT	4.5	18	2	1.2	0.6	±1.5%	130/105	200	SOT23-6	Smooth Pre-bias Startup, PFM, Stable with 10μF C_{OUT}
SY81102EABT	4.5	18	2	0.5	0.6	±1%	130/105	/	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP, Forced CCM
SY81103ABT	4.5	18	3	0.5	0.6	±1.5%	80/40	200	SOT23-6	Hic-cup SCP
SY81103BABT	4.5	18	3	1.2	0.6	± 1.5%	80/40	/	SOT23-6	Smooth Pre-bias Startup, FCCM, Stable with 10μF C_{OUT}
SY81103CABT	4.5	18	3	1.2	0.6	± 1.5%	80/40	200	SOT23-6	Smooth Pre-bias Startup, PFM, Stable with 10μF C_{OUT}
SY81103EABT	4.5	18	3	0.5	0.6	±1.5%	80/40	200	SOT23-6	FCCM, hic-cup UVP, auto-recovery OTP, Support smooth startup with pre-biased output
SY8113B1ADC	4.5	18	3	1.4	0.6	±1.5%	80/40	/	TSOT23-6	Hic-cup SCP
SY8113C1ADC	4.2	18	3	1.2	0.6	±1.5%	80/40	270	TSOT23-6	Hic-cup SCP， Output Auto Discharge
SY8113E1ADC	4.5	18	3	0.5	0.6	±1.5%	80/40	/	TSOT23-6	FCCM, Hic-cup SCP
SY8113DAIC	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-8	Power Good Indicator, Hic-cup SCP, EXT SS
SY81153CART	4	18	3	1.2	0.6	±1%	65 /30	160	SOT563	MSL1,PFM, Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit Protection
SY81003EADC	4.2	18	3	0.6	0.6	± 1.0%	80/40	/	TSOT23-6	Hic-cup SCP, Output auto discharge
SY81058ABT	4.5	18	3	0.5	0.6	±1.5%	80/40	200	SOT23-6	Hic-cup SCP
SY81058EABT	4.5	18	3	0.5	0.6	±1.5%	80/40	NA	SOT23-6	MSL1, FCCM, Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit, Auto-Recovery Protection, Stable with 10μF C_{OUT}, MSL1
SY81058TABT	4.5	18	3	0.5	0.765	±1%	80/40	200	SOT23-6	Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit, Auto-Recovery Protection, MSL1
SY81104ADT	4.5	18	4	0.4	0.6	±1%	29 /19	200	TSOT23-6	MSL1,PFM, Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit Protection

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Single Output Step down (Buck) Converter VIN Max ≥ 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY81104EADT	4.5	18	4	0.4	0.6	±1%	29/19	NA	TSOT23-6	MSL1,FCCM, Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit Protection
SY81105ADT	4.5	18	5	0.4	0.6	±1%	29/19	200	TSOT23-6	Auto-Recovery Protection, Cycle by Cycle Bottom and Peak Current, Output Auto Discharge, MSL1
SY81105EADT	4.5	18	5	0.4	0.6	±1%	29/19	NA	TSOT23-6	Auto-Recovery Protection, Cycle by Cycle Bottom and Peak Current, Output Auto Discharge, MSL1
SY81106ADT	4.5	18	6	0.4	0.6	±1%	29/19	200	TSOT23-6	Auto-Recovery Protection, Cycle by Cycle Bottom and Peak Current, Output Auto Discharge, MSL1
SY81106EADT	4.5	18	6	0.4	0.6	±1%	29/19	NA	TSOT23-6	Auto-Recovery Protection, Cycle by Cycle Bottom and Peak Current, Output Auto Discharge, MSL1
SY8104IADC	4.2	18	4	0.5	0.6	±1.5%	55/36	200	TSOT23-6	Hic-cup SCP
SY8105IADC	4.5	18	5	0.5	0.6	±1.5%	41/27	250	TSOT23-6	
SY8156IADC	4.5	18	6	0.4	0.6	±1.0%	29/19	200	TSOT23-6	Output Auto Discharge, SCP
SY81050RRC	2.85	18	12	0.5/ 0.75/1/ 1.25	0.6	±1.0%	15/4.5	540	QFN3×4-14	Power Good Indicator, selectable Hic-cup/Latch-off SCP, 12A Continuous/15A Peak Current Capability, Programmable Soft-start Time
NEW SY81586SVD	4.5	18	6	0.4	0.6	±1%	29/19	200	DFN2.5×1.5-10	Auto-Recovery Protection, Cycle by Cycle Bottom and Peak Current, Output Auto Discharge, MSL1, PFM
SY81050CRRC	2.85	18	12	0.5/ 0.75/1 /1.25	0.6	±1.0%	15/4.5	540	QFN3×4-14	I^2C Selectable PFM/ FCCM, Hic-cup/Latch off for UVP and OVP, Programmable Peak and Valley Current Limit, Selectable Output Discharge
SY81012VDC	2.7	16	12	0.6/ 0.8/1	0.6	±1.0% (-40~125°C)	12.6/4.3	650	QFN3×4-19	Power Good Indicator, Remote sense, Seamless ILMT, Pre-bias startup, FCCM/PFM, Hic-cup SCP, Programmable Soft-start Time
SY81047BWZQ	4.5	17	12	0.4/0.8 /1.2	0.6	±1.0%	9.8/4.5	600	QFN3.5×3.5-18	Power Good Indicator, pre-bias startup, FCCM/PFM, Ultra fast load transient
SY81020VDC	2.9	16	20	0.6/ 0.8/1	0.6	±1.0% (-40~125°C)	7.5/2.4	550	QFN3×4-19	Power good Indicator, Remote sense, Seamless ILMT, Pre-bias startup, FCCM/PFM, Hic-cup SCP, Programmable Soft-start Time
SY8120IABC*	4.2	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	Hic-cup SCP
SY81052ABC*	4.2	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	Hic-cup SCP, Low ripple in PFM
SY8120E1ABC*	4.5	18	2	0.5	0.6	±1.5%	130/105	/	SOT23-6	FCCM, Hic-cup SCP
SY8120B1ABC*	4.5	18	2	0.5	0.6	±2.0%	130/120	400	SOT23-6	
SY8121ABC*	4.5	18	2	1	0.6	±2.0%	170/160	400	SOT23-6	
SY8121BABC*	4.35	18	2	1.2	0.6	±2.0%	170/160	/	SOT23-6	1.2MHz, FCCM
SY8121CABC*	4.5	18	2	1.2	0.6	±2.0%	130/120	400	SOT23-6	
SY8121DEC*	4.5	18	2	1	0.6	±2.0%	170/160	400	DFN2×2-6	
SY8113BADC*	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP
SY8113CADC*	4.5	18	3	1	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP
SY8113GADC*	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP, FCCM
SY8113IADC*	4.2	18	3	0.5	0.6	±1.5%	80/40	200	TSOT23-6	Hic-cup SCP

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Single Output Step down (Buck) Converter VIN Max ≥ 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8104AADC*	4.5	18	4	0.5	0.6	±1.5%	50/30	100	TSOT23-6	Instant PWM architecture
SY8104ADC*	4.5	18	4	0.5	0.6	±1.5%	50/30	100	TSOT23-6	
SY8105AADC*	4.5	18	5	0.5	0.6	±1.5%	40/20	100	TSOT23-6	Instant PWM architecture
SY8105ADC*	4.5	18	5	0.5	0.6	±1.5%	50/30	100	TSOT23-6	
SY8182QCC*	4	18	12	0.2~1	0.6	±1.0%	18/6	/	QFN4×4-20	Power Good Indicator

** Not recommended for new design*

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8232FAC	4.5	23	2	0.5	0.6	±1.5%	150/110	400	SO8	EXT SS, Hic-cup SCP
SY8233FCC	4.5	23	3	0.5	0.6	±1.5%	130/90	400	SO8E	EXT SS
SY8253ADC	4.5	23	3	0.5	0.6	±1.5%	105/50	100	TSOT23-6	Hic-cup SCP
SY8253AIC	4.5	23	3	0.5	0.6	±1.5%	105/50	100	TSOT23-8	Power Good Indicator, EXT SS, Hic-cup SCP
SY82003ABT	4.5	24	3	0.5	0.6	±1.0%	120/60	130	SOT23-6	PFM, hic-cup UVP, auto-recovery OTP, Support smooth startup with pre-biased output
SY8254RAC	4	23	4	0.6	0.6	±1.0%	85/35	130	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP,UVLO
SY8284RAC	4	23	4	0.5	0.6	±1.0%	85/35	121	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP,UVLO
SY8284BRAC	4	23	4	0.6	Fixed 3.338	±1.0%	85/35	80	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP,UVLO
SY8284CRAC	5.5	23	4	0.6	Fixed 5.1	±1.0%	85/35	115	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP,UVLO
SY8386BRHC	4.5	24	6	0.6	Fixed 3.338	±1.0%	36/18	75	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Output Discharge
SY8386CRHC	5.5	24	6	0.6	Fixed 5.1	±1.0%	36/18	130	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Output Discharge
SY8388ARHC	4	24	8	0.6	0.6	±1.0%	20/10	140	QFN2.5×2.5-16	Power Good Indicator, Hic-cup UVP, Output discharge
SY8388RHC	4.5	24	8	0.5	0.6	±1.0%	30/15	100	QFN2.5×2.5-16	Power Good Indicator, Output Discharge, Latch-off UVP/OVP
SY8388BRHC	4.5	24	8	0.6	Fixed 3.338	±1.0%	30/15	75	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY83086ARHC	4.5	24	6	0.6	0.6	±1.0%	28/16	190	QFN2.5×2.5-16	Power Good Indicator, Hic-cup SCP, Auto-recovery OVP/OTP, Selectable PFM/FCCM, up to 98% Duty Cycle
SY8388B3RHC	4	24	8	0.6	Fixed 3.338	±1.0%	20/10	85	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY8388C3RHC	5.5	24	8	0.6	Fixed 5.1	±1.5%	20/10	85	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY83088CRHC	5.5	24	8	0.6	Fixed 5.1	±1.5%	20/10	96	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY8388D3RHC	4	24	8	0.5	0.6	±1%	20/10	140	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge

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Single Output Step down (Buck) Converter VIN Max ≥ 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY83088ARHC	4	24	8	0.6	0.6	±1%	20/10	160	QFN2.5×2.5-16	On Time Stretch, Selectable PFM/FCCM, BYP Input, Current Limit Programmable, Output Discharge, Power Good Indicator, Auto-Recovery Protection
SY83088A1RHC	4	24	8	0.6	0.6	±1%	20/10	150	QFN2.5×2.5-16	Power Good Indicator, Auto recovery Protection, Output Auto Discharge
NEW SY83088JRHC	4	24	8	0.6	0.6	±1%	20/10	150	QFN2.5×2.5-16	PFM Light Load Operation Mode, Power Good Indicator, Output Auto-Discharge Function
SY8310RAC	4	24	9	0.6	0.6	±1.0%	27/9	85 in S3 125 in S0	QFN3×3-20	Power Good Indicator, 9A continuous/14A peak current capability, Latch-off UVP/OVP, ±1A Source/Sink Current Capability of the VTT LDO
SY8310DRAC	4	24	9	0.6	0.6	±1.0%	27/9	65 in S3 110 in S0	QFN3×3-20	Power Good Indicator, 9A Continuous/12A Peak Current Capability, Latch-off UVP/OVP, ±1A Source/Sink Current Capability of the VDDQ LDO
SY8371BTMC	4	24	10	0.6	Fixed 3.36	±1.0%	18/8	85	QFN3×4-13	Power Good Indicator, Latch-off Protection, Auto-discharge
SY8370C1TMC	5.5	24	11	0.6	Fixed 5.15	±1.5%	17/7.5	110	QFN3×4-13	Power Good Indicator, Latch-off UVP/OVP, Output Discharge
SY8370TMC	4	24	11	0.5	0.6	±1.0%	17/7.5	140	QFN3×4-13	Power Good Indicator, Latch-off UVP/OVP, Output Discharge
SY8370FTMC	5.5	24	11	0.6	1	±1.0%	17/7.5	180	QFN3×4-13	High Duty Cycle Capable using On-Time Stretch, Power Good Indicator, Auto-Discharge
SY8222DBC*	4.5	23	2	0.5	0.6	±1.5%	150/110	400	DFN3×3-10	Power Good Indicator, EXT SS, Hic-cup SCP
SY8203ADBC*	4.5	23	3	1	0.6	±1.5%	120/85	400	DFN3×3-10	Power Good Indicator, EXT SS
SY8223DBC*	4.5	23	3	0.5	0.6	±1.5%	120/85	400	DFN3×3-10	Power Good Indicator, EXT SS, Hic-cup SCP
SY8286RAC*	4	23	6	0.5	0.6	±1.0%	38/19	120	QFN3×3-20	Power Good Indicator, Output Auto Discharge, Latch-off Protection
SY8286ARAC*	4	23	6	0.6	0.6	±1.0%	38/19	120	QFN3×3-20	Power Good Indicator, Output Auto Discharge, Hic-cup SCP
SY8286BRAC*	4	23	6	0.6	Fixed 3.37	±1.5%	38/19	75	QFN3×3-20	Power Good Indicator, Output Auto Discharge, Latch-off Protection
SY8286CRAC*	5.5	23	6	0.6	Fixed 5.1	±1.5%	38/19	108	QFN3×3-20	Power Good Indicator, Output Auto Discharge, Latch-off Protection
SY8386ARHC*	4.5	24	6	0.6	0.6	±1.0%	38/19	100	QFN2.5×2.5-16	Power Good Indicator, Output Discharge, Hic-cup UVP
SY8386RHC*	4.5	24	6	0.5	0.6	±1.0%	38/19	100	QFN2.5×2.5-16	Power Good Indicator, Output Discharge, Latch-off UVP/OVP/OTP
SY8288ARAC*	4	23	8	0.6	0.6	±1.0%	22/11	120	QFN3×3-20	Power Good Indicator, Output Discharge, Hic-cup SCP
SY8288BRAC*	4	23	8	0.6	Fixed 3.37	±1.5%	22/11	75	QFN3×3-20	Power Good Indicator, Output Discharge, Latch-off UVP/OVP
SY8288CRAC*	5.5	23	8	0.6	Fixed 5.1	±1.5%	22/11	108	QFN3×3-20	Power Good Indicator, Output Discharge, Latch-off UVP/OVP
SY8288RAC*	4	23	8	0.5	0.6	±1.0%	30/10	105	QFN3×3-20	Power Good Indicator, Output Discharge, Latch-off UVP/OVP
SY8270TMC*	4	23	10	0.5	0.6	±1.0%	28/8	100	QFN3×4-13	Power Good Indicator, Latch-off OVP/SCP

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SY8201ABC	4.5	27	1	0.5	0.6	±2.0%	350/150	400	SOT23-6	
SY8201CABC	4.5	27	1	1.15	0.6	±2.0%	350/150	400	SOT23-6	Force CCM
SY8202ADC	4.5	28	1.7	0.5	0.6	±2.0%	350/150	400	TSOT23-6	Cycle-by-cycle Valley Current Limitation
SY82802ABT	4.5	30	2	0.6	0.6	±1%	150/115	250	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
SY82852ABT	4.5	30	2	0.6	0.6	±1%	150/115	250	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
NEW SY82852GABT	4.5	30	0.2	1.1	Fixed 3.3	±1%	160/120	/	SOT23-6	MSL1, FCCM, Fixed 3.3V Output Voltage, Auto-Recovery Protection, Cycle by Cycle Valley and Peak Current Limit Protection
SY8263AIC	4.5	30	3	0.5~2.5	0.6	±1.5%	110/70	19	TSOT23-8	Hic-cup SCP
SY8205DNC	4.5	30	5	0.5	0.6	±1.5%	70/40	200	DFN3×4-12	Power Good Indicator, EXT SS
SY8205FCC	4.5	30	5	0.5	0.6	±1.5%	70/40	200	SO8E	EXT SS
SY82806WYQ	4.5	30	6	0.5	0.6	±1.5%	40/20	120	QFN2×3-14	Power Good Indicator, Hic-cup SCP, 9A Peak current limit
SY8366QNC	4	28	6	0.8	0.6	±1.5%	40/20	100	QFN3x3-10	Power Good Indicator, Latch-off SCP/OVP, 12A Peak Current Capability, Programmable peak current limit
SY8366AQQC	4	28	6	0.8	0.6	±1.5%	40/20	100	QFN3x3-12	Power Good Indicator, Hic-cup SCP/OVP, 12A Peak current capability, programmable peak current limit
SY8366HQQC	4	28	6	0.8	0.6	±1.5%	40/20	100	QFN3×3-12	Power Good Indicator, Hic-cup SCP, 12A Peak current capability, programmable peak current limit
SY8366KQQC	4	28	6	0.5	0.6	±1.5%	40/20	100	QFN3×3-12	Power Good Indicator, Hic-cup SCP, 12A peak current capability, programmable peak current limit
SY83086RHC	4.5	24	6	0.5	0.6	±1%	28/16	190	QFN2.5×2.5-16	Power Good Indicator, Latch-off SCP/OVP/OTP, Selectable P, Programmable Current Limit
SY83086BRHC	4.5	24	6	0.6	Fixed 3.338	±1.0%	28/16	100	QFN2.5×2.5-16	Fixed 3.338V output, with 100mA 3.3V LDO, PFM/USM, latch off UVP/OVP/OTP
SY8368AQQC	4	28	8	0.8	0.6	±1.0%	20/10	100	QFN3×3-12	Power Good Indicator, Hic-cup SCP, 16A Peak current capability, programmable output current limit
SY8368LQQC	4.5	28	8	0.5	0.6	±1.0%	20/10	100	QFN3×3-12	Power Good Indicator, OVP
SY83088BRHC	4	24	8	0.6	Fixed 3.338	±1.0%	20/10	80	QFN2.5×2.5-16	Fixed 3.338V output, with 100mA 3.3V LDO, PFM/USM, latch off UVP/OVP/OTP
SY82808WYQ	4.5	30	8	0.5	0.6	±1.5% full temperature	20/10	120	QFN2×3-14	On Time Stretch, Selectable PFM/FCCM, BYP Input, Current Limit Programmable, Output Discharge, Power Good Indicator, Auto-Recovery Protection
SY83088RHC	4	24	8	0.5	0.6	±1.0%	20/10	140	QFN2.5×2.5-16	Selectable PFM/USM, BYP Input, Current Limit Programmable, Output Discharge, Power Good Indicator, Latch-off Protection
NEW SY83071BTMC	4	28	10	0.6	Fixed 3.36V	±1.0%	18/8	80	QFN3×4-13	PFM/USM Selectable Light Load Operation Mode,Power Good Indicator, Output Auto-Discharge Function
SY8213FCC*	4.5	30	3	0.5	0.6	±1.5%	80/50	200	SO8E	Power Good Indicator, EXT SS
SY8210AQVC*	4	28	10	0.6	0.6	±1.5%	25/8	300	QFN4×3-19	Power Good Indicator, Memory power, 10A VDDQ/2A VTT LDO, 16A Peak Current capability, Latch off UVP/OVP, Over temperature alert
SY8210DQVC*	4	28	10	0.6	0.6	±1.5%	25/8	300	QFN4×3-19	Power Good Indicator, Memory power, 10A VDDQ/1A VTT LDO, 16A Peak Current capability, Latch-off UVP/OVP, Over temperature alert

** Not recommended for new design*

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Single Output Step down (Buck) Converter VIN Max ≥ 7V

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8290ABC	5	40	0.3	2	0.6	±2.0%	2000/-	160	SOT23-6	
SY8301ABC	4.5	40	1	2	0.8	±1.0%	380/180	18	SOT23-6	Hic-cup SCP
SY8291ABC	5	40	1.2	0.8	0.6	±2.0%	180/-	160	SOT23-6	
SY8291FABC	9	36	1.2	0.3	0.81	±2.0%	180/-	160	SOT23-6	
SY8292ABC	5	40	2	0.8	0.6	±2.0%	180/-	160	SOT23-6	
SY8293FCC	5	40	3	0.8	0.6	±2.0%	180/-	160	SO8E	
SY8303AAIC	4.5	40	3	0.5~2.5	0.6	±1.5%	110/70	18	TSOT23-8	
SY8308RBC	4	40	8	0.35/ 0.5	0.6	±1.0%	25/12	60	QFN3.5×3.5-20	Power Good Indicator, programmable soft-start & valley current limit, hic-cup SCP, selectable switching frequency
SY8401ABC	4.5	50	0.8	1.2	0.6	±1.0%	700/-	150	SOT23-6	
SY8492FCC	4.5	60	2	0.1~1	0.8	± 1.0%	175/-	100	SO8E	Power Good Indicator, Hic-cup SCP, Adjustable Switching Frequency
SY8493FCC	4.5	60	3	0.1~0.5	0.8	±1.0%	150/-	100	SO8E	Adjustable switching frequency range: 100kHz ~500kHz, hic-cup SCP
SY89695FCP	4.5	60	5	0.5	0.8	±2.0%	95/-	152	SO8E	Adjustable Switching Frequency range: 100kHz~2500kHz
SY8502AFCC	7	85	1.2	0.2~0.5	1.2	±2.0%	500/240	/	SO8E	Programmable Switching Frequency /FCCM, 1.2A Continuous/1.8A Peak Output Current Capability
SY8502FCC	7	85	1.2	0.2~0.5	1.2	±2.0%	500/240	400	SO8E	Programmable Switching Frequency, 1.2A Continuous/1.8A Peak Output Current Capability
NEW SY8510ADC	4.5	100	0.3	0.2	1.2	±1.0%	1000/-	100	TSOT23-6	Hic-cup SCP
SY8511ADC	4.5	100	0.6	0.2	0.6	±1.0%	1000/-	100	TSOT23-6	Hic-cup SCP
SY89000FCC	7	100	0.6	0.2~0.6	1.225	±2.0%	500/285	/	SO8E	Programmable Switching Frequency
SY8501FCC	7	100	1	0.2~1	1.2	±2.0%	500/240	400	SO8E	Programmable Switching Frequency
SY89001FCC	7	100	1	0.2~0.6	1.225	±2.0%	500/240	/	SO8E	Programmable Switching Frequency
SY8511BADC	4.5	100	1.2	0.2	0.6	±1.0%	1000/-	100	TSOT23-6	Hic-cup SCP
SY8512FCC	4.5	100	2	0.1~1	0.8	± 1.0%	175/-	100	SO8E	Power Good Indicator, Hic-cup SCP, Adjustable Switching Frequency
SY8513FCC	4.5	100	3	0.1~0.5	0.8	± 1.0%	150/-	100	SO8E	Power Good Indicator, Hic-cup SCP, Adjustable Switching Frequency

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SQ27000SXC/SQ27000FCC/SQ27001FCC

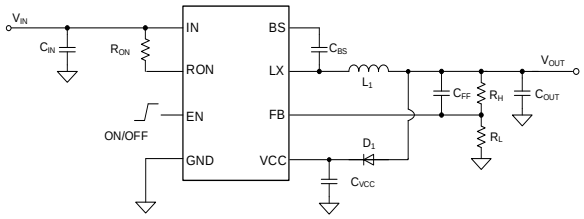
High Efficiency, 0.6A/1A, 100V Input Sync Buck

Features

- Wide Input Voltage Range: 7-100V
- Internal 500mΩ Main Switch and 285mΩ Synchronous Switch
- 0.6A Output Current Capability （SQ27000)
- 1A Output Current Capability(SQ27001)
- COT Ripple-Based Control to Achieve Fast Transient Responses
- Programmable Switching Frequency Range:
  200kHz~1MHz(SQ27000SXC) 200kHz~600kHz (SQ27000/7FCC)
- 2ms Internal Soft-start Limits the Inrush Current
- Accurate Feedback Set Point: 1.225V±2%
- Cycle-by-cycle Peak/Valley Current Limit
- Cycle-by-cycle Reverse Current Limit
- Auto Recovery for Over Temperature (OTP)
- RoHS Compliant and Halogen Free
- Compact Package DFN4×4-8 / SO8E

Applications

- Isolated Telecom Bias Supply
- Secondary High Voltage Post Regulator
- Automotive Systems



SQ27403FCA

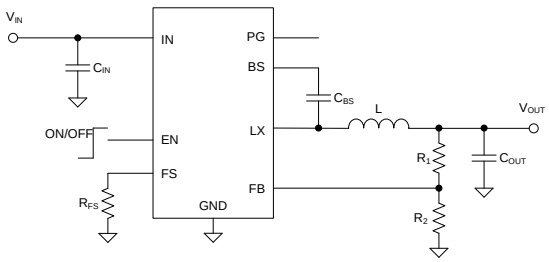
High Efficiency Fast Response, 3.5A, 40V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 115/80mΩ
- 4.2-40V Input Voltage Range
- Internal Compensation
- Internal 1ms Soft-start Limits the Inrush Current
- Adjustable Switching Frequency Range: 300kHz to 2.2MHz
- 3.5A Output Current Capability
- ±2% 0.6V Reference Over -40°C ~ 105°C
- Cycle-by-cycle Peak Current Limitation
- Short Circuit Protection
- Thermal Shutdown and Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: SO8E

Applications

- Industrial
- High-Voltage DC/DC Converters



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SQ27506XNQ

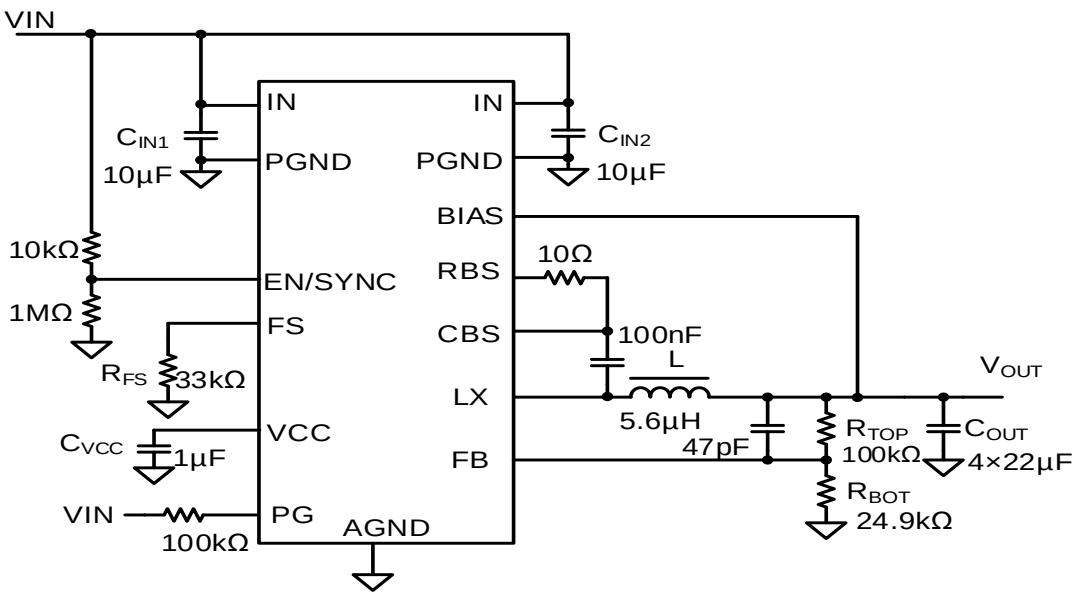
High Efficiency, 36V Input, 6A Synchronous Step-Down Regulator

Features

- 3.5V to 36V Input Voltage Range
- 6A Output Current Capability
- Low RDS(ON) for Internal Switches: 41mΩ Top, 21mΩ Bottom
- Typical 11.5μA Quiescent Current and 1μA Shutdown Current.
- 300kHz to 2.3MHz Switching Frequency
- Synchronization to External Clock
- Spread Spectrum Function
- Hiccup Mode Output Short-Circuit Protection
- EN On/Off Control with Accurate Threshold
- Cycle-by-Cycle Peak Current Limit
- Power Good Indicator
- 1V ±1% Reference Voltage Over -40˚C to 125˚C Temperature Range
- QFN3.5×4-14 Package

Applications

- Industrial
- High Voltage DC/DC Converters



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SQ20953AIC

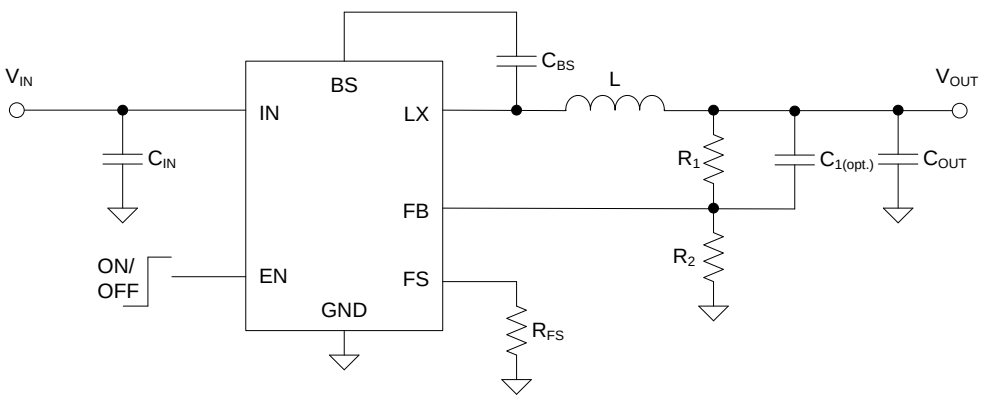
High Efficiency Fast Response, 3A, 30V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 110/70 mΩ
- 4.5-30V Input Voltage Range
- Internal Compensation
- Internal 1ms Soft-start Limits the Inrush Current
- Adjustable Switching Frequency Range: 500kHz to 2.5MHz
- 3A Output Current Capability
- 1.5% 0.6V Reference
- Low Quiescent Current
- Cycle-by-cycle Peak Current Limit
- Short Circuit Protection
- Thermal Shutdown and Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- LCD-TV
- SetTop Box
- Notebook
- Storage
- High Power AP Router
- Networking



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SQ27692FCC

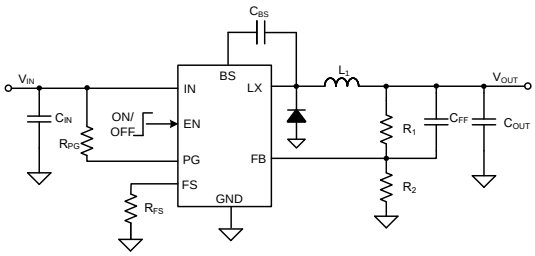
High Efficiency, 60V Input, 2A Asynchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET (TOP):175mΩ
- 4.5-60V Input Voltage Range
- 2A Output Current Capability
- Adjustable Switching Frequency Range: 100kHz to1MHz
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Output Short Circuit Protection
- EN ON/OFF Control with Accurate Threshold
- Cycle-by-cycle Peak Current Limit
- 0.8V± 1% Reference Voltage Accuracy
- Compact Package: SO8E

Applications

- Non-isolated Telecommunication Buck
- Secondary High Voltage Post Regulator
- Automotive Systems
- Electric Bicycle



SQ27693FCP

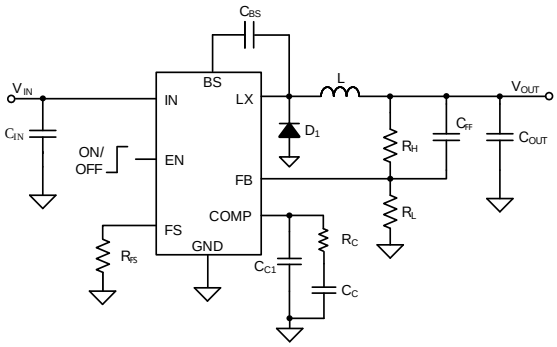
High Efficiency, 60V Input, 3.5A Asynchronous Step Down Regulator

Features

- Wide Input Voltage Range: 4.5V ~ 60V
- Output Current Capability: 3.5A
- Low $R_{DS(ON)}$ for Internal N-channel Power FET(TOP): 95mΩ
- Accurate Feedback Set Point: 0.8V ±1% from -40℃ to 125℃
- Adjustable Switching Frequency: 100kHz to 2500kHz
- High Efficiency at Light Loads with Pulse Skipping Mode
- Cycle by Cycle Peak Current Limit Protection
- Automatic Recovery for UVLO, OVP and OTP Conditions
- Hiccup Mode for UVP Condition
- Compact Package: SO8E

Applications

- 5G AAU/RRU
- Industrial
- High-Voltage DC-DC Converters



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SQ29004RHQ

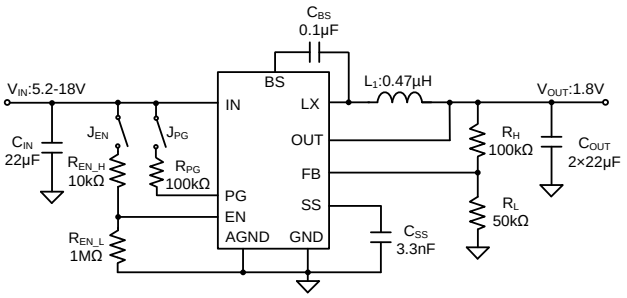
High Efficiency, 2.0MHz, 4A Synchronous Step Down Regulator

Features

- 5.2V to 18V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 50mΩ/25mΩ
- High Switching Frequency 2.0MHz Minimizes the External Components
- 75μA Operating Quiescent Current
- Power Good Indicator
- Power Save Mode for Light Load Efficiency
- Reliable Protection Mode: Auto-recovery Mode for UVLO, UVP, OTP
- Cycle-by-cycle Valley Current Limit and Peak Current Limit
- Programmable Soft-start
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5x2.5-16

Applications

- Server and Data-center



SQ20056RAC

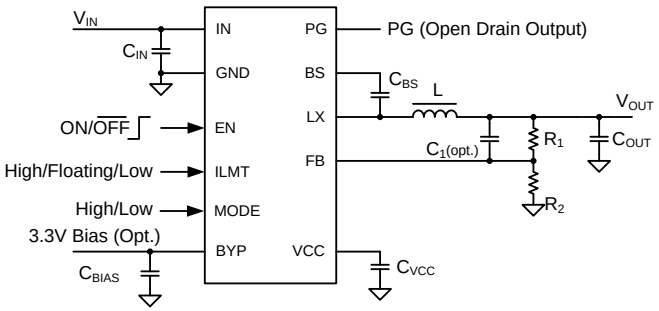
High Efficiency Fast Response 6A, 23V Input Sync Buck

Features

- Low $_{RDS(ON)}$ for Internal Switches (Top/Bottom): 38/19 mΩ
- Wide Input Voltage Range: 4-23V
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal 1.3ms Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- 6A Output Current Capability
- ±1% Internal Reference Voltage
- PFM/PWM Selectable Light Load Operation Mode
- Optional Bypass Input
- Power Good Indicator
- Output Discharge Function
- Output Current Limit Protection
- Hiccup Mode Output Short Circuit Protection
- Output Over Voltage Protection
- Input UVLO
- Over Temperature Protection with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN3×3-20

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP



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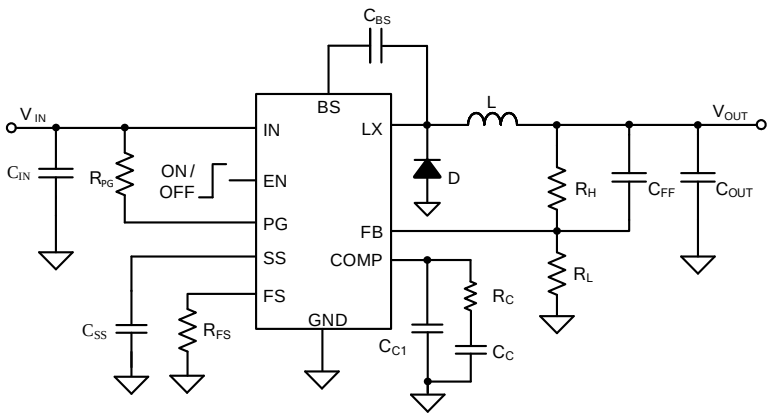
SQ27695TOD

Features

- Wide Input Voltage Range: 4.5V ~ 60V
- Output Current Capability: 5A
- Low RDS(ON) for Internal N-Channel Power FET (TOP): 95mΩ
- Accurate Feedback Set Point: 0.8V ±1% from -40°C to 125°C
- Adjustable Switching Frequency: 100kHz to 2500kHz
- High Efficiency at Light Loads with Pulse Skipping Mode
- Cycle by Cycle Peak Current Limit Protection
- Automatic Recovery for UVLO, OVP and OTP Conditions
- Hiccup Mode for UVP Condition
- Internal and Adjustable Soft-Start Limits Inrush Current
- Power Good Output Monitor for Under-Voltage and Over-Voltage
- Compact Package: DFN4×4-10

Applications

- 5G AAU/RRU
- Industrial
- High-Voltage DC-DC Converters



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SQ29066BWYQ/SQ29063BWYQ/SQ29066EWYQ

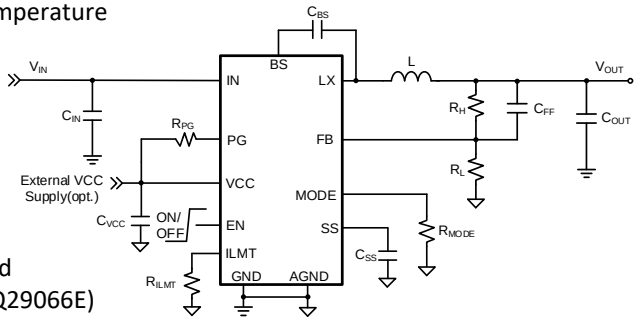
High Efficiency, 16V/6A Sync Buck

Features

- Wide Input Voltage Range:
  - 2.85V to 16V if VCC is Supplied by External Source
  - 3.6V to 16V if VCC is Supplied by Internal LDO
- Internal 22.1mΩ Power Switch and 8.1mΩ Synchronous Rectifier
- ±1% Reference Voltage Over -40°C to +125°C Junction Temperature Range
- Instant-PWM™ Provides Fast Transient Response
- 660kHz, 1100kHz and 2200kHz Operating Frequency
- Selectable PFM/FCCM Operation
- Programmable Valley Current Limit
- Reliable Built-in Protections:
  - Cycle-by-cycle Valley and Peak Current Limit (OCP)
  - Cycle-by-cycle Reverse Current Limit if FCCM is Selected
  - Automatic Recovery for Output Over-voltage (OVP) (SQ29066E)
  - Latch off for Output Over-voltage (OVP), Output Under-voltage (UVP), Over-temperature (OTP) conditions and after 32 Consecutive Cycles Valley Current Limit Protection(SQ29063B, SQ29066E)
  - Hic-cup Mode after 32 Consecutive Cycles Valley Current Limit Protection(SQ29066B, SQ29066E)
- Pre-biased Startup
- Power Good Indicator

Applications

- Telecom and Networking Systems
- Servers
- High Power AP



SQ20058RAC

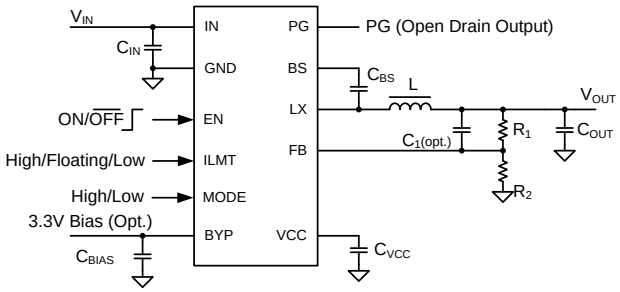
High Efficiency Fast Response 8A, 23V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 22 mΩ /11 mΩ
- Wide Input Voltage Range: 4~23V
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal 1.1ms Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- 8A Output Current Capability
- ±1% Internal Reference Voltage
- PFM/PWM Selectable Light Load Operation Mode
- Optional Bypass Input
- Power Good Indicator
- Output Discharge Function
- Output Current Limit Protection
- Hiccup Mode Output Short Circuit Protection
- Output Over Voltage Protection
- Input UVLO
- Over Temperature Protection with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN3×3-20

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP



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SQ29047WZQ

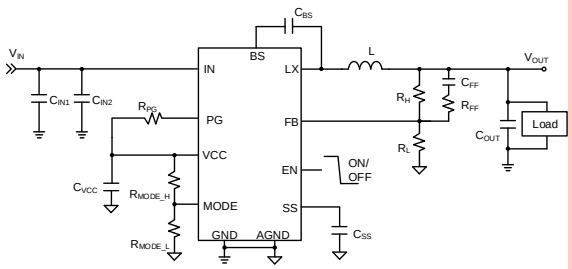
High Efficiency, 17V/12A Sync Buck

Features

- Wide Input Voltage Range: 4.5-17V
- Internal 9.8mΩ Power Switch and 4.5mΩ Synchronous Rectifier
- Accurate Feedback Set Point: 0.6V ±1%
- Fast Transient Response
- Selectable 400kHz, 800kHz and 1200kHz Operating Frequency
- Selectable Automatic High-efficiency Discontinuous Operating Mode at Light Loads
- Selectable Valley Current Limit
- Reliable Built-in Protections:
  - ➢ Automatic Recovery for Input Under-voltage (UVLO), Output Under-voltage (UVP), Output Over-voltage (OVP) and Over-temperature (OTP) Conditions
  - ➢ Cycle-by-cycle Valley and Peak Current Limit (OCP)
  - ➢ Cycle-by-cycle Reverse Current Limit
- Internal, Adjustable Soft-Start Limits Inrush Current
- Smooth Pre-biased Startup
- Power Good Output Monitor for Under-voltage and Over-voltage

Applications

- Telecom and Networking Systems
- Servers



SQ29047BWZQ/SQ29047CWZQ

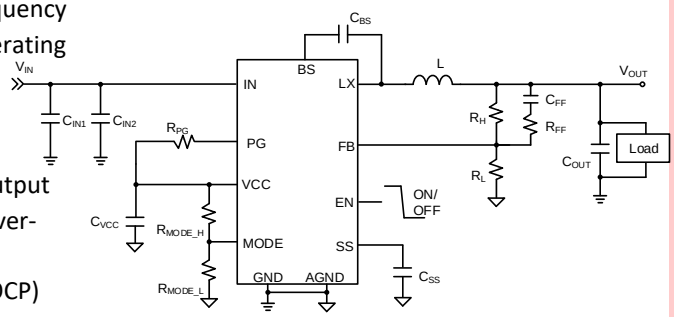
High Efficiency, 16V/12A Sync Buck

Features

- Wide Input Voltage Range: 4.5-17V
- Internal 9.8mΩ Power Switch and 4.5mΩ Synchronous Rectifier
- Accurate Feedback Set Point: 0.6V ±1%
- Fast Transient Response
- Selectable 400kHz, 800kHz and 1200kHz Operating Frequency
- Selectable Automatic High-efficiency Discontinuous Operating Mode at Light Loads
- Selectable Valley Current Limit
- Reliable Built-in Protections:
- Automatic Recovery for Input Under-voltage (UVLO), Output Under-voltage (UVP), Output Over-voltage (OVP) and Over-temperature (OTP) Conditions
- Cycle-by-cycle Reverse, Valley and Peak Current Limit (OCP)
- Internal, Adjustable Soft-Start to limit Inrush Current
- Smooth Pre-biased Startup
- Power Good Output Monitor for Under-voltage and Over-voltage

Applications

- Telecom and Networking Systems
- Servers



Back

SQ29068TXQ/SQ29069TXQ

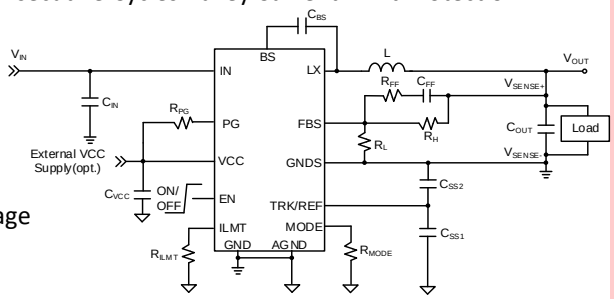
High Efficiency, 16V/12A Sync Buck

Features

- Wide Input Voltage Range:
- 2.7V to 16V if VCC is Supplied by External Source
- 3.6V to 16V if VCC is Supplied by Internal LDO
- Internal 13.3 mΩ Power Switch and 3.8mΩ Synchronous Rectifier
- Accurate Feedback Setpoint: ±1% from -40°C to 125°C
- Remote Sensing at Point of Load Side
- Ultra-Fast Load Transient Response
- Selectable 600kHz, 800kHz, and 1000kHz Switching Frequency
- Selectable Automatic High Efficiency Discontinuous Operating Mode at Light Loads
- Programmable Valley Current Limit
- Reliable Built-In Protections:
- Automatic Recovery for Input Undervoltage (UVLO)
- SQ29068 Latch-Off, SQ29069 Automatic Recovery for Output Undervoltage (UVP) and Overtemperature (OTP) Conditions
- SQ29068 Latch-Off Mode, SQ29069 Hiccup Mode after 32 Consecutive Cycles Valley Current Limit Protection
- Latch-Off for Output Overvoltage Condition(OVP)
- Cycle-by-Cycle Reverse, Valley, and Peak Current Limit (OCP)
- Internal and Adjustable Soft-Start to Limit Inrush Current
- Smooth Startup with Pre-Biased VOUT
- Output Voltage Tracking
- Output Sinking Mode
- Power-Good Output Monitor for Undervoltage and Overvoltage

Applications

- Telecom and Networking Systems
- Servers
- High Power Access Points
- Storage Systems
- Cellular Base Station



SQ29012VDC/SQ29072TXQ

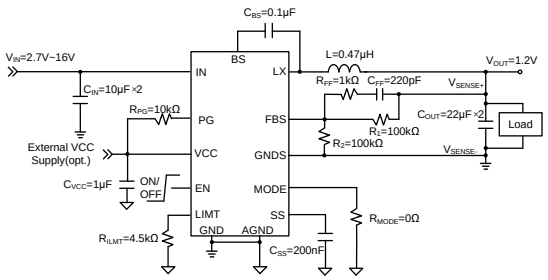
High Efficiency, 16V/12A Sync Buck

Features

- Wide Input Voltage Range:
  - 2.7V to 16V if VCC is Supplied by External Source
  - 3.6V to 16V if VCC is Supplied by V_{IN}
- Internal 12.6mΩ Power Switch and 4.3mΩ Synchronous Rectifier
- Accurate Feedback Set Point: 0.6V ±1%
- Differential Remote Sense
- Fast Transient Response
- 600kHz, 800kHz and 1000kHz Operating Frequency
- Selectable Automatic High-efficiency Discontinuous Operating Mode at Light Loads
- Programmable Peak Current Limit
- Reliable Built-in Protections:
  - Automatic Recovery for Input Under-voltage (UVLO), Output Under-voltage (UVP) and Over-temperature (OTP) Conditions
  - Cycle-by-cycle Valley and Peak Current Limit (OCP)
  - Cycle-by-cycle Reverse Current Limit
- Internal and Adjustable Soft-start to Limits Inrush Current
- Smooth Pre-biased Startup
- Power Good Output Monitor for Under-voltage and Over-voltage
- Package:QFN3*4-19(SQ29012VDC)
  QFN3*4-21(SQ29072TXQ)

Applications

- Telecom and Networking Systems
- Servers
- High Power Access Points
- Storage Systems
- Cellular Base Stations



Back

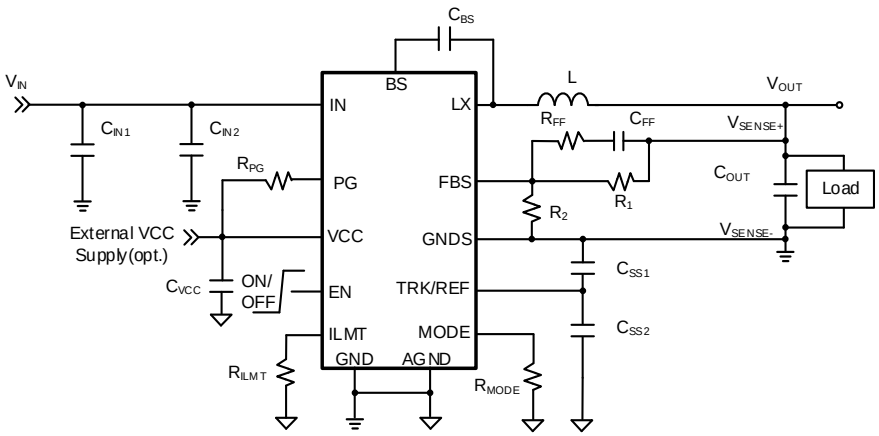
SQ29071TXQ/SQ29070TXQ

Features

- Wide Input Voltage Range:
  - 2.7V to 16V if VCC is Supplied by an External Source
  - 3.6V to 16V if VCC is Supplied by Internal LDO
- Internal 8.6mΩ Power Switch and 2.5mΩ Synchronous Rectifier
- Accurate Feedback Setpoint: ±1% from -40°C to 125°C
- Remote Sensing at Point of Load Side
- Ultra-Fast Load Transient Response
- Selectable 600kHz, 800kHz, and 1000kHz Switching Frequency
- Selectable Automatic High Efficiency Discontinuous Operating Mode at Light Loads
- Programmable Valley Current Limit
- Reliable Built-In Protections:
  - Automatic Recovery for Input Undervoltage (UVLO)
  - SQ29070 Latch-Off, SQ29071 Automatic Recovery for Output Undervoltage (UVP) and Overtemperature (OTP) Conditions
  - SQ29070 Latch-Off Mode, SQ29071Hiccup Mode after 32 Consecutive Cycles Valley Current Limit Protection
  - Latch-Off for Output Overvoltage Condition(OVP)
  - Cycle-by-Cycle Reverse, Valley, and Peak Current Limit(OCP)
- Internal and Adjustable Soft-Start to Limit Inrush Current
- Smooth Startup with Pre-Biased VOUT
- Output Voltage Tracking
- Output Sinking Mode
- Power-Good Output Monitor for Undervoltage and Overvoltage

Applications

- Telecom and Networking Systems
- Servers
- High Power Access Points
- Storage Systems
- Cellular Base Stations



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SQ29020VDC/SQ29080TXQ/SQ29090VDQ/SQ29090TXQ

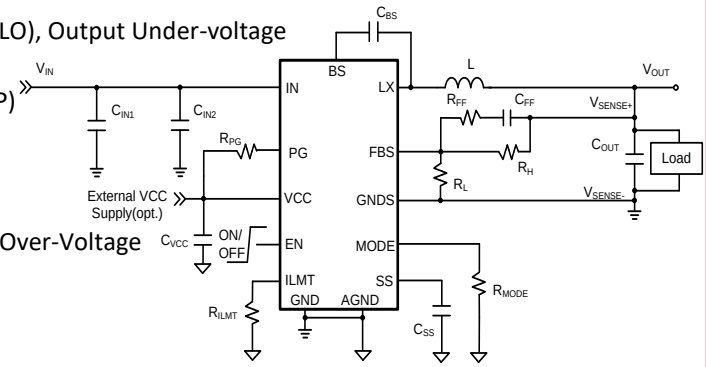
High Efficiency, 16V/20A Sync Buck

Features

- Wide Input Voltage Range: 3.6-16V, and as Low as 2.9V with External VCC Applied
- SQ29020/SQ29080: Internal 7.5mΩ Power Switch and 2.4mΩ Synchronous Rectifier
- SQ29090: Internal 8.6mΩ Power Switch and 2.5mΩ Synchronous Rectifier
- Accurate Feedback Set Point: 0.6V ±1%
- Differential Remote Sense
- Fast Transient Response
- 600kHz, 800kHz and 1000kHz Operating Frequency
- Selectable Automatic High-Efficiency Discontinuous Operating Mode At Light Loads
- Programmable Valley Current Limit
  - ➢ Automatic Recovery for Input Under-voltage (UVLO), Output Under-voltage (UVP) and Over-temperature (OTP) Conditions
  - ➢ Cycle-by-cycle Valley and Peak Current Limit (OCP)
  - ➢ Cycle-by-cycle Reverse Current Limit
- Internal, Adjustable Soft-Start Limits Inrush Current
- Smooth Pre-Biased Startup
- Power Good Output Monitor for Under-Voltage and Over-Voltage
- Package:QFN3*4-19(SQ29012VDC/SQ29090VDQ)
  QFN3*4-21(SQ29072TXQ/SY2160TXQ)

Applications

- Telecom and Networking Systems
- Servers
- High Power Access Points
- Storage Systems
- Cellular Base Stations



SQ29051DFD

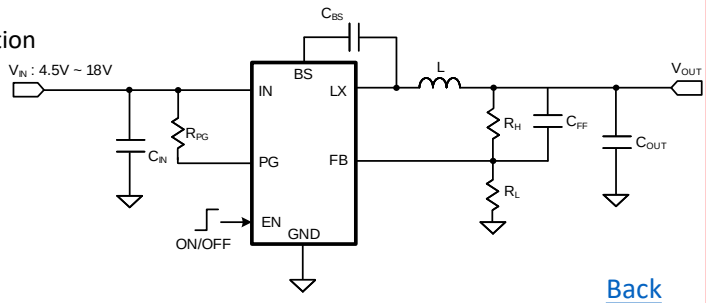
High Efficiency, 18V/1.5A Sync Buck

Features

- Low RDS(ON) for Internal MOSFETs: 80mΩ Top, 40mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 1.5A Output Current
- ±1.5% Reference Accuracy
- Internal Soft-Start Limits the Inrush Current
- 750kHz Switching Frequency
- Constant On-Time and Valley Current Control to Achieve Fast Transient Response.
- Cycle-by-Cycle Peak and Valley Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- Startup from Pre-Biased Output
- Power Good Indicator
- RoHS Compliant and Halogen Free
- MSL Rating: MSL1 (DFN2x2-8)

Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



Back

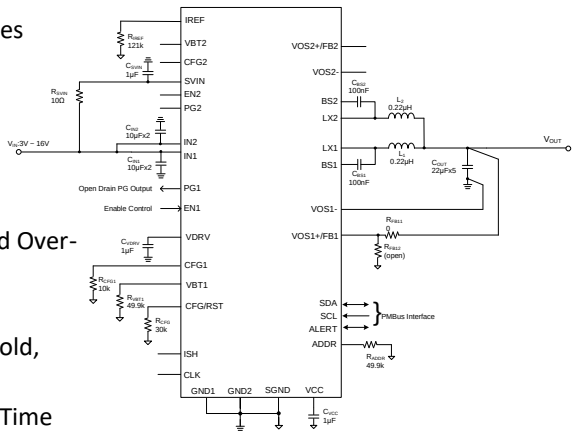
SQ25821NIG High Efficiency 16V Input, 15A, Dual Phase Stackable Sync Buck

Features

- Wide Input Voltage Range:
  - 4V to 16V if VCC and VDRV are Supplied by Internal LDO
  - 3V to 16V if VCC and VDRV are Supplied by External 3.3V DC Source
- Low RDS(ON) for Internal Switches (Top FET/Bottom FET): 9/4mΩ
- 0.6V ±1% Reference Voltage Over Temperature Range (TJ = -40°C to 125°C)
- Selectable 1-, 2-, or 4 (Two Devices Paralleled) Interleaved Phases Shifts
- Accurate Current Sharing
- Power Good Indicator
- Fast Transient Response
- Differential Output Voltage Remote Sense
- Fully Protected for Short Circuit, Over Voltage, Over Current and Over-Temperature
- PMBus Compatible Interface
- Programmable Output Voltage (0.4V to 6V), Input UVLO Threshold, Output Current Limit, OVP/UVP Threshold and Response
- Programmable ton rise / toff fall Time, Turn-on/ Turn-off Delay Time
- Selectable Switching Frequency (400kHz~1800kHz, 200kHz/step)
- Phase Number, PFM/FCCM Light Load Operation Mode Selected
- Real-Time Detection of Input Voltage, Output Voltage, Current, Temperature and Faults
- RoHS Compliant and Halogen Free
- Compact package: LGA6x6-42

Applications

- Power Module
- Telecom and Networking Systems
- Servers
- Storage SSD



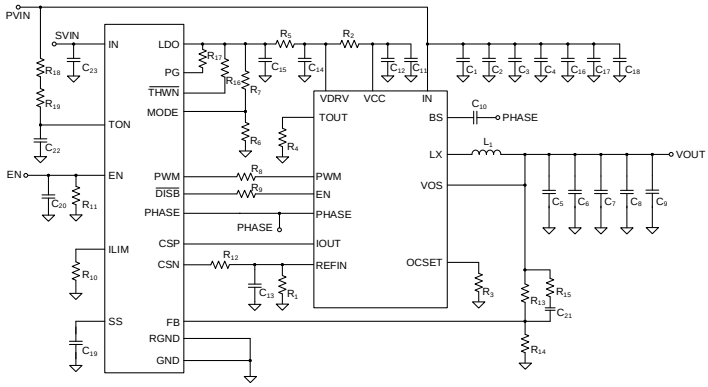
SQ20903QDQ High-efficiency and High-current Sync Buck

Features

- 4.5V to 19V Input Voltage Range
- 0.6V Reference with ±1% Accuracy from -40oC to 125oC
- Instant PWM Architecture to Achieve Fast Transient Responses
- Integrated 5V LDO@100mA for DrMOS Module
- Startup with Pre-bias Voltage
- Programmable Soft-start
- Programmable Switching Frequency
- Programmable Over Current Limit
- Power Good Indication
- Over Temperature Protection
- OVP, UVP, UVLO Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN3×3-16

Applications

- Base Stations
- Telecom and Networking Systems



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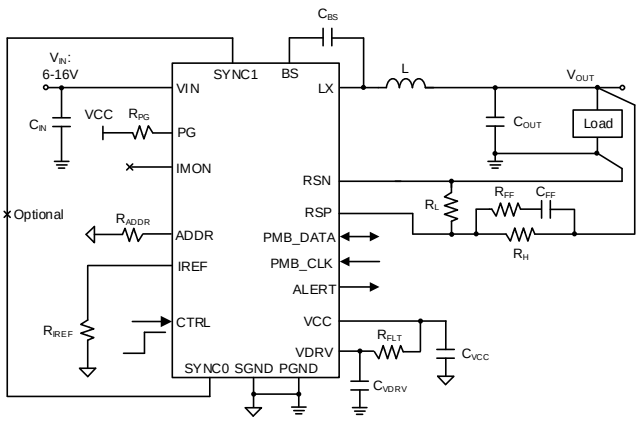
SQ29045NDG High Efficiency 16V Input, 45A, Dual Phase Stackable Sync Buck

Features

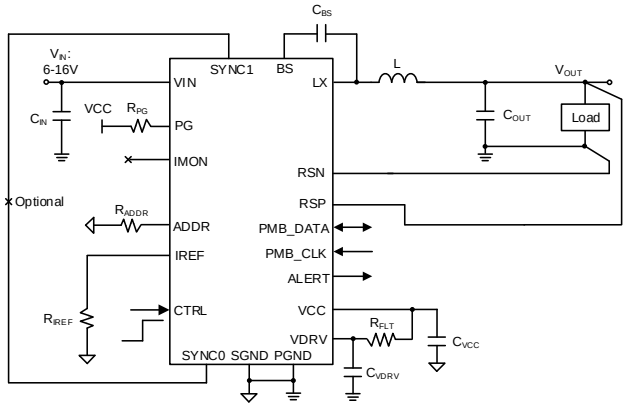
- Wide Input Voltage Range: 6V to 16V
- Adjustable Output Voltage with Wide Voltage Range:
  - 0.6V to 5.5V via External Resistor Divider while operates in External Resistor Divider Mode
  - 0.35V to 5.5V with Programmable PMBus Interface while operates in Internal Resistor Divider Mode
- 40A Continuous, 45A Peak Output Current Capacity
- Accurate Feedback Set Point: ±1%@0.6V,T_J= 40°C to 125°C
- Low $R_{DS(ON)}$ for Internal Switches (top/bottom): 3.0mΩ/0.9mΩ
- Differential Remote Sense
- Proprietary Advanced COT Control For Fast Transient Response
- Startup with Pre-biased Voltage
- Input/Output Voltage, Output Current and Internal Die Temperature Reporting
- Programmable via the PMBus Interface
  - Output Voltage From 0.35V to 5.5V and Vout Transition Rate
  - Switching Frequency of 400kHz /600kHz /800kHz /1MHz
  - Pulse-Skip or Forced-CCM Operation
  - Soft-start and Turn On/Off Delay Time
  - Input Under-voltage lockout (UVLO),Output current limit, Input/Output Over-voltage protection and Output Under-voltage protection(UVP) threshold
  - Cycle-by-cycle Valley, Peak and Reverse Current Limit
  - Selectable Hic-cup/Latch-off Mode for Output Over-current protection(OCP) and Under-voltage Protection.
  - Selectable Auto Recovery/Latch-off Mode for Output Over-voltage protection(OVP) and Over Temperature Protection(OTP)
  - Power Good Indicator for Under-Voltage and Over-Voltage
- RoHS Compliant and Halogen Free Compact Package: LGA5×6-30

Applications

- Telecom
- Servers
- Base Stations



(a) External Resistor Divider Operation Schematic



(b) Internal Resistor Divider Operation Schematic

Back

SY8121B1ABC

Features

- 4.2-18V Input Voltage Range
- 2A Output Current Capability
- 500kHz Switching Frequency Minimize the External Components
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- SY8120E1ABC: Forced PWM Operation
- Cycle-by-cycle Peak/Valley Current Limitation
- Hic-cup Mode Output Short Circuit Protection
- Thermal Shutdown with Auto Recovery
- Compact Package SOT23-6

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP CAM
- Networking

SY8121C1ABC

Features

- 4.2V to 18V Input Voltage Range
- Up to 2A Output Current
- Quiescent Current IQ: 200 μA (typ.)
- Shutdown Current ISHDN: 5 μA (typ.)
- SY8121C1ABC: 1.2MHz
- Constant-On-Time and Ripple-Based Control
- Instant-PWM Architecture to Achieve Fast Transient Responses
- Cycle-by-Cycle Peak/Valley Current Limits
- Internal Soft-Start Limits the Inrush Current
- Hiccup Mode for Short-Circuit Protection
- Thermal Shutdown with Auto-Recovery
- Output Auto-Discharge Function
- Compact Package: DFN2x2-6/SOT23-6

SY81103ABT/SY81103EABT/SY81103CABT/SY81103BABT

- 3A, 18V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 80mΩ Top, 40mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 3A Output Current
- ±1.5% 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81103 and SY81103C
- Forced Continuous Conduction Mode (FCCM) Operation for SY81103E and SY81103B
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components for SY81103 and SY81103E
- 1200kHz Switching Frequency Minimizes the External Components for SY81103C and SY81103B
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF C_{OUT}
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking

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SY81102ABT/SY81102BABT/SY81102CABT/SY81102EABT

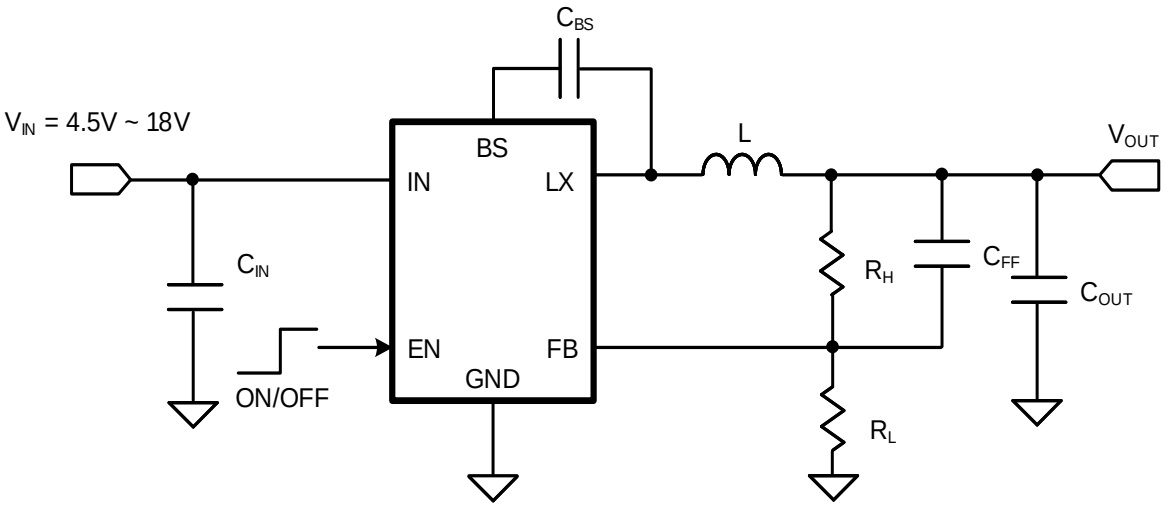
- High Efficiency, 2A, 18V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 130mΩ Top, 105mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 2A Output Current
- ±1.5% 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81102 and SY81102C
- Forced Continuous Conduction Mode (FCCM) Operation for SY81102E and SY81102B
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components for SY81102 and SY81102E
- 1200kHz Switching Frequency Minimizes the External Components for SY81102C
- 1400kHz Switching Frequency Minimizes the External Components for SY81102B
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF COUT
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



Back

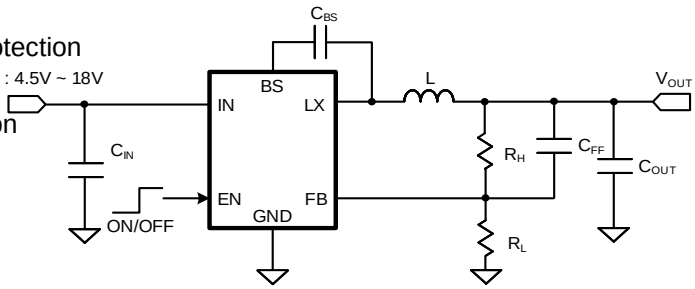
SY81058ABT/SY81058EABT - High Efficiency, 500kHz, 3A, 18V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 80mΩ Top, 40mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 3A Output Current
- ±1.5% 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81058
- Forced Continuous Conduction Mode (FCCM) Operation for SY81058E
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10µF COUT
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



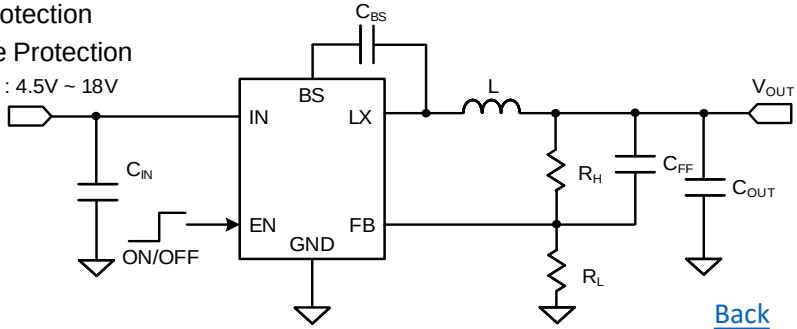
SY81058TABT - High Efficiency, 3A, 18V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 80mΩ Top, 40mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 3A Output Current
- ±1% 0.765V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6
- MSL Rating: MSL1 (SOT23-6)

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



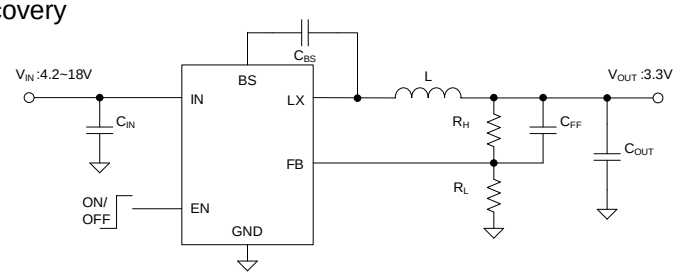
Back

SY8113B1ADC/SY8113C1ADC/SY8113E1ADC/SY81003EADC

- 3A, 18V Input Sync Buck

Features

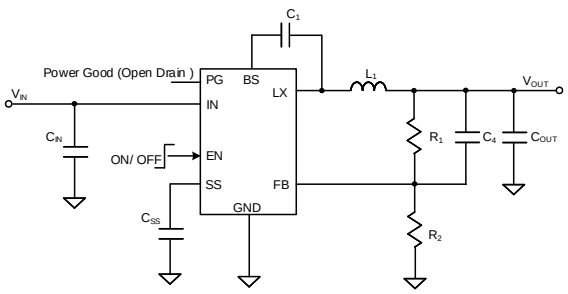
- 4.2V to 18V Input Voltage Range
- Up to 3A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 80mΩ Top, 40mΩ Bottom
- **SY81003EADC-600kHz**
- **SY8113B1ADC-** 1.4MHz
- **SY8113C1ADC-** 1.2MHz
- **SY8113E1ADC-** 500kHz
- **SY8113B1ADC-** Forced PWM Operation
- **SY8113C1ADC/SY8113E1ADC**-Instant PWM Architecture to Achieve Fast Transient Responses
- Cycle-by-Cycle Peak/Valley Current Limits
- Internal Soft-Start Limits the Inrush Current
- **SY81003EADC-**Startup from Pre-biased Output
- Hiccup Mode Output Short-Circuit Protection
- Overtemperature Protection with Auto-Recovery
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-6



SY8113DAIC - High Efficiency, 500kHz, 3A, 18V Input Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 80mΩ/40mΩ
- 4.5-18V Input Voltage Range
- 3A Output Current Capability
- 500KHz Switching Frequency
- Instant PWM Architecture to Achieve Fast Transient Responses
- Cycle-by-cycle Current Limitation
- Hic-cup Mode Short Circuit Protection
- Power Good Indicator
- Programmable Soft-start Time to Limit the Inrush Current
- ±1.5% 0.6V Reference
- Thermal Shut Down With Auto-recovery
- RoHS Compliant and Halogen Free
- TSOT23-8 Package



Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking

Back

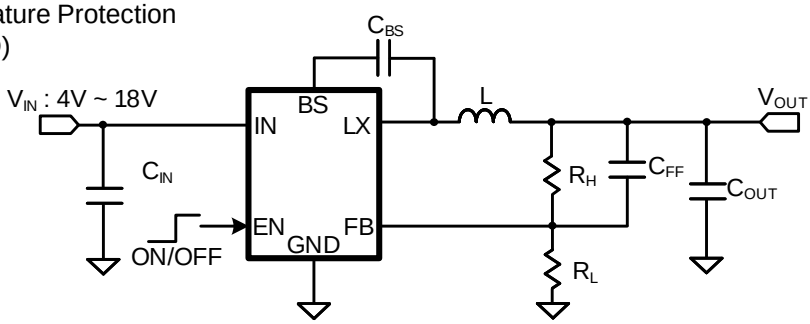
SY81153CART - 3A, 18V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 65mΩ Top, 30mΩ Bottom
- Wide Input Voltage Range: 4V ~ 18V
- Up to 3A Output Current
- Precise ±1% 0.6V Reference under -40° C~125° C
- Precise EN Threshold
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 1200kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT563
- Moisture Sensitivity Level (MSL): 1

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



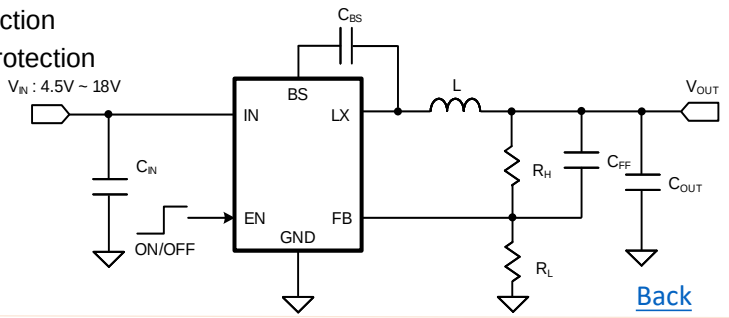
SY81103BABT/SY81103CABT - **3A, 18V Input Sync Buck**

Features

- Low RDS(ON) for Internal MOSFETs: 80mΩ Top, 40mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 3A Output Current
- ±1.5% 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81103 and SY81103C
- Forced Continuous Conduction Mode (FCCM) Operation for SY81103E and SY81103B
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components for SY81103 and SY81103E
- 1200kHz Switching Frequency Minimizes the External Components for SY81103C and SY81103B
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10µF COUT
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



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4A, 18V Input Sync Buck

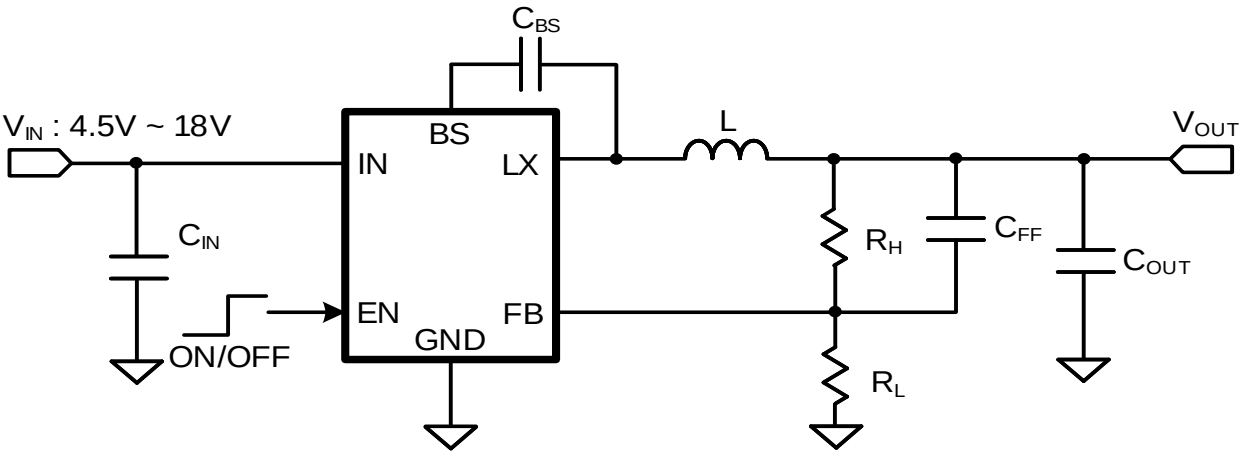
SY81104ADT/SY81104EADT/SY81105ADT/SY81105EADT/SY81106ADT/SY81106EADT

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 29mΩ Top, 19mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 4A(SY81104,E)/ 5A(SY81105,E)/ 6A(SY81106,E) Output Current
- ±1% 0.6V Reference
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81104, 5, 6
- Forced Continuous Conduction Mode (FCCM) Operation for SY81104E, 5E , 6E
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 400kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-6
- Moisture Sensitivity Level (MSL): 1

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Network



Back

SY8104IADC - 4A, 18V Input Sync Buck

Features

- 4.2-18V Input Voltage Range
- 4A Output Current Capability
- 500kHz Switching Frequency Minimize the External Components
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-Start Limits the Inrush Current
- Cycle-by-cycle Peak/Valley Current Limitation
- Hic-cup Mode Output Short Circuit Protection
- Thermal Shutdown with Auto Recovery
- Output Auto Discharge Function
- Compact Package: TSOT23-6

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP CAM
- Networking

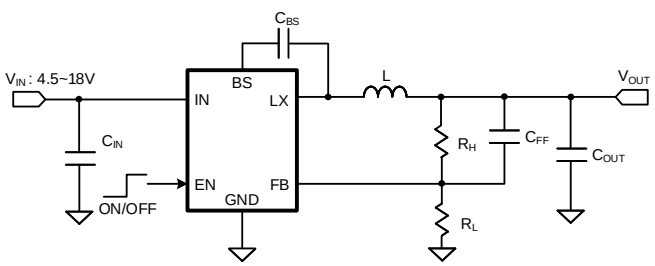
SY8105IADC - 5A, 18V Input Sync Buck

Features

- 4.5V to 18V Input Voltage Range
- Up to 5A Output Current
- 500kHz Switching Frequency Minimizes Required External Components
- Constant-On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Top/Bottom Current Limits
- Internal Soft-Start Limits Inrush Current
- Hiccup Mode for Short-Circuit Protection
- Overtemperature Protection with Auto-Recovery
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



Back

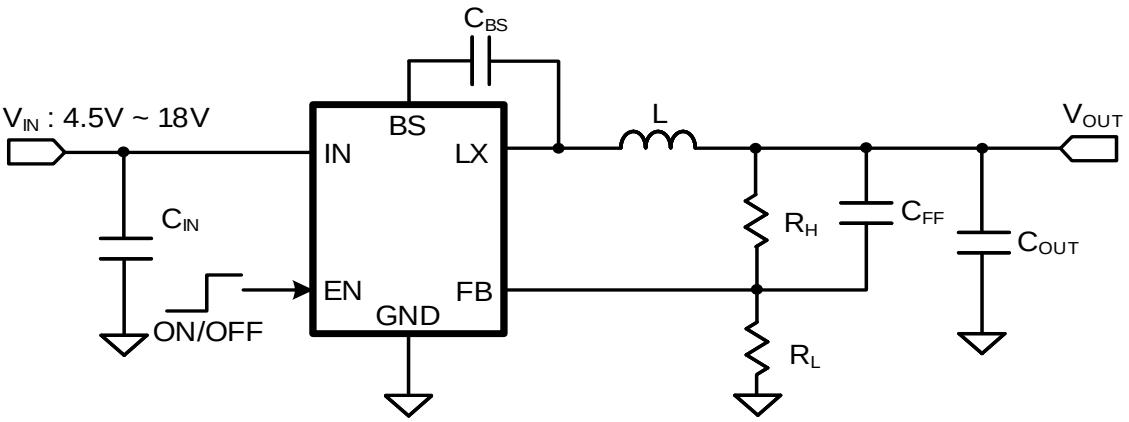
SY81586SVD - High Efficiency, 6A, 18V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 29mΩ Top, 19mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 6A Output Current
- ±1% 0.6V Reference
- Pulse-Frequency Modulation (PFM) Mode Operation
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 400kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN2.5×1.5-10
- Moisture Sensitivity Level (MSL): 1

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Network



Back

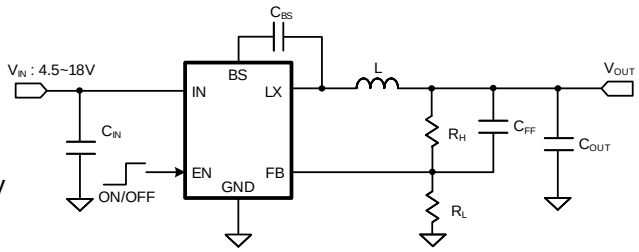
SY8156IADC- 6A, 18V Input, Sync Buck

Features

- 4.5V to 18V Input Voltage Range
- Up to 6A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 29mΩ Top, 19mΩ Bottom
- 400kHz Switching Frequency Minimizes Required External Components
- Constant-On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 22µF COUT and 1µH Inductor
- Cycle-by-Cycle Top/Bottom Current Limits
- Internal Soft-Start Limits the Inrush Current
- Hiccup Mode for Short-Circuit Protection
- Over-temperature Protection with Auto-Recovery
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-6

Applications

- Set-Top Boxes
- Portable TVs
- DSL Modems
- LCD TVs
- IP Cameras
- Networking



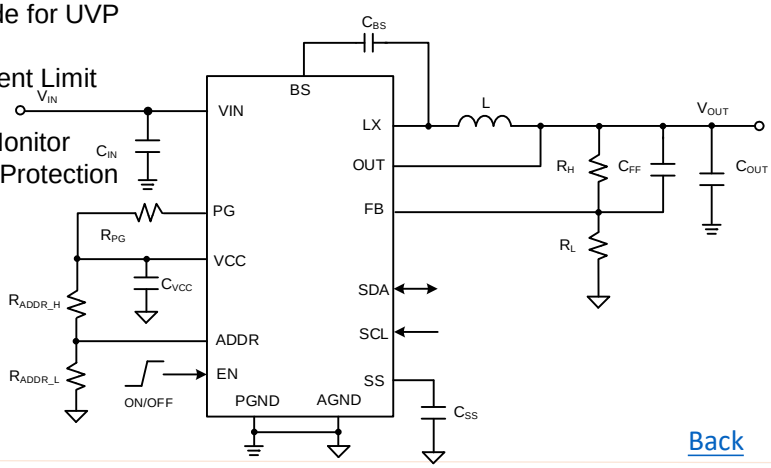
SY81050RRC/SY81050CRRC- 18V Input, 12A Sync Buck with I2C Interface

Features

- 2.85V to 18V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 15mΩ/4.5mΩ
- 12A Continuous, 15A Peak (Duration<100µs) Output Current Capability
- ±1% Reference Voltage Accuracy
- External Programmed Soft Start
- Pre-biased Startup
- Power Good Indicator
- I^2C Programmed Function:
- Selectable Reference Range from 0.6V to 1.108V in 4mV Steps with Slew Rate Control
- Selectable Switching Frequency: 500kHz, 750kHz, 1MHz and 1.25MHz
- Selectable PFM and FCCM Mode
- Selectable Hic-cup and Latch off Mode for UVP and OVP
- Programmable Peak and Valley Current Limit
- Selectable Output Discharge
- Output Voltage and Output Current Monitor
- Auto-recovery for Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x4-14

Applications

- Smart-phone
- Web-tablets
- SSD



Back

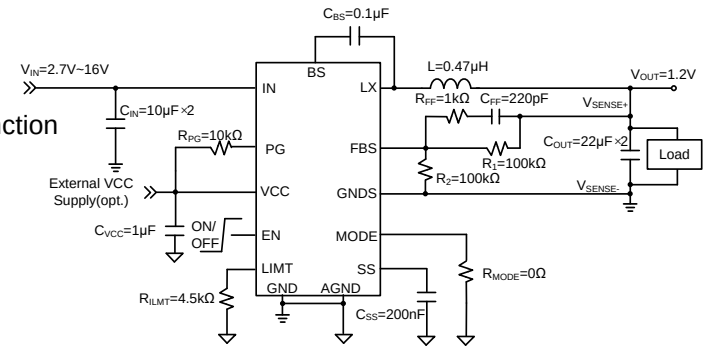
SY81012VDC- 12A, 16V Input, Sync Buck

Features

- Wide Input Voltage Range:
- 3.6V to 16V if VCC is Supplied by Internal LDO
- 2.7V to 16V if VCC is Supplied by External 3.3V DC Source
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 12.6mΩ/4.3mΩ
- 0.6V ±1% Voltage Reference Over Temperature Range (TJ = -40° C to 125° C)
- Adopt Constant-on-time Architecture and Frequency Lock Loop
- Instant PWM Architecture to Achieve Fast Transient Response.
- 600kHz, 800kHz and 1000kHz Switching Frequency Operation Selected by MODE Pin
- PFM/FCCM Light Load Operation Mode Selected by MODE pin.
- Programmable Bottom Valley Limit by ILMT pin
- Reliable Protection Mode: Auto-Recovery Mode for UVP, UVLO, OTP and OVP
- Cycle-by-cycle Valley Current Limit and Peak Current Limit
- Cycle-by-cycle Reverse Current Limit
- Internal Soft-start Limits the Inrush Current
- Programmable Soft-start Time by SS Pin
- Smooth Soft-start with Output Pre-biased Function
- Adjustable Input Voltage UVLO by EN Pin
- Power Good Indicator
- Differential Output Voltage Remote Sense
- Output Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x4-19

Applications

- Power Module
- Telecom and Networking Systems
- Servers
- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP



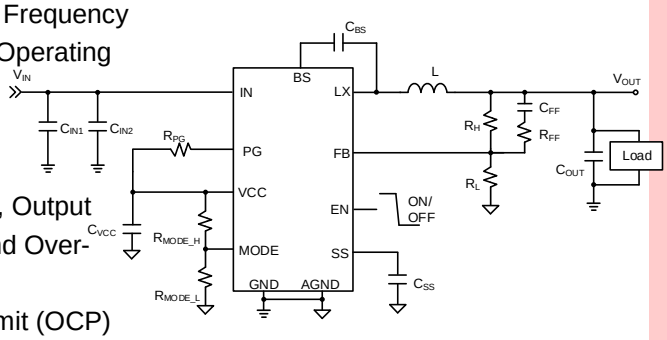
SY81047BWZQ- High Efficiency, 12A, 17V Input Synchronous Step-down Regulator

Features

- Wide Input Voltage Range: 4.5-17V
- Internal 9.8mΩ Power Switch and 4.5mΩ Synchronous Rectifier
- Accurate Feedback Set Point: 0.6V ±1%
- Fast Transient Response
- Selectable 400kHz, 800kHz and 1200kHz Operating Frequency
- Selectable Automatic High-efficiency Discontinuous Operating Mode at Light Loads
- Selectable Valley Current Limit
- Reliable Built-in Protections:
- Automatic Recovery for Input Under-voltage (UVLO), Output Under-voltage (UVP), Output Over-voltage (OVP) and Over-temperature (OTP) Conditions
- Cycle-by-cycle Reverse, Valley and Peak Current Limit (OCP)
- Internal, Adjustable Soft-Start to limit Inrush Current
- Smooth Pre-biased Startup
- Power Good Output Monitor for Under-voltage and Over-voltage

Applications

- Telecom and Networking Systems
- Servers



Back

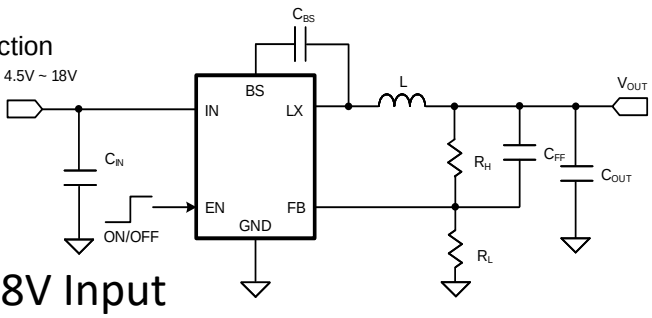
SY81057ABT/SY81057BABT/SY81057CABT/SY81057EABT - High Efficiency, 2A, 18V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 130mΩ Top, 105mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 2A Output Current
- ±1.5% 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81057 and SY81057C
- Forced Continuous Conduction Mode (FCCM) Operation for SY81057E and SY81057B
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components for SY81057 and SY81057E
- 1200kHz Switching Frequency Minimizes the External Components for SY81057C
- 1400kHz Switching Frequency Minimizes the External Components for SY81057B
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF C_{OUT}
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6
- Moisture Sensitivity Level (MSL): 1

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



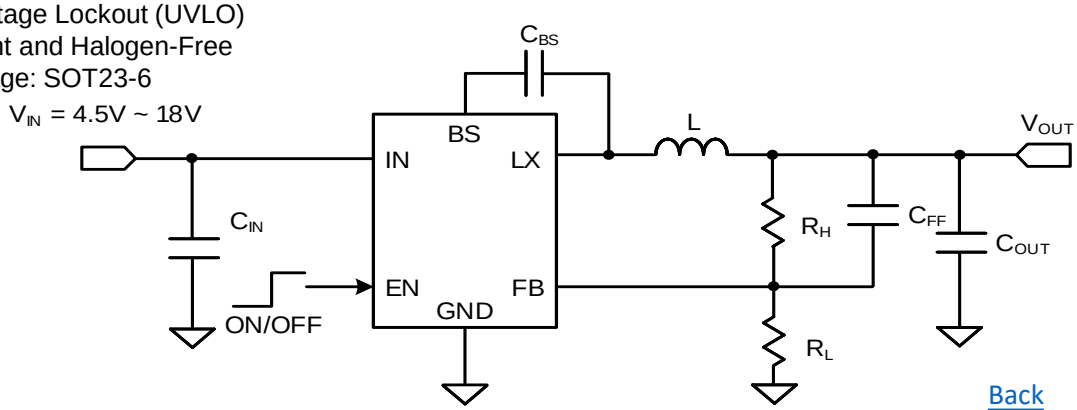
SY81057TABT- High Efficiency, 2A, 18V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 130mΩ Top, 105mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 2A Output Current
- ±1% 0.765V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



Back

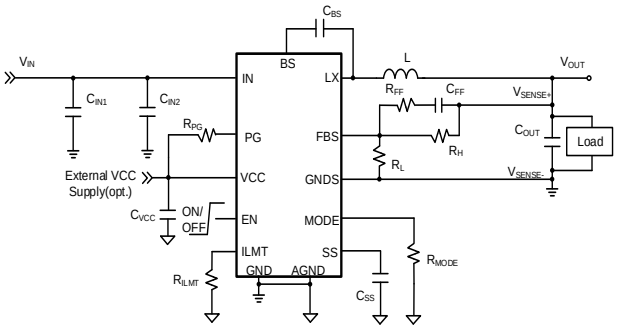
SY81020VDC - 20A, 16V Input, Synchronous Step-Down Regulator

Features

- Wide Input Voltage Range: 3.6-16V, and as Low as 2.9V with External VCC Applied
- Internal 7.5mΩ Power Switch and 2.4mΩ Synchronous Rectifier
- Accurate Feedback Set Point: 0.6V ±1%
- Differential Remote Sense
- Fast Transient Response
- 600kHz, 800kHz and 1000kHz Operating Frequency
- Selectable Automatic High-Efficiency Discontinuous Operating Mode At Light Loads
- Programmable Valley Current Limit
- Automatic Recovery for Input Under-voltage (UVLO), Output Under-voltage (UVP) and Over-temperature (OTP) Conditions
- Cycle-by-cycle Valley and Peak Current Limit (OCP)
- Cycle-by-cycle Reverse Current Limit
- Internal, Adjustable Soft-Start Limits Inrush Current
- Smooth Pre-Biased Startup
- Power Good Output Monitor for Under-Voltage and Over-Voltage

Applications

- Telecom and Networking Systems
- Servers
- High Power Access Points
- Storage Systems
- Cellular Base Stations



Back

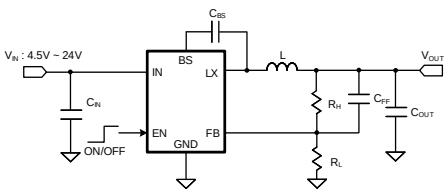
SY82003ABT - 20A, 16V Input, Synchronous Step-Down Regulator

Features

- Low RDS(ON) for Internal MOSFETs: 120mΩ Top, 60mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 24V
- Up to 3A Output Current
- ±1% 0.6V Reference Accuracy
- Precise EN Threshold
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF COUT
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking

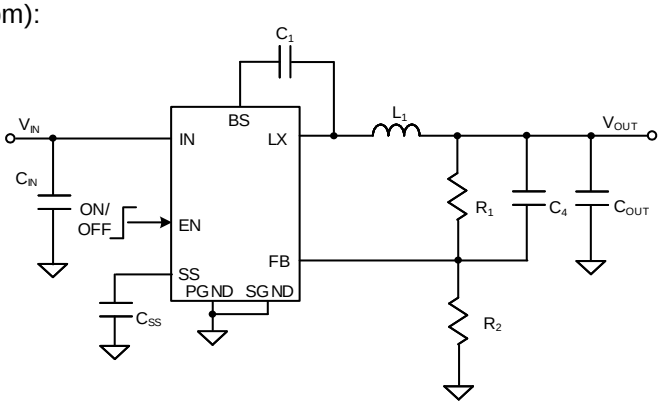


Back

SY8232FAC- 2A, 23V Input, Synchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 150/110 mΩ
- 4.5-23V Input Voltage Range
- Instant PWM Architecture to Achieve Fast Transient Responses
- Programmable Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 500kHz
- 2A Output Current Capability
- 1.5% 0.6V Reference
- RoHS Compliant and Halogen Free
- Compact Package: SO8



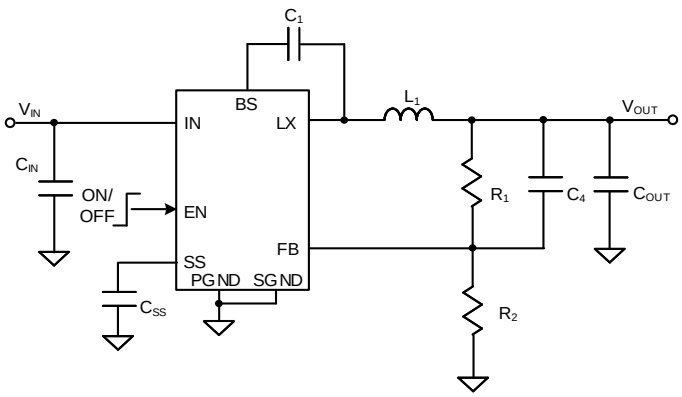
Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV

SY8233FCC- 3A, 23V Input, Synchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 130/90 mΩ
- 4.5-23V Input Voltage Range
- Instant PWM Architecture to Achieve Fast Transient Responses
- Programmable Softstart Limits the Inrush Current
- Pseudo-constant Frequency: 500khz
- 3A Output Current Capability
- 1.5% 0.6V Reference
- RoHs Compliant and Halogen Free
- Compact Package: SO8E



Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV

Back

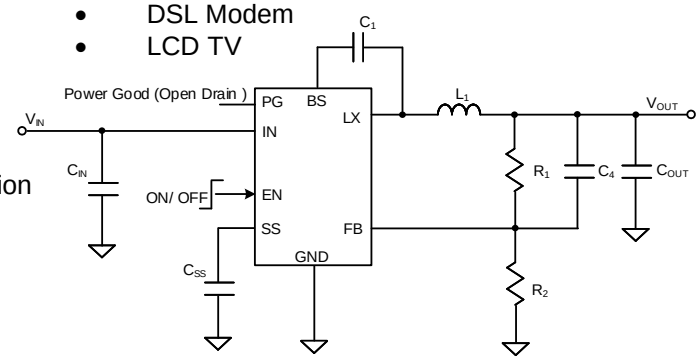
SY8253ADC/SY8253AIC- 3A, 23V Input, Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 105mΩ/50mΩ
- 4.5-23V Input Voltage Range
- 3A Output Current Capability
- 500 kHz Switching Frequency
- Instant PWM Architecture To Achieve Fast Transient Responses.
- Cycle-by-cycle Peak Current Limitation
- Internal Softstart Limits The Inrush Current
- Hic-Cup Mode Output Short Circuit Protection
- ±1.5% 0.6V Reference
- Power Good Indicator (SY8253AIC Only)
- TSOT23-8/ TSOT23-6 Package

Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



SY8254RAC/SY8284RAC/SY8284BRAC/SY8284CRAC - 4A, 23V Input, Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85/35mΩ
- Wide Input Voltage Range: 4-23V
- SY8284/B/C-Instant PWM Architecture to Achieve Fast Transient Responses
- SY8254/8284B-Internal 1.2ms Soft-start Limits the Inrush Current
- SY8284-Internal 600μs Soft-start Limits the Inrush Current
- SY8284C-Internal 800μs Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- 4A Output Current Capability
- SY8284B/C-100mA LDO Current Capability
- SY8284B-Fixed 3.338V Output Voltage
- SY8284B/C-Fixed 5.1V Output Voltage
- ±1% Internal Reference Voltage
- SY8254-PFM/FCCM Selectable Light Load Operation mode
- Optional Bypass Input
- Power Good Indicator
- Output Discharge Function
- Output Current Limit Protection
- SY8254/SY8284：Hiccup Mode Output Short Circuit Protection
- Output Under Voltage Protection
- Output Over Voltage Protection
- SY8284B/C-Latch-off Mode Output Under Voltage Protection
- SY8284B/C-Latch-off Mode Output Over Voltage Protection
- SY8284B/C-Latch-off Mode Over Temperature Protection
- Programmable Bottom FET Current Limit
- Input Under Voltage Lock-out(UVLO)
- Over Temperature Protection With Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN3×3-20

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP

Back

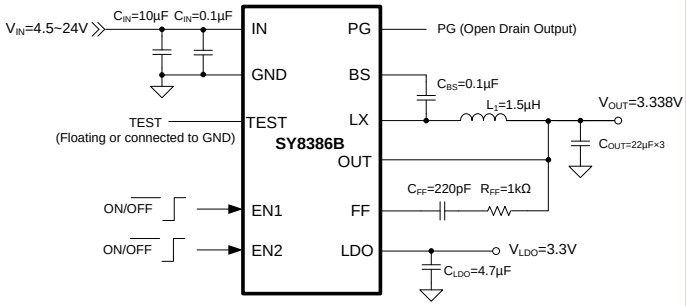
SY8386BRHC/SY8386CRHC

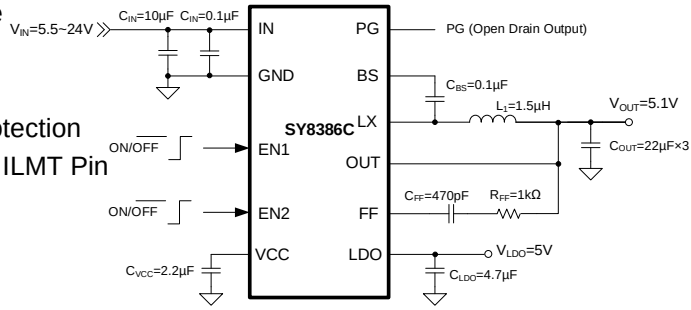
Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 38/19mΩ
- Wide Input Voltage Range: 4.5~24V
- Integrated Bypass Switch: 1.2Ω
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Pseudo-Constant Frequency: 500kHz
- SY8386B/C-Pseudo-constant Frequency: 600kHz
- SY8386B-Fixed 3.338V Output Voltage
- SY8386C-Fixed 5.1V Output Voltage
- Adjustable Output Voltage Application
- 6A Output Current Capability
- SY8386B/C-100mA LDO Current Capability
- ±1% Internal Reference Voltage
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley and Peak Current Limit Protection
- Programmable Valley Current Limit Threshold by ILMT Pin
- Latch-off Mode Output Under Voltage Protection
- Latch-off Mode Output Over Voltage Protection
- Latch-off Mode Over Temperature Protection
- Input UVLO
- Compact Package: QFN2.5×2.5-16

Applications

- LCD TV/3DTV
- Set-Top Box
- Notebook
- High-Power AP





8A, 24V Input, Sync Buck

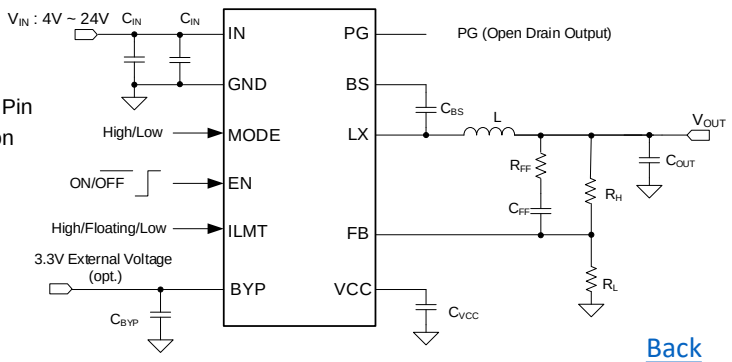
SY83088ARHC/SY83088A1RHC

Features

- Low RDS(ON) for Internal MOSFETs: 20mΩ Top, 10mΩ Bottom
- Wide Input Voltage Range: 4V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 12.5V
- Large Duty Cycle On-Time Stretch
- 8A Continuous Output Current Capability
- 600kHz Pseudo-Constant Frequency
- ±1% Internal Reference Voltage
- Internal 1ms(**SY83088A**)/1.2ms(**SY83088A1**) Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 1.5Ω Bypass Switch
- PFM/FCCM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Programmable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Output Over Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5×2.5-16
- Moisture Sensitivity Level (MSL): 1

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP



Back

8A, 24V Input, Sync Buck

SY8388ARHC

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 20/10 mΩ
- Wide Input Voltage Range: 4~24V
- Integrated Bypass Switch: 1.5Ω
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-Start Limits the Inrush Current
- Pseudo-Constant Frequency: 600kHz
- Adjustable Output Voltage Application
- 8A Output Current Capability
- ±1% Internal Reference Voltage
- PFM/FCCM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley and Peak Current Limit Protection
- Programmable Valley Current Limit Threshold by ILMT Pin
- Hic-cup Mode Output Under Voltage Protection
- Auto-recovery Mode Output Over Voltage Protection
- Auto-recovery Mode Over Temperature Protection
- Input UVLO
- Compact Package: QFN2.5×2.5-16

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP

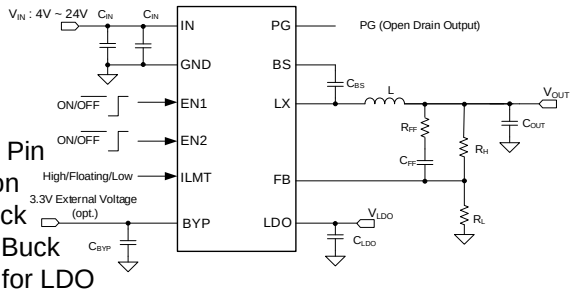
SY83088JRHC - **High Efficiency Fast Response, 8A, 24V Input Synchronous Buck Converter with 100mA 3.3V LDO**

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 20mΩ Top, 10mΩ Bottom
- Wide Input Voltage Range: 4V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 12.5V
- Large Duty Cycle On-Time Stretch
- 8A Continuous Output Current Capability
- 600kHz Pseudo-Constant Frequency
- ±1% Internal Reference Voltage
- Internal 1.2ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 3.3V LDO with 100mA Current Capability
- Integrated 1.5Ω Bypass Switch
- PFM Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Programmable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Latch-off Mode Output Under Voltage Protection for Buck
- Auto-Recovery Mode Over Temperature Protection for Buck
- Auto-Recovery Mode Output Under Voltage Protection for LDO
- Auto-Recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5×2.5-16
- Moisture Sensitivity Level (MSL): 1

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP



Back

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 30/15mΩ
- Wide Input Voltage Range: 4.5~24V
- Integrated Bypass Switch
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Pseudo-Constant Frequency: 500kHz(SY8388) 600kHz(SY8388B/B3/C3/D3)
- SY8388-Adjustable Output Voltage Application
- SY8388B/B3-Fixed 3.338V Output Voltage
- SY8388C3/D3-Fixed 5.1V Output Voltage
- 8A Output Current Capability
- SY8388B/D3-100mA LDO Current Capability
- ±1% Internal Reference Voltage
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley and Peak Current Limit Protection
- Programmable Valley Current Limit Threshold by ILMT Pin
- Latch-off Mode Output Under Voltage Protection
- Latch-off Mode Output Over Voltage Protection
- Latch-off Mode Over Temperature Protection
- Input UVLO
- Compact Package: QFN2.5×2.5-16

Back

9A,28V Input Sync Buck

SY8310RAC/SY8310DRAC Features

- 4–24V Input Voltage Range
- SY8310：Up to 9A Continuous/14A Peak Output Current
- SY8310D: 9A Continuous/12A Peak Output Current Capability of the VDD2 Regulator
- SY8310D:Compatible for LPDDR4X Application
- Low $R_{DS(ON)}$ for Internal Switches: 27mΩ Top, 9mΩ Bottom
- Integrated 1.2Ω Bypass Switch
- SY8310：COT Ripple-Based Control to Achieve Fast Transient Responses
- PFM/USM Selectable Light Load Operation Mode
- 450μs Soft-Start Inrush Current Limit
- Pseudoconstant Frequency: 600kHz
- SY8310: Adjustable Output Voltage
- SY8310D: Fixed 0.61V VDDQ Reference
- SY8310： ±1% 0.6V Internal Reference Voltage
- SY8310D: ±1.0% 0.6V VDD2 Reference
- SY8310：±1A Source/Sink Current Capability
- SY8310D：±1A Source/Sink Current Capability of the VDDQ LDO
- SY8310: Buffered Low-Noise ±10mA VTTREF Output
- Power-Good Indicator
- Support for VTT LDO High-Z in S3
- Output Tracking Discharge Function for the Regulator and VTT LDO
- Cycle-by-Cycle Valley/Peak-Current Limit
- Latch-Off Mode Output Undervoltage (UVP), Overvoltage (OVP), and Overtemperature (OTP)
- Input and Bias Undervoltage (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: QFN3mm×3mm-20

Applications

- LCD TV/3DTV
- Set-Top Box
- Notebook
- High-Power AP

High Efficiency Fast Response, 98% Duty, 6A, 24V Input Synchronous Buck Converter

SY83086ARHC

Features

- Low RDS(ON) for Internal MOSFETs: 28mΩ Top, 16mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 12.5V
- High Duty Cycle Capable using On-Time Stretch
- 6A Continuous Output Current Capability
- 600kHz Pseudo-Constant Frequency
- ±1% Internal Reference Voltage
- Internal 1.2ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 1.2Ω Bypass Switch
- PFM/FCCM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Adjustable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Output Over Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5×2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP

Back

High Efficiency Fast Response, 8A, 28V Input, Fixed 5.1V Output Synchronous Buck Converter with 100mA 5V LDO

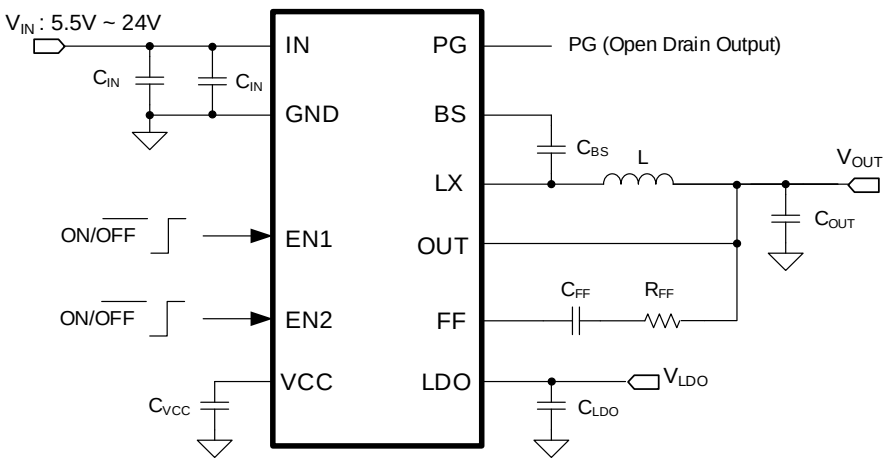
SY83088CRHC

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 20mΩ Top, 10mΩ Bottom
- Wide Input Voltage Range: 5.5V ~ 24V
- Fixed 5.1V Output Voltage
- Large Duty Cycle On-Time Stretch
- 8A Continuous Output Current Capability
- 100mA LDO Current Capability
- 600kHz Pseudo-Constant Frequency
- ±1.5% Internal Reference Voltage
- Internal 0.8ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 1.5Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Latch-Off Mode Output Under Voltage Protection for Buck
- Latch-Off Mode Output Over Voltage Protection for Buck
- Latch-Off Mode Over Temperature Protection for Buck
- Auto-Recovery Mode Output Under Voltage Protection for LDO
- Auto-Recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lockout(UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5x2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP



Back

SY8371BTMC - 10A, 28V Input, Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 18/8mΩ
- Wide Input Voltage Range: 4~24V
- Integrated Bypass Switch: 1.5Ω
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- Fixed 3.36V Output Voltage
- 10A Output Current Capability
- 100mA LDO Current Capability
- ±1% Internal Reference Voltage
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley Current and Peak Current Limit Protection
- Latch-off Mode Output Under Voltage Protection for Buck
- Latch-off Mode Output Over Voltage Protection for Buck
- Latch-off Mode Over Temperature Protection for Buck
- Auto-recovery Mode Output Under Voltage Protection for LDO
- Auto-recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lock-out(UVLO)
- Compact Package: QFN3x4-13

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP
- Desk-top

SY8370TMC/SY8370C1TMC/SY8370FTMC - 11A, 28V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 17/7.5mΩ
- Wide Input Voltage Range: 5.5~24V
- Integrated Bypass Switch: 1.5Ω
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- SY8370：Adjustable Output Voltage Application
- SY8370C1：Fixed 5.15V Output Voltage
- SY8370F:Adjustable Output Voltage: 1V ~ 12V
- 11A Output Current Capability
- 100mA LDO Current Capability
- ±1.5% Internal Reference Voltage
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley and Peak Current Protection for Buck
- Latch-off Mode Output Under Voltage Protection for Buck
- Latch-off Mode Output Over Voltage Protection for Buck
- Latch-off Mode Over Temperature Protection for Buck
- Auto-recovery Mode Output Under Voltage Protection for LDO
- Auto-recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lock-out(UVLO)
- Compact package: QFN3×4-13

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP

Back

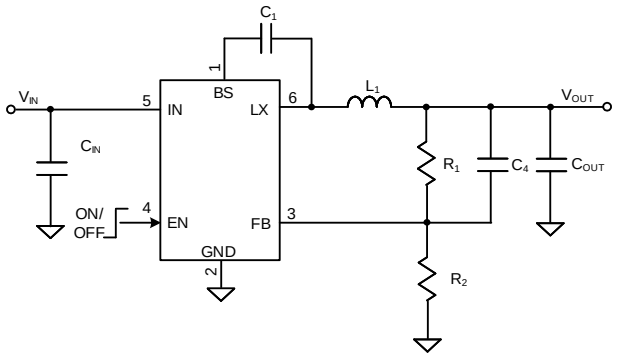
SY8201ABC/SY8201CABC- High Efficiency Fast Response, 1A, 27V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 350/150 mΩ
- 4.5-27V Input Voltage Range
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- 2% 0.6V Reference
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



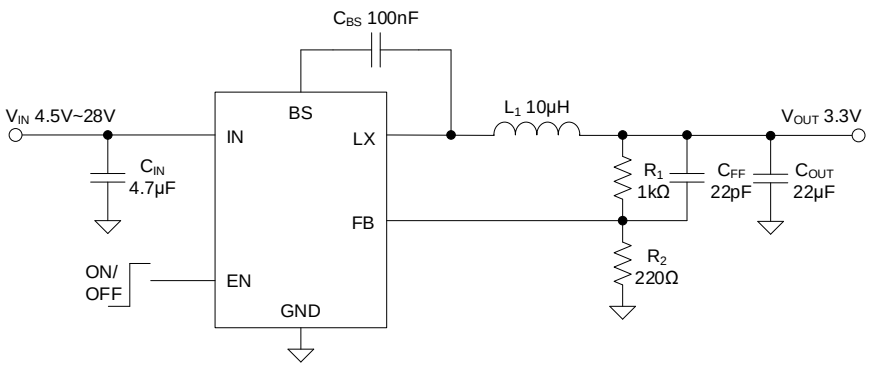
SY8202ADC- 1.7A, 28V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 350mΩ/150mΩ
- 4.5V-28V Input Voltage Range
- 1.7A Output Current Capability
- 500kHz Switching Frequency Minimizes the External Components
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Cycle-by-cycle Valley Current Limitation
- ±2.0% 0.6V Reference
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-6

Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



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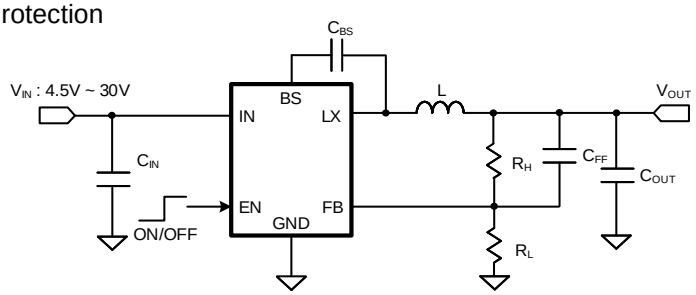
SY82802ABT - High Efficiency, 600kHz, 2A, 30V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 150mΩ Top, 115mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 30V
- Up to 2A Output Current
- ±1% 0.6V Reference over Temperature from -40° C to 125° C
- Precise EN Threshold
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 600kHz Switching Frequency Minimizes the External Components
- Advanced Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP CAM
- Networking



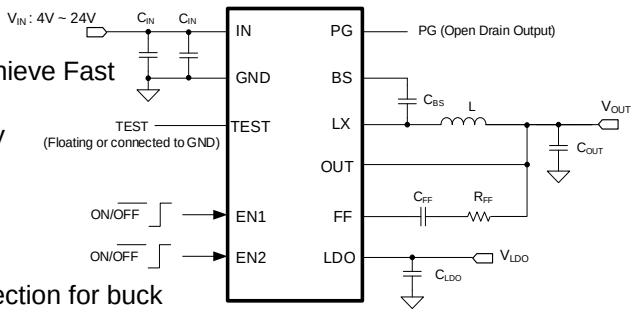
SY83088BRHC - High Efficiency Fast Response, 8A, 28V Input Synchronous Buck Converter with 100mA 3.3V LDO

Features

- Low RDS(ON) for Internal MOSFETs: 20mΩ Top, 10mΩ Bottom
- Wide Input Voltage Range: 4V ~ 24V
- Fixed 3.338V Output Voltage
- 8A Continuous Output Current Capability
- 600kHz Pseudo-Constant Frequency
- ±1% Internal Reference Voltage
- Internal 1.2ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 3.3V LDO with 100mA Current Capability
- Integrated 1.5Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection for buck
- Latch-off Mode Output Under Voltage Protection for buck
- Latch-off Mode Output Over Voltage Protection for buck
- Latch-off Mode Over Temperature Protection for buck
- Auto-Recovery Mode Output Under Voltage Protection for LDO
- Auto-Recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact package: QFN2.5×2.5-16

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP



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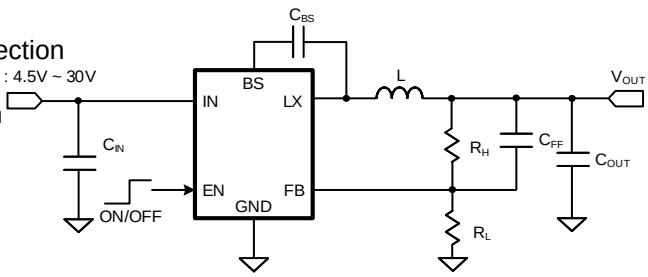
SY82852ABT - High Efficiency, 600kHz, 2A, 30V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 150mΩ Top, 115mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 30V
- Up to 2A Output Current
- ±1% 0.6V Reference over Temperature from -40° C to 125° C
- Precise EN Threshold
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 600kHz Switching Frequency Minimizes the External Components
- Advanced Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP CAM
- Networking



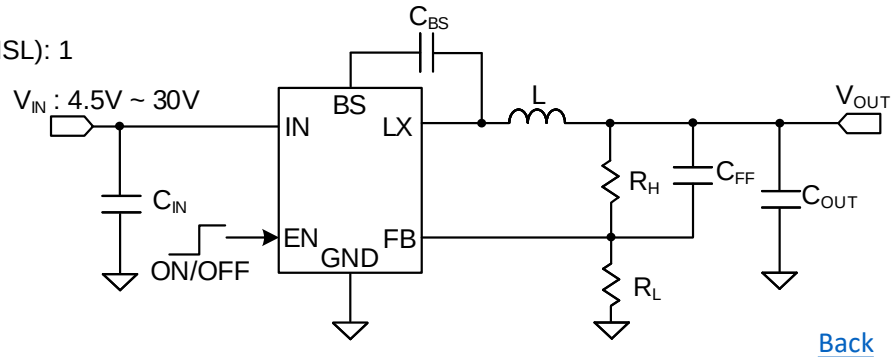
SY82852GABT - High Efficiency, 1100kHz, 0.6A, 30V Input, 3.3V Output Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 160mΩ Top, 120mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 30V
- Up to 0.6A Output Current Capability
- Fixed 3.3V Output Voltage
- Precise EN Threshold
- FCCM Light Load Operation Mode for Small Ripple
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Bias Output
- 1100kHz Switching Frequency Minimize the External Components
- Constant On-Time and Advanced Ripple-Based Mode Control Strategy
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package SOT23-6
- Moisture Sensitivity Level (MSL): 1

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP



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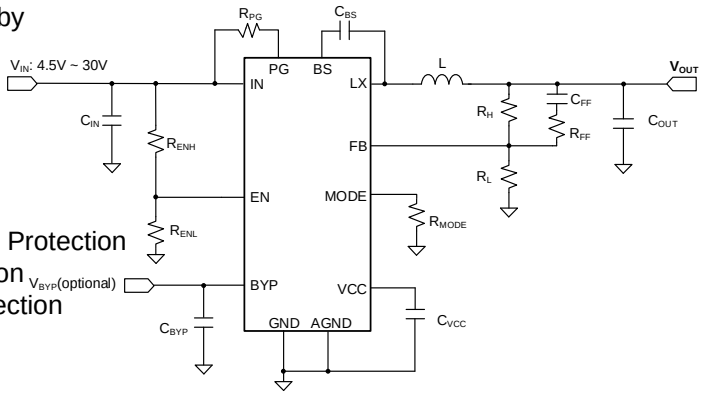
SY82808WYQ - High Efficiency Fast Response, 98% Duty, 8A, 30V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 20mΩ Top, 10mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 30V
- Adjustable Output Voltage: 0.6V ~ 24V
- High Duty Cycle Capable using On-Time Stretch
- 8A Continuous Output Current Capability
- 500kHz Pseudo-Constant Frequency
- ±1.5% 0.6V Reference under -40° C ~125° C
- Precise EN Threshold
- Internal 1ms Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Selectable PFM/FCCM Light Load Operation by
- MODE Pin
- Power Good Indicator
- Optional BYP Input for Power Saving
- Output Auto-Discharge Function
- Selectable Peak and Valley Current Limit
- Threshold by MODE Pin
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2×3-14

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Monitor
- High Power AP



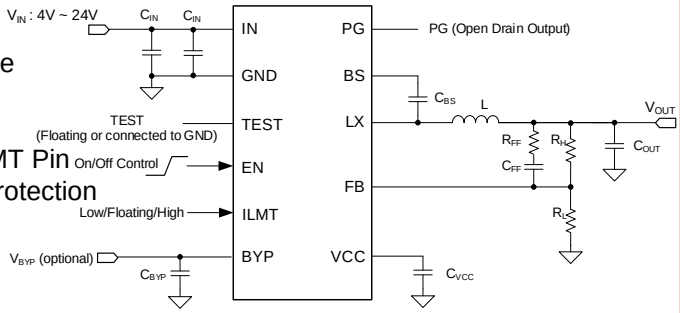
SY83088RHC - High Efficiency, Fast Response, 8A, 28V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 20mΩ Top, 10mΩ Bottom
- Wide Input Voltage Range: 4V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 2.5V
- 8A Continuous Output Current Capability
- 500kHz Pseudo-Constant Frequency
- ±1% Internal Reference Voltage
- Internal 0.6ms Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- Constant On-Time and Ripple-Based Control to Achieve Excellent Dynamic Performance
- Integrated 1.5Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Adjustable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Peak and Valley Current Limit Protection
- Latch-off Mode Output Under Voltage Protection
- Latch-off Mode Output Over Voltage Protection
- Latch-off Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact package: QFN2.5×2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP



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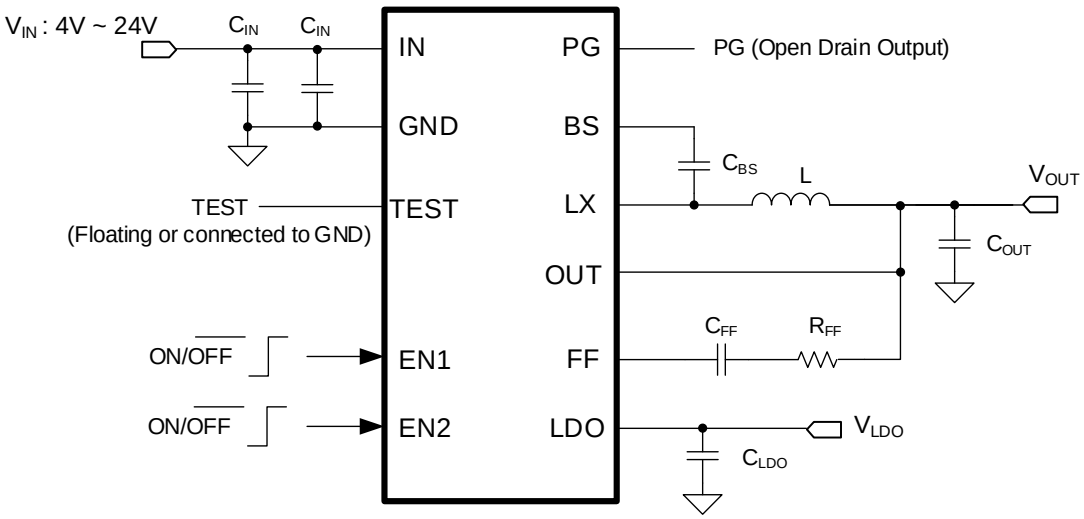
SY83071BTMC - High Efficiency Fast Response, 10A, 28V Input Synchronous Buck Converter with 100mA 3.3V LDO

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 18mΩ Top, 8mΩ Bottom
- Wide Input Voltage Range: 4V ~ 24V
- Fixed 3.36V Output Voltage
- 10A Continuous Output Current Capability
- 600kHz Pseudo-Constant Frequency
- ±1% Internal Reference Voltage
- Internal 1.2ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 3.3V LDO with 100mA Current Capability
- Integrated 1.5Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection for buck
- Latch-off Mode Output Under Voltage Protection for buck
- Latch-off Mode Output Over Voltage Protection for buck
- Latch-off Mode Over Temperature Protection for buck
- Auto-Recovery Mode Output Under Voltage Protection for LDO
- Auto-Recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact package: QFN3×4-13
- Moisture Sensitivity Level (MSL): 3

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP



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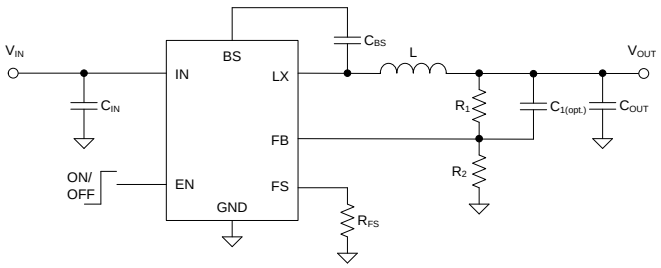
SY8263AIC- 3A, 30V Input, Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 110/70 mΩ
- 4.5-30V Input Voltage Range
- Internal Compensation
- Internal 1ms Soft-start Limits the Inrush Current
- Adjustable Switching Frequency Range: 500kHz to 2.5MHz
- 3A Output Current Capability
- 1.5% 0.6V Reference
- Low Quiescent Current
- Cycle-by-cycle Peak Current Limit
- Short Circuit Protection
- Thermal Shutdown and Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- LCD-TV
- SetTop Box
- Notebook
- Storage
- High Power AP Router
- Networking



SY8205DNC/SY8205FCC - 5A, 30V Input, Synchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches
- 4.5-30V Input Voltage Range
- Instant PWM Architecture to Achieve Fast Transient Responses
- External Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 500kHz at Heavy Loads
- 5A Continuous, 6A /10A Peak Load Current Capability

SY8205FCC(QFN)

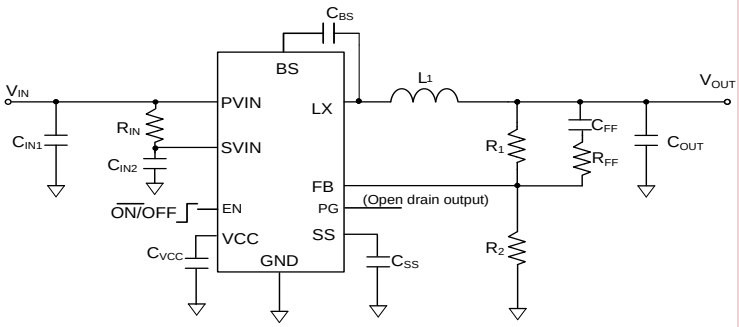
- Internal 400μs Soft-start Limits the Inrush Curr
- ±1.0% 0.6V Reference
- Programmable Valley Current Limit
- Power Good Indicator
- Output Discharge Function
- Short Circuit Latch Off Protection
- Over Voltage Latch Off Protection
- Input UVLO

SY8205(DFN/SO8)

- 1.5% 0.6V Reference
- Output Over Current Limit
- Output Short Circuit Protection with Current Fold Back
- Thermal Shutdown and Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: DFN4×3-12/SO8E/QFN3x4-13

Applications

- LCD-TV
- SetTop Box
- Notebook
- Storage
- High Power AP Router
- Networking



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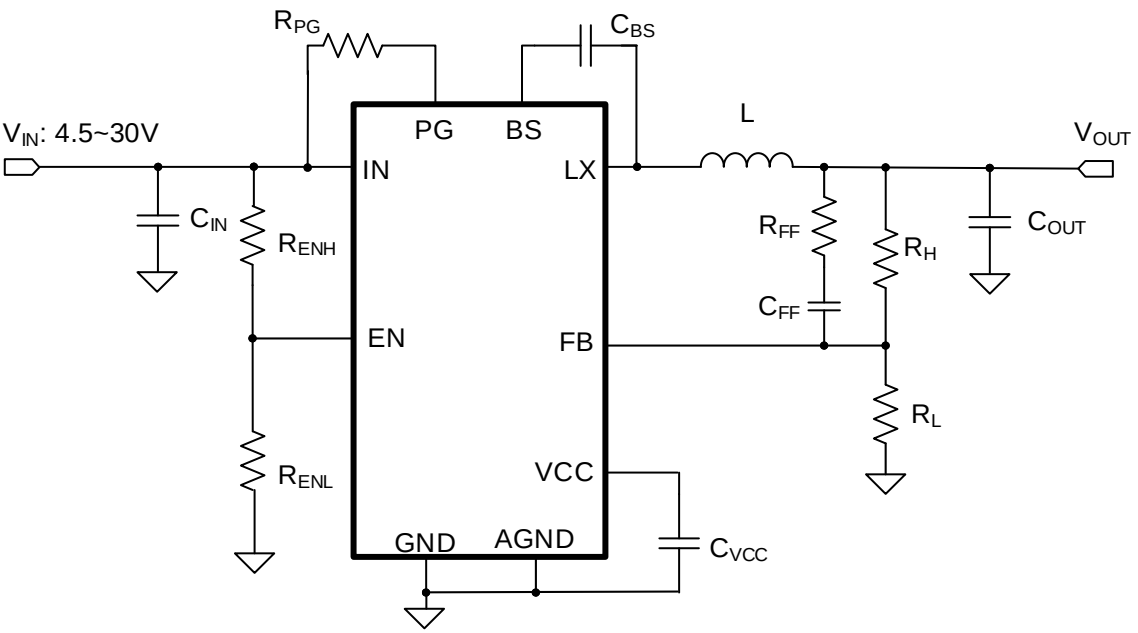
SY82806WYQ – High Efficiency Fast Response, 98% Duty, 6A, 30V Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 40mΩ Top, 20mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 30V
- Adjustable Output Voltage: 0.6V ~ 24V
- 6A Continuous Output Current Capability
- 500kHz Pseudo-Constant Frequency
- ±1.5% 0.6V Reference under -40° C ~125° C
- Precise EN Threshold
- Internal 1ms Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- PFM Light Load Operation for High Efficiency
- Power Good Indicator
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2×3-14
- Moisture Sensitivity Level (MSL): 1

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Monitor
- High Power AP



Back

6A, 28V Input, Sync Buck

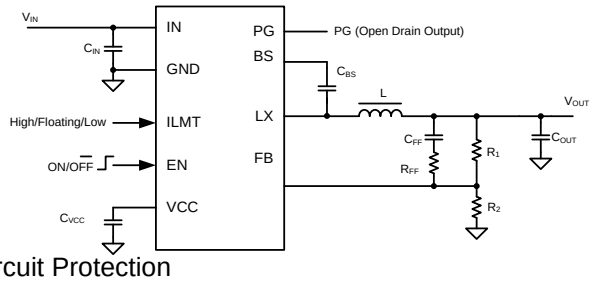
SY8366QNC/SY8366AQQC/SY8366HQQC/SY8366KQQC

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 40/20mΩ
- Wide Input Voltage Range: 4-28V
- Instant PWM Architecture to Achieve Fast Transient Responses
- SY8366: Internal 400μs Soft-start
- SY8366H/K/SY8366A: Internal 600μs Soft-start
- SY8366/H/K/SY8366A: Pseudo-constant Frequency: 800kHz
- SY8366K: Pseudo-constant Frequency: 500kHz.
- 6A Continuous/12A Peak Output Current Capability
- ±1.5% 0.6V Reference
- Programmable Peak Current Limit
- Power Good Indicator
- Output Discharge Function
- Short Circuit Latch Off Protection
- Over Voltage Latch Off Protection
- SY8366H/K/SY8366A: Hic-cup Mode Output Short Circuit Protection
- SY8366A:Hic-cup mode output over voltage protection
- Input UVLO
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x3-10

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP



6A, 28V Input, Sync Buck

SY8368AQQC/SY8368LQQC

Features

- 4.0-28V Wide Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches: 20/10mΩ
- Instant PWM Architecture to Achieve Fast Transient Response
- Internal 600μs Soft-start Limits the Inrush Current
- SY8368A: Pseudo-constant Frequency: 800kHz
- SY83688L: Pseudo-constant Frequency: 500kHz
- 8A Continuous, 16A Peak Output Current Capability
- ±1% 0.6V Reference Voltage
- Hiccup Mode SCP, OVP
- SY8368L: PSM/FCCM Selectable Light Load Operation Mode
- SY8368L: Latch Off Mode Output Under Voltage and Over Voltage Protection
- Cycle-by-Cycle Current Limit
- Thermal Shutdown with Auto Recovery
- Power Good Indicator
- Compact Package: QFN3x3-12

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP

Back

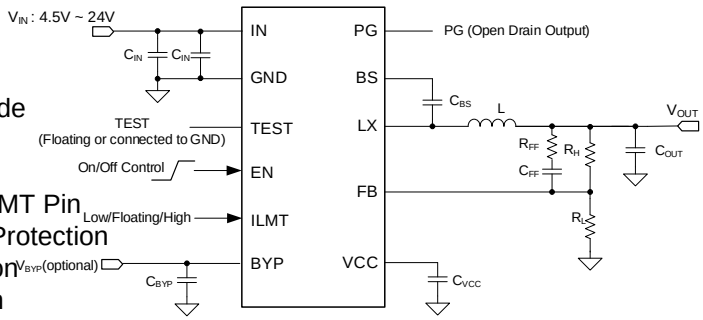
SY83086RHC - High Efficiency, Fast Response, 6A, 28V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 28mΩ Top, 16mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 2.5V
- 6A Continuous Output Current Capability
- 500kHz Pseudo-Constant Frequency
- ±1% Internal Reference Voltage
- Internal 0.6ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control
- Excellent Dynamic Performance
- Integrated 1.2Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Adjustable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Peak and Valley Current Limit Protection
- Latch-Off Mode Output Under Voltage Protection
- Latch-Off Mode Output Over Voltage Protection
- Latch-Off Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact package: QFN2.5x2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP



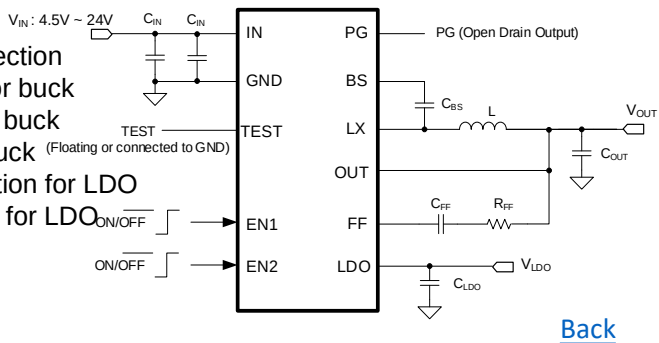
SY83086BRHC - High Efficiency, Fast Response, 6A, 28V Input, Fixed 3.338V Output Synchronous Buck Converter with 100mA 3.3V LDO

Features

- Low RDS(ON) for Internal MOSFETs: 28mΩ Top, 16mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 24V
- Fixed 3.338V Output Voltage
- 6A Continuous Output Current Capability
- 100mA LDO Current Capability
- 600kHz Pseudo-Constant Frequency
- ±1% Internal Reference Voltage Accuracy
- Internal 1.2ms Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 1.2Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Latch-Off Mode Output Under Voltage Protection for buck
- Latch-Off Mode Output Over Voltage Protection for buck
- Latch-Off Mode Over Temperature Protection for buck
- Auto-Recovery Mode Output Under Voltage Protection for LDO
- Auto-Recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lockout(UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5×2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP

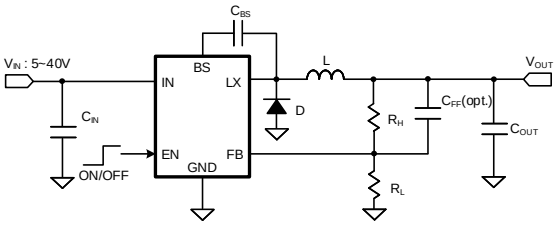


Back

SY8290ABC - High-Efficiency, 2MHz, 40V Input, 300mA Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-Channel Power FET: 2Ω
- 5V to 40V Input Voltage Range
- Up to 300mA Output Current
- 2MHz Switching Frequency
- Constant Off-Time and Peak-Current Mode Control
- Internal Soft-Start Limits Inrush Current
- ±2% 0.6V Reference
- Output Short-Circuit Protection
- Cycle-by-Cycle Peak Current Limit
- Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



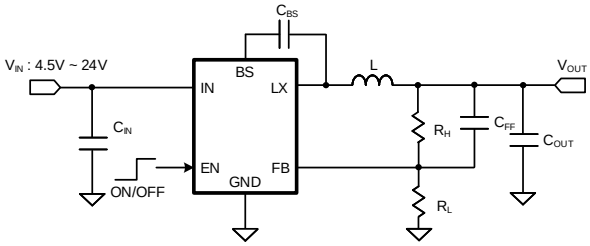
Applications

- Smart Meter
- Set-Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV

SY8301ABC - High Efficiency, 22μA IQ, 2MHz, 1A, 40V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 380mΩ Top, 180mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 40V
- 1A Output Current Capability
- ±1% 0.8V Reference Voltage
- 22μA Low Quiescent Current
- 2MHz Fixed Switching Frequency
- Constant Frequency and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- Hiccup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6



Applications

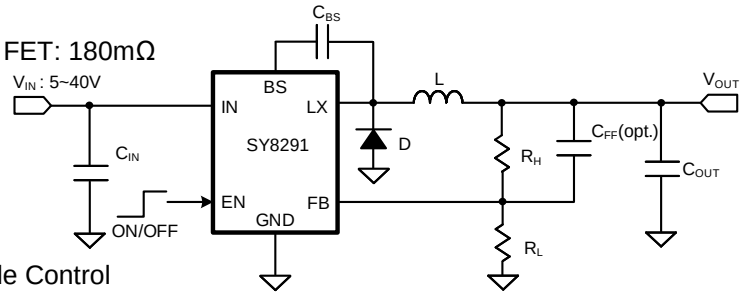
- LCD-TV
- Set-Top Box
- Notebook
- Storage
- High-Power AP Router
- Networking

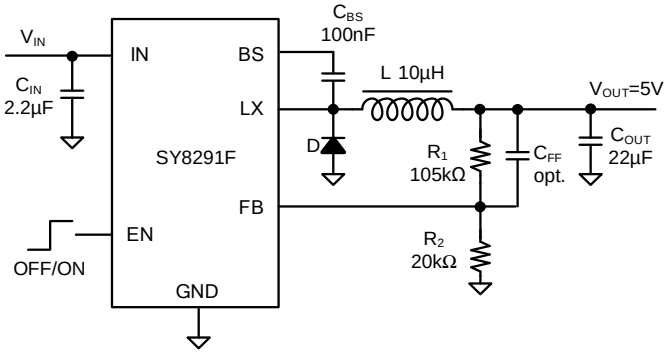
Back

SY8291ABC/SY8291FABC - High Efficiency, 1.2A, Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 180mΩ
- Input Voltage Range:
  - SY8291 : 5V to 40V
  - SY8291F: 9V to 36V
- Up to 1.2A Output Current
- 800kHz (SY8291)/ 300kHz (SY8291F) Switching Frequency
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- SY8291 : ±2% 0.6V Reference
- SY8291F: ± 2% 0.81V Reference
- Output Short Circuit Protection
- Cycle-by-Cycle Peak Current Limit
- Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package





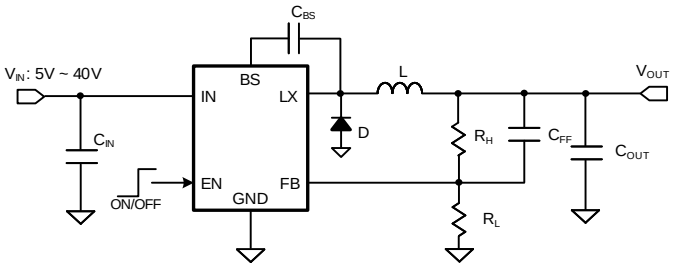
Applications

- Smart Meter
- Set-Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV

SY8292ABC - High Efficiency, 800kHz, 2A, 40V Input Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-Channel Power FET: 180mΩ
- 5V to 40V Input Voltage Range
- Up to 2A Output Current
- 800kHz Switching Frequency
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- ±2% 0.6V Reference
- Auto-Recovery Mode Output Short Circuit Protection
- Cycle-by-Cycle Power FET Current Limit Protection
- Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



Applications

- Set-Top Box
- Access Point Router
- DSL Modem
- LCD TV

Back

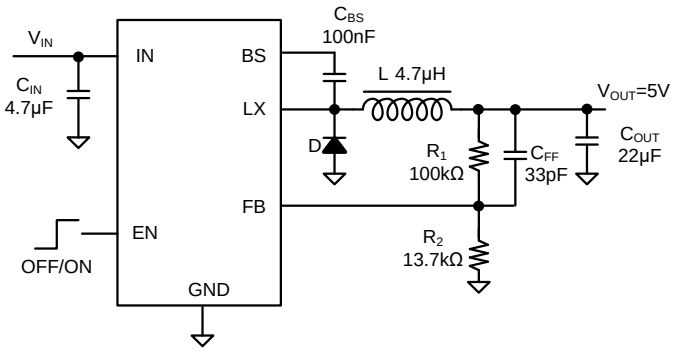
SY8293FCC - High Efficiency, 800kHz, 40V Input, 3A Non-synchronous Step Down Regulator

Features

- 5-40V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal N-Channel Power FET: 180 mΩ
- 800kHz Switching Frequency
- Adaptive Constant OFF Time Control
- Internal Soft-start Limits the Inrush Current
- 2% 0.6V Reference
- RoHS Compliant and Halogen Free
- Compact Package: SO8E

Applications

- Set-Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



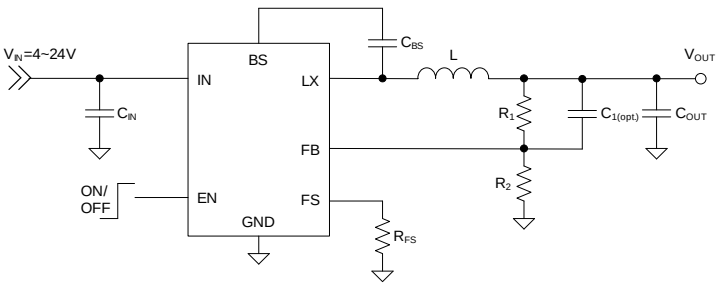
SY8303AAIC - High-Efficiency, Fast-Response, 40V Input, 3A Synchronous Step-Down Regulator

Features

- 4.5 to 40V Input Voltage Range
- 3A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches: 110mΩ Top, 70mΩ Bottom
- Adjustable Switching Frequency Range: 500kHz to 2.5MHz
- 1.5% 0.6V Reference Voltage
- Low 19µA Quiescent Current
- Internal Compensation
- Internal 1ms Soft-Start Limits Inrush Current
- Cycle-by-Cycle Peak-Current Limit
- Hiccup Mode Short-Circuit Protection
- Thermal Shutdown and Auto-Recovery
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-8

Applications

- LCD-TV
- Set-Top Box
- Notebook
- Storage
- High-Power AP Router
- Networking



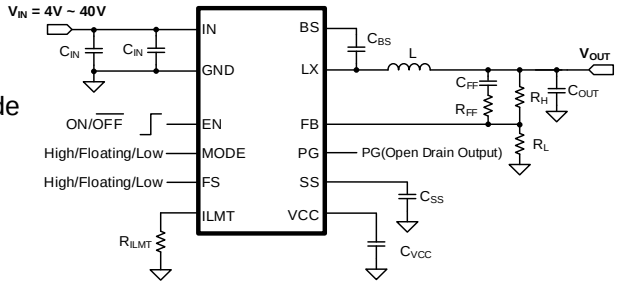
Back

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 25mΩ Top, 12mΩ Bottom
- Wide Input Voltage Range: 4V ~ 40V
- Up to 8A Output Current Capability
- Precise ± 1% 0.6V Reference
- COT Ripple-Based Control to Achieve Fast Transient Response
- Internal Soft-Start Limits the Inrush Current
- Power Good Indicator
- Output Auto-Discharge Function
- 350kHz/500kHz Selectable Switching Frequency
- PFM/FCCM Selectable Light Load Operation Mode
- Programmable Valley Current Limit Threshold
- Cycle-by-Cycle Peak and Valley Current Limit Protection
- Hiccup Mode Output Short Circuit Protection
- Auto-Recovery Mode Output Over Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: QFN3.5×3.5-20

Applications

- LCD TV
- Set-Top Box
- Notebook
- High-Power AP Router

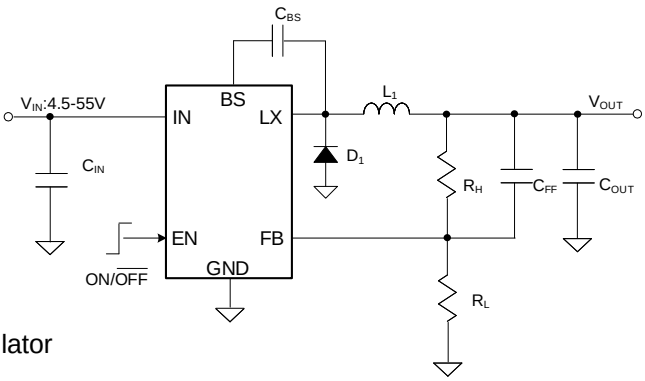


Back

SY8401ABC - High Efficiency, 1.2MHz, 55V Input, 0.8A Asynchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 700mΩ
- 4.5-55V Input Voltage Range
- 0.8A Output Current Capability
- 1.2MHz Pseudo Constant Switching Frequency
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Output Short Circuit Protection
- EN ON/OFF Control with Accurate Threshold
- Cycle by Cycle Peak Current Limit
- 0.6V±1% Reference Voltage
- SOT23-6 Package



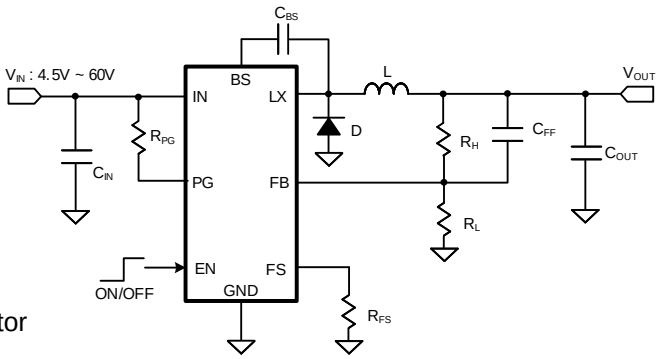
Applications

- Non-Isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems

SY8492FCC - High-Efficiency, 2A, 60V Input Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 175mΩ
- 4.5V to 60V Input Voltage Range
- Up to 2A Output Current
- Adjustable Switching Frequency Range: 100kHz to 1MHz
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- ±1% 0.8V Reference
- EN ON/OFF Control with Accurate Threshold
- Hiccup Mode Output Short Circuit Protection
- Cycle-by-Cycle Peak Current Limit
- Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact SO8E Package



Applications

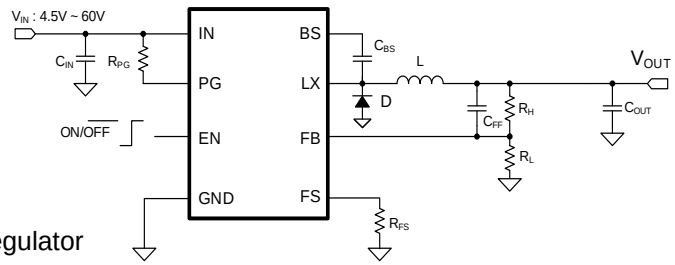
- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

Back

SY8493FCC - High-Efficiency, 3A, 60V Input Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-Channel Power FET: 150mΩ
- 4.5V to 60V Input Voltage Range
- Up to 3A Output Current Capability
- Constant Off-Time and Peak-Current Mode Control
- Internal Soft-Start Limits the Inrush Current
- ±1% 0.8V Reference
- Adjustable Switching Frequency Range: 100kHz to 1MHz
- EN ON/OFF Control with Accurate Threshold
- Hiccup Mode Output Short Circuit Protection
- Cycle-by-Cycle Peak Current Limit
- RoHS-Compliant and Halogen-Free
- Compact Package: SO8E



Applications

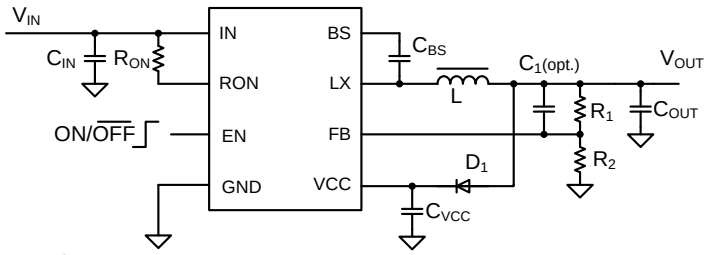
- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

SY8502FCC/SY8502AFCC

- High Efficiency, 1.2A Continuous, 1.8A Peak, 85V Input Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 500mΩ/240mΩ
- 7-85V Input Voltage Range
- 1.2A Continuous, 1.8A Peak Output Current Capability
- Adjustable Switching Frequency
- Instant PWM Architecture to Achieve Fast Transient Responses.
- Programmable Switching Frequency Range: 200~500 kHz.
- 2ms Internal Soft-start Limits the Inrush Current
- Precise ±2% 1.2V Reference
- RoHS Compliant and Halogen Free
- Compact Package SO8E



Applications

- Non-isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems

Back

SY8510ADC

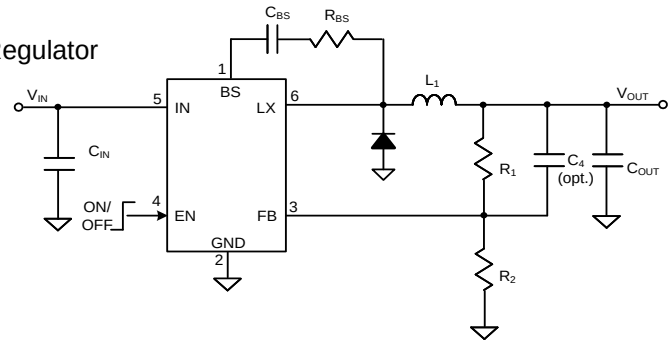
- High Efficiency, 200kHz, 100V Input, 0.3A Asynchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET:1Ω
- 4.5-100V Input Voltage Range
- 0.3A Output Current Capability
- 200kHz Pseudo Constant Switching Frequency
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Output Short Circuit Protection
- EN ON/OFF Control with Accurate Threshold
- Cycle by Cycle Peak Current Limit
- 0.6V±1 % Reference Voltage
- TSOT23-6 Package

Applications

- Non-isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems
- Electric Bicycle



SY89695FCP

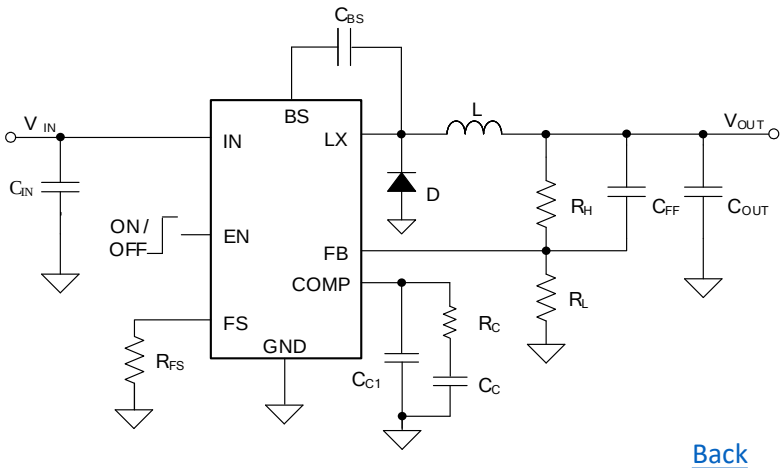
- High Efficiency, 60V Input, 5A Asynchronous Step Down Regulator

Features

- Wide Input Voltage Range: 4.5V ~ 60V
- Output Current Capability: 5A
- Low RDS(ON) for Internal N-Channel Power MOSFET (TOP): 95mΩ
- Accurate Feedback Set Point: 0.8V ±1% from -40°C to 125°C
- Adjustable Switching Frequency: 100kHz to 2500kHz
- High Efficiency at Light Loads with Pulse Skipping Mode
- Cycle by Cycle Peak Current Limit Protection
- Automatic Recovery for UVLO, OVP and OTP Conditions
- Hiccup Mode for UVP Condition
- Compact Package: SO8E

Applications

- 5G AAU/RRU
- Industrial
- High-Voltage DC-DC Converters



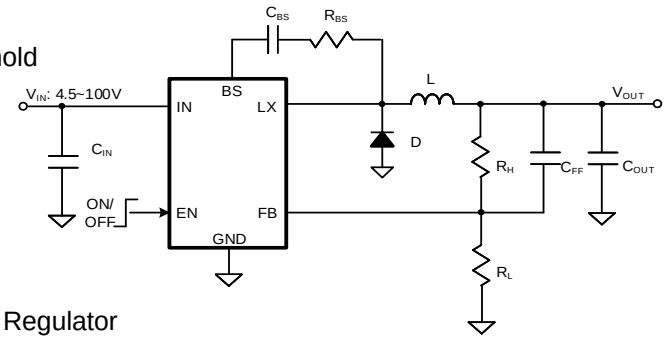
Back

SY8511ADC/SY8511BADC

- High-Efficiency, 200kHz, 100V Input, 0.6A/1.2A Asynchronous Step-Down Regulator

Features

- 4.5V to 100V Input Voltage Range
- Up to 0.6A(SY8511)/ 1.2A (SY8511B) Output Current
- Low $R_{DS(ON)}$ for Internal N-Channel power FET: 1Ω
- 200kHz Pseudo-constant Switching Frequency
- Constant Off-Time and Peak-Current-Mode Control
- Internal Soft-Start
- 0.6V ±1% Reference
- Hiccup Mode Short-Circuit Protection
- EN On/Off Control with Accurate Threshold
- Cycle-by-Cycle Peak Current limit
- Compact TSOT23-6 Package



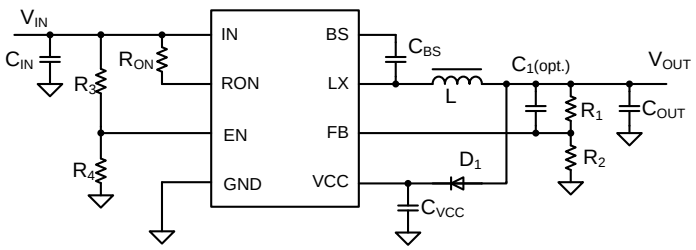
Applications

- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

SY89000FCC - High Efficiency, 0.6A, 100V Input Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 500mΩ/285mΩ
- 7~100V Input Voltage Range
- 0.6A Output Current Capability
- Constant On-time Control
- Instant PWM Architecture to Achieve Fast Transient Responses
- Programmable Switching Frequency Range: 200kHz~600kHz.
- 2ms Internal Soft-start Limits the Inrush Current
- Precise ±2% 1.225V Reference over
- -40°C to +125°C Temperature Range
- Cycle-by-cycle Peak Current Limit
- Over Temperature Protection with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package SO8E



Applications

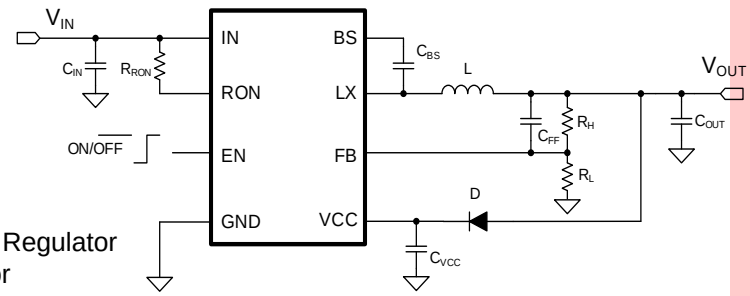
- Isolated Telecom Bias Supply
- Secondary High Voltage Post Regulator
- Automotive Systems

Back

SY8501FCC - High-Efficiency, 1A, 100V Input, Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 500mΩ Top, 240mΩ Bottom
- 7V to 100V Input Voltage Range
- Up to 1A Output Current Capability
- Adjustable Switching Frequency
- COT Ripple-Based Control to Achieve Fast Transient Responses
- 2ms Internal Soft-start Limits the Inrush Current
- Precise ±2% 1.2V Reference
- Output Short Circuit Protection
- Cycle-by-Cycle Peak and Valley Current Limit
- Over Temperature Protection
- Output Auto-Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SO8E



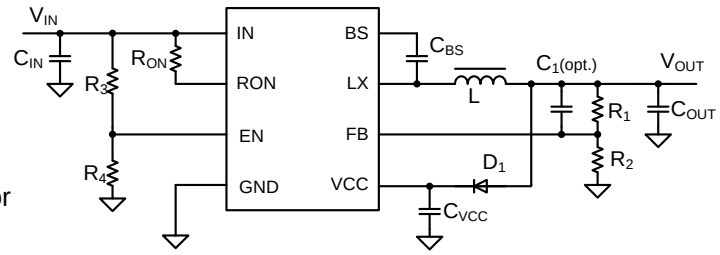
Applications

- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems

SY89001FCC - High Efficiency, 1A, 100V Input Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 500mΩ/240mΩ
- 7-100V Input Voltage Range
- 1A Output Current Capability
- Constant On-time Control
- Instant PWM Architecture to Achieve Fast Transient Responses
- Programmable Switching Frequency Range: 200kHz ~600kHz
- 2ms Internal Soft-start Limits the Inrush Current
- Precise ±2% 1.225V Reference over
- -40°C to +125°C Temperature Range
- Cycle-by-cycle Peak Current Limit
- Over Temperature Protection with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package SO8E



Applications

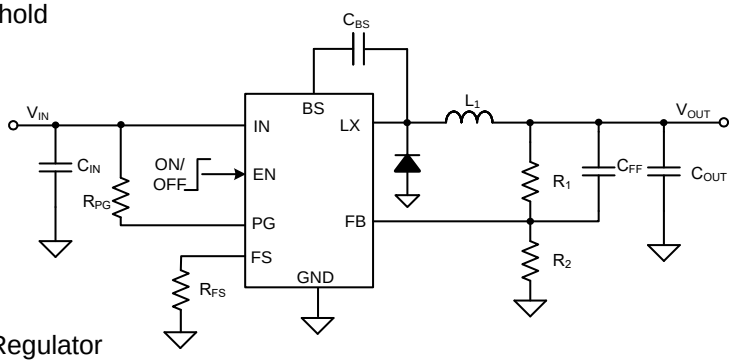
- Isolated Telecom Bias Supply
- Secondary High Voltage Post Regulator
- Automotive Systems

Back

SY8512FCC - High Efficiency, 100V Input, 2A Asynchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET(TOP):175mΩ
- 4.5-100V Input Voltage Range
- 2A Output Current Capability
- Adjustable Switching Frequency Range: 100kHz to1MHz
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Output Short Circuit Protection
- EN ON/OFF Control with Accurate Threshold
- Cycle-by-cycle Peak Current Limit
- 0.8V± 1% Reference Voltage Accuracy
- Compact Package: SO8E



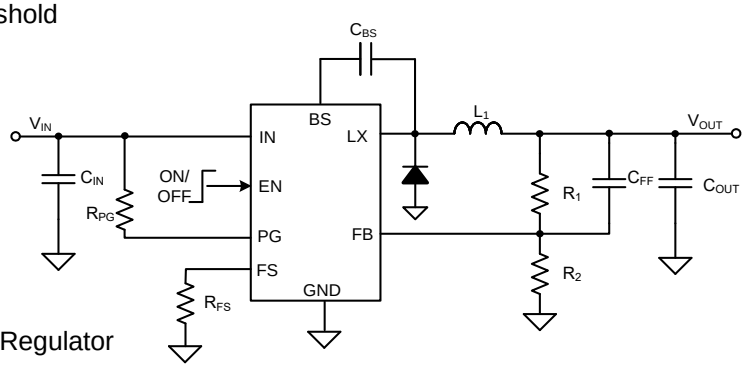
Applications

- Non-isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

SY8513FCC - High Efficiency, 100V Input, 3A Asynchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET(TOP):150mΩ
- 4.5-100V Input Voltage Range
- 3A Output Current Capability
- Adjustable Switching Frequency Range: 100kHz to 500kHz
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Output Short Circuit Protection
- EN ON/OFF Control with Accurate Threshold
- Cycle-by-cycle Peak Current Limit
- 0.8V± 1% Reference Voltage Accuracy
- Compact Package: SO8E



Applications

- Non-isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

Back

Single Output Step Up (Boost) Converter (Low Voltage)

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{LIM} (A)	fsw (MHz)	V_{OUT} (max) (V)	Sync Boost	V_{REF} Accuracy	Input Quiescent Current (μA)	MOSFET(Ron Main/Sync) (mΩ)	Feature/ Special Function	Package
SQ25052ABC	0.98	5.5	2	1	5.5	Y	1.2V±1.5%	0.7	100/170	Auto Bypass Mode When V_{IN} ≥V_{OUT}. OVP	SOT23-6
SQ25201QDQ	2.8	5.5	0.68	0.85	70	N	external	500	600	2.5mA Precision Protection APD Bias, Dual-Gain Track/Hold Current Mirror	QFN3×3-16

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{LIM} (A)	f_{SW} (MHz)	V_{OUT} (Max) (V)	Sync Boost	Fixed Output Voltage (V)	V_{FB}/ Accuracy	Quiescent Current Input (μA)	Quiescent Current output (μA)	MOSFET Ron (H/L)(mΩ)	Feature/ Special Function	Package
SY7070AAC	0.7	5	0.35	/	3.3 (Fixed)	√	3.3	/	0.5	5.5	700/500	Bypass function during shutdown	SOT23-5
SY7070AAAC	0.7	5	0.35	/	3.0 (Fixed)	√	3	/	0.5	5.5	700/500		SOT23-5
NEW SY7070BAAT	0.7	5	0.35	/	2.8 (Fixed)	√	2.8	/	0.5	5.5	700/500	Bypass function during shutdown	SOT23-5
SY7071AHC	0.7	5	0.35	/	5.25	√	/	1.0V±3%	0.5	5	700/500	Pass-through Function@ Shutdown	SOT-363
SY7071AAHC	0.7	5	0.35	/	/	√	5	/	0.5	7	500/400	Pass-through Function@ Shutdown; OVP	SOT-363
SY7072DABC	0.85	5.5	0.6	1	5.5	√	/	0.5V±1.5%	0.7	5	170/100	Auto Bypass Mode When V_{IN} ≥V_{OUT}; OVP	SOT23-6
SY87092SUD	1.8	5.5	1	1	5.5	√	/	1.2V±1.5%	/	/	125/70	Auto Bypass Mode When V_{IN} ≥V_{OUT}; OVP, CCM Only	DFN2×1.5-6
SY7072AABC	0.85	5.5	2	1	5.5	√		1.2V±1.5%	0.7	5	170/100	Auto Bypass Mode When V_{IN} ≥V_{OUT}; OVP	SOT23-6
SY7072ABC	1.8	5.5	2	1	5.5	√		1.2V±1.5%	0.7	5	170/100	Auto Bypass Mode When V_{IN} ≥V_{OUT}; OVP	SOT23-6
SY7092SUC	0.85	5.5	2	1	5.5	√	/	1.2V±1.5%	0.7	5	125/70	Auto Bypass Mode When V_{IN} ≥V_{OUT}; OVP	DFN2×1.5-6
SY7063QMC	1.8	5.25	3	0.5	5.5	√	/	1.2V±1.5%	10	27	40/36	Output Disconnect @Shutdown	QFN2×2-10
SY7069ADC	2.5	5.5	3	1	5.5	√	/	1.2V±1.5%	8	32	90/50	Auto Bypass Mode When V_{IN} ≥V_{OUT}; OVP	TSOT23-6
SY7069BADC	2.5	5.5	3	1	5.5	√	/	1.2V±1.5%	8	32	90/50	Auto Bypass Mode When V_{IN} ≥V_{OUT}; OVP	TSOT23-6
SY7069CUMC	2.5	5.5	3	1	5.6	√	/	1.2V±1.5%	8	32	100/70	Auto Bypass Mode When V_{IN} ≥V_{OUT}; OVP	CSP1.54×0.9-6
SY7065QMC	1.8	5.25	5	0.5	5.5	√	/	1.2V±1.5%	10	27	40/20	Auto Output Discharge Function, Input Battery Voltage Monitor, OVP	QFN2×2-10
SY7065AQMC	1.8	5.25	5	0.5	5.5	√	/	1.2V±1.5%	10	27	40/20	No Output Discharge Function, Input Battery Voltage Monitor, OVP	QFN2×2-10
SY7076QMC	2	5.5	6	0.5	5.5	√	/	1.2V±1.5%	10	27	40/20	Selectable Forced PWM Mode, Programmable Output Current Limit, OVP	QFN2×2-10
SY7066QMC	1.8	5.25	6	0.5	5.5	√	/	1.2V±1.5%	10	27	40/20	Auto Output Discharge Function, Input Battery Voltage Monitor, OVP	QFN2×2-10
SY7066AQMC	1.8	5.25	6	0.5	5.5	√	/	1.2V±1.5%	10	27	40/20	No Output Discharge Function, Input Battery Voltage Monitor, OVP	QFN2×2-10
SY7066BQMC	1.8	5.25	6	0.5	5.5	√	/	1.2V±1.5%	10	27	40/20	Selectable Forced PWM Mode, OVP	QFN2×2-10
SY87004WUS	1.9	5.5	6	2.1	5.5	√	/	/	3	24	17/17	I^2C Configurable ; Auto Bypass and Forced Bypass Modes; FCCM and PFM Modes	CSP1.65×1.65 -16

Back

Single Output Step Up (Boost) Converter (Low Voltage)

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{LIM} (A)	f_{SW} (MHz)	V_{OUT} (Max) (V)	Sync Boost	Fixed Output Voltage (V)	V_{FB}/ Accuracy	Quiescent Current Input (μA)	Quiescent Current output (μA)	MOSFET Ron (H/L)(mΩ)	Feature/ Special Function	Package
SY7060LAHC*	0.7	5	0.2	/	5.25	√	/	0.5V±3%	0.5	18	800/450	Pass-through Function@ Shutdown; OVP	SOT-363
SY7060AHC*	0.7	5	0.4	/	5.25	√	/	0.5V±3%	0.5	18	800/450	Pass-through Function@ Shutdown; OVP	SOT-363
SY7080ABC*	0.9	4	1.8	1.2	4	√	/	1.2V±3%	65	/	200/90	Output Disconnect @Shutdown	SOT23-6
SY7088DGC*	2.3	5.25	3	1	5.5	√		1.2V±1.5%	2	30	85/70	OVP	DFN2×3-8
SY7088EDGC*	2.3	5.25	3	1	5.5	√	/	1.2V±1.5%	/	/	85/70	FCCM, OVP	DFN2×3-8

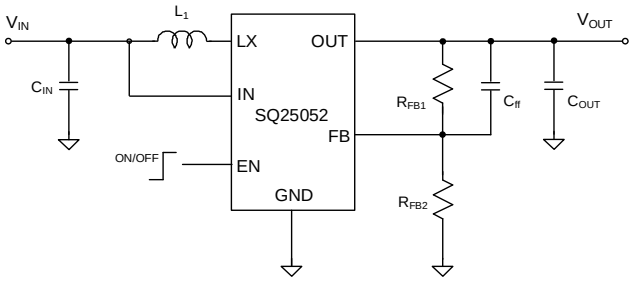
** Not recommended for new design*

Back

SQ25052ABC - 0.98V Minimum Input, 5.5V Maximum Output, High Efficiency 2A Valley Current Synchronous Boost Converter

Features

- 0.98V Minimum Input Voltage
- Adjustable Output Voltage from 1.8V to 5.5V
- Minimum 2A Valley Current Limit
- 5μA Typical Quiescent Current
- Load Disconnect During Shutdown
- Low $R_{DS(ON)}$ at 3.3V Output: 100mΩ Main, 170mΩ Synchronous
- Output OVP
- Auto-Bypass Mode when VIN ≥ VOUT
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6



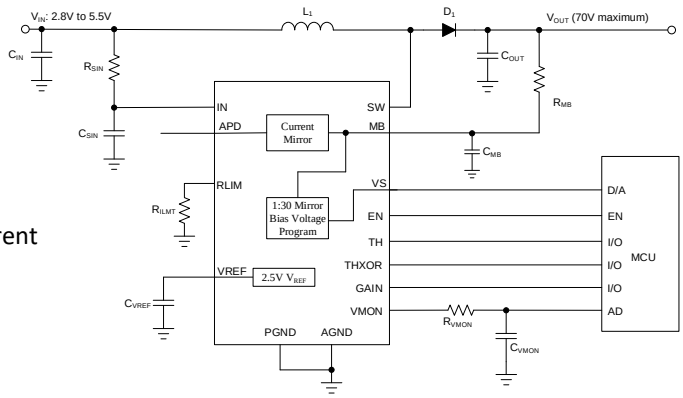
Applications

- Single-cell Lithium or Dual-Cell Nickel Battery-Powered Devices (MP3 Players, PDAs, etc.)

