

Technical Data  
Data Sheet 2953, Rev. -

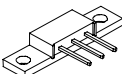
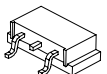
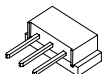
**63CNQ080/63CNQ100 SCHOTTKY RECTIFIER**

**Applications:**

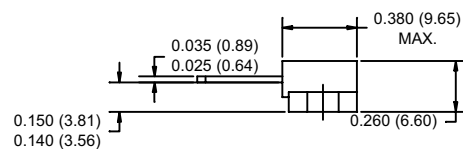
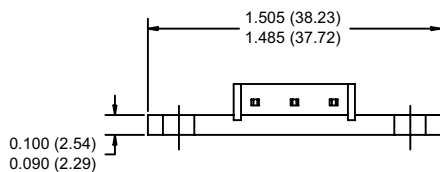
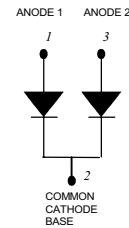
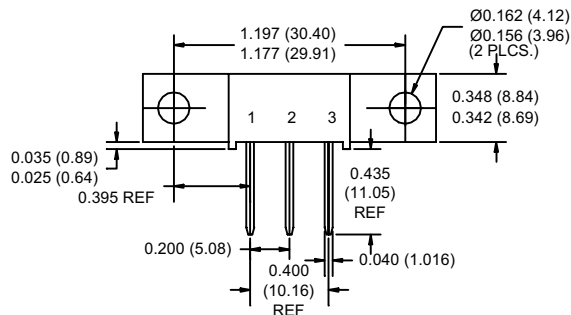
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

**Features:**

- 175°C T<sub>J</sub> operation
- Center tap module
- 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 profiles, small footprint, high current package

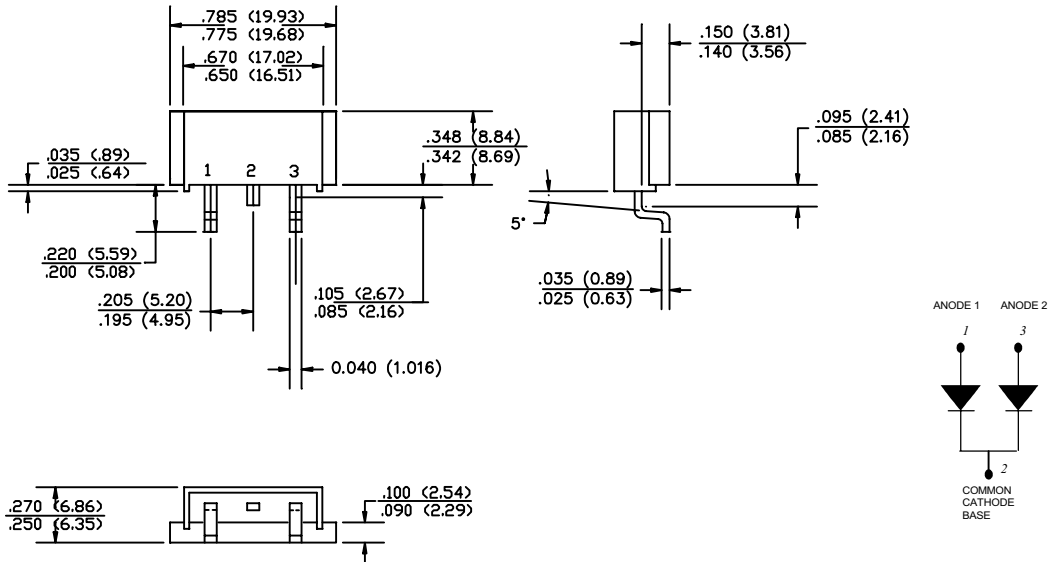
Case Styles		
<b>63CNQ...</b>    <b>PRM3</b>	<b>63CNQ...SL</b>    <b>PRM3-SL</b>	<b>63CNQ...SM</b>    <b>PRM3-SM</b>

