

SOT-89-3L Encapsulate Adjustable Reference Source

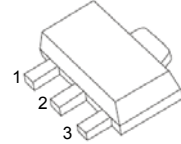
CJ431 Adjustable Accurate Reference Source

FEATURES

- The output voltage can be adjusted to 36V
- Low dynamic output impedance ,its typical value is 0.2Ω
- Trapping current capability is 1 to 100mA
- The typical value of the equivalent temperature factor in the whole temperature scope is 50 ppm/°C
- The effective temperature compensation in the working range of full temperature
- Low output noise voltage
- Fast on -state response

SOT-89-3L

1.REFERENCE
2.ANODE
3.CATHODE



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

Parameter	Symbol	Value	Unit
Cathode Voltage	V_{KA}	37	V
Cathode Current Range (Continuous)	I_{KA}	-100~+150	mA
Reference Input Current Range	I_{ref}	0.05~+10	mA
Power Dissipation	P_D	500	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	250	°C/W
Operating Ambient Temperature Range	T_{opr}	0 ~ +70	°C
Storage temperature Range	T_{stg}	-65~+150	°C
Operating Junction Temperature	T_j	150	°C

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

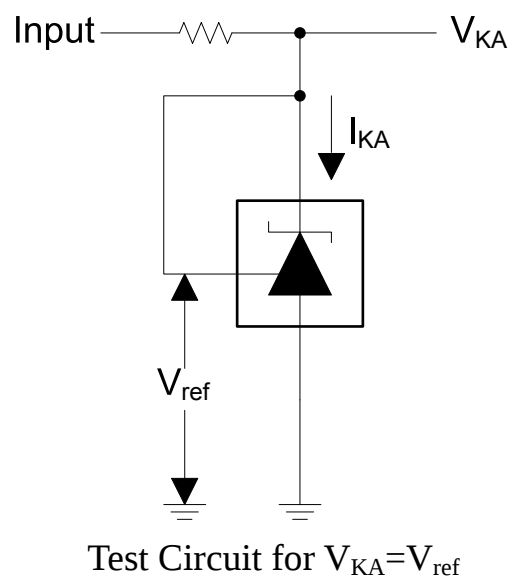
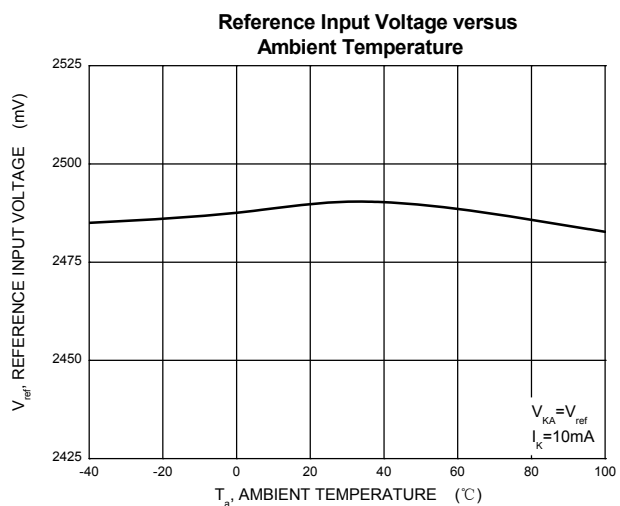
