TECHNICAL DATA
DATA SHEET

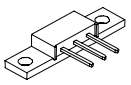
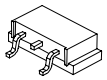
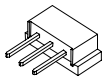
61CNQ035/61CNQ040/61CNQ045
SCHOTTKY RECTIFIER

Applications:

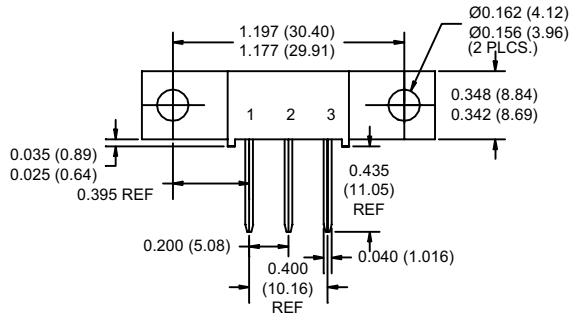
• Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

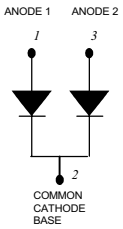
Features:

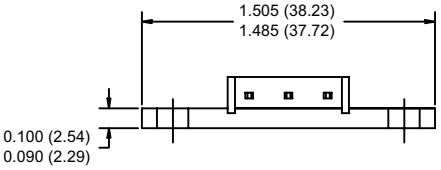
- 175°C T_J operation
- Center tap module
- Very Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Low profiles, small footprint,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

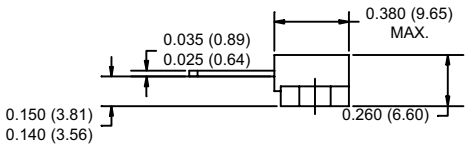
Case Styles		
61CNQ…	**61CNQ…SL**	**61CNQ…SM**
		
D-61-6	**D61-8**	**D61-8-SM**

Mechanical Dimensions: In Inches / mm

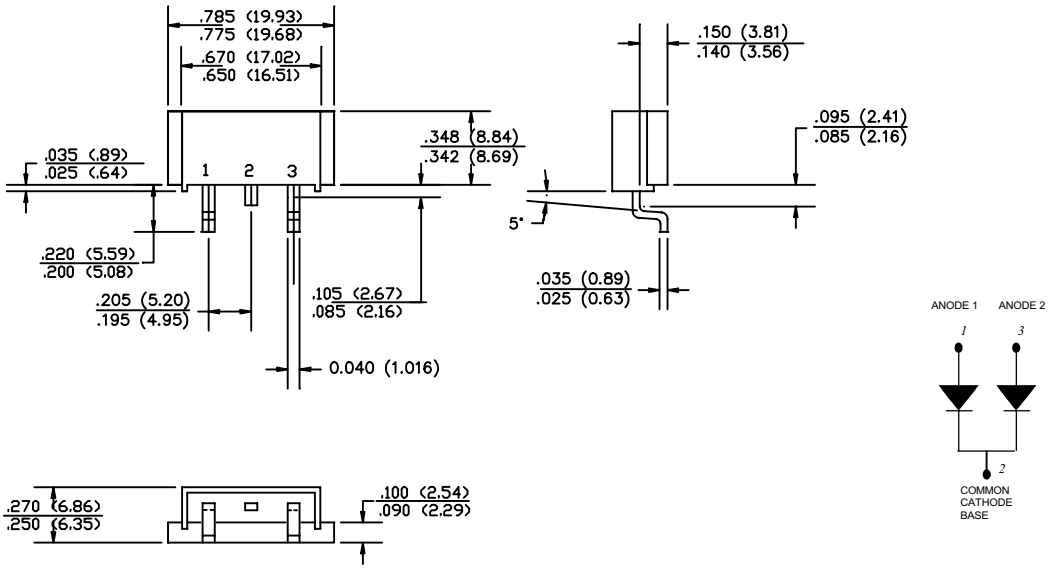




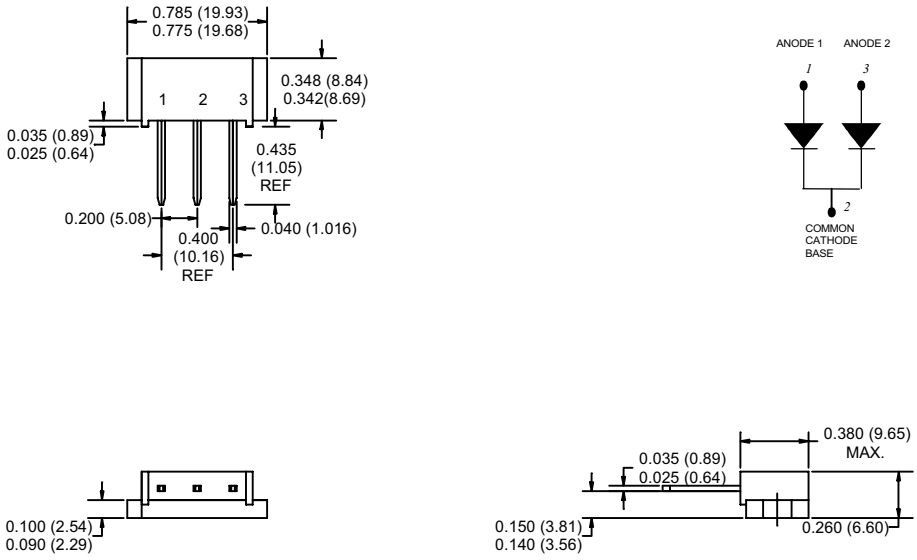




PRM3 (D-61-6)