SQ25201QDQ 70V, 2.5mA Precision Protection APD Bias Dual-Gain Track/Hold Current Mirror

Features

- Wide Input Range: 2.8V to 5.5V
- Wide Output Voltage Range from (V_{IN} + 5V) to 70V
- 850kHz Switching Frequency
- Less Than 1μA Shutdown Current
- 1:30 Output Voltage Programming
- Adjustable Precision, Over-Current Protection
- Internal 1×/1.8× Dual-Gain Current Mirror
- Up to 2.5V Voltage Buffer for Full-Scale Output Current
- Input Voltage UVLO
- Over Temperature Protection
- Full Chain Circuit: Bias-Mirror-Track/Hold
- Compact Package: QFN3×3-16
- -40°C to +85°C Operating Temperature Range



Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Player

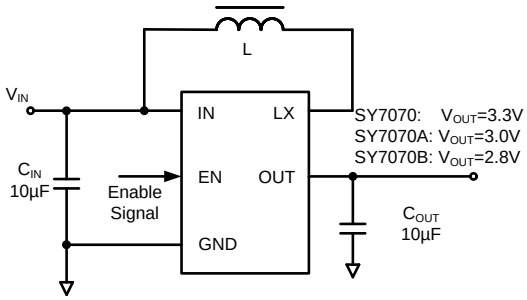
Back

SY7070AAC/SY7070AAAC/ SY7070BAAT

0.7V Minimum Input, Fixed Output 100mA Maximum Output Current Synchronous Boost

Features

- 0.7V Minimum Input Voltage
- 5.5μA Typical Quiescent Current
- Input Under Voltage Lockout
- Bypass Function During Shutdown
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at Output: 0.5/0.7 Ω
- Fixed Output Voltage
  - SY7070: Fixed 3.3V
  - SY7070A: Fixed 3.0V
  - SY7070B: Fixed 2.8V
- Typical 350mA Peak Current Limit
- Compact SOT23-5 Package.



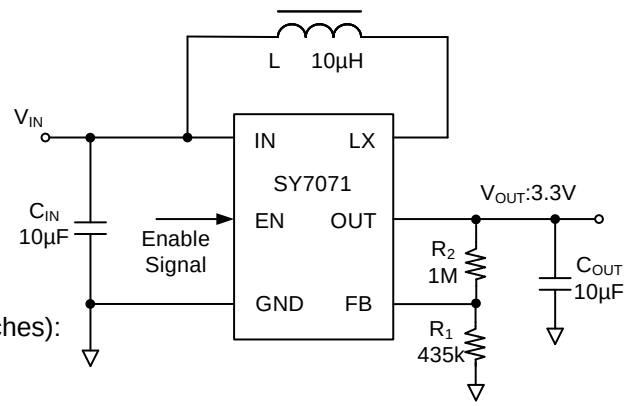
Applications

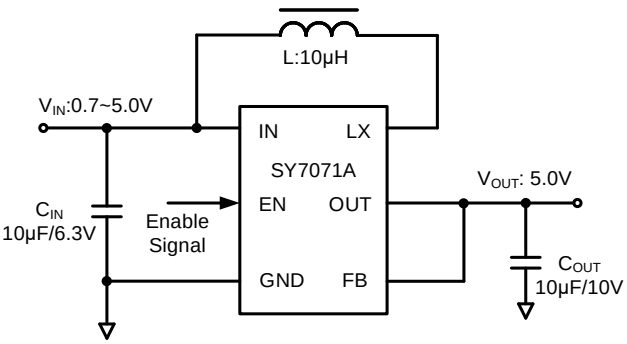
- Battery Powered Applications
- Consumer And Portable Medical Products
- Personal Care Products
- Smartphones
- White or Status LEDs

SY7071AHC/SY7071AAHC- 0.7V Minimum Input Voltage Synchronous Boost

Features

- 0.7V to 5V Input Voltage Range
- Fixed 5V Output Voltage (SY7071A)
- Low Quiescent Current
- 1 μA Shutdown Current (Max.)
- 95% Peak Efficiency
- Input Under Voltage Lockout
- Pass-through Function During Shutdown
- Low RDS(ON) (Main Switch/Synchronous Switches):
  - SY7071: 0.5/0.7Ω
  - SY7071A: 0.4/0.5Ω
- Typical 350mA Peak Current Limit
- RoHS Compliant and Halogen Free
- Compact Package: SOT-363





Applications

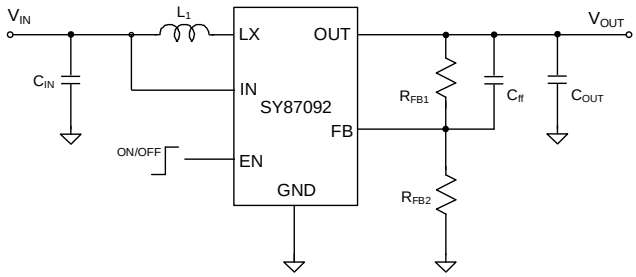
- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Care Products
- Smartphones
- White or Status LEDs

Back

SY87092SUD- 1.8V Minimum Input and 5. 5V Maximum Output High Efficiency 1A Valley Current Synchronous Boost

Features

- 1.8V Minimum Input Voltage
- Adjustable Output Voltage from 1.8V to 5.5V
- Min 1A Valley Current Limit
- CCM Only Operation
- Load Disconnect During Shutdown
- Low RDS(ON) (Main Switch/Synchronous Switch) at 3.3V Output: 70/125mΩ
- Output OVP
- RoHS Compliant and Halogen Free
- Auto Bypass Mode When VIN ≥VOUT
- Compact Package DFN2×1.5-6



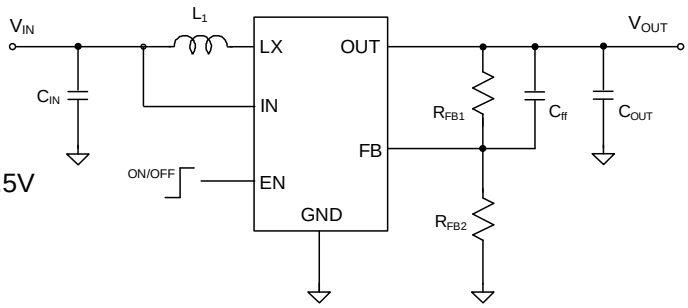
Applications

- All Single Cell Li or Dual Cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

SY7072ABC/SY7072AABC/SY7072DABC

5. 5V Maximum Output High Efficiency Synchronous Boost Converter

Features



- Minimum Input Voltage:
  - SY7072D: 0.85V
  - SY7072A: 0.85V
  - SY7072:1.8V
- Adjustable Output Voltage from 1.8V to 5.5V
- Min Valley Current Limit
  - SY7072D: 0.6A
  - SY7072A: 2A
  - SY7072: 2A
- 5μA Typical Quiescent Current
- Load Disconnect During Shutdown
- Low RDS(ON) (Main Switch/Synchronous Switch) at 3.3V Output: 100/170mΩ
- Output OVP
- RoHS Compliant and Halogen Free
- Auto Bypass Mode When VIN ≥VOUT
- Compact Package SOT23-6

Applications

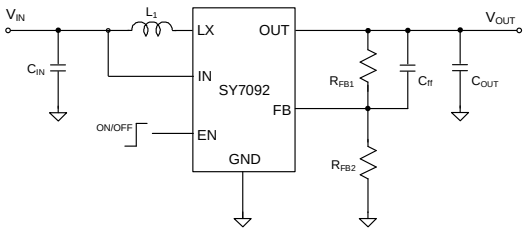
- All Single Cell Li or Dual Cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

Back

SY7092SUC- 0.85V Minimum Input and 5. 5V Maximum Output High Efficiency 2A Valley Current Synchronous Boost

Features

- 0.85V Minimum Input Voltage
- Adjustable Output Voltage From 1.8V to 5.5V
- Min 2A Valley Current Limit
- 5μA Typical Quiescent Current
- Load Disconnect During Shutdown
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at 3.3V Output: 70/125mΩ
- Output OVP
- RoHS Compliant and Halogen Free
- Auto Bypass Mode When VIN ≥VOUT
- Compact Package DFN2x1.5-6



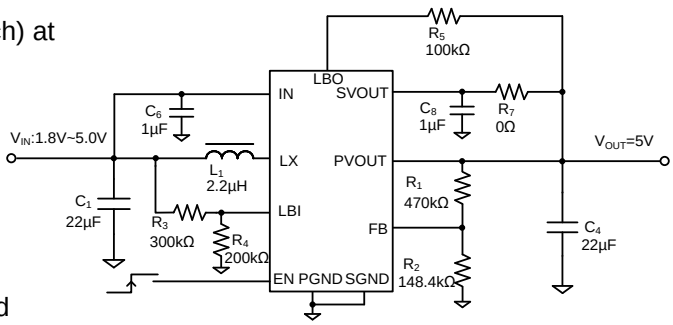
Applications

- All Single Cell Li or Dual Cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

SY7063QMC- 1.8V Minimum Input and 5. 5V Maximum Output 3A Peak Current Synchronous Boost with Output Disconnect

Features

- 1.8V Minimum Input Voltage
- Adjustable Output Voltage from 2.5V to 5. 5V
- 3A Peak Current Limit
- Input Under Voltage Lockout
- Load Disconnect during Shutdown
- Output Over Voltage Protection
- Input Battery Voltage Monitor
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at 5.0V Output: 36/40mΩ
- Output Auto-discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN2×2-10



Applications

- All Single-cell Li or Dual-cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

Back

SY7069ADC/SY7069BADC/SY7069CUMC

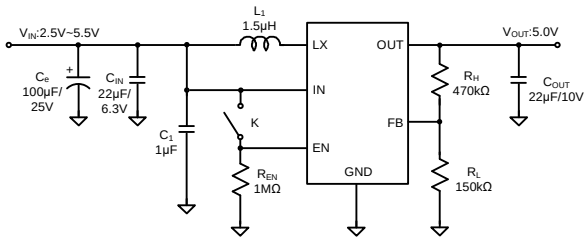
5.5V/5.6V Maximum Output, 3A Valley Current, 1MHz Synchronous Boost Converter

Features

- 2.5V Minimum Input Voltage
- Adjustable Output Voltage :
  - SY7069/B: from 2.5V to 5.5V
  - SY7069C: from 2.5V to 5.6V
- Minimum 3A Valley Current Limit
- Capable of Seamless Transition between Boost and Bypass Mode
- Load Disconnect During Shutdown
- Low $R_{DS(ON)}$ at 5.0V Output:
  - SY7069/B: 50mΩ Main, 90mΩ Synchronous
  - SY7069C: 70mΩ Main, 100mΩ Synchronous
- Output Overvoltage Protection (OVP)
- RoHS-Compliant and Halogen-Free
- Compact Package:
  - SY7069/B: TSOT23-6
  - SY7069C: CSP1.54×0.9-6

Applications

- Single-cell lithium or dual-cell nickel battery-powered devices (MP3 players, PDAs, etc.)



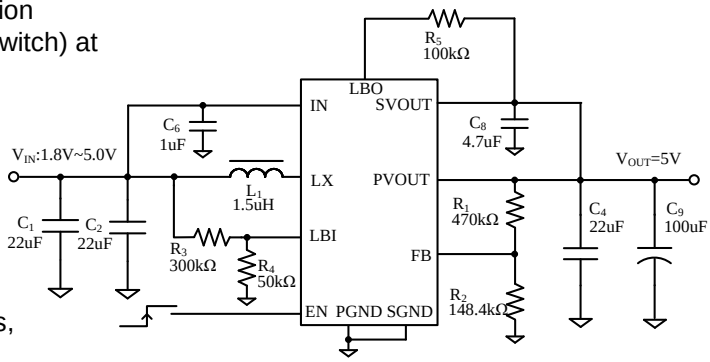
SY7065QMC/SY7065AQMC - 1.8V Minimum Input and 5. 5V Maximum Output 5A Peak Current Synchronous Boost with Output Disconnect

Features

- 1.8V Minimum Input Voltage
- Adjustable Output Voltage from 2.5V to 5.5V
- 5A Peak Current Limit
- Input Under Voltage Lockout
- Load Disconnect during Shutdown
- Output Over Voltage Protection
- Input Battery Voltage Monitor
- Automatic Output Discharge at Shutdown:
  - SY7065: Auto Output Discharge Function
  - SY7065A: No Output Discharge Function
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at 5.0V Output: 20/40mΩ
- Compact Package: QFN2×2-10

Applications

- All Single-cell Li or Dual-cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment



Back

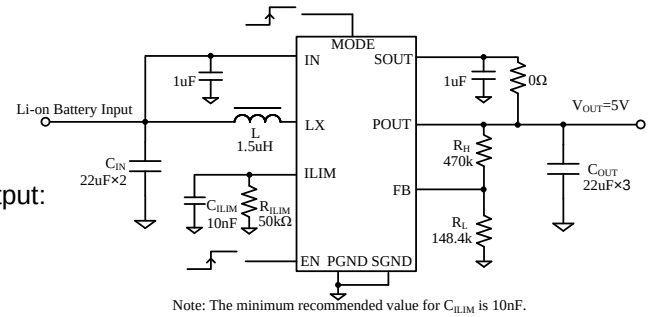
SY7076QMC- 2V Minimum Input, 5.5V Maximum Output, 6A Peak Current Synchronous Boost Converter with Output Current Limit

Features

- 2V Minimum Input Voltage
- Adjustable Output Voltage from 2.5V to 5.5V
- 6A Peak Current Limit
- Input Undervoltage Lockout
- Load Disconnect During Shutdown
- Programmable Output Current Limit Protection
- ±10% Output Current Limit Accuracy
- Selectable Forced-PWM Mode
- Hiccup Mode for Short-Circuit Protection
- Low RDS(ON) for Internal Switches at 5.0V Output: 20mΩ Main, 40mΩ Synchronous
- Output Overvoltage Protection (OVP)
- Compact Package: QFN2mmx2mm-10

Applications

- Single-cell Lithium or Dual-Cell Nickel Battery-Powered Devices (MP3 players, PDAs, etc.)



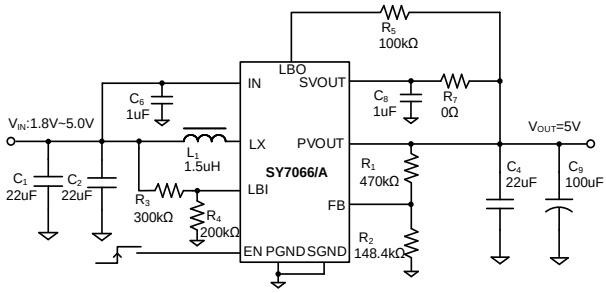
Note: The minimum recommended value for C_{ILIM} is 10nF.

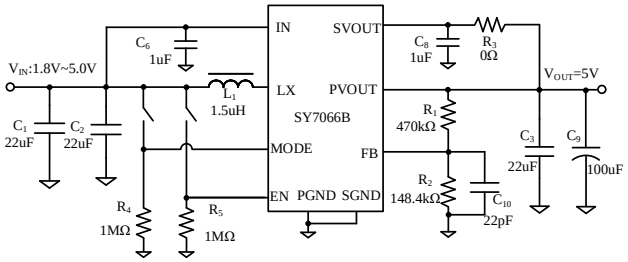
SY7066QMC/SY7066AQMC/SY7066BQMC

1.8V Minimum Input, 5.5V Maximum Output, 6A Peak-Current Synchronous Boost Converter with Output Disconnect

Features

- 1.8V Minimum Input Voltage
- Adjustable Output Voltage from 2.5V to 5.5V
- 6A Peak Current Limit
- Input Undervoltage Lockout
- Quiescent Current: 27 μA (typ.)
- Shutdown Current: 0.1 μA (typ.)
- Load Disconnect During Shutdown
- Selectable Forced PWM Mode Operation (SY7066B)
- Input Battery Voltage Monitor (SY7066/A)
- Output Overvoltage Protection
- Low $R_{DS(ON)}$ for Internal Switches at 5.0V Output: 20mΩ Main, 40mΩ Synchronous
- Automatic Output Discharge at Shutdown:
  - ➢ SY7066: Automatic Output Discharge Function
  - ➢ SY7066A/B: No Output Discharge Function
- Compact Package: QFN2mmx2mm-10





Applications

- Single-cell Lithium or Dual-Cell Nickel Battery-Powered Devices (MP3 players, PDAs, etc.)

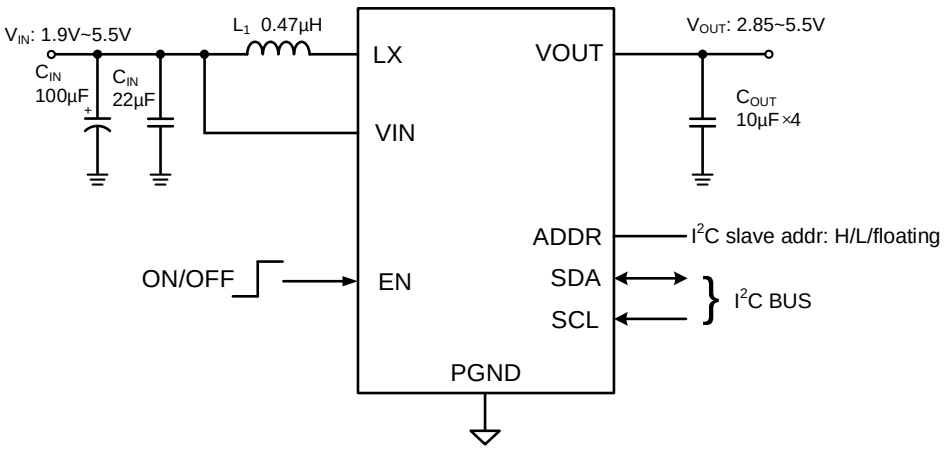
Back

Features

- Input Voltage Range: 1.9V to 5.5V
- Program Output Range: 2.85V to 5.5V
- Maximum Bypass Continuous Load Current :6A
- Up to 95% Efficiency
- Supports 0.9V signaling for SCL/SDA/EN Pins
- Programmable Valley Inductor Current Limit and Output Voltage
- I²C Configurable Auto Bypass Operation And Forced Bypass Mode
- I²C configurable FCCM and PFM Modes
- Low Operating Quiescent Current
- Shutdown Current 0.1 μA (Typ.)
- Load Disconnect During Shutdown
- Compact Package CSP1.65×1.65-16

Applications

- Single-Cell Li-Ion, LiFePO4 Smart-Phones or Tablet PCs
- 2.5G/3G/4G Data Cards



Back

Single Output Step Up (Boost) Converter (High Voltage)

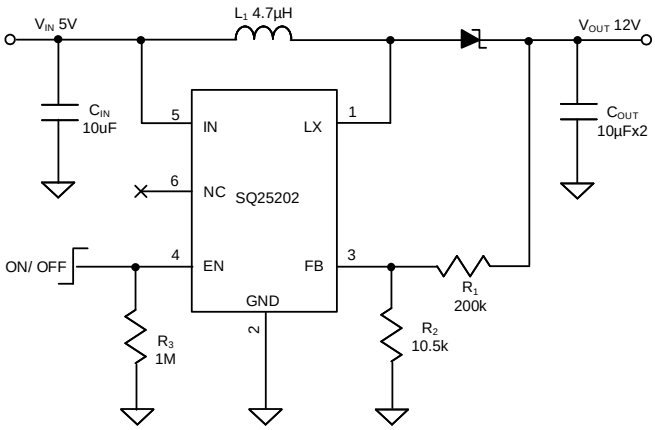
Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{LIM} (A)	f_{SW} (MHz)	V_{OUT} (Max) (V)	Sync Boost	V_{FB}/ Accuracy	Input Quiescent Current (μA)	MOSFET (Ron H/L) (mΩ)	Feature/ Special Function	Package
SQ25202ABC	3	30	2	1	33		0.6V±3%	100	-/200	Internal SS/Comp	SOT23-6
SQ25110ARAC	2.9	16	2~10	0.4~2	16	√	1V±2%	200	20/10	PFM/PWM Light Load Operation Mode, OVP, Programmable Switching Frequency: 0.4~2MHz, Programmable I_{LIM}: 2~10A	QFN3×3-20
SQ25250ABC	3	30	0.75	1	33		1.24V±2%	100	-/400	Internal SS/Comp	SOT23-6
SY7208CABC	3	25	0.6	1	25		0.6V±2%	100	-/150	Internal SS/Comp	SOT23-6
SY7152AABC	3	8	2	1	16		0.6V±2%	100	-/130	Internal SS/Comp	SOT23-6
SY7208LABC	3	25	2	1	25		0.6V±2%	100	-/150	Internal SS/Comp	SOT23-6
SY7302ABC	3	33	2	1	33		0.6V±2%	100	-/200	Internal SS/Comp	SOT23-6
SY7102ABC	2	6	2.5	1	6		0.6V±2%	200	-/120	Internal SS/Comp	SOT23-6
SY7304DBC	3	33	4	1	33		0.6V±2%	100	-/120		DFN3×3-10
NEW SY7304BXES	3	33	4	1	33		0.6V±2%	100	-/120	Internal Soft-Start	CSP2.03×0.93-8
SY7205ADBC	8.6	15.9	4.5	0.5	16		1.25V±1.5%	120	-/75	Adjustable soft-start time, OVP	DFN3×3-10
SY7982QDC	3	9	6	1	13	√	1V±2%	600	40/80	Power Good Indicator, Integrated 40mΩ Disconnection FET, True Shutdown	QFN3×3-16
SY7219DBC	3	5.5	9	/	36		1.25V±2%	380	-/65	EXT Comp	DFN3×3-10
SY7215ARDC	3	16	15	0.25~1	16	√	1V±1.5%	230	12/9	Power Good Indicator, Integrated 12mΩ Disconnection FET, Internal SS, OVP/SCP/ True shutdown Programmable Switching Frequency: 0.25~1MHz	QFN4×4-18
SY7315RDC	4.5	30	15	0.2~1	30	√	1V±1.5%	230	18/16	Integrated 18mΩ Disconnect ion FET, OVP/OTP/SCP, True Shutdown, Programmable Switching Frequency: 0.2~1MHz, Power Good Indicator	QFN4×4-18
SY7120RAC	2.8	16	2~10	0.3~2	16	√	1V±1%	200	20/10	PFM/PWM light load operation mode, Programmable Switching Frequency: 0.3~2MHz, Programmable I_{LIM}: 2~10A, OVP	QFN3×3-20

Back

SQ25202ABC- High Efficiency 1MHz, 2A Step-Up Regulator

Features

- 3V to 30V Bias Input Voltage Range, $33V_{OUT,MAX}$
- Up to 2A Output Current
- Quiescent Current I_Q 100 μA (typ.)
- Shutdown Current I_{SHDN} 5 μA (typ.)
- Low RDS(ON) for Internal N-Channel MOSFET: 200mΩ
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start Limits Inrush Current
- ±2% 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



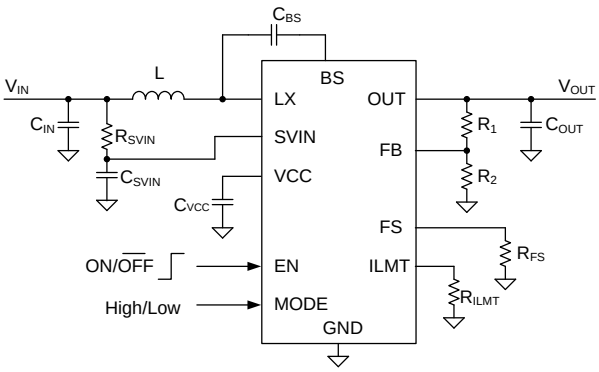
Applications

- Digital Camera
- Cell Phone
- PDA, PMP, MP3

SQ25110ARAC - High Efficiency, 16V, Synchronous Step-Up Regulator With 10A Programmable Current Limit

Features

- 2.9V to 16V Input Voltage Range
- 16V Maximum Output Voltage
- 1.5 μA Shutdown Current (Typ.)
- 200 μA Quiescent Current (Typ.)
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET: 10mΩ Main, 20mΩ Rectifier
- Programmable Peak Current Limit
- Programmable Pseudoconstant 400kHz-2MHz Frequency
- PFM/PWM Selectable Light Load Operation Mode
- Internal Loop Compensation
- Internal Soft-Start Limits Inrush Current
- Input Voltage UVLO
- Output Overvoltage Protection
- Overtemperature Protection
- RoHS-Compliant and Halogen-Free
- Compact QFN3mm×3mm-20 Package



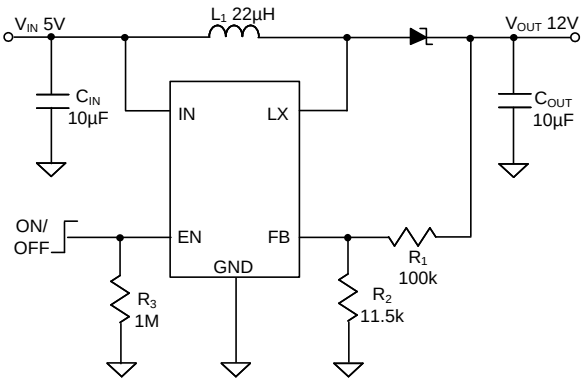
Applications

- Power Banks
- E-cigarettes
- Bluetooth Speakers

Back

Features

- Wide Input Range: 3-30V
- Output Voltage Range: VIN to $33V_{OUT, MAX}$
- 1MHz Switching Frequency
- Minimum ON Time: 100ns typical
- Minimum OFF Time: 100ns typical
- Low $R_{DS(ON)}$: 400mΩ
- RoHS Compliant and Halogen Free
- Accurate Reference: $1.24V_{REF}$
- Compact Package: SOT23-6



Applications

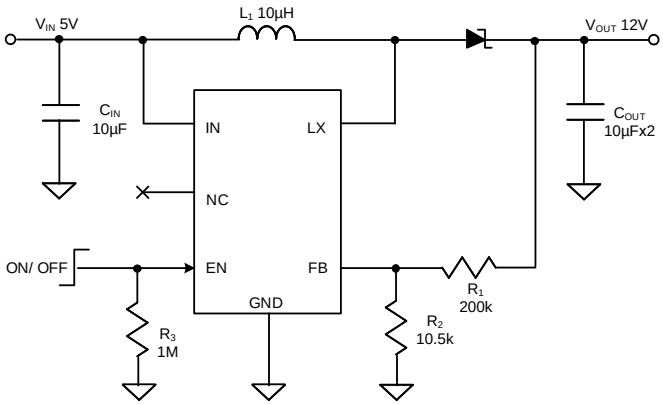
- Digital Cameras
- PDA, PMP, MP3
- LED/ Backlight Drivers

Back

SY7208CABC/SY7208LABC - High Efficiency 1MHz Step-Up Regulator

Features

- 3V to 25V Bias Input Range, $25V_{OUT,MAX}$
- **SY7208C**: Up to 600mA Output Current
- **SY7208L**: Up to 2A Output Current
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET: 150mΩ
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start Limits Inrush Current
- ±2% 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



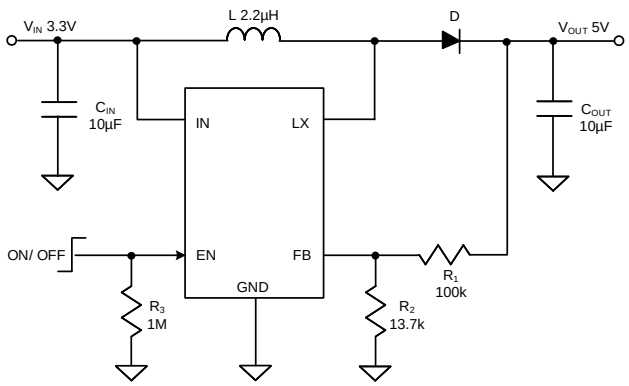
Applications

- WLED Drivers
- Networking Cards Powered From PCI Or PCI-Express Slots

SY7152AABC - High Efficiency 1MHz, 2A Current Limit Step-Up Regulator

Features

- 3V to 8V Input Voltage Range
- Up to 2A Output Current
- 15 μA Shutdown Current (Max.)
- 100 μA Iq (Typ.)
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET: 130mΩ
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start Limits Inrush Current
- ±2% 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



Applications

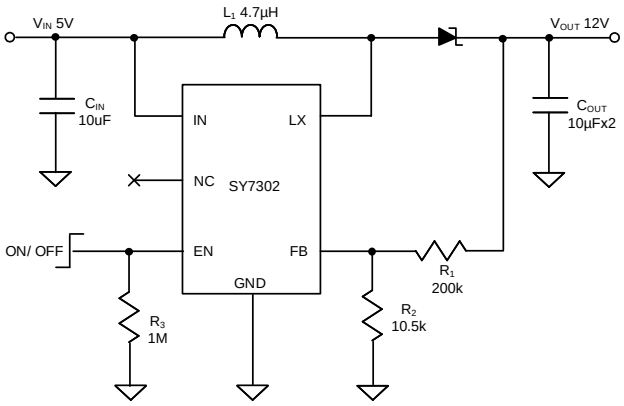
- WLED Drivers
- Networking Cards Powered From PCI Or PCI-Express Slots

Back

SY7302ABC- High Efficiency 1MHz, 2A Current Limit Step-Up Regulator

Features

- 3V to 33V Input Voltage Range
- 33V Maximum VOUT
- 2A Internal MSOFET Current Limit
- 5μA Shutdown Current (Typ.)
- 100μA Iq (Typ.)
- Low RDS(ON) for Internal N-Channel MOSFET: 200mΩ
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start
- ±2% 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



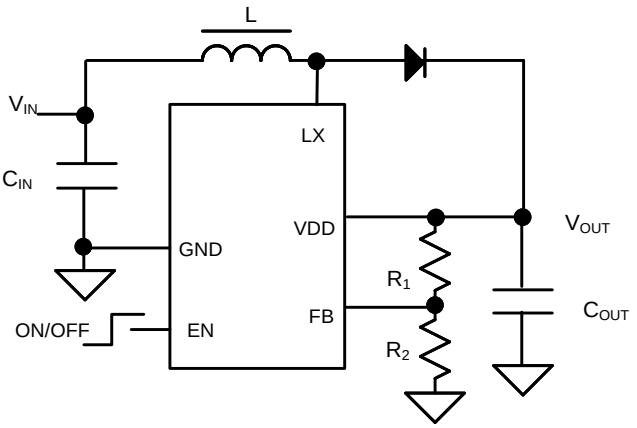
Applications

- Digital Camera
- Cell Phone
- PDA, PMP, MP3

SY7102ABC- High Efficiency 6V, 1MHz, 2.5A Current Limit Step-Up Regulator

Features

- Wide 2V to 6V Input Range
- Up to 6V Output Voltage
- Low RDS(ON) for Internal N-Channel MOSFET: 120mΩ
- 2.5A Minimum Switch Current Limit
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start Limits Inrush Current
- ±2% 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



Applications

- Solar Battery Charger
- Backup Battery

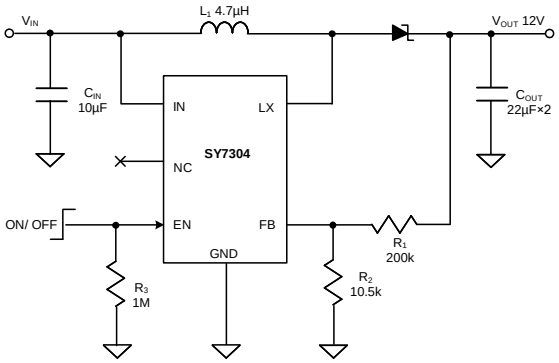
Back

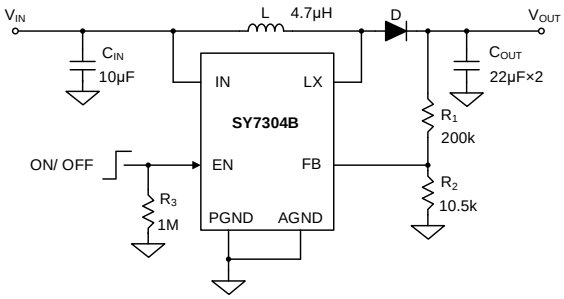
SY7304DBC/SY7304BXES

High Efficiency 33V, 1MHz, 4A Current Limit Step-Up Regulator

Features

- 3V to 33V Input Voltage Range
- 33V Maximum Output Voltage
- 4A Main MOSFET Current Limit
- 15 μA Shutdown Current (Max.)
- 100 μA Quiescent Current (Typ.)
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET: 120mΩ
- 1MHz Switching Frequency
- Internal Soft-Start
- ±2% 0.6V Reference
- Cycle-by-Cycle Peak Current Limit
- Overtemperature Protection
- RoHS-Compliant and Halogen-Free
- Compact Package:
  - DFN3×3-10 (SY7304DBC)
  - CSP2.03×0.93-8 (SY7304BXES)





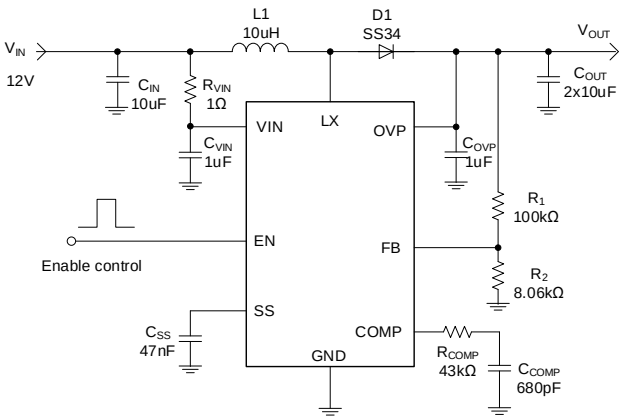
Applications

- Portable Devices
- Battery Powered Systems
- Networking Cards Powered from PCI or PCI-Express Slots

SY7205ADBC- High-Performance Boost Regulator for UHD TV Display

Features

- Wide 8.6V–15.9V Input Voltage Range
- Low RDS(ON) for N-channel MOSFET: 75mΩ (typical)
- 95% Typical Efficiency
- Feedback Reference Voltage: 1.25V ±1.5%
- 500kHz Fixed Switching Frequency
- Pulse Skipping Mode at Light Load
- Adjustable Soft-Start Limits Inrush Current
- EN ON/OFF Control
- Overvoltage Protection
- Cycle-by-Cycle Current-Limiting Protection
- Input UVLO
- Thermal Shutdown with Automatic Recovery
- Compact DFN3×3-10 Package



Applications

- TFT LCD Panels AVDD

Back

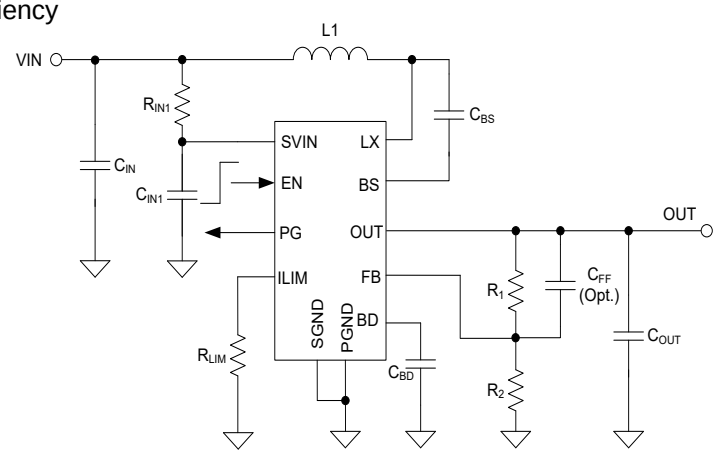
SY7982QDC - High Efficiency 1MHz, 16V, 6A Synchronous Step-Up Regulator with Accurate Output Current Limit

Features

- 3V to 9V Input Voltage Range
- 6A (Min.) Main MOSFET Current Limit
- 7 µA Shutdown Current (Max.)
- 600 µA Quiescent Current (Typ.)
- Programmable Output Current Limit
- Low RDS(ON) for Internal N-Channel MOSFET: 80mΩ Main, 40mΩ Rectifier, 40mΩ Disconnection
- Synchronous Rectification for High Efficiency
- Pseudoconstant 1MHz Frequency
- Enable Control
- Input Voltage UVLO
- Output Overvoltage Protection
- Overtemperature Protection
- Output Short-Circuit Protection
- Power-Good Indicator
- True Shutdown Function
- RoHS-Compliant and Halogen-Free
- Compact QFN3mm×3mm-16 Package

Applications

- Power Bank
- High Power Application
- SSD



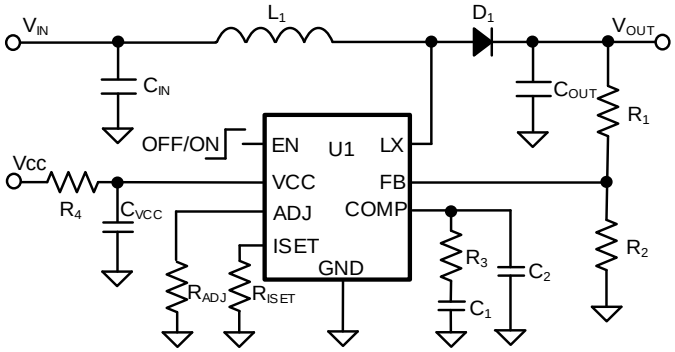
SY7219DBC- Current Limit Step-Up Regulator

Features

- 3V to 5.5V Input Range
- 30V Maximum Output Voltage
- 1 µA Shutdown Current (Typ.)
- 380 µA Quiescent Current (Typ.)
- Programmable Peak Current Limit
- Programmable Constant Off-Time
- Low RDS(ON) for Internal 9A N-Channel MOSFET: 65mΩ
- Internal Soft-Start
- RoHS-Compliant and Halogen-Free
- Compact DFN3mm×3mm-10 Package

Applications

- Industrial Control Systems
- Battery Powered Devices
- LED Drivers



Back

SY7215ARDC/SY7315RDC

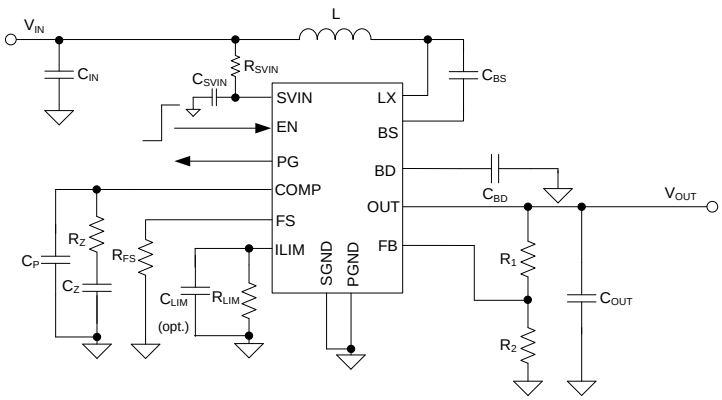
- High Efficiency 15A Step-Up Regulator with Accurate Output Current Limit

Features

- Input Voltage Range :
  - SY7215A: 3V to 16V
  - SY7315: 4.5V to 30V
- Up to 15A Output Current
- Programmable Output Current Limit
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET:
  - SY7215A:
    9mΩ Main, 12mΩ Rectifier, 12mΩ Disconnection FET
  - SY7315:
    16mΩ Main, 18mΩ Rectifier, 18mΩ Disconnection FET
- Programmable Pseudoconstant Frequency:
  - SY7215A: 250kHz to 1MHz
  - SY7315: 200kHz to 1MHz
- Enable Control
- Input Voltage UVLO
- Output Overvoltage Protection
- Overtemperature Protection
- Output Short-Circuit Protection
- True Shutdown Function
- RoHS-Compliant and Halogen-Free
- Compact QFN4mm×4mm-18 Package

Applications

- Power Bank
- High Power Application



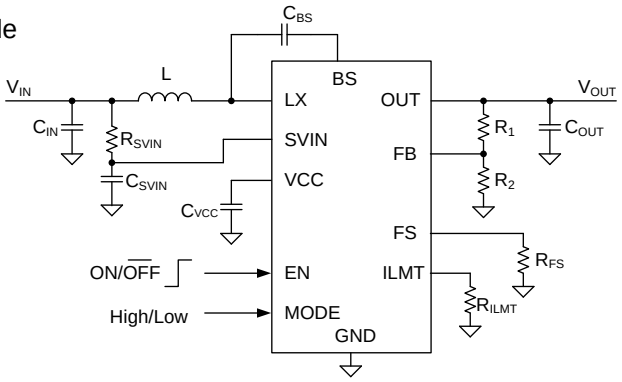
SY7120RAC - High Efficiency, 16V, 10A Synchronous Step Up Regulator

Features

- Input Voltage Range: 2.8-16V
- Programmable Pseudo-constant Frequency:
  300kHz-2MHz
- Low RDS(ON) for Internal Switch
  - Main FET: 10mΩ
  - Rectifier FET: 20mΩ
- PFM/PWM Selectable Light Load Operation Mode
- Internal Loop Compensation
- Programmable Peak Current Limit
- Internal Soft-start Time Limit the Inrush Current
- Input Voltage UVLO
- Over Temperature Protection
- Over Voltage Protection
- RoHS Compliant and Halogen Free
- Compact Package:QFN3×3-20

Applications

- Power Bank
- High Power AP
- E-cigarette
- Bluetooth Speaker



Back

DC-DC PWM Controller (External Switch)

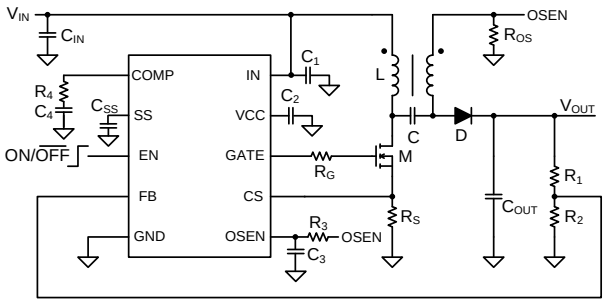
Part Number	V_{IN} Min (V)	V_{IN} Max (V)	f_{SW} (MHz)	V_{REF} Accuracy	Quiescent Current (μA)	Function	Package
SQ25902AFHC	3	25	0.3	1V±8% (-40°C to 125°C)	130	Current mode DC/DC controller targeted for both Boost and SEPIC applications with DC Output Current Limit	SSOP10
SQ25001QEQ	6	60	0.15-0.4	0.8V±1%	NA	Four-Switch Single Inductor/PFM or PWM Light Load/ Power Good/Fault Indicator/Spread-Spectrum Function/ CBC Current Limit Protection	QFN5×5-32
SY7901DBC	3	25	0.5	1V±2%	170	Current mode DC/DC controller targeted for Boost, SEPIC, Flyback and Forward applications with DC Input Current Limit	DFN3×3-10
SY7902AFHC	3	25	0.3	1V±1.5%	130	Current mode DC/DC controller targeted for both Boost and SEPIC applications with DC Output Current Limit	SSOP10

Back

SQ25902AFHC- High Efficiency 300kHz, 25V Boost/SEPIC Controller with Output Current Limit

Features

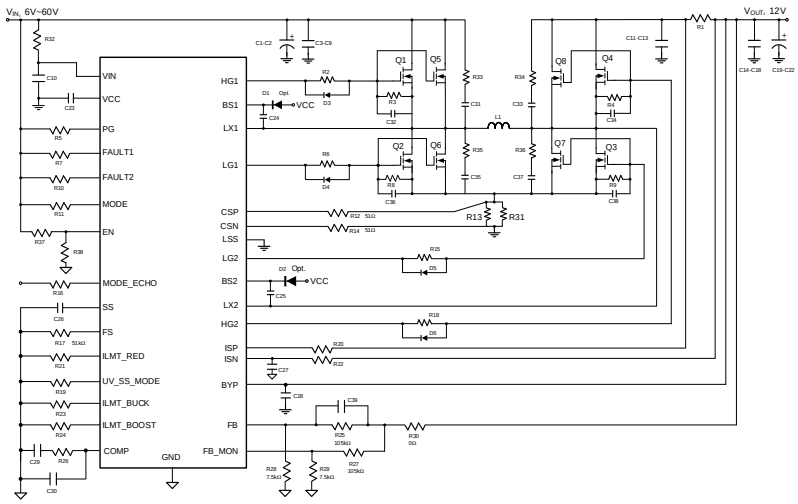
- Input Voltage Range 3V to 25V
- 300kHz Fixed Switching Frequency
- Output Current Limit
- External Compensation
- Programmable Soft-start Limits the Inrush Current
- Integrated Low Side Driver: 1.5A Sourcing and 3A Sinking
- RoHS Compliant and Halogen Free
- Compact Package: SSOP10



Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Player

SQ25001QEQ - 60V Synchronous Four-Switch Buck-Boost Controller



Features

- Four-Switch Single Inductor Architecture
- 6V to 60V Input Voltage Range
- 4.5V to 30V Output Voltage Range
- Peak Drive Current > 3A
- 0.8V ±1% Reference Voltage
- Adjustable Switching Frequency from 150kHz to 400kHz
- Adjustable Soft-Start Time
- PWM or PFM Operation Selectable in Light Load
- Smooth Pre-Biased Startup
- Spread-Spectrum Function
- Power Good Indicator
- Fault Indicator
- CBC Current Limit Protection
- Output Voltage Undervoltage, Overvoltage, and Overcurrent Protection
- Thermal Shutdown
- Package: QFN5×5-32

Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Player

Back

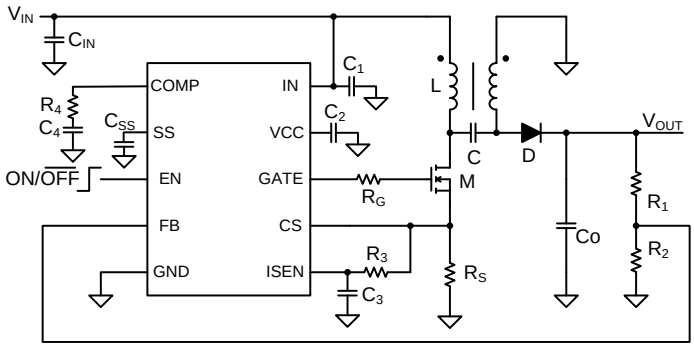
SY7901DBC- High Efficiency 500kHz, 25V PWM Controller with DC Input Current Limit

Features

- Input Voltage Range 3V to 25V
- 500kHz Fixed Switching Frequency
- An Accurate DC Input Current Limit
- External Compensation
- Internal Soft-start Limits the Inrush Current
- Integrated Low Side Driver: 1.5A Sourcing and 3A Sinking
- RoHS Compliant and Halogen Free
- Compact Package: DFN3×3-10

Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Player



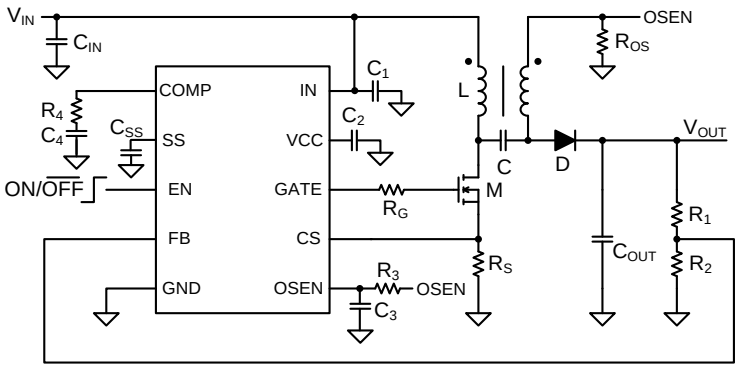
SY7902AFHC - High Efficiency 300kHz, 25V Boost/SEPIC Controller with Output Current Limit

Features

- Input Voltage Range 3V to 25V
- 300kHz Fixed Switching Frequency
- Output Current Limit
- External Compensation
- Programmable Soft-start Limits the Inrush Current
- Integrated Low Side Driver: 1.5A Sourcing and 3A Sinking
- RoHS Compliant and Halogen Free
- Compact Package: SSOP10

Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Player



Back

Step Up/Down Regulator (Power Switch Integrated)

Part Number	V_{IN} Min (V)	V_{IN} Max (V)	I_{LIM}(A)	F_{SW} (MHz)	V_{OUT} (max) (V)	V_{FB}/ Accuracy	Input Quiescent Current (μA)	MOSFET Ron (H/L) (mΩ)	I^2C	Feature/ Special Function	Package
SY9702QOC	2.6	5.5	2	1	3.8	0.6V±1.5%	60	50/50		Output Disconnect @Shutdown	QFN2×3-13
SY9701ADPC	2.6	5.5	1.2	1	3.8	0.6V±1.5%	60	100/100		Output Disconnect @Shutdown	DFN3×3-14
SY9329QFC	4	28	Programmable 6A/8A/10A	0.25/0.5/ 0.75/1	28	adjustable	310	25/25	√	Selectable Inductor Current Limit and VBUS Output Current Limit Selectable VBUS Output Voltage:5V, 7V, 9V, 12V, 15V, 20V	QFN4×4-32
SY9329BQFC	4	28	Programmable 6A/8A/10A	0.25/0.5/ 0.75/1	28	adjustable	310	25/25	√	Selectable Inductor Current Limit and VBUS Output Current Limit Selectable VBUS Output Voltage:5V, 9V, 10V, 12V, 15V, 20V	QFN4×4-32
SY9329CQFC	4	28	Programmable 6A/10A	0.25/0.5	28	1V±1.5%	300	25/25		Programmable Output Current Limitation with Ext. Sensing Resistor	QFN4×4-32
SY9228QEC	4	28	Programmable 6A/8A/10A	0.25/0.5/ 0.75/1	28	adjustable	450	19/19		VBUS Output Voltage can be Configured in 0.1V per Step from 3.6V to 21V Selectable Inductor Current Limit and Output Current Limit	QFN5×5-32

Back

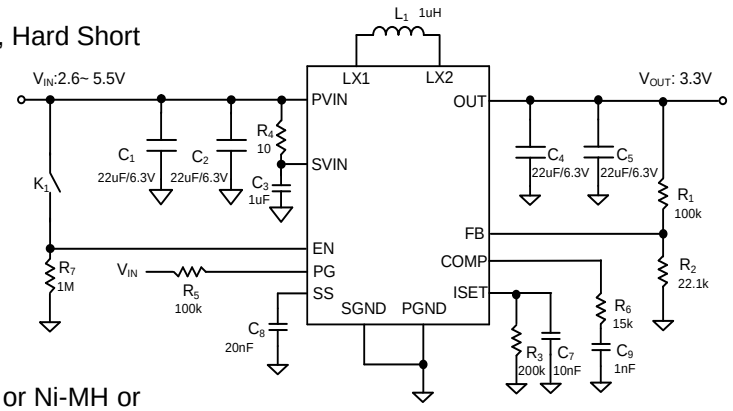
SY9702QOC- High Efficiency, 1MHz, 2A Buck-Boost DC/DC Regulator

Features

- 2.6V to 5.5V Input Voltage Range
- 2A Continuous Output Current Capability
- Adjustable Output Voltage between 2.6V and 3.8V Independent of the Input Voltage
- 1 MHz (typ.) Fixed Frequency Operation
- Four low RDSON Internal Power Switches
- Seamless Buck-Boost Transition
- Output Disconnect During Shutdown
- Power Good Indicator
- Built In Thermal Shut Down Protection, Hard Short Protection

Applications

- Handheld Instruments
- MP3/MP4 Players
- Digital Cameras/Camcorders
- Personal Medical Products
- High Power LED's
- Two-cell and three-cell alkaline, Ni-Cd or Ni-MH or single cell Li battery powered products



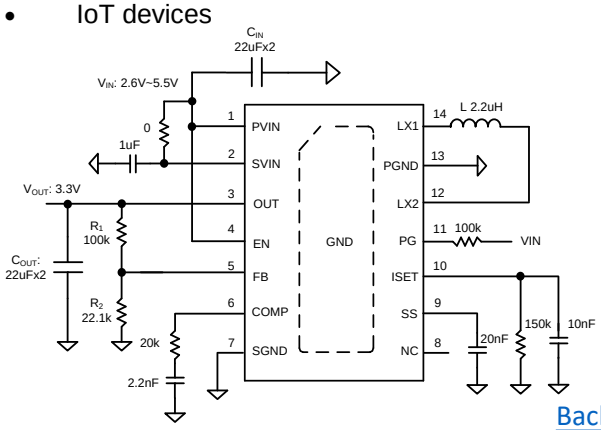
SY9701ADPC - High Efficiency, 1MHz, 1.2A Buck-Boost DC/DC Regulator

Features

- 2.6V to 5.5V Input Voltage Range
- 1.2A Output Current capability
- 1 MHz Fixed Frequency Operation
- 60 µA Quiescent Current (no load, typ.)
- 0.1 µA Shutdown Current (typ.)
- Seamless Transition Between Operating Modes
- Output disconnect during shutdown
- Application configurable soft-start
- Power Good Indicator
- Built in Thermal, Output Short UVLO and OVP Protections
- Compact Package: DFN3×3-14

Applications

- Two cell and three cell alkaline, Ni-Cd or Ni-MH, or single cell Li batteries used in portable applications
- Handheld Instruments
- MP3/MP4 Players
- Digital Cameras/Camcorders
- IoT devices



Back

SY9329QFC/SY9329BQFC

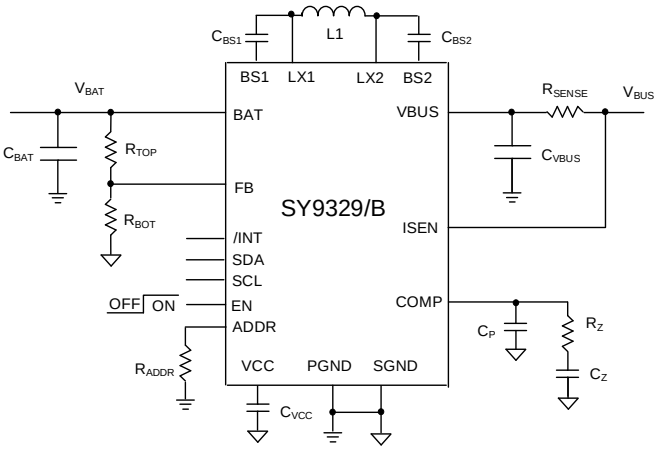
- High Efficiency, 28V Input Single Inductor Synchronous Step Up/Down Regulator

Features

- Bidirectional Power Delivery: Source Mode and Sink Mode
- 4V to 28V Input Voltage Range
- Low RDS(ON) for Internal Switches: 25mΩ
- Internal Soft Start
- 8-bit ADC for Output Voltage, Input Voltage and VBUS Output Current Detection
- Fully Protected for Output Over Current, Short-circuit and Over-temperature
- **I²C Compatible Interface**
- Support Interrupt for Status Feedback
- Selectable Switching Frequency:
- 250kHz, 500kHz, 750kHz, 1MHz
- Selectable VBUS Output Voltage:
  - SY9329: 5V, 7V, 9V, 12V, 15V, 20V
  - SY9329B: 5V, 9V, 10V, 12V, 15V, 20V
- Selectable Inductor Current Limit and VBUS Output Current Limit
- Compact Package: QFN4×4-32

Applications

- Docking Station
- Laptop
- High-End Power Bank
- Monitor
- Car Charger
- USB PD



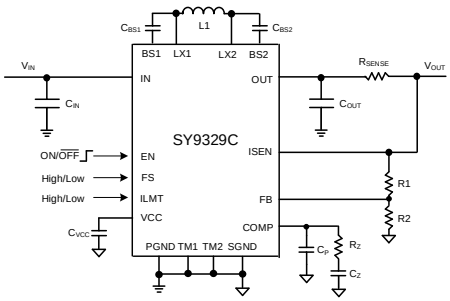
SY9329CQFC - High-Efficiency, 38V Maximum Input Single-Inductor Synchronous Step-Up/Down Regulator

Features

- 4V to 28V Operating Input Voltage Range
- 38V Absolute Maximum Input Voltage
- Low RDS(ON) for Internal Switches: 25mΩ
- 250kHz/500kHz Selectable Switching Frequency
- Soft-Start Inrush Current limit
- Hiccup Mode for Output Overcurrent,
- Short-Circuit and Overvoltage Protection
- Thermal Shutdown with Auto-Recovery
- 6A/10A Selectable Average Inductor Current Limit
- 1.0V±1.5% Reference Voltage Accuracy
- Resistor Programmable Output Current Limit
- RoHS-Compliant and Halogen-Free
- Compact Package: QFN4×4-32

Applications

- Docking Station
- Laptop
- High-End Power Bank
- Monitor
- Car Charger
- USB PD



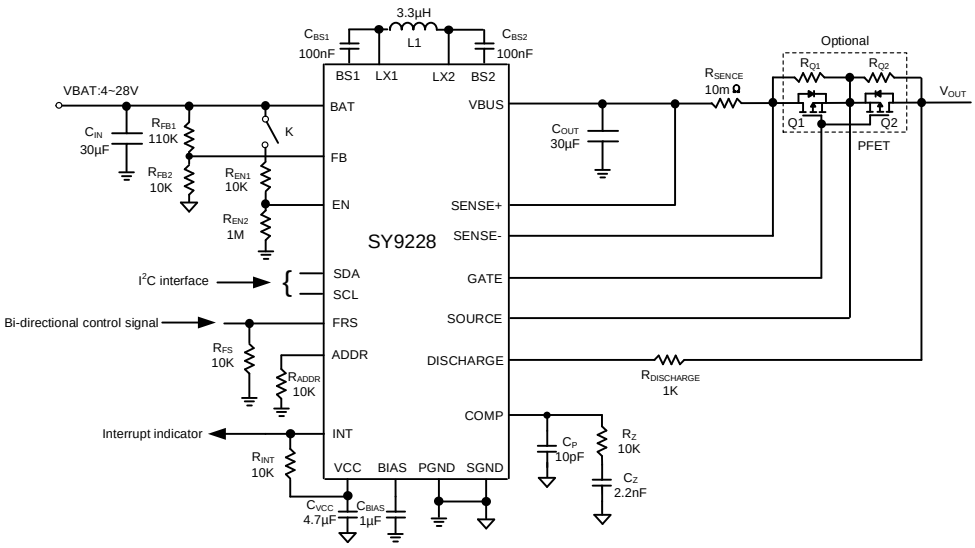
Back

Features

- Bidirectional Power Delivery: Source Mode and Sink Mode
- 4V to 28V Input Voltage Range
- Low RDS(ON) for Internal Switches: 19mΩ
- Internal soft-start
- Support Interrupt for Status Feedback
- Optional External P-channel FET Driver
- Cable Impedance Compensation
- 8-bit ADC for Output Voltage, Input Voltage and Output Current Detection
- Fully Protected for Output Over Current, Short-circuit and Over-temperature
- I²C Compatible Interface
  - ➢ Support Interrupt for Status Feedback
  - ➢ Selectable Switching Frequency: 250kHz, 500kHz, 750kHz, 1MHz
  - ➢ VBUS Output Voltage can be Configured in 0.1V per Step from 3.6V to 21V
  - ➢ Selectable Inductor Current Limit and Output Current Limit
- Compact Package: QFN5×5-32
- UL Certificate Number E491480
- IEC 62368-1 Certified

Applications

- Docking Station
- Laptop
- Power Bank
- Monitor
- USB PD



Back

Part Number	Package	VCC/VDRV Supply Voltage (V)	V_{IN} (V)	Continuous Output Current (A)	IMON Output Type	Overall IMON Accuracy	REFIN Range (V)	f_{SW} (kHz)	Temp Range	Features
SQ29663XBQ	QFN5×6-41	5	5~16	70	Voltage Output	±5%	1~2	250~1000	-40°C to 125°C	16V, 70A co-package DrMOS
SQ29670NGG	LGA5×6-41	3.3	5~16	70	Current Type	±5%	1~1.4	200~2000	-40°C to 125°C	16V, 70A DrMOS

Back

SQ29663XBQ

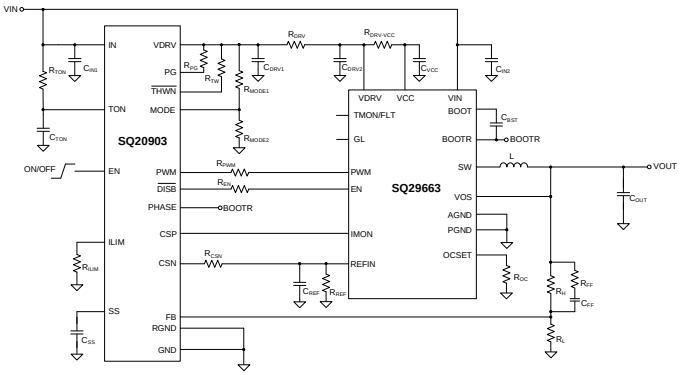
16V/70A Integrated Power Stage DrMOS

Features

- 70A Output Current Capability
- Integrated Driver and Power MOSFET
- VDRV/VCC/VBST/VIN UVLO
- Provide Pre-OVP protection via VOS Pin
- Support Switching Frequency up to 1.0MHz
- 3.3V/5V PWM Input Compatible with Tri-state Logic
- Integrated 5mV/A Current Sensing and Accurate Inductor Current Report
- Integrated 8mV/°C Temperature Monitor and Report
- Provide OTP with Fault Flag
- Cycle by Cycle Peak Current Protection with Fault Flag and Negative Over Current Protection
- Programmable Threshold for Peak Current and Valley Current Protection
- Switching-node Short Circuit Protection with Fault Flag
- Auto Refresh for VBST Power Supply in Tri-state
- Package: QFN5×6-41

Applications

- Multi-phase Synchronous Buck Converters
- POL DC-DC Converters
- Telecom and Server Power
- GPU/CPU Core Power



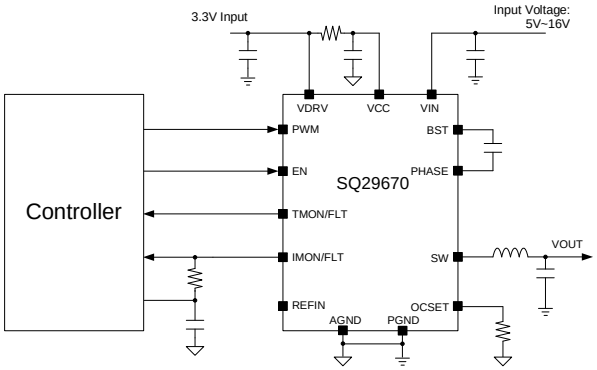
SQ29670NGG 16V/70A DrMOS

Features

- 70A Output Current Capability
- Integrated Driver, Power MOSFET and Decoupling Capacitors
- VDRV/VCC/BST/VIN UVLO
- Support Switching Frequency up to 2.0MHz
- 3.3V PWM Input Compatible with Tri-state Logic
- Integrated 5μA/A Current Sensing and Accurate Inductor Current Report
- Integrated 8mV/°C Temperature Monitor and Report
- Provide OTP with Fault Flag
- Cycle-by-cycle Peak Current Protection with Fault Flag and Negative Over Current Protection
- Programmable Threshold for Peak Current and Valley Current Protection
- Auto Refresh for VBST Power Supply in Tri-state
- Common Footprint Package: LGA5×6-41

Applications

- Multiphase Synchronous Buck Converters
- High Current CPU, GPU, ASIC and AI Power Supply
- Telecom and Server Power



Back

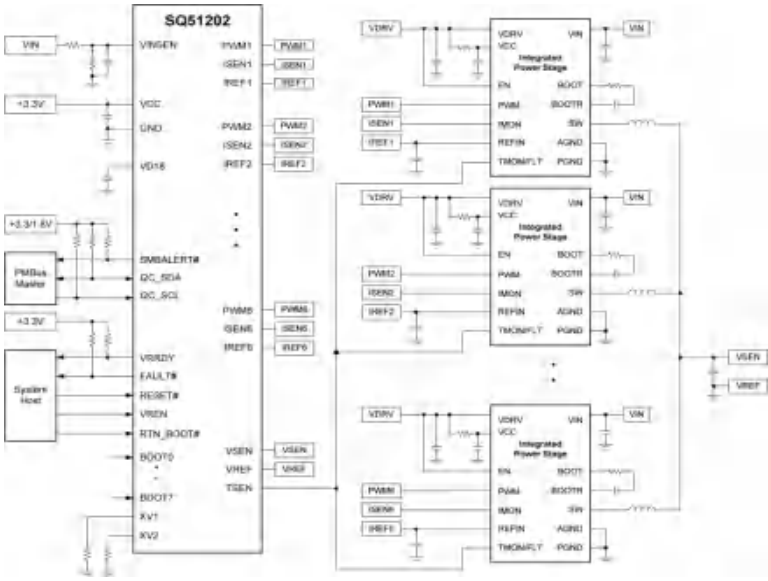
Part Number	Package	Number of Output Rail	Number of Phases	Supply Voltage (V)	fsw (kHz)	Interfaces	Temp Range	Typical Application	Features
SQ51202QJQ	QFN7×7-48	1	6	3.3	300-1200	PMBus	-40°C to 125°C	ASIC, Networking, ASSP	Ripple-based COT control with built-in flexible loop compensation, single rail 6 phase digital controller, enhanced version
SQ51222RPQ	QFN5×5-40	2	N+M≤5 (M≤2)	3.3	300-1000	PMBus AVSBus	-40°C to 125°C	ASIC, Networking, ASSP	Ripple-based COT control with built-in flexible loop compensation, dual rail, phases with N+M≤5 (M≤2) digital controller
SQ51225QJQ	QFN7×7-48	2	N+M≤5 (M≤2)	5	300-2000	PMBus AVSBus	-40°C to 125°C	ASIC, Networking, ASSP	Ripple-based COT control with built-in flexible loop compensation, dual rail, phases with N+M≤5 (M≤2) digital controller

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SQ51202QJQ -Single Rail, 6 Phase Controller

Features

- Flexible Phase Assignment and Arbitrary Firing Sequence, N<=6
- Differential Remote Sense
- Output Voltage Regulation Range Covers:
  - 0.25~1.52V in 5mV Table
  - 0.5~2.0V in 10mV Table
  - 0.25~2V in Linear Mode (LSB=1.953mV)
- Programmable Soft-Start Slew Rate and Voltage Positioning Slew Rate
- Flexible Pin-Strap Settings Including:
  - Multiple(8) Customer Configurations
  - 5mV/10mV VID Table
  - 4 PMBus Addresses with Additional 5 Bit Programmable Offset
  - 8-Bit Boot Voltage
- PMBus 1.3.1 Compliant, 1.8/3.3V Signaling:
  - System Configuration
  - DVS using VOUT_COMMAND
  - Operation Control and Fault Handling
  - Status Reporting and Telemetry
- Flexible PWM Driver Design to Support SPS from Multiple Vendors
- Integrated Programmable Loop Compensation, Minimal External Components
- Adjustable Current Balancing with Optional Thermal Balancing Offsets
- Autonomous Phase Shedding with Enhanced Transient Performance
- Advanced Protection Scheme with Programmable Response and Thresholds
  - Fault Response: Latched Shutdown, Hiccup, Autonomous Recovery
  - IUVP, IOVP, OUVP, OOVP (Fix and Tracking)
  - OCP
  - OTP, DRV_FLT, DRV_NONRDY Protection
  - Driver UVLO and Limp Mode fault detection
  - SPS Current Sharing Protection
  - Pulse by Pulse Current Limit
  - Open/Short Voltage Sense Line Detection
  - Per-Phase Negative Current Limit
- Internal NVM to Store Up to 8 Customer Configurations
- Switching Frequency Range from 300kHz to 1.2MHz with Frequency Compensation
- Single +3.3V Supply Operation
- 48-Lead QFN7x7 0.5mm Pitch Package



Applications

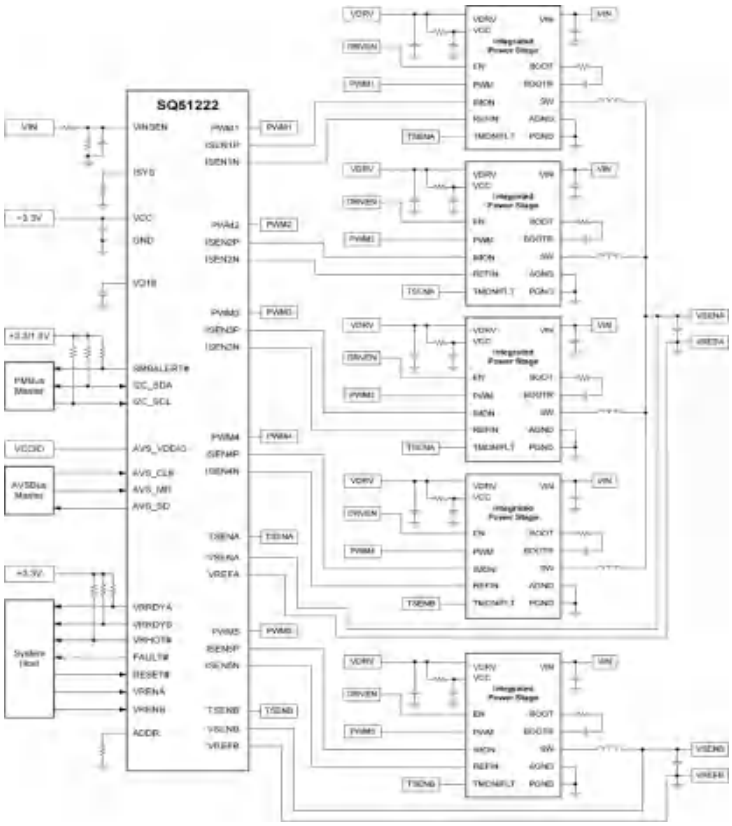
- Application-Specific ASIC power
- Core Routers and Switches
- High Performance XPU/FPGA Power
- High Density Power Solutions

Back

SQ51222RPQ -Dual Rail, N+M≤5(M≤2) Phase Digital Controller

Features

- Flexible Phase Assignment between Two Rails and Arbitrary Sequence for N+M≤5(M≤2)
- Differential Remote Sense
- Output Voltage Regulation Range：
  - 0.25~1.52V using 5mV Table
  - 0.5~2.0V using 10mV Table
- Programmable Soft-Start and Voltage Positioning Slew Rate
- Flexible Pin-strap Settings including:
  - 16 PMBus Device Addresses
- PMBus® 1.3.1 Compliant, 1.8V/3.3V Signaling:
  - System Configuration
  - Dynamic Voltage Scaling using VOUT_COMMAND
  - Operation Control and Fault Handling
  - Status Reporting and Telemetry
- PMBus® PARTIII, AVSBus Compatible
- Flexible PWM Driver Design to Support SPS (Smart Power Stage) from Multiple Vendors
- Integrated Programmable Loop Compensation
- Adjustable Current Balancing with Optional Thermal Balancing Offsets
- Advanced Protection Scheme with Programmable Response and Thresholds
  - Fault Response: Latched Shutdown, Hiccup, Autonomous Recovery
  - IUVP, IOVP, OUVP, OOVP (Fixed and Tracking)
  - OCP
  - OTP, DRV_FLT, DRV_NONRDY Protection
  - Pulse by Pulse Current Limit
  - Open/Short Voltage Sense Line Detection
- Internal NVM to Store Customer Configuration
- Switching Frequency Range from 300kHz to 1MHz with Frequency Compensation
- Single +3.3V Supply Operation
- 40-Lead QFN5x5 0.4mm Pitch



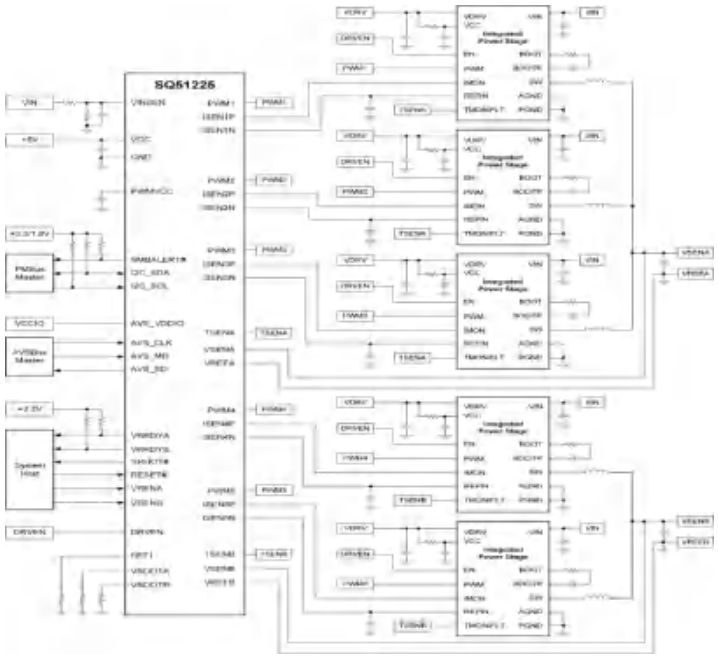
Applications

- Application-Specific ASIC Power
- ASIC Core supply for Routers and Switches
- High Performance XPU/FPGA Power
- High Density Power Solutions

Back

Features

- Flexible Phase Assignment Between Two Rails and Arbitrary Firing Sequence, N+M ≤5(M≤2)
- Differential Remote Sense
- Output Voltage Regulation Range:
  - 0.25~1.52V in 5mV Table
  - 0.25~1.52V in Linear Mode (1mV Custom Table)
- Programmable Soft-Start Slew Rate and Voltage Positioning Slew Rate
- Flexible Pin-strap Settings including:
  - 8 PMBus Device Address
  - 16 Boot Voltage for Both Rails
- PMBus® 1.3.1 Compliant, 1.8/3.3V Signaling:
  - System Configuration
  - Dynamic Voltage Scaling using VOUT_COMMAND
  - Operation Control and Fault Handling
  - Status Reporting and Telemetry
- PMBus® PARTIII, AVSBus Compatible
- Flexible PWM Driver Design to Support SPS (Smart Power Stage) from Multiple Vendors
- Integrated Programmable Loop Compensation
- Adjustable Current Balancing with Optional Thermal Balancing Offsets
- Advanced Protection Scheme with Programmable Response and Thresholds:
  - Fault Response: Latch Shutdown, Hiccup, Autonomous Recovery
  - IUVP, IOVP, OUVP, OOVP (Fixed and Tracking)
  - OCP
  - OTP, DRV_FLT, DRV_NONRDY Protection
  - SPS Current Sharing Protection
  - Pulse-by-Pulse Current Limit
  - Open/Short Voltage Sense Line Detection
- Internal NVM to Store Configuration
- Switching Frequency Range from 300kHz to 2MHz
- Single +5V Supply Operation
- 48-Lead QFN7x7 0.5mm Pitch Package



Applications

- Application-Specific ASIC Power
- Core Routers and Switches
- High Performance XPU/FPGA Power
- High Density Power Solutions

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Part Number	V_{IN} (min) (V)	V_{IN} (max) (V)	Output Voltage Range (V)	I_{OUT} (A)	V_{FB}/ V_{ADJ}	V_{FB}/V_{ADJ} Accuracy	PSRR	Dropout Voltage (mV)	Temp Range	Function	Package
SQ24340DED	2.5	30	Adjustable	0.15	0.6	±2%	50dB@1kHz	150	-40°C to 125°C	LDO Regulator	DFN2x2-6
SQ24345HDGD	4	36	Adjustable	0.5	1.235	±1 %	60dB @1kHz	500	-40°C to 125°C	LDO Regulator	DFN2x3-8
SQ24301DSD	1.6	5.5	Adjustable	1	1	±5%	-60dB@1kHz	320mV@V_{OUT}=1.5V 180mV@V_{OUT}=2.8V	-40°C to 125°C	LDO Regulator Current Limiting Protection	DFN3x3-6
SQ24302FCC	1.5	6	Adjustable	2	0.5	±2%	30dB@100kHz	400mV@2A	-40°C to 125°C	2A LDO with Enable	SO8E
SQ24302DAC	1.5	6	Adjustable	2	0.5	±2%	30dB@100kHz	400mV@2A	-40°C to 125°C	2A LDO with Enable	DFN3x3-8
SQ24302BSED	1.8	6.5	Adjustable	2	0.8	±2%	40dB@500 kHz	200mV @at 2A	-40°C to 125°C	2A Low Noise LDO	DFN2.5x2.5-10
SQ24335BTDD	2.375	3.5	Adjustable	2				/	-40°C to 125°C	Sink and Source DDR Termination Regulator	DFN2x2-10
SQ24333MAB	3	18	Adjustable	3	1.24	±2%	30dB @100kHz	480	-40°C to 125°C	LDO Regulator	TO263-5
SQ24335DBD	2.375	3.5	Adjustable	3				/	-40°C to 125°C	Sink and Source DDR Termination Regulator	DFN3x3-10
SQ24303CRBQ	1.1	6	Adjustable	4	0.5	±1.5%	40dB@ 500kHz	160mV @ 4A (3.3V V_{OUT})	-40°C to 125°C	6V, 4A, Ultra Low Noise, LDO Regulator	QFN3.5×3.5-20

Back

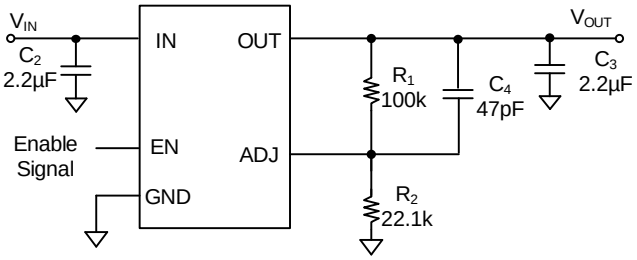
Part Number	V_{IN} (Min)(V)	V_{IN} (Max)(V)	V_{OUT}(V)	I_{OUT}(A)	Dropout Voltage (mV)	Function	Package
SY6340BAAC	3.6	30	3.3	0.05	100	Reverse Blocking Function	SOT23-5
SY6340DEC	2.3	30	Adjustable	0.15	300	Reverse Blocking Function	DFN2×2-6
SY6340AAC	2.3	30	Adjustable	0.15	300	Reverse Blocking Function	SOT23-5
SY6340ZDED	2.5	30	Adjustable	0.15	150	LDO Reg.	DFN2×2-6
SY6345AAC	4	40	Adjustable	0.3	300	LDO Reg.	SOT23-5
SY6307BSCC	0.8	5.5	Adjustable	0.5	90	Current Limiting Protection, Auto-discharge	DFN1.2×1.2-6
SY6301DSC	1.6	5.5	Adjustable	1	0.32V @ I_{OUT}=1A, V_{OUT}=1.5V 0.18V @I_{OUT}=1A, V_{OUT}=2.8V	Current Limiting Protection, Auto-discharge	DFN3×3-6
SY6301BAJC	1.6	5.5	3.3	1	200	Current Limiting Protection	SOT223
SY6321CSED	1.65	6.5	Adjustable	1	0.2V @ I_{OUT}=1A	Adjustable Start-Up Inrush Control with Selectable Soft-Start Charge Current, PG	DFN2.5×2.5-10
SY6321DAC	1.4	6	Adjustable	2	0.45V@ I_{OUT}=2A	Reverse Blocking from Output to Input, OCP & OTP	DFN3×3-8
SY6321FCC	1.4	6	Adjustable	2	0.45V@ I_{OUT}=2A	Reverse Blocking from Output to Input, OCP & OTP	SO8E
SY6321BSED	1.8	6.5	Adjustable	2	0.4V @ I_{OUT}=2A	Adjustable Start-up In-Rush Control with Selectable Soft-start Charging Current, PG	DFN2.5×2.5-10
SY6103JBC	3	18	Adjustable	3	0.48V @ I_{OUT}=3A	Zero-current Shutdown Mode; Output Short Circuit Protection	TO252-5
SY6103MAC	3	18	Adjustable	3	0.48V @ I_{OUT}=3A	Zero-current Shutdown Mode; Output Short Circuit Protection	TO263-5
SY6103BMAB	3	18	Adjustable	3	0.48V @ I_{OUT}=3A	Zero-current Shutdown Mode	TO263-5
SY6353MAC	3	55	Adjustable	3	0.45V @ Full Load 3A	Zero-current Shutdown Mode Over Input Voltage Protection	TO263-5
SY6353BMAB	3	55	Adjustable	3	0.45V @ Full Load 3A	Zero-current Shutdown Mode	TO263-5
SY6355DBC	2.375	3.5	Adjustable	3	/	Sink and Source DDR Termination Regulator	DFN3×3-10
SY6355BTDD	2.375	3.5	Adjustable	2	/	Sink and Source DDR Termination Regulator	DFN2×2-10

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SQ24340DED - 30V Max 150mA LDO

Features

- Wide Input Voltage Range: 2.5V to 30V
- Low Dropout Voltage: 150mV at 150mA
- 150mA Output Current Capability
- Low Ground Current
- Ultra-Low Shutdown Current (1 μA Typ.)
- Output Current Limitation
- High Output Accuracy: ±2% at Room Temperature
- Stable with Small Ceramic Capacitors
- Excellent Load and Line Regulation
- TTL Logic Enable Input
- Thermal Shutdown
- RoHS Compliant and Halogen Free
- Compact DFN2×2-6 Package



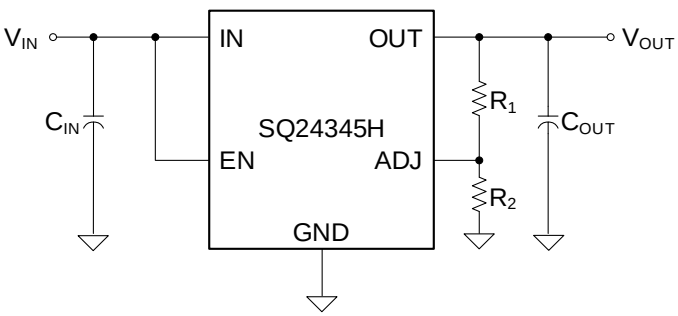
Applications

- Battery Powered Applications
- Consumer and Portable Products
- Notebooks
- Smartphones
- SMPS Post-Regulators/ DC/DC Modules

SQ24345HDGD- 36V, 500mA LDO Regulator

Features

- Input Voltage Range: 4V to 36V
- V_{ABS} = 40V
- V_{FB}: 1.235V (±1%)
- Output Voltage Tolerance: ±1%
- Line Regulation: 0.2%/V
- Load Regulation: 0.25%
- PSRR: 60dB
- Noise Level: 150μVRMS
- Operating TJ: -40℃ to 125℃
- Auto Retry-During Fault Conditions
- Compact Package: DFN2×3-8



Applications

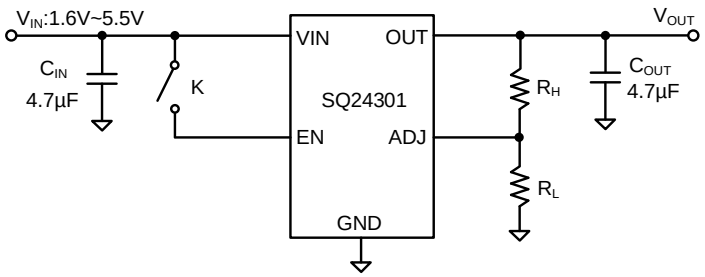
- Portable Consumer Equipment
- Portable Instrumentation
- Industrial Equipment
- SMPS Post Regulators

Back

SQ24301DSD- Super Low Dropout 1A LDO Regulator

Features

- Input Voltage Range: 1.6-5.5V
- Output Voltage Accuracy: ±5%
- Up to 1A Output Current
- Low Dropout Voltage:
  - Typ. 0.32V at IOUT=1A, VOUT=1.5V
  - Typ. 0.18V at IOUT=1A, VOUT=2.8V
- Current Limiting Protection
- Thermal Shutdown Protection
- Quiescent Current: 60μA
- Output Auto-discharge Function
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN3×3-6



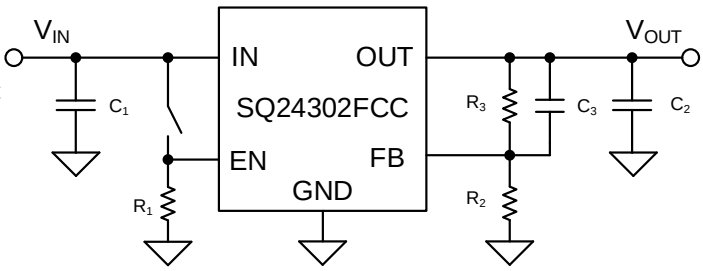
Applications

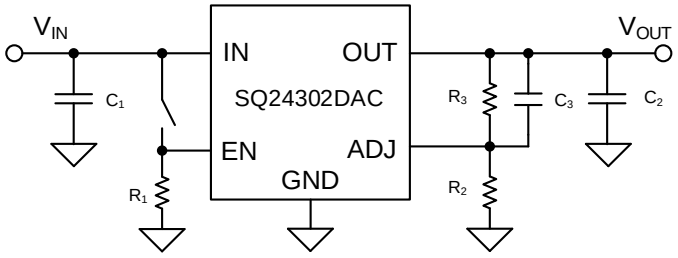
- Portable Communication Equipment
- Hand-Held Instruments, Notebook PC
- Camcorders and Cameras

SQ24302FCC/SQ24302DAC- Low Input/Low dropout, 2A LDO with Enable

Features

- Input Voltage as Low as 1.5V
- 400mV Dropout @ 2A
- Adjustable Output from 0.5V
- 0.9ms Internal Soft-start Minimizes Inrush Current
- 10μA Quiescent Current in Shutdown
- Over Current and Over Temperature Protection
- Enable Control: Default High
- Reverse Blocking from Output to Input
- Full Industrial Temperature Range
- RoHS Compliant and Halogen Free
- Packages: SO8E (SQ24302FCC)
  DFN3×3-8 (SQ24302DAC)





Applications

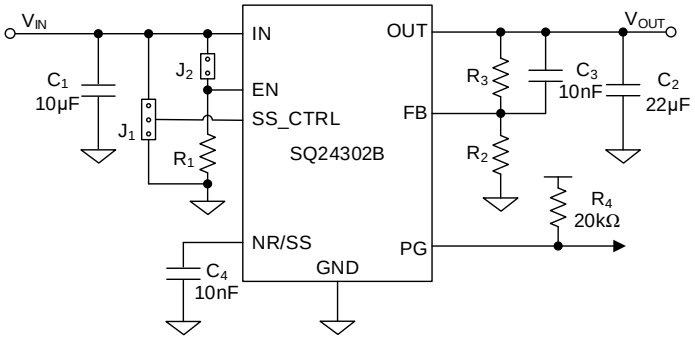
- Telecom/Networking Cards
- Motherboards/Peripheral Cards
- Industrial Applications
- Wireless Infrastructure
- Set Top Box
- Medical Equipment
- Notebook Computers
- Battery Powered Systems

Back

SQ24302BSED- 2A, High Accuracy, Low Noise LDO Voltage

Features

- 2.0% Accuracy Over Line, Load and Temperature
- Low Dropout: 200 mV (Typ) at 2 A
- Wide Input Voltage Range: 1.8 V to 6.5 V
- Wide Output Voltage Range: 0.8 V to 5.2 V
- Fast Transient Response
- Adjustable Start-up In-Rush Control with Selectable Soft-start Charging Current
- Open-Drain Power-Good (PG) Output
- Stable with a 22µF or Larger Ceramic Output Capacitor
- RoHS Compliant and Halogen Free
- 2.5mm × 2.5mm, 10-Pin DFN Package



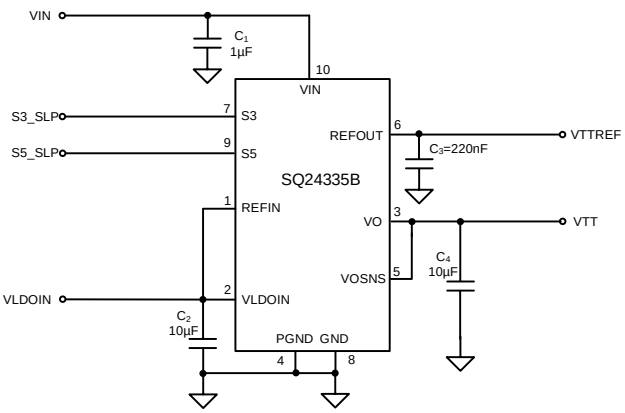
Applications

- High Speed Analog Circuits: VCO, ADC, DAC, LVDS
- Imaging: CMOS Sensors, Video ASICs
- Test and Measurement
- Instrumentation, Medical, and Audio
- Digital Loads: SerDes, FPGA, DSP

SQ24335BTDD- Sink and Source DDR Termination Regulator

Features

- Input Voltage: Supports 2.5V Rail and 3.3V Rail
- VLDOIN Voltage Range: 1.1V to 3.5V
- 2A Peak Sink and Source Current
- Sink and Source Termination Regulator Includes Droop Compensation
- Requires Minimum Ceramic Output Capacitance of 10uF for memory
- Support High-Z in S3 and Soft-Stop in S4 and S5 with S3 and S5 inputs
- Remote Sensing (VOSNS)
- ±10mA Buffered Reference (REFOUT)
- REFIN/2 ±1% Accuracy (REFOUT)
- Built-in Soft Start, UVLO, and OCL
- Thermal Shutdown
- Supports DDR, DDR2, DDR3, DDR3L, Low Power DDR3, DDR4 VTT Applications
- Packages: 10-Pin, DFN2mm×2mm With Thermal Pad



Applications

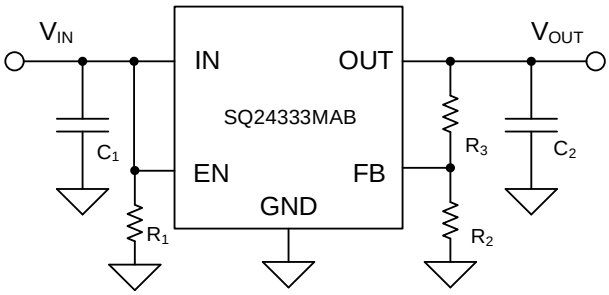
- Memory Termination Regulator for DDR, DDR2, DDR3, DDR3L, Low-Power DDR3 and DDR4
- Notebooks, Desktops, and Servers
- Base Stations

Back

SQ24333MAB- 3A Fast-Response LDO Regulator

Features

- Input Voltage Range: 3V to 18V
- High Current Capability: 3A Over Full Temperature Range
- Adjustable Output Voltage
- Low Dropout Voltage: 480mV at Full Load 3A
- Fast Transient Response
- Zero-Current Shutdown Mode
- Low Ground Current
- Current Limiting Protection
- Over Temperature Protection
- Output Short Circuit Protection
- Package: TO263-5



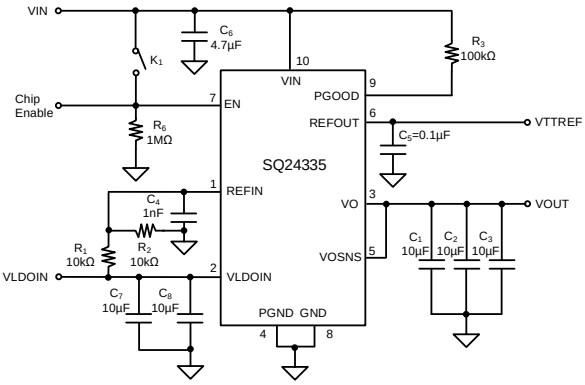
Applications

- High Efficiency Linear Low Power Supply Applications
- Battery-Powered Equipment
- Hand-Held Instruments
- Notebook PCs

SQ24335DBD- Sink and Source DDR Termination Regulator

Features

- System Voltage Range (VIN): 2.35V to 3.5V
- Wide VLDOIN Voltage Range: 1.1V to 3.5V
- Current Source/Sink Capability: 3A/3.5A
- PGOOD Pin Monitors Output Regulation
- Output Voltage Remote Sensing (VOSNS)
- REFIN Input Allows Flexible Input Voltage Tracking
- Output Current Limit Setting
- Thermal Shutdown Protection
- ±10mA Buffered Reference (REFOUT)
- Supports DDR, DDR2, DDR3, DDR3L, DDR4 VTT Applications
- Package: DFN3×3-10 with Thermal Pad



Applications

- Memory Termination Regulator for DDR, DDR2, DDR3, DDR3L, and DDR4 Applications
- Notebooks, Desktops, and Servers
- Base Stations

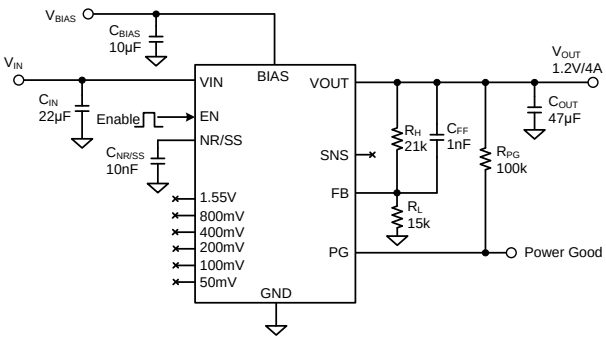
Back

Features

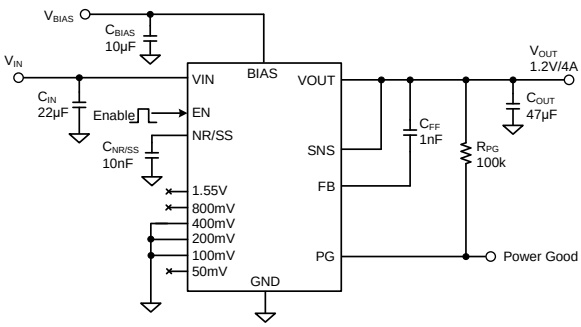
- Input Voltage Range:
  - ✓ Without Bias Supply: 1.5V to 6.0V
  - ✓ With Bias Supply: 1.1V to 6.0V
- Output Voltage Setting:
  - ✓ Set by External Resistor Divider: 0.5V to 5.2V
  - ✓ Set via PCB Layout of Output Voltage Setting Pins: 0.5V to 3.6V
- Output Voltage Accuracy: ±1.5% from -40 °C to 125 °C
- Low Dropout Voltage: 160mV (Typ.) at 4A (3.3V V_{OUT})
- Power Supply Rejection Ratio (PSRR): 40dB at 500kHz
- Excellent Noise Immunity:
  - ✓ 6.4μVRMS at 0.5V Output
  - ✓ 11.3μVRMS at 3.3V Output
- Enable Control
- Power Good Indicator
- Programmable Soft-Start Output
- Stable with 47μF or higher Output Ceramic Capacitor
- Over-Current Limit and Short-Circuit Protection
- Over-Temperature Protection with Auto Recovery
- Moisture Sensitivity Level (MSL): 3
- Compact QFN3.5×3.5-20 Package

Applications

- Telecom, Base Stations, RRUs
- Digital Loads: SerDes, FPGAs, and DSPs
- Imaging, Sensors, Measurements



(a)External Resistor Divider Operation Schematic



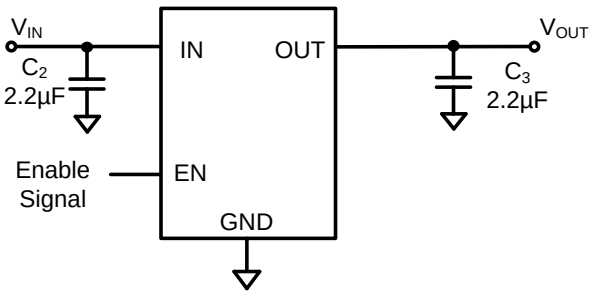
(b)Pin-Selectable Output Operation Schematic

Back

SY6340BAAC- 3.3V Fixed Output/50mA, 30V Input, LDO

Features

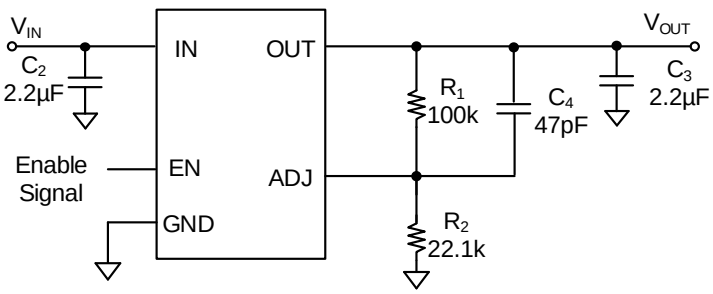
- Wide Input Voltage Range: 3.6V to 30V
- 3.3V Fixed Output Voltage
- Low Dropout Voltage(100mV @ 50mA)
- Low Ground Current
- Ultra Low Shutdown Current
- ±2% Output Voltage Accuracy
- Stable with Small Ceramic Capacitors
- Excellent Load and Line Regulation
- 50mA Output Current Capability
- Output Current Limitation
- Reverse Leakage Current Protection
- Reverse Input Voltage Protection
- TTL Logic Enable Input
- Thermal Shutdown
- RoHS Compliant and Halogen Free
- Compact SOT23-5 Package



SY6340AAC/SY6340DEC/SY6340ZDED - 150mA LDO Regulator

Features

- Input Voltage Range:
  - SY6340: 2.3V to 30V
  - SY6340Z: 2.5V to 30V
- Low Dropout Voltage:
  - SY6340: 300mV @ 150mA
  - SY6340Z: 150mV @ 150mA
- 150mA Output Current Capability
- Low Ground Current
- Ultra-Low Shutdown Current
- High Output Accuracy of ±2% Over Operating Temperature Range
- Stable with Small Ceramic Capacitors
- Excellent Load and Line Regulation
- Reverse Leakage Current Protection (SY6340)
- Reverse Input Voltage Protection (SY6340)
- TTL Logic Enable Input
- Thermal Shutdown
- RoHS Compliant and Halogen Free
- Compact Package:
  - SY6340: SOT23-5/ DFN2×2-6
  - SY6340Z: DFN2×2-6

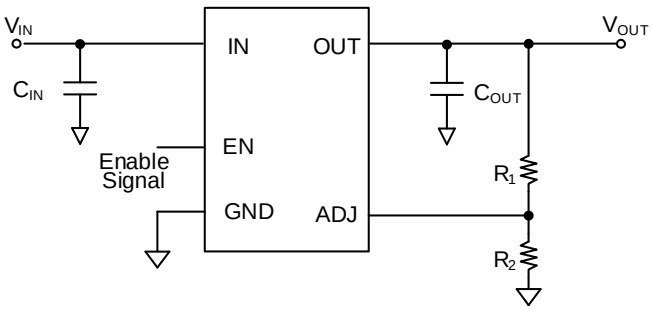


Back

SY6345AAC- 40V Input, 300mA LDO

Features

- Wide Input Voltage Range: 4V to 40V
- Low Dropout Voltage (300mV at 300mA)
- Low Quiescent Current (10μA max)
- Very Low Shutdown Current (1.25μA max)
- Stable with Tantalum or Ceramic Capacitors
- Excellent Load and Line Regulation
- ±2% 0.6V Reference Accuracy
- 300mA Maximum Load Current
- Enable Control Input
- Overcurrent Protection
- Thermal Shutdown
- Compact SOT23-5 Package



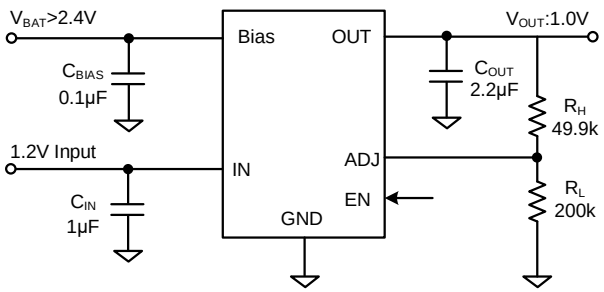
Applications

- Battery-Powered Applications
- Automotive Applications
- Gateway Applications
- Remote Keyless Entry Systems
- SMPS Post-Regulator/ DC-DC Modules

SY6307BSCC - 500mA Low Dropout Bias Rail LDO Regulator

Features

- Input Voltage Range: 0.8V-5.5V
- Bias Voltage Range: 2.4V-5.5V
- Output Voltage Accuracy: ±1%
- Bias Input Quiescent Current: 110μA (typ.)
- Bias Shutdown current: 0.1μA (typ.)
- Up to 500mA Output Current
- Current Limit Protection
- Over Temperature Shutdown
- Output Auto-Discharge Resistor: 130Ω
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.2×1.2-6



Applications

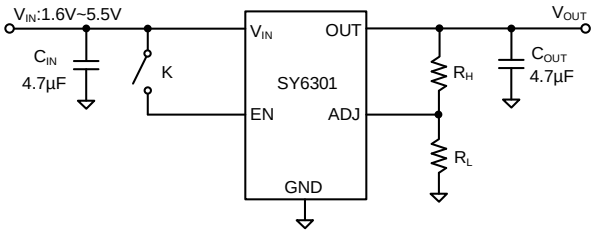
- Battery−Powered Equipment
- Smartphones, Tablets
- Cameras, DVRs, STB and Camcorders

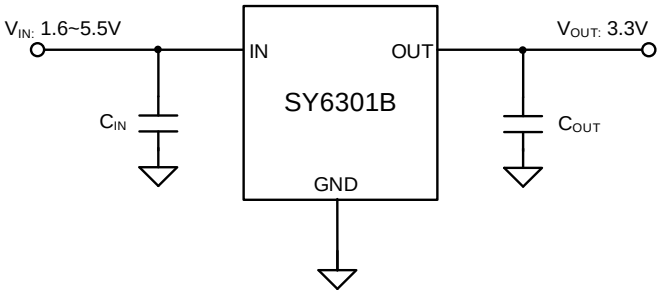
Back

SY6301DSC/SY6301BAJC- Low Dropout 1A LDO Regulator

Features

- Input Voltage Range: 1.6-5.5V
- Up to 1A Output Current
- Output Voltage Accuracy: ±3%
- Low Dropout Voltage (SY6301):
  Typ. 0.32V at I_{OUT}=1A, V_{OUT}=1.5V
  Typ. 0.18V at I_{OUT}=1A, V_{OUT}=2.8V
- Current Limiting Protection
- Thermal Shutdown Protection
- Output Auto-discharge Function
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: SY6301: DFN3×3-6
  SY6301B: SOT-223





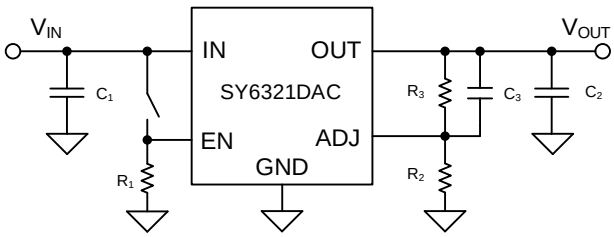
Applications

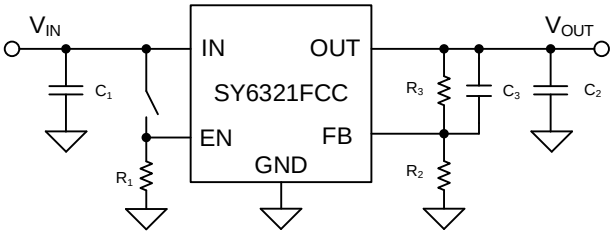
- Portable Communication Equipment
- Hand-Held Instruments, Notebook PCs
- Camcorders and Cameras

SY6321DAC/SY6321FCC- Low Input/Low dropout, 2A LDO with Enable

Features

- Input Voltage as Low as 1.4V
- 450mV Dropout @ 2A
- Adjustable Output from 0.5V
- 0.9ms Internal Soft-start Minimizes Inrush Current
- 10μA Quiescent Current in Shutdown
- Over Current and Over Temperature Protection
- Enable Control: Default High
- Reverse Blocking from Output to Input
- RoHS Compliant and Halogen Free
- Package: DFN3×3-8 /SO8E





Applications

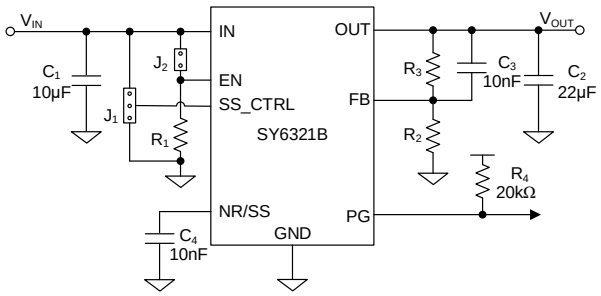
- Telecom/Networking Cards
- Motherboards/Peripheral Cards
- Industrial Applications
- Wireless Infrastructure
- Set Top Box
- Medical Equipment
- Notebook Computers
- Battery Powered Systems

Back

SY6321BSED- 2A, High Accuracy, Low Noise LDO Regulator

Features

- 2.0% Accuracy Over Line, Load and Temperature
- Low Dropout: 200 mV (Typ) at 2 A
- Wide Input Voltage Range: 1.8 V to 6.5 V
- Wide Output Voltage Range: 0.8 V to 5.2V
- Fast Transient Response
- Adjustable Start-up In-Rush Control with Selectable Soft-start Charging Current
- Open-Drain Power-Good (PG) Output
- Stable with a 22μF or Larger Ceramic Output Capacitor
- RoHS Compliant and Halogen Free
- 2.5mm × 2.5mm, 10-Pin DFN Package



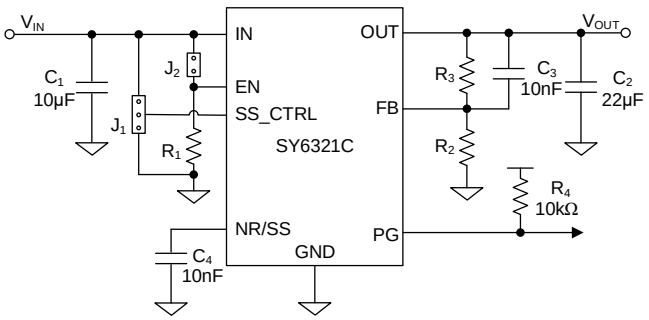
Applications

- High Speed Analog Circuits: VCO, ADC, DAC, LVDS
- Imaging: CMOS Sensors, Video ASICs
- Test and Measurement
- Instrumentation, Medical, and Audio
- Digital Loads: SerDes, FPGA, DSP

SY6321CSED- 1A, High Accuracy, LDO Regulator

Features

- 2.0% Accuracy Over Line, Load, and Temperature
- Low Dropout: 200 mV (Max) at 1 A
- Wide Input Voltage Range: 1.65V to 6.5 V
- Wide Output Voltage Range: 0.8 V to 5.2V
- Fast Transient Response
- Adjustable Start-Up Inrush Control with Selectable Soft-Start Charge Current
- Open-Drain Power Good (PG) Output
- RoHS Compliant and Halogen Free
- Compact Package: DFN 2.5×2.5-10



Applications

- High Speed Analog Circuits: VCO, ADC, DAC, LVDS
- Imaging: CMOS Sensors, Video ASICs
- Test and Measurement
- Instrumentation, Medical, and Audio
- Digital Loads: SerDes, FPGA, DSP

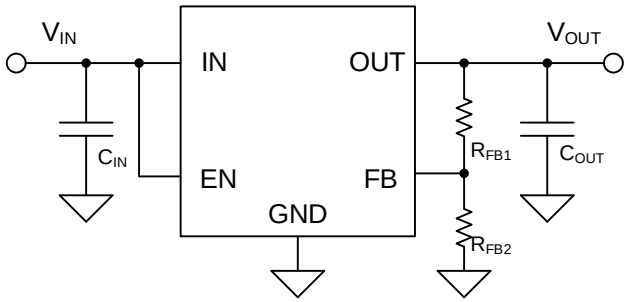
Back

SY6103MAC/SY6103JBC/SY6103BMAB

18V Input, 3A Fast-Response LDO Regulator

Features

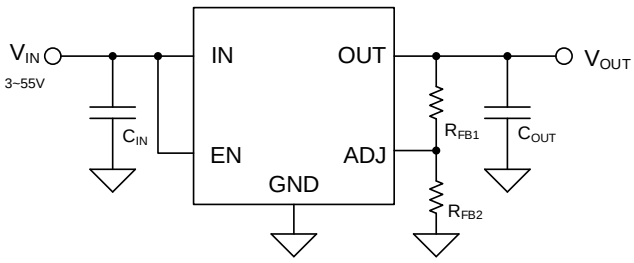
- 3V to 18V Input Voltage Range
- Low Dropout Voltage: 480mV at Full Load 3A
- High Current Capability: 3A Over Full Temperature Range
- Fast Transient Response
- Zero-Current Shutdown Mode
- Adjustable Output Voltage
- Low Ground Current
- Over Current Limit
- Output Short Circuit Protection (SY6103)
- Over Temperature Protection
- Package: TO263-5/TO252-5
- RoHS Compliant and Halogen Free



SY6353MAC/SY6353BMAB - 3A, 55V Input Fast-Response LDO Regulator

Features

- 3V to 55V Input Voltage Range
- Adjustable Output Voltage
- Low Dropout Voltage: 450mV at Full Load 3A (Typ.)
- High Current Capability: 3A Over Full Temperature Range
- Fast Transient Response
- Low Current Shutdown Mode (1 μA Typ.)
- Low Ground Current
- Current Limiting Protection
- Over Temperature Protection
- Input Voltage Protection
- Package: TO263-5
- RoHS Compliant and Halogen Free



$$V_{OUT} = 1.24 \times (\frac{R_{FB1} + R_{FB2}}{R_{FB2}})$$

Applications

- Industrial Applications
- Medical Imaging
- Smart Metering

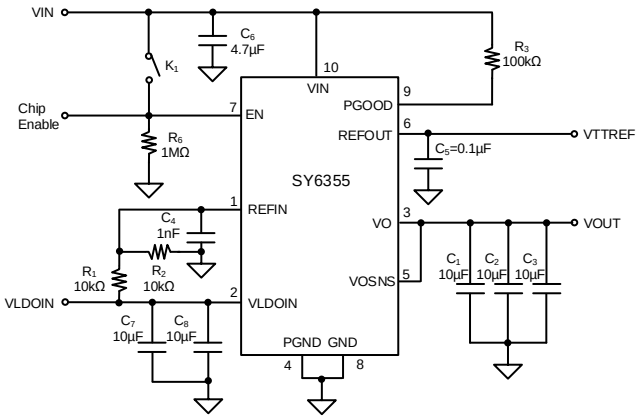
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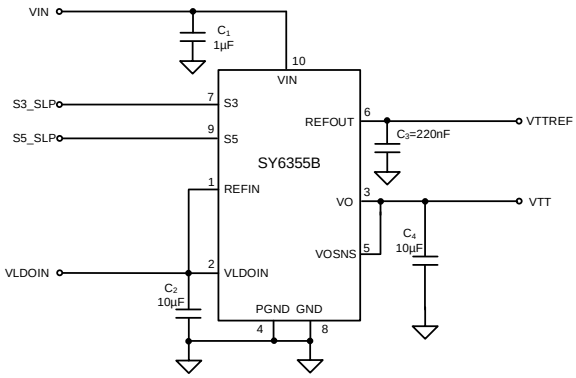
Features

- Input Voltage: Supports 2.5V Rail and 3.3V Rail
- VLDOIN Voltage Range: 1.1V to 3.5V
- Sink and Source Termination Regulator Includes Droop Compensation
- Requires Minimum Output Capacitance of 20μF(Typically 3×10μF MLCCs) for Memory.
- PGOOD to Monitor Output Regulation
- Enable Function Option
- REFIN Input Allows for Flexible Input Tracking either Directly or Through Resistor Divider
- Remote Sensing(VOSNS)
- ±10mA Buffered Reference(REFOUT)
- Built-in Soft-start, UVLO, and OCL
- Thermal Shutdown Protection
- Supports DDR, DDR2, DDR3, DDR3L, Low Power DDR3, DDR4 VTT Applications
- Compacted Package:
  - SY6355: DFN3×3-10 with Thermal Pad
  - SY6355B: DFN2×2-10 with Thermal Pad

Application

- Memory Termination Regulator for DDR, DDR2, DDR3, DDR3L, Low-Power DDR3 and DDR4
- Notebooks, Desktops, and Servers
- Base Stations





Back

Part Number	Package	Enable Logic	OCP	OVP	Output Clamp	Output Discharge	No. of Channels	V_{IN} (V)	I_{OUT} (A)	$R_{DS(ON)}$	Special Function
SQ24806AQSC	QFN3x4-20	H	Y	Y		N	1	2.7~18	0.6~5.3	42mΩ	Output Reverse Blocking
SQ24806BQSQ	QFN3x4-20	H	Y	Y		N	1	2.7~18	0.6~5.3	42mΩ	4ms Fault Timer Then Shutoff
SQ24092ZDEC	DFN2x2-6	H	Y	N		Y	1	2.5~5.5	2	65mΩ	Output Discharge at Shutdown Reverse Blocking, Fast OCP, OCB Indicator
SQ24201EDED	DFN2×2-6	H	Y	N		Y	1	2.5~5.5	0~2	65mΩ	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator
SQ24201EABT	SOT23-6	H	Y	N		Y	1	2.5~5.5	0~2	65mΩ	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator
SQ24201E1DED	DFN2x2-6	H	Y	N		Y	1	2.5~5.5	0~2	65mΩ	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator
SQ24201E1ABT	SOT23-6	H	Y	N		Y	1	2.5~5.5	0~2	65mΩ	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator
SQ24201E2DED	DFN2x2-6	L	Y	N		Y	1	2.5~5.5	0~2	65mΩ	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator
SQ24201FAAT	SOT23-5	H	Y	N		Y	1	2.5~5.5	1.4	65mΩ	1.57A±9% Current Limit Accuracy, , Fast Reverse Recovery, OCB Indicator
SQ24815BDBC	DFN3x3-10	H	Y	Y	Y	Y	1	2.5~18	1A/2A	40mΩ	2 Level Current Limit (1.4A/2.75A), Prog.SS, Selectable Input /Clamping Voltage Range
SQ24815CDBC	DFN3x3-10	H	Y	Y	Y	Y	1	2.5~18	5	40mΩ	Fixed Current Limit, Prog.SS,3.3V/5V Selectable Power Rail with 2.4V UVLO
SQ24802LTLQ	QFN2x2-12	H	Y	N		Y	1	2.5~16	5	30mΩ	Blocking FET Control, Programmable OUT Slew Rate Built-in Thermal Shutdown and Latch-off
SQ24802K1DFD	DFN2x2-8	H	Y	Y	Y	N	1	4.2~16	0~5	31mΩ	Adjustable Current Limit Adjustable Output Slew Rate Control Overtemperature/Overvoltage Protection
SQ24802K2DFD	DFN2×2-8	H	Y	Y	Y	N	1	4.2~16	0~5	31mΩ	Adjustable Current Limit Adjustable Output Slew Rate Control Overtemperature/Overvoltage Protection
SQ24026DUC	DFN3x2-14	H	N	N		Y	2	0.8~5.5	6	18mΩ	Dual-channel, Programmable Soft-start Time
SQ24010ADHC	DFN2x3-10	H	N	N		Y	1	0.6~5.5	10	2.8mΩ	Controlled and Adjustable Slew Rate, Power Good Indicator
SQ24810QMQ	QFN2x2-10	H	Y	Y		Y	1	2.7~16	10	6mΩ	Programmable Current Limit, Programmable Overcurrent Response Time , Power Good Indicator
SQ24801DCD	DFN3x3-12	H	Y	N		Y	1	0.5~13.5	0~24	4.1mΩ	Advanced Controller with Charge Pump Controlled and Adjustable Slew Rate, Load Bleed (Quick Discharge)
SQ24801BDCD	DFN3x3-12	H	Y	N		Y	1	3~24	0~10	5.2mΩ	Advanced Controller with Charge Pump Programmable Soft Start Time Fault Detection with Power Good Output
SQ24801CDCD	DFN3x3-12	H	Y	N		Y	1	3~24	0~20	3.8mΩ	Advanced Controller with Charge Pump Programmable Soft Start Time Fault Detection with Power Good Output
SQ24800QEQ	QFN5×5-32	H	Y	N		Y	1	4.5~18	0~50	0.76mΩ	Current Monitor, Fault Detection with Status OK Output, Adjustable Slew Rate Control/ Current Limit/Over Current Alert Output
SQ24800BQEQ	QFN5×5-32	H	Y	N	N	Y, 0.8V<V_{ON} <1.2V	1	4.5~18	0~50	0.76mΩ	Current Monitor, Latch off for Fault Response , 100A SCP Threshold Adjustable Slew Rate Control/ Current Limit/Over Current Alert Output

Back

Part Number	Package	Enable Logic	OCP	OVP	No. of Channels	V_{IN}(V)	I_{OUT}(A)	$R_{DS(ON)}$ (mΩ)	Special Function
SY6288AAAC	SOT23-5	H	√		1	2.5~5.5	0.6	80	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288BAAC	SOT23-5	L	√		1	2.5~5.5	0.6	80	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6811PDC	CSP0.9×0.9-4	H			1	1.05~1.95	1	45@V_{IN}=1.2V 35@V_{IN}=1.8V	Auto output cap discharge function, ultra low input voltage
SY6829PRC	CSP0.79×0.79-4	H		√	1	2.5~6	1	96	Precise clamping output voltage
SY6819AFAC	SO8	H	√		1	4.5~18	1.2	110@V_{IN}=12V	Programmable blanking time for DFF control, Default Off when EN ON
SY6819FAC	SO8	H	√	√	1	4.5~18	1.2	110@V_{IN}=12V	Programmable blanking time for DFF control, Default On when EN ON
SY86201FAAT	SOT23-5	H	√		1	2.5~5.5	1.4	65	1.57A±9% Current Limit Accuracy, , Fast Reverse Recovery, OCB Indicator
SY6829BPRC	CSP0.79×0.79-4	H			1	1.8~5.5	1.5	80	Independent ON/OFF Control Input
SY6280DAAT	SOT23-5	H	√		1	2.5~5.5	0.1~2	65	Programmable current limit, reverse blocking
SY6280AAAC	SOT23-5	H	√		1	2.4~5.5	0.4~2	63	Programmable current limit, reverse blocking
SY6281AAAC	SOT23-5	L	√		1	2.4~5.5	0.4~2	63	Programmable current limit, reverse blocking
SY6288C20AAC	SOT23-5	H	√		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288D20AAC	SOT23-5	L	√		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6882ADFC	DFN2×2-8	H		√	1	3~23	2	100	Fixed internal OVP@7.1V, Thermal Shutdown Protection & Auto Recovery
SY6882BDFC	DFN2×2-8	H		√	1	3~23	2	100	Programmable OVP Threshold Thermal Shutdown Protection & Auto Recovery
SY6883ABC	SOT23-6	H		√	1	3~23	2	100	Programmable OVP Threshold Thermal Shutdown Protection & Auto Recovery
SY6287CABC	SOT23-6	H	√		1	2.5~5.5	2	65	TUV/CB, UL Certificate
SY6287BDEC	DFN2×2-6	L	√		1	2.5~5.5	0~2	65	High accurate programmable current limit, reverse blocking
SY6287CDEC	DFN2×2-6	H	√		1	2.5~5.5	0~2	65	High accurate programmable current limit and reverse blocking, TUV/CB, UL Certificate
SY6287ZDEC	DFN2×2-6	H	√		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6287LABC	SOT23-6	H	√		1	2.5~5.5	2	65	Adjustable Current Limit up to 2.0A, OCP/OTP with Latch Off Function
SY6816APAC	CSP0.78×0.78–4	H			1	1.05~5.5	2	37@V_{IN}=5V 38@V_{IN}=3.3V 43@V_{IN}=1.8V	load switch with controlled slew rate
SY6816GPAC	CSP0.78×0.78–4	L			1	1.05~5.5	2	37@V_{IN}=5V 38@V_{IN}=3.3V 43@V_{IN}=1.8V	Load Switch with Controlled Slew Rate
SY6829APRC	CSP0.79×0.79-4	H			1	1.8~5.5	2	95	Ultra low quiescent current for IoT application
SY86201EDED	DFN2×2-6	H	√		1	2.5~5.5	2	65	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator
SY86201EABT	SOT23-6	H	√		1	2.5~5.5	2	65	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator

Back

Part Number	Package	Enable Logic	OCP	OVP	No. of Channels	V_{IN}(V)	I_{OUT}(A)	$R_{DS(ON)}$ (mΩ)	Special Function
SY6288C7AAC	SOT23-5	H	√		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288D7AAC	SOT23-5	L	√		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288C5CAC	MSOP8	H	√		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288D5CAC	MSOP8	L	√		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6282LACC	TSOT23-5	H	√		1	2.4~6	2.5	80	Programmable Current limit
SY6280CAAT	SOT23-5	H	√		1	2.5~5.5	0.1~2.5	65	Programmable current limit, reverse blocking
SY6288F3ABC	SOT23-6	H	√		1	2.5~5.5	0~3	45	programmable current limit and reverse blocking
SY6288E1AAC	SOT23-5	H	√		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288E2AAC	SOT23-5	L	√		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288F2ABC	SOT23-6	L	√		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6282ACC	TSOT23-5	H	√		1	2.4~6	3	50	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6283ADRC	DFN1.2×1.6-4	H	√		1	2.5~5.5	3	60	Output discharge at shutdown Reverse Blocking
SY6283DRC	DFN1.2×1.6-4	H	√		1	2.5~5.5	3	60	Reverse blocking output, ultra low input voltage
SY6813PEC	6 ball CSP	H			1	1.2~5.5	3	22	Auto output cap discharge function
SY6813APEC	6 ball CSP	H			1	1.2~5.5	3	22	No output cap discharge function
SY6821AAC	SOT23-5	H			1	0.6~3.6	3	45	Programmable turn-on delay, Automatic shutdown discharge
SY6863B2ABC	SOT23-6	L	√	√	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY6863B3ABC	SOT23-6	H	√	√	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY6863B4ABC	SOT23-6	L	√	√	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY6886UGC	CSP1.50×1.64-12	H	√	√	1	3~18	3	45	OCP/TSD/OVP Protection; Auto-recovery; Programmable current limit, Reverse blocking
SY6886BUGC	CSP1.50×1.64-12	H	√	√	1	3~18	3	45	OCP/TSD/OVP Protection; Auto-recovery; Programmable current limit
SY6821ADQC	DFN1.5×1.5-6	H			1	0.6~3.6	4	16	Programmable turn-on delay & Automatic shutdown discharge
SY6823DFC	DFN2×2-8	H			2	0.6~5.5	4	28	Programmable turn-on delay & ramp-up time, integrated OTP SCP
SY6874DBC	DFN3×3-10	H	√	√	1	2.5~30	4	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY6818PLC	CSP1.73×1.73-12	H		√	1	2.5~30	5	R_{PWPT}=53mΩ (typ.)	Programmable OVP with Integrated Reverse Blocking FET, accurate current level indicator

Back

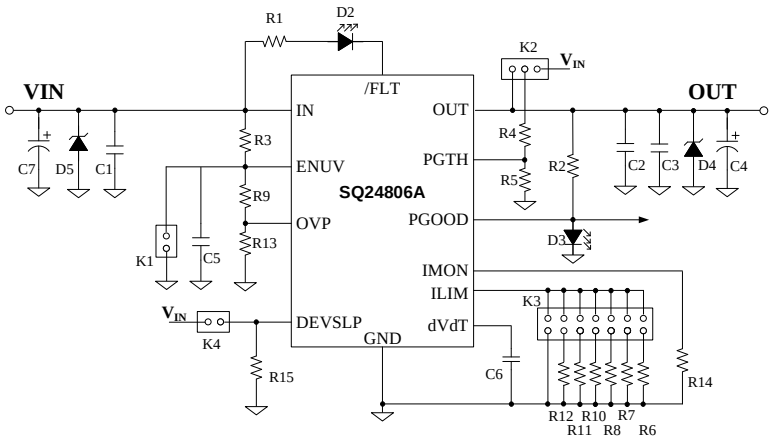
Part Number	Package	Enable Logic	OCP	OVP	No. of Channels	V_{IN}(V)	I_{OUT}(A)	$R_{DS(ON)}$ (mΩ)	Special Function
SY6875ADBC	DFN3×3-10	H	√	√	1	2.5~30	5	40	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY6875CDBC	DFN3×3-10	H	√	√	1	2.5~30	5	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY6875DDBC	DFN3×3-10	H	√	√	1	2.5~30	5	40	Programmable soft-start & current limit, 3.3V/5V/9V selectable clamping output
SY6875FDBC	DFN3×3-10	H	√	√	1	2.5~30	5	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY6895ADBC	DFN3×3-10	H	√	√	1	2.5~12	5	40	Fixed Current Limit, Prog. SS
SY6895CDBC	DFN3×3-10	H	√	√	1	2.5~12	5	40	Fixed Current Limit, Prog. SS
SY6884PYC	CSP0.89×1.43-6	H		√	2	2.5~25	5	30	Programmable Over Voltage Threshold
SY6862CQLC	QFN3×4-16	H	√	√	2	HV: 4.5~23 5V: 4~5.5	HV: 5A 5V: 3A	35 (HV Power Path) 50 (5V Power Path)	I^2C interface, 2 to 1 Power MUX, Fast Role Swap, 2.7×I_{LIMIT} Short Circuit Protection Threshold for HV Channel, RVS_MasK bit, Lower 25mΩ ON Resistance of CC Bypass
SY6862DQLC	QFN3×4-16	H	√	√	2	HV: 4.5~23 5V: 4~5.5	HV: 5A 5V: 3A	35 (HV Power Path) 50 (5V Power Path)	I^2C interface, 2 to 1 Power MUX, Fast Role Swap, 2.7×I_{LIMIT} Short Circuit Protection Threshold for HV Channel, RVS_MasK bit, Lower 25mΩ ON Resistance of CC Bypass, Stronger Noise Immunity On CC Channel
SY6880CPGC	CSP1.8×2-12	H		√	1	2.5~28	5A continuous, 8A peak	38	Fixed internal OVP@6.8V, Reverse block, Surge protection up to 80V
SY6880APGC	CSP1.8×2-12	H		√	1	2.5~28	5A continuous, 8A peak	38	Programmable Over Voltage Threshold from +4V to +7V
SY6881PTC	CSP1.32×1.86-12	H		√	1	2.5~28	Programmable 5A	R_{PWPT}=32mΩ (typ.)	Programmable Over Voltage Threshold from +4V to +22V
SY6898ERYC	QFN2×2-9	H	√		1	2.95~6.5	5	30	Selectable Clamping Output Voltage
SY6896RYC	QFN2×2-9	H	√		1	2.7~5.5	5	30	Programmable high current limit, reverse blocking, VIN state indicate, Selectable Clamping Output
SY6897ATLC	QFN2×2-12	H	√		1	2.5~16	1~5	30	Programmable OUT Slew Rate
SY86802LTLQ	QFN2×2-12	H	√		1	2.5~16	5	30	Blocking FET Control, Programmable OUT Slew Rate Built-in Thermal Shutdown and Latch-off
SY6876AQSC	QFN3×4-20	H	√	√	1	2.7~18	0.6~5.3	42	True reverse blocking, programmable current limit & dV/dt control, power good and fault outputs
SY6234DUC	DFN3×2-14	H	√		2	0.8~5.5	6	18	Dual-channel, Programmable soft-start time
SY86809AAAQ	QFN2×2.5-10	L	√	√	1	2.95~15	9	10	Programmable Current Limit, Programmable Soft-Start Time, Selectable Clamping Output Voltage Threshold
SY6210DHC	DFN2×3-10	H			1	0.6~5.5	10	2.8	Controlled and Adjustable Slew Rate through CSST, PG Indicator
SY86011BWPQ	QFN1.5×2-10	H			1	0.285~5.5	10	5.3	Auto Output Discharge

Back

SQ24806AQSC- 2.7V-18V Switch with True Reverse Blocking and DevSleep Support for SSDs

Features

- 2.7V – 18V Operating Voltage, 30V (Max)
- Ultra Low $R_{DS(ON)}$: 42 mΩ R_{ON} (Typical)
- 0.6A to 5.3A Adjustable Current Limit (±8%)
- IMON Current Indicator Output (±8%)
- 115µA Operating I_Q (Typical)
- Reverse Current Blocking
- Programmable dV/dt Control
- Power Good and Fault Outputs
- -40°C to 125°C Junction Temperature Range
- Compact package: QFN 3x4-20



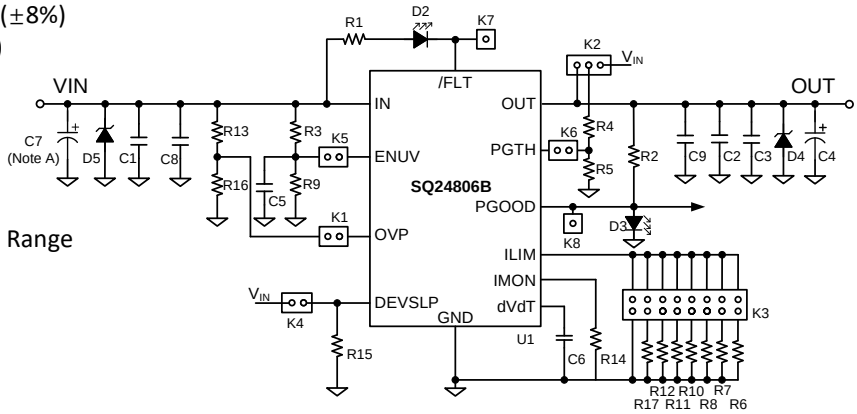
Applications

- PCIe/SATA/SAS HDD and SSD Drives
- Enterprise and Micro Servers
- Set-Top-Box (STB), DTVs and Game Consoles
- RAID Cards - Holdup Power Management
- Telecom Switches and Routers
- Adapter Powered Devices

SQ24806BQSQ - 2.7V-18V Load Switch With Reverse Blocking

Features

- 2.7V to 18V Operating Voltage, 30V (Max)
- Ultra-low RDS(ON): 42mΩ RON (Typical)
- 0.6A to 5.3A Adjustable Current Limit (±8%)
- IMON Current Indicator Output (±8%)
- Operating IQ: 115µA (typ.)
- Reverse Current Blocking
- Programmable dV/dt Control
- Power Good and Fault Outputs
- 4ms Fault Timer Then Shutoff
- -40℃ to 125℃ Junction Temperature Range
- Compact Package: QFN3 4-20



Applications

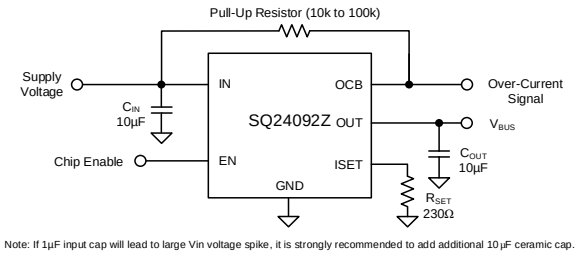
- PCIe/SATA/SAS HDD and SSD Drives
- Enterprise and Micro Servers
- Smart Load Switch
- PLCs, SS Relays, and Fan Control
- RAID Cards - Holdup Power Management
- Telecom Switches and Routers
- Adapter Powered Devices

Back

SQ24092ZDEC - Low Loss Power Distribution Switch with Programmable Current limit

Features

- Input Voltage: 2.5V to 5.5V
- Low Power Path Resistance: 65mΩ (Typ.)
- Adjustable Current Limit up to 2.0A
- Over-Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- Open-Drain Fault Flag (OCB) Output for Over-Current and Fault Conditions
- Built-in Soft-Start
- Compact Package: DFN2×2-6



Note: If 1μF input cap will lead to large Vin voltage spike, it is strongly recommended to add additional 10μF ceramic cap.

