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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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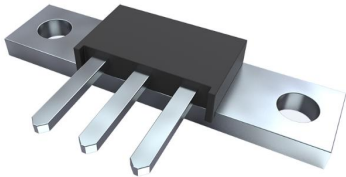
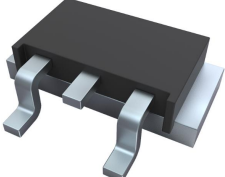
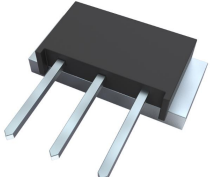
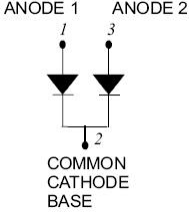
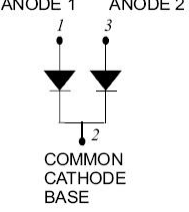
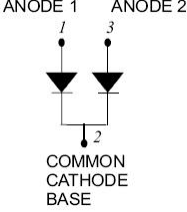
## 63CNQ080/63CNQ100 SCHOTTKY RECTIFIER

### Applications

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

### Features

- 175°C T<sub>J</sub> 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 electrical and life testing can be performed upon request

| 63CNQ...   | 63CNQ...SL   | 63CNQ...SM   |
|--|--|--|
|    |    |    |
| <p>ANODE 1    ANODE 2</p>  <p>COMMON CATHODE BASE</p> | <p>ANODE 1    ANODE 2</p>  <p>COMMON CATHODE BASE</p> | <p>ANODE 1    ANODE 2</p>  <p>COMMON CATHODE BASE</p> |
| <b>PRM3</b>  | <b>PRM3-SL</b>   | <b>PRM3-SM</b>   |

### Maximum Ratings:

| Characteristics  | Symbol   | Condition   | Max.                          | Units |
|--|--|---|-------------------------------|-------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | -   | 80(63CNQ080)<br>100(63CNQ100) | V     |
| Average Rectified Forward Current  | I <sub>F (AV)</sub>                                    | 50% duty cycle @T <sub>C</sub> =155°C,<br>rectangular wave form   | 30(Per Leg)<br>60(Per Device) | A     |
| Peak One Cycle Non-Repetitive Surge Current(Per leg)                                   | I <sub>FSM</sub>                                       | 8.3 ms, half Sine pulse   | 750                           | A     |
| Non-Repetitive Avalanche Energy (Per leg)  | E <sub>AS</sub>  | T <sub>J</sub> =25°C, I <sub>AS</sub> =1A, L=30mH   | 15                            | mJ    |
| Repetitive Avalanche Current(Per leg)  | I <sub>AR</sub>  | Current decaying linearly to zero in 1 μsec<br>Frequency limited by T <sub>J</sub> max.<br>V <sub>A</sub> =1.5×V <sub>R</sub> typical | 1                             | A     |

**Electrical Characteristics:**

| Characteristics                     | Symbol          | Condition  | Typ.         | Max.         | Units |
|-------------------------------------|-----------------|--|--------------|--------------|-------|
| Forward Voltage Drop<br>(Per leg) * | V <sub>F1</sub> | @ 30A, Pulse, T <sub>J</sub> = 25 °C<br>@ 60A, Pulse, T <sub>J</sub> = 25 °C   | 0.73<br>0.79 | 0.80<br>0.93 | V     |
|                                     | V <sub>F2</sub> | @ 30A, Pulse, T <sub>J</sub> = 125 °C<br>@ 60A, Pulse, T <sub>J</sub> = 125 °C | 0.58<br>0.63 | 0.64<br>0.76 | V     |
| Reverse Current (Per leg) *         | I <sub>R1</sub> | @V <sub>R</sub> = rated V <sub>R</sub> T <sub>J</sub> = 25 °C                  | 0.005        | 1.5          | mA    |
|                                     | I <sub>R2</sub> | @V <sub>R</sub> = rated V <sub>R</sub> T <sub>J</sub> = 125 °C                 | 1.5          | 20           | mA    |
| Junction Capacitance<br>(Per leg)   | C <sub>T</sub>  | @V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C<br>f <sub>SIG</sub> = 1MHz        | 1200         | 1400         | pF    |
| Voltage Rate of Change              | dv/dt           | -  | -            | 10,000       | V/μs  |

