



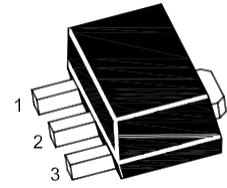
# PJ78L08SQ

## 3-Terminal Voltage Regulator

### Features

- Input voltage: up to 30V
- Output: 8V
- Output current up to 100 mA, internal thermal overload protection and short-circuit limiting.

SOT-89

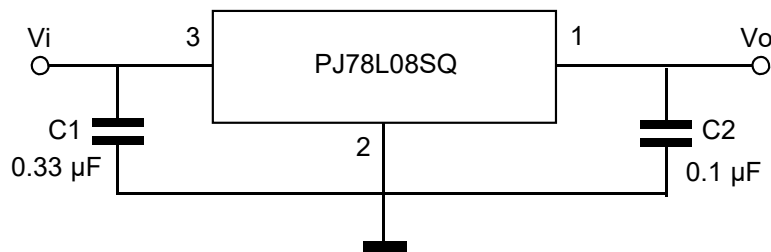


1. OUT 2. GND 3. IN

### Maximum Ratings

Ratings at  $T_A = 25^\circ\text{C}$  ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Units
Input Voltage	$V_I$	30	V
Output Current	$I_o$	100	mA
Power Dissipation	$P_D$	500	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Operating Temperature Range	$T_{OPR}$	-40~125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~150	$^\circ\text{C}$





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## 3-Terminal Voltage Regulator

### Electrical Characteristics

$V_I=14V$ ,  $I_O=40mA$ ,  $0^{\circ}C \leq T_J \leq 125^{\circ}C$ ,  $C_i=0.33\mu F$ ,  $C_o=0.1\mu F$ , unless otherwise specified.

