

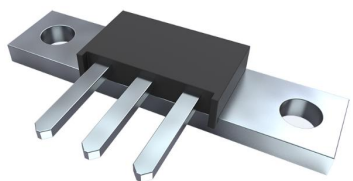
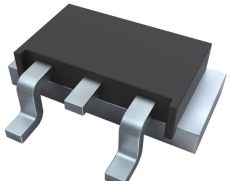
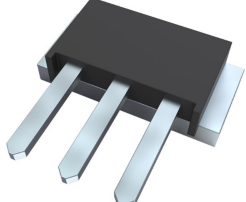
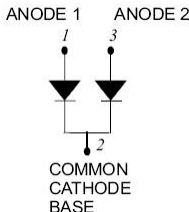
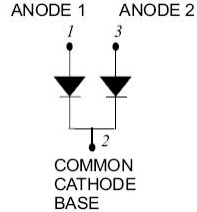
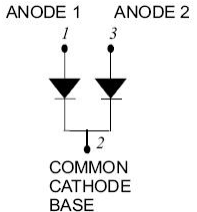
89CNQ135/89CNQ150 SCHOTTKY RECTIFIER

Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features

- 175°C T_J operation
- Ultra low reverse leakage current
- Soft reverse recovery at low and high temperature
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capacity
- Guard ring for enhanced ruggedness and long term reliability
- Guaranteed reverse avalanche characteristics
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional electrical and life testing can be performed upon request

89CNQ...	89CNQ...SL	89CNQ...SM
		
		
PRM2	PRM2-SL	PRM2-SM

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	135(89CNQ135) 150(89CNQ150)	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current	$I_F (AV)$	50% duty cycle @T _C =132°C, rectangular wave form	40(Per Leg) 80(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per leg)	I_{FSM}	8.3 ms, half Sine pulse	708	A

Electrical Characteristics:

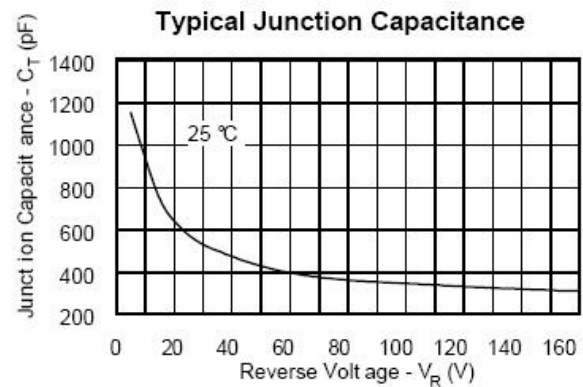
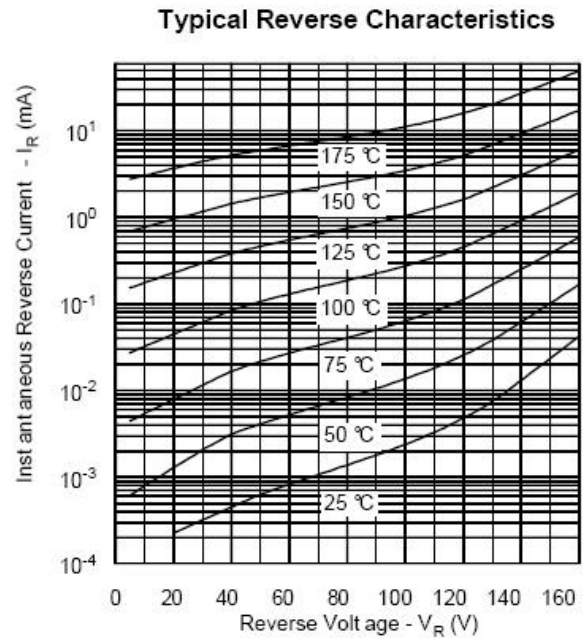
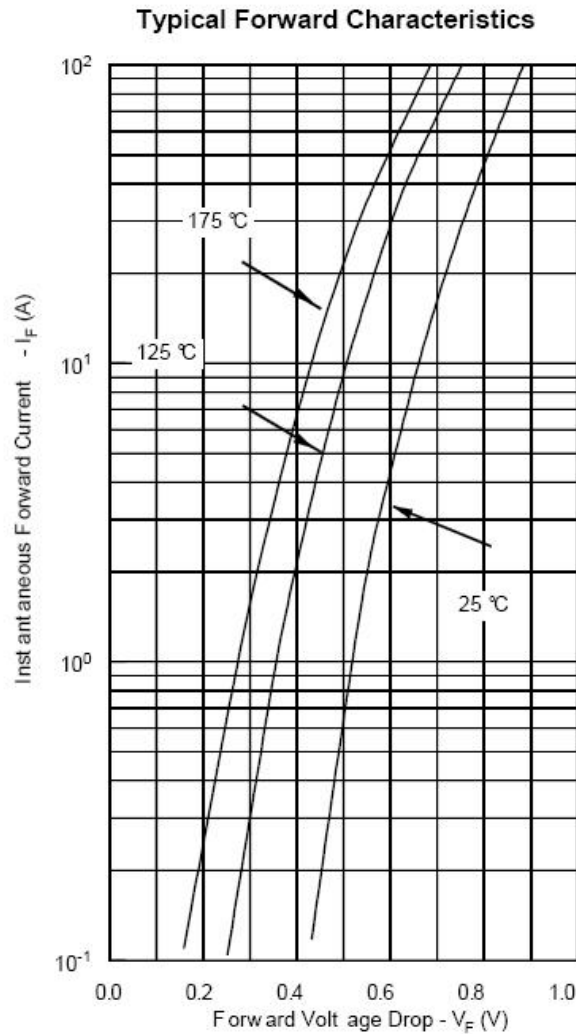
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per leg) *	V _{F1}	@ 40A, Pulse, T _J = 25 °C	0.82	0.99	V
		@ 80A, Pulse, T _J = 25 °C	0.88	1.14	
	V _{F2}	@ 40A, Pulse, T _J = 125 °C	0.62	0.69	V
		@ 80A, Pulse, T _J = 125 °C	0.72	0.78	
Reverse Current (Per leg) *	I _{R1}	@V _R = rated VR T _J = 25 °C	0.02	1.5	mA
	I _{R2}	@V _R = rated VR T _J = 125 °C	4	21	mA
Junction Capacitance (Per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz, VSIG=50mV(p-p)	1200	1400	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

