Technical Data
Data Sheet N1135, Rev. -

Green Products

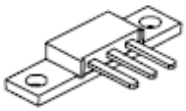
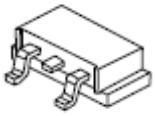
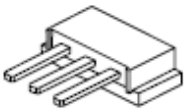
ULTRA LOW REVERSE LEAKAGE PLASTIC POWER SCHOTTKY RECTIFIER (135V-150V, 80A)

Applications:

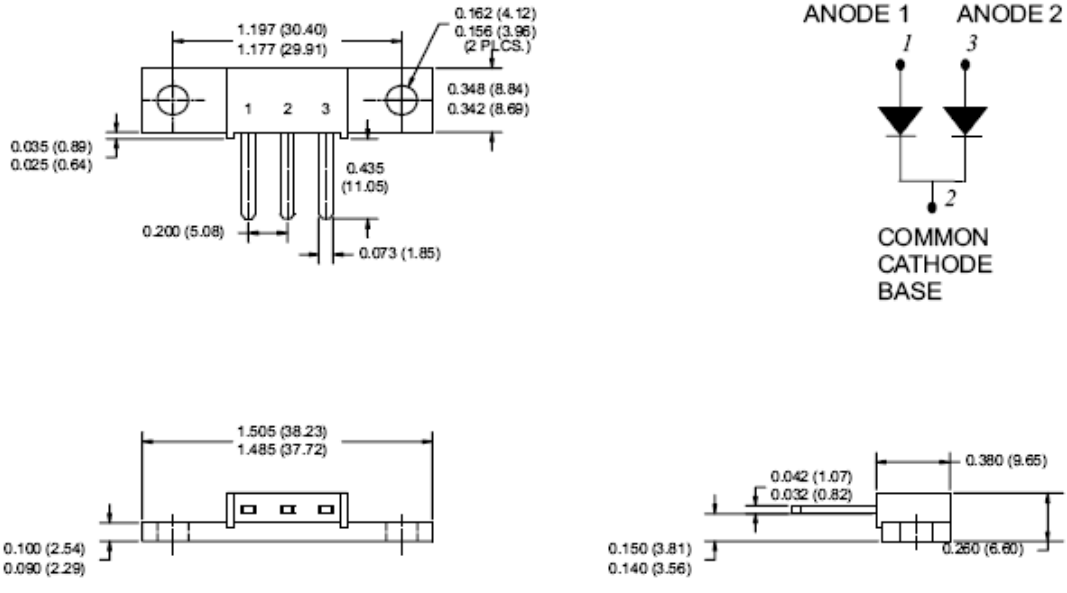
● Switching power supply ● Converters ● Free-Wheeling diodes ● Reverse battery protection

Features:

