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78L08 Three-terminal positive voltage regulator

SOT-89 Encapsulate Three Terminal Voltage Regulator

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客户确认：

公司签章：

部门	工程部	品保部	采购部
签名			
日期			



SOT-89 Encapsulate Three Terminal Voltage Regulator

78L08 Three-terminal positive voltage regulator

FEATURES

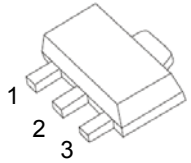
- Maximum Output current
I_{OM}: 0.1 A
- Output voltage
V_o: 8 V
- Continuous total dissipation
P_D: 0.5W

SOT-89-3L

1. OUT

2. GND

3. IN



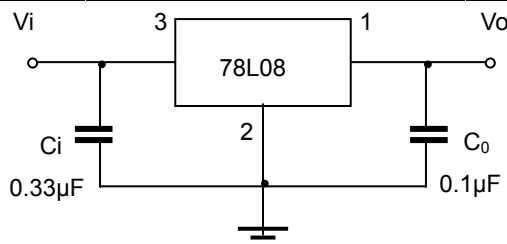
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Units
Input Voltage	V _i	30	V
Operating Junction Temperature Range	T _{OPR}	0~+150	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (V_i=14V, I_o=40mA, C_i=0.33μF, C_o=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V _o	25°C	7.7	8.0	8.3	V	
		10.5V≤V _i ≤23V, I _o =1mA~40mA	0-125°C	7.6	8.0	8.4	V
		I _o =1mA~70mA		7.6	8.0	8.4	V
Load Regulation	ΔV _o	I _o =1mA~100mA	25°C	18	80	mV	
		I _o =1mA~40mA	25°C	10	40	mV	
Line regulation	ΔV _o	10.5V≤V _i ≤23V	25°C	42	175	mV	
		11V≤V _i ≤23V	25°C	36	125	mV	
Quiescent Current	I _q		25°C	4	6	mA	
Quiescent Current Change	ΔI _q	11V≤V _i ≤23V	0-125°C		1.5	mA	
	ΔI _q	1mA≤I _o ≤40mA	0-125°C		0.1	mA	
Output Noise Voltage	V _N	10Hz≤f≤100KHz	25°C	54		μV	
Ripple Rejection	RR	13V≤V _i ≤23V, f=120Hz	0-125°C	37	46	dB	
Dropout Voltage	V _d		25°C		1.7	V	

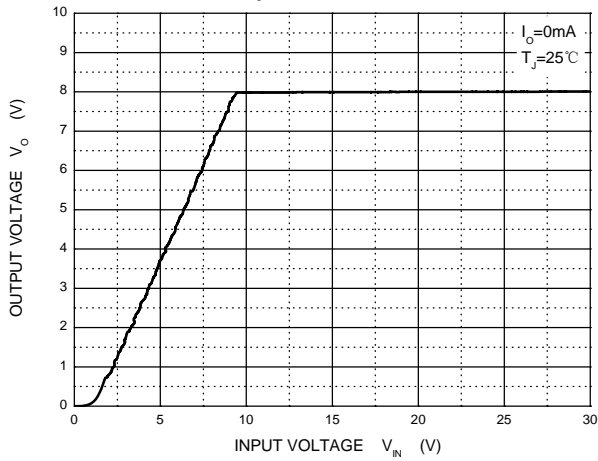
TYPICAL APPLICATION



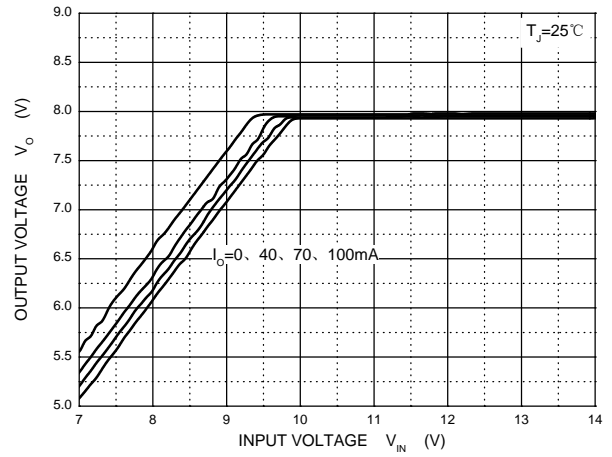
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