Applications

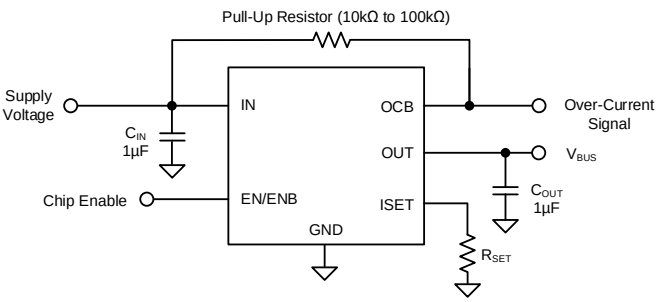
- USB 3.1 Applications
- USB 3G Data Cards
- USB Dongles
- Mini PCI Accessories
- USB Chargers
- Public Multi-USB Chargers
- PC Card Hot Swap Applications

SQ24201EDED/SQ24201EABT/SQ24201E1DED/SQ24201E1ABT/SQ24201E2DED

Low Loss Power Distribution Switch with Programmable Current limit

Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 65mΩ (Typ.)
- Adjustable Current Limit up to 2A
- Reverse Blocking (No Body Diode)
- Fast Reverse Recovery
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- At Shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- RoHS Compliant and Halogen Free
- Compact Package Minimizes the Board Space: DFN2×2-6/ SOT23-6



EN for SQ24201EDED/SQ24201EABT/ SQ24201E1DED/SQ24201E1ABT

ENB for SQ24201E2DED

Applications

- USB 3.1 Application
- USB 3G Data Card
- USB Dongle
- Mini PCI Accessories
- USB Charger
- Public Place Multi-USB Charger
- PC Card Hot Swap Applications

Back

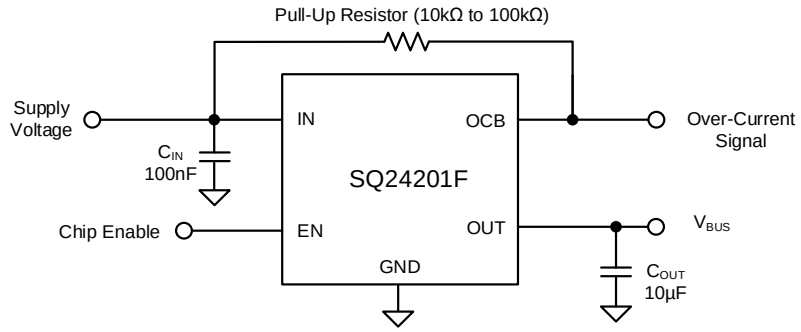
SQ24201FAAT -Low Loss Power Distribution Switch with 1.57A Fixed Current Limit

Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 65mΩ (Typ.)
- 1.57A±9% Current Limit Accuracy
- Reverse Blocking (No Body Diode)
- Fast Reverse Recovery
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- At Shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- RoHS Compliant and Halogen Free
- Compact Package Minimizes the Board Space: SOT23-5

Applications

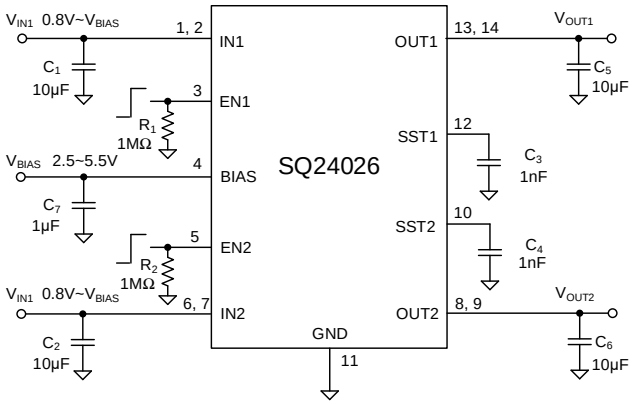
- USB 3.1 Application
- USB 3G Data Card
- USB Dongle
- USB Charger
- Public Place Multi-USB Charger
- PC Card Hot Swap Applications



SQ24026DUC - 5.5V, Low $R_{DS(ON)}$ Dual-Channel 6A Load Switch

Features

- Dual-Channel 6A Load Switch
- Wide Input Voltage Range: 0.8V to 5.5V
- Low Bias Current:
  - 20μA Typical (Both Channels)
  - 18μA Typical (Single Channel)
- Extremely Low $R_{DS(ON)}$ for the Integrated Switch: 18mΩ (V_{BIAS}=5V)
- Programmable Soft-Start Time
- Compact Package: DFN3×2-14



Applications

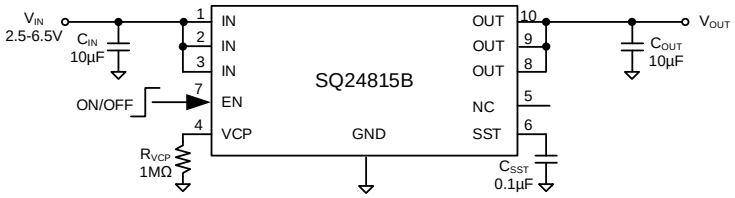
- Notebook Tablet, or Net PCs
- Desktop PCs
- Servers
- Set Top Boxes
- E-Book or MIDs
- Smart TVs
- Routers
- Industrial PCs
- Solid-state Drives (SSD)

Back

SQ24815BDBC - Current Limit Switch with Output Voltage Clamping

Features

- Wide Input Voltage Range from 2.5V to 6.5V with Surge up to 18V
- Ultra Low Bias Current: 50μA Typical
- Extremely Low RDS(ON) for the Integrated Protection Switch: 40mΩ
- Programmable Soft-start Time
- 2 Level Current Limit:
  - 1.4A for 3.3 Mode
  - 2.75A for 5V Mode
- Short Circuit Protection
- Selectable Input and Clamping Voltage Range
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: DFN3×3-10



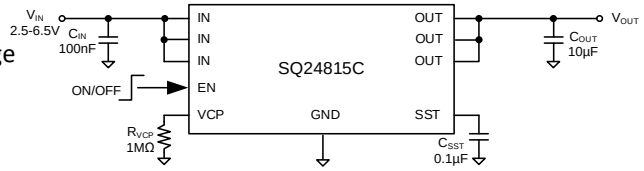
Applications

- Notebook PC
- I-pad Mini
- Server
- Service PC

SQ24815CDBC -Current Limit Switch with Output Voltage Clamping

Features

- Wide Input Voltage Range from 2.5V to 6.5V with surge up to 18V
- Ultra Low Bias Current: 50μA Typical
- Extremely Low RDS(ON) for the Integrated Protection Switch: 40mΩ
- Programmable Soft-start Time
- Current Limit Protection: 6A
- Short Circuit Protection
- Selectable Input and Clamping Voltage Range
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: DFN3×3-10



Applications

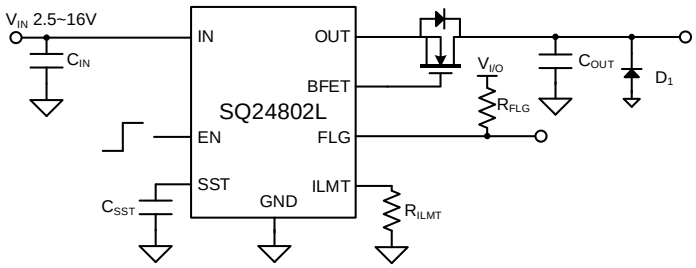
- PCIE/SATA/SAS HDD and SSD Drives
- Enterprise and Micro Servers
- Smart Load Switch
- Set-Top-Box (STB), DTVs and Game Consoles
- RAID Cards - Holdup Power Management
- Telecom Switches and Routers
- Adapter Powered Devices

Back

SQ24802LTLQ - 2.5V to 16V Protection Switch with Blocking FET Control

Features

- 2.5V to 16V Input Voltage Range
- Extremely Low Power Path Resistance RDS(ON)
- $R_{DS(ON)}$=30mΩ (typ.)
- Open-drain Indicator Pin for Operation Status
- 1A to 5A Adjustable I_{ILMT}
- ±10% I_{ILMT} Accuracy at 3A
- Reverse Blocking Support when EN OFF
- Programmable OUT Slew Rate
- Built-in Thermal Shutdown and Latch-off
- RoHS Compliant and Halogen Free
- Small Footprint –QFN (2mmX2mm)



Applications

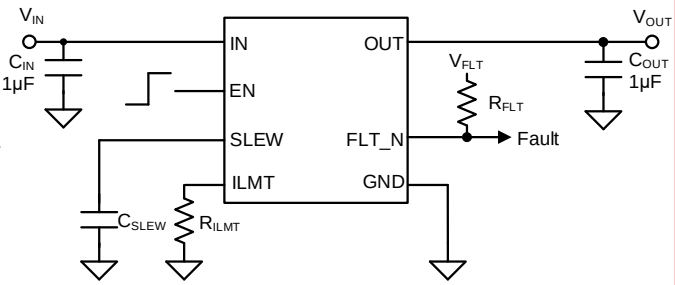
- Power Bank
- LCD Panel
- HDD and SSD Drives
- Set Top Boxes
- Servers / AUX Supplies
- Fan Control
- PCI/PCIe Cards
- Adapter Powered Devices

SQ24802K1DFD/SQ24802K2DFD

4.2V to 16V, 5A, 31mΩ eFuse with Over-voltage Protection

Features

- Low Power Path Resistance : $R_{DS(ON)}$=31mΩ (Typical)
- Overvoltage Protection Clamp at 14V
- Adjustable Current Limit (ILIMIT): 1A to 5A
- Adjustable Output Slew Rate Control (SLEW)
- Overtemperature Protection (OTP)
- Fault Indication Pin (FLT_N)
- Protection Mode: Auto Restart
- Operating Voltage Range: 4.2V to 16V, V_{ABSMAX} = 18V
- Compact Package: DFN2x2-8



Applications

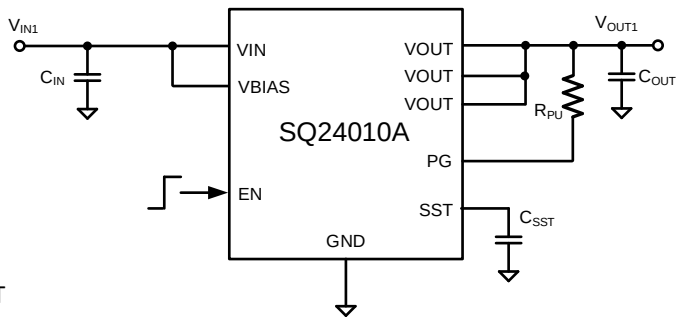
- Industrial Systems
- Hot-Swap Applications
- Digital Televisions
- SSDs and HDDs
- Adapter Powered Systems

Back

SQ24010ADHC - 5.5V 10A Load Switch with Ultra low $R_{DS(ON)}$

Features

- Integrated Single Channel Load Switch
- V_{BIAS} Voltage Range: 2.5V to 5.5V
- V_{IN} Voltage Range: 0.6V to V_{BIAS}
- On-Resistance: 2.8mΩ@VIN=3.3V, VBIAS=3.3V
- 10A Maximum Continuous Switch Current
- Shutdown Current
  - I_{SD_VBIAS} = 5.5μA at V_{BIAS} = 5V
  - I_{SD_VIN} = 4nA at V_{BIAS} = 5V, V_{IN} = 5V
- Controlled and Adjustable Slew Rate through CSST
- Power Good (PG) Indicator
- Compact DFN2×3-10 Package



Applications

- Servers
- Telecom systems

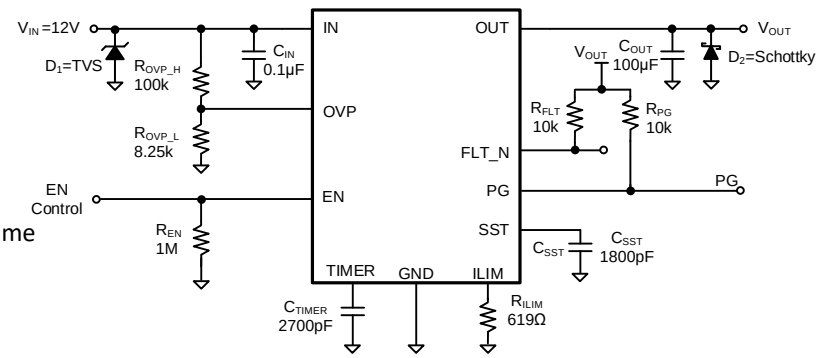
SQ24810QMQ - 2.7V ~ 16V, 10A, 6mΩ Programmable Current Limit Switch

Features

- Wide Input Voltage Range from 2.7V to 16V with 20V Absolute Maximum Voltage Rating
- Extremely Low Power Path Resistance RPWPT: 6mΩ(typ) at 3.3V/5V/12V VIN
- 10A Output Current Capability
- Programmable Current Limit
- ±10% Load Current Monitor Accuracy (I_{OUT}≥3A)
- Programmable Soft-Start Time
- Programmable Overvoltage Threshold
- Programmable Overcurrent Response Time (TIMER)
- Power Good Indication (PG)
- Response to Fault: Latch-Off
- Independent ON/OFF Control Input
- Thermal Shutdown Protection
- Output Fast Discharge Function
- Compact Package: QFN2×2-10

Applications

- Servers
- SSDs
- Industrial PCs

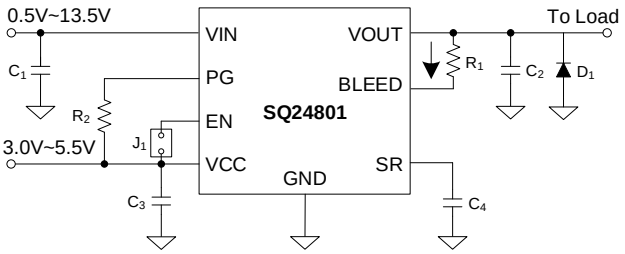


Back

SQ24801DCD - Advanced Load Management Controlled Load Switch with Low R_{ON}

Features

- Integrated N-Channel MOSFET with Ultra Low R_{ON}
- Input Voltage Range 0.5 V to 13.5 V
- Soft-start via Controlled Slew Rate
- Power Good Signal
- Thermal Shutdown
- Under Voltage Lockout
- Short Circuit Protection
- Extremely Low Standby Current
- Load Bleed (Quick Discharge



Applications

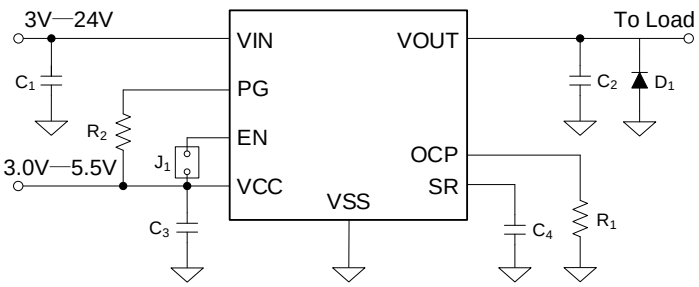
- Portable Electronics and Systems
- Notebook and Tablet Computers
- Telecom, Networking, Medical, and Industrial Equipment
- Set Top Boxes, Servers, and Gateways
- Hot Swap Devices and Peripheral Ports

SQ24801BDCD/SQ24801CDCD

Advanced Load Management Controlled Load Switch with Low R_{ON}

Features

- Integrated N-Channel MOSFET with Ultra Low RON
- Low R_{ON}
  - SQ24801B: 5.2mΩ
  - SQ24801C: 3.8mΩ
- Input Voltage Range 3 V to 24 V
- 3V to 5.5V Input Voltage Range for VCC
- Programmable Soft Start time
- Fault Detection with Power Good Output
- Thermal Shutdown Protection
- Short Circuit and Adjustable Over-Current Protection and latch off
- Output capacitor discharge during EN OFF
- Extremely Low Standby Current
- Compact Package: DFN3x3-12



Applications

- USB Type C Power Delivery
- Portable Electronics and Systems
- Notebook and Tablet Computers
- Telecom, Networking, Medical, and Industrial Equipment
- Set−Top Boxes, Servers, and Gateways
- Hot−Swap Devices and Peripheral Ports

Back

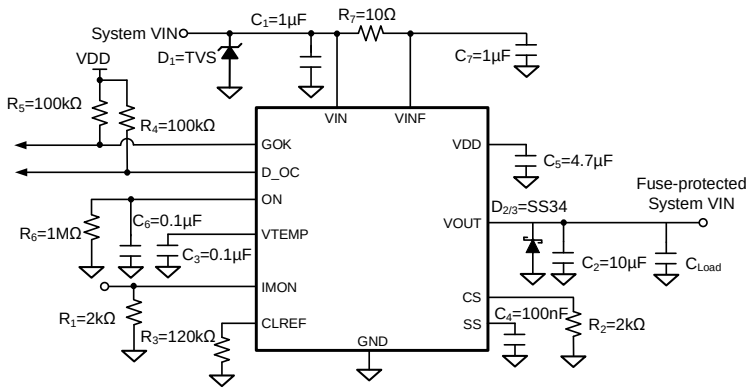
SQ24800QEQ -18V, 50A E-Fuse

Features

- Wide Input Range: 4.5 V to 18 V
- Up to 60 A Peak Current Output, 50 A Continuous
- Integrated N-Channel MOSFET with 0.76 mΩ Ultra Low R_{ON}
- Adjustable Slew Rate Control
- Adjustable Current Limit
- Accurate Analog Load Current Monitor
- Adjustable Over Current Alert Output
- Temperature Indicator
- Fault Detection with Status OK Output
- Can be used in Parallel for Higher Current Applications
- Auto-Retry Mode for Following Protection Features
  - Soft Start Duration Timeout
  - Thermal Shutdown
  - Fast Short-Circuit Protection
  - Current Limiting Response Timeout
- Compact Package Minimizes the Board Space: QFN 5 mm × 5 mm-32

Applications

- Servers
- Base Station
- Hot Swap Applications



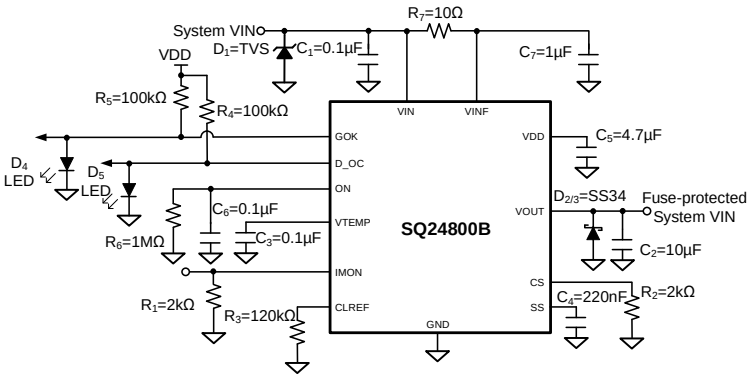
SQ24800BQEQ- Hot Swap Smart Fuse

Features

- Wide Input Range: 4.5 V to 18 V
- Up to 60 A Peak Current Output, 50 A Continuous
- Integrated N-Channel MOSFET with 0.76 mΩ Ultra Low RON
- Optional Output Discharge Function when Disabled
- Adjustable Slew Rate Control
- Adjustable Current Limit
- Accurate Analog Load Current Monitor
- Adjustable Over Current Alert Output
- Temperature Indicator
- Fault Detection with status OK Output
- Built-in Insertion Delay
- Can be used in Parallel for Higher Current Applications
- Latch off for Following Protection Features
  - Soft Start Duration Timeout
  - Thermal Shutdown
  - Fast Short-Circuit Protection
  - Current Limiting Response Timeout
- Compact Package Minimizes the Board Space: QFN 5 mm× 5 mm-32

Applications

- Servers
- Base Station
- Hot Swap Applications



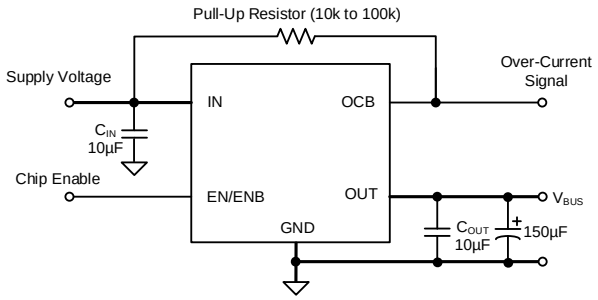
Back

SY6288A/SY6288B/SY6288C5/SY6288D5/SY6288C7/SY6288D7/ SY6288C20/SY6288D20/SY6288E1/SY6288E2

- 5.5V Low Loss Power Distribution Switch

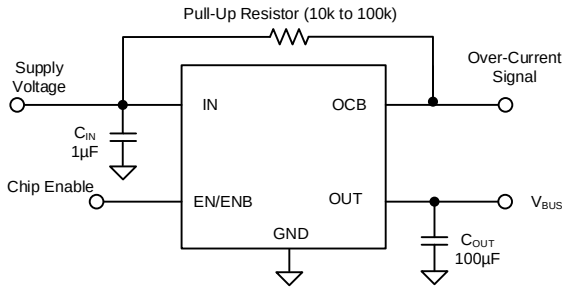
Features

- Distribution Voltage: 2.5V to 5.5V
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- At Shutdown, OUT can be Forced Higher than IN
- Fault Flag (OCB) Output for Over Current, Thermal Shut Down or Reverse Blocking
- Auto Output Discharge Function
- Built-in Soft-start
- 0.4ms Rise Time (SY6288A/B/C7/D7)
- 1.6ms Rise Time at 3.3V_{IN} Conditions (SY6288C20/D20)
- RoHS Compliant and Halogen Free
- Compact Packages : SOT23-5, MSOP8



Note: If 1uF input cap will lead to large Vin voltage spike, it is strongly recommended to add additional 10uF ceramic cap.

(SY6288A/B/C5/D5/C7/D7)



Note: If 1uF input cap will lead to large Vin voltage spike, it is strongly recommended to add additional 10uF ceramic cap.

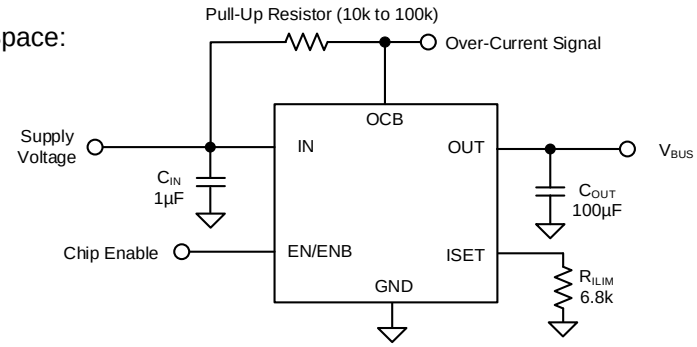
(SY6288C20/D20/E1/E2)

Ordering Number	Package Type	Enable Logic	Output Current
SY6288AAAC	SOT23-5	Active High	0.6A
SY6288BAAC	SOT23-5	Active Low	0.6A
SY6288C5CAC	MSOP8	Active High	2.5A
SY6288D5CAC	MSOP8	Active Low	2.5A
SY6288C7AAC	SOT23-5	Active High	2.5A
SY6288D7AAC	SOT23-5	Active Low	2.5A
SY6288C20AAC	SOT23-5	Active High	2A
SY6288D20AAC	SOT23-5	Active Low	2A
SY6288E1AAC	SOT23-5	Active High	3A
SY6288E2AAC	SOT23-5	Active Low	3A

Back

Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 45mΩ (typ.)
- 3A Load Current Capability
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- Programmable Current Limitation
- At Shutdown, OUT Can be Forced Higher than IN
- Built-in Soft-start
- Compact Package Minimizes the Board Space: SOT23-6
- RoHS Compliant and Halogen Free



Note: If 1uF input cap will lead to large Vin voltage spike, it is strongly recommended to add additional 10uF ceramic cap.

Applications

- USB 3.1 Application
- USB 3G Datacard
- USB Dongle
- MiniPCI Accessories
- USB Charger
- Public Place Multi-USB Charger

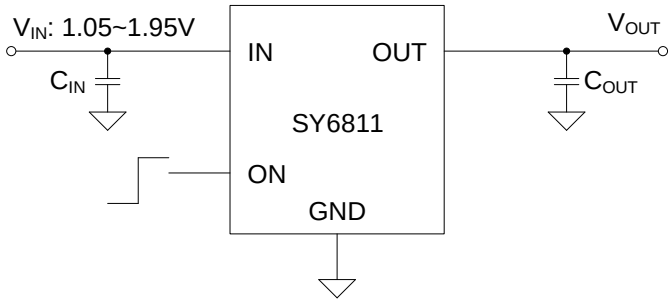
Ordering Number	Package Type	Enable Logic	Output Current	Note
SY6288F2ABC	SOT23-6	Active Low	3A	Output Discharge Function
SY6288F3ABC	SOT23-6	Active High	3A	No Output Discharge

Back

SY6811PDC - Low ON-Resistance, Slew-Rate-Controlled Load Switch

Features

- Input Voltage Range: 1.05V to 1.95V
- Low $R_{DS(ON)}$ for Internal Pass Switch:
  45mΩ at V_{IN}=1.2V
  35mΩ at V_{IN}=1.8V
- 1A Continuous Load Current Capability
- ON/OFF Control Input
- Output Capacitor Auto Discharge Function.
- RoHS Compliant and Halogen Free
- Ultra Small CSP-4 Package 0.9 mm × 0.9mm, 0.5-mm Pitch, 0.5-mm Height



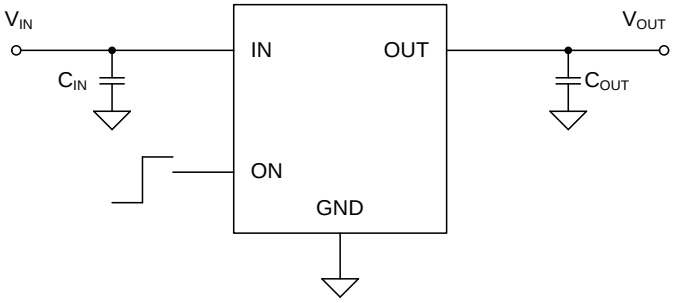
Applications

- Smartphones, Tablet PCs
- MIDs, E-Books
- Storage, DSLR, and Portable Devices

SY6829PRC/SY6829APRC/SY6829BPRC - Low ON-Resistance Load Switch

Features

- Input Voltage Range:
  - SY6829: 2.5V to 6V
  - SY6829A/B: 1.8V to 5.5V
- Low $R_{DS(ON)}$:
  - SY6829: 96mΩ
  - SY6829A/B: 80mΩ
- Continuous Load Current Capability:
  - SY6829: 1A
  - SY6829A/B: 1.5A
- 100nA Shutdown Current (SY6829A/B)
- Independent ON/OFF Control Input
- Ultra Compact CSP0.79×0.79-4 0.3mm Package
- RoHS Compliant and Halogen Free



Applications

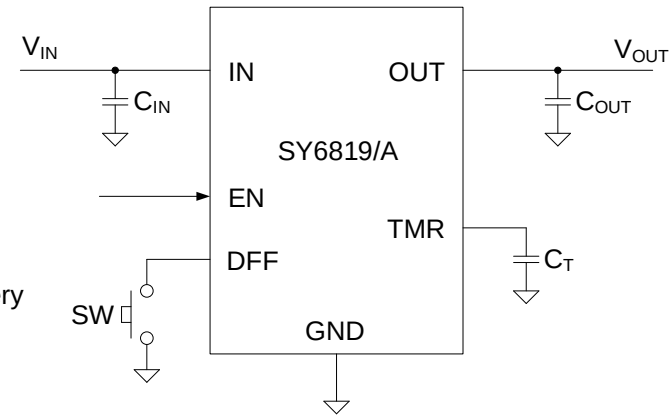
- Smartphones, Tablet PCs
- MIDs, E-Books
- Storage, DSLR, and Portable Devices

Back

SY6819FAC/SY6819AFAC - 1.2A Load Switch with D Flip Flop Control

Features

- Wide Input Voltage Range: 4.5 to 18V
- Up to 1.2A Continuous Load Current Capability
- Low $R_{DS(ON)}$: 110mΩ at V_{IN}=12V
- Programmable Blanking Time for DFF Control
- Start-Up Sequence:
  - SY6819: Default ON when EN high
  - SY6819A: Default OFF when EN high
- Low Shutdown Current
- Controlled Turn-On Slew Rate to Avoid Inrush Currents
- Over Temperature Shutdown with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

- Industrial Control
- Set-top Boxes

SY6280AAAC/SY6280CAAT/SY6280DAAT

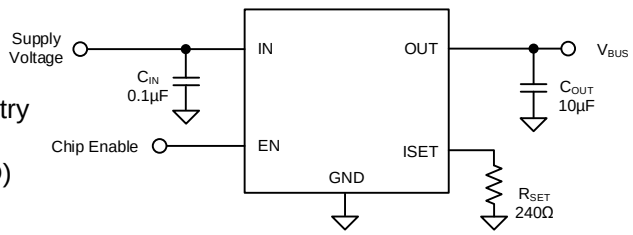
- Low Loss Power Distribution Switch with Programmable Current Limit

Features

- Input Voltage:
  - SY6280A: 2.4V to 5.5V
  - SY6280C/D: 2.5V to 5.5V
- Low Power Path Resistance:
  - SY6280A: 63mΩ (typ.)
  - SY6280C/D: 65mΩ (typ.)
- Low Quiescent Current I_Q
- Low Shutdown Current I_{SHDN}
- Adjustable Current Limit :
  - SY6280A: from 400mA to 2A
  - SY6280C: from100mA to 2.5A
  - SY6280D: from 100mA to 2A
- Overtemperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- Output Capacitor Auto-Discharge (SY6280C/D)
- Built-in Soft-Start
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5

Applications

- USB 3.1 Applications
- USB Dongles
- PC Accessories
- USB Chargers
- Public Place Multi-USB Chargers
- PC Card Hotswap Applications

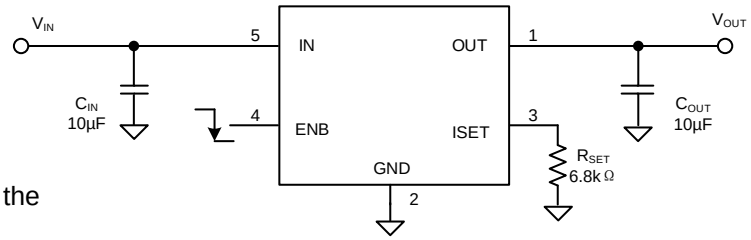


Back

SY6281AAAC - 5.5V, 2A Low Loss Power Distribution Switch

Features

- Input voltage: 2.4V to 5.5V
- 2A load current capability
- Programmable current limit
- Enable polarity: active low
- Over temperature protection
- Reverse blocking (no body diode)
- OUT can be forced higher than IN at shutdown
- Compact SOT23-5 package minimizes the board space



(1A current limit)

Applications

- USB 3G Datacard
- USB Dongle
- MiniPCI Accessories

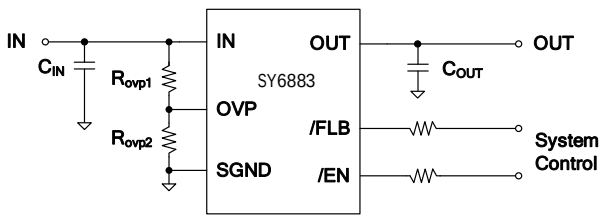
SY6883ABC/SY6882ADFC/SY6882BDFC - Over Voltage Protection Switch

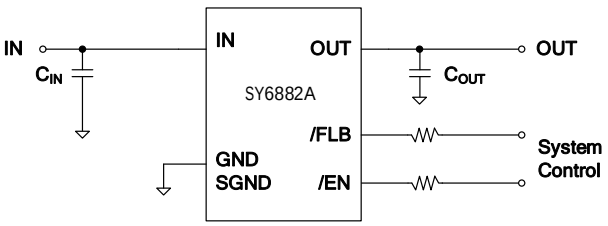
Features

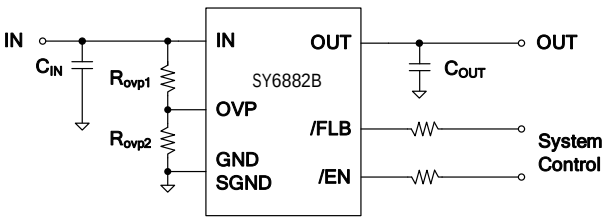
- Low $R_{DS(ON)}$ for the N-channel MOSFET Switch: 100 mΩ typical
- 2.0A Maximum Continuous Current
- Over-voltage Protection up to 25V
  - ➢ **SY6882A** —— Internal Fixed Over-Voltage Protection Threshold at 7.1V
  - ➢ **SY6883/ SY6882B**——External Programmable Over-Voltage Protection Threshold
- Thermal Shutdown Protection& Auto Recovery
- OVP and OTP Fault Flag
- 300µA MAX Quiescent Current
- 20µA MAX in Shutdown Mode
- RoHS Compliant and Halogen Free
- Compact package:
  - ➢ SY6883: SOT23-6
  - ➢ SY6882A/B: DFN2×2-8

Applications

- Cell Phones
- Digital Still Cameras
- GPS
- MP3 Players
- Personal Data Assistants(PDAs)
- USB Hot Swap/Live Insertion Device







Back

SY6287BDEC/SY6287CDEC/SY6287CABC/SY6287LABC/SY6287ZDEC

- Low Loss Power Distribution Switch With Programmable Current Limit

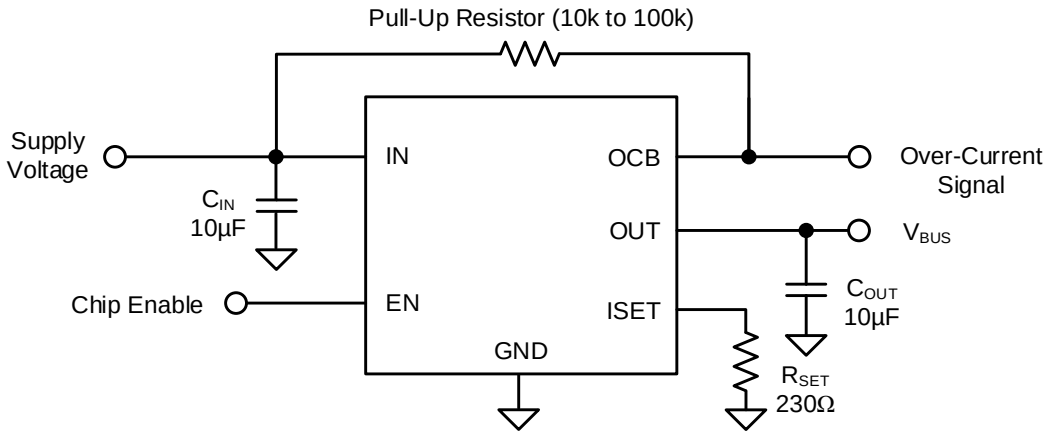
Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 65mΩ (Typ.)
- Adjustable Current Limit Up to 2.0A
- Overtemperature Shutdown and Automatic Retry
  - SY6287B/C/Z: Automatic Retry
  - SY6287L: Latch Off After Current Limit 2ms
- Automatic Output Discharge at Shutdown
  - SY6287L/Z: Auto Output Voltage Discharge
  - SY6287B/C: No Output Voltage Discharge
- Fast Trip Protection Logic During V_{OUT} Hard Short
  - SY6287Z: 2μs short circuit response time
  - SY6287B/C/L: 25μs current limit response time
- Enable Polarity
  - SY6287C/L/Z: Active High
  - SY6287B: Active Low
- Reverse Blocking (No Body Diode)
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- Built-in Soft-Start
- Compact Package: DFN2×2-6/SOT23-6
- RoHS Compliant and Halogen Free
- UL(CB) Certification No. E491480

Applications

- USB 3.1 Applications
- USB 3G Data Cards
- USB Dongles
- Mini PCI Accessories
- USB Chargers
- Public Place Multi-USB Chargers
- PC Card Hotswap Applications

Part Number	Package Type
SY6287BDEC	DFN2×2-6
SY6287CDEC	DFN2×2-6
SY6287CABC	SOT23-6
SY6287LABC	SOT23-6
SY6287ZDEC	DFN2×2-6



Back

SY86201EDED/SY86201EABT

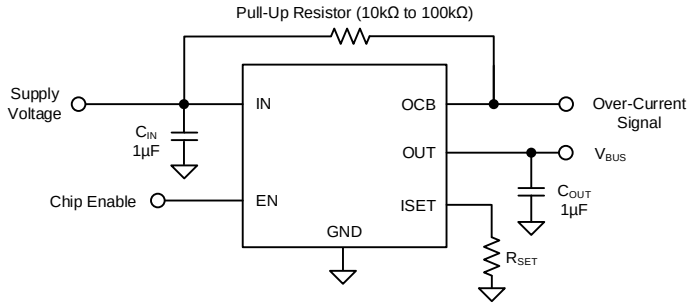
- Low Loss Power Distribution Switch with Programmable Current limit

Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 65mΩ (Typ.)
- Adjustable Current Limit up to 2A
- Reverse Blocking (No Body Diode)
- Fast Reverse Recovery
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- During Shutdown, OUT Can Be Forced Higher than IN
- Built-In Soft-Start
- MSL1
- RoHS Compliant and Halogen Free
- Compact Package Minimizes Board Space: DFN2×2-6/ SOT23-6

Applications

- USB 3.1 Applications
- USB 3G Data Cards
- USB Dongles
- Mini PCI Accessories
- USB Chargers
- Multi-USB Chargers
- PC Card Hot-Swap Applications



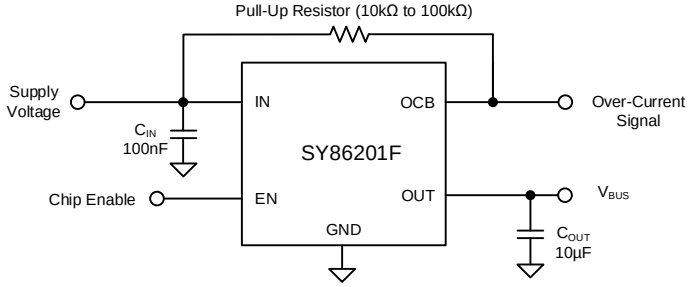
SY86201FAAT - Low Loss Power Distribution Switch with 1.57A Fixed Current Limit

Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 65mΩ (Typ.)
- 1.57A±9% Current Limit Accuracy
- Reverse Blocking (No Body Diode)
- Fast Reverse Recovery
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- At Shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- RoHS Compliant and Halogen Free
- Compact Package Minimizes the Board Space: SOT23-5

Applications

- USB 3.1 Applications
- USB 3G Data Cards
- USB Dongles
- USB Chargers
- Public Place Multi-USB Charger
- PC Card Hot-Swap Applications

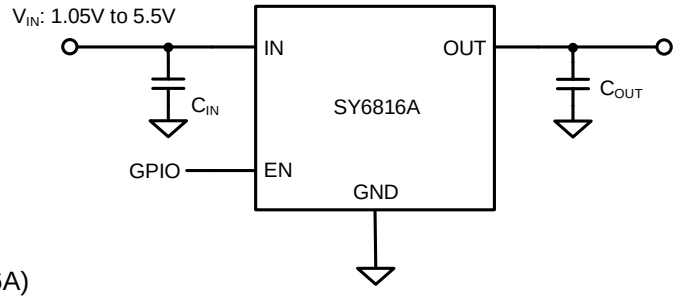


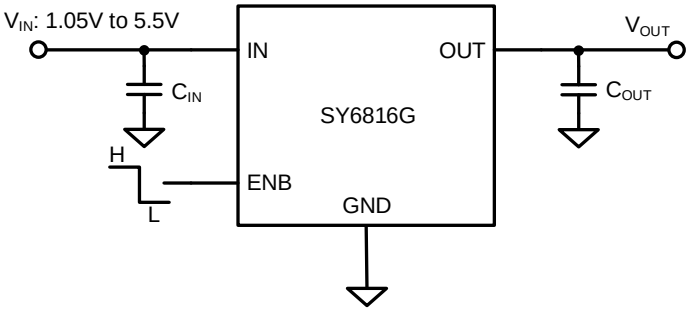
Back

SY6816APAC/SY6816GPAC - 1.05V to 5.5V 2A Load Switch

Features

- Input Voltage Range: 1.05V to 5.5V
- 2A Load Current Capability
- Ultra-low $R_{DS(ON)}$:
  - 37mΩ(typ) at V_{IN} = 5V
  - 38mΩ(typ) at V_{IN} = 3.3V
  - 43mΩ(typ) at V_{IN} = 1.8V
- Quiescent Current: 9.7μA (typ) at V_{IN}=3.3V
- Controlled Slew Rate:
  - 910μs rise time at V_{IN}=3.3V (SY6816A)
  - 1200μs rise time at V_{IN}=3.3V (SY6816G)
- Compact Package: CSP 0.78mm×0.78mm-4





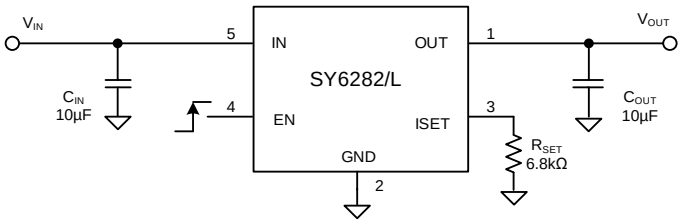
Applications

- Notebook
- Cell Phone
- Digital Cameras
- IoT devices

SY6282ACC/SY6282LACC - 6V, 3A/2.5A Low Loss Power Distribution Switch

Features

- Input Voltage: 2.4V to 6V
- 3A(SY6282)/ 2.5A (SY6282L) Load Current Capability
- Quiescent Current I_Q 38μA (typ.)
- Shutdown Current I_{SHDN} 0.2μA (typ.)
- Programmable Current Limit
- Overtemperature Protection
- Reverse Blocking (No Body Diode)
- OUT Can be Forced Higher than IN During Shutdown
- Compact Package: TSOT23-5
- RoHS Compliant and Halogen Free



Applications

- Battery Operated Products
- USB Dongles
- Mini PCI Accessories
- USB Chargers
- Public Place Multi-USB Chargers

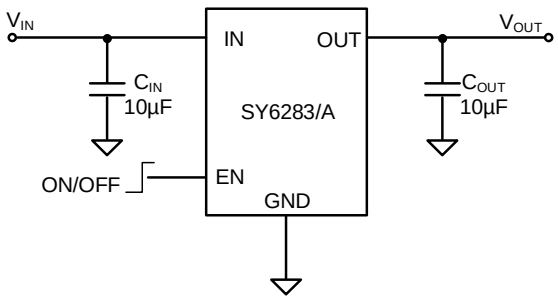
Back

SY6283DRC/SY6283ADRC

- 3A Continuous, 4A Peak Current, Low Loss Power Distribution Load Switch

Features

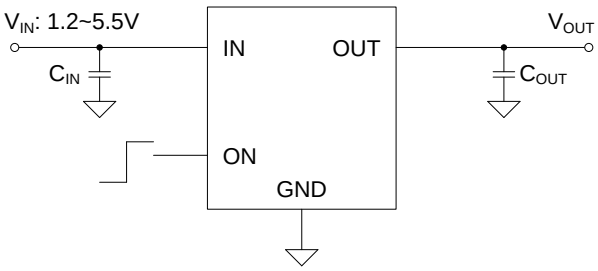
- Distribution Voltages: 2.5V to 5.5V
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- At shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- Output Discharge Function
- ✧ SY6283: No Output Discharge Function
- ✧ SY6283A: Auto Output Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package Minimize Board Space: DFN1.2×1.6-4



SY6813PEC/SY6813APEC - 3A Ultra-Low Loss Switch

Features

- Input Voltage Range: 1.2V to 5.5V
- Low $R_{DS(ON)}$ for Internal Pass Switch: 22mΩ at V_{IN}=5V
- 3A Continuous Load Current Capability
- Operating Current Iq = 4 μA (typ.)
- Shutdown Current I_{SHDN} = 1μA (max.)
- Reverse Blocking (No Body Diode)
- ON/OFF Control Input
- Controlled Turn-On Slew Rate
- Auto Output Capacitor Discharge Function:
  - ➢ SY6813: Auto Output Capacitor Discharge Function
  - ➢ SY6813A: No Output Capacitor Discharge Function
- RoHS Compliant and Halogen Free
- Compact CSP-6 Package: 1.0mm×1.5mm, 0.5mm Pitch, 0.5mm Height



Applications

- Smartphones
- Storage, DSLR, and Portable Devices
- Battery operated devices

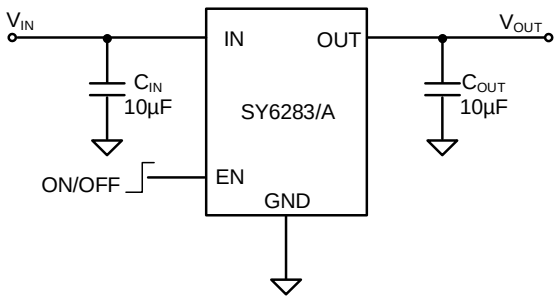
Back

SY6283DRC/SY6283ADRC

- 3A Continuous, 4A Peak Current, Low Loss Power Distribution Load Switch

Features

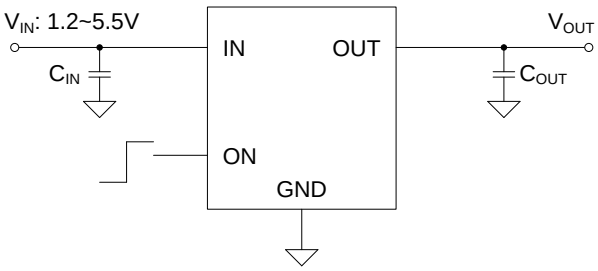
- Distribution Voltages: 2.5V to 5.5V
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- At shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- Output Discharge Function
- ✧ SY6283: No Output Discharge Function
- ✧ SY6283A: Auto Output Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package Minimize Board Space: DFN1.2×1.6-4



SY6813PEC/SY6813APEC - 3A Ultra-Low Loss Switch

Features

- Input Voltage Range: 1.2V to 5.5V
- Low $R_{DS(ON)}$ for Internal Pass Switch: 22mΩ at V_{IN}=5V
- 3A Continuous Load Current Capability
- Operating Current Iq = 4 μA (typ.)
- Shutdown Current I_{SHDN} = 1μA (max.)
- Reverse Blocking (No Body Diode)
- ON/OFF Control Input
- Controlled Turn-On Slew Rate
- Auto Output Capacitor Discharge Function:
  - ➢ SY6813: Auto Output Capacitor Discharge Function
  - ➢ SY6813A: No Output Capacitor Discharge Function
- RoHS Compliant and Halogen Free
- Compact CSP-6 Package: 1.0mm×1.5mm, 0.5mm Pitch, 0.5mm Height



Applications

- Smartphones
- Storage, DSLR, and Portable Devices
- Battery operated devices

Back

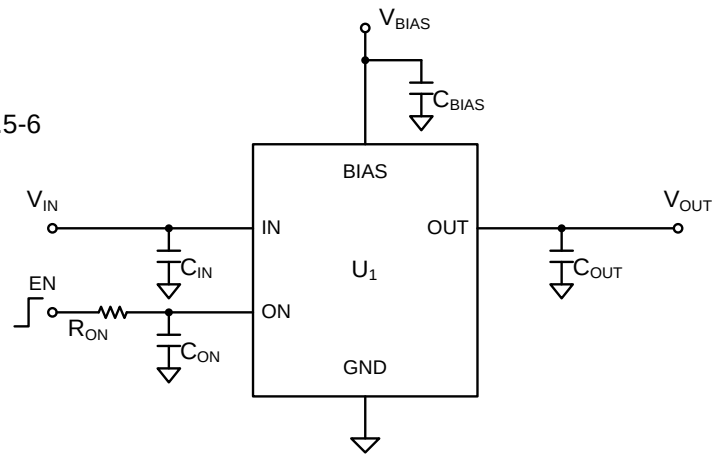
SY6821AAC/SY6821ADQC - Single 3A/4A, Ultra Low Loss Load Switch

Features

- Input Voltage Range: 0.6V to 3.6V
- Bias Range: 2.5V to 5.5V
- Low $R_{DS(ON)}$ for Internal Pass Switch:45mΩ (SY6821)/ 16mΩ (SY6821A)
- Maximum Output Current: 3A (SY6821)/ 4A (SY6821A)
- Accurate Turn On Threshold to Allow Programmable Turn On Delay to Enable Power Sequencing
- Programmable Turn On Slew Rate
- Quiescent Bias Current: 100μA
- Automatic shutdown Discharge: 100Ω
- RoHS Compliant and Halogen Free
- Compact Package: SY6821: SOT23-5/
  SY6821A: DFN1.5×1.5-6

Applications

- Notebook PC
- Desktop PC
- Server
- SetTop Box
- E-Book
- LCD-TV
- Portable Device



SY6863B2ABC/SY6863B3ABC/SY6863B4ABC

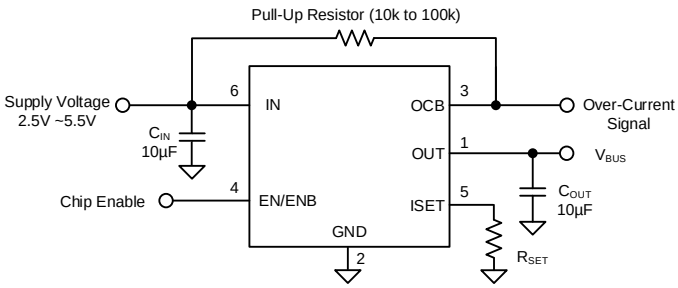
- 5.5V, 3A Low Loss Power Distribution Switch with Reverse Block Rating Up to 28V

Features

- Input Voltage: 2.5V to 5.5V
- Output Voltage Withstanding 28V
- Extremely Low Power Path Resistance: 45mΩ (typ.)
- 3A Load Current Capability
- Reverse Blocking in Normal Operation or Shutdown
- Fault Flag (OCB) Output for over Current and Fault Conditions
- Fast Role Swap Support
- Enable Polarity
  - SY6863B2/B4: Active Low
  - SY6863B3: Active High
- Compact Package: SOT23-6
- RoHS Compliant and Halogen Free

Applications

- USB 3.1 Application
- USB 3G Datacard
- USB Dongle
- MiniPCI Accessories
- USB Charger
- Public Place Multi-USB Charger



Note: If 1uF input cap will lead to large Vin voltage spike, it is strongly recommended to add additional 10uF ceramic cap.

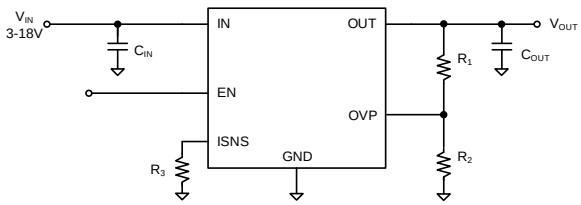
Back

SY6886UGC/SY6886BUGC

- Over Voltage Protection Switch with Current Monitor

Features

- Wide Input Voltage Range from 3V to 18V
- Up to 25V Voltage Rating for OUT Pin (SY6886)
- Up to 28V Voltage Rating for OUT Pin (SY6886B)
- Extremely Low ON Resistance $R_{DS(ON)}$
  - $R_{DS(ON)}$=45mΩ(typ.) at 12V V_{IN} condition
- Reverse Blocking Function (SY6886)
- 3A Output Current Capability
- Programmable Current Limit
- Short-circuit Protection
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: CSP1.50mm×1.64mm -12



Applications

- Wireless Charger
- USB PD

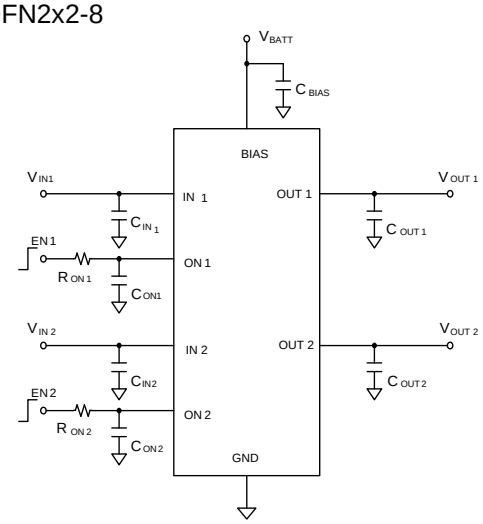
SY6823DFC - Dual Channel 4A, Ultra Low Loss Load Switch

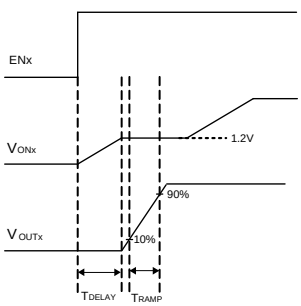
Features

- Low $R_{DS(ON)}$ for internal MOSFETs: 28mΩ
- Maximum output current per channel: 4A
- Distribution voltages: 0.6V-BIAS
- Accurate turn-on threshold to allow programmable turn-on delay to enable power sequencing
- Programmable ramp-up time
- Latch mode overtemperature protection
- Latch mode short circuit protection
- Automatic shutdown discharge: 210Ω
- Compact: DFN2x2-8

Applications

- Notebook, Tablet, Desktop, and Net PCs
- Servers
- Set Top Boxes
- E-Book or MIDs
- Smart TVs
- Routers
- Industrial PCs





Back

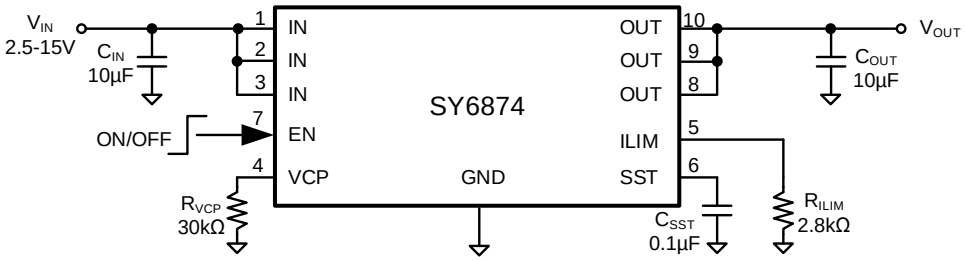
SY6874DBC - Programmable Current Limit Switch

Features

- Wide Input Voltage Range: 2.5V to 15V with Surge up to 30V
- Extremely Low RDS(ON) for the Integrated Protection Switch: 50 mΩ
- Programmable Soft-Start Time
- Programmable Current Limit up to 4A
- Short-circuit Protection
- Selectable Input Range and Clamping Output Voltage Threshold.
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact package: DFN3X3-10

Applications

- Notebook PCs
- I-pad Mini
- Servers
- Service PCs



SY6875ADBC/SY6875CDBC/SY6875DDBC/SY6875FDBC

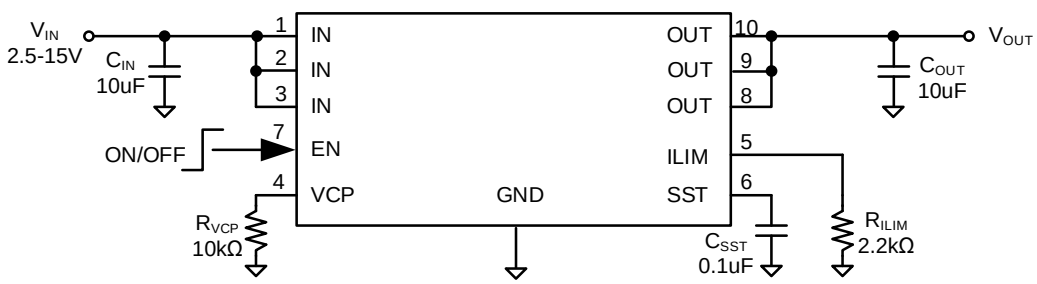
- 15V Programmable Current Limit Switch with OVP Clamp

Features

- Input Voltage Range: 2.5V to 15V with Surge Up to 30V
- Programmable Current Limit
- Low $R_{DS(ON)}$ for the Integrated Protection Switch:
  - SY6875A/D: 40 mΩ
  - SY6875C/F: 50mΩ
- Programmable Soft-Start Time
- Short Circuit Protection
- Selectable Input Range and Clamping Output Voltage Threshold
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: DFN3×3-10

Applications

- Notebook PCs
- Servers
- Service PCs



Back

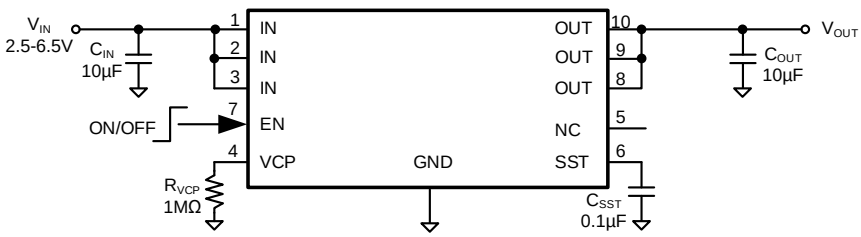
SY6895ADBC/SY6895CDBC - 6.5V 5A Current Limit Switch with OVP Clamp

Features

- Input Voltage Range: 2.5V to 6.5V with Surge Up to 12V
- 5A Fixed Current Limit
- Ultra Low Bias Current: 50μA (typ.)
- Extremely Low $R_{DS(ON)}$ for the Integrated Protection Switch: 40 mΩ
- Programmable Soft-Start Time
- Short-Circuit Protection
- Selectable Input Range and Output Clamping Voltage
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact package: DFN3x3-10

Applications

- Notebook PCs
- Servers
- Service PCs



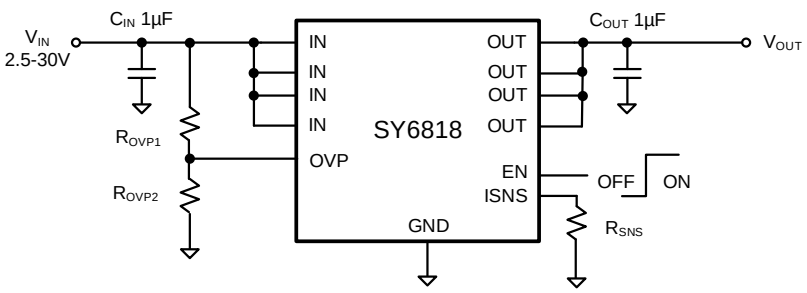
SY6818PLC - High-Current Overvoltage Protection Switch With Integrated Reverse Blocking MOSFETs

Features

- Input Voltage Range: 2.5V to 30V
- 20V Integrated Reverse Blocking FET Rating
- Extremely Low Power Path Resistance R_{PWPT}
  - R_{PWPT}=53mΩ (Typical)
- Programmable OVP Through External Resistor Divider, ±3% Accuracy (max)
- Internal Soft-Start to Prevent In-Rush Current
- Thermal Shutdown Protection and Auto-Recovery
- Current Indicator with ±5% Accuracy
- RoHS Compliant and Halogen Free
- Compact Package: CSP-12 (1.73mm×1.73mm)

Applications

- Smartphones
- Tablet PCs
- Mobile Devices



Back

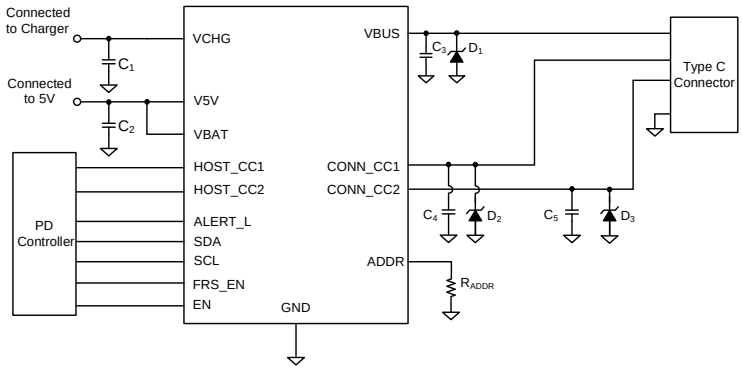
SY6862CQLC/SY6862DQLC - 2 to 1 Power MUX for USB PD Application

Features

- 2 to 1 Power MUX:
  - High Voltage Channel: 4.5V to 23V Range for VCHG
  - V5V Channel: 4V to 5.5V Range for 5V Input
- Smooth Ramp Control during Channel Transitions
- Reverse Blocking Capability
- Bi-directional Control for High Voltage Channel
- Fast Role Swap
- I²C Interface
- CC Bypass and Isolation Control
- Dead Battery Wake-Up Function
- VCONN Path for E-Mark Cable
- Protection:
  - Output Current Limit Setting
  - OCP/OVP/TSD/UVP
- RoHS Compliant and Halogen Free
- Compact Package QFN3×4-16

Applications

- USB PD
- Desktop PC
- Laptops
- Smartphones



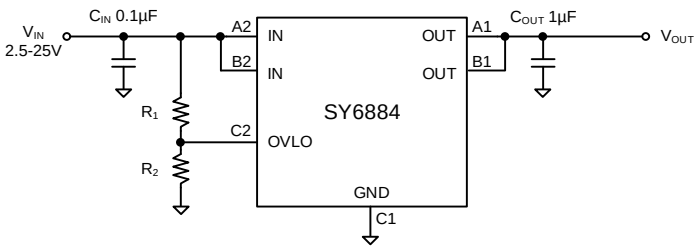
SY6884PYC- Programmable High Current Overvoltage Protection Switch

Features

- V_{IN}=2.5V to 25V, Absolute Maximum V_{IN}=28V
- Extremely Low Power Path on Resistance R_{PWPT}: 30mΩ Typ.
- Fast OVP Response Time: 100 ns.
- Auto-enabled Switch with 15ms De bounce Time
- Programmable Over Voltage Threshold from +4V to +20V
- Internal Soft-start to Prevent Inrush Current
- Thermal Shutdown Protection & Auto Recovery
- Short Circuit Protection
- Compact Package: CSP 0.89×1.43-6

Applications

- Smart Phone
- Tablet PCs
- Mobile Device



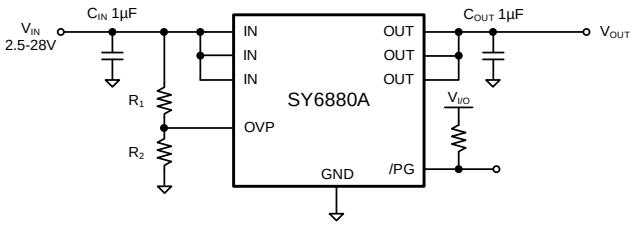
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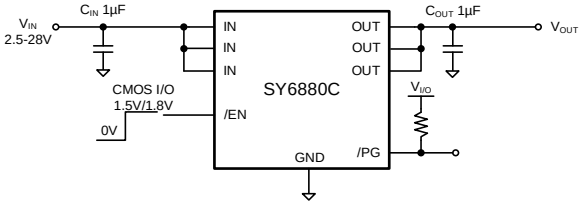
SY6880APGC/SY6880CPGC

- Programmable High Current Overvoltage Protection Switch with Integrated Reverse Blocking FET

Features

- V_{IN}=2.5V to 28V. Absolute Maximum V_{IN}=29V
- Extremely Low Power Path Resistance R_{PWPT}
  - R_{PWPT}=38mΩ typ.
- Internal 6.8V Default OVP Threshold
- Open-drain Indicator Pin for Operation Status
- Surge Protection up to +80V
- Internal Soft-start to Prevent In-rush Current
- Thermal Shutdown Protection & Auto Recovery
- Enable Control (SY6880C)
- Programmable Over Voltage Threshold from +4V to +7V (SY6880A)
- RoHS Compliant and Halogen Free
- Compact Package: CSP 2.0mm×1.8mm-12





Applications

- Smart Phone
- Tablet PCs
- Mobile Device

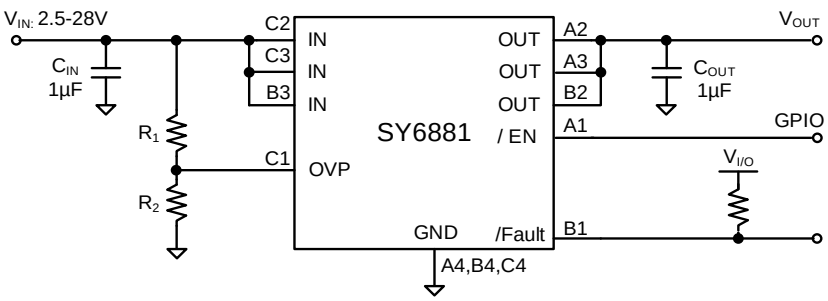
SY6881PTC - Programmable 5A Overvoltage Protection Switch

Features

- Surge Protection IEC 61000-4-5 to +100V
- Extremely Low Power Path Resistance R_{PWPT}
  - R_{PWPT}=32mΩ typ.
- Programmable Over Voltage Threshold from +4V to +22V
- Default Over Voltage Threshold 6.8V
- Open Drain Indicator Pin for Operation Status
- Internal Soft Start to Prevent In-rush Current
- Thermal Shutdown Protection & Auto Recovery
- IEC61000-4-2 Air Discharge > 15KV
- IEC61000-4-2 Contact Discharge > 8KV
- RoHS Compliant and Halogen Free
- Compact Package: CSP 1.32mmx1.86mm-12

Applications

- Smart Phone
- Tablet PCs
- Mobile Device



Back

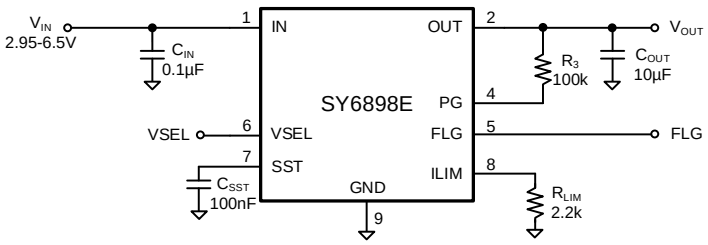
SY6898ERYC- Programmable High Current Protection Switch with -6V Reverse Voltage Protection

Features

- Input Voltage Range: 2.95V to 6.5V with Surge Up to 18V
- 5A Output Current Capability
- Withstands -6V Input Voltage and Blocks the Power Path
- Extremely Low $R_{DS(ON)}$: 30mΩ at 3V V_{IN}
- Programmable Soft-Start Time
- Short Circuit Protection
- Selectable Clamping Output Voltage Threshold
- Power Good Indicator Pin for Operation Status
- FLG Indicator Pin for IN Status
- Thermal Shutdown Protection and Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN2×2-9

Applications

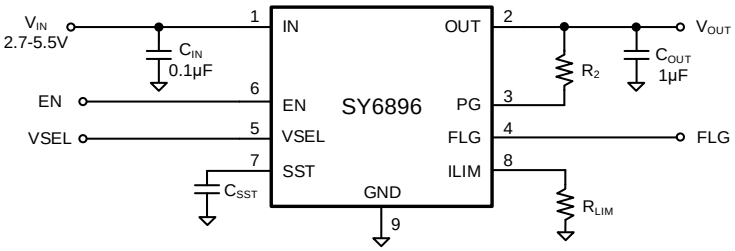
- SSD M.2 Form Factor
- SSD Dual Input Power Applications
- SSD Load Switch



SY6896RYC - Programmable High Current Protection Switch with Integrated Reverse Blocking FET

Features

- Input Voltage Range: 2.7V to 5.5V with Surge Up to 15V
- 5A Output Current Capability
- Extremely Low Power Path Resistance R_{PWPT}=30mΩ (typ) at 3V Vin Conditions
- Reverse Blocking Function
- Programmable Current Limit
- Programmable Soft-Start Time
- Selectable Clamping Output Voltage Threshold
- Power Good Indicator Pin for Operation Status
- FLG Indicator Pin for Input Voltage Status
- RoHS Compliant and Halogen Free
- Compact package: QFN2×2-9



Applications

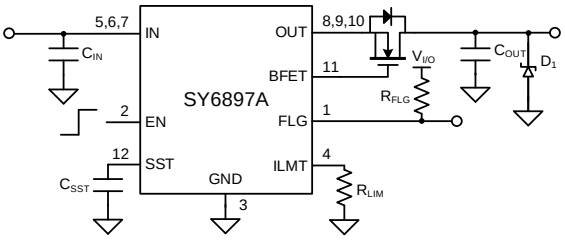
- SSD M.2 from Factor
- SSD Dual Input Power Applications
- SSD Load Switch

Back

SY6897ATLC- 2.5V to 16V Protection Switch with Blocking FET Control

Features

- Input Voltage Range: 2.5V to 16V
- Extremely Low Power Path Resistance $R_{DS(ON)}$=30mΩ (Typical)
- 1A to 5A Programmable Current Limit
- Open Drain Indicator Pin for Operation Status
- ±10% I_{LIMIT} Accuracy at 3A
- Programmable OUT Slew Rate
- Auto Output Discharge during shutdown
- Built-in Thermal Shutdown
- Compact Package: QFN2x2-12



Applications

- Power Banks
- LCD Panels
- HDD and SSD Drives
- Set Top Boxes
- Servers / AUX Supplies
- Fan Controls
- PCI/PCIe Cards
- Adapter Powered Devices

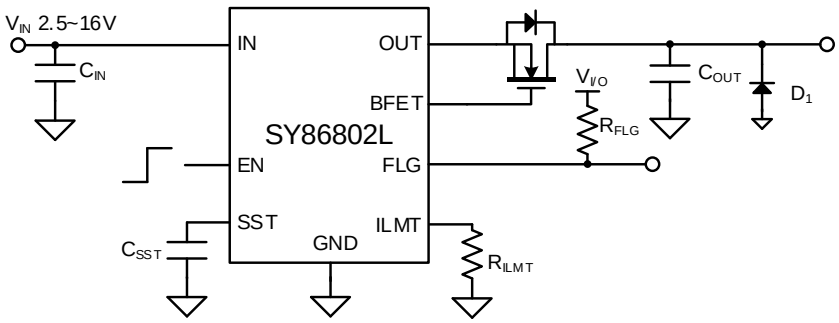
SY86802LTLQ - 2.5V to 16V Protection Switch with Blocking FET Control

Features

- 2.5V to 16V Input Voltage Range
- Extremely Low Power Path Resistance $R_{DS(ON)}$ $R_{DS(ON)}$=30mΩ (typ.)
- Open-drain Indicator Pin for Operation Status
- 1A to 5A Adjustable IILMT
- ±10% IILMT Accuracy at 3A
- Reverse Blocking Support when EN OFF
- Programmable OUT Slew Rate
- Built-in Thermal Shutdown and Latch-off
- RoHS Compliant and Halogen Free
- Small Footprint –QFN (2mmx 2mm)

Applications

- Power Bank
- LCD Panel
- HDD and SSD Drives
- Set Top Boxes
- Servers / AUX Supplies
- Fan Control
- PCI/PCIe Cards
- Adapter Powered Devices

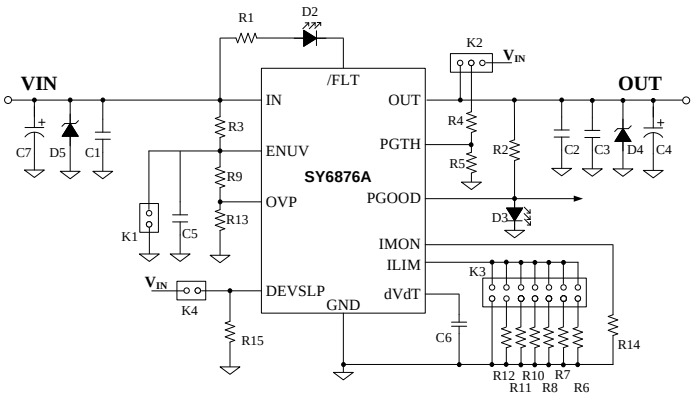


Back

SY6876AQSC- 2.7V-18V Switch with True Reverse Blocking and DevSleep Support for SSDs

Features

- 2.7V to 18V Operating Voltage, 30V (Max)
- Ultra Low RDS(ON): 42 mΩ RON (Typical)
- 0.6A to 5.3A Adjustable Current Limit (±8%)
- IMON Current Indicator Output (±8%)
- Operating IQ: 115μA (VIN = 12 V, typ.)
- Shutdown Current: 15 μA (VIN = 12 V, typ.)
- Reverse Current Blocking
- Programmable dV/dt Control
- Power Good and Fault Outputs
- -40° C to 125° C Junction Temperature Range
- QFN3x4-20 Package
- UL Certificate Number: E491480



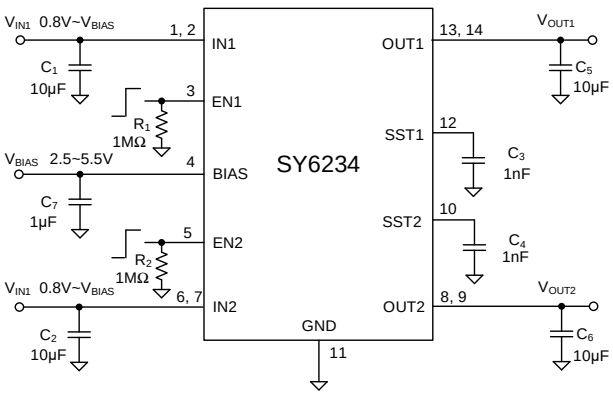
Applications

- PCIe/SATA/SAS HDD and SSD Drives
- Enterprise and Micro Servers
- Set-Top-Box (STB), DTVs and Game Consoles
- RAID Cards - Holdup Power Management
- Telecom Switches and Routers
- Adapter Powered Devices

SY6234DUC - 5.5V/6A, Low $R_{DS(ON)}$ Dual-Channel Load Switch

Features

- Dual-Channel 6A Load Switch
- Wide Input Voltage Range: 0.8V to 5.5V
- Low Bias Current:
  - 20μA Typical (Both Channels)
  - 18μA Typical (Single Channel)
- Extremely Low $R_{DS(ON)}$ for the Integrated MOSFET: 18mΩ (V_{BIAS}=5V)
- Programmable Soft-Start Time
- Compact Package: DFN3×2-14



Applications

- Notebook Tablet, or Net PCs
- Desktop PCs
- Servers
- Set Top Boxes
- E-Book or MIDs
- Smart TVs
- Routers
- Industrial PCs
- Solid-state Drives (SSD)

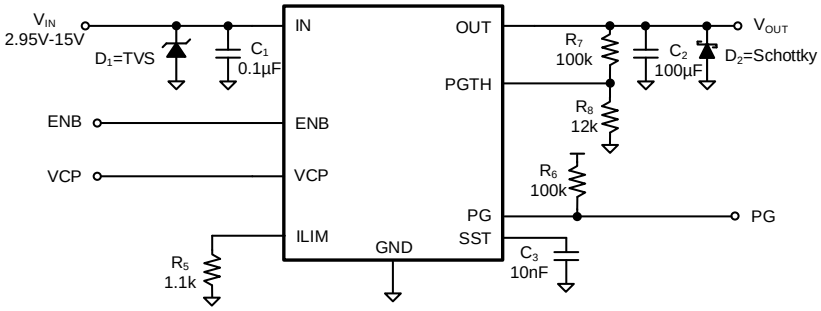
Back

Features

- Wide Input Voltage Range from 2.95V to 15V with Surge up to 30V
- Extremely Low Power Path Resistance $R_{DS(ON)}$
  - $R_{DS(ON)}$=10mΩ(typ) at 3.3/5/12 V_{IN} Condition
- 9A Output Current Capability/10.8A Peak Current
- Programmable Current Limit
- Programmable Soft-Start Time
- Selectable Clamping Output Voltage Threshold
- Independent ON/OFF Control Input
- Thermal Shutdown Protection & Auto Recovery
- Moisture Sensitivity Level (MSL): 1
- Compact package: QFN2×2.5-10

Applications

- SSD M.2 from Factor
- SSD Dual Input Power Application
- SSD Load Switch



Back

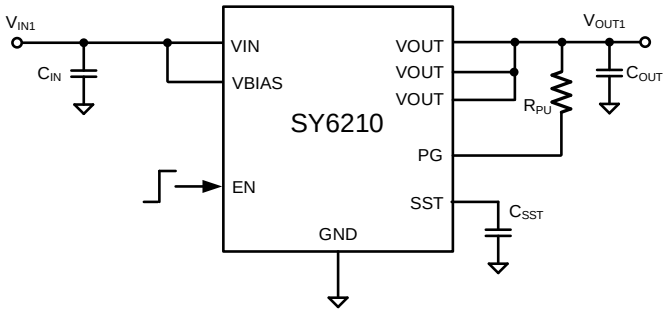
SY6210DHC- 5.5V 10A Load Switch with Ultra Low RDS(ON)

Features

- V_{BIAS} Voltage Range: 2.5V to 5.5V
- V_{IN} Voltage Range: 0.6V to VBIAS
- ON-Resistance
  - R_{ON} = 2.8 mΩ (typical) at V_{IN} = 5 V, V_{BIAS} = 5V
  - R_{ON} = 2.8 mΩ (typical) at V_{IN} = 3.3 V, V_{BIAS} = 3.3V
- 10-A Maximum Continuous Switch Current
- Quiescent Current
  - I_{Q_VBIAS} = 63μA at V_{BIAS} = 5V
- Shutdown Current
  - I_{SD_VBIAS} = 5.5μA at V_{BIAS} = 5V
  - I_{SD_VIN} = 4nA at V_{BIAS} = 5V, V_{IN} = 5V
- Controlled and Adjustable Slew Rate through C_{SST}
- Integrated Single Channel Load Switch
- Power Good (PG) Indicator
- Compact DFN2x3-10 Package

Applications

- Notebooks
- Desktop PC
- SSDs
- Servers
- Telecom systems



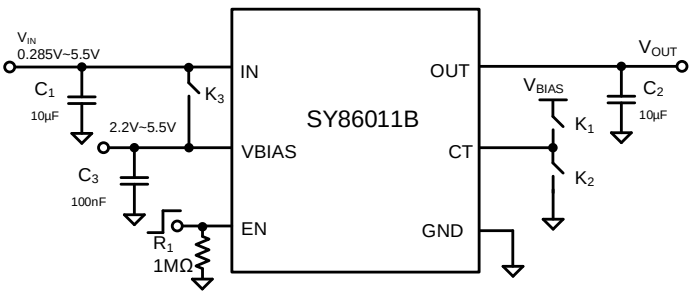
SY86011BWPQ - 5.5V 10A Load Switch with Ultra Low $R_{DS(ON)}$

Features

- Integrated Single Channel Load Switch
- V_{BIAS} Voltage Range: 2.2V to 5.5V
- V_{IN} Voltage Range: 0.285V to V_{BIAS}
- On-Resistance
  - R_{ON} = 5.3mΩ (typical) at V_{IN}=5V (V_{BIAS}=5V)
  - R_{ON} = 5.3mΩ (typical) at V_{IN}=3.3V (V_{BIAS}=3.3V)
- 10A Maximum Continuous Switch Current
- Auto Output Discharge: 50Ω
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5×2-10

Applications

- Notebooks
- Desktop PC
- SSDs
- Servers
- Telecom Systems



Back

Hotswap ORing

Part Number	Package	Enable Logic	OCP	OVP	No. of Channels	V_{IN}(V)	V_{OUT}(V)	Temp Range	Special Function
SQ24900IAC	DFN4x3-14	/	/	/	2	6~80	0~80	-40°C to 125°C	Dual input, Positive High Voltage Ideal Diode-OR with Input Supply and Fuse Monitors
SQ24901HKC	TSSOP16	Y	Y	Y	1	-10~ -200	0~ -80	-40°C to 125°C	Integrated ORing Controller, Dual Hot Swap Gate Driver
SQ24902FBC	MSOP10	/	/	/	1	1.5~60	0~60	-40°C to 125°C	IEEE802.3bt PD Interface Controller
SQ24902BDBD	DFN3x3-10	/	/	/	1	1.5~60	0~60	-40°C to 125°C	IEEE 802.3af/at-compliant PD Interface Controller
SQ24903FBP	MSOP10	H	Y		1	2.5~18	0~18	-40°C to 125°C	Power Limiting Hotswap Controller/Fault Timer/ UV Threshold/Programmable FET SOA Protection
SQ24905CQEQ	QFN5x5-32	H	Y	Y	1	4.5~20	4.5~20	-40°C to 125°C	Hot Swap Controller with Digital Power, Energy Monitor and PMBus Interface

Back

SQ24900IAC

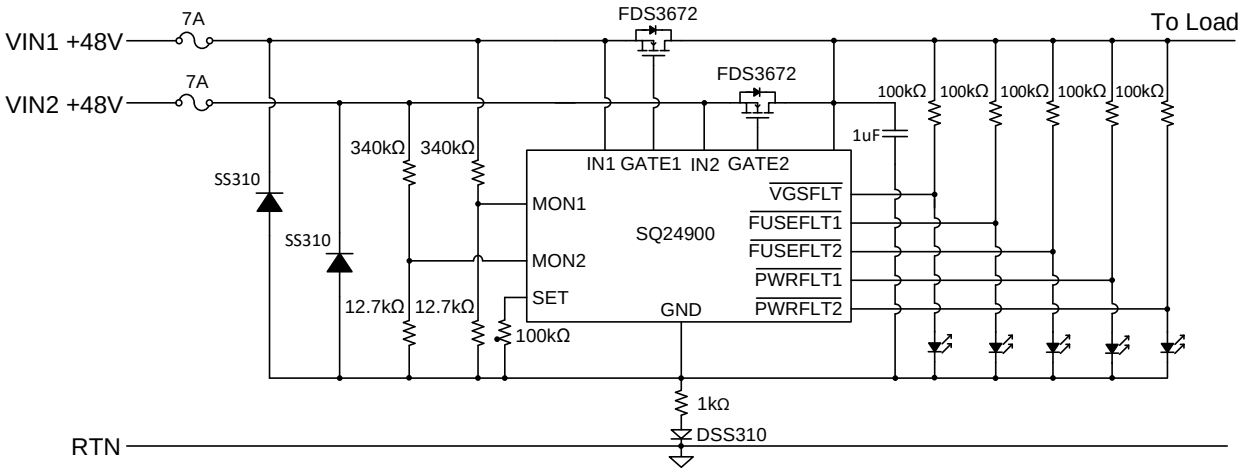
Positive High Voltage Ideal Diode-OR with Input Supply and Fuse Monitors

Features

- 6V to 80V Operation
- 0.3µs Turn-Off Time
- Reverse Current Blocking
- Controlled Transition Between Inputs
- Can be Used On Positive Rails or Return Path
- Temperature Range: -40°C to 125°C
- Available in DFN4×3-14 Package

Applications

- N+1 Redundant Power Systems
- Sever Racks (Backplane and Blades)
- 48V and –48V Distributed Power Systems
- Telecom Infrastructure



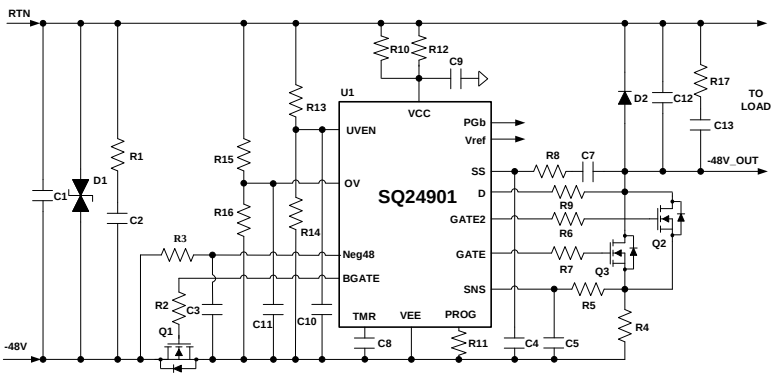
Back

SQ24901HKC

-48V Hot Swap and Single OR-ing Controller

Features

- -10V to -80V DC Operation,
- -200V Absolute Maximum
- Soft-start Cap Disconnect
- Dual Hot Swap Gate Drive
- 340μA Gate Sourcing Current
- Dual Current Limit (based on VDS)
  - 26 mV ±8% When Low VDS
  - 3.7 mV ±22% When High VDS
- Programmable UV(±1.5%) and OV (±2%)
  - Programmable Hysteresis (±11%)
- Integrated OR-ing Controller
  - Regulation: 25 mV ±15 mV
  - Fast Turn off: –25 mV ±4 mV
- Retries After Time Out
- RoHS Compliant and Halogen Free
- TSSOP16



Applications

- Remote Radio Units
- Baseband Units
- Routers and Switchers
- Small Cells
- -48V Telecommunications Infrastructure

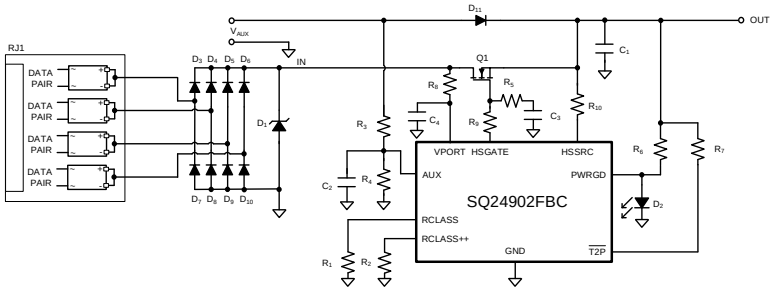
SQ24902FBC - IEEE 802.3bt PD Interface Controller

Features

- IEEE 802.3af/at/bt Powered Device (PD) Solution for Type 1-4 PoE Applications
- Supports up to 71.3W PDs
- Supports up to 5-Event Classification Sensing
- 100V Robust Surge Protection (Abs. Max.)
- Integrated Signature Resistor
- Thermal Shutdown Protection
- External Hot-swap N-Channel MOSFET for Lowest Power Dissipation and Highest System Efficiency
- Configurable AUX Power Support as Low as 9V
- –40℃ to 125℃Junction Temperature Range

Applications

- Security Cameras
- Base Stations
- IEEE 802.3bt Compliant Devices
- Video and VoIP Telephones
- Industrial Applications

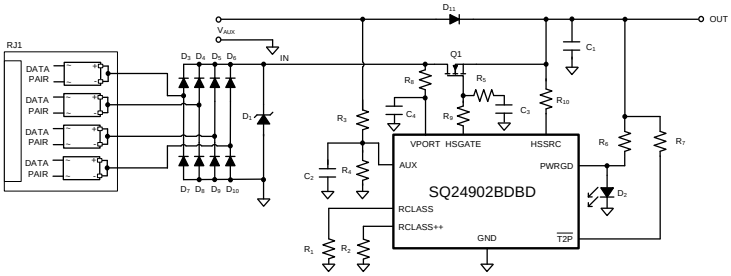


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SQ24902BDBD - IEEE 802.3af/at-compliant PD Interface Controller

Features

- IEEE 802.3af/at Powered Device (PD) Controller
- Supports Up to 90W PDs
- Supports All of the Following Standards:
  - High Power Mode: 38.7W, 52.7W, 70W and 90W
  - IEEE 802.3at 25.5W Compliant
  - IEEE 802.3af up to 13W Compliant
- 100V Robust Surge Protection (Abs. Max.)
- Integrated Signature Resistor
- Thermal Shutdown Protection
- External Hot Swap N-Channel MOSFET for Lowest Power Dissipation and Highest System Efficiency
- Configurable Aux Power Support as Low as 9V
- –40℃ to 125℃Junction Temperature Range



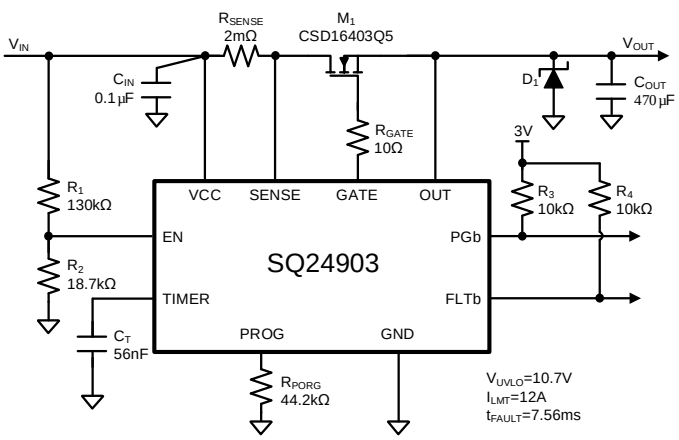
Applications

- Security Cameras
- Base Stations
- IEEE 802.3bt Compliant Devices
- Video and VoIP Telephones

SQ24903FBP - 2.5V to 18V High Efficiency Power Limiting Hot-swap

Features

- 2.5V to 18V Operation
- Accurate Current Limiting for Startup
- Programmable FET SOA Protection
- Accurate 25mV Current-Sense Threshold
- Power Good Output
- Fast Breaker for Short-Circuit Protection
- Programmable Fault Timer
- Programmable UV Threshold
- RoHS Compliant and Halogen Free
- MSOP-10 Package



Applications

- SSD
- Networking
- DWDM

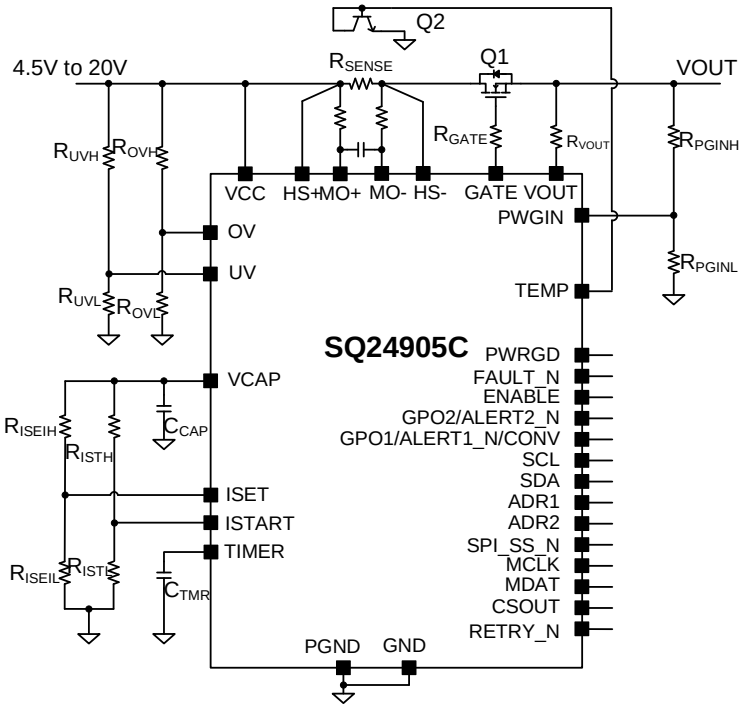
Back

SQ24905CQEQ

Hot Swap Controller with Digital Power, Energy Monitor and PMBus Interface

Features

- 4.5V to 20V Input Voltage Range
- ±0.6% Accurate, 12-Bit ADC for V_{IN}, V_{OUT}, I_{OUT}, and Temperature Measurement
- Split Hot Swap and Power Monitor Inputs for Additional External ADC Filtering
- 320ns Response Time to Short-Circuit Events
- Resistor-Programmable Current Limit of 5mV to 25mV V_{SENSE}
- Programmable Start-Up Current Limit
- 1% Accurate UV, OV, and PWRGD Thresholds
- Remote Temperature Sensing with Configurable Warning and Shutdown Thresholds
- Shutdown After Detecting MOSFET Health Faults
- FAULT_N Open Drain Output
- Multi-functional GPO Output Pin:
  - SMBAlert Mode
  - General-purpose Digital Output Mode
  - Digital Comparator Mode
  - CONV Function Mode
- Reports Power and Energy Consumption Over Time
- Peak Detection Registers for Voltage, Current, and Power Monitoring
- PROCHOT Power Throttling Capability for Precise Control of System Power Usage
- PMBus Fast-Mode Compliant Interface and SPI Interface
- Moisture Sensitivity Level (MSL): 3
- QFN 5x5-32 Package



Applications

- Servers and Datacenters
- Power Distribution Systems
- Telecommunication Equipment and Switches

Back

Part Number	Package	Number of Supplies Monitored	Output Driver/ Reset Output	Threshold Voltage (V)	Delay Time (ms)	Reset Threshold Accuracy	Quiescent Current (μA)	Temp Range	Features
SQ24370ADTD	DFN1.45×1-6	1	Active high, Push-pull	Adjustable	Programmable	±1%	9	-40°C to 125°C	EN ON delay time programmable
SQ24370EDTD	DFN1.45×1-6	1	Active high, open drain	Adjustable	Programmable	±1%	9	-40°C to 125°C	EN ON delay time programmable
SQ24370FDTD	DFN1.45×1-6	1	Active high, open drain	Adjustable	Programmable	±1%	9	-40°C to 125°C	200ns EN ON delay time

Part Number	Package	Number of Supplies Monitored	Output Driver/ Reset Output	Threshold Voltage (V)	Delay Time (ms)	Reset Threshold Accuracy	Quiescent Current (μA)	Features
SY6370ADTD	DFN1.45×1-6	1	Active high, Push-pull	Adjustable	Programmable	±1%	9	EN ON delay time programmable
SY6370EDTD	DFN1.45×1-6	1	Active high, open drain	Adjustable	Programmable	±1%	9	EN ON delay time programmable
SY6370FDTC	DFN1.45×1-6	1	Active high, open drain	Adjustable	Programmable	±1%	9	200ns EN ON delay time

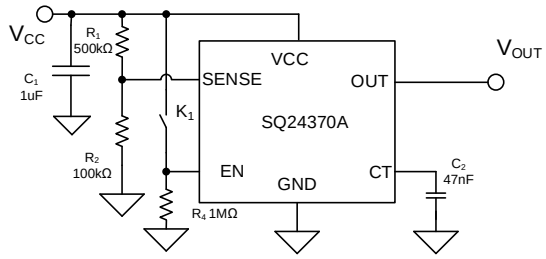
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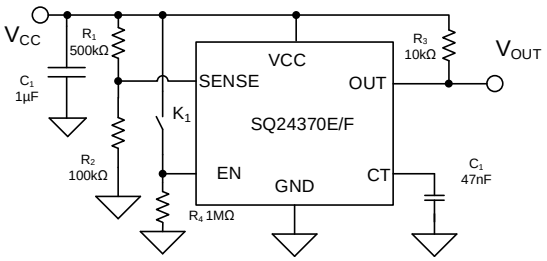
SQ24370ADTD/SQ24370EDTD/SQ24370FDTD

- Single-channel, Adjustable Voltage Monitor in Ultra-small Package

Features

- Operating Voltage Range: 1.7V to 6.5V
- Adjustable Threshold Down to 500mV
- Threshold Accuracy: 1% Over temperature
- Capacitor-adjustable Delay Time
- Low Quiescent Current: 9μA (typ.)
- External Enable Input
- SQ24370E/F: Open Drain Output (Rated at 18V)
- Temperature Range: -40°C to 125°C
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.45×1-6





Applications

- Notebook and Desktop Computers
- Microcontrollers, DSPs, and Microprocessors
- Portable and Battery-Powered Products
- FPGAs and ASICs

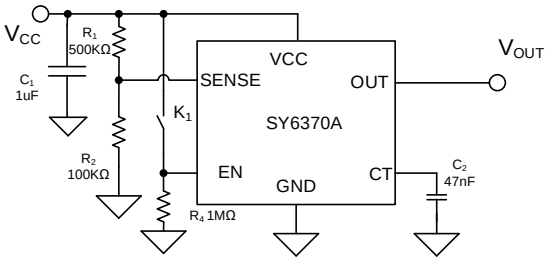
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SY6370ADTD/SY6370EDTD/SY6370FDTC

- Single-channel, Adjustable Voltage Monitor in Ultra-small Package

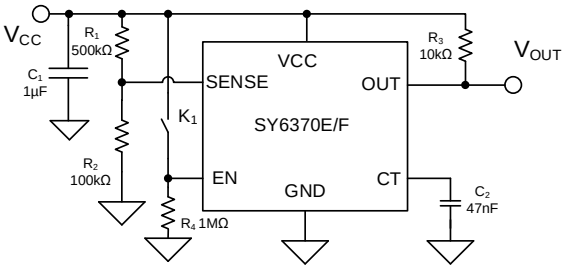
Features

- Adjustable Threshold Down to 500mV
- Operating voltage: 1.7V to 6.5V
- Threshold Accuracy: 1% Over Temperature
- Capacitor-Adjustable Delay Time
- Active-High Enable Input
- Low Quiescent Current: 9μA (Typical)
- External Enable Input
- SY6370E/F: Open Drain Output (Rated at 18V)
- Temperature Range: -40 ºC to 125 ºC
- Compact Package: DFN1.45x1.0-6



Applications

- DSPs, Microcontrollers and Microprocessors
- Notebook and Desktop Computers
- PDAs and Handheld Products
- Portable and Battery-Powered Products
- FPGAs and ASICs



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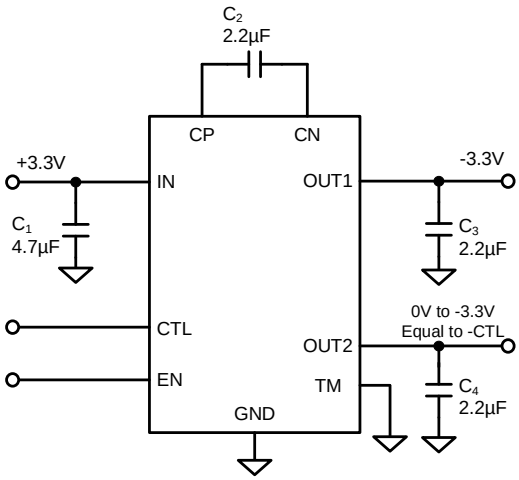
Part Number	Package	Enable Logic	V_{IN}(V)	V_{OUT}(V)	No. of Channels	Quiescent Current (mA)	I_{OUT}(A)	f_{SW}(kHz)	Temp Range	Features
SQ24390VLQ	QFN1.4×1.8-10	H	2.3~5.5	-VIN	2	1.2	0.2	500	-40°C to 125°C	Negative Charge Pump and Adjustable Regulator
SQ24390BVLQ	QFN1.4×1.8-10	H	2.3~5.5	-VIN	2	1.2	0.2	500	-40°C to 125°C	Negative Charge Pump and Adjustable Regulator

SQ24390VLQ/SQ24390BVLQ

-Negative Charge Pump and Adjustable Regulator

Features

- Wide Input Voltage Range: 2.3V to 5.5V
- Low Quiescent Current: 1.2mA
- Output Current: Up to 200mA
- No Inrush Current During Startup:
  - SQ24390: 1.6A Charge Pump Current Limit (Typ.)
  - SQ24390B: 0.8A Charge Pump Current Limit (Typ.)
- Overcurrent and Short-Circuit Protection
- Dual Output:
  - -1× Charge Pump
  - Regulated Output Between 0V and -VIN
- Compact Package: QFN 1.4mm×1.8mm



Applications

- Negative Rails for Analog Power
- Optical Applications Modules
- Power Supply for RF Amplifiers
- Power Source for Sensors in Portable Devices

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Power Module

Tech Advantage



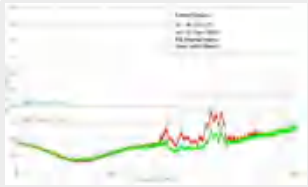
IC Design

- ✓ Advanced Single Die solution
- ✓ High efficiency topology
- ✓ High Frequency & low loss switch



3D Package

- ✓ Patent 3D package tech
- ✓ Low Parasitic Parameter
- ✓ Excellent thermal design



Mag. & EMI

- ✓ Customized Mag. Design
- ✓ New Material & process
- ✓ Low core & AC copper loss

Power Module Advantage





Space Saving

- ✓ Compared to Discrete, Up to 90% Size Reduction

High Performance

- ✓ Reduced Parasitic L/C Improving Efficiency and Minimize Signal Distortions
- ✓ Excellent Thermal & EMI Performance with 3D Package
- ✓ Good Anti-vibration and Environmental Ability

Low Total Cost

- ✓ PCB Cost Saving & SMD Process Time Saving
- ✓ Shorter Time to Market (Easy Layout, Fast Testing, Debug).
- ✓ Simpler Sourcing Management (Lower MOQ, Low CE & System job)

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5V Bus Buck Module(Temp Range -40°C to 125°C)

Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	I_{OUT}(Max) (A)	F_{SW} (MHz)	Output Voltage (V)	V_{FB} Accuracy	Efficiency @ full load	Features	Package	Height (Max)(mm)
SQ76001RCC	2.5	5.5	1.2	3	Adjustable	±2%	79% @ 3.3V_{IN}, 1.8V_{OUT}	PFM	QFN2.5×2-8	1.15
SQ76002CAEE	2.5	5.5	2	2.4	Adjustable	±1.5%	87% @ 3.3VIN, 1.8VOUT	FCCM	MDFN1.9×1.75-6	1.08
SQ76003D3AAE	2.5	6	3	2.4	Adjustable	±1%	89% @ 3.3V_{IN}, 1.8V_{OUT}	FCCM	QFN2.5×2-10	1.22
SQ76004BAKE	2.5	6	4	2.4	Adjustable	±1%	86% @ 3.3V_{IN}, 1.8V_{OUT}	FCCM	QFN2.5×2.5-10	1.25
SQ76825DABE	2.7	5.5	6	1.5	Adjustable, Default：0V	±1%	83% @ 3.3V_{IN}, 1V_{OUT}	I^2C	MQFN3×4-16	1.68
SQ76006B1AIE	2.85	7	6	1.1	Adjustable	±1.5%	88% @ 3.3V_{IN}, 1.8V_{OUT}	PFM&FCCM	MQFN3x3-19	1.5
SQ76020AFE	2.75	5.5	20	3.4	Adjustable, Default：0V	±1%	79.8% @ 3.3V_{IN}, 0.95V_{OUT}	FCCM	MQFN5×6-24	1.8
SQ76040ADG	2.9	5.5	40	3.4	Adjustable, Default：0V	±1%	81.8% @ 3.3V_{IN}, 0.6V_{OUT}	FCCM	MLGA6.2×6.7-80	2.9

12V Bus Buck Module(Temp Range -40°C to 125°C)

Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	I_{OUT}(Max) (A)	F_{SW} (MHz)	Output Voltage (V)	V_{FB} Accuracy	Efficiency @ full load	Features	Package	Height (Max)(mm)
SQ76103C3ACE	4.7	18	3	2	Adjustable	±1.8%	85% @ 12V_{IN}, 3.3V_{OUT}	FCCM	QFN3×2.8-8	1.5
SQ76106BAIE	2.85		6@0.6-3.3V	1.1	Adjustable	±1.5%	90.7% @ 12V_{IN}, 3.3V_{OUT}	PFM&FCCM	MQFN3x3-19	1.7
SQ76115BADE	2.9	16	15	Adj	Adjustable	±1%	90.7% @ 12VIN, 3.3VOUT	PFM&FCCM	MQFN5×5-32	2.8
SQ76106C3AAG	4.5	16	15	Adj	Adjustable	±1%	93% @ 12VIN, 3.3VOUT	PFM&FCCM	MLGA7.1×7.1-29	4.25

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20V Bus Buck Module(Temp Range -40°C to 125°C)

Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	I_{OUT}(Max) (A)	F_{SW} (MHz)	Output Voltage (V)	V_{FB} Accuracy	Efficiency @ full load	Features	Package	Height (Max)(mm)
SQ76202QNC	4.5	23	2	1.7	Adjustable	±1.5%	83% @ 12VIN, 3.3VOUT	PFM	QFN3*3-10	2

Isolated Module (Temp Range -40°C to 125°C)

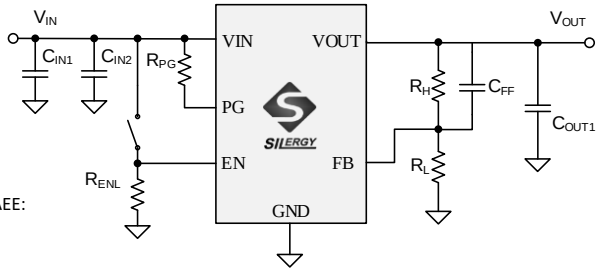
Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	I_{OUT}(Max) (A)	F_{SW} (MHz)	Output Voltage (V)	Load Regulation	Efficiency @ full load	Features	Package	Height (Max)(mm)
SQ79002AJE	4.5	14	0.2	1.6	5	1%(typ)	65% @ $5V_{IN}$, $5V_{OUT}$	3kV DC Hipot	MQFN4*5.5-14	4.05

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SQ76002C -- 5V input, 2A Module

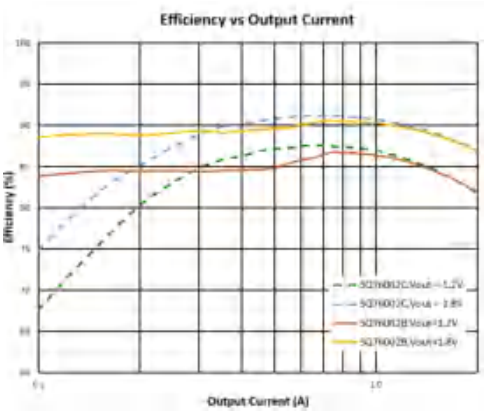
Features:

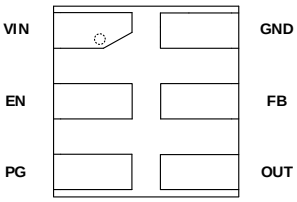
- ✓ 2.5V to 5.5V input voltage range
- ✓ Capable of 2A constant output current
- ✓ Compact Package: MDFN1.9×1.75-6 (Height:1.08mm max)
- ✓ High Switching Frequency 2.4MHz Minimizes the External Components
- ✓ PFM/FCCM under light load condition: – SQ76002BAEE: PFM – SQ76002CAEE: FCCM
- ✓ 100% Duty Cycle Operation
- ✓ Power Good Indicator
- ✓ Reliable Protection Mode: Auto-retry Mode for OVP, UVLO and OTP. Hiccup Mode for OCP



Typical Schematic

Efficiency@3.3V Input :







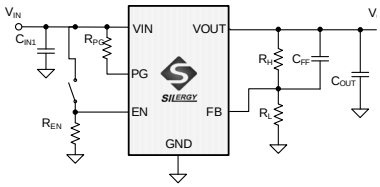
Package:MDFN1.9x1.75-6, Height: 1.08mm max

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SQ76003D3 -- 6V input, 3A Module

Features:

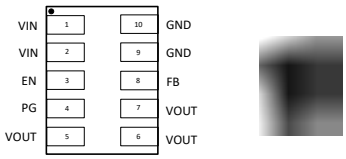
- ✓ 2.5~6V input voltage range
- ✓ Adjustable output voltage
- ✓ Maximum current Capability: 3A
- ✓ 2.4MHZ switching Frequency
- ✓ Power good indicator
- ✓ Package:QFN2.5x2-10, Height: 1.22mm max



Typical Schematic

Competition:

P/N	Max I_{OUT}(A)	Package (mm)	Efficiency @ I_{OUT}=3.0A V_{IN}=3.3V,V_{OUT}=1.8V
SQ76003A	3.0A	3.0x3.0x1.1	86%
SQ76003D3	3.0A	2.5x2x1.22	88.8%

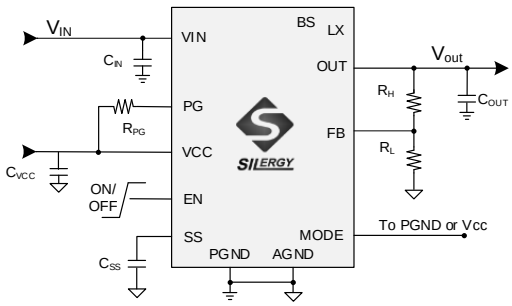


Package:MQFN2.5x2-10, Height: 1.22mm max

SQ76006B1 -- 7V input, 6A Module

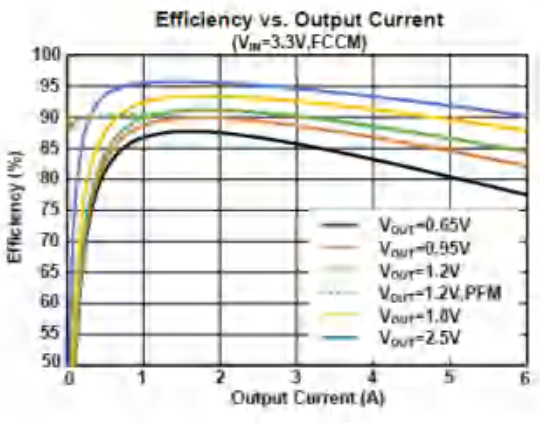
Features:

- ✓ 2.85V to 7V input voltage range
- ✓ 6A continuous output current capability
- ✓ Output adjustable from 0.6V
- ✓ Output Default Adjustable
- ✓ Selectable FCCM and PFM light load
- ✓ Package: MQFN 3mm*3mm-19
- ✓ Height: 1.5mm max



Typical Schematic

Efficiency@3.3V_{IN} （FCCM mode）:





Package:MQFN3x3-19, Height: 1.5mm max

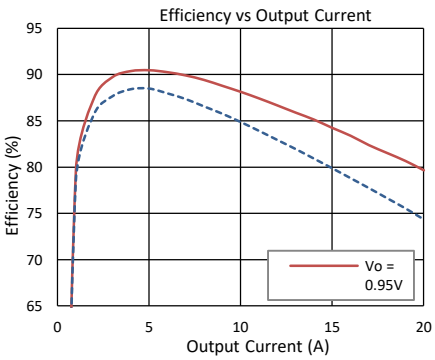
Back

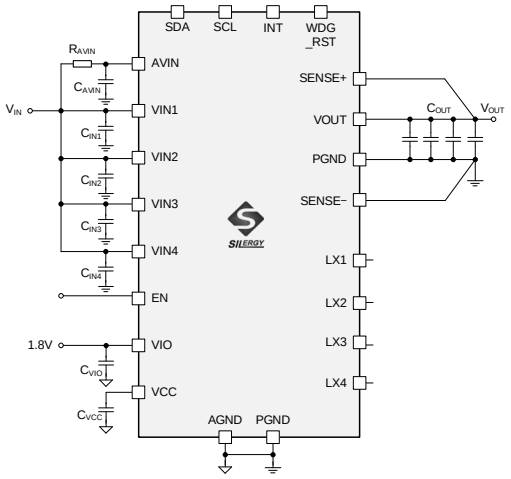
SQ76020– 5V input, 20A Module

Features:

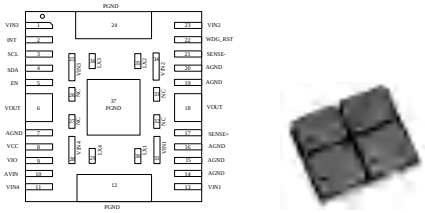
- ✓ 2.75V to 5.5V input voltage range
- ✓ 20A maximum output current capability
- ✓ I²C programmable output voltages from 0.3V to 1.85V
- ✓ Forced CCM mode
- ✓ COT control achieves fast transient performance
- ✓ OCP/SCP/OVP/UVLO/OTP protections
- ✓ Low output ripple & high efficiency with 4-phase Interleaved topology
- ✓ Package: MQFN5x6-24, Height: 1.8mm max

Efficiency@3.3V Input:





Typical Schematic



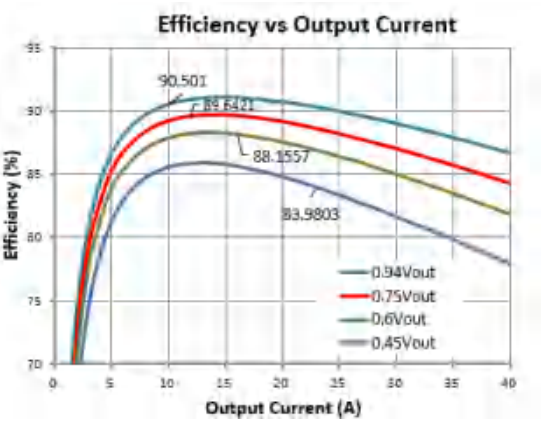
Package:MQFN5x6-24, Height: 1.8mm max

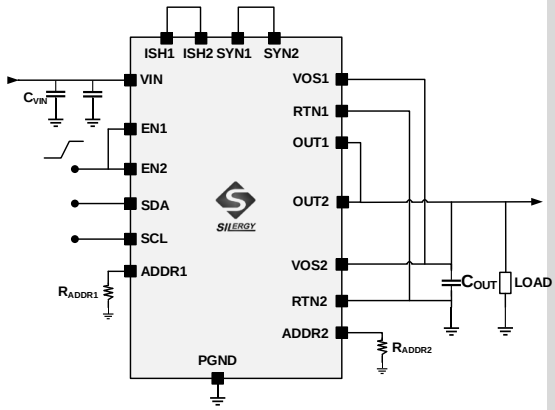
SQ76040– 5V input, 40A Module

Features:

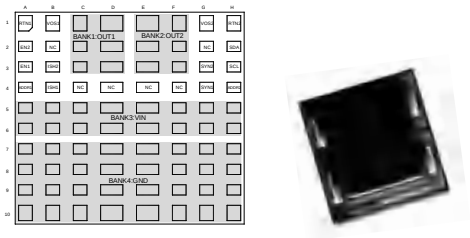
- ✓ 2.9V to 5.5V input voltage range
- ✓ 40A maximum output current capability
- ✓ I²C programmable output voltages from 0.34V to 1.23V
- ✓ Forced CCM mode
- ✓ OCP/SCP/UVP/UVLO/OTP protections
- ✓ Low output ripple & high efficiency with 2-phase Interleaved topology
- ✓ Package: MLGA6.2x6.7-80, Height: 2.9mm max

Efficiency@3.3V Input:





Typical Schematic



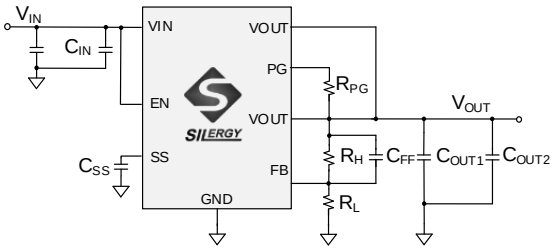
Package:MLGA6.2x6.7-80, Height: 2.9mm max

Back

SQ76103C3 – 18V input, 3A Module

Features:

- ✓ 4.7-18V input voltage range
- ✓ 0.8V to 5.4V adjustable output voltage
- ✓ 3A load current capability
- ✓ FCCM for small output voltage ripple
- ✓ External programmable soft-start time to limit the inrush current
- ✓ Compact Package: MQFN 2.8×3-8 (H: 1.5mm max)



Typical Schematic

Efficiency@3.3V Output:

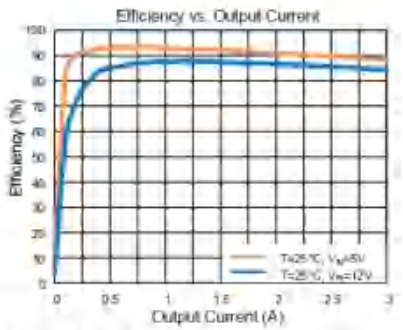
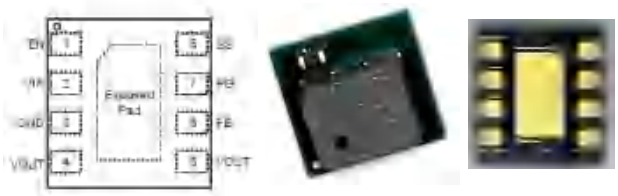


Figure 2. V_{OUT}=3.3V Efficiency vs. Output Current



Package:MQFN 2.8×3-8, Height: 1.5mm max

SQ76106B – 16V input, 6A Module

Features:

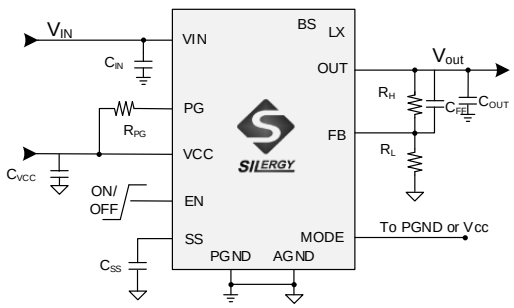
- ✓ 2.85V to 16V Input Voltage Range
- ✓ Output adjustable from 0.6V
- ✓ Output current:

  0.6V to3.3V: 6A

  Above 3.3V: 5A
- ✓ Smooth Pre-biases startup
- ✓ Selectable FCCM for low VOUT ripple and PFM

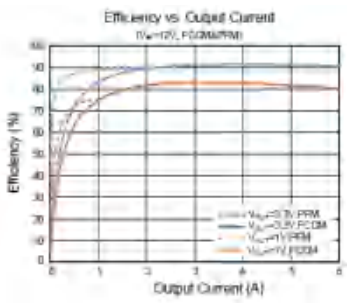
for high light load efficiency

- ✓ Compact Package:MQFN 3×3-19 (H: 1.7mm max)



Typical Schematic

Efficiency@3.3V Output:





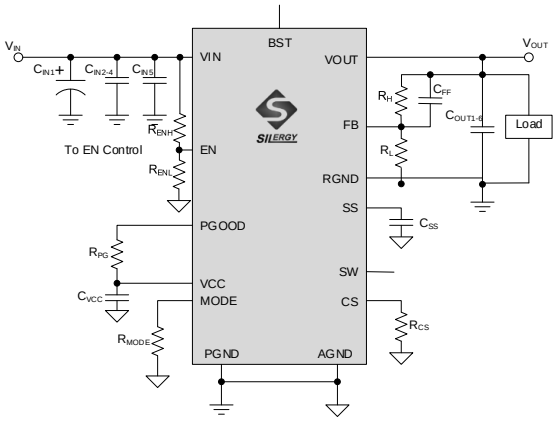
Package:MQFN 3×3-19, Height: 1.7mm max

Back

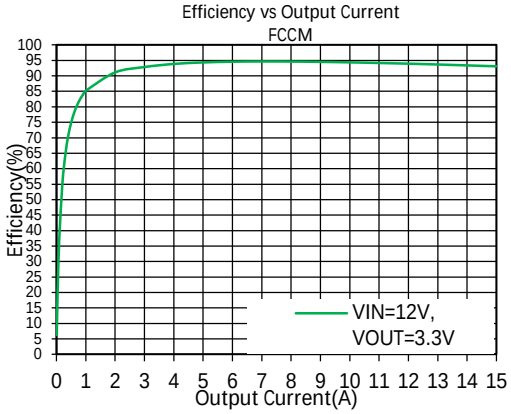
SQ76106C3 – 12V input, 15A Module

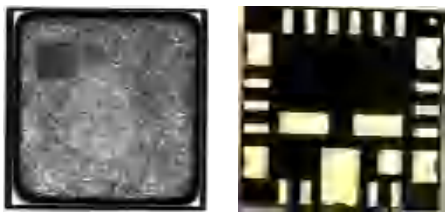
Features:

- ✓ 4.5~16V wide input voltage Range
- ✓ 15A continuous output current capability
- ✓ Adjustable Output Voltage Range: 0.6V to 6.5V
- ✓ Selectable Pulse-Skip Mode (PFM) or Forced Continuous Conduction Mode (FCCM)
- ✓ 600k/800k/1MHZ switching frequency selection
- ✓ Power good indicator
- ✓ OCP/UVP/UVLO/OTP
- ✓ Compact Package: MLGA7.1×7.1-29, Height=4.25mm max.



Efficiency@3.3V Output:



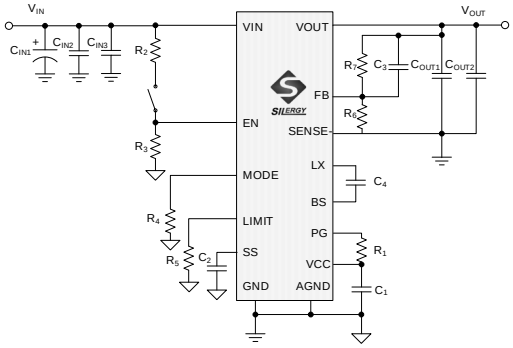


Package: MLGA7.1×7.1-29, Height: 4.25mm max

SQ76115B – 12V input, 15A Module

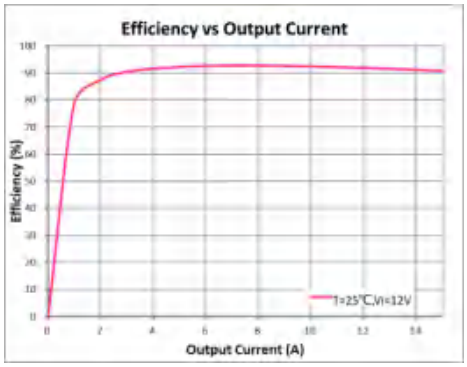
Features:

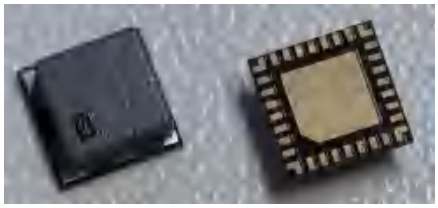
- ✓ 2.9~16V wide input voltage Range
- ✓ 15A continuous output current capability
- ✓ 600k/800k/1MHZ switching frequency selection
- ✓ High Reference Voltage Accuracy Over -40°C to 125°C
- ✓ Instant PWM architecture to achieve fast transient response
- ✓ Power good indicator
- ✓ OCP/UVP/UVLO/OTP
- ✓ Tiny MQFN5x5-32 package (H: 2.8mm max)



Typical Schematic

Efficiency@3.3V Output:





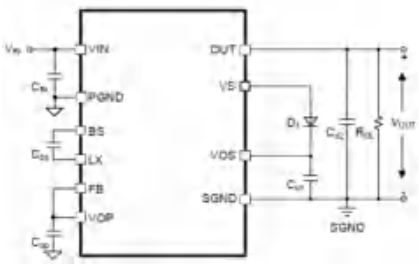
Package:MQFN5x5, Height: 2.8mm max

Back

SQ79002 – 5-14V input,1W Isolation Module

Features:

- ✓ 4.5~14V wide input, 5V/1W output
- ✓ 3000Vdc Isolation
- ✓ Input UVLO /OTP/OCP/SCP
- ✓ 1% typical Load regulation
- ✓ Tiny MQFN4*5.5-14 package (H: 4.05mm max)
- ✓ Recommended Ambient Temperature: -40 ℃ ~105 ℃

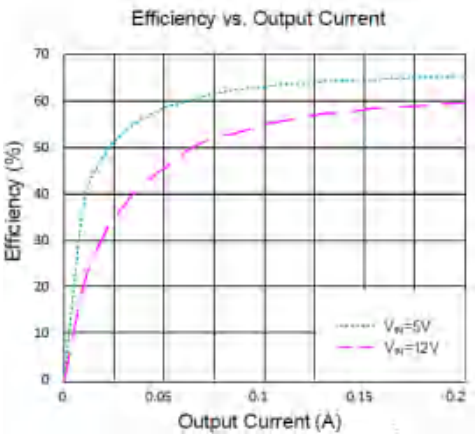


Typical Schematic

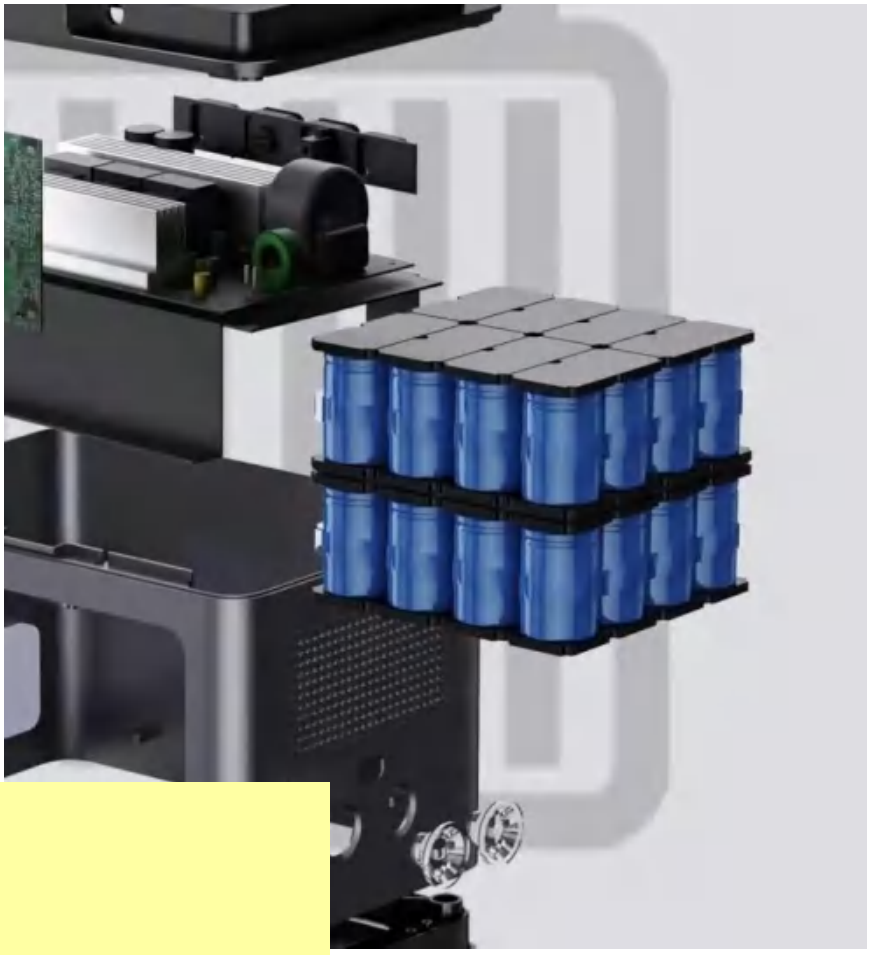


MQFN4x5.5-14, H: 4.05mm max

Efficiency:



Back



Battery Management

Switching Charger(Temp Range -40°C to 85°C)

Partnumber	Features	Package	V_{IN}(V)	Max. Charge Current (A)	F_{SW} (MHz)	Series Cells	Cell Voltage	Special Function	Temp Range
SQ64974BQCQ	Single Cell Li-Ion DC/DC Switching Charger	QFN4×4-24	3.9~13.5	3	1.5	Single Cell	3.856~4.624V, Step 32mV	NVDC Power Path Management, OTG, BC1.2 Compliance, USB Source Detection	-40°C to 85°C
SQ64971VKS	Single Cell Li-Ion/ Li-polymer DC/DC Switching Charger	CSP2.2×2.565 -30	3.8~14	2	1.5	Single Cell	4.0-4.5V, step 10mV	Extremley low Iq, NVDC power path management, OTG, dual-channel LDO	-40°C to 85°C
SQ64971BVKS	Single Cell Li-Ion/ Li-polymer DC/DC Switching Charger	CSP2.2×2.565 -30	3.8~14	2	1.5	Single Cell	4.0-4.5V, step 10mV	Extremley low Iq, NVDC power path management, OTG, dual-channel LDO	-40°C to 85°C
SQ67661QFQ	Multi-Cell Buck-Boost Battery Charger Controller	QFN4*4-32(WB)	3.5-25	8.128	0.8, 1.2	1~4	1.024V-19.2V, step 8mV	NVDC Power Path Management, High Accuracy for Voltage/Current Regulation, Accurate Power/Current Monitor, PROCHOT for CPU Throttling, OTG, Peak Power Mode	-40°C to 85°C

Switching Charger

Part Number	Function	Package	V_{IN} (V)	Max. Charge Current (A)	F_{SW} (MHz)	Series Cells	Cell Voltage	Special Function
SY6927FAC	Single-Cell High Efficiency Switching Charger	SO8	4~16	1.2	0.8	Single Cell	4.1V	Adaptive Input Current Limit
SY6927BFAC	Single-Cell High Efficiency Switching Charger	SO8	4~16	1.5	0.8	Single Cell	4.2V	Adaptive Input Current Limit
SY6923D1PPC	Single-Cell with USB-OTG	CSP1.93x2.05-20	4~6	1.25/1.55	3	Single Cell	3.5~4.44V	Compliance with USB and USB OTG
SY6952AQIC	Single-cell Charger Step Down Reg.	QFN4x4-16	4~23	2	0.8	Single Cell	4.2V,4.35V	Power Path Management and Adaptive Input Current Limit
SY6952CDCC	Single-cell Charger Step Down Reg.	DFN3x3-12	4~23	2	0.8	Single Cell	4.2V, 4.35V	Power Path Management and Adaptive Input Current Limit
SY6952BFCC	Single-cell Charger Step Down Reg.	SO8E	4~23	2	0.8	Single Cell	4.2V, 4.35V	Adaptive Input Current Limit
SY6952B1FCC	Single-cell Charger Step Down Reg.	SO8E	4~23	2	0.8	Single Cell	4.1V, 4.4V	Adaptive Input Current Limit
SY6918EQDC	Single-cell Battery Power Bank Charger	QFN3x3-16	4.7~5.5	2	0.5	Single Cell	4.25V, 4.4V	Prog. Current Limit, 2.5A Boost

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Switching Charger

Part Number	Function	Package	V_{IN} (V)	Max. Charge Current (A)	F_{SW} (MHz)	Series Cells	Cell Voltage	Special Function
SY6970DQCQ	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~14	5	1.5	Single Cell	3.84~4.608V, step 32mV	NVDC power path management, OTG, BC1.2 compliance, Default HVTYPE=9V
SY6971VKS	Single Cell Li-Ion/ Li-polymer DC/DC Switching Charger	CSP 2.2×2.565 -30	3.8~14	2	1.5	Single Cell	4.0-4.5V, step 10mV	Extremley low Iq, NVDC power path management, OTG, dual-channel LDO
SY6935QDC	High Current Step-down Charger	QFN3x3-16	4~14	3.5	0.5	1-2 Cells	4.2V, 4.35V	Adaptive input current limit, Blocking FET integrated
SY6935BQDC	High Current Step-down Charger	QFN3x3-16	4~14	3.5	0.5	1-2 Cells	4.25V, 4.4V	Adaptive input current limit, Blocking FET integrated
SY6991QYC	Single-Cell Bi-directional Power Bank	QFN4x4-20	4~13.5	5	0.3, 0.5	Single Cell	4.1V,4.2V, 4.35V,4.4V	I^2C controlled, USB and Protocol IC Compliance, 20W Boost
SY6995QEQ	2 ports Single-Cell Bi-directional Power Bank	QFN5x5-32	4~13.5	8	0.26, 0.34, 0.42, 0.5	Single Cell	4.1V, 4.2V, 4.35V, 4.4V	Dual ports, Bi-direction for USB-C, I^2C, ADC, BC1.2, 28W Boost
SY6998QEQ	22.5W PD3.0 3IN1 Single Cell Power Bank	QFN5x5-32	4.6~13	5	Programmable	Single Cell	4.2V, 4.35V	USB Type-C DRP support, PD3.0,QC3.0/SCP compliance, Battery Fuel Gauge Indicator, 22.5W output power
SY6996VCC	3IN1 Single-Cell Bi-directional Power Bank	QFN5x5-34	4.6~13.2	5	Programmable	Single Cell	4.2V, 4.35V, 4.4V	QC3.0,AFC/FCP compliance, Battery Fuel Gauge Indicator
SY6990QCC	Single-Cell Bi-directional Power Bank	QFN4x4-24	4~13.5	5	0.5	Single Cell	4.1V,4.2V, 4.35V,4.4V	I^2C controlled, USB Compliance, 5V/3A&12V/1.2A Boost
SY6983QDC	3-cell Synchronous Boost Li-Ion Battery Charger	QFN3x3-16	3.6~12.8	1	0.5	3 Cells	4.2V, 4.35V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6981QDC	2-cell Synchronous Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	1.2	1	2 Cells	4.1V, 4.2V, 4.35V, 4.4V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6982NQDC	Two-Cell Boost Li-Ion Battery Charger With System Power Path Management	QFN3x3-16	3.6~5.5	1.5	1	2 Cells	8.4V	System Power Path Management; External Separated Control for Boost and BATFET
SY6982EQDC	2 cell Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	2	1	2 Cells	4.2V, 4.35V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6982E1QDC	2 cell Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	2	1	2 Cells	4.25V, 4.4V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6982FQDC	2 cell Boost Li-Ion Battery Charger	QFN3x3-16	3~5.5	2	1	2 Cells	4.2V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6984QDC	2-cell Boost Li-Ion Battery Charger	QFN3x3-16	3.6~ 5.5	2	1	2 Cells	4.2V, 4.35V	Prog. Charge Current&Timer, Cell Balance Control
SY6969CQFQ	Multi-Cell Synchronous Buck-Boost Battery Charger Controller	QFN4x4-32	3.5~25	8.128	0.8/1.2	1-4 Cells	1.024~19.2V	NVDC Power Path Management, DPM, OTG. Support 2.2uH inductor@800kHz
SY6961DQFQ	Multi-Cell Synchronous Buck-Boost Battery Charger Controller	QFN4x4-32	3.5~25	8.128	0.8/1.2	1-4 Cells	1.024~19.2V	NVDC Power Path Management, DPM, OTG

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Part Number	Function	Package	V_{IN} (V)	Max. Charge Current (A)	F_{SW} (MHz)	Series Cells	Cell Voltage	Special Function
SY6981BQDC	2-cell Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	2	1	2 Cells	4.1V,4.2V,4.25V,4.35V	Prog. Charge Current&Timer, Adaptive Input Current Limit
SY6986RAC	2-cell Boost Li-Ion Battery Charger	QFN3x3-20	3.6~5.5	1.6	0.5	2 Cells	4.1V,4.2V, 4.35V	Prog.Charge Current&Timer, Cell Balance&Limit Control, NTC JEITA Compliance
SY7994QYC	Synchronous Boost converter with QC3.0	QFN4x4-20	2.7~4.5	/	0.3, 0.5	Single Cell	/	QC3.0 Compliance
SY6953QIC	2-4 cells Li-Ion synchronous Buck charger	QFN3x3-18	4~28	2	0.5	2-4 Cells	4.1V,4.2V,4.35V	Prog. Input Current Limit, Thermal Regulation, NTC JEITA Compliance
SY69410VWS	USB Type-C Port PD Controller	CSP1.29×1.25-9	3~5.5	/	/	/	/	Support TCPC, Support DFP/UFP/DRP, Support VCONN, Support PD3.0,Support VBUS Detect
SY6974GQCQ	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~13.5	3	1.5	Single Cell	3.8~4.61V, step 25mV	NVDC power path management, OTG, BC1.2 compliance
SY6971BVKS	Single Cell Li-Ion/ Li-polymer DC/DC Switching Charger	CSP 2.2×2.565 -30	3.8~14	2	1.5	Single Cell	4.0-4.5V, step 10mV	Extremley low Iq, NVDC power path management, OTG, dual-channel LDO
SY6971CVKS	Single Cell Li-Ion/ Li-polymer DC/DC Switching Charger	CSP 2.2×2.565 -30	3.8~14	2	1.5	Single Cell	4.0-4.55V, step 10mV	Extremley low Iq, NVDC power path management, OTG, dual-channel LDO
SY6973BQCQ	Single Cell Li-Ion DC-DC Switching Charger	QFN4*4-24(WB)	3.9~13.5	3	1.5	Single Cell	3.856V~4.624V, step 32mV	NVDC Power Path Management, OTG, BC1.2 Compliance, USB Source Detection
SY6975QCQ	Single Cell Li-Ion DC-DC Switching Charger	QFN4*4-24(RDL+WB)	3.9~14	5	1.5	Single Cell	3.84V~4.624V, step 16mV	NVDC Power Path Management, OTG, BC1.2 Compliance, USB Source Detection
SY6976WFS	Single Cell Li-Ion DC-DC Switching Charger with LED driver	CSP3.2*2.8-42	3.9~14	4	0.5, 1, 1.5, 2	Single Cell	3.84V~4.856V, step 8mV	NVDC Power Path Management,OTG,USB Source Detection, Charging Protocol, 2-channel 1.5A LED driver
SY6974GQCQ	Single Cell Li-Ion DC-DC Switching Charger	QFN4*4-24(RDL+WB)	3.9~13.5	3	1.5	Single Cell	3.8V~4.1V, step 25mV; 4.1V~4.61V, step 10mV;	th Management, OTG, BC1.2 Compliance, USB Source Detection
SY6916AQAQ	SMBus Controlled 1-4 Cell Battery Charger Controller	QFN4*4-28(WB)(P0.40)	4.5~24	16.256	0.6, 0.8, 1	1~4	1.024V-19.2V, step 16mV	High Accuracy for Voltage/Current Regulation, Accurate Power/Current Monitor,PROCHOT for CPU Throttling,Energy Star Low Iq
SY6969FQFQ	Multi-Cell Synchronous Buck-Boost Battery Charger Controller	QFN4x4-32	3.5~25	8.128	0.8/1.2	1-4 Cells	1.024~19.2V	NVDC Power Path Management, DPM, OTG. Support 2.2uH & 1.5uH inductor@800kHz
SY6982QQDQ	Two-cells Boost Li-Ion Battery Charger	QFN3×3-16	3.6~5.5	2	1	2 Cells	8.38V/8.68V	Programmable Input Voltage Threshold for Adaptive Current Limit, Input Voltage UVLO and OVP, External Shutdown Function

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Switching Charger

Part Number	Function	Package	V_{IN} (V)	Max. Charge Current (A)	F_{SW} (MHz)	Series Cells	Cell Voltage	Special Function
SY6918CQDC	Single-Cell Bi-directional Power Bank	QFN3x3-16	4.5~5.35	2.5	0.5	Single Cell	4.2V, 4.35V	Prog. Current Limit, 2.5A Boost
SY6918GQDC	Single-cell Battery Power Bank Charger	QFN3x3-16	4.5~5.35	2.5	0.5	Single Cell	4.2V, 4.35V	Prog. Current Limit, 4.75V Boost
SY6907QCC	Single Cell NVDC Switching Charger	QFN4x4-24	3.9~6	2.5	1.5	Single Cell	3.5~4.4V	I^2C Control, USB OTG, Power Path Management
SY6924QDC	Multi-cell Charger Step Down Reg.	QFN3x3-16	4~14	2.5	0.5	1-2 Cells	4.2V, 4.35V	Adaptive input current limit, Blocking FET integrated
SY6924BQDC	Multi-cell Charger Step Down Reg.	QFN3x3-16	4~14	2.5	0.5	1-2 Cells	4.1V, 4.25V	Adaptive input current limit, Blocking FET integrated
SY6924CQDC	Multi-Cell Li-Ion Battery Charger	QFN3x3-16	4~13	2.5	0.5	1-2 Cells	4.1V, 4.2V	Adaptive Input Power Limit, Blocking FET integrated
SY6928TYC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-26	4.5~5.7	3	0.35	Single Cell	4.2V/4.35V/4.4V	dual output data port, adjustable battery level indication
SY6928BTYC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-26	4.5~5.7	3	0.35	Single Cell	4.2V,4.35V, 4.4V	dual output data port, adjustable battery level indication, 5% low power alarm
SY6974QCC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~13.5	3	1.5	Single Cell	3.856~4.624V, step 32mV	NVDC power path management, OTG
SY6974BQCC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~13.5	3	1.5	Single Cell	3.856~4.624V, step 32mV	NVDC power path management, OTG, BC1.2 compliance
SY6974CQCQ	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~13.5	3	1.5	Single Cell	3.856~4.624V, step 32mV	NVDC power path management, OTG, Default Input OVP 14V
SY6970BQCQ	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~14	5	1.5	Single Cell	3.84~4.608V, step 32mV	NVDC power path management, OTG, BC1.2 compliance, Default HVTYPE=12V
NEW SY6961GQFQ	Multi-Cell Synchronous Buck-Boost Battery Charger Controller	QFN4x4-32	3.5~28.5	8.128	0.8/1.2	1-4 Cells	1.024~19.2V	NVDC Power Path Management, DPM, OTG,PD3.0
NEW SY69410BQDQ	USB Type-C Port PD Controller	QFN3×3-16	3~5.5	/	/	/	/	Support TCPC, Support DFP/UFP/DRP, Support VCONN, Support PD3.0,Support VBUS Detect

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Fast Charge(Temp Range -40°C to 85°C)

Partnumber	Features	Package	V_{IN}(V)	Typical Output Current(A)	F_{SW}(MHz)	ADC	MOSFET Peak Current(A)	Protection	Temp Range
SQ64510UIC	High Efficiency Single Phase 2:1 Switched Capacitor Converter	CSP2.57×3.71-34	4.5~20	2	0.125~1	NO	14.5	OCP, OTP, OVP	-40°C to 85°C

Fast Charge

Part Number	Function	Package	ADC	V_{IN} (V)	Typical Output Current(A)	F_{SW} (kHz)	MOSFET Peak Current(A)	Support Protocol	Protection
SY6510UIC	High Efficiency Single Phase 2:1 Switched Capacitor Converter	CSP2.57x3.71-34	NO	4.5~20	2	125~1000	14.5	No	OCP, OTP,OVP
SY6537CVLS	8A dual phase switched capacitor battery charger with ADC	CSP3.03x3.34-56	Yes	3.5~12	8	250~1000	16	No	OCP, OVP, OTP, UCP, VDR

BMS

Part Number	Description	Package	V_{IN} (V)	Series Cells	Protection Mode
SY68920QEQ	3 to 6 Series Cell Battery Monitor, Balance, Protection for Li-ion and Phosphate Application	QFN5×5-32	30	3-6 Cells	OCD、SCD、OV、UV
SY68930QHQ	6 to 12 Series Cell Battery Monitor, Balance, Protection for Li-ion and Phosphate Application	QFN6×6-40	60	6-12Cells	OCD、SCD、OV、UV
SY68940RJQ	9 to 18 Series Cell Battery Monitor, Balance, Protection for Li-ion and Phosphate Application	QFN8×8-64	90	9-18Cells	OCD、SCD、OV、UV

Gauge IC

Part Number	Functions	Cell Chemistry	Package	Series Cells	Communication Interface	Operating Temperature Range (°C)	Special Functions
SY6410DFC	Cost-save Single Cell Li+ Battery Gauge IC	li-ion	DFN2×2-8	Single Cell	I^2C	-20 to 60	Eliminate Current Sense Resistor
SY62510SZD	Fully Integrated Single Cell Li+ Battery Gauge IC	Li-ion	DFN2.5×4-12	Single Cell	I2C	-40 to 85	1. Patented Gauge Algorithm 2. high accurate coulomb counter ADC 3. high accurate VADC

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Gauge IC

Part Number	Functions	Cell Chemistry	Package	Series Cells	Communication Interface	Operating Temperature Range (°C)	Special Functions
SY62520SZD	Fully Integrated 2 series Lithium-Ion/Li-Pol battery gauge with authentication.	Li-ion	DFN2.5×4-12	2	I2C	-40 to 85	1. Patented Gauge Algorithm 2. Accurate Low-Side Current Sense 3. high accurate VADC 4. Hardware protections SCD, SCC and OCD 5. High-Side N-CH FET Drivers 6. Integrated Cell Balancing MOSFETs
SY62540QFQ	Fully Integrated 2-4 Cell Series Lithium-ion/Li-Pol Battery Gauge	Li-ion	QFN 4x4-32	2-4	SMB, UART	-40 to 85	SPI port for external flash memory
NEW SY62510VXS	Fully Integrated Single Cell Li+ Battery Gauge IC	Li-ion	WLCSP-9 1.62 x 1.58	1	I2C	-40 to 85	1.Patented Gauge Algorithm 2. high accurate coulomb counter ADC 3. high accurate VADC
NEW SY62541QFQ	Fully Integrated 2-4 Cell Series Lithium-ion/Li-Pol Battery Gauge	Li-ion	QFN 4.0 x 4.0-32	2~4	UART/ SMBUS/I2C	-40 to 85	1. 3.3V LDO output 20ma with cap 2. Button Reset IC is supported 3. 16 bit I/V ADC for accurate voltage/current/temp measurement 4. ECC-256 for Encryption requirements 5. Large flash memory to support custom features 6. PD function is support for battery pack charging (TYPE C Interface) 7. Patented Gauge Algorithm

Back

SQ64974BQCQ

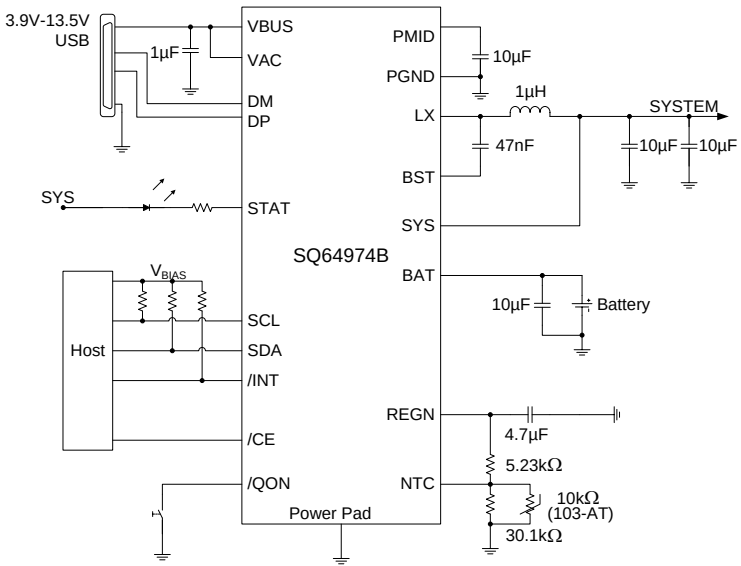
3A, Single Cell Li-Ion DC/DC Switching Charger with I²C Control, USB Detection and OTG JEITA Compliant, Power Path Management

Features

- High Efficiency 3A 1.5MHz Buck Mode Charger
  - Support 3.9V-13.5V Input Voltage Range
  - Programmable IDPM/VDPM to Support the USB and Adapter
  - 3.856V-4.624V Adjustable Charge Voltage
  - Support Narrow VDC Power Path Management
  - JEITA Compliance
  - ±0.5% Charge Voltage Regulation
  - Charge Status Outputs for LED or Host Processor
- Maximum 1.2A 1.5MHz Boost OTG Current
  - 4.85V-5.3V Adjustable OTG Output Voltage
  - Selectable OTG Output Current Limit
  - ± 1.5% Output Regulation in Boost Mode
  - Soft-Start up to 500µF Capacitive Load
  - Constant Current (CC) Limit
- Full BATFET Control to Support Shipping Mode,Wake up, and System Reset
- Safety
  - Battery Temperature Sensing for Charge and Boost Mode
  - Battery Charging Safety Timer
  - Thermal Regulation and Thermal Shutdown
  - Input/System over-Voltage Protection
  - MOSFET over-Current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



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SQ64971VKS/SQ64971BVKS

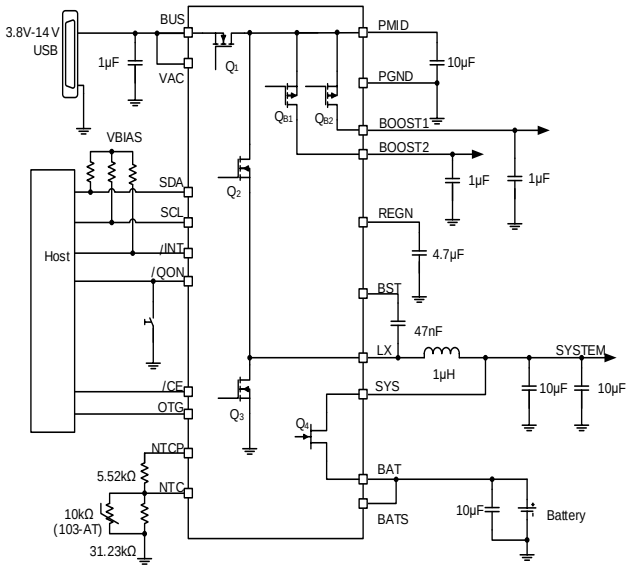
2A Switching Charger with Low Iq Power Path Management, OTG and LDO

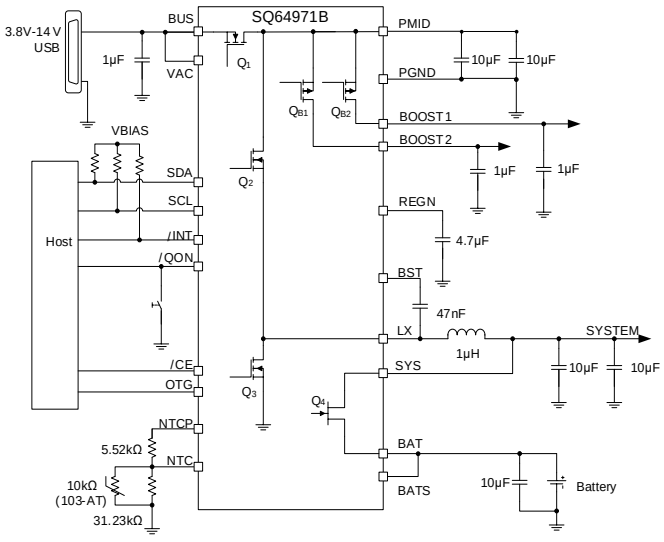
Features

- Extremely Low Battery Leakage Current and Support Shipping Mode
- High Efficiency 2A Buck Mode Charger
  - Support 3.8V-14V Input Voltage range
  - Programmable IDPM/VDPM to support the USB and adapter
  - 4.0V-4.5V Adjustable Charge Voltage
  - Support NVDC Power Path Management
  - JEITA Compliance
- Maximum 1.2A OTG Output Current
  - 4.5V-5.5V Adjustable Output Voltage
  - Selectable OTG Output Current Limit
- Maximum 350mA on BOOST1 and BOOST2 Channel(SQ64971)
  - 1.6V-6.0V Adjustable Output Voltage
  - Maxmium 200mA Current Limit in LDO Mode
  - Maxmium 350mA Current Limit in Full On Mode
- Maximum 550mA on BOOST1 and BOOST2 Channel(SQ64971B)
  - 1.6V-6.0V Adjustable Output Voltage
  - Maxmium 500mA Current Limit in LDO Mode
  - Maxmium 550mA Current Limit in Full On Mode
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 8A Battery Discharge Current
- Safety
  - Battery Temperature Sensing for Charge and Boost Mode
  - Battery Charging Safety Timer
  - Thermal Regulation and Thermal Shutdown
  - Input/System Over-Voltage Protection
  - MOSFET Over-Current Protection

Applications

- Earphone Charging Case
- Wearable accessories
- Single Cell Li-Ion Portable Device





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SQ67661QFQ

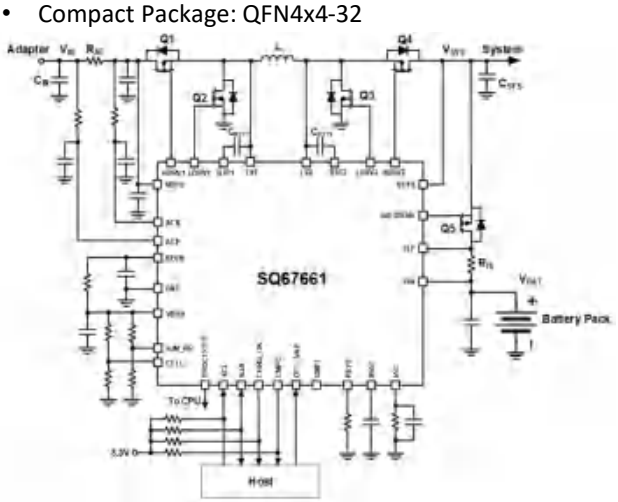
Multi-Cell Synchronous Buck-Boost Battery Charger Controller with NVDC Power Path Management