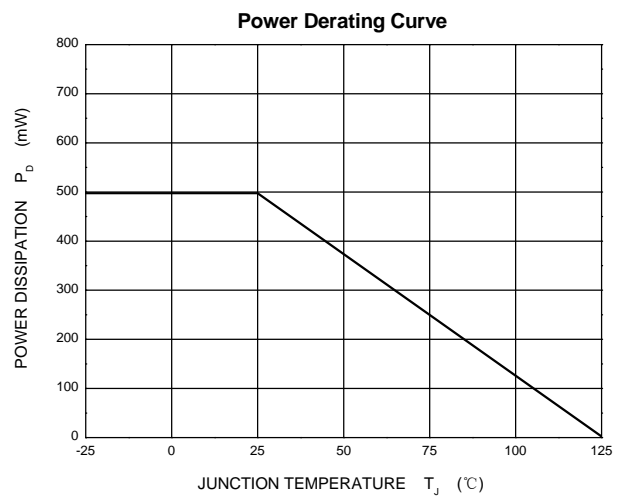
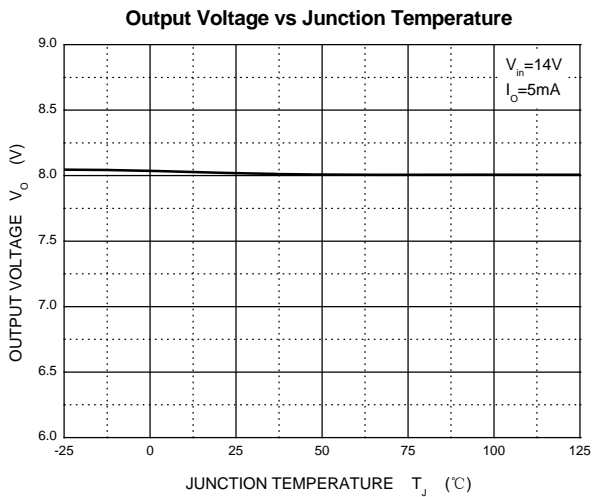
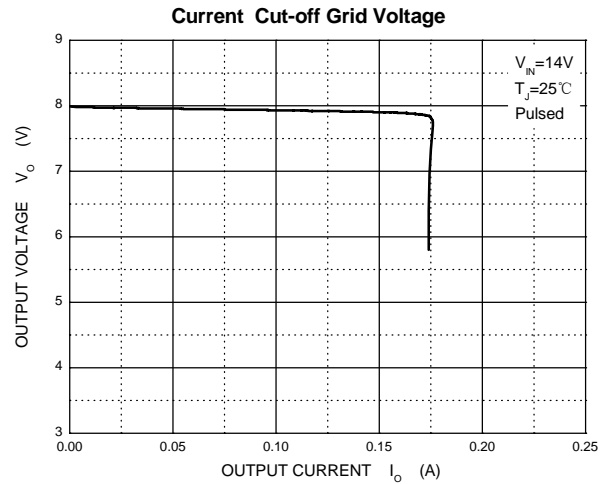
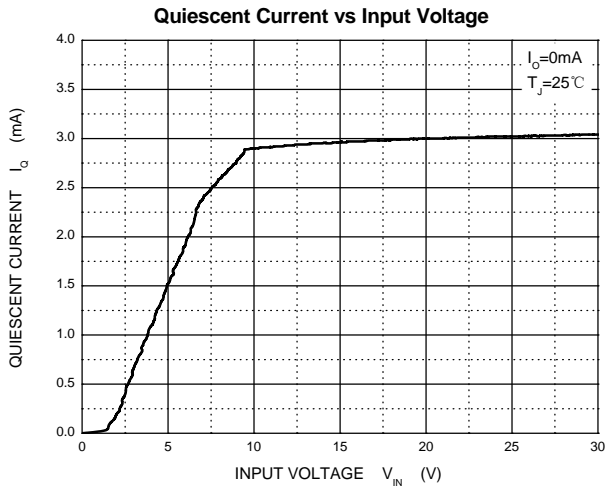
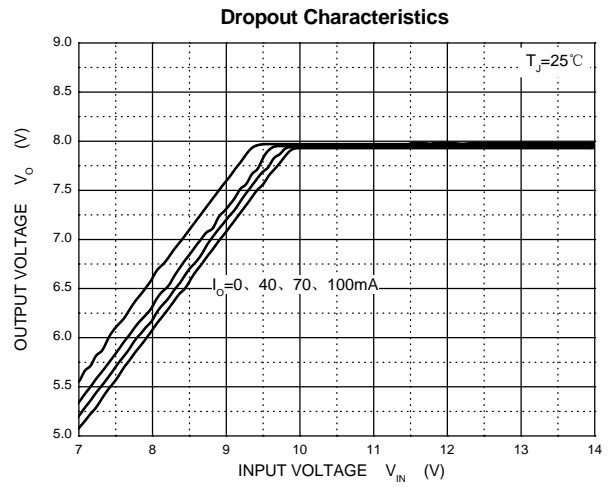
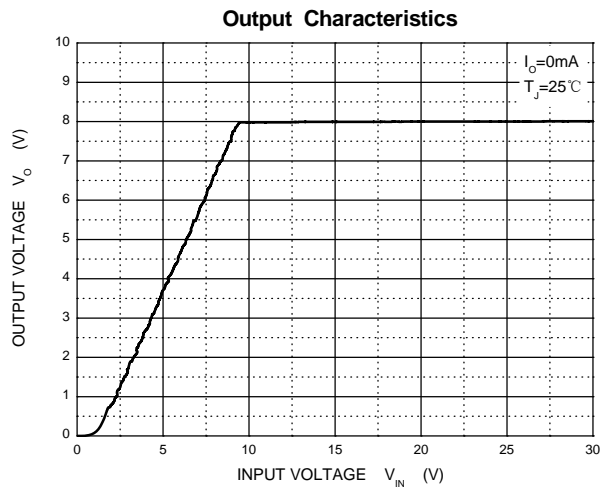
Parameter	Symbols	Test Conditions	Min	Typ	Max	Unit
Output Voltage	$V_O$	$T_J=25^{\circ}C$	7.70	8	8.30	V
		$I_O=1mA$ to $40mA$ $V_I=10.5V$ to $23V$	7.6	8	8.4	V
		$I_O=1mA$ to $70mA$	7.6	8	8.4	V
Line Regulation	$\Delta V_O$	$V_I=10.5V$ to $23V$ $T_J=25^{\circ}C$			175	mV
		$V_I=11V$ to $23V$ $T_J=25^{\circ}C$			125	mV
Load Regulation	$\Delta V_O$	$I_O=1mA$ to $100mA$ , $T_J=25^{\circ}C$			80	mV
		$I_O=1mA$ to $70mA$ , $T_J=25^{\circ}C$			40	mV
Ripple Rejection	RR	$V_I=11V$ to $23V$ , $T_J=25^{\circ}C$ $f=120Hz$	36	45		dB
Output Noise Voltage	$V_N$	$f=10Hz \sim 100KHz$		49		$\mu V$
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$		1.7		V
Quiescent Current	$I_Q$				5.5	mA
Quiescent Current Change	$\Delta I_Q$	$V_I=11V$ to $23V$			1.5	mA
		$I_O=1mA$ to $40mA$			0.1	mA



