Technical Data *Green Products*

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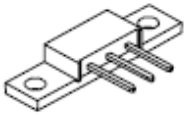
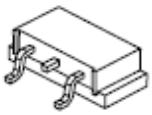
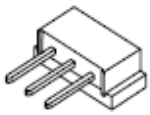
61CNQ035/61CNQ040/61CNQ045 SCHOTTKY RECTIFIER

Applications:

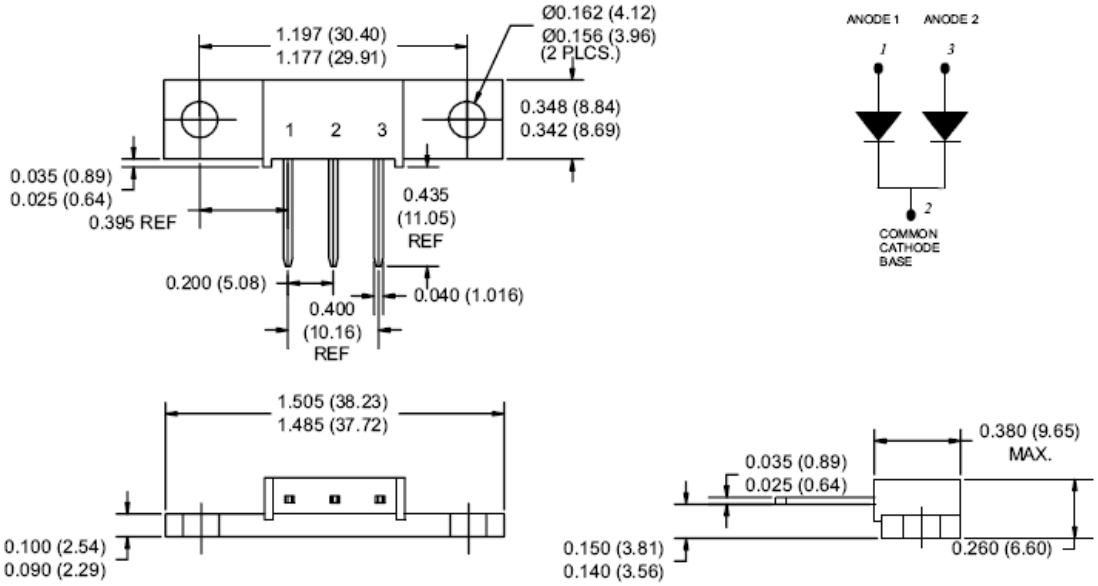
- **Switching power supply**
- **Converters**
- **Free-Wheeling diodes**
- **Reverse battery protection**

Features:

- **175℃ 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 testing can be offered upon request**

