

408CNQ060

Technical Data Data Sheet N1230, Rev. B **Green Products** 

# 408CNQ060 SCHOTTKY RECTIFIER

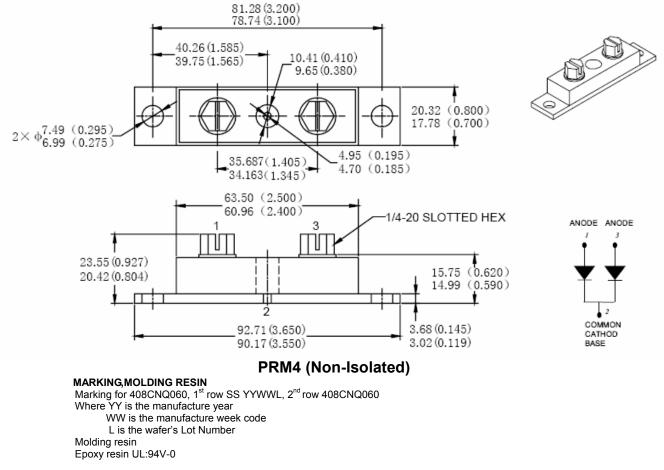
#### **Applications:**

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

#### Features:

- 150 ℃ T<sub>J</sub> 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



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### SANGDEST **MICROELECTRONICS**

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#### Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V <sub>RWM</sub>	-	60		V
Max. Average Forward	I <sub>F(AV)</sub>	50% duty cycle $@T_c = 109^{\circ}C$ ,	200per leg400per device		А
Current		rectangular wave form			
Max. Peak One Cycle Non- Repetitive Surge Current (per leg)	I <sub>FSM</sub>	8.3 ms, half Sine pulse	3960		A
Non-Repetitive Avalanche Energy(peg leg)	E <sub>AS</sub>	T <sub>J</sub> =25℃,I <sub>AS</sub> =1A,L=30mH	15		mJ
Repetitive Avalanche Current(peg leg)	I <sub>AR</sub>	Current decaying linearly to zero in 1 $\mu$ sec Frequency limited by T <sub>J</sub> max. V <sub>A</sub> =1.5× V <sub>R</sub> typical		1	A

### **Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 200A, Pulse, T <sub>J</sub> = 25 °C @ 400A, Pulse, T <sub>J</sub> = 25 °C	0.68 0.83	V
	$V_{F2}$	@ 200A, Pulse, T <sub>J</sub> = 125 °C @ 400A, Pulse, T <sub>J</sub> = 125 °C	0.59 0.76	V
Max. Reverse Current (per	I <sub>R1</sub>	$@V_R$ = rated V <sub>R</sub> T <sub>J</sub> = 25 °C	2.2	mA
leg) *	I <sub>R2</sub>	$@V_R$ = rated V <sub>R</sub> T <sub>J</sub> = 125 °C	600	mA
Max. Junction Capacitance (per leg)	C <sub>T</sub>	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C f <sub>SIG</sub> = 1MHz	11000	pF
Typical Series Inductance (per leg)	L <sub>S</sub>	Measured lead to lead 5 mm from package body	5.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/μs
Insulation Voltage	V <sub>RMS</sub>	-	1000	V

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

#### **Thermal-Mechanical Specifications:**

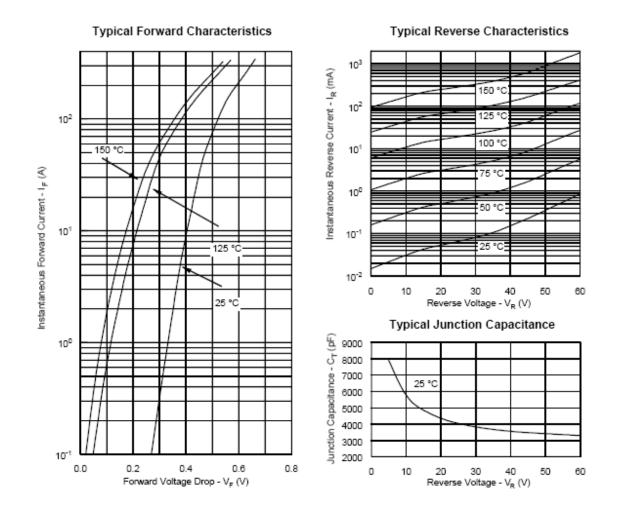
Characteristics	Symbol	Condition	Specifi	Units			
Max. Junction Temperature	TJ	-	-55 to	°C			
Max. Storage Temperature	T <sub>stg</sub>	-	-55 to	°C			
Maximum Thermal Resistance Junction to Case (per leg)	R <sub>θJC</sub>	DC operation	0.20		°C/W		
Maximum Thermal Resistance Junction to Case (per package)	$R_{ ext{ heta}JC}$	DC operation	0.10		°C/W		
Typical Thermal Resistance, case to Heat Sink	$R_{ hetacs}$	Mounting surface, smooth and greased	0.10		°C/W		
Mounting Torque	Тм	-	Mounting Torque Terminal Torque	24(min) 35(max) 35(min) 46(max)	Kg-cm		
Approximate Weight	wt	-	79	g			
Case Style	PRM4 Non-Isolated						

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