

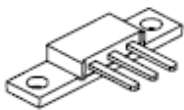
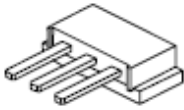
86CNQ200 SCHOTTKY RECTIFIER

Applications:

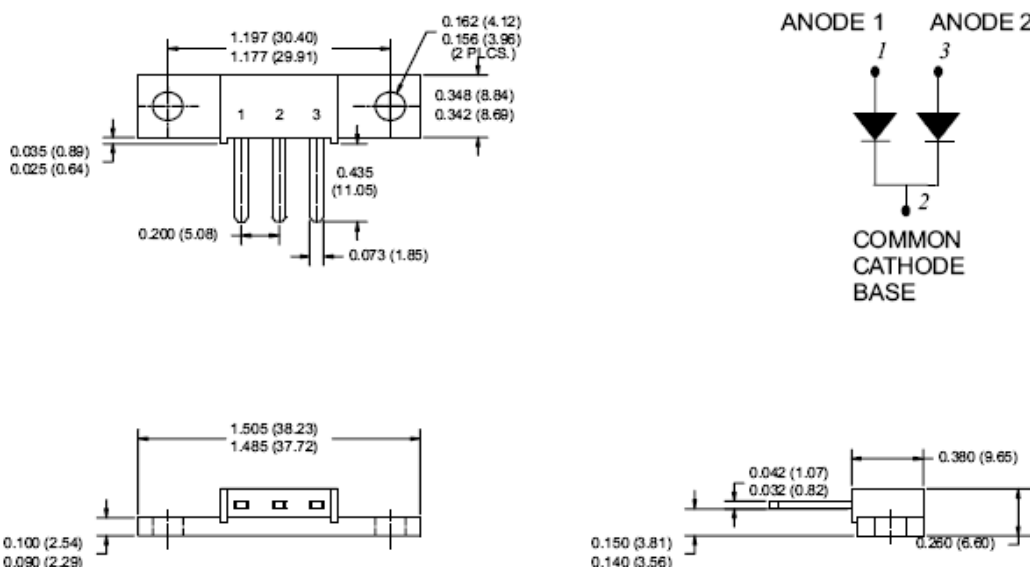
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

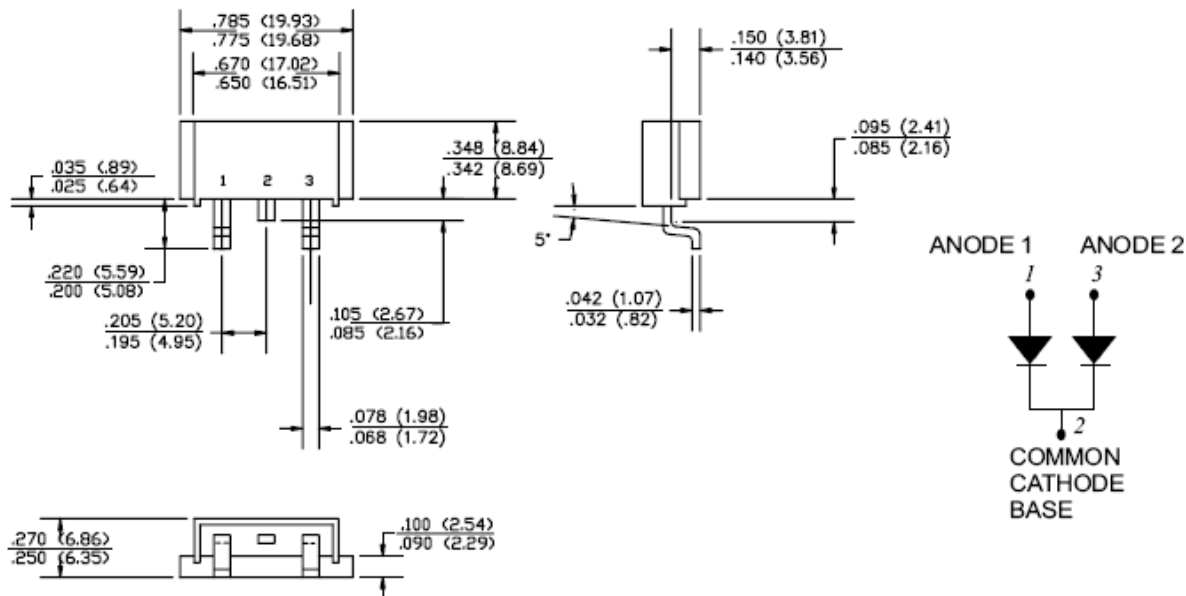
- 175°C T_J operation
- Center tap module
- Very Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Low profile, high current package
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

