Technical Data
Data Sheet N0990, Rev. E

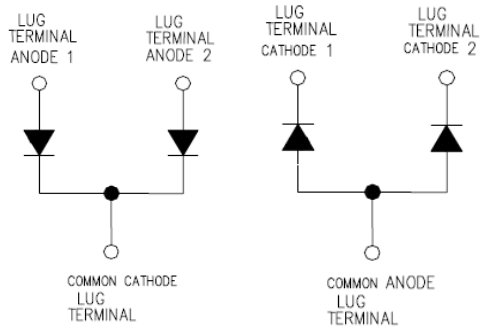
403CMQ SERIES SCHOTTKY RECTIFIER

Applications:

- **High current switching power supply ● Plating power supply ● Free-Wheeling diodes**
- **Reverse battery protection ● Converters ● UPS System ● Welding**

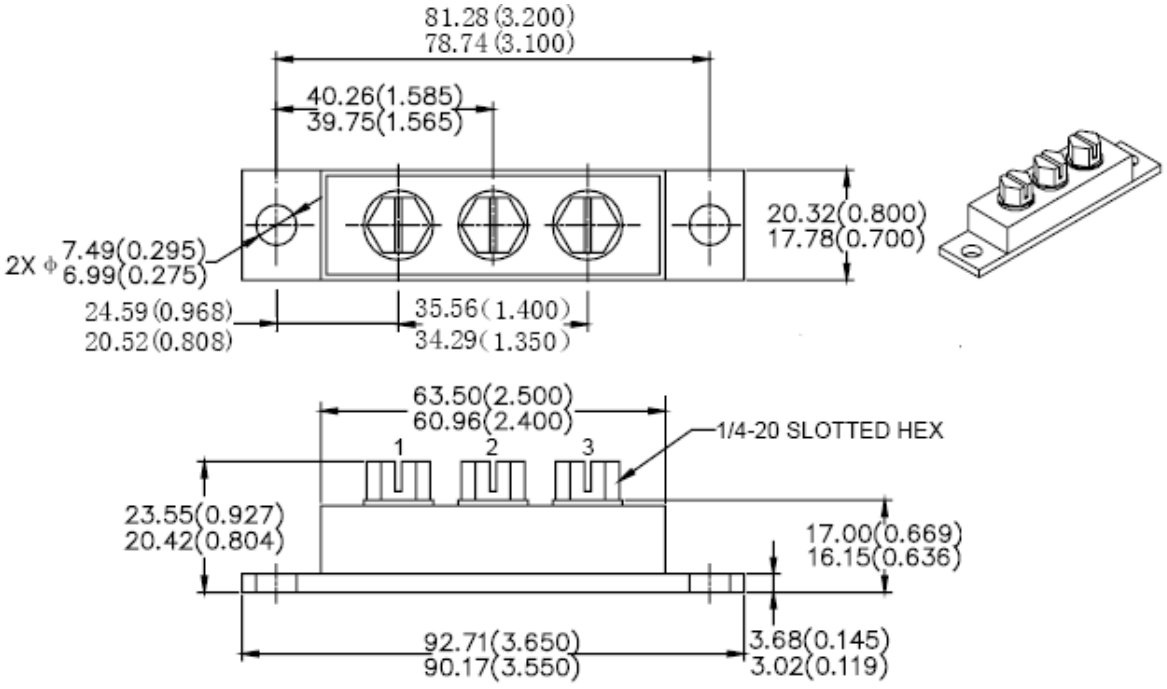
Features:

- **175 ℃ 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**
- **Product contain Pb**
- **All SMC parts are traceable to the wafer lot**
- **Additional testing can be offered upon request**



403CMQ080 **403CMQ080R**

Mechanical Dimensions: In mm/Inches



Please Note: Suffix “R” Denotes For Reversed Polarity

PRM4 (Isolated)

MARKING, MOLDING RESIN
Marking for 403CMQ080/R, 1st row SS YYWWL, 2nd row 403CMQ080/403CMQ080R
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

Technical Data
Data Sheet N0990, Rev. E

Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	80	403CMQ080/R	V
			100	403CMQ100/R	
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C =85°C, rectangular wave form	200	per leg	A
			400	per device	
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	3960		A
Non-Repetitive Avalanche Energy(peg leg)	E_{AS}	T_J=25℃,I_{AS}=1A,L=30mH	15		mJ
Repetitive Avalanche Current(peg leg)	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

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg) *	V_{F1}	@ 200A, Pulse, T_J = 25 °C @ 400A, Pulse, T_J = 25 °C	0.83 0.97	V
	V_{F2}	@ 200A, Pulse, T_J = 125 °C @ 400A, Pulse, T_J = 125 °C	0.69 0.82	V
Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	6	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	140	mA
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	5500	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

