

/ Descriptions

SOT-89

Low dropout linear regulator in a SOT-89 Plastic Package .

/ Features

24V

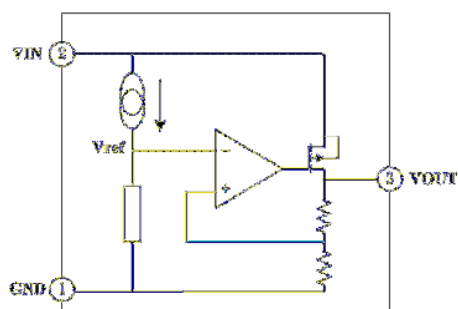
1.5 μ A $\pm 2\%$

Low power consumption, Low voltage drop, Small temperature drift coefficient, Input voltage up to 24V, The static current 1.5 μ A, The output voltage accuracy: $\pm 2\%$, HF Product.

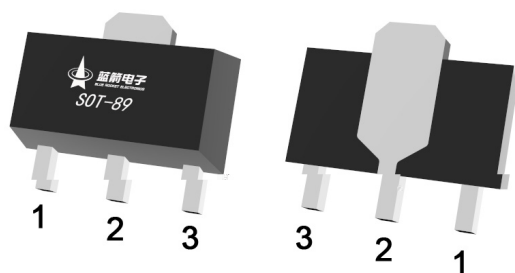
/ Applications

For use in power equipment, Communication equipment, Audio and video equipment.

/ Equivalent Circuit



/ Pinning



PIN1 GND

PIN 2 VIN

PIN 3 VOUT

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Working Voltage	V_{IN}	-0.3~26	V
Thermal Resistance	$R_{\theta JA}$	200	/W
Power Consumption	P_D	500	mW
Storage Temperature	T_{STG}	-50~+125	
Working Temperature	T_A	-40~+85	

Notes: If the device operating conditions over the maximum rating of the above-mentioned conditions, may cause permanent damage to the device. The above parameters is only part of the operating conditions the maximum, we do not recommend the device running outside the scope of this specification. If the device to work long hours under the condition of absolute maximum limit, its stability may be affected.

/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
The Output Voltage	V_{OUT}	$V_{IN}=5.0V, I_{OUT}=10mA$	2.94	3.00	3.06	V
The Output Current	I_{OUT}	$V_{IN}=5.0V$		150		mA
Load Regulation	V_{OUT}	$V_{IN}=5.0V$ $1mA \leq I_{OUT} \leq 100mA$		25	60	mV
Low Dropout	V_{DIF}	$I_{OUT}=10mA, V_{OUT}=2\%$			100	mV
Static Power	I_{SS}	$V_{IN}=5.0V$		1.5	3.0	μA
Line Regulation	$\frac{V_{OUT}-V_{OUT}^*}{V_{IN}}$	$5.0 \leq V_{IN} \leq 24V$ $I_{OUT}=10mA$			0.2	%/V
The Input Voltage	V_{IN}				24	V
Temperature Coefficient	$\frac{V_{OUT}}{T_A} \cdot V_{OUT}$	$V_{IN}=5.0V, I_{OUT}=10mA$ $-40 \leq T_A \leq 85$		100		ppm/

