

WEJ78L08 Three-terminal positive voltage regulator

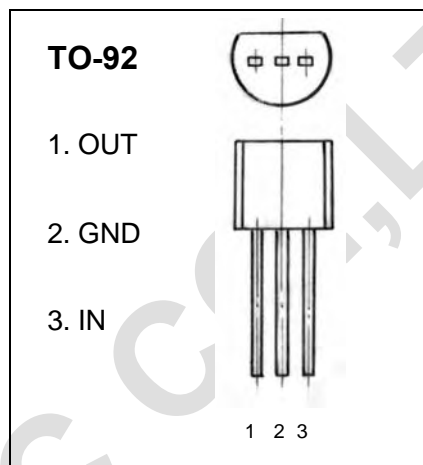
FEATURES

Maximum Output current

I_{OM} : 0.1 A

Output voltage

V_o : 8 V



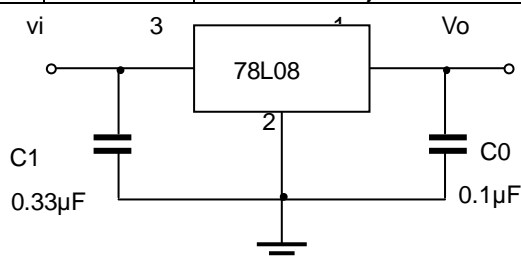
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

| Parameter | Symbol | Value | Units |
|--------------------------------------|-----------|----------|-------|
| Input Voltage | V_I | 30 | V |
| Operating Junction Temperature Range | T_{OPR} | 0~+125 | °C |
| Storage Temperature Range | T_{STG} | -55~+150 | °C |

ELECTRICAL CHARACTERISTICS ($V_I=14V, I_o=40mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------|--------------|--|-----|-----|-----|----------|
| Output voltage | V_o | $T_j=25^\circ C$ | 7.7 | 8.0 | 8.3 | V |
| | | $10.5V \leq V_I \leq 23V, I_o=1mA \sim 40mA$ | 7.6 | 8.0 | 8.4 | V |
| | | $10.5V \leq V_I \leq 23V, I_o=1mA \sim 70mA$ | 7.6 | 8.0 | 8.4 | V (note) |
| Load Regulation | ΔV_o | $T_j=25^\circ C, I_o=1mA \sim 100mA$ | | 18 | 80 | mV |
| | | $T_j=25^\circ C, I_o=1mA \sim 40mA$ | | 10 | 40 | mV |
| Line regulation | ΔV_o | $10.5V \leq V_I \leq 23V, T_j=25^\circ C$ | | 42 | 175 | mV |
| | | $11V \leq V_I \leq 23V, T_j=25^\circ C$ | | 36 | 125 | mV |
| Quiescent Current | I_q | $T_j=25^\circ C$ | | 4 | 6 | mA |
| Quiescent Current Change | ΔI_q | $11V \leq V_I \leq 23V$ | | | 1.5 | mA |
| | ΔI_q | $1mA \leq I_o \leq 40mA$ | | | 0.1 | mA |
| Output Noise Voltage | V_N | $10Hz \leq f \leq 100KHz$ | | 54 | | μV |
| Ripple Rejection | RR | $13V \leq V_I \leq 23V, f=120Hz, T_j=25^\circ C$ | 37 | 46 | | dB |
| Dropout Voltage | V_d | $T_j=25^\circ C$ | | 1.7 | | V |

TYPICAL APPLICATION



Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.