

Features

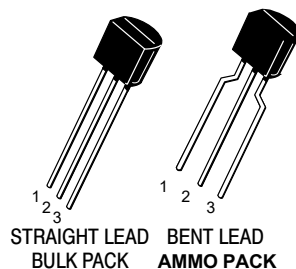
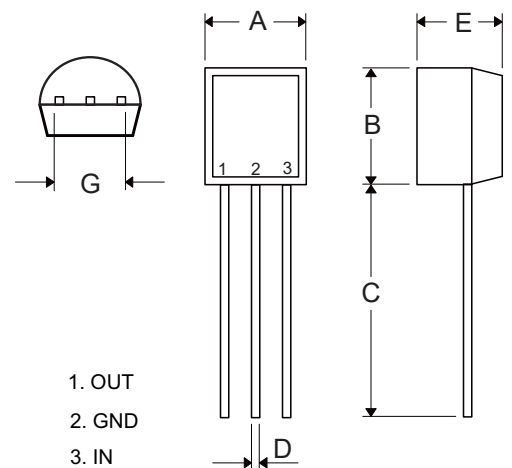
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- No External Components Required
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

Maximum Ratings

| Parameter | Symbol | Value | Unit |
|--------------------------------------|-----------|---------|------|
| Input Voltage | V_1 | 30 | V |
| Maximum Output Current | I_o | 0.1 | A |
| Operating Junction Temperature Range | T_{opr} | -20~120 | °C |
| Storage Temperature Range | T_{STG} | -55~150 | °C |

Three-Terminal Low Current Positive Voltage Regulators

TO-92



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|---------------|
| | MIN | MAX | MIN | MAX | |
| A | 0.169 | 0.185 | 4.30 | 4.70 | |
| B | 0.169 | 0.185 | 4.30 | 4.70 | |
| C | 0.500 | ----- | 12.70 | ----- | |
| D | 0.015 | 0.022 | 0.38 | 0.55 | |
| E | 0.130 | 0.146 | 3.30 | 3.70 | |
| G | 0.095 | 0.105 | 2.42 | 2.67 | Straight Lead |
| | 0.173 | 0.220 | 4.40 | 5.60 | Bent |

Electrical Characteristics

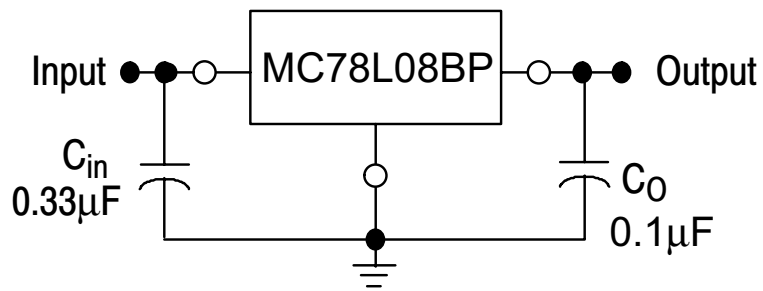
 ($V_i=14V$, $I_o=40mA$, $0^\circ C < T_j < 125^\circ C$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, Unless Otherwise Specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------|--------------|--|-----|-----|-----|---------|
| Output Voltage | V_o | $T_j=25^\circ C$ | 7.7 | 8.0 | 8.3 | V |
| | | $10.5V \leq V_1 \leq 23V$, $I_o=1mA-40mA$ | 7.6 | - | 8.4 | V |
| | | $10.5V \leq V_1 \leq V_{MAX}$ $I_o=1mA-70mA$ (Note 1) | 7.6 | - | 8.4 | V |
| Load Regulation | ΔV_o | $I_o=1mA-100mA$, $T_j=25^\circ C$ | - | 15 | 80 | mV |
| | | $I_o=1mA-70mA$, $T_j=25^\circ C$ | - | 8.0 | 40 | mV |
| Line Regulation | ΔV_o | $10.5V \leq V_1 \leq 23V$, $T_j=25^\circ C$ | - | 10 | 175 | mV |
| | | $11.0V \leq V_1 \leq 23V$, $T_j=25^\circ C$ | - | 8.0 | 125 | mV |
| Quiescent Current | I_q | | - | 2.0 | 5.5 | mA |
| Quiescent Current Change | ΔI_q | $11V \leq V_1 \leq 23V$ | - | - | 1.5 | mA |
| | | $1mA \leq I_o \leq 40mA$ | - | - | 0.1 | mA |
| Output Noise Voltage | V_N | $10Hz \leq f \leq 100KHz$ | - | 49 | - | μV |
| Ripple Rejection | RR | $11V \leq V_1 \leq 23V$, $f=120Hz$, $T_j=25^\circ C$ | 39 | 70 | - | dB |
| Dropout Voltage | V_d | $T_j=25^\circ C$ | - | 1.7 | - | V |

Note:

1. Bypass Capacitors are Recommended for Optimum Stability and Transient Response and should be Located as Close as Possible to The Regulators

Typcial Application



Ordering Information

| Device | Packing |
|----------------|-----------------------------|
| Part Number-AP | Ammo Packing: 20Kpcs/Carton |
| Part Number-BP | Bulk: 100Kpcs/Carton |

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-BP-HF
 Adding "-HF" Suffix for Halogen Free, eg. Part Number-AP-HF

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