

Technical Data
Data Sheet 3758, Rev. -

Green Products

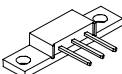
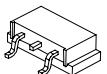
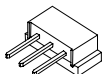
63CNQ080-G/63CNQ100-G SCHOTTKY RECTIFIER

Applications:

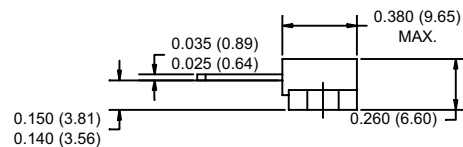
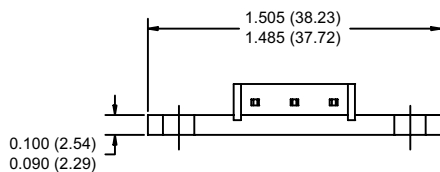
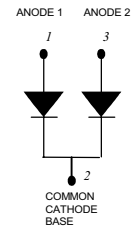
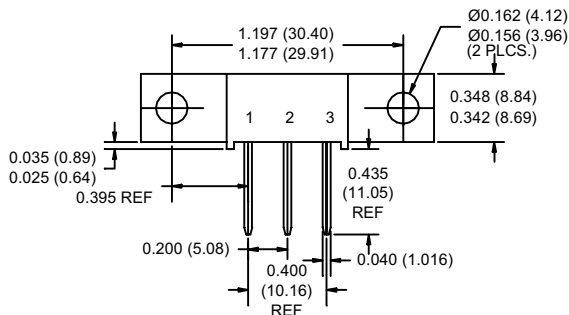
- Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

Features:

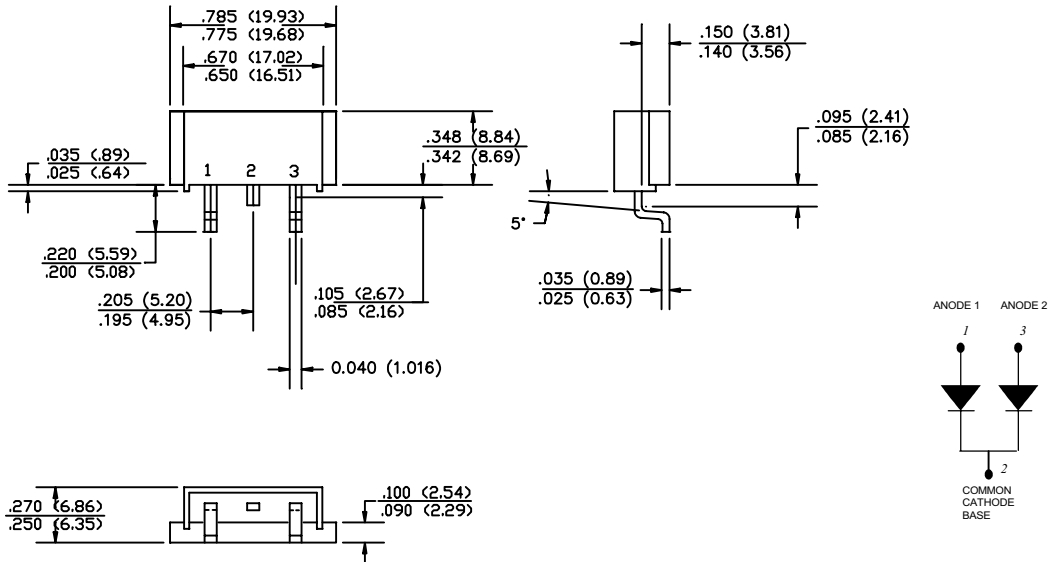
- 175°C T_J operation
- Center tap module
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Low profiles, small footprint,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

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

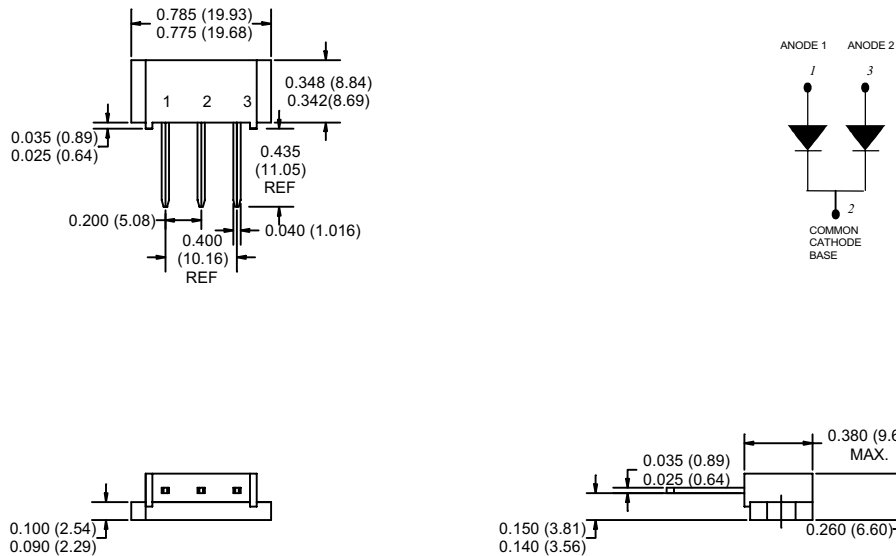
Mechanical Dimensions: In Inches / mm



PRM3



PRM3-SL



PRM3-SM

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Maximum Ratings:

Green Products

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	80	(63CNQ080-G)
			60	(63CNQ100-G)
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 155\text{ }^\circ\text{C}$, 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}	$T_J = 25\text{ }^\circ\text{C}$, $I_{AS} = 1\text{A}$, $L = 30\text{mH}$	15	mJ
Repetitive Avalanche Current(per leg)	I_{AR}	Current decaying linearly to Zero in 1 μsec Frequency Limited by T_J max. $V_A = 1.5 \times V_R$ typical	1	A

Electrical Characteristics:

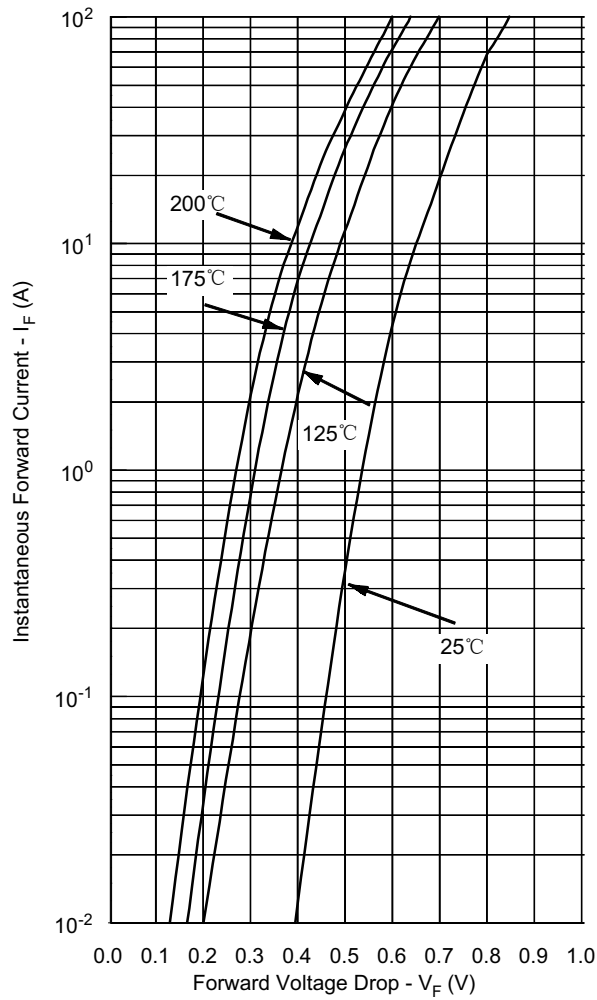
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 30 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.80	V
		@ 60 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.93	
	V_{F2}	@ 30 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.64	V
		@ 60 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.76	
Max. Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	1.5	mA
		I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	20
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	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/ μs

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

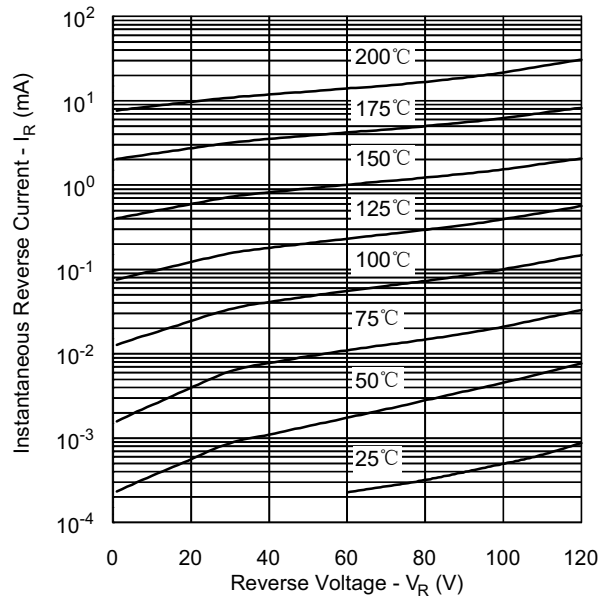
Thermal-Mechanical Specifications:

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	$R_{\theta JC}$	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			

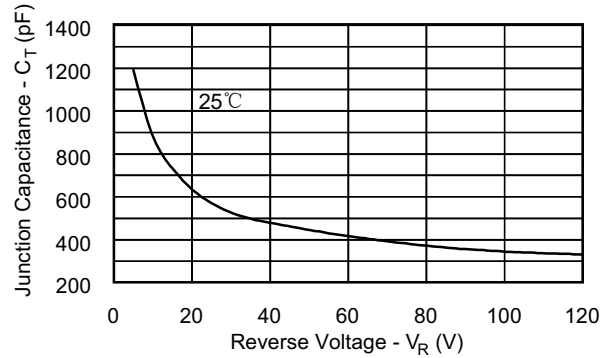
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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