

Features

- Input Voltage up to 45V
- Output current up to 250mA
- 2.5 μ A Current at no Load(Typ)
- $\pm 2\%$ Output Accuracy
- Compact package: SOT89-3&SOT23-3L

Applications

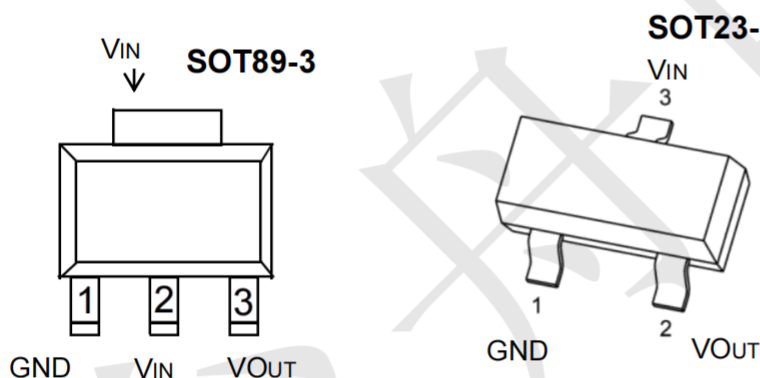
- Hand-Held Instruments
- Battery Powered Consumer Products
- Test and Measurement Equipment
- Industrial Power Supplies

Description

The HT475 series are 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, Widely used for power supply of various audio, video equipment, and communication devices.

PIN CONFIGURATION (TOP VIEW)



SOT89-3	SOT23-3L	Pin Name	Pin Function
1	1	GND	Ground
2	3	VIN	Input of Supply Voltage
3	2	VOUT	Output of the Regulator

Ordering Information

HT7550H

PACKAGE TYPE
HS :SOT23-3L
H :SOT89-3

OUTPUT VOLTAGE

15 : 1.5V; 18 : 1.8V; 25 : 2.5V .
28 : 2.8V; 30 : 3.0V; 33 : 3.3V .
50 : 5.0V .

Example:HT7550H

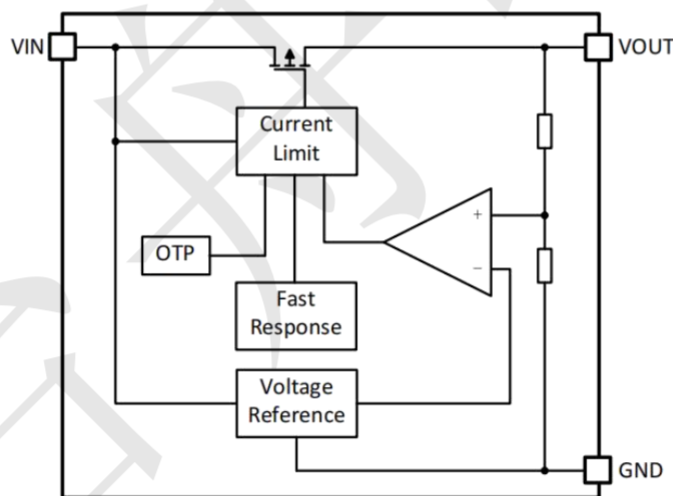
→ 5.0V Version, in SOT89-3 Package & Tape & Reel Packing Type

Absolute Maximum Ratings

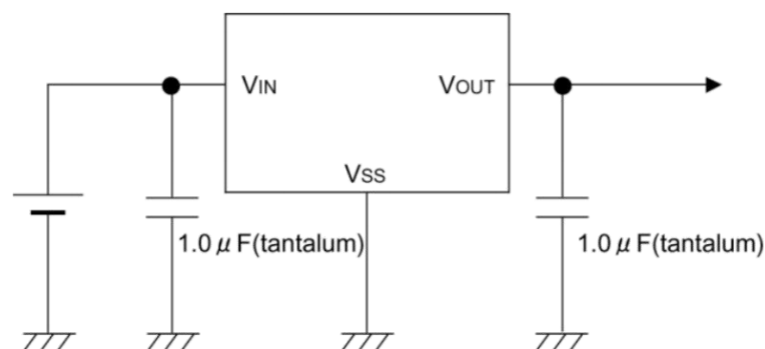
over operating free-air temperature range (unless otherwise noted)

