

Features

- Input Voltage up to 36V
- output current up to 200mA
- output Voltage 5 V
- 3 μ A Current at no Load
- $\pm 2\%$ Output Accuracy
- Compact package: SOT-223

Applications

- Hand-Held Instruments
- Battery Powered Consumer Products
- Test and Measurement Equipment
- Industrial Power Supplies

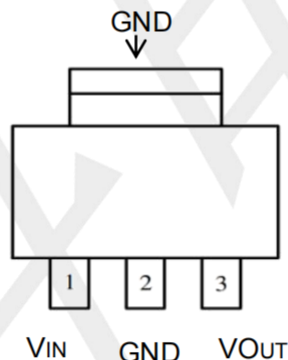
Description

The is micropower low dropout voltage regulators available in a wide variety of output voltages. These devices feature a very low quiescent current and thermal limiting protection are provided by the presence of a short circuit at the output and an internal thermal shutdown circuit.

Due to the low input-to-output voltage differential and bias current specifications, these devices are ideally suited for battery powered computer, consumer, and industrial equipment where an extension of useful battery life is desirable.

Reference: NCV8664ST50T3G

PIN CONFIGURATION



SOT-223
(TOP VIEW)

Pin Number	Pin Name	Pin Function
1	VIN	Input of Supply Voltage
2	GND	Ground
3	VOUT	Output of the Regulator

Absolute Maximum Ratings

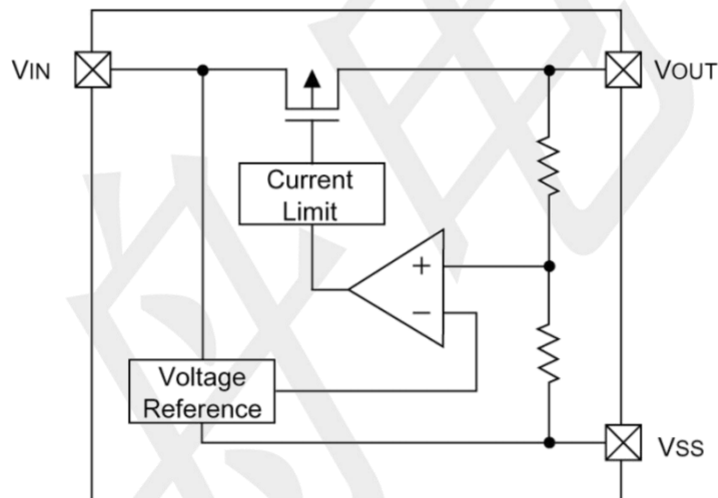
over operating free-air temperature range (unless otherwise noted)

SYMBOL	PARAMETER	RATINGS	UNIT
V _{IN}	Continuous input voltage range	-0.3 ~ +40	V
Current	Maximum output current	Internally limited	mA
T _J	Operating Junction Temperature Range	-40 ~ +85	°C
T _{stg}	Storage temperature range	-55 ~ 150	°C

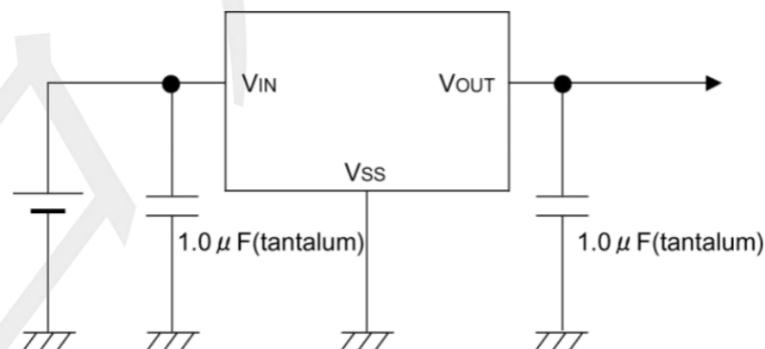
THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	245	°C/W
Junction to Case	θ_{JC}	15	°C/W

BLOCK DIAGRAM



Typical Application Circuit



Electrical Characteristics

(TA=25°C, unless otherwise specified)

