

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

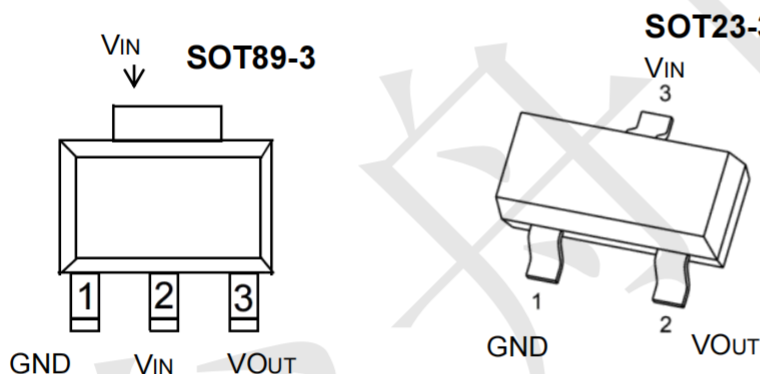
- Hand-Held Instruments
- Battery Powered Consumer Products
- Test and Measurement Equipment
- Industrial Power Supplies

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

HT7533HS

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:HT7533HS

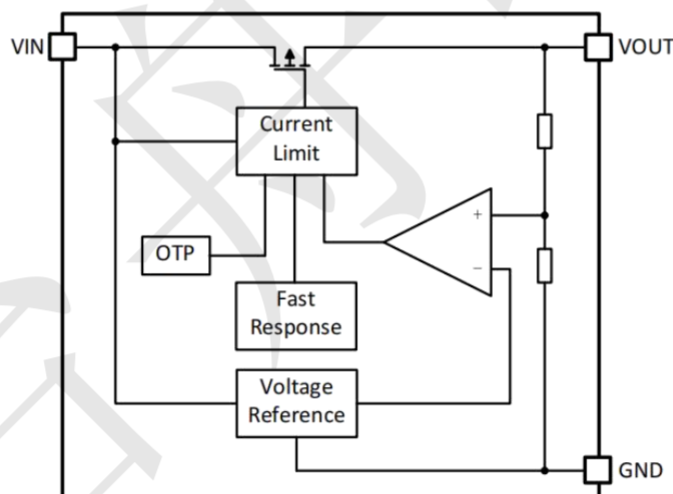
→ 3.3V Version, in SOT23-3L Package
&Tape & Reel Packing Type

Absolute Maximum Ratings

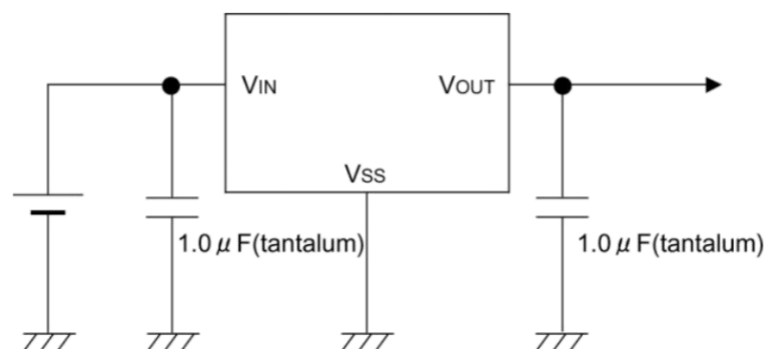
over operating free-air temperature range (unless otherwise noted)