SYMBOL	PARAMETER	RATINGS	UNIT
V _{IN}	Continuous input voltage range	-0.3 ~ +55	V
Current	Maximum output current	Internally limited	mA
T _J	Operating Junction Temperature Range	-40 ~ +125	°C
T _A	Ambient temperature	-40 ~ +70	°C
T _{stg}	Storage temperature range	-55 ~ +125	°C
PD	Power Dissipation SOT89-3	500	mW
PD	Power Dissipation SOT23-3L	250	mW
θ _{JC}	Junction to Case SOT89-3	25	°C/W
θ _{JC}	Junction to Case SOT23-3L	50	°C/W
ESD	HBM	2500	V

BLOCK DIAGRAM



Typical Application Circuit



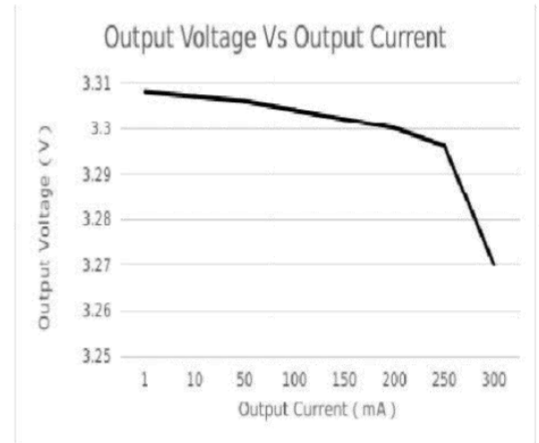
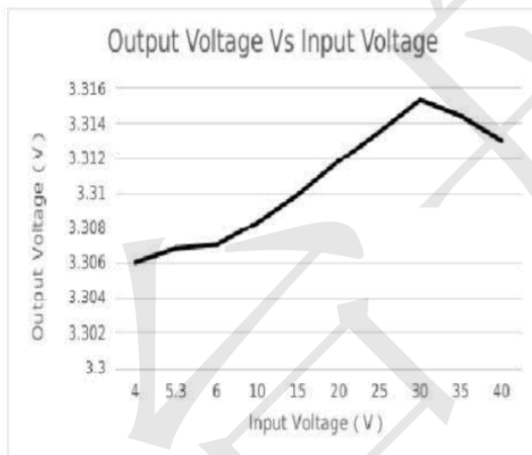
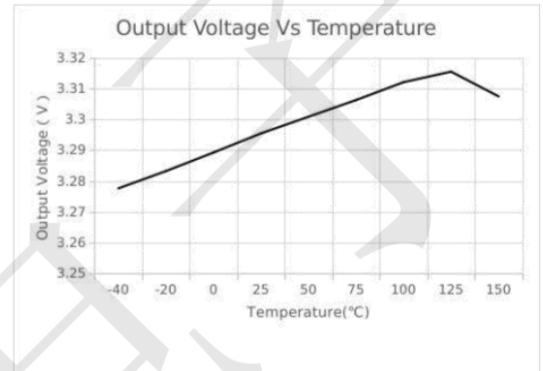
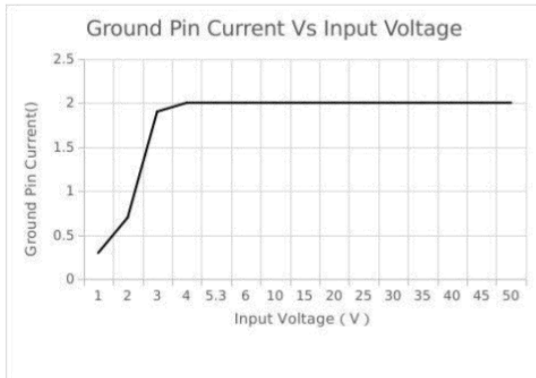
Electrical Characteristics (TA=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST Conditions	MIN	TYP	MAX	UNIT
Supply Voltage	V _{IN}	I _{OUT} = 1mA	--	--	45	V
Output current	I _{OUT}	V _{IN} -V _{OUT} =2V	70	250	--	mA
DC Output Voltage Accuracy		I _{OUT} = 1mA	-2	--	+2	%
Dropout Voltage (V _{IN} -V _{OUT})	I _{OUT} = 10mA	V _{OUT} = 3.3V	--	100	--	mV
Ground Current (I _{OUT} = 0mA)	I _Q		--	2.5	4	uA
Line Regulation	ΔLINE	I _{OUT} = 1mA, 10≤V _{IN} ≤18V	--	0.3	--	%
Load Regulation	ΔLOAD	10mA≤ I _{OUT} ≤ 100mA	--	0.3	--	
Output Current Limit	I _{LIM}	V _{OUT} =0.9× V _{OUT(NOM)}	--	300	--	mA
Power Supply Rejection Ratio	PSRR	V _{OUT} = 3.3V, I _{OUT} = 30mA, V _{IN} = 12V, f = 1kHz	--	60	--	dB
Thermal Shutdown Temperature	T _{SD}	I _{OUT} = 10mA	--	160	--	°C
Thermal Shutdown Hysteresis	ΔT _{SD}		--	15	--	

