

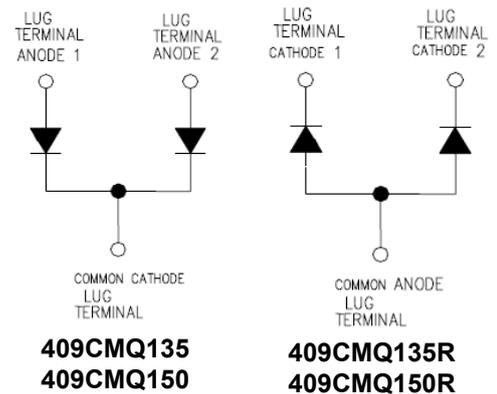
**409CMQ135/150 409CMQ135R/150R**  
**SCHOTTKY RECTIFIER**

**Applications:**

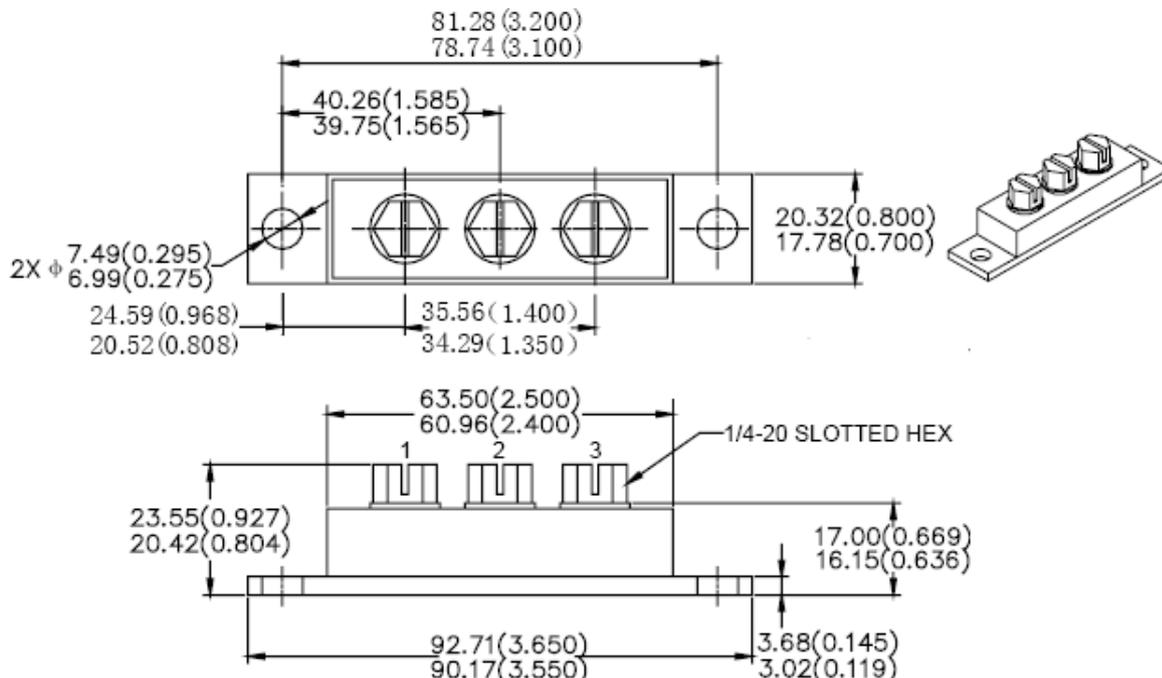
- High current switching power supply • Plating power supply • Free-Wheeling diodes
- Reverse battery protection • Converters • UPS System • Welding

**Features:**

- 175 °C 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**



Please Note: Suffix "R" Denotes For Reversed Polarity

**PRM4 (Isolated)**

**MARKING, MOLDING RESIN**

Marking for 409CMQ135/R 409CMQ150/R, 1<sup>st</sup> row SS YYWWL, 2<sup>nd</sup> row 409CMQ135/409CMQ135R 409CMQ150/409CMQ150R  
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

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •



**409CMQ135/150**  
**409CMQ135R/150R**

**Technical Data**  
**Data Sheet N0991, Rev. E**  
**Maximum Ratings:**

**Green Products**

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$	-	135	409CMQ135/R
Working Peak Reverse Voltage	$V_{RWM}$	-	150	409CMQ150/R
DC Blocking Voltage	$V_R$	-	-	-
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=105^{\circ}C$ , rectangular wave form	200 400	per leg per device
Peak One Cycle Non-Repetitive Surge Current(per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	2760	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg) *	$V_{F1}$	@ 200A, Pulse, $T_J = 25^{\circ}C$	1.03	V
		@ 400A, Pulse, $T_J = 25^{\circ}C$	1.21	V
Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ , $T_J = 25^{\circ}C$	6	mA
		@ $V_R = \text{rated } V_R$ , $T_J = 125^{\circ}C$	85	mA
Junction Capacitance (per leg)	$C_T$	@ $V_R = 5V$ , $T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$	6000	pF
Typical Series Inductance (per leg)	$L_S$	Measured lead to lead 5 mm from package body	5.0	nH
Isolation Voltage	$V_{ISO}$	Tracer to 1500V, measuring whether conducting base plate and the center column	1500	V
Voltage Rate of Change	dv/dt	-	10,000	V/ $\mu s$

