

Technical Data
Data Sheet 2964, Rev. -

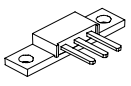

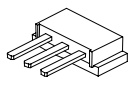
88CNQ060 SCHOTTKY RECTIFIER

Applications:

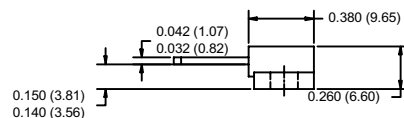
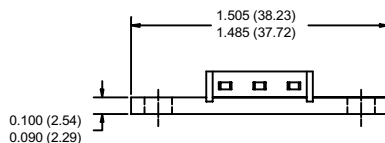
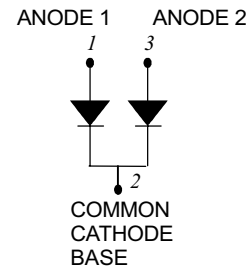
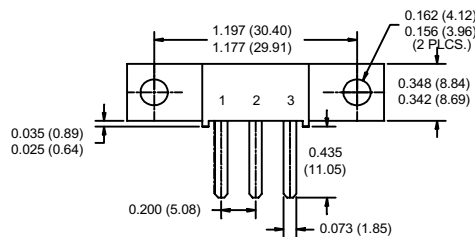
- Switching power supply • Free-Wheeling Diodes • Reverse battery protection • Converters

Features:

- 175°C T_J operation
- Center tap module
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Very Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- New fully transfer-mould low profile, small footprint, high current package

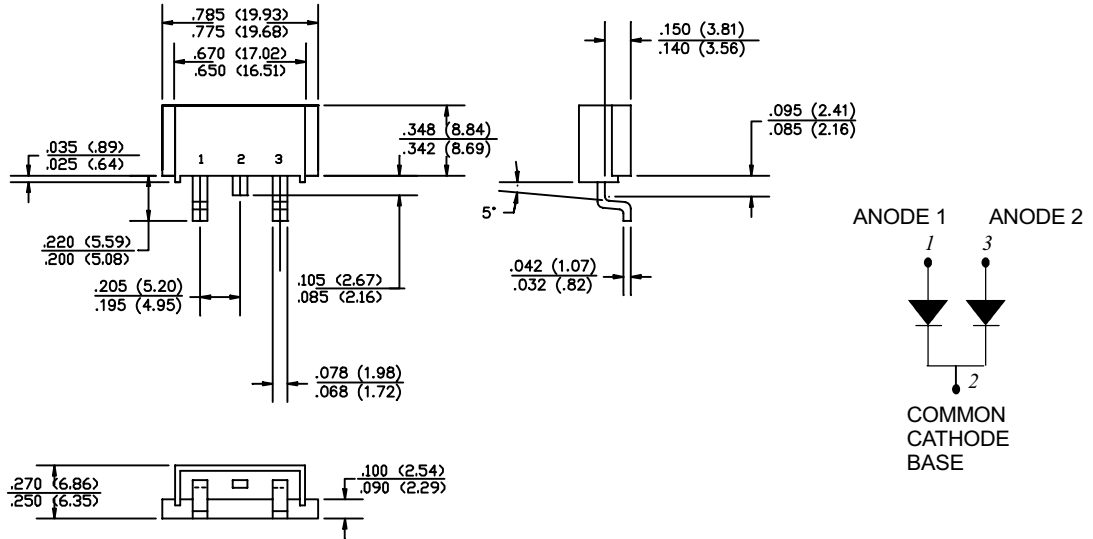
| Case styles | | |
|--|---|---|
| 88CNQ060  PRM2 | 88CNQ060SL  PRM2-SL | 88CNQ060SM  PRM2-SM |

