

408CMQ060 SCHOTTKY RECTIFIER

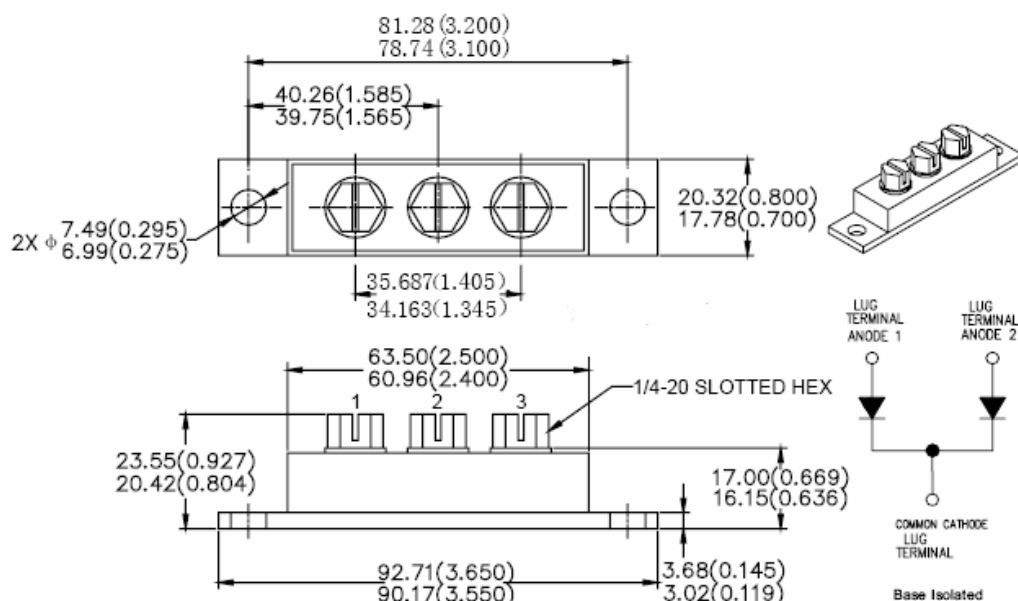
Applications:

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

Features:

- 150 °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
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Dimensions: In mm/Inches



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

PRM4 (Isolated)

MARKING, MOLDING RESIN

Marking for 408CMQ060, 1st row SS YYWWL, 2nd row 408CMQ060

Where YY is the manufacture year

WW is the manufacture week code

L is the wafer's Lot Number

Molding resin

Epoxy resin UL:94V-0

Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units | |
|--|-------------|---|------|------------|---|
| Peak Inverse Voltage | V_{RWM} | - | 60 | V | |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @ $T_C=109^{\circ}C$, rectangular wave form | 200 | per leg | A |
| | | | 400 | per device | |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 3960 | A | |
| Non-Repetitive Avalanche Energy(per leg) | E_{AS} | $T_J=25^{\circ}C, I_{AS}=1A, L=30mH$ | 15 | mJ | |
| Repetitive Avalanche Current(per leg) | I_{AR} | Current decaying linearly to zero in 1 μ sec Frequency limited by T_J max. $V_A=1.5 \times V_R$ typical | 1 | A | |

Electrical Characteristics:

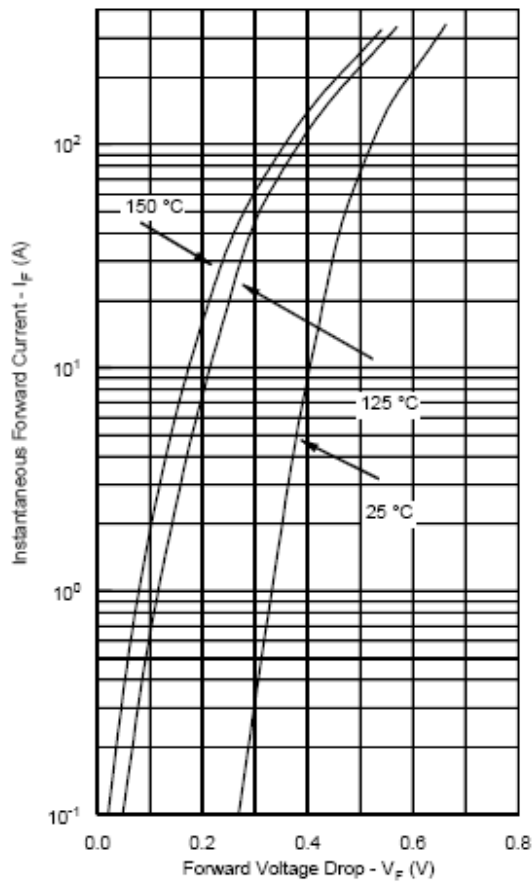
| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------------------|-----------|--|--------------|------------|
| Max. Forward Voltage Drop (per leg) * | V_{F1} | @ 200A, Pulse, $T_J = 25^{\circ}C$ @ 400A, Pulse, $T_J = 25^{\circ}C$ | 0.68 0.83 | V |
| | V_{F2} | @ 200A, Pulse, $T_J = 125^{\circ}C$ @ 400A, Pulse, $T_J = 125^{\circ}C$ | 0.59 0.76 | V |
| Max. Reverse Current (per leg) * | I_{R1} | @ $V_R =$ rated V_R $T_J = 25^{\circ}C$ | 2.2 | mA |
| | I_{R2} | @ $V_R =$ rated V_R $T_J = 125^{\circ}C$ | 600 | mA |
| Max. Junction Capacitance (per leg) | C_T | @ $V_R = 5V, T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$ | 10000 | pF |
| Typical Series Inductance (per leg) | L_S | Measured lead to lead 5 mm from package body | 5.0 | nH |
| Max. Voltage Rate of Change | dv/dt | - | 11,000 | V/ μ s |
| Insulation Voltage | V_{RMS} | - | 1000 | V |

* Pulse Width < 300 μ s, Duty Cycle <2%

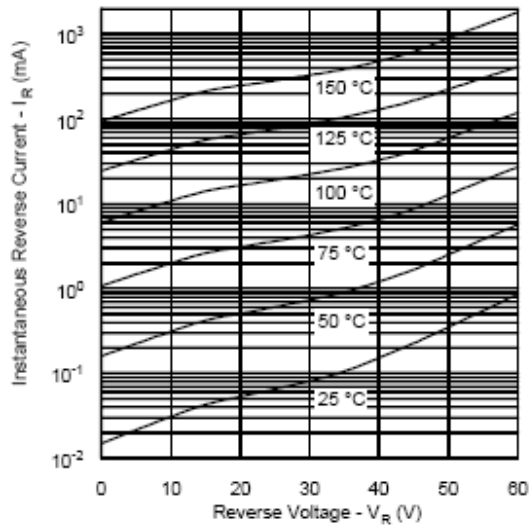
Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units | |
|---|-----------------|--------------------------------------|-----------------|--------------------|-------|
| Max. Junction Temperature | T_J | - | -55 to +150 | $^{\circ}C$ | |
| Max. Storage Temperature | T_{stg} | - | -55 to +150 | $^{\circ}C$ | |
| Maximum Thermal Resistance Junction to Case (per leg) | $R_{\theta JC}$ | DC operation | 0.40 | $^{\circ}C/W$ | |
| Maximum Thermal Resistance Junction to Case (per package) | $R_{\theta JC}$ | DC operation | 0.20 | $^{\circ}C/W$ | |
| Typical Thermal Resistance, case to Heat Sink | $R_{\theta cs}$ | Mounting surface, smooth and greased | 0.10 | $^{\circ}C/W$ | |
| Mounting Torque | T_M | - | Mounting Torque | 24(min) 35(max) | Kg-cm |
| | | | Terminal Torque | 35(min) 46(max) | |
| Approximate Weight | wt | - | 79 | g | |
| Case Style | PRM4 Isolated | | | | |

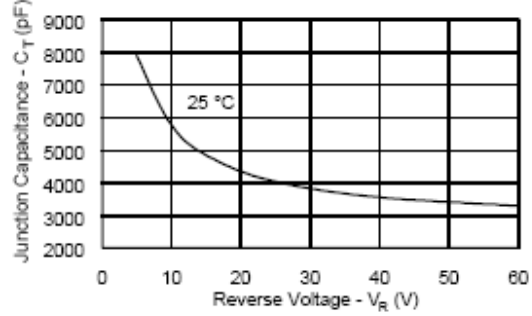
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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