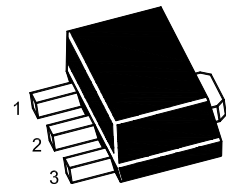


ST 78L08U

3-Terminal Positive Voltage Regulator



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

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

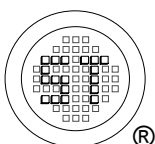
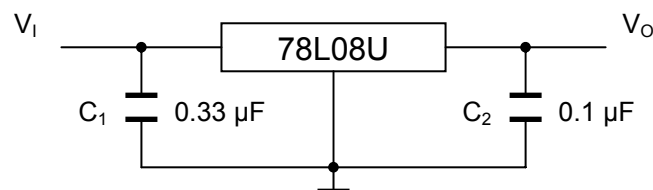
Parameter	Symbol	Value	Unit
Input Voltage	V_I	30	V
Power Dissipation	P_{tot}	800 ¹⁾	mW
Operating Temperature	T_{opr}	- 20 to + 120	$^{\circ}\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^{\circ}\text{C}$

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

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

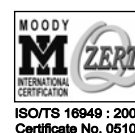
(Unless otherwise specified, $0^{\circ}\text{C} \leq T_j \leq 125^{\circ}\text{C}$, $V_I = 14\text{ V}$, $I_O = 40\text{ mA}$, $C_I = 0.33\text{ }\mu\text{F}$, $C_O = 0.1\text{ }\mu\text{F}$)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Voltage	V_O	$T_j = 25\text{ }^{\circ}\text{C}$	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	$10.5\text{ V} \leq V_I \leq 23\text{ V}$, $T_j = 25\text{ }^{\circ}\text{C}$	-	-	175	mV
		$11\text{ V} \leq V_I \leq 23\text{ V}$, $T_j = 25\text{ }^{\circ}\text{C}$	-	-	125	
Load Regulation	Regload	$1\text{ mA} \leq I_O \leq 100\text{ mA}$, $T_j = 25\text{ }^{\circ}\text{C}$	-	-	80	mV
		$1\text{ mA} \leq I_O \leq 40\text{ mA}$, $T_j = 25\text{ }^{\circ}\text{C}$	-	-	40	
Quiescent Current	I_Q	$T_j = 25\text{ }^{\circ}\text{C}$	-	-	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	$10\text{ Hz} \leq f \leq 100\text{ KHz}$, $T_j = 25\text{ }^{\circ}\text{C}$	-	60	-	μV
Ripple Rejection	RR	$f = 120\text{ Hz}$, $12\text{ V} \leq V_I \leq 22\text{ V}$, $T_j = 25\text{ }^{\circ}\text{C}$	39	-	-	dB
Dropout Voltage	V_{Drop}	$T_j = 25\text{ }^{\circ}\text{C}$	-	1.7	-	V



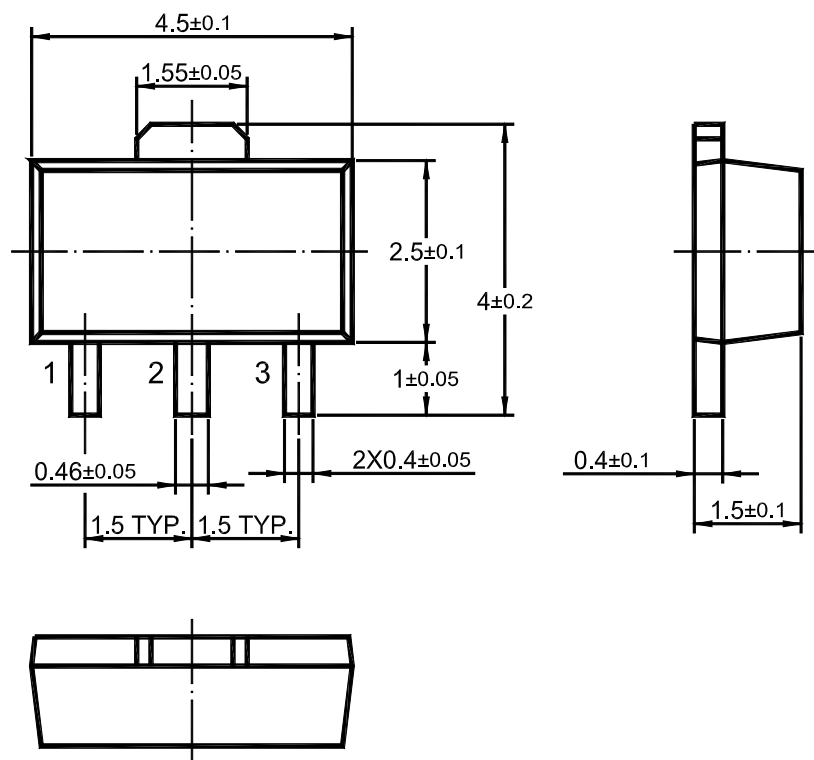
SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

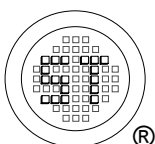


Dated : 05/09/2006

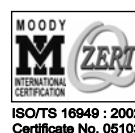
SOT-89 PACKAGE OUTLINE



Dimensions in mm



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Dated : 05/09/2006