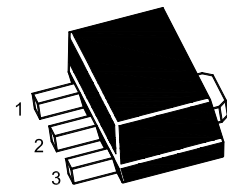


78L08U

3-Terminal Positive Voltage Regulator



1.OUT 2.GND 3.IN
SOT-89 Plastic Package

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

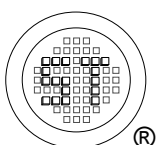
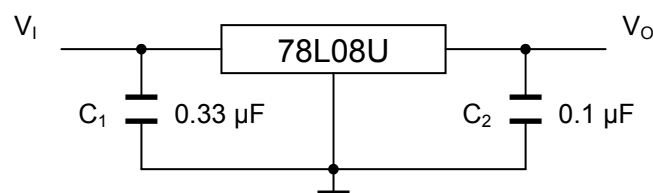
Parameter	Symbol	Value	Unit
Input Voltage	V_I	30	V
Power Dissipation	P_{tot}	800 ¹⁾	mW
Operating Temperature	T_{opr}	- 20 to + 120	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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, $0^\circ\text{C} \leq T_J \leq 125^\circ\text{C}$, $V_I = 14\text{ V}$, $I_o = 40\text{ mA}$, $C_1 = 0.33\ \mu\text{F}$, $C_o = 0.1\ \mu\text{F}$)

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	Regline	$10.5\text{ V} \leq V_I \leq 23\text{ V}$, $T_j = 25^\circ\text{C}$	-	-	175	mV
		$11\text{ V} \leq V_I \leq 23\text{ V}$, $T_j = 25^\circ\text{C}$	-	-	125	
Load Regulation	Regload	$1\text{ mA} \leq I_o \leq 100\text{ mA}$, $T_j = 25^\circ\text{C}$	-	-	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



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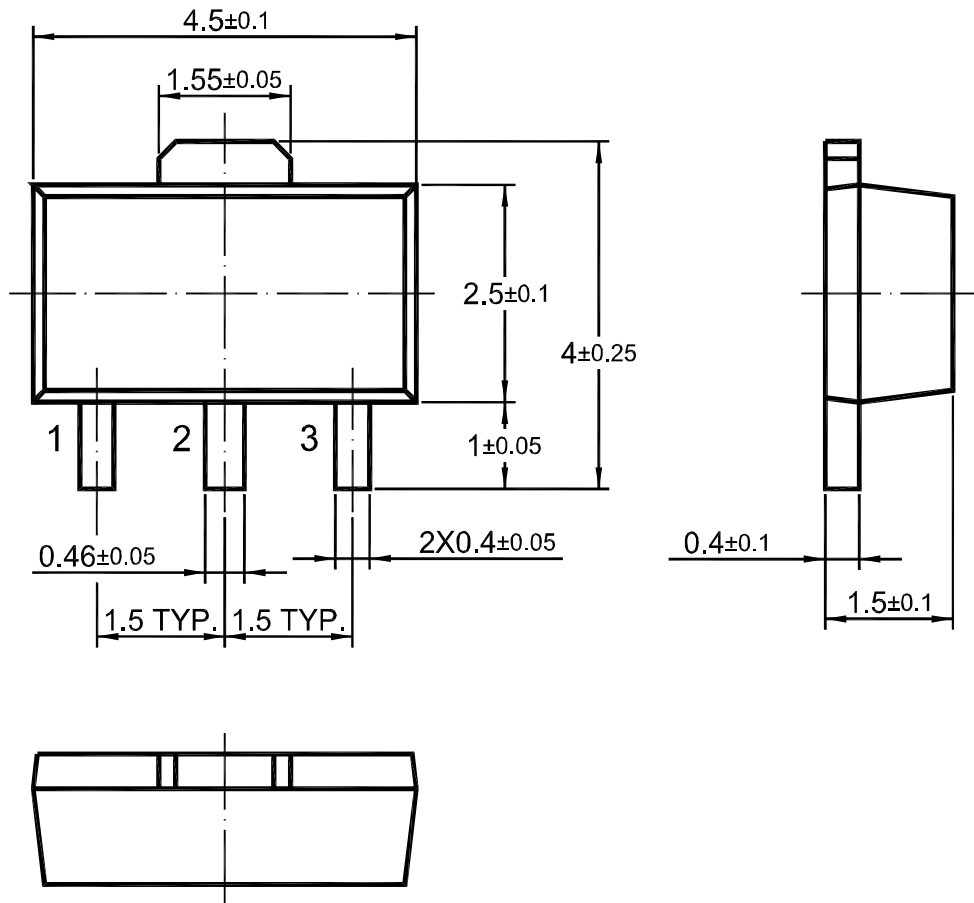


ISO/TS 16949 : 2009 Certificate No. 180713000
 ISO14001 : 2004 Certificate No. 7116
 ISO 9001 : 2008 Certificate No. 9071940
 BS-OHSAS 18001 : 2007 Certificate No. 7116
 IECQ QC 080000 Certificate No. PRC-18PM-1485-1

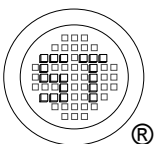
Dated: 05/03/2016 Rev: 02

78L08U

SOT-89 PACKAGE OUTLINE



Dimensions in mm



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