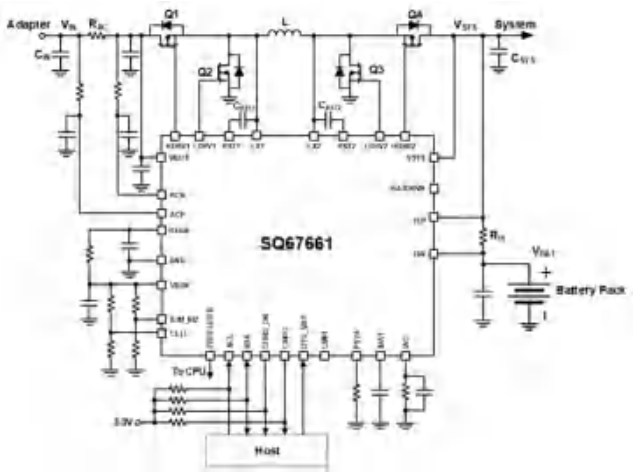
Features

- 3.5V to 25V Input Operating Voltage
- Charge 1s to 4s Battery from Wide Range of Input Source
- Drive Bi-Direction 4-switch Buck-Boost with Single Inductor
- 800kHz or 1.2MHz Programmable Switching Frequency
- I^2C Controls
  - ➢ Battery Charge Voltage (1.024V - 19.2V)
  - ➢ Minimum System Voltage (1.024V - 16.128V)
  - ➢ OTG Output Voltage (3V - 20.8V)
  - ➢ Battery Charge Current (64mA - 8.128A)
  - ➢ Input Voltage Limit for DPM (3.2V - 19.52V)
  - ➢ Input Current Limit for DPM (50mA - 6.4A)
  - ➢ OTG Output Current Limit (50mA - 6.35A)
- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM_HIZ Pin to Set Input Current Limit
- NVDC Power Path Management
  - ➢ Battery Supplements System when Adapter is Fully-Loaded
  - ➢ Battery MOSFET (BATFET) Ideal Diode Operation in Supplement Mode
- Pass Through Mode (PTM) for System Power Efficiency Improvement
- When System is Powered by Battery Only, Vmin Active Protection (VAP) Mode Supplements System from Input Capacitors during System Peak Power Spike
- Support Battery LEARN Function
- Adaptive Input Current Limit (AICL) to Extract Max Input Power
- Host Control Interface for Flexible System Configuration
- Integrated ADC to Monitor Voltage, Current and Power
- Thermal Shutdown Protection
- Input, System, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Compact Package: QFN4x4-32

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries



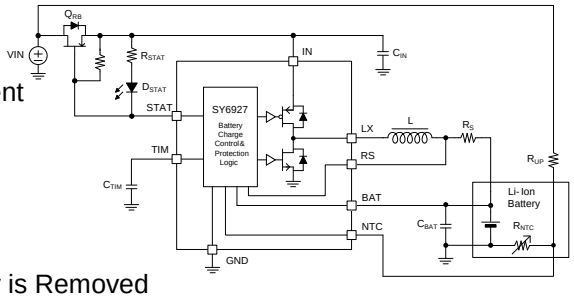


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SY6927FAC - 1.2A Single Cell High Efficiency Switching Charger

Features

- Wide Input Voltage Range: 4.0V to 16V
- High Efficiency Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current/Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Programmable Charging Timeout
- Programmable (1.2A MAX) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery is Removed
- Compact Package SO8



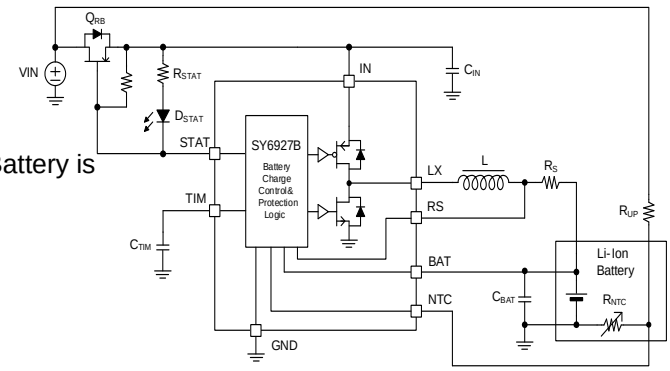
Applications

- Cellular Telephones
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players

SY6927BFAC - 1.5A Single Cell High Efficiency Switching Charger

Features

- Wide Input Voltage Range: 4.0V to 16V
- High Efficiency Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current/Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Programmable Charging Timeout
- Programmable (1.5A MAX) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery is Removed
- Compact Package SO8



Applications

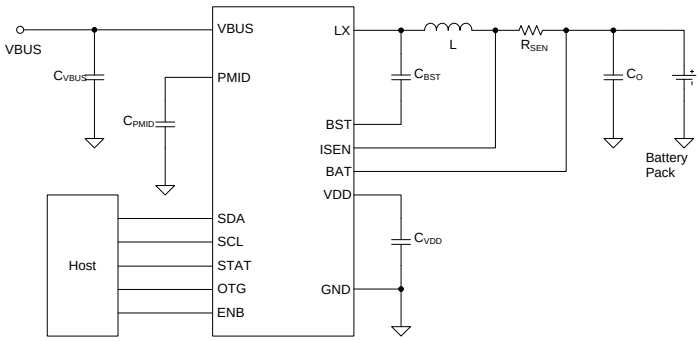
- Cellular Telephones
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players

Back

Features

- High Integrated and High Efficiency
- Up to 1.25A Charge Current (68mΩ RSENSE)
- Up to 1.55A Charge Current (55mΩ RSENSE)
- Up to 18V Absolute Maximum Input Voltage
- 6V Maximum Operating Input Voltage
- Adaptive Input Current Limit
- ±5% Input Current Limit Accuracy@500mA
- ±0.5% Charge Voltage Accuracy
- ±3.5% Charge Current Accuracy when ICHG Higher than 550mA
- I2C Controls(up to 3.4Mbps)

-- Battery Charge Voltage (3.5V – 4.44V)
-- Battery Charge Current (550mA – 1.25A)
-- Termination Current (50mA – 400mA)
-- Battery Weak Voltage (3.4V – 3.7V)
-- Input Current Limit
-- VBUS Threshold for Adaptive Input Current
-- Low Charge Current Mode Enable and Disable
-- Termination Enable and Disable



- Integrated Loop Compensation
- Internal Soft-start
- Bad adapter Detection and Rejection
- 3MHz Frequency PWM
- Automatic High Impedance Mode for Low Power Consumption
- 5V, Boost Mode for USB OTG
- CSP1.93×2.05-20 Package
- Spread Spectrum Frequency Control for Improved EMI Performance
- Factory Test-Mode for GSM Calibration Without a Battery

Applications

- PADs
- Smart Phones
- Portable Equipment with Rechargeable Batteries
- Battery Back-up Systems

Back

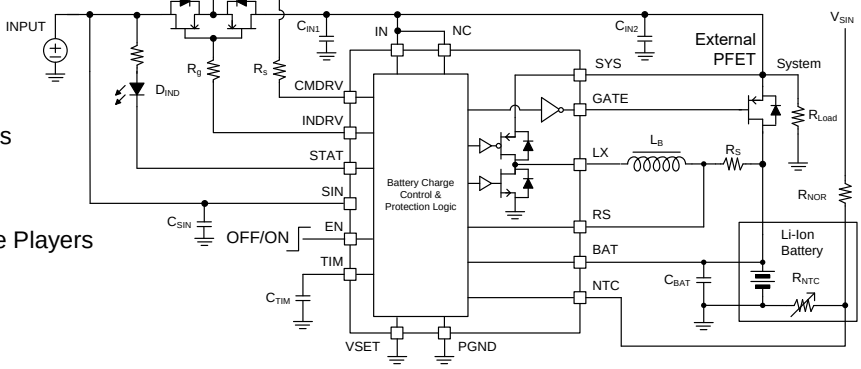
SY6952AQIC - 2A Single-Cell High Efficiency Switching Charger with Adaptive Input Current Limit

Features

- Wide Input Voltage Range: 4.0V to 23V
- High Efficiency Int. Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive input current limit
- Programmable Charging Timeout
- 4.35 and 4.2V selectable cell voltage
- Programmable (2A MAX) Constant Charge Current
- External Shutdown Function
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery Removed
- Compact package QFN4×4-16

Applications

- Cellular Telephones,
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



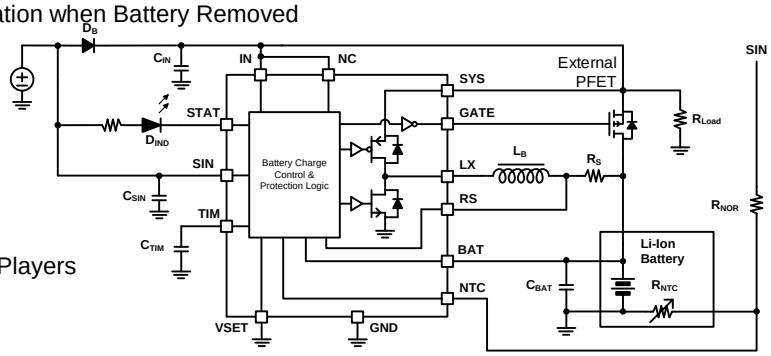
SY6952CDCC - 2A Single-Cell High Efficiency Switching Charger with Adaptive Input Current Limit

Features

- Wide Input Voltage Range: 4.0V to 23V
- High Efficiency Int. Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive input current limit
- Programmable Charging Timeout
- 4.35 and 4.2V selectable cell voltage
- Programmable (2A MAX) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery Removed
- Compact package DFN3*3-12

Applications

- Cellular Telephones,
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



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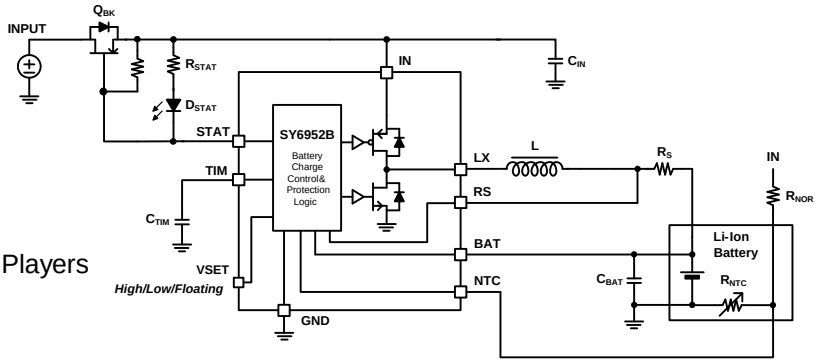
SY6952BFCC - 2A Single-Cell High Efficiency Switching Charger with Adaptive Input Current Limit

Features

- Wide Input Voltage Range: 4.0V to 23V
- High Efficiency Int. Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive input current limit
- Programmable Charging Timeout
- 4.35 and 4.2V selectable cell voltage
- Programmable (2A MAX) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery Removed
- Compact package SO8E

Applications

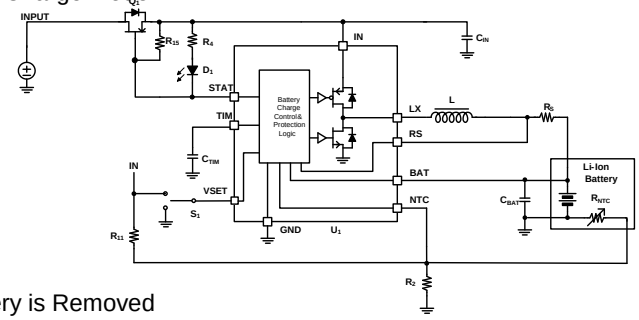
- Cellular Telephones,
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



SY6952B1FCC - 2A Single-Cell High Efficiency Switching Charger with Adaptive Input Current Limit

Features

- Wide Input Voltage Range: 4.0V to 23V
- High Efficiency Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Programmable Charging Timeout
- 4.4V and 4.1V Selectable Cell Voltage
- Programmable (2A Max) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation When the Battery is Removed
- Compact Package SO8E



Applications

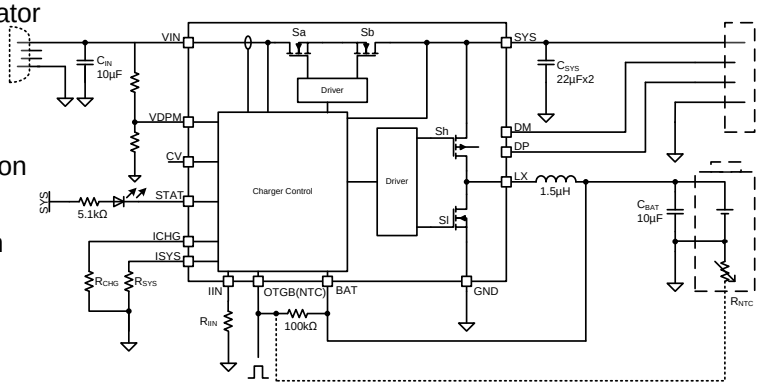
- Cellular Telephones
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook

Back

SY6918EQDC - High Efficiency Bi-direction Power Bank Regulator for Single-cell Battery Power Bank

Features

- Maximum 18V Input Voltage Surge
- Bad Adapter Detection
- Build in Power Path NFETs and Power Switches
- 500kHz Switching Frequency Operation
- Trickle Current / Constant Current / Constant Voltage Charge Mode with Internal Compensation
- Maximum 2A Constant Charge Current
- Maximum 2.5A Boost Output Current
- 4.25V/4.4V Selectable Battery Cell Voltage
- +/-0.5% Cell Voltage Accuracy
- Charge/Discharge/Fault Status Indicator
- Discharging Control Logic
- Programmable Input Current Limit
- Dynamic Power Management
- Cycle-by-cycle Peak Current Limitation
- Input Voltage UVLO and OVP
- Boost Output Short Circuit Protection
- Thermal Shutdown



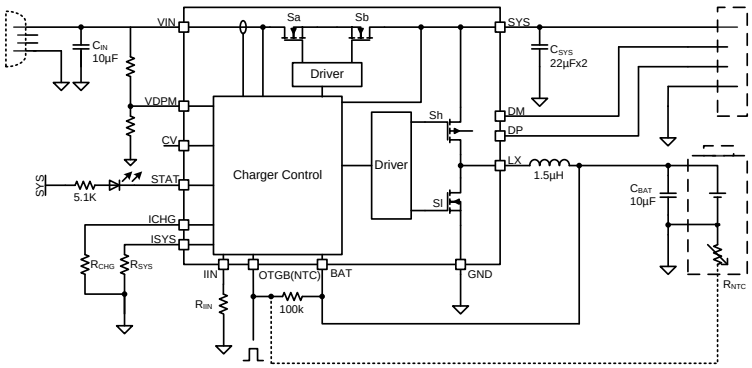
Applications

- Single Cell Power Bank
- Portable Device with Single Cell Battery

SY6918CQDC - High Efficiency Bi-direction Power Bank Regulator for Single-cell Battery Power Bank

Features

- Maximum 18V Input Voltage Surge
- Bad Adapter Detection
- Build in Power Path NFETs and Power Switches
- 500kHz Switching Frequency Operation
- Trickle Current / Constant Current / Constant Voltage Charge Mode with Internal Compensation
- Maximum 2A Constant Charge Current
- Maximum 2.5A Boost Output Current
- 4.2V/4.35V Selectable Battery Cell Voltage
- +/-0.5% Cell Voltage Accuracy
- Charge/Discharge/Fault Status Indicator
- Discharging Control Logic
- Programmable Input Current Limit
- Dynamic Power Management
- Cycle-by-cycle Peak Current Limitation
- Input Voltage UVLO and OVP
- Boost Output Short Circuit Protection
- Thermal Shutdown



Applications

- Single Cell Power Bank
- Portable Device with Single Cell Battery

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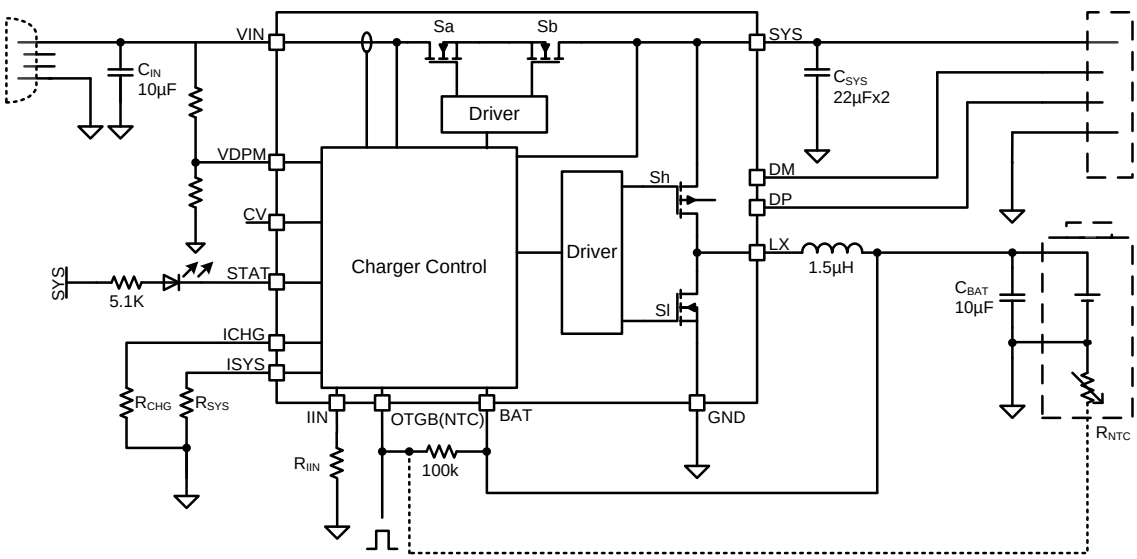
SY6918GQDC - High Efficiency Bi-direction Power Bank Regulator for Single-cell Battery Power Bank

Features

- Maximum 18V Input Voltage Surge
- Bad Adapter Detection
- Build in Power Path NFETs and Power Switches
- 500kHz Switching Frequency Operation
- Trickle Current / Constant Current / Constant Voltage Charge Mode with Internal Compensation
- Maximum 2A Constant Charge Current
- Maximum 2.5A Boost Output Current
- 4.2V/4.35V Selectable Battery Cell Voltage
- +/-0.5% Cell Voltage Accuracy
- Charge/Discharge/Fault Status Indicator
- Discharging Control Logic
- Programmable Input Current Limit
- Dynamic Power Management
- Cycle-by-cycle Peak Current Limitation
- Input Voltage UVLO and OVP
- Boost Output Short Circuit Protection
- Thermal Shutdown

Applications

- Single Cell Power Bank
- Portable Device with Single Cell Battery



Back

SY6907QCC - 2.5A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB OTG, Power Path Management

Features

- Single Input USB-Compliant/Adapter Charger

– Input Voltage and Current Limit Supports USB2.0 and USB 3.0
– Input Current Limit: 100mA, 150mA, 500mA, 900mA, 1A, 1.5A, 2A and 3A

- 3.9V–6 V Input Operating Voltage Range
- USB OTG 5V at about 1A Synchronous Boost Converter Operation
- Narrow VDC (NVDC) Power Path Management
- 1.5MHz Switching Frequency for Low Profile Inductor
- Autonomous Battery Charging with or without Host Management
- High Accuracy

– ±1% Charge Voltage Regulation
– ±10% Fast Charge Current Regulation
– ± 2% Output Regulation in Boost Mode

- High Integration

– Power Path Management
– Synchronous Switching MOSFETs
– Integrated Current Sensing
– Bootstrap Diode
– Internal Loop Compensation

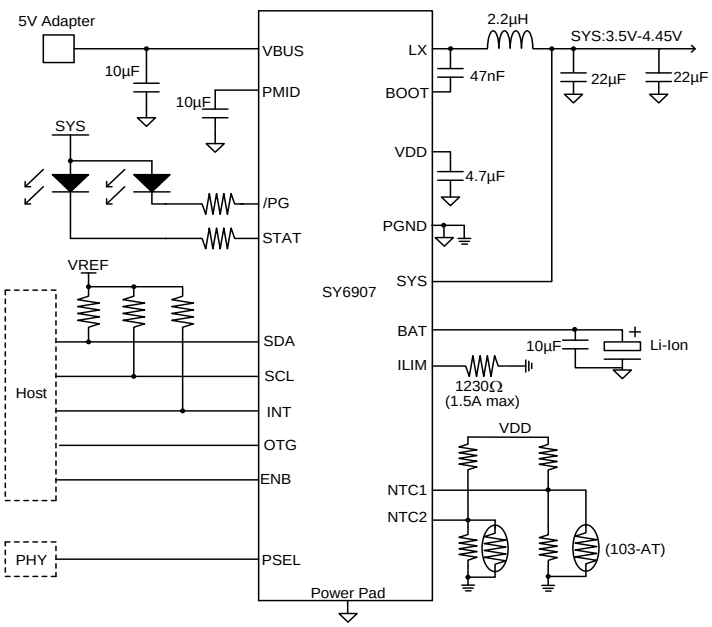
- Safety

– Battery Temperature Sensing and Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input System Over Voltage Protection
– MOSFET Over Current Protection
– Charge Status Outputs for LED or Host Processor

- Low Battery Leakage Current and Support Shipping Mode

Applications

- Tablet PC
- Smart Phone
- Portable Audio Speaker
- Portable Media Players
- Internet Device

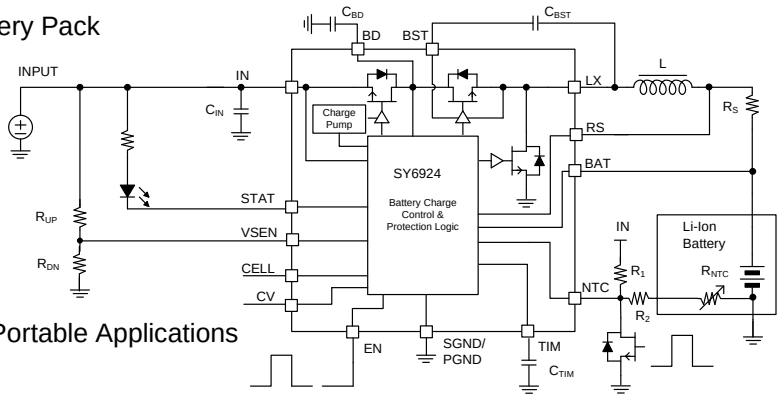


Back

SY6924QDC - High Efficiency, 2.5A, Multi-Cell Li-Ion Battery Charger

Features

- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-14V Wide Input Voltage
- Maximum 2.5A Programmable Charge Current
- 4.2V and 4.35V Constant Voltage Selectable
- +/-0.5% Cell Voltage Accuracy
- Support Single-cell or Two-cell Battery Pack
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-back Protection
- Over Temperature Protection
- Battery Short Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3×3 Package for Portable Applications



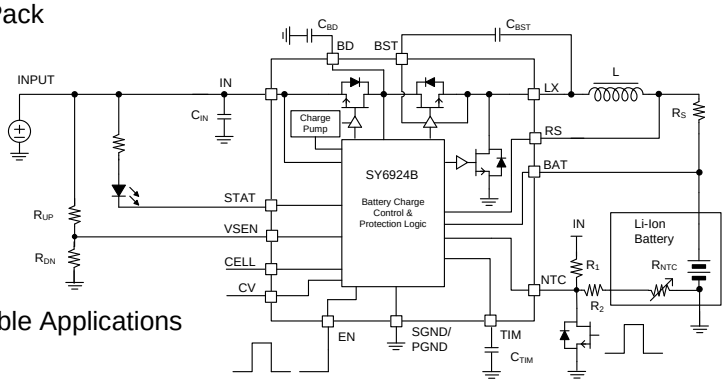
Applications

- Power Bank
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players
- Notebook

SY6924BQDC - High Efficiency, 2.5A, Multi-Cell Li-Ion Battery Charger

Features

- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-14V Wide Input Voltage
- Maximum 2.5A Programmable Charge Current
- 4.1V and 4.246V Constant Voltage Selectable
- Support Single-cell or Two-cell Battery Pack
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-back Protection
- Over Temperature Protection
- Battery Short Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3×3 Package for Portable Applications



Applications

- Power Bank
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players
- Notebook

Back

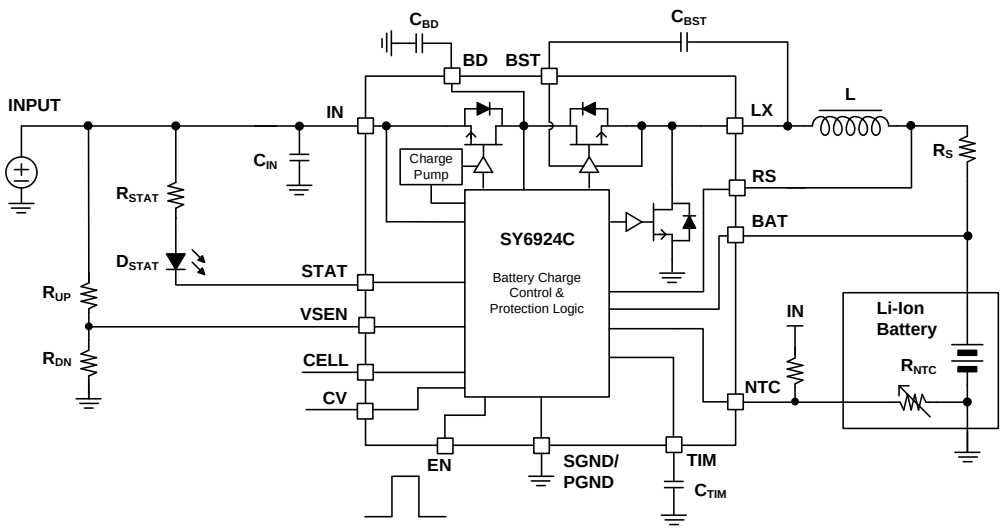
SY6924CQDC - High Efficiency, 2.5A, Multi-Cell Li-Ion Battery Charger

Features

- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-13V Wide Input Voltage
- Maximum 2.5A Programmable Charge Current
- 4.1V and 4.2V Constant Voltage Selectable
- +/-0.5% Cell Voltage Accuracy
- Support Single-cell or Two-cell Battery Pack
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-back Protection
- Over Temperature Protection
- Battery Short Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3×3 Package for Portable Applications

Applications

- Power Bank
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players



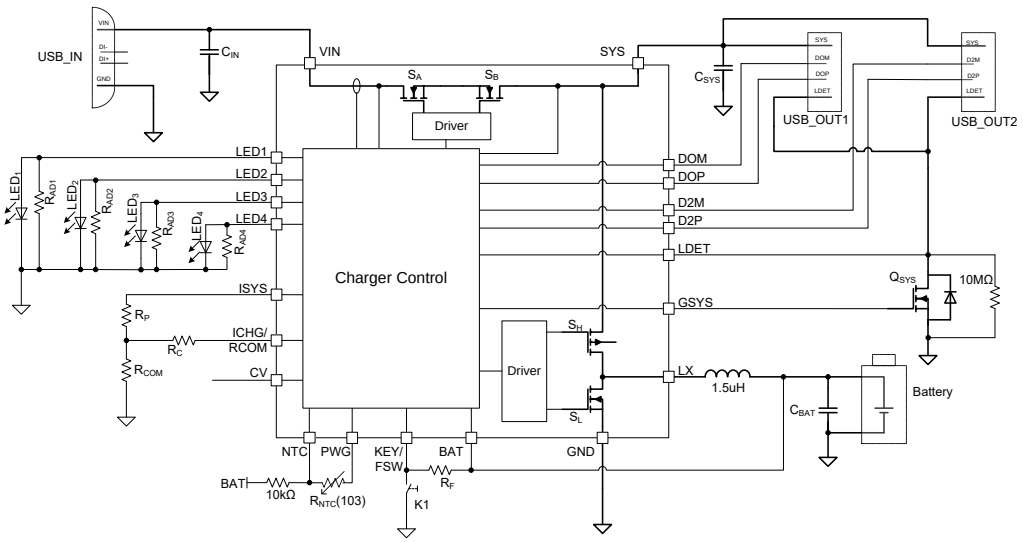
Back

Features

- Maximum 18V Input Voltage Rating
- Build in Low Rdson Power Path NFETs and Power Switches
- Programmable Boost Switching Frequency
- Maximum 3A Charge Current
- Maximum 3A Boost Output Current
- 4.2V/4.35V/4.4V Selectable Cell Voltage
- +/-0.5% Battery Cell Voltage Tolerance
- 4 LEDs Battery Level Indicator
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Input Voltage UVLO and OVP
- Output Divider Mode, DCP Mode Handshaking
- Boost Auto Start When Portable Device Inserts
- Boost Auto Shutdown with Light Load
- Boost Cycle-by-cycle Peak Current Limit
- Boost Programmable Output Current Limit Boost Output Short Circuit Protection
- Thermal Shutdown Protection
- Compact Package: QFN4×4-26

Applications

- Power Bank
- Portable Device with 1-Cell Battery



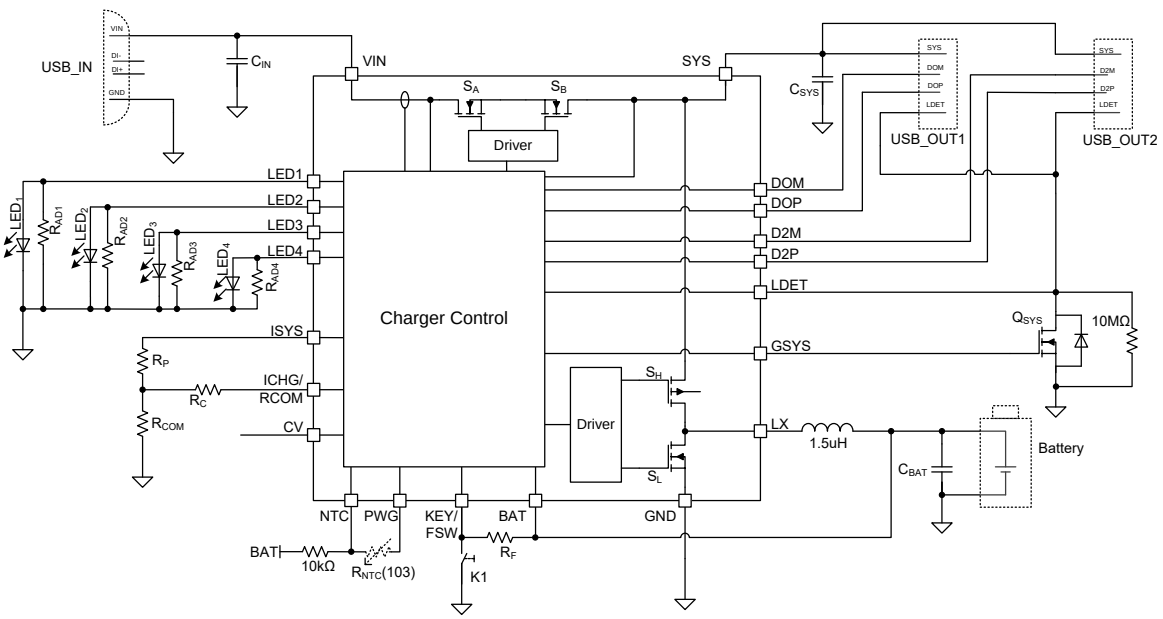
Back

Features

- Maximum 18V Input Voltage Rating
- Build in Low Rdson Power Path NFETs and Power Switches
- Programmable Boost Switching Frequency
- Maximum 3A Charge Current
- Maximum 3A Boost Output Current
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- Boost Auto Start When Portable Device Inserts
- Boost Auto Shutdown with Light Load
- Boost Cycle-by-cycle Peak Current Limit
- Boost Programmable Output Current Limit Boost Output Short Circuit Protection
- Thermal Shutdown Protection
- Compact Package: QFN4×4-26

Applications

- Power Bank
- Portable Device with 1-Cell Battery



Back

Features

- High Efficiency 3A 1.5MHz Buck Mode Charger

– Support 3.9V-13.5V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– 3.856V-4.624V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Charge Status Outputs for LED or Host Processor

- Maximum 1.2A 1.5MHz Boost OTG Current

– 4.85V-5.3V Adjustable OTG Output Voltage
– Selectable OTG Output Current Limit
– ± 1.5% Output Regulation in Boost Mode
– Soft-Start up to 500μF Capacitive Load
– Constant Current (CC) Limit

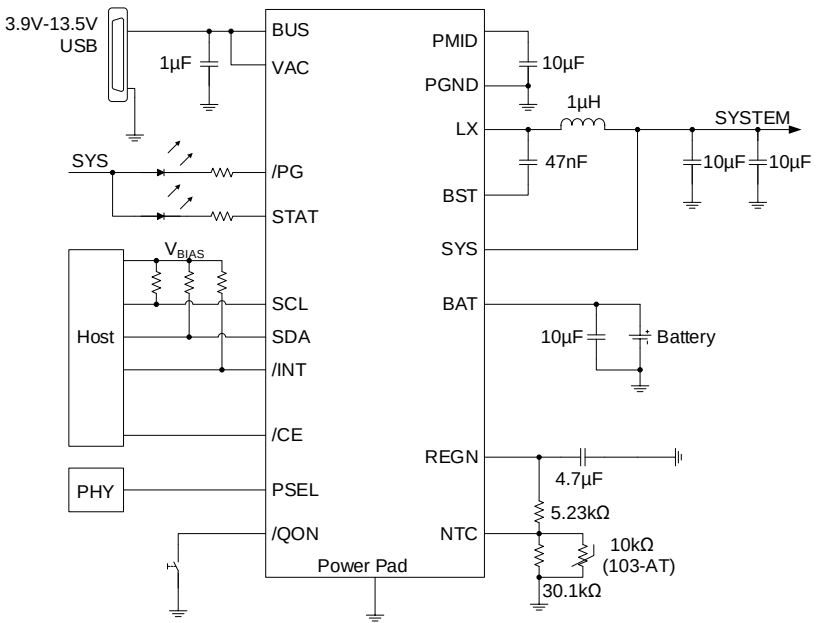
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System over-Voltage Protection
– MOSFET over-Current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Back

Features

- High Efficiency 3A 1.5MHz Buck Mode Charger

– Support 3.9V-13.5V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– 3.856V-4.624V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Charge Status Outputs for LED or Host Processor

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– Soft-Start up to 500µF Capacitive Load
– Constant Current (CC) Limit

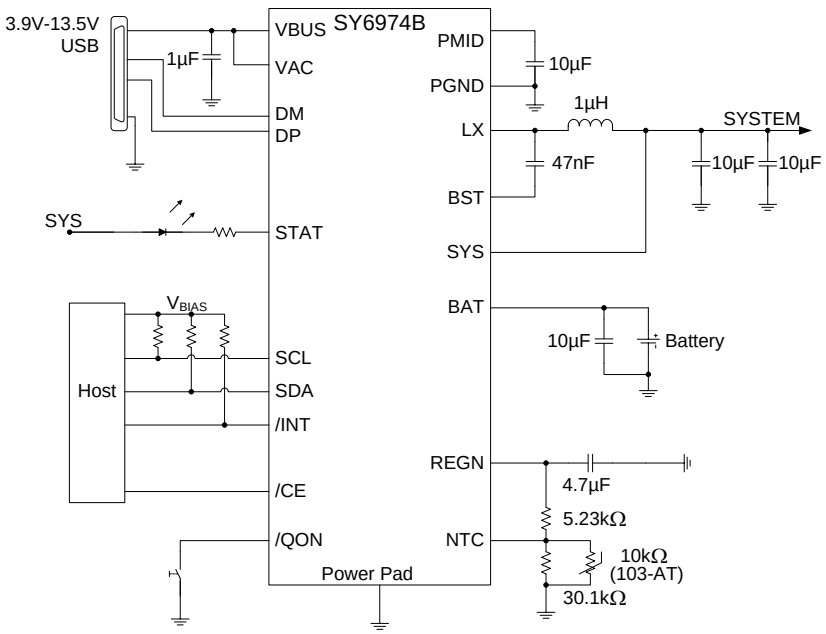
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System over-Voltage Protection
– MOSFET over-Current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Features

- High Efficiency 5A 1.5MHz Buck Mode Charger

– Support 3.9V-14V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– Support USB SDP/DCP/CDP and Non-Standard Adapter Detection
– 3.84-4.608V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Accelerate Charge Time by Battery Path Impedance Compensation
– Charge Status Outputs for LED or Host Processor

- Maximum 2.4A 500KHz/1.5MHz Boost OTG Current

– 4.55-5.51V Adjustable OTG Output Voltage
– Selectable OTG Output Current Limit
– Up to 2.4A OTG Current Limit on BUS
– ±1.5% Output Regulation in Boost Mode

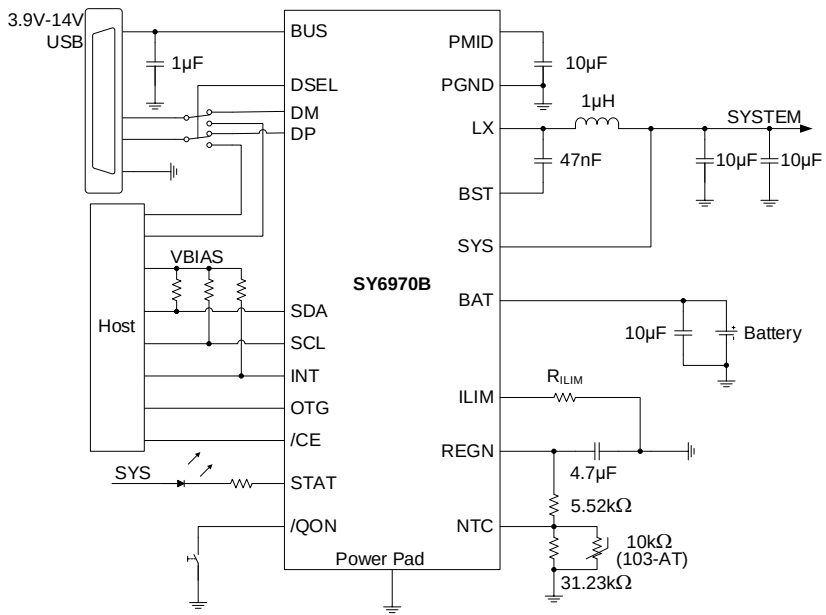
- Battery Monitor for Voltage, Temperature and Charge Current Measurements
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 9A Battery Discharge Current
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System Over-voltage Protection
– MOSFET Over-current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm × 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Back

Features

- High Efficiency 3A 1.5MHz Buck Mode Charger

– Support 3.9V-13.5V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– 3.856V-4.624V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Charge Status Outputs for LED or Host Processor

- Maximum 1.2A 1.5MHz Boost OTG Current

– 4.85V-5.3V Adjustable OTG Output Voltage
– Selectable OTG Output Current Limit
– ± 1.5% Output Regulation in Boost Mode
– Soft-Start up to 500μF Capacitive Load
– Constant Current (CC) Limit

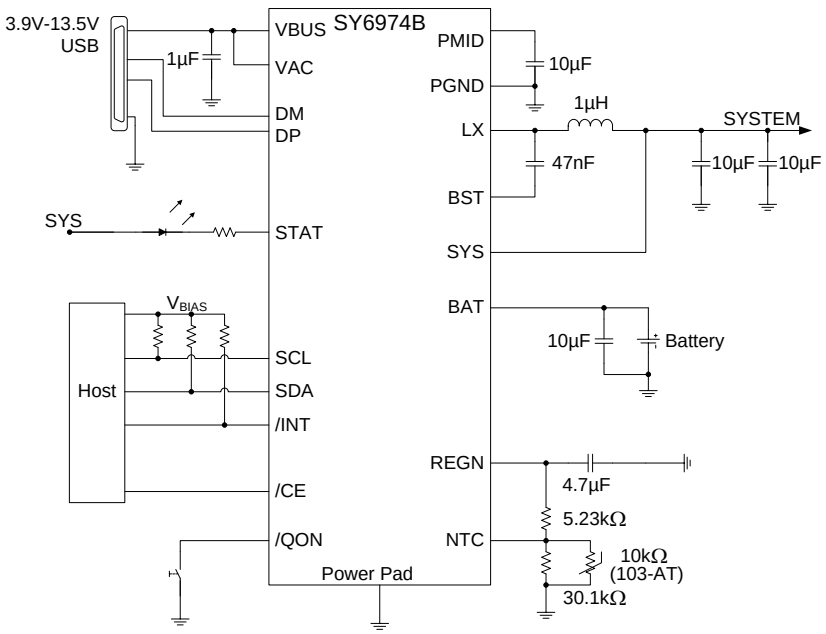
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System over-Voltage Protection
– MOSFET over-Current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Features

- High Efficiency 5A 1.5MHz Buck Mode Charger

– Support 3.9V-14V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– Support USB SDP/DCP/CDP and Non-Standard Adapter Detection
– 3.84-4.608V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Accelerate Charge Time by Battery Path Impedance Compensation
– Charge Status Outputs for LED or Host Processor

- Maximum 2.4A 500KHz/1.5MHz Boost OTG Current

– 4.55-5.51V Adjustable OTG Output Voltage
– Selectable OTG Output Current Limit
– Up to 2.4A OTG Current Limit on BUS
– ±1.5% Output Regulation in Boost Mode

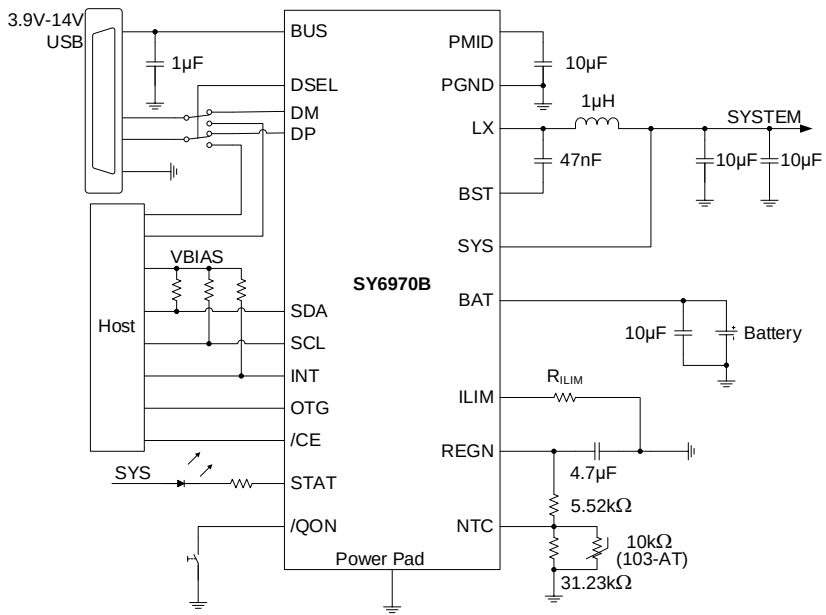
- Battery Monitor for Voltage, Temperature and Charge Current Measurements
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 9A Battery Discharge Current
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System Over-voltage Protection
– MOSFET Over-current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm × 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Back

Features

- High Efficiency 5A 1.5MHz Buck Mode Charger

– Support 3.9V-14V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– Support USB SDP/DCP/CDP and Non-Standard Adapter Detection
– 3.84-4.608V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
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– Selectable OTG Output Current Limit
– Up to 2.4A OTG Current Limit on BUS
– ±1.5% Output Regulation in Boost Mode

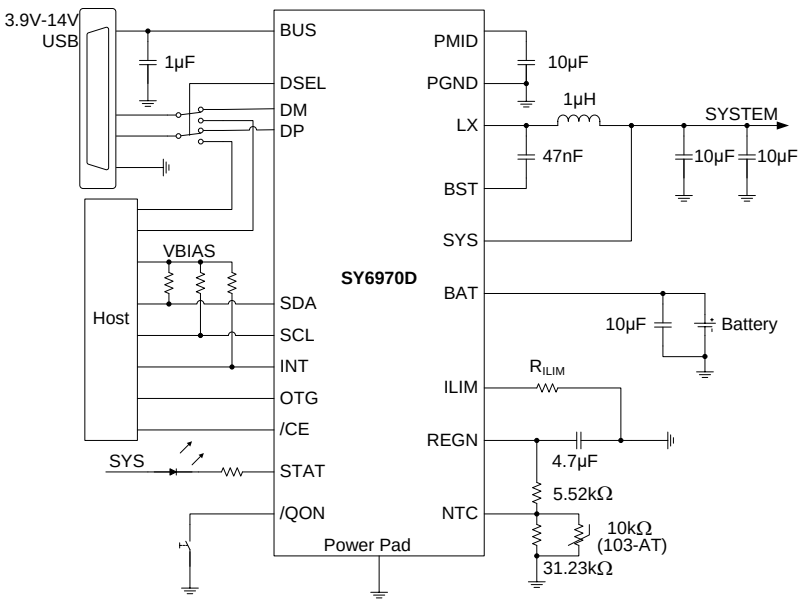
- Battery Monitor for Voltage, Temperature and Charge Current Measurements
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 9A Battery Discharge Current
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System Over-voltage Protection
– MOSFET Over-current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm × 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Back

Features

- Extremely Low Battery Leakage Current and Support Shipping Mode
- High Efficiency 2A Buck Mode Charger

- Support 3.8V-14V Input Voltage range
- Programmable IDPM/VDPM to support the USB and adapter
- 4.0V-4.5V Adjustable Charge Voltage
- Support NVDC Power Path Management
- JEITA Compliance

- Maximum 1.2A OTG Output Current

- 4.5V-5.5V Adjustable Output Voltage
- Selectable OTG Output Current Limit

- Maximum 350mA on BOOST1 and BOOST2 Channel

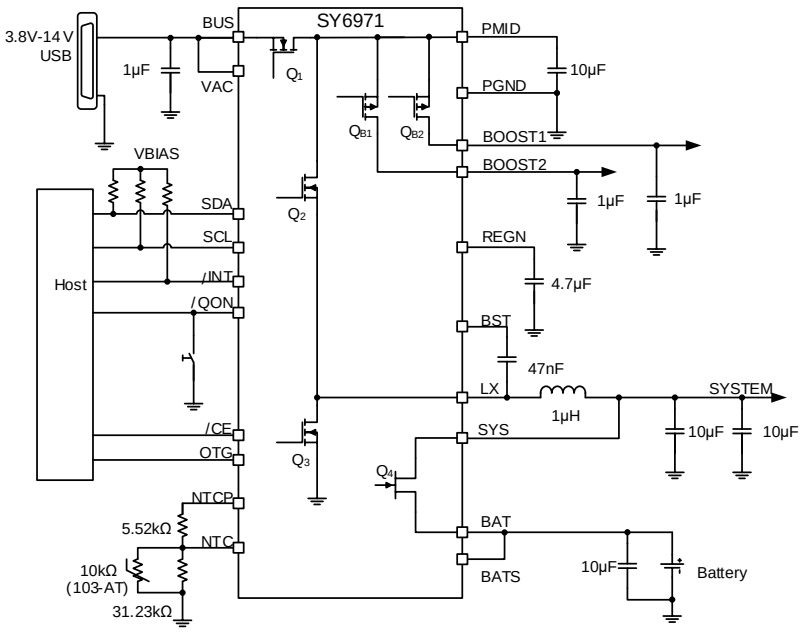
- 1.6V-6.0V Adjustable Output Voltage
- Maxmium 200mA Current Limit in LDO Mode
- Maxmium 350mA Current Limit in Full On Mode

- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 8A Battery Discharge Current
- Safety

- Battery Temperature Sensing for Charge and Boost Mode
- Battery Charging Safety Timer
- Thermal Regulation and Thermal Shutdown
- Input/System Over-Voltage Protection
- MOSFET Over-Current Protection

Applications

- Earphone Charging Case
- Wearable accessories
- Single Cell Li-Ion Portable Device

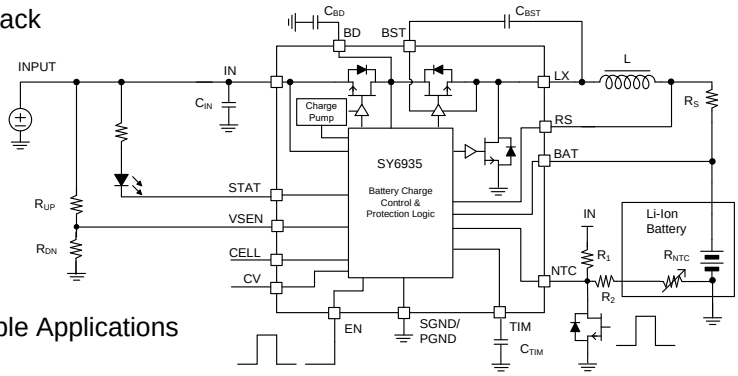


Back

SY6935QDC - High Efficiency, 3.5A, Multi-Cell Li-Ion Battery Charger

Features

- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-14V Wide Input Voltage
- Maximum 3.5A Programmable Charge Current
- 4.2V and 4.35V Constant Voltage Selectable
- +/-0.5% Cell Voltage Accuracy
- Support Single-cell or Two-cell Battery Pack
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-back Protection
- Over Temperature Protection
- Battery Short Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3×3 Package for Portable Applications



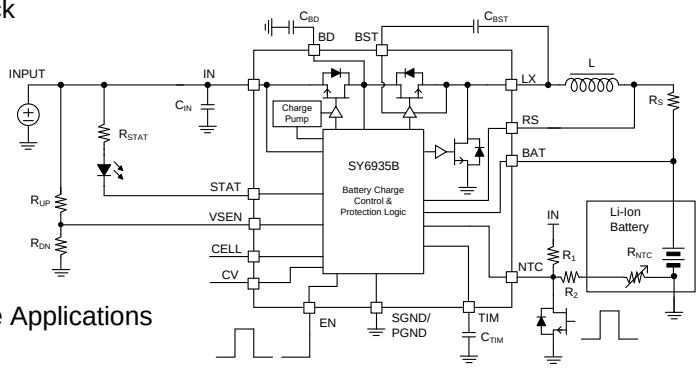
Applications

- Power Bank
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players
- Notebook

SY6935BQDC - High Efficiency, 3.5A, Multi-Cell Li-Ion Battery Charger

Features

- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-14V Wide Input Voltage
- Maximum 3.5A Programmable Charge Current
- 4.25V and 4.4V Constant Voltage Selectable
- +/-0.5% Cell Voltage Accuracy
- Support Single-cell or Two-cell Battery Pack
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-back Protection
- Over Temperature Protection
- Battery Short Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3×3 Package for Portable Applications



Applications

- Power Bank
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players

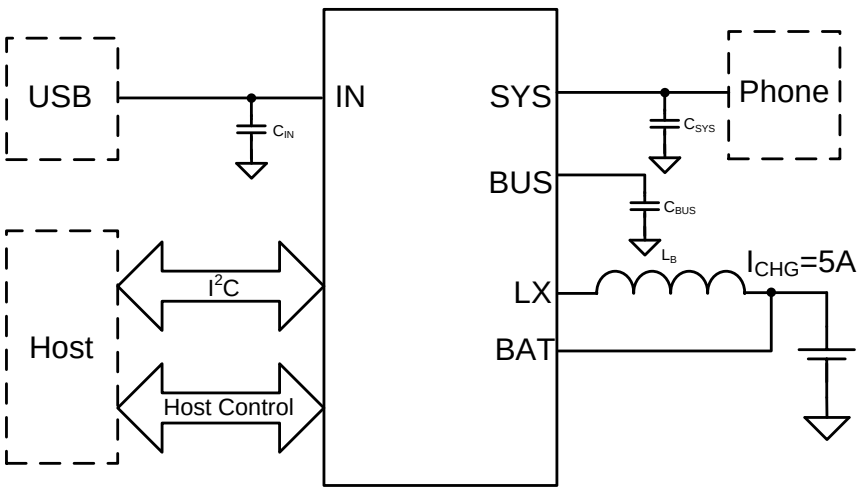
Back

Features

- Integrated N-Channel MOSFETs with 16V Voltage Rating and Extremely Low RDSON
- High Switching Frequency to Minimize Peripheral Circuit Design
- Trickle Current / Constant Current / Constant Voltage Charging Mode
- Maximum 5A Battery Charging Current
- Maximum 4.5A/5V or 2.25A/12V System Current in Battery Power Supply Mode
- USB Port Identifier for Various Input Current Limit
- Automatic Input Power Source Detection
- I2C controls
- Programmable Battery Charge Voltage
- Programmable Constant Current Charging
- Programmable Over Current Limit for SYS load
- Programmable Input Current DPM
- Programmable Input Voltage DPM
- Programmable Battery Charging Timeout
- Charging Shutdown Control
- Charging Mode CV Tolerance +/-0.5%
- DO+/DO- Divider Mode Compliant
- DO+/DO- QC3.0 Compliant
- OUTPUT MTK PE Compliant
- Host Enable Control for Standby Mode in Supply Mode
- Over Temperature Protection
- Battery UTP/OTP in Charging Mode and Supply Mode
- Charge Status Indication
- Light load Status Indication

Applications

- Single Cell Li-Ion Power Bank
- Portable Device with 1-cell Battery Pack



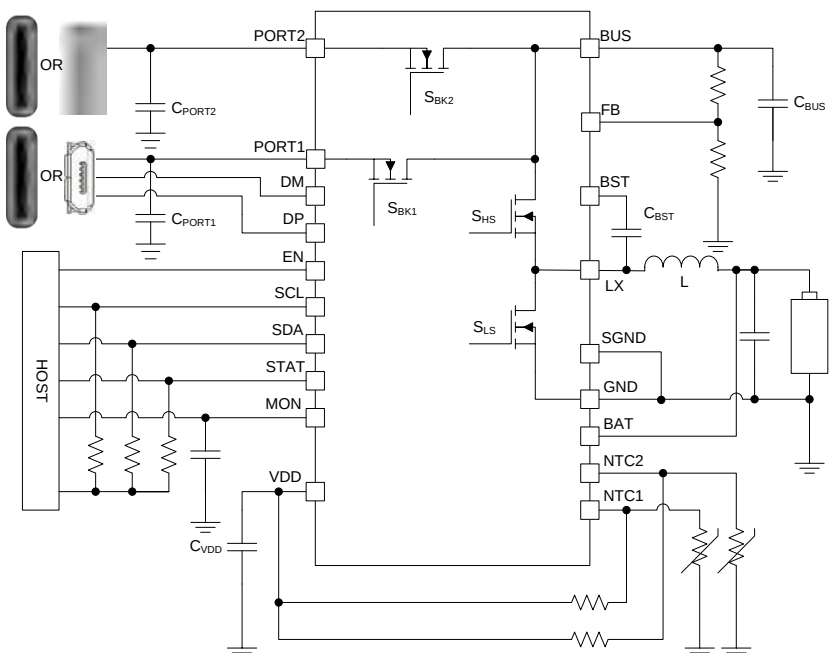
Back

Features

- Integrated N-Channel MOSFETs with 16V Voltage Rating and Extremely Low RDS(ON)
- High Switching Frequency to Minimize Peripheral Circuit Design
- Trickle Current / Constant Current / Constant Voltage Charging Mode
- Maximum 8A Battery Charging Current
- Maximum 28W OTG Output Power
- Automatic Input Power Source Detection
- USB Port Identifier for Various Input Current Limit
- I2C Controls
  - Programmable Battery Charge Voltage
  - Programmable Constant Charge Current
  - Programmable Input Voltage DPM
  - Programmable Input Current Limit and Output Current Limit
  - Programmable Bus Voltage for Discharging Mode
  - Programmable Battery Charging Timeout
- Charging Enable Control
- Charging Mode CV Tolerance +/-0.5%
- Host Enable Control for Standby Mode in Discharging Mode
- Battery UTP/OTP in Charging Mode and Discharging Mode
- Over Temperature Protection
- Light Load Status Indication
- Charge Status Indication
- Low Profile Package QFN5×5 for Portable Applications

Applications

- Single Cell Li-Ion Power Bank
- Portable Device with 1-Cell Battery Pack



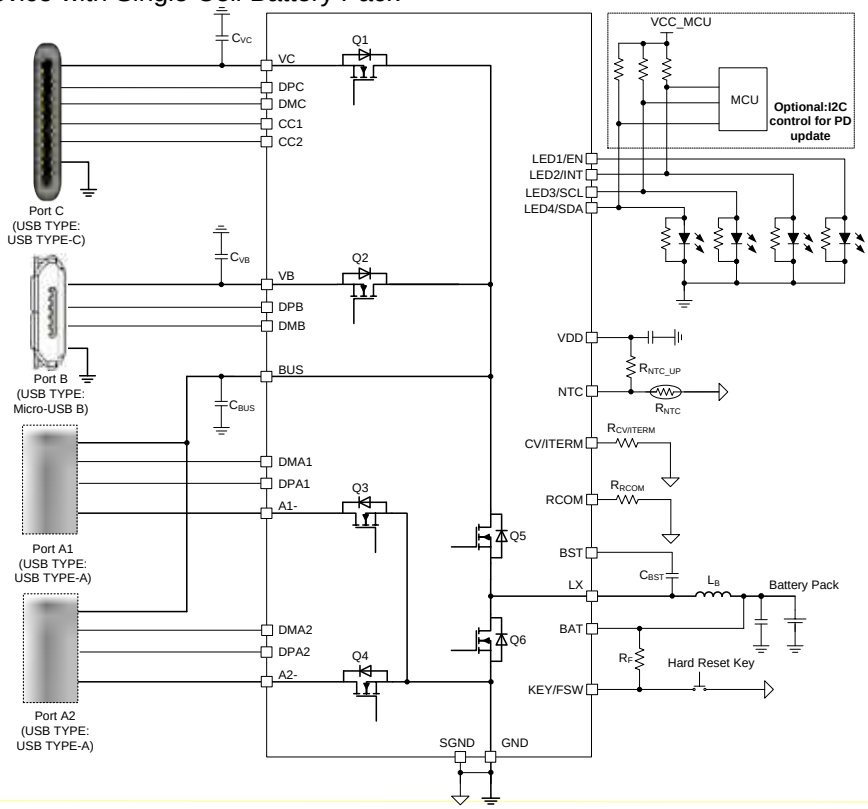
Back

Features

- Integrated 6 N-Channel MOSFETs with 18V Voltage Rating and Extremely Low RDS(ON)
- Maximum 5A Battery Charging Current
- Maximum 22.5W Output Power
- Trickle Current / Constant Current / Constant Voltage for Charging
- Programmable Constant Charge Voltage and Termination Current
- USB Port Identifier for Various Input Current Limit
- Programmable Battery Internal Resistor Compensation for Battery Fuel Gauge Indicator
- Up to 4 LEDs Battery Fuel Gauge Indicator with Programmable Threshold
- Support BC1.2 and PD3.0 for Input Ports
- Support Fast Charging Protocols PD3.0, QC3.0/2.0, SCP, FCP, AFC and Apple 2.4A for Output Ports
- Support Type-C DRP with Try.SRC
- Support TCPC Interface for the Update of PD Protocol
- Load Insert Detection
- Light Load Auto-Sleep
- Integrated Input OVP/UVP Protection
- Integrated Output OVP/OCP/SCP Protection
- Battery UTP/OTP/SCP/OVP Protection
- Thermal Shutdown Protection
- Max 100uA Quiescent Current in Sleep Mode

Applications

- Single Cell Li-Ion Power Bank
- Portable Device with Single Cell Battery Pack



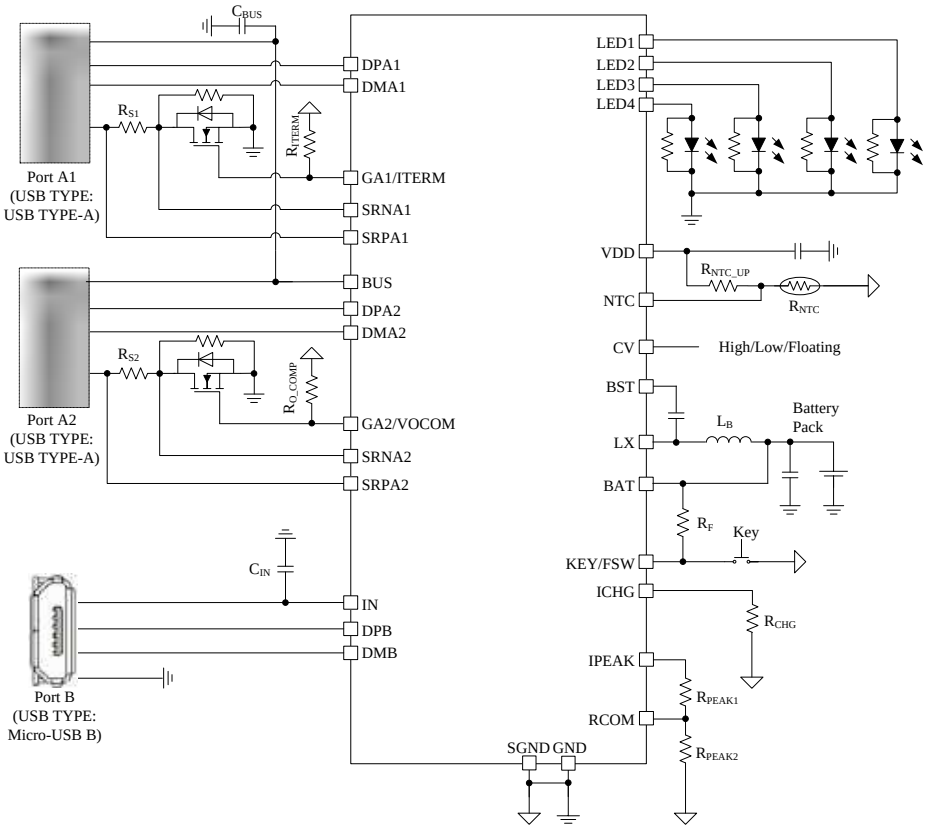
Back

Features

- Integrated N-Channel MOSFET with 18V Voltage Rating and Extremely Low RDS(ON)
- Maximum 5A Battery Charging Current
- Support BC1.2
- Adaptive Input Current Limit
- Trickle Current / Constant Current / Constant Voltage Charging Mode.
- Maximum 18W Output Power in Battery Discharging Mode
- Programmable Boost Peak Current Limit
- 200kHz-500kHz Programmable Boost Switching Frequency
- Programmable Battery Internal Resister Compensation
- Up to 4 LEDs Battery Fuel Gauge Indicator with Programmable Threshold
- Support Smart Phone Fast Charge Protocols QC3.0, FCP and AFC
- Load Insert Detection
- Light Load Auto-shutdown
- Battery UTP/OTP Protection
- Output OVP/SCP/OCP Protection
- Thermal Shutdown Protection
- Max 50μA Quiescent Current in Sleep Mode

Applications

- Single Cell Li-Ion Power Bank
- Portable Device with Single Cell Battery Pack



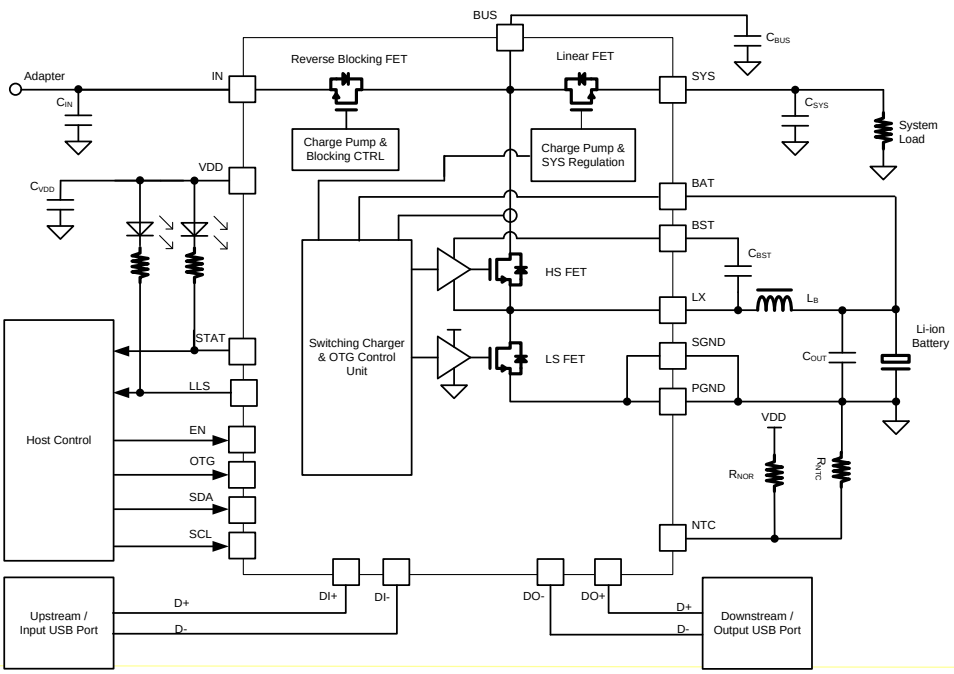
Back

Features

- Integrated N-channel MOSFETs with 16V Voltage Rating and Extremely Low RDS(ON)
- High Switching Frequency to Minimize Peripheral Circuit Design
- Trickle Current / Constant Current / Constant Voltage Charging Mode
- Maximum 5A Battery Charging Current
- Maximum 3A System Current in Battery Power Supplement Mode
- USB Port Identifier for Various Input Current Limit
- Automatic Input Power Source Detection
- I2C Controls
- Selectable Battery Charge Voltage
- Programmable Constant Charge Current
- Programmable Over Current Limit for SYS load
- Programmable Battery Charging Timeout
- Programmable Input Current DPM
- Programmable Input Voltage DPM
- Charging Shutdown Control
- Charging Mode CV Tolerance +/-0.5%
- DO+/DO- Divider Mode Compliant
- Host Enable Control for Standby Mode
- Over Temperature Protection
- Charge Status Indication
- Light load Status Indication
- Supply Power to System by Both the Adapter and the Battery in Supplement Mode

Applications

- Single Cell Li-ion Power Bank
- Portable Device with Single Cell Battery Pack



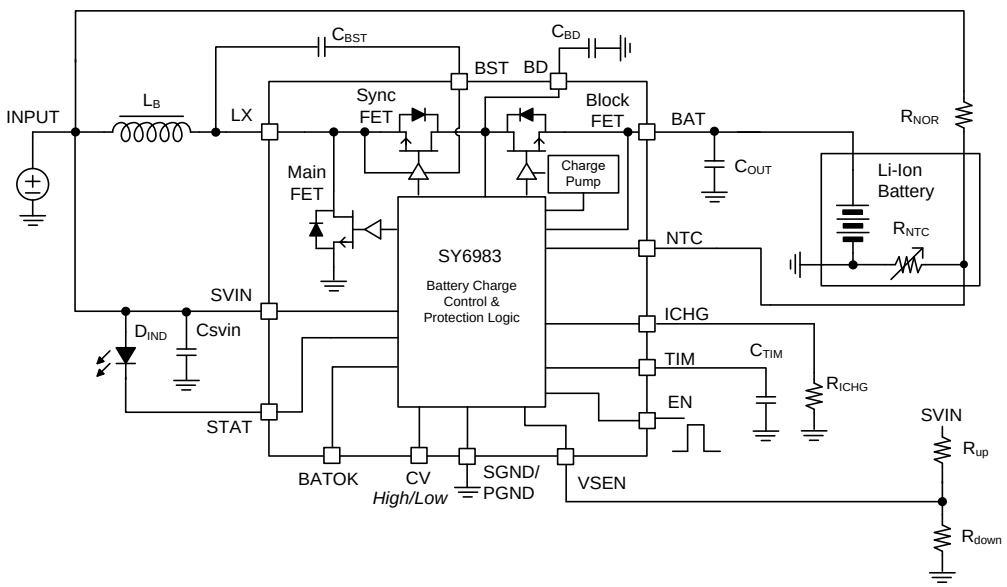
Back

Features

- Low Profile QFN3×3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit
- Maximum 1A Constant Charge Current
- Charge Current Information Indication
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- ±0.5% Battery Voltage Accuracy
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation when the Battery is Removed

Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



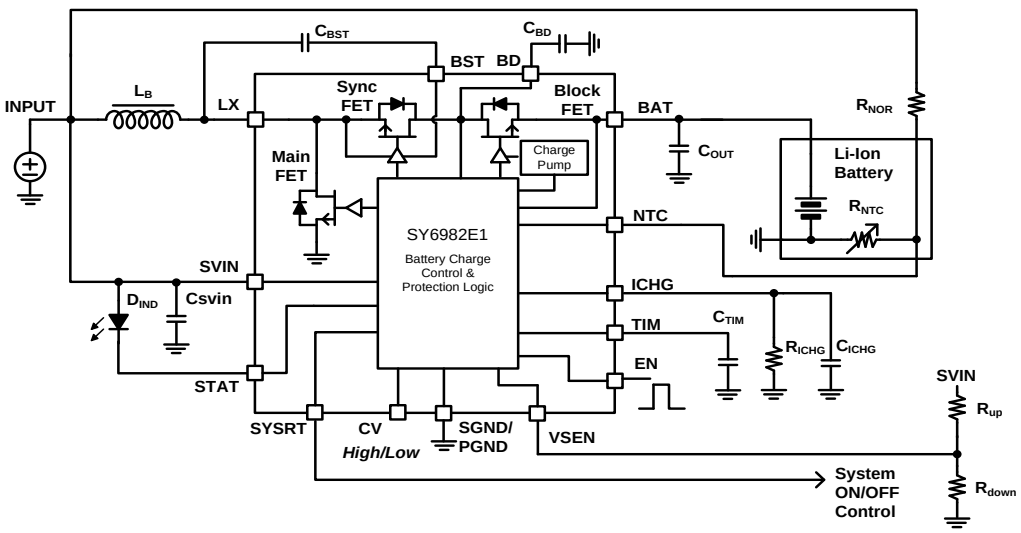
Back

Features

- Low Profile QFN3x3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- ±0.5% Battery Voltage Accuracy
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation When Battery Removed

Applications

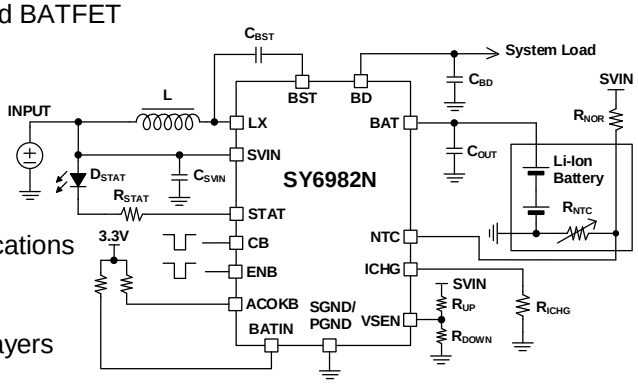
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



Back

SY6982NQDC - High Efficiency, 1.5A, Two-Cell Boost Li-Ion Battery Charger With System Power Path Management

- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Maximum 1.5A Constant Charge Current
- Programmable Constant Charge Current
- Programmable Input Voltage Threshold for Adaptive Current Limit
- ±0.5% Battery Voltage Accuracy
- Input Voltage UVLO and OVP
- External Separated Control Function for Boost and BATFET
- System Power Path Management Function
- Input and Battery Inserted Indication
- Charge Status Indication
- Thermal Fold-back Protection
- Over Temperature Protection
- Low Profile QFN3×3 Package for Portable Applications

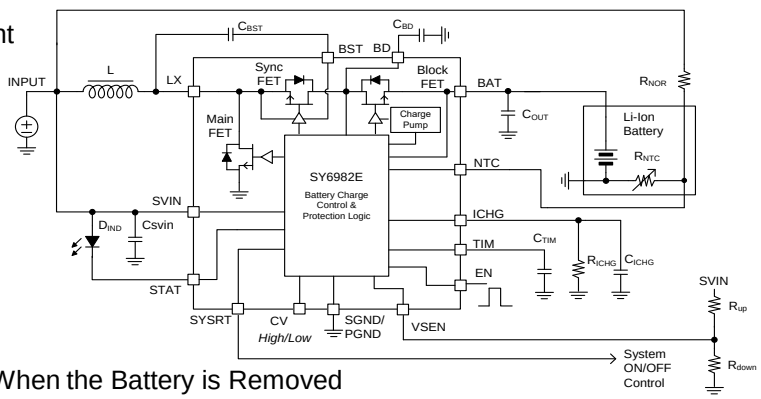


Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players

SY6982EQDC - High Efficiency, 2A, Two-cell Boost Li-Ion Battery Charger

- Low Profile QFN3×3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- ±0.5% Battery Voltage Accuracy
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation When the Battery is Removed



Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players

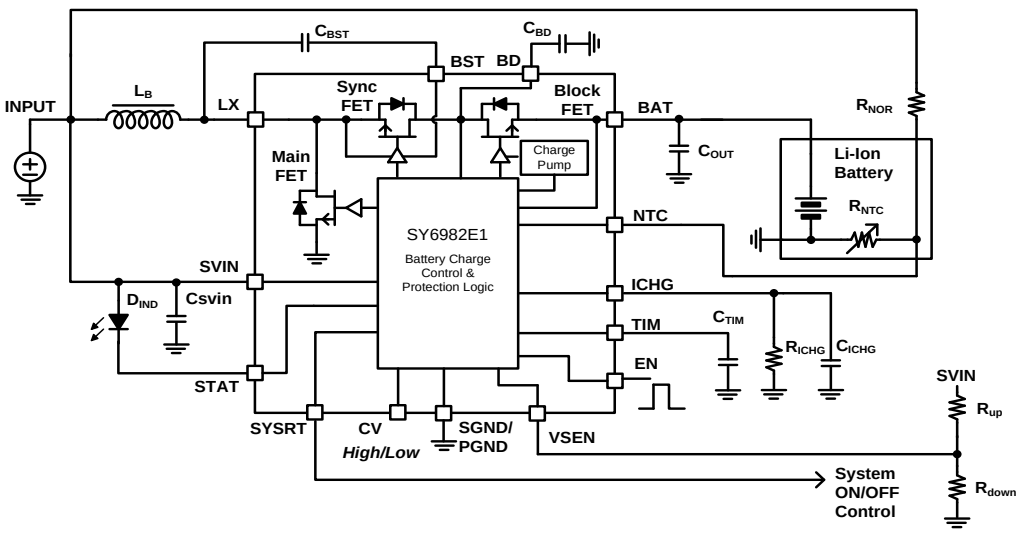
Back

Features

- Low Profile QFN3x3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- ±0.5% Battery Voltage Accuracy
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation When Battery Removed

Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



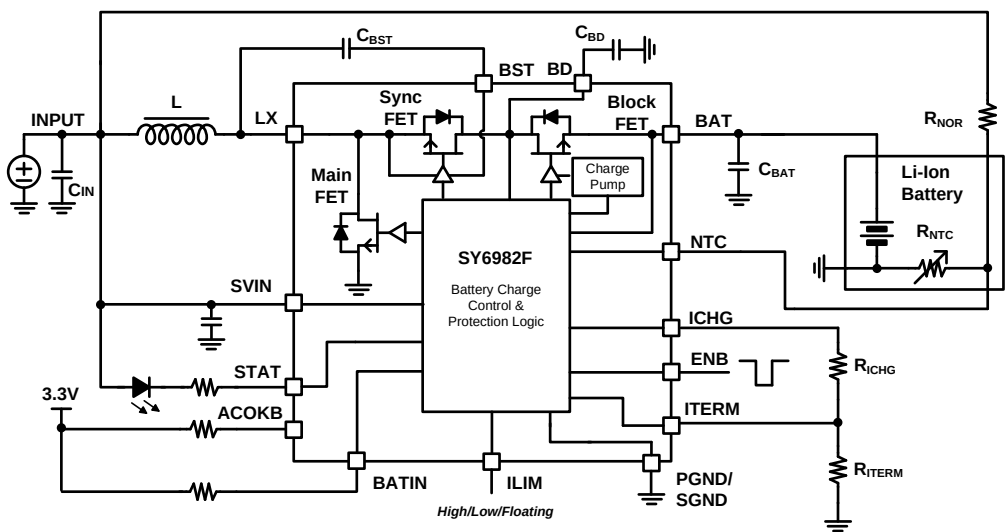
Back

Features

- Low Profile QFN3x3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive Input Current Limit with selectable threshold
- Maximum 2A Constant Charge Current
- Charge Current Information Indication
- Programmable Constant Charge Current
- Programmable Charge Termination Current
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Output Short Circuit Protection
- Over Temperature Protection
- Input Power Good Indication
- Battery Inserted Indication
- Charge Status Indication
- Normal Synchronous Boost Operation When Battery Removed

Applications

- POS, Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players



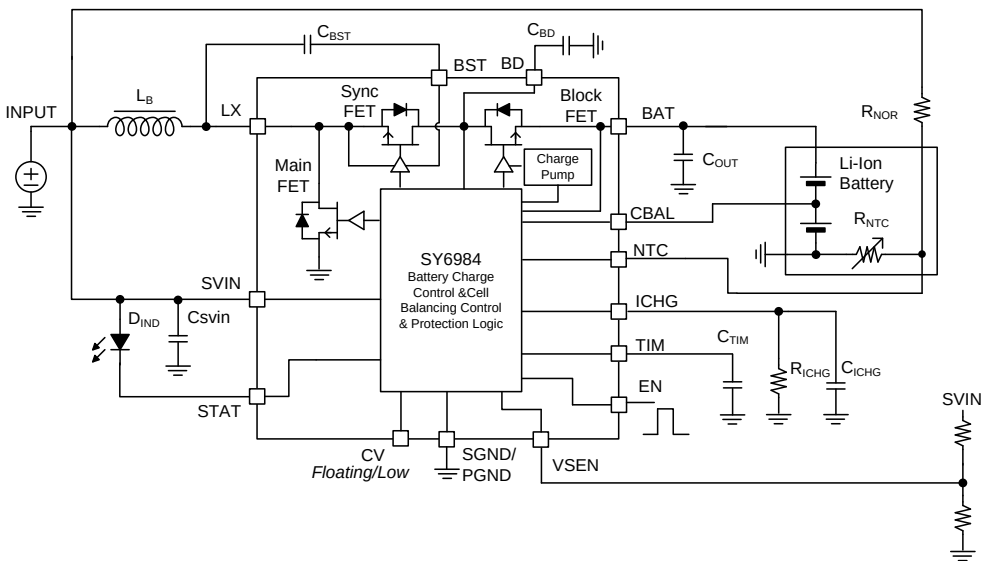
Back

Features

- Low Profile QFN3×3 Package for Portable Applications
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 2A Constant Charge Current
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- ±0.5% Battery Voltage Accuracy
- Cell Balance Control
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication

Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



Back

SY6969CQFQ - Multi-Cell Synchronous Buck-Boost Battery Charger Controller with NVDC Power Path Management

Features

- 3.5V to 25V Input Operating Voltage
- Charge 1s to 4s Battery from Wide Range of Input Source
- Drive Bi-Direction 4-switch Buck-Boost with Single Inductor
- 800kHz or 1.2MHz Programmable Switching Frequency
- SMBus Controls

-- Battery Charge Voltage (1.024V - 19.2V)
-- Minimum System Voltage (1.024V - 16.128V)
-- OTG Output Voltage (3V - 20.8V)
-- Battery Charge Current (64mA - 8.128A)
-- Input Voltage Limit for DPM (3.2V - 19.52V)
-- Input Current Limit for DPM (50mA - 6.4A)
-- OTG Output Current Limit (50mA - 6.35A)

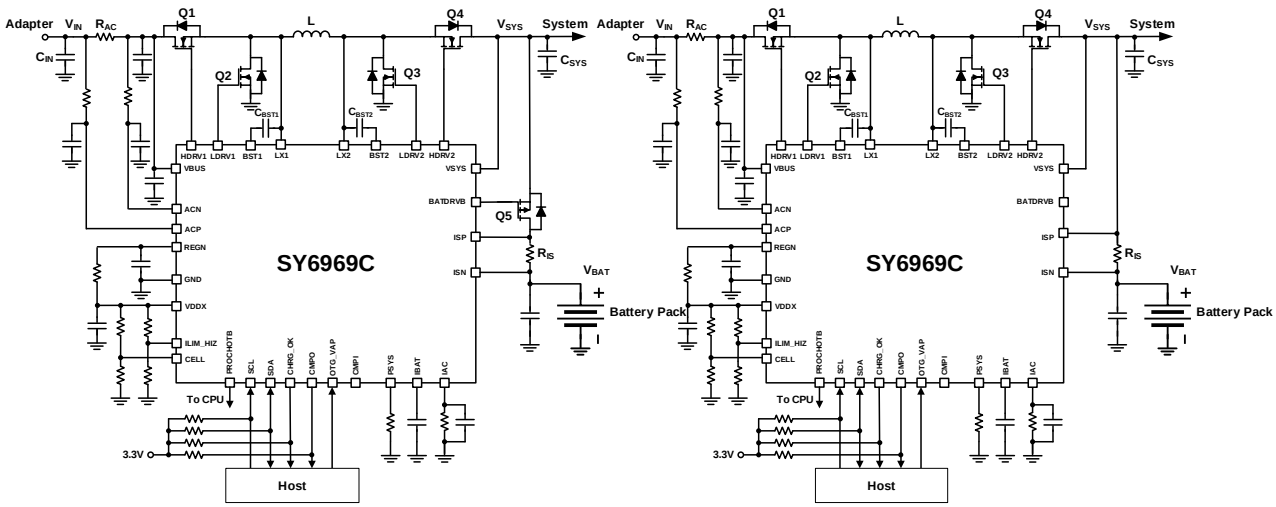
- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM_HIZ Pin to Set Input Current Limit
- NVDC Power Path Management

-- Battery Supplements System when Adapter is Fully-Loaded
-- Battery MOSFET (BATFET) Ideal Diode Operation in Supplement Mode

- Pass Through Mode (PTM) for System Power Efficiency Improvement
- When System is Powered by Battery Only, Vmin Active Protection (VAP) Mode Supplements System from Input Capacitors during System Peak Power Spike
- Support Battery LEARN Function
- Adaptive Input Current Limit (AICL) to Extract Max Input Power
- Host Control Interface for Flexible System Configuration
- Integrated ADC to Monitor Voltage, Current and Power
- Thermal Shutdown Protection
- Input, System, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Compact Package: QFN4x4-32

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries



Back

Features

- 3.5V to 25V Input Operating Voltage
- Charge 1s to 4s Battery from Wide Range of Input Source
- Drive Bi-Direction 4-switch Buck-Boost with Single Inductor
- 800kHz or 1.2MHz Programmable Switching Frequency
- I2C Controls

-- Battery Charge Voltage (1.024V - 19.2V)
-- Minimum System Voltage (1.024V - 16.128V)
-- OTG Output Voltage (3V - 20.8V)
-- Battery Charge Current (64mA - 8.128A)
-- Input Voltage Limit for DPM (3.2V - 19.52V)
-- Input Current Limit for DPM (50mA - 6.4A)
-- OTG Output Current Limit (50mA - 6.35A)

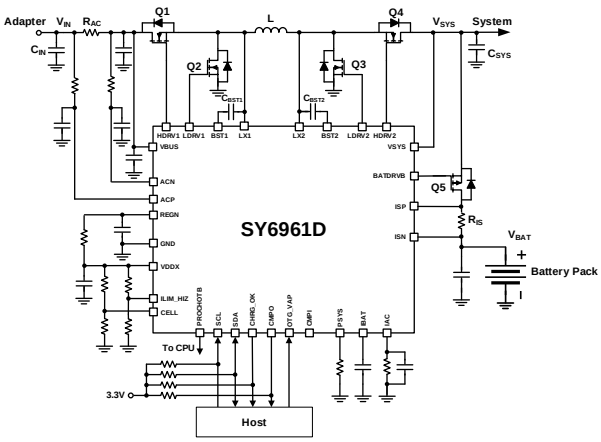
- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM_HIZ Pin to Set Input Current Limit
- NVDC Power Path Management

-- Battery Supplements System when Adapter is Fully-Loaded
-- Battery MOSFET (BATFET) Ideal Diode Operation in Supplement Mode

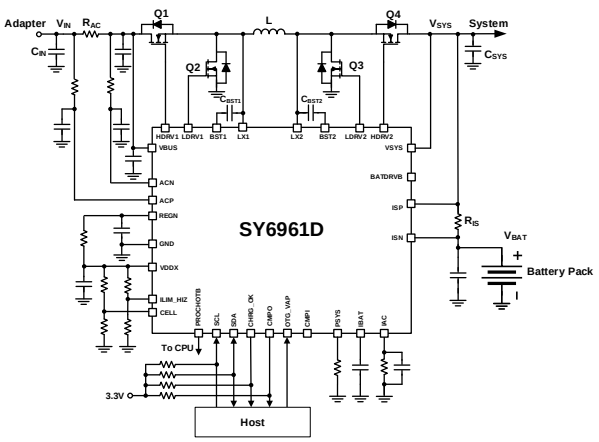
- Pass Through Mode (PTM) for System Power Efficiency Improvement
- When System is Powered by Battery Only, Vmin Active Protection (VAP) Mode Supplements System from Input Capacitors during System Peak Power Spike
- Support Battery LEARN Function
- Adaptive Input Current Limit (AICL) to Extract Max Input Power
- Host Control Interface for Flexible System Configuration
- Integrated ADC to Monitor Voltage, Current and Power
- Thermal Shutdown Protection
- Input, System, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Compact Package: QFN4x4-32

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries



(a) With BATFET (Default)



(b) Without BATFET

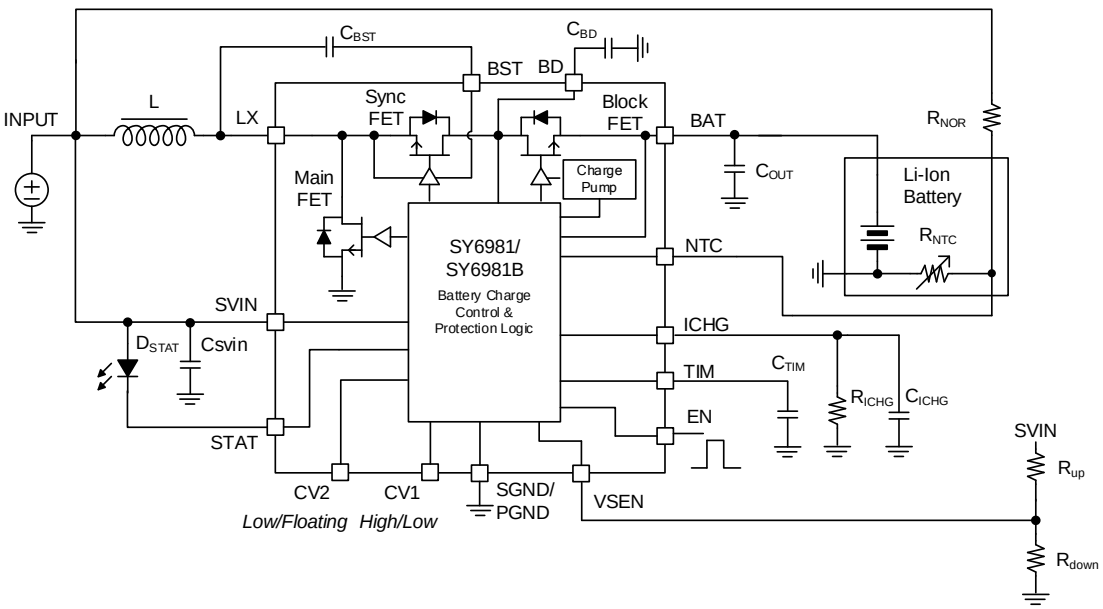
Back

Features

- Low Profile QFN3×3 Package
- Integrated Synchronous Boost with 18V Rating Low R_{DSON} FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 1.2/2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- ±0.5% Battery Voltage Accuracy
- Thermal Foldback Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation When Battery is Removed

Applications

- Cellular Telephones, PDA, MP3/MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



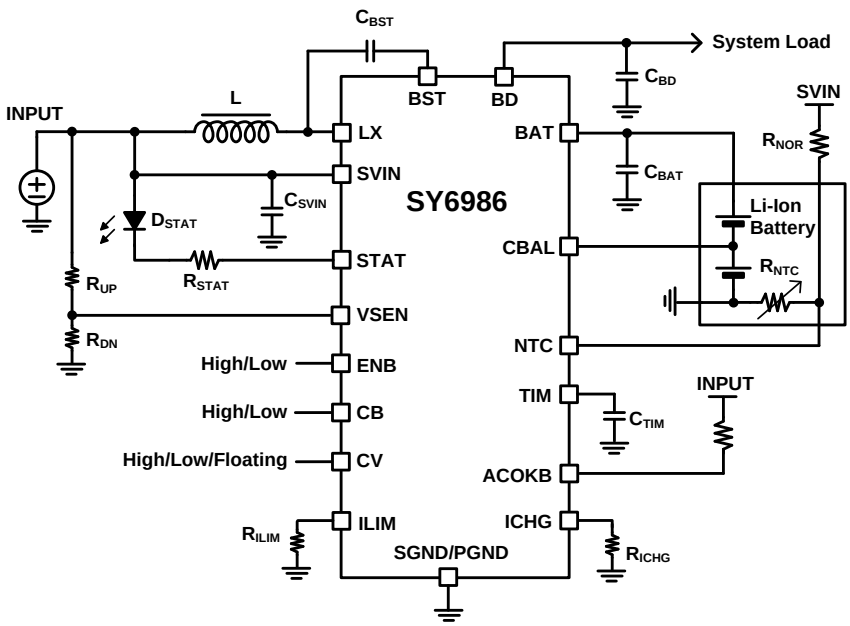
Back

Features

- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Threshold for Input Voltage DPM Function
- Programmable Threshold for Input Current DPM Function
- Maximum 1.6A Constant Charge Current
- Programmable Constant Charge Current
- Selectable Constant Voltage
- Programmable Charge Timeout
- System Power Path Management Function
- External Separated Control Function for Boost and BATFET
- Up to 200mA Cell Balance Current
- Cell Voltage Limit Protection during Balance
- Battery Pack Temperature Monitor Complying with JEITA Standard
- Input and Charge Status Indication
- Input Voltage UVLO and OVP
- BAT OVP and Short Protection
- Over Temperature Protection
- Low Profile QFN3×3 Package

Applications

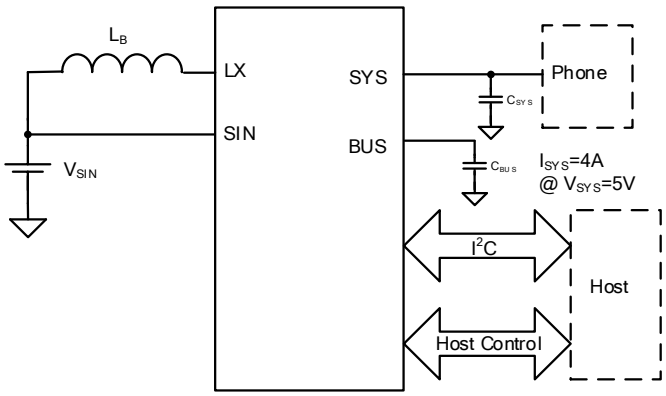
- Bluetooth Speaker
- Digital Cameras
- POS
- PSP Game Players, NDS Game Players



Back

SY7994QYC - Fully Integrated Synchronous Boost Converter with QC3.0 for Li-Ion Battery Power Bank Application

- Integrated N-Channel MOSFETs with 16V Voltage Rating and Extremely Low RDS(ON) for
- Linear Switch
- Half Bridge
- 0.3MHz or 0.5MHz Selectable Switching Frequency to Minimize Peripheral Circuit Design
- Up to 20W Output Power
- I2C Controls
- Programmable Peak Current Limit
- Programmable Over Current Limit for SYS Load
- Integrated SYS Current Sense
- Do+/Do- Divider Mode Compliant
- QC3.0 Class a Output Compliant
- 5V4A
- 9V/2.22A
- 12V/1.67A
- MTK PE+ Compliant
- Host Enable Control for Standby Mode
- Over Temperature Protection
- Battery UTP/OTP
- Light Load Status Indication

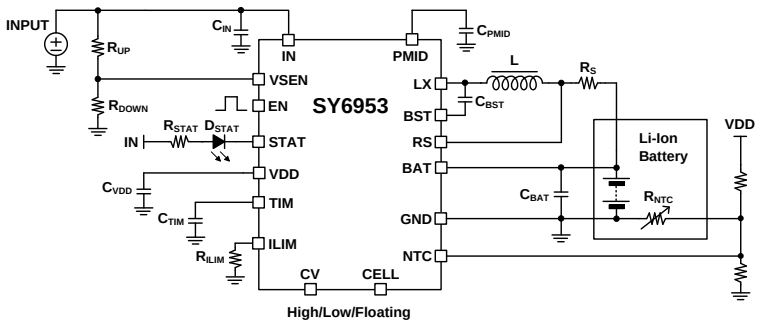


Applications

- Single Cell Li-Ion Power Bank
- Multiple Output Ports Charger

SY6953QIC - High Efficiency, 2-4 cells Buck Li-Ion Battery Charger

- Wide Input Voltage Range: 4V to 28V
- Constant Voltage Selectable: 4.1V/4.2V/4.35V per Cell
- Charge Current up to 2A for 2 Cells Battery
- Charge Current up to 1.6A for 3 Cells Battery
- Charge Current up to 1.5A for 4 Cells Battery
- Programmable VDPM
- Programmable Input Current Limit
- Programmable Charge Timer
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Thermal Regulation
- Input Voltage UVLO and OVP Protection
- BAT OVP and Short Protection
- Over Temperature Protection
- Charge Status Indication
- NTC JEITA Compliance
- Package QFN3x3-18



Applications

- Floor Cleaning Robot
- Window & Door Automation
- Smart Speaker
- Electrical Tools

Back

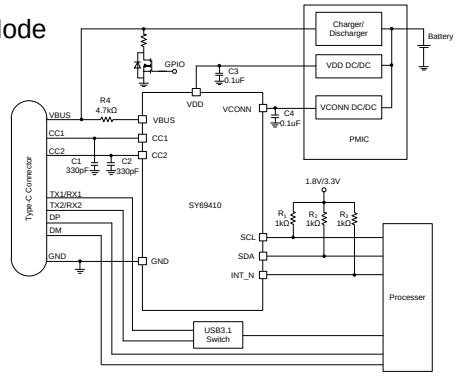
SY69410VWS - USB Type-C Port Controller

Features

- USB PD3.0 PHY with I2C Interface
- Current Capability Advertising and Detection
- CC Attach/Detach Detection as DFP, UFP and DRP
- Active Cable Detection
- Cable Orientation Detection
- BIST Mode Support
- VBUS Detection Support
- VCONN Power Control Support
- VCONN OVP, SCP and Programmable OCP
- Dead Battery Support
- Low Power Consumption: typical 11uA with DRP in Low Power Mode
- VDD range:3-5.5V
- Thermal Shutdown
- CSP1.29×1.25-9 Package

Applications

- Smartphones
- Tablets, Notebooks
- Laptops
- Adapters, Power Banks



SY6974GQCQ - 3A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

- High Efficiency 3A 1.5MHz Buck Mode Charger

– Support 3.9V-13.5V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– 3.8V-4.61V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Charge Status Outputs for LED or Host Processor

- Maximum 1.2A 1.5MHz Boost OTG Current

– 4.85V-5.3V Adjustable OTG Output Voltage
– Selectable OTG Output Current Limit
– ± 1.5% Output Regulation in Boost Mode
– Soft-Start up to 500μF Capacitive Load
– Constant Current (CC) Limit

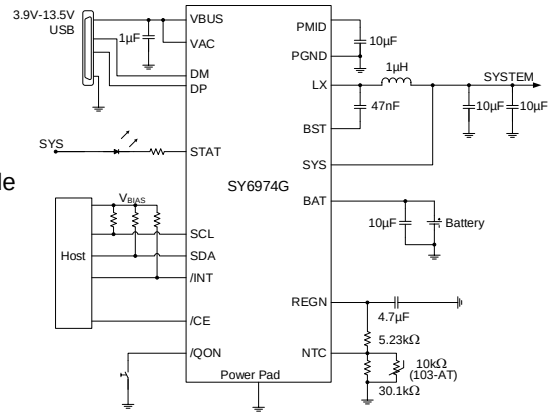
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System over-Voltage Protection
– MOSFET over-Current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Back

- Extremely Low Battery Leakage Current and Support Shipping Mode
- High Efficiency 2A Buck Mode Charger

− Support 3.8V-14V Input Voltage range
− Programmable IDPM/VDPM to support the USB and adapter
− 4.0V-4.5V Adjustable Charge Voltage
− Support NVDC Power Path Management
− JEITA Compliance

- Maximum 1.2A OTG Output Current

− 4.5V-5.5V Adjustable Output Voltage
− Selectable OTG Output Current Limit

- Maximum 550mA on BOOST1 and BOOST2 Channel

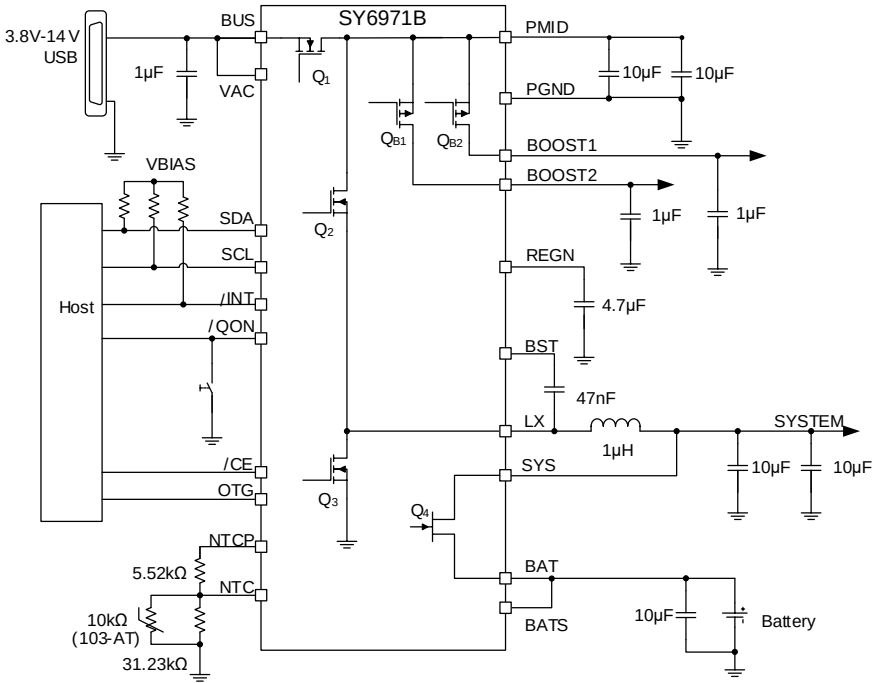
− 1.6V-6.0V Adjustable Output Voltage
− Maxmium 500mA Current Limit in LDO Mode
− Maxmium 550mA Current Limit in Full On Mode

- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 8A Battery Discharge Current
- Safety

− Battery Temperature Sensing for Charge and Boost Mode
− Battery Charging Safety Timer
− Thermal Regulation and Thermal Shutdown
− Input/System Over-Voltage Protection
− MOSFET Over-Current Protection

Applications

- Earphone Charging Case
- Wearable accessories
- Single Cell Li-Ion Portable Device



Back

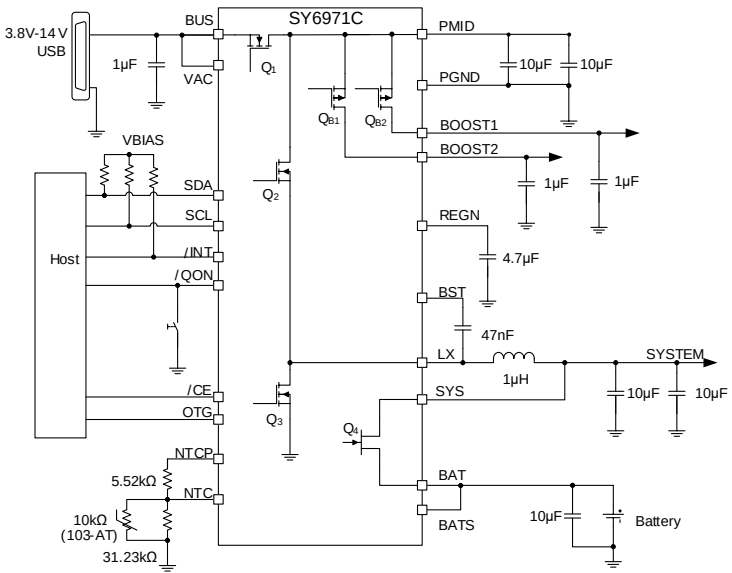
SY6971CVKS -2A Switching Charger with Low Iq Power Path Management, OTG and LDO

Features

- Extremely Low Battery Leakage Current and Support Shipping Mode
- High Efficiency 2A Buck Mode Charger
- Support 3.8V-14V Input Voltage range
- Programmable IDPM/VDPM to support the USB and adapter
- 4.044V-4.55V Adjustable Charge Voltage
- Support NVDC Power Path Management
- JEITA Compliance
- 63% Charge Efficiency at 3.8V/10mA from 5V input
- 93.8% Charge Efficiency at 3.8V/0.5A~1.2A from 5V input
- 92% Charge Efficiency at 3.8V/1.5A~2A from 5V input
- Maximum 1.2A OTG Output Current
- 4.5V-5.5V Adjustable Output Voltage
- Selectable OTG Output Current Limit
- 88.5% Boost Efficiency at 1mA from 3.8V V_{BAT}
- 90.5% Boost Efficiency at 10mA from 3.8V V_{BAT}
- 92.5% Boost Efficiency at 100mA from 3.8V V_{BAT}
- Maximum 550mA on BOOST1 and BOOST2 Channel
- 1.6V-6.0V Adjustable Output Voltage
- Maxmium 500mA Current Limit in LDO Mode
- Maxmium 550mA Current Limit in Full On Mode
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 8A Battery Discharge Current
- Safety
- Battery Temperature Sensing for Charge and Boost Mode
- Battery Charging Safety Timer
- Thermal Regulation and Thermal Shutdown
- Input/System Over-Voltage Protection
- MOSFET Over-Current Protection

Applications

- Earphone Charging Case
- Wearable accessories
- Single Cell Li-Ion Portable Device



Back

SY6973BQCQ - 3A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

Features

- High Efficiency 3A 1.5MHz Buck Mode Charger

– Support 3.9V-13.5V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– 3.856V-4.624V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Charge Status Outputs for LED or Host Processor

- Maximum 1.2A 1.5MHz Boost OTG Current

– 4.85V-5.3V Adjustable OTG Output Voltage
– Selectable OTG Output Current Limit
– ± 1.5% Output Regulation in Boost Mode
– Soft-Start up to 500μF Capacitive Load
– Constant Current (CC) Limit

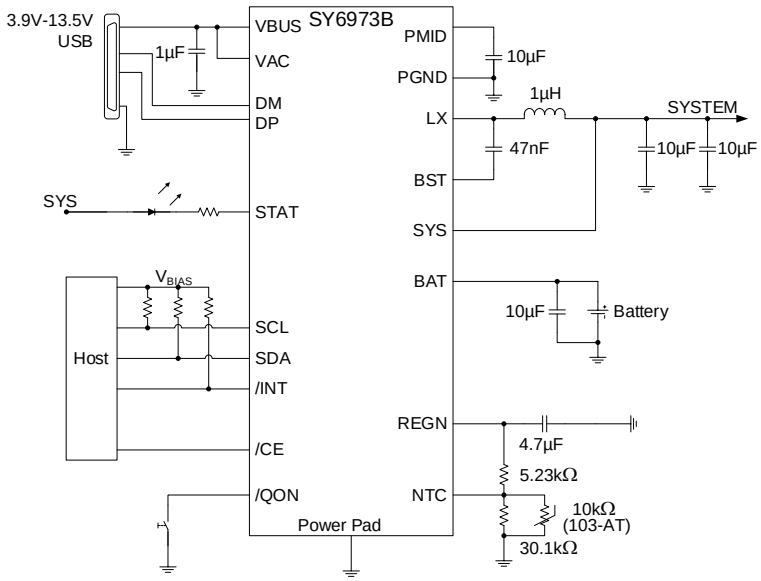
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System over-Voltage Protection
– MOSFET over-Current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Back

- High Efficiency 5A 1.5MHz Buck Mode Charger

– Support 3.9V-14V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– Support USB SDP/DCP/CDP and Non-Standard Adapter Detection
– 3.84-4.608V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Accelerate Charge Time by Battery Path Impedance Compensation
– Charge Status Outputs for LED or Host Processor

- Maximum 2.4A 500KHz/1.5MHz Boost OTG Current

– 4.55-5.51V Adjustable OTG Output Voltage
– Selectable OTG Output Current Limit
– Up to 2.4A OTG Current Limit on BUS
– ±1.5% Output Regulation in Boost Mode

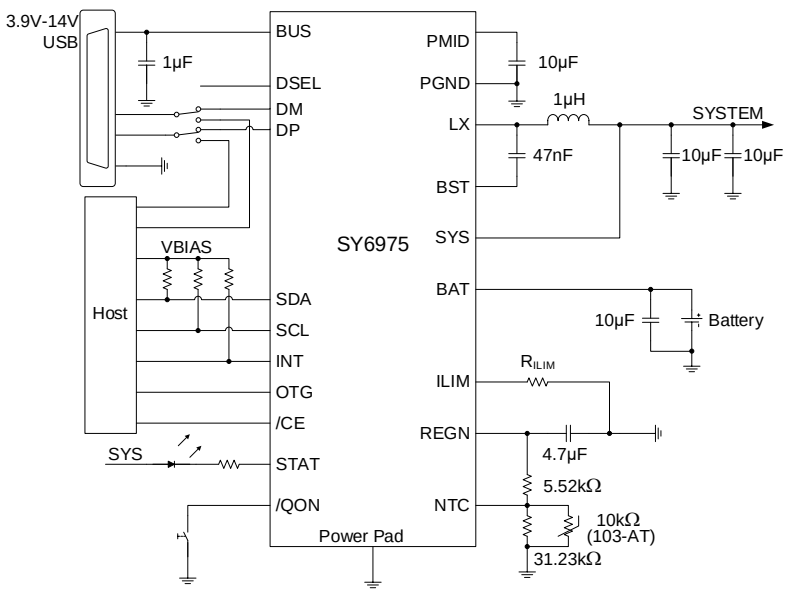
- Battery Monitor for Voltage, Temperature and Charge Current Measurements
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 9A Battery Discharge Current
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System Over-voltage Protection
– MOSFET Over-current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices

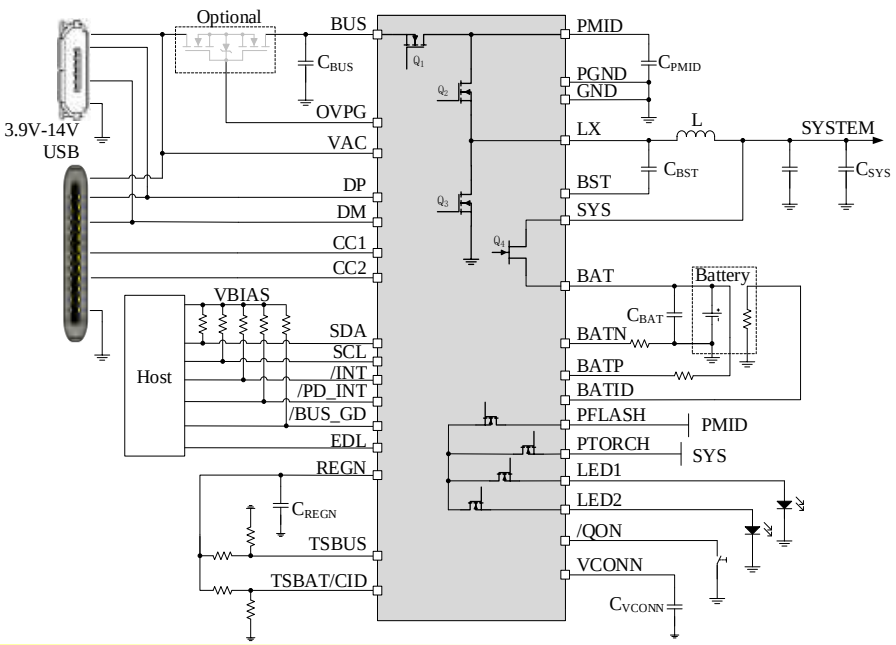


Back

- Support 3.9V-14V Input Voltage range
- Programmable IINDPM/VINDPM to support the USB and adapter
- Support USB SDP/DCP/CDP/HVDCP, Non-standard Adapter, PD and UFCS
- 3.84-4.856V Adjustable Charge Voltage
- Support Narrow VDC Power Path Management
- JEITA Compliance
- ±0.5% Charge Voltage Regulation
- ±4% at 1.5A Charge Current Regulation
- Accelerate Charge Time by Battery Path impedance Compensation
- 3.9-5.5V Adjustable OTG Output Voltage
- Selectable OTG Output Current Limit
- Up to 2.5A OTG Current Limit on BUS
- ± 2% Output Regulation in Boost Mode
- Soft-Start Up to 500-μF Capacitive Load
- Maximum 2A Boost LED Flash Driver
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 12A Battery Discharge Current
- 11 channels 12-bits ADC for Monitor
  - VBAT, VSYS
  - VBUS, ICHG
  - TSBUS, TSBAT
  - VAC, IBUS, TDIE, BATID, BATSNS
- Package: WLCSP 3.2mm×2.8mm -42

Applications

- Smart Phone
- Tablet PC
- Portable Internet Device



Back

- High Efficiency 3A 1.5MHz Buck Mode Charger

– Support 3.9V-13.5V Input Voltage Range
– Programmable IDPM/VDPM to Support the USB and Adapter
– 3.8V-4.61V Adjustable Charge Voltage
– Support Narrow VDC Power Path Management
– JEITA Compliance
– ±0.5% Charge Voltage Regulation
– Charge Status Outputs for LED or Host Processor

- Maximum 1.2A 1.5MHz Boost OTG Current

– 4.85V-5.3V Adjustable OTG Output Voltage
– Selectable OTG Output Current Limit
– ± 1.5% Output Regulation in Boost Mode
– Soft-Start up to 500µF Capacitive Load
– Constant Current (CC) Limit

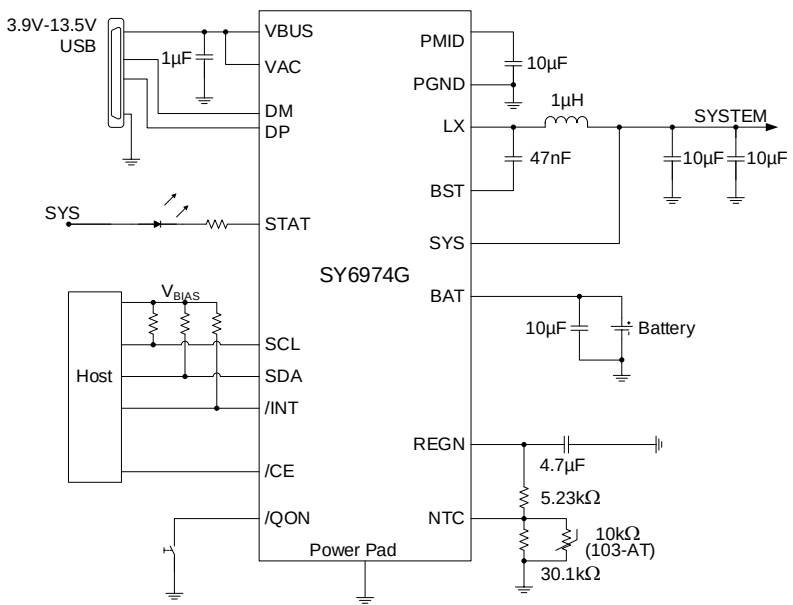
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety

– Battery Temperature Sensing for Charge and Boost Mode
– Battery Charging Safety Timer
– Thermal Regulation and Thermal Shutdown
– Input/System over-Voltage Protection
– MOSFET over-Current Protection

- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



Back

- 4.5V to 24V Input Operating Voltage
- Charge 1 cell to 4 cells Battery from Wide Range of Input Source
- 600kHz, 800kHz or 1MHz Programmable Switching Frequency
- SMBus Controls

− Battery Charge Voltage (1.024V - 19.2V)
− Battery Charge Current (up to 16.256A/8.128A based on 5mΩ/10mΩ sensing resistor)
− Battery Discharge Current (up to 32.256A based on 10mΩ sensing resistor)
− Input Current Limit for DPM (up to 16.128A/8.064A based on 5mΩ/10mΩ sensing resistor)

- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM Pin to Set Charge Current Limit and Discharge Current Limit
- Support Battery LEARN Function and Programmable Battery Depletion Threshold
- Support CPU Turbo Boost Mode

− Adapter and Battery Provide Power to System Together for CPU Turbo Boost Mode
− Ultra-Fast Transient Response of 50µs, 150µs or 250µs to Enter Boost Mode

- Internal Charge Pumps for AC Blocking NFETs (ACFET and RBFET) and BAT NFET (BATFET)

− ACFET Fast Turn on in 100µs

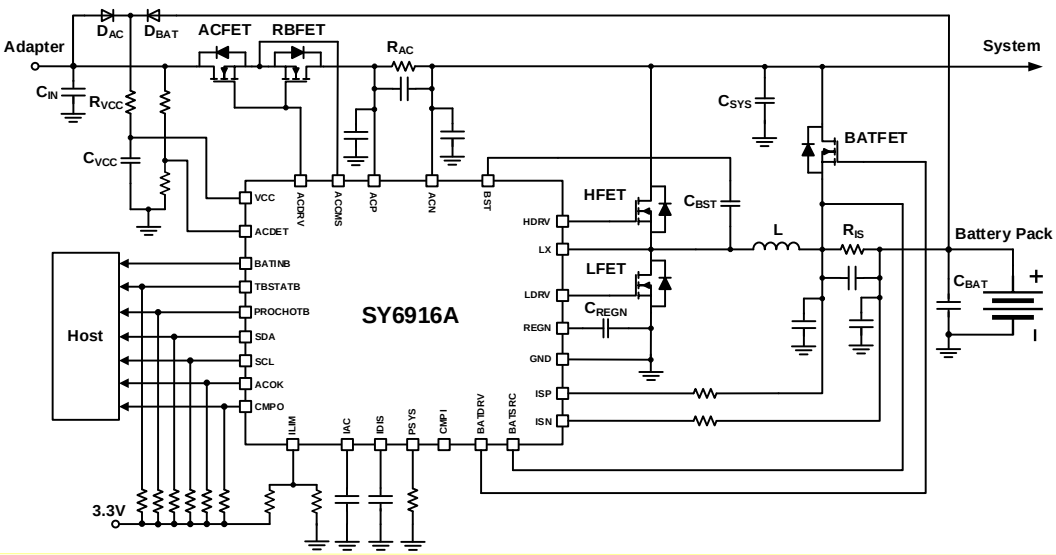
- Internal Charge Current Softstart
- PFM Mode to Improve Light Load Efficiency
- Thermal Shutdown Protection
- Input, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Energy Star Low Iq

− 0.65mA Adapter Output Current when Adapter Present and Charge Disabled

- Compact Package: QFN4×4-28

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries



Back

SY6969FQFQ - Multi-Cell Synchronous Buck-Boost Battery Charger Controller with NVDC Power Path Management

Features

- 3.5V to 25V Input Operating Voltage
- Charge 1s to 4s Battery from Wide Range of Input Source
- Drive Bi-Direction 4-switch Buck-Boost with Single Inductor
- 800kHz or 1.2MHz Programmable Switching Frequency
- SMBus Controls

-- Battery Charge Voltage (1.024V - 19.2V)
-- Minimum System Voltage (1.024V - 16.128V)
-- OTG Output Voltage (3V - 20.8V)
-- Battery Charge Current (64mA - 8.128A)
-- Input Voltage Limit for DPM (3.2V - 19.52V)
-- Input Current Limit for DPM (50mA - 6.4A)
-- OTG Output Current Limit (50mA - 6.35A)

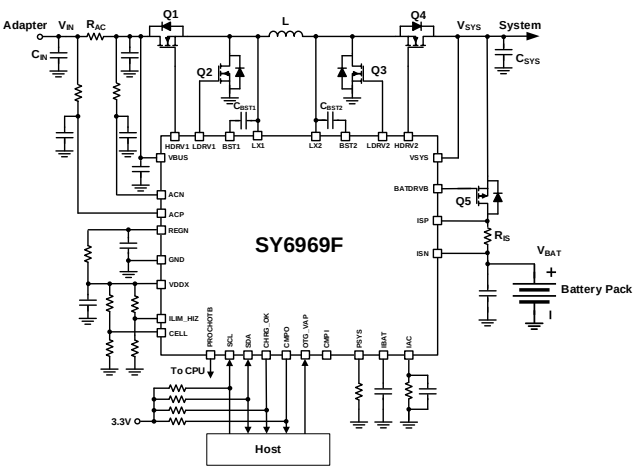
- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM_HIZ Pin to Set Input Current Limit
- NVDC Power Path Management

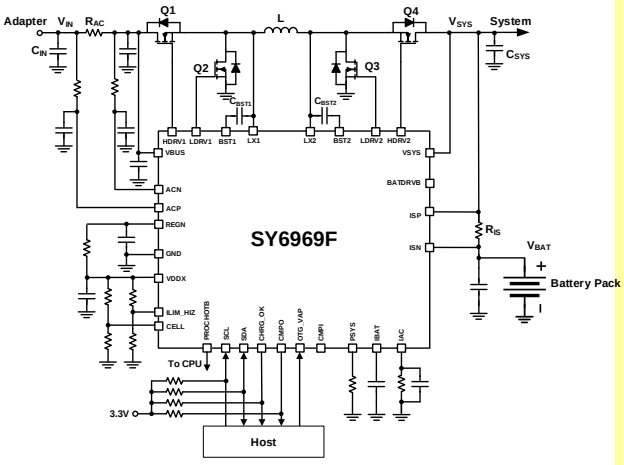
-- Battery Supplements System when Adapter is Fully-Loaded
-- Battery MOSFET (BATFET) Ideal Diode Operation in Supplement Mode

- Pass Through Mode (PTM) for System Power Efficiency Improvement
- When System is Powered by Battery Only, Vmin Active Protection (VAP) Mode Supplements System from Input Capacitors during System Peak Power Spike
- Support Battery LEARN Function
- Adaptive Input Current Limit (AICL) to Extract Max Input Power
- Host Control Interface for Flexible System Configuration
- Integrated ADC to Monitor Voltage, Current and Power
- Thermal Shutdown Protection
- Input, System, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Compact Package: QFN4x4-32

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries





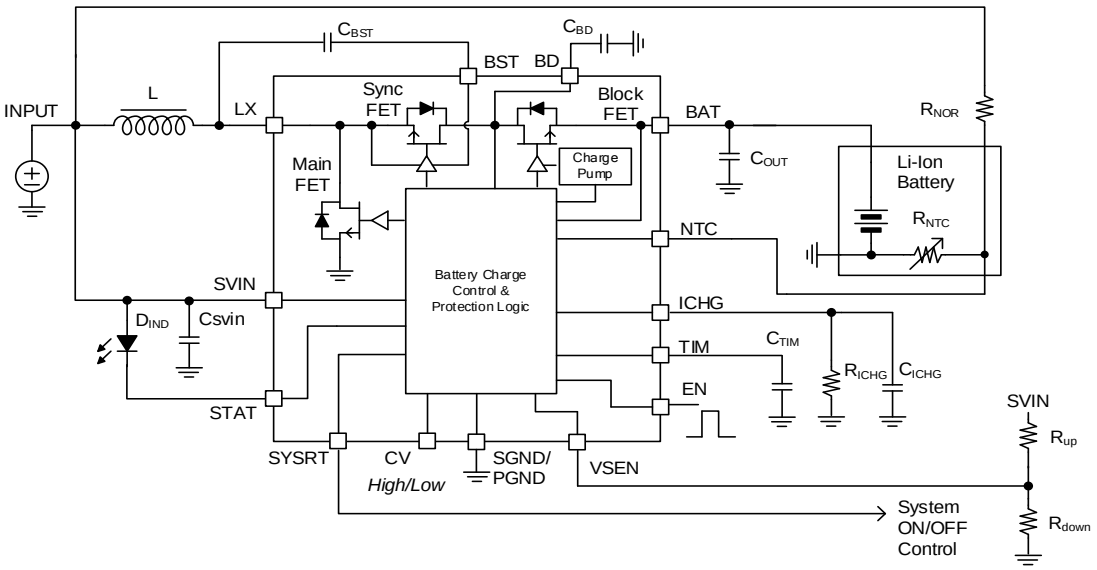
Back

Features

- Low Profile QFN3x3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- ±0.5% Battery Voltage Accuracy
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation When Battery Removed

Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



Back

- 4.5V to 24V Input Operating Voltage
- Charge 1 cell to 4 cells Battery from Wide Range of Input Source
- 600kHz, 800kHz or 1MHz Programmable Switching Frequency
- SMBus Controls

– Battery Charge Voltage (1.024V - 19.2V)
– Battery Charge Current (up to 16.256A/8.128A based on 5mΩ/10mΩ sensing resistor)
– Battery Discharge Current (up to 32.256A based on 10mΩ sensing resistor)
– Input Current Limit for DPM (up to 16.128A/8.064A based on 5mΩ/10mΩ sensing resistor)

- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM Pin to Set Charge Current Limit and Discharge Current Limit
- Support Battery LEARN Function and Programmable Battery Depletion Threshold
- Support CPU Turbo Boost Mode

– Adapter and Battery Provide Power to System Together for CPU Turbo Boost Mode
– Ultra-Fast Transient Response of 50µs, 150µs or 250µs to Enter Boost Mode

- Internal Charge Pumps for AC Blocking NFETs (ACFET and RBFET) and BAT NFET (BATFET)

– ACFET Fast Turn on in 100µs

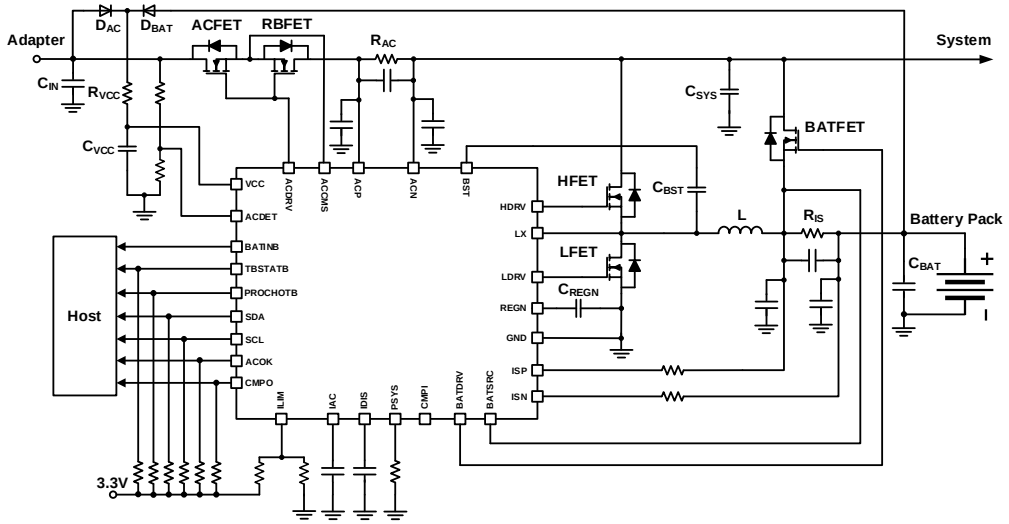
- Internal Charge Current Softstart
- PFM Mode to Improve Light Load Efficiency
- Thermal Shutdown Protection
- Input, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Energy Star Low Iq

– 0.65mA Adapter Output Current when Adapter Present and Charge Disabled

- Compact Package: QFN4×4-28

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries



Back

Features

- 3.5V to 28.5V Input Operating Voltage
- Charge 1s to 4s Battery from Wide Range of Input Source
- Drive Bi-Direction 4-switch Buck-Boost with Single Inductor
- 800kHz or 1.2MHz Programmable Switching Frequency
- I2C Controls

-- Battery Charge Voltage (1.024V - 19.2V)
-- Minimum System Voltage (1.024V - 16.128V)
-- OTG Output Voltage (3V - 20.8V)
-- Battery Charge Current (64mA - 8.128A)
-- Input Voltage Limit for DPM (3.2V - 19.52V)
-- Input Current Limit for DPM (50mA - 6.4A)
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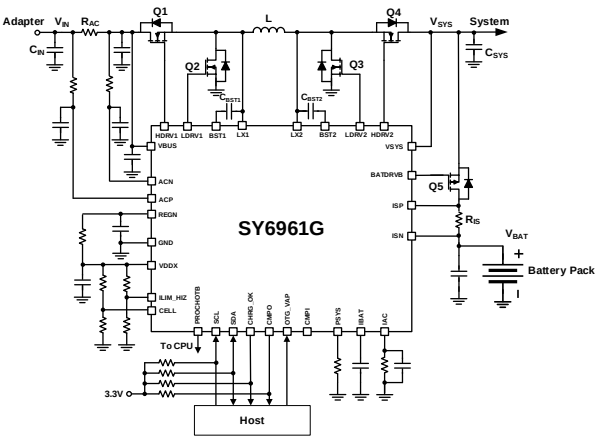
- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM_HIZ Pin to Set Input Current Limit
- NVDC Power Path Management

-- Battery Supplements System when Adapter is Fully-Loaded
-- Battery MOSFET (BATFET) Ideal Diode Operation in Supplement Mode

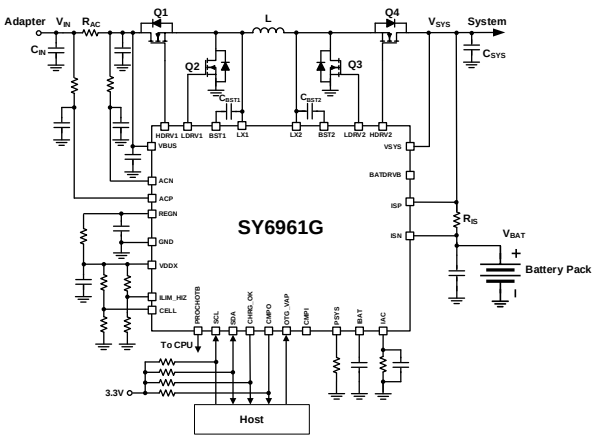
- Pass Through Mode (PTM) for System Power Efficiency Improvement
- When System is Powered by Battery Only, Vmin Active Protection (VAP) Mode Supplements System from Input Capacitors during System Peak Power Spike
- Support Battery LEARN Function
- Adaptive Input Current Limit (AICL) to Extract Max Input Power
- Host Control Interface for Flexible System Configuration
- Integrated ADC to Monitor Voltage, Current and Power
- Thermal Shutdown Protection
- Input, System, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Compact Package: QFN4x4-32

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries



(a) With BATFET (Default)



(b) Without BATFET

Back

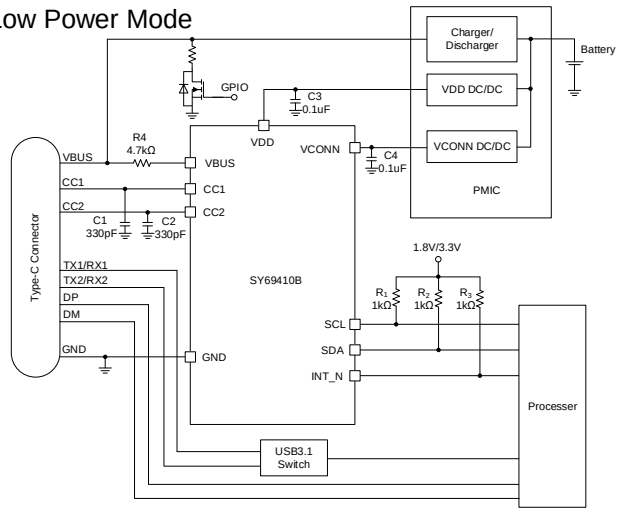
SY69410BQDQ - USB Type-C Port Controller

Features

- USB PD3.0 PHY with I2C Interface
- Current Capability Advertising and Detection
- CC Attach/Detach Detection as DFP, UFP and DRP
- Active Cable Detection
- Cable Orientation Detection
- BIST Mode Support
- VBUS Detection Support
- VCONN Power Control Support
- VCONN OVP, SCP and Programmable OCP
- Dead Battery Support
- Low Power Consumption: typical 11uA with DRP in Low Power Mode
- VDD range:3-5.5V
- Thermal Shutdown
- QFN3*3-16 Package

Applications

- Smartphones
- Tablets, Notebooks
- Laptops
- Adapters, Power Banks



Back

SQ64510UIC

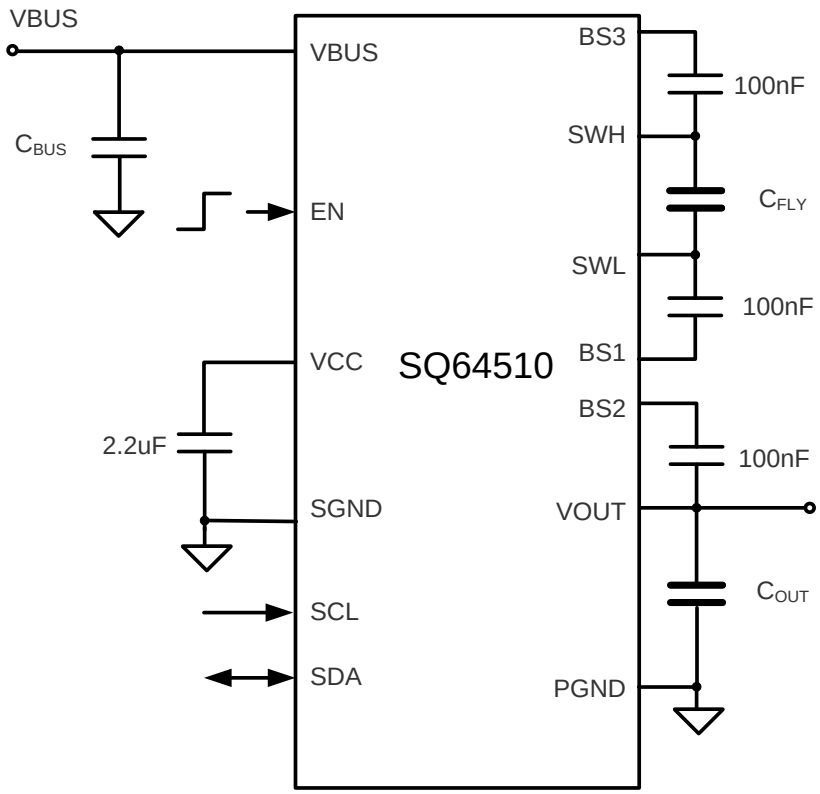
High Efficiency Step-down Converter

Features

- Fully Integrated Power MOSFETs with Extremely Low $R_{DS(ON)}$
- Bypass Mode and Charge Pump Mode Selectable Online
- 50% Duty Cycle in Charge Pump Mode
  - Voltage Divider: Input Voltage is 2 times of Output Voltage
  - Current Doubler: Output Current is 2 times of Input Current
- Internal Charge Pump Driver for Bypass Mode
- Soft-start for Inrush Current Limit
- Over Current and Over Temperature Protection
- V_{OUT} Short Protection
- V_{OUT} Over Voltage Protection
- High Conversion Efficiency
- I^2C Interface

Applications

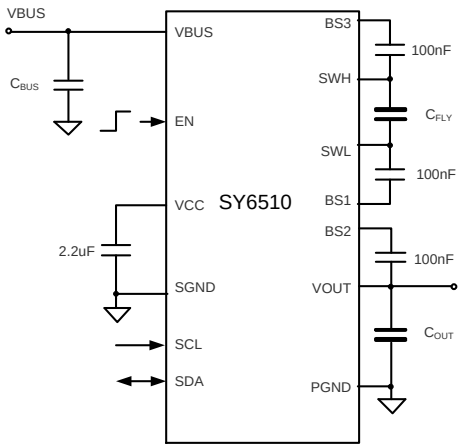
- Smart Phones/ Tablets
- Other Handhelds



Back

SY6510UIC - High Efficiency Step-down Converter

- Fully Integrated Power MOSFETs with Extremely Low RDS(ON)
- Bypass Mode and Charge Pump Mode Selectable Online
- 50% Duty Cycle in Charge Pump Mode
  - o Voltage Divider: Input Voltage is 2 times of Output Voltage
  - o Current Doubler: Output Current is 2 times of Input Current
- Internal Charge Pump Driver for Bypass Mode
- Soft-start for Inrush Current Limit
- Over Current and Over Temperature Protection
- VOUT Short Protection
- VOUT Over Voltage Protection
- High Conversion Efficiency
- I2C Interface

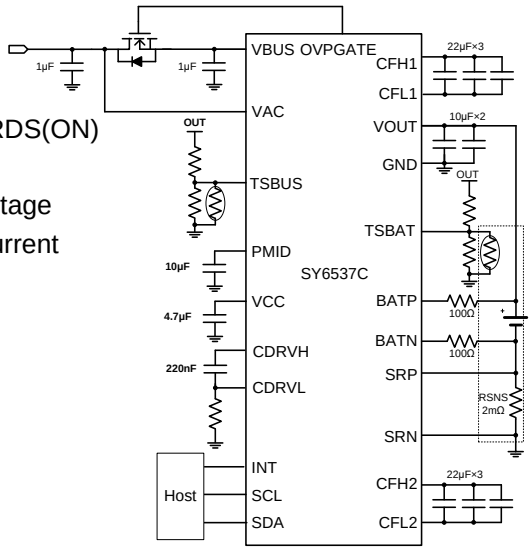


Applications

- Smart Phones/ Tablets
- Other Handhelds

SY6537CVLS - High Efficiency Switched Capacitor Charger

- External OVP Control and Regulation
  - o High Absolute Maximum Rating of 20V (VBUS)
  - o BAT Voltage Regulation (VBAT REG)
  - o BAT Current Regulation (IBAT REG)
- Integrate Input-Side NFET to Block the Reverse Current
- Dual Phase Switched Capacitor Converter Module
  - o 8A Output Current Capability
  - o Efficiency up to 96.8% when VBAT=4V, IBAT=6A
  - o Programmable Frequency
- Fully Integrated Power MOSFETs with Extremely Low RDS(ON)
- 50% Duty Cycle in switched capacitor Mode
  - o Voltage Divider: Input Voltage is 2 times of Output Voltage
  - o Current Doubler: Output Current is 2 times of Input Current
- Soft-start for Inrush Current Limit
- 9-Channel 12-bit ADC
  - o VAC, VBUS, VOUT, VBAT
  - o IBUS, IBAT
  - o TSBUS, TSBAT, TDIE
- I2C Interface



Applications

- Smart Phones/ Tablets
- Other Handhelds

Back

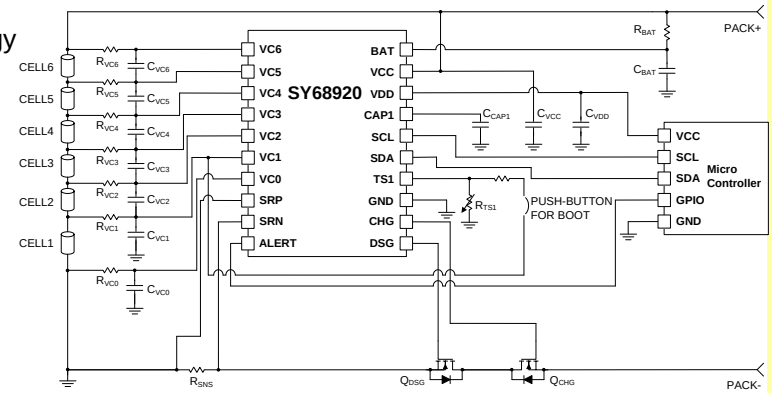
SY68920QEQ - 3 to 6 Series Cell Battery Monitor, Balance, Protection For Li-ion and Phosphate Application

Features

- Internal ADC Measures Cell Voltage, Pack or Die Temperature
- A Separate, Internal ADC Measures Pack Current
- Low-Side Charge and Discharge NCH FET Drivers
- Over Current Protection during Discharge (OCD)
- Short-Circuit Protection during Discharge (SCD)
- Cell Over Voltage Protection (OV)
- Cell Under Voltage Protection (UV)
- Secondary Protector Fault Detection
- Integrated Cell Balance FETs
- Integrated Internal Cell Balance Strategy
- Alert Interrupt for Host
- 3.3V External Regulator
- Simple I2C Compatible Interface
- Low Profile QFN5×5 Package

Applications

- Light Electric Vehicles (LEV)
- Power Tools and Garden Tools
- Energy Storage Systems (ESS)



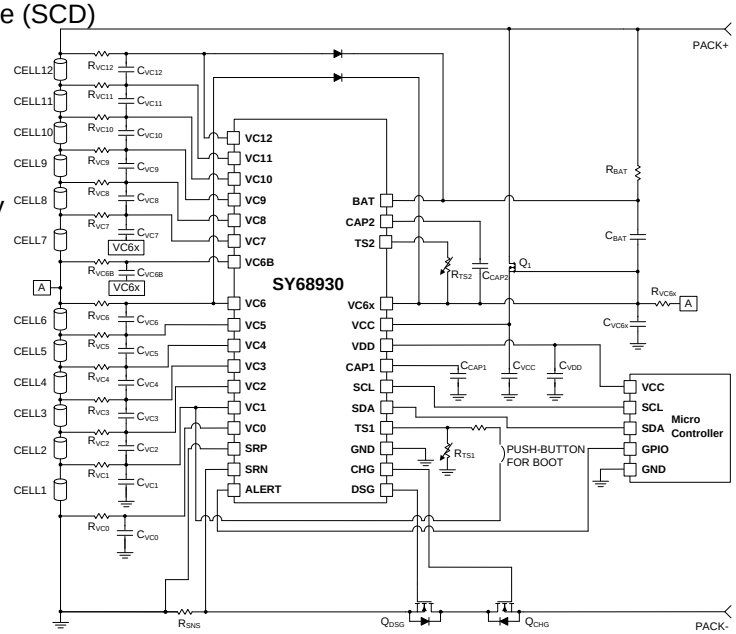
SY68930QHQ - 6 to 12 Series Cell Battery Monitor, Balance, Protection For Li-ion and Phosphate Application

Features

- Internal ADC Measures Cell Voltage, Pack or Die Temperature
- A Separate, Internal ADC Measures Pack Current
- Low-Side Charge and Discharge NCH FET Drivers
- Over Current Protection During Discharge (OCD)
- Short-Circuit Protection During Discharge (SCD)
- Cell Over Voltage Protection (OV)
- Cell Under Voltage Protection (UV)
- Secondary Protector Fault Detection
- Integrated Cell Balance FETs
- Integrated Internal Cell Balance Strategy
- Alert Interrupt for Host
- 3.3V External Regulator
- Simple I2C Compatible Interface
- Low Profile QFN6×6 Package

Applications

- Light Electric Vehicles (LEV)
- Power Tools and Garden Tools
- Energy Storage Systems (ESS)

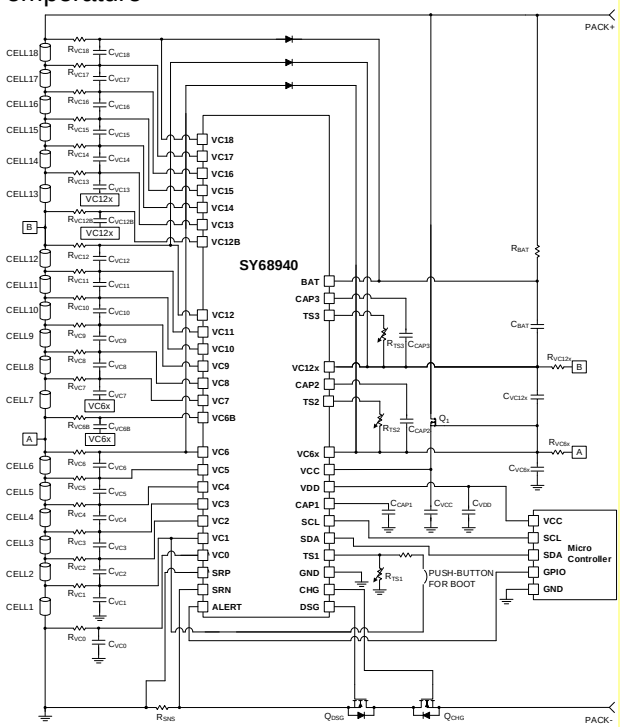


Back

SY68940RJQ - 9 to 18 Series Cell Battery Monitor, Balance, Protection For Li-ion and Phosphate Application

Features

- Internal ADC Measures Cell Voltage, Pack or Die Temperature
- A Separate, Internal ADC Measures Pack Current
- Low-Side Charge and Discharge NCH FET Drivers
- Over Current Protection During Discharge (OCD)
- Short-Circuit Protection During Discharge (SCD)
- Cell Over Voltage Protection (OV)
- Cell Under Voltage Protection (UV)
- Secondary Protector Fault Detection
- Integrated Cell Balance FETs
- Integrated Internal Cell Balance Strategy
- Alert Interrupt for Host
- 3.3V External Regulator
- Simple I2C Compatible Interface
- Low Profile QFN8 8 Package



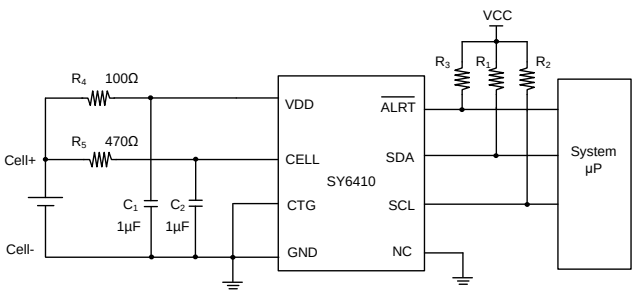
Applications

- Light Electric Vehicles (LEV)
- Power Tools and Garden Tools
- Energy Storage Systems (ESS)

SY6410DFC - Cost-save Single Cell Li+ Battery Gauge IC

Features

- ±7.5mV/Cell Voltage Measurement
- Provide Accurate State of Charge
- Temperature/Load Variation Compensation
- No Accumulated Errors
- Eliminate Current Sense Resistor
- I2C Interface
- Low SOC Alert Indicator
- Compact DFN2×2-8 Package



Applications

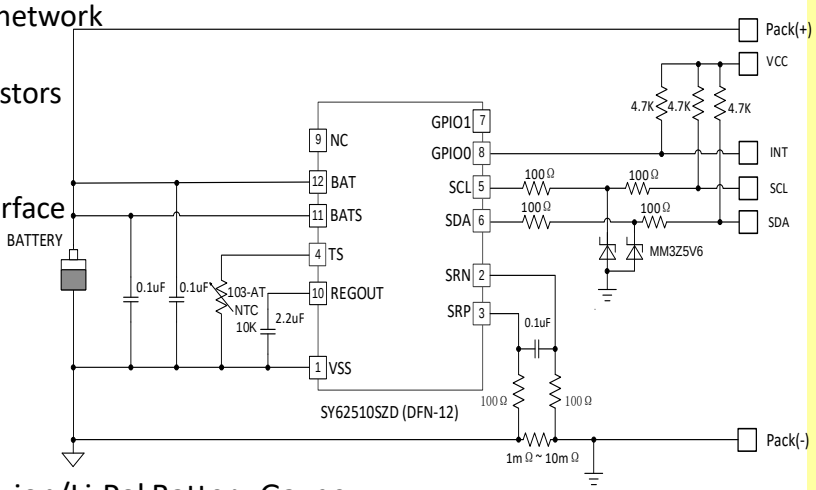
- Smart Phones/PDAs
- Portable Game Players
- Digital Still and Video Cameras
- Wireless Handsets

Back

SY62510SZD- Fully Integrated Single Series Lithium-ion/Li-Pol Battery Gauge

Features

- Operating Voltage: 2.2V to 5.5V
- Operating Current: 50 µA (Typ.)
- Sleep Mode Current: 12 µA (Typ.)
- Patented gauge algorithm: accurate SOC, SOH
- Automatic compensation for temperature, age, rate and self-discharge
- Dual ADC for Simultaneous Current and Voltage Measurements
- On-chip temperature sensor for monitoring system temperature
- External temperature-measurement network
- Low-side current sense
- Supports min 1mΩ current sense resistors
- SHA-256 and SHA1 authentication
- Diagnostic lifetime data monitor
- 400-kHz I²C bus communications interface
- Package: DFN 2.5mm×4mm-12PIN



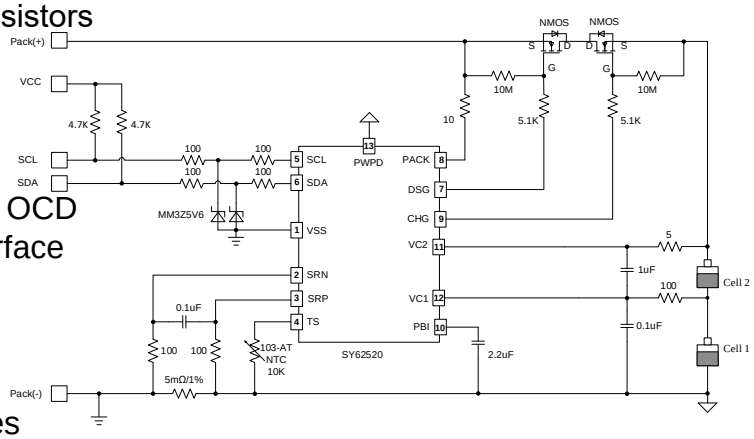
Applications

- Portable Multimedia Players
- Handheld Terminals
- Portable Medical Device

SY62520SZD- 2 Cell Series Lithium-ion/Li-Pol Battery Gauge

Features

- Accurate Patented Gauge Algorithm
- Current Consumption:
  - 100 µA Normal Operating Mode (typ.)
  - 50 µA Sleep Mode (typ.)
  - 1 µA Shutdown Mode (typ.)
- Dual ADC for Simultaneous Current and Voltage Measurements
- Automatic Compensation for Temperature, Age, Charge Rate and Self-Discharge
- On-Chip Temperature Sensor for Monitoring System Temperature
- Remote Temperature Sensor (Thermistor) Input
- Accurate Low-Side Current Sense
- Supports min 1mΩ Current Sense Resistors
- Integrated Cell Balancing MOSFETs
- SHA-256 and SHA1 authentication
- Diagnostic lifetime data monitor
- High-Side N-CH FET Drivers
- Hardware protections SCD, SCC and OCD
- 400kHz I²C bus communications interface
- Package: DFN2.5mm×4mm-12PIN



Applications

- Mobile Phones
- Portable and Wearable Health Devices
- Portable Audio Devices

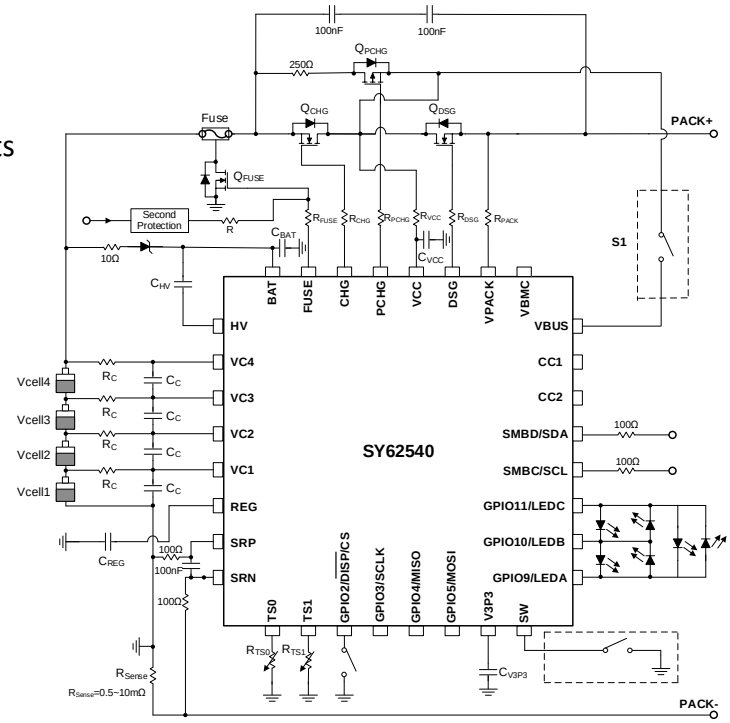
Back

Features

- High-side Protection
- Low-side Current sense
- Pre-charge supporting
- Internal Cell Balance up to 20mA
- Hardware Protections include OLD/SCD/SCC
- Firmware protections for CUV/COV/OT/PF and so on
- ECC authentication
- PD3.0. Sink Function
- 32MHz M0 Core
- High-capacity memory of 256KByte Flash supporting power outage data retention
- 24KByte SRAM
- High accuracy Voltage ADC
- High accuracy Current ADC
- 2 UART Communication Interfaces
- 1MHz SMBUS Compliant
- SPI Interface
- Timer/ Watchdog
- High accuracy RTC with 0.2% error (typ.)
- Accurate Patented Gauge Algorithm ensures SOC estimation with 1% error (typ.)
- Low Current Consumption:
- 200uA Normal Operation Mode (typ.)
- 100uA Sleep Mode (typ.)
- 14uA RTC Mode (typ.)
- 2uA Deep Shutdown Mode (typ.)
- Support for up to 3 NTC temperature sensors if PD is not used
- 32-Pin QFN 4.0mm x 4.0mm
- MSL3