Note:

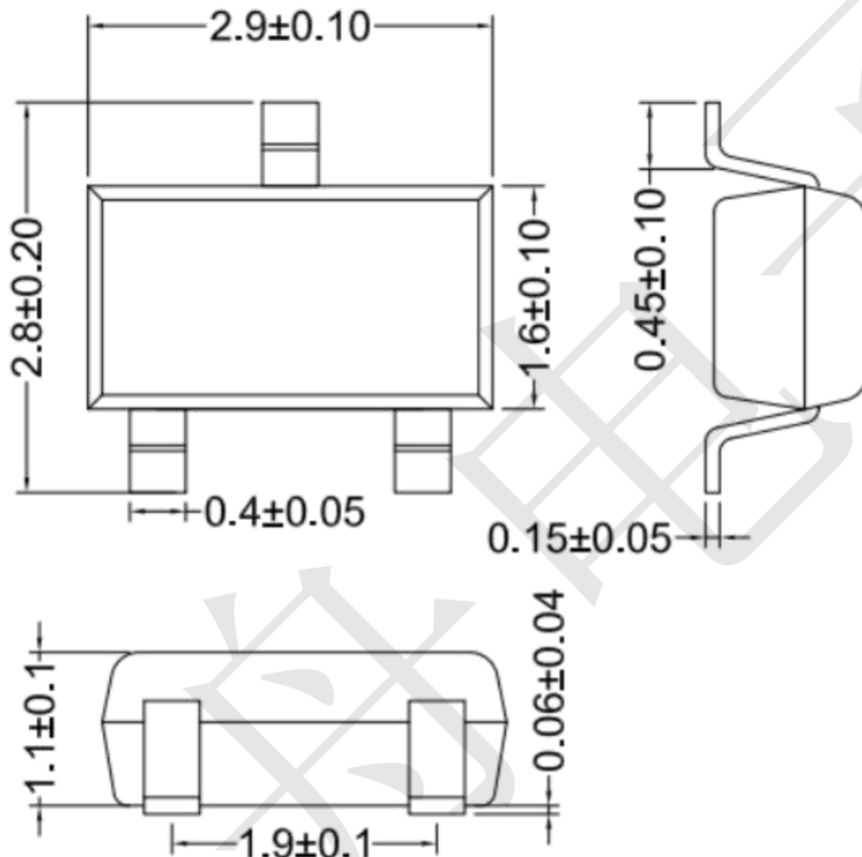
1. Test condition: the device is mounted on FR-4 substrate PC board, with minimum recommended pad layout.
2. V_{dif} : The Difference Of Output Voltage And Input Voltage When Input Voltage Is Decreased Gradually Till Output Voltage Equals To 98% Of V_{OUT} .

