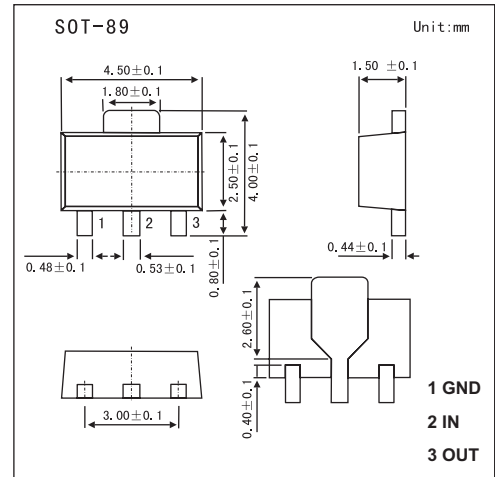


Three-terminal Voltage Regulator

LM79L09

■ Features

- Maximum output current I_{om} : 0.1A.
- Output voltage V_o : -9V.
- Continuous total dissipation P_D : 0.5W

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

| Parameter | Symbol | Rating | Unit |
|--------------------------------------|-----------|-------------|------------------|
| Input Voltage | V_i | -30 | V |
| Operating junction temperature range | T_{OPR} | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics ($V_i=16\text{V}, I_o=40\text{mA}, 0^\circ\text{C}<T_j<125^\circ\text{C}, C_1=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------|--------------|---|-------|------|-------|---------------|
| Output voltage | V_o | $T_j=25^\circ\text{C}$ | -8.64 | -9.0 | -9.36 | V |
| | | $-12\text{V}\leq V_i\leq -24\text{V}, I_o=1\text{mA}-40\text{mA}$ | -8.55 | -9.0 | -9.45 | V |
| | | $I_o=1\text{mA}-70\text{mA}$ | -8.55 | -9.0 | -9.45 | V |
| Load regulation | ΔV_o | $T_j=25^\circ\text{C}, I_o=1\text{mA}-100\text{mA}$ | | 19 | 90 | mV |
| | | $T_j=25^\circ\text{C}, I_o=1\text{mA}-40\text{mA}$ | | 11 | 40 | mV |
| Line regulation | ΔV_o | $-12\text{V}\leq V_i\leq -24\text{V}, T_j=25^\circ\text{C}$ | | 45 | 175 | mV |
| | | $-13\text{V}\leq V_i\leq -24\text{V}, T_j=25^\circ\text{C}$ | | 40 | 125 | mV |
| Quiescent current | I_q | 25°C | | 4.1 | 6.0 | mA |
| Quiescent current change | ΔI_q | $0^\circ\text{C}<T_j<125^\circ\text{C}, -13\leq V_i\leq -24\text{V}$ | | | 1.5 | mA |
| | ΔI_q | $0^\circ\text{C}<T_j<125^\circ\text{C}, 1\text{mA}\leq I_o\leq 40\text{mA}$ | | | 0.1 | mA |
| Output noise voltage | V_N | $10\text{Hz}\leq f\leq 100\text{KHz}, T_j=25^\circ\text{C}$ | | 58 | | μV |
| Ripple rejection | RR | $-15\text{V}\leq V_i\leq -24\text{V}, f=120\text{Hz}$ | | 45 | | dB |
| Dropout voltage | V_d | $T_j=25^\circ\text{C}$ | | 1.7 | | V |

■ Typical Application