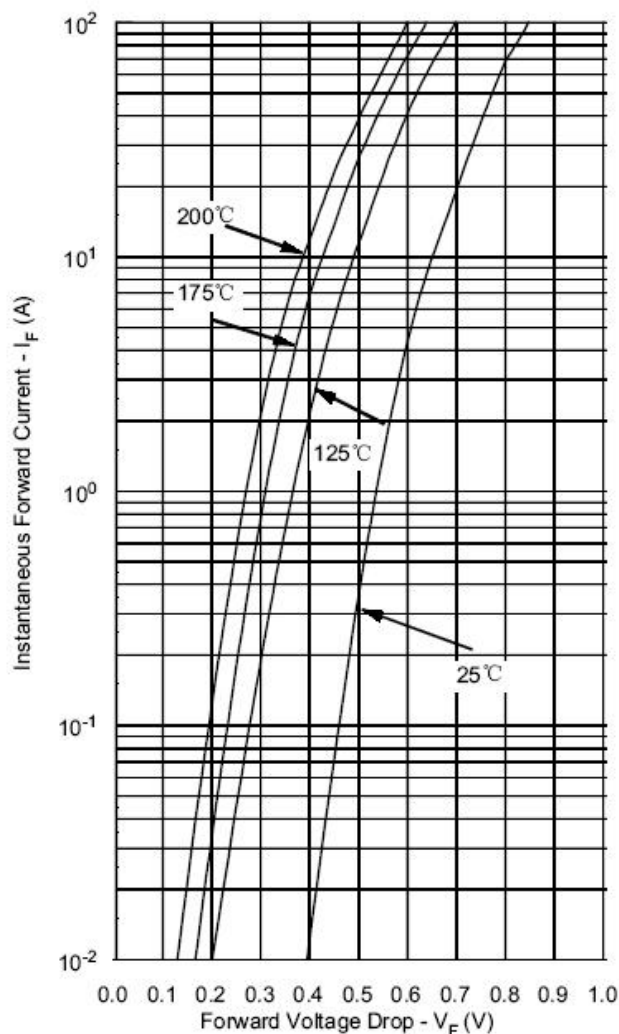
\* Pulse width < 300 μs, duty cycle < 2%

**Thermal-Mechanical Specifications:**

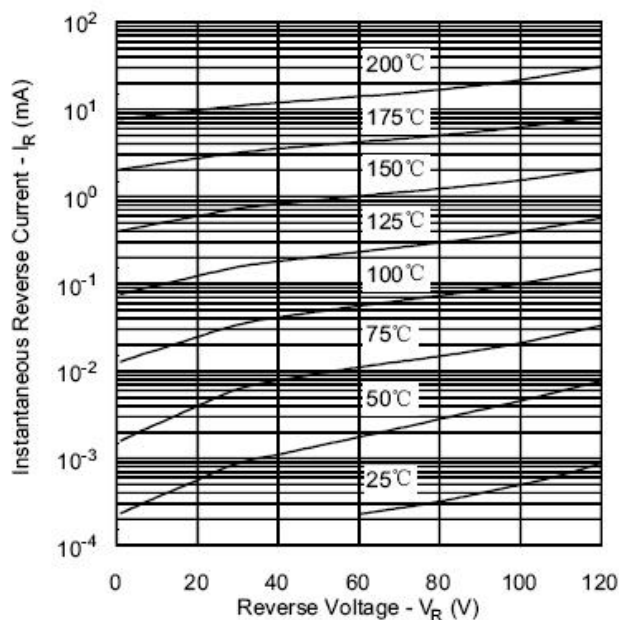
| Characteristics   | Symbol               | Condition                               | Specification      | Units |
|---|----------------------|---|--------------------|-------|
| Junction Temperature  | T <sub>J</sub>       | -                                       | -55 to +175        | °C    |
| Storage Temperature   | T <sub>stg</sub>     | -                                       | -55 to +175        | °C    |
| Typical Thermal Resistance<br>Junction to Case<br>(per leg)     | R <sub>θJC</sub>     | DC operation                            | 0.85               | °C/W  |
| Typical Thermal Resistance<br>Junction to Case<br>(per package) | R <sub>θJC</sub>     | DC operation                            | 0.42               | °C/W  |
| Typical Thermal Resistance, case<br>to Heat Sink                | R <sub>θcs</sub>     | Mounting surface, smooth and<br>greased | 0.30               | °C/W  |
| Mounting Torque   | TM                   | -                                       | 40(min)<br>58(max) | Kg-cm |
| Approximate Weight  | wt                   | -                                       | 7.8                |       |
| Case Style  | PRM3 PRM3-SL PRM3-SM |   |                    |       |

