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

Technical Data
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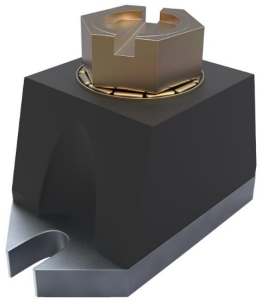
RoHS

183NQ080/R-1 183NQ100/R-1
SCHOTTKY RECTIFIER



PRM1-1(HALF PAK Module)

Features

- 175℃ T_J operation
- Unique high power, Half-Pak module
- Replaces three parallel DO-5’ S
- Easier to mount and lower profile than DO-5’ S
- High purity, high temperature epoxy encapsulation for enhanced
- mechanical strength and moisture resistance
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram

183NQ...-1　　183NQ...R-1

Applications

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

Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	80	183NQ080-1	V
			100	183NQ100-1	
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C=116°C, rectangular wave form	180		A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	1860		A
Non-Repetitive Avalanche Energy	E_{AS}	T_J=25℃,I_{AS}=0.50A,L=60mH	15		mJ
Repetitive Avalanche Current	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. V_A=1.5×V_R typical	1		A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 180A, Pulse, T_J = 25 °C @ 360A, Pulse, T_J = 25 °C	0.79 -	0.91 1.14	V
	V_{F2}	@ 180A, Pulse, T_J = 125 °C @ 360A, Pulse, T_J = 125 °C	0.61 -	0.73 0.89	V
Reverse Current*	I_{R1}	@V_R = rated V_R T_J = 25 °C	0.002	4.5	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	1	60	mA
Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	3500	4150	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_J	-	-55 to +175		°C
Storage Temperature	T_{stg}	-	-55 to +175		°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.30		°C/W
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.15		°C/W
Mounting Torque	T_M	Non-lubricated threads	Mounting Torque	23(min) 29(max)	Kg-cm
			Terminal Torque	35(min) 46(max)	
Approximate Weight	wt	-	25.6		g
Case Style	PRM1-1				

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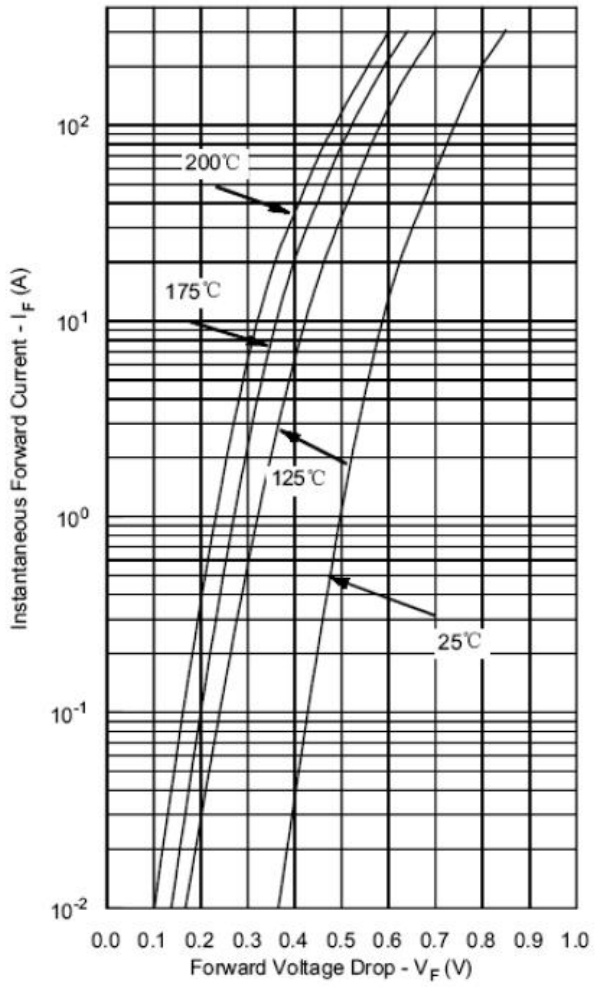
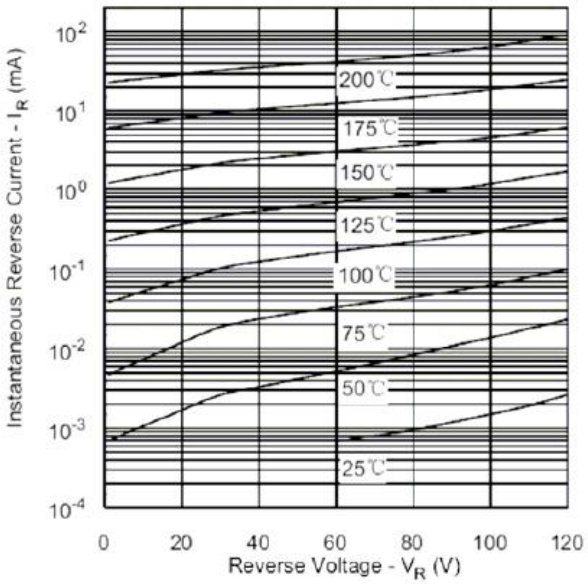
RoHS