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

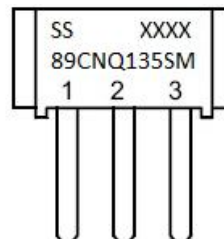
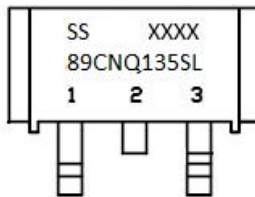
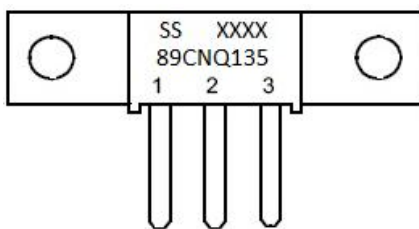
Thermal-Mechanical Specifications:

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	0.85	°C/W
Typical Thermal Resistance Junction to Case (per package)	R _{θJC}	DC operation	0.42	°C/W
Typical Thermal Resistance, case to Heat Sink	R _{θcs}	Mounting surface, smooth and greased	0.30	°C/W
Mounting Torque	T _M	-	40(min)	Kg-cm
			58(max)	
Approximate Weight	wt	-	7.8	g
Case Style	PRM2 PRM2-SL PRM2-SM			

Ratings and Characteristics Curves



Marking Diagram



Where XXXX is YYWW

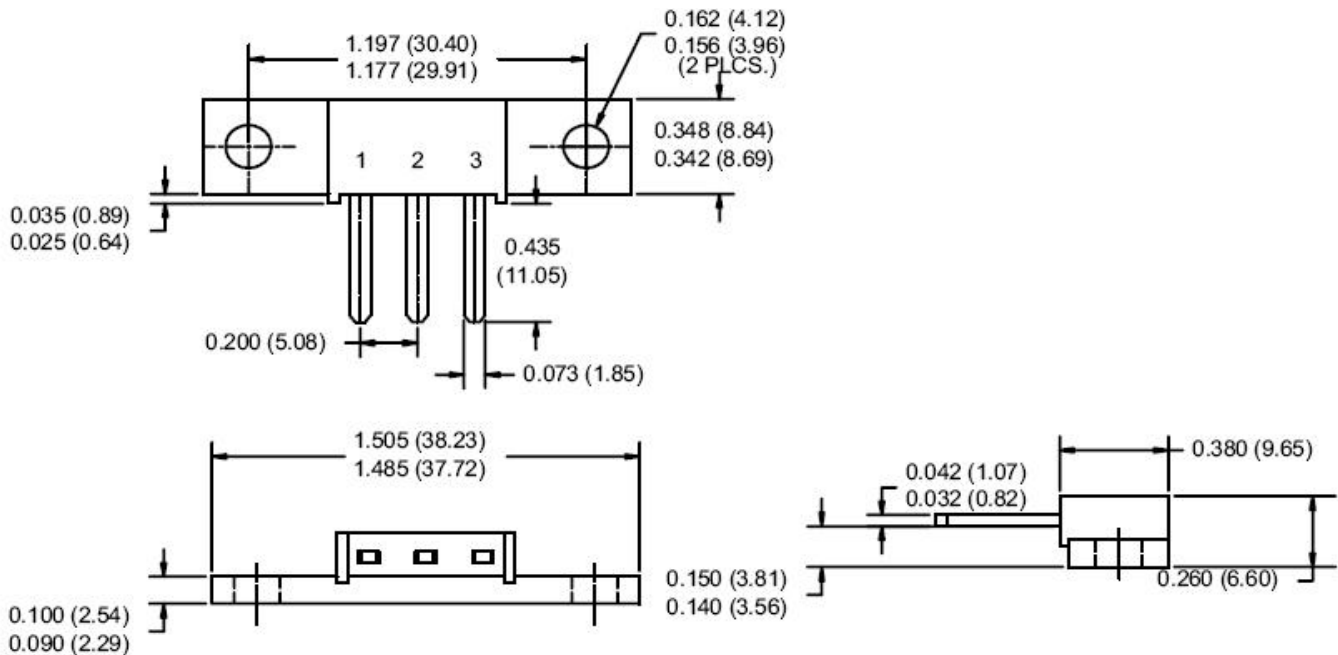
1st row SS YYWWL
2nd row 89CNQ135/SL/SM
3rd row 1 2 3 (pin)
SS = SS
YY = Year
WW = Week

