





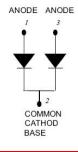
224CNQ035/224CNQ040/224CNQ045 SCHOTTKY RECTIFIER



Features

- 125°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	220CMQ035	
Working Peak Reverse Voltage	V_{RWM}		40	220CMQ040	V
DC Blocking Voltage	VR		45	220CMQ045	
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _C =81°C,	110(Per Leg)		A
		rectangular wave form	220(Per Device)		
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	I _{FSM}	8.3 ms, half Sine pulse	2880		Α
Non-Repetitive Avalanche Energy(Peg Leg)	E _{AS}	T _J =25℃,I _{AS} =20A,L=0.67mH	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×V _R typical	20		А

- China Germany Korea Singapore United States
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Electrical Characteristics:

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 110A, Pulse, T _J = 25 °C @ 220A, Pulse, T _J = 25 °C	0.48 -	0.52 0.68	V
	V _{F2}	@ 110A, Pulse, T _J = 125 °C @ 220A, Pulse, T _J = 125 °C	0.42 -	0.50 0.68	٧
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	2	10	mA
	I _{R2}	$@V_R = rated V_{R, T_J} = 125 °C$	1500	2000	mA
Junction Capacitance(Per leg)	Ст	$@V_R = 5V, T_C = 25 °C$ $f_{SIG} = 1MHz$	4300	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	Specific	Units	
Junction Temperature	TJ	-	-55 to +125		°C
Storage Temperature	T _{stg}	-	-55 to +125		°C
Typical Thermal Resistance Junction to Case(Per leg)	$R_{ heta JC}$	DC operation	0.50		°C/W
Typical Thermal Resistance Junction to Case(Per package)	$R_{ heta JC}$	DC operation	0.25		°C/W
Typical Thermal Resistance, case to Heat Sink	$R_{ heta cs}$	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 Non-Isolated				

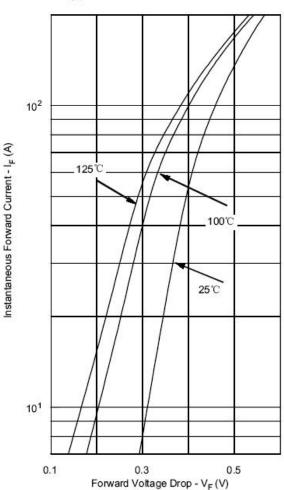




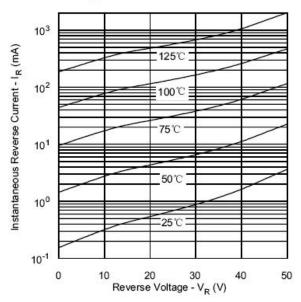


Ratings and Characteristics Curves

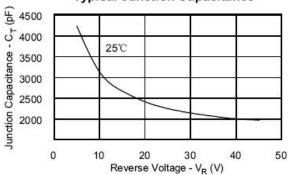
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



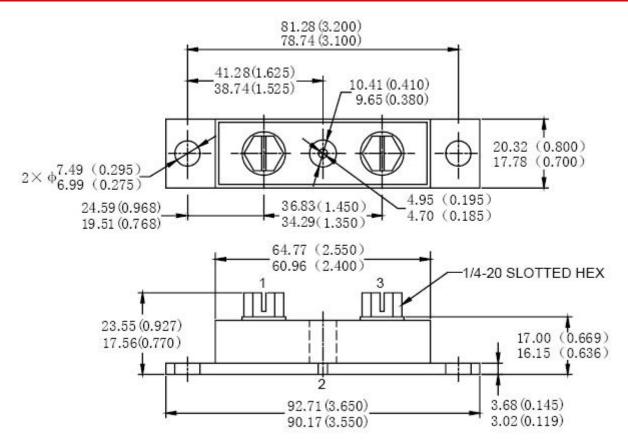
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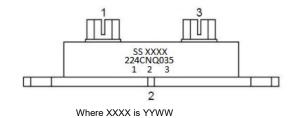




Mechanical Dimensions PRM4 Non-Isolated(Millimeters/Inches)



Marking Diagram



224CNQ035 = Part name SS = SS YY = Year WW = Week

Cautions: Molding resin

Epoxy resin UL:94V-0

Ordering Information

Device Package		Shipping	
224CNQ SERIES	PRM4(Non- 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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