Applications

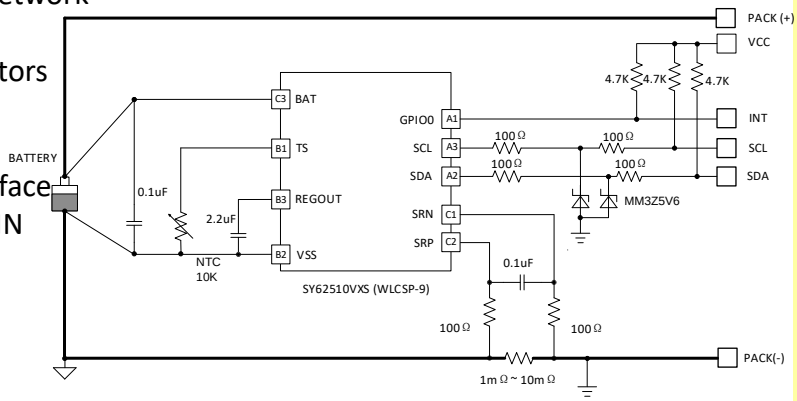
- Industrial and Medical products
- Notebooks and Laptops
- IOT Devices



Back

Features

- Operating Voltage: 2.2V to 5.5V
- Operating Current: 50 µA (Typ.)
- Sleep Mode Current: 12 µA (Typ.)
- Patented gauge algorithm: accurate SOC, SOH
- Automatic compensation for temperature, age, rate and self-discharge
- Dual ADC for Simultaneous Current and Voltage Measurements
- On-chip temperature sensor for monitoring system temperature
- External temperature-measurement network
- Low-side current sense
- Supports min 1mΩ current sense resistors
- SHA-256 and SHA1 authentication
- Diagnostic lifetime data monitor
- 400-kHz I²C bus communications interface
- Package: CSP 1.655mm×1.802mm-9PIN



Applications

- Portable Multimedia Players
- Handheld Terminals
- Portable Medical Device

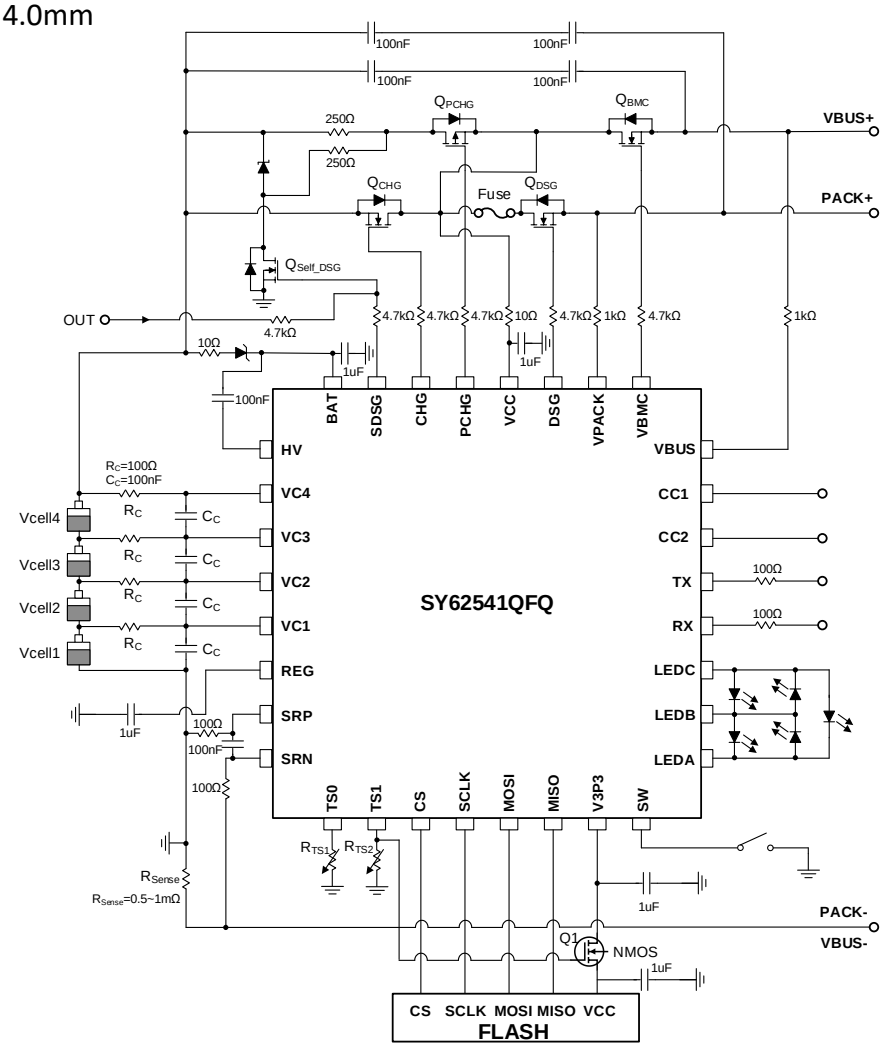
Back

Features

- High-side Protection
- Low-side Current sense (Rsense lower to 1mΩ)
- Pre-charge supporting
- Cell Balance
- Protections include OCD/SCD/SCC
- ECC authentication
- PD Function (sink only)
- 32MHz M0 Core
- 256KByte Flash
- 24KByte SRAM
- High accuracy Voltage ADC
- High accuracy Current ADC
- UART/ SMBUS Communication Interface
- SPI Interface
- RTC/ Timer/ Watchdog
- 2 NTC temperature measurement
- 32-Pin QFN 4.0mm x 4.0mm

Applications

- Drone



Back

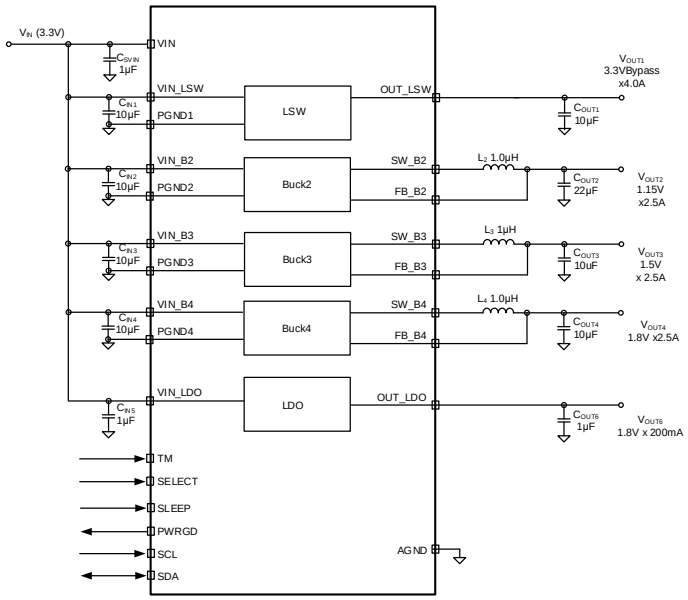


PMIC

Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	Number of Channels	Package	Application	Integrated Function
SY8970UBC	2.4	5.5	1 Ch LSW+1 Ch LDO + 3 Chs Buck	CSP3.2×4.2-48	SSD Power System, Microcontrollers	3.4MHz I2C; Auto PFM/FCCM control; Dedicate Sleep Control; Power Good indicator; Protection: OVP/OCP/SCP/OTP.
SY70201QPQ	2.6	5.5	4 Buck+ LSW+ Boost	QFN5×5-36	SSD	4-Ch Buck,1-Ch LS, 1-Ch Boost, 3.4MHz I2C, Hardware reset control; DVS, Reset output, Auto PFM/FCCM control; OVP/OCP/SCP/OTP.
SY8600GPZS	2.6	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP.
SY8600PZC	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP.
SY8600CPZC	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP. Enable Output Control.
SY8600EPZC	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP. Enable Output Control.
SY8600FPZS	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP.
SY70200PZS	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.2×3.2-52	SSD	3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP. Enable Output Control.
SY70202AVTS	2.8	3.7	4 Chs Buck+2 Chs LDO	CSP2.6×3.6-36	SSD	4-Ch Buck and 2-Ch LDO; 3.4MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY70202SVTS	2.8	3.7	4 Chs Buck+2 Chs LDO	CSP2.5×2.45-36	SSD	4-Ch Buck and 2-Ch LDO; 3.4MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY70202TVTS	2.8	3.7	4 Chs Buck+2 Chs LDO	CSP2.5×2.45-36	SSD	4-Ch Buck and 2-Ch LDO; 3.4MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY8686UXC	2.9	3.7	3 Chs Buck+2 Chs LDO	CSP2.42×2.82-36	SSD	3-Ch Buck and 2-Ch LDO; 1MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY8686FUXC	2.9	3.7	3 Chs Buck+2 Chs LDO	CSP2.42×2.82-36	SSD	3-Ch Buck and 2-Ch LDO; 1MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY8686KUXC	2.9	3.7	3 Chs Buck+2 Chs LDO	CSP2.42×2.82-36	SSD	3-Ch Buck and 2-Ch LDO; 1MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY8686RUXS	2.9	3.7	3 Chs Buck+2 Chs LDO	CSP2.42×2.82-36	SSD	3-Ch Buck and 2-Ch LDO; 1MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled

Back

Features



- 2.4V to 5.5V Input Voltage Range
- Channel 1 Load Switch:
  - 4.0A Output Current Capability.
  - 25mohm $R_{DS(ON)}$
  - 0.5ms Soft-start Time
- Channel 2 Synchronous Buck:
  - 2.5A Maximum Output Current Capability.
  - 0.8V to 2V Programmable, 12.5mV Step.
  - 50mohm/35mohm $R_{DS(ON)}$
  - Default output voltage V_{OUT2}=1.15V
- Channel 3 Synchronous Buck:
  - 2.5A Maximum Output Current Capability.
  - 0.8V to 2V Programmable, 12.5mV Step.
  - 50mohm/35mohm $R_{DS(ON)}$
  - Default output voltage V_{OUT3}=1.5V/1.35V
- Channel 4 Synchronous Buck:
  - 2.5A Maximum Output Current Capability.
  - 0.8V to 2V Programmable, 12.5mV Step
  - 50mohm/35mohm $R_{DS(ON)}$
  - Default Output Voltage V_{OUT4}=1.8V
- Channel 6 LDO:
  - 200mA Maximum Output Current Capability.
  - 0.8V to 2V Programmable, 25mV Step.
  - Default Output Voltage V_{OUT5}=1.8V
- I^2C Interface up to 3.4MHz
- Auto PWM/PFM or Forced PWM Controlled by I^2C Interface
- Output Voltage Level of Each Channel Controlled by I^2C Interface
- Reliable Protections:
  - Input / Output over Voltage Protection (OVP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: Fan-out CSP3.2x4.2-48

Applications

- SSD Power System
- Microcontroller

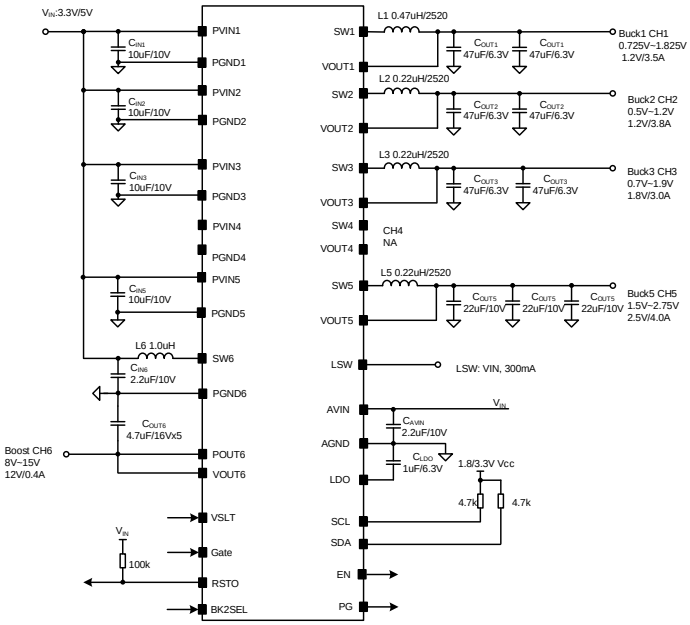
Back

Features

- Input Range: 2.6V to 5.5V
- 5 Independent Synchronous Bucks and 1 Independent 400mA Synchronous Boost, 1 Voltage Detector
- Buck1: Max. Current 3.5A (0.725 V to 1.825V, 6.25mV Step, Default on 1.2V)
- Buck2: Max. Current 3.8A (0.5 V to 1.2V, 6.25mV Step, Default on 1.2V)
- Buck3: Max. Current 3A (0.96V to 1.86 V, 7.5mV Step, Default on 1.8V)
- Buck5: Max. Current 4A (1.5 V to 2.75 V, 12.5mV Step, Default on 2.5 V)
- Boost6: Max. Current 0.4A (8 V to 15 V, 500mV Step, Default on 12 V)
- LSW: Max 300mA. Max. Ron 120mhom, Input Connect to VIN Internally, ON/OFF Controlled by I^2C)
- I^2C Interface up to 3.4MHz
- Independent PMIC Hardware Reset (Make all Channels Return to the Default Voltage)
- DVS (Dynamic Voltage Scaling) Controlled by I^2C Interface
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I^2C Interface
- Pull down Mode to Discharge all Channels Forcedly Controlled by I^2C Interface
- Support to Adjustable Discharge Resister Controlled by I^2C Interface
- Programmable the Various Function by OTP (Each Channel Start up Delay Time, RSTO Delay Time (Power On, RSTO Threshold)
- Enable Output Pin to Synchronous External Device Sequence
- Ultra-Fast Transient Response
- Support to Protection Function (Thermal Shutdown (Typ. 150˚C), Over Voltage Protection (External/Output), Over Current Protection, Over Load Protection)
- Input Voltage Monitor Function: Input Monitor bit will be Set from 0 to 1 when Input Exceeds Specific Value.
- Compact 5mm x 5mm QFN Package, 0.45mm pitch
- Green RoHS Package, Pb-Free Lead Finish, Halogen Free Mold Compound

Applications

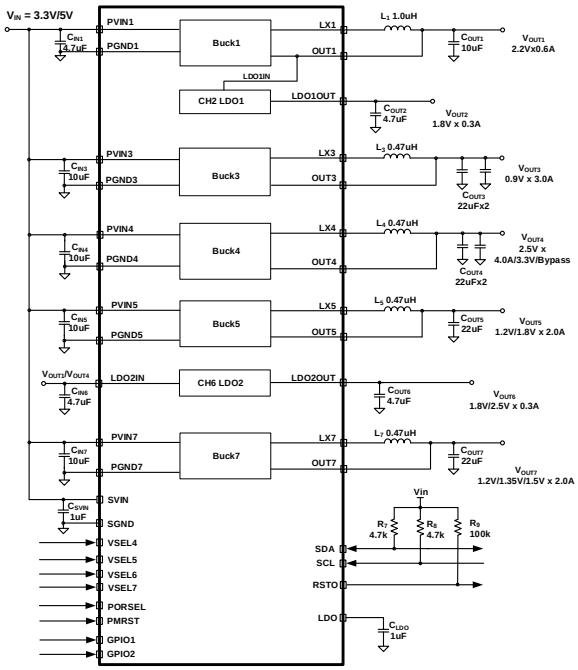
- SSD Power System



Back

Features

- 2.6V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 150/150 mΩ
  - 0.6A Maximum Output Current Capability.
  - Default Output Voltage VOUT1=2.2V.
- Channel 2 LDO1:
  - 0.3A Output Current Capability.
  - Default Output Voltage VOUT2=1.8V
- Channel 3 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 45/20 mΩ
  - 3.0A Maximum Output Current Capability.
  - Default Output Voltage VOUT3=0.90V.
  - 0.55V to 0.95V Programmable, 10mV step.
- Channel 4 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 35/45 mΩ
  - 4.0A Maximum Output Current Capability.
  - Default Output Voltage VOUT4=2.5V/3.3V/Bypass.
  - 2.4V to 3.3V Programmable, 100mV step.
  - Default Output Voltage:
- Channel 5 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40 mΩ
  - 2.0A Output Current Capability.
  - Default Output Voltage:
- Channel 6 LDO2:
  - 0.3A Output Current Capability.
  - Default Output Voltage VOUT6=1.8V/2.5V
- Channel 7 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40 mΩ
  - 2.0A Output Current Capability.
  - Default Output Voltage VOUT7=1.2V/1.35V/1.5V
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I2C Interface
- I2C Interface up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I2C Interface with DVS Function
- 2 kinds of Power on Reset Detection Voltage Level Selected by PORSEL Pin
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
  - Over Voltage Protection (OVP)
  - Over Current Protection (OCP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact package: CSP3.23x3.23-52 (0.4mm pitch)



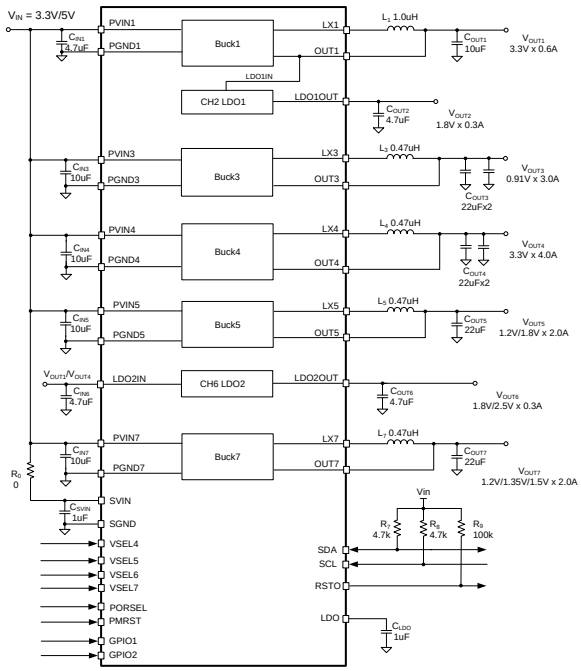
Applications

- SSD Power System

Back

Features

- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 150/150mΩ
  - 0.6A Maximum Output Current Capability
  - Default Output Voltage:
- Channel 2 LDO1:
  - 0.3A Output Current Capability
  - Default Output Voltage VOUT2=1.8V
- Channel 3 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 45/20mΩ
  - 3.0A Maximum Output Current Capability
  - Default Output Voltage VOUT3=0.91V
  - 0.7V to 1.1V Programmable, 10mV Step
- Channel 4 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 35/45mΩ
  - 4.0A Maximum Output Current Capability
  - 2.7V to 3.6V Programmable, 100mV Step
  - Default Output Voltage:
- Channel 5 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40mΩ
  - 2.0A Output Current Capability
  - Default Output Voltage:
- Channel 6 LDO2:
  - 0.3A Output Current Capability
  - oDefault Output Voltage VOUT6=1.8V/2.5V
- Channel 7 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40mΩ
  - 2.0A Output Current Capability
  - Default Output Voltage VOUT7=1.2V/1.35V/1.5V
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I2C Interface
- I2C Interface Up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by
- I2C Interface with DVS Function
- 2 Kinds of Power On Reset Detection Voltage Level Selected by PORSEL Pin
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
  - Over Voltage Protection (OVP)
  - Over Current Protection (OCP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP3.23×3.23-52



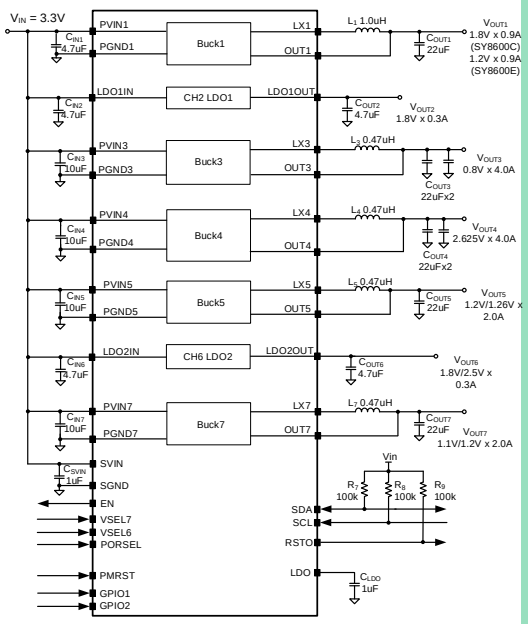
Applications

- SSD Power System

Back

Features

- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 150/150mΩ
  - 0.9A Maximum Output Current Capability
  - Default Output Voltage VOUT1 = 1.8V(SY8600C)
  - Default Output Voltage VOUT1 = 1.2V(SY8600E)
- Channel 2 LDO1:
  - 0.3A Output Current Capability
  - Default Output Voltage VOUT2 = 1.8V
- Channel 3 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 45/20mΩ
  - 4.0A Maximum Output Current Capability
  - Default Output Voltage VOUT3 = 0.8V
  - 0.7V to 1.1V Programmable, 10mV Step
- Channel 4 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 35/45mΩ
  - 4.0A Maximum Output Current Capability
  - Default Output Voltage VOUT4 = 2.625V
  - 2.3625V to 3.15V Programmable, 87.5mV Step
- Channel 5 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40mΩ
  - 2.0A Output Current Capability
  - Default Output Voltage VOUT5 = 1.2V/1.26V, Selected by Pin VSEL6
- Channel 6 LDO2:
  - 0.3A Output Current Capability
  - Default Output Voltage VOUT6 = 1.8V/2.5V, Selected by Pin VSEL7
- Channel 7 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40mΩ
  - 2.0A Output Current Capability
  - Default Output Voltage VOUT7 = 1.1V/1.2V, Selected by Pin VSEL7
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I2C Interface
- I2C Interface up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I2C Interface with DVS Function
- Two Types of Power-On Reset Detection Voltage Level, Selected by PORSEL Pin
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
  - Over Voltage Protection (OVP)
  - Over Current Protection (OCP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP3.23x3.23-52(0.4mm pitch)



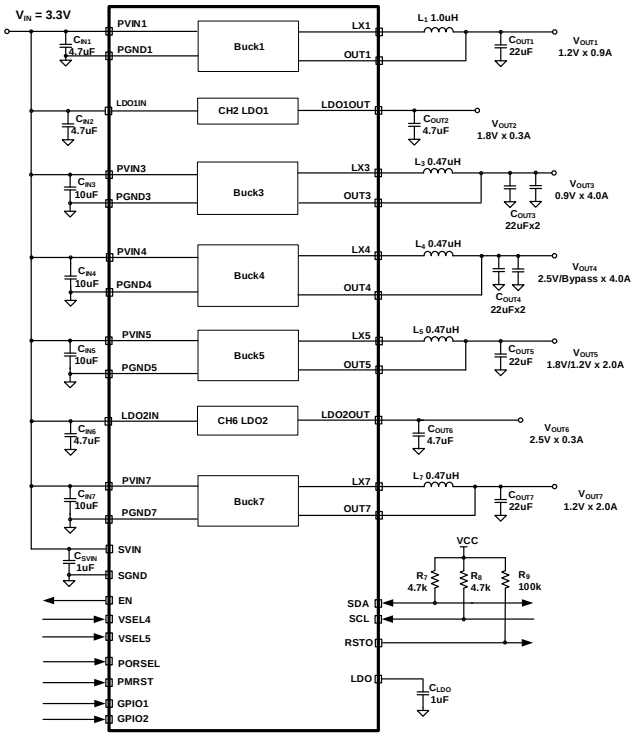
Applications

- SSD Power

Back

Features

- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 150/150 mΩ
  - 0.9A Maximum Output Current Capability
  - Default Output Voltage: VOUT1=1.2V
- Channel 2 LDO1:
  - 0.3A Output Current Capability
  - Default Output Voltage VOUT2=1.8V
- Channel 3 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 45/20 mΩ
  - 4.0A Maximum Output Current Capability
  - Default Output Voltage VOUT3=0.90V
  - o0.7V to 1.1V Programmable, 10mV Step
- Channel 4 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 35/45 mΩ
  - 4.0A Maximum Output Current Capability
  - 2.1V to 3.0V Programmable, 100mV Step
  - Default Output Voltage:
- Channel 5 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40 mΩ
  - 2.0A Output Current Capability
  - Default Output Voltage:
- Channel 6 LDO2:
  - 0.3A Output Current Capability
  - Default Output Voltage VOUT6=2.5V
- Channel 7 Synchronous Buck:
  - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40 mΩ
  - 2.0A Output Current Capability
  - Default Output Voltage VOUT7=1.2V
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I2C Interface
- I2C Interface up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I¬2C Interface with DVS Function
- 2 Kinds of Power on Reset Detection Voltage Level Selected by PORSEL Pin
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
  - Over Voltage Protection (OVP)
  - Over Current Protection (OCP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP3.23x3.23-52(0.4mm pitch)

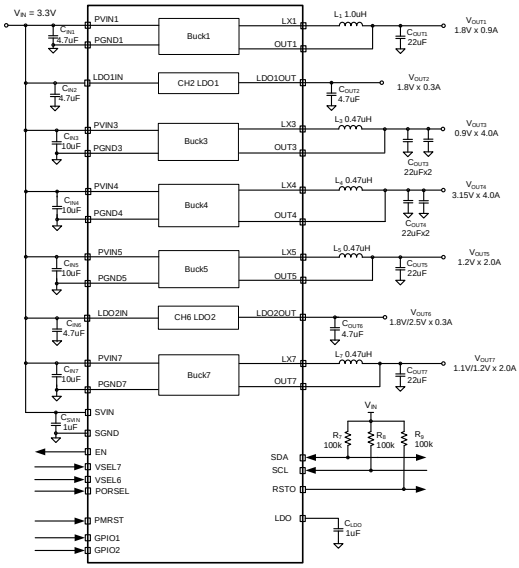


Applications

- SSD Power System

Back

Features



- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
  - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 150/150mΩ
  - 0.9A Maximum Output Current Capability
  - Default Output Voltage VOUT1 = 1.8V
- Channel 2 LDO1:
  - 0.3A Output Current Capability
  - Default Output Voltage VOUT2 = 1.8V
- Channel 3 Synchronous Buck:
  - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 45/20mΩ
  - 4.0A Maximum Output Current Capability
  - Default Output Voltage VOUT3 = 0.9V
  - 0.7V to 1.1V Programmable, 10mV Step
- Channel 4 Synchronous Buck:
  - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 35/45mΩ
  - 4.0A Maximum Output Current Capability
  - Default Output Voltage VOUT4 = 3.15V Selected by PORSEL
  - 2.3625V to 3.15V Programmable, 87.5mV Step
- Channel 5 Synchronous Buck:
  - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 60/40mΩ
  - 2.0A Output Current Capability
  - Default Output Voltage VOUT5 = 1.2V

Channel 6 LDO2:

  - 0.3A Output Current Capability
  - Default Output Voltage VOUT6 = 1.8V/2.5V Selected by VSEL6

- Channel 7 Synchronous Buck:
  - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 60/40mΩ
  - 2.0A Output Current Capability
  - Default Output Voltage VOUT7 = 1.1V/1.2V Selected by VSEL7
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I^2C Interface
- I^2C Interface up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I^2C Interface with DVS
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
  - Overvoltage Protection (OVP)
  - Overcurrent Protection (OCP)
  - Short-Circuit Protection (SCP)
  - Overtemperature Protection (OTP)
- Compact Package: CSP3.23×3.23-52 (0.4mm pitch)

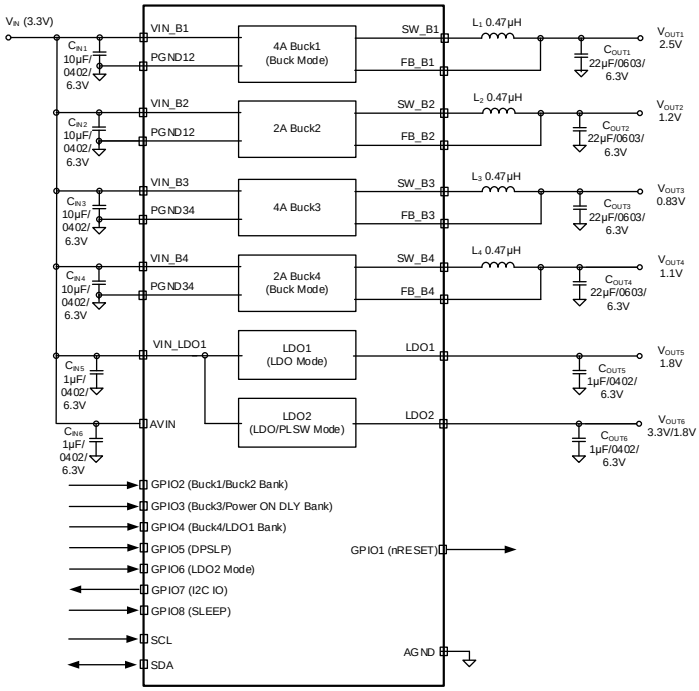
Applications

- SSD Power

Back

Features

- Wide Input Voltage Range
  - VIN = 2.8V to 3.7V
- Channel 1 Synchronous Buck:
  - 4A Maximum Output Current Capability.
  - 1.6V to 3.0V Programmable, 25mV step.
  - Bypass Mode or Buck Mode Selection.
- Channel 2 Synchronous Buck:
  - 2A Maximum Output Current Capability.
  - 0.9V to 2.0V Programmable, 10mV Step.
- Channel 3 Synchronous Buck:
  - 4A Maximum Output Current Capability.
  - 0.5V to 1.2V Programmable, 10mV Step.
- Channel 4 Synchronous Buck:
  - 2A Maximum Output Current Capability.
  - 0.9V to 2.0V Programmable, 50mV Step.
  - Buck Mode or LDO Mode Selection.
- Channel 5 LDO1:
  - 0.4A Maximum Output Current Capability.
  - 1.0V to 2.7V Programmable, 50mV step.
  - Bypass Mode or LDO Mode Selection.
- Channel 6 LDO2:
  - 0.4A Maximum Output Current Capability.
  - 1.0V to 2.7V Programmable, 50mV Step.
  - Bypass Mode or LDO Mode Selection.
- I2C Interface up to 3.4MHz
- Auto PWM/PFM or Forced PWM Controlled by I2C Interface
- Output Voltage Level of Each Channel Controlled by I2C Interface
- Reliable Protections:
  - Input/Output Over Voltage Protection(OVP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP2.6×2.6-36



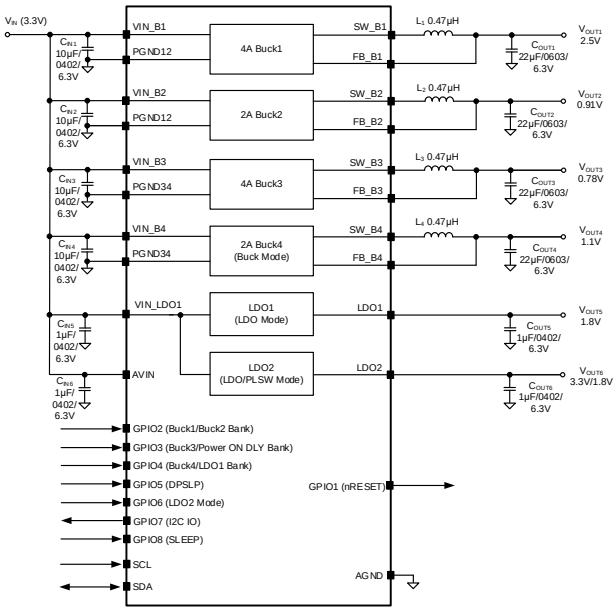
Applications

- Solid State Drives
- Microcontroller

Back

Features

- Wide Input Voltage Range
  - V_{IN} = 2.8V to 3.7V
- Channel 1 Synchronous Buck:
  - 4A Maximum Output Current Capability.
  - 1.6V to 3.0V Programmable, 25mV Step.
- Channel 2 Synchronous Buck:
  - 2A Maximum Output Current Capability.
  - 0.9V to 2.0V Programmable, 10mV Step (or 0.5V to 1.6V Programmable, 10mV Step. Di-vided by OTP)..
- Channel 3 Synchronous Buck:
  - 4A Maximum Output Current Capability.
  - 0.5V to 1.2V Programmable, 10mV Step.
- Channel 4 Synchronous Buck:
  - 2A Maximum Output Current Capability.
  - 0.9V to 2.0V Programmable, 50mV Step.
  - Buck Mode or LDO Mode Selection.
- Channel 5 LDO1:
  - 0.4A Maximum Output Current Capability.
  - 1.0V to 2.7V Programmable, 50mV step.
  - Bypass Mode or LDO Mode Selection.
- Channel 6 LDO2:
  - 0.4A Maximum Output Current Capability.
  - 1.0V to 2.7V Programmable, 50mV Step.
  - Bypass Mode or LDO Mode Selection.
- I^2C Interface up to 3.4MHz
- Auto PWM/PFM or Forced PWM Controlled by I^2C Interface
- Output Voltage Level of Each Channel Controlled by I^2C Interface
- Reliable Protections:
  - Input/Output Over Voltage Protection(OVP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP2.5×2.45-36



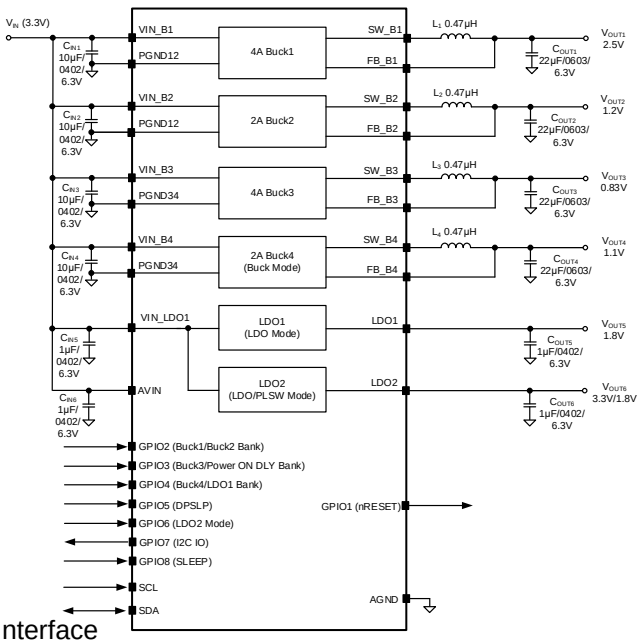
Applications

- Solid State Drives
- Microcontroller

Back

Features

- Wide Input Voltage Range
  - V_{IN} = 2.8V to 3.7V
- Channel 1 Synchronous Buck:
  - 4A Maximum Output Current Capability.
  - 1.6V to 3.0V Programmable, 25mV Step.
- Channel 2 Synchronous Buck:
  - 2A Maximum Output Current Capability.
  - 0.9V to 2.0V Programmable, 10mV Step (or 0.5V to 1.6V Programmable, 10mV Step. Di-vided by OTP).
- Channel 3 Synchronous Buck:
  - 4A Maximum Output Current Capability.
  - 0.5V to 1.2V Programmable, 10mV Step.
- Channel 4 Synchronous Buck:
  - 2A Maximum Output Current Capability.
  - 0.9V to 2.0V Programmable, 50mV Step.
  - Buck Mode or LDO Mode Selection.
- Channel 5 LDO1:
  - 0.4A Maximum Output Current Capability.
  - 1.0V to 2.7V Programmable, 50mV Step.
  - Bypass Mode or LDO Mode Selection.
- Channel 6 LDO2:
  - 0.4A Maximum Output Current Capability.
  - 1.0V to 2.7V Programmable, 50mV Step.
  - Bypass Mode or LDO Mode Selection.
- I^2C Interface up to 3.4MHz
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- Reliable Protections:
  - Input/Output Over Voltage Protection(OVP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP2.5×2.45-36

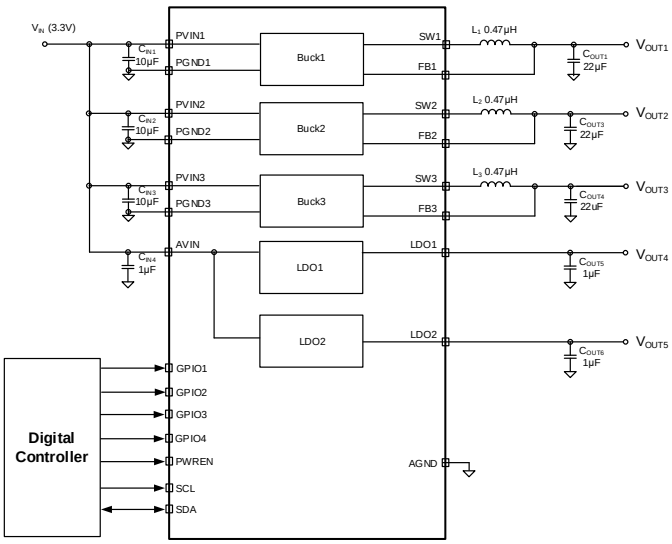


Applications

- Solid State Drives
- Microcontroller

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Features



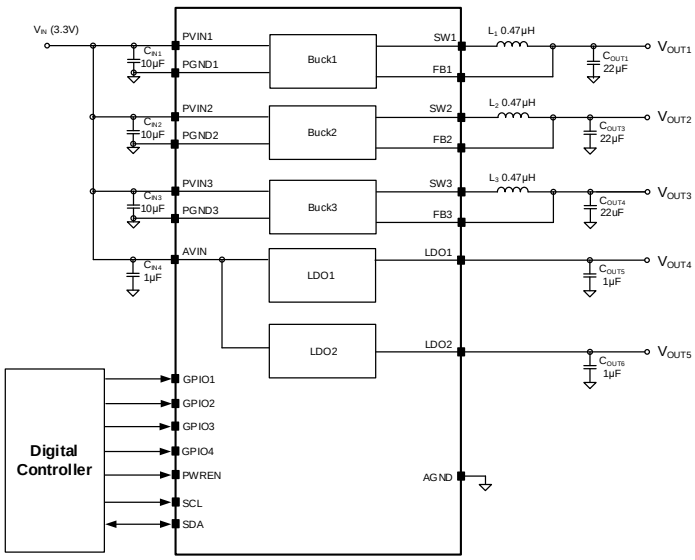
- Wide Input Voltage Range
  - VIN = 2.9V to 3.7V
- Channel 1 Synchronous Buck:
  - 4A Maximum Output Current Capability
  - 2.1V to 3.3V Programmable, 12.5mV Step
  - 40mohm/25mohm RDS_ON
- Channel 2 Synchronous Buck:
  - 3A Maximum Output Current Capability
  - 0.6V to 1.5V Programmable, 9.375mV Step
  - 80mohm/35mohm RDS_ON
- Channel 3 Synchronous Buck:
  - 3A Maximum Output Current Capability
  - 1.0V to 3.3V Programmable, 12.5mV Step
  - 50mohm/50mohm RDS_ON
- Channel 4 LDO1:
  - 0.3A Maximum Output Current Capability
  - 1.0V to 2.5V Programmable, 12.5mV Step
- Channel 5 LDO2:
  - 0.3A Maximum Output Current Capability
  - 1.6V to 3.3V Programmable, 12.5mV Step
- I^2C Interface up to 1MHz
- Auto PWM/PFM or Forced PWM Controlled by I^2C Interface
- Output Voltage Level of Each Channel Controlled by I^2C Interface
- Reliable Protections:
  - Input/output Over Voltage Protection (OVP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP2.42×2.82-36

Applications

- Solid State Drives
- Microcontroller

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Features



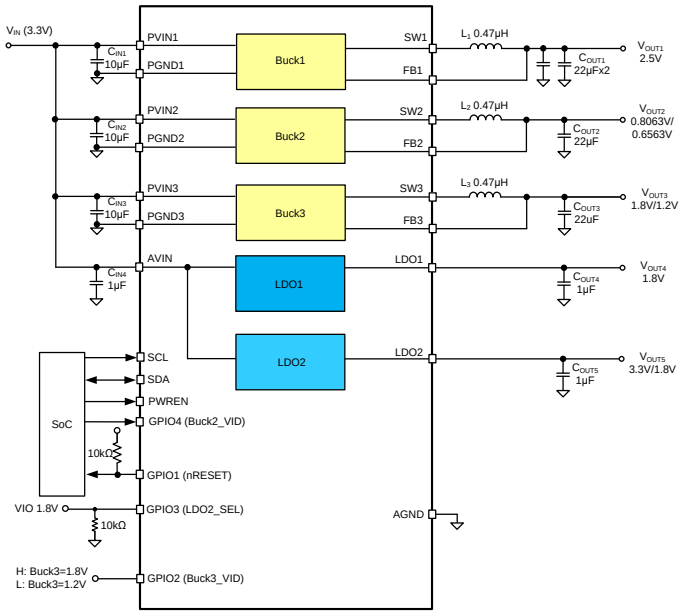
- Wide Input Voltage Range
  - VIN = 2.9V to 3.7V
- Channel 1 Synchronous Buck:
  - 4A Maximum Output Current Capability
  - 2.1V to 3.3V Programmable, 12.5mV Step
  - Bypass Mode or Buck Mode Selection
  - 40mohm/25mohm RDS_ON
- Channel 2 Synchronous Buck:
  - 3A Maximum Output Current Capability
  - 0.6V to 1.5V Programmable, 9.375mV Step
  - 80mohm/35mohm RDS_ON
- Channel 3 Synchronous Buck:
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  - 1.0V to 3.3V Programmable, 12.5mV Step
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  - Over Temperature Protection (OTP)
- Compact Package: CSP2.42×2.82-36

Applications

- Solid State Drives
- Microcontroller

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Features



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  - 2.1V to 3.0V Programmable, 12.5mV step.
  - 40mohm/25mohm RDS_ON
- Channel 2 Synchronous Buck:
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  - 0.6V to 1.5V Programmable, 9.375mV Step.
  - 80mohm/35mohm RDS_ON
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  - 1.0V to 3.0V Programmable, 12.5mV Step.
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  - 0.3A Maximum Output Current Capability.
  - 1.0V to 2.5V Programmable, 12.5mV Step.
- Channel 5 LDO2:
  - 0.3A Maximum Output Current Capability.
  - 1.6V to 3.0V Programmable, 12.5mV step.
  - Bypass Mode or LDO Mode Selection.
- I2C Interface up to 1MHz
- Auto PWM/PFM or Forced PWM Controlled by I2C Interface
- Output Voltage Level of Each Channel Controlled by I2C Interface
- Reliable Protections:
  - Input/output Over Voltage Protection (OVP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP2.42×2.82-36

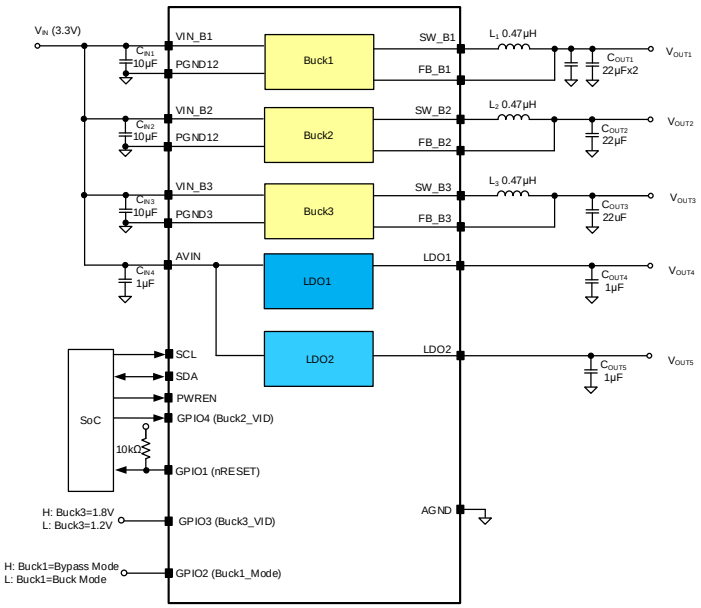
Applications

- Solid State Drives
- Microcontroller

Back

Features

- Wide Input Voltage Range
  - VIN = 2.9V to 3.7V
- Channel 1 Synchronous Buck:
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  - 2.1V to 3.3V Programmable, 12.5mV Step
  - Bypass Mode or Buck Mode Selection
  - 40mohm/25mohm RDS_ON
- Channel 2 Synchronous Buck:
  - 3A Maximum Output Current Capability
  - 0.6V to 1.5V Programmable, 9.375mV Step
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  - 1.0V to 2.5V Programmable, 12.5mV Step
- Channel 5 LDO2:
  - 0.3A Maximum Output Current Capability
  - 1.6V to 3.3V Programmable, 12.5mV Step
- I2C Interface up to 1MHz
- Auto PWM/PFM or Forced PWM Controlled by I2C Interface
- Output Voltage Level of Each Channel Controlled by I2C Interface
- Reliable Protections:
  - Input/output Over Voltage Protection (OVP)
  - Short Circuit Protection (SCP)
  - Over Temperature Protection (OTP)
- Compact Package: CSP2.42×2.82-36



Applications

- Solid State Drives
- Microcontroller

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Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	Number of Channels	Package	Application	Integrated Function
SQ40001RGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch Bi-directional DC/DC regulator, I2C interface
SYT664RGC	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch Bi-directional DC/DC regulator, I2C interface.
SY72001RGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch Bi-directional DC/DC regulator, I2C interface.
SY72025RGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY72025ARGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY72025BRGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY72025CRGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY6402QVC	2.7	16	1	QFN3×4-19	SSD	Input-side current limit switch Bi-directional DC-DC Regulator with disconnect switch: Boost Charging Mode and Buck Discharging Mode .

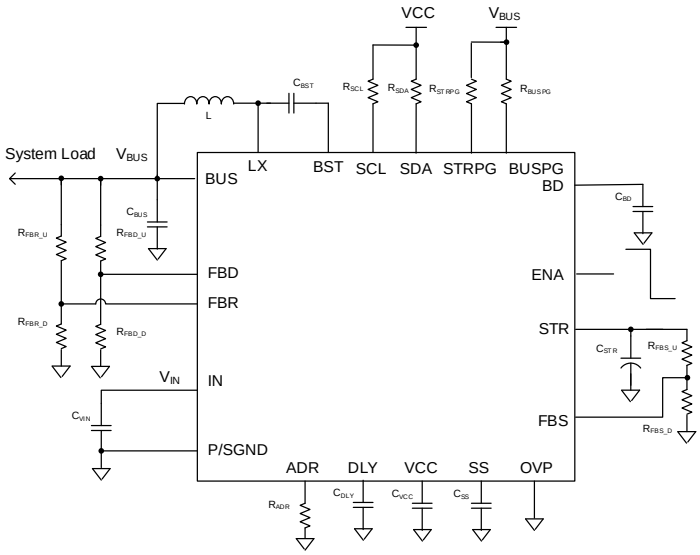
Back

Features

- Low $R_{DS(ON)}$ for Internal Switches
  - Input Reverse Blocking Switch: 24mΩ (Typical)
  - High-side and Low-side Switches of Bi-directional DC/DC Regulator: 70mΩ/70mΩ (Typical)
  - Disconnect Switch: 40mΩ (Typical)
- 2.6V-16V Input Voltage Range
- Storage Voltage Rating Up to 36V
- Programmable Input Current Limit from 1.2A to 6.2A
- Selectable Over Voltage Protection: 3.8V 6.1V and 14.3V
- Reverse Blocking at Input Side to Prevent From Leakage Current
- Programmable Reverse Blocking Switch Turn On Delay Time
- Programmable Reverse Blocking Switch Soft-start Time
- Integrated High-efficiency Bi-directional Dc-Dc Regulator: Boost Charging Mode and Buck Discharging Mode Auto-alternating According to the Programmed BUS Voltage Detection and Regulation Level
- Programmable Quasi-Fixed Frequency Constant OFF Time Control for Steady-State Operation
- Programmable Boost Charging Peak Current
- Programmable Storage Voltage
- MTP(Multi-Times Programming) Available for Control Parameters Programming by I^2C
- Short-circuit Protection at Energy Storage Side
- Storage Capacitance Measurement and Abnormal ESR Detection
- Enable Control
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×4-25

Applications

- Cable, DSL, PON Modems
- Home Gateway
- Access Point Network



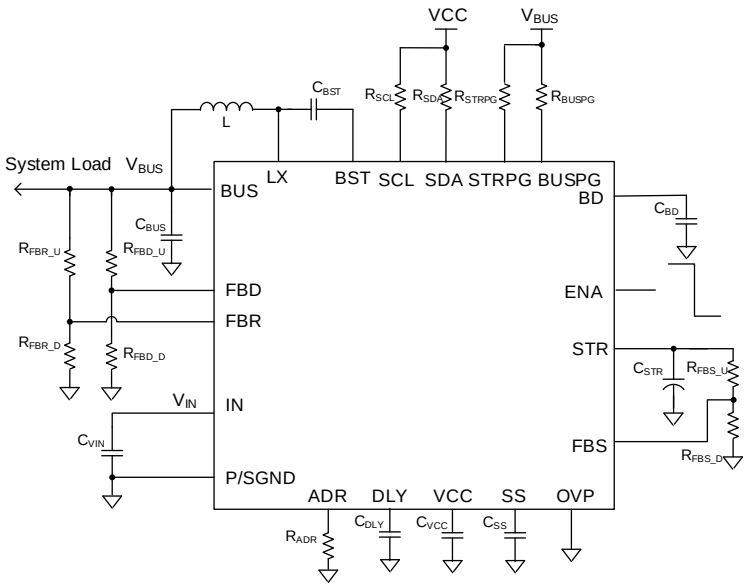
Back

Features

- Low RDS(ON) for Internal Switches
  - Input Reverse Blocking Switch: 24mΩ (Typical)
  - High-side and Low-side Switches of Bi-directional DC/DC Regulator: 70mΩ /70mΩ (Typical)
- - Disconnect Switch: 40mΩ (Typical)
- 2.6V-16V Input Voltage Range
- Storage Voltage Rating Up to 36V
- Programmable Input Current Limit from 1.2A to 6.2A
- Selectable Over Voltage Protection: 3.8V, 5.7V, and 13.3V
- Reverse Blocking at Input Side to Prevent From Leakage Current
- Programmable Reverse Blocking Switch Turn On Delay Time
- Programmable Reverse Blocking Switch Soft-start Time
- Integrated High-efficiency Bi-directional DC/DC Regulator: Boost Charging Mode and Buck Discharging Mode Auto-alternating According to the Programmed BUS Voltage Detection and Regulation Level
- Programmable Quasi-Fixed Frequency Constant OFF Time Control for Steady-State Operation
- Programmable Boost Charging Peak Current and Adaptive Charging Current Fold-back
- Programmable Storage Voltage
- MTP(Multi-Times Programming) Available for Control Parameters Programming by I2C
- Short-circuit Protection at Energy Storage Side
- Storage Capacitance Measurement and Abnormal ESR Detection
- Enable Control
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×4-25

Applications

- Solid-state Drivers
- Backup Power Supply



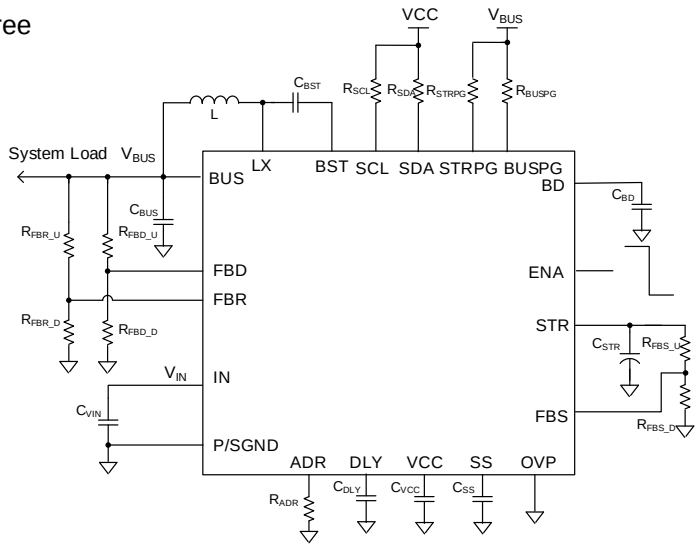
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Features

- Low RDS(ON) for Internal Switches
  - Input Reverse Blocking Switch: 24mΩ (Typical)
  - High-side and Low-side Switches of Bi-directional DC/DC Regulator: 70mΩ/70mΩ (Typical)
  - Disconnect Switch: 40mΩ (Typical)
- 2.6V-16V Input Voltage Range
- Storage Voltage Rating Up to 36V
- Programmable Input Current Limit from 1.2A to 6.2A
- Selectable Over Voltage Protection: 3.8V 6.1V and 14.3V
- Reverse Blocking at Input Side to Prevent From Leakage Current
- Programmable Reverse Blocking Switch Turn On Delay Time
- Programmable Reverse Blocking Switch Soft-start Time
- Integrated High-efficiency Bi-directional Dc-Dc Regulator: Boost Charging Mode and Buck Discharging Mode Auto-alternating According to the Programmed BUS Voltage Detection and Regulation Level
- Programmable Quasi-Fixed Frequency Constant OFF Time Control for Steady-State Operation
- Programmable Boost Charging Peak Current
- Programmable Storage Voltage
- MTP(Multi-Times Programming) Available for Control Parameters Programming by I2C
- Short-circuit Protection at Energy Storage Side
- Storage Capacitance Measurement and Abnormal ESR Detection
- Enable Control
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×4-25

Applications

- Solid-State Drivers
- Backup Power Supply



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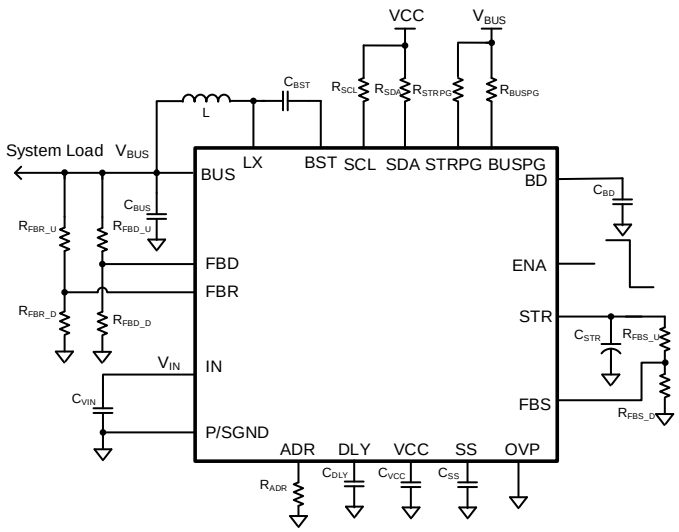
Features

- Low RDS(ON) for internal switches
  - Input Reverse Blocking Switch: 24 mΩ (Typical)
  - Bi-directional Dc-Dc Regulator: 70 mΩ /70 mΩ/40 mΩ (Typical)
- IN/BUS/STR Voltage ADC and Input Current ADC
- BUS Auto-discharge Function
- Selectable Boost CV Mode and Burst Mode
- Programmable Boost Soft Start Time
- Selectable Pulse Pre-charge Current for Supercapacitor Application
- High accuracy storage Capacitance Measurement: ±5%
- Pre-Bias function in capacitance measurement
- Support quick POR function
- Compact package: QFN4X4-25

PN	Quick POR	Boost soft start step
SY72025RGQ	Yes	250us
SY72025ARGQ	No	250us
SY72025BRGQ	Yes	31.25us
SY72025CRGQ	No	31.25us

Applications

- Solid-State Drivers
- Backup Power Supply



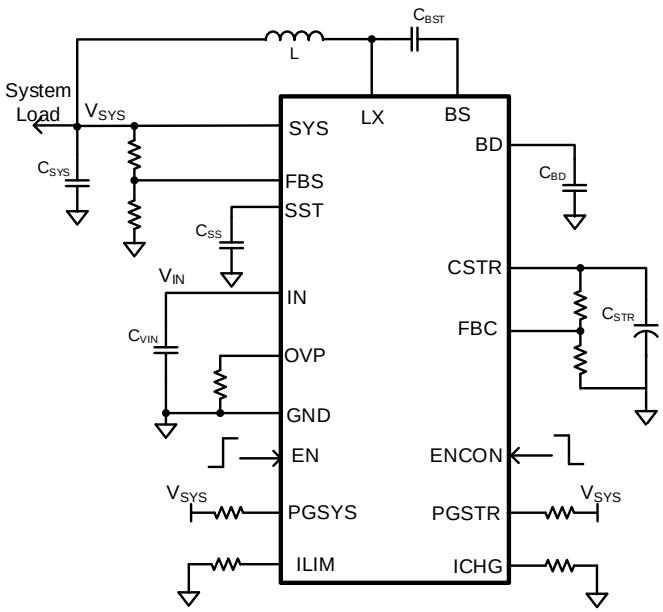
Back

Features

- Low RDS(ON) for internal switches
  - Input Reverse Blocking Switch: 50 mΩ
  - High-side and Low-side Switches of Bi-directional Dc-Dc Regulator: 60 mΩ /60 mΩ
  - Disconnect Switch: 30 mΩ
- 2.7V-16V Input Voltage Range
- 36V Storage Voltage Rating
- Programmable Input Current Limit from 1A to 5A
- Selectable Over Voltage Protection: 3.3V, 5.0V, and 12V
- Reverse Blocking at Input Side
- Programmable Soft-start Time
- Integrated High-efficiency Bi-directional Dc-Dc Regulator: Boost Charging Mode and Buck Discharging Mode Auto-alternating with Programmable System Voltage
- Quasi-Fixed Frequency Constant OFF Time Control for Stable Operation: 500kHz
- Programmable Boost Charging Current
- Programmable Storage Voltage
- Power Path Management
- Short-circuit Protection at Energy Storage Side
- Enable Control
- RoHS Compliant and Halogen Free
- Compact package: QFN3X4-19

Applications

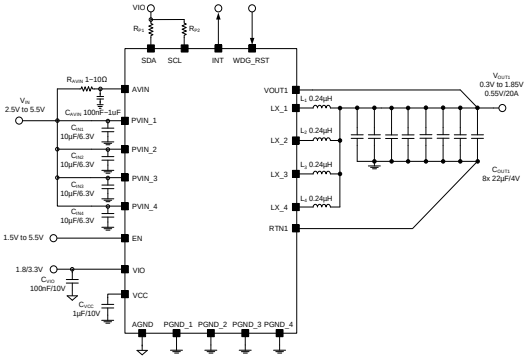
- Solid-State Drivers
- Backup Power Supply

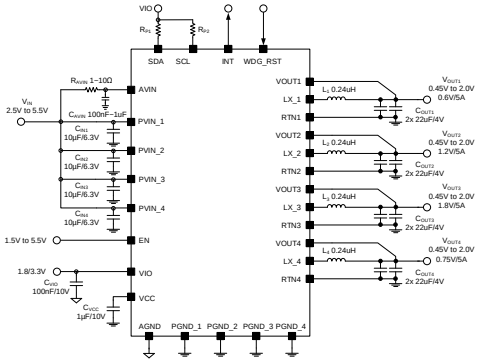


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Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	Number of Channels	Package	Application	Integrated Function
SQ48300AVCS	2.5	5.5	1	WLCSP 2.66×3.89-54	Optical Module	5A per Phase, Single Output 4-Phase total 20A Output Current Capability; Supports Phase Shedding
SQ48300BVCS	2.5	5.5	4	WLCSP 2.66×3.89-54	Optical Module	Quad Output 1+1+1+1, 5A Per Phase Output Current Capability
SY70300AVCS	2.5	5.5	1	WLCSP 2.66×3.89-54	Optical Module	4 integrated power stages and each phase has the capability to deliver up to 5A totally 20A continuous output current.
SY70300BVCS	2.5	5.5	4	WLCSP 2.66×3.89-54	Optical Module	4 integrated power stages and each output has the capability to deliver up to 5A continuous output current.
SY70300EVCS	2.5	5.5	2	WLCSP 2.66×3.89-54	Optical Module	Integrated 4 power stages and dual outputs with 3 phase + 1 phase , each phase has the capability to deliver up to 5A output current. FPWM operation to reduce output ripple.
SY70300FVCS	2.5	5.5	3	WLCSP 2.66×3.89-54	Optical Module	Integrated 4 power stages and triple outputs with 2 phase + 1 phase + 1 phase , each phase has the capability to deliver up to 5A output current. FPWM operation to reduce output ripple.
SY70300JVCS	2.5	5.5	2	WLCSP 2.66×3.89-54	Optical Module	Integrated 4 power stages and dual outputs with 2 phase + 2 phase , each phase has the capability to deliver up to 5A output current. FPWM operation to reduce output ripple.
SY70301WBQ	2.5	5.5	4	QFN4.5×5-30	Smart Phones, Tablets	Integrate 4-channel high efficiency Buck converters, which provide 6A/4A/6A/4A output current and output voltage covers 0.6V~3.7V, with independent enable pin; support 3.4MHz I^2C communication, DVS, PFM/FCCM control; Protection: OVP/OCP/SCP/OTP etc.

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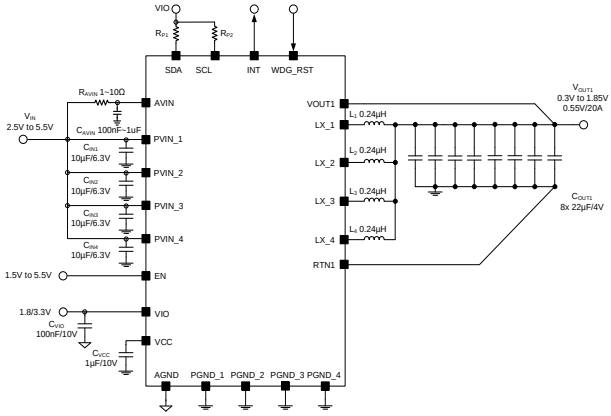
Features

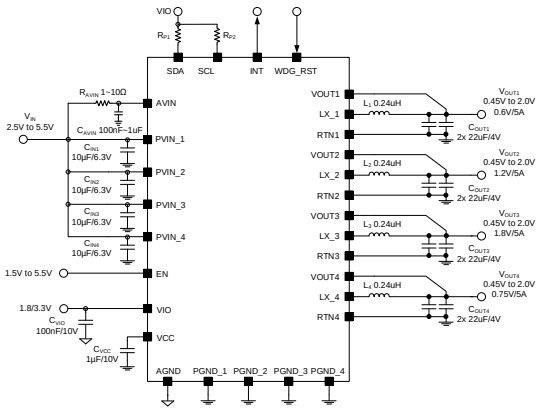
- Five Distinct Phase Configurations:
  - SQ48300A (3+1)
  - SQ48300B (1+1+1+1)
- I²C Programmable Output Voltages from 0.3V to 1.85V or 0.45V to 2V
- COT Control Achieves Fast Transient Performance
- ±1.0% Accuracy with Remote Sensing
- Fixed-phase Configuration and Continuous Conduction Mode (FPCCM), OTP Programmable Light Load Mode(DCM/FPCCM)
- Supports Phase Shedding if Configured with DCM Mode by Factory OTP
- Supports Startup with Pre-Biased Output Voltage
- Status Feedback with Interrupt Pin
- Reliable OTP/SCP/UVP/OVP Protection

Applications

- Industrial MPU Power

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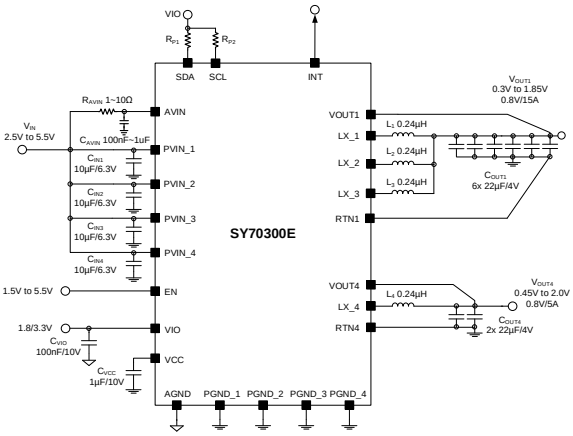
Features

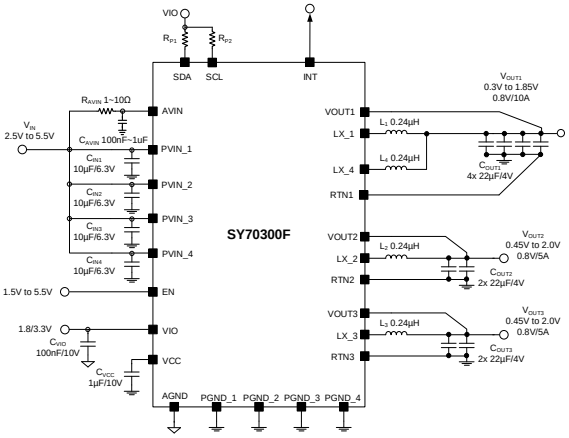
- 2.5V to 5.5V Wide Input Voltage Range
- Five Distinct Phase Configurations:
  - SY70300A (3+1)
  - SY70300B (1+1+1+1)
- 5A per Phase Output Current Capability
- I²C Programmable Output Voltages from 0.3V to 1.85V or 0.45V to 2V
- COT Control Achieves Fast Transient Performance
- ±1.0% Accuracy with Remote Sensing
- Fixed-phase Configuration and Continuous Conduction Mode (FPCCM), OTP Programmable Light Load Mode(DCM/FPCCM)
- Supports Phase Shedding if Configured with DCM Mode by Factory OTP
- Supports Startup with Pre-Biased Output Voltage
- Status Feedback with Interrupt Pin
- Reliable OTP/SCP/UVP/OVP Protection
- Compact Package: WLCSP2.66×3.89-54

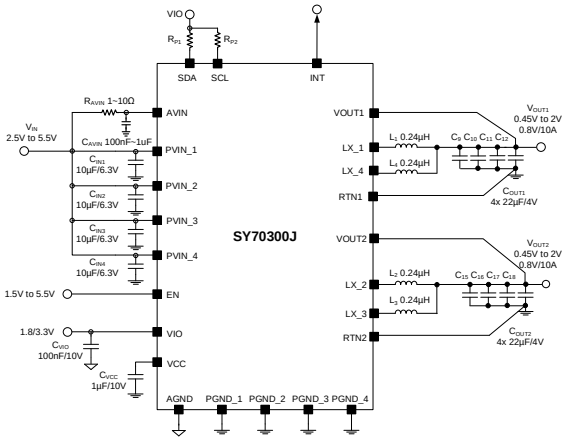
Applications

- Smartphones, Tablets
- FPGA and ASIC Power
- Industrial MPU Power

Back







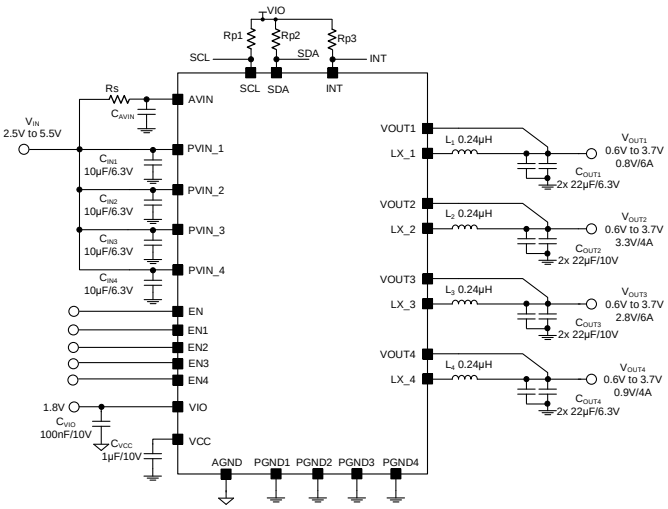
Features

- 2.5V to 5.5V Wide Input Voltage Range
- Three Distinct Phase Configurations:
  - SY70300E (3+1)
  - SY70300F (2+1+1)
  - SY70300J (2+2)
- 5A per Phase Output Current Capability
- I^2C Programmable Output Voltages from 0.3V to 1.85V or 0.45V to 2V
- COT Control Achieves Fast Transient Performance
- ±1.0% Accuracy with Remote Sensing
- Fixed-phase Configuration and Continuous Conduction Mode (FPCCM), OTP Programmable Light Load Mode(DCM/FPCCM)
- Supports Phase Shedding if Configured with DCM Mode by Factory OTP
- Supports Startup with Pre-Biased Output Voltage
- Status Feedback with Interrupt Pin
- Reliable OTP/SCP/UVP/OVP Protection
- Compact Package: WLCSP2.66×3.89-54

Applications

- Smartphones, Tablets
- FPGA and ASIC Power
- Industrial MPU Power
- Optical Module

Back



Features

- 2.5V to 5.5V Wide Input Voltage Range
- Four Output Channels: Two with 6A Output Current per Channel; Two with 4A Output Current per Channel
- Low IQ in Low Power Mode
- COT Control Achieves Fast Transient Performance
- I^2C Programmable Output Voltages from 0.6V to 3.7V
- ±1.0% Output Accuracy
- Independent Dynamic Voltage Scaling (DVS) for Each Output
- Status Feedback with Interrupt Pin
- Reliable OTP/UVP/OVP Protection
- Compact Package: QFN4.5×5-30

Applications

- Smartphones, Tablets
- FPGA and ASIC Power
- Industrial MPU Power

Back

Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	Number of Channels	Package	Application	Integrated Function
SY7510TQC	VGH:5V VGL:-18V	VGH:40V VGL:0V	14	QFN4×5-28	TV LCD Panel	14-Channel level shifter.
SY7511QFC	VGH=17V VGL=-18V	VGH=42V VGL=-3V	10	QFN4×4-32	TFT LCD Panel/MNT Panel	6 channel + 4 channel level shifter.
SY7512QAC	VGH=16V VGL=-20V	VGH=40V VGL=-3V	10	QFN4×4-28	TFT LCD Panel	6 channel level shifter with gate shaping function and 4 channel level shifter without gate shaping function.
SY7565QCC	8.6	15.9	3	QFN4×4-24	TV LCD Panel	a synchronous Boost regulator and 2 channel high speed operation amplifies for TV LCD panel.
SY7561UYC	2.5	4.8	3	CSP2.4×2.4-36	Smart Phone OLED panel	a synchronous boost regulator for ELVDD, a dual-phase buck-boost regulator for ELVSS, and a synchronous boost regulator for AVDD.
SY7561BUYS	2.5	4.8	3	CSP2.4×2.4-36	Smart Phone OLED panel	a synchronous boost regulator for ELVDD, a dual-phase buck-boost regulator for ELVSS, and a synchronous boost regulator for AVDD.
SY7566VFC	2.6	6	5	QFN3×3-22	NB TFT LCD Panel	an AVDD synchronous boost converter for source driver, a VGH asynchronous boost converter for gate driver, a VGL negative charge pump for gate driver, two high performance OPAMPs for HAVDD and VCOM rails, and a voltage detector RESET.
SY7571RKC	8	18	22	QFN6×6-52	FHD TV LCD Panel	a synchronous Buck regulators, an AVDD Boost regulator, an HAVDD OPAMP, a positive and a negative charge pump controller for VGH and VGL, a gate pulse modulator VGHM, 14 channel gamma and 2 channel VCOM OPAMP.
SY7576QPC	8.6	14.7	4	QFN5×5-36	TFT LCD TV Panel	4 Phase AVDD Boost Controller.
SY7578TOQ	9.5	14.7	14	QFN8×8-72	TV LCD Panel	AVDD Boost, VGH/VGL charge pump, VCOM OPAMP, Gamma reference LDO.
SY77502XKQ	9.5	14.7	19	QFN12×8-88	TFT LCD Panel	4 channels Buck regulator for system power, an AVDD Boost regulator for source driver, a VGH Boost controller and a VGL Buck-Boost controller, 3 channels high speed operation amplifier for VCOM buffer, 14 channels programmable gamma reference and 19 channels level shifters for gate driver
SY7627RMC	VDD: 2.6V VGH: 7V VGL: -20V VSS1/2: VGL+0.3V	VDD: 5.5V VGH: 40V VGL: 0V VSS1/2: 0V	19	QFN6×6-48	TV LCD Panel	19-Channel level shifter.
SY7627DRMQ	VDD: 2.6V VGH: 7V VGL: -20V VSS1/2: VGL+0.3V	VDD: 5.5V VGH: 40V VGL: 0V VSS1/2: 0V	19	QFN6×6-48	TV LCD Panel	19-Channel level shifter.

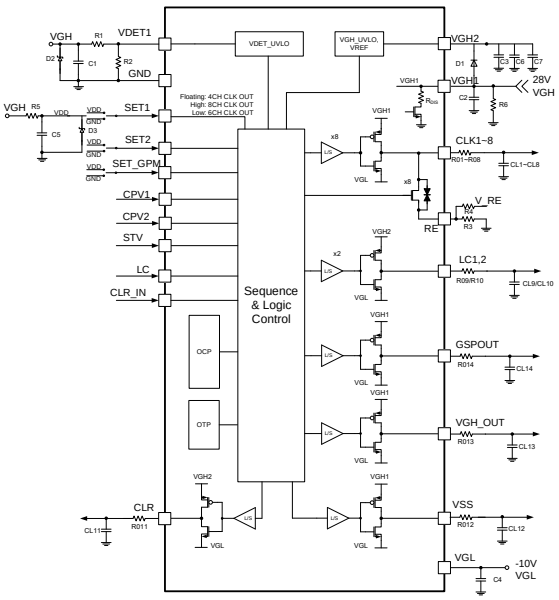
Back

Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	Number of Channels	Package	Application	Integrated Function
SY7630CQCC	2.3	5.5	3	QFN4×4-24	Monitor/NB LCD Panel Power	AVDD Boost, VGH/VGL charge pump, VCOM OPAMP, GPM.
SY7634RPC	9.5	14	7	QFN5×5-40	UD TV LCD Panel	2 channel Buck regulators , an AVDD Boost regulator , a VGH Boost or charge pump controller, a VGL Buck-Boost or charge pump controller, and an OPAMP with temperature compensation.
NEW SY7634CRPQ	9.5	14	7	QFN5×5-40	UD TV LCD Panel	2 channel Buck regulators , an AVDD Boost regulator , a VGH Boost or charge pump controller, a VGL Buck-Boost or charge pump controller, an VSS OPAMP and an VCOM OPAMP
SY7636ARMC	2.9	5.5	4	QFN6×6-48	E-Book/ E-Writer/ E-ink EPD	+/-15V LDOs for EPD source driver, adjustable pos. & neg. charge pumps for EPD gate driver, a VCOM OPAMP, temperature measurement function.
SY7686DCC	2.5	5.5	2	DFN3×3-12	PAD Panels/Active Matrix OLED	a synchronous boost regulator and a synchronous Buck-boost regulator.
SY7687QEC	AVDD:6.5V DVDD:2.5V	AVDD:18V DVDD:3.6V	15	QFN5×5-32	TFT-LCD TVs/ Monitors/ PC	14 channel voltage references for gamma correction and one voltage reference for VCOM in TFT LCD panels.
SY7696BQEC	2.9	5.5	5	QFN5×5-32	Electronic Paper Display	a single-chip power management IC designed for electronic paper display.
SY71500QFQ	2.6	3.6	13	QFN4×4-32	TV LCD Panel	13 channel level shifters; OCP level 100mA.
SY71503QFQ	2.6	3.6	13	QFN4×4-32	TV LCD Panel	13 channel level shifters; OCP level 60mA
SY71600RPC	AVDD:11V	AVDD:20V DVDD:3.3V	8	QFN5×5-40	OLED TV Panel	8-channel gamma solution for OLED display.
SY71100TOQ	9.5	14.7	36	QFN8×8-72	UD TV LCD Panel	4ch Buck regulator, an AVDD Boost regulator, a VGH positive charge pump, a VGL negative charge pump, 3 channel operation amplifier, 14 channel gamma reference and 12 channel level shifters.

Back

Features

- Input Supply Voltage Range:
  - VGH: 5V to 40V
  - VGL: -18V to 0V
- 14 Channel Level Shifter
- 55V Maximum Input for VGH-VGL
- Phase Option with 4-Phase, 6-Phase or 8-Phase
- Over Current Protection
- VGH Input Under Voltage Lockout
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×5-28



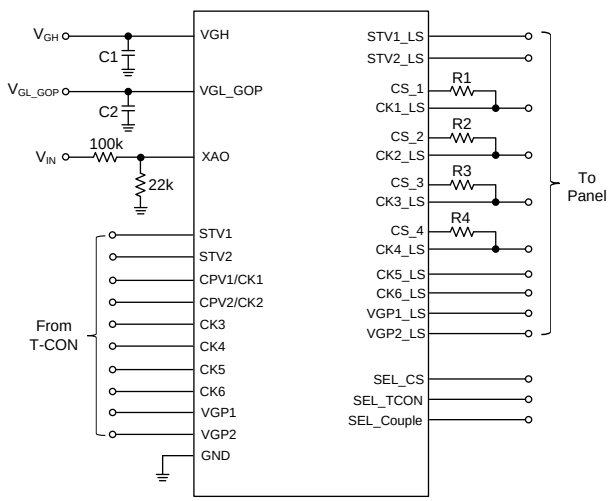
Applications

- TFT-LCD Panel

SY7511QFC - 10-Channel Level Shift IC for TFT-LCD Panel

Features

- High Voltage Scan Driver
  - Output levels of -18V to 42V
  - 10 channel scan drivers with OCP protection
  - High output slew rate to drive up to 5nF load
  - Power off discharge function
- Input UVLO
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN4x4-32



Applications

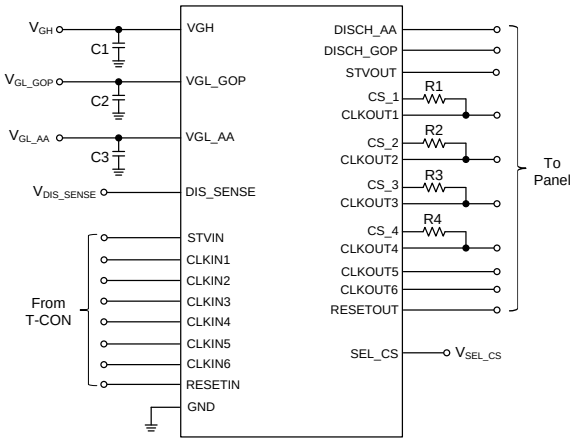
- TFT-LCD Panel

Back

SY7512QAC - 10-Channel Level Shift IC for TFT-LCD Panel

Features

- High Voltage Scan Driver
  - Output Levels of -20V to 40V
  - 10 Channel Scan Drivers with OCP Protection
  - High Output Slew Rate to Drive Up to 5nF Load
  - Power Off Discharge Function
- Input UVLO
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN4x4-28



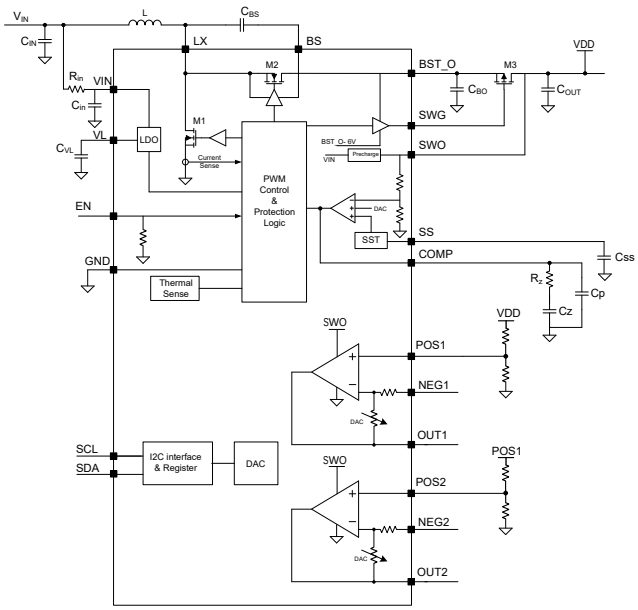
Applications

- TET-LCD Panel

SY7565QCC - SUB PMIC for TV LCD Panel

Features

- Wide Input Range: 8.6V to 15.9V
- 500kHz Switching Frequency
- Low RDS(ON) Internal Switch
  - Main FET: 75mΩ
  - Rectifier FET: 45mΩ
- External Loop Compensation
- External Soft-start Time Limit the Inrush Current
- Input Voltage UVLO
- Over Temperature Protection
- Output Over Voltage Protection
- 2 Channel High Speed Operation Amplifier
- I2C Compatible Interface
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×4-24



Applications

- TET-LCD Panel

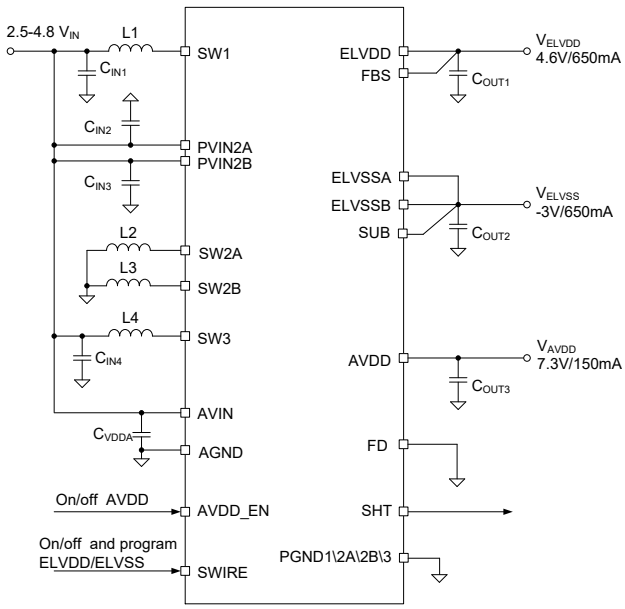
Back

Features

- 2.5V to 4.8V Input Voltage Range
- ELVDD Boost Converter:
  - 4.6V to 5V Output Voltage Programmable, 4.6V Default Voltage
  - 0.5% Output Voltage Accuracy
  - 800mA Output Current Capability
  - Output Voltage Sensing
  - Output True Shutdown
- ELVSS Dual-phase Buck-Boost Converter:
  - -5.6V to -0.8V Output Voltage Programmable, -3V Default Voltage
  - ±50mV Output Voltage Accuracy at 25℃
  - 800mA Output Current Capability
  - Output True Shutdown
- AVDD Boost Converter:
  - 5.5V to 7.9V Output Voltage Programmable, 7.3V Default Voltage
  - 1% Output Voltage Accuracy
  - 150mA Output Current Capability
  - EN Control On/Off
  - Output True Shutdown
- Single Wire Digital Interface for Programming
- Short Circuit Protection (SCP)
- Thermal Shutdown (OTP)
- Compact Package: CSP 2.4x2.4-36

Applications

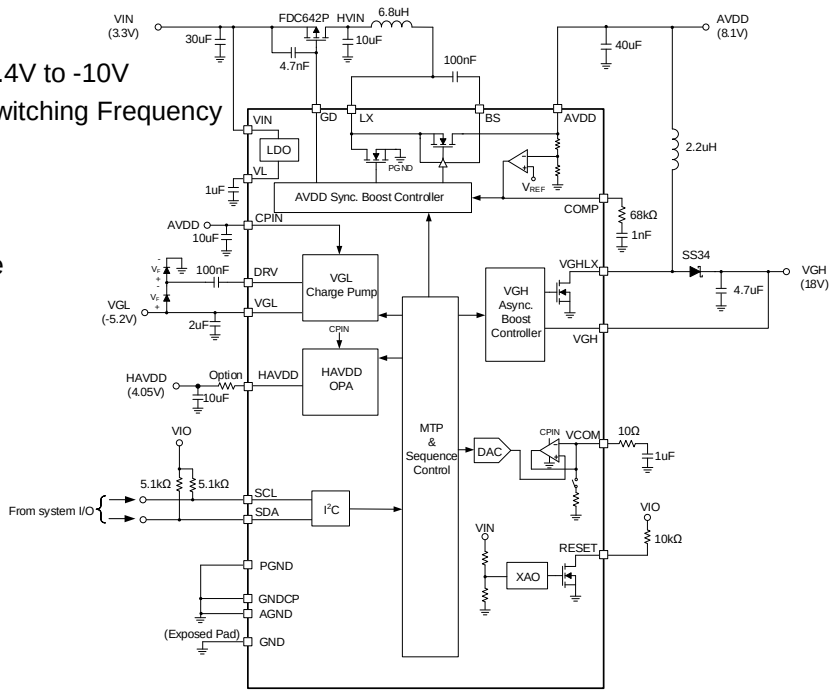
- Mobile AMOLED Display



Back

Features

- 2.6V to 6V Input Supply Voltage
- AVDD Sync. Boost Converter
  - Integrated 150mΩ/300mΩ Low Ron Switch
  - Peak Current Control with Fast Transient Response
  - 600-1200kHz Selectable Fixed Switching Frequency
  - 5/10ms Selectable Soft-start Time
  - Programmable Output Voltage 6V to 14V
  - ±1% Output Voltage Setting Accuracy
  - Output Over Voltage Protection
  - Output Under Voltage Protection
  - Output Short Circuit Protection
- VGH Async. Boost Converter
  - Integrated 1Ω Low Ron Switch with Minimum 1.2A Current Limit
  - Peak current Control with fast Transient Response
  - 600-1200kHz Selectable Fixed Switching Frequency
  - Programmable Output Voltage 16V to 31V
  - Output Under Voltage Protection
  - Output Short Circuit Protection
- Operational Amplifier for HAVDD Rail
  - Programmable Output Voltage 0.4×AVDD to 0.6×AVDD
  - ±250mA Short Circuit Current
- Operational Amplifier for VCOM Rail
  - Programmable 7-Bit VCOM Calibrator
  - ±150mA Short Circuit Current
- VGL Negative Charge pump
  - Programmable Output Voltage -4.4V to -10V
  - 600-1200kHz Selectable Fixed Switching Frequency
  - Output Under Voltage Protection
  - Output Short Circuit Protection
- Programmable Voltage Detector
- Programmable Power on Sequence
- MTP Memory
- I2C Compatible Interface
- Input UVLO
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x3-22



Applications

- Tablet Panel
- Notebook Panel

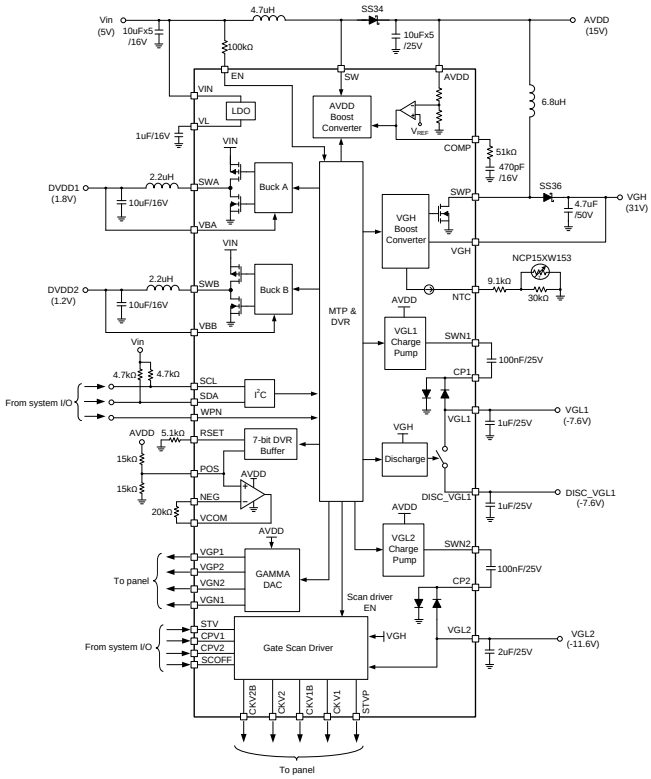
Back

Features

- 8V-18V input voltage range
- 500kHz/750kHz fixed switching frequency for AVDD/DVDD
- 500kHz/750kH/ 1000kHz selectable switching frequency for VGH/VGL charge pumps
- AVDD Boost regulator
  - Integrated 100mΩ low Ron switch with 5A current limit
  - Peak current control with fast transient response
  - Adjustable soft-start
  - Adjustable current limit
  - Up to 19.2V output voltage
  - 2% output voltage setting accuracy
  - Low duty cycle operation
- HAVDD operation amplifier
  - ±300mA short circuit current
  - 45V/us slew rate
  - 20MHz -3dB bandwidth
- DVDD Buck switching regulator
  - Integrated 200mΩ/80mΩlow Ron switch with 3.2A current limit
  - Peak current control with fast transient response
  - Internal loop compensation
  - Internal soft-start
- Positive charge pump regulator (VGH)
- Negative charge pump regulator (VGL)
- Integrated high voltage gate pulse modulator
  - 16-step programmable discharge current
  - 32-step programmable clamping voltage
  - Selectable start up delay
- Dual high speed operation amplifier (VCOM)
  - ±400mA short circuit current
  - Rail to rail output
  - 20MHz -3dB bandwidth
  - 10-bit DAC resolution

14 channel programmable gamma reference

  - 10-bit DAC resolution
  - 2 selectable gamma curve
- External p-channel MOSFET gate control for AVDD sequencing
- Input voltage detector (XAO)
- Buck1, VGH and VGL are 180° out of phase operation from AVDD to lower the input ripple
- Input UVLO
- Over temperature protection
- Over Voltage Protection(OVP)
- Over Current Protection (OCP)
- Under voltage Protection(UVP)
- RoHS Compliant and Halogen Free
- Compact package: QFN6x6-52



Applications

- TFT LCD Panel

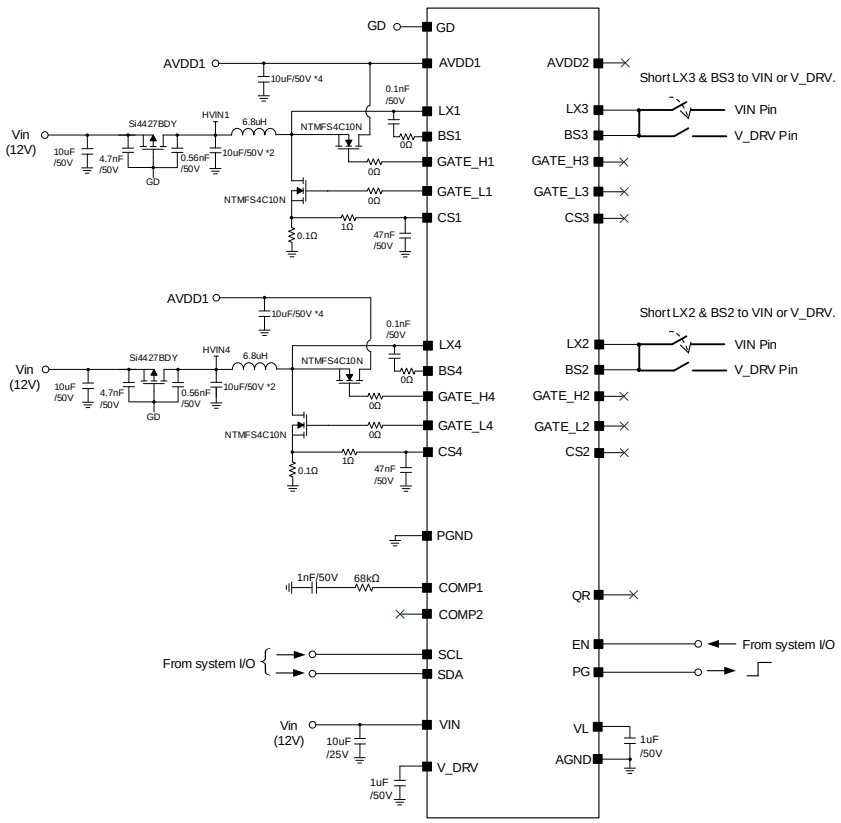
Back

Features

- 8.6V-14.7V input voltage range
- Multi Phase AVDD Boost Regulator
  - Phase mode selectable
    - Two phase mode with 2/1 CH output
    - Three phase mode with 1 CH output
    - Four phase mode with 1 CH output
  - ±1% output voltage setting accuracy
  - Phase shedding control for efficiency optimization
  - Fast phase up mechanism for improve transient response
  - Peak current control with fast transient response
  - Sync/Async mode selectable
  - 300-750kHz selectable fixed switching frequency
  - 13.5V to 19.8V programmable output
  - Programmable OCP level
  - Output over current protection
  - Output under voltage protection
  - Output over voltage protection
  - Output short circuit protection
- MTP Memory
- I2C compatible interface
- Input UVLO
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN5x5-36L

Applications

- TFT-LCD TV Panel



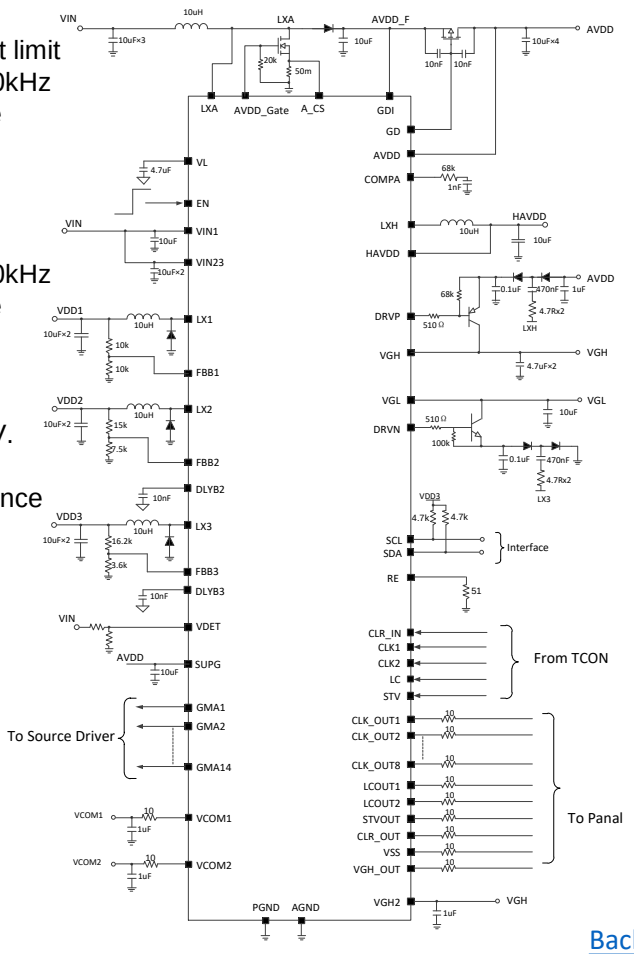
Back

Features

- Input range: 9.5V to 14.7V
- Boost regulator for AVDD:
  - Provide internal low side MOSFET mode and external low side MOSFET mode
  - Programmable switching frequency: 500kHz/750kHz
  - Programmable output voltage from 13V to 19.2V.
  - Peak current control with fast transient response
  - Force CCM at light load
  - Output SCP, OVP and UVP.
- Positive charge pump control for VGH:
  - Programmable output voltage from 20V to 40V.
  - Output SCP and UVP.
- Sync./Async. Buck regulator for VDD1:
  - Integrated low Ron switch with 1.6A/3.2A current limit
  - Programmable switching frequency: 500kHz/750kHz
  - Peak current control with fast transient response
  - Force CCM at light load (Sync mode)
  - Output SCP, OVP and UVP.
- Sync./Async. Buck regulator for VDD2:
  - Integrated low Ron switch with 1.6A/3.2A current limit
  - Programmable switching frequency: 500kHz/750kHz
  - Peak current control with fast transient response
  - Force CCM at light load (Sync mode)
  - Output SCP, OVP and UVP.
- Sync./Async. Buck regulator for VDD3:
  - Integrated low Ron switch with 1.6A/3.2A current limit
  - Programmable switching frequency: 500kHz/750kHz
  - Peak current control with fast transient response
  - Force CCM at light load (Sync mode)
  - Output SCP, OVP and UVP.
- Sync. Buck regulator for HAVDD:
  - Integrated low Ron switch with 2.5A current limit
  - Programmable switching frequency: 500kHz/750kHz
  - Peak current control with fast transient response
  - Force CCM at light load
  - Output SCP, OVP and UVP.
- Negative charge pump for VGL:
  - Programmable output voltage from -20V to -4.5V.
  - Output SCP and UVP.
- +/-30mA 14 channel programmable gamma reference
- +/-200mA 2 channel high speed operation amplifier for VCOM
- 14 Channel Level Shifter:
  - 1 Channel STV_OUT;
  - 1 Channel CLR_OUT;
  - 1 Channel VSS;
  - 1 Channel VGH_OUT;
  - 2 Channels LC_OUT;
  - 8 Channels CLK_OUT.
- I2C compatible interface
- Over temperature protection OTP.
- RoHS Compliant and Halogen Free
- Compact package: QFN8x8-72

Applications

- TFT-LCD TV Panel



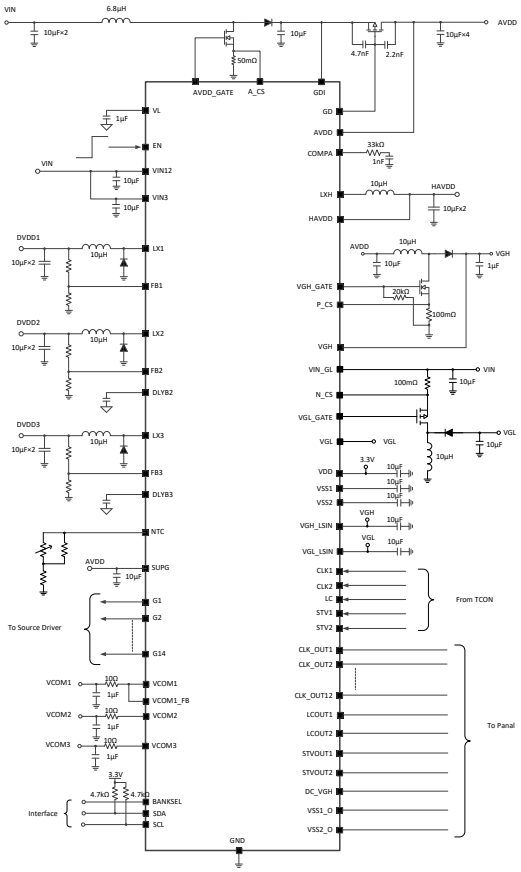
Back

Features

- Input Range: 9.5V to 14.7V
- Async Boost Controller for AVDD:
  - Programmable Switching Frequency: 500kHz/750kHz
  - Programmable Output Voltage from 13V to 19.2V.
  - Peak Current Control with Fast Transient Response.
  - External GD Isolation Switch (P-MOSFET) for AVDD
  - Slew Rate Controller.
  - Output SCP, OVP and UVP.
- Async Buck Regulator for DVDD1~3:
  - Integrated low Ron Switch with 1.6A/3.2A Current Limit
  - Programmable Switching Frequency: 500kHz/750kHz
  - Peak Current Control with Fast Transient Response
  - FCCM in Light Load
  - Output SCP, OVP and UVP.
- Sync. Buck Regulator for HAVDD:(Gamma7+Gamma8)/2
  - Integrated Low Ron Switch with ±2.5A Current Limit
  - Programmable Switching Frequency: 500kHz/750kHz
  - Peak Current Control with Fast Transient Response
  - Output SCP, OVP and UVP.
- Async Boost Controller for VGH:
  - Programmable Output Voltage from 20V to 40V.
  - Temperature Compensation Selection.
  - Switching Current Limit Selection
  - Output SCP, OVP and UVP.
- Async Buck-Boost Controller for VGL:
  - Programmable Output Voltage from -4.5V ~ -22V.
  - Temperature Compensation Selection.
  - Switching Current Limit Selection
  - Output SCP, OVP and UVP.
- Negative Regulator for VSS1/2 with -4.5V ~ -18V
- 14 Channel Programmable Gamma Reference
  - ±75mA Short Circuit Current.
  - 15V/μs Slew Rate.
  - -10bits DAC Resolution.
  - 2Selectable Gamma Curves
- 3 Channel High Speed Operation Amplifier for VCOM1~3.
  - ±400mA Short Circuit Current.
  - 15V/μs Slew Rate.
  - -10bits DAC Resolution.
- 19 Channel Level Shifter:
  - 12Channels CLKOUT
  - 2Channels STV_OUT
  - 2Channels VSS_OUT
  - 2Channels LC_OUT
  - 1Channel DC_VGH
- I^2C Compatible Interface
- Over Temperature Protection OTP.
- RoHS Compliant and Halogen Free
- Compact Package: QFN12×8-88

Applications

- TFT-LCD TV Panel



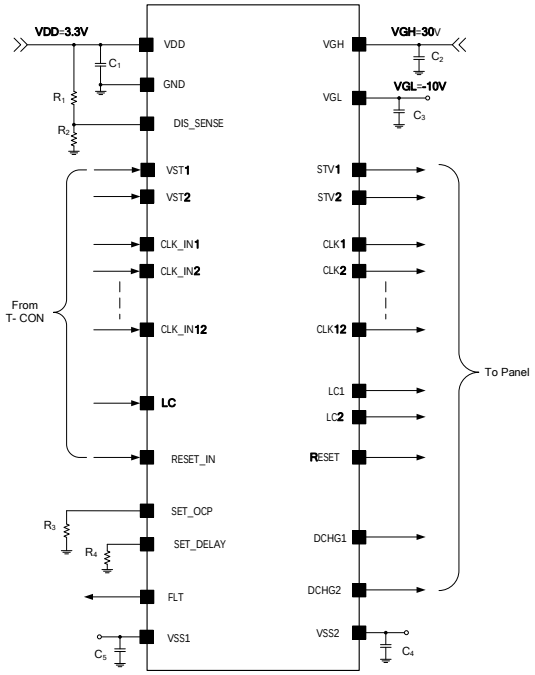
Back

SY7627RMC/SY7627DRMQ

- 19-Channel Level Shift IC for LCD TV Panel Application

Features

- Input Supply Voltage Range:
  - VDD: 2.6V to 5.5V
  - VGH: 7V to 40V
  - VGL: -20V to 0V
  - VSS1/2: VGL+0.3V to 0V
- 19 Channel Level Shifter
- 60V Maximum Input for VGH-VGL
- 750mA Peak Current
- 20mA Continuous Current
- 20-200mA Over Current Protection Programming
- Input Under Voltage lockout
- Over Temperature Protection.
- RoHS Compliant and Halogen Free
- Compact Package:QFN6×6-48

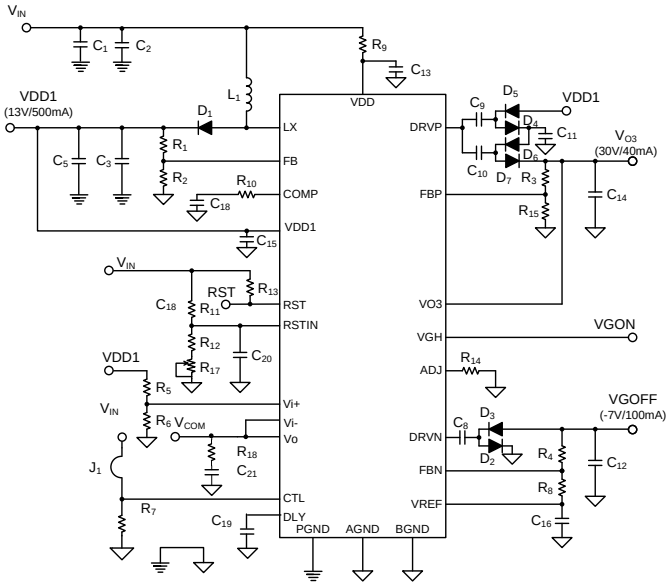


Applications

SY7630CQCC - High Efficiency Power Management IC for TFT LCD

Features

- 2.3-5.5V input voltage range
- Current mode boost regulator:
  - Low RDS(ON) for Boost internal switches:
- 140mΩ / 3.5A
  - 1.2MHz switching frequency
- Positive charge pump for VGH
- Negative charge pump for VGL
- Integrated gate pulse modulator with adjustable delay.
- Integrated operational amplifier
- Open drain reset output
- Compact package: QFN4x4-24



Applications

- TFT LCD Panels

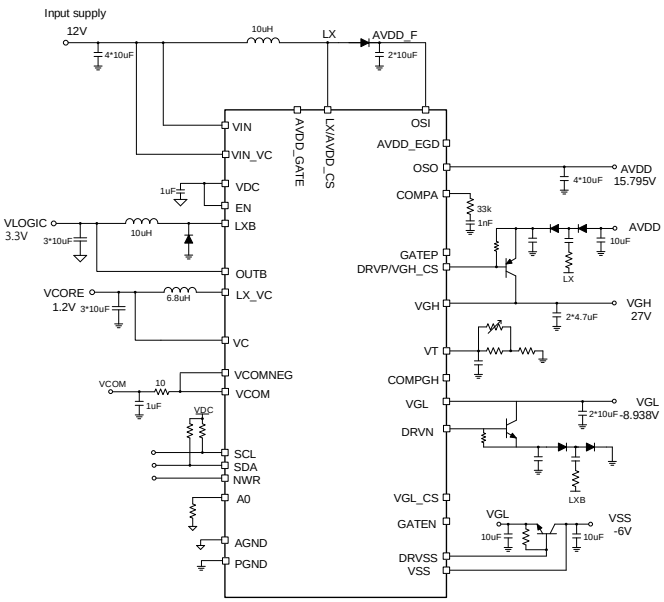
Back

Features

- Input Range: 9.5V to 14V
- Output SCP, OVP and UVP
- Channel 1, Boost or Sepic Regulator for AVDD:
  - Provide Internal MOSFET Mode and External MOSFET Mode
  - Selectable Switching Frequency
  - Programmable Output Voltage
  - Peak Current Control with Fast Transient Response
- Channel 2, External MOSFET Boost or Positive Charge Pump Control for VGH:
  - Programmable Output Voltage
  - 750kHz Switching Frequency
  - Output Voltage Temperature Compensation
- Channel 3, Buck Regulator for VLOGIC:
  - Selectable Switching Frequency
  - Programmable Output Voltage
  - Peak Current Control with Fast Transient Response
  - Force CCM at Light Load
- Channel 4, Buck Regulator for VCORE:
  - Selectable Switching Frequency
  - Peak Current Control with Fast Transient Response
  - Programmable Output Voltage
  - Force CCM at Light Load
- Channel 5, Negative Charge Pump or Buck-Boost Control for VGL:
  - Programmable Output Voltage
  - Fixed 750kHz Switching Frequency
- Channel 6 Negative Regulator for VSS
- Channel 7 DVCOM Control with Temperature Compensation
- MTP Memory
- I2C Compatible Interface
- Input UVLO
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package:QFN5×5-40

Applications

- TV LCD Panel



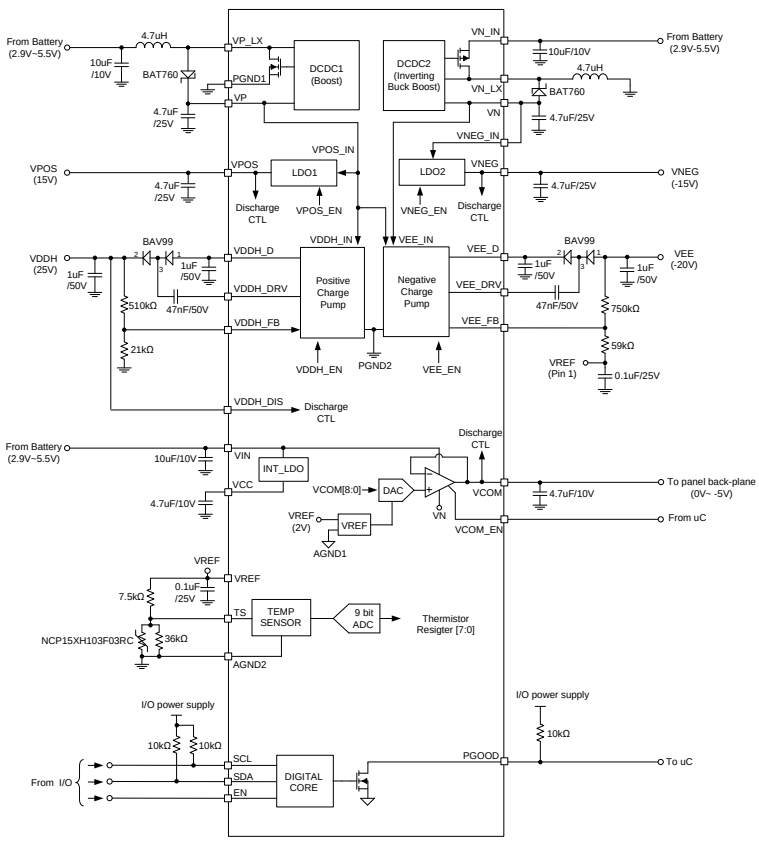
Back

Features

- 2.9V to 5.5V Input Voltage Range
- Boost Converter VP for the Power Input of Positive Rails
- Inverting Buck-Boost converter VN for the Power Input of Negative Rails
- Two Adjustable LDOs for Source Driver Supply
  - VPOS: 15 V, 200mA
  - VNEG: –15 V, 200mA
  - Accurate Output Voltage Tracking: VPOS+VNEG = ±50 mV
- Two Charge Pumps for Gate Driver Supply
  - VDDH: 25 V, 10mA (Up to 29V)
  - VEE: –20 V, 15mA (Down to -25V)
- Adjustable VCOM Driver for Accurate Panel-Backplane Biasing
  - 0 V to –5V
  - ± 1.5% Accuracy (±10 mV)
  - 9-Bit Control (10-mV Nominal Step Size)
- Internal Active Discharge for VPOS, VNEG, VDDH, and VCOM
- Differential Temperature Sense Input and Digital Temperature Reporting
- I2C Compatible Interface
- Protection: UVLO, OTP, OCP, SCP, UVP
- RoHS Compliant and Halogen Free
- Compact package: QFN6×6-48

Applications

- Power Supply for Active Matrix Panels
- EPD Power Supplies
- E-Book Readers



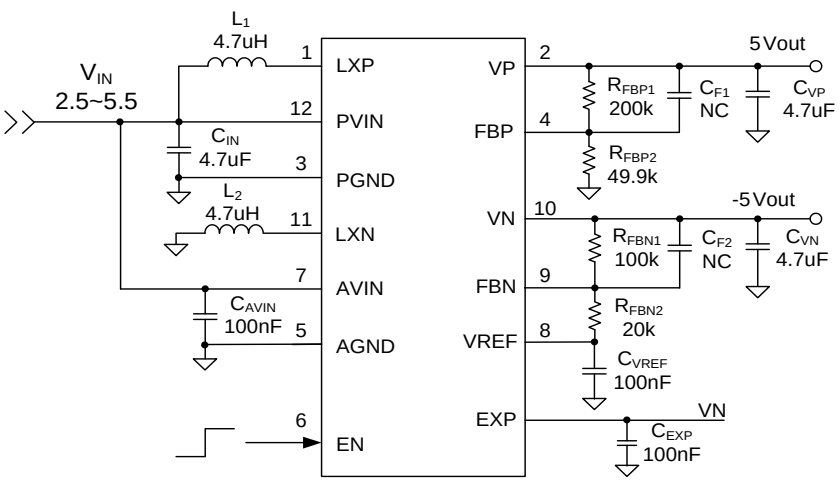
Back

Features

- 2.5V to 5.5V Input Voltage Range
- Synchronous Boost converter:
  - Low RDS(ON) for Internal Switches (P-Channel FET/N-Channel FET): 660/400mΩ
  - 150mA Output Current Capability
  - True Shutdown Output
  - 4.6V-7V Adjustable Output
  - Cycle-by-cycle Current Limiting Protection
- Synchronous Inverter Converter:
  - Low RDS(ON) for Internal Switches (P-Channel FET/N-Channel FET): 500/340mΩ
  - 150mA Output Current Capability
  - -6V to -1.5V Adjustable Inverting Output
  - Cycle-by-cycle Current Limiting Protection
- Internal Loop Compensation
- 1.5MHz Switch Frequency
- Low Shutdown Current <1uA
- xBuilt-in Softstart
- EN Control On/Off
- PSM Mode at Light Load for High Efficiency
- RoHS Compliant and Halogen Free
- Compact Package: DFN3x3-12

Applications

- PAD panels power driver
- Active Matrix OLED
- Mobile device



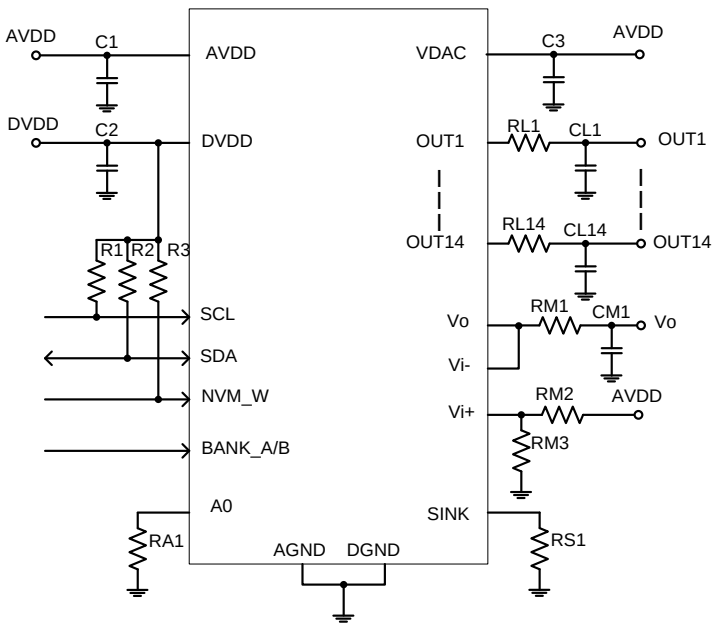
Back

Features

- Analog Supply Voltage Range(AVDD): 6.5 to 18V
- Digital Supply Voltage Range(DVDD): 2.6 to 3.6V
  - NVM Read: Minimum DVDD 2.6V
  - NVM Write: Minimum DVDD 3.0V
- 14 Channel Gamma Reference Voltage Outputs with 10- bit DAC Resolution
- 128-step Programmable Sink-current Output for DVR Output
- Integrated High Current, Wide Bandwidth OPAMP for VCOM Buffer
- DAC Reference Voltage Input
- Integrated NVM
- Switchable Gamma Curve
- I2C Compatible Interface:
  - Supports 100kHz Standard Mode and 400kHz Fast Mode
  - Selectable Device Address
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN5×5-32

Applications

- TFT-LCD TVs
- TFT-LCD Monitors
- TFT-LCD Notebook PC



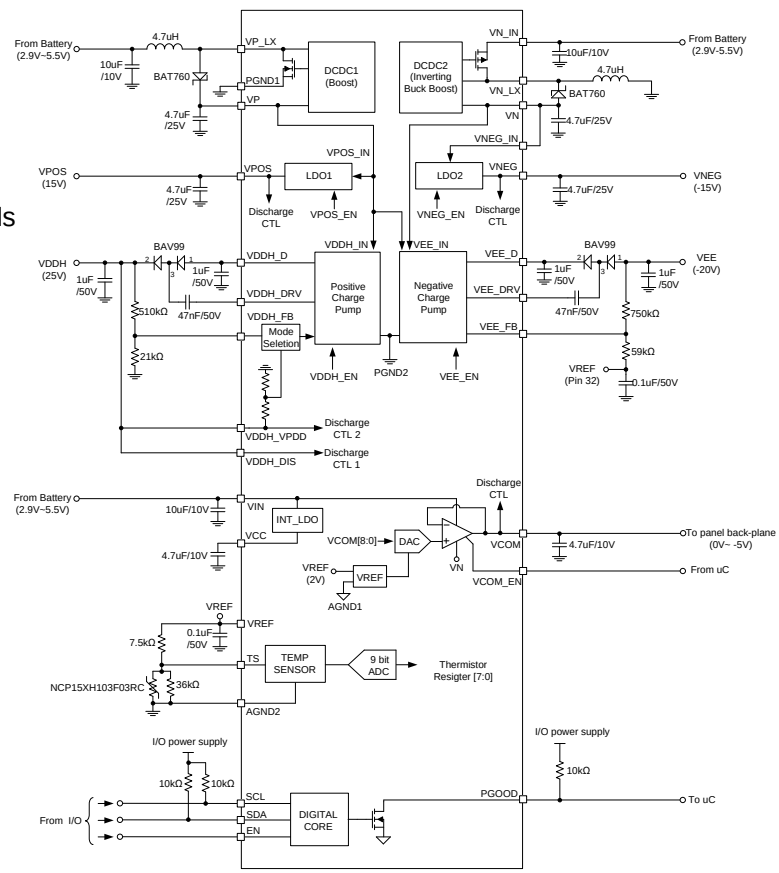
Back

Features

- 2.9V to 5.5V Input Voltage Range
- Boost Converter VP for the Power Input of Positive Rail
- Inverting Buck-Boost Converter VN for the Power Input of Negative Rail
- Two Adjustable LDOs for Source Driver Supply
  - VPOS: 15 V, 200mA.
  - VNEG: –15 V, 200mA.
  - Accurate Output Voltage Tracking: VPOS+VNEG = ±50 mV
- Two Charge Pumps for Gate Driver Supply
  - VDDH: 25 V, 10mA (up to 29V)
  - VEE: –20 V, 15mA (down to -25V)
- Adjustable VCOM Driver for Accurate Panel-Backplane Biasing
  - 0 V to –5V
  - ± 1.5% Accuracy (±10 mV)
  - 9-Bit Control (10-mV Nominal Step Size)
- Internal Active Discharge for VPOS, VNEG, VDDH, and VCOM
- Differential Temperature Sense Input and Digital Temperature Reporting
- I2C Compatible Interface
- Protection: UVLO, OTP, OCP, SCP, UVP
- RoHS Compliant and Halogen Free
- Compact Package: QFN5x5-32

Applications

- Power Supply for Active Matrix Panels
- EPD Power Supplies
- E-Book Readers



Back

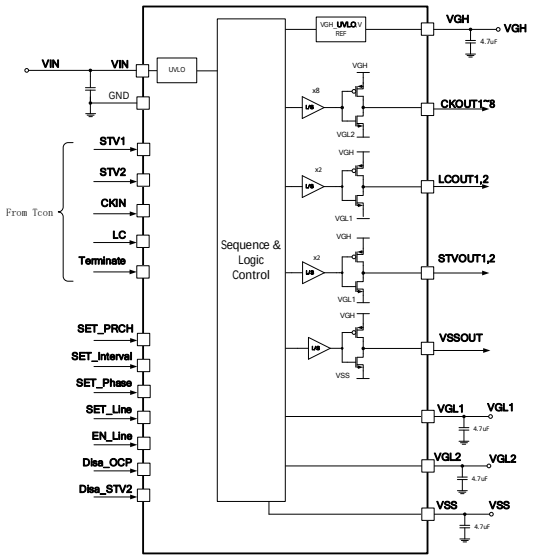
SY71500QFQ - 13-Channel Level Shifter IC for LCD TV Panel Application

Features

- Input Range:
  - VIN: 2.6V to 3.6V
  - VGH: 7V to 40V
  - VGL1: -18V to 0V
  - VGL2: VGL1 to 0V
  - VSS: VGL1 to 0V
- 13 channel level shifters
  - 8Channel CK
  - 2Channel LC
  - 2Channel STV
  - 1Channel VSSOUT
- Over current protection
- Input under voltage lockout
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN4x4-32

Applications

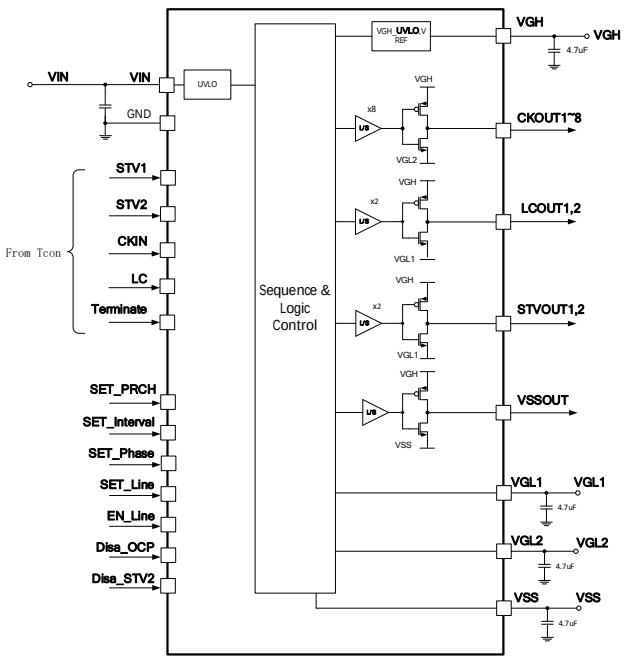
- TV LCD Panel



SY71503QFQ - 13-Channel Level Shifter IC for LCD TV Panel Application

Features

- Input Range:
  - VIN: 2.6V to 3.6V
  - VGH: 7V to 40V
  - VGL1: -18V to 0V
  - VGL2: VGL1 to 0V
  - VSS: VGL1 to 0V
- 13 channel level shifters
  - 8Channel CK
  - 2Channel LC
  - 2Channel STV
  - 1Channel VSSOUT
- Over current protection
- Input under voltage lockout
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN4x4-32



Applications

- TV LCD Panel

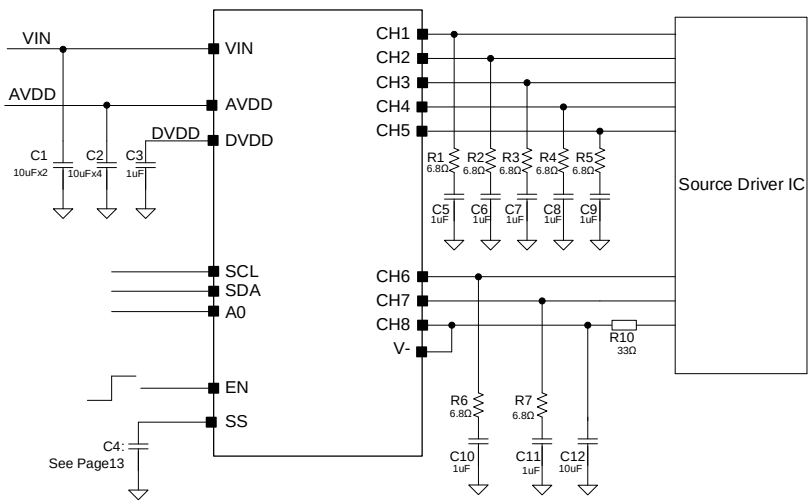
Back

Features

- Analog Supply Voltage Range(AVDD): 11 to 20V
- Digital Supply Voltage (DVDD) with internal LDO: 3.3V
- Output Voltage Range for CH1~CH5: 0(REFL) to AVDD(REFH)
- Output Voltage Range for CH6~CH8: 0 to AVDD/2
- CH1, CH5, CH8 Analog Output for Gamma Reference Voltages with 10-bit DAC Resolution
- Sub DAC with Fixed R-string Ratio for CH1~CH5
- CH6,CH7 Analog Output for Gamma Reference Voltages with 9-bit DAC Resolution
- Programmable Non Volatile Memory
- Over Temperature Protection
- I2C Compatible Interface:
  - Supports 100kHz ~ 3.4MHz
  - Device Address select by A0 Pin
- RoHS Compliant and Halogen Free
- Compact Package: QFN5×5-40

Applications

- OLED TV Panel



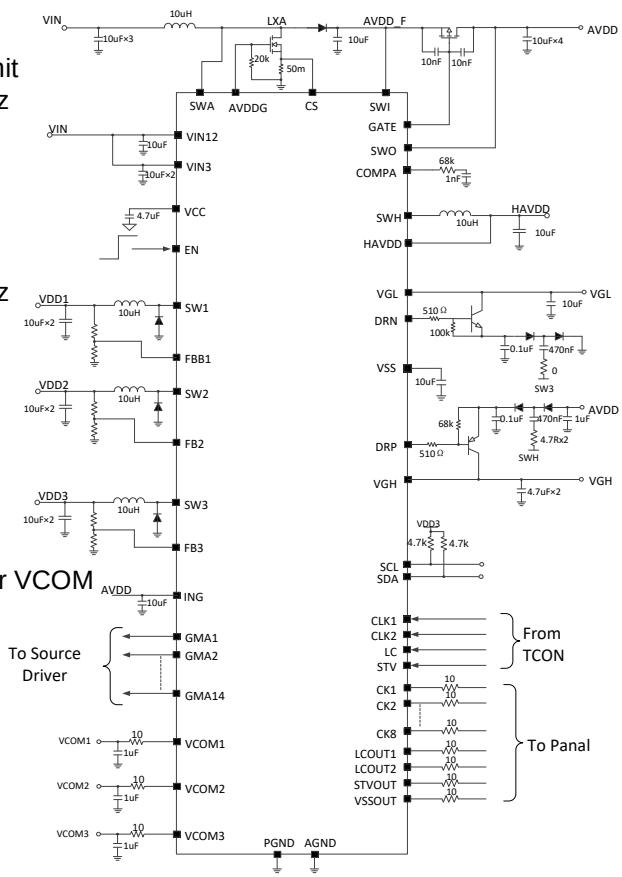
Back

Features

- Input range: 9.5V to 14.7V
- Boost regulator for AVDD:
  - Provide internal low side MOSFET mode and external low side MOSFET mode
  - Programmable switching frequency: 500kHz/750kHz
  - Programmable output voltage from 13V to 19.2V.
  - Peak current control with fast transient response
  - Force CCM at light load
  - Output SCP, OVP and UVP.
- Positive charge pump control for VGH:
  - Programmable output voltage from 20V to 40V.
  - Output SCP and UVP.
- Sync./Async. Buck regulator for VDD1:
  - Integrated low Ron switch with 1.6A/3.2A current limit
  - Programmable switching frequency: 500kHz/750kHz
  - Peak current control with fast transient response
  - Force CCM at light load (Sync mode)
  - Output SCP, OVP and UVP.
- Sync/Async. Buck regulator for VDD2:
  - Integrated low Ron switch with 1.6A/3.2A current limit
  - Programmable switching frequency: 500kHz/750kHz
  - Peak current control with fast transient response
  - Force CCM at light load (Sync mode)
  - Output SCP, OVP and UVP.
- Sync./Async. Buck regulator for VDD3:
  - Integrated low Ron switch with 1.6A/3.2A current limit
  - Programmable switching frequency: 500kHz/750kHz
  - Peak current control with fast transient response
  - Force CCM at light load (Sync mode)
  - Output SCP, OVP and UVP.
- Sync. Buck regulator for HAVDD:
  - Integrated low Ron switch with 2.5A current limit
  - Programmable switching frequency: 500kHz/750kHz
  - Peak current control with fast transient response
  - Force CCM at light load
  - Output SCP, OVP and UVP.
- Negative charge pump for VGL:
  - Programmable output voltage from -20V to -4.5V.
  - Output SCP and UVP.
- Negative regulator for VSS with -18V to -4.5V
- +/-30mA 14 channel programmable gamma reference
- +/-200mA 3 channel high speed operation amplifier for VCOM
- 12 Channel Level Shifter:
  - 1 Channel STV;
  - 1 Channel VSS;
  - 2 Channels LC;
  - 8 Channels CK.
- I2C compatible interface
- Over temperature protection OTP.
- RoHS Compliant and Halogen Free
- Compact package: QFN8x8-72

Applications

- TFT LCD Panel



Back

Part Number	V_{IN}(Min) (V)	V_{IN}(Max) (V)	Number of Channels	Package	Application	Integrated Function
SY8631BQCC	2.5	5.5	5	QFN4×4-24	Portable Media Players	2-Ch synchronous buck and 3ch LDO, one RESET output and forced PWM mode selection.
SY8665TTC	4.5	28	2	QFN3×3-19	Notebook/Monitor/ Desktop	5A buck regulator, an external PMOS driver and an external NMOS driver to realize power path control
SY8665DTTQ	4.5	28	2	QFN3×3-19	Notebook/Monitor/ Desktop	5A buck regulator, an external PMOS driver and an external NMOS driver to realize power path control
SY72220QLQ	PVIN: 1.8 AVIN: 2.8	PVIN:5.5 AVIN:5.5	1	QFN3×4-16	Optical Module, Smartphone and Portable Devices, DCDC Modules.	3.4MHz I2C; DVS; Auto PFM or forced PWM mode; Remote sense; Fast transient response; UVP/SCP/OTP/OCP.

