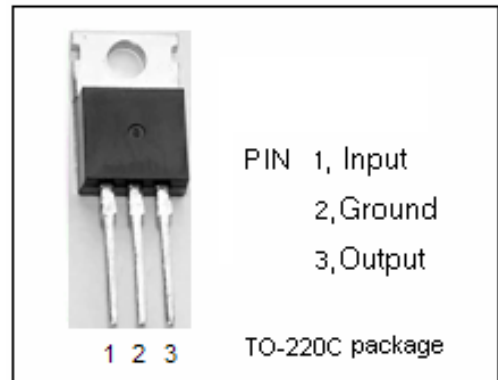


**isc Three Terminal Positive Voltage Regulator**

**7805**

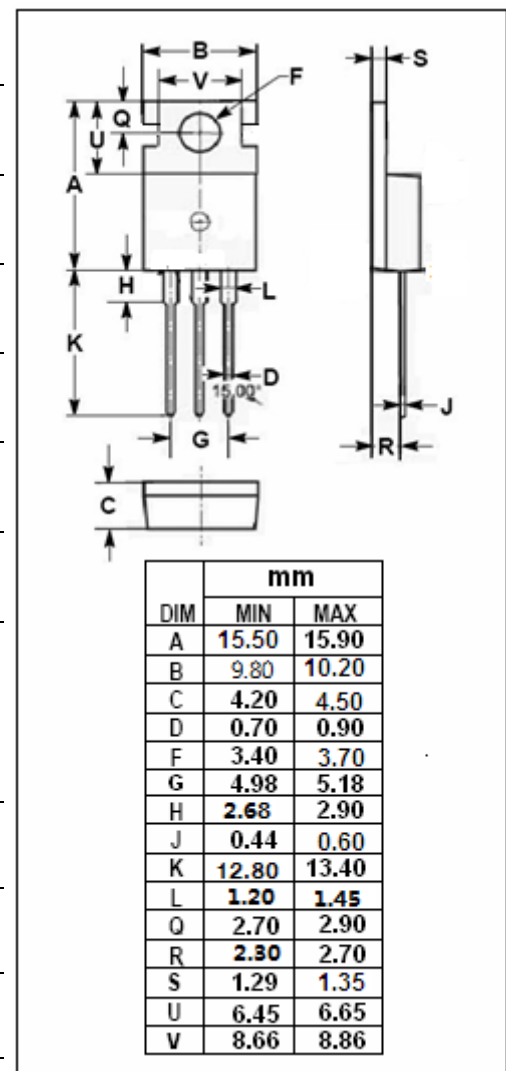
**FEATURES**

- Output current in excess of 1.5A
- Output voltage of 5V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

| SYMBOL           | PARAMETER                      | RATING             | UNIT |
|------------------|--------------------------------|--------------------|------|
| V <sub>i</sub>   | DC input voltage               | 35                 | V    |
| I <sub>o</sub>   | Output current                 | internally limited |      |
| P <sub>tot</sub> | Power dissipation              | internally limited |      |
| T <sub>OP</sub>  | Operating junction temperature | 0~150              | °C   |
| T <sub>stg</sub> | Storage temperature            | -55~150            | °C   |



**THERMAL CHARACTERISTICS**

| SYMBOL              | PARAMETER                               | MAX | UNIT |
|---------------------|---|-----|------|
| R <sub>th j-c</sub> | Thermal Resistance, Junction to Case    | 3   | °C/W |
| R <sub>th j-a</sub> | Thermal Resistance, Junction to Ambient | 50  | °C/W |

**isc Three Terminal Positive Voltage Regulator****7805****• ELECTRICAL CHARACTERISTICS** $T_j=25^{\circ}\text{C}$  ( $V_i=10\text{V}$ ,  $I_o=0.5\text{A}$ ,  $C_i=0.33\mu\text{F}$ ,  $C_o=0.1\mu\text{F}$  unless otherwise specified)

| SYMBOL        | PARAMETER                | CONDITIONS   | MIN | MAX | UNIT |
|---------------|--------------------------|--|-----|-----|------|
| $V_o$         | Output Voltage           | $V_{in}=20\text{V}$ ; $I_o=500\text{mA}$                       | 4.8 | 5.2 | V    |
| $\Delta V_V$  | Line Regulation          | $7.5\text{V} \leq V_{in} \leq 20\text{V}$ ; $I_o=0.5\text{A}$  |     | 50  | mV   |
| $\Delta V_i$  | Load Regulation          | $5.0\text{mA} \leq I_o \leq 1.5\text{A}$ ; $V_{in}=10\text{V}$ |     | 100 | mV   |
| $I_q$         | Quiescent Current        | $V_{in}=10\text{V}$ ; $I_o=1.5\text{A}$                        |     | 6.0 | mA   |
| $\Delta_{q1}$ | Quiescent Current Change | $5.0\text{mA} \leq I_o \leq 1.0\text{A}$ ; $V_{in}=10\text{V}$ |     | 0.5 | mA   |
| $\Delta_{q2}$ | Quiescent Current Change | $7\text{V} \leq V_{in} \leq 25\text{V}$ ; $I_o=500\text{mA}$   |     | 1.3 | mA   |