JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD

SOT-89-3L Plastic-Encapsulate Voltage Regulator

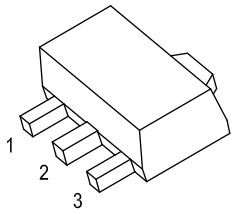
CJ78L15 Three-terminal positive voltage regulator

FEATURES

- Maximum output current
  I_{OM}: 0.1A
- Output voltage
  V_O: 15V
- Continuous total dissipation
  P_D: 0.6 W (T_a= 25 ℃)

SOT-89-3L

1. OUT
2. GND
3. IN



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

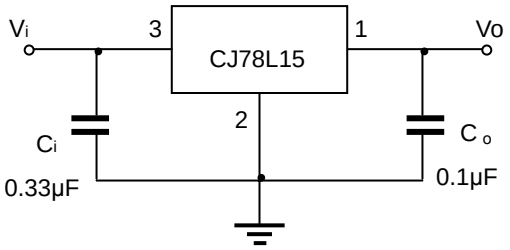
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	166.7	℃/W
Operating Junction Temperature Range	T_{OPR}	-40~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE (V_i=23V,Io=40mA,C_i=0.33μF,Co=0.1μF,unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output voltage	Vo		25℃	14.55	15	15.45	
		17.5V≤V_i≤30V,Io=1mA-40mA	0-125℃	14.25	15	15.75	V
		V_i=23V, Io=1mA-70mA		14.25	15	15.75	V
Load Regulation	△Vo	Io=1mA-100mA, V_i=23V	25℃		25	150	mV
		Io=1mA-40mA, V_i=23V	25℃		15	75	mV
Line regulation	△Vo	17.5V≤Vi≤30V,Io=40mA	25℃		65	300	mV
		19V≤Vi≤30V,Io=40mA	25℃		58	250	mV
Quiescent Current	Iq		25℃		4.6	6.5	mA
Quiescent Current Change	△Iq	19V≤Vi≤30V, Io=40mA	0-125℃			1.5	mA
	△Iq	1mA≤I_O≤40mA, Vi=23V	0-125℃			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		82		μV/Vo
Ripple Rejection	RR	18.5V≤Vi≤28.5V,f=120Hz	0-125℃	34	39		
Dropout Voltage	Vd		25℃		1.7		

* Pulse test.

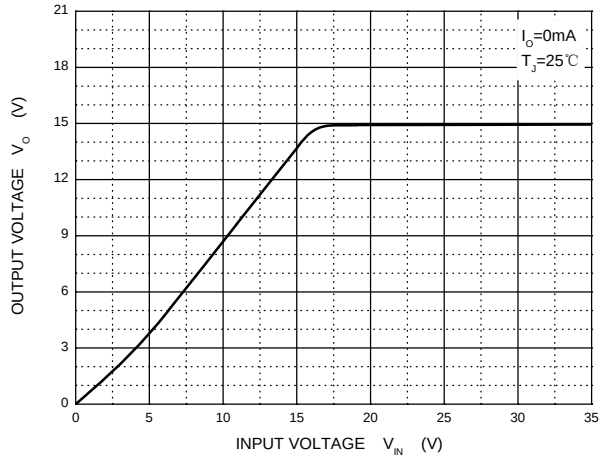
TYPICAL APPLICATION



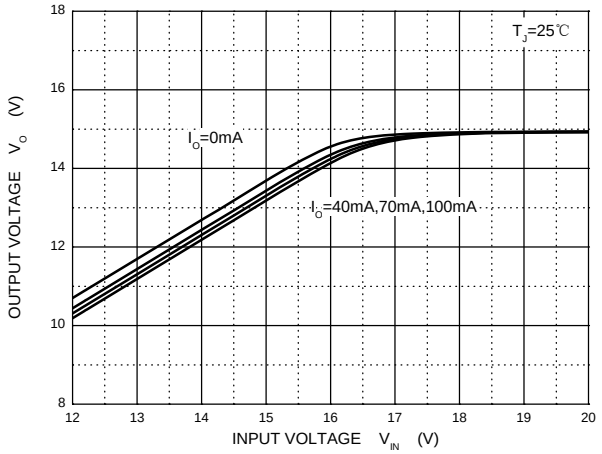
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

