Technical Data *Green Products*
Data Sheet N1017, Rev. A

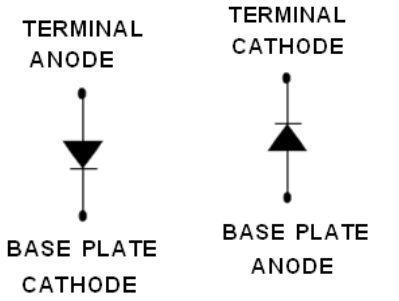
122NQ030/R-1 SCHOTTKY RECTIFIER

Applications:

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

Features:

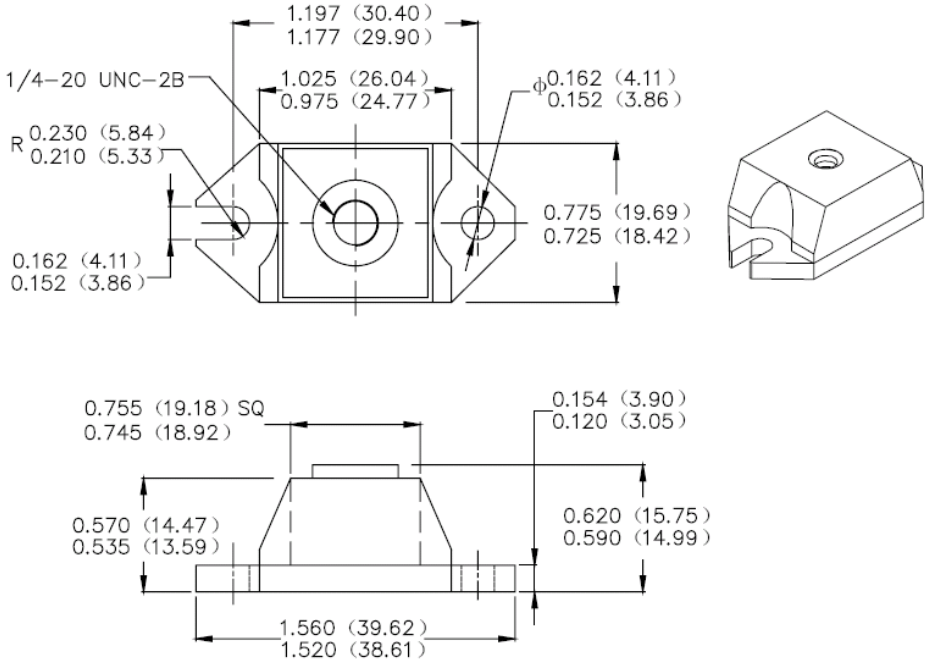
- **150℃ T_J operation**
- **Unique high power, Half-Pak module**
- **Replaces three parallel DO-5'S**
- **Easier to mount and lower profile than DO-5'S**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **Low forward voltage drop**
- **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**



122NQ030-1 **122NQ030R-1**

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

Mechanical Dimensions: In Inches / mm



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

122NQ030/R-1

Technical Data
Data Sheet N1017, Rev. A

Green Products

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°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:

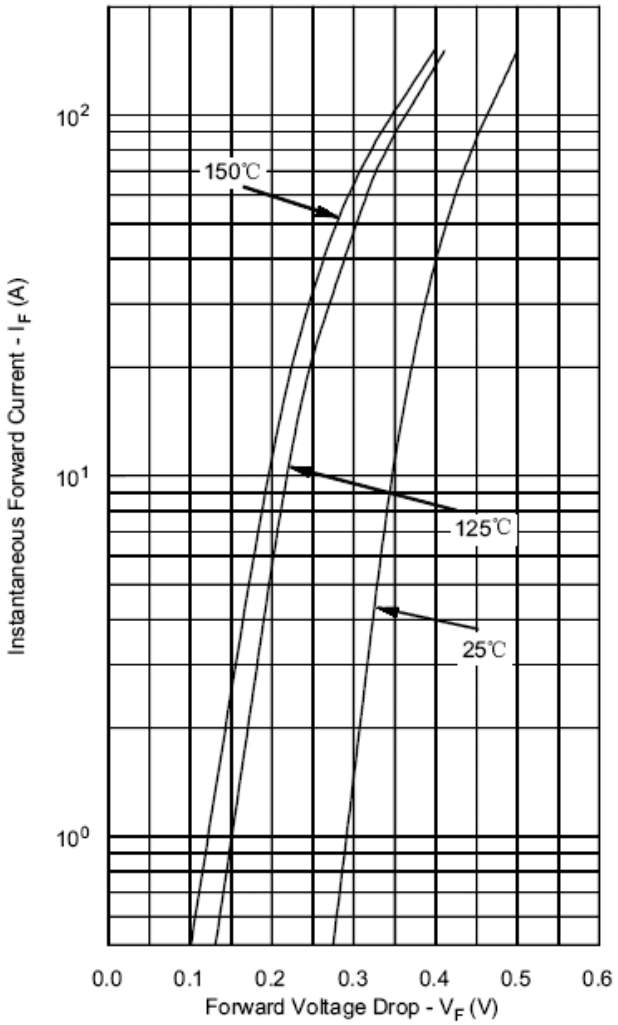
Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop(per leg) *	V_{F1}	@ 120A, Pulse, T_J = 25 °C @ 240A, Pulse, T_J = 25 °C	0.49 0.59	V
	V_{F2}	@ 120A, Pulse, T_J = 125 °C @ 240A, Pulse, T_J = 125 °C	0.41 0.54	V
Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	10	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	560	mA
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	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 < 300μs, Duty Cycle <2%

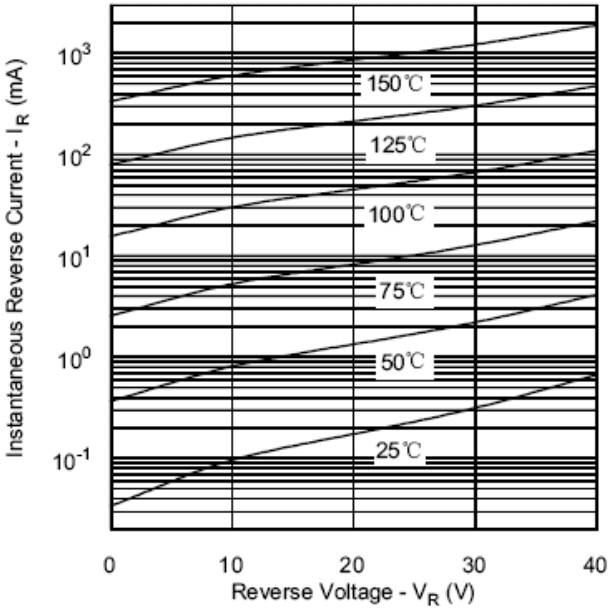
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification		Units
Junction Temperature	T_J	-	-55 to +150		°C
Storage Temperature	T_{stg}	-	-55 to +150		°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.40		°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 Base	23(min) 29(max)	Kg-cm
			Terminal Torque	35(min) 46(max)	
Approximate Weight	wt	-	25.6		g
Case Style	PRM1-1				

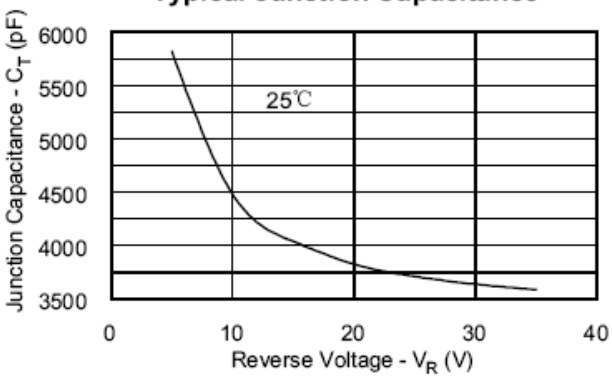
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Technical Data
Data Sheet N1017, Rev. A

Green Products