THE DATASHEET OF

62CNQ030

Technical Data
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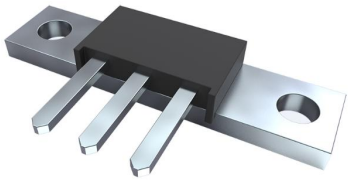
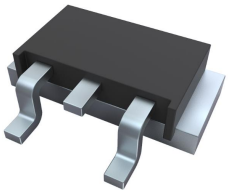
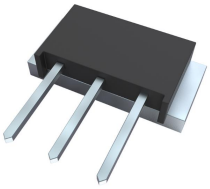
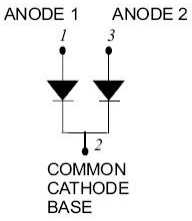
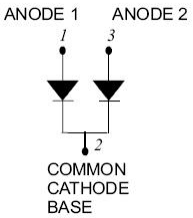
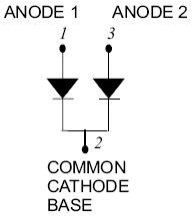
62CNQ030 SCHOTTKY RECTIFIER

Applications

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

Features

- 150℃ 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

62CNQ030	62CNQ030SL	62CNQ030SM
		
		
PRM3	PRM3-SL	PRM3-SM

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	30	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @T_C=135°C, rectangular wave form	30(Per Leg) 60(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per leg)	I_{FSM}	8.3 ms, half Sine pulse	940	A
Non-Repetitive Avalanche Energy (Peg leg)	E_{AS}	T_J=25℃,I_{AS}=6A,L=1.5mH	27	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	0.45 0.50	0.49 0.53	V
	V_{F2}	@ 30A, Pulse, T_J = 125 °C @ 60A, Pulse, T_J = 125 °C	0.36 0.41	0.39 0.44	V
Reverse Current (Per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	0.17	5	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	38	280	mA
Junction Capacitance (Per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	2800	3700	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 +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.5	°C/W
Typical Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.25	°C/W
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.21	°C/W
Mounting Torque	TM	-	40(min) 58(max)	Kg-cm
Case Style	PRM3 PRM3-SL PRM3-SM			