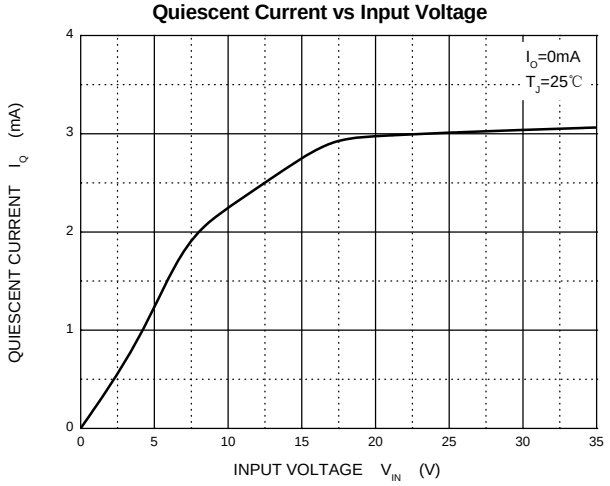
Output Characteristics



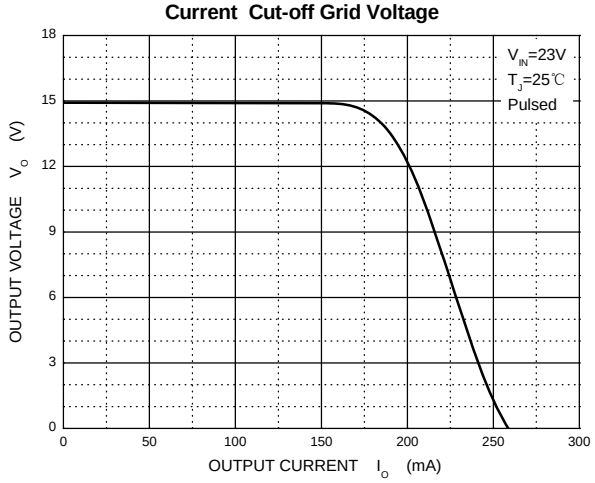
Dropout Characteristics



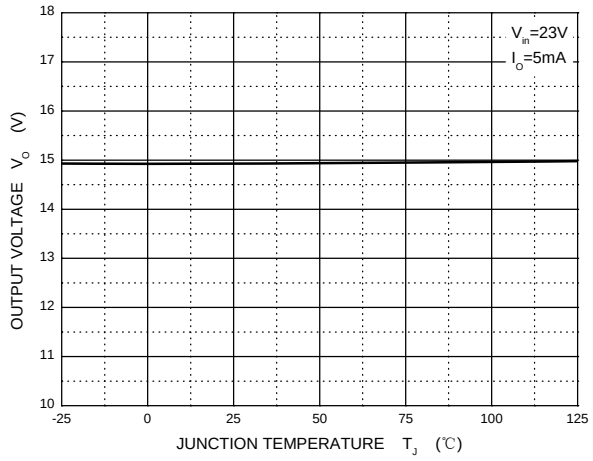
Quiescent Current vs Input Voltage



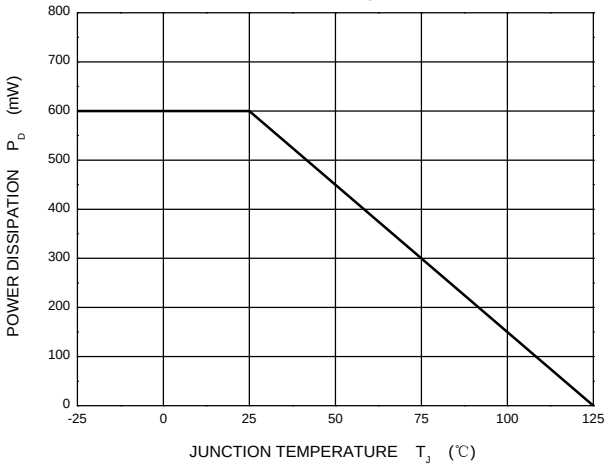
Current Cut-off Grid Voltage



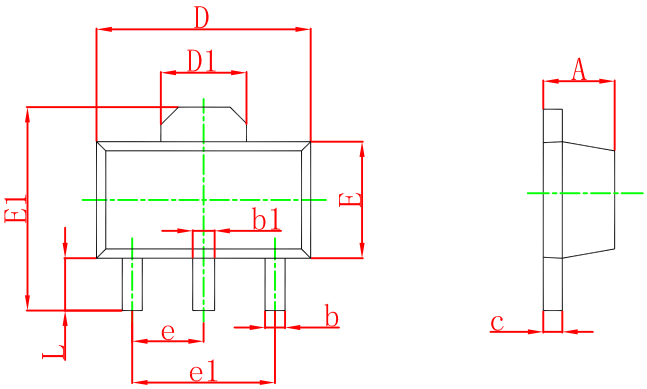
Output Voltage vs Junction Temperature



Power Derating Curve

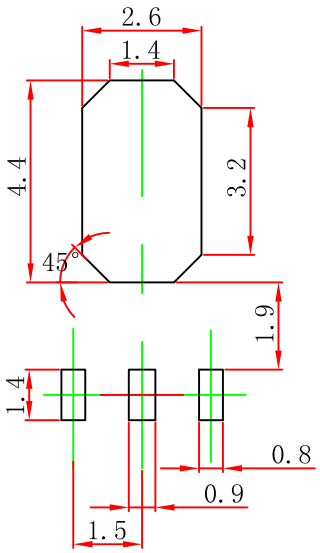


SOT-89-3L Package Outline Dimensions