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

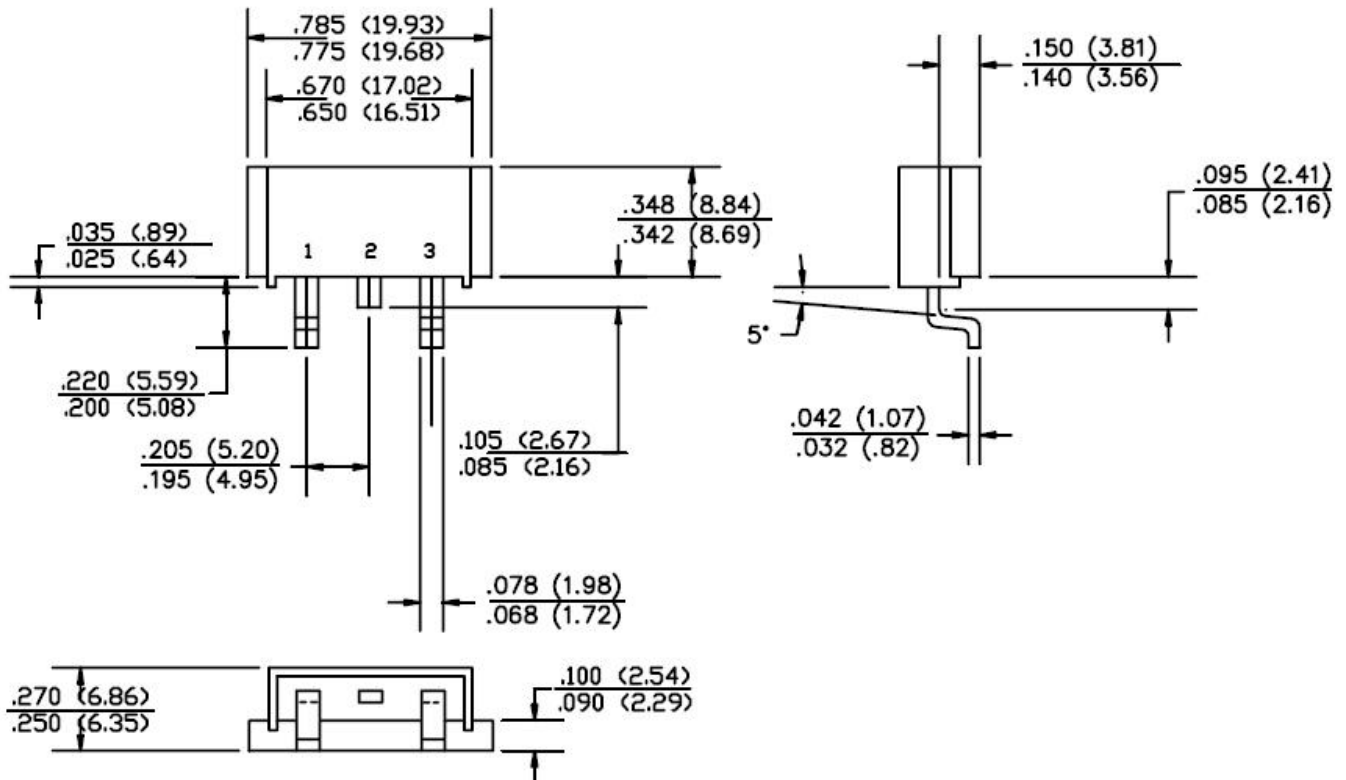
Ordering Information

Device	Package	Terminals finish	Shipping
89CNQ135	PRM2	Nickel plated	48pcs / box
89CNQ135S	PRM2	Pure Sn dipped (dipped height 6-8 mm)	48pcs / box
89CNQ135SL	PRM2-SL	Pure Sn plated	100pcs / box
89CNQ135SM	PRM2-SM	Nickel plated	48pcs / box
89CNQ135SMS	PRM2-SM	Pure Sn dipped (dipped height 6-8 mm)	48pcs / box
89CNQ150	PRM2	Nickel plated	48pcs / box