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



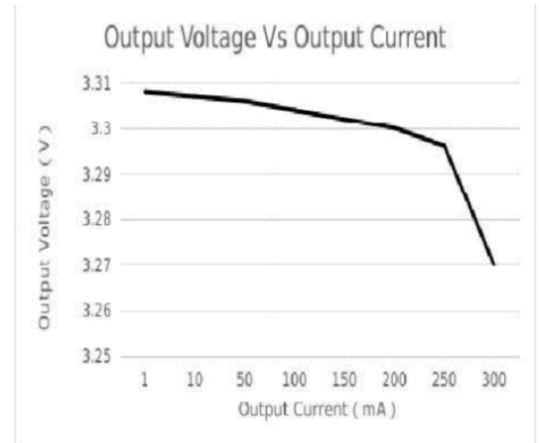
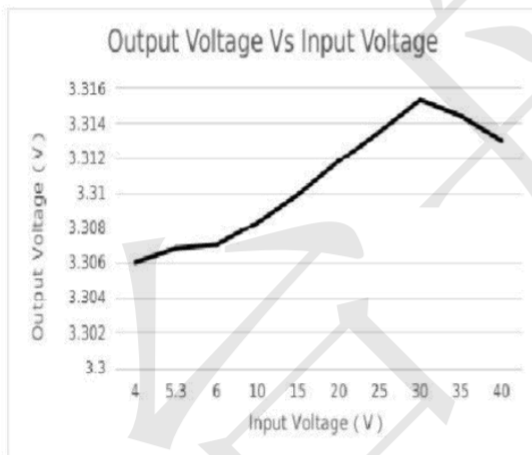
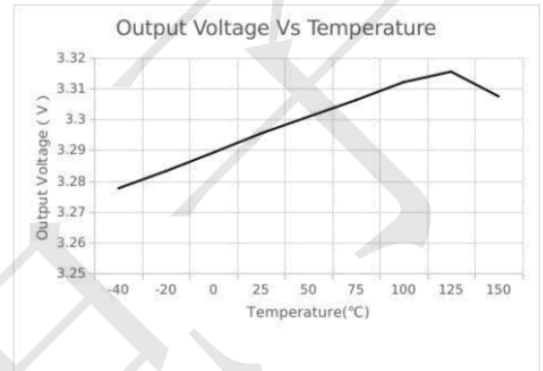
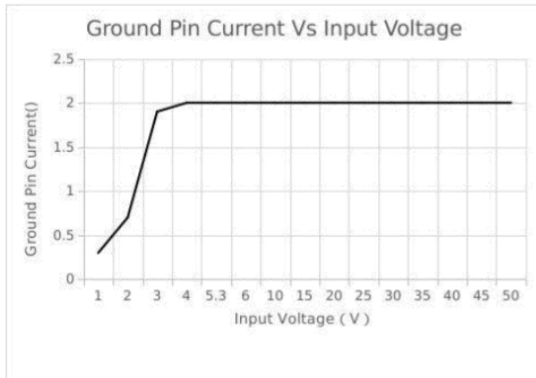
Electrical Characteristics (TA=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST Conditions	MIN	TYP	MAX	UNIT
Supply Voltage	VIN	IOUT = 1mA	--	--	45	V
Output current	IOUT	VIN-VOUT=2V	70	250	--	mA
DC Output Voltage Accuracy		IOUT = 1mA	-2	--	+2	%
Dropout Voltage (VIN-VOUT)	IOUT = 10mA	VOUT = 3.3V	--	100	--	mV
Ground Current (IOUT = 0mA)	Iq		--	2.5	4	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)	--	300	--	mA
Power Supply Rejection Ratio	PSRR	VOUT = 3.3V, IOUT = 30mA, VIN = 12V, f = 1kHz	--	60	--	dB
Thermal Shutdown Temperature	TSD	IOUT = 10mA	--	160	--	°C
Thermal Shutdown Hysteresis	ΔTSD		--	15	--	

Note:

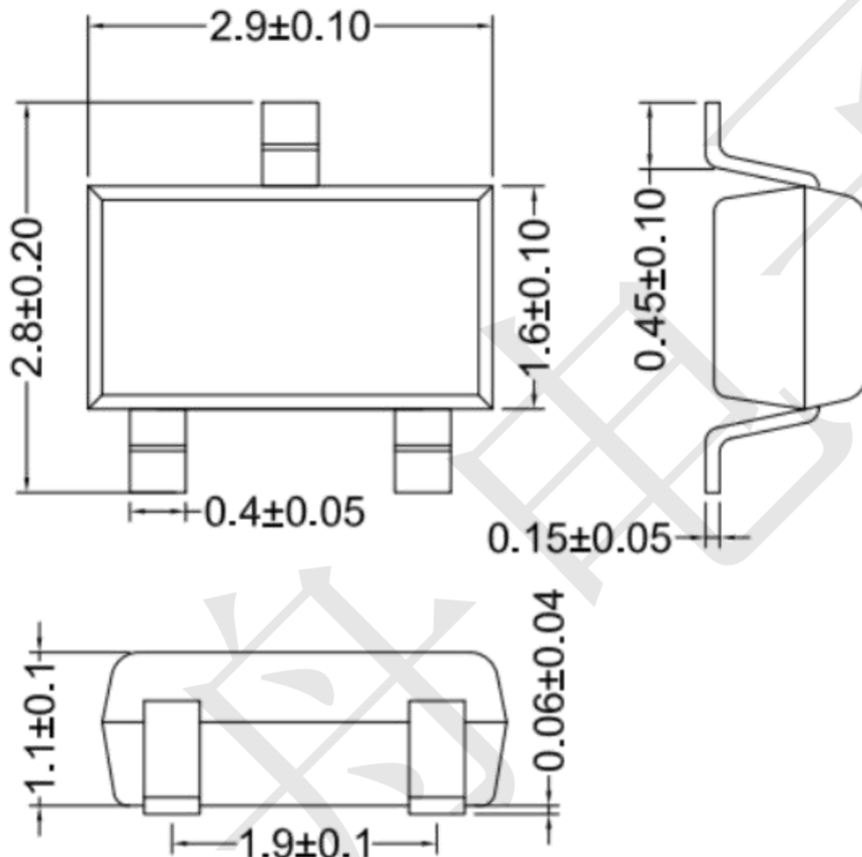
1. Test condition: the device is mounted on FR-4 substrate PC board, with minimum recommended pad layout.
2. Vdif : The Difference Of Output Voltage And Input Voltage When Input Voltage Is Decreased Gradually Till Output Voltage Equals To 98% Of VOUT .

