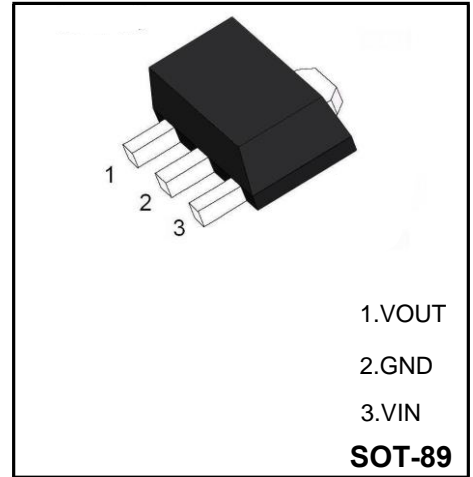


Three-Terminal Positive Voltage Regulator

FEATURES

- ◆Maximum Output current I_o : 0.1A
- ◆Output Voltage V_o : 8V
- ◆Continuous Total Dissipation P_D :800mW ($T_a= 25^{\circ}\text{C}$)



1.VOUT
2.GND
3.VIN
SOT-89

Marking Code	
78L08SI	YFW 78L08

Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Input Voltage	V_I	30	V
Power Dissipation (1)	P_D	800	mW
Operating Temperature	T_J	- 20 to + 120	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150	$^{\circ}\text{C}$

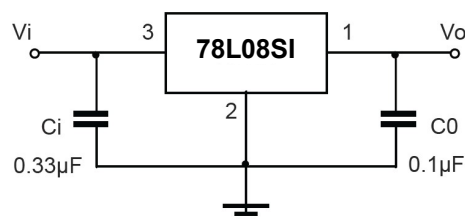
(1) 15 mm X 25 mm X 0.7 mm alumina ceramic board, $T_a \leq 25^{\circ}\text{C}$

Electrical Characteristics ($T_a=25^{\circ}\text{C}$)

