

201CMQ035/201CMQ040/201CMQ045 SCHOTTKY RECTIFIER

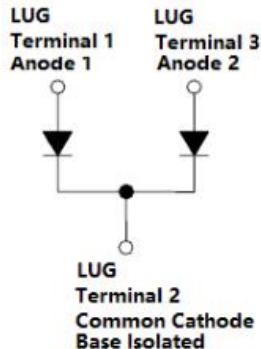


PRM4 (Isolated)

Features

- 175°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
- Baseplate: Nickel plated; Terminals: Nickel plated
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

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

Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	35	201CMQ035	V
Working Peak Reverse Voltage	V_{RWM}		40	201CMQ040	
DC Blocking Voltage	V_R		45	201CMQ045	
Average Rectified Forward Current		50% duty cycle @ $T_c = 121^\circ\text{C}$, rectangular wave form	100(Per Leg)		A
			200(Per Device)		
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	I_{FSM}	8.3 ms, half Sine pulse	3840		A
Non-Repetitive Avalanche Energy(Peg Leg)	E_{AS}	$T_J=25^\circ\text{C}$, $I_{AS}=20\text{A}$, $L=0.67\text{mH}$	135		mJ
Repetitive Avalanche Current (Peg Leg)	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. $V_A=1.5 \times V_R$ typical	20		A

Electrical Characteristics:

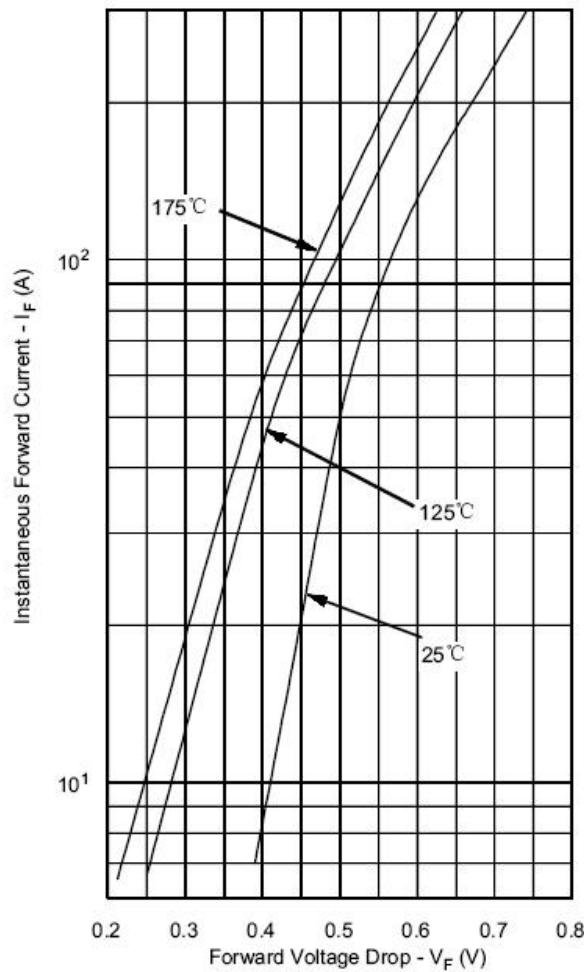
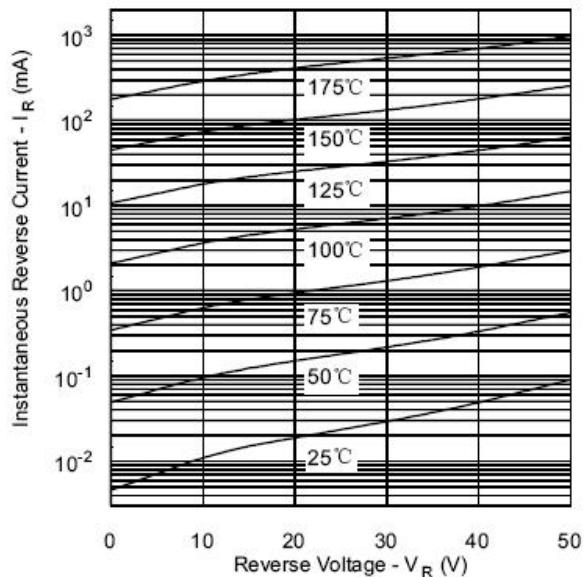
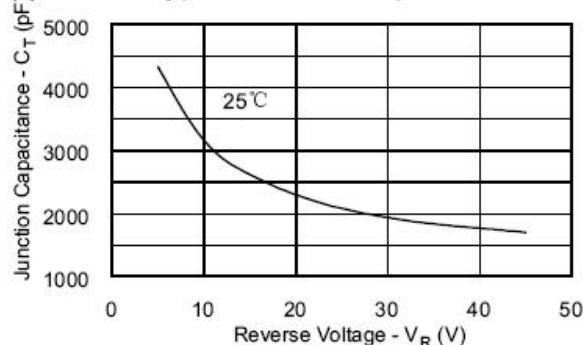
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 100A, Pulse, T _J = 25 °C @ 200A, Pulse, T _J = 25 °C	0.56 0.67	0.67 0.81	V
	V _{F2}	@ 100A, Pulse, T _J = 125 °C @ 200A, Pulse, T _J = 125 °C	0.50 0.60	0.58 0.71	V
Reverse Current(Per Leg)*	I _{R1}	@ V _R = rated V _R , T _J = 25 °C	0.06	10	mA
	I _{R2}	@ V _R = rated V _R , T _J = 125 °C	6	90	mA
Junction Capacitance(Per leg)	C _T	@ V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	4400	5200	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

