TECHNICAL DATA DATA SHEET 4675, REV. -

# HERMETIC POWER SCHOTTKY RECTIFIER Low Forward Voltage

# **Applications:**

Switching Power Supply · Converters · Free-Wheeling Diodes · Polarity Protection Diode

## Features:

- Soft Reverse Recovery at Low and High Temperature
- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics

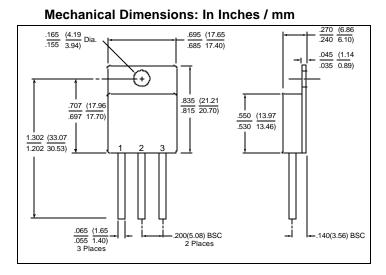
## **Maximum Ratings:**

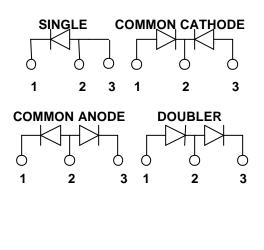
| Characteristics                                      | Symbol             | Condition  | Max.        | Units |
|--|--------------------|--|-------------|-------|
| Peak Inverse Voltage                                 | V <sub>RWM</sub>   | -  | 200         | V     |
| Max. Average Forward<br>Current                      | I <sub>F(AV)</sub> | 50% duty cycle, rectangular wave form (Single/Doubler) | 7.5         | A     |
| Max. Average Forward<br>Current                      | I <sub>F(AV)</sub> | 50% duty cycle, rectangular wave form (Common          | 15          | A     |
|  |                    | Cathode/Common Anode)                                  |             |       |
| Max. Peak One Cycle Non-<br>Repetitive Surge Current | I <sub>FSM</sub>   | 8.3 ms, half Sine wave<br>(per leg)                    | 140         | A     |
| Max. Thermal Resistance                              | $R_{\theta JC}$    | (Single)   | 1.36        | °C/W  |
| Max. Junction Temperature                            | TJ                 | -  | -65 to +200 | °C    |
| Max. Storage Temperature                             | T <sub>stg</sub>   | -  | -65 to +200 | О°    |

# **Electrical Characteristics:**

| Characteristics           | Symbol          | Condition                                    | Max.  | Units |
|---------------------------|-----------------|--|-------|-------|
| Max. Forward Voltage Drop | V <sub>F1</sub> | @ 7.5A, Pulse, T <sub>J</sub> = 25 °C        | 1.01  | V     |
|                           |                 | (per leg)                                    |       |       |
|                           | V <sub>F2</sub> | @ 7.5A, Pulse, T <sub>J</sub> = 125 °C       | 0.85  | V     |
|                           |                 | (per leg)                                    |       |       |
| Max. Reverse Current      | I <sub>R1</sub> | @V <sub>R</sub> = 200V, Pulse,               | 0.008 | μA    |
|                           |                 | $T_J = 25 \ ^{\circ}C \ (per \ leg)$         |       |       |
|                           | I <sub>R2</sub> | @V <sub>R</sub> = 200V, Pulse,               | 0.5   | mA    |
|                           |                 | T <sub>J</sub> = 125 °C (per leg)            |       |       |
| Max. Junction Capacitance | CT              | @V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C | 150   | pF    |
|                           |                 | f <sub>SIG</sub> = 1MHz,                     |       |       |
|                           |                 | $V_{SIG} = 50 \text{mV} (p-p) (per leg)$     |       |       |

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#### **PINOUT TABLE**

| FINOUTTABLE  |  |   |  |           |  |  |
|--|--|---|--|-----------|--|--|
| ТҮРЕ   |  | PIN 1   | PIN 2  | PIN 3     |  |  |
| SINGLE RECTIFIER   |  | CATHODE<br>ANODE 1  | ANODE  | ANODE     |  |  |
|  | DUAL RECTIFIER, COMMON CATHODE (P)                   |   | COMMON CATHODE   | ANODE 2   |  |  |
|  | R, COMMON ANODE (N)                                  | CATHODE 1   | COMMON ANODE   | CATHODE 2 |  |  |
|  | R, DOUBLER (D)                                       | ANODE   | CATHODE/ANODE  | CATHODE   |  |  |
| Note: The V <sub>f</sub> curve   | es shown are for the un-packa                        | ged die only.   |  |           |  |  |
|  | Typical Forward Characteristi                        |   | Typical Reverse Characteristics  |           |  |  |
| 10 <sup>1</sup><br>10 <sup>0</sup> + (¥)<br>10 <sup>1</sup><br>10 <sup>-1</sup><br>10 <sup>-2</sup>  | 125 °C   | 10 <sup>1</sup><br>10 <sup>0</sup><br>10 <sup>1</sup><br>10 <sup>1</sup><br>10 <sup>1</sup><br>10 <sup>1</sup><br>10 <sup>2</sup><br>10 <sup>3</sup><br>10 <sup>4</sup><br>10 <sup>4</sup> 1 | 200 °C<br>175 °C<br>150 °C<br>125 °C<br>100 °C<br>125 °C<br>50 °C<br>50 °C<br>25 °C<br>0 40 80 120 160<br>Reverse Voltage - ¥ (V)<br>Typical Junction Capaci | 200 240   |  |  |
| 10 <sup>-3</sup>   |  | 04 U U U U U U U U U U U U U U U U U U U  |  |           |  |  |
|  | 0.0 0.2 0.4 0.6 0.8<br>Forward Voltage Drop - \≠ (V) | 0 40 80 120 160<br>Reverse Voltage - ₩ (V)  |  |           |  |  |
| 221 WEST INDUSTRY COURT      DEER PARK, NY 11729-4681      PHONE (631) 586-7600      FAX (631) 242-9798      World Wide Web - http://www.sensitron.com      E-mail Address - sales@sensitron.com |  |   |  |           |  |  |



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