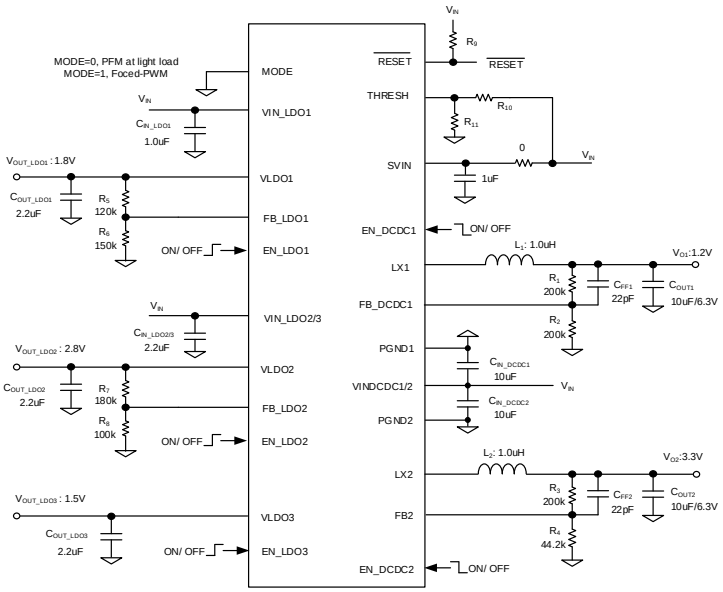
Back

Features

- Input voltage range: 2.5V to 5.5V
- Input voltage range for LDOs : 1.8V to 5.5V
- 2 channels DCDC regulators and 3 channels LDO regulators
- 1A output current capability for each DC/DC regulator
- DC/DC regulators output voltage externally adjustable
- 2.2MHz switching frequency
- Power save mode at light load condition for higher efficiency
- Forced-PWM mode selection by Mode pin
- Total 38uA quiescent current for DC/DC regulators
- 400mA output current capability for LDO1
- 200mA output current capability for LDO2 and LDO3
- LDO1, LDO2 output voltage externally adjustable
- Fixed 1.5V output voltage for LDO3
- Hard short protection, thermal shut down protection
- RoHS Compliant and Halogen Free
- Compact package: QFN4x4-24

Applications

- Cell Phones, Smart-Phones
- WLAN
- PDAs, Pocket PCs, GPS
- Portable Media Players
- Digital Cameras



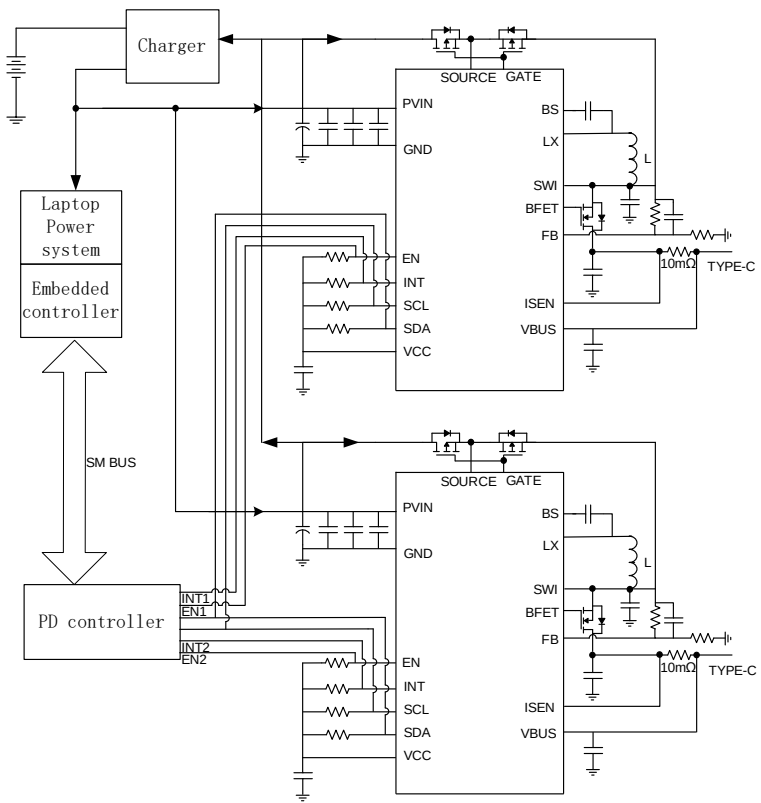
Back

Features

- 4.5-28V wide input voltage range
- Bidirectional power path control
- 5A buck regulator
  - Low RDS(ON) internal switch: HSFET: 33mΩ, LSFET: 23 mΩ
  - I2C programmable output range from 3.0V to 21V in 200mV per step
  - Cable impedance compensation
  - Selectable switching frequency: 250kHz/500kHz/750kHz/1MHz
  - Internal soft-start limits the input inrush current
  - Output OCP, SCP, OVP
- External NFET driver for reverse blocking
- External PFET driver for power bypass
- I2C compatible interface
- Support interrupt for status feedback
- Programmable discharge
- Inductor peak current limit setting:
  - SY8665: 5A/7A
  - SY8665D: 9A/12.5A
- Thermal shutdown protection
- Compact package QFN3x3-19
- UL Certificate Number: E491480
- UL 2367 Certified
- IEC/ EN 62368-1 Certified

Applications

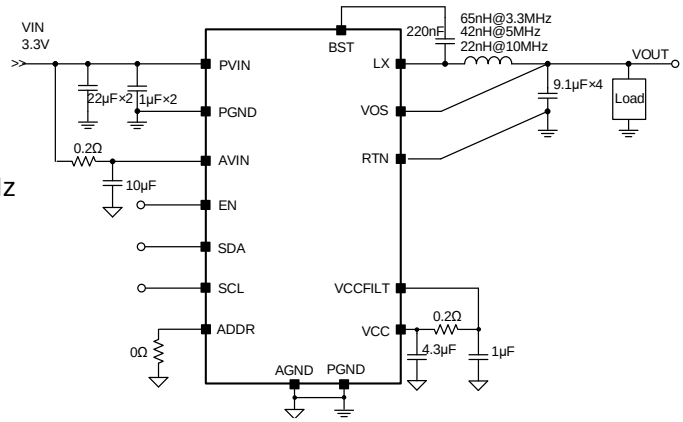
- Notebook
- Monitor
- Desktop



Back

Features

- Wide Input Range from 1.8V to 5.5V
- Up to 20A Output Current
- Accuracy ±1% of output voltage from -40°C to 125°C
- Low RDS(ON) for Internal High-side FET and Synchronous FET
- Forced PWM Mode & Auto PFM Mode
- Differential Remote Sense
- Fast Transient Response
- Programmable Via I2C
  - Output Voltage from 0.4V to 1.5V
  - Switching Frequency of 3.3MHz/5MHz/10MHz
  - Dynamic Voltage Scaling (DVS) Slew Rate
- MTP Memory
- Internal Soft-start &Smooth Pre-Biased Startup
- Reliable Build-in Protections:
  - Automatic Recovery for:
- Input Under-voltage (UVLO)
- Output Under-voltage (UVP)
- Output Short-Circuit (SCP)
- Over Temperature (OTP)
  - Cycle-by-cycle Valley and Peak Current Limit (OCP)
  - Cycle-by-cycle Reverse Current Limit
- Compact Package: QFN3mm×4mm-16



Applications

- Optical Modules
- Smartphone and Portable Devices
- DC-DC Modules

Back



AC/DC

Auxiliary Power Supply (Boost/Flyback Controller) (Temp Range-40°C to 105°C)

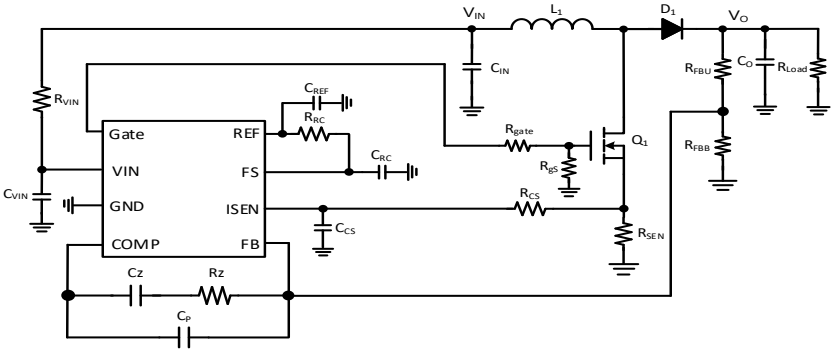
Partnumber	V_{IN} (min) (V)	V_{IN} (max) (V)	f_{SW} (MHz)	V_{REF} Accuracy	Max Duty	Ambient Temp Range	Feature/ Special Function	Package
SQ35702BFAP	10	22	<500KHz	2.5V±2%	96%	-40℃to 105℃	Peak current mode Boost/flyback Controller	SOP8
SQ35702CFAP	10	22	<250KHz	2.5V±2%	48%	-40℃to 105℃	Peak current mode Boost/flyback Controller	SOP8
SQ35702EFAP	16	22	<250KHz	2.5V±2%	48%	-40℃to 105℃	Peak current mode Boost/flyback Controller	SOP8

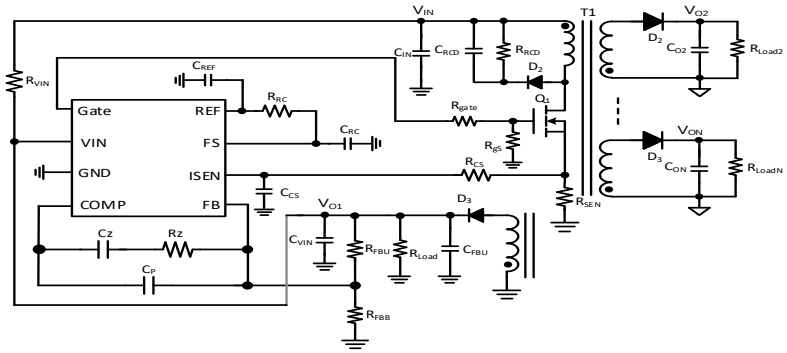
Part Number	App.Type	LED Channels	Input Voltage	LED Voltage	LED Current	Control Method	Switching Frequency	Package	Int.MOS
SY7301AADC/ SY7301ADBC	Handheld devices Backlight	1	2.8 to 40V	<40V	<300mA	Boost	1MHz	TSOT23-6 /DFN3x3-10	40V/2A
SY7203DBC	Handheld devices Backlight	1	2.8 to 30V	<30V	<300mA	Boost	1MHz	DFN3x3-10	30V/4A
SY7200AABC	Handheld devices Backlight	1	2.8 to 30V	<30V	<300mA	Boost	1MHz	SOT23-6	30V/2A
SY7726POC	Phone/PAD Backlight	2	2.7 to 28V	<40V	<30mA	Boost+LDO	1MHz	CSP 1.31x1.31-9	40V/1A
SY7711BABC	TV Power Backlight	1	9-28Vdc	<200V	<1.5A	Boost	120KHz	SOT23-6	NA
SY7728LFEC/ SY7728LFFC	Monitor Backlight	4	4.5-30V	<30V	<240mA	Boost + current sink	100KHz-0.5MHz	SOP16E/ SOP16	60V/3Ω
SY7759RBQ	Notebook or tablet Backlight	6	3V-24V	<40V	6-25mA	Boostt+ current sink	100KHz-1.5MHz	QFN3.5x3.5	40V/200mΩ
SY7758QCQ	Notebook or tablet Backlight	6	2.7V-20V	<46V	<50mA	Boost+ current sink	320KHz-1.3MHz	QFN4.0x4.0	48V/200mΩ
SY7758VGS	Notebook or tablet Backlight	6	2.7V-20V	<46V	<50mA	Boost+ current sink	320KHz-1.3MHz	WLCSP2.43x1.77	48V/200mΩ
SY8717ABT	IR LED Backlight	1	4.5V-28V	27V	<0.8A	Syn Buck	1.8MHz	SOT23-6	28V/220mΩ
SY7790DFD	TV mini LED Backlight	4	3.05V-3.6V	<30V	<100mA	current sink	<30KHz	DFN2x2-8	YES
SY77963XVQ	TV mini LED Backlight	6	3.05V-3.6V	<30V	<100mA	current sink	<30KHz	QFN2.5x2.5-14	YES
NEW SY7760AXZQ	NB backlight	6	3.6~24	36V	30mA	Fixed frequency+Peak current	0.4~1.5MHz	QFN3x3-24	Boost Low Side 165mΩ
NEW SY77982XVQ	TV miniled backlight	8	3.0~3.8	30V	70mA	1-WIRE	0.5MHz~2MHz	QFN2.5x2.5-14	NA
NEW SY77983HRP	TV miniled backlight	8	3.0~3.8	30V	140mA	1-WIRE	0.5MHz~2MHz	TSSOP14E	NA
NEW SY77782YQQ	TV miniled backlight	8	3.0~3.8	30V	60mA	1-WIRE	1MHz~3MHz	QFN2x2-14	NA

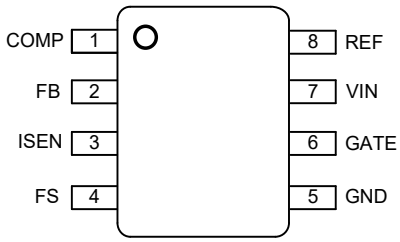
Back

SQ35702BFAP/SQ35702CFAP/SQ35702EFAP

Boost/Flyback Current Mode Controller







Features

- 10-22V input voltage range
- ±2% accuracy for REF and FB reference
- Flexible frequency and minimum off time set by FS pin and up to 500kHz switching frequency
- Cycle by cycle current limit(1V) and over current limit (1.1V) for ISEN
- Package:SO8

Applications

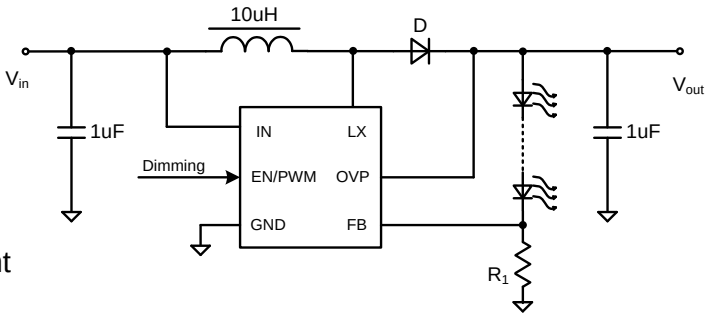
- Switch mode power supplies (SMPS)
- DC-to-DC converters
- Power modules
- Battery-operated Power Supply Unit

Back

SY7301AADC/SY7301ADBC - 40V High Current Boost LED Driver

Features

- Input voltage range: 2.8 to 40V
- Switch current limit:2A
- Drives LED strings up to 40V
- 1MHz fixed frequency minimizes the external components
- 200Hz~1MHz dimming frequency for EN/PWM pin
- Internal softstart limits the inrush current
- Open LED over voltage protection
- RoHS Compliant and Halogen Free
- Compact package: TSOT23-6/DFN3X3-10



Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players

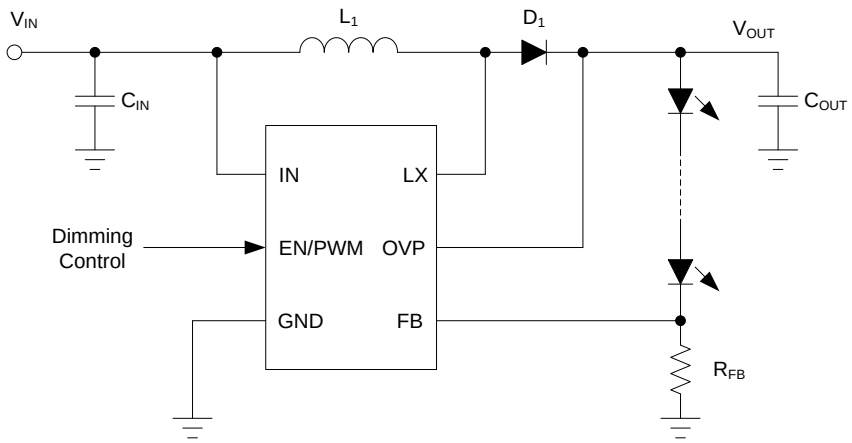
SY7203DBC - 30V High Current Boost LED Driver

Features

- Input voltage range: 2.8 to 30V
- Switch current limit: 4A
- Drives LED strings up to 30V
- 1MHz fixed frequency minimizes the external components
- 20kHz~1MHz wide dimming frequency range for EN/PWM pin
- Internal softstart limits the inrush current
- Open LED over voltage protection
- RoHS Compliant and Halogen Free
- Compact package: DFN3X3-10

Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players

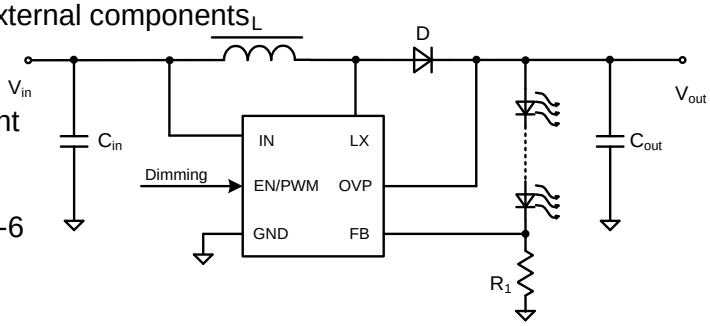


Back

SY7200AABC - 30V High Current Boost LED Driver

Features

- Input voltage range: 2.8 to 30V
- Switch current limit 2A
- Drives LED strings up to 30V
- 1MHz fixed frequency minimizes the external components
- Dimming frequency for EN/PWM pin:
- SY7200A: 20kHz~1MHz
- Internal softstart limits the inrush current
- Open LED over voltage protection
- RoHS Compliant and Halogen Free
- Compact package: SOT23-6/ TSOT23-6



Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players

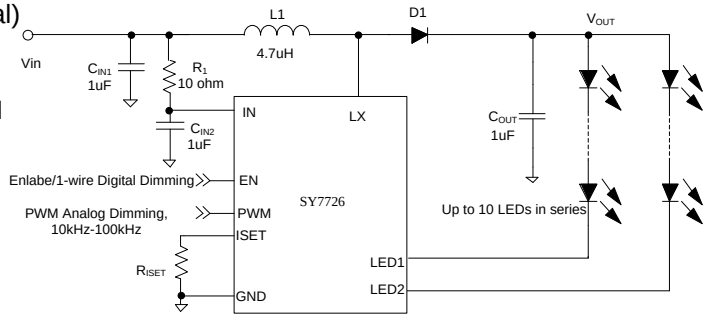
SY7726POC - High Efficiency 2-string LED Driver For Smart Phone

Features

- Wide Input Range: 2.7V~28V
- Drive Up to 10 LEDs per String
- Integrated 40V Power MOSFET
- Integrated 2 Channel Current Source of Up to 30mA Each
- 1% Typical Current Matching Accuracy
- Low LED Regulated Voltage (150mV typical)
- High Frequency Boost Converter (1MHz)
- Internal Compensation and Soft-start
- Analog PWM Dimming with 500ns min. ON Time
- Enable and 1-wire Digital Dimming
- Up to 100:1 PWM Dimming Ratio (20kHz Dimming Frequency)
- Cycle-by-cycle Inductor Current Limit
- LED Open/Short Protection, Output Over-voltage Protection
- Thermal Shutdown Protection
- Low Quiescent Current and Low Shutdown Current
- Pb-free Package: CSP 1.31×1.31 -9

Applications

- Smart Phone
- PAD
- 1-cell Lithium-ion Battery LED Applications
- Monitor Panel Backlight

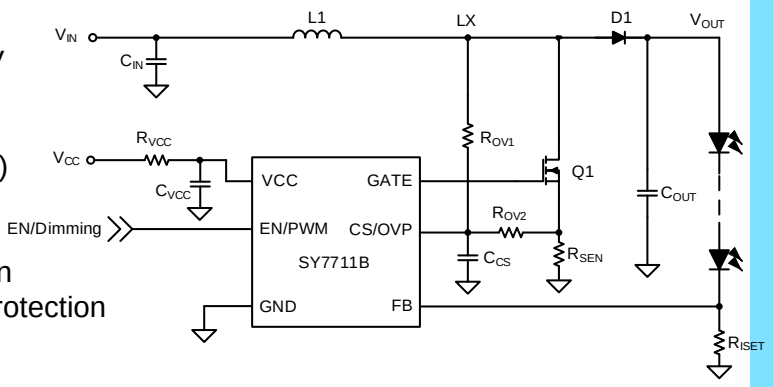


Back

SY7711BABC - 1 Channel Boost LED Controller

Features

- V_{CC} Supply Voltage Range: 9V to 28V
- 120kHz Switching Frequency
- PWM Analog Dimming: 20kHz~1MHz
- Output Over Voltage Protection (OVP)
- Over Current Protection (OCP)
- LED Open & Short Protection
- LED Cathode Short to GND Protection
- Inductor Short & Diode Open/Short Protection
- Thermal Shutdown Protection (OTP)
- -40 to +85 ℃ Temperature Range
- RoHS Compliant and Halogen Free
- Pb-free Package: SOT23-6



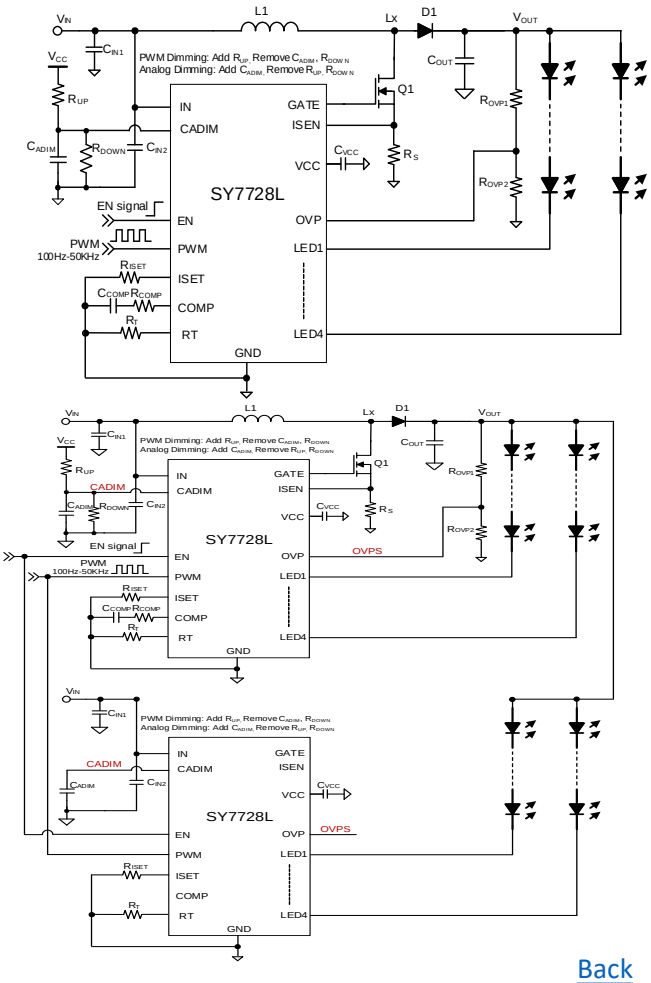
Applications

- LCD TV Backlight
- LCD Monitor Backlight

SY7728LFEC/SY7728LFFC - 60V High Efficiency Four-String Boost LED Driver

Features

- 4.5-30V Wide Input Voltage Range
- Programmable 5mA~240mA LED Current Per String
- LED Current with +/-6% Accuracy at 5mA per String
- +/-2% Current Matching Among Strings at 5mA per String
- PWM and Analog Mode Dimming Frequency: 100Hz~50 kHz
- Programmable Boost Switching Frequency: 100kHz-1MHz
- Open and Short LED Protection
- Output Over Voltage Protection
- Boost Inductor/Diode Short Protection
- LEDN short to GND Protection
- RoHS Compliant and Halogen Free
- Compact Package: SOP16/SOP16E



Applications

- Monitor Panel Backlight

Back

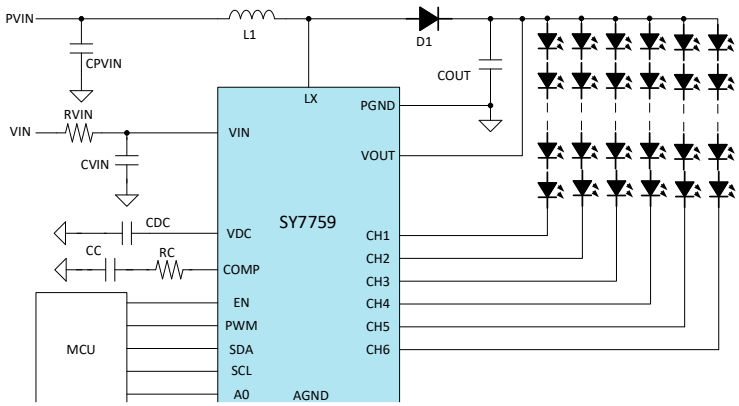
SY7759RBQ - 37V High Efficiency Boost Converter with I²C Controlled 6-CH LED Driver

Features

- Wide input voltage ranges from 3V to 24V
- VOUT OVP up to 40V to cover 12-13 WLEDS application
- Low head room(400mV) for high system efficiency
- Channel current set in register:6-25mA
- Adjustable switching frequency 100KHz-1.5MHz
- Embedded Memory with MTP
- 4 dimming mode: PWM/DC/MIX/MIX-26KHz
- Direct PWM up to 25kHz with Minimum 1.2% Duty
- DC mode up to 2KHz with 12bit resolution (Max 12 bits DAC integrated)
- PWM to mixed up to 2kHz with 12-bit resolution
- PWM to mixed-26kHz up to 2kHz with 12-bit resolution
- Protection: OVP/SLP/OLP/OTP
- Package: WQFN-20L 3.5*3.5

Applications

- Notebook or tablet LED backlight



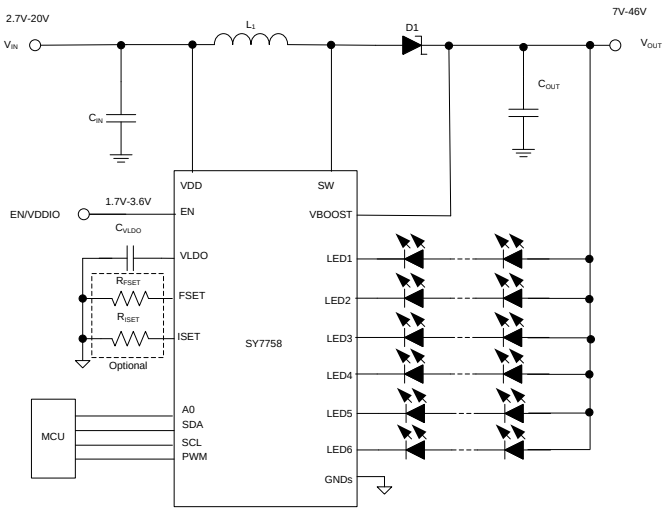
SY7758QCQ/SY7758VGS - 6-channel High Efficiency LED Driver for LCD Panel Backlighting

Features

- High Efficiency DC/DC Boost Converter and OTP Program Three Switching Frequency Options: 320 kHz, 635 kHz, and 1200 kHz
- 2.7V to 20V VDD Input Voltage Range Supports Multi-Cell Li-Ion Batteries
- 7V to 46V Boost Switch Output Voltage Range Supports as few as 3 WLEDs in Series per Channel and as Many as 13 pcs
- Configurable Channel Count (1 to 6)
- Up to 50 mA per Channel
- PWM and I2C Brightness Control
- Phase-shift PWM Mode Reduces Audible Noise
- Adaptive Dimming for Higher LED Drive Optical Efficiency
- Programmable Slew-rate Control and Frequency Jitter Scheme Minimize Switching noise and improve EMI performance
- LED Fault (Short and Open) Detection, UVLO, TSD, OCP, and OVP (Up to 6 Threshold options)
- Available in tiny 20-pin, 0.4-mm pitch CSP Package(CSP2.43 1.77-20) and 24-pin, 0.5-mm Pitch QFN package(QFN4 4-24)

Applications

- LED Backlights for Smart Phone LCDs
- LED Backlights for PAD LCDs
- LED Backlights for Notebook LCDs
- LED Backlights for VR LCDs



Back

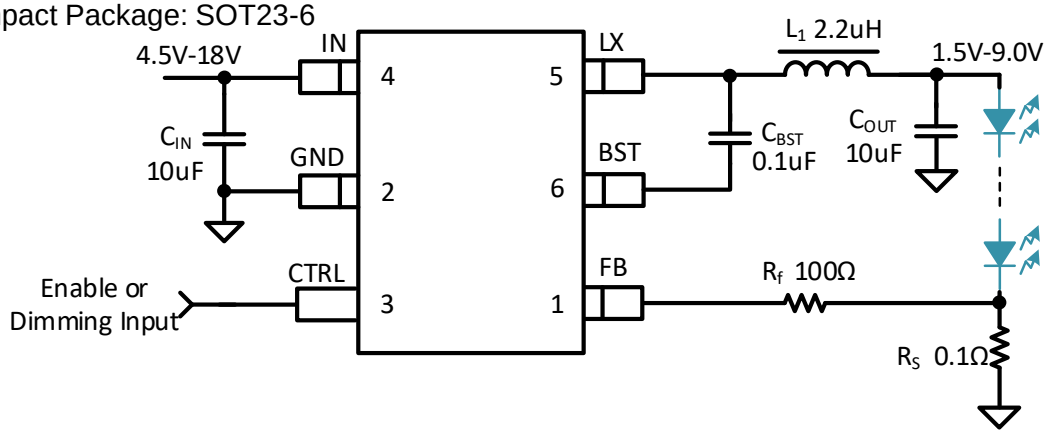
SY8717ABT - 1A, 1.8MHz, 0.2% Dimming Synchronous Step-Down Regulator for Dimmable LED Driver

Features

- Wide Input Range: 4.5V-28V
- Up to 1A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches
- High Side/Low Side:220mΩ/220mΩ
- Up to 1.8MHz Switching Frequency
- Auto Frequency Reduction to Apply Small or Large Conversion Ratio Application
- Cycle by Cycle Peak Current Limit for High Side and Valley Current Limit for Low Side
- High Accuracy for Down to 0.2% Dimming Scale
- Output Voltage Discharging
- Open LED and Short LED Protection
- Over Temperature Protection
- Compact Package: SOT23-6

Applications

- DVR Or NVR (IP Camera) System Application
- 12VDC Lighting



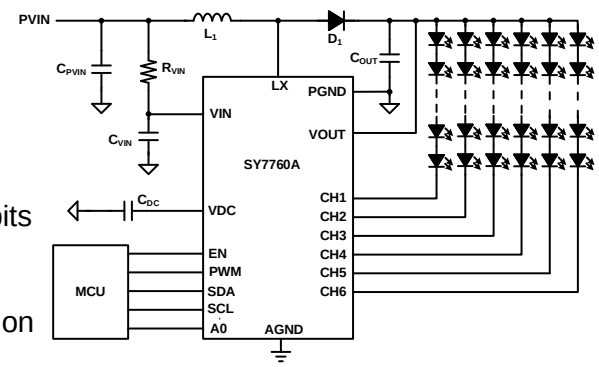
SY7760AXZQ - 37V High Efficiency Boost Converter with I2C Controlled 6-CH LED Driver

Features

- Wide input voltage ranges from 3.3V to 24V
- VOUT OVP up to 40V to cover 12-13 WLEDS application.
- Low head room(400mV) for high system efficiency
- Channel current set in register: 6-31mA
- Adjustable switching frequency 100KHz-1.5MHz
- Embedded Memory with MTP
- 4 dimming mode: PWM/DC/MIX/MIX-26KHz
- Direct PWM up to 25kHz with Minimum 1.2% duty
- DC mode up to 2kHz with 12bit resolution (Max 12 bits DAC integrated)
- PWM to mixed up to 2kHz with 12-bit resolution
- PWM to mixed-26kHz up to 2kHz with 12-bit resolution
- Protection: OVP/SLP/OLP/OTP
- Package: QFN3 x 3 - 24

Applications

- Notebook or tablet LED backlight



Back

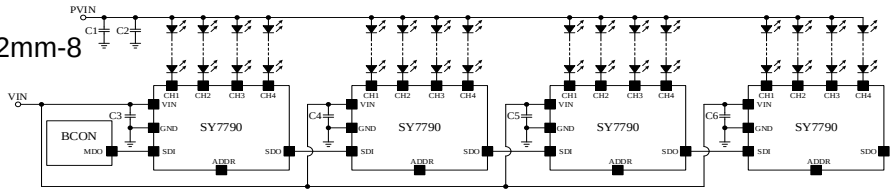
SY7790DFD - 4CH Current Sink with One Wire Interface Mini LED Driver

Features

- 3.05V to 3.6V Input Voltage Range
- 0V to 30V LED Channel Pin Voltage Range
- Current Accuracy ±3% (10mA to 100mA)
- 0.6V Headroom Voltage for Current Sink
- 10-bit to 13-bit Local PWM Dimming
- Support for 3.91kHz or 2.6kHz PWM Frequency (at Max 13-Bit Resolution)
- 8-Bit Global Analog Dimming
- 1-Bit LED Current Rising Slew Rate Selection
- 8-Bit Global Phase-Shift Configuration for Synchronization Control
- 1-Bit Channel Turn-On Delay Selection
- 10-Bit PWM Pulse Configuration for PWM Mask
- 32MHz Internal Clock
- 2.6kHz to 31.25kHz PWM Dimming Frequencies
- Internal LED Short, LED Open, and Overtemperature (OTP) Protections
- Headroom Voltage Feedback using SDI Pin
- Support for 0.5Mbps/1Mbps/1.5Mbps/2Mbps 1-Wire Interface Speed
- Compact Package: DFN2mmx2mm-8

Applications

- Monitor LCD Backlight
- LCD TV Backlight



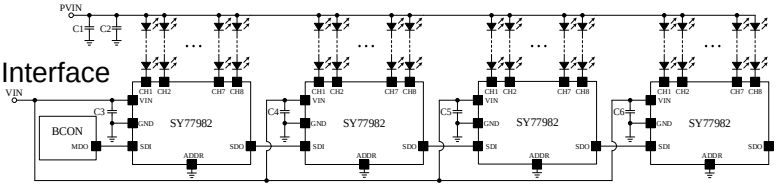
SY77982XVQ - 8-Channel Current Sink with 1-Wire Interface Mini LED Driver

Features

- 3.05V to 3.6V Input Voltage Range
- 0V to 30V LED Channel Pin Voltage Range
- 3.0V to 3.8V Input Voltage Range
- 0V to 30V LED Channel Pin Voltage Range
- Current Accuracy ±3% (7mA to 70mA)
- Headroom Voltage following Current Range
- 10-bit to 12-bit Local PWM Dimming
- 3.74kHz to 29.95kHz PWM Dimming Frequencies Selection
- 4-bit to 6-bit Local Analog Dimming
- Max 16-bit Local Hybrid Dimming
- 1-bit LED Current Rising Slew Rate Selection
- 8-bit Local Turn-On Delay Configuration for Synchronization Control
- 10-bit PWM Pulse Setting for PWM Mask
- Internal LED Short, LED Open, and Over-temperature (OTP) Protections
- Headroom Voltage Feedback by SDI Pin
- 0.5Mbps/1Mbps/1.5Mbps/2Mbps 1-Wire Interface Speed with Biphase Mark Coding
- Support Hardware Addressing
- Compact Package: QFN2.5x2.5-14

Applications

- Monitor LCD Backlight
- LCD TV Backlight



Back

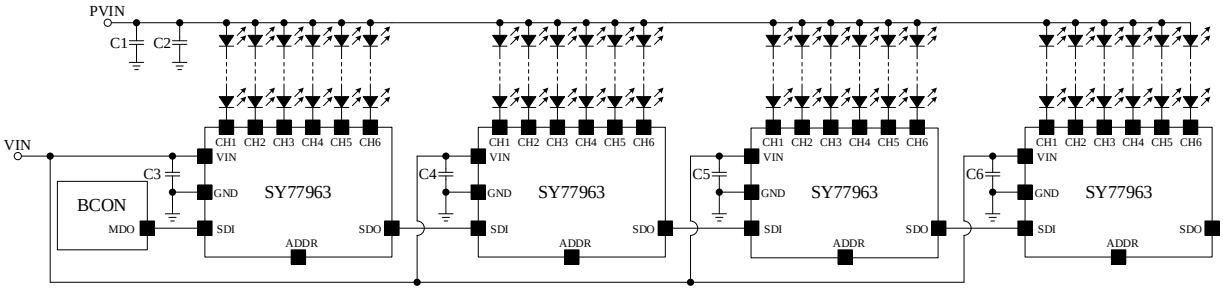
SY77963XVQ - 6CH Current Sink with One Wire Interface Mini LED Driver

Features

- VIN voltage range: 3.05 to 3.6V
- 3.05V to 3.6V Input Voltage Range
- 0V to 30V LED Channel Pin Voltage Range
- Current Accuracy ±3% (10mA to 100mA)
- 0.6V Headroom Voltage for Current Sink
- 10-bit to 13-bit Local PWM Dimming
- Support for 3.91kHz or 2.6kHz PWM Frequency (at Max 13-Bit Resolution)
- 8-Bit Global Analog Dimming
- 1-Bit LED Current Rising Slew Rate Selection
- 8-Bit Global Phase-Shift Configuration for Synchronization Control
- 1-Bit Channel Turn-On Delay Selection
- 10-Bit PWM Pulse Configuration for PWM Mask
- 32MHz Internal Clock
- 2.6kHz to 31.25kHz PWM Dimming Frequencies
- Internal LED Short, LED Open, and Overtemperature (OTP) Protections
- Headroom Voltage Feedback using SDI Pin
- Support for 0.5Mbps/1Mbps/1.5Mbps/2Mbps 1-Wire Interface Speed
- Compact Package: QFN2.5mmx2.5mm-14

Applications

- Monitor LCD Backlight
- LCD TV Backlight



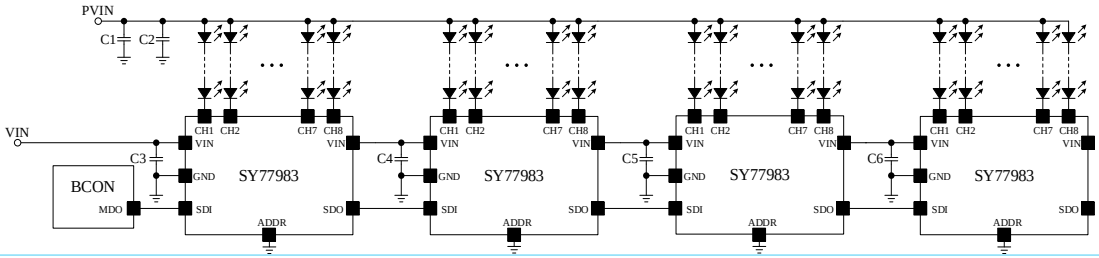
SY77983HRP - 8CH Current Sink with One Wire Interface Mini LED Driver

Features

- 3.0V to 3.8V Input Voltage Range
- 0V to 30V LED Channel Pin Voltage Range
- Current Accuracy ±3% (7mA to 70mA)
- Headroom Voltage following Current Range
- 10-bit to 12-bit Local PWM Dimming
- 3.74kHz to 29.95kHz PWM Dimming Frequencies Selection
- 4-bit to 6-bit Local Analog Dimming
- Max 16-bit Local Hybrid Dimming
- 1-bit LED Current Rising Slew Rate Selection
- 8-bit Local Turn-On Delay Configuration for Synchronization Control
- 10-bit PWM Pulse Setting for PWM Mask
- Internal LED Short, LED Open, and Over-temperature (OTP) Protections
- Headroom Voltage Feedback by SDI Pin
- 0.5Mbps/1Mbps/1.5Mbps/2Mbps 1-Wire Interface Speed with Biphase Mark Coding
- Support Hardware Addressing
- Compact Package: TSSOP-14E

Applications

- Monitor LCD Backlight
- LCD TV Backlight



Back

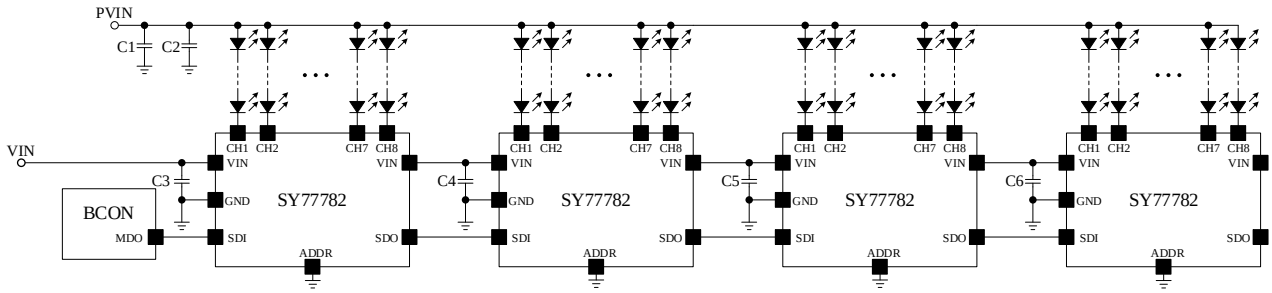
SY77782YQQ - 8CH Current Sink with One Wire Interface Mini LED Driver

Features

- 3.0V to 4.0V Input Voltage Range
- 0V to 30V LED Channel Pin Voltage Range
- Max 15mA/30mA/45mA/60mA/ 75mA/90mA/105mA/120mA Output
- Current Accuracy ±3% (3mA to 60mA)
- Adaptive Headroom Voltage for Channels
- 16-bit Local PWM Dimming including Max 6-bit dither
- 2.81kHz to 33.69kHz PWM Dimming Frequencies Selection
- 10-bit Local Analog Dimming
- Max 26-bit Local Hybrid Dimming
- 1-bit LED Current Rising Slew Rate Selection
- 8-bit Local and 8-bit Global Turn-On Delay Configuration for Synchronization Control
- 10-bit PWM Pulse Setting for PWM Mask
- Internal LED Short, LED Open, and Over-temperature (OTP) Protections
- Headroom Voltage Feedback by SDI or SDO Pin
- 1Mbps/2Mbps/2.5Mbps/3Mbps 1-Wire Interface Speed with Biphase Mark Coding
- Support Hardware Addressing
- Compact Package: QFN2x2-14

Applications

- Monitor LCD Backlight
- LCD TV Backlight



Back

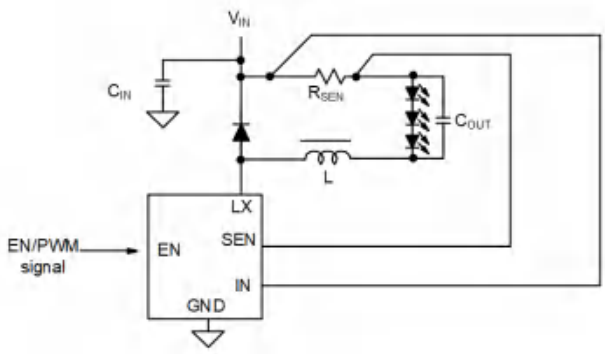
Part Number	App.Type	Input Range(V)	Description	Max. LED Current	F(Hz)	Topology	Package
SY8702AABC	DCDC Buck	2.8V-30V	Buck, Int. 30V/200mΩ MOS, PWM dimming	500mA	300kHz	Buck	SOT23-6
SY8745AFCC	DCDC Buck	10V-60V	Buck, Int. 60V/160mΩ MOS, Analog/PWM dimming	1500mA	500kHz	Buck	SO8E
SY8746BFCC	DCDC Buck	12V-60V	Buck, Int. 60V/660mΩ MOS, ON/OFF dimming	800mA	350kHz	Buck	SO8E
SY8750FCC	DCDC Buck	5V-80V	Buck, Int. 80V/200mΩ MOS, Analog/PWM dimming	2000mA	500kHz	Buck	SO8E
SY8756AHHC	DCDC Buck	11V-55V	Buck Controller, RGBW 4 channel, PWM dimming	5A	Adjustable frequency	Buck	TSSOP24E
SY8759FFP	DCDC Buck	33V-92V	Buck Controller, Precision Analog Dimming	5A	Adjustable frequency	Buck	SOP16
SY87596FFP	DCDC Buck	33V-92V	Buck Controller, Precision Analog Dimming 100V/150mΩ MOS	1.5A	Adjustable frequency	Buck	SOP16
SY8703ABC	IR LED	2.8V-30	Buck, Int. 30V/200mΩ MOS,PWM dimming	1.0A	1M	Buck	SOT23-6
SY8705FCC	IR LED	2.8V-30	Buck, Int. 30V/100mΩ MOS,PWM dimming,	3.0A	1M	Buck	SO8E
SY8708ABC	IR LED	2.8V-25	Buck. Int. 25V/200mΩ MOS, Analog dimming,	0.8A	1M	Buck	SOT23-6
SY8718A1ADC	IR LED	4.0V-23	Sync Buck, Int. 23V/125mΩ&23V/75mΩ MOS,PWM dimming, Small dimming scale accuracy	1.5A	1M	Buck	TSOT23-6
SY8718B1ADC	IR LED	4.0V-23	SYN Buck, Int. 23V/125mΩ&23V/75mΩ MOS,PWM dimming, Small dimming scale accuracy	1.5A	1M	Buck	TSOT23-6
SY8718H1ADC	IR LED	4.0V-23	SYN Buck, Int. 23V/125mΩ&23V/75mΩ MOS, Analog dimming, Small dimming scale accuracy down to 1% dimming scale	1.5A	1M	Buck	TSOT23-6
SY8719TQD	IR LED	4.5V-28V	SYN Buck, Int. 28V/210mΩ&28V/210mΩ MOS, Analog dimming, Small dimming scale accuracy down to 0.1% dimming scale	1A	1.8M	Buck	DFN1.8*1.4-6
SY7310AADC	IR LED	2.7V-5.5	Boost, Int.40V/400mΩ MOS,PWM dimming, Small dimming scale accuracy	1.0A	1M	Boost	SOT23-6
SY7807DEC	Flash LED Driver	2.7V-5.5V	Syn Boost,PWM dimming	IFLASH<1.5A,ITORCH<300mA	2M	Boost	DFN2*2_6
SY7803BDUC	Flash LED Driver	2.7V-5.5V	Syn Boost+ Current Source,PWM dimming	Each channel IFLASH<1.0A,ITORCH<200mA	2M	Boost	DFN3*2-14
SY7806EPSC	Flash LED Driver,I2C	2.7V-5.5V	Syn Boost+ Current Source	Each channel IFLASH<1.5A,ITORCH<358mA	2M/4M	Boost	CSP1.79*1.46-12
NEW SY8728ABT	IR LED	4.2~36	36V,1A,syn-buck CC regulator	1A	1MHz	Buck	SOT23-6

Back

SY8702AABC- High Efficiency Low EMI 300KHz,0.5A,30V, Step-down White LED Driver

Features

- Wide input range: 2.5-30 V
- 300kHz switching frequency
- Very low RdsON: 200mΩ
- Enable and dimming control available
- Compatible with PWM dimming power supply
- Compact 6 pin SOT23 package
- RoHS Compliant and Halogen Free



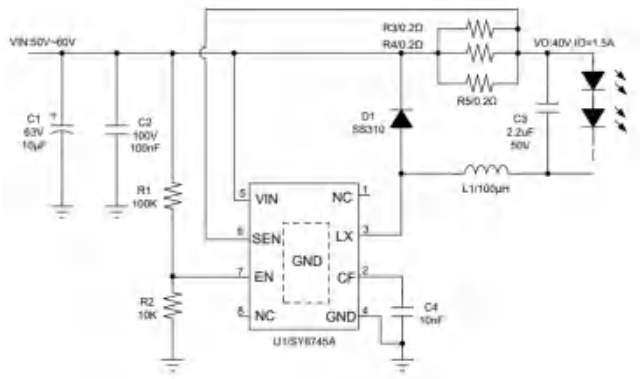
Applications

- Flash light
- Display cabinet lamp
- LED module
- LED sign

SY8745AFCC- High Efficiency 60V, 2.0A, 500KHz Constant Current Step-down Regulator

Features

- Low RDS(ON) for internal switches :160mΩ
- Input range: 12V-60V
- 500kHz switching frequency
- PWM/Analog dimming available
- 2.0A LED current output
- Compact package: SO8E
- RoHS Compliant and Halogen Free
- ±2% 100mV reference



Applications

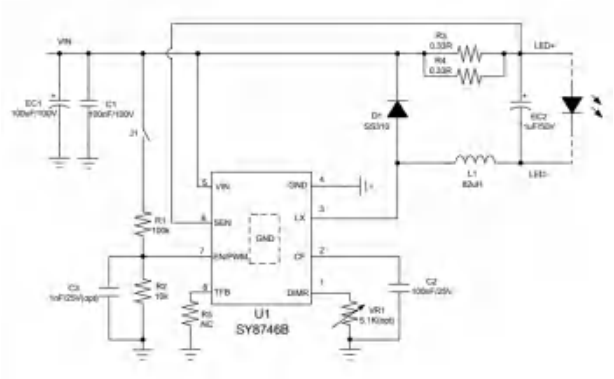
- PAR Lamp
- Tube Lamp
- Bulb

Back

SY8746BFCC- High Efficiency 60V, 0.8A, 350KHz Constant Current Step-down Regulator

Features

- Low RDS(ON) for Internal Switches :680mΩ
- Input Range: 12V-60V
- 350kHz Switching Frequency
- 1.2A MOSFET Peak Current Limitation
- Analog/PWM Dimming Available
- Lower than 0.5% Deep Dimming Level
- Adjustable Thermal Foldback Temperature
- Dimming Resistor to Adjust Output Full Load
- Compact Package: SO8E



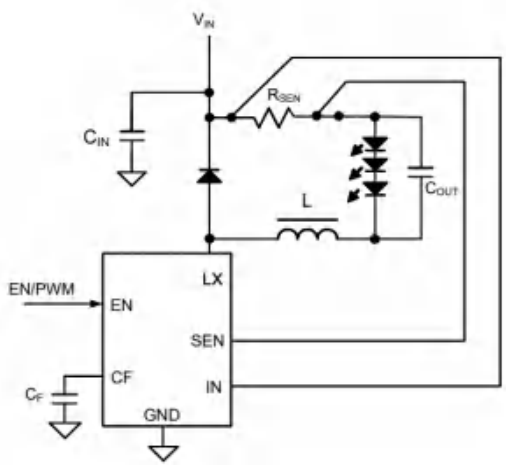
Applications

- PAR Lamp
- Tube Lamp
- Bulb

SY8750FCC- High Efficiency, 5-80V Input, 500kHz White LED Driver

Features

- Wide input range: 5-80 V 500kHz switching frequency
- Integrated low RDS(ON) FET: 200mΩ
- Analog dimming with PWM signal/Analog signal Maximum output LED current 2A
- Compact package: SO8E



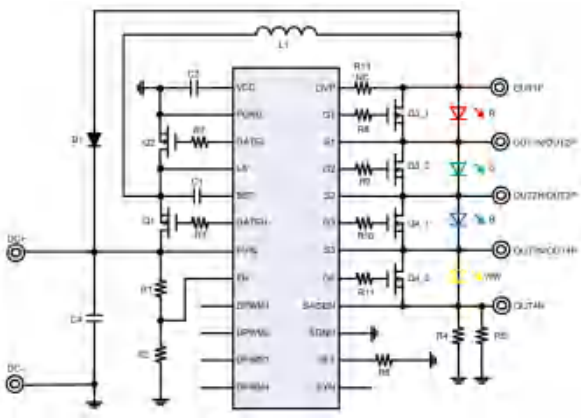
Applications

- LED Lighting

Back

Features

- Input Range: 11V-55V
- 4-channel Shunt Dimming MOSFET Driver
- Excellent PWM Dimming: 0~100% PWM Dimming Frequency: 500Hz~20 KHz
- MOSFET Gate Driver: Source1 1A and Sink 2A
- Programmable Current Ripple Hysteresis Control
- Simple External Components
- Reliable Input UVLO and Open LED Protection
- Thermal Shut down Protection
- RoHS Compliant and Halogen Free
- Compact Package: TSSOP24E



Applications

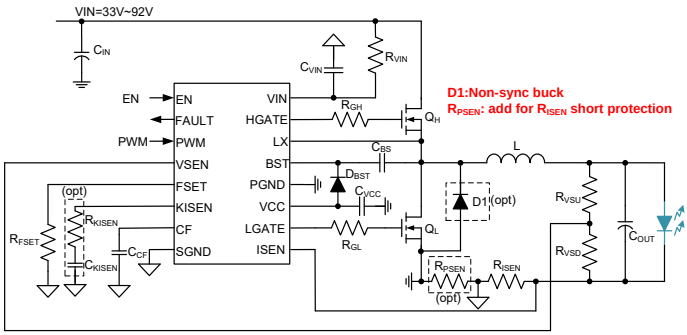
- RGBW Color Mixing and Dimming

Back

SY8759FFP- High Efficiency, 33~92V, Step-down Controller for Precision Dimming LED Driver

Features

- Input Range: 33V-92V
- Wide Analog Dimming Range: 400:1
- Excellent Dimming Accuracy:
  ±5%@25~100%
  ±25%@0.25%
- Gate Driver: Source 8.8Ωand Sink 3.7Ω
- Programmable Switching frequency: 20kHz~500kHz
- Support Synchronous and Non-synchronous Buck
- CC/CV Operation for Open LED and Short LED
- Reliable Single-fault Protection
- Compact Package: SOP16



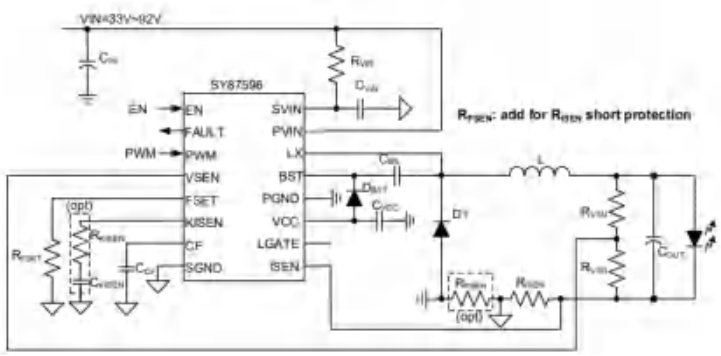
Applications

- High Precision Dimming LED Driver

SY87596FFP- High Efficiency, 33–92V, Step-Down Regulator for Precision Dimming LED Driver

Features

- Input Range: 33V-92V
- Low RDSON for Internal Top Switch:150mΩ
- Wide Analog Dimming Range: 400:1
- Excellent Dimming Accuracy
  ±5%@25–100% ±25%@0.25%
- Programmable Switching Frequency: 20kHz–500kHz
- Constant Current (CC) and Constant Voltage (CV) Operation for Open LED and Shorted LED
- Reliable Single-Fault Protection
- Compact Package: SOP16



Applications

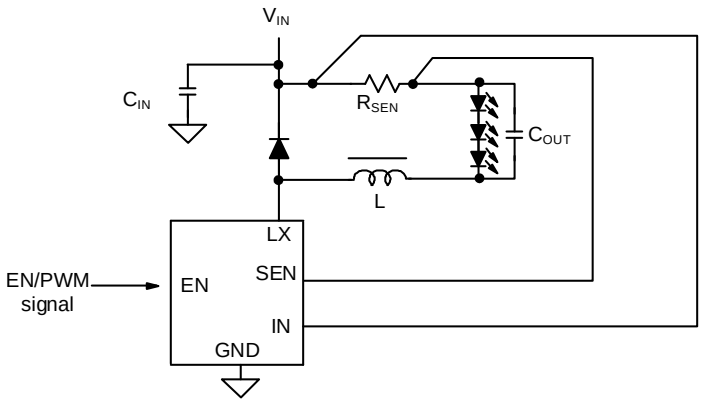
- High Precision Dimming LED Driver

Back

SY8703ABC- High Efficiency, 1MHz, 1A,30V,Step-down White LED Driver

Features

- Wide input range: 2.5-30 V
- 1 MHz switching frequency
- Very low R_{ON}: 200mΩ
- Enable and dimming control available
- 20kHz~1MHz wide dimming frequency range
- Compact 6 pin SOT23 package
- RoHS Compliant and Halogen Free



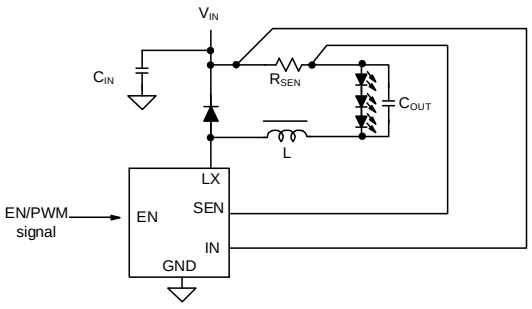
Applications

- Flash light
- Display cabinet lamp
- LED sign

SY8705FCC- High Efficiency, 1MHz, 3A, 30V Step Down White LED Driver

Features

- Wide input range: 2.5-30 V
- 1 MHz switching frequency
- Very low R_{ON}: 100mΩ
- Enable and dimming control available
- 20kHz~1MHz wide dimming frequency range
- Compact package: SO8E
- RoHS Compliant and Halogen Free



Applications

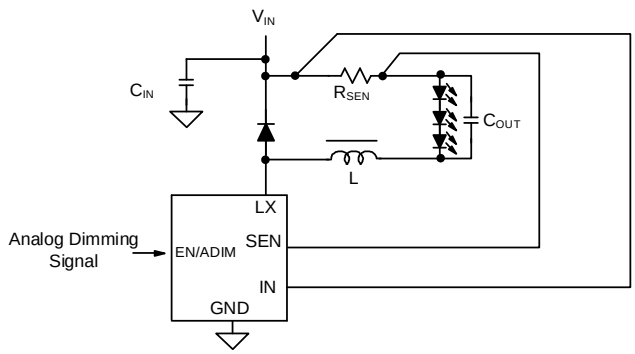
- Flash Light
- Display Cabinet Lamp
- LED Sign

Back

SY8708ABC- High Efficiency, 1MHz, 0.8A, 25V, Step Down White LED Driver

Features

- Wide input range: 2.8-25 V
- 1 MHz switching frequency
- Very low R_{ON}: 200mΩ
- 0.65-1.2V analog dimming
- Compact package: SOT23-6
- RoHS Compliant and Halogen Free



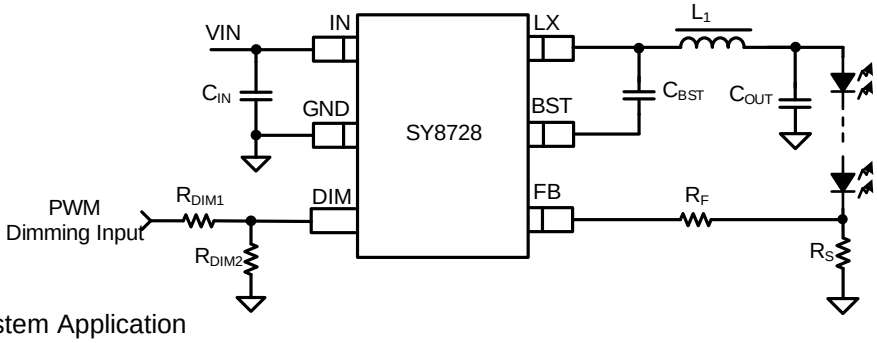
Applications

- IP Camera and CCD Camera
- Flash Light
- Display Cabinet Lamp
- LED Sign

SY8728ABT- 34V, 1A, 1.0MHz, 1% Dimming Synchronous Buck Regulator For Dim mable LED Driver

Features

- 4.5V to 34V Input Voltage Range
- Up to 1A Output Current Capability
- RDSON for Internal Switches:
- High/Low Side: 220mΩ/210mΩ
- 1.0MHz Switching Frequency
- Auto Frequency Reduction to Apply Small or Large Conversion Ratio Application
- Cycle by Cycle Peak Current Limit for High Side Switch and Valley Current Limit for Low Side Switch
- PWM signal on the DIM Pin to achieve DC dimming
- Down to 1% Dimming Scale
- Output Voltage Discharging
- Open/Short LED Protection
- Over Temperature Protection
- Compact Package: SOT23-6



Applications

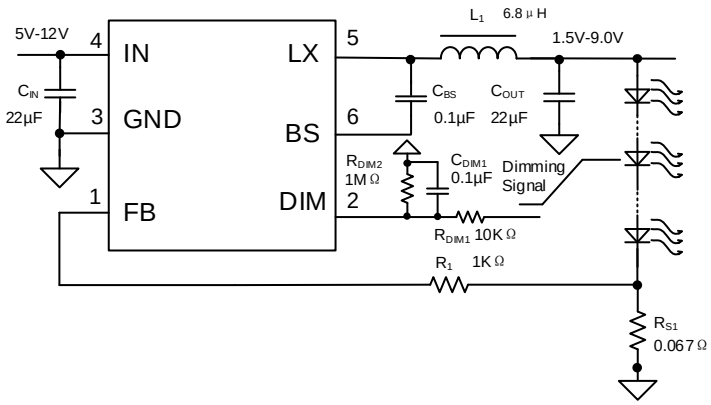
- DVR or NVR(IP Camera) System Application
- 12V DC Lighting

Back

SY8718A1ADC/SY8718B1ADC- High Efficiency, 23V,2.0A Synchronous Step Down Regulator For Dimmable LED Driver

Features

- Wide Input Range: 4V-23V
- Up to 2.0A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches
- High Side/Low Side:125mΩ/75mΩ
- Fixed 1MHz Switching Frequency
- Cycle by Cycle 3.5A Peak Current Limit for High Side and 2.5A Valley Current Limit for Low Side
- High Accuracy for Low Dimming Scale
- Output Voltage Discharging
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-6



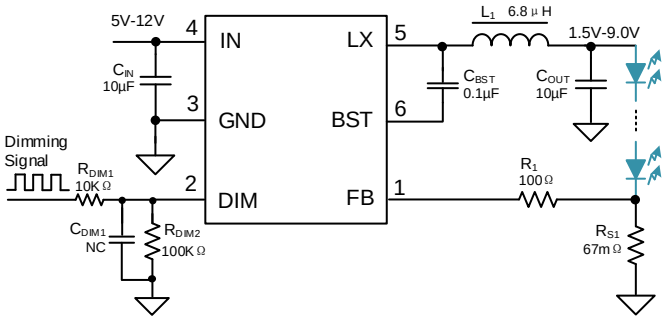
Applications

- DVR Or NVR(IP Camera) System Application
- 12VDC Lighting

SY8718H1ADC- High Efficiency, 23V,2.0A Synchronous Step Down Regulator For Dimmable LED Driver

Features

- Wide input voltage range: 4V-23V
- Up to 2.0A Output Current Capability
- Low $RDS_{(ON)}$ for Internal Switches
- High Side/Low Side:125mΩ/75mΩ
- Fixed 1MHz Switching Frequency
- Cycle by Cycle 3.5A Peak Current Limit for High Side and 2.5A Valley Current Limit for Low Side
- High Accuracy at low duty cycle operation
- Enables dimming down to 1% of the maximum LED programmed current
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact package: TSOT23-6



Applications

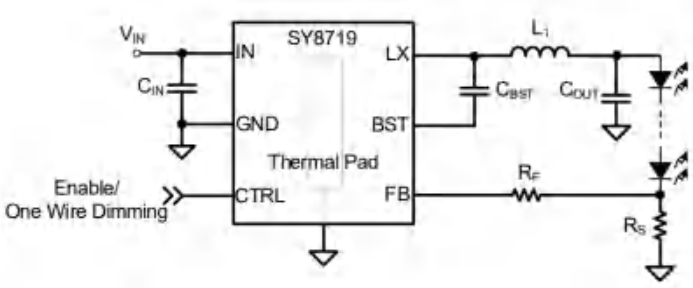
- IR LED Driving for DVR /NVR Camera Systems
- 12VDC Lighting

Back

SY8719TQD- High 28V, 1A, 1.8MHz, 0.1% Dimming Synchronous Buck Regulator For Dimmable LED Driver

Features

- 4.5V to 28V Input Voltage Range
- Up to 1A Output Current Capability
- Low RDSON for Internal Switches: High/Low Side: 200mΩ/200mΩ
- Up to 1.8MHz Switching Frequency
- Auto Frequency Reduction to Apply Small or Large Conversion Ratio Application
- Cycle by Cycle Peak Current Limit for High Side Switch and Valley Current Limit for Low Side Switch
- One-Wire Dimming on the CTRL Pin
- Down to 0.1% Dimming Scale
- Output Voltage Discharging
- Open/Short LED Protection
- Over Temperature Protection
- Compact Package: DFN 1.8mm×1.4mm-6



Applications

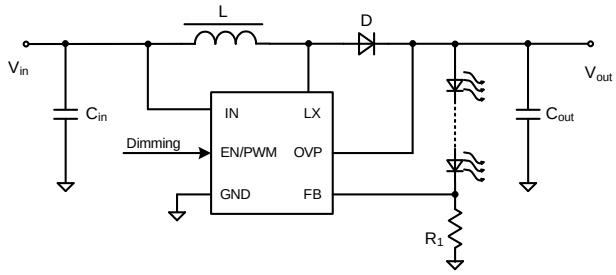
- DVR or NVR(IP Camera) System Application
- 12V DC Lighting

Back

SY7310AADC- 30V/40V High Current Boost LED Driver

Features

- Input Voltage Range:
  - SY7200A: 2.8 to 30V
  - SY7310A: 2.5 to 5.5V
- Switch Current Limit:
  - SY7200A: 2A
  - SY7310A: 1A
- Drives LED Strings up to 30V/40V
- 1MHz Fixed Frequency Minimizes the External Components
- Dimming Frequency for EN/PWM Pin: 20kHz~1MHz
- PWM Dimming Frequency:10kHz~1MHz
- Internal soft-start limits the inrush current
- Open LED Over Voltage Protection
- RoHS Compliant and Halogen Free



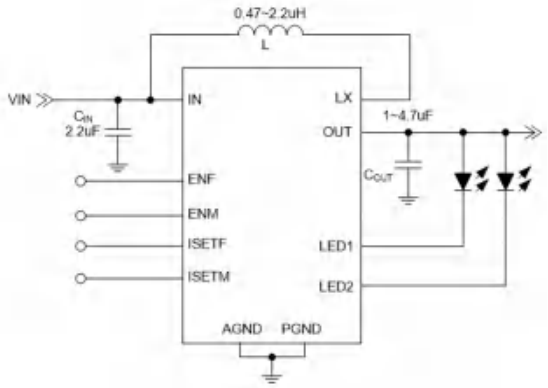
Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players

SY7803BDUC- 2A Flash LED Boost Driver for Smart Phone Application

Features

- Input voltage range: 2.7V to 5.5V.
- 2MHz switching frequency to achieve small total solution size.
- Drive up to total 2A or 1A per channel in flash mode
- Timeout function in flash mode
- Independent flash-mode enable and movie/torch-mode enable pins
- Movie/torch-mode dimming via PWM control
- One resistor sets flash-mode LED current
- One resistor sets movie/torch-mode LED current
- Low Rdson of internal FET: 100m ohm for PFET and 200m ohm for NFET
- LED open/short protection
- Over-voltage protection
- 0.1 μA shutdown current
- Thermal shut down.
- 40 to +85 C° Temperature Range
- Pb-free Package: DFN3x2-14



Applications

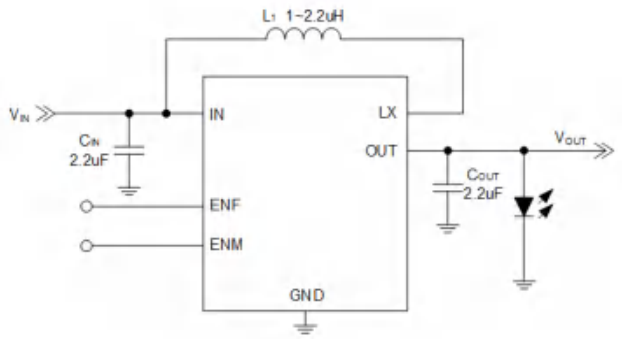
- Smart phone/digital camera LED flash
- White LED driver

Back

SY7807DEC- 1.5A Flash LED Boost Driver for Smart

Features

- Input voltage range: 2.7V to 5.5V
- 2MHz switching frequency to achieve small total solution size
- Drive up to 1.5A LED flash current
- Drive up to 300mA LED torch current
- Dimming frequency: 20kHz~200kHz
- Timeout function in flash mode
- Independent flash mode enable and torch mode enable pins
- Low $R_{DS(ON)}$ of internal FET: 180mΩ for PFET and 150mΩ for NFET
- LED open/short protection
- Over-voltage protection
- 0.1 μA shutdown current
- Thermal shutdown
- -40 to +85 C° temperature range
- Pb-free package: DFN2×2-6



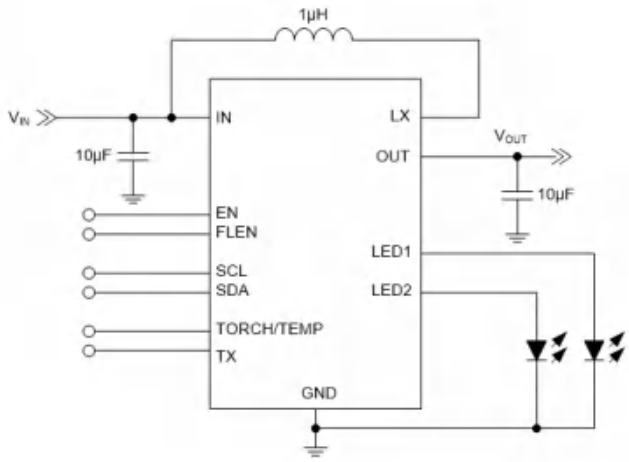
Applications

- Smart phone/digital camera LED flash
- White LED driver

SY7806EPSC- Dual 1.5A Current Source Camera Flash LED Driver

Features

- Dual Independent 1.5A LED High Side Current Sources Programmability, 2 A Total Allowed LED Current during Operation(ILED1 + ILED2 = 2A)
- Accurate and Programmable LED Current Range from 1.8 mA to 1.5 A
- Low R_{DS}(on) of internal FET: 55mohm for NFET and 85mohm for PFET.
- Up to 85% Efficiency with small inductor
- Hardware Flash Mode Enable (FLEN)
- Synchronization Input for RF Power Amplifier Pulse Events (TX)
- Hardware Torch Mode Enable (TORCH/TEMP)
- Optimized Flash LED Current During Low Battery Conditions (IVFM)
- Remote NTC Monitoring (TORCH/TEMP)
- 400kHz I2C Compatible Interface
- Package: CSP1.79mm×1.46mm -12



Applications

- Camera Phone White LED Flash

Back

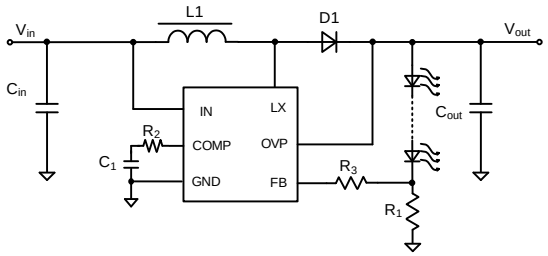
Part Number	App.Type	PF	Description	Input V_{AC}	Output Power	Output Current	Package
SY7305ABC	MR16 non-dimming	>0.9	Boost, Int.40V/220mΩ MOS	$12V_{AC}$	<5W	<300mA	SOT23-6
SY7306FCC	MR16 non-dimming	>0.9	Boost, Int.40V/220mΩ MOS	$12V_{AC}$	<8W	>18Vout	SO8E
SY7308FPC	MR16 non-dimming	>0.9	Boost, Int.40V/120mΩ MOS	$12V_{AC}$	<5W	>18Vout	CPC8
SY8727FCC	MR16 dimmable	>0.9	Boost+LDO, Int.40V/120mΩ MOS, Best compatibility	$12V_{AC}$	<8W	>18Vout	SO8E
SY7400FCC	MR16 dimmable		Boost, Int.60V/650mΩ MOS		<20W	>18Vout	SO8E
SY7400LABC	MR16 dimmable		Boost, Int.60V/650mΩ MOS		<15W	8~24Vout	SOT23-6

Back

SY7305ABC/SY7306FCC- High Efficiency Low EMI 350KHz,Step Up White LED Driver

Features

- Wide Input Voltage Range: 2.9 to 36V
- Switch Current Limit:2.5A
- Low R_{dsON}: 220mΩ
- 350KHz Switching Frequency
- Internal Soft-start Limits the Inrush Current
- Open LED Over Voltage Protection
- RoHS Compliant and Halogen Free
- Compact Package:
  - SY7305: SOT23-6
  - SY7306: SO8E



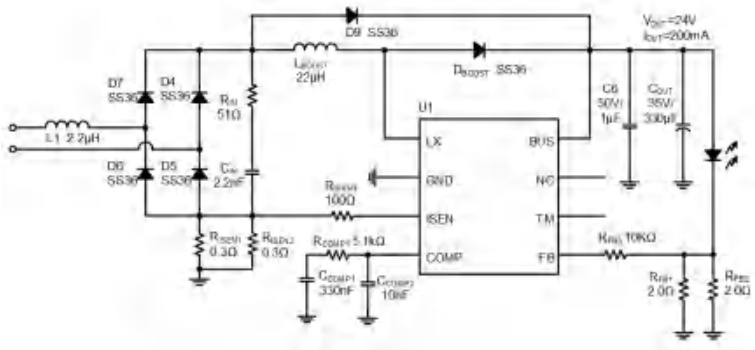
Applications

- MR16 LED Lighting

SY7308FPC- 2A Boost Regulator for MR16 LED Driver

Features

- Wide Input Range: 4V-36V
- Current Hysteresis Control for Boost Stage
- Integrated Low $R_{DS(ON)}$ FET for Boost Stage
- Compatible with Electronic Transformer and Magnetic Transformer
- Overvoltage Protection for Boost Output Voltage
- Over Temperature Protection for Boost Stage
- Compact Package: CPC8



Applications

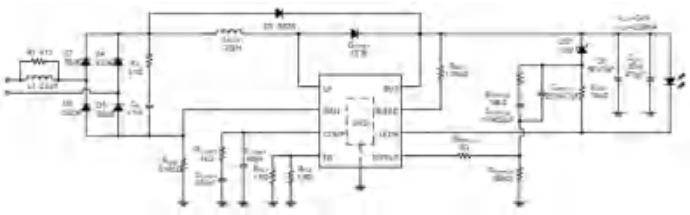
- MR16 Lighting
- 12VAC/12VDC Lighting

Back

SY8727FCC- 40V/2A Boost Regulator for Dimmable MR16 LED Driver

Features

- Wide Input Range: 4V-36V
- Current Hysteresis Control for Boost Stage
- Integrated Low $R_{DS(ON)}$ FET for Boost Stage
- Integrated Current Ripple Remover FET
- Compatible with Electronic Transformer and Magnetic Transformer
- Compatible with Leading-edge (TRIAC) Dimmer and Trailing-edge Dimmer
- Flicker-free Dimming
- Active Bleeding Support
- Overvoltage Protection for Boost Output Voltage
- Over Temperature Protection for Boost Stage and Current Ripple Remover
- Compact Package: SO8E



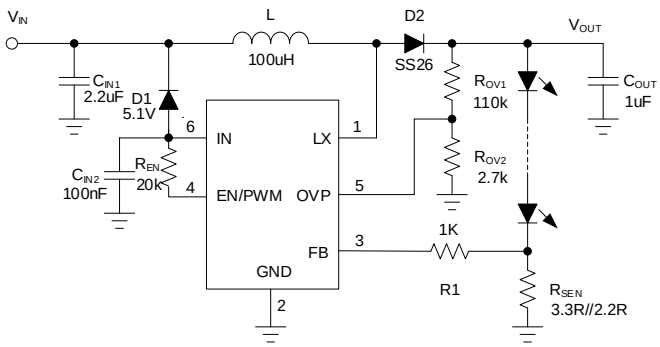
Applications

- 12VAC/12VDC Lighting
- Dimmable MR16 Lighting

SY7400FCC/SY7400LABC- 60V High Current Boost LED Driver

Features

- Input Voltage Range 5 to 60V
- Switch Current Limit 1.2A/0.8A
- Drives LED Strings up to 60V
- 400kHz Fixed Frequency Minimizes the External Components
- Internal Soft start Limits the Inrush Current
- Open LED Over Voltage Protection
- RoHS Compliant and Halogen Free
- Compact Package:
  - ➢ SY7400: SO8E
  - ➢ SY7400L: SOT23-6



Applications

- Handheld Devices
- Portable Lighting

Back

Part Number	App.Type	PF	Description	Input V_{AC}	Output Power	Output Current	Package
SY58978UFAC	AC Buck non-dimming	>0.9	QR,Buck,4 Drain, no aux winding, Int. MOS 600V/2Ω	120/230V_{AC}	<20W	<300mA	SO8
SY58213FAC	AC Flyback non-dimming	>0.9	Self-Bias, QR, Buck, 4-Drain SO8, Int. comp. accurate OVP,650V/10Ω	230V_{AC}	<10W	NA	SO8
SY58215FAC	AC Flyback non-dimming	>0.9	Self-Bias, QR, Buck, 4-Drain SO8, Int. comp. accurate OVP, 650V/4.4Ω	230V_{AC}	<20W	NA	SO8
SY5839ABC	AC Buck non-dimming	>0.9	PSR, QR, CC, Buck controller	120/230V_{AC}	<100W	NA	SOT23-6
SY5830BABC	AC Flyback non-dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback controller	120/230V_{AC}	<100W	NA	SOT23-6
SY5842FAC	AC Flyback non-dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback controller, OTP, Line OVP & Brown-out	120/230V_{AC}	<80W		SO8
SY5861BFAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	<250mA	SO8
SY5862FAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	250~600mA	SO8
SY5863AJAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	0,25~1.2A	TO252-3
SY5864KAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	0.5~1.5A	TO220-3
SY5867FAC	Dim-Interface	NA	3-in-1 Dimming Interface	NA	NA	NA	SO8
SY5867SFAC	Dim-Interface	NA	3-in-1 Dimming Interface	NA	NA	NA	SO8
SY58873UFAC	PFC_Boost_CV	>0.9	QR, CV, Boost, Int. MOS 500V/4.9Ω single winding	230V_{AC}	<50W		SO8
SY58874UFAC	PFC_Boost_CV	>0.9	QR, CV, Boost, Int. MOS 520V/3.4Ω single winding	230V_{AC}	<60W		SO8
SY58237AGC	AC Flyback non-dimming	>0.5	Self-Bias, QR, Buck-Boost/Flyback,4 Drain, no aux winding, Int. MOS 650V/2.7Ω	400V_{DC}	<50W	NA	DIP8
SY58237CAGC	AC Flyback non-dimming	>0.5	Self-Bias, QR, Buck-Boost/Flyback,4 Drain, no aux winding, Jitter, Int. MOS 650V/2.7Ω	400V_{DC}	<50W	NA	DIP8
SY5951AFAC	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump, LLC controller	230V_{AC}	<100W	NA	SO8
SY59515FAC	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump, LLC, 4 Drain, Low side, Int. MOS 500V/1.1Ω	230V_{AC}	<45W	NA	SO8

Back

Part Number	App.Type	PF	Description	Input V_{AC}	Output Power	Output Current	Package
SY59516FAC	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump,LLC,4 Drain, High side, ,Int. MOS 500V/1.1Ω	230V_{AC}	<45W	NA	SO8
SY59525FAP	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump,LLC,4 Drain, Low side, ,Int. MOS 650V/1.1Ω	230V_{AC}	<45W	NA	SO8
SY59526FAP	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump,LLC,4 Drain, High side, ,Int. MOS 650V/1.1Ω	230V_{AC}	<45W	NA	SO8
SY5072AABT	PFC_Boost_CV	>0.9	QR, CV, Boost	120/230V_{AC}	<300W		SOT23-6
SY5072BABC	PFC_Boost_CV	>0.9	QR, CV, Boost, Burst @light load	120/230V_{AC}	<300W		SOT23-6
SY5018BFAC	PFC_Flyback_CV	>0.9	PSR, QR, CV, Controller	120/230V_{AC}	<80W		SO8
SY5018CFAP	PFC_Flyback_CV	>0.9	PSR, QR, CV, Controller,Low THD	120/230V_{AC}	<80W		SO8
SY5018SFAP	PFC_Flyback_CC_CV	>0.9	SSR, QR, CC, CV, Controller	120/230V_{AC}	<80W		SO8
SY5028ABC	PFC_Flyback_CV	>0.9	PSR, QR, CV, Controller	120/230V_{AC}	<60W		SOT23-6
SY50183FAC	PFC_Buck_CV	>0.9	PSR, QR, Buck CV, Int. MOS 500V/4.5Ω	120/230V_{AC}	<10W	<250mA	SO8
SY50186FAC	PFC_Buck_CV	>0.9	PSR, QR, Buck CV, Int. MOS 600V/2.2Ω	120/230V_{AC}	<16W	<400mA	SO8
SY5881FAC	AC Buck PWM Dimming	>0.9	PFC, CC, Buck Controller, PWM/Analog Dimming	120/230V_{AC}	<80W		SO8
SY5881SFAP	DC Buck	>0.5	CC, Buck Controller, Analog Dimming	40~400V_{DC}	<80W		SO8
SY5881DFAP	DC Buck PWM Dimming	>0.5	CC, Buck controller, PWM/Analog dim	40~400V_{DC}	<80W		SO8
SY5881ZFAC	DC Buck PWM Dimming	>0.5	CC, Buck controller, PWM/Analog dim	40~400V_{DC}	<80W		SO8
SY5983FAC	AC Flyback PWM Dimming	>0.9	PFC,CC, Flyback controller, 0-10V dim	120/227Vac	<80W		SO8
SY5989FAP	AC Flyback 0-10V Dimming	>0.9	PFC,CC, Flyback controller, TRIAC and 0-10V Dimming	120/277V_{AC}	<80W		SO8
SY5987FAP	AC Boost 0-10V Dimming	>0.9	PFC,CC, Boost controller, 0-10V Dimming	120/277V_{AC}	<400W		SO8
SY5882NFAC	AC Flyback PWM Dimming	>0.9	PFC, CC, Flyback controller, PWM/Analog dim	120/230V_{AC}	<80W		SO8
SY5882ZFAC	DC Flyback PWM Dimming	>0.5	CC, Flyback controller, PWM/Analog dim	400V_{DC}	<150W		SO8
SY5882SFAP	DC Flyback PWM Dimming	>0.5	CC, Flyback Controller, PWM/Analog Dim, 25%~100% V_{OUT}	400V_{DC}	<150W		SO8
SY5955AFFP	Boost+LLC Combo IC	PF>0.95 THD<5%	SSR,CC/CV Controller	120/277Vac	<400W		SOP16
SY5886FAC	AC Flyback, Resistance Dimming	>0.9	PFC, CC, Flyback Controller, Multistage Dim	120/230V_{AC}	<80W		SO8

Back

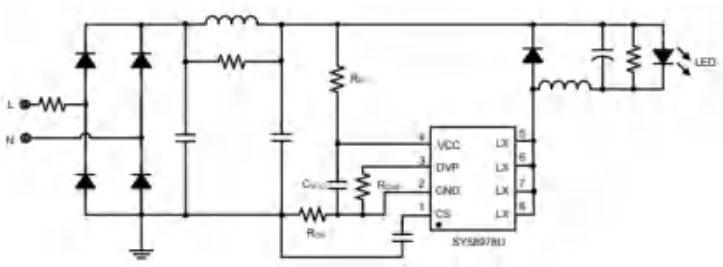
Part Number	App. Type	PF	Description	Input V_{AC}	Output Power	Output Current	Package
SY58561AAC	AC Buck Triac Dimming	>0.9	QR, CC, Buck, Triac Dimming, Low BOM cost, Int. MOS 350V/4.5Ω	$120V_{AC}$	<10W	<320mA	SOT23-5
SY58563FAC	AC Buck Triac Dimming	>0.9	QR, CC, Buck, Triac Dimming, Low BOM cost, 4 Drain, Int. MOS 350V/2.5Ω	$120V_{AC}$	<18W	<320mA	SO8
SY5852FAC	AC Flyback Triac Dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback controller, Triac Dimming, single winding	$120/230V_{AC}$	<40W	NA	SO8
SY58363AFAC	AC Buck-Boost Triac Dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback, Int. MOS 350V/2Ω, Triac Dimming, single winding	$120V_{AC}$	<15W	<200mA	SO8
SY58763AFAC	AC Boost Triac Dimming	>0.9	PSR, QR, CC, Boost, Int. MOS 350V/2Ω, Triac Dimming, single winding	$120V_{AC}$	<25W	<100mA	SO8
SY59101NFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB148°C	$120V_{AC}$	<12W	<70mA	SO8E
SY59101AFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB110°C	$120V_{AC}$	<12W	<70mA	SO8E
SY59101BFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB122°C	$120V_{AC}$	<12W	<70mA	SO8E
SY59101CFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB128°C	$120V_{AC}$	<12W	<70mA	SO8E
SY59101PFCP	AC Linear Triac Dimming	>0.9	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB148°C	$120V_{AC}$	<12W	<70mA	SO8E
SY59101QFCP	AC Linear Triac Dimming	>0.9	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB122°C	$120V_{AC}$	<12W	<70mA	SO8E
SY59102N2FCP	AC Linear Triac Dimming	>0.9	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB148°C ,Low Current Ripple	$120V_{AC}$	<8W	<50mA	SO8E
SY59119A1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	$230V_{AC}$	<12W	<45mA	SO8E
SY59119B1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	$230V_{AC}$	<12W	<45mA	SO8E
SY59119C1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	$230V_{AC}$	<12W	5~12mA	SO8E
SY59112A2FCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. Main MOS 500V and Bleeder MOS 700V, Low current ripple	$230V_{AC}$	<12W	16~30mA	SO8E
SY59112B4FCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. Main MOS 500V and Bleeder MOS 700V, Low current ripple	$230V_{AC}$	<12W	12~20mA	SO8E

Back

SY58978UFAC - Single Stage Buck PFC Regulator for LED Lighting

Features

- Power Factor >0.9
- 600V MOSFET Integrated
- Quasi-Resonant Operation
- Thermal Fold Back
- Low BOM Cost
- RoHS Compliant and Halogen Free
- Compact Package: SO8



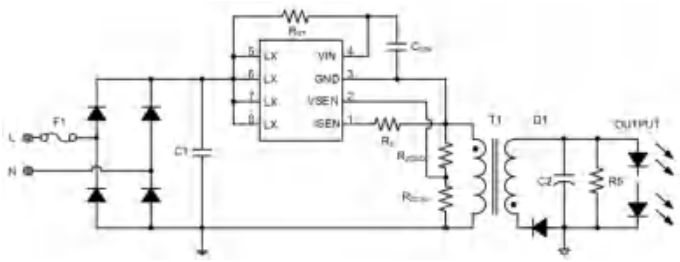
Applications

- LED Lighting

SY58213FAC/SY58215FAC - Flyback Regulator for LED Lighting

Features

- Integrated 650V MOSFET
- Quasi-Resonant (QR) Mode to Achieve Low Switching Losses
- No Opto-coupler or Auxiliary Winding for Feedback in the Proprietary Floating Switch Configuration
- Reliable Short LED and Open LED Protection Thermal Foldback Function
- Power Factor>0.9 with Internal Loop Compensation
  - SY58213:Maximum Output Power : 10W
  - SY58215:Maximum Output Power : 20W
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

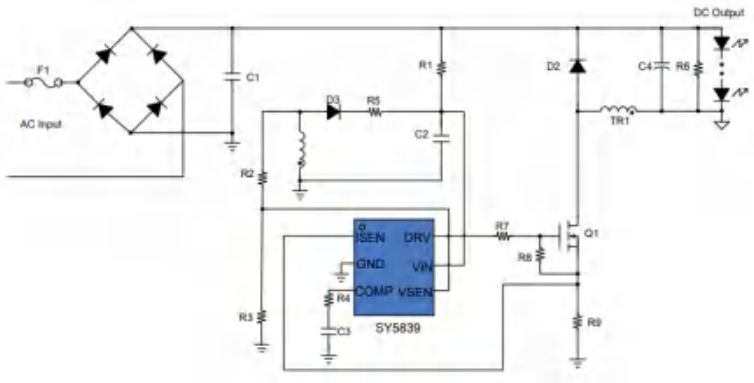
- LED Lighting

Back

SY5839ABC - Single Stage Buck PFC Controller for LED Lighting

Features

- Valley turn-on of the MOSFET to achieve low switching loss
- Power factor >0.90 with single-stage conversion
- Low start up current: 15μA typical Quick start up 0.90 with single-stage conversion
- RoHS Compliant and Halogen Free Compact package: SOT23-6



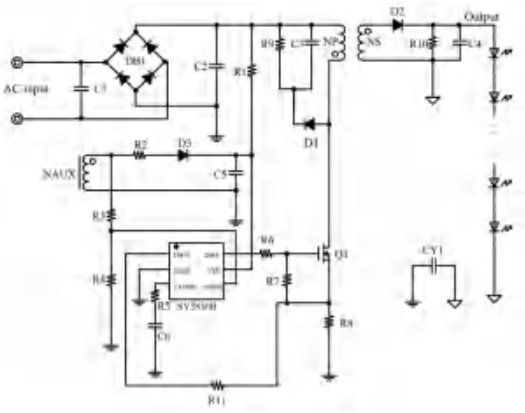
Applications

- LED lighting
- Down light
- Tube lamp
- PAR lamp
- Bulb lamp

SY5830BABC - Single Stage Flyback and PFC Controller With Primary Side Control for LED Lighting

Features

- Primary side control eliminates the opto-coupler
- Valley turn-on of the primary MOSFET to achieve
- low switching loss
- Power factor >0.90 with single-stage conversion
- Reliable short LED and Open LED protection
- Quick start up <500ms
- Low start up current:15μA typical
- RoHS Compliant and Halogen Free
- Package: SOT23-6



Applications

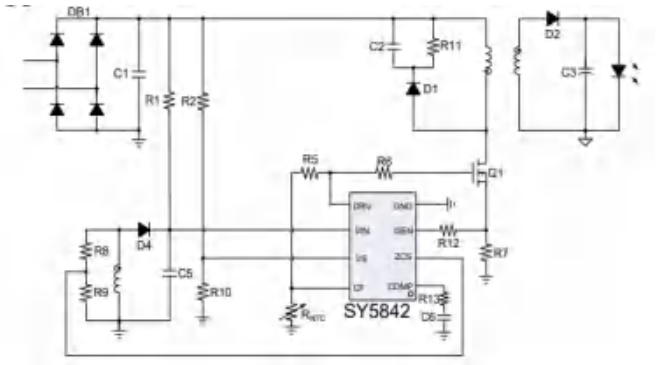
- LED Lighting

Back

SY5842FAC- Single Stage Flyback and PFC Controller With Primary Side Control for LED Lighting

Features

- High PF>0.9, Low THD<10%
- Primary Side Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- Input Over/Under Voltage Protection
- Programmable Thermal Fold-back Function
- Reliable Short LED and Open LED Protection
- Quick Start up <500ms
- Low Start up Current:34μA Typical
- Package: SO8



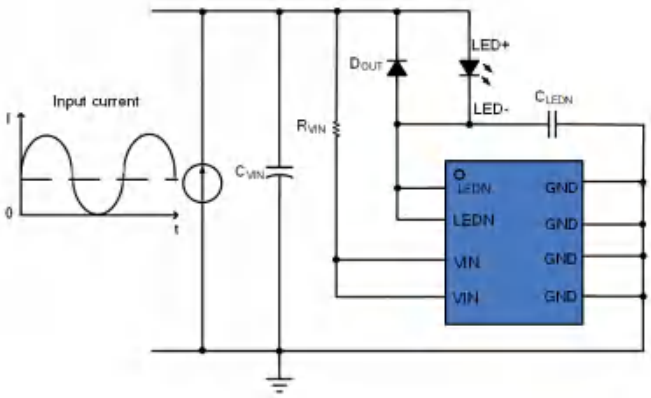
Applications

- LED lighting

SY5861BFAC/SY5862FAC- Adaptive LED Current Filter for LED Lighting

Features

- Current filter for single stage LED driver to eliminate current ripple
- Proprietary scheme for low power loss ≤2.5%
  Adaptive for wide output speculation:
  - SY5861B: Output voltage range from 20V to 100V Output current≤250mA
  - SY5862: Output voltage range from 20V to 60V Output current range from 0.2A to 0.6A
- Open LED Protection and Short LED protection
  Reliable short LED and Open LED protection
- RoHS Compliant and Halogen Free
- Compact package: SO8



Applications

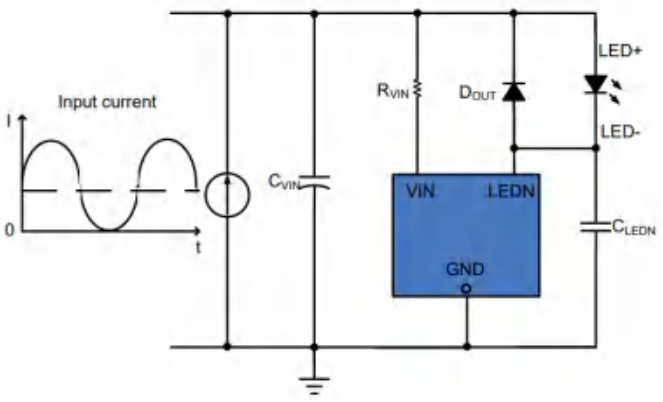
- LED Lighting

Back

SY5863AJAC/SY5864KAC- Adaptive LED Current Filter for LED Lighting

Features

- Current filter for single stage LED driver to eliminate current ripple
- Proprietary scheme for low power loss ≤2.5% Adaptive for wide output speculation:
  - ➢ SY5863A: Output voltage range from 20V to 65V Output Current Range from 0.25A to 1.2A
  - ➢ SY5864: Output voltage range from 20V to 60V Output current range from 0.5A to 1.5A
- Open LED Protection and Short LED protection Reliable short LED and Open LED protection
- RoHS Compliant and Halogen Free
- Compact package: SY5863A: TO252-3
  SY5864: TO220-3



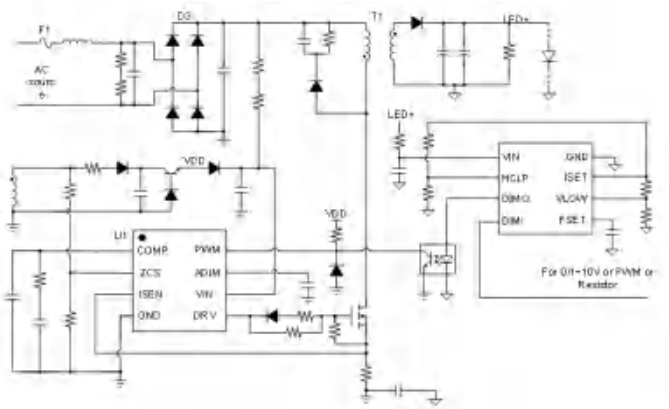
Applications

- LED lighting

SY5867FAC/SY5867SFAC- Dimming Interface Converter Compatible with 0/1~10V Dimming Resistor Dimming and PWM Dimming

Features

- Compatible with 0/1~10V Dimming, Resistor Dimming and PWM Dimming
- Recognize Different Dimming Signal Automatically Integrate 60V LDO Module to Simplify External Circuit
- The Source Current for Passive 0~10V Dimmer Can Be Set
- The Frequency of Output Can Be Set
- RoHS Compliant and Halogen Free
- Compact package: SO8



Applications

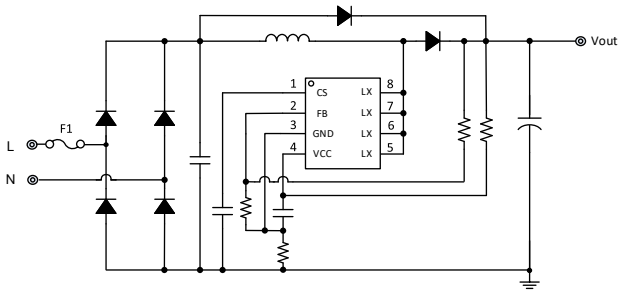
- LED Lighting

Back

SY58873UFAC/SY58874UFAC- Boost PFC Regulator

Features

- SY58873U: Integrated 520V MOSFET
- SY58874U: Integrated 540V MOSFET
- Quasi-Resonant (QR) Mode to Achieve Low Switching Losses
- PF>0.95, THD<10%
- Output Over Voltage Protection
- Low BOM Cost
- RoHS Compliant and Halogen Free
- Compact Package: SO8



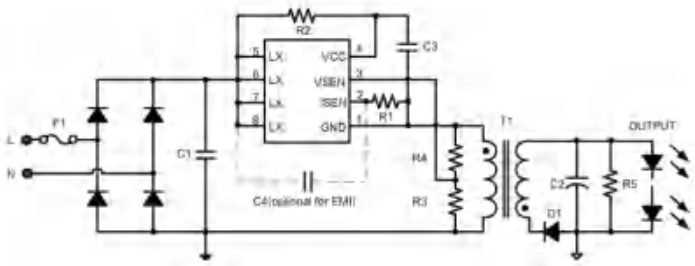
Applications

- Adaptors
- Pre-stage for Two-stage AC/DC Converter
- LED Lighting

SY58237AGC/SY58237CAGC- Flyback Regulator for LED Lighting

Features

- Integrated 650V MOSFET
- Quasi-Resonant (QR) Mode to Achieve Low Switching Losses
- No Opto-coupler or Auxiliary Winding for Feedback in the Proprietary Floating Switch Configuration
- Reliable Short LED and Open LED Protection
- Thermal Foldback Function
- Jitter Function for Reduced EMI(SY58237C)
- RoHS Compliant and Halogen Free
- Compact Package: DIP8



Applications

- AC/DC Adaptors
- Battery Charges
- LED Lighting

Back

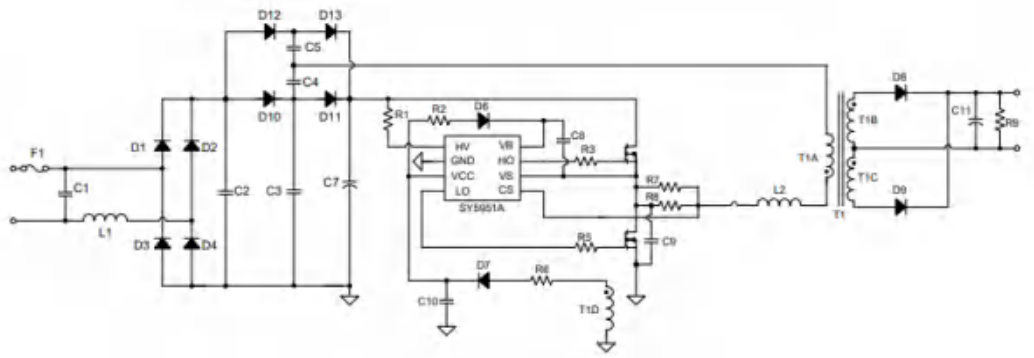
SY5951AFAC- Charge Pump PFC LLC Controller, High PF, Low THD

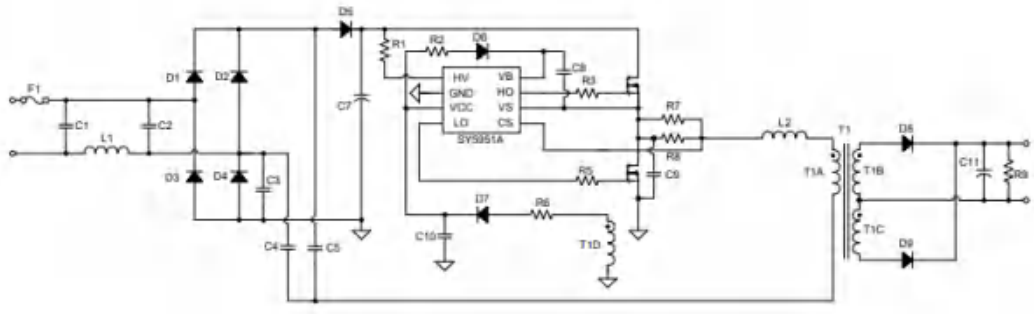
Features

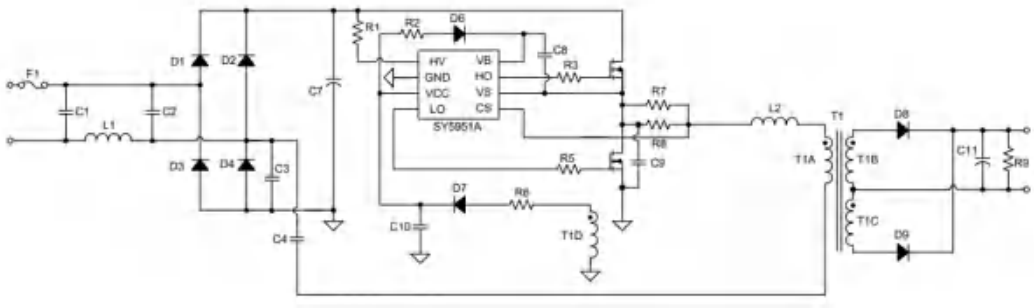
- Charge Pump PFC LLC Topology with Low BOM Cost
- PF>0.95, THD<20%
- Primary Side ILED Regulation and Less than 5% ILED Ripple
- Short LED Protection (SLP)
- Open LED Protection (OLP)
- E-cap over Voltage Protection (OVP)
- Adaptive Prevent Capacitive Mode
- Compact Package: SO8

Applications

- LED Lighting







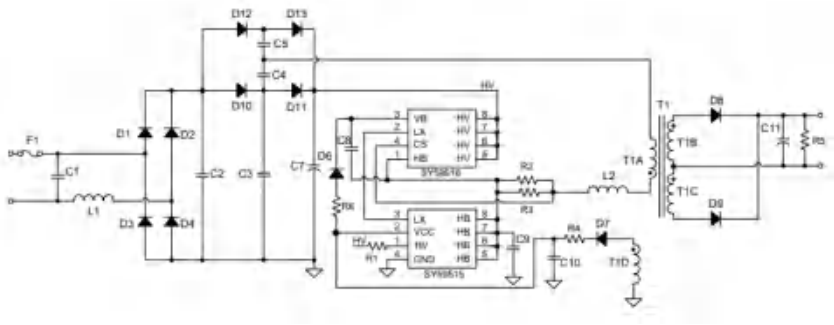
Back

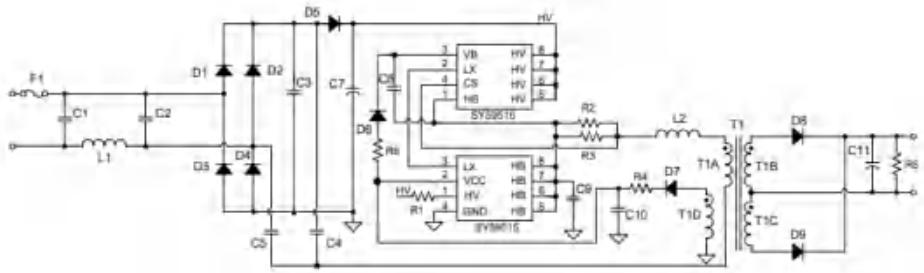
Features

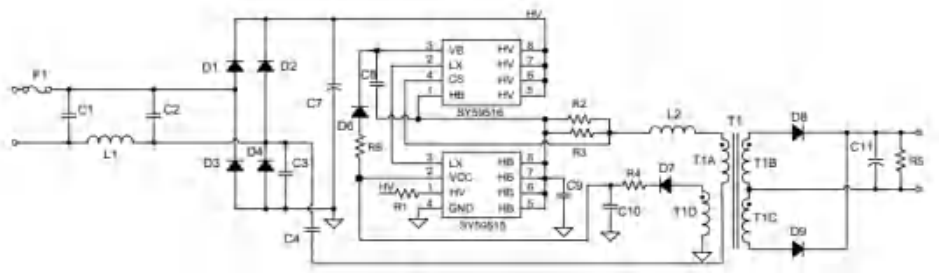
- Integrated 500V MOSFET
- Charge Pump PFC LLC Topology with Low BOM Cost
- PF>0.95, THD<20%
- Primary Side ILED Regulation and Less than 2% ILED Ripple
  - SY59515: Short LED Protection (SLP), Open LED Protection (OLP), E-cap over Voltage Protection (HV OVP)
  - SY59516: Over Current Protection (OCP), Over Temperature Protection (OTP), Thermal Fold Back (TFB), Adaptive Prevent Capacitive Mode Function
- Zero Voltage Overshoot on Resonant Capacitor at Startup
- Compact Package: SO8

Applications

- LED Lighting







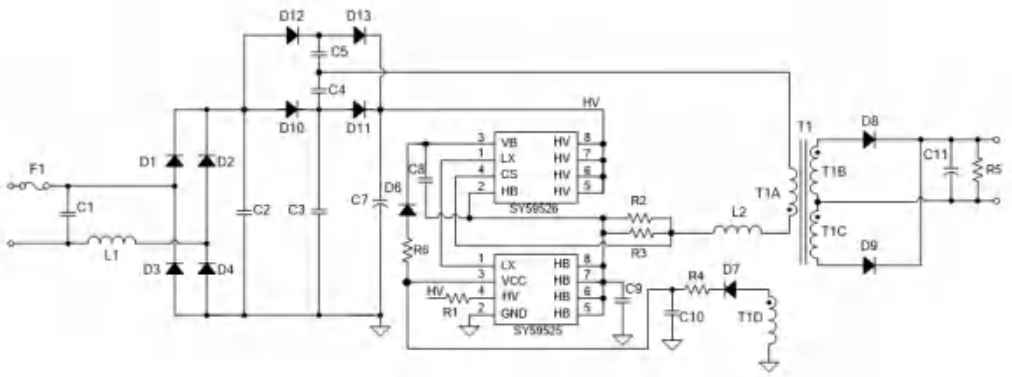
Back

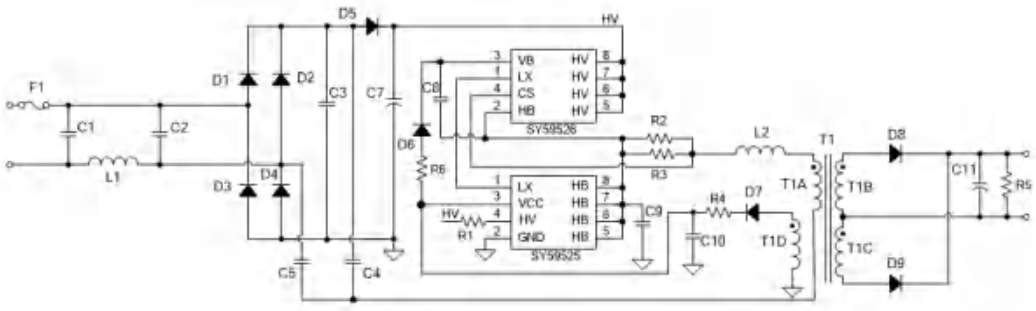
Features

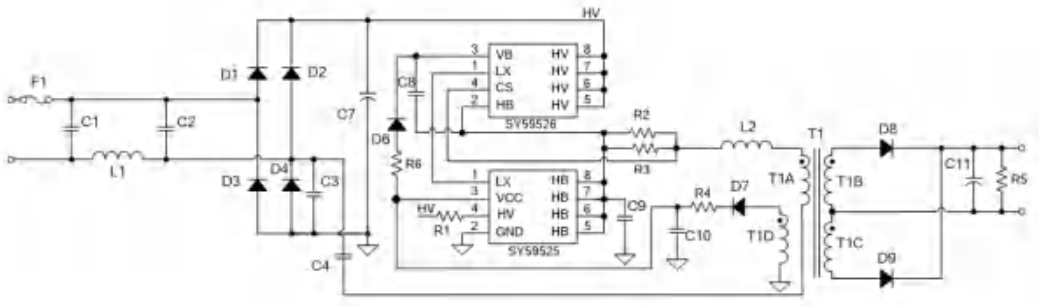
- Integrated 650V MOSFET
- Charge Pump PFC LLC Topology with Low BOM Cost
- PF>0.95, THD<20%
- Primary Side ILED Regulation and Less than 2% ILED Ripple
- Short LED Protection (SLP), Open LED Protection (OLP), E-cap over Voltage Protection (HV OVP)
- Zero Voltage Overshoot on Resonant Capacitor at Startup
- Compact Package: SO8

Applications

- LED Lighting





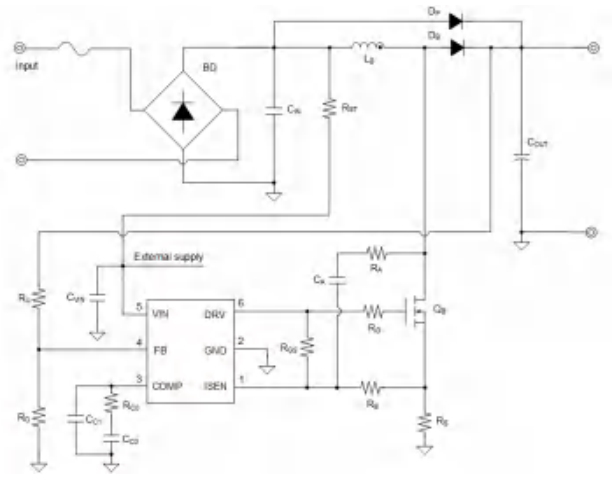


Back

SY5072AABT/SY5072BABC- Single-Phase Transition-Mode PFC Controller

Features

- Valley Turn-on to Achieve Low Switching Losses
- Frequency Reduce in Light Load
- Internal High Current MOSFET Driver:
  - SY5072A: 75mA Sourcing and 400mA Sinking
  - SY5072B: 70mA Sourcing and 400mA Sinking
- MOSFET Over-Current Protection (OCP)
- Internal THD Optimization to Achieve Low THD
- Internal Transition Optimization
- Compact Package: SOT23-6



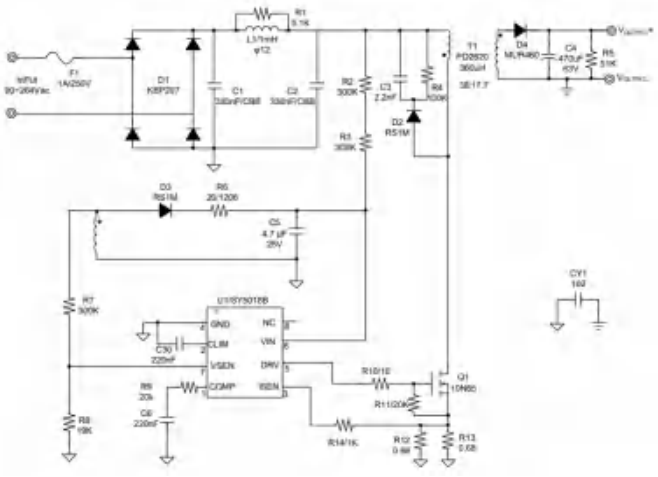
Applications

- AC Adapter Front End
- LED Drivers and Luminaries

SY5018BFAC- Single Stage Flyback and PFC Controller with CV Control

Features

- Primary Side CV Control Eliminates the Opto-coupler.
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- Internal High Current MOSFET Driver: 0.1A Sourcing and 0.5A Sinking
- Power Factor >0.90 with Single-stage Conversion
- Maximum Switching Frequency Limitation 100kHz
- Output Current Limit, about 1.2 Times the Rated Current
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

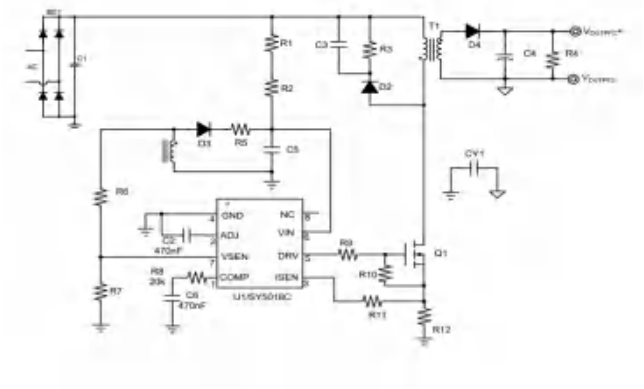
- AC/DC Adaptors
- Battery Charges
- LED Lighting

Back

SY5018CFAP- Single Stage Flyback and PFC Controller with CV Control

Features

- Primary Side CV Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- Integrate THD Compensation, PF>0.9, THD<20% during 40% Load to 100% Load
- Fast Load Regulation
- Internal High Current MOSFET Driver: 0.1A Sourcing and 0.5A Sinking
- Maximum Switching Frequency Limitation 100kHz
- Compact Package: SO8



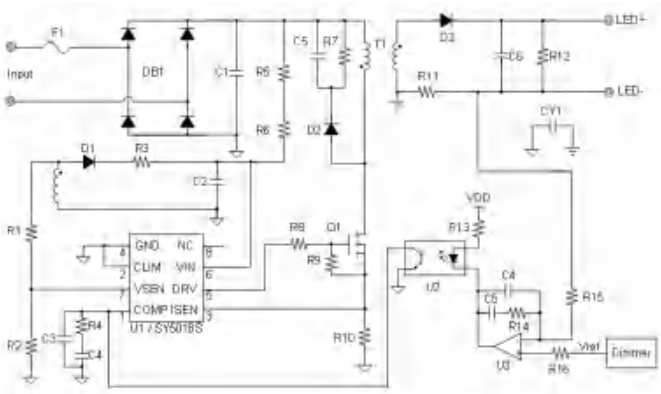
Applications

- AC/DC Adapters
- Battery Chargers
- LED Lighting

SY5018SFAP- Single Stage Flyback and PFC Controller

Features

- Secondary Side CC Control Improves Output Current Accuracy
- Primary Side CV Control for Output Overvoltage Protection when Opt-coupler Fails
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- Internal High Current MOSFET Driver: 75mA Sourcing and 400mA Sinking
- Power Factor >0.90 with Single-stage Conversion
- Maximum Switching Frequency Limitation 100kHz Compact Package: SO8



Applications

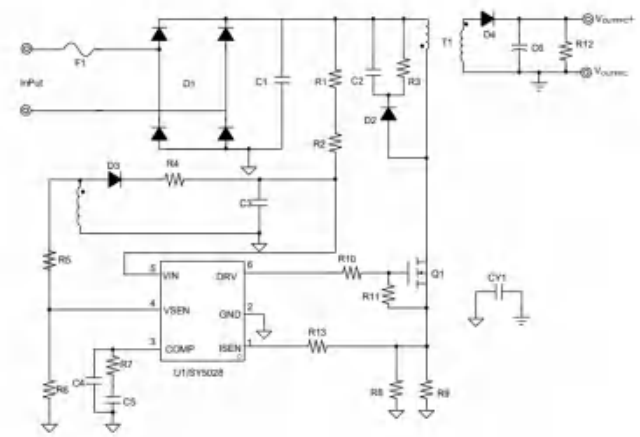
- AC/DC Adaptors
- Battery Charges
- LED Lighting

Back

SY5028ABC- Single Stage Flyback and PFC Controller with CV Control

Features

- Primary Side CV Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Loss
- Internal High Current MOSFET Driver: 0.1A Sourcing and 0.5A Sinking
- Power Factor >0.90 with Single-stage Conversion Maximum Switching Frequency Limitation 100 kHz RoHS Compliant and Halogen Free
- Compact Package: SOT23-6



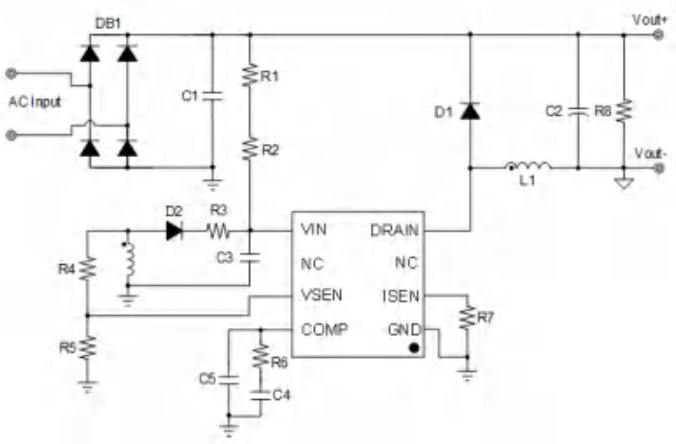
Applications

- AC/DC Adapters
- Battery Chargers
- LED Lighting

SY50183FAC/SY50186FAC- Single Stage Buck PFC Constant-Voltage Regulator

Features

- SY50183: Integrated 500V MOSFET
- SY50186: Integrated 600V MOSFET
- Valley Turn-on to Achieve Low Switching Losses
- Power Factor >0.9 with Single-Stage Conversion
- Maximum Switching Frequency Limitation 100kHz
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

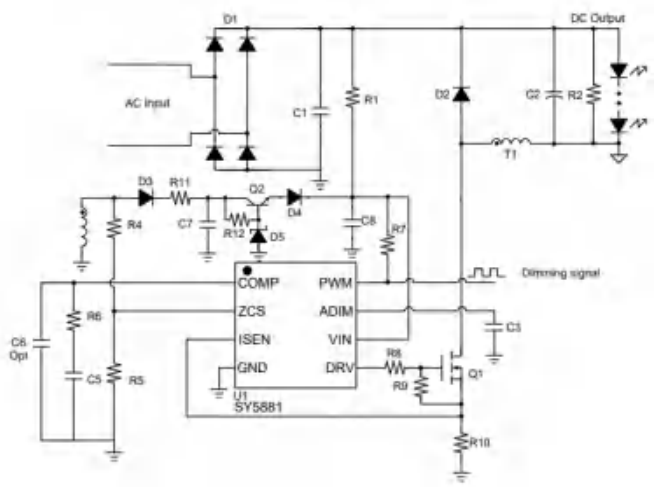
- AC/DC Adaptors
- LED Lighting

Back

SY5881FAC- Single Stage Buck PFC Controller for LED Dimming Lighting

Features

- High Dimming Accuracy
- Dimming Range from 5.5% to 100%
- CV Mode for Bias Supply at 0.90
- RoHS Compliant and Halogen Free
- Compact Package: SO8



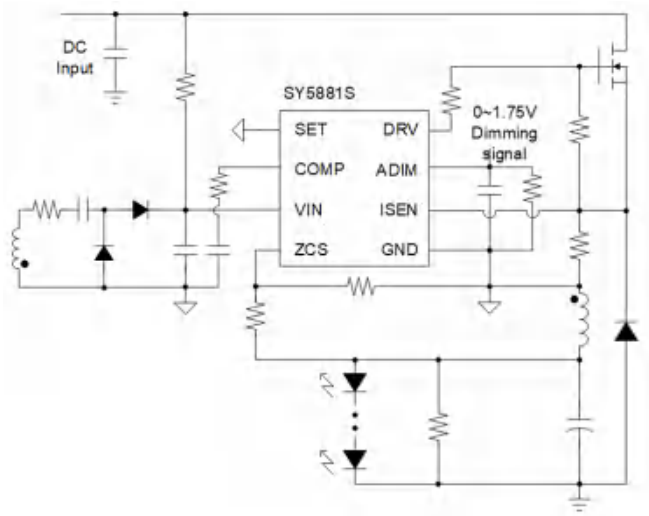
Applications

- LED Lighting

SY5881SFAP- DC/DC Buck Controller for LED Dimming Lighting

Features

- Linear Dimming Curve
- Wide Range Voltage Output
- Optional Over Voltage Protection Mode
- CV Mode for Bias Supply when VADIM=0V
- Valley Turn-on to Achieve Low Switching Losses
- Single Winding Inductor with Floating Topology
- 200mA Sourcing Current and 600mA Sinking Current Drive Capability
- Low Start up Current: 34μA Typical
- Reliable Short LED and Open LED Protection Reliable Short ISEN Resistor Protection Compact Package: SO8



Applications

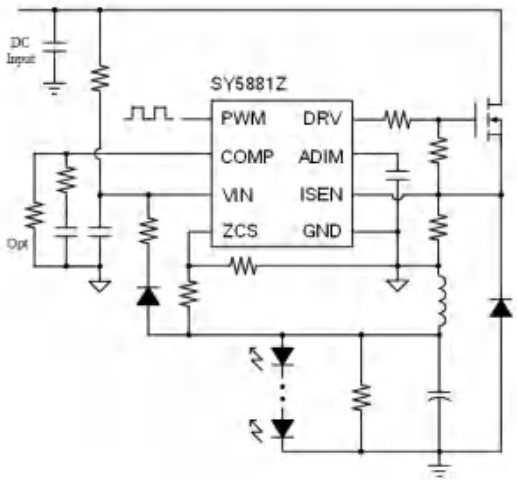
- LED Lighting

Back

SY5881ZFAC- DC/DC Buck Controller for LED Dimming Lighting

Features

- Linear Dimming Curve
- Dimming Range from 2.5% to 100.0%.
- CV Mode for Bias Supply when PWM=0%
- Valley Turn-on to Achieve Low Switching Losses
- Single Winding Inductor with Floating Topology
- 200mA Sourcing Current and 600mA Sinking Current Drive Capability
- Low Start up Current: 34μA typical
- Reliable Short LED and Open LED Protection
- Reliable Short ISEN Resistor Protection
- Compact Package: SO8



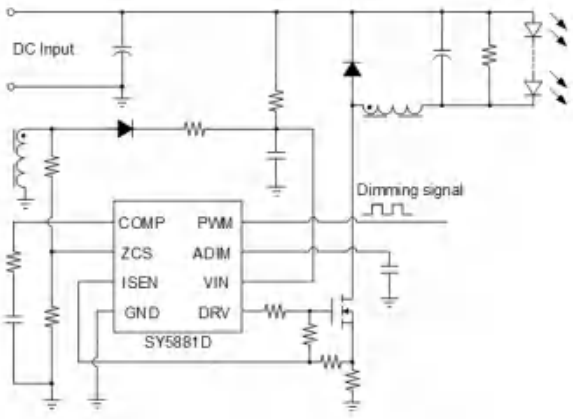
Applications

- LED Lighting

SY5881DFAP- DC/DC Buck Controller for LED Dimming Lighting

Features

- Linear Dimming Curve.
- Dimming Depth Lower than 1%.
- Valley Turn-on to Achieve Low Switching Losses
- 250mA Sourcing Current and 600mA Sinking Current Drive Capability
- Low Start up Current: 40μA Typical
- Reliable Short LED and Open LED Protection
- Reliable Short ISEN Resistor Protection
- Compact Package: SO8



Applications

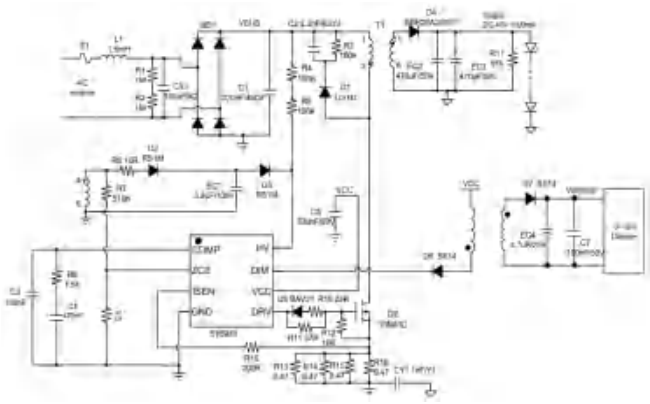
- LED Lighting

Back

SY5983FAC- Single Stage Flyback and PFC Controller with Primary Side Control for LED Lighting and Integrates 0~10V Transformer Driver

Features

- Primary side control eliminates the Opto-coupler
- Dimming Range from 5% to100%
- Integrated Dimming Transformer Driver Enables Isolation between the LED Driver and the Dimming Controller.
- Primary MOSFET Valley Turn-on Reduces Switching Losses
- Integrated High Voltage Start-up Function
- Start-up Time<300ms
- Low Standby Power<500mW
- Reliable Short LED and Open LED Protections
- Power Factor >0.90
- Internal High Current MOSFET Driver:
- ▪ 0.19A Sourcing and 0.6A Sinking
- Compact Package: SO8



Applications

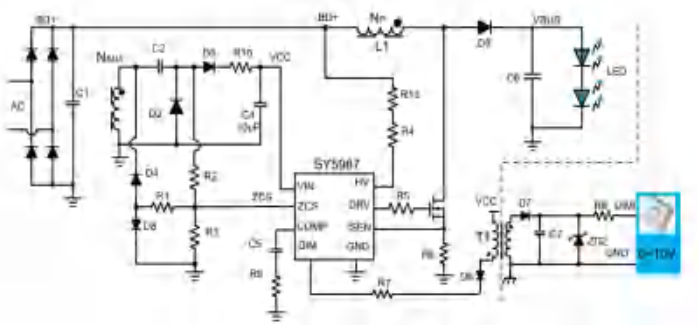
- LED Lighting

Back

SY5987FAP- Boost PFC Controller Integrates 0~10V Transformer Driver for LED Lighting

Features

- Dimming Range from 5% to100%
- Integrated Dimming Transformer Driver Enables Isolation between the LED Driver and the Dimming Controller
- MOSFET Valley Turn-ON Reduces Switching Losses Integraed High Voltage Start-up Function Start-up Time0.90
- Internal High Current MOSFET Driver: 0.19A Sourcing and 0.6A Sinking
- Compact Package: SO8



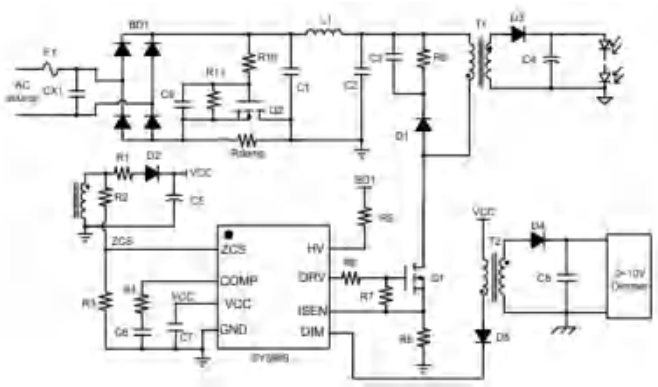
Applications

- LED Lighting

SY5989FAP- Single Stage Flyback and PFC Controller with Primary Side Control for LED Lighting and Multiple Dimming Mode Option

Features

- Primary side control eliminates the Opto-coupler
- 0~10V Dimming Range from 5% to100% Integrated Dimming Transformer Driver enables isolation between the LED driver and the dimming controller
- Compatible with Leading/Trailing Edge Dimmer Primary MOSFET Valley Turn-on reduces switching losses
- Integrated High Voltage Start-up Function Start-up Time0.90
- Internal High Current MOSFET Driver: ▪ 0.19A Sourcing and 0.6A Sinking
- Compact Package: SO8



Applications

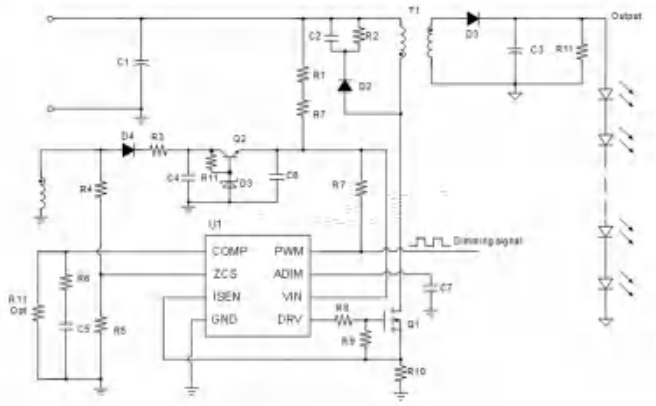
- LED Lighting

Back

SY5882ZFAC/SY5882SFAP- DC/DC Flyback Controller with Primary Side Control for LED Lighting and Analog Dimming Mode

Features

- 2.5%~100.0% Dimming Range
- CV Mode for Bias Supply when PWM=0.0%.
- Primary Side Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- 200mA Sourcing Current and 600mA Sinking Current Drive Capability
- Low Start up Current: 34μA Typical
- Reliable Short LED and Open LED Protection
- Low Power Frequency Ripple
- Compact Package: SO8



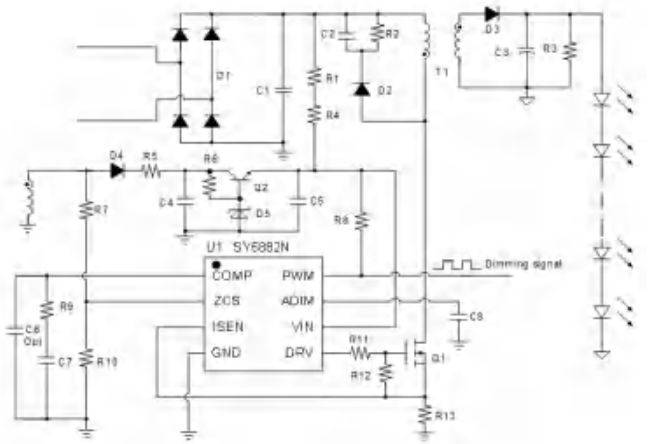
Applications

- LED Lighting

SY5882NFAC- Single Stage Flyback and PFC Controller with Primary Side Control for LED Lighting and Multiple Dimming Mode Option

Features

- 2.0%~100.0% Dimming Range
- CV Mode for Bias Supply when PWM=0.0%
- Primary Side Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- 0.3V Primary Current Sense Reference Voltage Leads to A Lower Sense Resistance thus A Lower Conduction Loss
- 200mA Sourcing Current and 650mA Sinking Current Drive Capability
- Low Start up Current: 34μA Typical
- Reliable Short LED and Open LED Protection
- Power Factor >0.90 with Single-stage Conversion.(Analog Dimming Only)
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

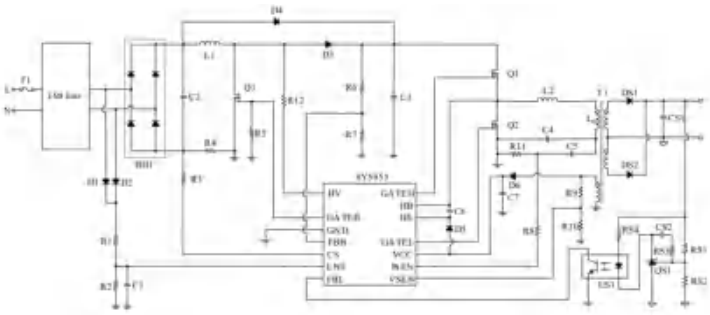
- LED Lighting

Back

SY5955AFFP- PFC+LLC Combo Controller

Features

- PF>0.95, THD<5%
- Boost Quasi Resonant (QR) Operation
- Boost Burst Operation at Light Load
- LLC Fast Dynamic Response
- LLC Integrated Half Bridge Driver
- Input BO/BI Protection
- Boost Output, LLC Output OVP Protection
- Cycle by Cycle Peak Current Protection
- Over Temperature Protection
- LLC Capacitive Mode Protection



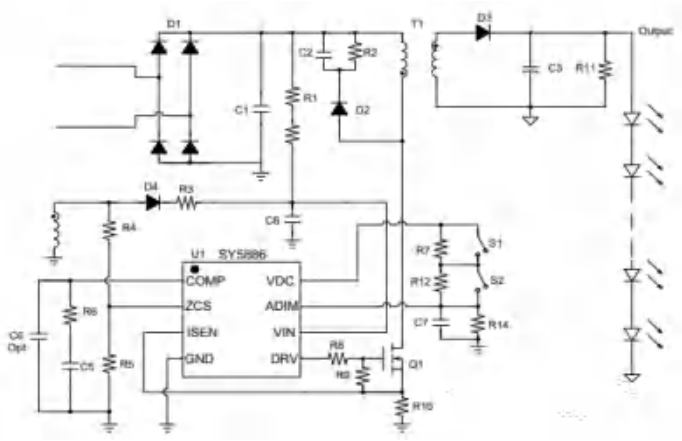
Applications

- LED Driver
- Desktop, all in one PC
- Adapter, Charger
- Printer

SY5886FAC- Single Stage Flyback and PFC Controller with Primary Side Control for LED Lighting and Multistage Dimming Mode

Features

- Multistage Dimming Mode
- CV Mode for Bias supply when ADIM<37mV
- Primary Side Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve
- Low Switching Losses
- 300mV Primary Current Sense Voltage Leads to A
- Lower Sense Resistance thus A Lower Conduction
- Loss
- Internal High Current MOSFET Driver: 0.2A
- Sourcing and 0.6A Sinking
- Low Start up Current: 34μA Typical
- Reliable Short LED and Open LED Protection
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

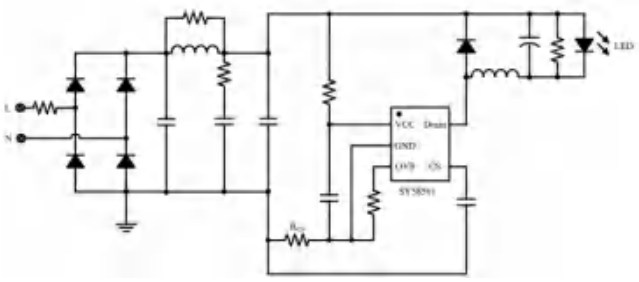
- LED Lighting

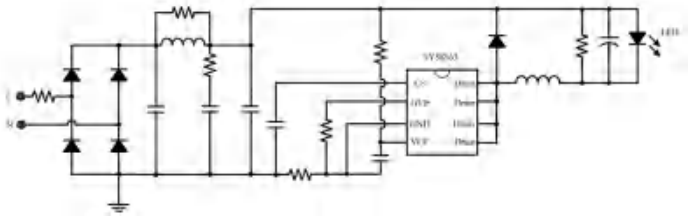
Back

SY58561AAC/SY58563FAC- Single Stage Buck PFC LED Driver Dimmable, High PF and Low BOM Cost

Features

- Compatible with Leading Edge/Trailing Edge Dimmer
- High PF without Any Dimmer
- 350V MOSFET Integrated
- Quasi-Resonant Operation
- Reliable Open/Short LED Protection
- Thermal Fold Back
- Low BOM Cost
- Maximum Output Power:
  - SY58561:10W
  - SY58563: 18W
- RoHS Compliant and Halogen Free
- Compact Package:
  - SY58561: SOT23-5
  - SY58563: SO8





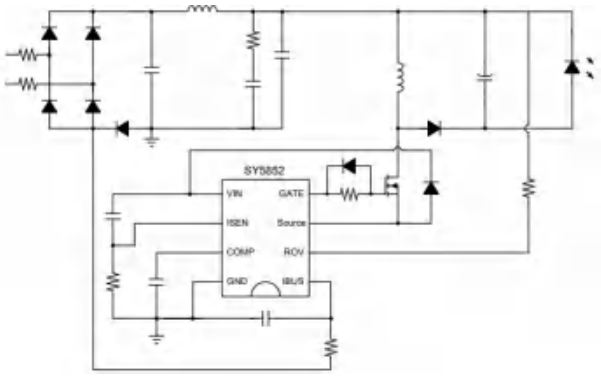
Applications

- LED Lighting
- Leading Edge Dimming
- Trailing Edge Dimming

SY5852FAC- Single Stage LED driver Dimmable, High PF and Low BOM Cost

Features

- Compatible with Leading Edge/Trailing Edge Dimmer
- High PF without any Dimmer, PF>0.9 Internal Dimming Curve 5%~100%
- Quasi-Resonant Operation
- Reliable Open/Short LED Protection Thermal Fold Back
- Low BOM Cost
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

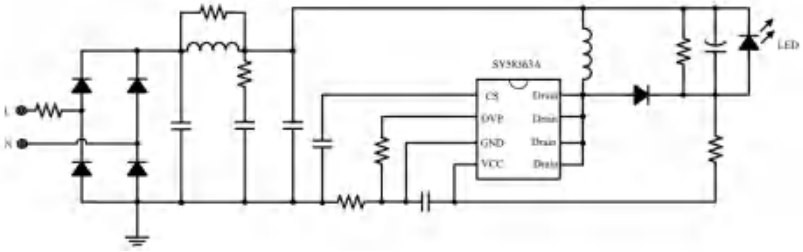
- LED Lighting

Back

SY58363AFAC- Single Stage Buck-Boost PFC LED Driver Dimmable, High PF and Low BOM Cost

Features

- Compatible with Leading Edge/Trailing Edge Dimmer
- High PF without Any Dimmer
- 350V MOSFET Integrated
- Quasi-Resonant Operation
- Reliable Open/Short LED Protection
- Thermal Fold Back
- Low BOM Cost
- Maximum Output Power:18W
- Compact Package: SO8



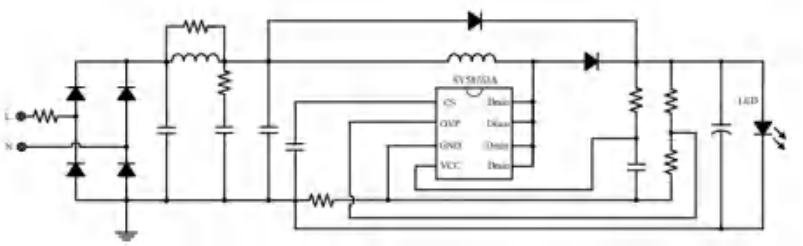
Applications

- LED Lighting
- Leading Edge Dimming
- Trailing Edge Dimming

SY58763AFAC- Single Stage Boost PFC LED Driver Dimmable, High PF and Low BOM Cost

Features

- Compatible with Leading Edge/Trailing Edge Dimmer
- High PF without Any Dimmer
- 350V MOSFET Integrated
- Quasi-Resonant Operation
- Reliable Open/Short LED Protection
- Thermal Fold Back
- Low BOM Cost
- Maximum Output Power:18W
- Compact Package: SO8



Applications

- LED Lighting
- Leading Edge Dimming
- Trailing Edge Dimming

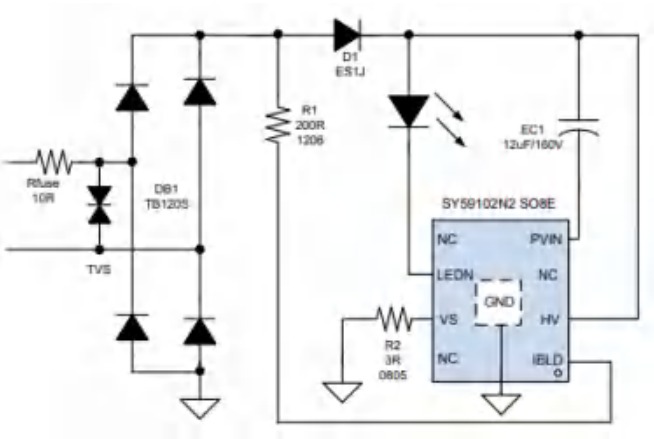
Back

SY59102N2FCP

- Dimmable, high Efficiency Linear Driver with Integrated Current Ripple Remover

Features

- Compatible with Leading/Trailing Edge Dimmer
- Integrated 350V MOSFET
- Regulator for adaptive 100/120Hz current ripple remove
- Power Factor >0.7
- Good regulation(<±3%)
- SMT Assembly
- Eliminate Magnetic Components
- Compact Package: SO8E



Applications

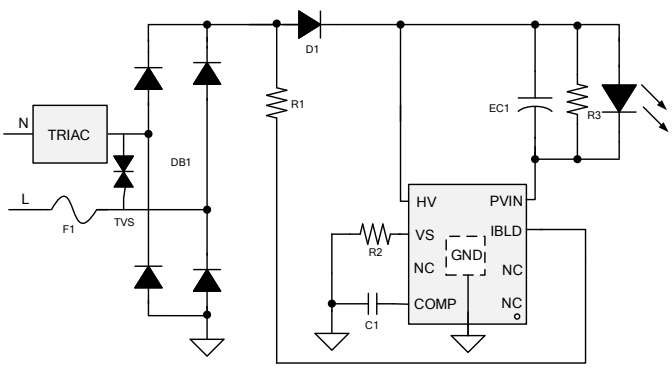
- LED Lighting

SY59101AFCP/SY59101BFCP/SY59101CFCP/SY59101NFCP/SY59101PFCP/SY59101QFCP

- Dimmable, high Efficiency Linear Driver with Integrated 350V MOSFET

Features

- Compatible with Leading/Trailing Edge Dimmer
- Integrated 350V MOSFET
- Power Factor >0.7
- Good regulation(<±3%)
- Up to 85% High Efficiency
- SMT Assembly
- Eliminate Magnetic Components
- Compact Package: SO8E



Applications

- LED Lighting

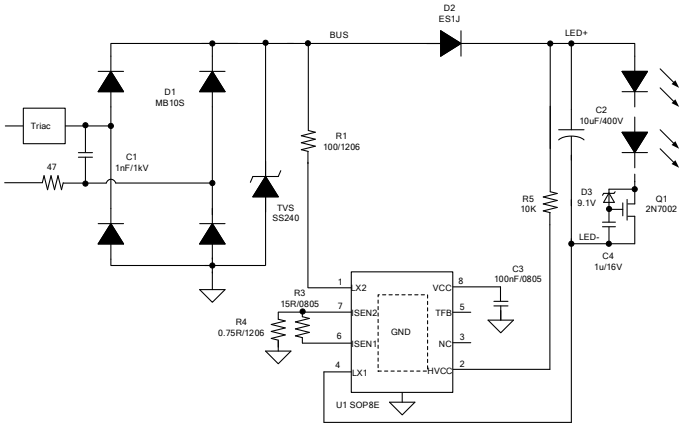
Back

SY59119A1FCC/SY59119B1FCC/SY59119C1FCC

- HV TRIAC Linear Dimming Controller, High Efficiency, PF>0.7

Features

- Compatible with HV TRIAC Dimmer
- Integrated: 500V Main MOS and 700V Bleeder MOS
- Latching Current is Adjustable
- Special Low Power Loss Control
- High PF: PF>0.7
- No Magnetic Components and Support All Components Surface Mounted
- Compatible with Brazil 60Hz
- RoHS Compliant and Halogen Free
- Compact Package: SO8E



Applications

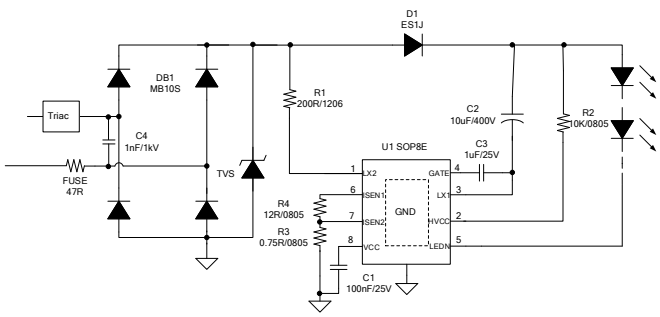
- LED Lighting

SY59112A2FCP/SY59112B4FCP

- Dimmable, high Efficiency Linear Driver with Integrated Current Ripple Remover

Features

- Compatible with HV TRIAC Dimmer
- Integrated: 500V Main MOS and 700V Bleeder MOS
- Latching Current is Adjustable
- Regulator for Adaptive 100/120Hz Current Ripple Remove
- Special Low Power Loss Control
- High PF: PF>0.7
- No Magnetic Components and Support All Components Surface Mounted
- Compact Package: SO8E



Applications

- LED Lighting

Back

High Voltage AC/DC Auxiliary Power Supply (Buck/Flyback)

Part Number	V_{VCC} (min) (V)	V_{VCC} (max) (V)	f_{SW} (kHz)	V_{REF} Accuracy	I_{D_MAX} (mA)	Temp Range	Feature/ Special Function	Package
SQ38341FHP	4.5	25.5	60	1.2V±2%	360	-40℃to 125℃	Peak current mode Buck/Flyback switcher integrated 800V power MOS	SSOP10
SQ38343FHP	4.5	25.5	120	1.2V±2%	590	-40℃to 125℃	Peak current mode Buck/Flyback switcher integrated 800V power MOS	SSOP10

AC/DC High Frequency QR Flyback Controller for Industrial Auxiliary Power Supply

Partnumber	Function	Operation Mode	Driver	Max Frequency	HV Startup	OCP Protection	OVP Protection	Input OVP Protection	BO/BI	X-cap Discharge	External OTP Protection	Package
SQ33020FVP	QR SSR Flyback Controller with Valley Lock	QR	MOS	500kHz	YES	YES	YES	NO	YES	YES	YES	SSOP9
SQ33020ZFVP	QR SSR Flyback Controller for GaN Driver with Valley Lock	QR	GaN	300kHz	YES	NO	YES	YES	YES	YES	YES	SSOP9

AC/DC LLC SR Controller for TV/PC/Gaming Adapter

Part Number	Function	Operation Mode	Max DSEN	Dual Supply Channel	Green Mode at Light Load	Package
SQ33260FAP	LLC SR Controller	CCM/DCM	200V	YES	YES Control by MOD Pin	SO8
SQ33261FAP	LLC SR Controller	CCM/DCM	200V	YES	YES Control by Internal	SO8

AC/DC LLC SR Controller for Industrial Auxiliary Power Supply

Part Number	Function	Operation Mode	Max DSEN	SR Position	Dual Supply Channel	ZVS Function	Package
SQ33239FPP	ZVS SR Controller	QR/DCM	130V	High Side / Low Side	YES	YES	CPC8

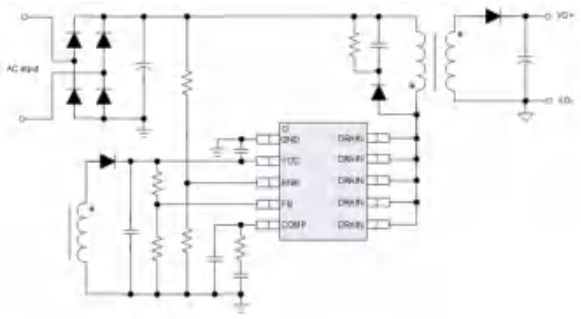
Wide Duty Cycle Range Synchronous Buck DCDC Controller

Part Number	V_{IN} (min) (V)	V_{IN} (max) (V)	f_{SW} (MHz)	V_{REF} Accuracy	IQ (mA)	Temp Range	Feature/ Special Function	Package
SQ33065/8WAQ	6	75	0.1~1	0.8V±1%	/	-40°C to 125°C	±1% Reference Voltage 6V to 75V Input Voltage Range 0.8V to 60V Output Voltage Range Voltage Mode Control with Feedforward Prevent Reverse Charging Protection Cycle-by-Cycle Over Current Protection Thermal Shutdown Protection with Hysteresis	QFN3.5x4.5-20

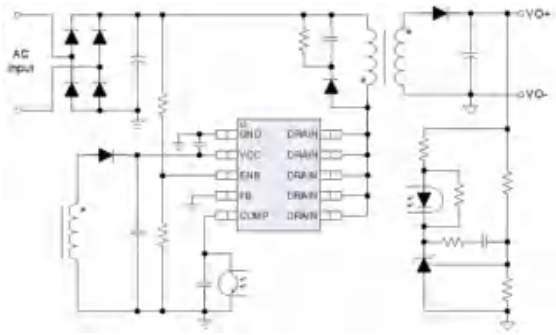
Back

Features

- 800V Power MOS Integrated
- Pseudo Fixed Frequency Control
- Rated Switching Frequency: 60kHz
- Frequency Fold Back and Burst Mode Control
- FSW Modulation to Reduce EMI Noise
- Support Both Flyback and Buck Topology
- PSR/SSR Optional for Flyback Topology
- HV Start Up from DRAIN
- Peak Current Limit: 345mA
- Wide VCC Operating Range: 4.5V~25.5V
- VCC OVP, OLP, OTP, Input OVP (through ENB pin)
- Internal Soft Start Process
- Compact Package: SSOP10



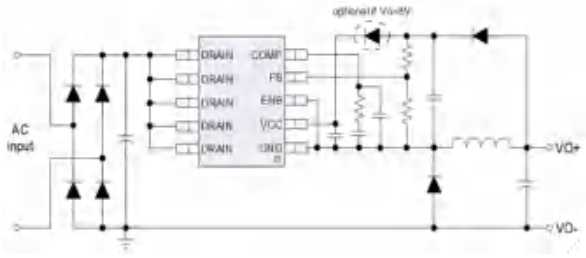
PSR Flyback



SSR Flyback

Applications

- Auxiliary Power Supply



Buck

Back

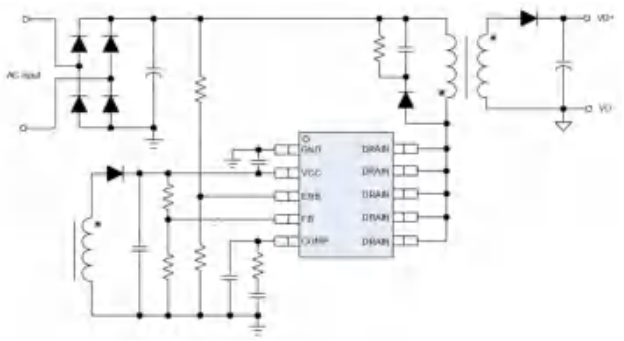
SQ38343FHP- Energy Saving Off-line AC/DC Converter with Integrated 800V MOSFET

Features

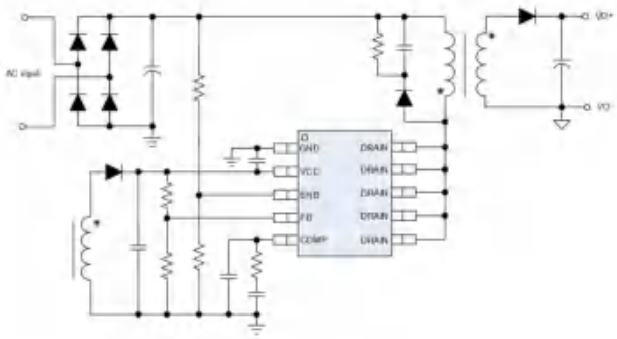
- 800V Integrated Power MOSFET
- Pseudo Fixed Frequency
- Nominal Switching Frequency: 120kHz
- Frequency Fold Back and Burst Mode Control
- FSW Modulation to Reduce EMI Noise
- Supports Flyback and Buck Topologies
- PSR/SSR Optional for Flyback Topology
- HV Start Up from DRAIN
- Peak Current Limit: 590mA
- Wide VCC Operating Range: 4.5V~25.5V
- VCC OVP, OLP, OTP, Input OVP (through ENB pin)
- Internal Soft Start Process
- Compact Package: SSOP10

Applications

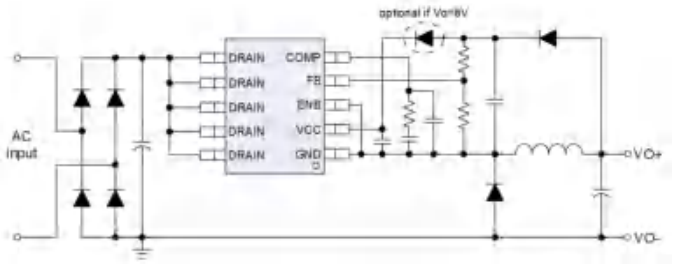
- Auxiliary Power Supply



PSR Flyback

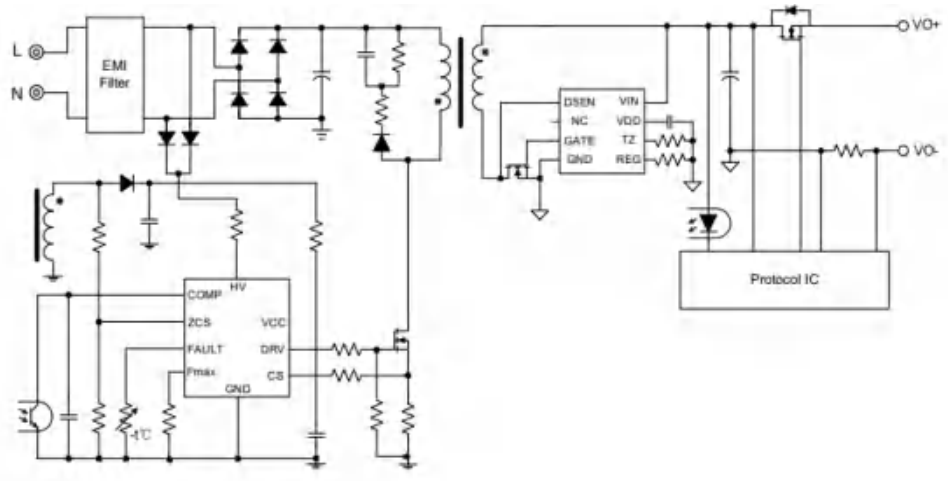


SSR Flyback



Buck

Back



Features

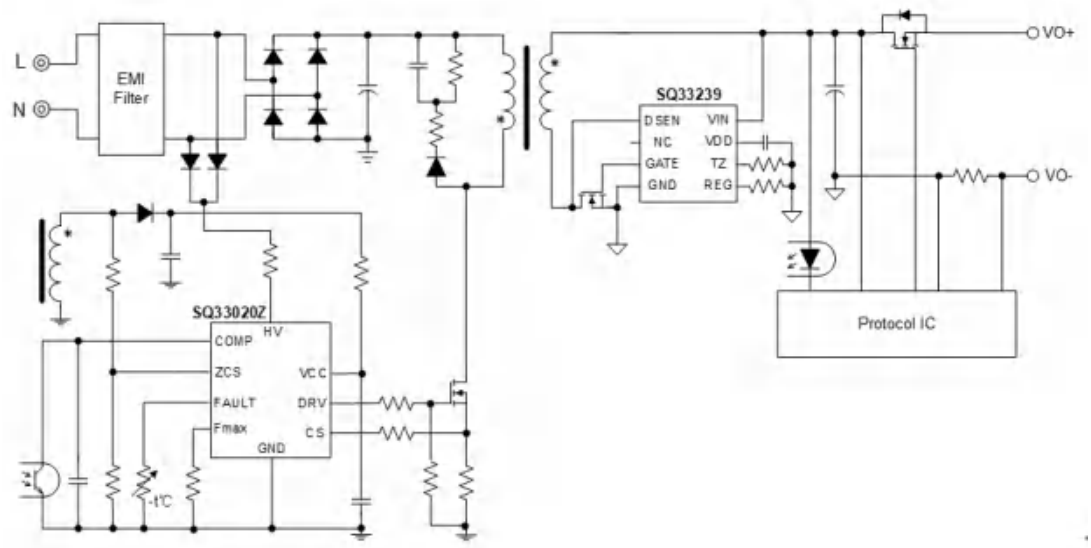
- DCM+QR Combined Operating Mode
- Programmable Gate Driver Current
- Switching Frequency Range: 25kHz–500kHz
- Automatic Valley Lockout from 1 to 6 cycles
- Accurate Output OCP
- Adaptive OCP (Limited Power Source)
- Low Frequency Burst Operation (1kHz)
- Switching Frequency Modulation to Reduce EMI Noise
- Internal Soft-Start Integrated 700V HV Startup
- Brown-In/Brown-Out Protections
- X Capacitor Discharge Protection (Optional)
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal and External
- Compact Package: SSOP9

Applications

- AC/DC Adapters
- PD Adapters
- Quick Battery Chargers

Back

SQ33020ZFVP- High Frequency QR Flyback Controller with Valley Lockout, E-Mode GaN Driver and Input OVP



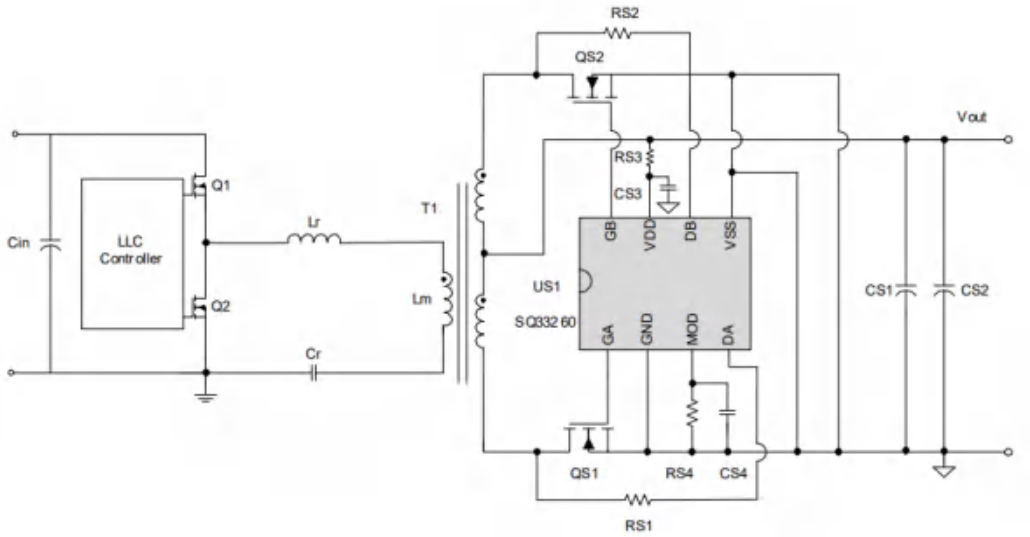
Features

- DCM+QR Combined Operating Mode
- Direct Enhancement-Mode (E-Mode) GaN FET Driver
- Programmable Gate Driver Current
- Switching Frequency Range: 25kHz–300kHz
- Automatic Valley Lockout from 1 to 6 cycles
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise (Configurable using ZCS Resistor)
- Internal Soft-Start
- Integrated 700V HV Startup Circuit
- X Capacitor Discharge Protection
- AC Input OVP
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal and External OTP
- MSL3
- Compact Package: SSOP9

Applications

- AC/DC Adapters
- PD Adapters
- Quick Battery Chargers

Back



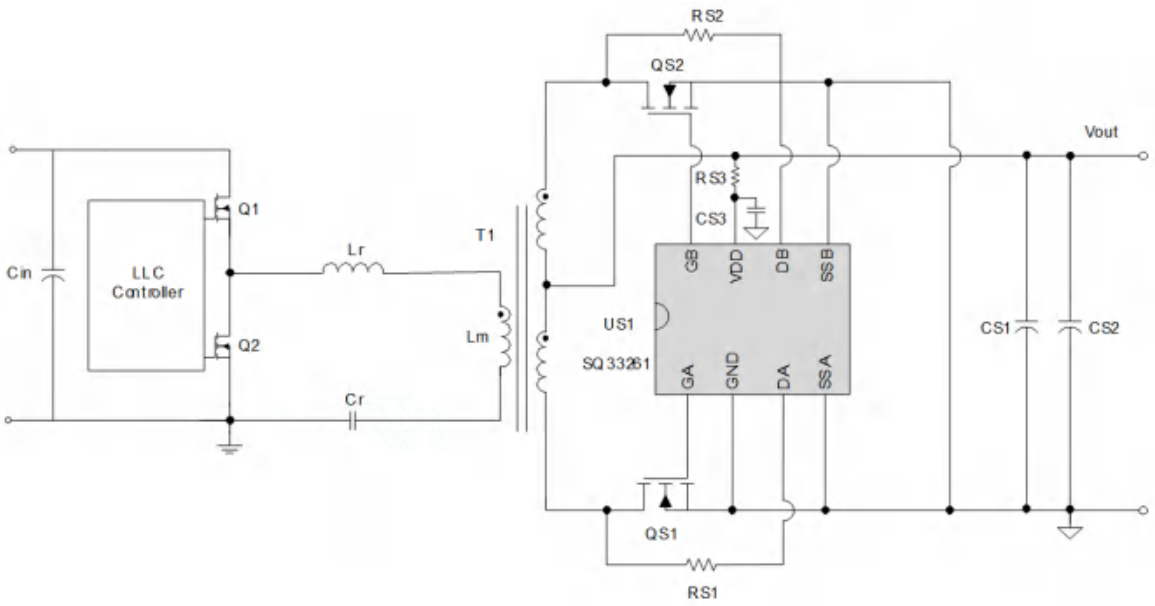
Features

- Dual-Channel SR Controller for LLC Resonant Converters
- Supports CCM, DCM Operation
- DA/DB Pins High-voltage Sensing up to 200V
- Wide 4.2V to 38V Power Supply Range
- 130μA Low Quiescent Current in Green Mode
- Dual-Channel Interlock to Prevent Short Circuit between Channels
- 15ns Fast Turn-Off Propagation Delay
- 1.7A Sink, 0.3A Source Gate Driver Capability
- Compact Package: SO8

Applications

- Gaming Adapters
- Desktop, All-in-One PCs
- AC/DC Adapters

Back

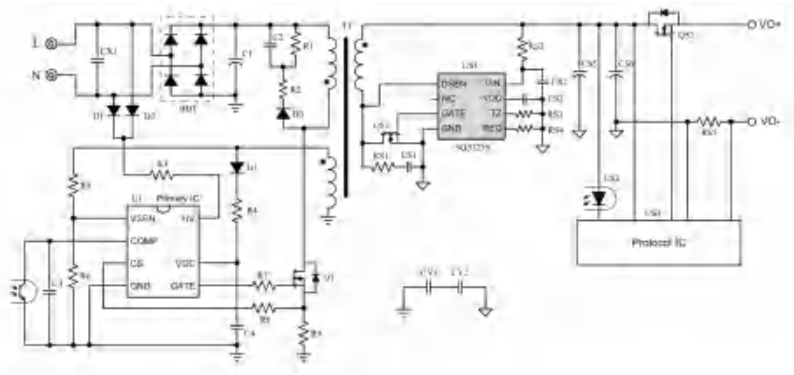


Features

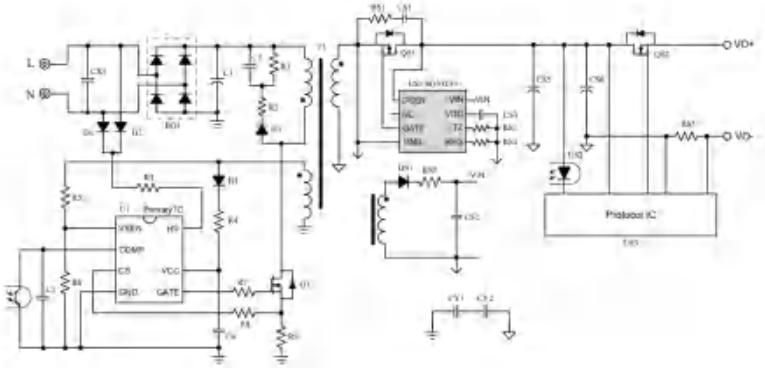
- Dual-Channel SR Controller for LLC Resonant Converters
- Supports CCM, DCM Operation
- DA/DB Pins High-voltage Sensing up to 200V
- Wide 4.2V to 38V Power Supply Range
- 110μA Low Quiescent Current in Green Mode
- Dual-Channel Interlock to Prevent Short Circuit between Channels
- 15ns Fast Turn-Off Propagation Delay
- 1.7A Sink, 0.3A Source Gate Driver Capability
- Compact Package: SO8

Applications

- Gaming Adapters
- Desktop, All-in-One PCs
- AC/DC Adapters



SR MOSFET Location: Low Side



SR MOSFET Location: High Side

Features

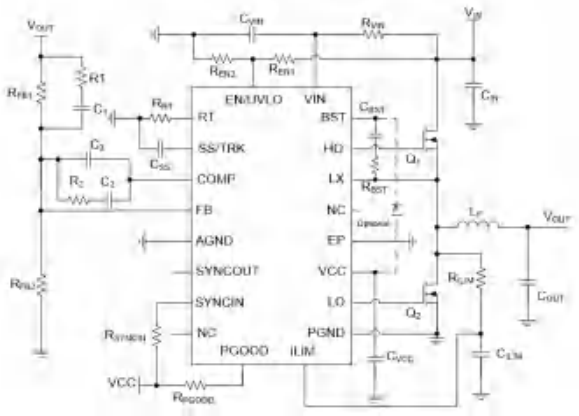
- DCM+QR Combined Operating Mode
- Proprietary Operation Mode for Flyback ZVS
- Adaptive Gate Voltage Control
- DSEN Falling Slope Rate Detecting to Prevent SR False Triggering
- 130V DSEN Pin to Directly Sense DRAIN Voltage of SR MOSET
- Power Saving Mode to Improve Light Load Efficiency
- Dual Power Supply Channel for 3.3V to 21V Output Systems
- Compact Package: CPC8

Applications

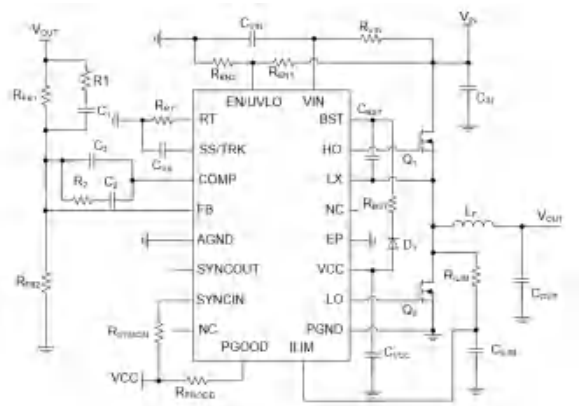
- AC/DC Adapters
- Auxiliary Power Supplies

SQ33065WAQ/SQ33068WAQ

- 6V to 75V Synchronous Buck Controller With Wide Duty Cycle Range



SQ33065WAQ



SQ33068WAQ

Features

- 6V to 75V Input Voltage Range
- 0.8V to 60V Output Voltage Range
- Switching Frequency: 100kHz~1MHz
- SYNC In/Out Capability
- Soft-Start or Voltage Tracking
- 0.8V±1% Reference Voltage
- Minimum On-time: 60ns Typical
- Minimum Off-time: 240ns Typical
- Type Ⅲ Voltage-mode Control with Feedforward
- High Gain-bandwidth Error Amplifier
- Open-drain Power Good Indicator
- Protection Features
  - ➢ Cycle-by-cycle Over Current Protection
  - ➢ Prevent Reverse Charging Protection
  - ➢ Input UVLO with Hysteresis
  - ➢ VCC and BST UVLO Protection
  - ➢ Thermal Shutdown Protection with Hysteresis
- Compact Package: QFN3.5x4.5-20
- External BST diode is required in SQ33068WAQ

Applications

- Telecom Power Application
- RF Power Application
- Commercial Drone Application

Back

Part Number	Function	Operation Mode	HV Startup	OCP Protection	OVP Protection	UVP Protection	No Load Loss	Package
SY5007ABC	PSR Flyback Controller without UVP	QR	NO	YES	YES	NO	<75mW	SOT23-6
SY5007AABC	PSR Flyback Controller with UVP	QR	NO	YES	YES	YES	<75mW	SOT23-6

Part Number	Function	Max Power	Integrated FETs	Typical Rdson	Operation Mode	HV Startup	OCP Protection	OVP Protection	UVP Protection	No Load Loss	Package
SY50133Z1FAP	PSR Flyback with UVP	12W	650V	4.4Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY50213NFAP	PSR Flyback with UVP	12W	650V	4.4Ω	QR	NO	YES	YES	YES	<75mW	SO8
SY50136ZFAC	PSR Flyback	18W	650V	2.2Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY50216NFAP	PSR Flyback with UVP	18W	650V	2.2Ω	QR	NO	YES	YES	YES	<75mW	SO8
SY50218VFAC	PSR Flyback	24W	650V	1.2Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY50323FQC	PSR Flyback with HV Start Up	12W	700V	4Ω	QR	YES	YES	YES	YES	<20mW	SO7

Part Number	Function	Max Power	Integrated FETs	Operation Mode	HV Startup	OCP Protection	OVP Protection	UVP Protection	No Load Loss	Package
SY50131CFAC	PSR Flyback with UVP	3.5W	980V	QR	NO	YES	YES	YES	<75mW	SO8
SY50211WAZC	PSR Flyback without UVP	6W	800V	QR	NO	YES	YES	NO	<75mW	SOT335
SY50213WFAC	PSR Flyback without UVP	12W	800V	QR	NO	YES	YES	NO	<75mW	SO8

Back

Part Number	Function	Operation Mode	Max Frequency	HV Startup	OCP Protection	OVP Protection	UVP Protection	BO/BI	Input OVP Protection	No Load Loss	Package
SY5019FAC	QR SSR Flyback Controller with HV Start Up	QR	125kHz	YES	YES	YES	NO	NO	NO	<50mW	SO8
SY5040ABC	CCM+QR SSR Flyback Controller	CCM/QR	65kHz	NO	NO	YES	NO	YES	NO	<75mW	SOT23-6
SY5040AABT	CCM+QR SSR Flyback Controller	CCM/QR	85kHz	NO	NO	YES	YES	YES	NO	<75mW	SOT23-6
SY5033AFAP	CCM+QR SSR Flyback Controller with Input OVP	CCM/QR	90kHz	YES	NO	YES	YES	YES	NO	<50mW	SO8
SY5033CFAP	CCM+QR SSR Flyback Controller with Input OVP	CCM/QR	90kHz	YES	NO	YES	YES	YES	YES	<50mW	SO8
SY5022BFVP	QR SSR Flyback Controller with GaN Driver	QR	300kHz	YES	NO	YES	YES	YES	NO	<50mW	SSOP9
SY5022CFVP	QR SSR Flyback Controller with GaN Driver	QR	300kHz	YES	NO	YES	YES	YES	YES	<50mW	SSOP9
SY5023FVP	CCM+QR SSR Flyback Controller for GaN Driver	CCM/QR	CCM: 85kHz QR: 500kHz	YES	NO	YES	YES	YES	NO	<50mW	SSOP9
NEW SY5023CFVP	QR SSR Flyback Controller for GaN Driver	QR	500kHz	YES	NO	YES	YES	YES	NO	<50mW	SSOP9

Part Number	Function	Integrated FETs	Typical Rdson	Operation Mode	Max Frequency	HV Startup	Lock Ring	OVP Protection	UVP Protection	BO/BI	No Load Loss	Package
SY50294HZP	QR SSR Flyback for Max 45W	700V	365mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	SSOP9E
SY50296XDQ	QR SSR Flyback for Max 100W	700V	165mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	QFN 5×7-18
SY50298XDQ	QR SSR Flyback for Max 180W	700V	104mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	QFN 5×7-18
NEW SY50296AXDQ	QR SSR Flyback for	700V	160mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	QFN 5×7-18
NEW SY50298AXDQ	QR SSR Flyback for	700V	101mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	QFN 5×7-18
SY50354HZP	CCM + QR Flyback Converter	700V	250mΩ	CCM QR	85kHz 500kHz	YES	YES	YES	YES	YES	<50mW	SSOP9E
NEW SY50355HZP	CCM + QR Flyback Converter	700V	160mΩ	CCM QR	85kHz 500kHz	YES	YES	YES	YES	YES	<50mW	SSOP9E

Back

Part Number	Function	Operation Mode	Max DSEN	SR Position	Dual Supply Channel	ZVS Function	Package
SY5231ABC	CCM+QR SR Controller	CCM/QR/DCM	200V	High Side / Low Side	YES	NO	SOT23-6
SY5231AABT	CCM+QR SR Controller	CCM/QR/DCM	200V	High Side / Low Side	YES	NO	SOT23-6
SY5236ABT	ZVS SR Controller	CCM/QR/DCM	200V	High Side / Low Side	YES	YES	SOT23-6
SY5239FPP	ZVS SR Controller	QR/DCM	130V	High Side / Low Side	YES	YES	CPC8

Part Number	Function	Integrated FETs	Typical Rdson	Operation Mode	SR Position	Dual Supply Channel	Package
SY52157AZC	SR Switcher for QR Mode	40V	16mΩ	QR/DCM	High Side / Low Side	NO	SOT335
SY52151FAP	SR Switcher for QR Mode	40V	12mΩ	QR/DCM	High Side / Low Side	NO	SO8
SY52257AAZC	SR Switcher for QR Mode	60V	19mΩ	QR/DCM	High Side / Low Side	NO	SOT335
SY52251FAC	SR Switcher for QR Mode	60V	10mΩ	QR/DCM	High Side / Low Side	NO	SO8
SY52341FAP	SR Switcher for CCM+QR Mode	65V	8.7mΩ	CCM/QR/DCM	High Side / Low Side	YES	SO8
SY52441FAP	SR Switcher for CCM+QR Mode	100V	8mΩ	CCM/QR/DCM	High Side / Low Side	YES	SO8

Part Number	Function	Max Power	Integrated FETs	Typical Rdson	Operation Mode	Max Frequency	HV Startup	OCP Protection	OVP Protection	No Load Loss	Package
SY50433BFHC	PSR Flyback	7W	900V	13.4Ω	QR	125kHz	YES	YES	YES	<75mW	SSOP10

Back

Part Number	Function	Max Power	Integrated FETs	Typical Rdson	Output Voltage	Operation Mode	Max Frequency	HV Startup	OCP Protection	OVP Protection	Package
SY50281AAC	Buck Converter	2.4W	500V	12Ω	Adjustable	QR	45kHz	NO	YES	YES	SOT23-5
SY50583FAC	Buck Converter	4.2W	700V	7.5Ω	Adjustable	QR	45kHz	NO	YES	YES	SO8
SY50271BFAC	Buck Converter for 12V Output	4.3W	650V	9Ω	12V	CCM/DCM	40kHz	YES	NO	YES	SO8
SY50272AGC	Buck Converter for 18V Output	6.5W	650V	9.2Ω	18V	CCM/DCM	40kHz	YES	NO	YES	DIP8
SY50272BAGC	Buck Converter for 12V Output	4.3W	650V	11.5Ω	12V	CCM/DCM	40kHz	YES	NO	YES	DIP8

Part Number	Function	Operation Mode	Control Mode	Protection	Support DC Input	Package
SY5055AHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/DCM/Burst	PFC: Average current mode LLC: Current mode	AC Brown in/out, OCP, OVP, OTP, PFC OPP	NO	SOP14
SY5055BHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/Burst	PFC: Average current mode LLC: Current mode	AC Brown in/out, OCP, OVP, OTP, PFC OPP	YES	SOP14
SY5055DHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/DCM/Burst	PFC: Average current mode LLC: Current mode	AC Brown in/out, OCP, OVP, OTP, PFC OPP	YES	SOP14
NEW SY5055EHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/DCM/Burst	PFC: Average current mode LLC: Current mode	AC Brown in/out, OCP, OVP, OTP, PFC OPP	YES	SOP14

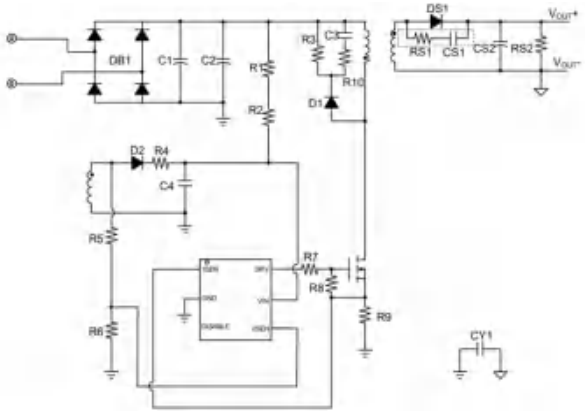
Part Number	Function	Max Power	Integrated FETs	Max Rdson	Operation Mode	Max Frequency	HV Startup	BO/BI	Input OVP Protection	Package
SY50329FIB	SSR Flyback Converter	30W	700V	2Ω	CCM/DCM	100kHz	YES	YES	YES	DIP7
NEW SY50428FIB	SSR Flyback Converter	24W	800V	2.8Ω	CCM/DCM	100kHz	YES	YES	YES	DIP7

Back

SY5007AABC- Flyback Controller with Primary Side CC/CV Control

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5μA Max
- Minimum Frequency Limitation 500Hz
- Reliable Protections for OVP, UVP, SCP, OTP, OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 125kHz
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6



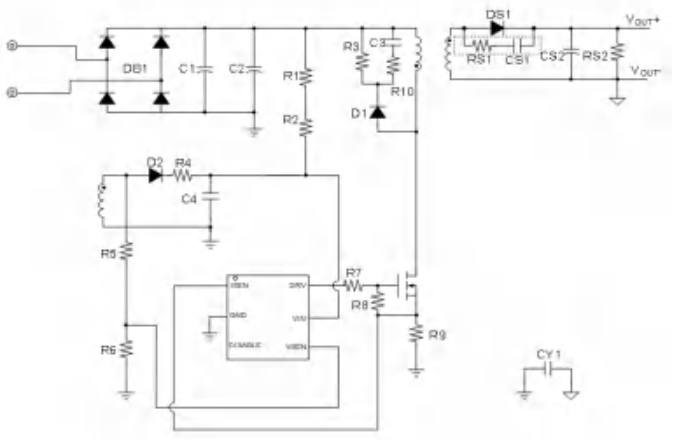
Applications

- AC/DC Adapters
- Battery Chargers

SY5007ABC- Flyback Controller with Primary Side CC/CV Control

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5μA Max
- Minimum Frequency Limitation 500Hz
- Reliable Protections for OVP, SCP, OTP, OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 125kHz
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6



Applications

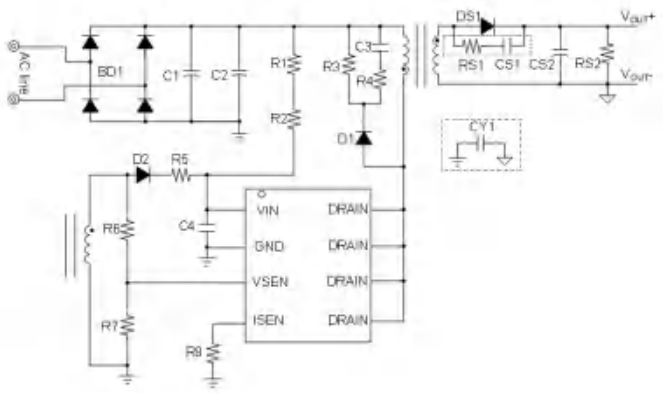
- AC/DC Adapters
- Battery Chargers

Back

SY50213NFAP/SY50216NFAP- Flyback Regulator with Primary Side Control for Adapters and Chargers CV/CC

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5μA Max
- Minimum Frequency Limitation 500Hz
- No-load Power is Less than 50mW
- Reliable Protections for OVP, UVP, SCP, OTP, OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 125kHz
- ➢ SY502013N:Integrated 650V/2.2ΩMOSFET
- ➢ SY50216N:Integrated 650V/4.4ΩMOSFET
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

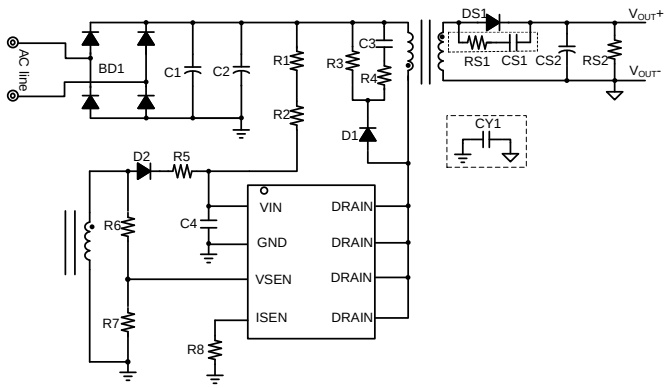
- AC/DC Adapters
- Battery Chargers

SY50136ZFAC/SY50133Z1FAP/SY50218VFAC

- Flyback Regulator with Primary Side Control for Adapters and Chargers CV/CC

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5μA Max
- Minimum Frequency Limitation 500Hz
- No-load Power is Less than 50mW
- Reliable Protections for OVP, SCP, OTP,OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 125kHz
- ➢ SY50136Z: Integrated 650V/2.2ΩMOSFET
- ➢ SY50133Z1: Integrated 650V/4.4ΩMOSFET
- ➢ SY50218V: Integrated 650V/1.2ΩMOSFET
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

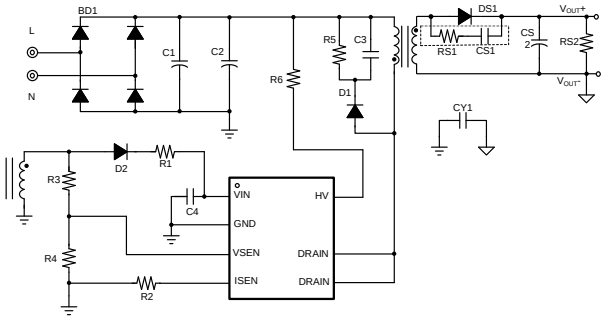
- AC/DC Adapters
- Battery Chargers

Back

SY50323FQC- Flyback Regulator with Primary Side CC/CV Control

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- No-load Power is Less than 20mW
- Integrated HV Start up Circuit
- Brown-in and Brown-out Function
- Reliable Protections for OVP, UVP, SCP, OTP
- Reliable Protections for Safety Requirement
- Minimum Switching Frequency Limitation 250Hz
- Maximum Switching Frequency Limitation 90kHz
- Integrated 700V MOSFET
- RoHS Compliant and Halogen Free
- Compact Package: SO7



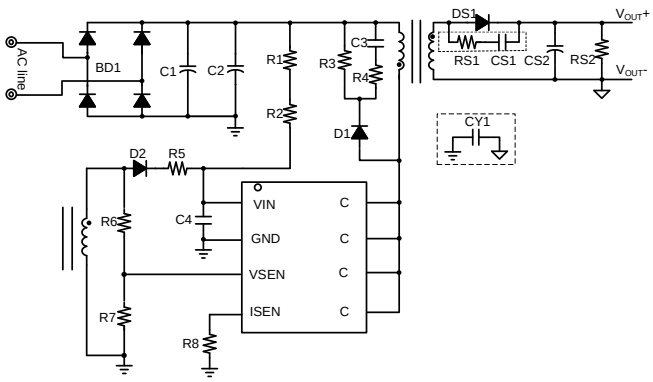
Applications

- AC/DC Adapters
- Battery Chargers
- Home Appliances

SY50131CFAC- Flyback Regulator with Primary Side CV/CC Control for Adapters and Chargers

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5μA Max
- Minimum Frequency Limitation 2kHz
- No-load Power is Less than 100mW
- Reliable Protections for OVP, UVP, SCP, OTP,OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 90kHz
- Integrated 980V Bipolar NPN Transistor
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

- AC/DC Adapters
- Battery Chargers

Back

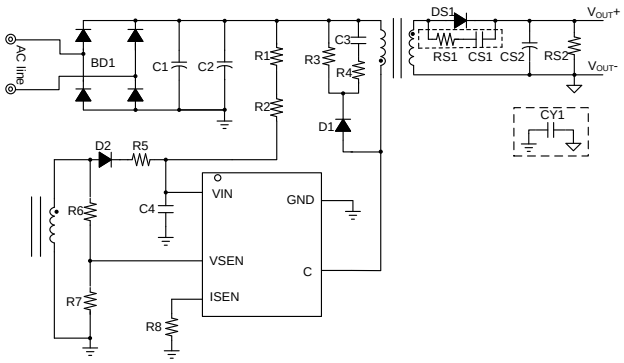
SY50211WAZC/SY50213WFAC

- Flyback Regulator with Primary Side CV/CC Control

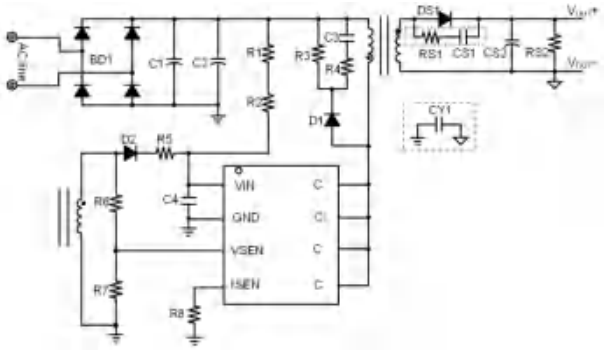
Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast dynamic load transient response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5μA Max
- Minimum Frequency Limitation 500Hz
- No-load Power is Less than 75mW
- Reliable Protections for OVP, SCP, OTP,OCP
- Reliable Protections for Safety Requirement
- Maximum switching frequency limitation:SY50211W: 72kHz
  SY50213W: 125kHz
- Integrated 800V Bipolar NPN Transistor
- RoHS Compliant and Halogen Free
- Compact Package: SY50211W:SOT335
  SY50213W:SO8

SY50211W



SY50213W



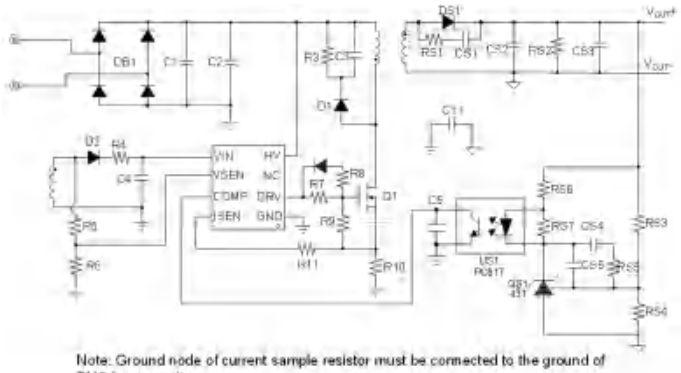
Applications

- AC/DC Adapters
- Battery Chargers

SY5019FAC- Flyback Controller for Adapters and Chargers

Features

- Quasi-Resonant (QR) mode operation: Valley turn-on of the primary MOSFET to achieve low switching losses
- Output current is monitored by primary detection for reliable Over Current Protection and Short Circuit Protection
- PWM/PFM control for higher average efficiency
- Burst mode control for low no load loss and efficiency
- HV start up circuit is used to reduce no-load.
- Internal high current MOSFET driver: 120mA
- Auto-Recovery for OVP/OCP/SCP/OTP
- Maximum frequency limitation 125kHz
- Compact package: SO8



Note: Ground node of current sample resistor must be connected to the ground of BUS line capacitor.

