



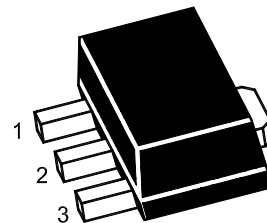
# PJ78L15SQ-K

## 3-Terminal Voltage Regulator

### Features

- Input voltage: up to 35V
- Output voltage: 15V
- Output current up to 100 mA, internal thermal overload protection and short-circuit limiting.

### SOT-89



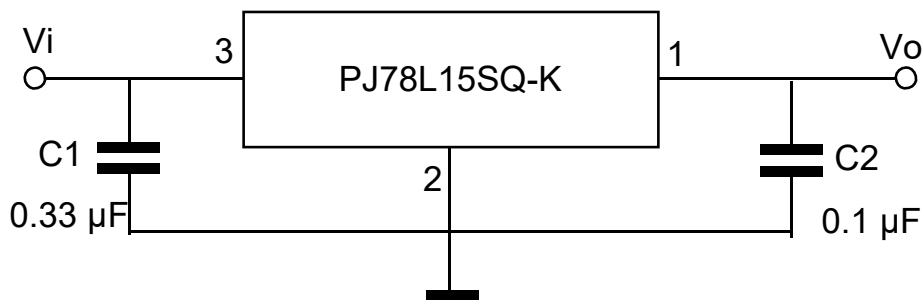
1. VOUT 2. GND 3. VIN

Marking Code : 78L15

### Absolute Maximum Ratings

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

Parameter	Symbol	Value	Unit
Input Voltage	$V_I$	35	V
Output Current	$I_O$	100	mA
Maximum Power Dissipation	$P_D$	500	mW
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Operating Temperature Range	$T_{OPR}$	-40 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$





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## 3-Terminal Voltage Regulator

### Electrical Characteristics

Ratings at  $0^{\circ}\text{C} \leq T_J \leq 125^{\circ}\text{C}$ ,  $V_I = 23\text{V}$ ,  $I_O = 40\text{mA}$ ,  $C_I = 0.33\mu\text{F}$ ,  $C_O = 0.1\mu\text{F}$ , unless otherwise specified.