Case Styles		
61CNQ…	**61CNQ…SL**	**61CNQ…SM**
		
PRM3	**PRM3-SL**	**PRM3-SM**

Mechanical Dimensions: In Inches / mm



PRM3

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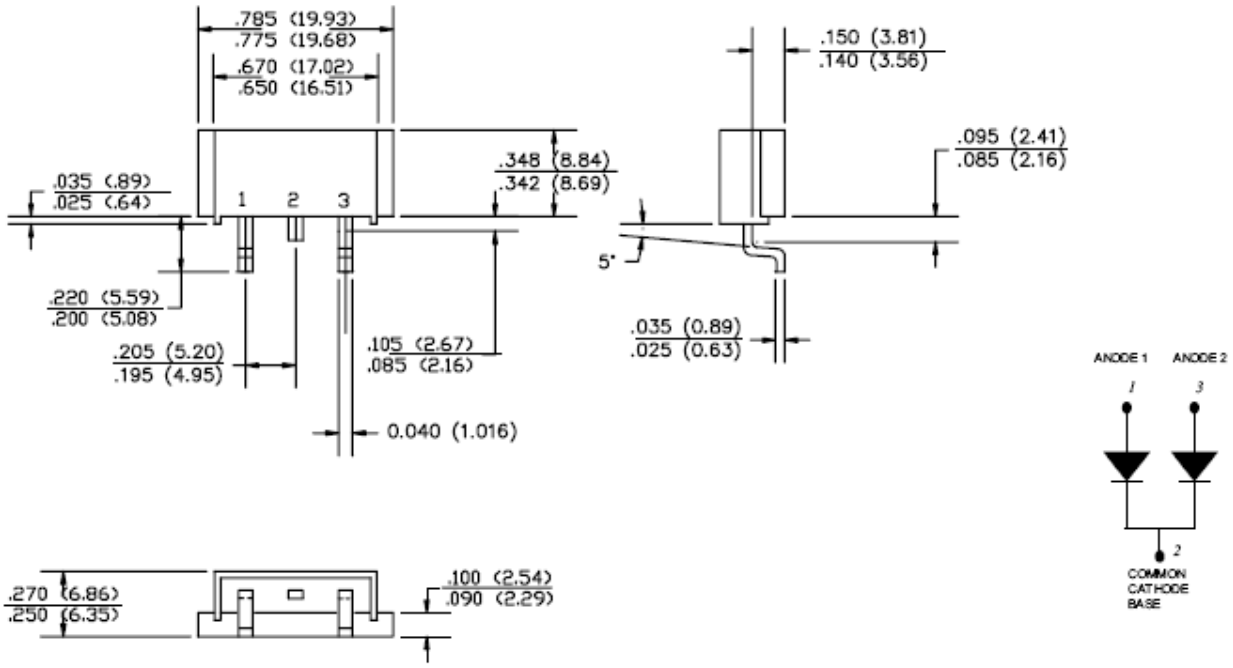
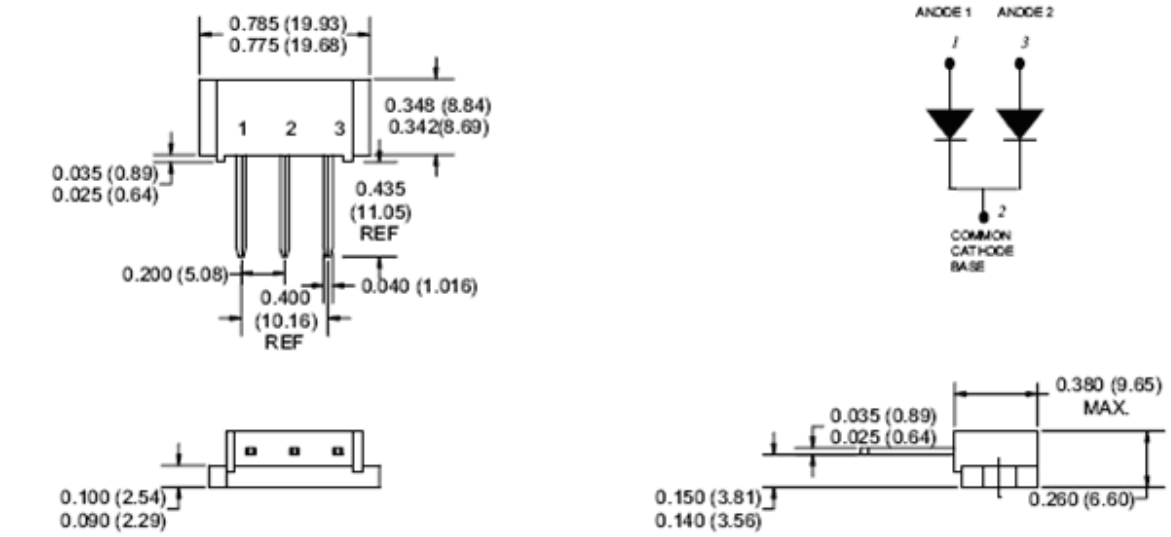


PRM3-SL



PRM3-SM

MARKING, MOLDING RESIN

Marking for 61CNQ035/SL/SM, 1st row SS YYWWL, 2nd row 61CNQ035/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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Ordering Information:

Device	Package	Terminals finish	Shipping
61CNQ035	PRM3	Nickel plated	48pcs / box
61CNQ035S	PRM3	Pure Sn dipped (dipped height 6-8 mm)	48pcs / box
61CNQ040	PRM3	Nickel plated	48pcs / box
61CNQ040S	PRM3	Pure Sn dipped (dipped height 6-8 mm)	48pcs / box
61CNQ045	PRM3	Nickel plated	48pcs / box
61CNQ045S	PRM3	Pure Sn dipped (dipped height 6-8 mm)	48pcs / box

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	35(61CNQ035) 40(61CNQ040) 45(61CNQ045)	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @T_C=149°C, rectangular wave form	60	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	990	A
Non-Repetitive Avalanche Energy(peg leg)	E_{AS}	T_J=25℃,I_{AS}=6A,L=2.2mH	40	mJ
Repetitive Avalanche Current(peg leg)	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. V_A=1.5× V_R typical	6	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg) *	V_{F1}	@ 30A, Pulse, T_J = 25 °C @ 60A, Pulse, T_J = 25 °C	0.51 0.56	0.61 0.68	V
	V_{F2}	@ 30A, Pulse, T_J = 125 °C @ 60A, Pulse, T_J = 125 °C	0.43 0.50	0.49 0.60	V
Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	0.03	5	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	25	45	mA
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	2300	2600	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	6.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

