

TECHNICAL DATA  
DATA SHEET 4083, REV. -**HERMETIC POWER SCHOTTKY RECTIFIER**  
**Ultra Low Reverse Leakage**  
**200°C Operating Temperature****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 100 Volt Ultrafast Rectifiers
- Available with Ceramic Seals

**Maximum Ratings:**

| Characteristics                                  | Symbol          | Condition                             | Max.        | Units |
|--------------------------------------------------|-----------------|---------------------------------------|-------------|-------|
| Peak Inverse Voltage                             | $V_{RWM}$       | -                                     | 100         | V     |
| Max. Average Forward Current                     | $I_{F(AV)}$     | 50% duty cycle, rectangular wave form | 30          | A     |
| Max. Peak One Cycle Non-Repetitive Surge Current | $I_{FSM}$       | 8.3 ms, half Sine wave                | 200         | A     |
| Max. Junction Temperature                        | $T_J$           | -                                     | -65 to +200 | °C    |
| Max. Storage Temperature                         | $T_{stg}$       | -                                     | -65 to +175 | °C    |
| Max. Thermal Resistance                          | $R_{\theta JC}$ | -                                     | 0.77        | °C/W  |

**Electrical Characteristics:**

| Characteristics           | Symbol   | Condition                                                                           | Max. | Units |
|---------------------------|----------|-------------------------------------------------------------------------------------|------|-------|
| Max. Forward Voltage Drop | $V_{F1}$ | @ 30A, Pulse, $T_J = 25\text{ °C}$                                                  | 1.01 | V     |
|                           | $V_{F2}$ | @ 30A, Pulse, $T_J = 125\text{ °C}$                                                 | 0.85 | V     |
| Max. Reverse Current      | $I_{R1}$ | @ $V_R = 100V$ , Pulse, $T_J = 25\text{ °C}$                                        | 0.20 | mA    |
|                           | $I_{R2}$ | @ $V_R = 100V$ , Pulse, $T_J = 125\text{ °C}$                                       | 2.0  | mA    |
| Max. Junction Capacitance | $C_T$    | @ $V_R = 5V$ , $T_C = 25\text{ °C}$<br>$f_{SIG} = 1MHz$ ,<br>$V_{SIG} = 50mV$ (p-p) | 1000 | pF    |



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