## Ratings and Characteristics Curves

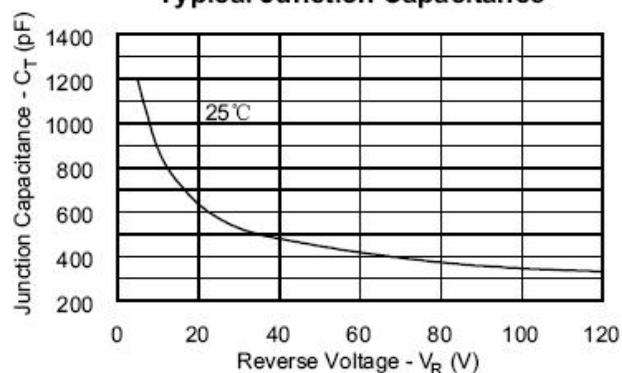
**Typical Forward Characteristics**



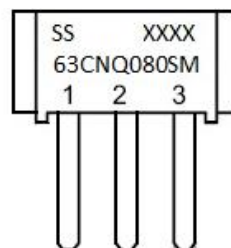
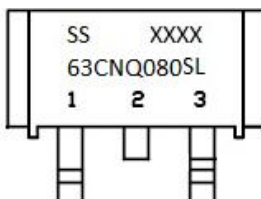
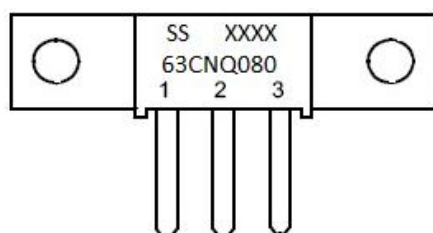
**Typical Reverse Characteristics**



**Typical Junction Capacitance**



## Marking Diagram



Where XXXX is YYWW

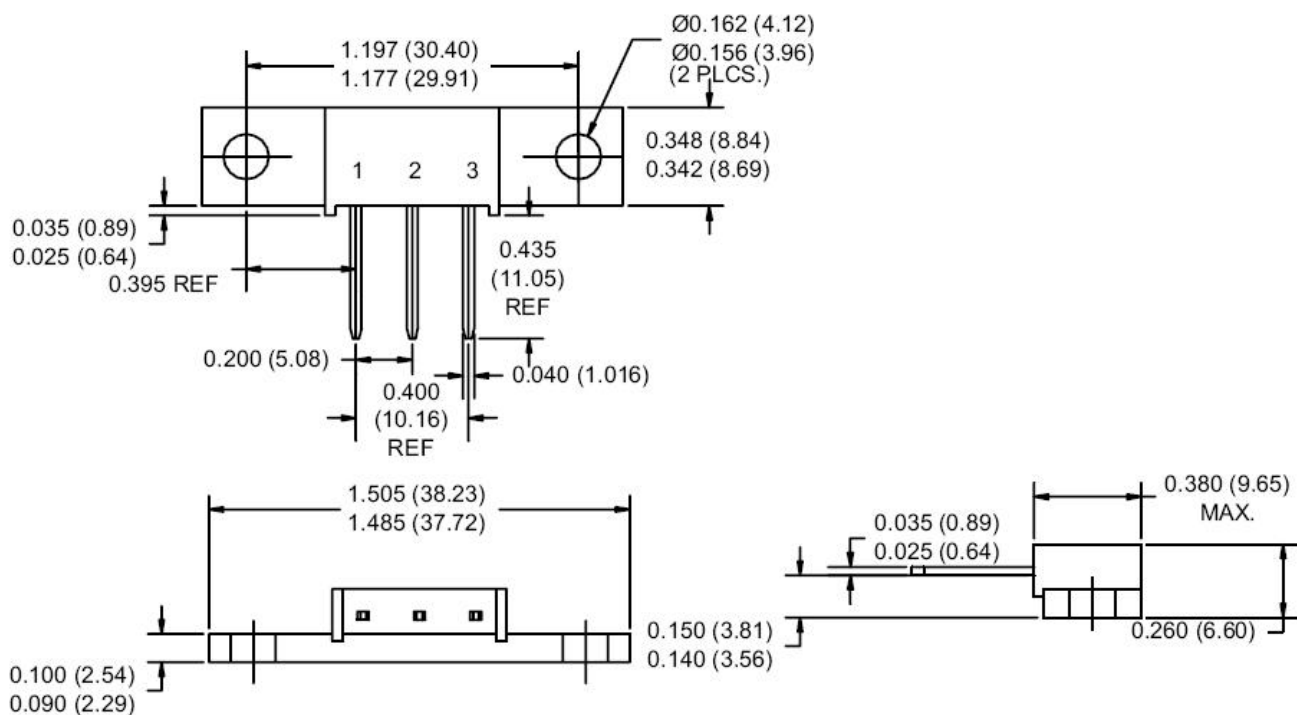
1st row SS YYWWL  
2nd row 63CNQ080/SL/SM  
3rd row 1 2 3 (pin)  
SS = SS  
YY = Year  
WW = Week

