

RoHS Compliant Product

A suffix of "-C" specifies halogen or lead -free

DESCRIPTION

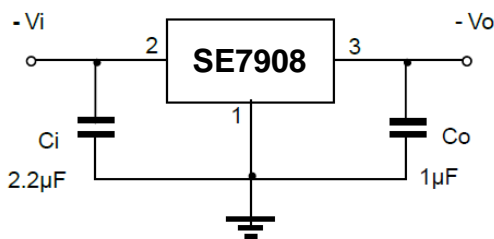
The SE7908 of fixed-voltage monolithic integrated-circuit voltage regulators designed to complement.

The SE7908 in a wide range of applications. These applications include on-card regulation for elimination of noise and distribution problems associated with single-point regulation. The internal current limiting and thermal shutdown features of these regulators make them essentially immune to overload. In addition to use as fixed-voltage regulators, these devices can be used with external components to obtain adjustable output voltage and current and also as the power pass element in precision regulators.

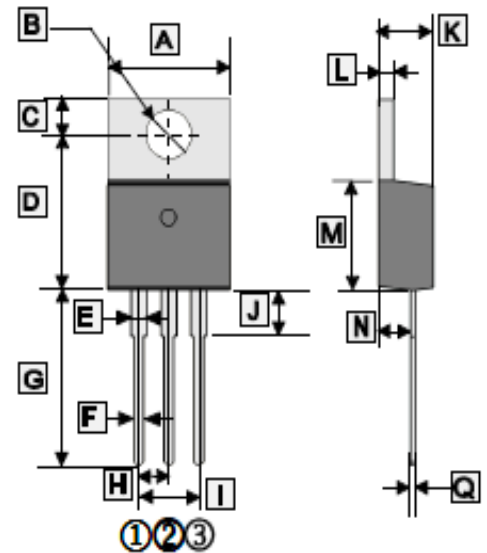
FEATURES

- 1.5A Output Current
- Internal Short-Circuit Current Limiting
- Output Transistor Safe-Area Compensation
- No External Components
- Internal Thermal Overload Protection

TYPICAL APPLICATION



TO-220J



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|-------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 9.57 | 10.57 | I | 4.68 | 5.48 |
| B | 3.54 | 4.14 | J | 2.95 | 3.96 |
| C | 2.54 | 2.94 | K | 4.27 | 4.87 |
| D | 11.86 | 13.26 | L | 1.07 | 1.47 |
| E | 0.97 | 1.57 | M | 8.0 | 10.0 |
| F | 0.51 | 1.11 | N | 2.03 | 2.92 |
| G | 12.7 | 13.8 | Q | 0.30 | 0.65 |
| H | 2.540 TYP. | | | | |

ORDER INFORMATION

| Part Number | Type |
|-------------|---------------------------------|
| SE7908 | Lead (Pb)-free |
| SE7908-C | Lead (Pb)-free and Halogen-free |

MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

| Parameter | Symbol | Ratings | Unit |
|--|-----------------|----------------|-----------------|
| Input Voltage | V_{IN} | -35 | V |
| Output Voltage | V_O | -8 | V |
| Continuous Total Dissipation | P_D | 1.5 | W |
| Thermal Resistance Junction-Air | $R_{\theta JA}$ | 83.3 | $^{\circ}C / W$ |
| Operating Junction & Storage Temperature Range | T_J, T_{STG} | 0~150, -55~150 | $^{\circ}C$ |

ELECTRICAL CHARACTERISTICS ($V_i = -14V$, $I_o = 500mA$, $C_i = 2.2\mu F$, $C_o = 1\mu F$, $T_J = 25^\circ C$ unless otherwise specified)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|--------------------------|-------------------------|-------|------|-------|-----------------|--|
| Output Voltage | V_o | -7.68 | -8 | -8.32 | V | $V_{IN} = -14V$, $I_o = 500mA$ |
| | | -7.6 | -8 | -8.4 | | $-10.5V \leq V_{IN} \leq -23V$, $5mA \leq I_o \leq 1A$, $T_J = 0 \sim 125^\circ C$ |
| Line Regulation | ΔV_o | - | 12.5 | 160 | mV | $-10.5V \leq V_{IN} \leq -25V$ |
| | | - | 4 | 80 | | $-11V \leq V_{IN} \leq -17V$ |
| Load Regulation | ΔV_o | - | 15 | 160 | mV | $5mA \leq I_o \leq 1.5A$ |
| | | - | 5 | 80 | | $250mA \leq I_o \leq 750mA$, $T_J = 25^\circ C$ |
| Quiescent Current | I_q | - | 1.5 | 2 | mA | |
| Quiescent Current Change | ΔI_q | - | - | 0.5 | mA | $5mA \leq I_o \leq 1A$, $T_J = 0 \sim 125^\circ C$ |
| | | - | - | 1 | | $-10.5V \leq V_{IN} \leq -25V$, $T_J = 0 \sim 125^\circ C$ |
| Output Noise Voltage | V_N | - | 200 | - | μV | $10Hz \leq f \leq 100KHz$ |
| Ripple Rejection | RR | 54 | 60 | - | dB | $-11.5V \leq V_{IN} \leq -21.5V$, $f = 120Hz$, $T_J = 0 \sim 125^\circ C$ |
| Dropout Voltage | V_D | - | 1.1 | - | V | $I_o = 1A$ |
| Peak Current | I_{pk} | - | 2.1 | - | A | |
| Output Voltage Drift | $\Delta V_o / \Delta T$ | - | -0.6 | - | mV / $^\circ C$ | $I_o = 5mA$, $T_J = 0 \sim 125^\circ C$ |

Note:

1. Pulse test.