



## TO-220 Encapsulate Voltage Regulator

**CJ7908** Three-terminal positive voltage regulator

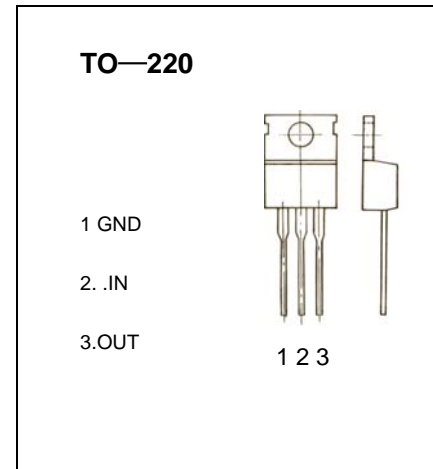
### FEATURES

Maximum Output current

$I_{OM}$ : 1.5 A

Output voltage

$V_o$ : -8 V



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

| Parameter                            | Symbol    | Value    | Unit |
|--------------------------------------|-----------|----------|------|
| Input Voltage                        | $V_i$     | -35      | V    |
| Operating Junction Temperature Range | $T_{OPR}$ | -20-+125 | °C   |
| Storage Temperature Range            | $T_{STG}$ | -55-+150 | °C   |

### ELECTRICAL CHARACTERISTICS ( $V_i = -23V, I_o = 500mA, 0^\circ C < T_j < 125^\circ C, C_i = 0.33 \mu F, C_o = 0.1 \mu F$ , unless otherwise specified)

| Parameter                | Symbol       | Test conditions  | MIN  | TYP  | MAX  | UNIT    |
|--------------------------|--------------|--|------|------|------|---------|
| Output voltage           | $V_o$        | $T_j = 25^\circ C$   | -7.7 | -8   | -8.3 | V       |
|                          |              | $-10.5V \leq V_i \leq -23V, I_o = 5mA-1A$<br>$P_o < 15W$   | -7.6 | -8   | -8.4 | V       |
| Load Regulation          | $\Delta V_o$ | $T_j = 25^\circ C, I_o = 5mA-1.5A$                         |      | 15   | 160  | mV      |
|                          |              | $T_j = 25^\circ C, I_o = 250mA-750mA$                      |      | 5    | 80   | mV      |
| Line regulation          | $\Delta V_o$ | $-10.5V \leq V_i \leq -25V, T_j = 25^\circ C$              |      | 12.5 | 160  | mV      |
|                          |              | $-11V \leq V_i \leq -17V, T_j = 25^\circ C$                |      | 4    | 80   | mV      |
| Quiescent Current        | $I_q$        | $T_j = 25^\circ C$   |      | 1.5  | 2    | mA      |
| Quiescent Current Change | $\Delta I_q$ | $-10.5V \leq V_i \leq -25V$                                |      |      | 1    | mA      |
|                          | $\Delta I_q$ | $5mA \leq I_o \leq 1A$                                     |      |      | 0.5  | mA      |
| Output Noise Voltage     | $V_N$        | $10Hz \leq f \leq 100KHz$                                  |      | 200  |      | $\mu V$ |
| Ripple Rejection         | RR           | $-11.5V \leq V_i \leq -21.5V, f = 120Hz, T_j = 25^\circ C$ | 54   | 60   |      | dB      |
| Dropout Voltage          | $V_d$        | $T_j = 25^\circ C, I_o = 1A$                               |      | 1.1  |      | V       |
| Peak Current             | $I_{pk}$     | $T_j = 25^\circ C$   |      | 2.1  |      | A       |

### TYPICAL APPLICATION

