

306CMQ200-G SCHOTTKY RECTIFIER

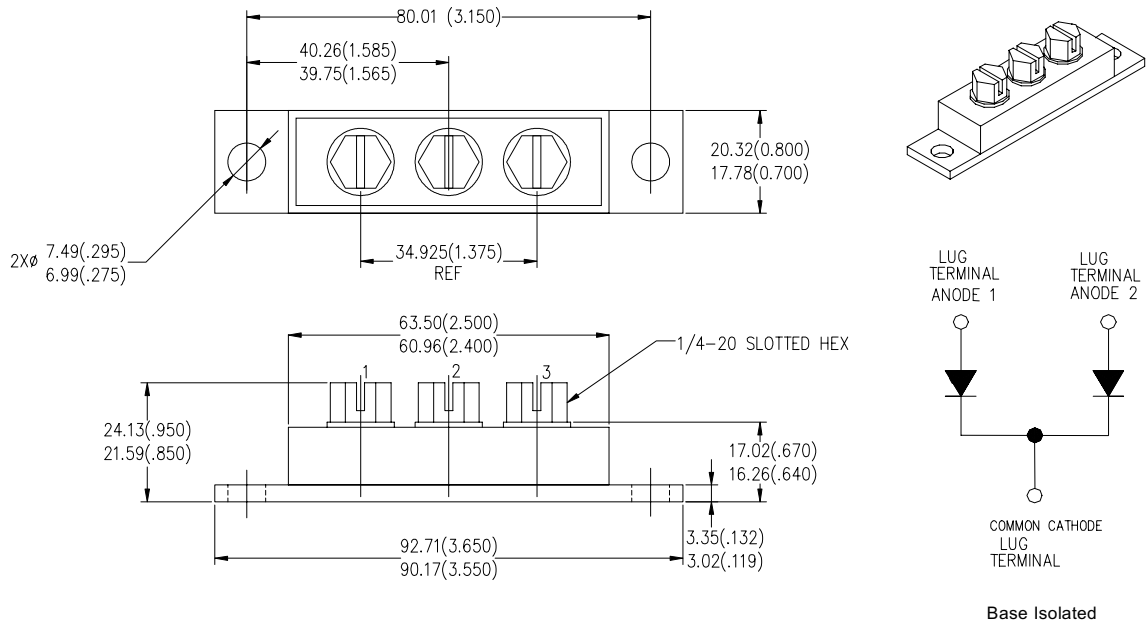
Applications:

- High current switching power supply • Plating power supply • Free-Wheeling diodes
- Reverse battery protection • Converters • UPS System • Welding

Features:

- 175 °C T_J operation
- Center tap module
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green Products in Compliance with the RoHS Directive

Mechanical Dimensions: In Inches / mm



Please Note: Anode 1 = Terminal 1; Anode 2 = Terminal 3; Common Cathode = Terminal 2
Suffix R Denotes for Reversed Polarity.

PRM4 (Isolated)

Data Sheet 3838, Rev. -
Maximum Ratings:

Green Products

| Characteristics | Symbol | Condition | Max. | Units | |
|--|-------------|---|------|------------|---|
| Peak Inverse Voltage | V_{RWM} | - | 200 | V | |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @ $T_C = 121\text{ }^\circ\text{C}$, rectangular wave form | 150 | per leg | A |
| | | | 300 | per device | |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 3840 | A | |

Electrical Characteristics:

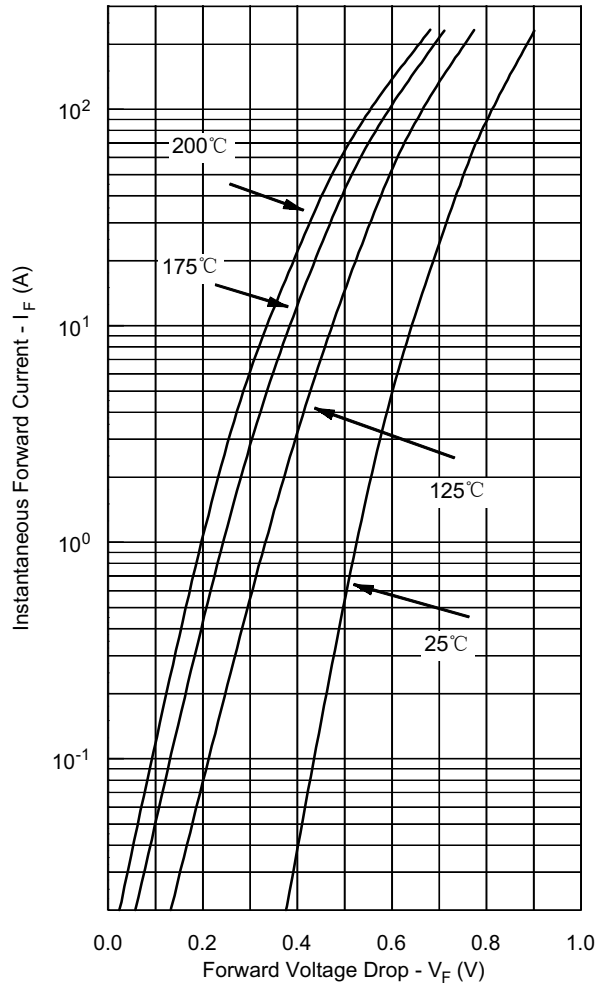
| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------------------|-----------|---|--------|------------------|
| Max. Forward Voltage Drop (per leg) * | V_{F1} | @ 150 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.86 | V |
| | | @ 300 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 1.03 | |
| | V_{F2} | @ 150 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.76 | V |
| | | @ 300 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.86 | |
| Max. Reverse Current (per leg) * | I_{R1} | @ $V_R = \text{rated } V_R$, $T_J = 25\text{ }^\circ\text{C}$ | 10 | mA |
| | I_{R2} | @ $V_R = \text{rated } V_R$, $T_J = 125\text{ }^\circ\text{C}$ | 90 | mA |
| Max. Junction Capacitance (per leg) | C_T | @ $V_R = 5\text{ V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{ MHz}$ | 3500 | pF |
| Typical Series Inductance (per leg) | L_S | Measured lead to lead 5 mm from package body | 7.0 | nH |
| Max. Voltage Rate of Change | dv/dt | - | 10,000 | V/ μs |
| Insulation Voltage | V_{RMS} | | 1000 | V |

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

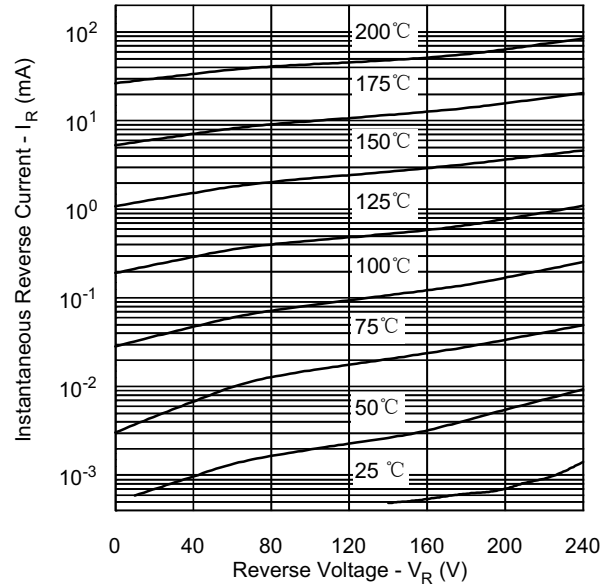
Thermal-Mechanical Specifications:

| 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 | 0.50 | $^\circ\text{C/W}$ | |
| Maximum Thermal Resistance Junction to Case (per package) | $R_{\theta JC}$ | DC operation | 0.25 | $^\circ\text{C/W}$ | |
| Maximum Thermal Resistance, Case to Heat Sink | $R_{\theta CS}$ | Mounting surface, smooth and greased | 0.10 | $^\circ\text{C/W}$ | |
| Approximate Weight | wt | - | 79 | g | |
| Mounting Torque | T_M | - | Mounting Torque Base | 24 (min) 35 (max) | Kg-cm |
| | | | Terminal Torque | 35 (min) 46 (max) | |
| | | | | | |
| Case Style | | PRM4 Isolated | | | |

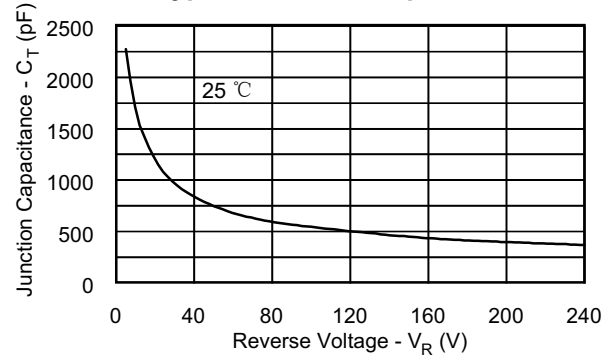
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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