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RoHS

Ratings and Characteristics Curves

Figure1
Typical Forward Characteristics

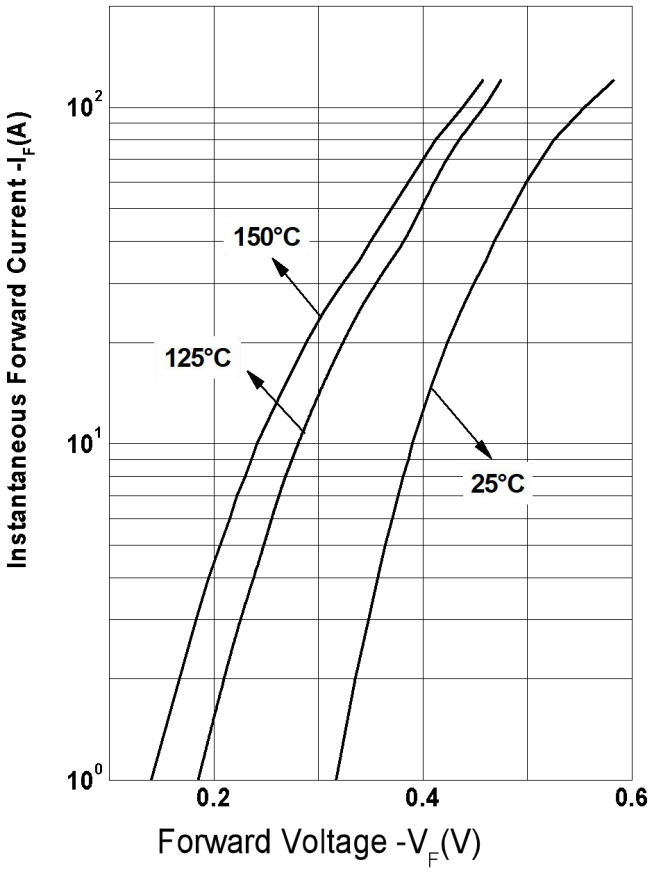


Figure 2
Typical Reverse Characteristics

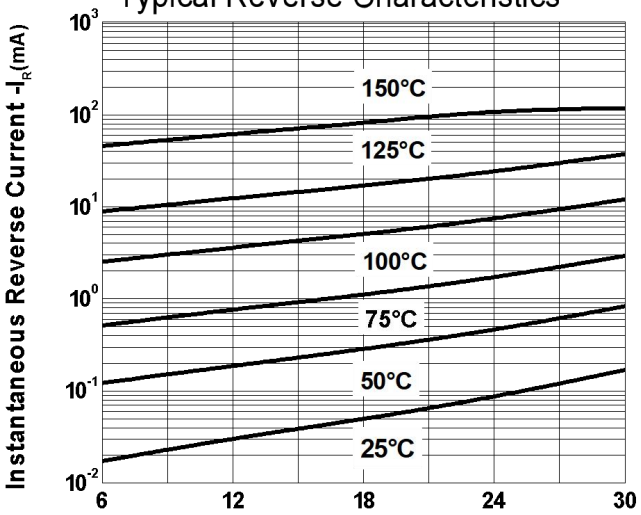
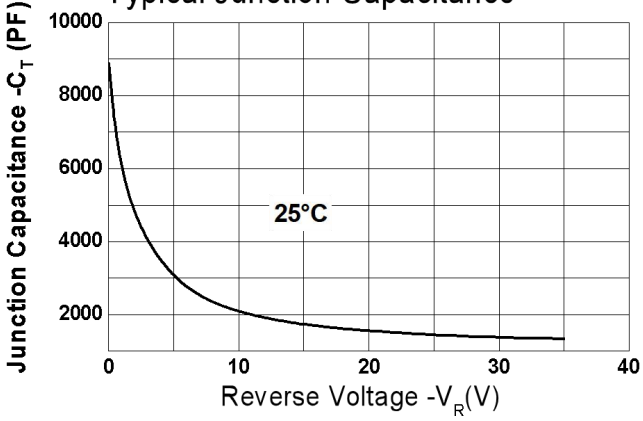
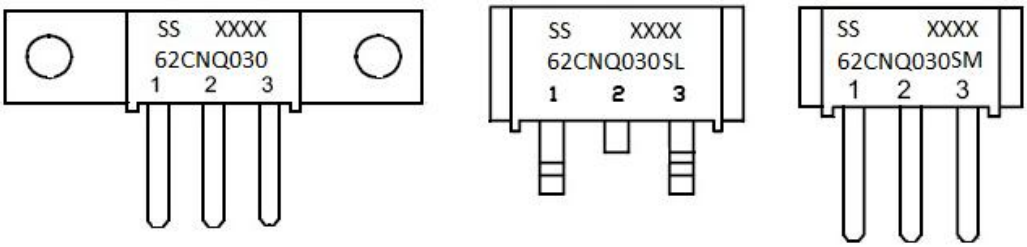


Figure 3
Typical Junction Capacitance



Marking Diagram



Where XXXX is YYWW

1st row SS YYWWL
2nd row 62CNQ030/SL/SM
3rd row 1 2 3 (pin)
SS = SS
YY = Year
WW = Week

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

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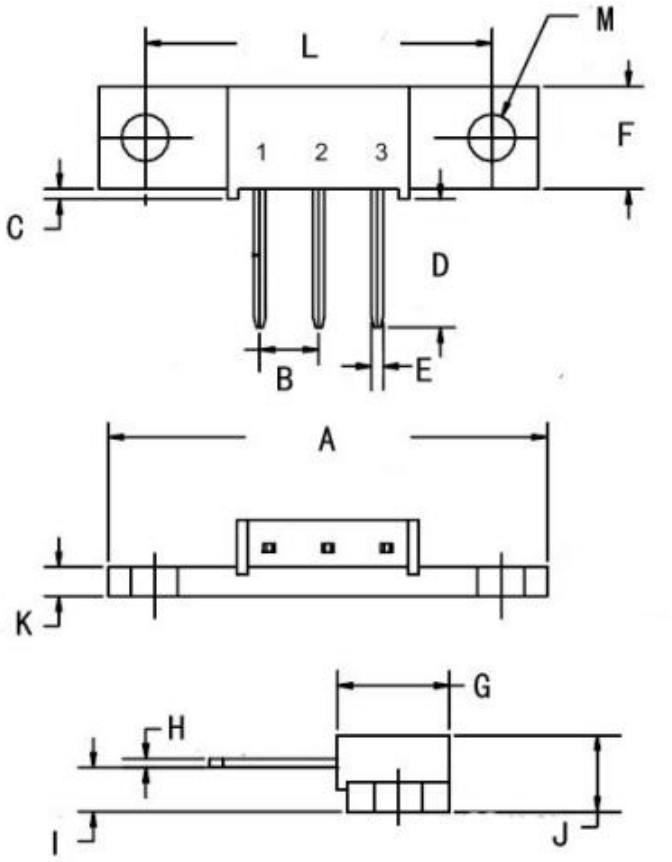
Ordering Information