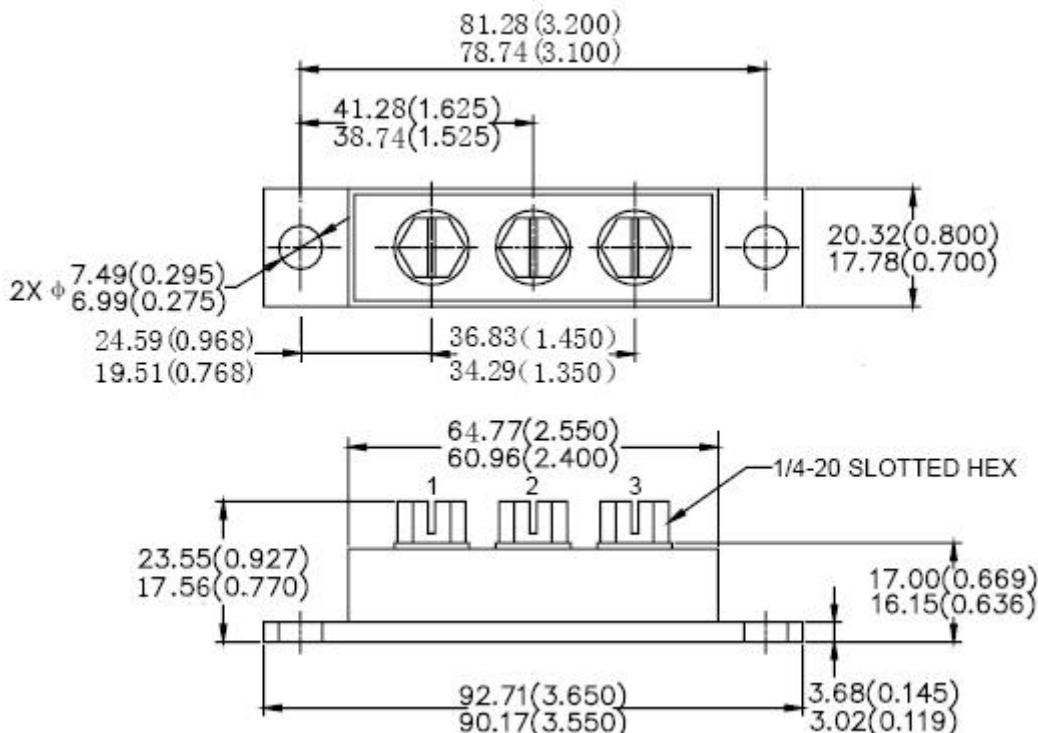
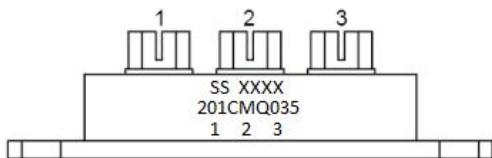
* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification		Units
Junction Temperature	T _J	-	-55 to +175		°C
Storage Temperature	T _{stg}	-	-55 to +175		°C
Typical Thermal Resistance Junction to Case(Per leg)	R _{θJC}	DC operation	0.70		°C/W
Typical Thermal Resistance Junction to Case(Per package)	R _{θJC}	DC operation	0.35		°C/W
Typical Thermal Resistance, case to Heat Sink	R _{θcs}	Mounting surface, smooth and greased	0.10		°C/W
Mounting Torque	TM	-	Mounting Torque	24(min) 35(max)	Kg-cm
			Terminal Torque	35(min) 46(max)	
Approximate Weight	wt	-	79		g
Case Style	PRM4 Isolated				

Ratings and Characteristics Curves

Typical Forward Characteristics

Typical Reverse Characteristics

Typical Junction Capacitance


Mechanical Dimensions PRM4 Isolated(Millimeters/Inches)

Marking Diagram


Where XXXX is YYWW

201CMQ035	= Part name
SS	= SS
YY	= Year
WW	= Week

Cautions: Molding resin
 Epoxy resin UL:94V-0

Ordering Information

Device	Package	Shipping
201CMQ SERIES	PRM4 Isolated (Pb-Free)	9 pcs/box

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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