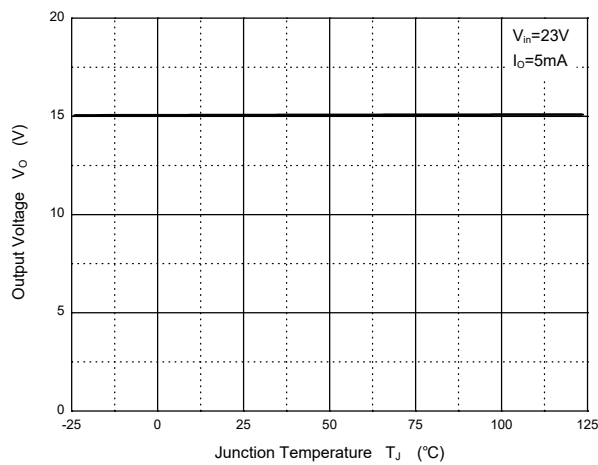
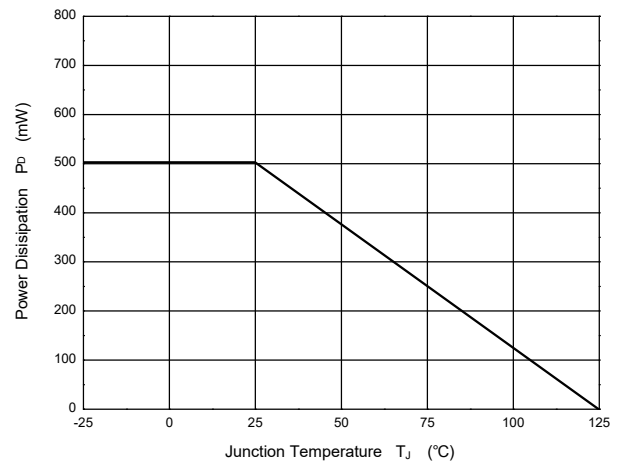
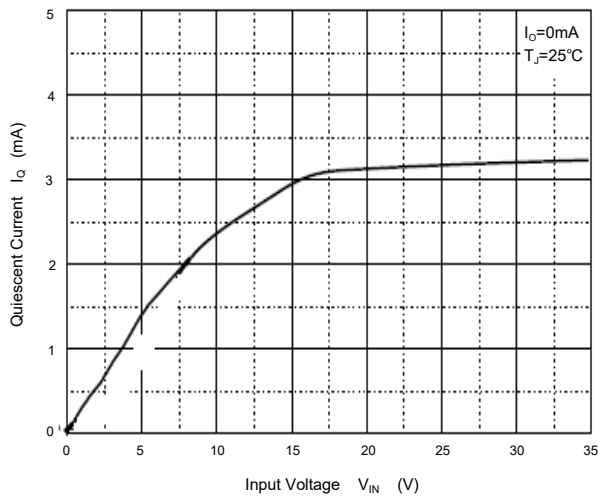
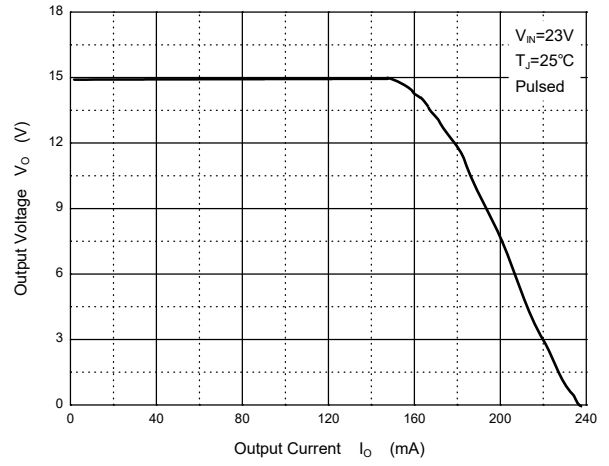
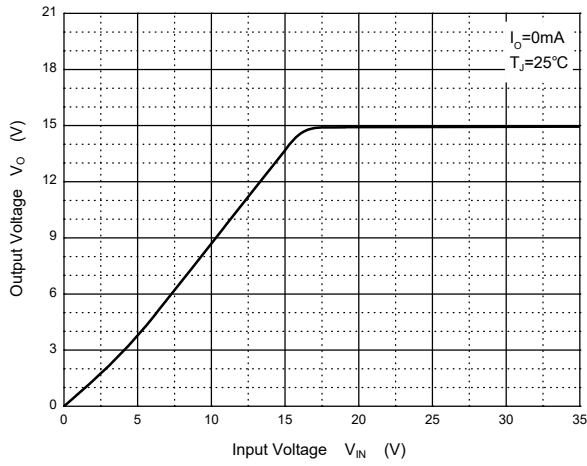
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Output Voltage	$V_O$	$T_J = 25^{\circ}\text{C}$	14.4	15	15.6	V
		$I_O = 1\text{mA to } 40\text{mA}$ $V_I = 17.5\text{V to } 30\text{V}$	14.25	15	15.75	V
		$I_O = 1\text{mA to } 70\text{mA}$	14.25	15	15.75	V
Line Regulation	$\Delta V_O$	$V_I = 17.5\text{V to } 30\text{V}$ , $T_J = 25^{\circ}\text{C}$	--	65	300	mV
		$V_I = 19\text{V to } 30\text{V}$ , $T_J = 25^{\circ}\text{C}$	--	58	250	mV
Load Regulation	$\Delta V_O$	$I_O = 1\text{mA to } 100\text{mA}$ , $T_J = 25^{\circ}\text{C}$	--	45	150	mV
		$I_O = 1\text{mA to } 40\text{mA}$ , $T_J = 25^{\circ}\text{C}$	--	22	75	mV
Ripple Rejection	RR	$V_I = 18.5\text{V to } 28.5\text{V}$ , $f = 120\text{Hz}$ , $T_J = 25^{\circ}\text{C}$	34	--	--	dB
Dropout Voltage	$V_D$	$T_J = 25^{\circ}\text{C}$	--	1.7	--	V
Quiescent Current	$I_Q$	$T_J = 25^{\circ}\text{C}$	--	--	6.5	mA
Quiescent Current Change	$\Delta I_Q$	$V_I = 19\text{V to } 30\text{V}$ , $T_J = 25^{\circ}\text{C}$	--	--	1.5	mA
		$I_O = 1\text{mA to } 40\text{mA}$	--	--	0.1	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{Hz}$ , $T_J = 25^{\circ}\text{C}$	--	82	--	$\mu\text{V}$