89CNQ150S	PRM2	Pure Sn dipped (dipped height 6-8 mm)	48pcs / box
89CNQ150SL	PRM2-SL	Pure Sn plated	100pcs / box
89CNQ150SM	PRM2-SM	Nickel plated	48pcs / box
89CNQ150SMS	PRM2-SM	Pure Sn dipped (dipped height 6-8 mm)	48pcs / box

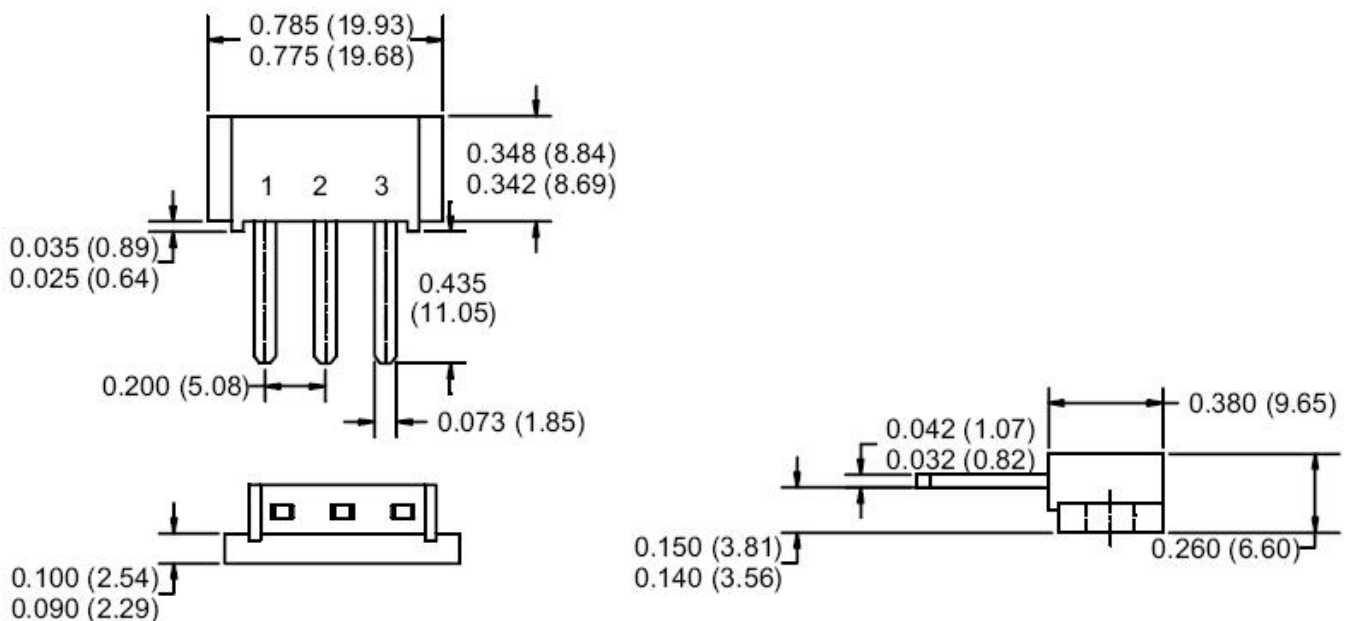
Mechanical Dimensions PRM2 (Inches/Millimeters)



Mechanical Dimensions PRM2-SL (Inches/Millimeters)



Mechanical Dimensions PRM2-SM (Inches/Millimeters)





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