Applications

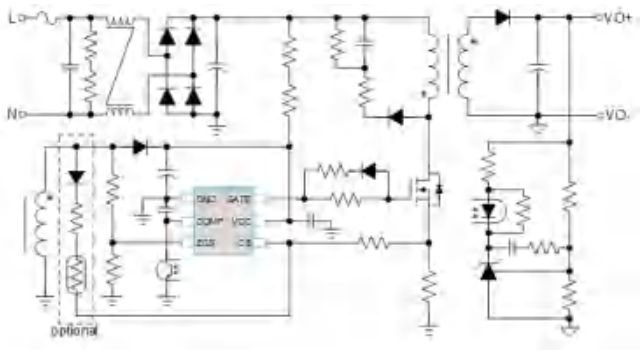
- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary power supplies

Back

SY5040ABC- CCM+QR Mode SSR Flyback Controller

Features

- Rated Switching Frequency: 65kHz
- CCM+QR Combined Operating Mode
- Frequency Fold Back and Burst Mode Control
- Minimum Switching Frequency Limited to 25kHz
- F_{SW} Modulation to Reduce EMI Noise
- Programmable Brownout Protection by ZCS Pin
- Programmable Output OVP by ZCS Pin
- Programmable External OTP by CS Pin
- OLP, VCC OVP, Internal OTP
- Secondary Diode Short Circuit Protection
- OCP Compensation over Universal Input Range
- Low Start up Current: <4μA
- Gate Drive Capability: 210mA/420mA(source/sink)
- Internal Soft Start Process
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6



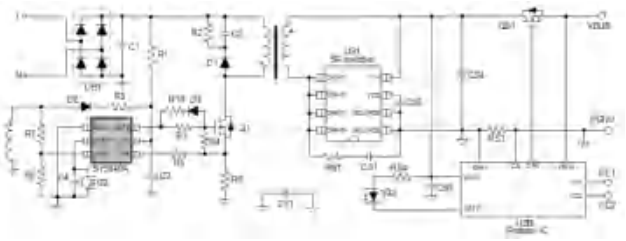
Applications

- AC/DC Power Supply
- Note Book Adapter
- LCD TV
- Auxiliary Power Supply

SY5040AABT- CCM and QR SSR Flyback Controller for Adapters and Fast Chargers

Features

- Wide VCC Operating Range: 9V to 54V
- Low Startup Current: < 5μA
- Mixed CCM+QR Control Architecture
- Forced QR Operating under High Line Voltage Conditions
- Quasi-Fixed Frequency Control to Eliminate Slope Compensation in CCM
- 85kHz Switching Frequency Limit under CCM
- 85kHz Switching Frequency Limit under QR Mode
- Minimum Switching Frequency Limited to 25.5kHz
- Frequency Foldback for High Average Efficiency
- Burst Control for High Light Load Efficiency
- Comprehensive Protections Including VCC OVP, Output OVP/UVP, OLP, OTP, and BO
- Secondary SR MOSFET Short-Circuit Protection
- Internal Soft-Start Process
- Gate Drive Capability: +120mA/-520mA
- Compact Package: SOT23-6



Applications

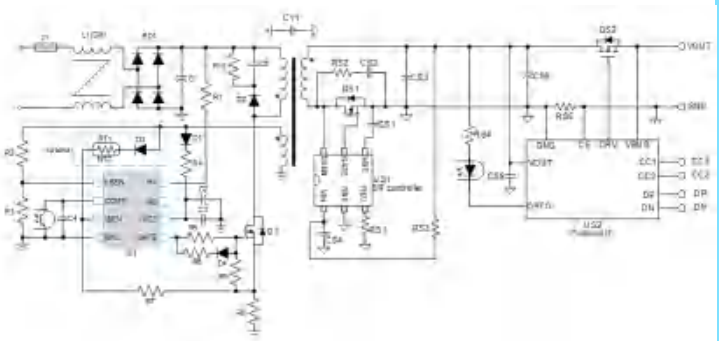
- AC/DC Adapters
- AC/DC Fast Chargers

Back

SY5033AFAP/SY5033CFAP- CCM+QR SSR Flyback Controller

Features

- SSR Flyback controller with HV start up
- Wide VCC range: 10V~90V
- CCM+QR mixed mode for small volume & high efficiency
- 65kHz CCM frequency, 90kHz QR frequency limit
- Force QR at high line input
- Pseudo fixed frequency control for CCM
- Frequency fold back and burst mode control
- New COMP pin design to achieve better load transient response
- BO, input OVP (SY5033C), output OVP/UVP, VCC OVP, OLP, SCP, external OTP, OTP, etc
- 2s auto-recovery timer under OLP/SCP protection to minimize power loss
- Compact Package: SO8



Applications

- Fast Chargers
- AC/DC Adapters

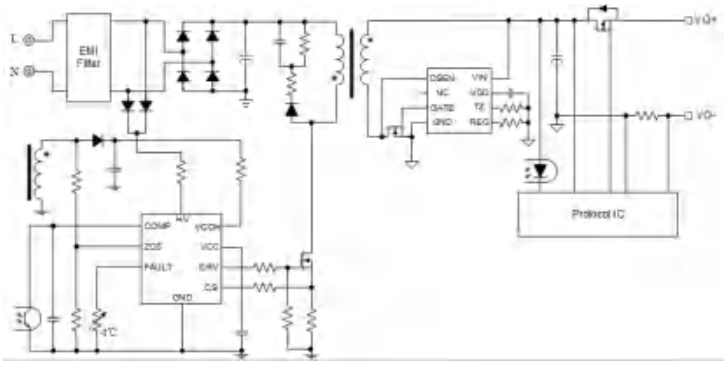
Part Number	OLP Timer	BO	BI	Max Toff	ISEN Short	Input OVP
SY5033AFAP	208ms	85uA, 200ms	120uA	64us	6.2us	NO
SY5033CFAP	64ms	100uA, 64ms	110uA	245us	3.9us	YES

Back

SY5022BFVP- High Frequency QR Flyback Controller with Valley Lockout and E-mode GaN FET Driver

Features

- DCM+QR Combined Operating Mode
- Direct Enhancement-Mode (E-mode) GaN FET Driver
- Programmable Gate Driver Current
- 140V Internal LDO on VCCH input pin
- Switching Frequency Range: 25kHz–300kHz
- Automatic Valley Lockout from 1 to 6 cycles
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise (Configurable using ZCS Resistor)
- Internal Soft-Start
- Integrated 700V HV Startup
- Brown-In/Out Protections
- X Capacitor Discharge Protection
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal and External OTP
- Compact Package: SSOP9



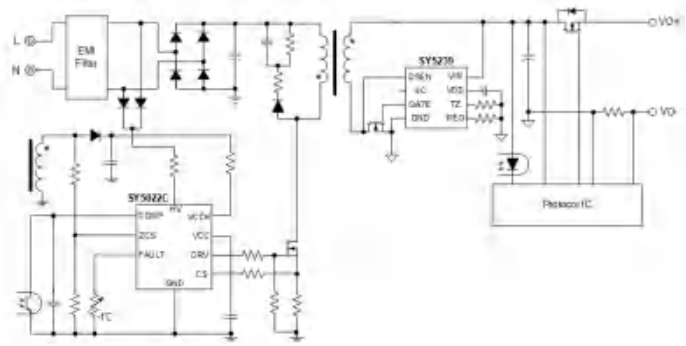
Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

SY5022CFVP- High Frequency QR Flyback Controller with Valley Lockout and E-mode GaN FET Driver and Input OVP

Features

- DCM+QR Combined Operating Mode
- Direct Enhancement-Mode (E-mode) GaN FET Driver
- Programmable Gate Driver Current
- 140V Internal LDO on VCCH input pin
- Switching Frequency Range: 25kHz–300kHz
- Automatic Valley Lockout from 1 to 6 cycles
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise (Configurable using ZCS Resistor)
- Internal Soft-Start
- Integrated 700V HV Startup
- Brown-In/Out Protections
- X Capacitor Discharge Protection
- AC Input OVP
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal and External OTP
- Compact Package: SSOP9



Applications

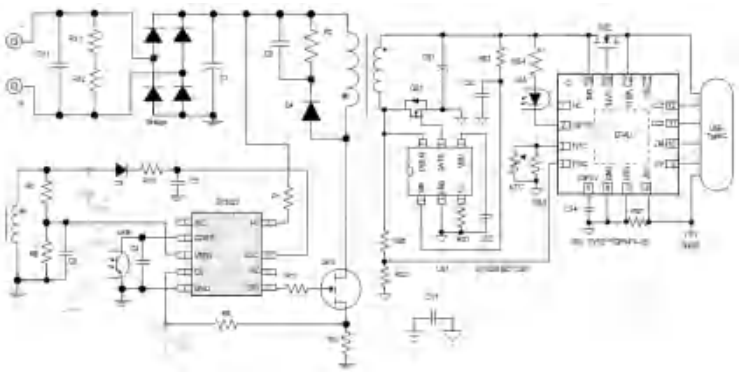
- AC/DC Adapters
- PD Adapters
- Quick Chargers

Back

SY5023FVP- CCM + QR Flyback Controller with E-Mode GaN Driver

Features

- Integrated E-Mode GaN Drive
- Combined CCM+QR Operating Modes
- Soft GaN Gate Drive for Optimized EMI Performance
- Wide VCC Operating Range: 7-85V
- Switching Frequency Range: 25kHz–500kHz
- Frequency Modulation to Reduce EMI Noise
- Integrated 700V HV Startup Circuitry
- Programmable Output OVP and UVP
- Brown-In/Out Protection
- Current Sense Resistor Short-Circuit Protection
- Winding or SR Short-Circuit Protection
- Internal and External OTP
- Compact Package: SSOP9



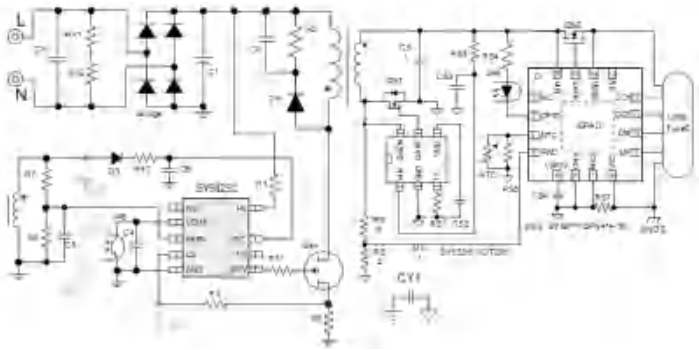
Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

SY5023CFVP- High Frequency QR Flyback Controller with E-Mode GaN Drive

Features

- Integrated E-Mode GaN Drive.
- QR/DCM Operating Modes
- Soft GaN Gate Drive for Optimized EMI Performance
- Wide VCC Operating Range: 7-85V
- Switching Frequency Range: 25kHz–500kHz
- Frequency Modulation to Reduce EMI Noise
- Integrated 700V HV Startup Circuitry
- Programmable Output OVP and UVP
- Programmable Brown-In/Out Protection
- Programmable AC input OVP
- Current Sense Resistor Short-Circuit Protection
- Winding or SR Short-Circuit Protection
- Internal and External OTP
- Compact Package: SSOP9



Applications

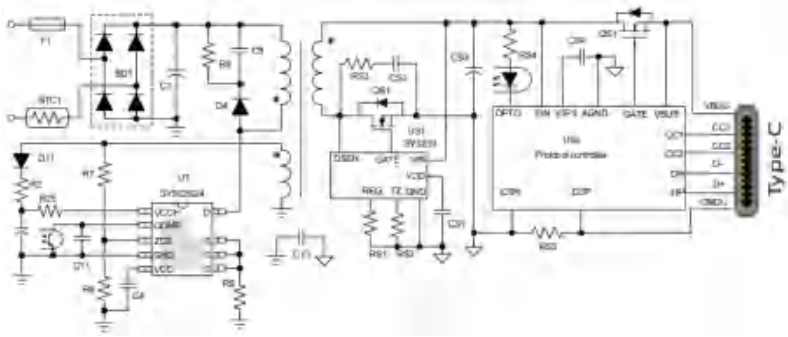
- AC/DC Adapters
- PD Adapters
- Quick Chargers

Back

SY50294HZP- High Frequency QR Flyback Converter with Valley Lockout, Accuracy Output OCP and E-mode GaN

Features

- Integrated 700V E-mode GaN FET
- DCM+QR Combined Operating Mode
- Switching Frequency Range: 25kHz–500kHz
- VCCH up to 140V Power Supply
- Automatic Valley Lockout from 1 to 6 Cycles
- Accuracy Output OCP Protection
- Adaptive OCP (LPS, Limited Power Source)
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise (Configurable using ZCS Resistor)
- Internal Soft-Start
- Integrated 700V HV Startup
- Brown-In/Out Protections
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal OTP
- Compact Package: SSOP9E



Applications

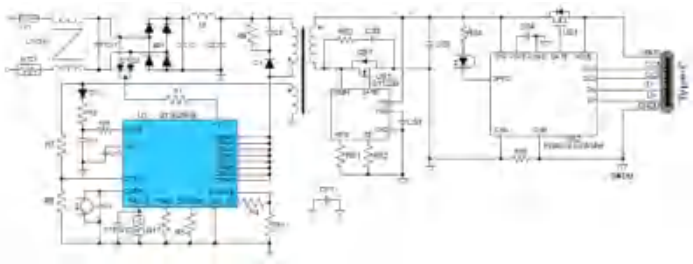
- AC/DC Adapters
- PD Adapters
- Quick Chargers

Back

SY50296XDQ/SY50298XDQ- High Frequency QR Flyback Converter with Valley Lockout and E-mode GaN Integrated

Features

- DCM+QR Combined Operating Mode
- Adaptive OCP (LPS, Limited Power Source)
  - SY50296: Integrated GaN (700V 0.165Ohm_typ)
  - SY50298: Integrated GaN (700V 0.104Ohm_typ)
- New Package for Excellent Heat Sink.
- Programmable Gate Driver Current
- 140V LDO in VCCH Pin
- Switching Frequency Range: 25kHz~500kHz
- Valley Lockout from 1 to 6th
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise
- Internal Soft Start
- Integrated 700V HV Start up
- Brown In/Out Protection
- X-cap Discharge Protection
- Programmable Output OVP&UVP
- Current Sense Resistor Short Protection
- Internal & External OTP
- Compact Package: QFN 5×7-18



Applications

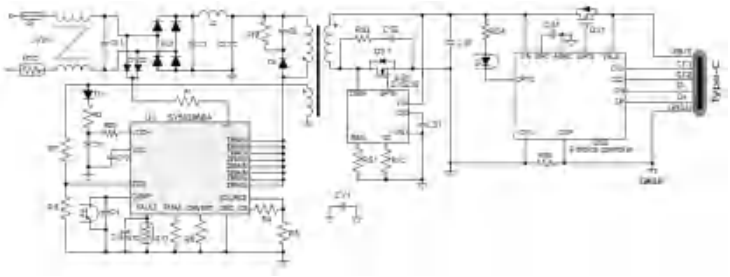
- Fast Chargers
- AC/DC Adapters

Back

SY50296AXDQ/SY50298AXDQ- High Frequency QR Flyback Converter with Valley Lockout , Accuracy Output OCP and GaN FET

Features

- SY50296A: Integrated GaN (700V 0.16Ohm_typ)
- SY50298A: Integrated GaN (700V 0.10Ohm_typ)
- Programmable Gate Driver Current
- DCM+QR Combined Operating Mode
- Switching Frequency Range: 25kHz–500kHz
- VCCH up to 140V Power Supply
- Automatic Valley Lockout from 1 to 6 Cycles
- Accuracy Output OCP Protection.
- Adaptive OCP (LPS, Limited Power Source)
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise
- Internal Soft-Start
- Integrated 700V HV Startup
- X-cap Discharge Protection
- Brown-In/Out Protections
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal and External OTP
- New Package for Excellent Heat Sink.
- Compact Package: QFN5*7-18



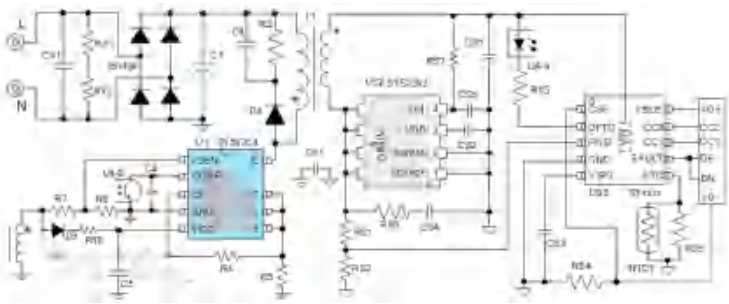
Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

Back

SY50354HZP- CCM + QR Flyback Converter with E-Mode GaN Integrated

Features



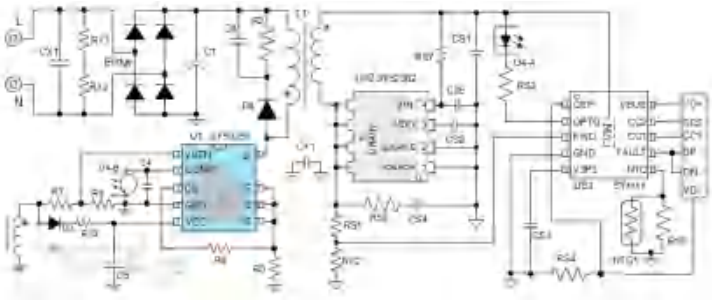
- Integrated 700V E-Mode GaN FET (270mΩ)
- Combined CCM+QR Operating Modes
- Soft GaN Gate Drive for Optimized EMI Performance
- Wide VCC Operating Range: 7-85V
- Switching Frequency Range: 25kHz–500kHz
- Frequency Modulation to Reduce EMI Noise
- Integrated 700V HV Startup Circuitry
- Programmable Output OVP and UVP
- Brown-In/Out Protection
- Current Sense Resistor Short-Circuit Protection
- Winding or SR Short-Circuit Protection
- Internal and External OTP
- MSL3
- Compact Package: SSOP9E

Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

SY50355HZP- CCM + QR Flyback Converter with E-Mode GaN Integrated

Features



- Integrated 700V E-Mode GaN FET (160mΩ)
- Combined CCM+QR Operating Modes
- Soft GaN Gate Drive for Optimized EMI Performance
- Wide VCC Operating Range: 7-85V
- Switching Frequency Range: 25kHz–500kHz
- Frequency Modulation to Reduce EMI Noise
- Integrated 700V HV Startup Circuitry
- Programmable Output OVP and UVP
- Brown-In/Out Protection
- Current Sense Resistor Short-Circuit Protection
- Winding or SR Short-Circuit Protection
- Internal and External OTP
- Compact Package: SSOP9E

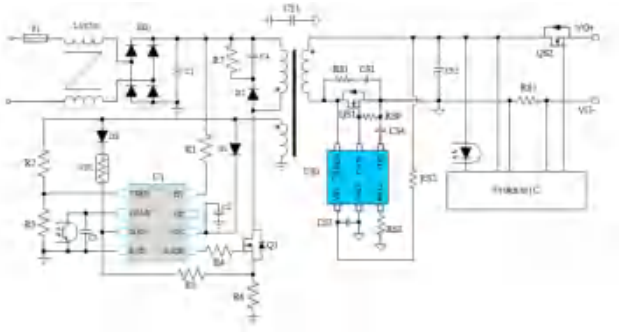
Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

Back

SY5231ABC/SY5231AABT- Secondary Side Synchronous Rectification

Features



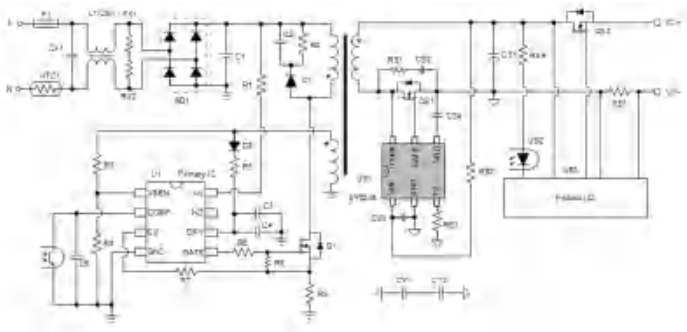
- Suitable for CCM, DCM and QR Mode Flyback Converters
- DSEN Pin Sensing up to 200V
- DSEN Falling Slope Rate Detection to Avoid False Turn on of SR MOSFET by Parasitic Ring
- Uses DSEN High Voltage Blanking Time to Enhance System ESD Performance
- GATE Pin Clamped Before VDD on
- Dual Supply Channel for 3.3V to 21V Output Systems
- Up to 500kHz Switching Frequency
- 10 ns Typical Turn off Propagation Delay
- 2A Sink, 0.5A Source Gate Driver Capability
- Minimum Ton:
  - SY5231ABC:1150ns
  - SY5231AABT:650ns
- Compact Package: SOT23-6

Applications

- AC/DC Adapters
- USB Type-C and Power Delivery AC Adapters
- Server and Telecom Power Supplies
- Auxiliary Power Supplies

SY5236ABT- ZVS Flyback SR Controller

Features



- Suitable for CCM, DCM and QR Mode Flyback Converter
- Proprietary Operation Mode for Flyback ZVS
- DSEN Pin Sensing up to 200V
- DSEN Falling Slope Rate Detection to Avoid False Turn on of SR MOSFET by Parasitic Ring
- DSEN High Voltage Blanking Time Detecting to Enhance System ESD Performance
- Dual Power Supply Channels for 3V to 30V Output Systems
- Power Saving Mode to Improve Light Load Efficiency
- Up to 500kHz Switching Frequency
- 10ns Typical Turn off Propagation Delay
- 2A Sink, 0.5A Source Gate Driver Capability
- Compact Package: SOT23-6

Applications

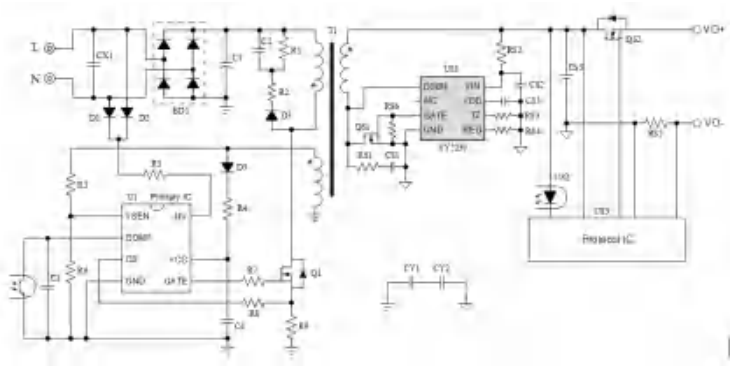
- Smart Phone Fast Chargers
- AC/DC Adapters and Auxiliary Power Supplies

Back

SY5239FPP- ZVS Flyback SR Controller

Features

- Proprietary Operation Mode for Flyback ZVS
- Adaptive Gate Voltage Control
- DSEN Falling Slope Rate Detecting to Prevent SR False Trigger
- 130V DSEN Pin to Directly Sense DRAIN Voltage of SR MOS
- Power Saving Mode to Improve Light Load Efficiency
- Dual Power Supply Channel for 3.3V to 21V Output Systems
- Compact Package: CPC8



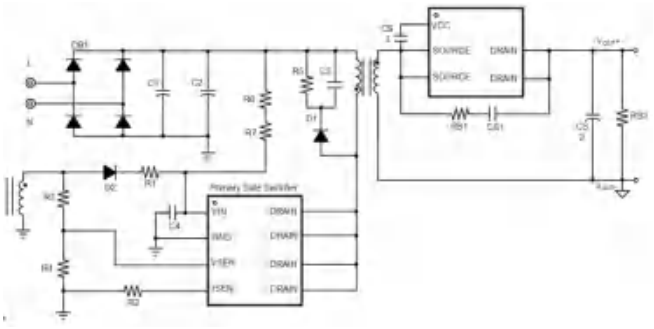
Applications

- USB PD, Fast Charger
- AC/DC Adaptor

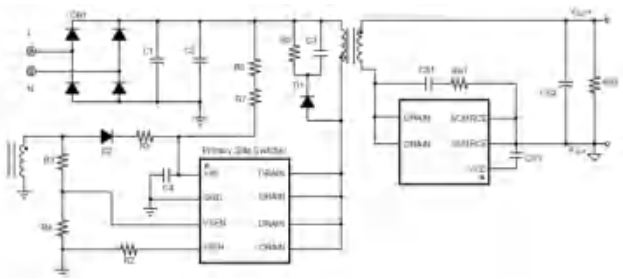
SY52157AZC/SY52257AAZC- Secondary Side Synchronous Rectification Converter

Features

- Smart Turn off Technology
- Secondary-side Synchronous Rectifier for 5V Systems(SY52157)
- Secondary-side Synchronous Rectifier for 5V~12V Systems(SY52257A)
- Suitable for Discontinuous Mode (DCM), Critical Conduction Mode (CRM)
- Suitable for Primary Side Regulation (PSR), Secondary Side Regulation (SSR)
- RoHS Compliant and Halogen Free
- Compact Package: SOT335



Typical Application Circuit in High Side



Typical Application Circuit in Low Side

Applications

- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary Power Supplies

Back

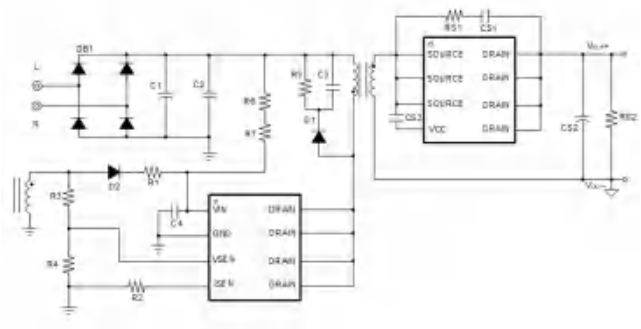
SY52151FAP/SY52251FAC- Secondary Side Synchronous Rectification Converter

Features

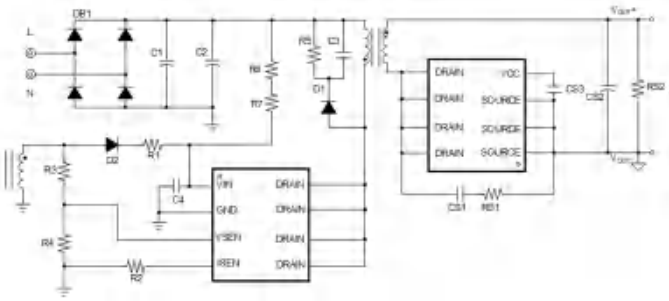
- Smart Turn off Technology
- Secondary-side Synchronous Rectifier for 5V~12V Systems
- Suitable for Discontinuous Mode (DCM), Critical Conduction Mode (CRM)
- Suitable for Primary Side Regulation (PSR), Secondary Side Regulation (SSR)
- Compact Package: SO8

Applications

- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary Power Supplies



Typical Application Circuit in High Side



Typical Application Circuit in Low Side

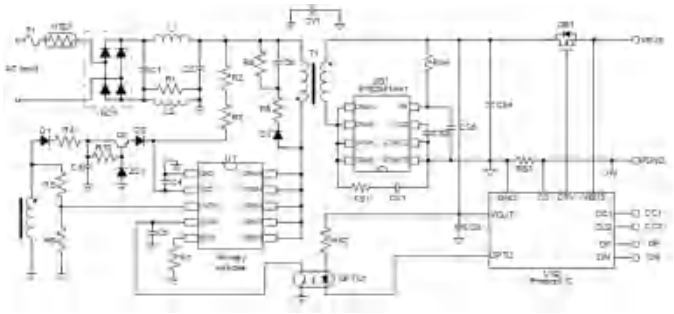
SY52341FAP/SY52441FAP- Secondary Side Synchronous Rectification

Features

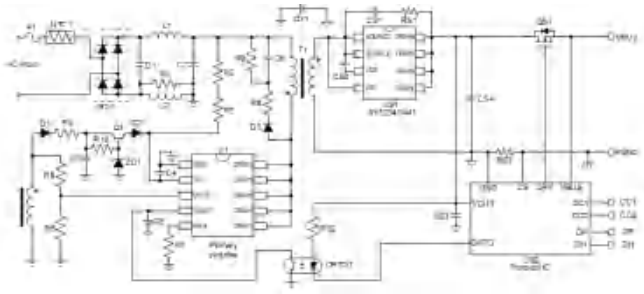
- Suitable for CCM, DCM and QR Mode Flyback Converter
- DRAIN Falling Slope Rate Detecting to Avoid False Turn On of SR MOSFET by Parasitic Ring
- DRAIN High Voltage Blanking Time detecting to enhance system ESD performance
- Dual Power Supply Channel for 3.3V to 12V Output Systems (SY52341)
- Dual Power Supply Channel for 3.3V to 21V Output Systems (SY52441)
- Compact Package: SO8

Applications

- AC/DC Adapters
- USB Type-C and Power Delivery AC Adapters
- Server and Telecom Power Supply
- Auxiliary Power Supplies



SR MOSFET Location: Low Side



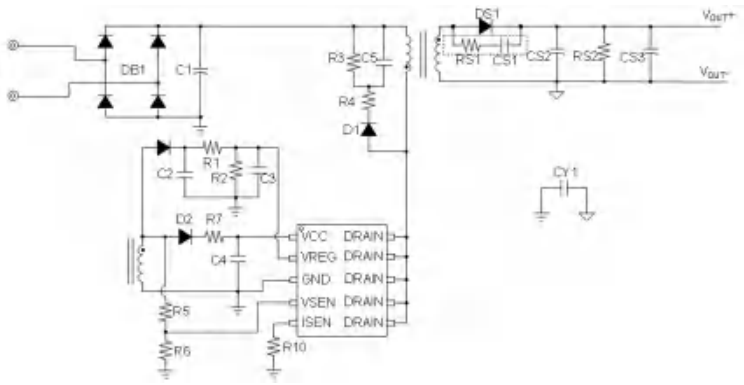
SR MOSFET Location: High Side

Back

SY50433BFHC- Flyback Regulator with Primary Side CV/CC Control for High Input Voltage Application

Features

- Integrated 900V MOSFET
- Very Tight Primary Side CV/CC Regulation
- Quasi-resonant Mode and PWM/PFM Control for Higher Average Efficiency
- Internal CC/CV Loop Compensation
- Low Start Up Current: 5μA Max
- HV Start Up Circuit to Reduce No-load Loss
- Maximum Switching Frequency Limitation 125kHz
- VREG OVP Function for Strong Magnetic Field Test
- Reliable Protections for OCP,SCP,VCCOVP,VSEN SCP, OTP
- Compact Package: SSOP10



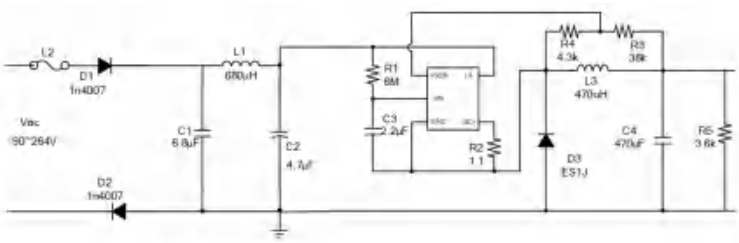
Applications

- Power Supply for STB Home Appliances, Smart Power Meter and Other Appliances with High AC Input Voltage

SY50281AAC/SY50583FAC- Buck Regulator with CC/CV Control

Features

- SY50281: Integrated 500V MOSFET
- SY50583: Integrated 700V MOSFET
- CC/CV control eliminates Aux-winding
- Quasi-Resonant (QR) mode to achieve low switching losses
- Fast Startup (<500ms)
- Low start up current: 15μA typical
- Maximum frequency limit: 45kHz
- Compact package: SOT23-5



Applications

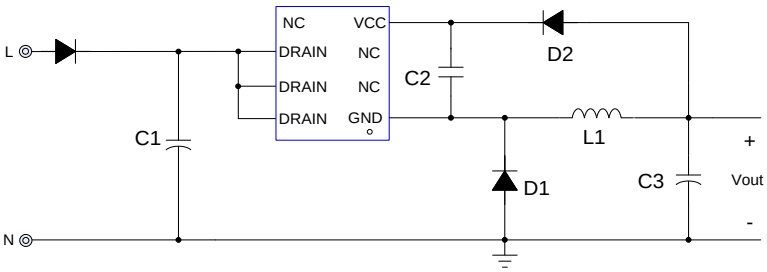
- Power supply for small appliance

Back

SY50272AGC/SY50272BAGC- AC Input Buck Regulator

Features

- 650V MOSFET Integrated
- High Voltage Start up Circuit Integrated
- 50mW No Load Power Consumption
- Multi-off Time Control
- Minimum External Components
- Over Temperature Protection(OTP)
- Output Over Voltage Protection(OVP)
- Compact Package: DIP8



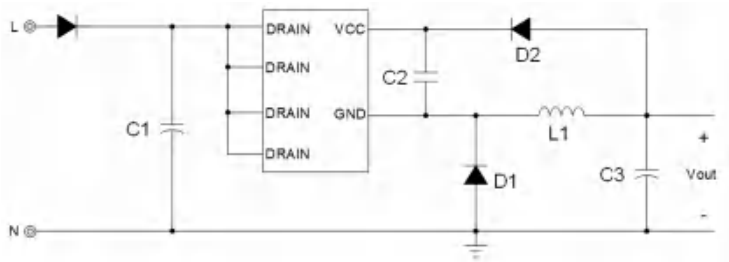
Applications

- Home Appliances and White Goods
- Auxiliary Power Supplies

SY50271BFAC- AC Input Buck Regulator

Features

- Integrated 650V MOSFET
- High Voltage Startup Circuit
- 50mW No-Load Power Consumption
- Multi-Off-Time Control
- Minimal External Components
- Overtemperature Protection (OTP)
- Output Overvoltage Protection (OVP)
- Compact Package: SO8



Applications

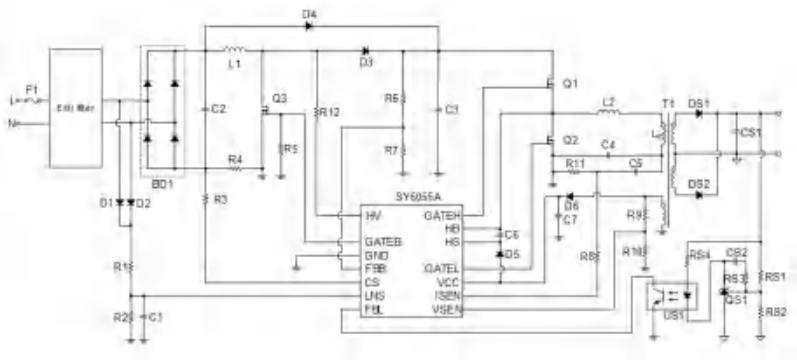
- Home Appliances and White Goods
- Auxiliary Power Supplies

Back

SY5055AHXP- PFC+LLC Combo Controller

Features

- PF>0.95, THD<5%
- Boost Quasi Resonant (QR) Operation
- Boost Burst Operation at Light Load
- LLC Fast Dynamic Response
- LLC Integrated Half-bridge Driver
- Input BO/BI Protection
- Boost Output, LLC Output OVP
- Cycle by Cycle Peak Current Protection
- Over Temperature Protection
- LLC Capacitive Mode Protection



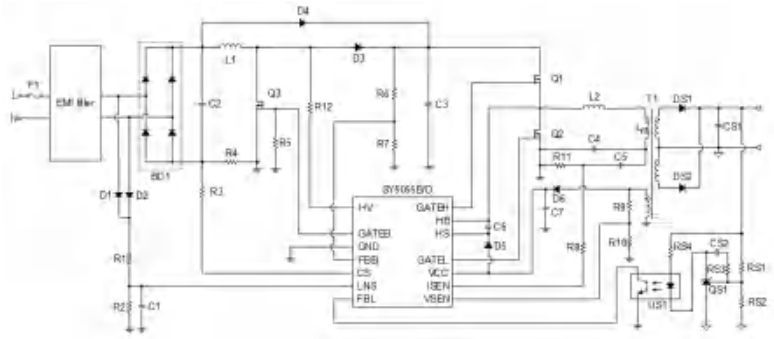
Applications

- LCD Television
- Desktop, All in One PC
- Adapter, Charger
- Printer

SY5055BHXP/SY5055DHXP- PFC+LLC Combo Controller

Features

- PF > 0.95, THD < 5%
- Support DC/AC input
- Boost Quasi-Resonant (QR) Operation
- Boost Burst Operation at Light Load
- LLC Fast Dynamic Response
- LLC Integrated Half-Bridge Driver
- Input Brown-In (BI) and Brown-Out (BO) Protection
- Boost FBB, LLC Output Overvoltage Protection (OVP)
- Cycle-by-Cycle Peak Current Protection
- Overtemperature Protection
- LLC Capacitive Mode Protection
- SOP14 package



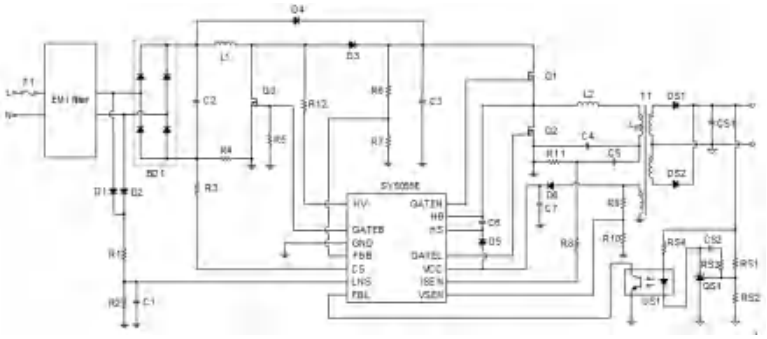
Applications

- LCD TVs
- Chargers
- Printers

Back

Features

- PF>0.95, THD<5%
- Support DC/AC input
- Boost Quasi-Resonant (QR) Operation
- Boost Burst Operation at Light Load
- LLC Fast Dynamic Response
- LLC Integrated Half-Bridge Driver
- Input Brown-In (BI) and Brown-Out (BO) Protection
- Boost FBB, LLC Output Overvoltage Protection (OVP)
- Cycle-by-Cycle Peak Current Protection
- Overtemperature Protection
- LLC Capacitive Mode Protection
- SOP14 package



Applications

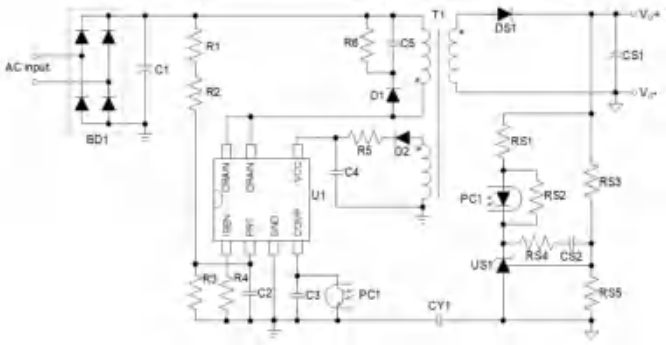
- LCD TVs
- Chargers
- Printers

Back

SY50329FIB- PWM/PFM Mode SSR Flyback Converter

Features

- Secondary Side Regulation
- Integrated 700V Power MOSFET
- HV Start-Up
- 100kHz Switching Frequency
- Pseudo-Fixed Frequency Control to Eliminate Slope Compensation for CCM (Duty Cycle>50%)
- PFM Control for High Average Efficiency
- Burst Mode Control for High Light Load Efficiency
- 23.5kHz Minimum Switching Frequency to Eliminate Audible Noise
- Frequency Modulation to Reduce EMI Noise
- Internal Soft-Start Process: SY50329
- Programmable Input BO/OVP Through PRT Pin
- OLP, VCC OVP, OTP, Secondary Diode SCP
- Compact Package: DIP7



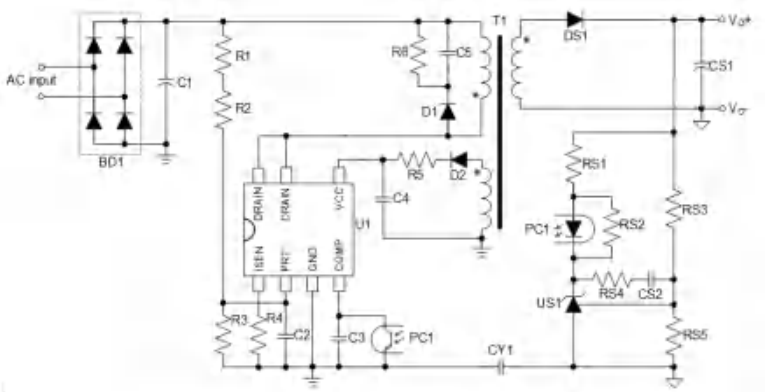
Applications

- Home Appliances
- AC/DC Adapters

SY50428FIB- PWM/PFM Mode SSR Flyback Converter

Features

- Secondary Side Regulation
- Integrated 800V Power MOSFET
- HV Start-Up
- 100kHz Switching Frequency
- Pseudo-Fixed Frequency Control to Elimina Slope Compensation for CCM (Duty Cycle>50%)
- PFM Control for High Average Efficiency
- Burst Mode Control for High Light Load Efficiency
- 23.5kHz Minimum Switching Frequency to Eliminate Audible Noise
- Frequency Modulation to Reduce EMI Noise
- Internal Soft-Start Process
- Programmable Input BO/OVP Through PRT Pin
- OLP, VCC OVP, OTP, Secondary Diode SCP
- Compact Package: DIP7



Applications

- Home Appliances
- AC/DC Adapters

Back

Isolated DC-DC Flyback Controller

Part Number	Function	Package	Integrated FET	Max Power	VIN Range	Max Frequency	OCP	OVP
SQ33604AFBP	PSR/SSR Flyback	MSOP10	NO	<60W	100V	500kHz	YES	YES

Isolated DC/DC Auxiliary Power Supply

Partnumber	V_{IN} (min) (V)	V_{IN} (max) (V)	f_{SW} (MHz)	V_{REF} Accuracy	MOSFET (BV & Ron)	Temp Range	Feature/ Special Function	Package
SQ38852BSXD	10.5	75	1	2.50V±2%	200V/1.4Ω	-40°C to 125°C	Programmable Switching Frequency Input Under voltage and Over voltage Detectors Internal Cycle by Cycle Current Limit VCC OVP P_{OUT_Max}: 6W	DFN 4*4-8
SQ38832AFAP	10.5	75	0.9	2.50V±2%	200V/1.4Ω	-40°C to 125°C	Programmable Switching Frequency Input Under voltage and Over voltage Detectors Internal Cycle by Cycle Current Limit VCC OVP P_{OUT_Max}: 6W	SO8
SQ38865IGD	10.5	75	0.4 or 0.8	1.20V±2%	180V/0.65Ω	-40°C to 125°C	Programmable Switching Frequency (PSR/SSR) Input Under voltage Detector Internal Cycle by Cycle Current Limit VCC OVP,OLP, SCP,OTP P_{OUT_Max}: 20W	DFN 5*6-8
SQ33052QCC	15	75	1	5V±2%	NA	-40°C to 125°C	Integrated 120V High Voltage Startup Circuit Programmable Oscillator with a 1MHz Maximum Frequency Support Voltage Mode Control and Peak Current Mode Control Cycle by Cycle Peak Current Limiting OCP, SCP ,OTP	QFN4x4-24

IEEE 802.3 af/at/bt-Compatible PoE PD Interface with DCDC Converter

Part Number	V_{IN} (min) (V)	V_{IN} (max) (V)	f_{SW} (KHz)	V_{REF} Accuracy	MOSFET (BV & Ron)	Temp Range	Feature/ Special Function	Package
SQ34815TQQ	10	57	500	1.2V±1.5%	180V/0.65Ω	-40°C to 125°C	Fully Compatible with IEEE 802.3 af Standard Power up to 13W(PoE input) Flexible Topology Design: PSR/SSR Flyback Internal Current Sense and Loop Compensation（PSR）for Simple Peripheral Circuit	QFN4×5-28
SQ33607QYQ	10	57	500	1.2V±1.5%	NA	-40°C to 125°C	Fully Compatible with IEEE 802.3 af/at Standard Power up to 30W(PoE input) Flexible Topology Design: PSR/SSR Flyback Internal Loop Compensation（PSR）for Simple Peripheral Circuit	QFN4×4-20
SQ33608WSQ	15	75	1	5V±2%	NA	-40°C to 125°C	Fully Compatible with IEEE 802.3 af/at/bt Standard Power up to 90W(PoE input) Programmable Oscillator with a 1MHz Maximum Frequency Support Voltage Mode Control and Peak Current Mode Control Cycle by Cycle Peak Current Limiting OCP, SCP ,OTP	QFN6x5-44

Back

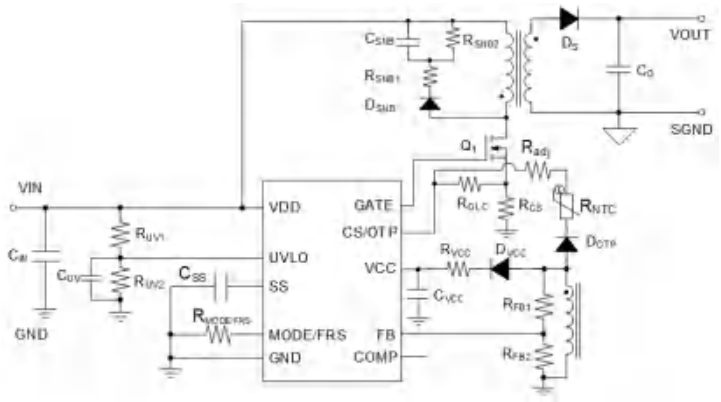
IEEE 802.3 af/at Compatible PSE Controller

Part Number	V_{IN} (min) (V)	V_{IN} (max) (V)	CH	MOS	Temp Range	Feature/ Special Function	Package
NEW SQ24908AQEQ	44	57	4	External	-40°C to 125°C	Four Independent PSE Channels Up to 70W per Port for High Power PSE application(non-standard) High Capacitance Legacy Device Detection I2C-Compatible, 3-Wire Serial Interface 9-Bit Port Current and Voltage Monitoring Supports DC Load-Removal Detections Over Temperature Protection	QFN5x5-32

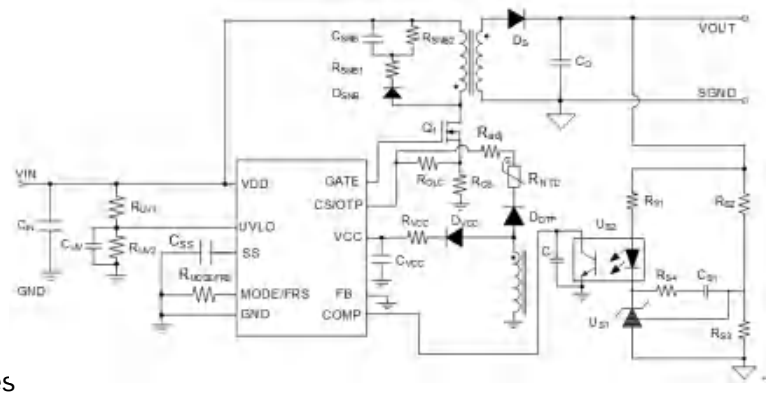
Back

Features

- Integrated 100V HV Start-up circuit
- Flexible Topology:
  - Primary-Side Regulated (PSR) Flyback (250kHz/400kHz Selectable)
  - Secondary-Side Regulated (SSR) Flyback (Programmable Frequency)
- Precision Voltage Reference
- Output Diode Compensation in PSR Mode
- Source/Sink=0.5A/0.9A GATE Drivers
- Programmable Soft-start
- Programmable Line Under Voltage Lockout (UVLO) with Adjustable Hysteresis
- External Programmable Thermal Shutdown
- OLP compensation for wide-input range
- Cycle-by-Cycle Current Sense Limit
- Frequency Modulation for EMI reduction
- Hiccup Protection for OLP, SCP, OVP and Thermal Shutdown



Typical Application-Isolated PSR Flyback Converter



Typical Application-Isolated SSR Flyback Converter

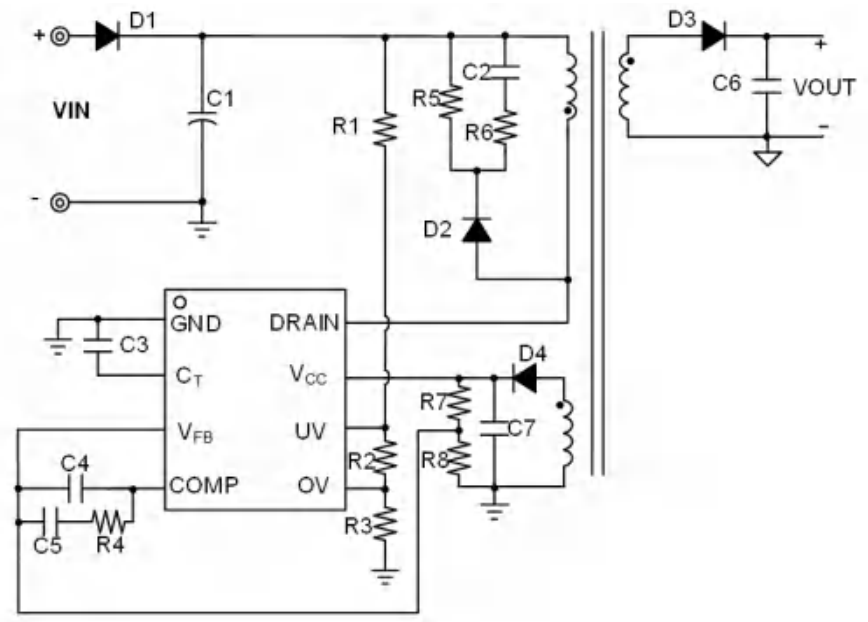
Applications

- Telecom Systems Isolated Power Supplies
- Industrial Isolated Power Supplies
- PoE (Power over Ethernet)/PD(Powered Device)

Back

SQ38852BSXD/SQ38832AFAP

- PWM Convertor with On-Chip Power Switch and Start up Circuits for 48V Telecom Systems Gate Driver



Features

- On Chip 200V Power Switch Circuit and Startup Circuit
- Programmable Switching Frequency
- Input Undervoltage and Overvoltage Detectors
- Internal Cycle by Cycle Current Limit
- Reliable Protections for Safety Requirement
- RoHS Compliant and Halogen Free
- Compact Package: DFN4×4-8 package

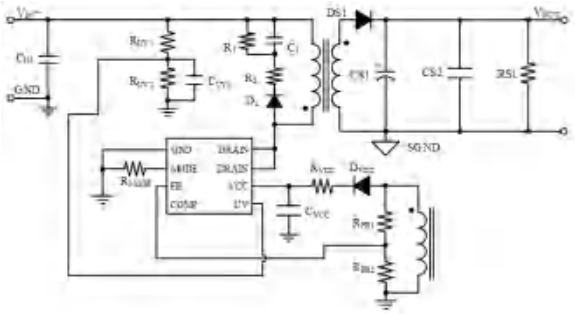
Applications

- Telecom Systems
- Wireless Base Station
- Low Power Bias Supply
- PoE (Power over Ethernet)/PD (Powered Device)

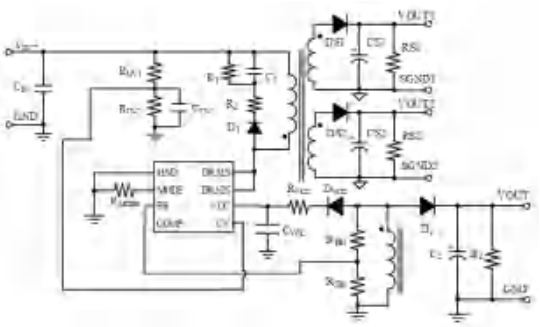
Back

SQ38865IGD

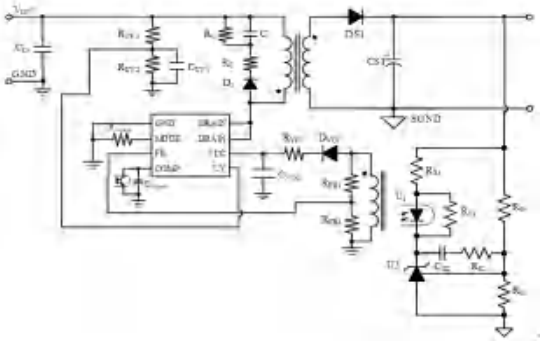
- Integrated High Frequency Flyback DC-DC Converter for 48V Telecom Systems



Typical Application Circuit-PSR



Multi-output Voltage Application Circuit (PSR)



Single-output Voltage Application Circuit (SSR)

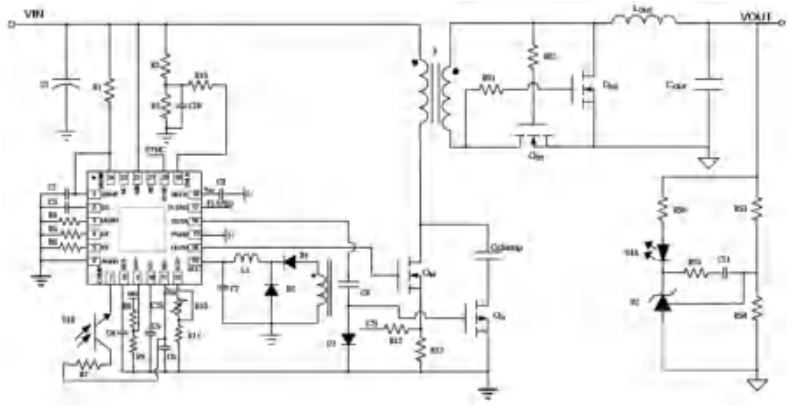
Features

- On Chip 180V Power Switch Circuit and Startup Circuit
- 3.2A Switching Current Limit (Typ)
- PSR/SSR Mode can be Selected
  - PSR(QR): 400kHz /800kHz Frequency Limit
  - SSR (fixed frequency): 200kHz≤fSW≤900kHz
- Internal Soft-start
- Frequency Modulation
- Cycle by Cycle Current Limit Using SENSEFET
- Active LEB Circuit
- Line Undervoltage Detectors
- Output Over Load Protection
- Output Over Voltage Protection
- Over Temperature Protection
- Compact Package: DFN5×6-8

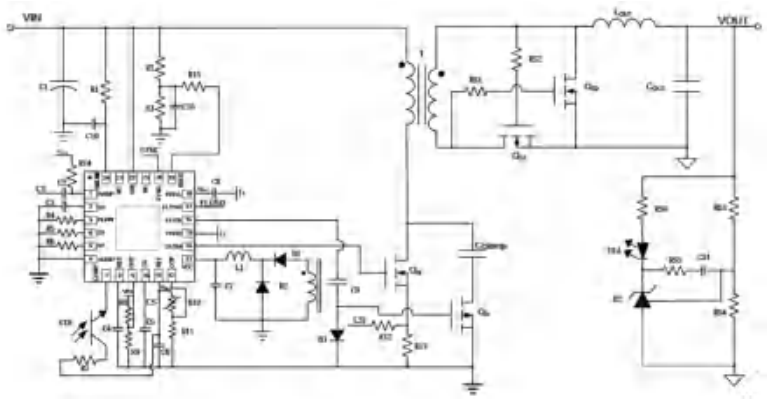
Applications

- Telecom Systems
- Wireless Base Station
- PoE (Power over Ethernet)/PD (Powered Device)
- Stand Alone Power DC-DC Converters
- Secondary Side Bias Supply for Isolated DC-DC Converters

Back



Voltage mode control



Current mode control

Features

- Support Voltage Mode Control and Peak Current Mode Control
- Integrated 120V High Voltage Startup Circuit
- Programmable Soft Start
- Programmable Oscillator with a 1MHz Maximum Frequency
- Programmable Maximum Duty Ratio Clamp
- Adaptive delay time Control for Improved Efficiency
- Line voltage under voltage protection
- Cycle by Cycle Peak Current Limiting
- Over current Protection
- Short Circuit Protection
- External Over temperature Protection
- Package：QFN4x4-24

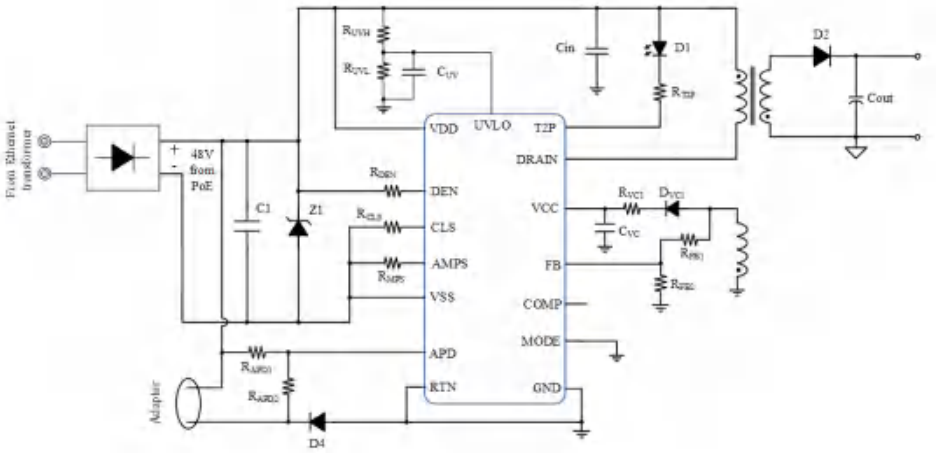
Applications

- Telecom Systems
- Server Power Supplies

Back

SQ34815TQQ

- IEEE 802.3 af/at-Compatible PoE Power Device Interface with13W High-frequency Flyback



Features

- Supports the IEEE 802.3 af/at Standard
- 100V, 0.45Ω Hot-swap Switch
- Adaptor ORing Support
- Power up to 13W(Input) PDs
- Auto-maintain Power Signature
- Primary Side Regulate Flyback with QR-mode Operation and PWM/PFM Control
- Secondary Side Regulate Flyback with Selectable Frequency and Internal Slope Compensation
- Integrate 180V,0.65Ω MOSFET for Converter
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×5-28

Applications

- IEEE 802.3af/at Complaint Devices
- Video and VoIP Telephones
- RFID Readers
- Multi-band Access Points
- Security Cameras

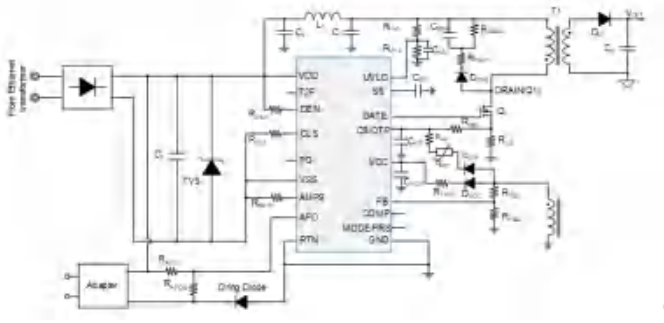
Back

SQ33607QYQ

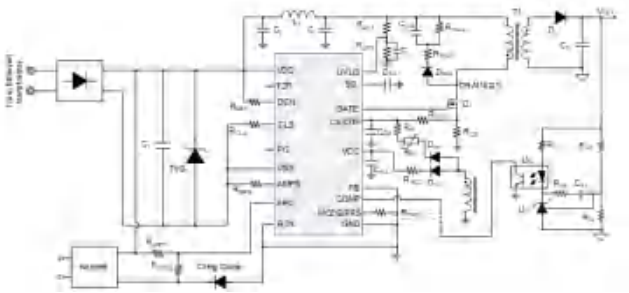
- IEEE 802.3af/at Compliant PoE PD Interface with High Efficiency PSR/SSR Flyback Controller

Features

- Fully Compatible with 802.3af/at Specifications
- 100V 0.45Ω PD Integrated Pass Switch
- 30W maximum power
- 100mA PD Inrush Current limit
- 900mA PD Normal Operation Current Limit
- Auxiliary Adaptor ORing Support
- Flexible Topology:
  - Primary-Side Regulated (PSR) Flyback (250kHz/400kHz Selectable)
  - Secondary-Side Regulated (SSR) Flyback (Programmable Frequency)
- Output Diode Compensation in PSR Mode
- Cycle-by-Cycle Current Sense Limit
- Precision Voltage Reference
- Frequency Modulation for EMI reduction
- Programmable Soft-start
- OLP Compensation for Wide-Input Range
- Externally Programmable Thermal Shutdown
- Programmable Line Under Voltage Lockout (UVLO) with Adjustable Hysteresis
- Hiccup Protection for OLP, SCP, OVP and Thermal Shutdown



PSR Flyback Converter



SSR Flyback Converter

Applications

- IEEE 802.3af/at-Compliant Devices
- Security Cameras
- Video Telephones
- WLAN Access Points
- IoT Devices

Back

SQ33608WSQ

- IEEE 802.3bt PD Interface with Highly Integrated Active Clamp PWM Controller

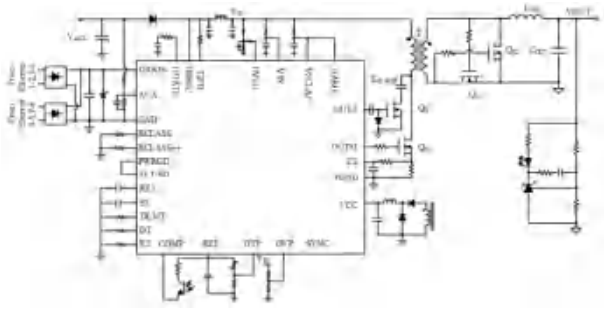
Features

PD Interface Section

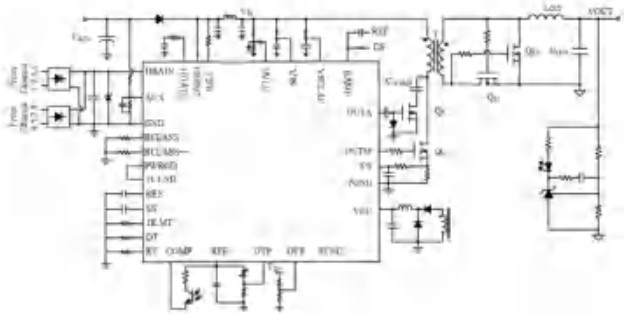
- IEEE 802.3af/at/bt-compliant powered device (PD) interface
- Supports Up to 71.3W PDs
- 5-Event Classification Sensing
- Superior Surge Protection (100V Absolute Maximum)
- 100V,60mΩ, N-channel Hot Swap MOSFET
- Integrated Signature Resistor
- Configurable Aux Power Support as Low as 9V
- Over Temperature Protection

DC-DC Controller Section

- Support Voltage Mode Control and Peak Current Mode Control
- Integrated 120V High Voltage Startup Circuit
- Programmable Soft Start
- Programmable Oscillator with a 1 MHz Maximum Frequency
- Programmable Maximum Duty Ratio Clamp
- Adaptive delay time Control for Improved Efficiency
- Line voltage under voltage protection
- Cycle by Cycle Peak Current Limiting
- Over current Protection
- Short Circuit Protection
- External Over temperature Protection
- Package：QFN6*5-44



Voltage mode **control**



Current **mode** control

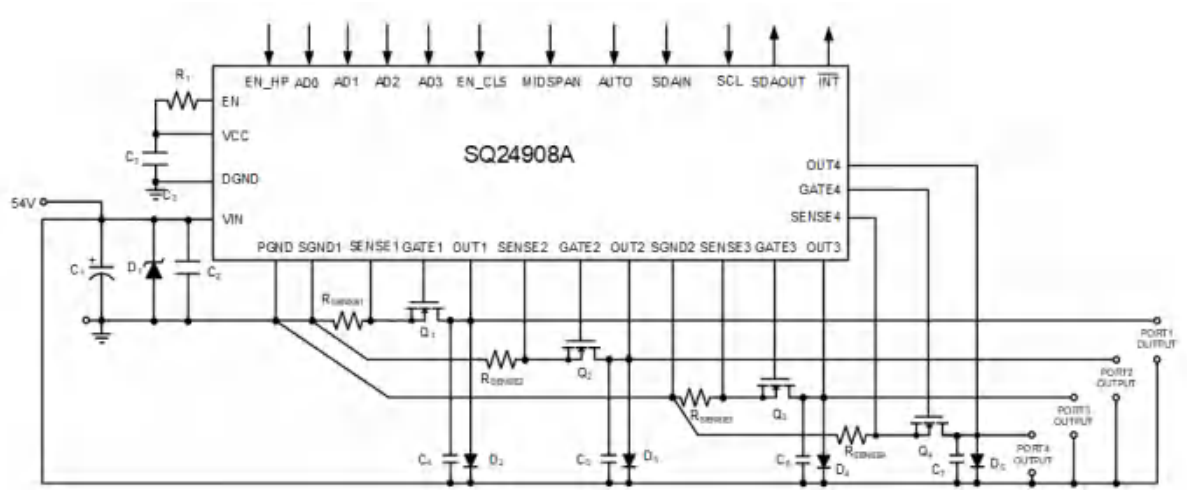
Applications

- High Power Wireless Data Systems
- Outdoor Security Camera Equipment
- Commercial and Public Information Displays
- High Temperature Industrial Applications

Back

SQ24908AQEQ

- Quad IEEE 802.3af/at-compliant Power Over Ethernet PSE Controller



Features

- IEEE 802.3af/at Power over Ethernet (PoE) PSE Controller
- Four Independent PSE Channels
- Up to 70W per Port for High Power PSE application
- 0.25Ω Current-Sensing Resistor
- High Capacitance Legacy Device Detection
- 400kHz I²C Compatible Serial Control Interface
- 9-Bit Port Current and Voltage Monitoring
- Supports DC Load Disconnect Detection
- Wide Junction Temperature Range (-40℃ to 125℃)
- Over Temperature Protection
- Available in QFN5× 5_32 Package

Applications

- High Power PSE Midspan Power Injectors
- High Power PSE Switches/Routers
- Surveillance NVR and DVRs

Back

IEEE 802.3 af/at PoE PD Interface Controller

Part Number	Function	Package	Integrated FET	Max Power	VIN Range	AMPS Function	OCP	OVP
SY5601AFCP	af/at Interface	SO8E	YES	<25W	POE	YES	YES	NO

Isolated DC-DC Flyback Controller

Part Number	Function	Package	Integrated FET	Max Power	VIN Range	Max Frequency	OCP	OVP
SY5609QYQ	PSR/SSR Flyback	QFN4X4-20L	NO	<60W	100V	500kHz	YES	YES

IEEE 802.3 af PoE PD Interface with High Frequency Flyback Converter

Part Number	Function	FSW_MAX	Package	Integrated FETs	Max Power	VIN Range	Isolation	Opto-Coupler	OCP	OVP	AMPS Function
SY56815ATQQ	POE PD+PSR Flyback converter	600kHz	QFN4x5-28	YES	<13W	POE	YES	NO	YES	YES	YES
SY56816XTQ	AT POE PD+PSR/SSR Flyback converter	500kHz	QFN4X6-38	YES	<25W	POE	YES	NO	YES	YES	YES

Isolated DC-DC Flyback Converter

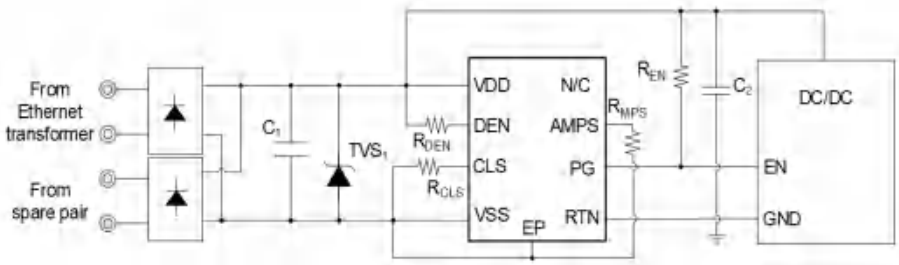
Part Number	Function	FSW_MAX	Package	Integrated FETs	Max Power	V_{IN} Range	Isolation	Opto-Coupler	OCP Protection	OVP Protection	Soft Start	No load loss
SY6174FAC	PSR Flyback	120kHz	SO8	200V	8W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW
SY6177FAC	PSR Flyback	120kHz	SO8	200V	12W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW
SY50833AFAC	PSR Flyback	300kHz	SO8	200V	12W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW

Back

SY5601AFCP - IEEE 802.3 af/at PoE-Compliant Powered Device (PD) Controller

Features

- Fully Compatible with 802.3af/at Specifications
- 100V, 0.45Ω Integrated PASS Switch
- 900mA Normal Operation Current Limit
- 100mA Inrush Current Limit
- Auto-Maintain Power Signature
- Open Drain Power Good Outpu
- SO8E Package



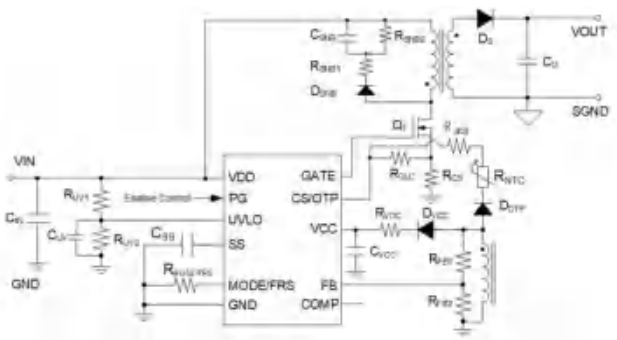
Applications

- VoIP Telephones
- Network Cards
- Security Camera Systems
- Safety Backup Power
- Remote Internet Power

SY5609QYQ- 100V High Efficiency PSR/SSR Flyback Controller

Features

- Integrated 100V HV Start-up circuit
- Flexible Topology:
  - Primary-Side Regulated (PSR) Flyback (250kHz/400kHz Selectable)
  - Secondary-Side Regulated (SSR) Flyback (Programmable Frequency)
- Precision Voltage Reference
- Output Diode Compensation in PSR Mode
- Source/Sink=0.5A/0.9A GATE Drivers
- Programmable Soft-start
- Programmable Line Under Voltage Lockout (UVLO) with Adjustable Hysteresis
- External Programmable Thermal Shutdown
- OLP compensation for wide-input range
- Cycle-by-Cycle Current Sense Limit
- Frequency Modulation for EMI reduction
- Hiccup Protection for OLP, SCP, OVP and Thermal Shutdown



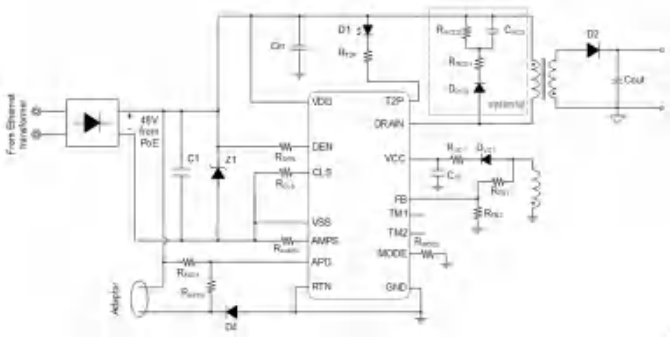
Applications

- Telecom Systems Isolated Power Supplies
- Industrial Isolated Power Supplies
- PoE (Power over Ethernet)/PD(Powered Device)

Back

Features

- Supports the IEEE 802.3 af/at Standard
- 100V, 0.45Ω Hot-swap Switch
- Adaptor ORing Support
- Power up to 13W(Input) PDs
- Primary Side Control and Internal Current Sense to Minimize Components Number
- QR-mode Operation and PWM/PFM Control for High Efficiency
- Integrate 180V,0.65Ω MOSFET for Converter
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×5-28



Applications

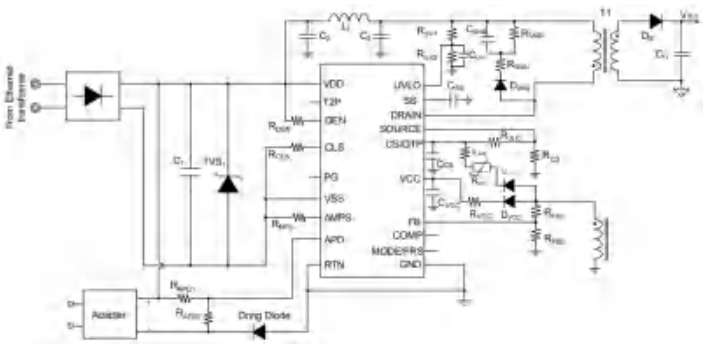
- IEEE 802.3af/at Complaint Devices
- Video and VoIP Telephones
- RFID Readers
- Multi-band Access Points
- Security Cameras

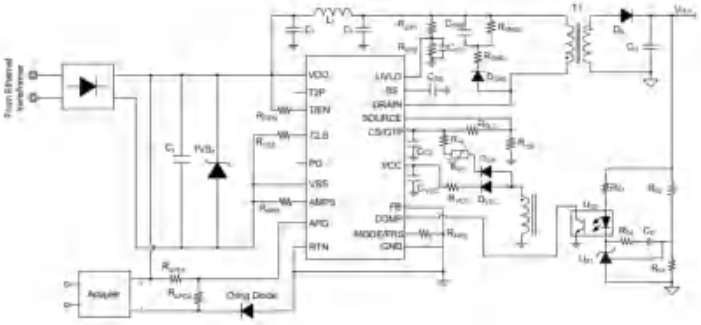
Back

SY56816XTQ- IEEE 802.3af/at Compliant PoE PD Interface with High Efficiency PSR/SSR Flyback Converter

Features

- Fully Compatible with 802.3af/at Specifications
- 100V 0.45Ω PD Integrated Pass Switch
- 30W maximum power
- 100mA PD Inrush Current Limit
- 900mA PD Normal Operation Current Limit
- Auxiliary Adaptor ORing Support
- Flexible Topology:
  - ➢ Primary-Side Regulated (PSR) Flyback (250kHz/400kHz Selectable)
  - ➢ Secondary-Side Regulated (SSR) Flyback (Programmable Frequency)
- Integrated with 150V 70mΩ Power MOSFET
- Output Diode Compensation in PSR Mode
- Cycle-by-Cycle Current Sense Limit
- Precision Voltage Reference
- Frequency Modulation for EMI reduction
- Programmable Soft-start
- OLP Compensation for Wide-input Range
- Externally Programmable Thermal Shutdown
- Programmable Line Under Voltage Lockout (UVLO) with Adjustable Hysteresis
- Hiccup Protection for OLP, SCP, OVP and Thermal Shutdown





Applications

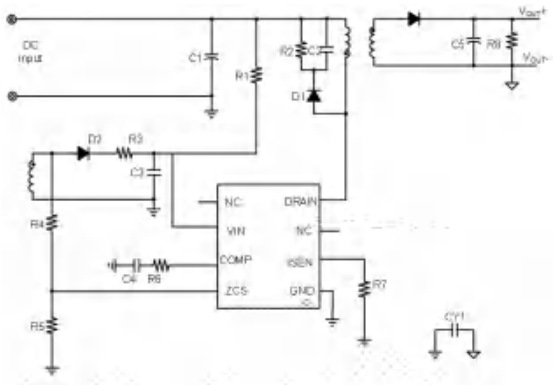
- IEEE 802.3af/at-Compliant Devices
- Security Cameras
- Video Telephones
- WLAN Access Points
- IoT Devices

Back

SY6174FAC/SY6177FAC- Flyback Regulator With Primary Side CV/CC Control for Adapters and Chargers

Features

- Integrated 200V MOSFET
- Primary side CV/CC control eliminates the opto-coupler
- Valley turn-on of the primary MOSFET to achieve low switching losses
- Low start up current: 15μA typical
- Maximum switching frequency limitation 120kHz
- Compact package: SO8



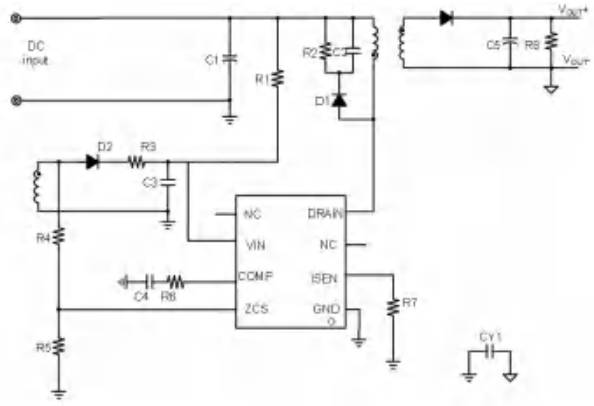
Applications

- Telecom Adapters
- Battery Chargers

SY50833AFAC - Flyback Converter With Primary Side CV/CC Control For Telecom Application

Features

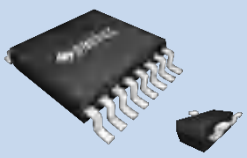
- Tight PSR CC/CV Regulation Over Entire Operating Range
- Integrated 200V MOSFET
- QR Mode and PWM/PFM Control for Higher Average Efficiency
- Maximum Switching Frequency Limitation 300kHz
- Low Start Up Current: 4μA Max
- Internal CC/CV Loop Compensation
- Reliable Protections for OVP, SCP, OTP
- Compact Package: SO8

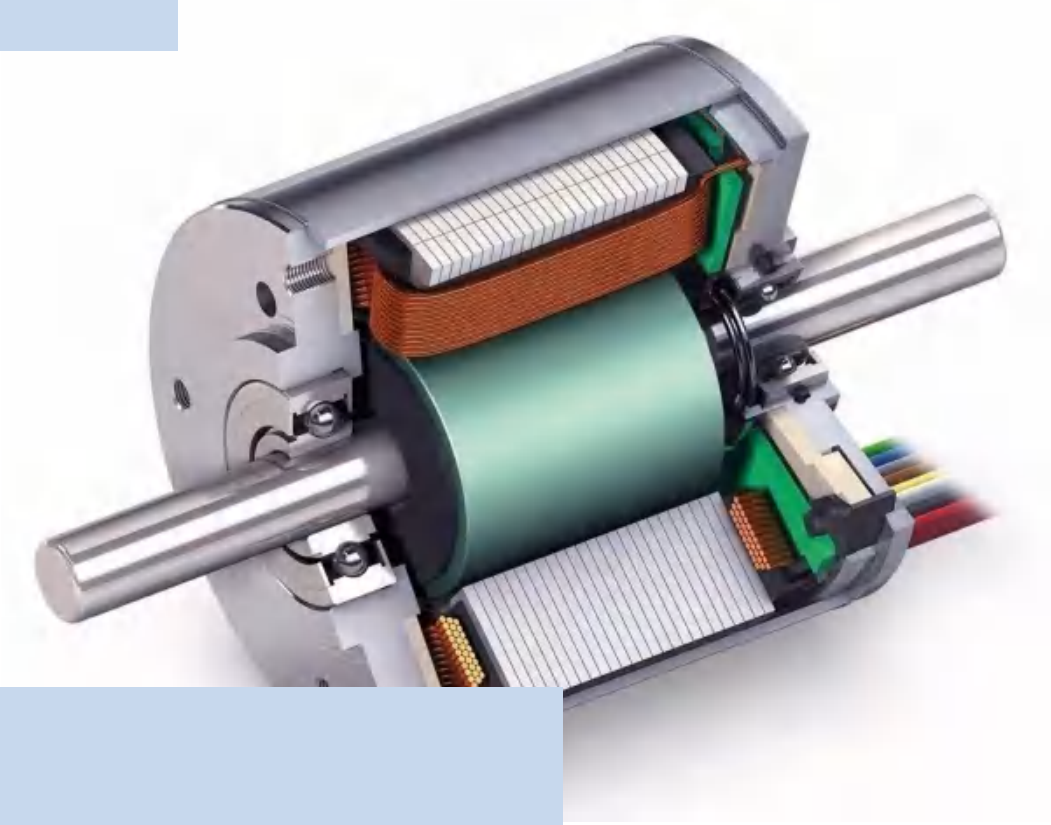


Applications

- Telecom Adapters
- POE Power Devices
- Security Cameras

Back





Motor Driver

Motor Driver

Part Number	Recommended Operating Voltage Min (V)	Max (V)	Drive Current Max (A)	MOSFET Ron HS+LS (mΩ)	Low power Sleep Mode	Package	Typical Applications
SQ55702DFD	2.5	12	1.8	<450	√	DFN2×2-8	Camera/DC Brushed Motor
SQ55703QIQ	2.5	16	1.5	<480	√	QFN4×4-16	Printer/Stepper Motor
SY6702DFC	2.5	12	1.8	<450mΩ	√	DFN2×2-8	Cameras, DSLR Lenses, Consumer Products, Robotics, Toys
SY6712ABC	2.5	12	1.8	< 450mΩ		SOT23-6	Cameras, DSLR Lenses, Consumer Products, Robotics, Toys
SY6703HFC	2.5	12	1.5	<480	√	TSSOP-16E	POS Printers, Consumer Products, Robotics, Game Machines, Toys
SY6703QIC	2.5	12	1.5	<480	√	QFN4×4-16	POS Printers, Consumer Products, Robotics, Game Machines, Toys
SY67211FHC	2.5	16	0.8	<700	√	SSOP10	Refrigerators, Stepper Motors
SY67134FCC	5	32	3.6	<500	√	SO8E	Consumer Products, Robotics, DC Brush Motor
SY67333HHC	5	32	3	< 250	√	TSSOP24E	Appliance Fan, 3-phase BLDC Fan, HVAC
SY67221HKP	2.7	18	1.5	<670	√	TSSOP16	Refrigerators, DC Brush Motors, Solenoid Valve Load
SY67626RPQ	5	26	6.5	<140	√	QFN5×5-40	3-Phase BLDC Motor Driver
SY67343HHP	5	32	3	<240	√	TSSOP24E	Fan, Pump, HVAC

Gate Driver

Part Number	Recommended Operating Voltage Min(V)	Max(V)	Maximum Driver Current	Fast Propagation Delay Time Turn On	Turn off	Bootstrap Diode Integrated	Typical Application	Package
SQ55664BSXD	8	17	4A	25ns	30ns	No	Telecom/Datacom/Half-bridge and Full-bridge Converters	DFN4×4-8
SQ37509VAQ	7.5	150	3A	28ns	25ns	No	Renewable Energy Designs	QFN5×5-24
SQ33080FAP	4.5	26	5A/5A	13ns	13ns	No	Telecom/EV Chargers Solar Inverters/Server	SOP8
SQ33080ACBP	4.5	26	5A/5A	13ns	13ns	No	Telecom/EV Chargers Solar Inverters/Server	MSOP8E
SQ33080BDAD	4.5	26	5A/5A	13ns	13ns	No	Telecom/EV Chargers Solar Inverters/Server	DFN3×3-8
SQ55800AHWP	Pri: 3 Sec: 9.2	Pri: 18 Sec: 25	5A/8A	32ns	32ns	No	EV Chargers Server Power Supplies Solar Inverters	SOP14W

Back

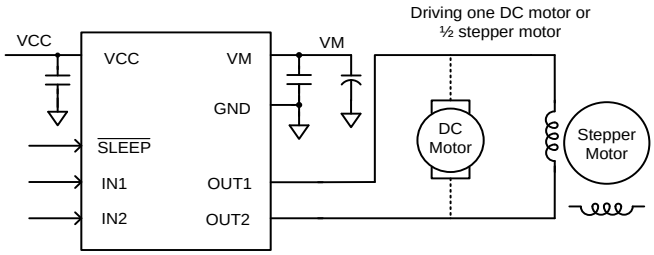
SQ55702DFD - High Efficiency Single H-Bridge Motor Driver IC

Features

- H-bridge Motor Driver
  - ➢ Drives a Brush DC Motor or One Winding of a Stepper Motor or Other Loads
- Low MOSFET On-resistance
- 1.8A Maximum Drive Current
- Power Supply Voltage Range from 2.5V to 16V
- Low Power Sleep Mode
- Internal Over Current Protection, Short Circuit Protection, Under Voltage Lockout and Thermal Shutdown
- Compact Package: DFN2×2-8

Applications

- Consumer Products
- Toys
- IPC IR CUT Driver



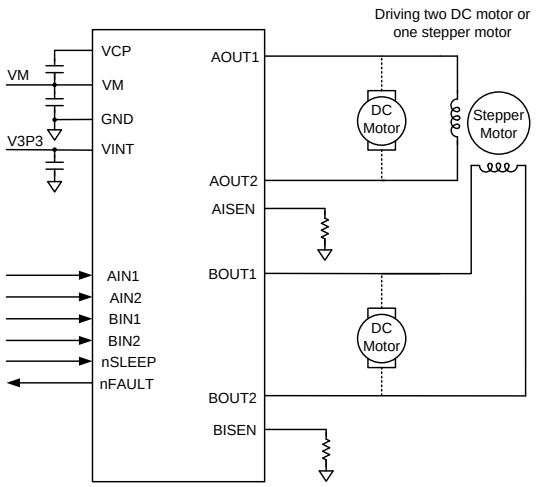
SQ55703QIQ - High Efficiency Dual H-Bridge Motor Driver IC

Features

- Dual H-bridge Motor Driver
- Maximum Drive Current of 1.5A RMS Current for Each H-bridge
- Power Supply Voltage Range from 2.5V to 16V
- PWM Winding Current Regulation/Limit
- Internal OCP/UVLO and Thermal Shutdown
- Compact Packages: QFN4×4-16

Applications

- POS Printers
- Video Security Cameras
- Toys
- Robotics
- Game Machines
- Office Automation Machines

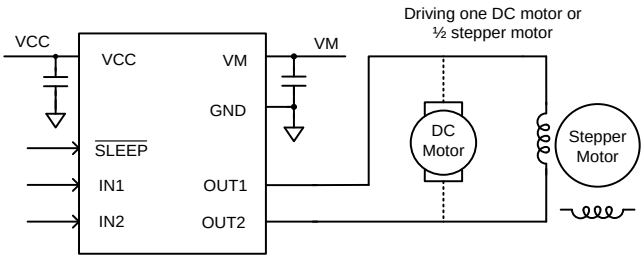


Back

SY6702DFC - Low Voltage H-Bridge IC

Features

- H-bridge motor driver
  - ➢ Drives a brush DC motor or one winding of a stepper motor or other loads
  - ➢ Low MOSFET on-resistance: HS + LS < 380mΩ
- 1.8A maximum drive current
- Power supply voltage range from 2.5V to 16V
- PWM (IN/IN) interface
- Low power sleep mode with 120nA maximum Combined supply current
- Low power with less than 120μA supply current
- Internal over current protection, short circuit protection, under voltage lockout and thermal shutdown
- Compact package: DFN2x2-8



Applications

- Cameras
- DSLR Lenses
- Consumer Products
- Toys
- Robotics
- Medical Devices

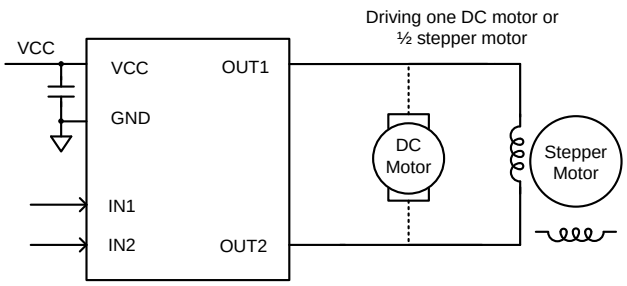
SY6712ABC - Low Voltage H-Bridge IC

Features

- H-bridge motor driver
  - ➢ Drives a brush DC motor or one winding of a stepper motor or other loads
  - ➢ Low MOSFET on-resistance: HS + LS < 380mΩ
- 1.8A maximum drive current
- Power supply voltage range from 2.5V to 16V
- PWM (IN/IN) interface
- Low power with less than 160μA supply current
- Internal over current protection, short circuit protection, under voltage lockout and over temperature protection
- Internal charge pump with capacitor inside
- Compact package: SOT23-6

Applications

- Cameras
- DSLR Lenses
- Consumer Products
- Toys
- Robotics
- Medical Devices



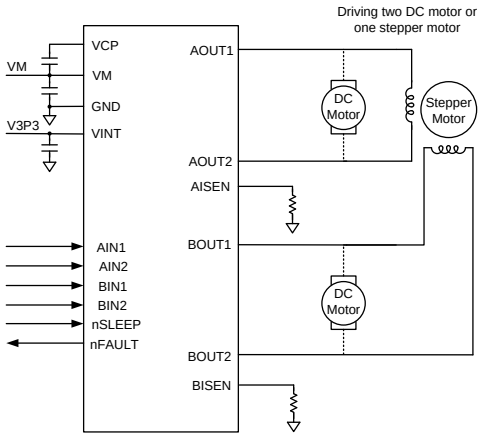
Back

Features

- Dual H-bridge Motor Driver
- Maximum Drive Current of 1.5A RMS Current for Each H-bridge
- Power Supply Voltage Range from 2.5V to 16V
- PWM (IN/IN) Interface
- PWM Winding Current Regulation/Limit
- Internal OCP/SCP/UVL and thermal shutdown
- Multiple Packages Choice: TSSOP-16E/QFN4×4-16

Applications

- POS Printers
- DSLR Lenses
- Video Security Cameras
- Toys
- Robotics
- Game Machines
- Office Automation Machines

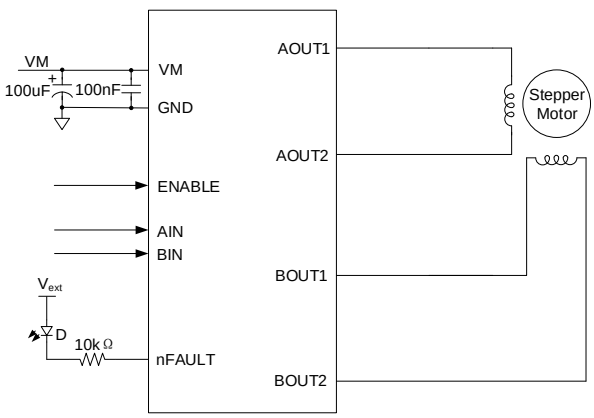


Features

- Power Supply Voltage Range: 2.5V to 16V
- Maximum Drive Current: 800mA RMS Current for Each H-Bridge
- H-Bridge Motor Driver
- Internal Logic Control
- Low-Power Standby Mode
- Reliable Built-In Protections:
  - Thermal Shutdown
  - Over-Current Protection
  - Under-Voltage Lockout
- SSOP10 Package

Applications

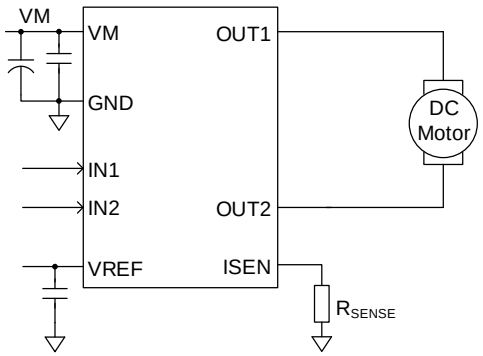
- Automation
- Stepper Motor Controllers



Back

Features

- Power Supply Voltage Range: 5V to 40V
- Maximum Drive Current: 3.6A
- H-Bridge Motor Driver
- PWM Interface
- Low Power Standby Mode with Less than 15μA Supply Current
- Automatic Fault Recovery
- Synchronous Rectification
- Reliable Built-in Protections:
  - Thermal Shutdown
  - Over-Current Protection
  - Under-Voltage Lockout
- SO8E Package



Applications

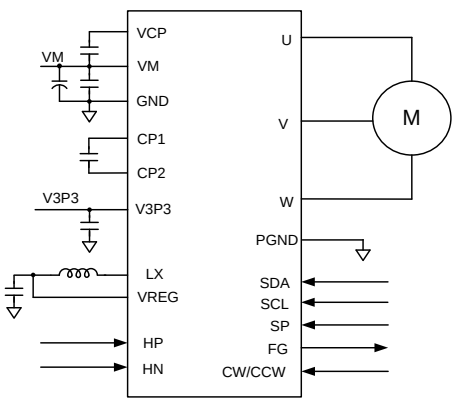
- Consumer Products
- Robotics

SY67333HHC

- Three Phase Sensorless Sine Wave Motor Driver with Integrated Power MOSFETs

Features

- Power Supply Voltage Range from 5V to 40V
- Integrated Three Half-H-Bridge Motor Driver
  - Low MOSFET on-Resistance: HS + LS < 250mΩ
- Maximum Drive Current of 2A RMS, 3A Peak Current
- Sensorless or Single Hall Sensor/Element Control
- Sine Wave Driver
- Integrated 5V or 3.3V Buck Regulator
- I²C Interface
- Speed Setting: PWM/ Analog/I²C
- Forward/Reverse Control
- Sleep Mode
- Over Current Protection
- Motor Lock Protection
- Under Voltage Protection
- Thermal Shutdown
- TSSOP24E Package



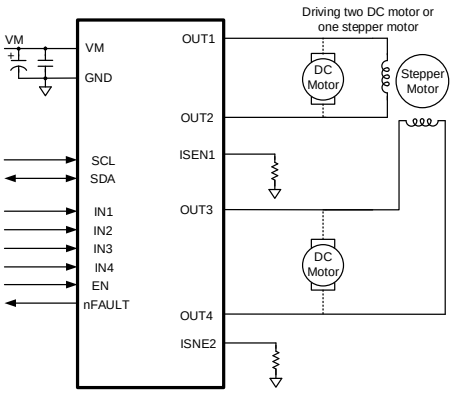
Applications

- Appliance Fan
- HVAC

Back

Features

- Power Supply Voltage Range from 2.7V to 18V
- Different Operation Mode
  - Two H-bridge Operation with Four INx Input
  - Two H-bridge Operation with Two INx Input
  - One H-bridge Operation with Two INx Input, Parallel Operation
  - Four Half-H-bridge Operation with Four INx Input
- Maximum Drive Current of 1.5A RMS Current for Each H-bridge@T_A=25°C
- Internal Integrated Open Circuit Detection, Over Current Protection, Short Circuit Protection, Under Voltage Lockout and Thermal Shutdown
- Low-power Sleep Mode
- Fault Indication
- TSSOP16 Package



Applications

- Refrigerators
- DC Brush Motors
- Solenoid Valve Load

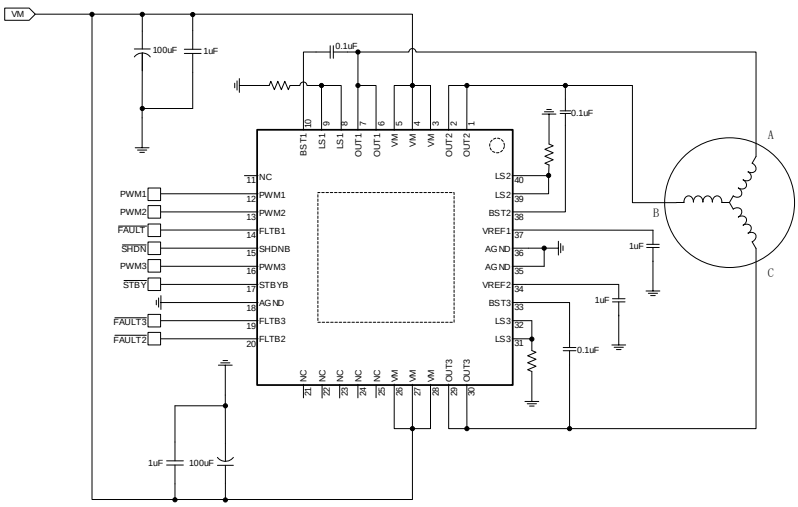
SY67626RPQ - 26V 6.5A Three-phase BLDC Motor Driver

Features

- Power Supply Voltage Range from 5V to 26V
- Integrated Three Half-Bridges Motor Driver
- Maximum 6.5A Peak Current
- Shutdown Mode
- Standby Mode
- Over Current Protection
- Under Voltage Protection
- Short Circuit Protection
- Thermal Shutdown
- Fault Output

Applications

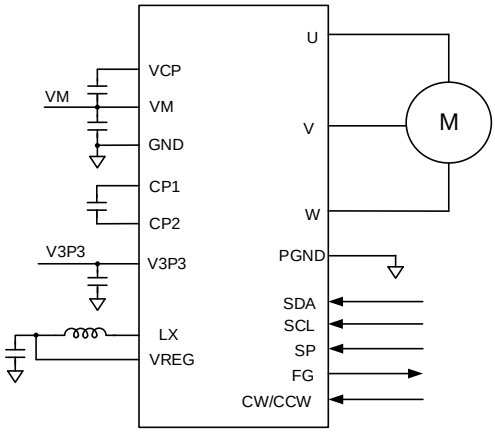
- 3-Phase BLDC Motor Driver



Back

Features

- Power Supply Voltage Range from 5V to 40V
- Maximum Drive Current of 2A RMS, 3A Peak Current
- Sine Wave Driver
- Integrated 5V or 3.3V Buck Regulator
- I^2C Interface
- Speed Setting: PWM/ Analog/I^2C
- Forward/Reverse Control
- Sleep Mode
- Over Current Protection
- Motor Lock Protection
- Under Voltage Protection
- Thermal Shutdown
- TSSOP24E Package



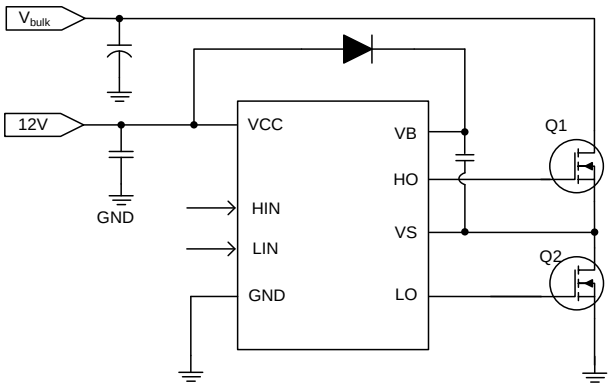
Applications

- Appliance Fan
- HVAC

Back

Features

- High Voltage Range up to 120 V
- 4A Sink and 4A Source Current
- VCC Operation Range from 8 V to 17 V
- CMOS/TTL Compatible
- 7.2ns Rise and 5.5ns Fall Time with 1000pF Load
- Fast Propagation Delay Time
- 5ns Delay Matching
- DFN4×4-8 package
- Industrial Standard



Applications

- Telecom, Datacom
- Half-bridge and Full-bridge Converters

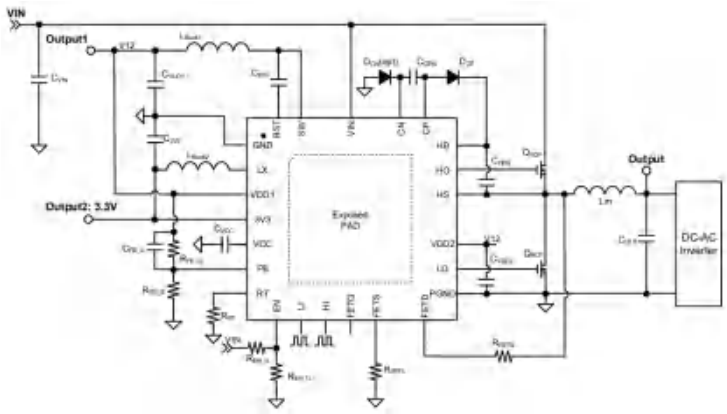
Back

Features

- Wide Input Voltage Range: 7.5V-150V
- Dual Output Current Capability: VDD1 Buck1: Continuous 200mA @VDD1=12.5V 3V3 Buck2: Continuous 400mA / Pulsed 800mA
- Constant On-Time Control
- Switching Frequency VDD1 Buck1: Programmable 350 kHz~650 kHz 3V3 Buck2: Fixed 1MHz
- ±2% 3.3V Output Accuracy Over -40℃ to +125℃ Temperature Range
- Internal Soft-Start Limits Inrush Current
- High Source/Sink Current: 3A/3A
- CMOS/TTL Compatible Input Versions
- 5.7ns Rise and 4ns Fall Time with 1000pF
- Fast Propagation Delay Times
- 5ns Delay Matching
- Charge Pump Current capability: ≥25mA
- Compact package: QFN5x5-24

Applications

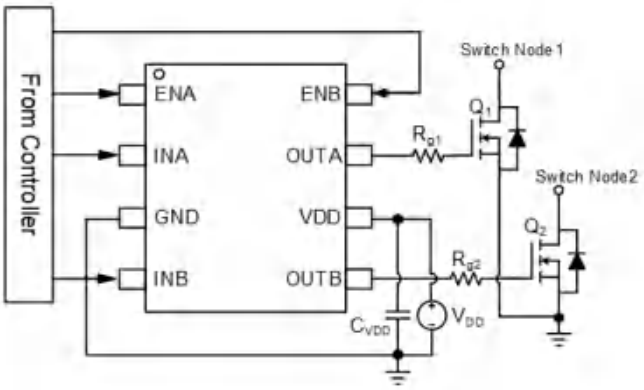
- Renewable Energy Designs



Back

Features

- Two Independent Gate-Driver Channels
- High-Current Drive Capability of ±5A
- -10V Handling Capability at Inputs
- Independent Enable Functions for Each Driver
- Input Logic Levels Independent of Supply
- Input Voltage Compatible with TTL and CMOS
- Hysteretic-logic Threshold for High Noise Immunity
- Power Supply Voltage Range from 4.5V to 26V
- Fast Rise and Fall Times
- Fast Propagation Delay Time
- 1ns(typical) Delay Matching between Two Channels
- Two Outputs can be Paralleled for Higher Drive
- Current
- Outputs Stay Low when Inputs Floating
- Operating Temperature Range: –40°C to +125°C
- Package: SQ33080: SO8
  SQ33080A: MSOP8E
  SQ33080B: DFN3*3-8



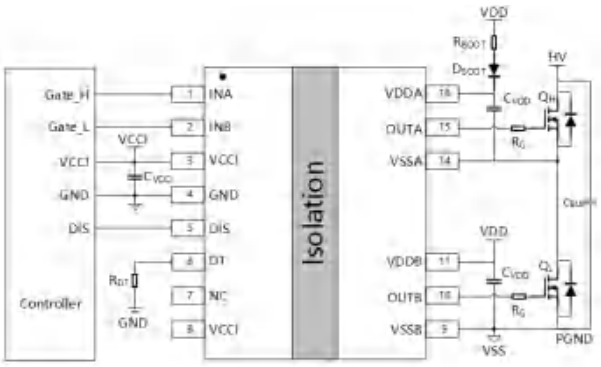
Applications

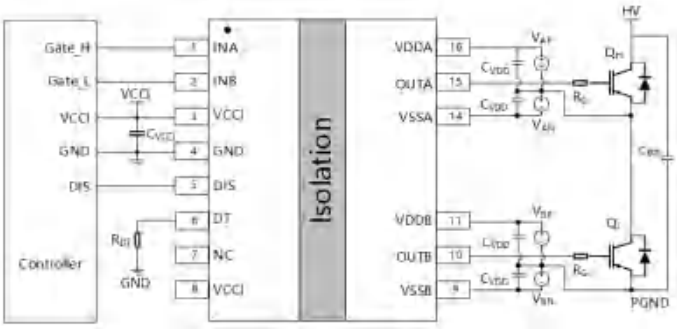
- DC/DC Converters
- Synchronous rectifiers
- Server Power Supplies
- Motor Drivers
- Solar Inverters

Back

Features

- Insulation voltage:
  - ➢ 5700Vrms input-to-output Per UL1577
  - ➢ ±1850V channel-to-channel
- CMTI Higher Than ±150V/ns
- Switching Parameters:
- 32ns Typical Propagation Delay
- 10ns Minimum Pulse Width
- 5ns Maximum Delay Matching
- 6ns Maximum Pulse-Width Distortion
- 5A Peak Source, 8A Peak Sink Output
- 3V to 18V Input Power Supply Range
- Up to 25V Output Power Supply
- Programmable Dead Time
- Isolation Barrier Life >40 Years
- Operating Temperature Range: –40°C to +125°C
- Package: SOP14W

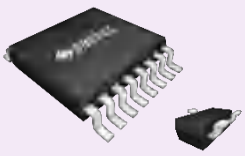




Applications

- Isolated AC/DC and DC/DC Converters
- EV Chargers
- Server Power Supplies
- Motor Drivers
- Solar Inverters
- UPS and Battery Chargers

Back









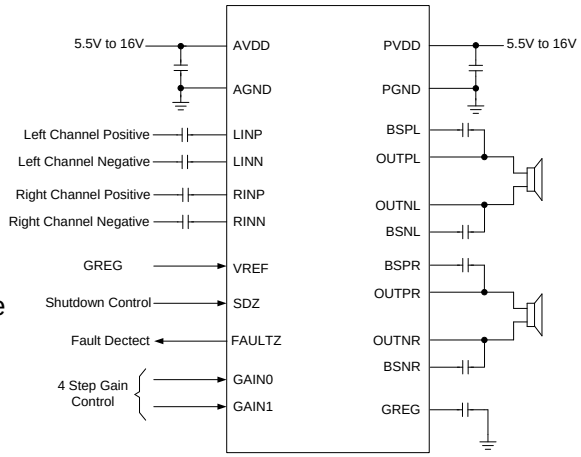
Signal Chain

Part Number	Input	Ch(#)	Vs_min(V)	Vs_max(V)	Load_min (Ω)	Po(W/Ch)	THD+N(%) @ 1W	SNR(dB)	Features	Package
SY6014QCC	Analog	2	5.5	16	6	7	0.05	100.5	Filter-less	QFN4×4-24
SY6014AQCC	Analog	2	5.5	12	6	4	0.05	100.5	Filter-less	QFN4×4-24
SY6018QEC	Analog	2	6	26	3.2	30	0.03	105.5	AM Avoidance	QFN5×5-32
SY6018BQEC	Analog	1	5.6	26	2.5	60	0.028	106	AM Avoidance	QFN5×5-32
SY6028QEC	Analog	2	5.6	16	3.2	20	0.026	104.1	AM Avoidance	QFN5×5-32
SY6045AQEC	Digital	2	4.5	28	4	20	0.025	101	3.3V/1.8V I/F, 3 Band+ Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	QFN5×5-32
SY6045BQHC	Digital	2	4.5	28	4	20	0.041	101	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	QFN6×6-40
SY6045SGAC	Digital	2	4.5	28	4	30	0.026	101.3	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7×7-48
SY6045SQHC	Digital	2	4.5	28	4	30	0.026	101.3	3 Band+ Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	QFN6×6-40
SY6065SGAC	Digital	2	4.5	28	4	30	0.026	101.3	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT, Capless Headphone Driver	TQFP7×7-48
SY6075DGAC	Digital	2	4.5	28	4	20	0.055	100.7	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7x7-48
SY60050GAF	Digital	2	4.5	28	4	20	0.055	100.7	3 Band + Post band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7x7-48
SY60020QHQ	Digital	2	4.5	28	4	20	0.041	101	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT, 4 I2C Address	QFN6×6-40

Back

Features

- 2×7W into 8Ω BTL Loads @1% THD+N from a 12V Supply
- 2×4W into 8Ω BTL Loads @10% THD+N from an 8V Supply
- 2×2.3W into 8Ω BTL Loads @10% THD+N from a 6V Supply
- Operates from 5.5V to 16V
- Filterless/Filter Operation
- Spread-Spectrum Modulation for Good EMI Performance
- High PSRR
- High Efficiency Class-D Operation Eliminates Need for Heat Sinks
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Internal Oscillator (No External Components Required)
- Thermal and Short-Circuit Protection with Auto Recovery
- Comprehensive Click and Pop Suppression
- Space-saving Surface Mount QFN4×4-24 Package



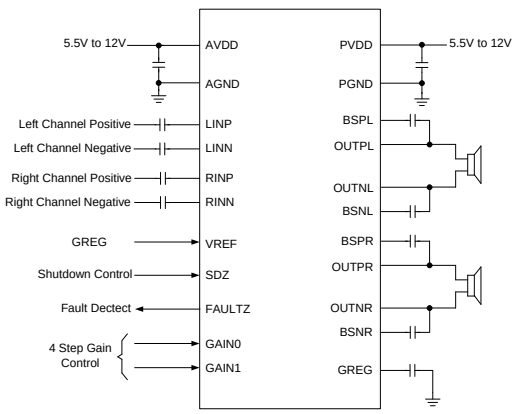
Applications

- Flat Panel Display TVs, DLP○RTVs, CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- DVD Players, Game Machines

SY6014AQCC - Analog Class-D Audio IC with EMI Suppression

Features

- 2×3.8W into 4Ω BTL Loads @1% THD+N from a 7V Supply
- 2×4.7W into 4Ω BTL Loads @10% THD+N from a 7V Supply
- 2×5.8W into 4Ω BTL Loads @1% THD+N from a 9V Supply
- 2×6W into 8Ω BTL Loads @1% THD+N from a 12V Supply
- 2×4W into 8Ω BTL Loads @10% THD+N from an 8V Supply
- 2×2.3W into 8Ω BTL Loads @10% THD+N from a 6V Supply
- Operates from 5.5V to 12V
- Filterless/Filter Operation
- Spread-Spectrum Modulation for Good EMI Performance
- High PSRR
- High Efficiency Class-D Operation Eliminates Need for Heat Sinks
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Internal Oscillator (No External Components Required)
- Thermal and Short-Circuit Protection with Auto Recovery
- Comprehensive Click and Pop Suppression
- Space-saving Surface Mount QFN4×4-24 Package



Applications

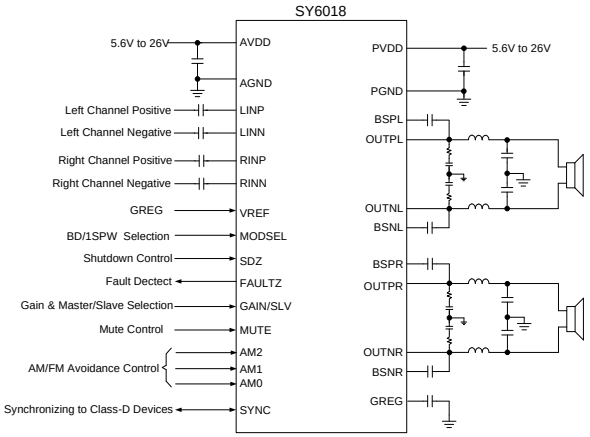
- Flat Panel Display TVs, DLP○RTVs, CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- DVD Players, Game Machines

Back

SY6018QEC - Analog Class-D Audio IC

Features

- 2×30W into 8Ω BTL Loads @ 10% THD+N from a 24V Supply
- 60W into a 4Ω PBTL Load @ 10% THD+N from a 24V Supply
- Wide Voltage Range: 5.6V to 26V
- Filter-free Operation
- Differential and Single-ended Inputs
- Internal Feedback Control with High PSRR
- High Efficiency Class-D Operation Eliminates Need for Heat Sinks
- AM/AF Avoidance
- Master and Slave Synchronization
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Selectable BD Mode and 1SPW Mode Modulation
- Integrated Protection Circuits Including Over Voltage, Under Voltage, Over Temperature, DC Error, and Short Circuit
- Comprehensive Click and Pop Suppression
- Space-saving Surface Mount 32Pin QFN 5mm×5mm Package



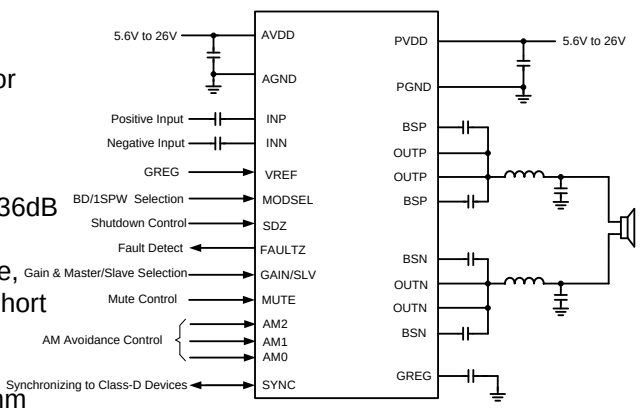
Applications

- Flat Panel Display TVs
- DLP® TVs
- CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

SY6018BQEC - Analog Class-D Audio IC

Features

- 60W into a 4Ω Load @ 10% THD+N from a 24V Supply
- Wide Supply Voltage Range from 5.6V to 26 V
- Differential and Single-ended Inputs
- Internal Feedback Control with High PSRR
- High Efficient Class-D Operation Eliminates Need for Heat Sinks
- AM Avoidance
- Master/Slave Mode Synchronization
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Selectable BD Mode and 1SPW Mode Modulation
- Integrated Protection Circuits Including Over Voltage, Under Voltage, Over Temperature, DC Error, and Short Circuit
- Comprehensive Click and Pop Suppression
- Space-Saving Surface Mount 32-Pin QFN 5mmx5mm Package



Applications

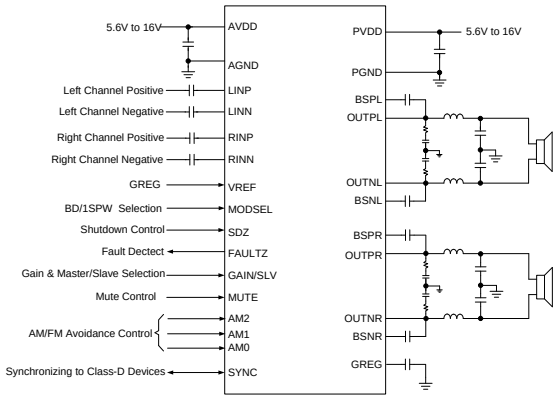
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

Back

SY6028QEC - Analog Class-D Audio IC

Features

- 2×14W into 8Ω BTL Loads @ <1% THD+N from a 16V Supply
- 2×20W into 4Ω BTL Loads @ <1% THD+N from a 16V Supply
- Wide Voltage Range: 5.6V to 16V
- Filter-free Operation
- Differential and Single-ended Inputs
- Internal Feedback Control with High PSRR
- High Efficiency Class-D Operation Eliminates Need for Heat Sinks
- AM/AF Avoidance
- Master and Slave Synchronization
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Selectable BD Mode and 1SPW Mode Modulation
- Integrated Protection Circuits Including Under Voltage, Over Temperature, DC Error, and Short Circuit
- Comprehensive Click and Pop Suppression
- Space-saving Surface Mount 32Pin QFN 5mm×5mm Package



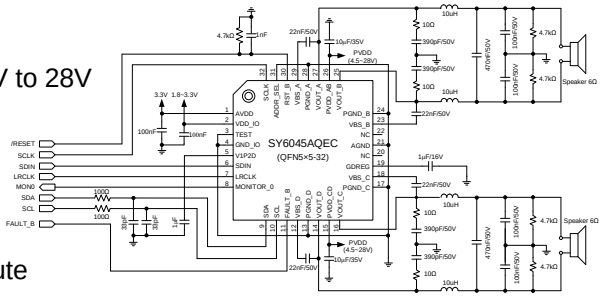
Applications

- Flat Panel Display TVs
- DLP® TVs
- CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

SY6045AQEC - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or Single-Filter PBTL Mode Support 4.5V to 28V PVDD Range
- 1.8V to 3.3V Digital IO Voltage Range
- 32bit Fixed-point DSP
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- I2C Address Selection Pin
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs each channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control plus a Post Dynamic Range Control
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection



Applications

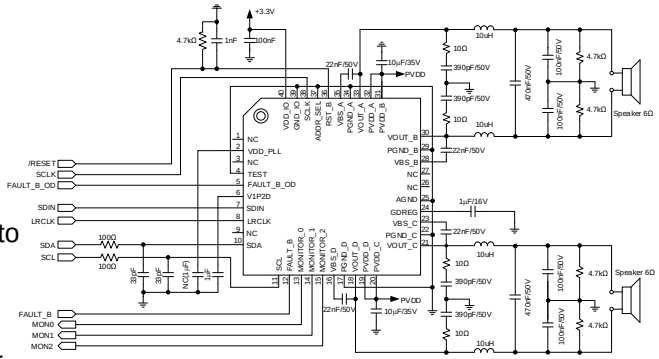
- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

Back

SY6045BQHC - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or PBTL Mode
- Support 4.5V to 28V PVDD Range
- 32bit Fixed-point DSP
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- I2C Address Selection Pin
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs each channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control plus a Post Dynamic Range Control
- Four Types of Digital Filters with Different Roll-off
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection



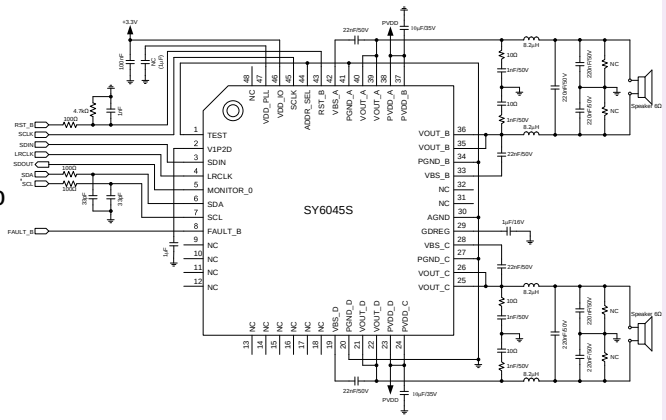
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY6045SGAC - High Performance, High Fidelity 30W Digital Audio-Power Amplifier

Features

- 2CH Stereo(30W×2BTL)
- 2.0 BTL Mode or PBTL Mode Support
- 4.5V to 28V PVDD Range
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- 4 I2C Slave Addresses
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S Output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control Plus a Post Dynamic Range Control
- Loudness Control
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over Current, Short Circuit, Short Load, Open Load Protections and EQ/DRC Coefficients Checksum
- Support Automatic Audio Sample Rate Detection
- Surface Mount, TQFP 48-Pin, 7mm×7mm



Applications

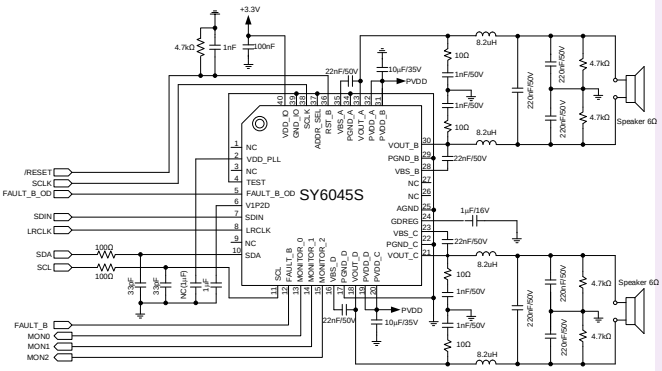
- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

Back

SY6045SQHC - High Performance, High Fidelity 30W Digital Audio-Power Amplifier

Features

- 2CH Stereo(30W×2BTL)
- 2.0 BTL Mode or Single-filter PBTL Mode Support
- 4.5V to 28V PVDD Range
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- I2C Address Selection Pin
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S Output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Plus a Post Dynamic Range Control
- Loudness Control
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over Current, Short Circuit, Short Load, Open Load Protections and EQ/DRC Coefficients Checksum
- Support Automatic Audio Sample Rate Detection
- Surface Mount, QFN 40-Pin, 6mm×6mm



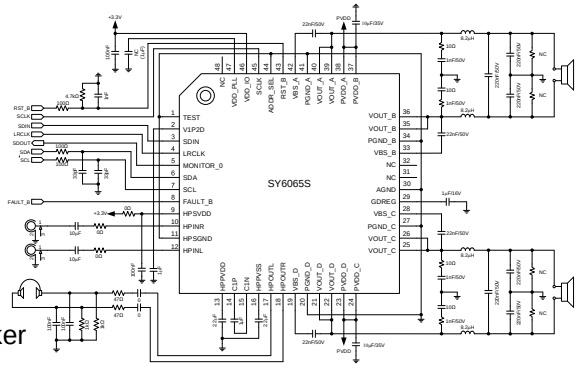
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY6065SGAC - High Performance, High Fidelity 30W Digital Audio-Power Amplifier

Features

- 2CH Stereo(30W×2BTL)
- 2.0 BTL Mode or PBTL Mode Support
- 4.5V to 28V PVDD Range
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- 4 I2C Slave Addresses
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S Output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control Plus a Post Dynamic Range Control
- Loudness Control
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over Current, Short Circuit, Short Load, Open Load Protections and EQ/DRC Coefficients Checksum
- Support Automatic Audio Sample Rate Detection
- Headphone Amplifier
  - ➢ No Output DC-Blocking Capacitors
  - ➢ Wide Power Supply Range: 2.1V-5V
  - ➢ 19mW/Ch Output Power into 32Ω at 5V
  - ➢ Short-Circuit and Thermal Protection and under Voltage Protection
- Surface Mount, TQFP 48-Pin, 7mm×7mm



Applications

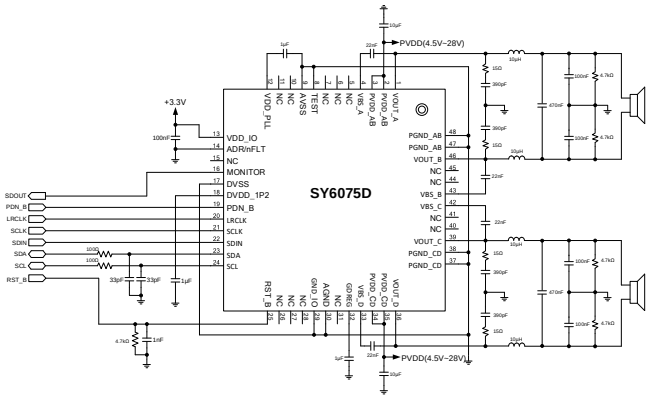
- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

Back

SY6075DGAC - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or PBTL Mode
- Support 4.5V to 28V PVDD Range
- 32bit Fixed-Point DSP
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- I2C Slave Address Selection
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control Plus A Post Dynamic Range Control
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection
- Space Saving Package: TQFP7×7-48E



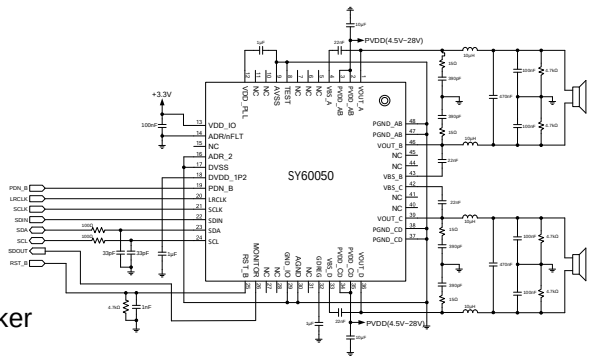
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY60050GAF - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or PBTL Mode
- Support 4.5V to 28V PVDD Range
- 32bit Fixed-Point DSP
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- 4 I2C Slave Address Selection
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control Plus a Post Dynamic Range Control
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection
- Space Saving Package: TQFP7×7-48E



Applications

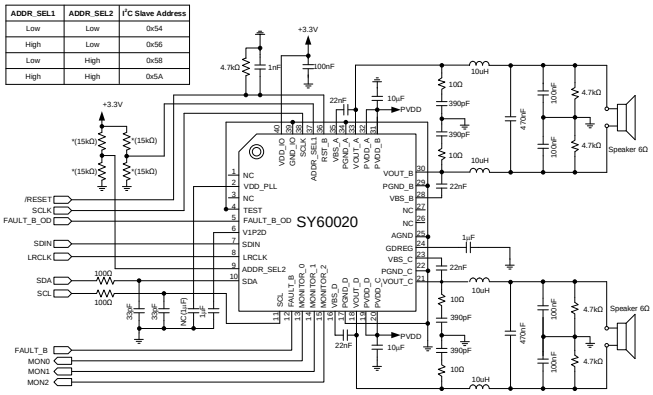
- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

Back

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or PBTL Mode
- 4.5V to 28V PVDD Range
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- 4 I2C Slave Addresses
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs each channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control plus a Post Dynamic Range Control
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection

ADDR_SEL1	ADDR_SEL2	I²C Slave Address
Low	Low	0x54
High	Low	0x56
Low	High	0x58
High	High	0x5A



Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

Back

Headphone or Line Driver

Part Number	Input	Ch(#)	Vs_min(V)	Vs_max(V)	Po(W) @ 1%THD+N	PSRR(dB)	THD+N(%)	SNR (dB)	Features	Package
SY6040QDC	Analog	2	2.2	5.5	21m	83	0.015	106	capacitor-less	QFN3×3-16

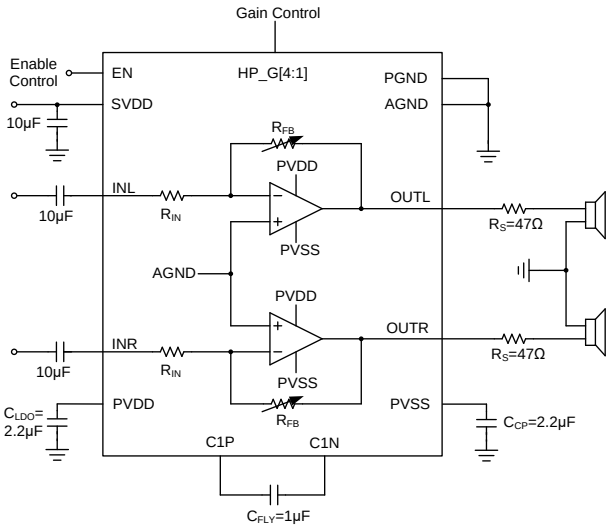
Audio Converter

Part Number	ADC Channels	DAC Channels	Digital Interface	Analog Inputs	Analog Outputs	Sampling Rate (kHz)	ADC SNR (dB)	DAC SNR (dB)	Features	Package
SQ58621QCQ	1	1	I2C,I2S	2	3	8-96	99	107	MIC Direct Path, Line Driver	QFN4x4-24

Back

Features

- 21mW/Ch Output Power into 32Ω Load at 3.3V When R_S=47Ω
- 86mW/Ch Output Power into 32Ω Load at 3.3V When R_S=0Ω
- Wide Power Supply Range: 2.2V-5.5V
- Ground Referenced Outputs Eliminate the DC Bias Voltage on the Headphone Ground Pin
- No Output DC Blocking Capacitors
- Reduced Board Area
- Reduced Component Cost
- Improved THD+N Performance
- No Degradation of the Low Frequency Response Due to the Output Capacitors
- Built in the LDO and the Charge Pump
- Short Circuit Protection, Thermal Protection and Under Voltage Protection
- Click and Pop Suppression Circuit
- Surface Mount, QFN, 16 Pin, 3mm×3mm



Applications

- Notebook Computers
- CD/MP3 Player
- Smart Phones
- Cellular Phones
- PDA

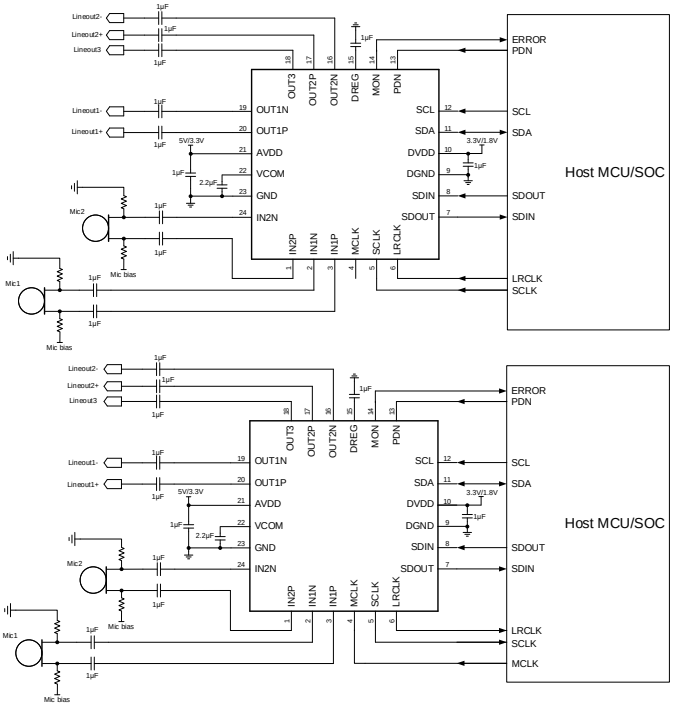
Back

Features

- Power Supplies:
  - 3.3V or 5V Analog Supply
  - 1.8V or 3.3V Digital IO Interface
- Audio DAC:
  - Digital Volume: +12 to -115dB, 0.5dB Per Step, Mute
  - Digital Filters: Sharp/Slow Roll-Off Filter
  - 2 Fully Differential Outputs and 1 Single-Ended Output
  - Differential Voltage Output: 5.8Vpp at 3.3V AVDD, 8.7Vpp at 5V AVDD
  - 107dB SNR, -83dB THD+N with Fully Differential Output
- Audio ADC:
  - 2 Fully Differential Inputs
  - Input PGA: -18 to +27dB, 3dB Per Step
  - Input Mixer
  - Digital Filters: Narrow Band Voice Filter, Wide Band Voice Filter, Full Band Voice Filter and 2 Optional Bi-Quad Filters
  - Differential Voltage Input: 4.5Vpp at 3.3V AVDD, 6.8Vpp at 5V AVDD
  - Digital Volume: +24 to -103dB, 0.5dB Per Step, Mute
  - 99dB SNR, -91dB THD+N
- Mic Direct Path Line Driver:
  - Mic Direct Path Boost Gain: 0 to +9dB, 3dB Per Step
  - 2 Fully-Differential Outputs
  - Differential Voltage Output: 5.8Vpp at 3.3V AVDD, 8.7Vpp at 5V AVDD
  - 108dB SNR, -96dB THD+N with Fully-Differential Output
- Audio Interface:
  - Supports Controller and Target Mode
  - Format: I²S, Left-/Right-Justified, TDM with 4/8/16 Slots
  - Supports Sampling Rates from 8 kHz to 96 kHz
  - Input/output Data Length: 16-bit, 20-bit, 24-bit, 32-bit
  - Slot Width: 16-bit, 24-bit, 32-bit
- I2C Control
- MSL Rating: MSL3
- Package Size: QFN4×4-24

Applications

- IP Network Camera
- Video Conference System



Back

Analog Light Sensor

Part Number	Description	IR-Cut Epoxy	V_{CC}		I_{OUT}(μA) @EV=100lux, V_{CC}=3V	Package
			Min (V)	Max (V)		
SY13103-G1	Ambient Light Sensor	/	2.5	5.5	120	Chip
SY3128AS22-J10	Ambient Light Sensor	/	2	5	101 (FT 10.1uA@10lux)	SMD2015-2L

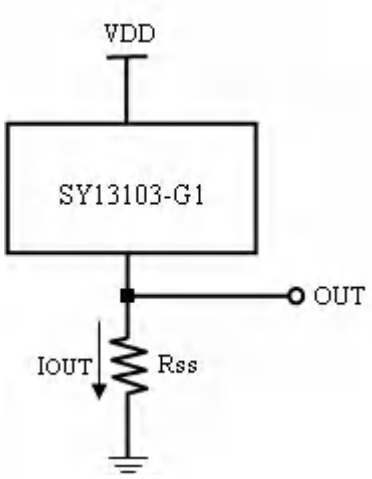
Digital Light Sensor

Part Number	Description	Bits	V_{CC}		Comm. Method	I_{DD} @ Power Down	I_{OUT}(μA) @EV=100lux, V_{CC}=3V	Finest Resolution	Gain & Tint Setting	Package
			Min(V)	Max(V)						
SQ81137AS22-J00	Ambient Light Sensor	/	2.5	3.6	I^2C	<10μA	150μA@Vcc=3.3V	0.2mlux/count	8 gain+ 6 integration time	SMD2020-6
SY3061-S1	ALS with side-look package	12	2.3	3.6	I^2C	<1.0uA	110uA	0.029 lux/count	5 gain	SMD3013-4L side-look
SY3079AS22-J01	Ambient Light Sensor	16	2.6	3.6	I^2C	<1.0μA	90μA	0.0079 lux/count	/	SMD2015-8L
SY3135AS21-J01	Ambient Light +Flicker Sensor	16	1.7	2	I^2C	<15μA	220uA@Vcc=1.8V	0.25 mlux/count	10 gain+8bits IT	SMD2010-6L
SY3135AS21-J00	Ambient Light Sensor	16	1.7	2	I^2C	<15μA	220uA@Vcc=1.8V	0.8mlux/count	9 gain+8bits IT	SMD2010-6L
SY3135CS21-J01	RGB Sensor	16	1.7	2	I^2C	<15μA	270uA@Vcc=1.8V	0.3mlux/count	11 gain+8bits IT	SMD2010-6L
SY3122-H2	Light Sensor with Frequency Output	/	2.7	3.6	/	/	/	2.76kHz/(uW/cm2)	/	DIP4646-3pin
SY3016PS32-G00	PXS	16	2.8	3.6	I^2C	<2.0μA	/	/	/	SMD2515-6L
SY3132CS42-J10	11-Channel Multi-Spectrum Sensor	16	1.7	2.0	I^2C	<20μA	450μA@Vcc=1.8V	1.3mlux/count	12 gain+ 9 integration time	SMD3120-8L

Back

Features

- Close to the human eye's response
- Good output linearity
- Guaranteed temperature performance, -40°C to 85°C
- Wide supply voltage range: 2.5V to 5.5V
- ROHS compliant