PRM3-SL (D-61-6-SL)



PRM3-SM (D-61-6-SM)

Maximum Ratings:

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

Electrical Characteristics:

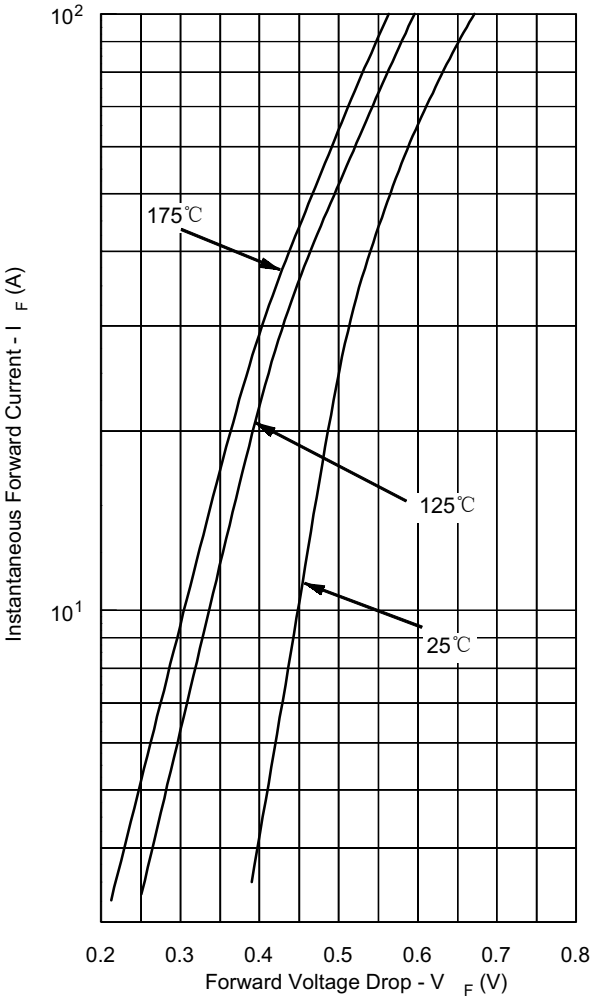
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V_{F1}	@ 30 A, Pulse, T_J = 25 °C @ 60 A, Pulse, T_J = 25 °C	0.56 0.68	V
	V_{F2}	@ 30 A, Pulse, T_J = 125 °C @ 60 A, Pulse, T_J = 125 °C	0.49 0.60	V
Max. Reverse Current (per leg)*	I_{R1}	@V_R = rated V_R T_J = 25 °C	5	mA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

* Pulse Width < 300µs, Duty Cycle <2%

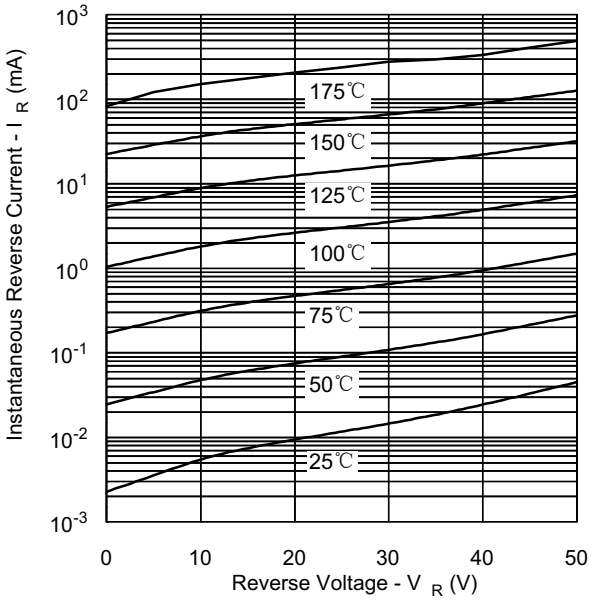
Thermal-Mechanical Specifications:

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	$R_{\theta JC}$	DC operation	0.85(per leg) 0.42(per package)	°C/W
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.30	°C/W
Approximate Weight	wt	-	7.8	g
Mounting Torque	T_M	-	40(min) 58(max)	Kg-cm
Case Style	PRM3 PRM3-SL PRM3-SM			

Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance