

TECHNICAL DATA  
DATA SHEET 824, REV. B

## HERMETIC POWER SCHOTTKY RECTIFIER

### Applications:

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

### Features:

- Ultra low Reverse Leakage Current
- Soft Reverse Recovery at Low and High Temperature
- Very 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
- Out Performs 60 Volt Ultrafast Rectifiers

### Maximum Ratings:

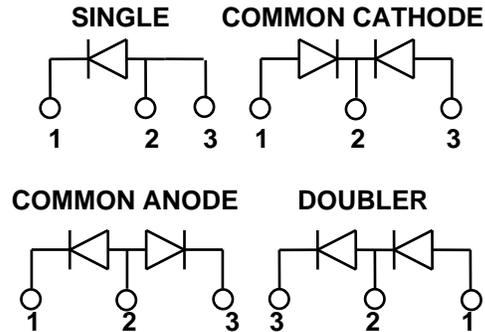
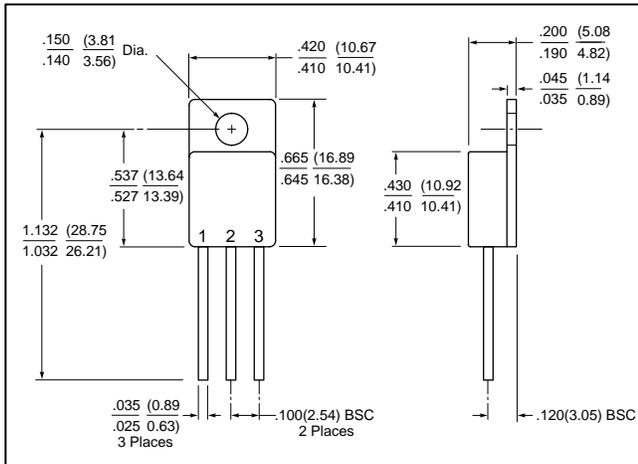
| Characteristics                                  | Symbol          | Condition                              | Max.        | Units |
|--|-----------------|--|-------------|-------|
| Peak Inverse Voltage                             | $V_{RWM}$       | -                                      | 60          | V     |
| Max. Average Forward Current                     | $I_{F(AV)}$     | 50% duty cycle, rectangular wave form. | 15          | A     |
| Max. Peak One Cycle Non-Repetitive Surge Current | $I_{FSM}$       | 8.3 ms, half Sine wave (per leg)       | 75          | A     |
| Max. Thermal Resistance                          | $R_{\theta JC}$ | (per leg)                              | 1.45        | °C/W  |
| Max. Junction Temperature                        | $T_J$           | -                                      | -65 to +175 | °C    |
| Max. Storage Temperature                         | $T_{stg}$       | -                                      | -65 to +175 | °C    |

### Electrical Characteristics:

| Characteristics           | Symbol   | Condition   | Max. | Units |
|---------------------------|----------|---|------|-------|
| Max. Forward Voltage Drop | $V_{F1}$ | @ 15A, Pulse, $T_J = 25\text{ °C}$ (per leg)  | 1.1  | V     |
|                           | $V_{F2}$ | @ 15A, Pulse, $T_J = 125\text{ °C}$ (per leg)   | 1.0  | V     |
| Max. Reverse Current      | $I_{R1}$ | @ $V_R = 60V$ , Pulse, $T_J = 25\text{ °C}$ (per leg)   | 0.55 | mA    |
|                           | $I_{R2}$ | @ $V_R = 60V$ , Pulse, $T_J = 125\text{ °C}$ (per leg)  | 12.0 | mA    |
| Max. Junction Capacitance | $C_T$    | @ $V_R = 5V$ , $T_C = 25\text{ °C}$<br>$f_{SIG} = 1MHz$ ,<br>$V_{SIG} = 50mV$ (p-p) (per leg) | 500  | pF    |

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**Mechanical Dimensions: In Inches / mm**

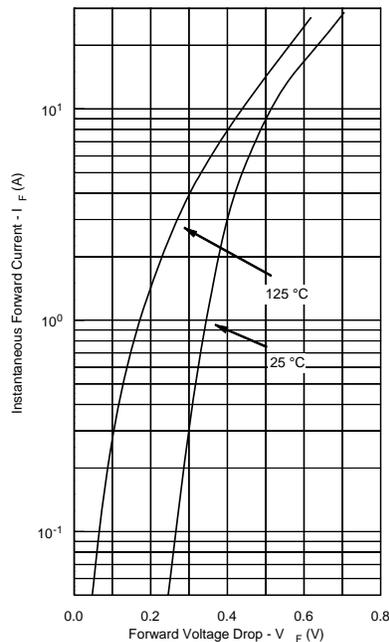


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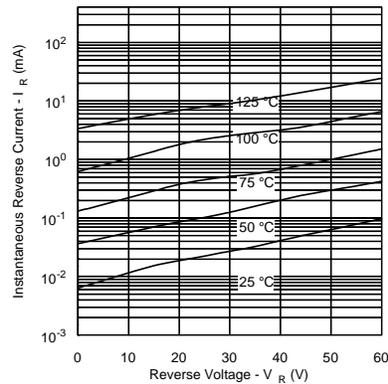
**PINOUT TABLE**

| 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     | ANODE/CATHODE  | CATHODE   |

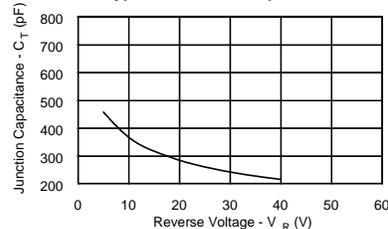
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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