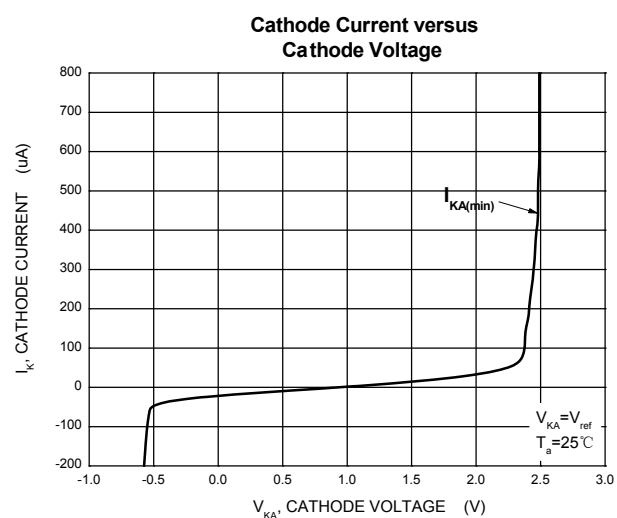
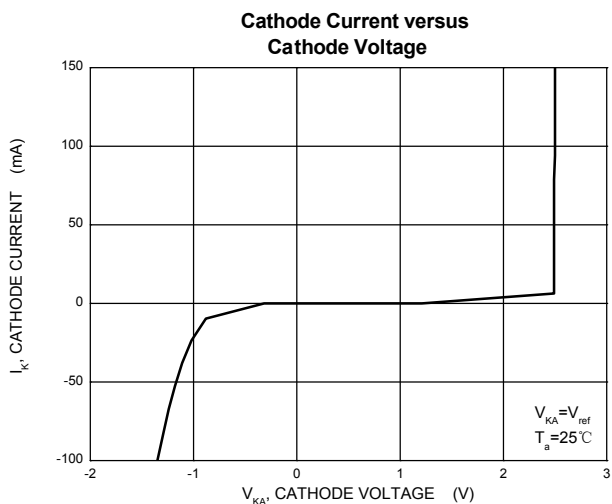
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reference input voltage	V_{ref}	$V_{KA}=V_{REF}$, $I_{KA}=10\text{mA}$	2.475	2.5	2.525	V
Deviation of reference Input voltage over temperature (note)	$\Delta V_{ref}/\Delta T$	$V_{KA}=V_{REF}$, $I_{KA}=10\text{mA}$ $T_{min}\leq T_a\leq T_{max}$		4.5	17	mV
Ratio of change in reference Input voltage to the change in cathode voltage	$\Delta V_{ref}/\Delta V_{KA}$	$I_{KA}=10\text{mA}$ $\Delta V_{KA}=10\text{V}\sim V_{REF}$		-1.0	-2.7	mV/V
		$\Delta V_{KA}=36\text{V}\sim 10\text{V}$		-0.5	-2.0	mV/V
Reference input current	I_{ref}	$I_{KA}=10\text{mA}$, $R_1=10\text{k}\Omega$ $R_2=\infty$		1.5	4	μA
Deviation of reference input current over full temperature range	$\Delta I_{ref}/\Delta T$	$I_{KA}=10\text{mA}$, $R_1=10\text{k}\Omega$ $R_2=\infty$ $T_A=\text{full Temperature}$		0.4	1.2	μA
Minimum cathode current for regulation	$I_{KA(min)}$	$V_{KA}=V_{REF}$		0.45	1.0	mA
Off-state cathode current	$I_{KA(OFF)}$	$V_{KA}=36\text{V}$, $V_{REF}=0$		0.05	1.0	μA
Dynamic impedance	Z_{KA}	$V_{KA}=V_{REF}$, $I_{KA}=1$ to 100mA $f\leq 1.0\text{kHz}$		0.15	0.5	Ω