 $V_{IN}=5.0V$

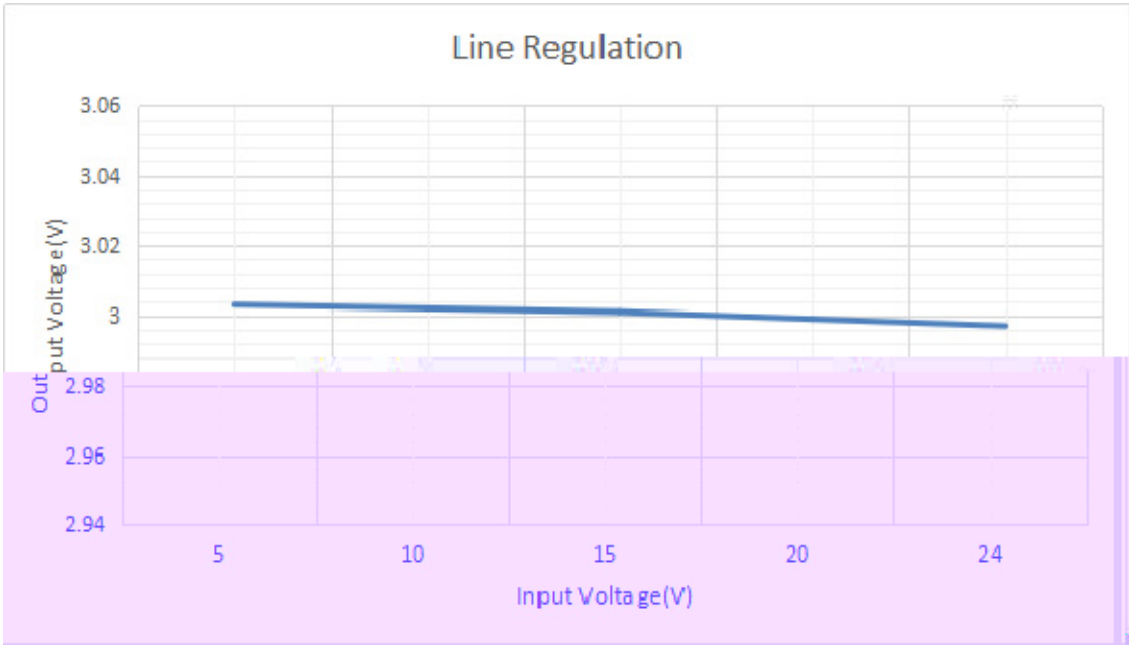
2%

 V_{DIF}

Note: V_{DIF} is defined as the input voltage minus the output voltage that produces a 2% change in the output voltage from the value at $V_{IN}=5.0V$ with a fixed load.

