XTP2021

Ultra-Low Power Consumption LDO

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1μA, 300mA Low Dropout Voltage Linear Regulator

General Description

The XTP2021 is a ultra-low-power, low-step-down linear regulator that supports a wide voltage input of 1.8V to 5.5V and a standby current of 1μA, making these devices ideal for battery-powered systems that spend most of their time in standby mode, requiring minimal standby power consumption to extend the life of the device. Integrated enable control mode that reduces current to only 100nA(typical) when the low level enable signal is turned off.

XTP2021 only needs 1uF ceramic capacitor to work normally. The XTP2021 integrated short-circuit current limiting and thermal shutdown protection. And has automatic discharge function, can be disabled in the state of rapid discharge V_{OUT}.

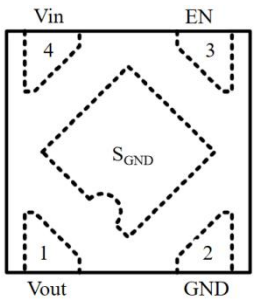
The operating temperature range is -40℃~ +85℃.

Features

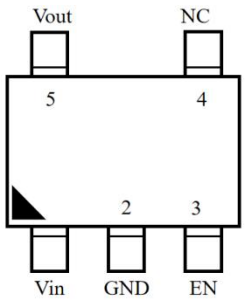
- 1μA Ground Current at no Load
- ±2% Output Accuracy
- 300mA Output Current
- 10nA Shutdown Current
- Input Voltage Range: 1.8V to 5.5V
- Dropout Voltage: 0.18V at 300mA
- Fixed Output Voltage 0.9V,1.05V,1.2V, 1.5V, 1.8V, 1.9V, 2.5V, 2.7V, 2.8V, 2.85V, 2.9V, 3.0V, 3.3V
- Stable with Ceramic or Tantalum Capacitor
- Current Limit Protection
- Over-Temperature Protection
- DFN1x1-4L，SOT-23-5 Packages Available

Applications

- Portable, Battery Powered Equipment
- Low Power Microcontrollers
- Laptop, Palmtops and PDAs
- Wireless Communication Equipment
- Audio/Video Equipment
- Car Navigation System



DFN1x1-4L



SOT-23-5

Ordering Information

MODEL	PACKAGE DESCRIPTION	ORDERING NUMBER	PACKAGE MARKING	PACKING OPTION
XTP2021-0.9	DFN1x1-4L	XTP2021-090AD1CT	1A YW	Tape and Reel, 12000
XTP2021-1.05	DFN1x1-4L	XTP2021-105AD1CT	1B YW	Tape and Reel, 12000
XTP2021-1.2	DFN1x1-4L	XTP2021-120AD1CT	1C YW	Tape and Reel, 12000
XTP2021-1.5	DFN1x1-4L	XTP2021-150AD1CT	1D YW	Tape and Reel, 12000
XTP2021-1.8	DFN1x1-4L	XTP2021-180AD1CT	1E YW	Tape and Reel, 12000
XTP2021-1.9	DFN1x1-4L	XTP2021-190AD1CT	1F YW	Tape and Reel, 12000
XTP2021-2.5	DFN1x1-4L	XTP2021-250AD1CT	1G YW	Tape and Reel, 12000
XTP2021-2.7	DFN1x1-4L	XTP2021-270AD1CT	1H YW	Tape and Reel, 12000
XTP2021-2.8	DFN1x1-4L	XTP2021-280AD1CT	1I YW	Tape and Reel, 12000
XTP2021-2.85	DFN1x1-4L	XTP2021-285AD1CT	1J YW	Tape and Reel, 12000
XTP2021-2.9	DFN1x1-4L	XTP2021-290AD1CT	1K YW	Tape and Reel, 12000
XTP2021-3.0	DFN1x1-4L	XTP2021-300AD1CT	1L YW	Tape and Reel, 12000
XTP2021-3.3	DFN1x1-4L	XTP2021-330AD1CT	1M YW	Tape and Reel, 12000
XTP2021-0.9	SOT-23-5	XTP2021-090AS2CT	P2021A YWZZX	Tape and Reel, 3000
XTP2021-1.05	SOT-23-5	XTP2021-105AS2CT	P2021B YWZZX	Tape and Reel, 3000
XTP2021-1.2	SOT-23-5	XTP2021-120AS2CT	P2021C YWZZX	Tape and Reel, 3000
XTP2021-1.5	SOT-23-5	XTP2021-150AS2CT	P2021D YWZZX	Tape and Reel, 3000
XTP2021-1.8	SOT-23-5	XTP2021-180AS2CT	P2021E YWZZX	Tape and Reel, 3000
XTP2021-1.9	SOT-23-5	XTP2021-190AS2CT	P2021F YWZZX	Tape and Reel, 3000
XTP2021-2.5	SOT-23-5	XTP2021-250AS2CT	P2021G YWZZX	Tape and Reel, 3000
XTP2021-2.7	SOT-23-5	XTP2021-270AS2CT	P2021H YWZZX	Tape and Reel, 3000
XTP2021-2.8	SOT-23-5	XTP2021-280AS2CT	P2021I YWZZX	Tape and Reel, 3000
XTP2021-2.85	SOT-23-5	XTP2021-285AS2CT	P2021J YWZZX	Tape and Reel, 3000
XTP2021-2.9	SOT-23-5	XTP2021-290AS2CT	P2021K YWZZX	Tape and Reel, 3000
XTP2021-3.0	SOT-23-5	XTP2021-300AS2CT	P2021L YWZZX	Tape and Reel, 3000
XTP2021-3.3	SOT-23-5	XTP2021-330AS2CT	P2021M YWZZX	Tape and Reel, 3000