Note: $T_{MIN}=0^{\circ}\text{C}$, $T_{MAX}=+70^{\circ}\text{C}$

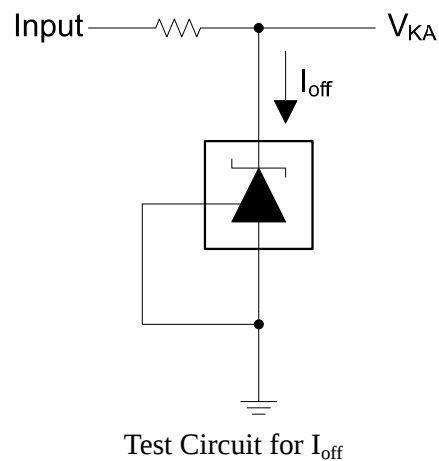
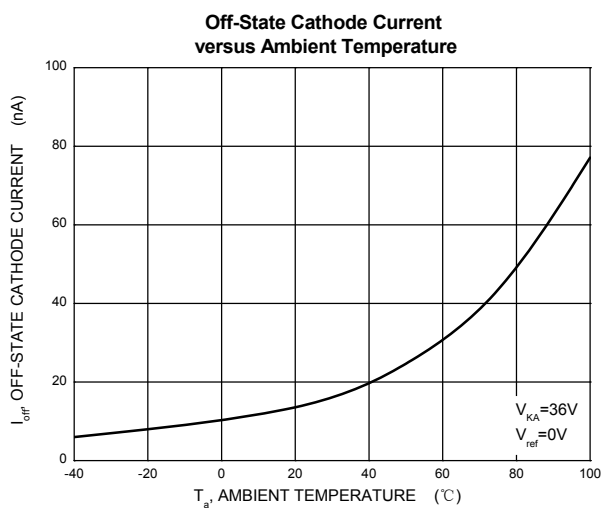
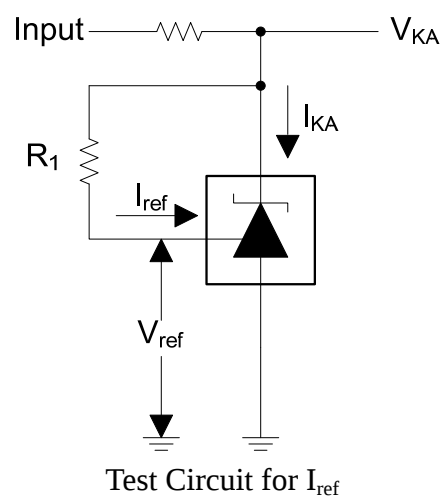
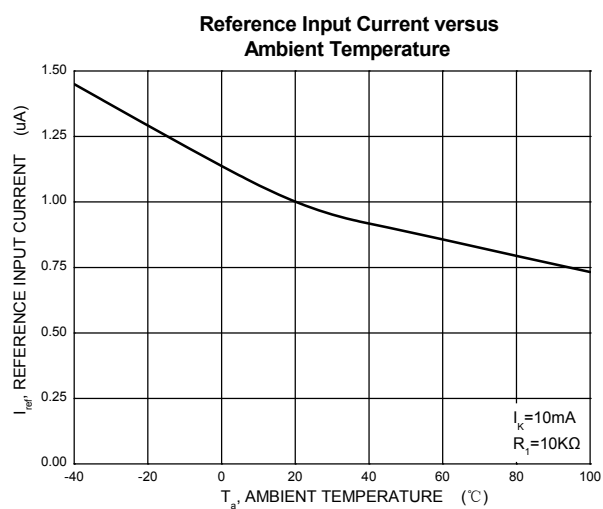
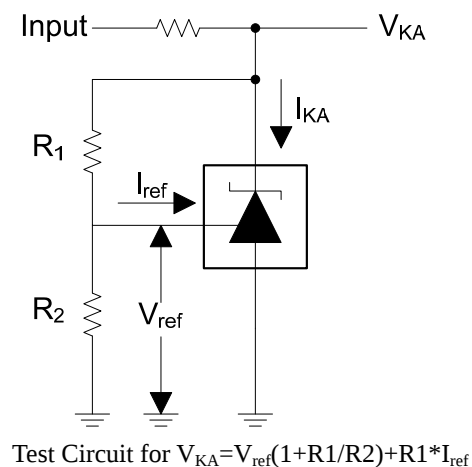
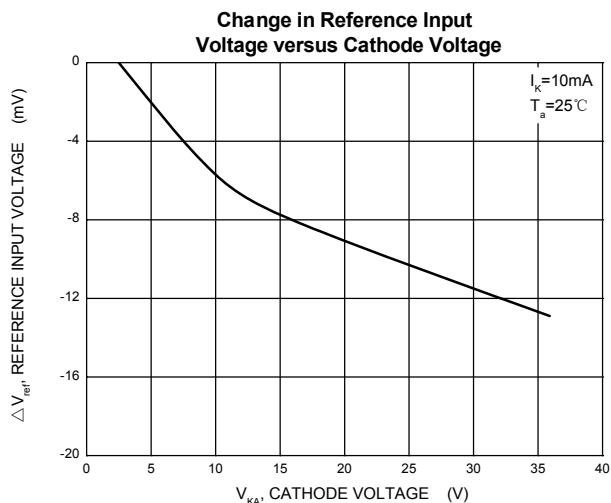
CLASSIFICATION of V_{ref}