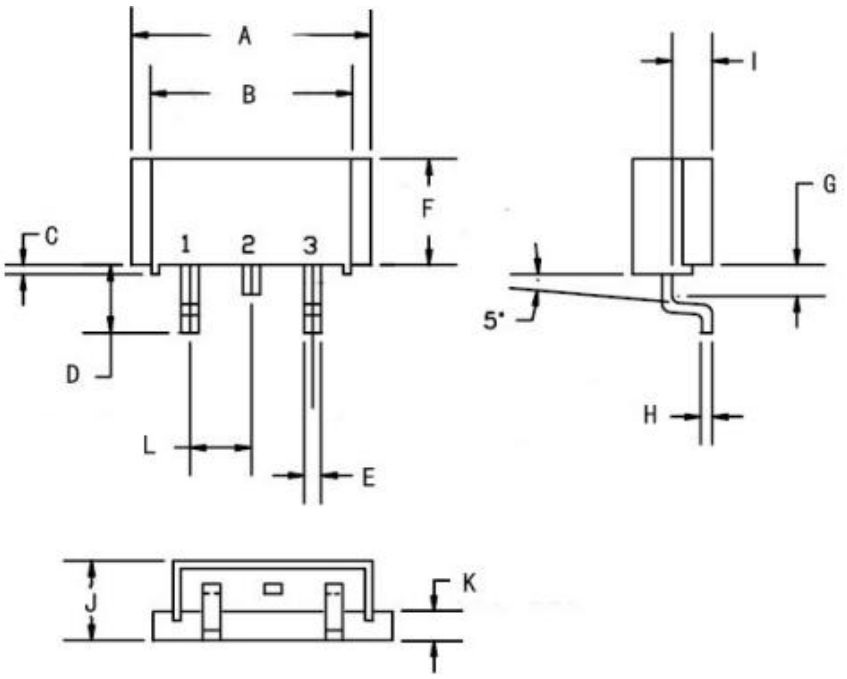
Device	Package	Approximate Weight(g)	Terminals finish	Baseplate finish	Shipping
62CNQ030	PRM3	8.6	Nickel plated	Nickel plated	48pcs / box
62CNQ030S2	PRM3	8.6	Pure Sn dipped (dipped heigh 6-8mm)	Nickel plated	48pcs / box
62CNQ030SL	PRM3-SL	5.3	Pure Sn plated	Pure Sn plated	100pcs / box
62CNQ030SM	PRM3-SM	5.6	Nickel plated	Nickel plated	48pcs / box
62CNQ030SMS2	PRM3-SM	5.6	Pure Sn dipped (dipped heigh 6-8mm)	Nickel plated	48pcs / box

Mechanical Dimensions PRM3 (Inches/Millimeters)



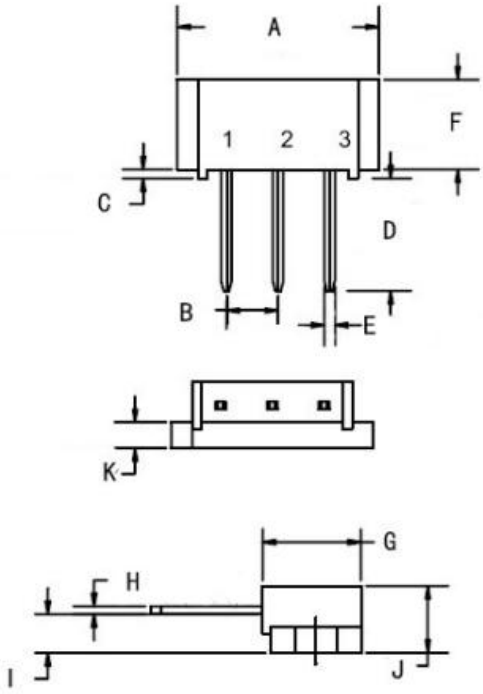
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	37.72	38.23	1.485	1.506
B	5.08		0.200	
C	0.62	1.02	0.024	0.040
D	10.38	12.98	0.408	0.511
E	0.88	1.22	0.034	0.048
F	8.46	9.06	0.333	0.357
G	9.24	9.85	0.363	0.388
H	0.61	0.92	0.024	0.037
I	3.19	4.19	0.125	0.165
J	6.95	7.55	0.273	0.298
K	2.40	2.60	0.094	0.103
L	29.51	30.40	1.161	1.197
M	3.75	4.33	0.147	0.171

Mechanical Dimensions PRM3-SL (Inches/Millimeters)



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	19.70	20.30	0.776	0.799
B	16.51	17.02	0.650	0.670
C	0.62	1.02	0.024	0.040
D	4.97	5.97	0.196	0.235
E	0.88	1.22	0.034	0.048
F	8.46	9.06	0.333	0.357
G	2.04	2.54	0.080	0.100
H	0.61	0.92	0.024	0.037
I	3.19	4.19	0.125	0.165
J	6.95	7.55	0.274	0.297
K	2.21	2.71	0.087	0.106
L	5.08		0.200	

Mechanical Dimensions PRM3-SM (Inches/Millimeters)



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	19.70	20.30	0.776	0.799
B	5.08		0.200	
C	0.62	1.02	0.024	0.040
D	10.38	12.98	0.408	0.511
E	0.88	1.22	0.034	0.048
F	8.46	9.06	0.333	0.357
G	9.24	9.85	0.363	0.388
H	0.61	0.92	0.024	0.037
I	3.19	4.19	0.125	0.165
J	6.95	7.55	0.273	0.298
K	2.40	2.60	0.094	0.103

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