**Mechanical Dimensions: In Inches / mm**

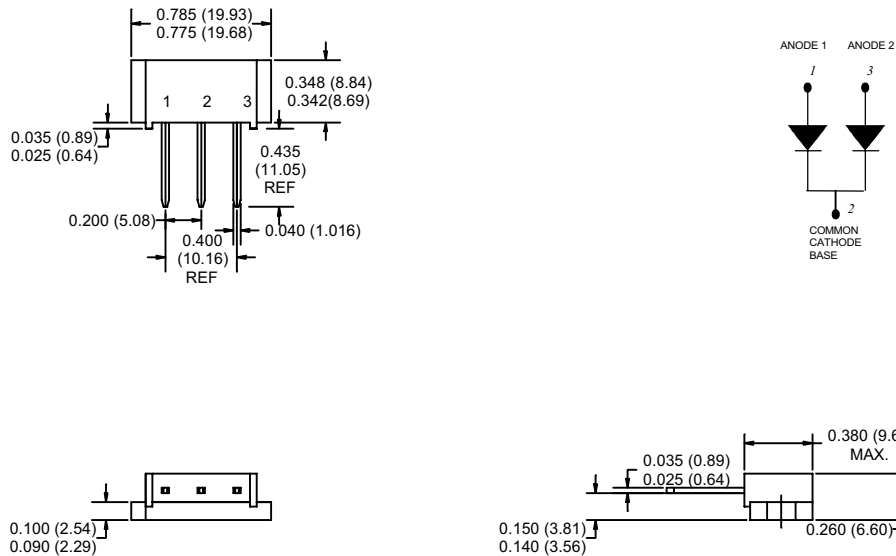


**PRM3**

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**PRM3-SL**



**PRM3-SM**

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Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	80	V
			100	
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 155^\circ\text{C}$ , rectangular wave form	60	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	750	A
Non-Repetitive Avalanche Energy(per leg)	$E_{AS}$	$T_J = 25^\circ\text{C}$ , $I_{AS} = 1\text{A}$ , $L = 30\text{mH}$	15	mJ
Repetitive Avalanche Current(per leg)	$I_{AR}$	Current decaying linearly to Zero in 1 $\mu\text{sec}$ 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) *	$V_{F1}$	@ 30 A, Pulse, $T_J = 25^\circ\text{C}$	0.77	V
		@ 60 A, Pulse, $T_J = 25^\circ\text{C}$	0.93	
	$V_{F2}$	@ 30 A, Pulse, $T_J = 125^\circ\text{C}$	0.64	V
		@ 60 A, Pulse, $T_J = 125^\circ\text{C}$	0.76	
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	1.5	mA
		@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	20	
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	1400	pF
Typical Series Inductance (per leg)	$L_S$	Measured lead to lead 5 mm from package body	6.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ $\mu\text{s}$

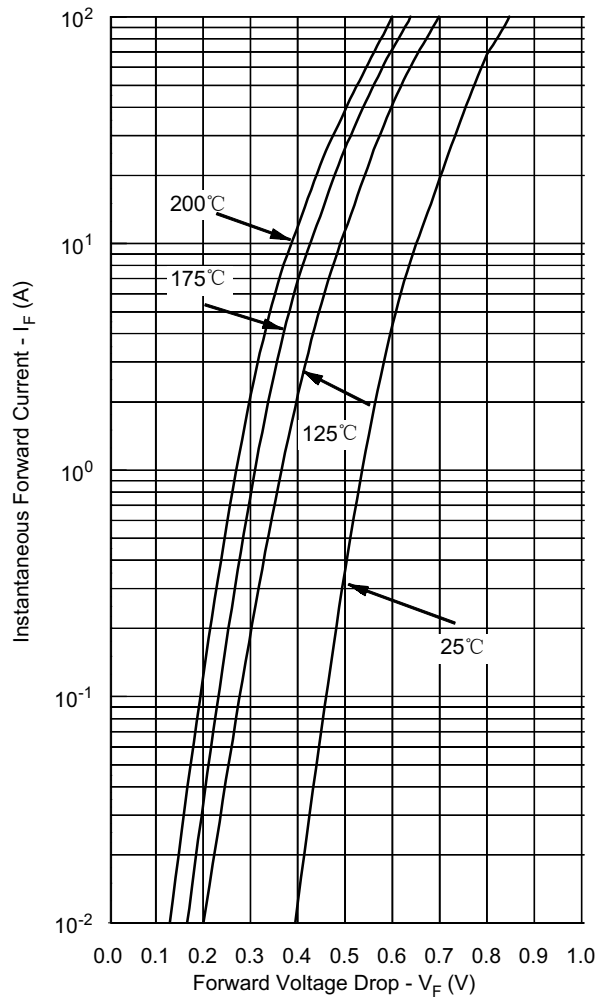
\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

**Thermal-Mechanical Specifications:**

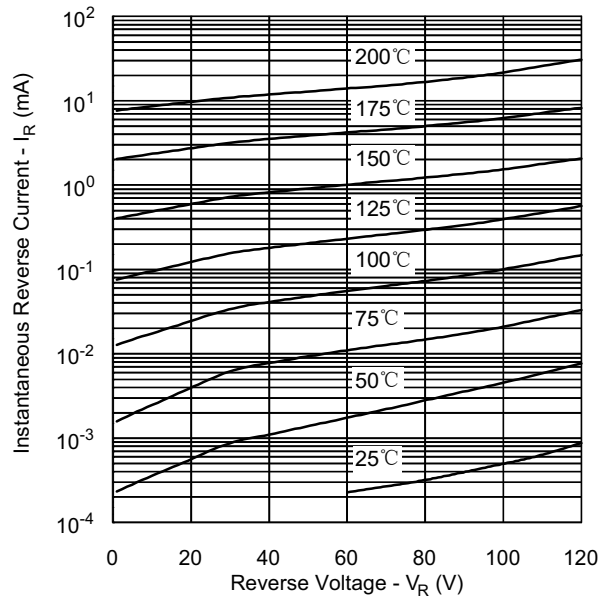
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +175	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.85(per leg)	$^\circ\text{C/W}$
			0.42(per device)	
Maximum 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) 58(max)	Kg-cm
Case Style	PRM3 PRM3-SL PRM3-SM			

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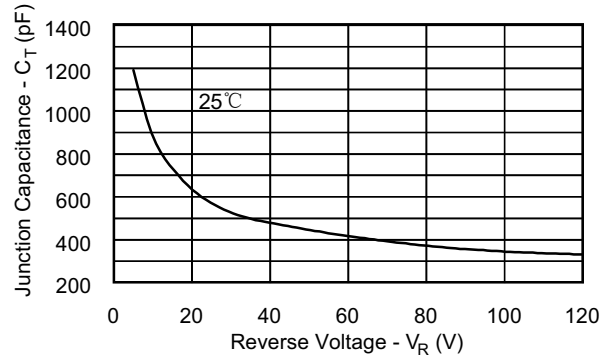
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**TECHNICAL DATA**

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