Ratings and Characteristics Curves

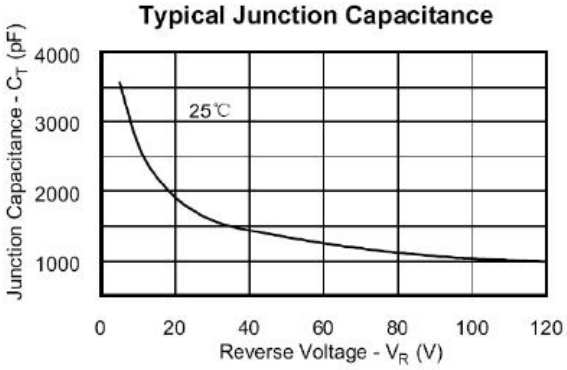
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Ordering Information

Device	Package	Shipping
183NQ SERIES	PRM1-1(Pb-Free)	27pcs/ box

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

Where XXXX is YYWW

1st row SS YYWW
2nd row 183NQ080-1
SS = SS
YY = Year
WW = Week

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

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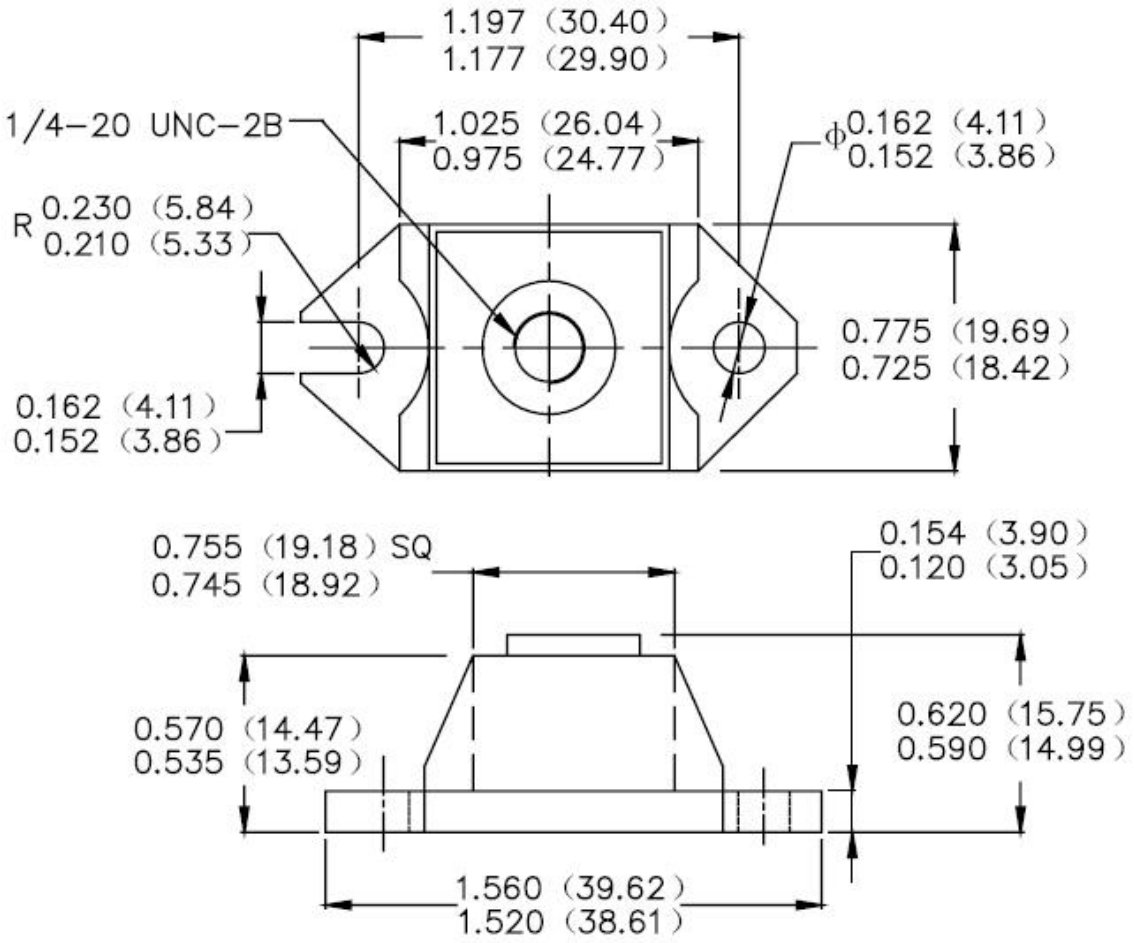
Mechanical Dimensions PRM1-1 (Inches/Millimeters)



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