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## 3-Terminal Voltage Regulator

### Typical Characteristic Curves





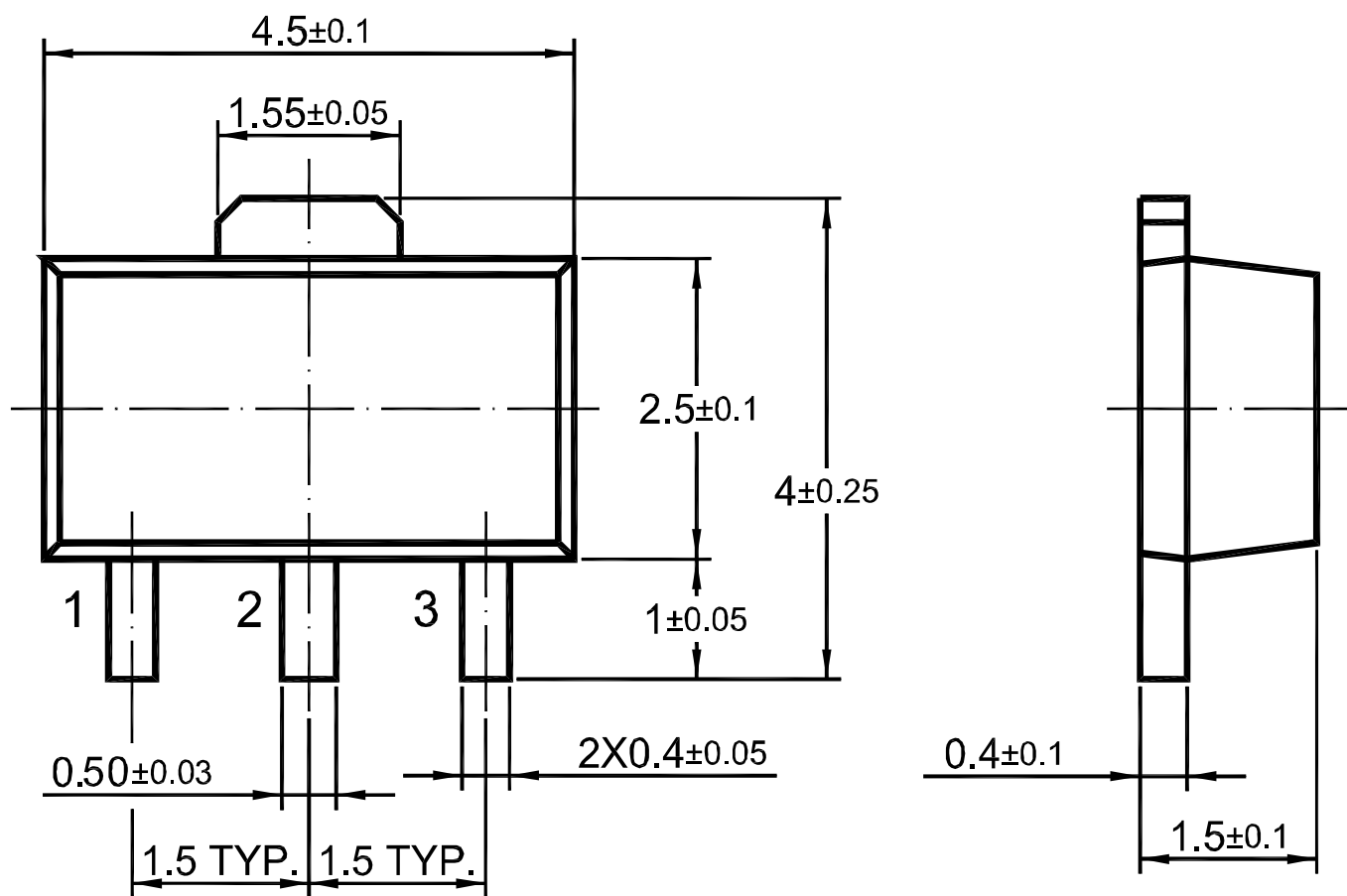
# PJ78L15SQ-K

## 3-Terminal Voltage Regulator

### Package Outline

SOT-89

Dimensions in mm



### Ordering Information

Device	Package	Shipping
PJ78L15SQ-K	SOT-89	1,000PCS/Reel&7inches
		3,000PCS/Reel&13inches