

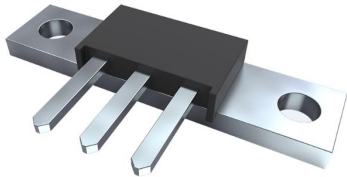

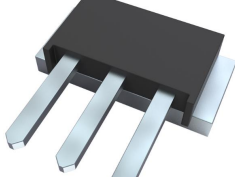
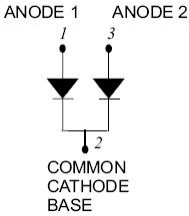
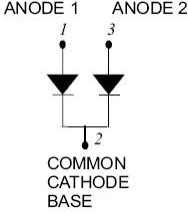
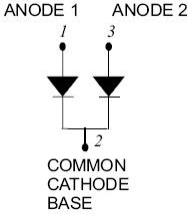
86CNQ200 SCHOTTKY RECTIFIER

Applications

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

Features

- 175°C T_J operation
- Center tap module
- Very Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Low profile, high current package
- 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

86CNQ200	86CNQ200SL	86CNQ200SM
		
		
PRM2	PRM2-SL	PRM2-SM

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	200	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current	$I_F (AV)$	50% duty cycle @T _C = 130°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	150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per leg) *	V _{F1}	@ 40A, Pulse, T _J = 25 °C @ 80A, Pulse, T _J = 25 °C	0.83 -	0.99 1.14	V
	V _{F2}	@ 40A, Pulse, T _J = 125 °C @ 80A, Pulse, T _J = 125 °C	0.68 -	0.69 0.78	V
Reverse Current (Per leg) *	I _{R1}	@V _R = rated VR T _J = 25 °C	0.0002	1.1	mA
	I _{R2}	@V _R = rated VR T _J = 125 °C	0.3	24	mA
Junction Capacitance (Per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	750	900	pF

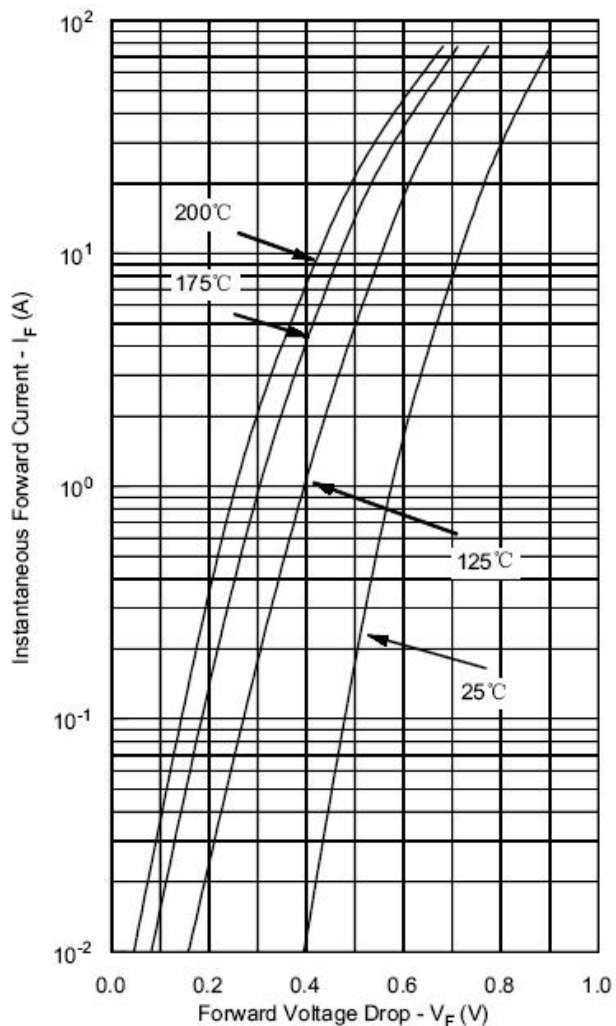
* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

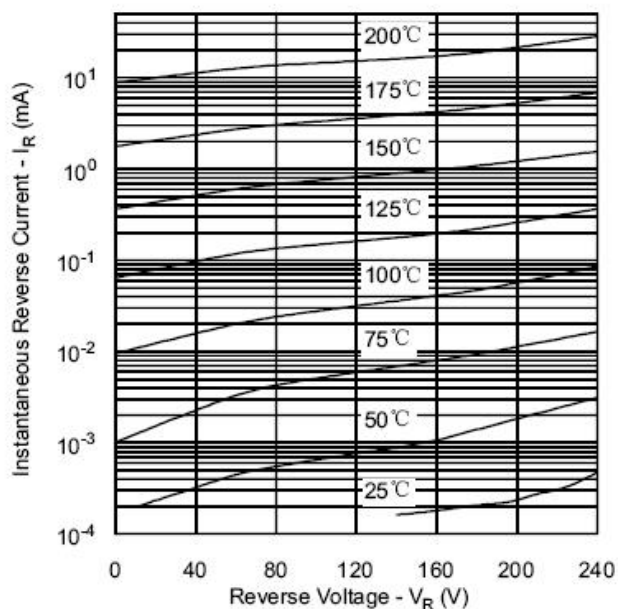
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-55 to +175	°C
Storage Temperature	T _{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case (per leg)	R _{θJC}	DC operation	0.85	°C/W
Typical Thermal Resistance Junction to Case (per package)	R _{θJC}	DC operation	0.42	°C/W
Typical Thermal Resistance, case to Heat Sink	R _{θcs}	Mounting surface, smooth and greased	0.30	°C/W
Mounting Torque	TM	-	40(min)	Kg-cm
			58(max)	
Approximate Weight	wt	-	7.8	g
Case Style	PRM2 PRM2-SL PRM2-SM			

Ratings and Characteristics Curves

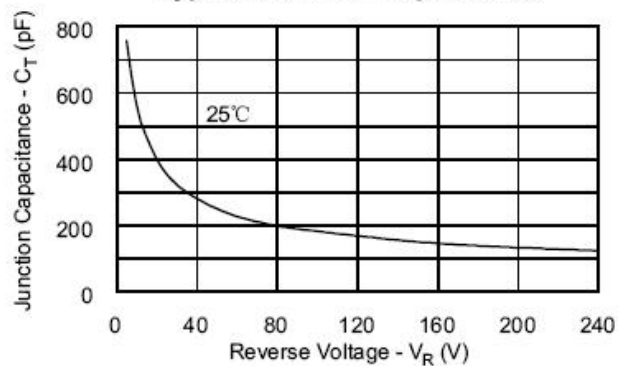
Typical Forward Characteristics



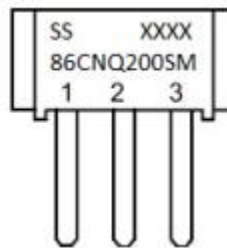
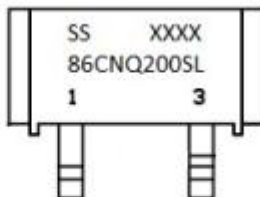
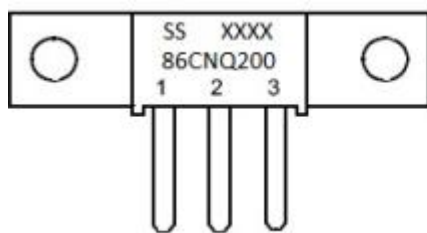
Typical Reverse Characteristics



Typical Junction Capacitance



Marking Diagram



Where XXXX is YYWW

1st row SS YYWWL
2nd row 86CNQ200/SL/SM
3rd row 1 2 3 (pin)
SS = SS
YY = Year
WW = Week

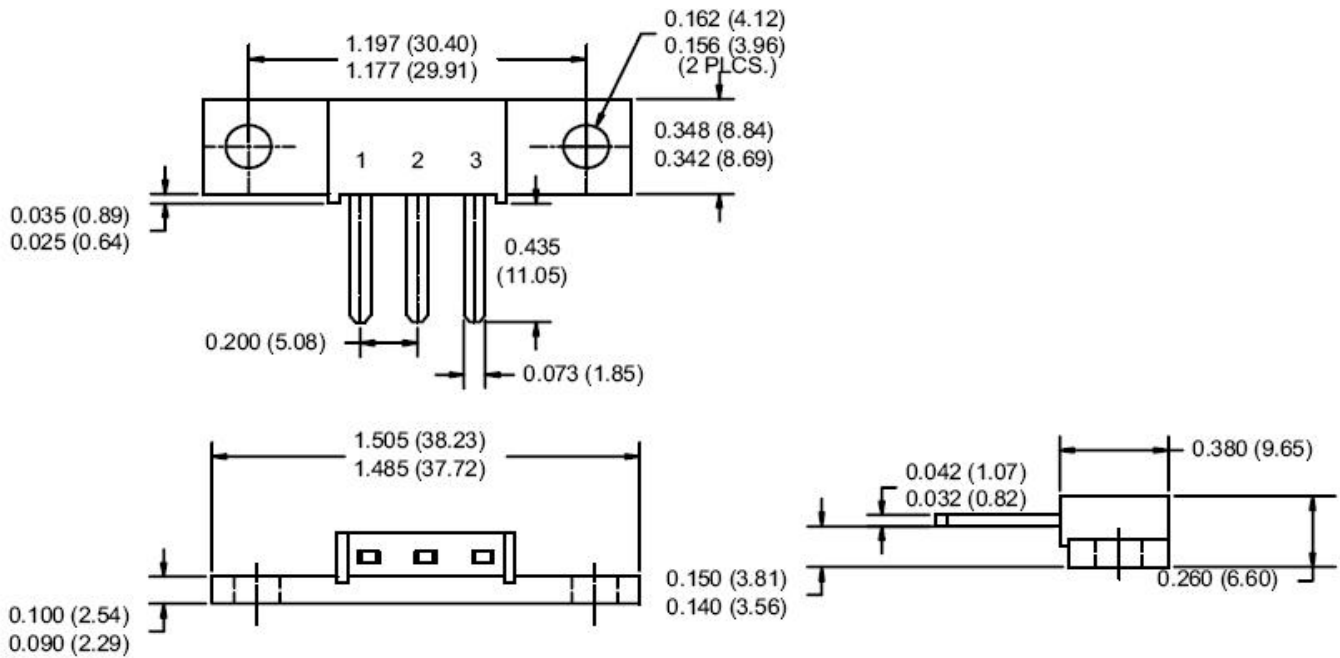
Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information

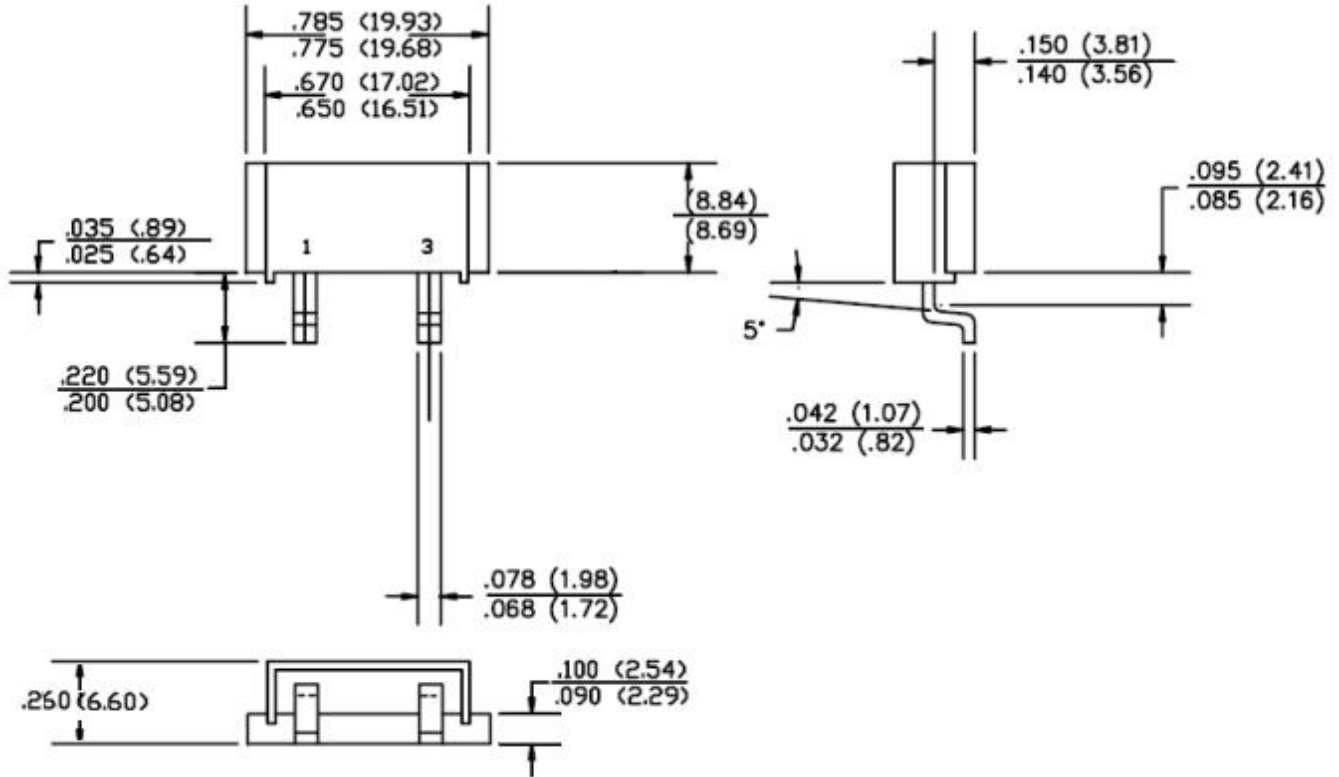
Device	Package	Terminals finish	Baseplate finish	Shipping
86CNQ200	PRM2	Nickel plated	Nickel plated	48pcs / box
86CNQ200S2	PRM2	Pure Sn dipped (dipped heigh 6-8mm)	Nickel plated	48pcs / box
86CNQ200SL	PRM2-SL	Pure Sn plated	Pure Sn plated	100pcs / box
86CNQ200SM	PRM2-SM	Nickel plated	Nickel plated	48pcs / box
86CNQ200SMS2	PRM2-SM	Pure Sn dipped (dipped heigh 6-8mm)	Nickel plated	48pcs / box