Mechanical Dimensions: In Inches / mm

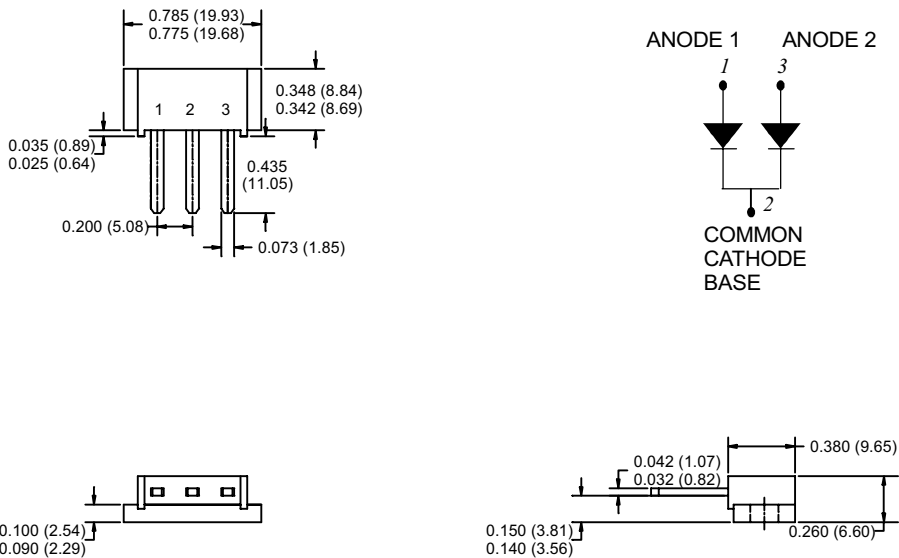


PRM2

Data Sheet 2964, Rev. -



PRM2-SL



PRM2-SM

Data Sheet 2964, Rev. -
Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|--|-------------|---|------|-------|
| Peak Inverse Voltage | V_{RWM} | - | 60 | V |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @ $T_C = 95^\circ\text{C}$, rectangular wave form | 80 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 960 | A |
| Non-Repetitive Avalanche Energy (per leg) | E_{AS} | $T_J = 25^\circ\text{C}$, $I_{AS} = 1\text{A}$, $L = 0.57\text{ mH}$ | 75 | mJ |
| Repetitive Avalanche Current (per leg) | I_{AR} | Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. $V_A = 1.5 \times V_R$ typical | 1 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------------------|----------|--|--------------|------------------|
| Max. Forward Voltage Drop (per leg) * | V_{F1} | @ 40 A, Pulse, $T_J = 25^\circ\text{C}$ @ 80 A, Pulse, $T_J = 25^\circ\text{C}$ | 0.58 0.77 | V |
| | V_{F2} | @ 40 A, Pulse, $T_J = 125^\circ\text{C}$ @ 80 A, Pulse, $T_J = 125^\circ\text{C}$ | 0.56 0.67 | V |
| Max. Reverse Current (per leg) * | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$ | 0.64 | mA |
| | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$ | 240 | mA |
| Max. Junction Capacitance (per leg) | C_T | @ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 5200 | pF |
| Typical Series Inductance (per leg) | L_S | Measured lead to lead 5 mm from package body | 5.5 | nH |
| Max. Voltage Rate of Change | dv/dt | - | 10,000 | V/ μs |

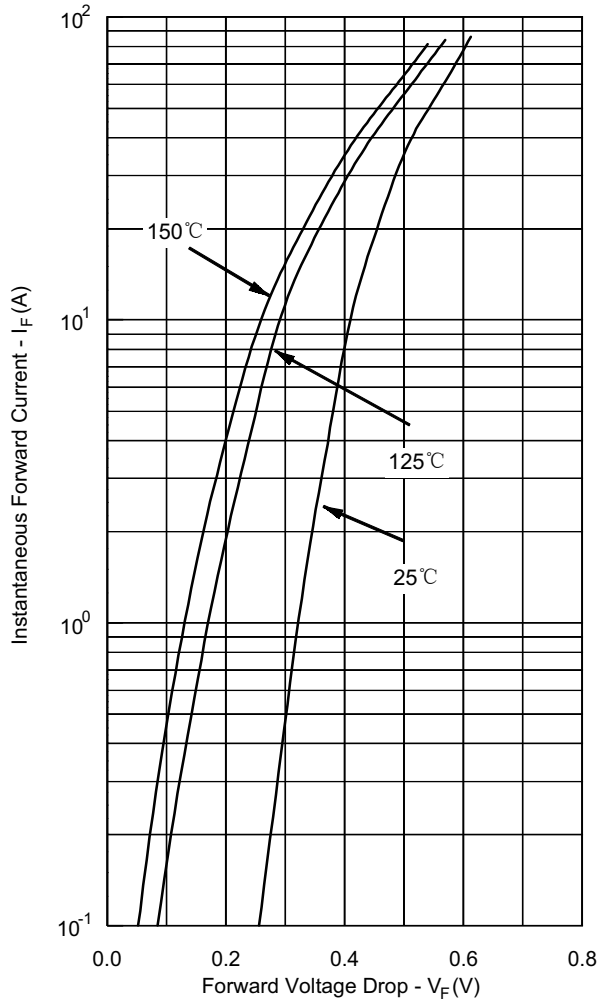
* Pulse Width < 300 μs , Duty Cycle <2%

Thermal-Mechanical Specifications:

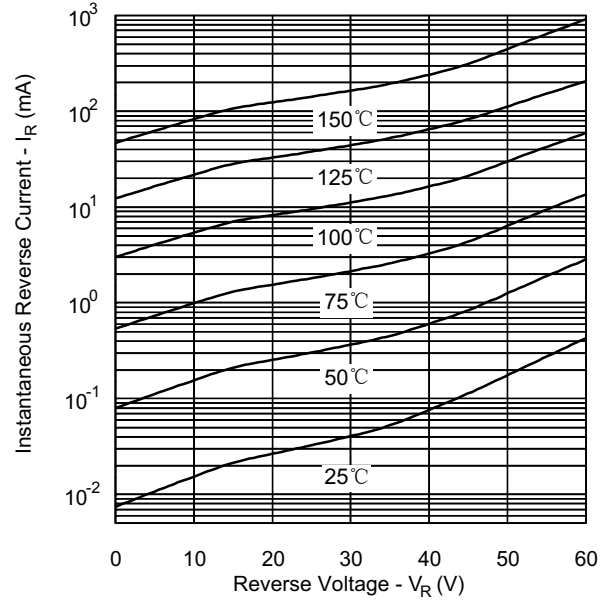
| Characteristics | Symbol | Condition | Specification | Units |
|--|----------------------|--|----------------------|--------------------|
| Max. Junction Temperature | T_J | - | -55 to +175 | $^\circ\text{C}$ |
| Max. Storage Temperature | T_{stg} | - | -55 to +175 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Case (per leg) | $R_{\theta JC}$ | DC operation | 0.85 | $^\circ\text{C/W}$ |
| Maximum Thermal Resistance Junction to Case (per package) | $R_{\theta JC}$ | DC operation | 0.42 | $^\circ\text{C/W}$ |
| Maximum Thermal Resistance, Case to Heat Sink (D61-8 Only) | $R_{\theta CS}$ | Mounting surface, smooth and greased Device flatness < 5 mils | 0.30 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 7.8 | g |
| Mounting Torque (D61-8 Only) | T_M | - | 40 (min) 58 (max) | Kg-cm |
| Case Style | PRM2 PRM2-SL PRM2-SM | | | |

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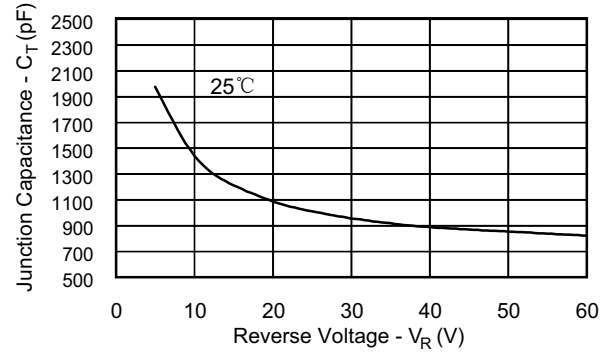
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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