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

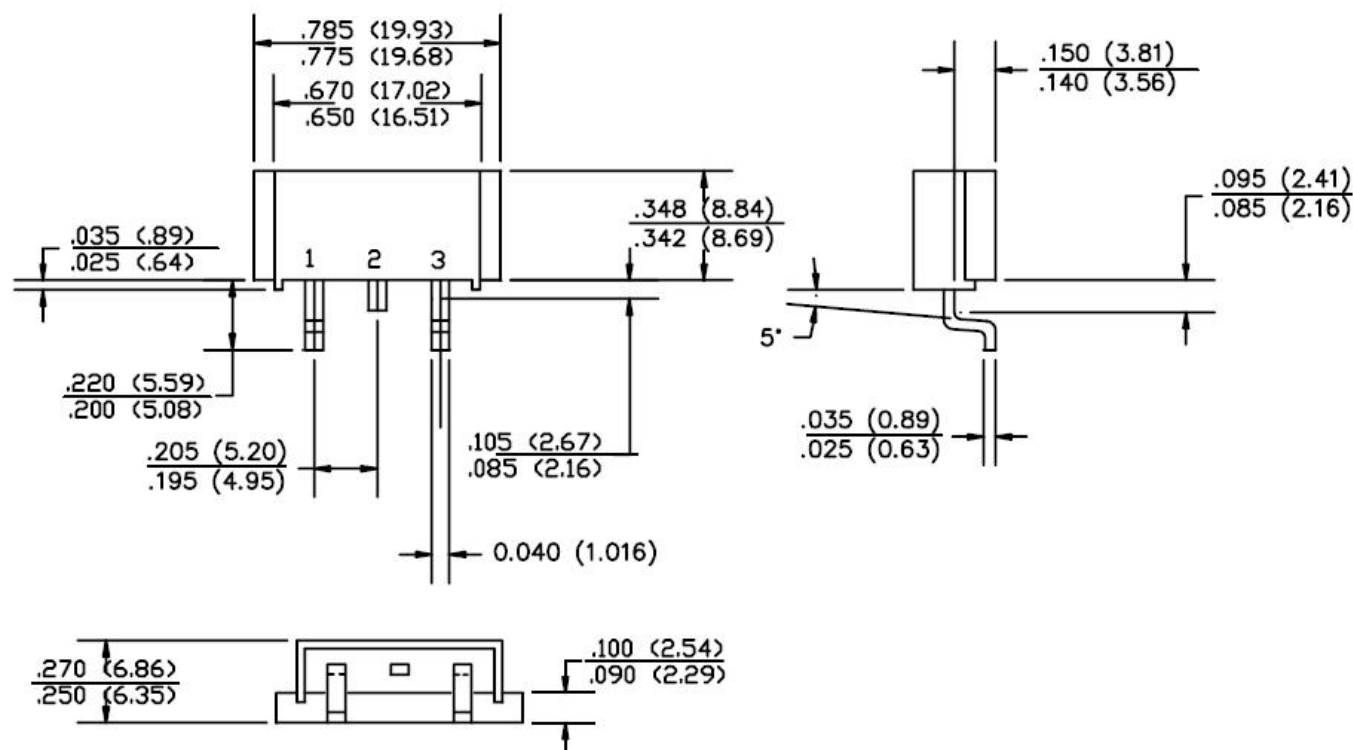
**Ordering Information**

| Device     | Package | Terminals finish                         | Shipping     |
|------------|---------|--|--------------|
| 63CNQ080   | PRM3    | Nickel plated                            | 48pcs / box  |
| 63CNQ080S  | PRM3    | Pure Sn dipped<br>(dipped height 6-8 mm) | 48pcs / box  |
| 63CNQ100   | PRM3    | Nickel plated                            | 48pcs / box  |
| 63CNQ100S  | PRM3    | Pure Sn dipped<br>(dipped height 6-8 mm) | 48pcs / box  |