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

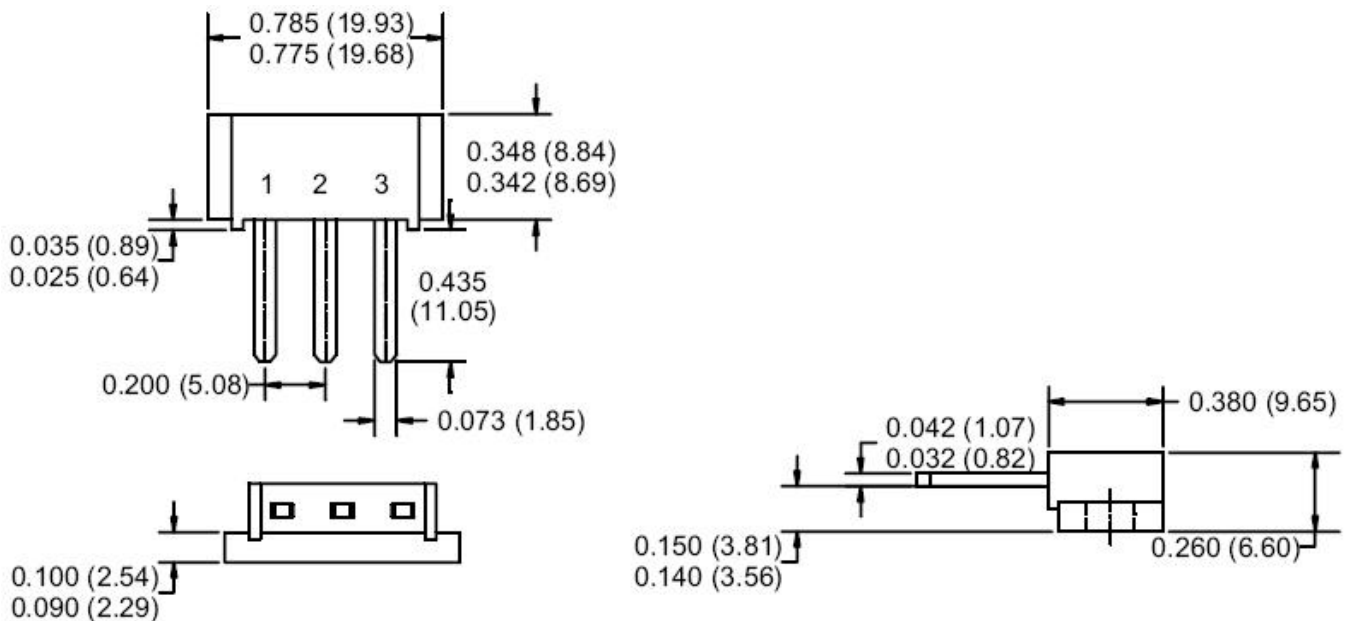
Mechanical Dimensions PRM2 (Inches/Millimeters)



Mechanical Dimensions PRM2-SL (Inches/Millimeters)



Mechanical Dimensions PRM2-SM (Inches/Millimeters)



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