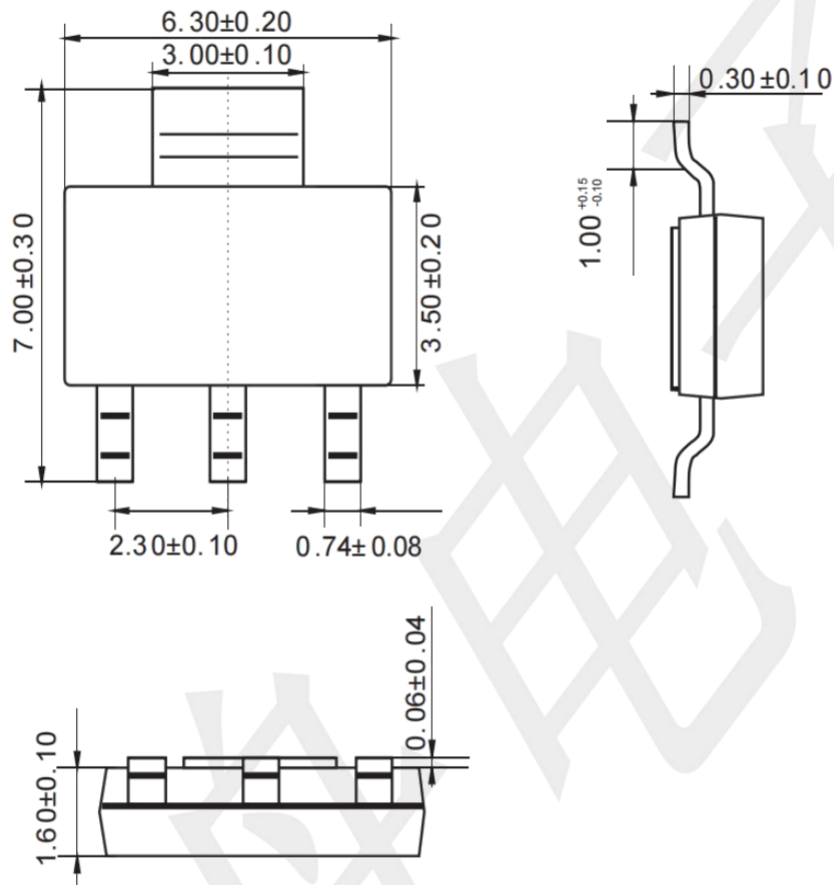
PARAMETER	SYMBOL	TEST Conditions	MIN	TYP	MAX	UNIT
Supply Voltage	VIN	IOUT = 100mA	3.0	--	36	V
Output current	IOUT		0	--	200	mA
DC Output Voltage Accuracy		IOUT = 0.1mA	-2	--	+2	%
Dropout Voltage (VIN-VOUT)	IOUT = 100mA	VOUT = 5 V	--	600	--	mV
Ground Current (IOUT = 0mA)	Iq		--	1.5	3.0	uA
Line Regulation	ΔLINE	IOUT = 1mA, 10≤VIN≤18V	--	0.3	--	%
Load Regulation	ΔLOAD	10mA≤ IOUT ≤ 100mA	--	0.3	--	
Output Current Limit	ILIM	VOUT=0.9× VOUT(NOM)	250	--	--	mA
Power Supply Rejection Ratio	PSRR	VOUT = 5V, IOUT = 30mA, VIN = 12V, f = 1kHz	--	70	--	dB
Thermal Shutdown Temperature	TSD	IOUT = 10mA	--	160	--	°C
Thermal Shutdown Hysteresis	ΔTSD		--	15	--	

Note:

1. Test condition: the device is mounted on FR-4 substrate PC board, with minimum recommended pad layout.
2. Vdif : The Difference Of Output Voltage And Input Voltage When Input Voltage Is Decreased Gradually Till Output Voltage Equals To 98% Of VOUT .

Package Outline Dimensions (unit: mm)

SOT-223



Mounting Pad Layout (unit: mm)