* Pulse Width < 300μs, 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)	$R_{\theta JC}$	DC operation	0.85	°C/W
Typical 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	PRM3 PRM3-SL PRM3-SM			

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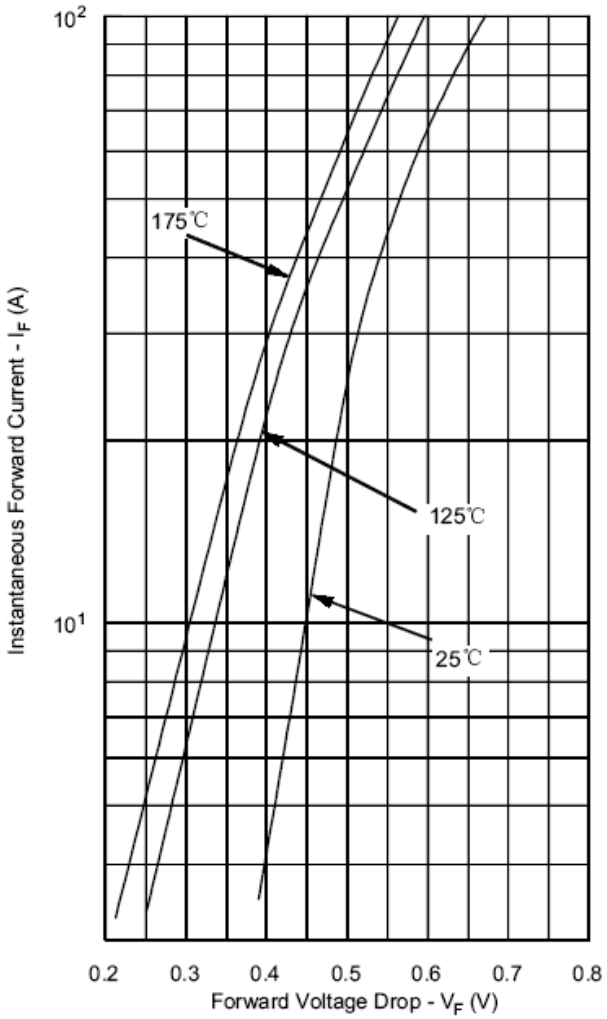
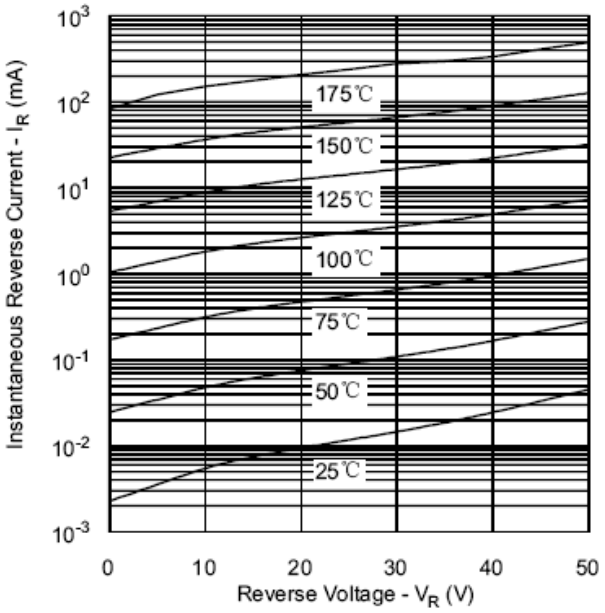
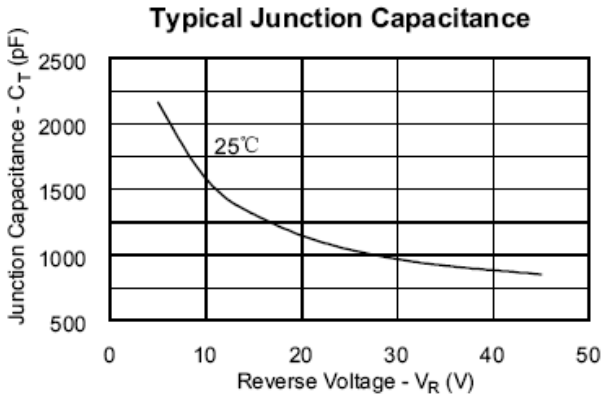
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



61CNQ SERIES

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