

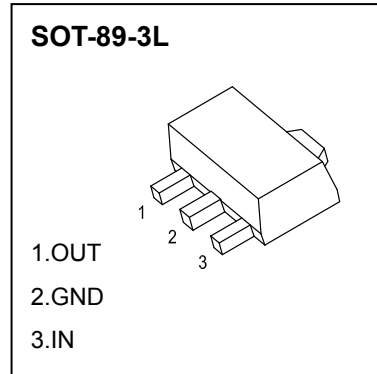


SOT-89-3L Encapsulate Three-terminal Voltage Regulator

NSP2951T-GC Three-terminal positive voltage regulator

FEATURES

- Maximum output current
I_o: 100mA
- Output voltage
V_o: 5 V
- Continuous total dissipation
P_D: 0.5W (T_a=25 °C)



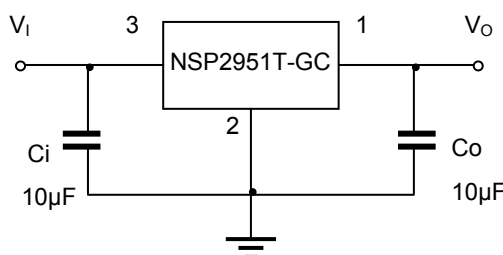
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage Range	V _I	-0.3~+45	V
Operating Ambient Temperature Range	T _{OPR}	-45~+105	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_a=25 °C, V_I=12V, C_i=C_o=10μF, unless otherwise specified)

