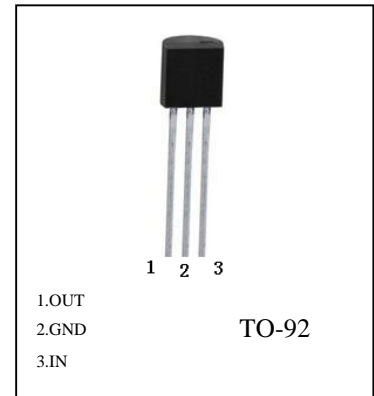


FEATURES

Maximum Output current I_O : 0.1 A
 Output voltage V_O : 9V
 Continuous total dissipation P_D : 0.625 W ($T_a=25^\circ\text{C}$)

78L09



ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies)

| Parameter | Symbol | Value | Unit |
|--------------------------------------|--------|---------|------------------|
| Input Voltage | V_I | 30 | V |
| Operating Junction Temperature Range | TOPR | 0-125 | $^\circ\text{C}$ |
| Storage Temperature Range | TSTG | -65-150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($V_i=10\text{V}, I_o=500\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified)

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

78L09 Typical Characteristics

