

**TECHNICAL DATA** DATASHEET 4741, REV. -

# HERMETIC POWER SCHOTTKY RECTIFIER 175°C Maximum Operation Temperature

DESCRIPTION: A 150-VOLT, 35 AMP, POWER SCHOTTKY RECTIFIER IN A HERMETIC TO-254 PACKAGE.

# **MAXIMUM RATINGS**

ALL RATINGS ARE @ T<sub>C</sub> = 25 °C UNLESS OTHERWISE SPECIFIED.

| ALE IVATINGS AILE & 10 - 25 C ONLESS OTTENWISE SI ECITIED.                         |                  |                 |       |  |
|--|------------------|-----------------|-------|--|
| RATING   | SYMBOL           | MAX.            | UNITS |  |
| PEAK INVERSE VOLTAGE   | PIV              | 150             | Volts |  |
| MAXIMUM DC OUTPUT CURRENT (@ T <sub>C</sub> =100 <sup>O</sup> C) (Single, Doubler) | Io               | 35              | Amps  |  |
| MAXIMUM NONREPETITIVE FORWARD SURGE CURRENT (t=8.3ms, Sine)                        | I <sub>FSM</sub> | 1650            | Amps  |  |
| MAXIMUM JUNCTION CAPACITANCE (V <sub>r</sub> =5V)                                  | C <sub>T</sub>   | 3000            | pF    |  |
| MAXIMUM THERMAL RESISTANCE (Single)  | $R_{	heta JC}$   | 0.33            | °C/W  |  |
| MAXIMUM OPERATING TEMPERATURE RANGE  | Top/Tstg         | -65 to<br>+ 175 | °C    |  |
| MAXIMUM STORAGE TEMPERATURE RANGE  | Top/Tstg         | -65 to<br>+ 175 | °C    |  |

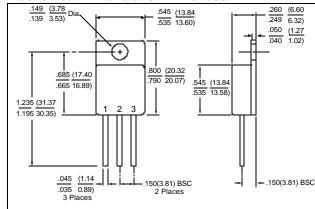
# **ELECTRICAL CHARACTERISTICS**

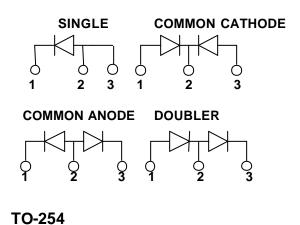
| CHARACTERISTIC  | SYMBOL         | MAX. | UNITS |
|---|----------------|------|-------|
| MAXIMUM FORWARD VOLTAGE DROP, Pulsed (I <sub>f</sub> = 35 Amps) |                |      |       |
| T <sub>J</sub> = 25 °C  | $V_{f}$        | 1.01 | Volts |
| T <sub>J</sub> = 125 °C   |                | 0.83 |       |
| MAXIMUM REVERSE CURRENT (I <sub>r</sub> @ 150 V PIV)            |                |      |       |
| T <sub>J</sub> = 25 °C  | l <sub>r</sub> | 3    | mA    |
| T <sub>J</sub> = 125 °C   |                | 48   |       |

# **SENSITRON**

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### Mechanical Dimensions: In inches / mm





# **PINOUT TABLE**

| TYPE                               | PIN 1     | PIN 2          | PIN 3     |
|------------------------------------|-----------|----------------|-----------|
| SINGLE RECTIFIER                   | CATHODE   | ANODE          | ANODE     |
| DUAL RECTIFIER, COMMON CATHODE (P) | ANODE 1   | COMMON CATHODE | ANODE 2   |
| DUAL RECTIFIER, COMMON ANODE (N)   | CATHODE 1 | COMMON ANODE   | CATHODE 2 |
| DUAL RECTIFIER, DOUBLER (D)        | ANODE     | CATHODE/ ANODE | CATHODE   |

Curves shown are for bare die only. **Typical Forward Characteristics Typical Reverse Characteristics** 10<sup>2</sup> 10<sup>1</sup> Instantaneous Reverse Current -  $I_{\rm R}$  (mA) 10<sup>0</sup> 10 10<sup>1</sup> 100 Instantaneous Forward Current - I  $_{\rm F}$  (A) 10<sup>-2</sup> 10<sup>-3</sup> 10<sup>0</sup> 10<sup>-4</sup> 25 20 60 80 100 120 140 160 Reverse Voltage -<sub>R</sub>V(V) 10<sup>-1</sup> Typical Junction Capacitance 25000 20000 20000 15000 10000 5000 10<sup>-2</sup> 0.0 0.2 0.4 0.6 0.8 1.0 20 40 60 80 100 120 140 160 0 Forward Voltage Drop  $-_{F}V(V)$ Reverse Voltage -<sub>R</sub>V(V)

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#### **TECHNICAL DATA**

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