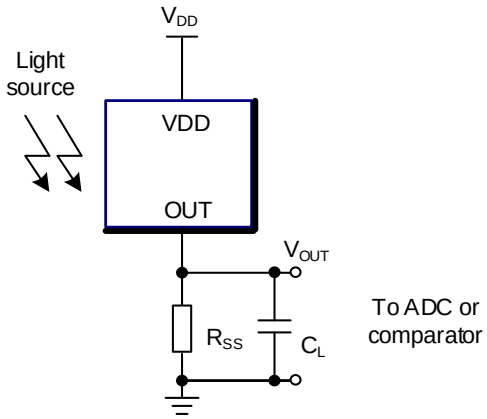


Applications

- Security lighting control
- Dawn/dusk or brightness/darkness sensing
- Detection of ambient light to control display
- backlighting
- Automatic residential and commercial lighting
- management
- Automatic contrast enhancement for electronic
- signboard
- Ambient light monitoring device for daylight and
- artificial light

Features

- Wide Supply Voltage Range: 2V to 5V
- Ultra-High Infrared Rejection
- Good Output Linearity
- Guaranteed Temperature Performance: -40°C to 85°C
- ESD Protection: ±2kV (HBM)
- Package Information:
  - Size: 2.0mm×1.5mm×0.6mm
  - Type: SMD BT with Transparent Molding Compound



Applications

- Infrared Illuminator for Security Cameras
- Dawn/Dusk or Brightness/Darkness Sensing
- Ambient Light Detection for Display Backlight Control
- Automatic Residential and Commercial Lighting Management

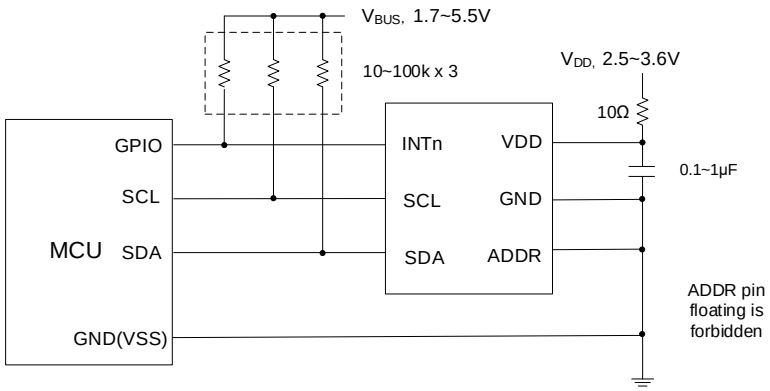
Back

Features

- Electrical Operation Performance:
  - Power Supply Voltage: 2.5V~3.6V
  - Operation Current: 150μA
  - Shutdown Current: Less Than 10μA
  - Operation Temperature: -40°C to +85°C
- Ambient Light Sensing:
  - ALS Channel with Photopic Coating and CLEAR Channel Without Coating
  - Programmable Gain Settings from 256x to 1x
  - Programmable Integration Time Settings Ranging from 25ms to 800ms
- Programmable Sleep Time Between Two Sequential ADC Cycles for Power-Saving
- High Sensitivity 0.0002 Lux/Count at IT=800ms and Gain=256x
- Measurement Range: 0.0002~107k Lux for ALS Channel
- Hardware Interrupt Pin with Programmable Configuration
- BT Substrate with Transparent Molding Compound
- Package Size: 2.0×2.0×0.6mm^3

Applications

- CMS

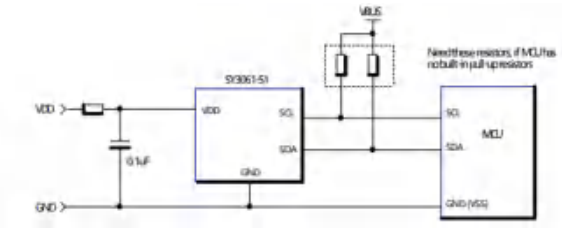


Back

SY3061-S1 - 5-range Ambient Light Sensor with Side View Package

Features

- Ambient Light Sensing
  - reading proportional to lux
  - flicker noise and IR rejection
  - spectral response matching human eye's photopic vision
  - selectable 120/240/481/963/1927 lux range
- Green Power
  - low supply current, less than 130μA
  - less than 1μA supply current when powered down
- Easy to Use
  - I2C (SMBus Compatible) interface
  - temperature compensation
- Side View Package
  - Package size:2.95mm x 1.25mm x 1.5mm
  - Can be soldered both top view and side view
- Wide Operating Voltage Range
  - 1.7V to 3.6V supply for I2C interface
  - 2.3V to 3.6V sensor power supply
- Works under All Light Sources, Including Sunlight



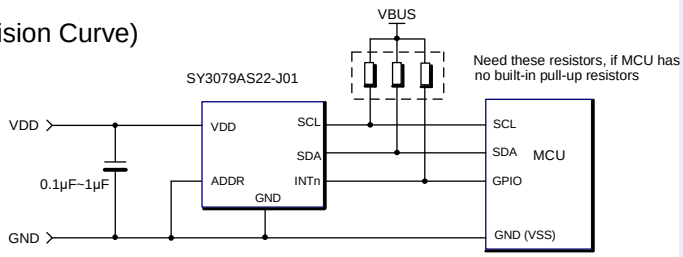
Applications

- TV Panel Control
- Accessories
- Industrial Control
- Lighting Control

SY3079AS22-J01 - 21-bit Dynamic Range True Ambient Light Sensor with Clear channel and high speed I2C interface

Features

- ALS Channel
  - Output Count Proportional to Lux
  - Indoor Light Source Flicker Noise Rejection
  - Matching Human Eye's Response (Photopic Vision Curve)
  - 6 Selectable Measurement Ranges
  - Finest Resolution: Down to 0.0079 Lux/Count
  - Maximum Detection Range 16512 Lux
- Clear Channel
  - Indoor Light Source Flicker Noise Rejection
  - 2 Selectable Measurement Ranges
- Green Power
  - Less than 110μA Supply Current
  - Less than 1μA Supply Current When Powered Down
- Easy to Use
  - SMBus Compatible I2C Interface
  - Temperature Compensation
- Wide Operating Voltage Range
  - 1.7V to 3.6V Supply for I2C Interface
  - 2.3V to 3.6V Supply for Sensor
- Wide Operating Temperature Range
  - 40°C to +85°C Ambient Temperature
- Package Information
  - Size: 2.0mm×1.5mm×0.6mm
  - Type: SMD (Surface Mount Device) BT with Transparent Molding Compound



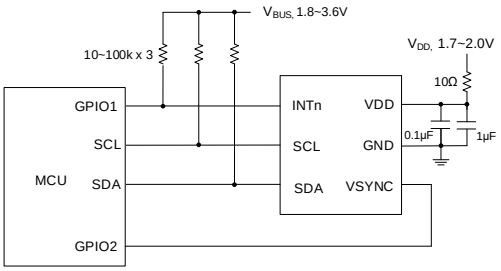
Applications

- TV Panel Control
- Smart Phone
- Accessories
- Industrial Control
- Lighting Control

Back

Features

- Electrical Operation Performance:
  - Power Supply Voltage: 1.7V - 2.0V
  - Operating Current: 220μA
  - Shutdown Current: Less Than 15μA
  - Operating Temperature: -40°C to +85°C
- Ambient Light Sensing:
  - Two Parallel 16-bit ADCs
  - Programmable Integration Time (IT) for Both Normal and Fast Operation Modes
  - Programmable Gain Settings Ranging From 1x to 512x
- Flicker Sensing:
  - Full Scale of 10,000 Counts with a 1ms Integration Time
  - 16-Bit Resolution When IT ≥6.25ms
- Programmable Integration Time Ranging from 6.25μs to 25.6ms
- Sensitivity Below 0.03 Lux/Count
- 512 Bytes FIFO, with Programmable Interrupt Threshold Levels
- Selectable FIFO Source, Allowing All ADC Data to Be Freely Directed to the FIFO
- BT Substrate with Transparent Molding Compound
- Package Size: 2.0mm×1.0mm×0.5mm



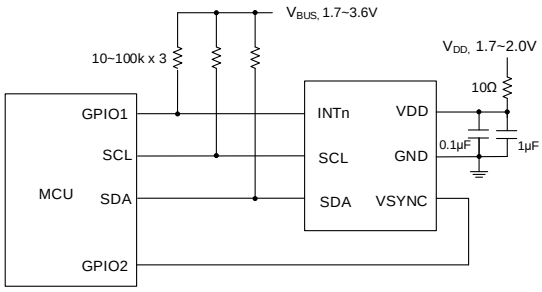
Applications

- Under OLED ALS for Cellphones and Watches
- Laptops and Notebooks
- TV panels
- Industrial Control

SY3135AS21-J00 - Ultra-High Sensitivity ALS for Under OLED Application

Features

- Electrical Operation Performance:
  - Power Supply Voltage: 1.7V - 2.0V
  - Operating Current: 220μA
  - Shutdown Current: Less Than 15μA
  - Operating Temperature: -40°C to +85°C
- Ambient Light Sensing:
  - Two Parallel 16-bit ADCs
  - Programmable Integration Time (IT) for Both Normal and Fast Operation Modes
  - Programmable Gain Settings Ranging From 1x to 256x
- 512 Bytes FIFO, with Programmable Interrupt Threshold Levels
- Selectable FIFO Sources, Allowing Selection of ADC Data to Be Written to the FIFO
- BT Substrate with Transparent Molding Compound
- Package Size: 2.0mm×1.0mm×0.35mm



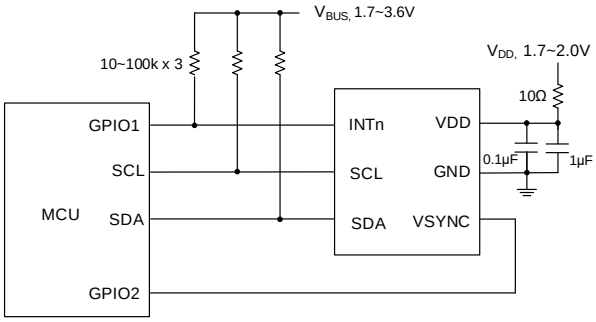
Applications

- Under-OLED ALS for Cellphones and Watches
- Laptops and Notebooks
- TV Panels
- Industrial Control

Back

Features

- Electrical Operation Performance:
  - Power Supply Voltage: 1.7V - 2.0V
  - Operating Current: 270μA
  - Shutdown Current: Less Than 15μA
  - Operating Temperature: -40°C to +85°C
- Ambient Light Sensing:
  - Three Parallel 16-bit ADCs
  - Programmable Integration Time (IT) for Both Normal and Fast Operation Modes
  - Programmable Gain Settings Ranging From 1x to 1024x
- CCT
  - Detection CCT ranging from 2500K to 10000K
- 512 Bytes FIFO, with Programmable Interrupt
- Threshold Levels
- Selectable FIFO Source, Allowing Selection of the Data to Be Written to the FIFO
- BT Substrate with Transparent Molding Compound
- Package Size: 2.0mm×1.0mm×0.5mm



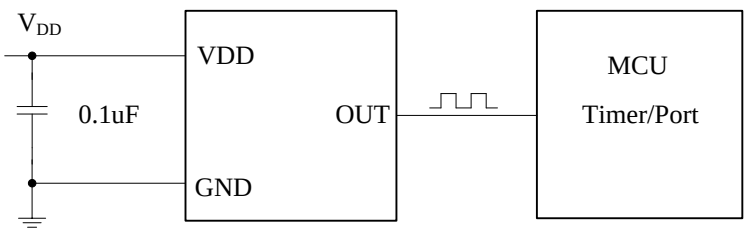
Applications

- Under-OLED Sensor for Smartphones and Watches
- Laptops and Notebooks
- TV Panel

SY3122-H2 - Light Sensor with Frequency Output

Features

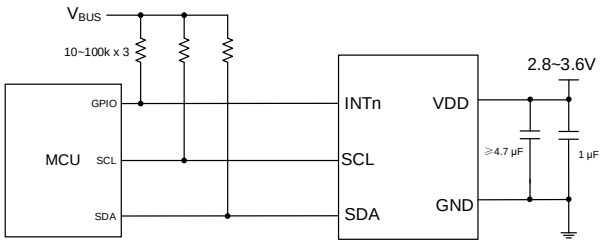
- High-resolution Conversion of Light Intensity to Frequency without External Components
- Low Dark Frequency <1Hz at 50°C
- Single-supply Operation 2.7V to 3.6V
- Interfaces Directly to a Microcontroller
- RoHS Compliant



Back

Features

- Reliable Proximity Detection between 3mm and 15cm
- 16-bit ADC with Programmable Integration Time, Gain and Sleep Time Enables High SNR Measurements and Low Power Operation.
- 940 nm VCSEL Eliminates the “Red Glow”
- Programmable VCSEL Drive Current with Built-in Temperature Compensation.
- Uses Proprietary Design Techniques and Package to Reduce Optical Crosstalk
- Input Voltage Range: 2.8V to 3.6V
- Current Consumption (Max):
  - Inactive -2μA
  - Sleep Mode -13μA
  - ADC Conversion -1.1 mA
- -30°C to +85°C Operating Temperature
- Package Information
  - Size:2.55mm×1.50mm×0.60mm
  - Type: SMD BT with Transparent Molding Compound

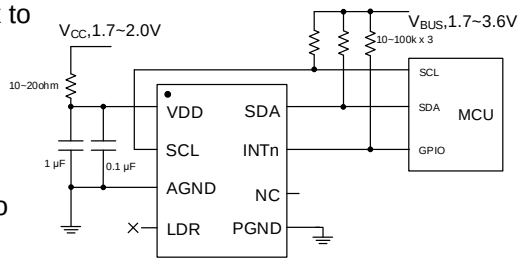


Applications

- Smart Phones
- TWS (true wireless stereo) Headphones
- Home Appliances
- Robotics

Features

- Spectral Sensing
  - 16-bit Resolution for all Channels
  - Wide Detection Range: Larger than 100k lux
  - Indoor Light Source Flicker Noise Rejection (50Hz and 60Hz)
  - Programmable Integration Time and Gain Settings from 1x to 2048x
- CCT (Correlated Color Temperature)
  - Detection CCT Range from 2000k to 13000k
- Flicker
  - 16 Bit Resolution
  - Sensitivity Less than 1lux/count, Detection Range from 1 to 10k lux
  - Sampling Rate Higher than 2kHz, can Detect Flicker from 50Hz to 400Hz
  - FIFO Depth 512 bytes
- Interrupt Source Selectable, FIFO Buffer Depth can also Generate an Interrupt
- Operation Range
  - 1.7V-2.0V
  - 490μA (typ.) for Normal Operation Mode, 5μA (typ.) Shutdown Current
  - -40°C to +85°C Operating Temperature
- Package Information
  - Size: 3.1mm×2.0mm×1.0mm



Back

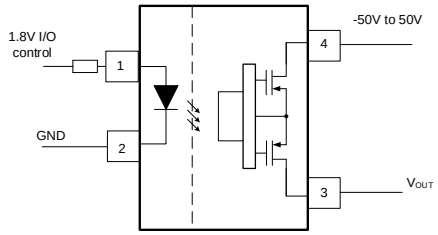
Part Number	Function	Max Terminal Voltage	Max Current Capacity	R_{ON}	C_{OFF}	Typical Applications	Package
SQ93407RL22-J00	Photo-Relay	60V	1A	0.18Ω	72pF	ATE, Testers	SMD2015-4L
SQ93409RL22-J00	Photo-Relay	100V	0.65A	0.44Ω	43pF	ATE, Testers	SMD2015-4L

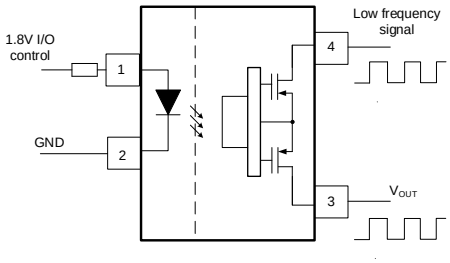
Features

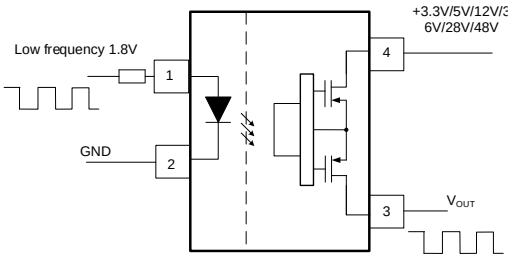
- Isolation voltage: 500Vrms
- On-state current: maximum 1A
- RON: 0.18Ω(typical)
- 1-Form-A, normally open Configuration
- Operating Temperature Range: -40°C ~110°C
- Leakage current less than 1μA under 60V load Voltage
- LED trigger current: 3mA(max)
- Compact Package: 2.0×1.45×1.20mm^3 (max 1.30mm height)

Applications

- ATE, Testers







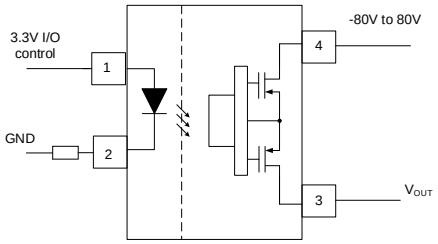
Back

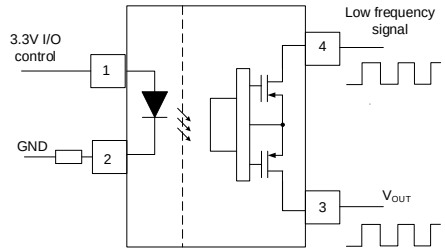
Features

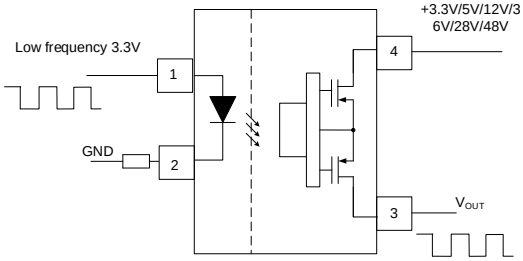
- Isolation Voltage: 500Vrms
- On-State Current: Maximum 0.65A
- R_{ON}: 0.44Ω (Typical)
- 1-Form-A, Normally Open Configuration
- Operating Temperature Range: -40°C ~110°C
- Leakage Current: Less Than 1μA Under 100V Load Voltage
- LED Trigger Current: 3mA (max)
- Compact Package: 2.0×1.45×1.20mm^3 (max 1.30mm height)

Applications

- ATE, Testers







Back

Current Sense Amplifier (Temp Range: -40°C to 125°C)

Part Number	Description	Supply Voltage (V)	CM Sense Range(V)	DM Sense Range (mV)	I_Q(Typ) (uA)	Gain (V/V)	Gain Error (Max)	Offset (Max) (uV)	Output Mode	Alert	Feature/ Special Function	Package
SQ52101AHT	Current-sense Amplifier	3-5.5	-0.3-26	±90	80	50	±0.5%	±100	Analog	No	High- or low side bidirectional	SOT363
SQ52102AHT	Current-sense Amplifier	3-5.5	-0.3-26	±45	78	100	±0.5%	±50	Analog	No	High- or low side bidirectional	SOT363
SQ52103AHT	Current-sense Amplifier	3-5.5	-0.1-26	±24	78	200	±0.5%	±35	Analog	No	High- or low side bidirectional	SOT363
SQ52104WMS	Current-sense Amplifier	1.8-5.5	1.8-5.5	52	18	100	±0.18%	±45	Analog	No	Small Size, low power, Unidirectional	CSP0.76×0.76-4
SQ52131CHMP	High-accuracy Current-sense Amplifier	2.7-5.5	-4-80	±98	1800	50	±0.15%	±22	Analog	No	-4-80V wide VCM range & Enhanced PWM Rejection	TSSOP8
SQ52131FAP	High-accuracy Current-sense Amplifier	2.7-5.5	-4-80	±98	1800	50	±0.15%	±22	Analog	No	-4-80V wide VCM range & Enhanced PWM Rejection	SOP8
SQ52132AAT	High-speed Current-sense Amplifier	2.7-5.5	-4-80	48	1300	100	±0.2%	±65	Analog	No	-4-80V wide VCM range & 1M High Bandwidth	SOT23-5
SQ52132DAAT	High-speed Current-sense Amplifier	2.7-20	-4-80	198	1300	100	±0.2%	±65	Analog	No	-4-80V wide VCM range & 1M High Bandwidth	SOT23-5
SQ52133EAHT	High-accuracy Current Sense Amplifier	1.8-5.5	-0.2-70	±24	62	200	±0.6%	±50	Analog	No	Ultra-low IB,70V wide VCM range , Bi-directional	SOT363
NEW SQ52134CAHT	High-accuracy Current Sense Amplifier	1.8-5.5	-24-55	±98	62	50	±0.6%	±54	Analog	No	Ultra low IB, High precise	SOT363
SQ52110FBP	Current-sense Comparator	2.7-5.5	0-36	250	135	/	/	-500	CMP	Yes	3 Delay time Programmable Alert Threshold	MSOP10
SQ52110TDD	Current-sense Comparator	2.7-5.5	0-36	250	135	/	/	-500	CMP	Yes	3 Delay time Programmable Alert Threshold	DFN2x2-10
SQ52111CAP	Current-sense Amplifier & Comparator	2.7-5.5	0-36	250	300	20	±0.1%	±125	AMP+CMP	Yes	Programmable Alert Threshold	MSOP8
SQ52112CAP	Current-sense Amplifier & Comparator	2.7-5.5	0-36	100	300	50	±0.15%	±50	AMP+CMP	Yes	Programmable Alert Threshold	MSOP8
SQ52113CAP	Current-sense Amplifier & Comparator	2.7-5.5	0-36	50	300	100	±0.2%	±35	AMP+CMP	Yes	Programmable Alert Threshold	MSOP8
SQ52114CAP	Current-sense Amplifier & Comparator	2.7-5.5	0-36	50	300	100	±0.2%	±35	AMP+CMP	Yes	Programmable Alert Threshold	MSOP8

Back

SQ52101AHT/SQ52102AHT/SQ52103AHT

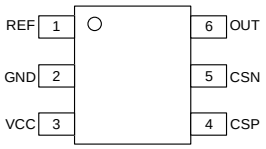
High-Side or Low-Side Bidirectional, High-Accuracy, Current-Sense Amplifier

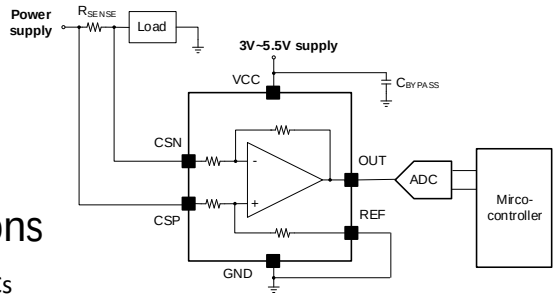
Features

- 4 to 36V Input Voltage Range
- Voltage-Output, Current-sense Monitor
- -0.3V–26V (SQ52101/2) -0.3V–26V (SQ52103) Common-Mode Operation Range
- 100μA (Maximum) Quiescent Current
- High Accuracy: ±0.5% Gain Error (Maximum)
- Gain: 50V/V (SQ52101), 100V/V (SQ52102), 200V/V (SQ52103)
- Amplifier Output Referenced to VREF input
- Shunt Maximum Input Voltage Range:
  SQ52101:
  - -40mV to 40mV (VCC=5V, REF=2.5V)
  - 1mV to 90mV (VCC=5V, REF=0V)

  SQ52102:
  - -20mV to 20mV (VCC=5V, REF=2.5V)
  - 1mV to 45mV (VCC=5V, REF=0V)

  SQ52103:
  - 10mV to 10mV (VCC=5V, REF=2.5V)
  - 1mV to 24mV (VCC=5V, REF=0V)
- Low Offset Voltage(Maximum):
  - ±100μV (SQ52101)
  - ±50μV (SQ52102)
  - ±35μV(SQ52103)
- 0.5μV/°C Offset Drift (Maximum)
- 10ppm/°C Gain Drift (Maximum)
- Package: SOT363





Applications

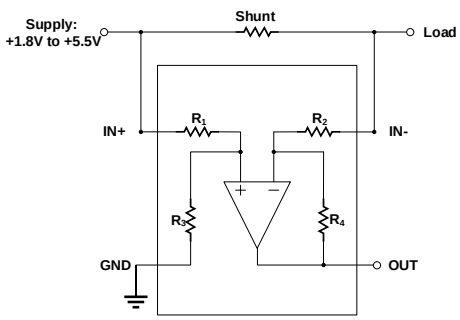
- Notebook PCs
- Smartphones
- Micro-inverters
- Battery Chargers
- Power Management
- Telecom Equipment

SQ52104WMS

Small Size, Low-Power, Unidirectional, Zero-Drift Current-sense Amplifier

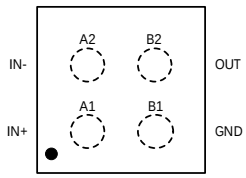
Features

- Voltage-output, Current-sense Amplifier
- Common-mode Range: +1.8V to +5.5V
- Gain=100V/V
- Low offset Voltage: ±7μV (typical)
- Offset Drift: 0.2 μV/℃ (maximum)
- Gain Error: 0.06% (typical)
- Gain Drift: 1 ppm/℃ (maximum)
- Quiescent Current: 18μA (typical)
- Buffered Voltage Output: No Additional OP Amp Needed
- Compact Package: CSP0.76×0.76-4



Applications

- Notebook Computers
- Cell Phones
- Telecom Equipment
- Power Management
- Battery Chargers



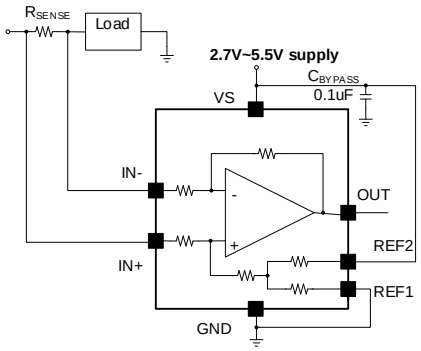
Back

SQ52131CHMP/SQ52131FAP

-4V to 80V, High- and Low-Side, Bidirectional, Zero-Drift, Current-Sense Amplifier with Enhanced PWM Rejection

Features

- –4V to 80V Wide Common-Mode Operation Range
- Voltage-Output, Current-Sense Amplifier
- Enhanced PWM Rejection
- Excellent CMRR:
  - 132dB DC CMRR
  - 93dB AC CMRR at 50kHz
- High Accuracy:
  - Gain Error: 0.15% (Max)
  - Gain Drift: 2.5ppm/℃ (Max)
- Low Offset Voltage:
  - Offset Voltage: ±22μV (Max)
  - Offset Drift: 250nV/℃ (Max)
- High Bandwidth: 550kHz
- Fixed Gain: 50V/V
- Quiescent Current: 2.4mA (Max)
- Package: TSSOP8/ SOP8
- MSL Rating: MSL3(TSSOP8/ SOP8)



Applications

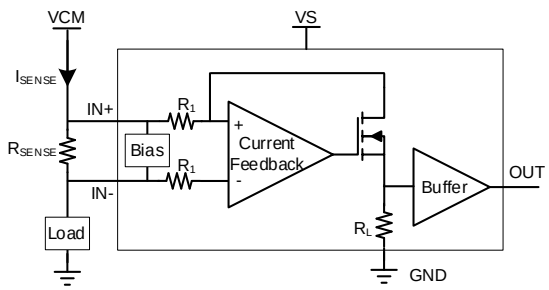
- Motor Controls
- DC/DC Converters
- Power Management
- Battery Management Systems (BMS)
- Pressure Regulators
- Telecom Equipment

SQ52132AAT/SQ52132DAAT

-4V to 80V, 1MHz, High-Precision, High-side or Low-side Current-Sense Amplifier

Features

- Supply Voltage Range: 2.7V to 5.5V(SQ52132)
  2.7V to 20V(SQ52132D)
- Wide Common-mode Range:
- Operational Voltage: -4V to 80V
- Survival Voltage: −6V to +90V
- Excellent CMRR:
  - 126dB (Minimum) DC CMRR
  - 80dB (Typical) AC CMRR@50kHz
- High-Accuracy:
  - Offset Voltage: ±65μV (Maximum)
  - Offset Voltage Drift: ±0.5μV/°C (Maximum)
  - Gain Error: ±0.2% (Maximum)
  - Gain Error Drift: ±10ppm/°C (Maximum)
- Fixed Gain: 100V/V
- High Bandwidth: 1MHz
- Slew Rate: 10V/μs
- Quiescent Current: 1.3mA (Typical)



Applications

- Over-current Protection
- Servers
- Power Supplies
- Telecom Equipment
- Battery Management Systems (BMS)

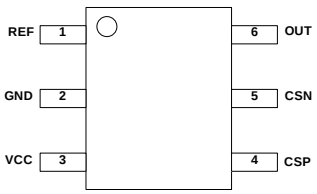
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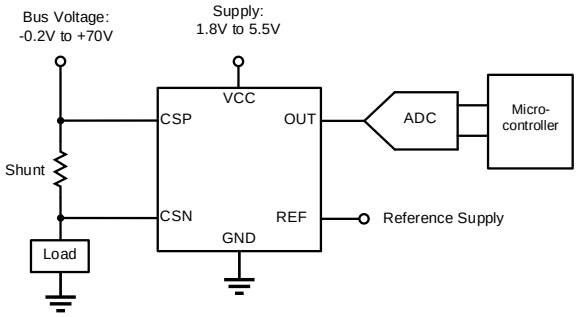
SQ52133EAHT

-0.2V to +70V, Low Power, Bi-directional, High-precision Current Sense Amplifier with Ultra-low I_B

Features

- Wide Common-mode Voltage Range, VCM: –0.2V to +70V
- Low Input Bias Currents, I_B: 500pA (Typ.)
- Fixed Gain: 200V/V
- High-Accuracy:
  - Offset Voltage, VOS: ±50µV (Max.)
  - Offset Drift: ±0.5µV/°C (Max.)
  - Gain Error: ±0.6% (Max.)
  - Gain Drift: ±15ppm/°C (Max.)
  - Common-mode Rejection Ratio: 134 dB (Min.)
- Low Supply Voltage, VCC: 1.8V to 5.5V
- Low Quiescent Current, IQ: 62µA (Typ.)
- Package: SOT363
- MSL Rating: MSL1





Applications

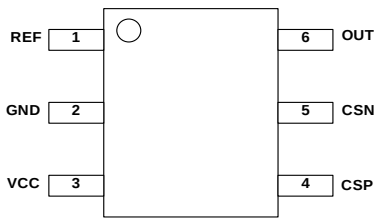
- Battery Management Systems (BMS)
- Servers
- Smartphones
- Notebook PCs
- Telecom equipment
- Power management

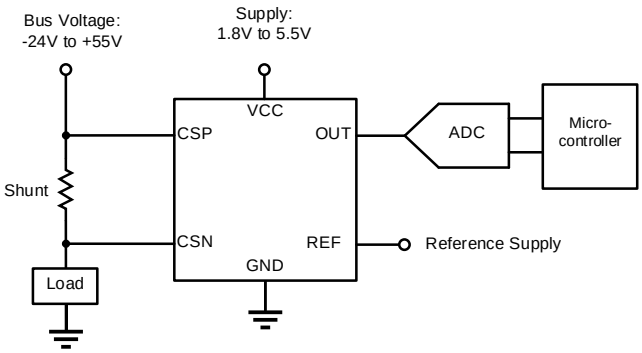
SQ52134CAHT

-24V to 55V Wide Common Mode, Low Power,
Bi-directional, High-precision, Current Sense Amplifier with Ultra-low I_B

Features

- Wide Common-mode Voltage Range, VCM: –24V to +55V
- Low Input Bias Currents, IB: 500pA (Typ.)
- Fixed Gain: 50V/V
- High-Accuracy:
  - Offset Voltage, VOS: ±54µV (Max.)
  - Offset Drift: ±0.25µV/°C (Max.)
  - Gain Error: ±0.6% (Max.)
  - Gain Drift: ±10ppm/°C (Max.)
  - Common-mode Rejection Ratio: 134 dB (Min.)
- Low Supply Voltage, VCC: 1.8V to 5.5V
- Low Quiescent Current, IQ:62µA (Typ.)
- Package: SOT363
- MSL Rating: MSL1





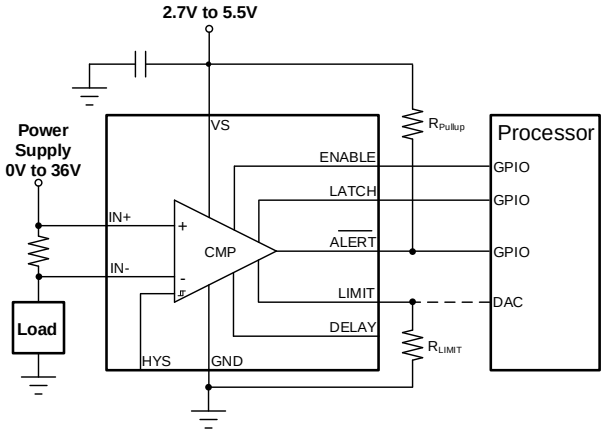
Applications

- Smartphones
- Battery Management Systems (BMS)
- Servers
- Notebook PCs
- Telecom equipment
- Power management

Back

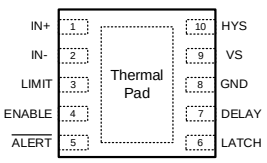
Features

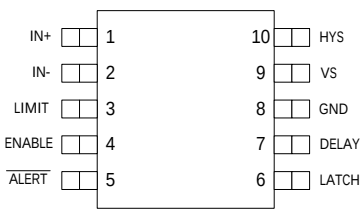
- High-resolution Conversion of Light Intensity to Frequency without External Components
- Low Dark Frequency <1Hz at 50°C
- Single-supply Operation 2.7V to 3.6V
- Interfaces Directly to a Microcontroller
- RoHS Compliant
- Wide Common Mode Range: 0V ~ 36V
- Accuracy:
  - Offset Voltage: ±500μV (Max)
  - Offset Voltage Drift: 0.5μV/°C (Max)
- Programmable Threshold:
  - Adjust Using Single Resistor
  - Programmable from 0 mV to 250 mV
- Active Quiescent Current: 135μA (Typ)
- Selectable Disable Mode
  - Disabled Quiescent Current: 1.2μA (Max)
  - Disabled Input Bias Current: 500nA (Max)
- Three Selectable Response Times: 10μs, 50μs, 100μs
- Three Selectable Hysteresis: 2 mV, 4 mV, 8 mV
- Open Drain Output with Latch Mode Available
- Packages: DFN2×2-10 and MSOP10



Applications

- Over-current Protection
- Computers
- Servers
- Telecom Equipment
- Power Supplies
- Battery Chargers





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Features

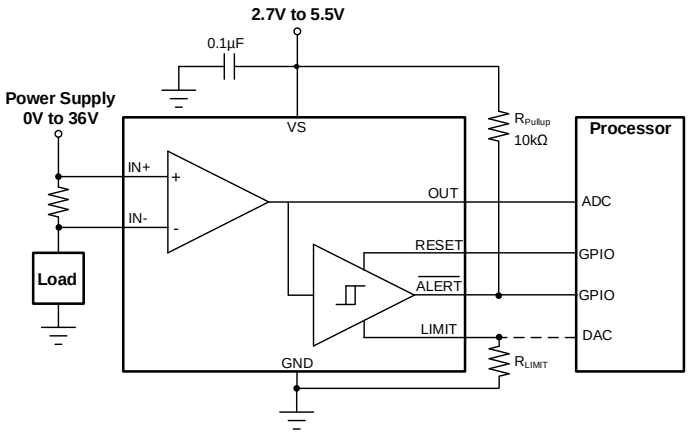
- Wide Common-mode Range: 0V to 36V
- Dual Output: Amplifier and Comparator Output
- High-Accuracy Amplifier:

SQ52111
  - Offset Voltage: 125μV (Max)
  - Offset Voltage Drift: 0.5μV/°C (Max)
  - Gain Error: 0.1% (Max)
  - Gain Error Drift: 10ppm/°C (Max)

SQ52112
  - Offset Voltage: 50μV (Max)
  - Offset Voltage Drift: 0.5μV/°C (Max)
  - Gain Error: 0.15% (Max)
  - Gain Error Drift: 10ppm/°C (Max)

SQ52113
  - Offset Voltage: 35μV (Max)
  - Offset Voltage Drift: 0.5μV/°C (Max)
  - Gain Error: 0.2% (Max)
  - Gain Error Drift: 10ppm/°C (Max)

- Available Amplifier Gain: 20V/V(SQ52111) 50V/V(SQ52112) 100V/V(SQ52113)
- Programmable Alert Threshold Setting through a Single Resistor
- Total Alert Response Time: 0.75μs
- Open-drain Output with Latching Mode
- Package: MSOP8



Applications

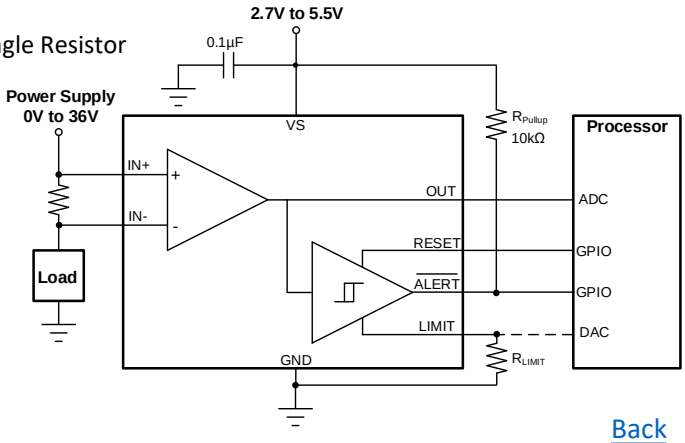
- Over-current Protection
- Power-Supply Protection
- Circuit Breakers
- Computers and Servers
- Telecom Equipment
- Battery Management

SQ52114CAP

36V High-Speed Zero-Drift Voltage Output
Current-Shunt Monitor with High-Speed Under-current Comparator

Features

- Wide Common-mode Range: 0V to 36V
- Dual Output: Amplifier and Comparator Output
- High-Accuracy Amplifier:
  - Offset Voltage: 35μV (Max)
  - Offset Voltage Drift: 0.5μV/°C (Max)
  - Gain Error: 0.2% (Max)
  - Gain Error Drift: 10ppm/°C (Max)
- Available Amplifier Gain: 100V/V
- Programmable Alert Threshold Setting through a Single Resistor
- Total Alert Response Time: 3μs
- Open-drain Output with Latching Mode
- Package: MSOP8



Applications

- Under-current Protection
- Power-Supply Protection
- Circuit Breakers
- Computers and Servers
- Telecom Equipment
- Battery Management

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Power Monitor (Temp Range: -40℃ to 125℃)

Part Number	Description	Supply Voltage (V)	CM Sense Range(V)	DM Sense Range (mV)	I_Q(Typ) (uA)	Gain Error (Max)	Offset (Max) (uV)	Output Mode	Alert	Feature/ Special Function	Package
SQ52201FBC	High-accuracy Power Monitor	2.7-5.5	0-36	±81.92	396	±0.15%	±10	I²C/SMBus	Yes	16-bit ADC for BUS &Shunt Voltage	MSOP10
SQ52201EFBC	High-accuracy Power Monitor	2.7-5.5	0-36	±81.92	396	±0.15%	±10	I²C/SMBus	Yes	16-bit ADC for BUS &Shunt Voltage	MSOP10
SQ52204VSS	High-accuracy Power Monitor	2.7-5.5	0-36	±81.92	320	±0.45%	±10	I²C/SMBus	Yes	16-bit ADC for BUS &Shunt Voltage	CSP1.39x1.68 -12
SQ52204BVSS	High-accuracy Power Monitor	2.7-5.5	0-36	±81.92	320	±0.45%	±10	I²C/SMBus	Yes	16-bit ADC for BUS &Shunt Voltage	CSP1.39x1.68 -12
SQ52205FBP	High-accuracy Power Monitor	2.7-5.5	0-36	±81.92	320	±0.15%	±10	I²C/SMBus	Yes	16-bit ADC for BUS &Shunt Voltage	MSOP10
SQ52205QDQ	High-accuracy Power Monitor	2.7-5.5	0-36	±81.92	320	±0.25%	±10	I²C/SMBus	Yes	16-bit ADC for BUS &Shunt Voltage	QFN3x3-16
SQ52206FBP	Power/Energy/ Charge Monitor	2.7-5.5	0-120	±163.84 ±81.92 ±40.96	1050	±0.14%	±5	I²C/SMBus	Yes	16bit ADC suited for both high- and low-side Bidirectional current measurements	MSOP10
SQ52210QIQ	Triple-Channel, High-Side Measurement, Current and Power Monitor	2.7-5.5	0-32.76	±163.84	300	±0.25%	±40	I²C/SMBus	Yes	13bit ADC suited for high-side Bidirectional current measurements	QFN4×4-16
SQ52211QIQ	Quad -Channel, High-Side Measurement, Current and Power Monitor	2.7-5.5	0-70	±81.92	300	±0.25%	±20	I²C/SMBus	Yes	13bit ADC suited for high-side Bidirectional current measurements	QFN4×4-16

Temperature Sensor (Temp Range: -40℃ to 125℃)

Part Number	Temperature Sensor Accuracy (Max) (℃)	Supply Voltage (V)	Supply Current (Max) (μA)	Interface	Address	Temperature Resolution (Max) (bits)	Type	Remote Channel	Features	Package
SQ52910ART	3	1.62-3.6	7.5	I²C	4	12	local	0	ALERT	SOT563
SQ52911ART	1	1.62-3.6	7.5	I²C	4	12	local	0	ALERT	SOT563
SQ52911EART	1	1.45-3.6	7.5	I²C	4	12	local	0	ALERT	SOT563
SQ52912WBS	±0.8	1.7-1.98	55	I²C/I3C	2	11	local	0	IBI, Parity Check, Packet Check	CSP1.338x0.838-6
NEW SY64912WBS	±0.75	1.7-1.98	13	I²C/I3C	2	11	local	0	IBI, Parity Check, Packet Check	CSP1.338x0.838-6

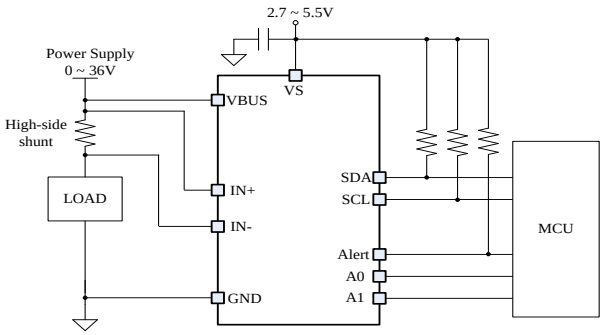
Back

SQ52201FBC/SQ52201EFBC

36V High-accuracy Current/Power Monitor with Programmable Alert Function

Features

- Senses Bus Voltages from 0 V to 36 V
- High-Side or Low-Side Sensing
- Bi-directional Current Sensing
- Reports Current, Voltage, and Power
- High Accuracy:
  - 0.02% Gain Error (Typ) for Shunt Voltage
  - 0.02% Gain Error (Typ) for Bus Voltage
  - 2.5μV Offset (Typ) for Shunt Voltage
  - 1.25mV Offset (Typ) for Bus Voltage
- Configurable Averaging Options
- Configurable Conversion Time
- Abundant Alert Sources Setting
- 16 Programmable Addresses
- High Speed I2C Mode Compatible
- Operates from 2.7V to 5.5V Power Supply



Applications

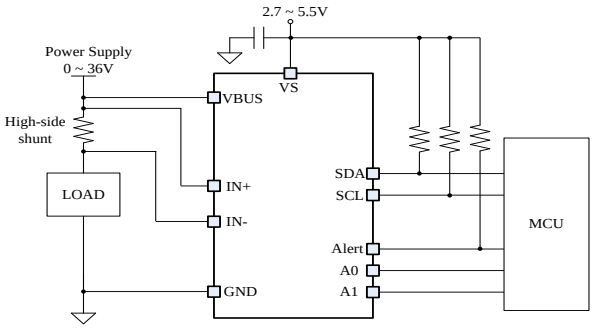
- Servers
- Telecom Equipment
- Computing
- Power Management
- Battery Chargers
- Power Supplies
- Test Equipment

SQ52204VSS/SQ52204BVSS

High-Side and Low-Side, Bidirectional, Zero-Drift, High-accuracy Current/Power Monitor with Accumulator and Programmable Alert

Features

- Senses Bus Voltages from 0V to 36V
- High-Side or Low-Side Sensing
- Embedded 16bit ADC
- Reports Current, Voltage, and Power
- Integrated Power Accumulator
- Configurable Averaging Options
- High Accuracy:
  - 0.45% Gain Error (Max)
  - ±10μV Shunt Offset (Max)
- Low IB: 1nA (Max)
- Flexible Interrupt Generation
- 1.8V I2C, SMBus Compliant Interface
- 16 Programmable Addresses
- Operates from 2.7V to 5.5V Power Supply
- Operating Current: 320μA (typ)
- Start-Up Mode Options:
  - SQ52204: Active Conversion
  - SQ52204B: Low-current Power down
- Industrial Temperature: –40°C~125°C
- Package: CSP1.39mm×1.68mm-12



Applications

- Servers
- Telecom Equipment
- Computing
- Power Management
- Battery Chargers
- Power Supplies
- Test Equipment

Back

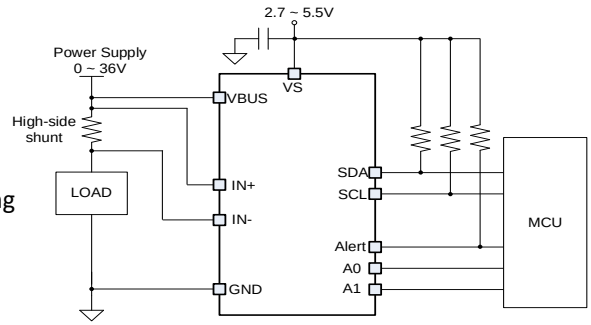
SQ52205FBP/SQ52205QDQ

High- and Low-Side, Bidirectional, Zero-Drift, High-accuracy Current/Power Monitor with Accumulator and Programmable Alert

Features

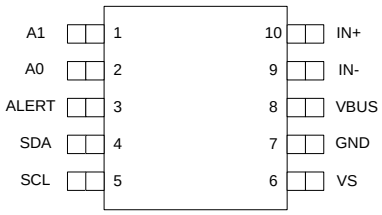
- Senses Bus Voltages from 0V to 36V
- High-Side or Low-Side Sensing
- Embedded 16bit ADC
- Reports Current, Voltage, and Power
- Integrated Power Accumulator for Average Power Monitoring
- High Accuracy:
  SQ52205FBP
  - 0.15% Gain Error (Max)
  - ±10μV Shunt Offset (Max)

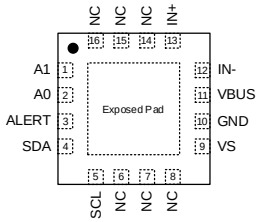
  SQ52205QDQ
  - 0.25% Gain Error (Max)
  - ±10μV Shunt Offset (Max)
- Low IB: 1nA (Max)
- Configurable Averaging Options
- Abundant Alert Sources Setting
- 1.8V I2C, SMBus Compliant Interface
- 16 Programmable Addresses
- Operates from 2.7V to 5.5V Power Supply
- Industrial Temperature: –40°C~125°C
- Package: MSOP10/QFN3×3-16



Applications

- Servers
- Telecom Equipment
- Computing
- Power Management
- Battery Chargers
- Power Supplies
- Test Equipment





SQ52206FBP

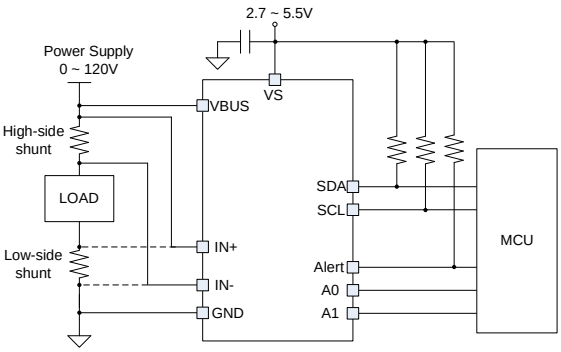
120V 16bit High-Precision Power/Energy/Charge Monitor with I2C Interface

Features

- High-Resolution, 16-bit Delta-Sigma ADC
- Current monitoring accuracy:
  - Offset voltage: ±5 μV (maximum)
  - Gain error: ±0.14 % (maximum)
  - Common mode rejection: 144 dB (minimum)
- • Power monitoring accuracy:
  - 0.8% full scale, –40°C to +125°C (maximum)
- Wide Common-Mode Range: –0.3V to +120V
- Shunt Full-Scale Differential Range Options: ±163.84mV, ±81.92mV, ±40.96 mV
- Bus Voltage Sense Input Range: 0V to 120V
- Selectable ADC Conversion Time and Sample Averaging
- Programmable Resistor Temperature Compensation
- Low Input Bias Current: 0.1nA (Typical)
- Operates on a 2.7V to 5.5V Power Supply
  - Operational Current: 1050μA (Typical)
  - Shutdown Current: 4.5μA (Typical)
- 2.94 MHz High-Speed I2C Interface with 16 Pin-Selectable Addresses
- MSL Rating: MSL3
- Package: MSOP10

Applications

- Servers
- Telecom Equipment
- Computing
- Power Management
- Battery Chargers
- Power Supplies
- Test Equipment



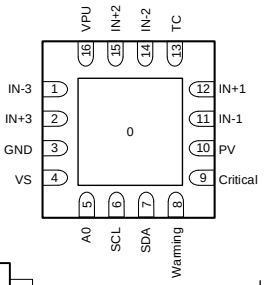
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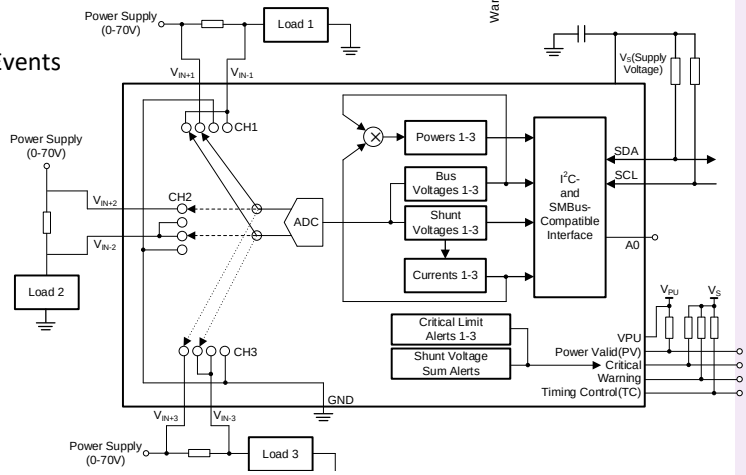
SQ52210QIQ

Triple-Channel, High-Side Measurement, Current and Power Monitor with I2C- and SMBUS-Compatible Interface

Features

- Power-Supply Operation: 2.7V to 5.5V
- Senses Bus Voltages From 0V to 32.76V
- 70V Common-Mode Voltage Tolerance
- Measures and Reports Current, Voltage, and Power
- High Measurement Precision:
  - Offset Voltage: ±40μV (max)
  - Gain Error: 0.25% (max)
- Configurable Averaging Modes
- Programmable Outputs for Warning and Critical Events
- Four Configurable I²C-Compatible Addresses.
- Package: QFN4×4-16
- MSL Rating: MSL3





Applications

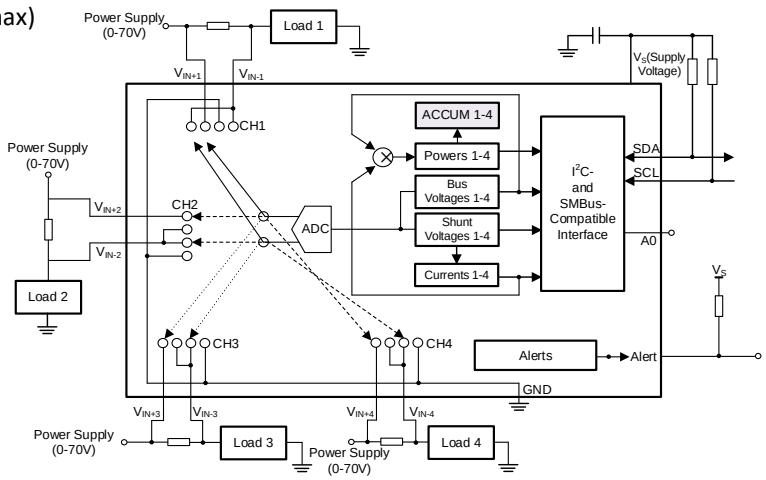
- Power Management
- Computers
- Telecommunication Equipment
- Battery Chargers
- Power Supplies
- Test and Measurement Equipment

SQ52211QIQ

Quad-Channel, High-Side Measurement, Current and Power Monitor with I2C- and SMBUS-Compatible Interface

Features

- Senses Bus Voltages From 0 V to 70V
- Reports Current, Voltage and Power
- Integrated Power Accumulator for Average Power Monitoring
- High Accuracy:
  - Shunt Voltage Offset Voltage: ±20 μV (max)
  - Shunt Voltage Gain Error: 0.25% (max)
  - Bus Voltage Offset Voltage: ±5mV (max)
  - Bus Voltage Gain Error: 0.25% (max)
- Configurable Averaging Options
- Four Programmable Addresses
- Abundant Alert Sources Setting
- 1.8V compliant I²C, SMBus interface
- Low input bias currents: 0.1nA (typ)
- Power-Supply Operation: 2.7 V to 5.5 V
- Package: QFN4×4-16
- MSL Rating: MSL3



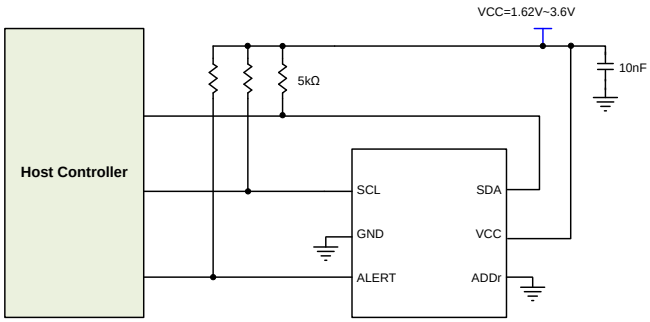
Applications

- Computers
- Power Management
- Telecom Equipment
- Battery Chargers
- Power Supplies
- Test Equipment

Back

Features

- Accuracy without Calibration:
  - 3°C (max) from –40°C to 125°C
- Low Quiescent Current:
  - 7.5µA Active (max)
  - 0.8µA Shutdown (max)
- Supply Range: 1.62 to 3.6V
- Resolution: 12 Bits
- Digital Output: SMBus, and I2C Interface Compatibility
- SOT563 Package (1.6-mmx1.6-mm) is a 68% Smaller Footprint than SOT-23

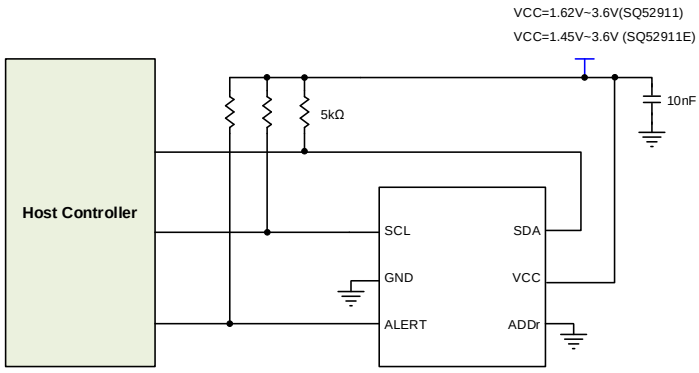


Features

- Accuracy without Calibration:
  - 0.5°C (max) from 0°C to 65°C
  - 1°C (max) from –40°C to 125°C
- Low Quiescent Current:
  - 7.5µA Active (max)
  - 0.8µA Shutdown (max)
- Supply Range: 1.62 to 3.6V (SQ52911), 1.45 to 3.6V (SQ52911E)
- Resolution: 12 Bits
- Digital Output: SMBus, and I2C Interface Compatibility
- SOT563 Package (1.6-mmx1.6-mm) is a 68% Smaller Footprint than SOT-23
- MSL Rating: MSL1

Applications

- Portable and Battery-Powered Applications
- Power-supply Temperature Monitoring
- Computer Peripheral Thermal Protection
- Notebook Computers
- Battery Management
- Office Machines
- Thermostat Controls
- Electromechanical Device Temperatures
- General Temperature Measurements:
  - Industrial Controls
  - Test Equipment
  - Medical Instrumentations



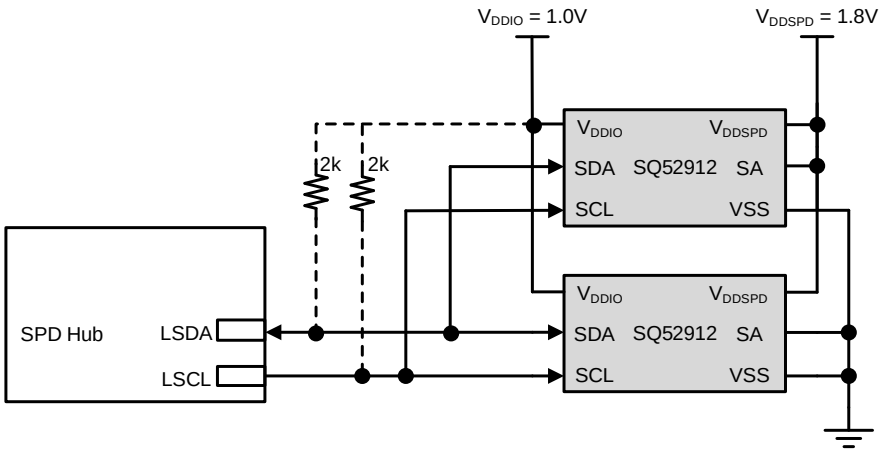
Back

Features

- JEDEC JESD302-1 DDR5 Grade B Support
- Exceeds JEDEC Temperature Accuracy Standards:
  - ±0.3°C Typical from –40°C to +125°C
  - ±0.5°C Max from +75°C to +95°C
  - ±0.8°C Max from –40°C to +125°C
- Low Quiescent and Stand by Currents:
  - 5.7µA Average Quiescent Current (typ.)
  - 3.8µA Standby Current (typ.)
- Power Supplies:
  - 1V I/O Power Supply
  - 1.8V Core Power Supply
- Two-Wire Serial Bus Interfaces (I²C and I3C Basic Operation Modes)
- Data Transfer Rate: Up to 12.5MHz in I3C Basic Mode
- In-Band Interrupt (IBI) for Alerting Host
- Error Detection Functions:
  - Parity Check for Host Writes
  - Packet Check for Host Reads and Writes
- 11-bit Resolution with 0.25°C per LSB
- Standard 6-Ball DSBGA (WCSP) Package With 0.5mm Pitch

Applications

- Servers, Laptops, Workstations
- DDR5 DIMM Modules
- SSDs



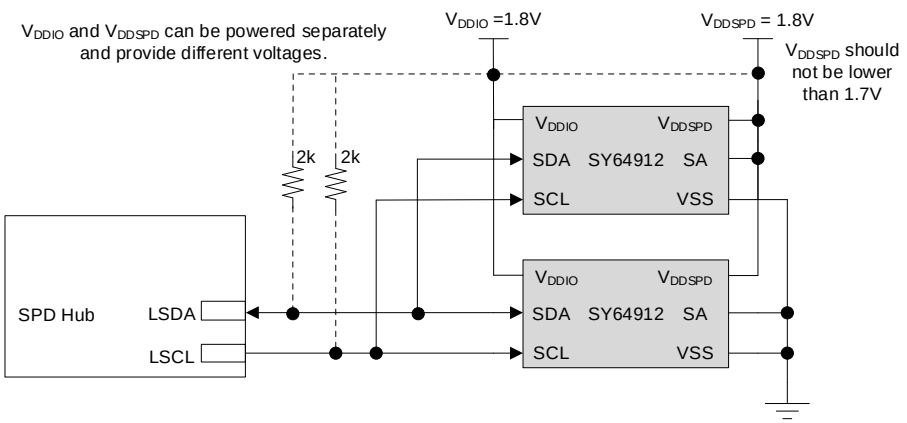
Back

Features

- Temperature Accuracy:
  - ±0.25°C Typical from 0°C to +70°C
  - ±0.75°C Max from 0°C to +70C
  - Low Quiescent and Stand by Currents:
  - 6µA Average Quiescent Current (typ.)
  - 1.5µA Standby Current (typ.)
- Power Supplies:
  - 1.8V I/O Power Supply
  - 1.8V Core Power Supply
- Two-Wire Serial Bus Interfaces (I2C and I3C Basic Operation Modes)
- Data Transfer Rate: Up to 12.5MHz in I3C Basic Mode
- In-Band Interrupt (IBI) for Alerting Host
- Error Detection Functions:
  - Parity Check for Host Writes
  - Packet Check for Host Reads and Writes
- 11-bit Resolution with 0.25°C per LSB
- Standard 6-Ball DSBGA (WCSP) Package With 0.5mm Pitch
- MSL Rating: MSL1

Applications

- Smart watches
- Portable equipment
- Electronic Thermometers



Back

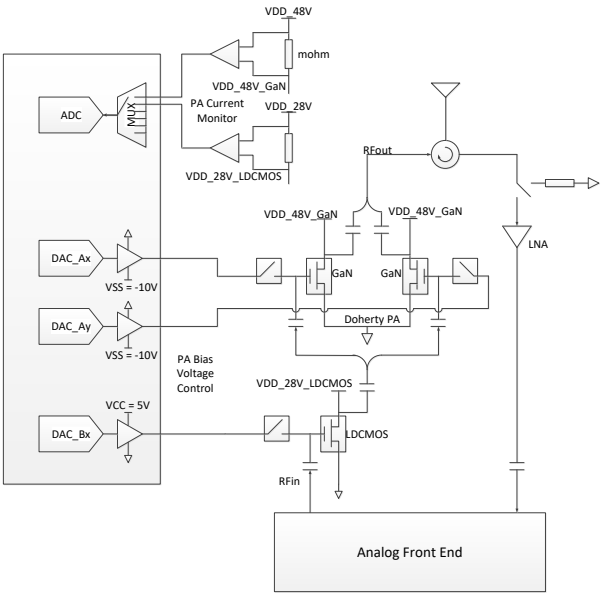
DAC (Temp Range: -40℃ to 125℃)

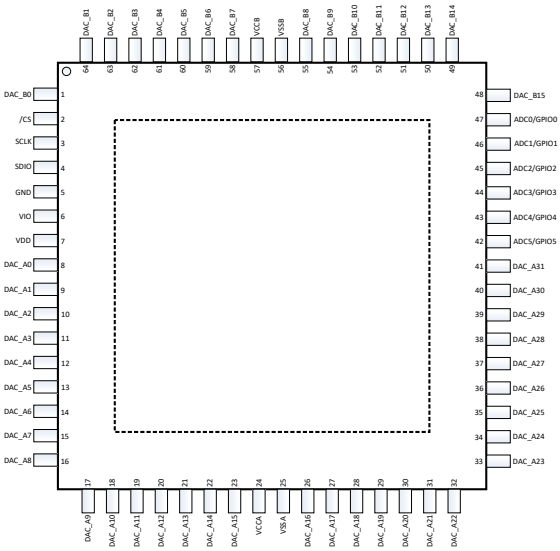
Part Number	Description	VDD(V)	Resolution (bit)	Channel	INL(Max) (LSB)	Offset Error (Max) (mV)	Gain Error (Max) (%)	with internal ref	Power on Reset to code	Package
SQ82948GGF	48 Channel 12 Bit DAC	4.5-5.5, ±11V	12	48	±3	±25	±0.5	Yes (2.5V)	/	TQFP10×10-64E
SQ82968VZS	16 Bit 8 Channel DAC	2.7-5.5	16	8	±13.8	±12.5	±0.25	Yes (1.25V)	Zero	CSP2.605×2.605-16
SQ82968CVZS	16 Bit 8 Channel DAC	2.7-5.5	16	8	±13.8	±12.5	±0.25	Yes (2.5V)	Zero	CSP2.605×2.605-16
SQ82958QIQ	16 Bit 8 Channel DAC	2.7-5.5	16	8	±3.5	±7.9	±0.29	Yes (1.25V)	Zero	QFN4×4-16
SQ82958BQIQ	16 Bit 8 Channel DAC	2.7-5.5	16	8	±3.5	±7.9	±0.29	Yes (1.25V)	Midscale	QFN4×4-16
SQ82928VZS	12 Bit 8 Channel DAC	2.7-5.5	12	8	±1.0	±13.9	±0.29	Yes (1.25V)	Zero	CSP2.605×2.605-16
SQ82918QIQ	12 Bit 8 Channel DAC	2.7-5.5	12	8	±1.0	±7.9	±0.28	Yes (1.25V)	Zero	QFN4×4-16

ADC (Temp Range: -40℃ to 125℃)

Part Number	Resolution (bit)	input channels	Architecture	Interface type	Input type	Analog Supply Voltage(V)	Digital Supply Voltage(V)	Input voltage range(V)	Gain Error (max)(LSB)	Offset (Max)(LSB)	Sample Rate(sps)	Reference mode	Package
SQ82806GDF	16	8	SAR	Byte-Wide, Parallel, SPI	Single-ended	4.75-5.25	1.8-5	-10~10 -5~5	±45	±4.8	200k	External, Internal	LQFP10x10-64

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Features

- 48 Monotonic 12-bit DACs
  - Programmable Ranges: –10V to 0V, –5V to 0V, 0V to 5V, and 0V to 10V
  - High Current Drive Capability: ±20 mA
  - Auto Range Detector
- 12-bit, 250kSPS SAR ADC
  - Input Ranges: 0V to 5V and 0V to 2.5V
  - Programmable out-of-range Alarms
- Built-in Sequencing Features
- Internal 2.5-V Reference
- Internal Temperature Sensor
  - Accuracy: ±2.5°C (Maximum)
  - Resolution: 0.0625°C
- SPI-compatible Interface: 1.65 to 5.5V Operation
- Specified Junction Temperature Range: –40°C to +125°C
- Operating Junction Temperature Range: –40°C to +150°C

Applications

- Active Antenna Radio Unit (AAU)
- Radar

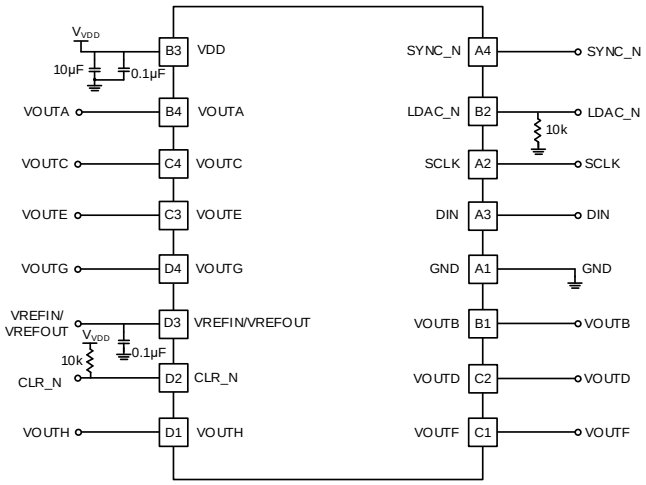
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SQ82968VZS/SQ82968CVZS

Octal, 16-Bit, SPI, Voltage Output DAC with Internal Reference

Features

- Low Power, Small Footprint, Octal, 16-bit DAC
- 2.7V to 5.5V Power Supply
- Power-down Capability
- Shutdown Current: 0.1µA at 3V and 0.2µA at 5V(typ.)
- On-chip 1.25V/2.5V, 8 ppm/°C Reference
- Power-on Reset to 0V or Midscale
- Configurable Power-down DAC Outputs
- Hardware/Software LDAC_N and LDAC_N Controls
- Software Configurable DAC Output Reset to 0V, Mid-Scale or Full Scale
- Rail-to-rail Operation
- Available in 16-ball CSP Package



Applications

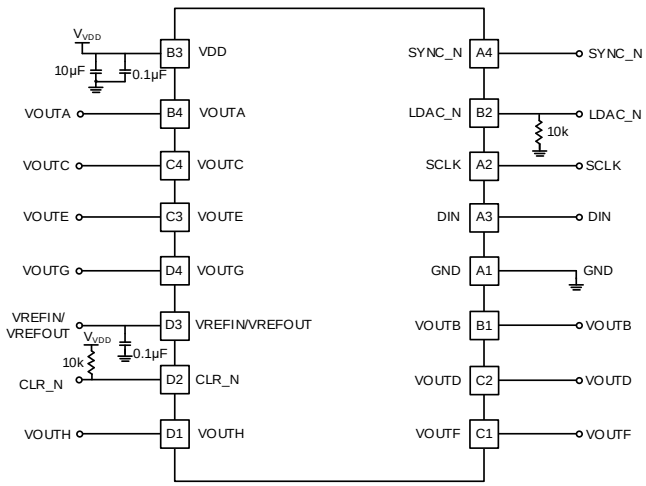
- Optical Networking
- Battery Test Equipment
- Industrial Automation
- Data Acquisition Systems

SQ82928VZS

Octal, 12-Bit, SPI, Voltage Output DAC with Internal Reference

Features

- Low Power, Small Footprint, Octal, 12-bit DAC
- 2.7V to 5.5V Power Supply
- Power-down Capability
- Shutdown Current: 0.1µA at 3V and 0.2µA at 5V(typ.)
- On-chip 1.25V, 8 ppm/°C Reference
- Power-on Reset to 0V or Midscale
- Configurable Power-down DAC Outputs
- Hardware/Software LDAC_N and LDAC_N Controls
- Software Configurable DAC Output Reset to 0V, Mid-Scale or Full Scale
- Rail-to-rail Operation
- Available in 16-ball CSP Package



Applications

- Optical Networking
- Battery Test Equipment
- Industrial Automation
- Data Acquisition Systems

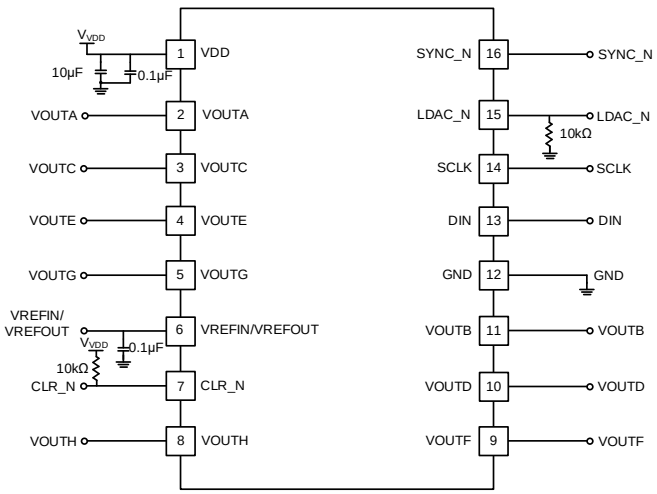
Back

SQ82958QIQ/SQ82958BQIQ

Octal, 16-Bit, SPI, Voltage Output DAC with Internal Reference

Features

- Low Power, Small Footprint, Octal, 16-bit DAC
- 2.7V to 5.5V Power Supply
- Power-down Capability
- Shutdown Current: 0.1µA at 3V and 0.2µA at 5V(typ.)
- On-chip 1.25V/2.5V, 11 ppm/°C Reference
- Power-on Reset to 0V or Midscale
- Configurable Power-down DAC Outputs
- Hardware/Software LDAC_N and LDAC_N Controls
- Software Configurable DAC Output Reset to 0V, Mid-Scale or Full Scale
- Rail-to-rail Operation
- Available in 16-lead QFN Package



Applications

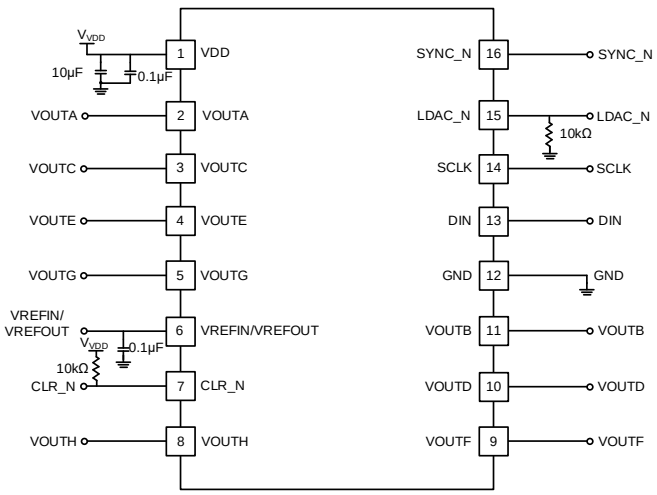
- Optical Networking
- Battery Test Equipment
- Industrial Automation
- Data Acquisition Systems

SQ82918QIQ

Octal, 12-Bit, SPI, Voltage Output DAC with Internal Reference

Features

- Low Power, Small Footprint, Octal, 12-bit DAC
- 2.7V to 5.5V Power Supply
- Power-down Capability
- Shutdown Current: 0.1µA at 3V and 0.2µA at 5V(typ.)
- On-chip 1.25V, 8 ppm/°C Reference
- Power-on Reset to 0V or Midscale
- Configurable Power-down DAC Outputs
- Hardware/Software LDAC_N and LDAC_N Controls
- Software Configurable DAC Output Reset to 0V, Mid-Scale or Full Scale
- Rail-to-rail Operation
- Available in 16-ball CSP Package



Applications

- Optical Networking
- Battery Test Equipment
- Industrial Automation
- Data Acquisition Systems

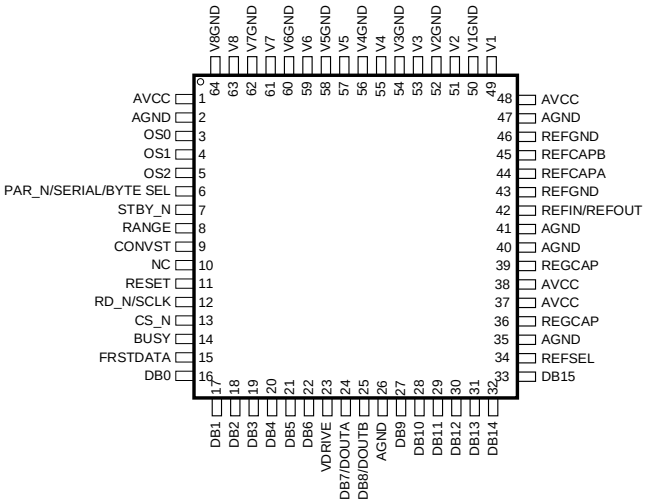
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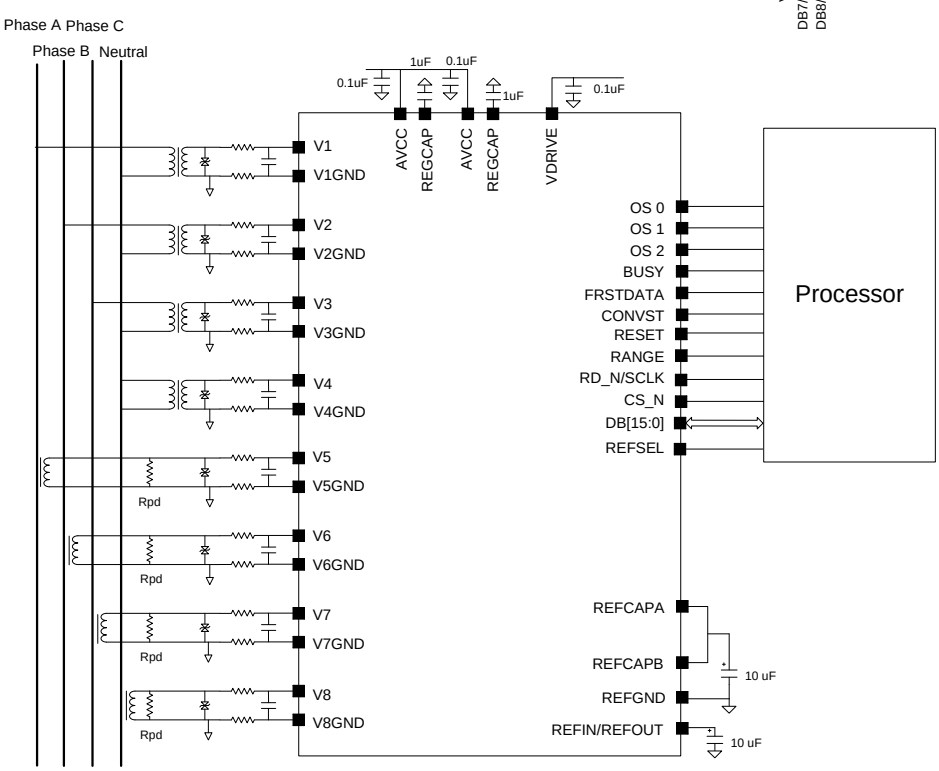
Features

- 16-bit ADC with 200kSPS on All Channels
- Configurable Input Ranges: ±10V and ±5V
- Input Buffer with 1MΩ Analog Input Impedance
- Overvoltage Input Clamp Protection with 8kV ESD
- Single 5V Analog Supply and 1.8V to 5V Digital Power Supply
- - 40°C to +125°C Operating Temperature Range
- Excellent Performance:
  - SNR: 95.7dB THD: -112.4dB
  - INL: ±0.7LSB DNL: ±0.4LSB
  - TUE: ±1.8LSB
- Low Temperature Drift:
  - 2.5V Reference drift: 2.2ppm/°C
  - Bipolar Zero Code Error Drift: 0.9μV/°C
  - Positive Full Scale Error Drift: 1.3ppm/°C
  - Negative Full Scale Error Drift: 1.8ppm/°C
- Oversampling Capability with Digital Filter
- Package: 64-Pin LQFP
- MSL Rating: MSL3 (LQFP10x10-64)

Applications

- Power Line Monitoring
- Protection Relays
- Multiphase Motor Control
- Instrumentation and Control Systems
- Data Acquisition Systems





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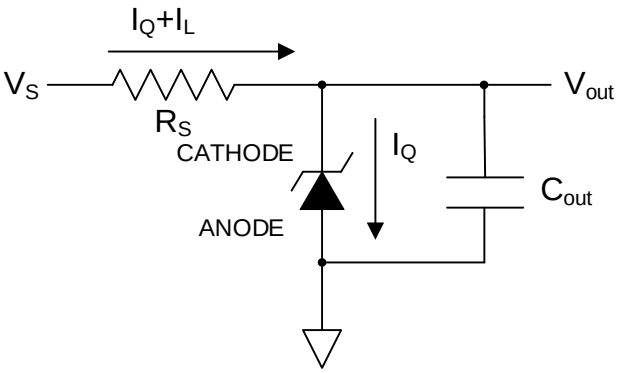
Shunt Voltage Reference (Temp Range: -40°C to 125°C)

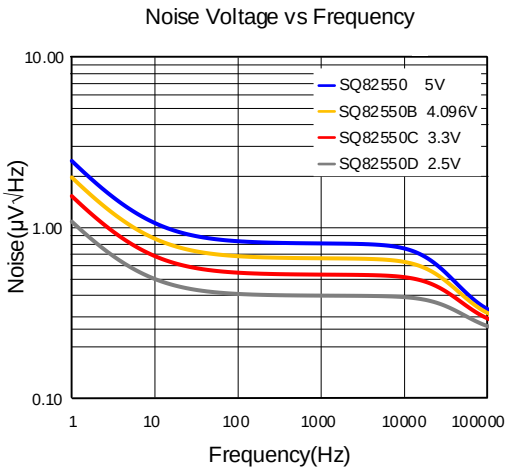
Part Number	Output Voltage (V)	Initial Accuracy (max)(%)	Operation Current (max)(mA)	Temp Coeff (max)(ppm/°C)	Wideband Noise (μVrms)	Package
SQ82550AOT	5	0.1	15	47	80	SOT-23
SQ82550BAOT	4.096	0.1	15	46	65	SOT-23
SQ82550CAOT	3.3	0.1	15	39	51	SOT-23
SQ82550DAOT	2.5	0.1	15	40	38	SOT-23

Series Voltage Reference (Temp Range: -40°C to 125°C)

Part Number	Vo (V)	Temp coeff (max) (ppm/°C)	Initial accuracy(max) (%)	Vin (min) (V)	Vin (max) (V)	Low frequency noise (typ) (μVpp/V)	Iq (typ) (mA)	Package
NEW SQ82534CABT	2.5	6	0.04	3	16	1.4	0.72	SOT23-6

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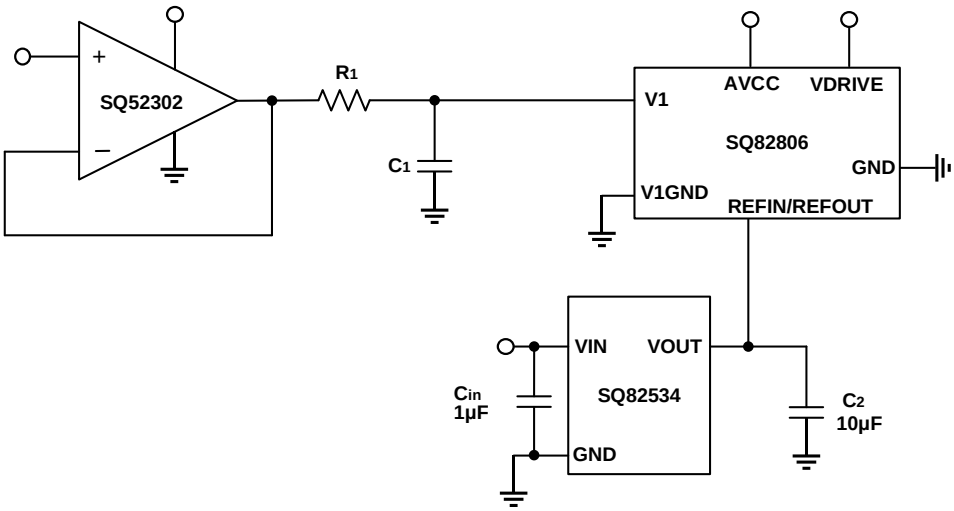
Features

- Fixed Reverse Breakdown Voltage of 2.5V, 3.3V, 4.096V and 5V.
- Output Voltage Tolerance ±0.1% (Maximum)
- Low output noise (10Hz to 10kHz) 38μVrms (Typical)
- No output Capacitor Required
- Tolerates Capacitive Loads
- Wide Operating Current Range 15mA
- Industrial Temperature Range −40°C to 125°C
- Low Temperature Coefficient ±40 ppm/°C(max)
- Small Package: SOT-23

Applications

- Power Line Monitoring
- Portable, Battery-Powered Equipment
- Data Acquisition Systems
- Instrumentation
- Process Control
- Energy Management
- Product Testing
- Precision Audio Components

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Features

- Output Voltage: 2.5V
- Initial accuracy: ±0.04% (maximum)
- Temperature coefficient :
  - 3.0 ppm/°C from 0°C to 70°C
  - 2.5 ppm/°C from -40°C to 125°C
- Operating temperature range: −40°C to +125°C
- Output current: ±10 mA
- Low quiescent current: 720 µA (typical)
- Wide input voltage range: 16 V
- Output 1/f noise (0.1 Hz to 10 Hz): 1.4 µVp-p/V
- Multiple small footprint 6 pin SOT-23 package

Applications

- Solar Inverter
- Medical Instruments
- Lab and Field Instruments
- Analog I/O Modules
- Data Acquisition Systems

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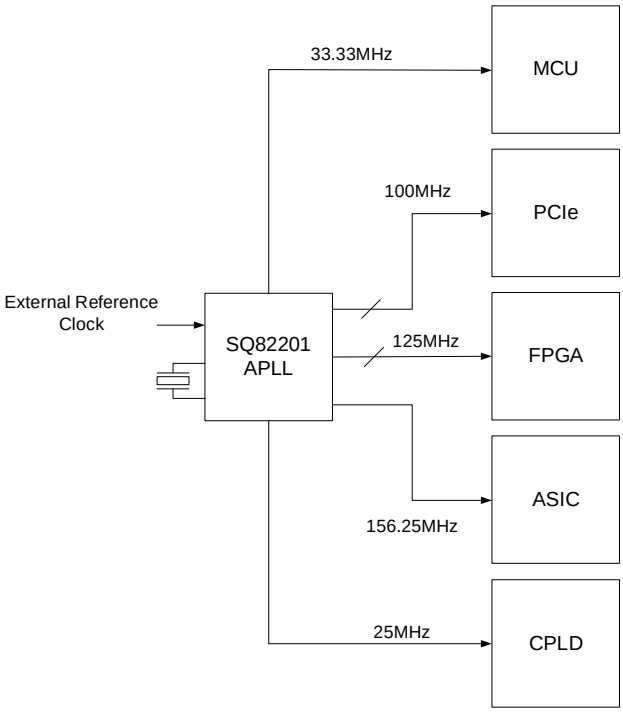
Clock Generator (Temp Range: -40°C to 85°C)

Part Number	Description	Outputs	Output Type	Output Freq Range (MHz)	Input Freq (MHz)	Inputs	Input Type	Output Banks	Core Voltage (V)	Integrated RMS Jitter (12KHz to 20MHz) (fs)	Package
SQ82201QHQ	Clock Generator	3 differential + 7 Single End	LVPECL/ LVCMOS	25/33.33/100/ 125/156.25	25	2	Crystal/ LVCMOS	5	3.3	<150	QFN6x6-40

Clock Buffer (Temp Range: -40°C to 85°C)

Part Number	Description	Outputs	Output Type	Output Freq Range (MHz)	Input Freq (MHz)	Inputs	Input Type	Core Voltage (V)	Additional Phase Jitter Typ RMS (fs)	Package
SQ82100EDQ	PCIe 1-6 Clock Buffer	20 differential	LP-HCSL	1~400	1~400	1	HCSL	3.3	PCIe Gen5 <16fs RMS DB2000QL <20fs RMS	AQFN6x6-80

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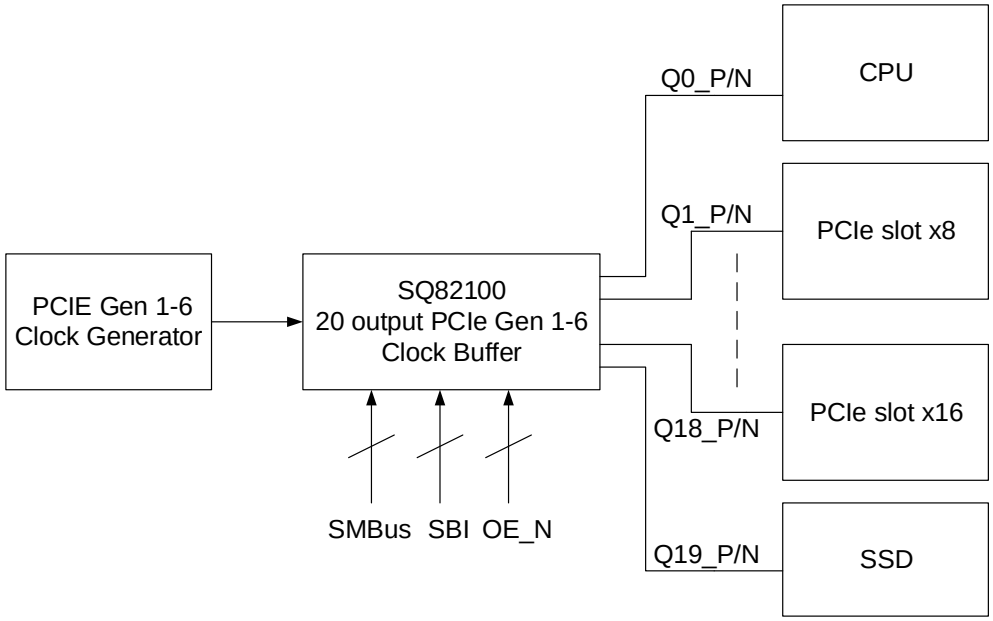
Features

- 7 Single-ended LVCMOS Outputs:
  - One Single-ended LVCMOS 33.33MHz CPU Clock
  - Six Single-ended LVCMOS Outputs from the Reference Clock
- 3 LVPECL Differential Output Pairs, 1 pair 156.25MHz, 2 pairs selectable 100MHz and 125MHz
- Selectable Input Source: External Crystal or external Single-ended Input Source
- 25MHz Crystal Oscillator Reference
- RMS Phase Jitter 0.127ps(Typical)@ 156.25MHz, Reference 25MHz Crystal (12kHz~20MHz)
- Power Supply Noise Rejection PSRR: -90dBc
- 3.3V Power Supply Voltage
- Ambient Operating Temperature: -40°C to 85°C
- Package: QFN6x6-40

Applications

- Wireless and Wired Infrastructure
- Server, Storage and PC
- Medical Imaging
- Portable Test and Measurement

Back



Features

- Supports 3.3V Power Supplies
- Differential Additive Phase Jitter: PCIe Gen6 <10fs RMS
- Differential Additive Phase Jitter: PCIe Gen5 <20fs RMS
- Differential Additive Phase Jitter: DB2000QL <30fs RMS
- Differential Additive Phase Jitter: PCIe Gen4 <30fs RMS
- Fully Compliant with Intel DB2000QL Specifications
- 20 Low-Power Push-Pull LP-HCSL PCIe Outputs
- Supports Clock Frequencies from 1MHz to 400MHz
- Maximum Output-to-Output Skew: 50ps
- Embedded Low Dropout (LDO) Voltage Regulator
- Embedded Series Termination Resistors for 85Ω Differential Transmission Line
- Power Down Tolerant (PDT) On Digital Input Pins
- Transparent for Spread Spectrum Clock
- Eight OE Pins
- SMBus Interface
- Side-Band Interface (SBI)
- Package: AQFN6×6-80

Applications

- Servers
- Computing
- PCI Express (PCIe 1.0 ~ 6.0)

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Digital Power Controller (Temp Range: -40℃ to 125℃)

Part Number	Core	Supply Range(V)	Frequency (MHz)	Flash(kB)	RAM(kB)	Communication	Feature	Package
SQ51103QHQ	Cortex-M4F	3-3.6	62.5	64+64	16	I2C X1, UART X1	digital power controller, integrated AFE, Digital PID, HRPWM	QFN6x6-40
SQ51102QHQ	Cortex-M4F	3-3.6	62.5	64+64	16	I2C X1, UART X1	digital power controller, integrated AFE, Digital PID, HRPWM, Integrated OPAMP	QFN6x6-40
SQ51100QCQ	Cortex-M4F	3-3.6	62.5	64+64	16	I2C X1, UART X1	digital power controller, integrated AFE, Digital PID, HRPWM	QFN4x4-24

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Features

Front End
- Error Analog to Digital Converter (EADC)
  - Error Analog to Digital Converter (EADC)
  - 15.625Msps Sample Rate
  - 1mV/LSB Resolution
  - Adaptive Sample Trigger Positioning
  - Flexible Sample Trigger (Single, Multi-sample, Oversample)
  - Hardware-Based Averaging (up to 8x)
- 11bit High Accuracy and High Speed Digital-to-Analog Converter(DAC)

Digital Filter
- Digital PID-Based Hardware (2-Pole/2-Zero)
- Non-Linear Control
- Support Anti-saturation by Hardware
- Input Voltage Feed Forward Control

DPWM Module
- 4x DPWM Modules, 8x Outputs
- Up to 8 High Resolution Outputs
  - 250ps Pulse Width Resolution
  - 4ns Frequency Resolution
- Configurable Modulation Methods
  - Pulse Width Modulation
  - Frequency Modulation
  - Phase Shift Modulation
- Automatic Mode Switching by Hardware
- Independent or Synchronization Mode
  - Independent Mode
  - Synchronized: Between DPWM Module or Other Devices
- Multi Counter Reset Sources
- Synchronous Rectification (SR) Soft ON/OFF
- Multi Burst Mode Based Hardware
- DPWM Output Synchronous ON/OFF Control
- Flexible Sample Trigger for Front End
- Multi Preload and Shadow Registers for Firmware Synchronous Control
- Up to 2MHz Switching Frequency

Fault Protection
- 7x Analog and 3x Digital Comparators
- Flexible Programmable Blanking Time
- Cycle-by-Cycle Current Limiting with Duty Match
- External Fault Inputs

12 bit, 1Msps General Purpose ADC
- 7x External Channels
- Internal Temperature Sensor
- Integration 10uA PMBus Address Current Source
- Integration 10/20/30/40uA NTC Current Source

62.5MHz, 32-Bit Cortex-M4F Processor
- Integrated FPU
- Memories
  - 64KB Program Flash
  - 64KB Data Flash with ECC
  - 8KB Boot Flash
  - 16KB RAM with ECC
  - 4KB Instruction & Data SRAM
- SWD Debug Support

Communication Peripherals
- I2C/PMBUS with Master or Slave Mode
- UART with Auto Baud Rate Adjustment

Timer
- 4x 32bit General Purpose Timers
- 1x Capture
- 2x General Purpose PWM Outputs

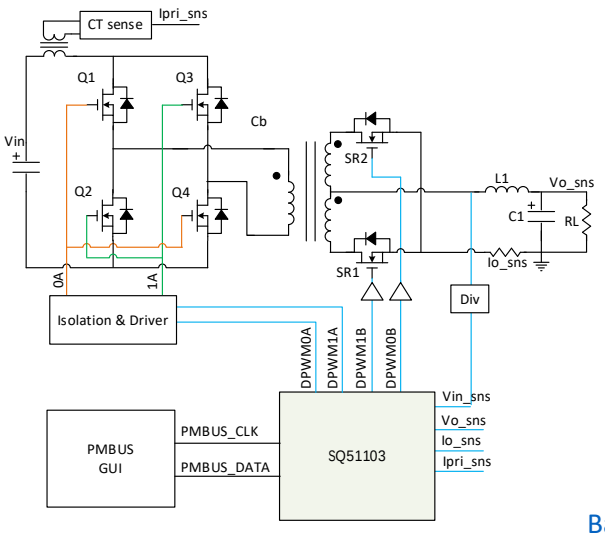
Power Control Features
- Voltage Control, Average Current Control and Peak Current Mode Control
- High Efficiency and Light Load Management
- Constant Voltage Constant Current
- Support Compensator Output (Vc) Soft Start
- Primary Side Voltage Sensing
- Pre-bias Load Soft Start

40-PIN QFN Packages

Operating Temperature: –40°C to 125°C

Applications

- Digital Controller for PFC, LLC, HSFB and PSFB Topology



Back

Features

Front End
- Error Analog to Digital Converter (EADC)
  - Error Analog to Digital Converter (EADC)
  - 15.625Msps Sample Rate
  - 1mV/LSB Resolution
  - Adaptive Sample Trigger Positioning
  - Flexible Sample Trigger (Single, Multi-sample, Oversample)
  - Hardware-Based Averaging (up to 8x)
- 11bit High Accuracy and High Speed Digital-to-Analog Converter(DAC)

Digital Filter
- Digital PID-Based Hardware (2-Pole/2-Zero)
- Non-Linear Control
- Hardware Support for Anti-Saturation
- Input Voltage Feed Forward Control

DPWM Module
- 4x DPWM Modules, 8x Outputs
- Up to 8 High Resolution Outputs
  - 250ps Pulse Width Resolution
  - 4ns Frequency Resolution
- Configurable Modulation Methods
  - Pulse Width Modulation
  - Frequency Modulation
  - Phase Shift Modulation
- Automatic Mode Switching via Hardware
- Independent or Synchronization Mode
  - Independent Mode
  - Synchronized: Between DPWM Module or Other Devices
- Multi Counter Reset Sources
- Synchronous Rectification (SR) Soft ON/OFF
- Multi Burst Mode Based Hardware
- DPWM Output Synchronous ON/OFF Control
- Flexible Sample Trigger for Front End
- Multi Preload and Shadow Registers for Firmware Synchronous Control
- Up to 2MHz Switching Frequency

Fault Protection
- 8x Analog and 3x Digital Comparators
- Flexible Programmable Blanking Time
- Cycle-by-Cycle Current Limiting with Duty Match
- External Fault Inputs

12 bit, 1Msps General Purpose ADC
- 9x External Channels
- Internal Temperature Sensor
- Integration 10uA PMBus Address Current Source
- Integration 10/20/30/40uA NTC Current Source

62.5MHz, 32-Bit Cortex-M4F Processor
- Integrated FPU
- Memories
  - 64KB Program Flash
  - 64KB Data Flash with ECC
  - 8KB Boot Flash
  - 16KB RAM with ECC
  - 4KB Instruction & Data SRAM
- SWD Debug Support

Communication Peripherals
- I2C/PMBUS with Master or Target Mode
- UART with Auto Baud Rate Adjustment

Timer
- 4x 32bit General Purpose Timers
- 2x Capture
- 2x General Purpose PWM Outputs

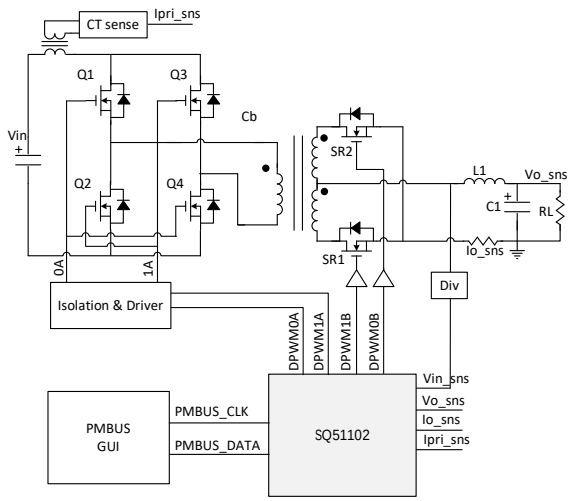
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- Voltage Control, Average Current Control and Peak Current Mode Control
- High Efficiency and Light Load Management
- Constant Voltage Constant Current
- Support Compensator Output (Vc) Soft Start
- Primary Side Voltage Sensing
- Pre-bias Load Soft Start

40-PIN QFN Packages

Operating Temperature: –40°C to 125°C

Applications

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Back

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Front End
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- Non-Linear Control
- Hardware Support for Anti-Saturation
- Input Voltage Feed-Forward Control

DPWM Module
- 3x DPWM Modules, 6x Outputs
- Up to Eight High Resolution Outputs
  - 250ps Pulse Width Resolution
  - 4ns Frequency Resolution
- Configurable Modulation Methods Pulse Width Modulation
  - Pulse Width Modulation
  - Frequency Modulation
  - Phase Shift Modulation
- Automatic Mode Switching via Hardware
- Independent or Synchronization Mode
  - Independent Mode
  - Synchronized: Between DPWM Modules or Other Devices
- Multi-Counter Reset Sources
- Synchronous Rectification (SR) Soft ON/OFF
- Multi-Burst Mode via Hardware
- DPWM Output Synchronous ON/OFF Control
- Flexible Sample Trigger for Front End
- Multiple Preload and Shadow Registers for Firmware Synchronous Control
- Up to 2MHz Switching Frequency

Fault Protection
- 8x Analog and 3x Digital Comparators
- Flexible Programmable Blanking Time
- Cycle-by-Cycle Current Limiting with Duty Match
- External Fault Inputs

12 bit, 1Msps General Purpose ADC
- 5x External Channels
- Internal Temperature Sensor
- Integrated 10µA PMBus Address Current Source
- Integrated 10/20/30/40µA NTC Current Source

62.5MHz, 32-Bit Cortex-M4F Processor
- Integrated FPU
- Memories
  - 64KB Program Flash
  - 64KB Data Flash with ECC
  - 8KB Boot Flash
  - 16KB RAM with ECC
  - 4KB Instruction and Data SRAM
- SWD Debug Support

Communication Peripherals
- I2C/PMBUS with Peripheral or Target Mode
- UART with Auto Baud Rate Adjustment

Timer
- 4x 32-bit General Purpose Timers
- 1x Capture
- 2x General Purpose PWM Outputs

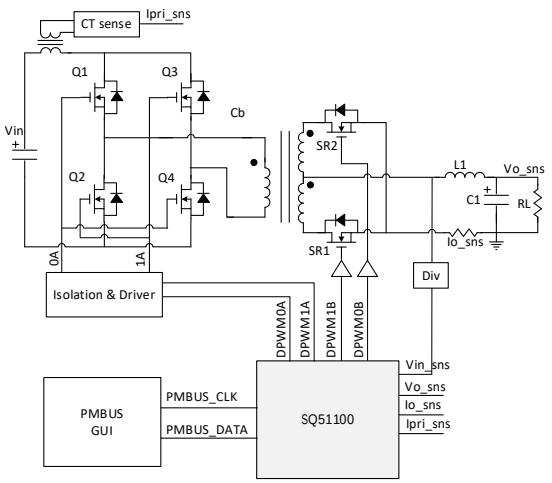
Power Control Features
- Voltage Control, Average Current Control, and Peak Current Mode Control
- High Efficiency and Light Load Management
- Constant Voltage Constant Current (CVCC)
- Support for Compensator Output (Vc) Soft-Start
- Primary Side Voltage Sensing
- Pre-Bias Load Soft-Start

24-PIN QFN Packages

Operating Temperature: –40°C to 125°C

Applications

- Digital Controller for PFC, LLC, HSFB and PSFB Topologies



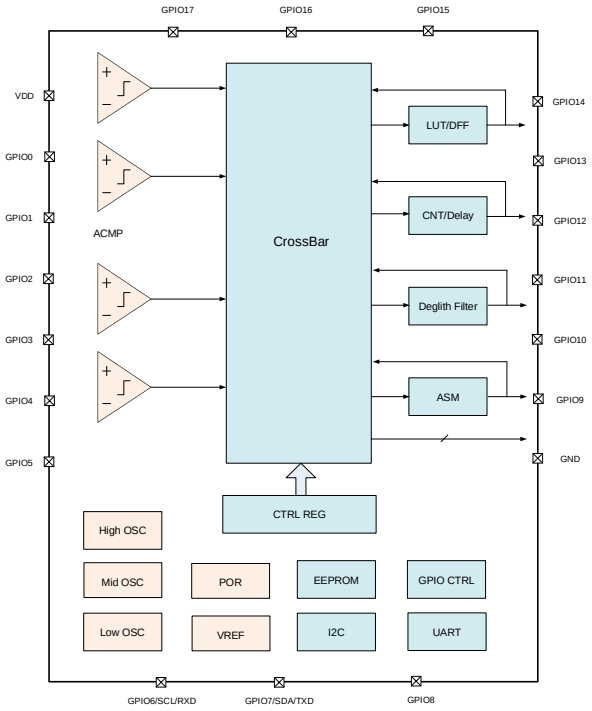
Back

Part Number	I/O Pins	LUTs	DFF/ Latches	CNT/ Delays	ASM	Interface	RC Oscillators	Analog Glitch Filters	Analog ACMPs	VDD	Special Features	Package
SY33519VYQ	18	18	4	9	Y	I2C/UART	25KHz/2MHz/ 25MHz	2	4	3.3V/5V	/	QFN2×3-20

SY33519VYQ - Mixed-signal Programmable Logic Device

Features

- 18 General-Purpose I/O (GPIO) Pins
- Nine 2-bit LUTs
- Nine 3-bit LUTs
- One 4-bit LUT
- Four DFF/Latches
- Nine CNT/Delays: Two for 16-bit CNT/Delays, Seven for 8-bit CNT/Delays
- Two Analog Glitch Filters
- One Asynchronous State Machine (ASM)
- Four Analog Comparators (ACMP)
- Embedded Crossbar for Application Flexibility
- On-Chip Voltage References (Vref)
- On-Chip RC Oscillators: 25kHz, 2MHz, 25MHz
- Serial Communication Interface by I2C or UART
- 20-Pin QFN (2×3×0.55mm) Package
- MSL Rating: MSL1



Applications

- Computers and Servers
- PC Peripherals
- Smart Phone
- Handheld Terminals
- Consumer Electronics

Back

Part Number	Application	Channels	Direction	V_{RWM} (V)	C_J (pF)	I_{PP} (A)	P_{PK} (W)	Package
SYT01M12DWC	12V Low Speed Interface	1	Bi	12	4	4	90	DFN1.0×0.6-2
SYT01M12DXC	12V Low Speed Interface	1	Bi	12	4	4	90	DFN0.6×0.3-2
SYT01L03DWC	3.3V High Speed Interface	1	Bi	3.3	1	12	120	DFN1.0×0.6-2
SYT01L03DXC	3.3V High Speed Interface	1	Bi	3.3	1	12	120	DFN0.6×0.3-2
SYT01N03DXC	3.3V Low Speed Interface	1	Bi	3.3	27	15	140	DFN0.6×0.3-2
SYT01A05DXC	5V High Speed Interface, USB-C	1	Bi	5	0.15	4	55	DFN0.6×0.3-2
SYT01N05ANC	Audio/Key	1	Bi	5	30	12	130	SOD523
SYT01N03ANC	Audio/Key	1	Bi	3.3	27	15	140	SOD523
SYT01N03DWC	Audio/Key	1	Bi	3.3	27	15	140	DFN1.0×0.6-2
SYT11N05DWD	Audio/Key	1	Bi	5	23	10	90	DFN1.0×0.6-2
SYT11N05DXD	Audio/Key	1	Bi	5	23	10	90	DFN0.6×0.3-2
SYT21N05DWD	Audio/Key	1	Bi	5	45	20	180	DFN1.0×0.6-2
SYT41N05DWD	Audio/Key	1	Bi	5	90	35	350	DFN1.0×0.6-2
SYT11M05DWD	Audio/Key	1	Bi	5	14	9	75	DFN1.0×0.6-2
SYT11M05DXD	Audio/Key	1	Bi	5	14	9	75	DFN0.6×0.3-2
SYT21M05DWD	Audio/Key	1	Bi	5	15	7	65	DFN1.0×0.6-2
SYT21M05DXD	Audio/Key	1	Bi	5	15	7	65	DFN0.6×0.3-2
SYT11M03DWD	Audio/Key	1	Bi	3.3	17	10	65	DFN1.0×0.6-2
SYT11M03DXD	Audio/Key	1	Bi	3.3	17	10	65	DFN0.6×0.3-2
SYT16S03DVC	HDMI/USB	4	Bi	3.3	0.25	3	50	DFN2.5×1.0-10
SYT46S05DVD	HDMI/USB	4	Bi	5	0.5	4.5	45	DFN2.5×1.0-10
SYT21S05DWC	HDMI/USB	1	Bi	5	0.5	4.5	45	DFN1.0×0.6-2
SYT21S05DXD	HDMI/USB	1	Bi	5	0.5	4.5	45	DFN0.6×0.3-2
SYT26S05DVC	HDMI/USB	4	Uni	5	0.5	6	42	DFN2.5×1.0-10
SYT46S03DVD	HDMI/USB	4	Bi	3.3	0.4	7	56	DFN2.5×1.0-10

Back

Part Number	Application	Channels	Direction	V_{RWM} (V)	C_J (pF)	I_{PP} (A)	P_{PK} (W)	Package
SYT06U05DVC	HDMI1.4	4	Uni	5	0.6	3	36	DFN2.5×1.0-10
SYT36A03DVD	HDMI2.1	4	Uni	3.3	0.25	7	70	DFN2.5×1.0-10
SYT26AB3DVD	HDMI2.1	4	Bi	3.3	0.18	4.5	30	DFN2.5×1.0-10
SYT13L03AOC	high-speed & general IO ESD protection	2	Bi	3.6	1	12	120	SOT-23
SYT36S03DVC	Low Cap ESD Array for High-speed Interface	4	Uni	3.3	0.6	12	60	DFN2.5×1.0-10
SYT11L05DWC	Normal Cap ESD for General I/O	1	Bi	5	2	10	100	DFN1.0×0.6-2
SYT11L05DXC	Normal Cap ESD for General I/O	1	Bi	5	2	10	100	DFN0.6×0.3-2
SYT21A05DWD	Ultra-low Cap ESD for High-speed Interface	1	Bi	5	0.28	10	65	DFN1.0×0.6-2
SYT01N24DWC	USB Vbus, Smart Phone	1	Bi	24	12	4	180	DFN1.0×0.6-2
SYT01N12DWC	USB Vbus, Smart Phone	1	Bi	12	25	7.5	210	DFN1.0×0.6-2
SYT01N15DWD	USB Vbus, Smart Phone	1	Bi	15	18	6	180	DFN1.0×0.6-2
SYT05S05ABC	USB/VGA/HDMI	4	Uni	5	1.2	8	100	SOT23-6
SYT06U05ABC	USB/VGA/HDMI	4	Uni	5	0.6	3	36	SOT23-6
SYT04L05AWC	USB2.0	2	Uni	5	1.2	7.5	100	SOT-143
SYT13L05AOC	USB2.0	2	Bi	5	3.5	2	24	SOT-23
SYT43L05SMD	USB2.0	2	Bi	5	2	10	100	DFN1.0×0.6-3
SYT02U05DWC	USB2.0	1	Uni	5	0.5	4	50	DFN1.0×0.6-2
SYT32S05DWD	USB2.0	1	Uni	5	0.85	14	70	DFN1.0×0.6-2
SYT13U05AOC	USB2.0	2	Uni	5	0.6	4	50	SOT-23
SYT13S03SMD	USB2.0	2	Uni	3.3	0.42	7	40	DFN1.0×0.6-3
SYT03S05SHC	USB2.0	2	Uni	5	0.6	4	50	DFN1.2×1.0-6
SYT03S05SIC	USB2.0	2	Uni	5	0.6	4	50	DFN1.6×1.0-6
SYT07S05SBC	USB3.x	6	Uni	5	0.3	3	45	DFN4.1×2.0-10

Back

Part Number	Application	Channels	Direction	V_{RWM} (V)	C_J (pF)	I_{PP} (A)	P_{PK} (W)	Package
SYT18A03SFC	USB3.x	8	Uni	3.3	0.42	6	30	DFN3.8×1.0-9
SYT21A05DXC	USB3.x,USB Type-C	1	Bi	5	0.2	9	55	DFN0.6×0.3-2
SYT26A03DVC	USB3.x,USB Type-C	4	Uni	3.3	0.38	10	55	DFN2.5×1.0-10
SYT26A05DVD	USB3.x,USB Type-C	4	Uni	5	0.38	10	55	DFN2.5×1.0-10
SYT31S05DWD	USB3.x,USB2.0	1	Bi	5	0.45	15	100	DFN1.0×0.6-2
SYT31A01DXD	USB4,TB4,USB TYPE-C	1	Bi	1.5	0.17	6	24	DFN0.6×0.3-2
SYT41A01DXD	USB4,TB4,USB TYPE-C	1	Bi	1	0.14	3	15	DFN0.6×0.3-2
SYT21S24DXC	USB-C/RF Antenna	2	Bi	24.5	0.2	9	50	DFN0.6×0.3-2
SYT06L05ABC	VGA/RJ45	4	Uni	5	3.5	20	350	SOT23-6
SYT26AU3DVD	USB3.x TTPE-C / HDMI2.1	4	Uni	3.3	0.28	4.0	20	DFN2.5×1.0-10
SYT21M05ANO	Audio/Key	1	Bi	5	15	7	65	SOD-523
SYT22U05DXD	HDMI/USB	1	Uni	5	0.5	6	42	DFN0.6×0.3-2
SYT11L03DXD	3.3V High Speed Interface	1	Bi	3.3	1.2	11	80	DFN0.6×0.3-2
SYT32L15DWD	USB2.0 & USB Type-C CC/SBU	1	Uni	15	1.5	30	210	DFN1.0×0.6-2
SYT56S03DVD	HDMI/USB	4	Bi	3.3	0.4	6	50	DFN2.5×1.0-10
SYT21N03DWD	Audio/Key	1	Bi	3.3	45	28	190	DFN1.0×0.6-2

EMI Filter

Part Number	Application	Channels	Direction	V_{RWM} (V)	fc(GHz)	IL	Atten	Package
SYE40C02SSC	MIPI/HDMI	4	Uni	5	4	-0.33dB@10MHz	-35dB@1.5GHz	DFN2.5×2.0-10
SYE1104TXD	LCD/Camera	4	Uni	5	0.25	-6dB@10MHz	-20dB@0.8GHz	DFN1.6×1.0-8
SYE1106TLD	LCD/Camera	6	Uni	5	0.25	-6dB@10MHz	-20dB@0.8GHz	DFN2.5×1.35-12
SYE1108TKD	LCD/Camera	8	Uni	5	0.25	-6dB@10MHz	-20dB@0.8GHz	DFN3.3×1.35-16

Back

Part Number	Application	Channels	Direction	V_{RWM} (V)	C_J (pF)	I_{PP} (A)	P_{PK} (W)	Package
SYS02H12AMC	DC IN	1	Uni	12	150	20	500	SOD323
SYS01V05AMC	DC IN	1	Bi	5	200	24	350	SOD323
SYS02V05AMC	DC IN	1	Uni	5	350	40	500	SOD323
SYS03H12AOC	DC IN	2	Uni	12	140	20	500	SOT-23
SYS11U24AMC	RJ45	1	Bi	24	0.6	6	550	SOD323
SYS11U15AMC	RJ45	1	Bi	15	0.8	10	550	SOD323
SYS11U12AMC	RJ45	1	Bi	12	0.6	12	550	SOD323
SYS11U05AMC	RJ45	1	Bi	5	0.6	20	550	SOD323
SYS11U03AMC	RJ45	1	Bi	3.3	0.6	25	550	SOD323
SYS11L03SEC	RJ45	4	Uni	3.3	3.5	25	450	DFN2.5×2.5-10
SYS14L02DHC	RJ45	4	Uni	2.5	3.5	40	1000	DFN3.0×2.0-10
SYS42L02FAC	RJ45	2	Bi	2.8	1.2	50	1000	SOP-8
SYS03N24AOC	RS232	2	Uni	24	120	8	300	SOT-23
SYS04M12THD	RS485	2	Uni	12	6	100	3000	DFN2.0×2.0-5
SYS02V12AMC	VBUS	1	Uni	12	400	42	1000	SOD323
SYS22X24TPD	VBUS	1	Uni	24	900	200	6400	DFN2.0×2.0-3
SYS12V20SLC	VBUS	1	Uni	20	210	25	850	DFN1.6×1.0-2
SYS12V12SLC	VBUS	1	Uni	12.5	400	52	1100	DFN1.6×1.0-2
SYS12V28SLD	VBUS	1	Uni	28	140	22	1000	DFN1.6×1.0-2
SYS12V36SLD	VBUS	1	Uni	36	95	17	900	DFN1.6x1.0-2

Back

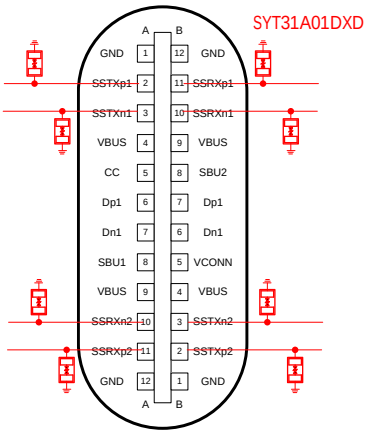
Part Number	Application	Channels	Direction	V_{RWM} (V)	C_J (pF)	I_{PP} (A)	P_{PK} (W)	Package
SYS12V48SLD	VBUS	1	Uni	48	60	12	750	DFN1.6×1.0-2
SYS12V05AMC	Vbus/Vbat	1	Uni	5.5	1100	100	1300	SOD-323
SYS12V05SLC	Vbus/Vbat	1	Uni	5	1100	100	1300	DFN1.6×1.0-2
SYS22V05SLC	Vbus/Vbat	1	Uni	5	2100	200	2100	DFN1.6×1.0-2
SYS22V04SLC	Vbus/Vbat	1	Uni	4.5	1100	240	3100	DFN1.6×1.0-2
SYS32V05SLD	Vbus/Vbat	1	Uni	5	600	100	800	DFN1.6×1.0-2
SYS02H24DWD	Vbus/Vbat	1	Uni	24	85	9	320	DFN1.0×0.6-2
SYS02H20DWC	Vbus/Vbat	1	Uni	20	85	12	450	DFN1.0×0.6-2
SYT02H05DWC	Vbus/Vbat	1	Uni	5	160	22	220	DFN1.0×0.6-2
SYS42V04SLD	Vbus/Vbat	1	Uni	4.8	1000	170	1600	DFN1.6×1.0-2
SYS42X12TPD	Vbus/Vbat	1	Uni	12	1000	135	2600	DFN2.0×2.0-3
SYS42V05SLD	Vbus/Vbat	1	Uni	5	1800	165	1900	DFN1.6×1.0-2
NEW SYS32X24TPD	VBUS	1	Uni	24	650	125	5400	DFN2.0×2.0-3
NEW SYS02VB3DWD	DC IN	1	Uni	3.3	450	75	600	DFN1.0×0.6-2

Back

SYT31A01DXD - Ultra low capacitance ESD for USB4.0/TB4.0 high speed data lines

Features

- IEC61000-4-2(ESD): ±15kV (Contact)
- IEC61000-4-5(Surge): 6A (8/20μs)
- Low clamping voltage: 4.8V @ TLP16A
  4V@ 6A(8/20us)
- Small capacitance: 0.17pf
- Small package: DFN0.6*0.3-2
- Pin compatible with: PESD5V0H1BRSF / AZ5B8S



SYT31A01DXD for USB4.0/TB4.0

Applications

- USB4.0/TB4.0 Tx/Rx high speed data lines
- PCIE4.0/5.0 Tx/Rx high speed data lines
- Target Customer: NB, SmartPhone, USB-C Hub

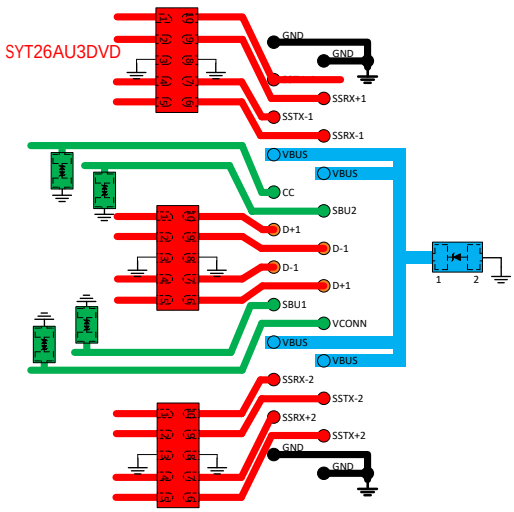
Benefits

- Ultra-low capacitance(0.17pF) for high-speed(20Gbps) signal integrity
- Low clamping voltage (4.8V@TLP 16A) for Sub-micro/Nano scale PHY IC

SYT26AU3DVD - 3.3V, Low capacitance ESD for USB3.x Type-C

Features

- IEC61000-4-2(ESD): ±15kV (Contact)
- IEC61000-4-5(Surge): 4A (8/20μs)
- Small capacitance: 0.28pf
- Package: DFN2.5*1.0-10
- Pin: AZ174-xxF/AZ176-xxF



SYT26AU3DVC For USB-C

Applications

- HDMI2.1 data lines
- USB3.x data lines
- Target Customer: NB, TV/STB/MNT

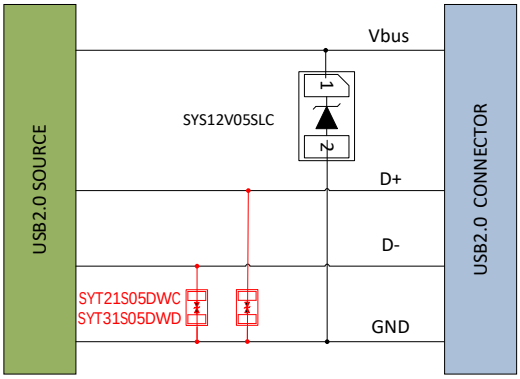
Benefits

- Low Clamping voltage features good ESD performance

Back

Features

- IEC61000-4-2(ESD) (Contact): ±30kV (SYT21S05DWC)
  ±25kV (SYT31S05DWD)
- IEC61000-4-5(Surge) (8/20μs): 4.5A (SYT21S05DWC)
  15A (SYT31S05DWD)
- Small capacitance: 0.5pf (SYT21S05DWC)
  0.45pf(SYT31S05DWD)
- Small package: DFN1.0*0.6-2
- Pin: PESD5V0F1BL/PESD5V0X1BL/RCLAMP0521PA



SYT21S05DWC/SYT31S05DWD
for USB2.0

Applications

- USB2.0/3.0 data lines
- HDMI1.4&2.0 speed data lines
- Target Customer: SmartPhone/PAD, PC, TV/STB/MNT

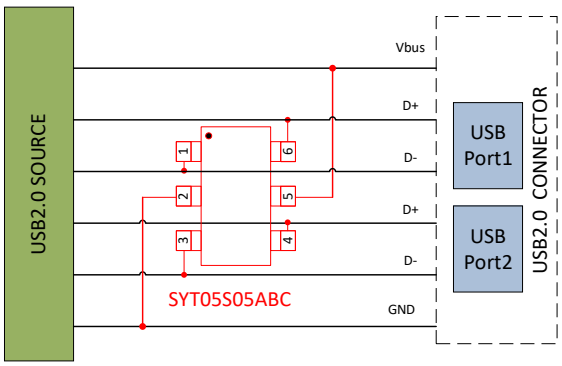
Benefits

- SYT21S05DWC: Worldwide lowest cost
- SYT31S05DWD: High performance with high IPP and low clamping

SYT05S05ABC - 5V, Low Capacitance TVS Protection

Features

- IEC61000-4-2(ESD) (Contact): ±30kV
- IEC61000-4-5(Surge) (8/20μs): 7.5A
- Low clamping voltage: 10.5V @ TLP16A
  11V@ 8A(8/20us)
- Small capacitance: 1.2pf
- Small package: SOT23-6
- Pin: AOZ8105CI/USBLC6-2SC6Y
  /RCLAMP0504PBTCT/SRV05-4HTG-D



SYT05S05ABC for USB2.0

Applications

- USB2.0 data lines
- VGA data lines
- Target Customer: PC, TV/STB/MNT

Benefits

- High surge IPP & Low clamping voltage feature good ESD protection performance

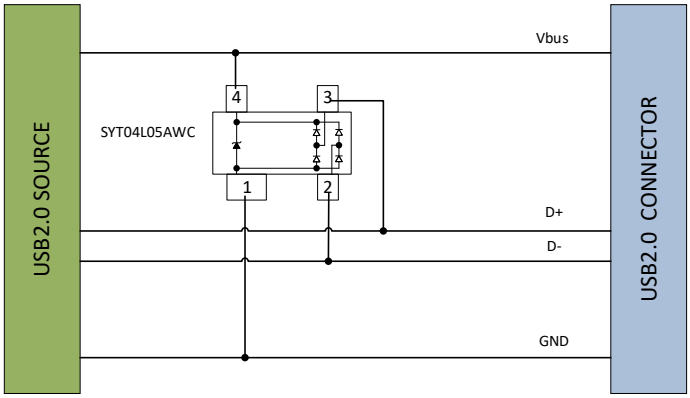
Back

Features

- IEC61000-4-2(ESD) (Contact): ±30kV
- IEC61000-4-5(Surge) (8/20μs): 7.5A
- Low clamping voltage: 10.5V @ TLP16A
  11V@ 8A(8/20us)
- Small capacitance: 1.2pf
- Small package: SOT143
- Pin: AZ1015-02N / PRTR5V0U2X /
  TPD2E001DZD / SP0503BAHTG

Applications

- USB2.0 data lines
- Target Customer: PC, TV/STB/MNT



SYT04L05AWC for USB2.0

Benefits

- High surge IPP & Low clamping voltage feature good ESD protection performance

SYT01L03DWC/SYT01N03DWC

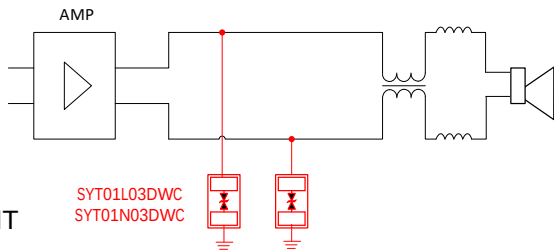
- 3.3V, Low capacitance ESD for general speed lines

Features

- IEC61000-4-2(ESD) (Contact): ±30kV
- IEC61000-4-5(Surge) (8/20μs): 12A (SYT01L03DWC)
  15A (SYT01N03DWC)
- Small capacitance: 2pF (SYT01L03DWC)
  27pF (SYT01N03DWC)
- Small package: DFN1.0*0.6-2
- Pin: PESD3V3U1UL/ PESD3V3L1UL

Applications

- Audio/Speaker
- Keys, LED, General I/O ESD protection
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT



SYT01L03DWC/SYT01N03DWC for Audio

Benefits

- Low cost
- Low Clamping voltage features good ESD performance

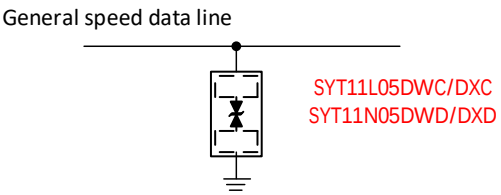
Back

SYT11L05DWC/SYT11L05DXC & SYT11N05DWD/SYT11N05DXD

- 5V, Low capacitance ESD for general speed lines

Features

- IEC61000-4-2(ESD) (Contact): ±30kV
- IEC61000-4-5(Surge) (8/20μs): 10A (SYT11L05DWC)
  10A (SYT11N05DWD)
- Small capacitance: 2pf (SYT11L05DWC)
  23pf (SYT11N05DWD)
- Small package: DFN1.0*0.6-2/DFN0.6*0.3-2
- Pin: PESD5V0V1BL/ AZ5725-01F



SYT11L05 & SYT11N05
for General speed data line

Applications

- General speed data line
- Audio/Speaker, Keys, LED ESD protection
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT

Benefits

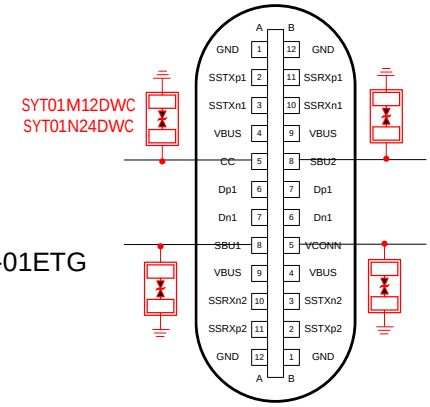
- Low cost
- Low Clamping voltage features good ESD performance

SYT01M12DWC/SYT01N24DWC

- 12V/24V, Low capacitance ESD for general speed lines

Features

- IEC61000-4-2(ESD) (Contact): ±30kV
- IEC61000-4-5(Surge) (8/20μs): 4A (SYT01M12DWC)
  4A (SYT01N24DWC)
- Small capacitance: 4pf (SYT01M12DWC)
  12pf (SYT01N24DWC)
- Small package: DFN1.0*0.6-2
- Pin: PESDNC2FD12VB/AZ4212-01F, PESD24VS1UL/ SPHV24-01ETG



SYT01M12DWC/SYT01N24DWC
for USB-C

Applications

- CC/SBU datalines
- RS232
- 12V or below VBUS ESD protection (SYT01M12DWC)
- 24V or below VBUS ESD protection (SYT01N24DWC)
- Target Customer: NB, SmartPhone, USB-C Hub

Benefits

- Low cost
- Low Clamping voltage features good ESD performance

Back

SYT46S05DVD/SYT46S03DVD

- 5V / 3.3V, Low capacitance ESD for HDMI2.0

Features

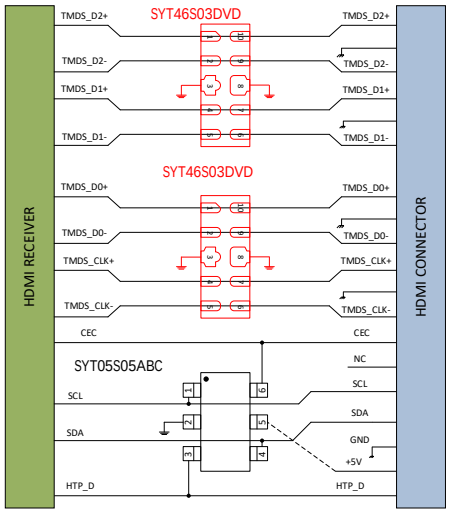
- IEC61000-4-2(ESD): ±30kV (Contact)
- IEC61000-4-5(Surge): 4.5A (SYT46S05DVD)
  6A (SYT46S03DVD)
- Small capacitance: 0.5pF (SYT46S05DVD)
  0.4pF (SYT46S03DVD)
- Package: DFN2.5*1.0-10
- Pin: PUSB3F96 / AZ1043-04F / AZ1045-04F / Rclamp0524

Applications

- HDMI1.4&2.0 high speed data lines
- Target Customer: NB, TV/STB/MNT

Benefits

- Low cost
- Low Clamping voltage features good ESD performance



SYT46S03DVD For HDMI2.0

SYT26AB3DVD/SYT36A03DVD

- Low capacitance ESD for HDMI2.1

Features

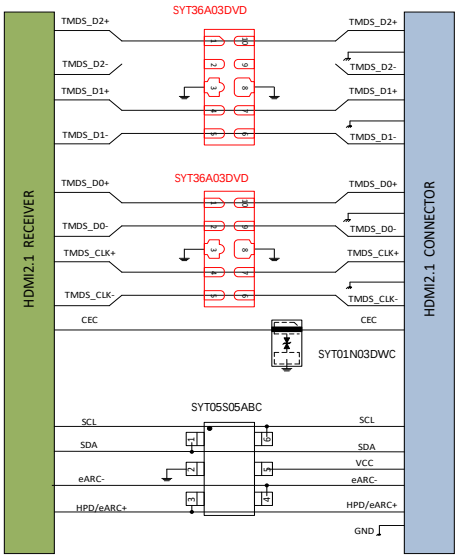
- IEC61000-4-2(ESD): ±15kV (Contact)
- IEC61000-4-5(Surge): 4.5A(SYT26AB3DVD)
  7A (SYT36A03DVD)
- Small capacitance: 0.18pF(SYT26AB3DVD)
  0.35pF(SYT36A03DVD)
- Package: DFN2.5*1.0-10
- Pin: PHDMI2AB4 / PUSB3AB4 / AZ176S / AZ1143-04F

Applications

- HDMI2.1 high speed data lines
- Target Customer: NB, TV/STB/MNT

Benefits

- Low Clamping voltage features good ESD performance
- Ultra low capacitance features good signal integrity



SYT36A03DVD For HDMI2.1

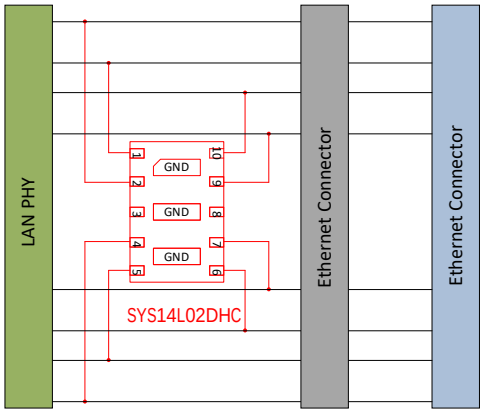
Back

SYS14L02DHC

- 2.5V, Low Capacitance ESD/Surge Protection for Gigabit Ethernet Interfaces

Features

- IEC61000-4-2(ESD): ±30kV (Contact)
- IEC61000-4-5(Surge): 40A (8/20μs)
- Small capacitance: 3pf
- Package: DFN3.0*2.0-10
- Pin: RCLAMP2574N/Rclamp3374N/AZ3125-08AF/Z3133-08F



SYS14L02DHC for 1000M Ethernet

Applications

- 10M/100M/1000M Ethernet
- Target Customer: PC/NB, Router&Swith,RJ45

Benefits

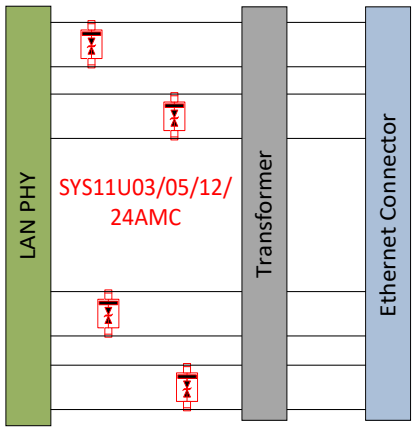
- Low clamping voltage &high Surge IPP features good surge protection

SYS11U03/05/12/24AMC

- 3.3V/5V/12V/24V, Ultra-low Capacitance ESD/Surge Protection

Features

- IEC61000-4-2(ESD): ±30kV (Contact)
- IEC61000-4-5(Surge): 25A (8/20μs) /SYS11U03AMC
  20A (8/20μs) /SYS11U05AMC
  12A (8/20μs) /SYS11U12AMC
  6A (8/20μs) /SYS11U24AMC
- Full Vrwm series: 3.3V / SYS11U03AMC
  5V / SYS11U05AMC
  12V / SYS11U12AMC
  24V / SYS11U24AMC
- Small capacitance: 0.6pf
- Package: SOD-323
- Pin: SP4021-1FTG/LSBLC12CG/ESD7351HT1G/AZ1613-01L.R7G



SYS11U03/05/12/24AMC
for 1000M Ethernet

Applications

- 10M/100M/1000M Ethernet
- Target Customer: PC/NB, Router&Swith,RJ45

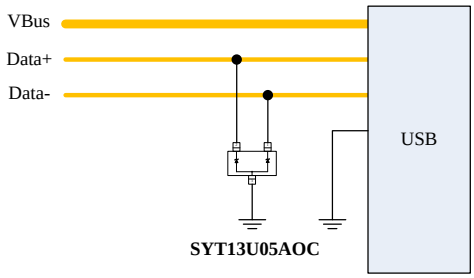
Benefits

- Low capacitance for good signal integrity
- Low clamping voltage &high Surge IPP features good surge protection

Back

Features

- IEC61000-4-2(ESD): ±25kV (Contact)
- IEC61000-4-5(Surge): 4A (8/20μs)
- Low clamping voltage: 14V @ TLP16A
- Small capacitance: 0.6pF
- Small package: SOT-23
- Pin: ESD5302F



Applications

- Computers and peripherals
- USB2.0

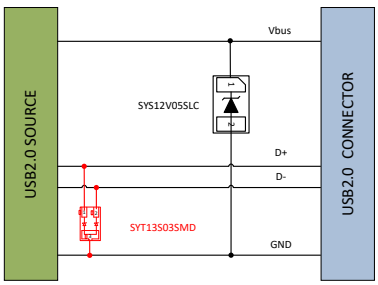
Benefits

- Low cost product with high ESD protect level &Low clamping voltage.

SYT13S03SMD - 3.3V, Ultra-Low capacitance ESD for high speed data lines

Features

- IEC61000-4-2(ESD): ±19kV (Contact)
- IEC61000-4-5(Surge): 7A (8/20μs)
- Low clamping voltage: 6V @ TLP16A
  5V@ 6A(8/20us)
- Small capacitance: 0.42pf
- Small package: DFN1.0*0.6-3
- Pin compatible with: AZ5313-02F



Applications

- USB2.0/3.0 data lines
- Target Customer: NB/PC

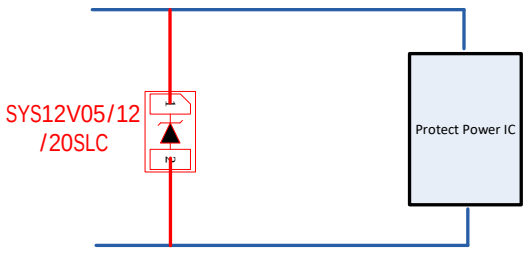
Benefits

- Low clamping voltage ,better ESD protection

Back

Features

- IEC61000-4-2(ESD): ±30kV (Contact)
- IEC61000-4-5(Surge): 100A (8/20μs) /SYS12V05SLC
  52A (8/20μs) /SYS12V12SLC
  25A (8/20μs)/SYS12V20SLC
- Full Vrwm series: 5V/SYS12V05SLC
  12V/SYS12V12SLC
  20V/SYS12V20SLC
- Package: DFN1.6*1.0-2
- Capacitance: 0.2pF
- Pin: AOZ8310DI/UCLAMPxx71P/AZ45xx-01F



SYS12V05SLC/SYS12V12SLC/SYS12V20SLC
for Vbus

Applications

- Type-C VBus
- VBAT Surge
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT

Benefits

- High surge IPP,Low clamping voltage
- Low cost

Back





Metering

Part Number	User MPU Core	Signal Processing Core	Vsupply (V)	Total Sensor Inputs	Internal Flash (KBytes)	Internal RAM (KBytes)	Slave Host Interface(s)	Package/Pins	Notes
MAX71071	None	None	See Datasheet	2	None	None	Proprietary	µSOP/10	ADC to be used with MAX78615+PPM or MAX78615+LMU
MAX78700*	None	None	See Datasheet	2	None	None	Proprietary	µSOP/10	ADC to be used with MAX78615+PPM or MAX78615+LMU
MAX71020A	None	CE	3.3	1V, 1I	OTP	1	SPI	TQFN/28 ,TSSOP/28	Single Phase
MAX78615+LMU	None	EMP	3.3	2V, 2I	8	1.5	I2C ,SPI ,UART	TQFN/24	Galvanic Isolation (Magnetic) Single Phase Chipset
MAX78615+PPM	None	EMP	3.3	3V, 3I	8	1.5	I2C ,SPI ,UART	TQFN/24	Galvanic Isolation (Magnetic), Polyphase Chipset
MAX78630+PPM	None	EMP	3.3	3V, 3I	8	1.5	I2C ,SPI ,UART	TQFN/32	Polyphase
78M6610+LMU	None	EMP	3.3	2V, 2I	8	1.5	I2C ,SPI ,UART	TQFN/24	Single Phase
78M6610+PSD	None	EMP	3.3	1V, 1I, 1T	8	1.5	I2C ,SPI ,UART	TQFN/24 ,TSSOP/16	Single Phase
78M6618	80515	CE	3.3	10 (Configurable)	128	4	SPI ,UART	SQFN/68	Single Phase, Polyphase Multi-Branch
78M6631*	80515	CE	3.3	3V, 3I	128	4	SPI ,UART	TQFN/56	Polyphase
78M6612*	80515	CE	3.3	2V, 2I	32	2	UART	LQFP/64 ,SQFN/68	Single Phase
78M6613*	80515	CE	3.3	2V, 2I	32	2	UART	SQFN/32	Single Phase
SY7T501FAC	None	None	3.3	2	None	None	UART	SOP8	Single Phase, Hard-coded IC
SY7T502FBC	None	None	3.3	2	None	None	UART	MSOP10	Single Phase, Hard-coded IC
SY7T609+R1	None	EMP	3.3	1V, 1I	8	1.5	SPI, UART	TSSOP/14	Single Phase
SY7T609+S1	None	EMP	3.3	1V, 1I	8	1.5	SPI, UART	TSSOP/14	Single Phase
SY7T609ET+R1	None	EMP	3.3	1V, 1I	8	1.5	SPI, UART	TSSOP/14	Single Phase
SY7T609EB+R1	None	EMP	3.3	1V, 1I	8	1.5	SPI, UART	TSSOP/14	Single Phase
SY7T610E+PSD/CK6T	None	EMP	3.3	1V, 1I	8	1.5	I2C,SPI, UART	TSSOP/16	Single Phase
SY7T610+OCPU/A0	None	EMP	3.3	1V, 1I	8	1.5	UART/SPI	TSSOP/16	Single Phase
SY7T611+U2	None	EMP	3.3	1V, 2I	8	1.5	UART/SPI	TQFN/24	Single Phase

Back

Part Number	User MPU Core	Signal Processing Core	Vsupply (V)	Total Sensor Inputs	Internal Flash (KBytes)	Internal RAM (KBytes)	Slave Host Interface(s)	Package/Pins	Notes
SY7T611+I2	None	EMP	3.3	1V, 2I	8	1.5	I2C/SPI	TQFN/24	Single Phase
SY7T612+U3	None	EMP	3.3	1V, 3I	8	1.5	UART/SPI	TQFN/32	Single Phase
SY7T612+I3	None	EMP	3.3	1V, 3I	8	1.5	I2C/SPI	TQFN/32	Single Phase
SY7T612+U4	None	EMP	3.3	1V, 4I	8	1.5	UART/SPI	TQFN/32	Single Phase
SY7T612+I4	None	EMP	3.3	1V, 4I	8	1.5	I2C/SPI	TQFN/32	Single Phase
SY7T612E+PPM/D05T	None	EMP	3.3	1V, 4I	8	1.5	I2C,SPI, UART	TQFN/32	Single Phase

* Not recommended for new design

Back

Part Number	Phase	Internal Flash (KBytes)	Internal RAM (KBytes)	Analog Input	Sensor Inputs (Current+Voltage)**	MCU MIPS	RTC	LCD Driver Pixels (Max)	GPIO	UARTs	SPI Port	Package/ Pins
71M6103	3P			Differential	1I	-	No	No	No	No	No	SO-8
71M6201	1P	-	-	Differential	1I	-	No	No	No	No	No	SO-8
71M6203	3P	-	-	Differential	1I	-	No	No	No	No	No	SO-8
71M6601	1P	-	-	Differential	1I	-	No	No	No	No	No	SO-8
71M6113	3P	-	-	Differential	1I	-	No	No	No	No	No	SO-8
71M6511*	1P	64	7	Single-end	2SE + 1	5	Yes	128 (32x4)	12	2	-	LQFP-64
71M6511H*	1P	64	7	Single-end	2SE + 1	5	Yes	128 (32x4)	12	2	-	LQFP-64
71M6513*	3P	64	7	Single-end	4SE + 3	5	Yes	168 (42x4)	22	2	-	LQFP-100
71M6513H *	3P	64	7	Single-end	4SE + 3	5	Yes	168 (42x4)	22	2	-	LQFP-100
71M6515H *	3P	64	7	Single-end	4SE + 3	5	Yes	-	8	1	-	LQFP-64
71M6521DE*	1P/2P	16	2	Single-end	2SE + 2	5	Yes	152(38x4)(41*4)	13(17)	2	-	LQFP-64 or QFN-68
71M6521FE*	1P/2P	32	2	Single-end	2SE + 2	5	Yes	152(38x4)(41*4)	13(17)	2	-	LQFP-64 or QFN-68
71M6531D	1P/2P	128	4	Single-end	2SE + 2	10	Yes	156 (39x4)	22	2	Yes	QFN-68
71M6531F	1P/2P	256	4	Single-end	2SE + 2	10	Yes	156 (39x4)	22	2	Yes	QFN-68
71M6532D	1P/2P	128	4	Differential	2D + 2	10	Yes	268 (67x4)	43	2	Yes	LQFP-100
71M6532F	1P/2P	256	4	Differential	2D + 2	10	Yes	268 (67x4)	43	2	Yes	LQFP-100
71M6533	3P	128	4	Differential	4D + 3	10	Yes	228 (57x4)	39	2	Yes	LQFP-100
71M6533H	3P	128	4	Differential	4D + 3	10	Yes	228 (57x4)	39	2	Yes	LQFP-100
71M6534	3P	128	4	Differential	4D + 3	10	Yes	300 (75x4)	52	2	Yes	LQFP-120
71M6534H	3P	256	4	Differential	4D + 3	10	Yes	300 (75x4)	52	2	Yes	LQFP-120
71M6541D	1P	32	3	Differential	2D + 1	5	Yes	222 (37x6)	32	2	Yes	LQFP-64

Back

Part Number	Phase	Internal Flash (KBytes)	Internal RAM (KBytes)	Analog Input	Sensor Inputs (Current+ Voltage)**	MCU MIPS	RTC	LCD Driver Pixels (Max)	GPIO	UARTs	SPI Port	Package/Pins
71M6541F	1P	64	5	Differential	2D + 1	5	Yes	222 (37x6)	32	2	Yes	LQFP-64
71M6541G	1P	128	5	Differential	2D + 1	5	Yes	222 (37x6)	32	2	Yes	LQFP-64
71M6541DT	1P	32	3	Differential	2D + 1	5	Yes	222 (37x6)	32	2	Yes	LQFP-64
71M6541FT	1P	64	5	Differential	2D + 1	5	Yes	222 (37x6)	32	2	Yes	LQFP-64
71M6541GT	1P	128	5	Differential	2D + 1	5	Yes	222 (37x6)	32	2	Yes	LQFP-64
71M6542F	1P/2P	64	5	Differential	2D + 2	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6542G	1P/2P	128	5	Differential	2D + 2	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6542FT	1P/2P	64	5	Differential	2D + 2	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6542GT	1P/2P	128	5	Differential	2D + 2	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6543F	3P	64	5	Differential	4D + 3	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6543G	3P	128	5	Differential	4D + 3	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6543FT	3P	64	5	Differential	4D + 3	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6543GT	3P	128	5	Differential	4D + 3	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6543HT	3P	64	5	Differential	4D + 3	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6543GHT	3P	128	5	Differential	4D + 3	5	Yes	336 (56x6)	51	2	Yes	LQFP-100
71M6545	3P	64	5	Differential	4D + 3	5	Yes	-	29	1	Yes	LQFP-64
71M6545H	3P	64	5	Differential	4D + 3	5	Yes	-	29	1	Yes	LQFP-64
71M6545T	3P	64	5	Differential	4D + 3	5	Yes	-	29	1	Yes	LQFP-64
71M6545HT	3P	64	5	Differential	4D + 3	5	Yes	-	29	1	Yes	LQFP-64
MAX71313L	1P/2P	64	8	Differential	2D + 2	10	Yes	156 (39x4) ,190 (38X5) ,222 (37x6)	39	3	Yes	LQFP-64
MAX71314L	1P/2P	128	8	Differential	2D + 2	10	Yes	156 (39x4) ,190 (38X5) ,222 (37x6)	39	3	Yes	LQFP-64

Back

Part Number	Phase	Internal Flash (KBytes)	Internal RAM (KBytes)	Analog Input	Sensor Inputs (Current+Voltage)**	MCU MIPS	RTC	LCD Driver Pixels (Max)	GPIO	UARTs	SPI Port	Package/ Pins
MAX71314C	1P	128	21	Differential	2D + 2	20	Yes	160 (40x4), 228 (6x38), 288 (8x36)	54	4	Yes	LQFP-100
MAX71315C	1P	256	21	Differential	2D + 2	20	Yes	160 (40x4), 228 (6x38), 288 (8x36)	54	4	Yes	LQFP-100
MAX71315S	1P	256	48	Differential	2D + 2	20	Yes	160 (40x4) ,228 (38x6) ,288 (36x8)	88	5	Yes	LQFP-128
MAX71316S	1P	512	48	Differential	2D + 2	20	Yes	160 (40x4) ,228 (38x6) ,288 (36x8)	88	5	Yes	LQFP-128
MAX71334C	3P	128	21	Differential	3D/1SE + 3SE	20	Yes	160 (40x4), 228 (6x38), 288 (8x36)	52	4	Yes	LQFP-100
MAX71335C	3P	256	21	Differential	3D/1SE + 3SE	20	Yes	160 (40x4), 228 (6x38), 288 (8x36)	52	4	Yes	LQFP-100
MAX71335S	3P	256	48	Differential	4D + 3	20	Yes	160 (40x4) ,228 (38x6) ,288 (36x8)	88	5	Yes	LQFP-128
MAX71336S	3P	512	48	Differential	4D + 3	20	Yes	160 (40x4) ,228 (38x6) ,288 (36x8)	88	5	Yes	LQFP-128
SY7M163G	1P	128	21	Differential	2D + 2	20	Yes	-	38	2	Yes	QFN-68
SY7M166H	3P	256	21	Differential	3D /1S+ 3	20	Yes	-	38	2	Yes	QFN-68
SY7T166G	3P	128	21	Differential	3D/1S + 3	20	Yes	-	38	2	Yes	QFN-68
SY7T166GH	3P	256	21	Differential	3D/1S + 3	20	Yes	-	38	2	Yes	QFN-68
SY7T108E	1P	32	8	Differential	2D +1SE	10	Yes	160 (40x4) ,228 (38x6) ,288 (36x8)	45	3	Yes	LQFP-64
SY7T108F	1P	64	8	Differential	2D +1SE	10	Yes	160 (40x4) ,228 (38x6) ,288 (36x8)	45	3	Yes	LQFP-64
SY7M007	3P	-	-	Differential	1U+1I	-	-	-	-	-	-	TQFN-16
SY7T625	3P		-	-	-	20	No	-	16	-	Yes	TQFN-32
SY7M213H	3P	256	24+4	Differential	3D/1SE+3SE	10	Yes	384(64x6) ,496 (62x8)	73	6	Yes	LQFP-100
SY7T213H	3P	256	24+4	Differential	3D/1SE+3SE	10	Yes	384(64x6) ,496 (62x8)	73	6	Yes	LQFP-100

* Not recommended for new design.

** D = Differential input, SE = Single End input, U = Voltage, I = Current

Back

Silergy designs mixed-signal integrated circuits used in energy, automation, networking, and secure access systems. Silergy Teridian's ICs connect customers' digital systems to the analog inputs found in utility metering, industrial automation, set top box, digital TV, voice over IP, electronic identity, and point-of-sale applications.