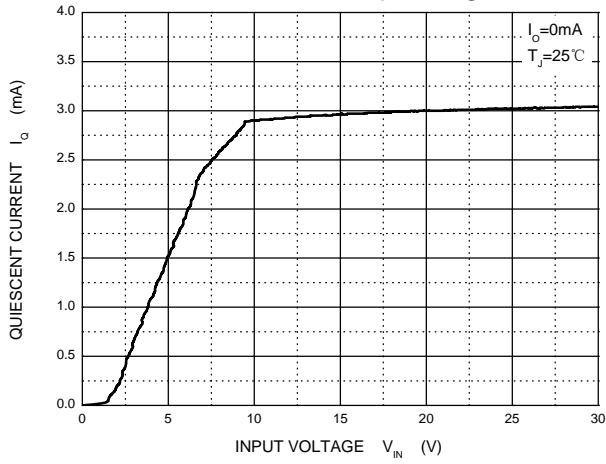
Output Characteristics



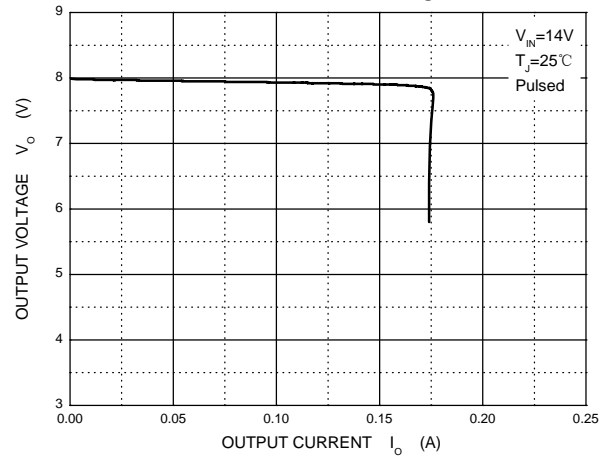
Dropout Characteristics



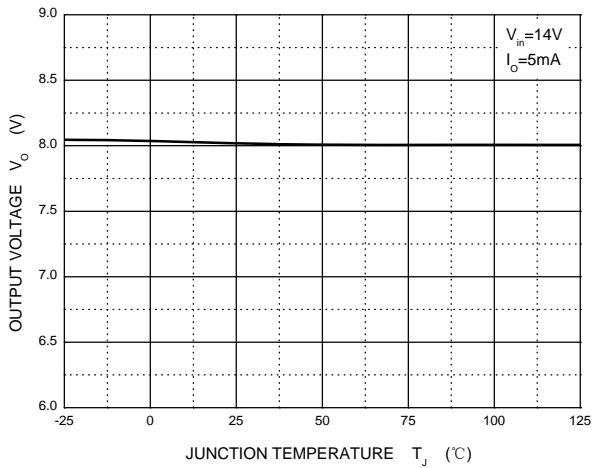
Quiescent Current vs Input Voltage



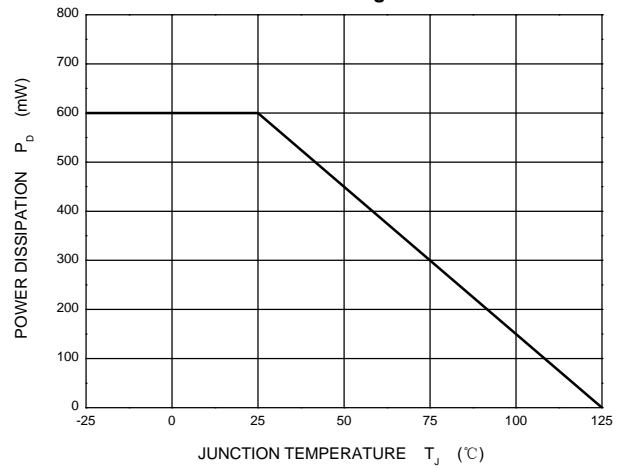
Current Cut-off Grid Voltage



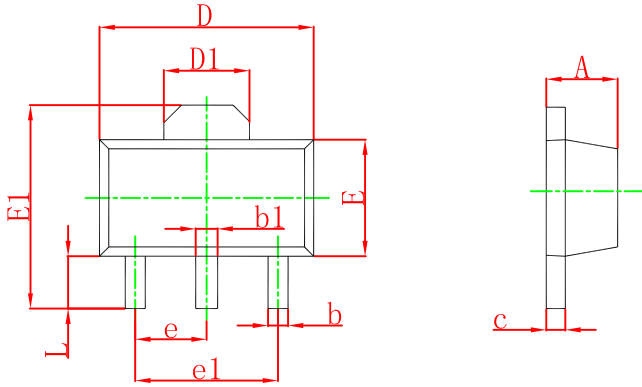
Output Voltage vs Junction Temperature



Power Derating Curve

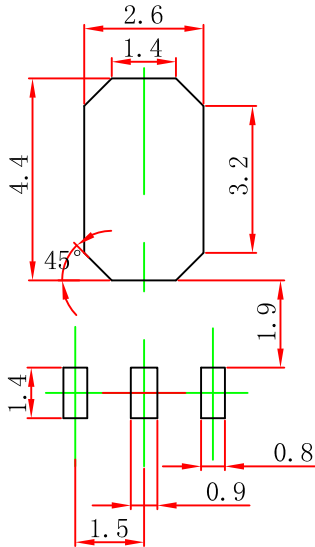


SOT-89-3L Package Outline Dimensions



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: ± 0.05 mm.
3. The pad layout is for reference purposes only.