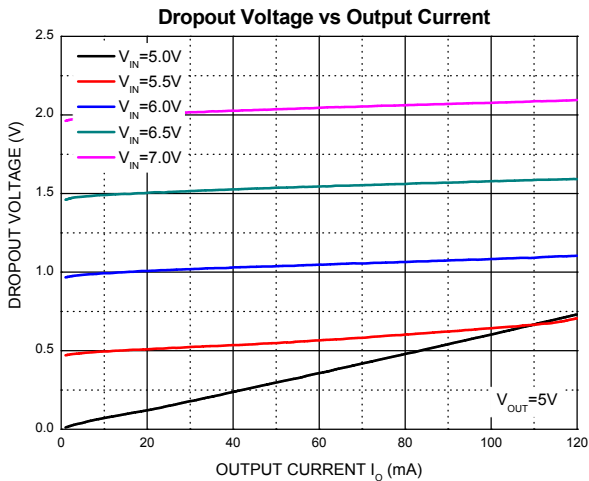
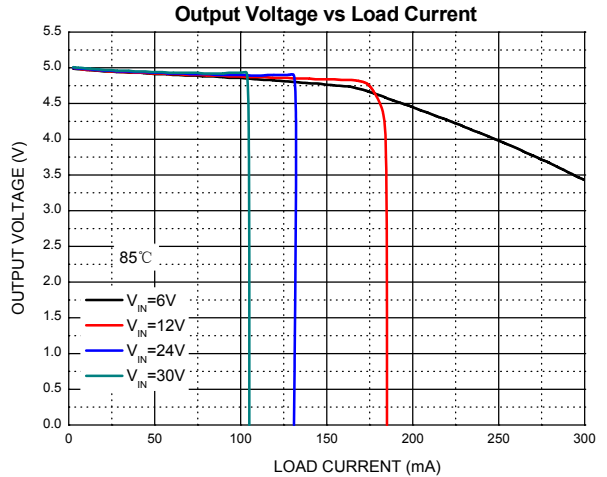
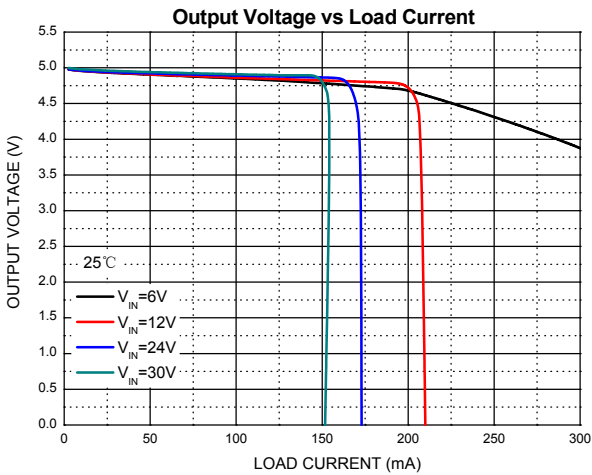
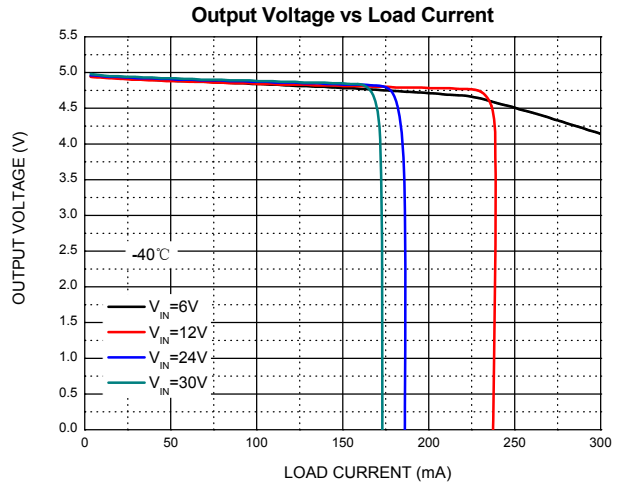
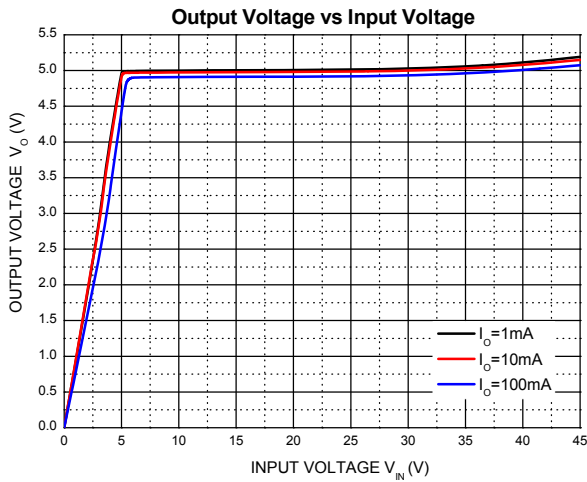
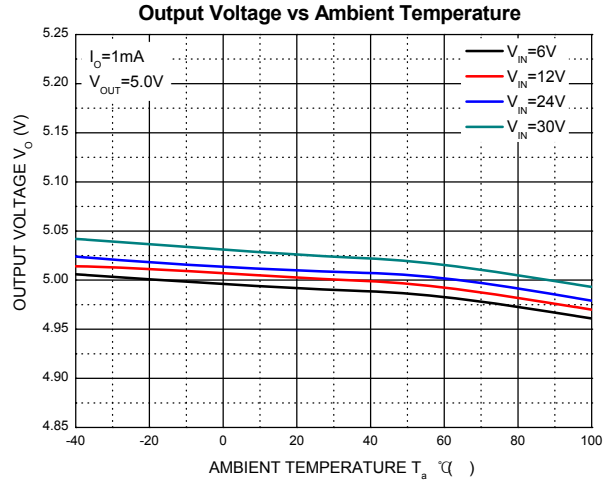
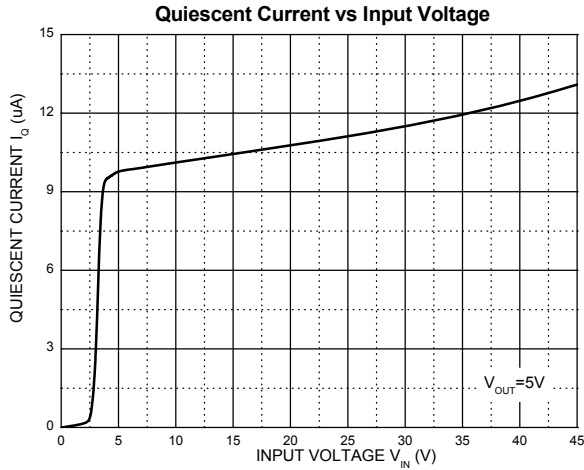
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Input voltage	V _I	I _o =10mA	4.75		40	V
Output voltage	V _O	I _o =10mA	4.9	5	5.1	V
Output voltage	V _O	I _o =10mA, T _a =-25~+100 °C	4.875		5.125	V
Load regulation	ΔV _o	I _o =1mA-100mA		0.6		%
Line regulation	ΔV _o	6V ≤ V _I ≤ 24V, V _O =5V, I _o =1mA		0.02		%/V
		6V ≤ V _I ≤ 45V, V _O =5V, I _o =1mA		0.1		%/V
Quiescent current	I _q	V _I =7V, No load			15	μA
		V _I =24V, No load			16	
		V _I =40V, No load			20	
Dropout Voltage	V _d	I _o =1mA		8		mV
		I _o =50mA		400		mV
Output noise voltage	V _N	I _o =10mA	-100		100	μV
Ripple rejection	RR	V _I =7V, V _{PP} =0.5V, I _o =1mA	f=100Hz	60		dB
			f=1kHz	45		
			f=10kHz	35		
Maximum output current	I _{PK}	R _L =1 Ω	180		460	mA
Thermal protection	T _{SD}	I _o =1mA		165		°C
Thermal protection Hys	T _{SD_HYS}	I _o =1mA		30		°C
Temperature coefficient	ΔV _O /ΔT	I _o =1mA		±0.5		mV/°C