\* Pulse Width < 300 $\mu s$ , Duty Cycle <2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^{\circ}C$
Storage Temperature	$T_{stg}$	-	-55 to +150	$^{\circ}C$
Typical Thermal Resistance Junction to Case(per leg)	$R_{\theta JC}$	DC operation	0.40	$^{\circ}C/W$
Typical Thermal Resistance Junction to Case(per package)	$R_{\theta JC}$	DC operation	0.20	$^{\circ}C/W$
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 Base	24(min) 35(max)
			Terminal Torque	35(min) 46(max)
Approximate Weight	wt	-	79	g
Case Style	PRM4 Isolated			

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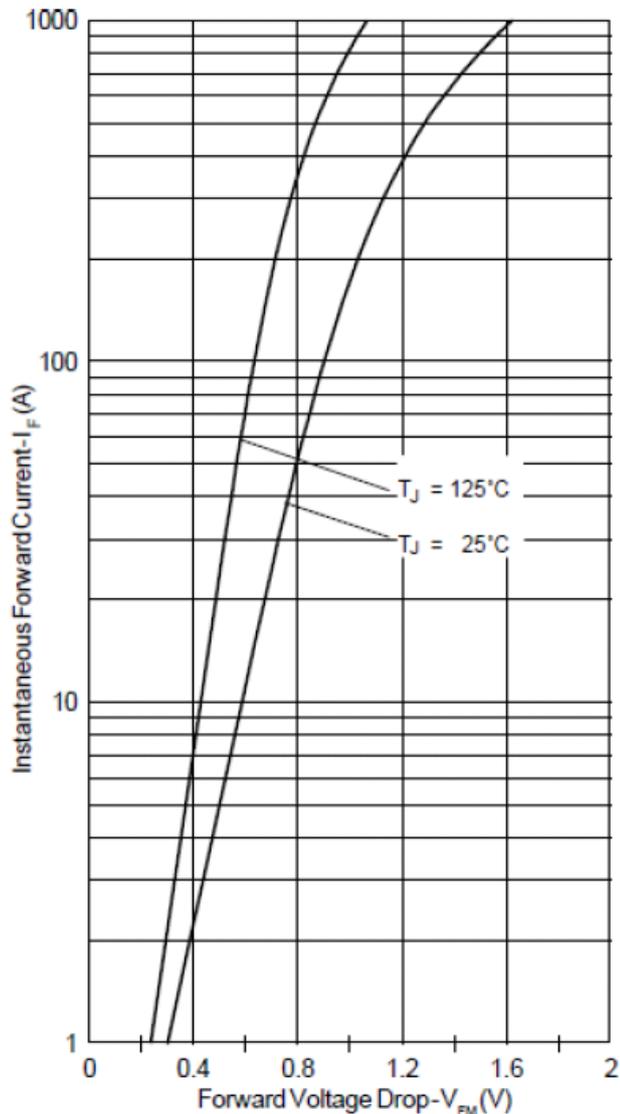


Fig. 1 - Max. Forward Voltage Drop Characteristics

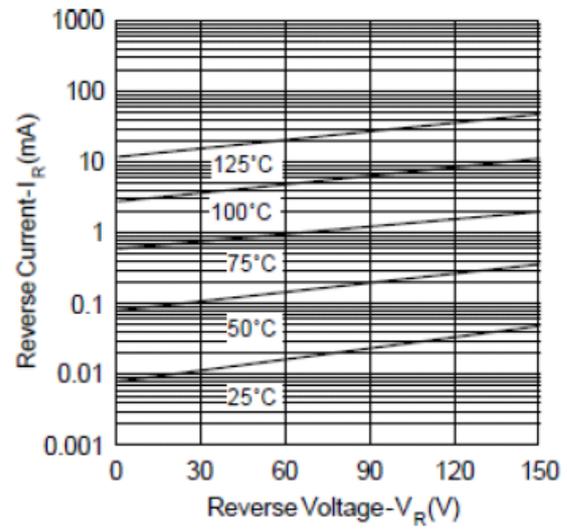


Fig.2-Typical Reverse Characteristics

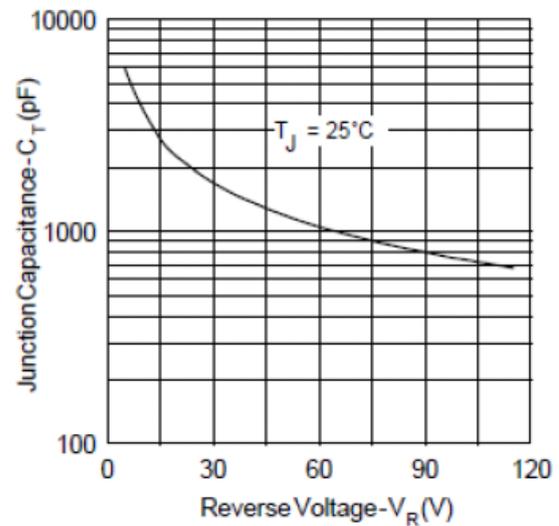


Fig.3 - Typical Junction Capacitance Vs. Reverse Voltage



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**Data Sheet N0991, Rev. E**

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