



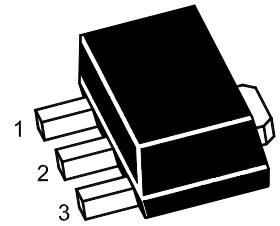
PJ78L10SQ

3-Terminal Voltage Regulator

Features

- Input voltage: up to 30V
- Output: 10V
- Output current up to 100 mA, internal thermal overload protection and short-circuit current limiting.

SOT-89



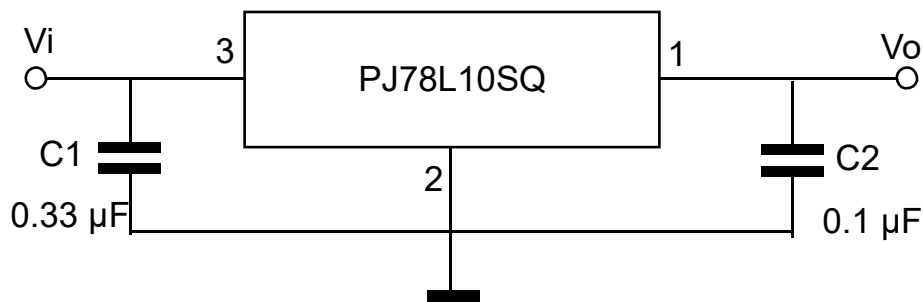
1. OUT 2. GND 3. IN

Marking Code : 78L10

Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|-----------------------------|-----------|-------------|------|
| Input Voltage | V_I | 30 | V |
| Output Current | I_O | 100 | mA |
| Maximum Power Dissipation | P_D | 500 | mW |
| Junction Temperature | T_J | 150 | °C |
| Operating Temperature Range | T_{OPR} | -40 to +125 | °C |
| Storage Temperature Range | T_{STG} | -55 to +150 | °C |





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Electrical Characteristics

$V_I=17V$, $I_O=40mA$, $0^{\circ}C \leq T_J \leq 125^{\circ}C$, $C_I=0.33\mu F$, $C_O=0.1\mu F$, unless otherwise specified.

| Parameter | Symbol | Test Conditions | Min. | Typ. | Max. | Unit |
|--------------------------|--------------|--|------|------|------|---------|
| Output Voltage | V_O | $T_J=25^{\circ}C$ | 9.6 | 10 | 10.4 | V |
| | | $I_O=1mA$ to $40mA$, $V_I=13V$ to $25V$ | 9.5 | 10 | 10.5 | V |
| | | $I_O=1mA$ to $70mA$ | 9.5 | 10 | 10.5 | V |
| Line Regulation | ΔV_O | $V_I=13V$ to $25V$, $T_J=25^{\circ}C$ | -- | -- | 175 | mV |
| | | $V_I=14V$ to $25V$, $T_J=25^{\circ}C$ | -- | -- | 125 | mV |
| Load Regulation | ΔV_O | $I_O=1mA$ to $100mA$, $T_J=25^{\circ}C$ | -- | -- | 90 | mV |
| | | $I_O=1mA$ to $40mA$, $T_J=25^{\circ}C$ | -- | -- | 40 | mV |
| Ripple Rejection | RR | $V_I=9V$ to $19V$, $f=120Hz$, $T_J=25^{\circ}C$ | 37 | 44 | -- | dB |
| Dropout Voltage | V_D | $T_J=25^{\circ}C$ | -- | 1.7 | -- | V |
| Quiescent Current | I_Q | | -- | -- | 6 | mA |
| Quiescent Current Change | ΔI_Q | $V_I=14V$ to $25V$ | -- | -- | 1.5 | mA |
| | | $I_O=1mA$ to $40mA$ | -- | -- | 0.1 | mA |
| Output Noise Voltage | V_N | $10Hz \leq f \leq 100Hz$ | -- | 62 | -- | μV |



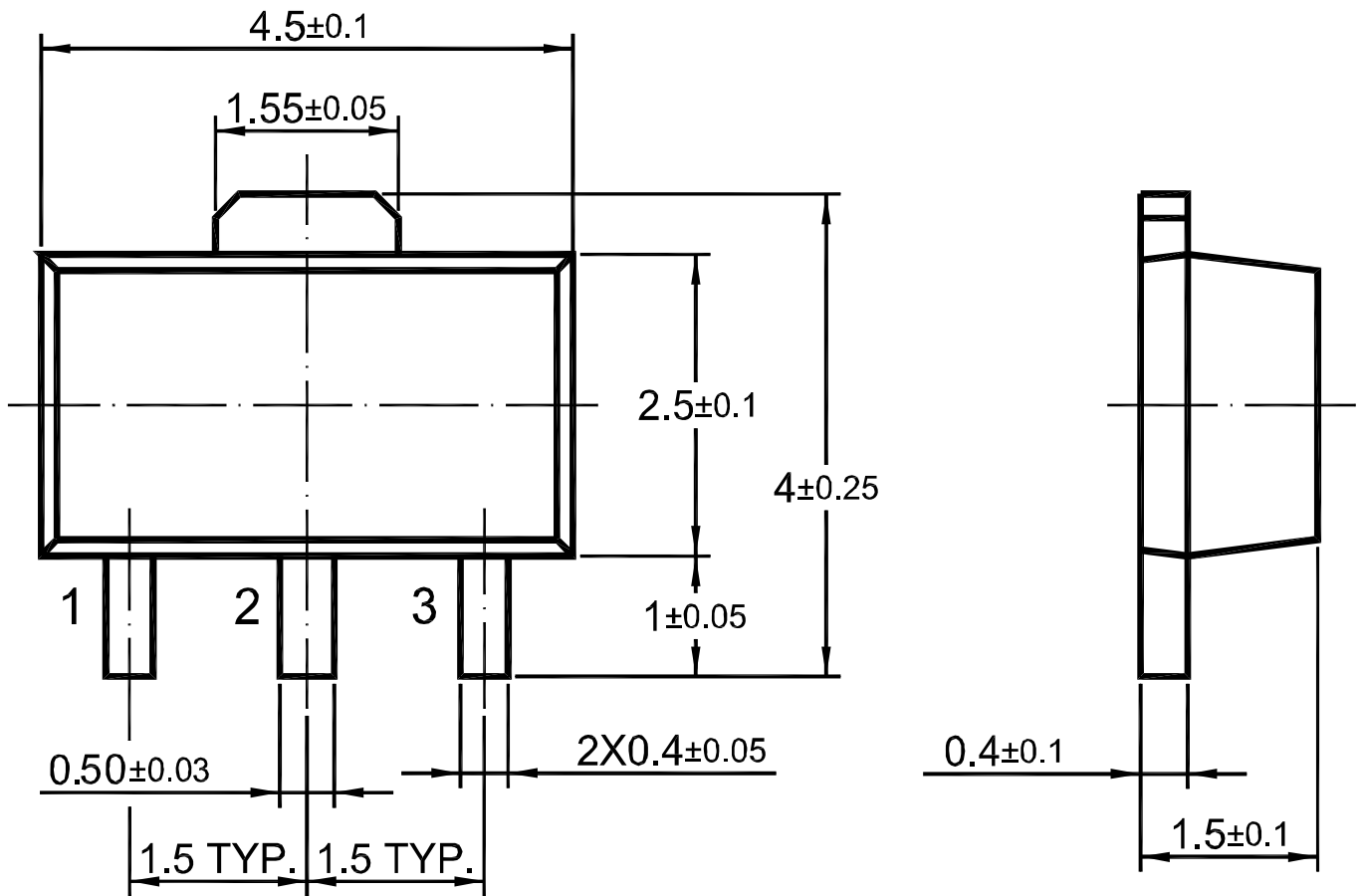
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3-Terminal Voltage Regulator

Package Outline

SOT-89

Dimensions in mm



Ordering Information

| Device | Package | Shipping |
|-----------|---------|------------------------|
| PJ78L10SQ | SOT-89 | 3,000PCS/Reel&13inches |