TYPICAL APPLICATION



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Typical Characteristics



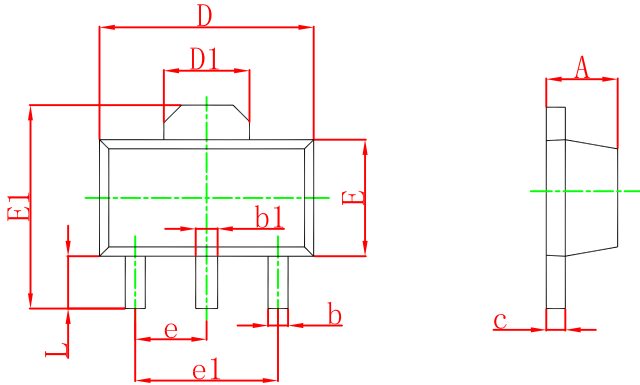
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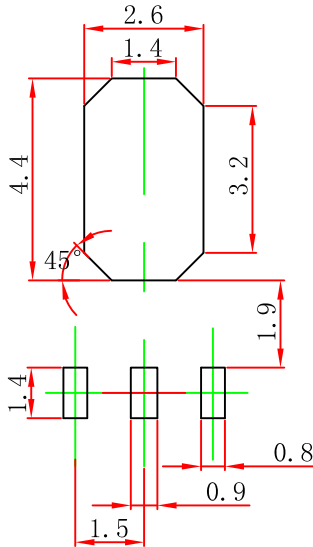
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SOT-89-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

SOT-89-3L Suggested Pad Layout



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Note:

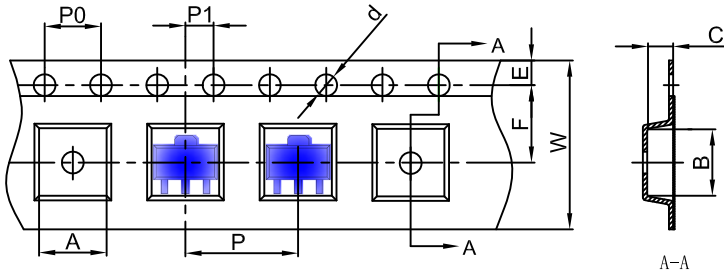
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

SOT-89-3L Tape and Reel

SOT-89-3L Embossed Carrier Tape

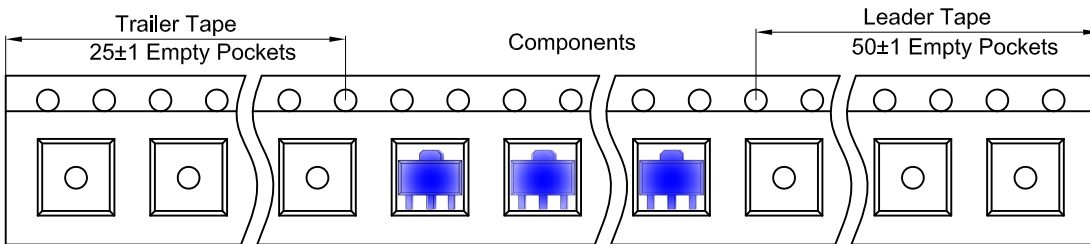


Packaging Description:

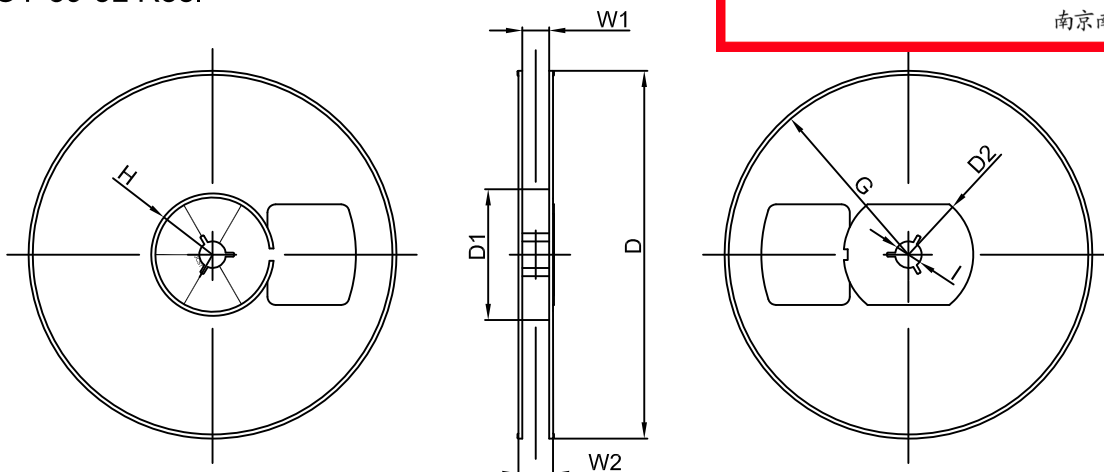
SOT-89-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 1,000 units per 7" or 18.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOT-89-3L Tape Leader and Trailer



SOT-89-3L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø180.00	60.00	R32.00	R86.50	R30.00	Ø13.00	13.20	16.50

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
1000 pcs	7 inch	10,000 pcs	203×203×195	40,000 pcs	438×438×220	

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