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)

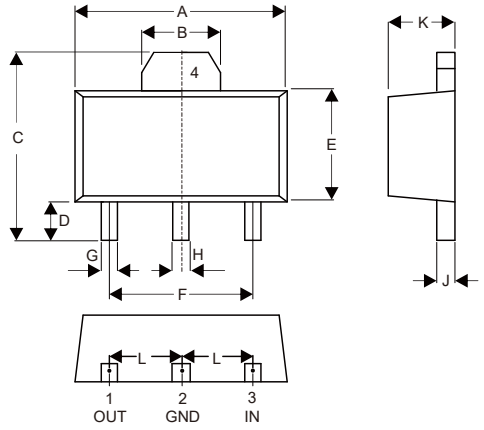
Three-Terminal Low Current Positive Voltage Regulators

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}	-25~125	℃
Storage Temperature Range	T_{STG}	-55~150	℃

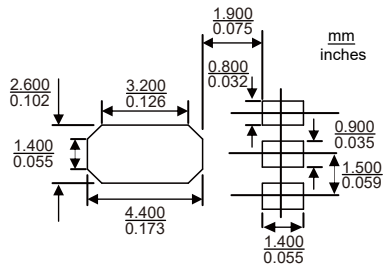
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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

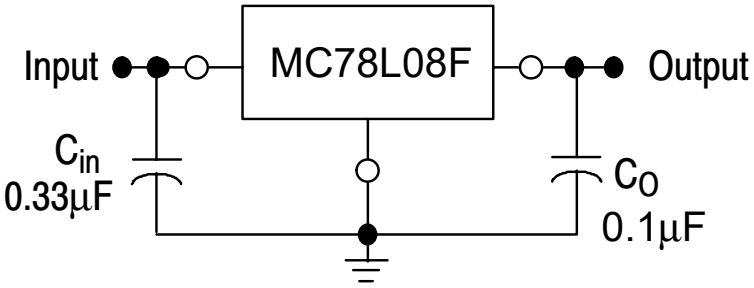
(V_i=14V, I_o=40mA, 0°C＜T_j＜ 125 °C,C_i=0.33uF, C_o=0.1uF,Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	Vo	T_j=25°C	7.7	8.0	8.3	V
		10.5V≤V_1≤23V, I_o=1mA-40mA	7.6	-	8.4	V
		I_o=1mA-70mA(Note2)	7.6	-	8.4	V
Load Regulation	△Vo	I_o=1mA-100mA,T_j=25°C	-	18	80	mV
		I_o=1mA-40mA, T_j=25°C	-	10	40	mV
Line Regulation	△Vo	10.5V≤V_1≤23V,T_j=25°C	-	42	175	mV
		11.0V≤V_1≤23V,T_j=25°C	-	36	125	mV
Quiescent Current	Iq	T_j=25°C	-	4.0	6.0	mA
Quiescent Current Change	$\triangle I_q$	11V≤V_1≤23V	-	-	1.5	mA
		1mA≤I_o≤40mA	-	-	0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	-	54	-	μV
Ripple Rejection	RR	13V≤V_1≤23V,f=120Hz,T_j=25°C	37	40	-	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