MARKING INFORMATION

NOTE：
1X/P2021X：Device Code.
YW：Date Code.
ZZX：Inside Cod

Description of Functional Pins

Pin No DFN1x1-4L	Pin Name	Pin Function
1	V_{OUT}	Output of the Regulator
2	GND	Ground
3	EN	Enable Control Input
4	V_{IN}	Input of Supply Voltage
Exposed Pad	S_{GND}	Substrate of Chip. Leave floating or tie to GND

Pin No SOT-23-5L	Pin Name	Pin Function
1	V_{IN}	Input of Supply Voltage
2	GND	Ground
3	EN	Enable Control Input
4	NC	No internal connection
5	V_{OUT}	Output of the Regulator

Typical Application Circuit

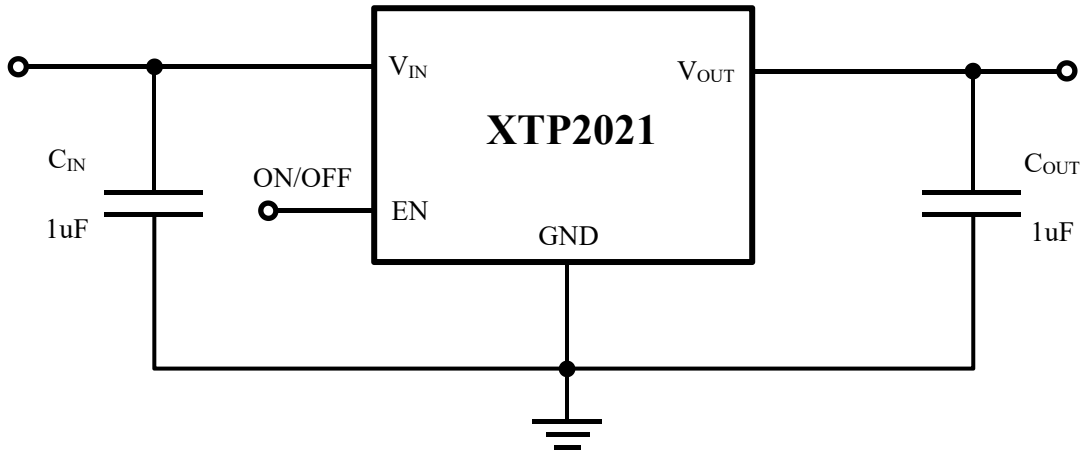


Figure 1: Application circuit of Fixed VOUT LDO with enable function