# isc Three Terminal Negative Voltage Regulator 7908

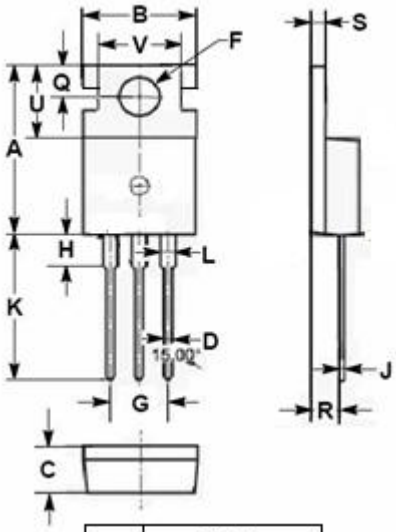
PIN 1, Ground
2, Input
3, Output

1 2 3

TO-220C package

## FEATURES

- Output current in excess of 1.5A
- Output voltage of -8V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




| DIM | mm MIN | MAX |
|---|---|---|
| A | 15.50 | 15.90 |
| B | 9.80 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 12.80 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

## ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | RATING | UNIT |
|---|---|---|---|
| $V_i$ | DC input voltage | -35 | V |
| $I_o$ | Output current | internally limited | |
| $P_{tot}$ | Power dissipation | internally limited | |
| $T_{OP}$ | Operating junction temperature | 0~150 | ℃ |
| $T_{stg}$ | Storage temperature | -65~150 | ℃ |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance, Junction to Case | 5 | ℃/W |
| $R_{th\ j\text{-}a}$ | Thermal Resistance,Junction to Ambient | 65 | ℃/W |

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## • ELECTRICAL CHARACTERISTICS

**$T_j$=25℃ ($V_i$= -14V, $I_O$=0.5A, $C_i$= 2.2 μF, $C_O$= 1 μF unless otherwise specified)**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_O$ | Output Voltage | $V_{in}$=-14V; $I_O$=0.5A | -7.7 | | -8.3 | V |
| $V_O$ | Output Voltage | $V_{in}$=-15.5to-27V; $I_O$=5mA to1A; Po≤15W | -7.6 | | -8.4 | V |
| $\triangle V_V$ | Line Regulation | -10.5V≤$V_{in}$≤−25V; $I_O$=0.5A<br>-11V≤$V_{in}$≤−17V ; $I_O$=0.5A | | | 160<br>80 | mV |
| $\triangle V_i$ | Load Regulation | 5.0mA≤$I_O$≤1.5A;<br>250mA≤$I_O$≤750mA; | | | 160<br>80 | mV |
| $I_d$ | Quiescent Current | $V_{in}$=-14V; $I_O$=0.5A | | | 8 | mA |
| $\triangle_{d1}$ | Quiescent Current Change | 5.0mA≤$I_O$≤1.5A; $V_{in}$=-9V | | | 0.5 | mA |
| $\triangle_{d2}$ | Quiescent Current Change | -10.5V≤$V_{in}$≤-25V; $I_O$=0.5A | | | 1 | mA |

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