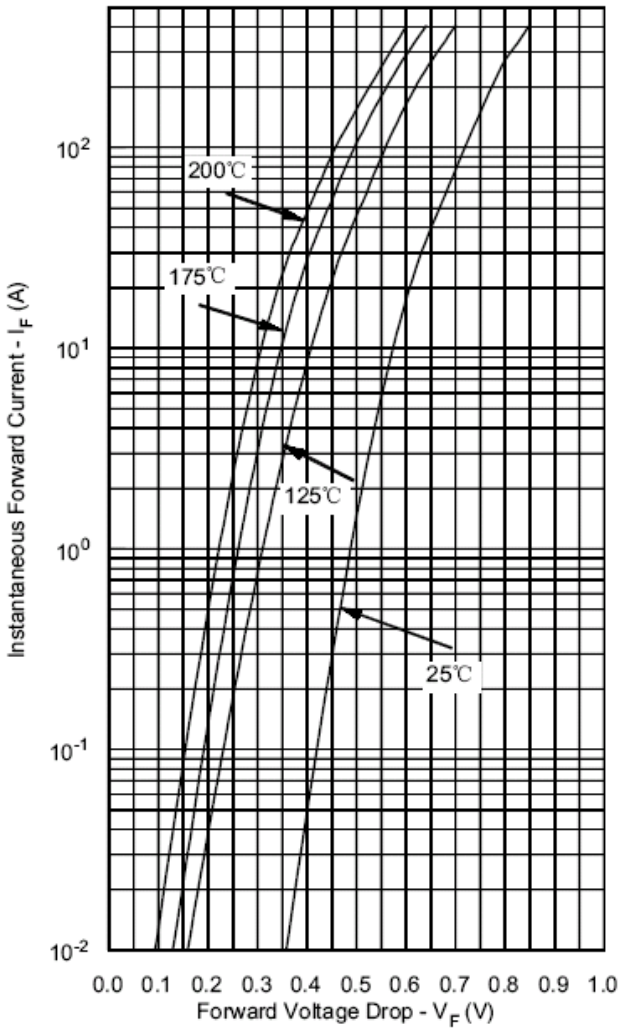
* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

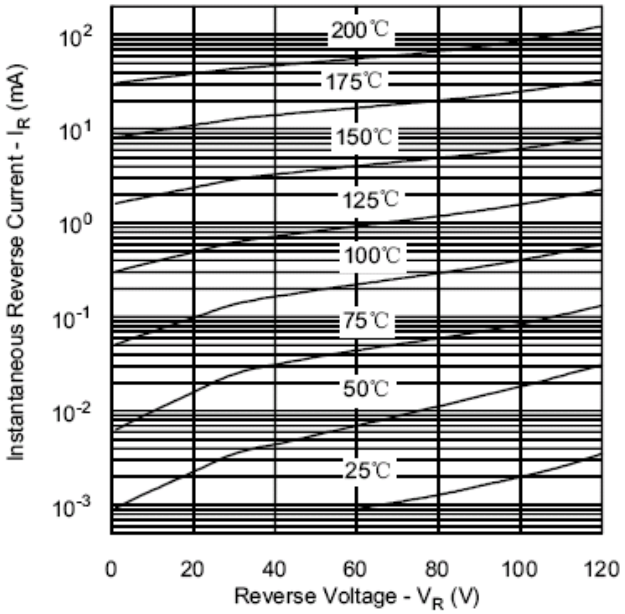
Characteristics	Symbol	Condition	Specification		Units
Junction Temperature	T_J	-	-55 to +175		°C
Storage Temperature	T_{stg}	-	-55 to +175		°C
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.40		°C/W
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.20		°C/W
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.10		°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				

Technical Data
Data Sheet N0990, Rev. E

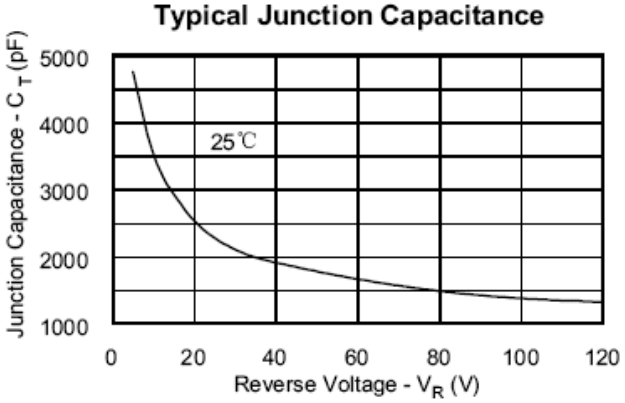
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



403CMQ SERIES

Technical Data
Data Sheet N0990, Rev. E

• Weiqi Street, Airport Development Zone, Jiangning District, Nanjing, China 211113 (86) 25-87123907 •
• FAX (86) 25-87123900 • World Wide Web Site - http://www.sangdest.com.cn • E-Mail Address - sales@ sangdest.com.cn •