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## 3-Terminal Voltage Regulator

### Ratings and Characteristic Curves





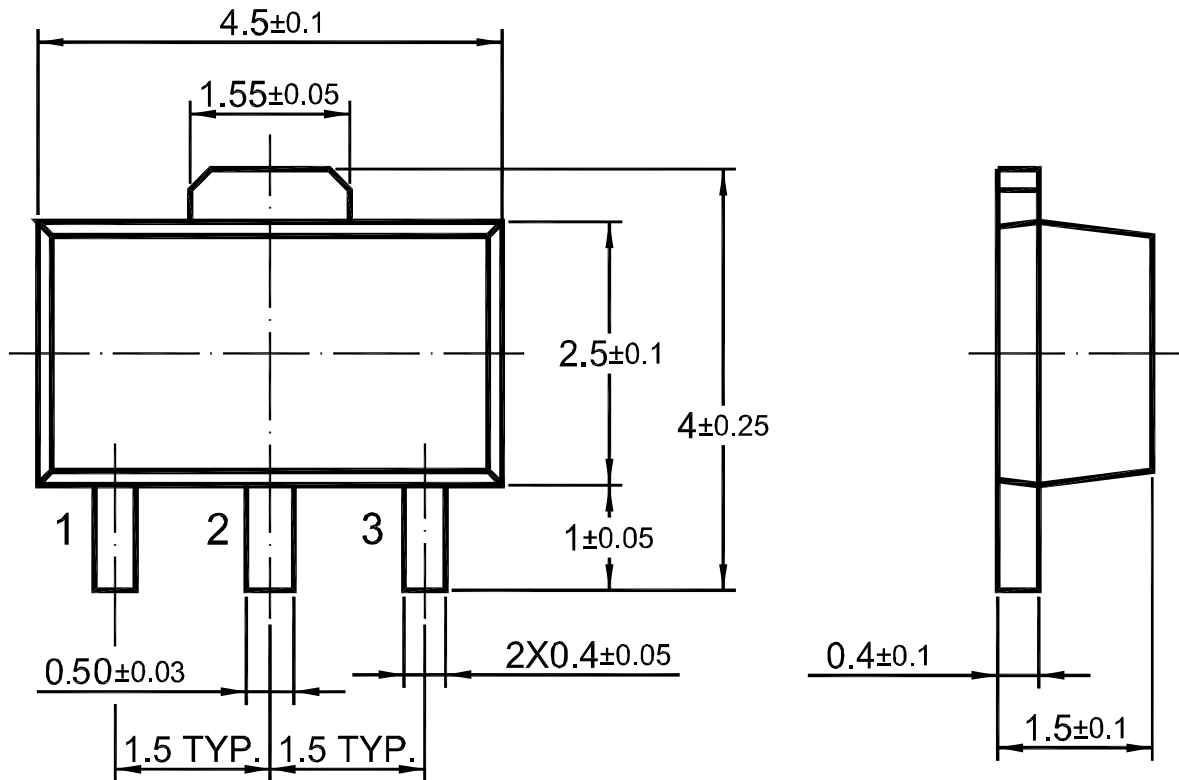
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## 3-Terminal Voltage Regulator

### Package Outline

SOT-89

Dimensions in mm



### Ordering Information

Device	Package	Shipping
PJ78L08SQ	SOT-89	1,000/ Tape & Reel (7 inches)