

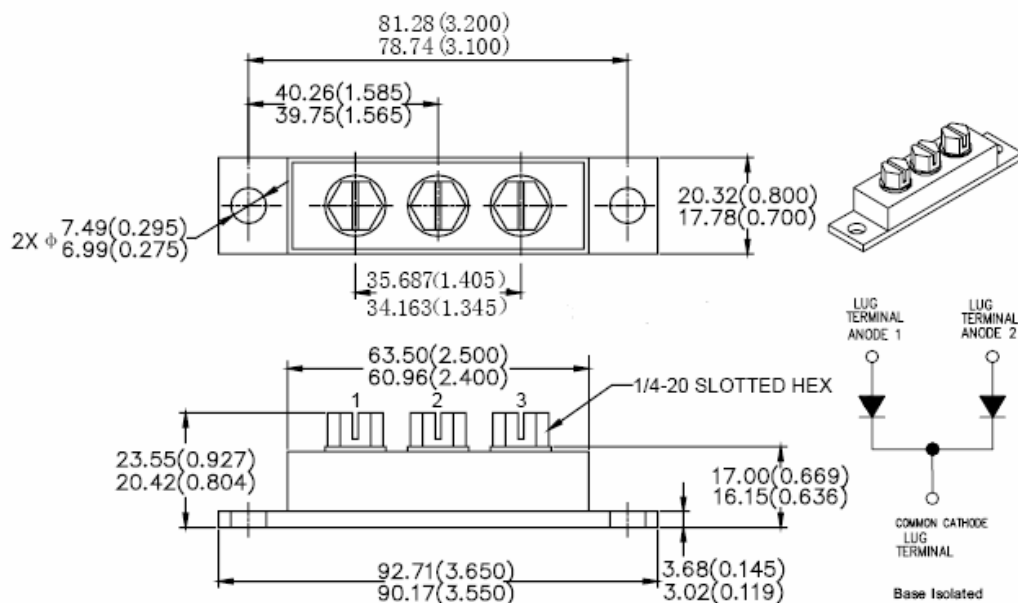
322CMQ030 SCHOTTKY RECTIFIER

Applications:

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

Features:

- 150°C T_J operation
- Center tap module
- 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 mm/Inches


Please Note: Anode 1 = Terminal 1; Anode 2 = Terminal 3; Common Cathode = Terminal 2
 Suffix R Denotes for Reversed Polarity.

PRM4 (Isolated)
MARKING, MOLDING RESIN

Marking for 322CMQ030, 1st row SS YYWWL, 2nd row 322CMQ030

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}	-	30	V	
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=100^{\circ}C$, rectangular wave form	150	per leg	A
			300	per device	
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	1800	A	
Non-Repetitive Avalanche Energy(per leg)	E_{AS}	$T_J=25^{\circ}C, I_{AS}=1A, L=30mH$	270	mJ	
Repetitive Avalanche Current(per leg)	I_{AR}	Current decaying linearly to zero in 1 μ sec Frequency limited by T_J max. $V_A=1.5 \times V_R$ typical	60	A	

Electrical Characteristics:

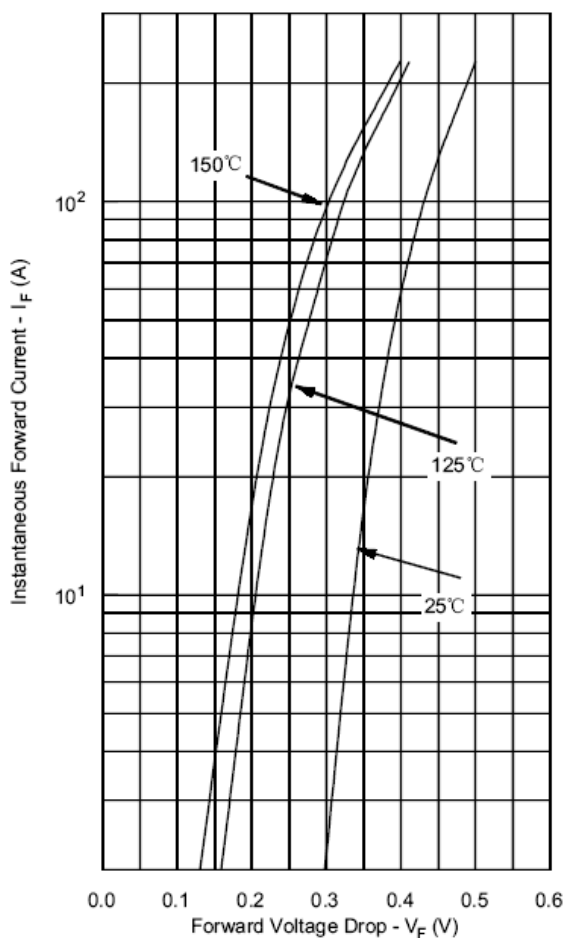
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 150A, Pulse, $T_J = 25^{\circ}C$	0.56	V
		@ 300A, Pulse, $T_J = 25^{\circ}C$	0.70	
Max. Reverse Current (per leg) *	I_{R1}	@ $V_R =$ rated V_R $T_J = 25^{\circ}C$	10	mA
		@ $V_R =$ rated V_R $T_J = 125^{\circ}C$	650	
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5V, T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$	11000	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ μ s

* Pulse Width < 300 μ s, Duty Cycle <2%

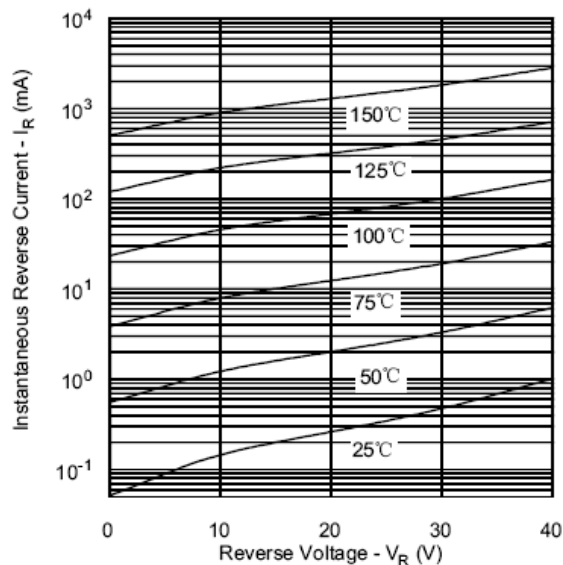
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units	
Max. Junction Temperature	T_J	-	-55 to +150	$^{\circ}C$	
Max. Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}C$	
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.50	$^{\circ}C/W$	
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.25	$^{\circ}C/W$	
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.10	$^{\circ}C/W$	
Mounting Torque	T_M	-	Mounting Torque	24(min) 35(max)	Kg-cm
			Terminal Torque	35(min) 46(max)	
Approximate Weight	wt	-	79	g	
Case Style	PRM4 Isolated				

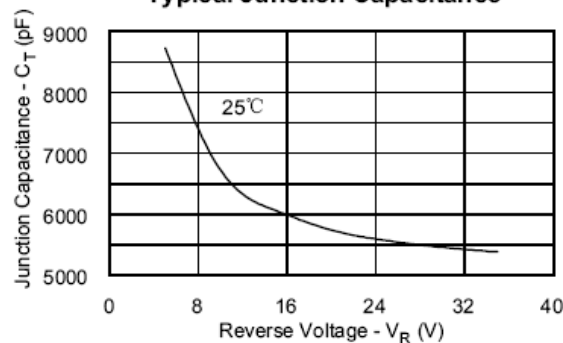
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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