

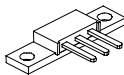
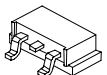
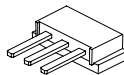
82CNQ030-G SCHOTTKY RECTIFIER

Applications:

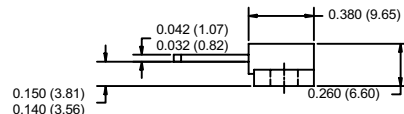
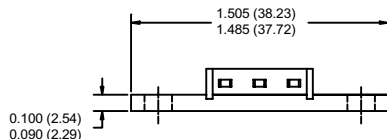
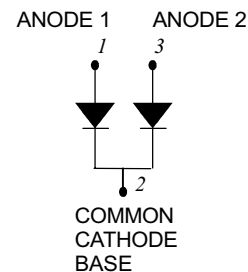
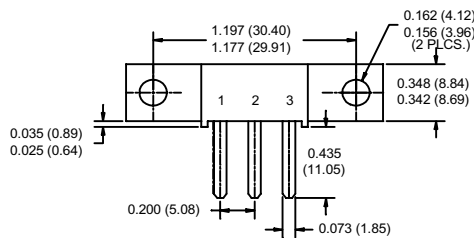
- Switching Power Supply • Free-Wheeling Diodes • Reverse battery protection • Converters

Features:

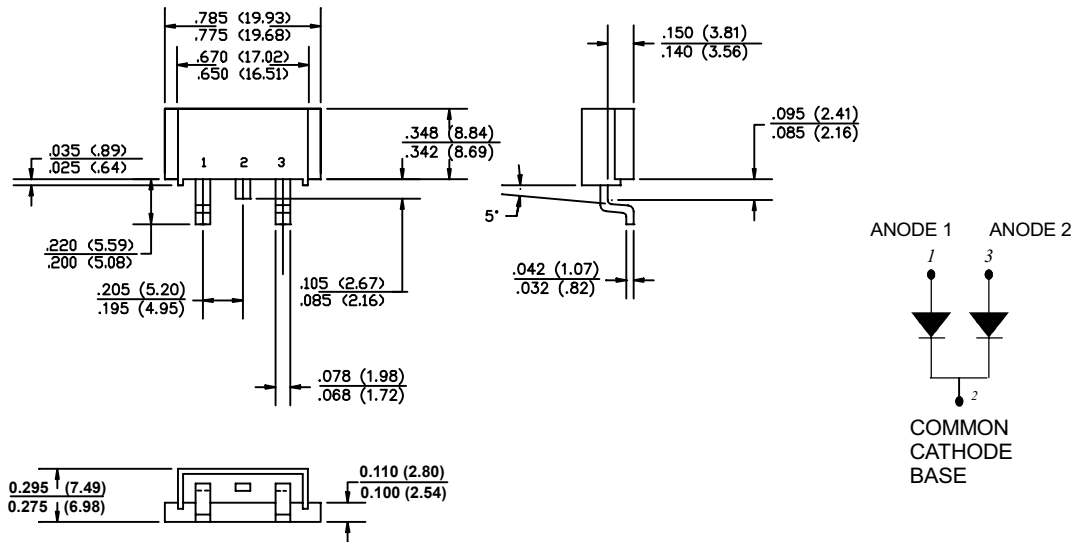
- 150°C T_J operation
- Center tap module
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- New fully transfer-mould low profile, small footprint, high current package
- Green Products in Compliance with the RoHS Directive

Case styles		
<p>82CNQ...-G</p>  <p>PRM2</p>	<p>82CNQ...SL-G</p>  <p>PRM2-SL</p>	<p>82CNQ...SM-G</p>  <p>PRM2-SM</p>

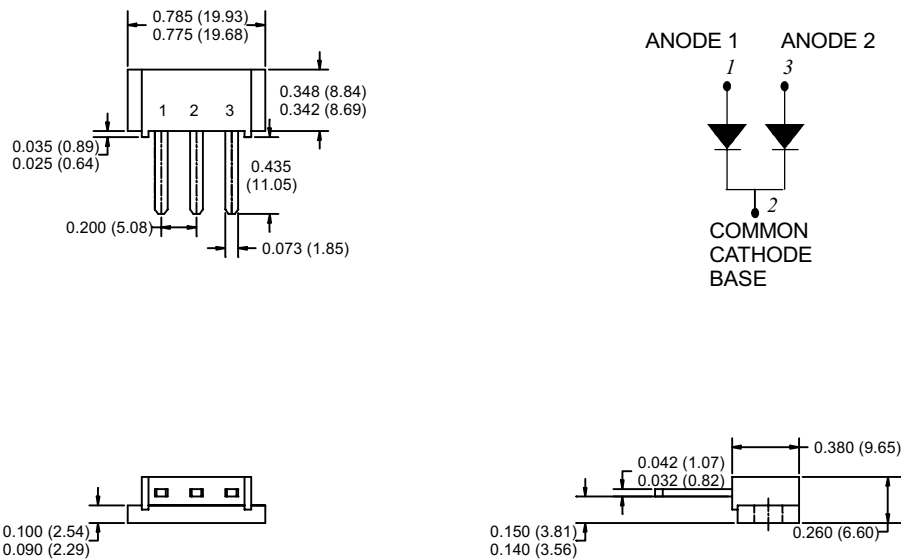
Mechanical Dimensions: In Inches / mm



PRM2



PRM2-SL



PRM2-SM

Data Sheet 3767, Rev. A
Maximum Ratings:

Green Products

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	30	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 119^\circ\text{C}$, rectangular wave form	80	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	1060	A
Non-Repetitive Avalanche Energy (per leg)	E_{AS}	$T_J = 25^\circ\text{C}$, $I_{AS} = 8\text{A}$, $L = 1.12\text{mH}$	36	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	8	A

Electrical Characteristics:

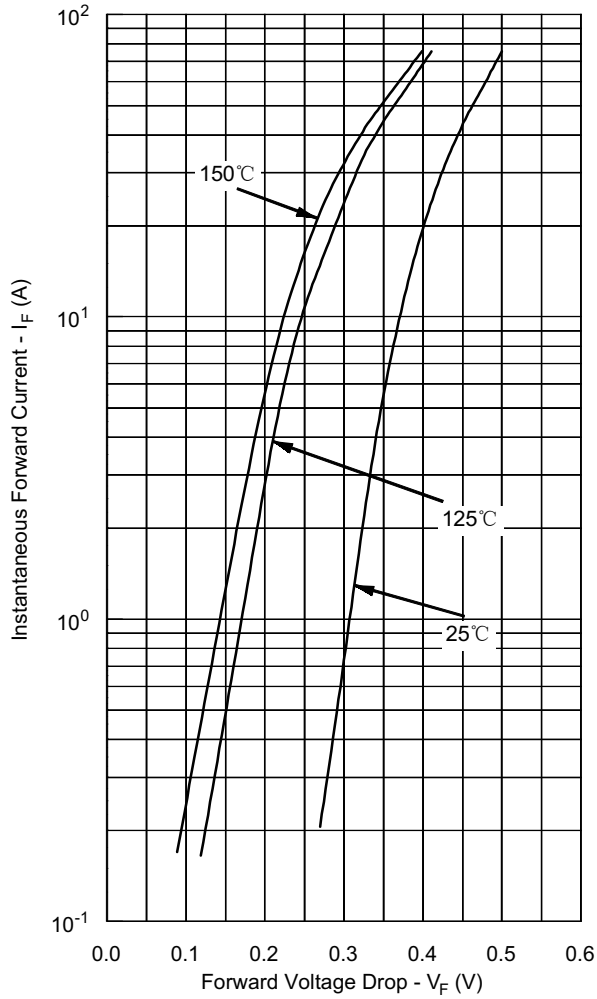
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 40 A, Pulse, $T_J = 25^\circ\text{C}$	0.47	V
	V_{F2}	@ 80 A, Pulse, $T_J = 25^\circ\text{C}$	0.55	V
		@ 40 A, Pulse, $T_J = 125^\circ\text{C}$	0.37	V
		@ 80 A, Pulse, $T_J = 125^\circ\text{C}$	0.47	V
Max. Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	5	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	280	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	3700	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%

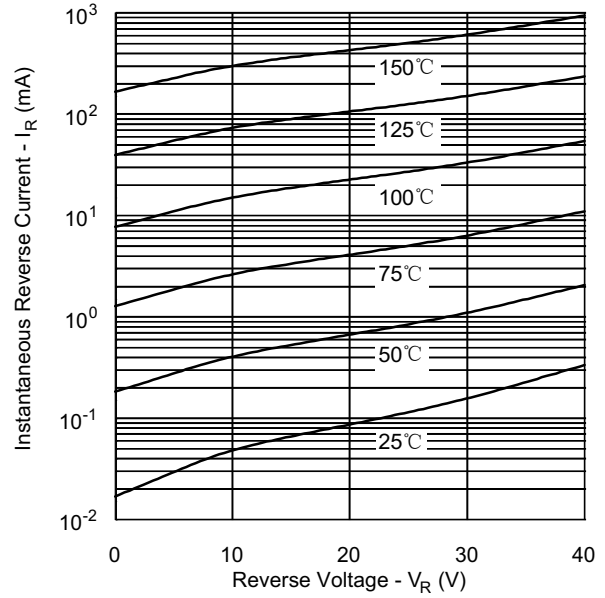
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
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	$^\circ\text{C/W}$
Maximum Thermal Resistance, Case to Heat Sink (PRM2 Only)	$R_{\theta CS}$	Mounting surface, smooth and greased Device flatness < 5 mils	0.30	$^\circ\text{C/W}$
Approximate Weight	wt	-	7.8	g
Mounting Torque (PRM2 Only)	T_M	-	40 (min) 58 (max)	Kg-cm
Case Style		PRM2 PRM2-SL PRM2-SM		

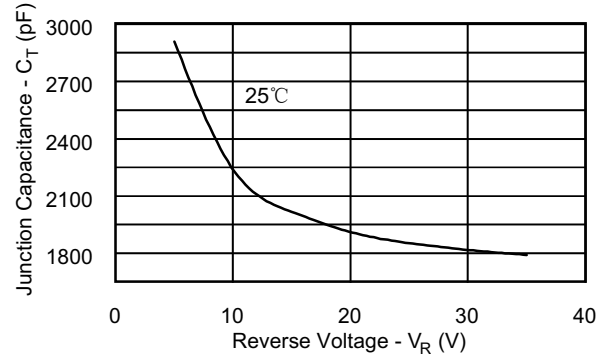
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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