Typical Application Circuit

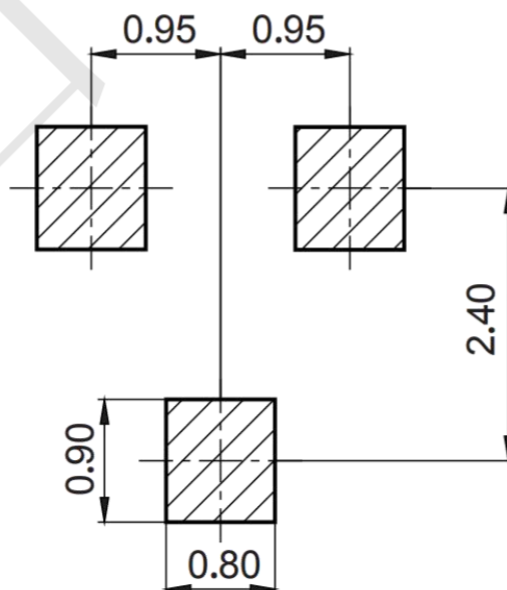


Package Outline Dimensions (unit: mm)

SOT-23-3L

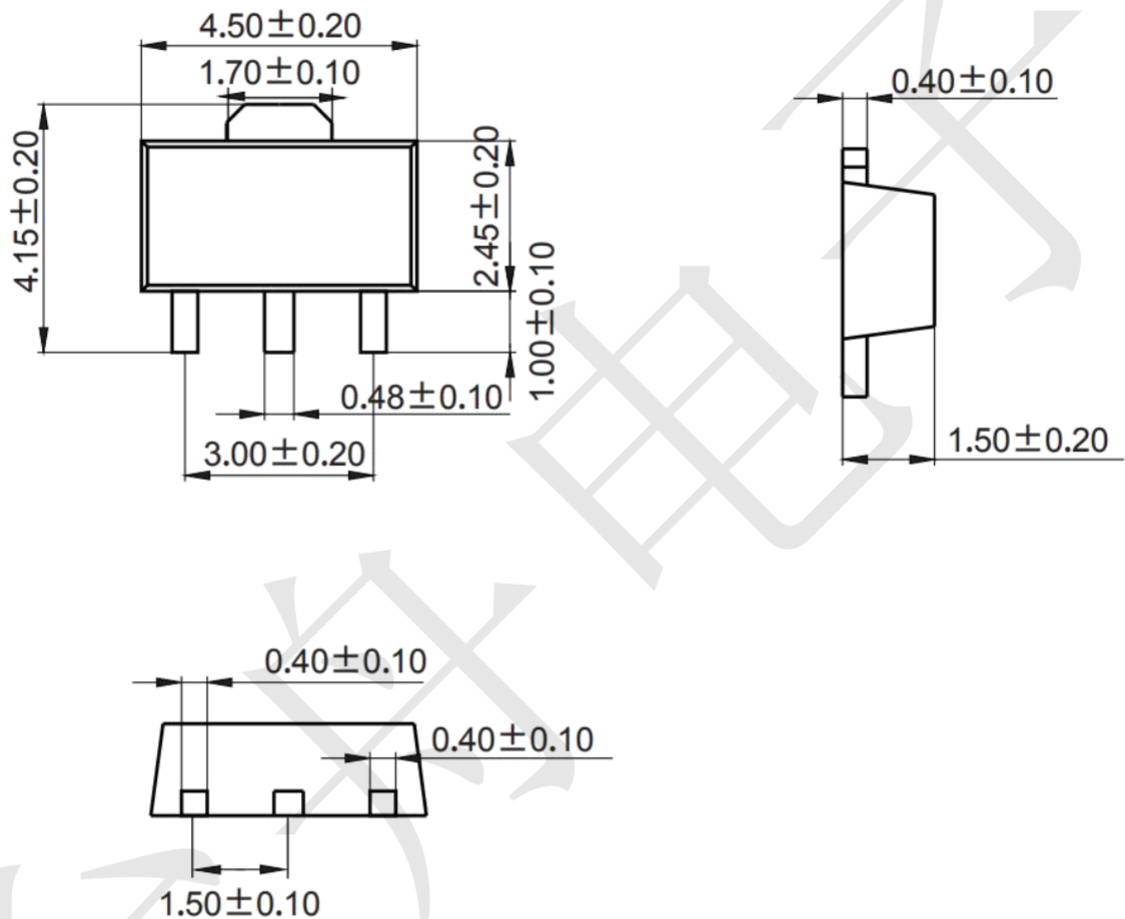


Mounting Pad Layout (unit: mm)



Package Outline Dimensions (unit: mm)

SOT89-3



Mounting Pad Layout (unit: mm)

