Features

- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- No External Components Required
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. “Green” Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

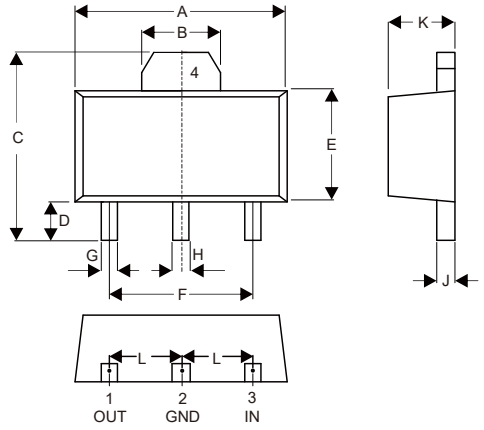
Three-Terminal Low Current Positive Voltage Regulators

Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V_1	30	V
Maximum Output Current	I_o	0.1	A
Operating Junction Temperature Range	T_{opr}	-20~120	℃
Storage Temperature Range	T_{STG}	-55~150	℃

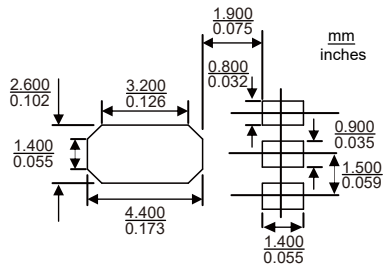
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

SOT-89



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.061		1.55		TYP.
C	0.154	0.171	3.91	4.35	
D	0.031	0.047	0.80	1.20	
E	0.089	0.104	2.25	2.65	
F	0.118		3.00		TYP.
G	0.013	0.020	0.33	0.52	
H	0.015	0.021	0.38	0.53	
J	0.014	0.017	0.35	0.44	
K	0.055	0.063	1.40	1.60	
L	0.059		1.50		TYP.

Suggested Solder Pad Layout



Electrical Characteristics

(V_i=12V, I_o=40mA, 0°C＜T_j＜ 125 °C,C_i=0.33uF, C_o=0.1uF,Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	Vo	T_j=25°C	5.75	6.0	6.25	V
		8.5V≤V_1≤20V, I_o=1mA-40mA	5.7	-	6.3	V
		8.5V≤V_1≤V_{MAX} I_o=1mA-70mA(Note2)	5.7	-	6.3	V
Load Regulation	△Vo	I_o=1mA-100mA,T_j=25°C	-	12.8	80	mV
		I_o=1mA-70mA, T_j=25°C	-	5.8	40	mV
Line Regulation	△Vo	8.5V≤V_1≤20V,T_j=25°C	-	64	175	mV
		9.0V≤V_1≤20V,T_j=25°C	-	54	125	mV
Quiescent Current	Iq		-	3.9	6.0	mA
Quiescent Current Change	$\triangle I_q$	9V≤V_1≤20V	-	-	1.5	mA
		1mA≤I_o≤40mA	-	-	0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	-	49	-	μV
Ripple Rejection	RR	8V≤V_1≤20V,f=120Hz,T_j=25°C	41	46	-	dB
Dropout Voltage	V_d	T_j=25°C	-	1.7	-	V

Note:

2.Bypass Capacitors are Recommended for Optimum Stability and Transient Response and should be Located as Close as Possible to The Regulators

Typcial Application