Curve Characteristics

Fig.1 Output Characteristics

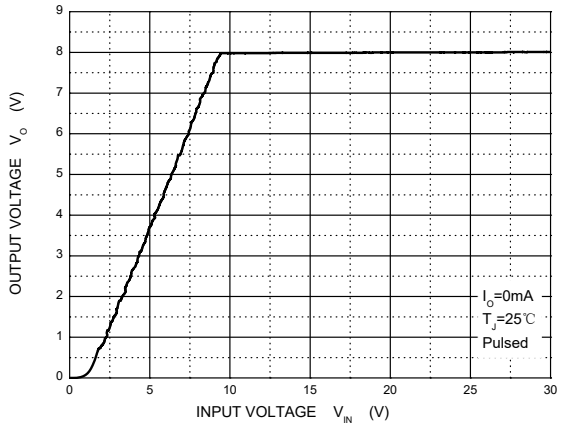


Fig.2 Dropout Characteristics

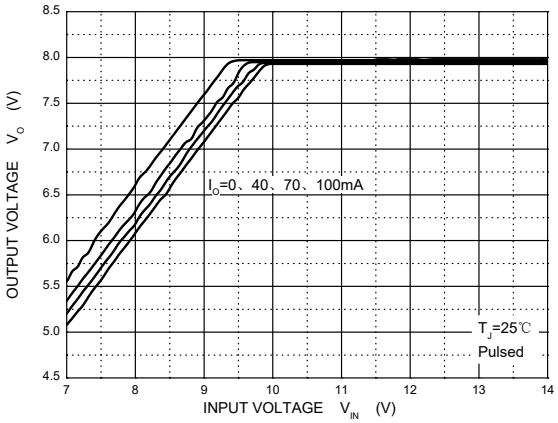


Fig.3 Quiescent Current vs Input Voltage

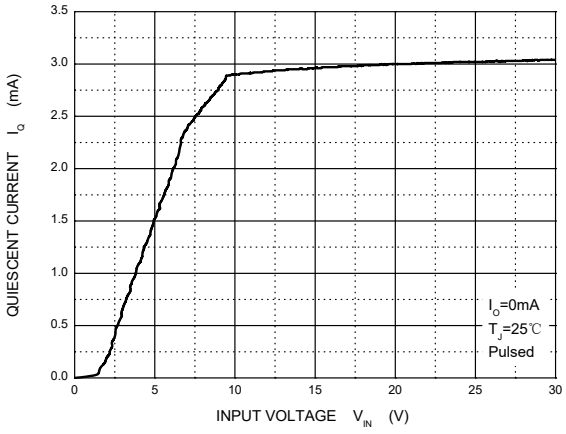
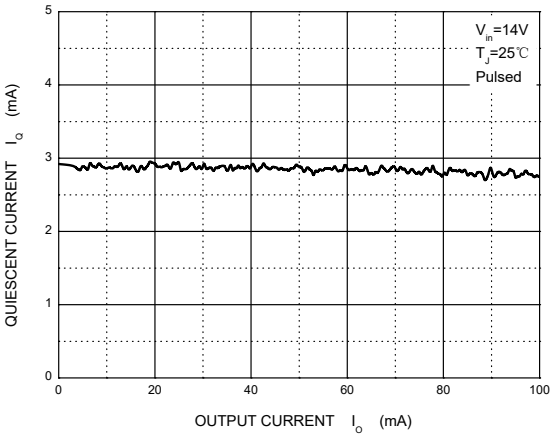


Fig.4 Quiescent Current vs Output Current



Curve Characteristics

Fig.5 Output Voltage vs Junction Temperature

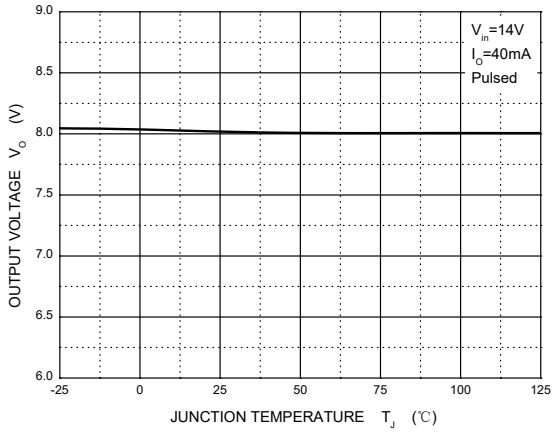


Fig.6 Current Cut-off Grid Voltage

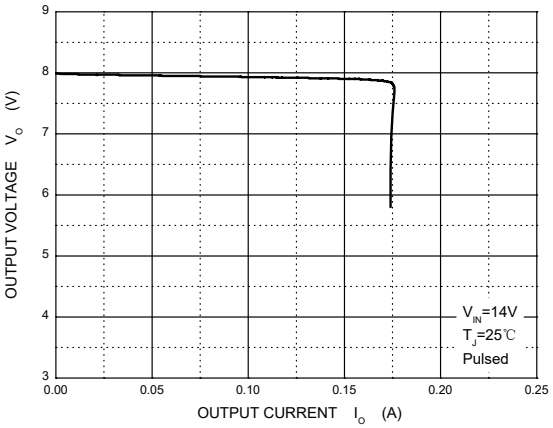
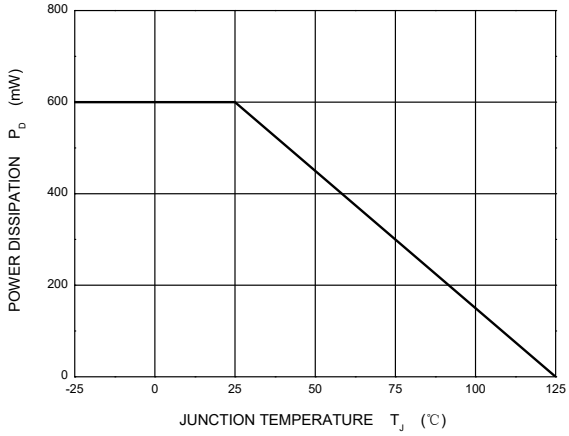


Fig.7 Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:1Kpcs/Reel

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