| Case Styles | | |
|---|--|--|
| 86CNQ200  PRM2 | 86CNQ200SL  PRM2-SL | 86CNQ200SM  PRM2-SM |

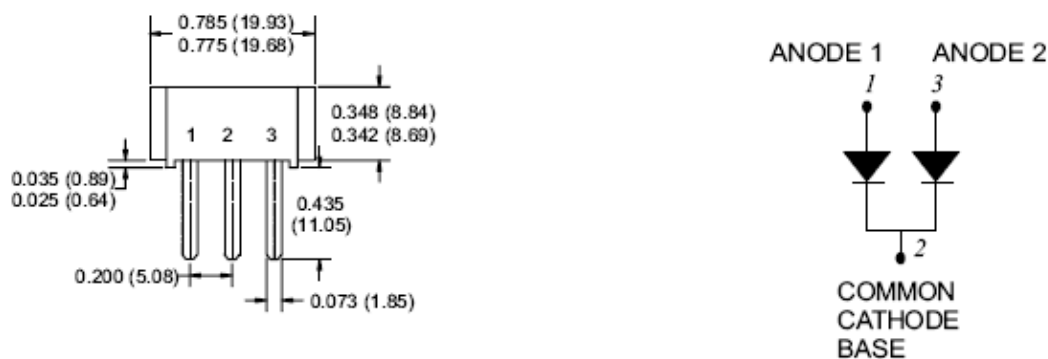
Mechanical Dimensions: In Inches / mm



PRM2



PRM2-SL



PRM2-SM

MARKING, MOLDING RESIN

Marking for 86CNQ200/SL/SM, 1st row SS YYWWL, 2nd row 86CNQ200/SL/SM, 3rd row 1 2 3 (pin)

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} | - | 200 | V |
| Max. Average Forward | $I_{F(AV)}$ | 50% duty cycle @ $T_C = 130^\circ\text{C}$, rectangular wave form | 80 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 150 | A |

Electrical Characteristics:

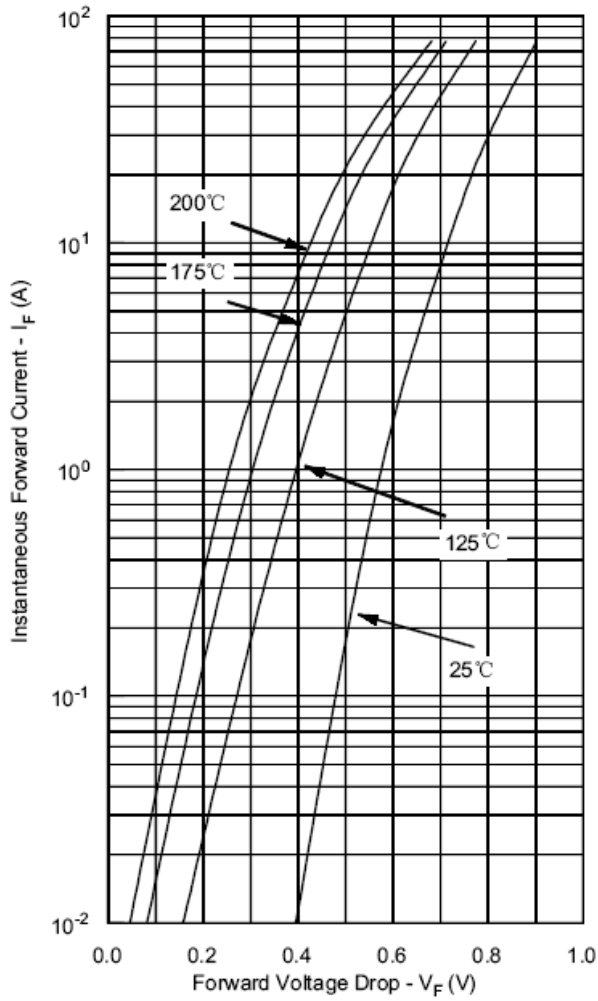
| Characteristics | Symbol | Condition | Max. | Units |
|---------------------------------------|----------|--|--------------|------------------|
| Max. Forward Voltage Drop (per leg) * | V_{F1} | @ 40A, Pulse, $T_J = 25^\circ\text{C}$ @ 80A, Pulse, $T_J = 25^\circ\text{C}$ | 0.99 1.14 | V |
| | V_{F2} | @ 40A, Pulse, $T_J = 125^\circ\text{C}$ @ 80A, Pulse, $T_J = 125^\circ\text{C}$ | 0.69 0.78 | V |
| Max. Reverse Current (per leg) * | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$ | 1.1 | mA |
| | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$ | 24 | mA |
| Max. Junction Capacitance (per leg) | C_T | @ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 900 | 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%

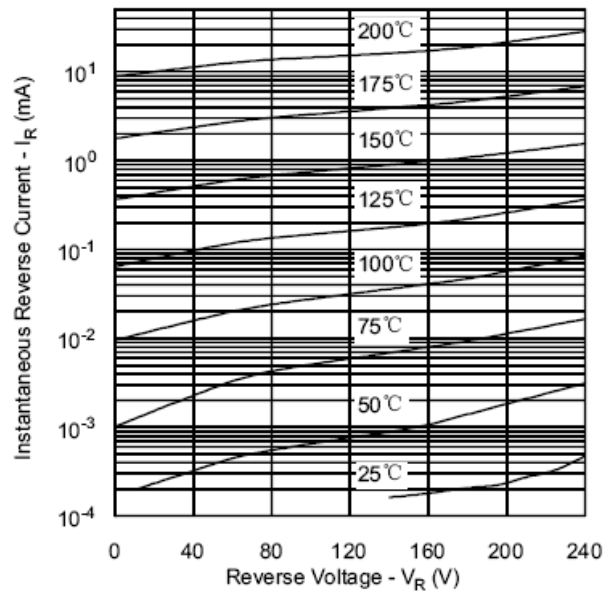
Thermal-Mechanical Specifications:

| 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 | $^\circ\text{C/W}$ |
| Typical Thermal Resistance, case to Heat Sink | $R_{\theta cs}$ | Mounting surface, smooth and greased | 0.30 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 7.8 | g |
| Mounting Torque | T_M | - | 40(min) | Kg-cm |
| | | | 58(max) | |
| Case Style | PRM2 PRM2-SL PRM2-SM | | | |

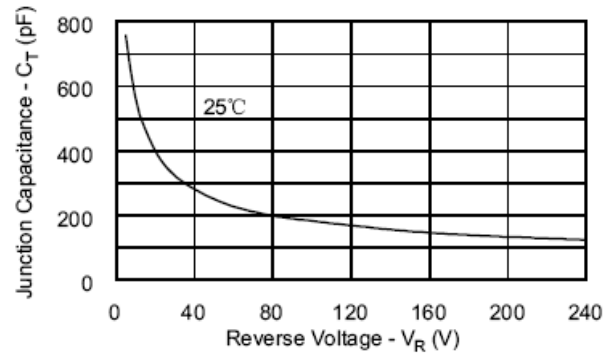
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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