Typical Application Circuit

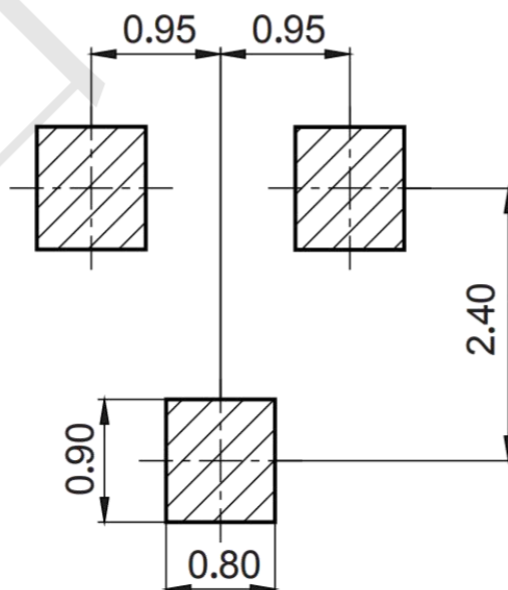


Package Outline Dimensions (unit: mm)

SOT-23-3L

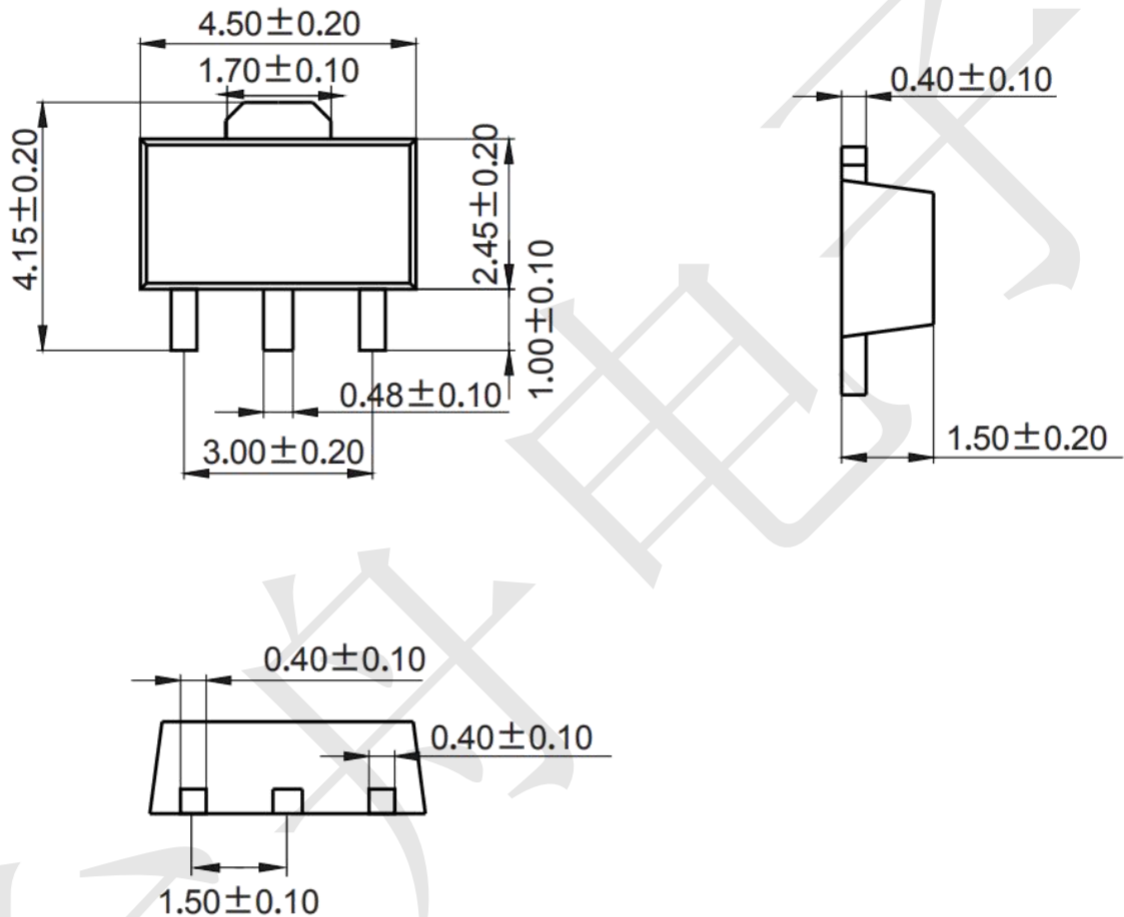


Mounting Pad Layout (unit: mm)



Package Outline Dimensions (unit: mm)

SOT89-3



Mounting Pad Layout (unit: mm)

