

122NQ030/R-1 SCHOTTKY RECTIFIER

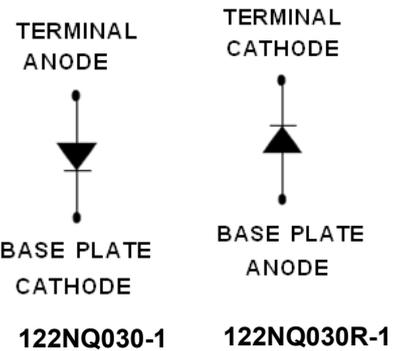
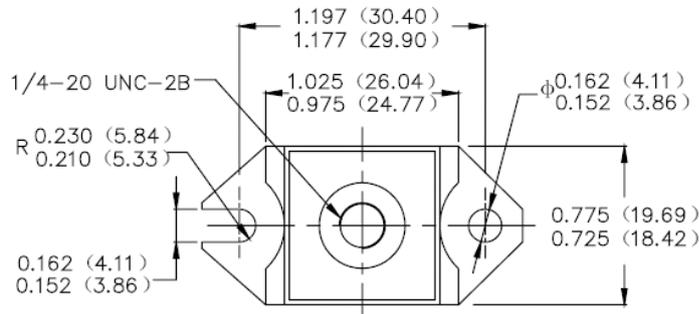
Applications:

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

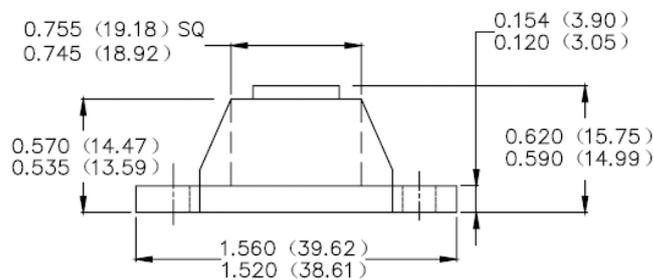
Features:

- 150°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
- 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



The top side is terminal, the bottom side is base plate.



PRM1-1(HALF PAK Module)

MARKING, MOLDING RESIN

Marking for 122NQ030/R-1, 1st row SS YYWWL, 2nd row 122NQ030-1/122NQ030R-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 Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	30	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 110^\circ\text{C}$, rectangular wave form	120	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	2880	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop(per leg) *	V_{F1}	@ 120A, Pulse, $T_J = 25^\circ\text{C}$ @ 240A, Pulse, $T_J = 25^\circ\text{C}$	0.49 0.59	V
	V_{F2}	@ 120A, Pulse, $T_J = 125^\circ\text{C}$ @ 240A, Pulse, $T_J = 125^\circ\text{C}$	0.41 0.54	V
Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	10	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	560	mA
Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	7400	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	7.0	nH
Voltage Rate of Change	dv/dt	-	10,000	V/ μs

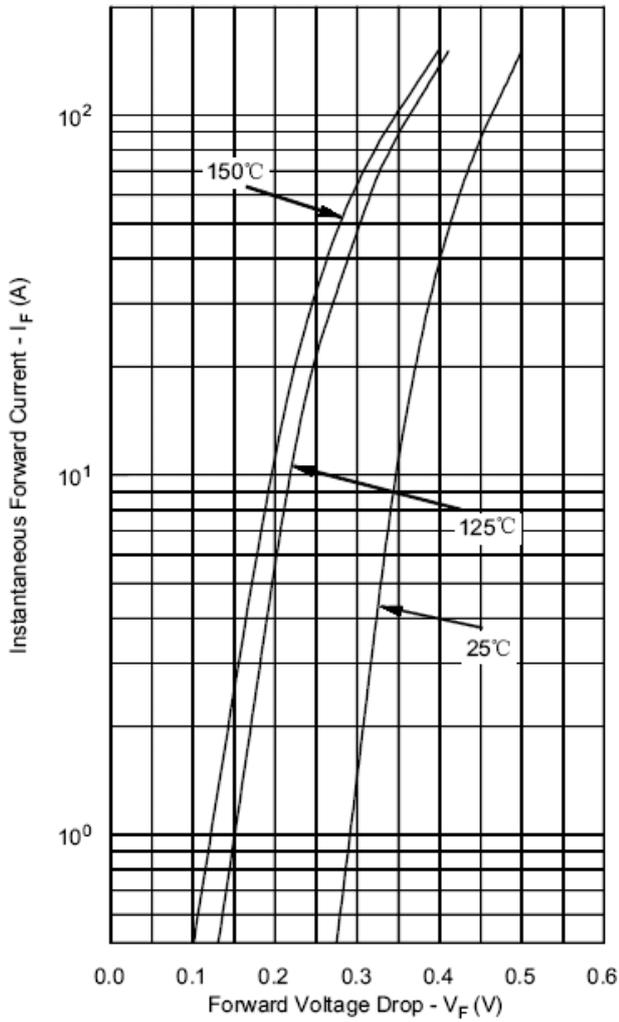
* Pulse Width < 300 μs , Duty Cycle <2%

Thermal-Mechanical Specifications:

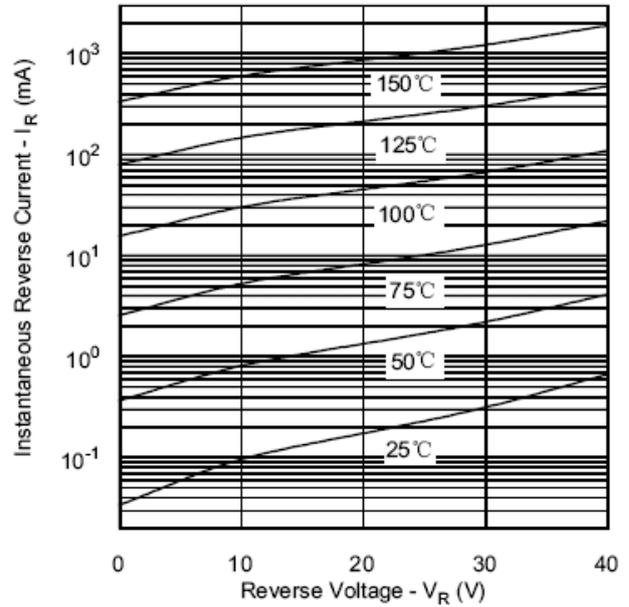
Characteristics	Symbol	Condition	Specification	Units	
Junction Temperature	T_J	-	-55 to +150	$^\circ\text{C}$	
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$	
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.40	$^\circ\text{C/W}$	
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.15	$^\circ\text{C/W}$	
Mounting Torque	T_M	Non-lubricated threads	Mounting Torque Base	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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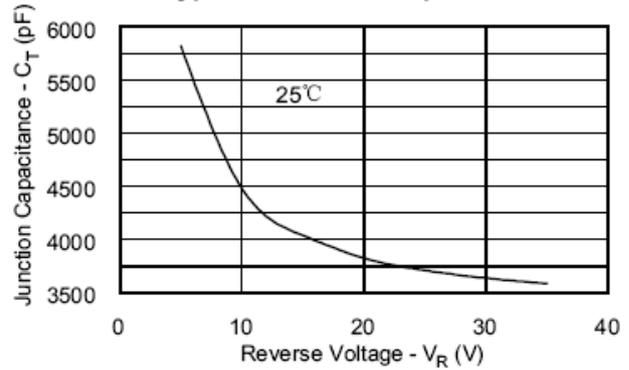
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance





122NQ030/R-1

Technical Data
Data Sheet N1017, Rev. A

Green Products

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