Rank	0.5%	1%
Range	2.487-2.513	2.475-2.525

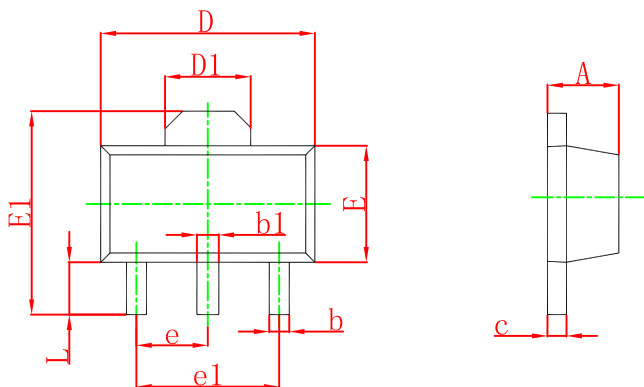
Typical Characteristics



Typical Characteristics

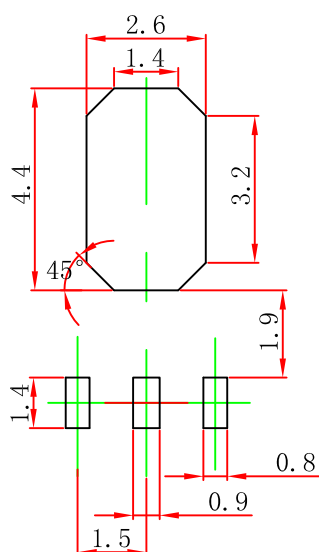


SOT-89-3L Package Outline Dimensions



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:

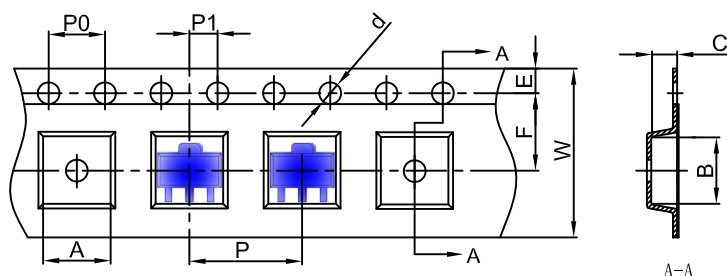
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

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

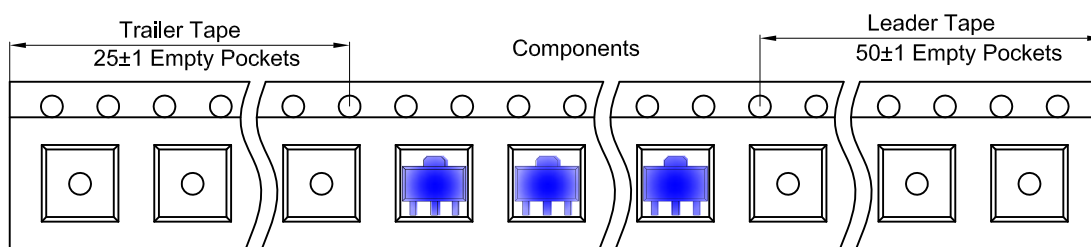


Packaging Description:

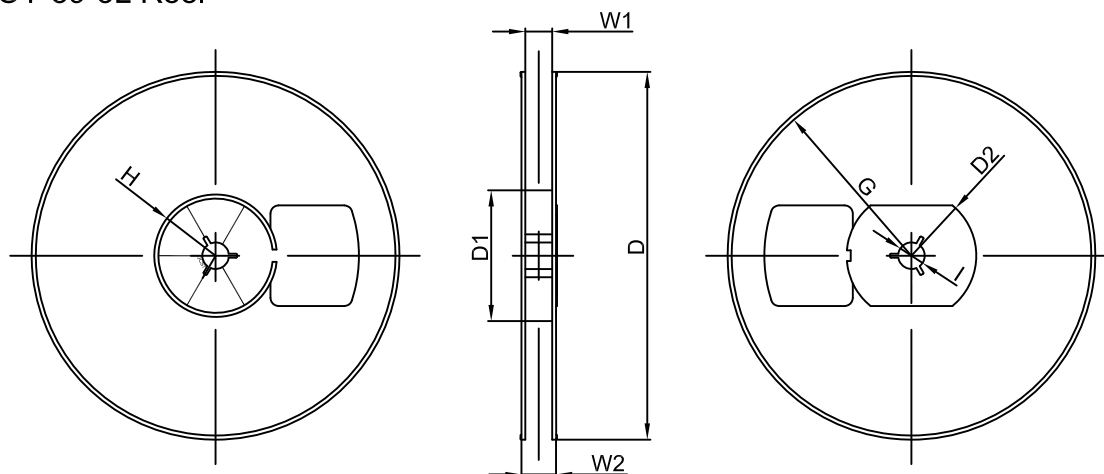
SOT-89-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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