| 63CNQ080SL | PRM3-SL | Nickel plated                            | 100pcs / box |
| 63CNQ100SL | PRM3-SL | Nickel plated                            | 100pcs / box |
| 63CNQ080SM | PRM3-SM | Nickel plated                            | 48pcs / box  |
| 63CNQ100SM | PRM3-SM | Nickel plated                            | 48pcs / box  |

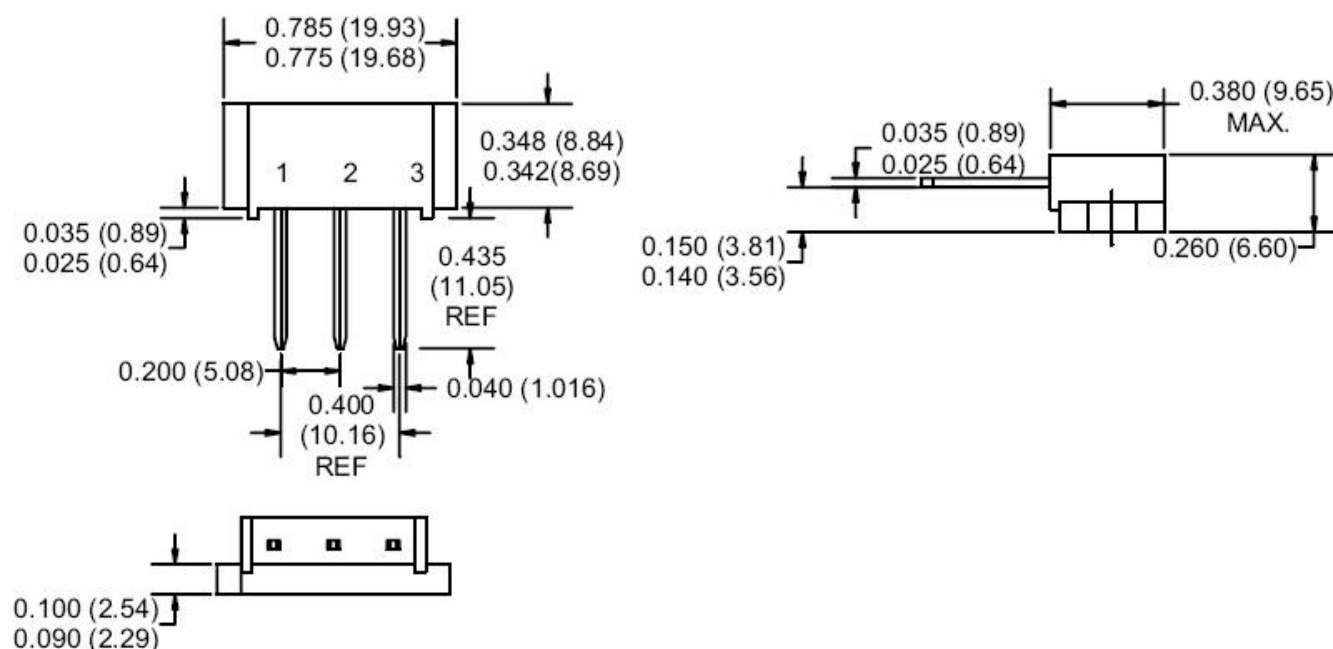
**Mechanical Dimensions PRM3 (Inches/Millimeters)**



**Mechanical Dimensions PRM3-SL (Inches/Millimeters)**



**Mechanical Dimensions PRM3-SM (Inches/Millimeters)**



**DISCLAIMER:**

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