



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



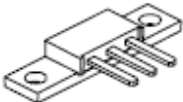
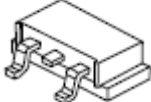
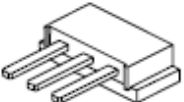
81CNQ SERIES SCHOTTKY RECTIFIER

Applications:

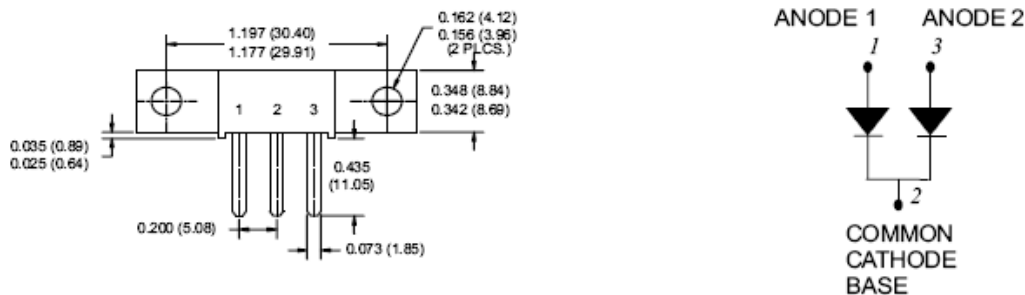
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

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

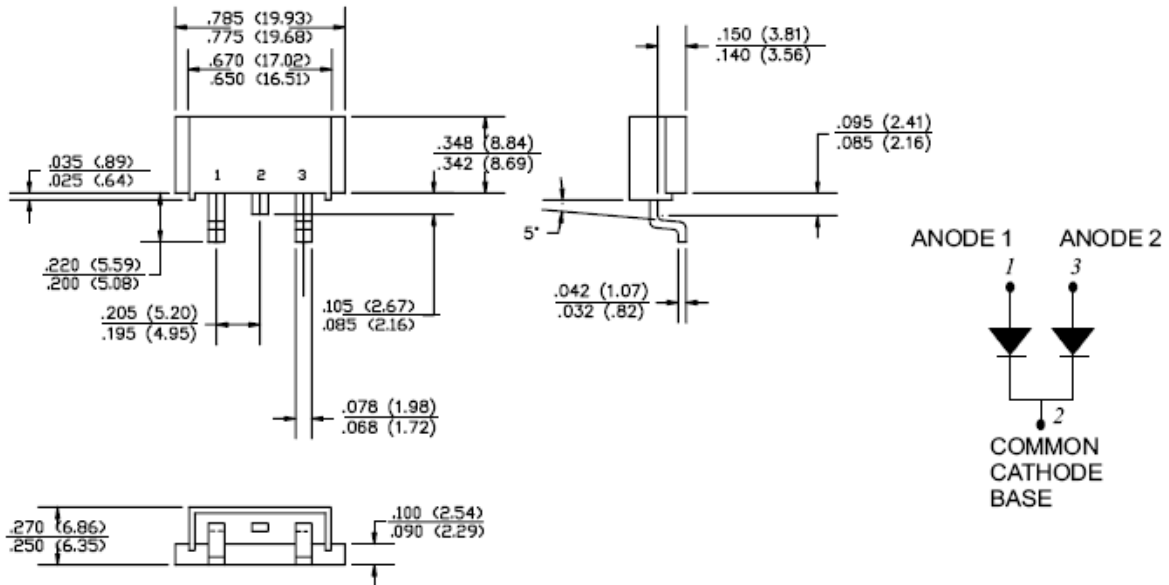
Case Styles		
<p>81CNQ...</p>  <p>PRM2</p>	<p>81CNQ...SL</p>  <p>PRM2-SL</p>	<p>81CNQ...SM</p>  <p>PRM2-SM</p>

Mechanical Dimensions: In Inches / mm

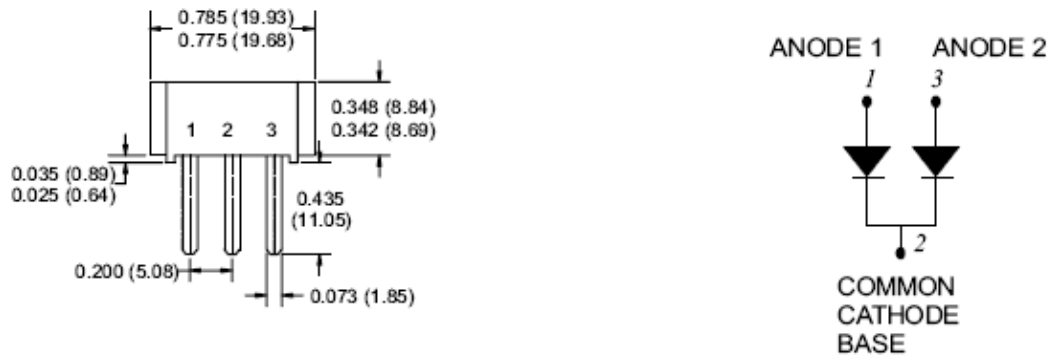


PRM2

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- <http://www.smc-diodes.com> - sales@smc-diodes.com •



PRM2-SL



PRM2-SM

MARKING, MOLDING RESIN

Marking for 81CNQ035/SL/SM, 1st row SS YYWWL, 2nd row 81CNQ035/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

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81CNQ SERIES

Technical Data
Data Sheet N1060, Rev. A

Green Products

Ordering Information:

Device	Package	Terminals finish	Shipping
81CNQ035	PRM2	Nickel plated	48pcs / box
81CNQ035S1	PRM2	PbSn dipped	48pcs / box
81CNQ035S2	PRM2	Pure Sn dipped	48pcs / box
81CNQ040	PRM2	Nickel plated	48pcs / box
81CNQ040S1	PRM2	PbSn dipped	48pcs / box
81CNQ040S2	PRM2	Pure Sn dipped	48pcs / box
81CNQ045	PRM2	Nickel plated	48pcs / box
81CNQ045S1	PRM2	PbSn dipped	48pcs / box
81CNQ045S2	PRM2	Pure Sn dipped	48pcs / box

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	35(81CNQ035) 40(81CNQ040) 45(81CNQ045)	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 141^\circ\text{C}$, rectangular wave form	80	A
Peak One Cycle Non-Repetitive Surge Current(per leg)	I_{FSM}	8.3 ms, half Sine pulse	950	A
Non-Repetitive Avalanche Energy(peg leg)	E_{AS}	$T_J = 25^\circ\text{C}$, $I_{AS} = 8\text{A}$, $L = 1.7\text{mH}$	54	mJ
Repetitive Avalanche Current(peg 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

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Electrical Characteristics:

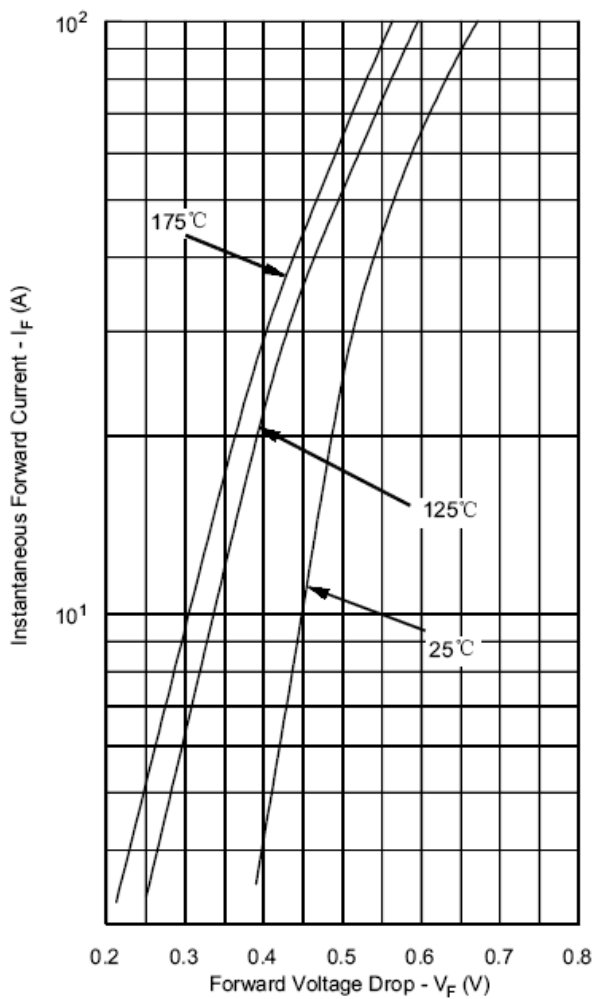
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg) *	V_{F1}	@ 40A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.54	0.60	V
		@ 80A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.64	0.74	V
	V_{F2}	@ 40A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.46	0.54	V
		@ 80A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.56	0.66	V
Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.03	5	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	25	45	mA
Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	2200	2600	pF
Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	5.5	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/ μs

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

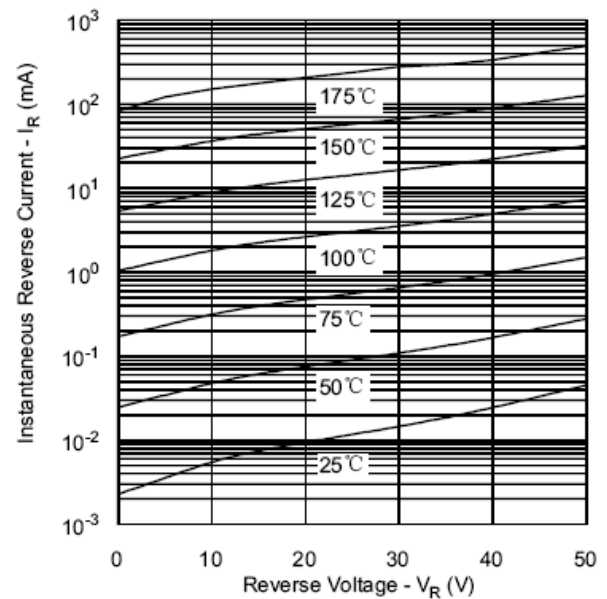
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +175	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.85	$^\circ\text{C/W}$
Typical 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	$^\circ\text{C/W}$
Mounting Torque	T_M	-	40(min)	Kg-cm
			58(max)	
Approximate Weight	wt	-	7.8	g
Case Style	PRM2 PRM2-SL PRM2-SM			

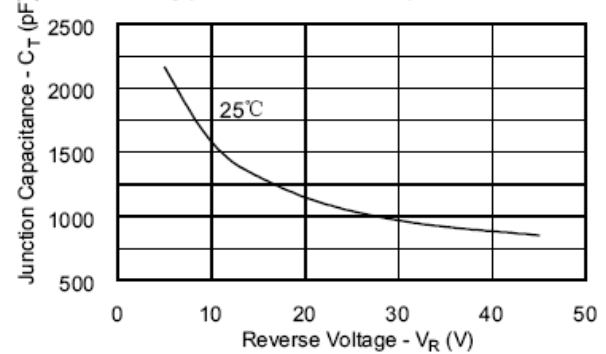
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance





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