

Technical Data
Data Sheet N1208, Rev. -

Green Products

249NQ135-1/249NQ150-1 SCHOTTKY RECTIFIER

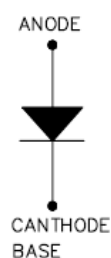
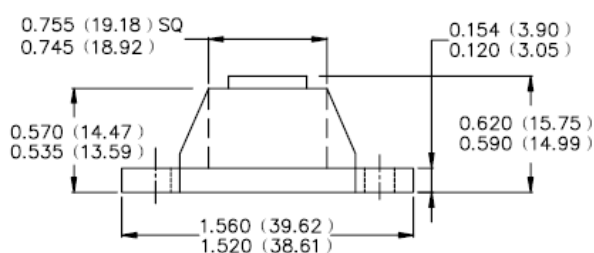
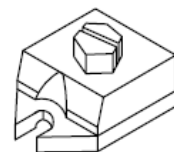
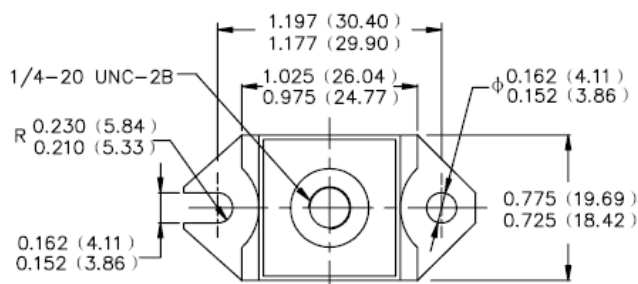
Applications:

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

Features:

- 175°C 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
- Very 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

Mechanical Dimensions: In Inches / mm



PRM1-1(HALF PAK Module)

Full part number for reversed polarity is 249NQ135R-1/249NQ150R-1
Here suffix R is designated for reversed polarity.

MARKING, MOLDING RESIN

Marking for 249NQ135-1, 1st row SS YYWWL, 2nd row 249NQ135-1

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

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	135	249NQ135-1
			150	249NQ150-1
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=117^{\circ}C$, rectangular wave form	240	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	2760	A

Electrical Characteristics:

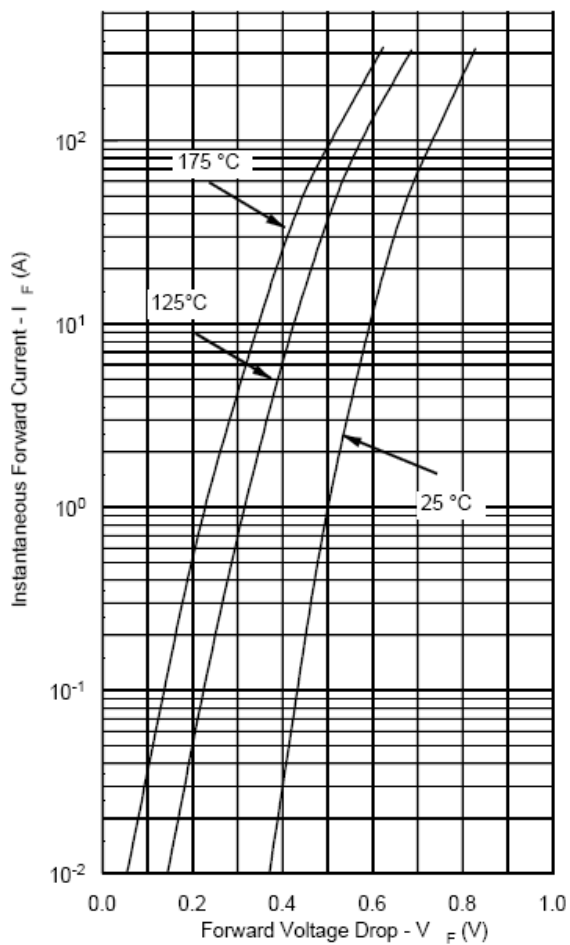
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 240A, Pulse, $T_J = 25^{\circ}C$ @ 480A, Pulse, $T_J = 25^{\circ}C$	1.07 1.27	V
	V_{F2}	@ 240A, Pulse, $T_J = 125^{\circ}C$ @ 480A, Pulse, $T_J = 125^{\circ}C$	0.74 0.86	V
Max. Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^{\circ}C$	6	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^{\circ}C$	85	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5V$, $T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$	6000	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	5.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ μs

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

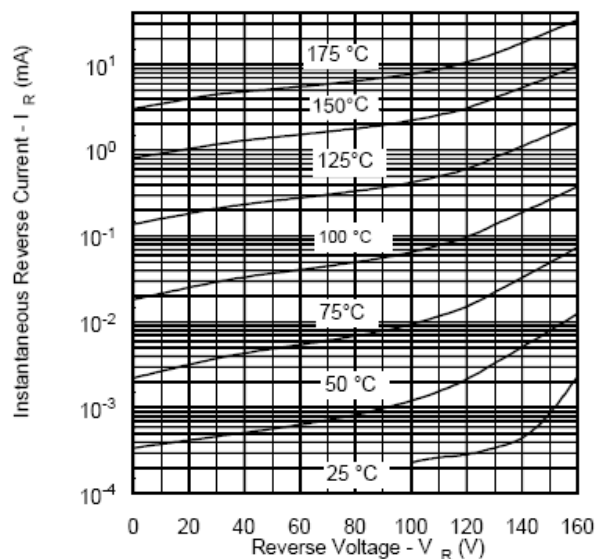
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	$^{\circ}C$
Max. Storage Temperature	T_{stg}	-	-55 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.20	$^{\circ}C/W$
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.15	$^{\circ}C/W$
Mounting Torque	T_M	Non-lubricated threads	Mounting Torque	23(min) 29(max)
			Terminal Torque	35(min) 46(max)
Approximate Weight	wt	-	25.6	g
Case Style	PRM1-1			

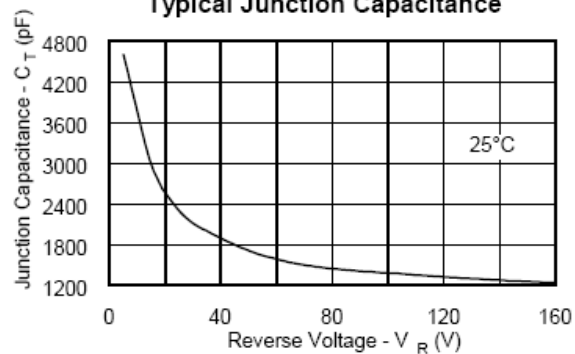
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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