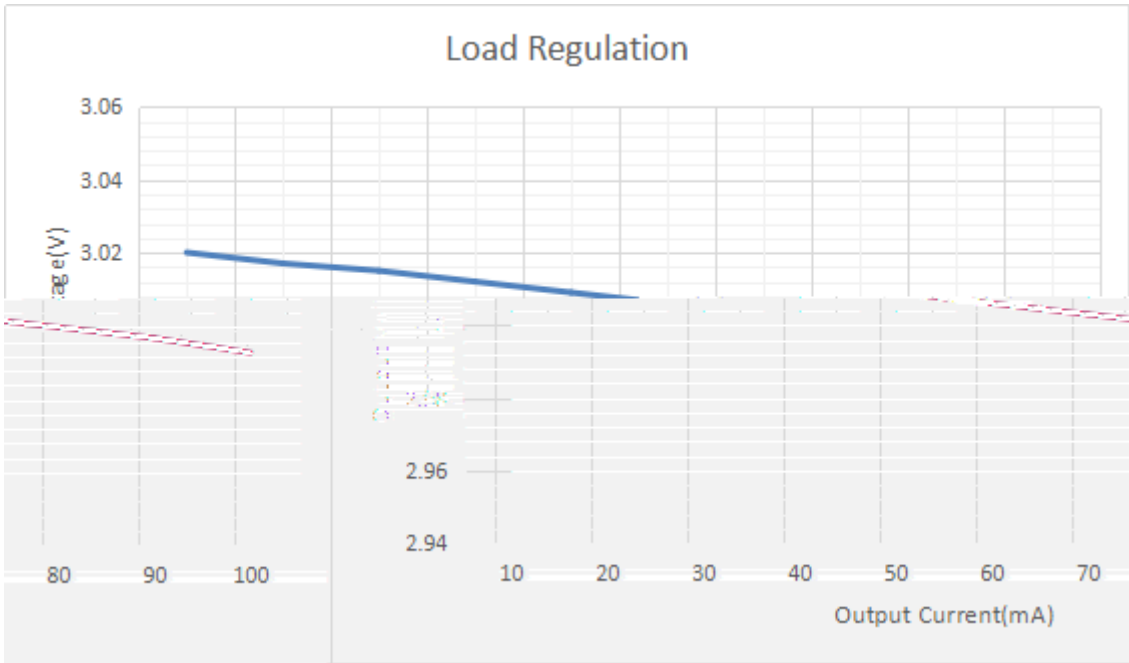
/ Electrical Characteristic Curve

/ The input voltage and output voltage



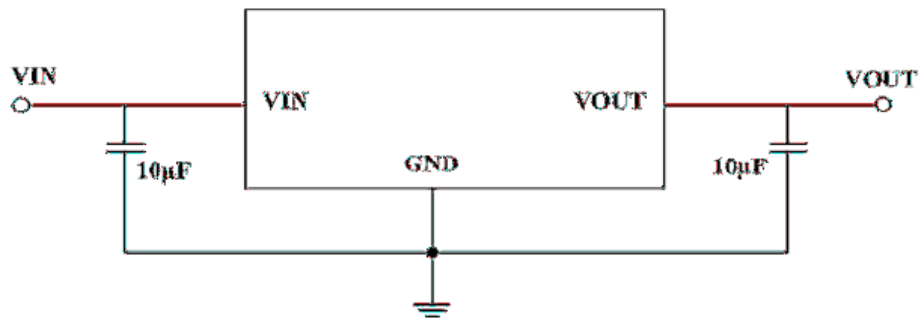
$I_{OUT}=10mA$

/ The output voltage and load current



$V_{IN}=5.0V$

/ Typical Application Circuit



1.

VIN

VOUT
- 2

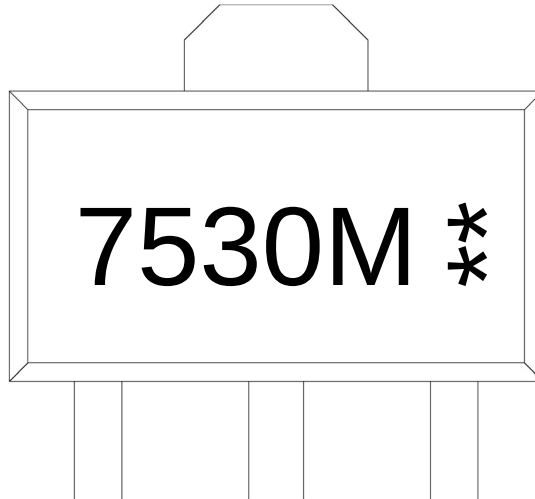
ESR

2.2uF
- 3

IC



/ Marking Instructions



7530M

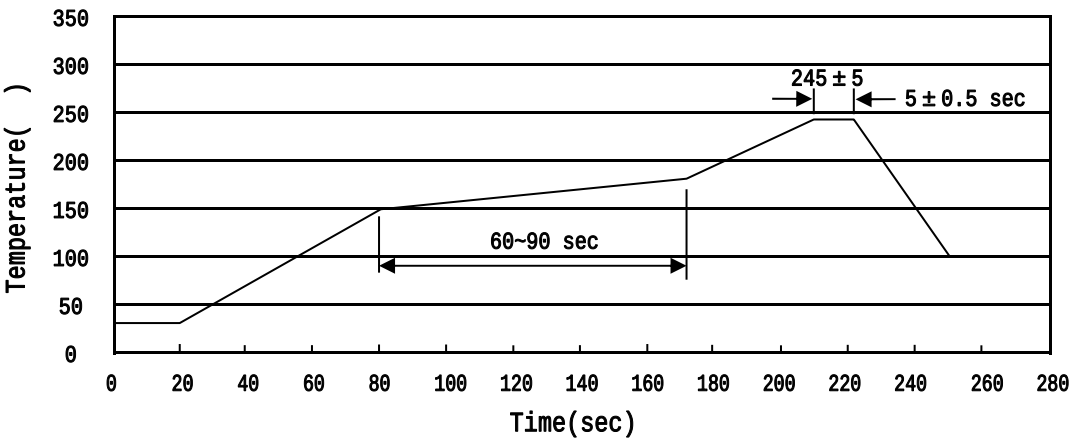
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Note:

7530M: Product Type Code

** : Lot No. Code, code change with Lot No

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;
- 2

245±5

5±0.5sec;
- 3

2 10 /sec.
- 1.Preheating:150~180

, Time:60~90sec.
- 2.Peak Temp.:245±5

, Duration:5±0.5sec.
3. Cooling Speed: 2~10

/sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
SOT-89	1,000	10	10,000	4	40,000	7 ×12	210×205×205	445×435×230

/ Notices