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

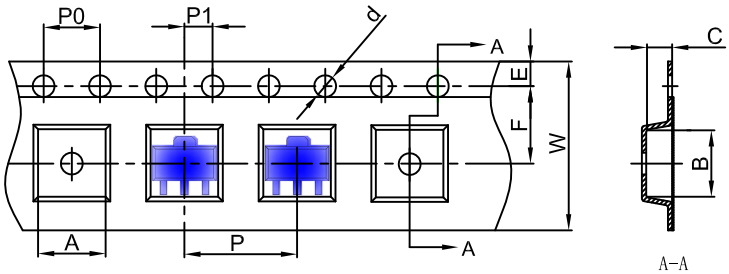
SOT-89-3L Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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

SOT-89-3L Embossed Carrier Tape

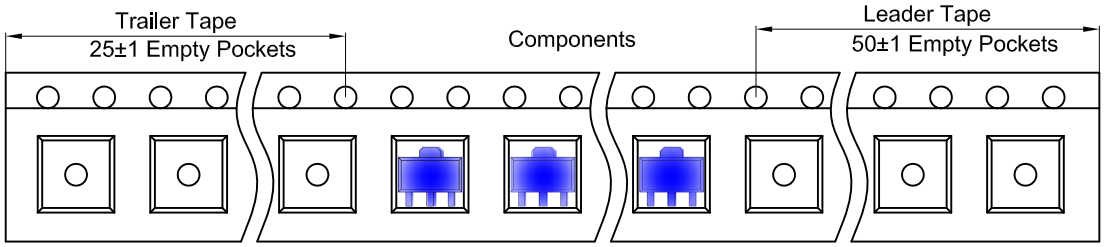


Packaging Description:

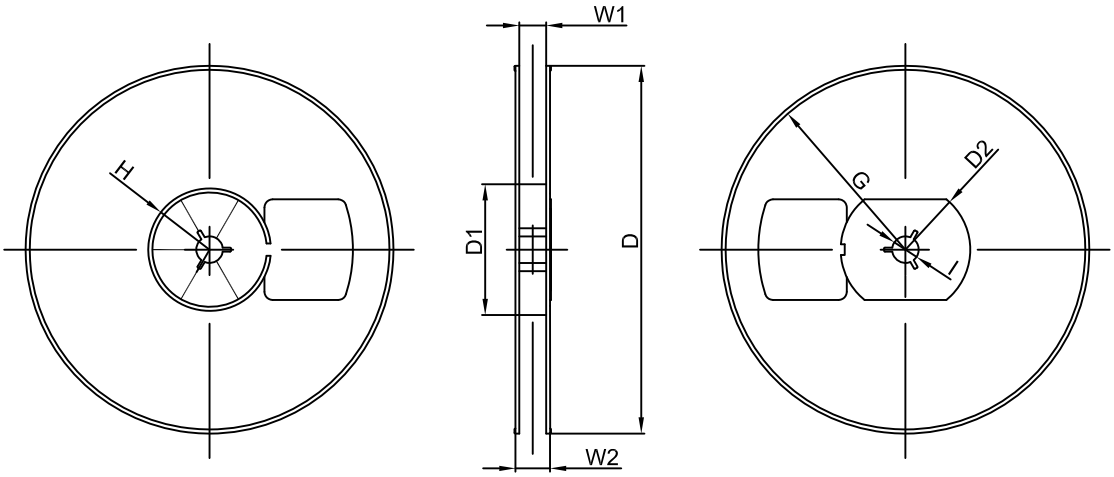
SOT-89-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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	