

TECHNICAL DATA  
DATA SHEET 924, REV. -

## HERMETIC POWER SCHOTTKY RECTIFIER Very Low Forward Voltage Drop

**Applications:**

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

**Features:**

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

**Maximum Ratings:**

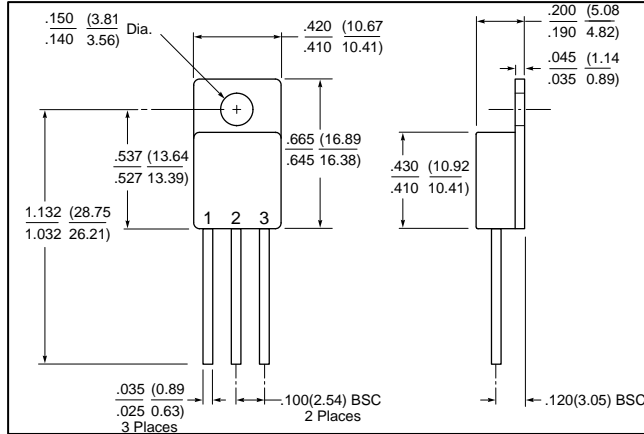
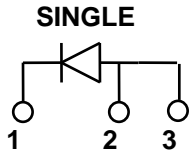
| Characteristics                                  | Symbol          | Condition   | Max.        | Units              |
|--|-----------------|---|-------------|--------------------|
| Peak Inverse Voltage                             | $V_{RWM}$       | -   | 200         | V                  |
| Max. Average Forward Current                     | $I_{F(AV)}$     | 50% duty cycle, rectangular wave form   | 16          | A                  |
| Max. Peak One Cycle Non-Repetitive Surge Current | $I_{FSM}$       | 8.3 ms, half Sine wave  | 75          | A                  |
| Non-Repetitive Avalanche Energy                  | $E_{AS}$        | $T_J = 25\text{ }^\circ\text{C}$ , $I_{AS} = 0.75\text{ A}$ , $L = 40\text{mH}$                   | 16          | mJ                 |
| Repetitive Avalanche Current                     | $I_{AR}$        | $I_{AS}$ decay linearly to 0 in $1\text{ }\mu\text{s}$<br>$f$ limited by $T_J$ max $V_A = 1.5V_R$ | 0.75        | A                  |
| Thermal Resistance                               | $R_{\theta JC}$ | -   | 0.77        | $^\circ\text{C/W}$ |
| Max. Junction Temperature                        | $T_J$           | -   | -65 to +200 | $^\circ\text{C}$   |
| Max. Storage Temperature                         | $T_{stg}$       | -   | -65 to +175 | $^\circ\text{C}$   |

**Electrical Characteristics:**

| Characteristics            | Symbol   | Condition  | Max. | Units |
|----------------------------|----------|--|------|-------|
| Max. Forward Voltage Drop  | $V_{F1}$ | @ 16A, Pulse, $T_J = 25\text{ }^\circ\text{C}$   | 0.96 | V     |
|                            | $V_{F2}$ | @ 16A, Pulse, $T_J = 125\text{ }^\circ\text{C}$  | 0.80 | V     |
| Max. Reverse Current       | $I_{R1}$ | @ $V_R = 200\text{V}$ , Pulse,<br>$T_J = 25\text{ }^\circ\text{C}$   | 0.7  | mA    |
|                            | $I_{R2}$ | @ $V_R = 200\text{V}$ , Pulse,<br>$T_J = 125\text{ }^\circ\text{C}$  | 16   | mA    |
| Max. Junction Capacitance  | $C_T$    | @ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$<br>$f_{SIG} = 1\text{MHz}$ ,<br>$V_{SIG} = 50\text{mV (p-p)}$ | 600  | pF    |
| Max. Reverse Recovery Time | $t_{rr}$ | $I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ ,<br>$I_{RM} = 0.25\text{ A}$ , $T_J = 25\text{ }^\circ\text{C}$         | 50   | nsec  |

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**Mechanical Dimensions: In inches / mm**

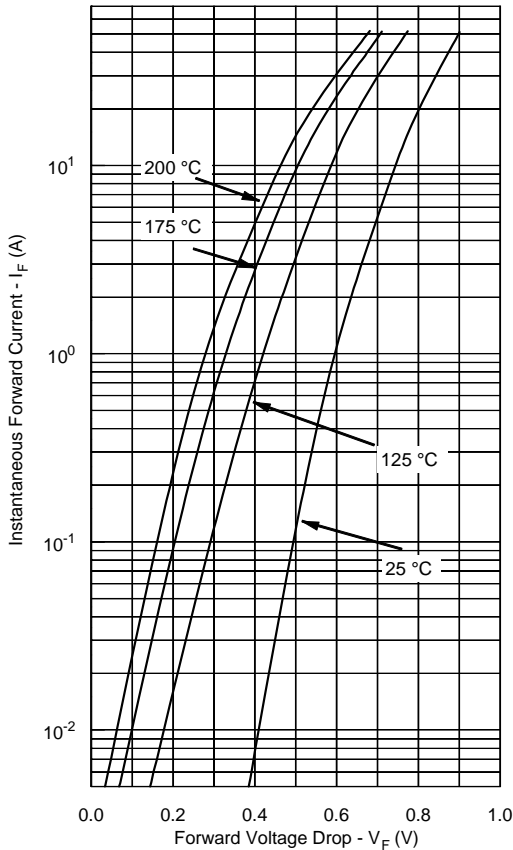


**TO-257**

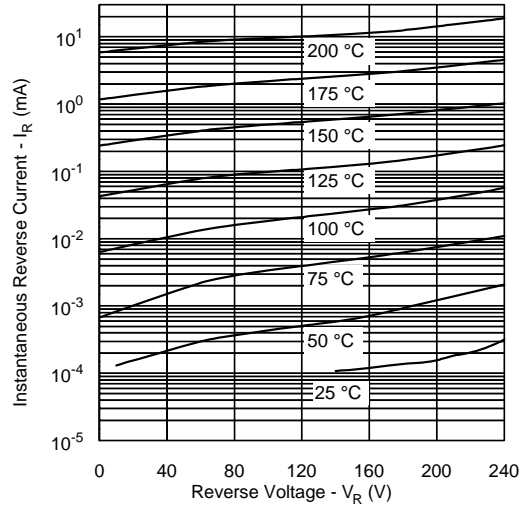
| DEVICE TYPE | PIN 1   | PIN 2 | PIN 3 |
|-------------|---------|-------|-------|
| TO-257      | CATHODE | ANODE | ANODE |

Curves shown are for bare die only.

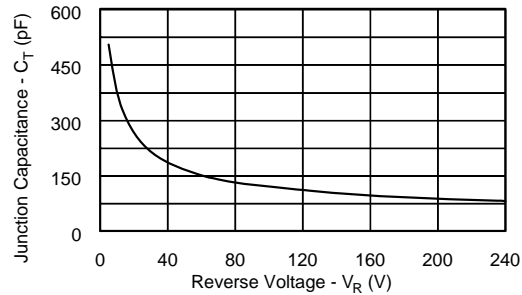
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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