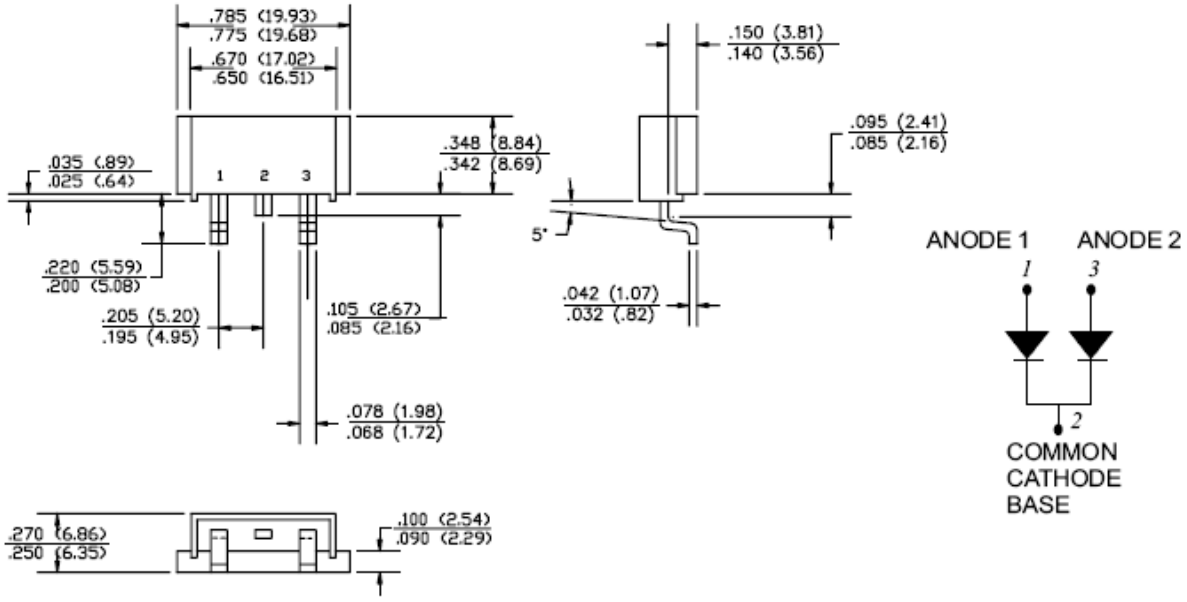
- **175℃ T_J operation**
- **Ultra low reverse leakage current**
- **Soft reverse recovery at low and high temperature**
- **Low forward voltage drop**
- **Low power loss, high efficiency**
- **High surge capacity**
- **Guard ring for enhanced ruggedness and long term reliability**
- **Guaranteed reverse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

Case Styles		
89CNQ…	**89CNQ…SL**	**89CNQ…SM**
		
PRM2	**PRM2-SL**	**PRM2-SM**

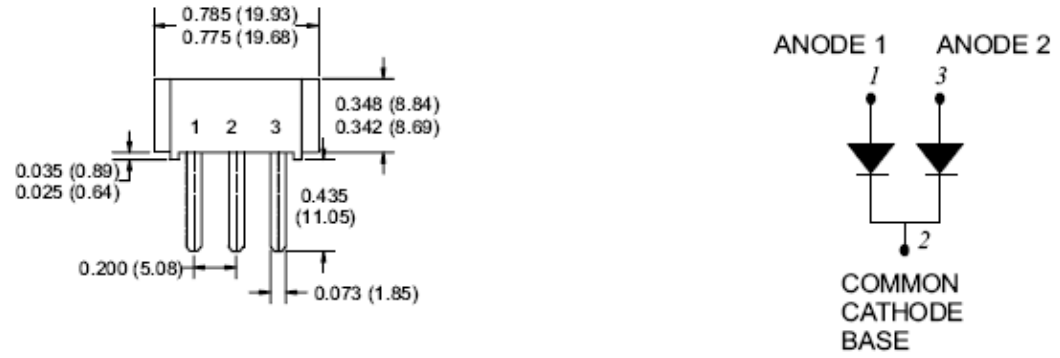
Mechanical Dimensions: In Inches / mm



PRM2



PRM2-SL



PRM2-SM

MARKING, MOLDING RESIN

Marking for 89CNQ135/SL/SM, 1st row SS YYWWL, 2nd row 89CNQ135/SL/SM, 3rd row 1 2 3 (pin)
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

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	135(89CNQ135) 150(89CNQ150)	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @T_C =132°C, rectangular wave form	80	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	708	A

Electrical Characteristics:

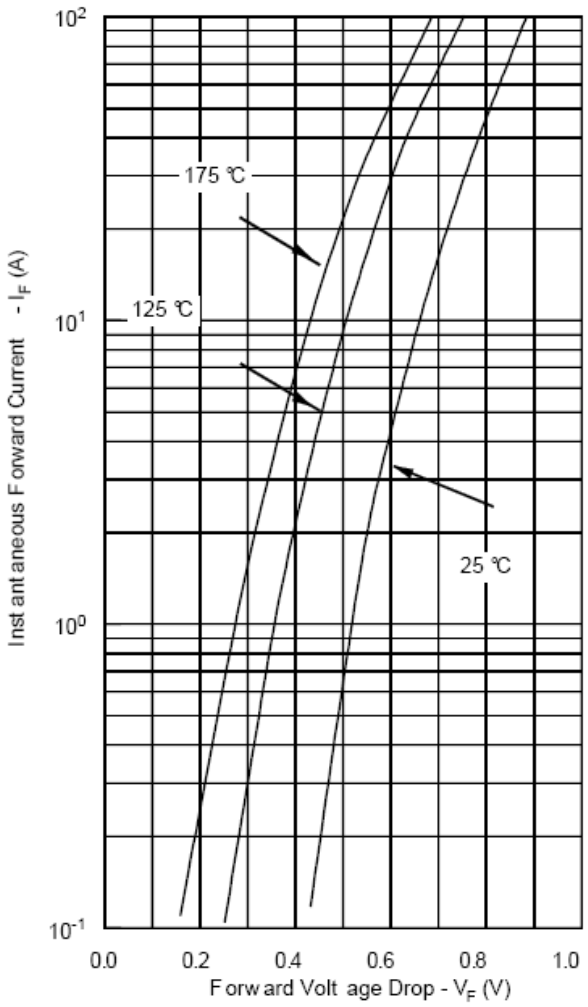
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 40A, Pulse, T_J = 25 °C @ 80A, Pulse, T_J = 25 °C	0.99 1.14	V
	V_{F2}	@ 40A, Pulse, T_J = 125 °C @ 80A, Pulse, T_J = 125 °C	0.69 0.78	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	1.5	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	21	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG}=50mV(p-p)	1400	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	5.5	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/μs

* Pulse Width < 300μs, Duty Cycle <2%

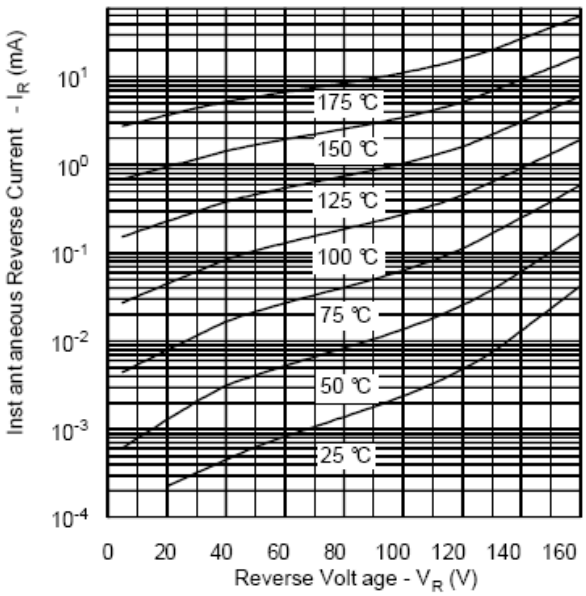
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	°C
Max. Storage Temperature	T_{stg}	-	-55 to +175	°C
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.85	°C/W
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.42	°C/W
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.30	°C/W
Mounting Torque	T_M	-	40(min) 58(max)	Kg-cm
Approximate Weight	wt	-	7.8	g
Case Style	PRM2 PRM2-SL PRM2-SM			

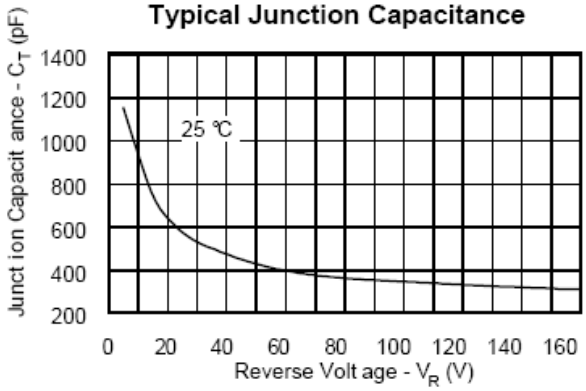
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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