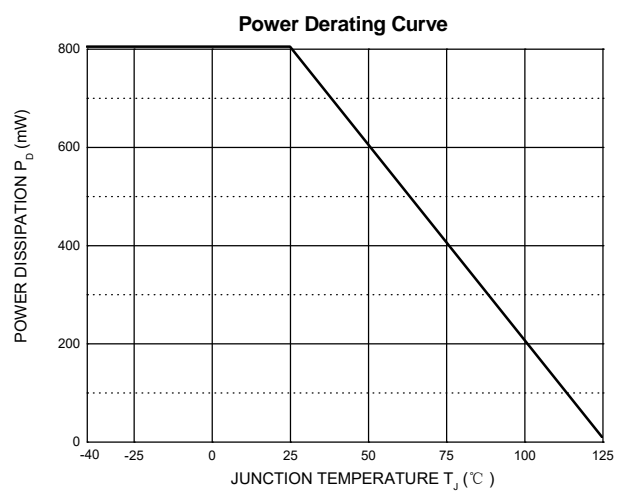
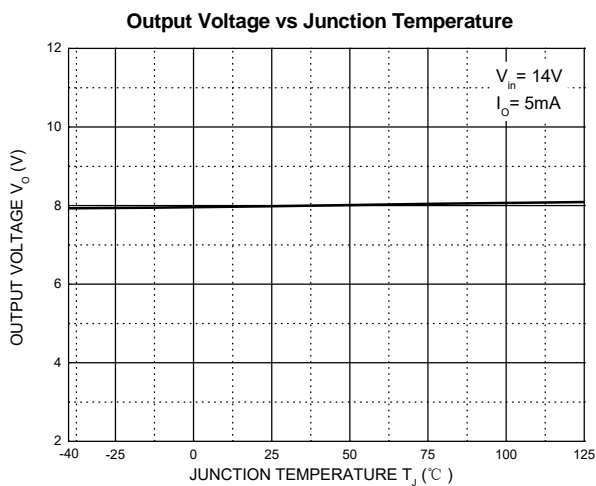
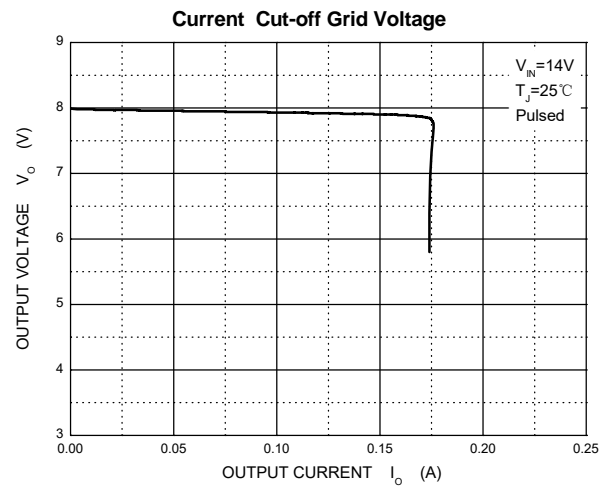
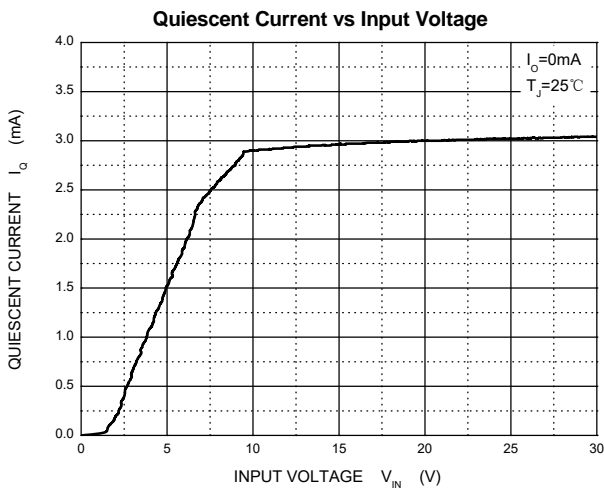
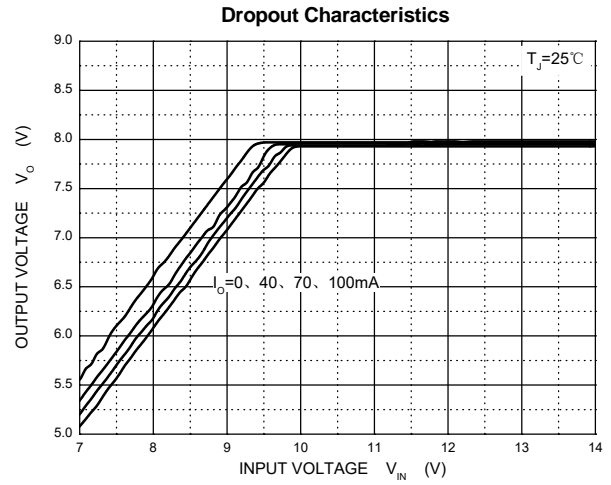
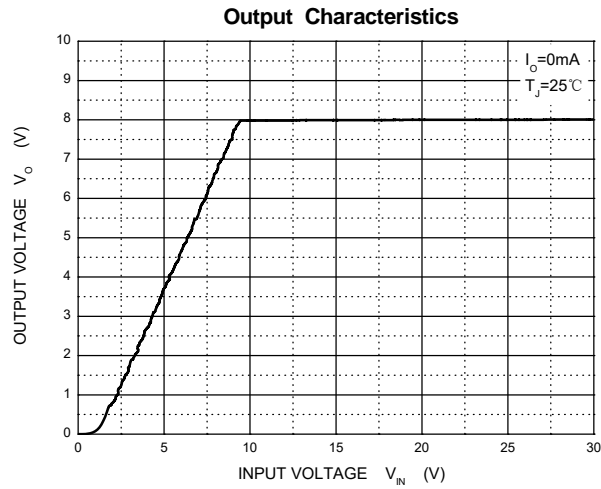
(Unless otherwise specified, $0^{\circ}\text{C} \leq T_J \leq 125^{\circ}\text{C}$, $V_I = 14\text{ V}$, $I_o = 40\text{ mA}$, $C_i = 0.33\ \mu\text{F}$, $C_o = 0.1\ \mu\text{F}$)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Output Voltage	V_o	$T_J = 25^{\circ}\text{C}$	7.7	8	8.3	V
		$10.5\text{ V} \leq V_I \leq 23\text{ V}$, $1\text{ mA} \leq I_o \leq 40\text{ mA}$	7.6	-	8.4	V
		$V_I = 14\text{ V}$, $1\text{ mA} \leq I_o \leq 70\text{ mA}$	7.6	-	8.4	V
Line Regulation	Reg_{line}	$10.5\text{ V} \leq V_I \leq 23\text{ V}$, $T_J = 25^{\circ}\text{C}$	-	-	175	mV
		$11\text{ V} \leq V_I \leq 23\text{ V}$, $T_J = 25^{\circ}\text{C}$	-	-	125	
Load Regulation	Reg_{load}	$1\text{ mA} \leq I_o \leq 100\text{ mA}$, $T_J = 25^{\circ}\text{C}$	-	-	80	mV
		$1\text{ mA} \leq I_o \leq 40\text{ mA}$, $T_J = 25^{\circ}\text{C}$	-	-	40	
Quiescent Current	I_q	$T_J = 25^{\circ}\text{C}$	-	-	5.5	mA
Quiescent Current Change	ΔI_q	$12\text{ V} \leq V_I \leq 23\text{ V}$, $I_o = 40\text{ mA}$	-	-	1.5	mA
		$V_I = 14\text{ V}$, $1\text{ mA} \leq I_o \leq 40\text{ mA}$	-	-	0.1	
Output Noise Voltage	V_N	$10\text{ Hz} \leq f \leq 100\text{ KHz}$, $T_J = 25^{\circ}\text{C}$	-	60	-	μV
Ripple Rejection	RR	$f = 120\text{ Hz}$, $12\text{ V} \leq V_I \leq 22\text{ V}$, $T_J = 25^{\circ}\text{C}$	39	-	-	dB
Dropout Voltage	V_{Drop}	$T_J = 25^{\circ}\text{C}$	-	1.7	-	V

TYPICAL APPLICATION



Typical Characteristics (continued) ($V_{OUT}=8.0V, T_J=25^{\circ}C$, unless otherwise specified)



Ordering information

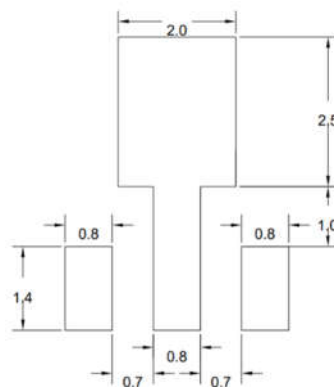
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel,7"reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-89

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

The recommended mounting pad size



UNIT:MM

Disclaimer

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