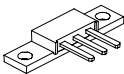
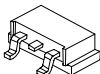
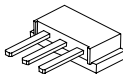


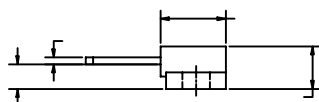
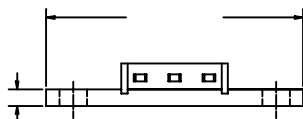
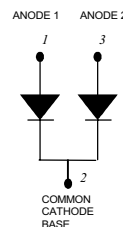
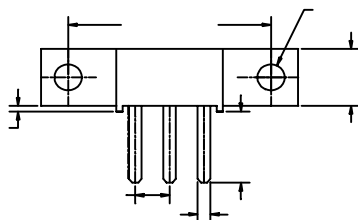
**SENSITRON****SEMICONDUCTOR****89CNQ... SERIES**TECHNICAL DATA
DATA SHEET**89CNQ135/89CNQ150 SCHOTTKY RECTIFIER****Applications:**

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

Features:

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

Case Styles		
89CNQ...	89CNQ...SL	89CNQ...SM
		
D61-8	D61-8-SL	D61-8-SM

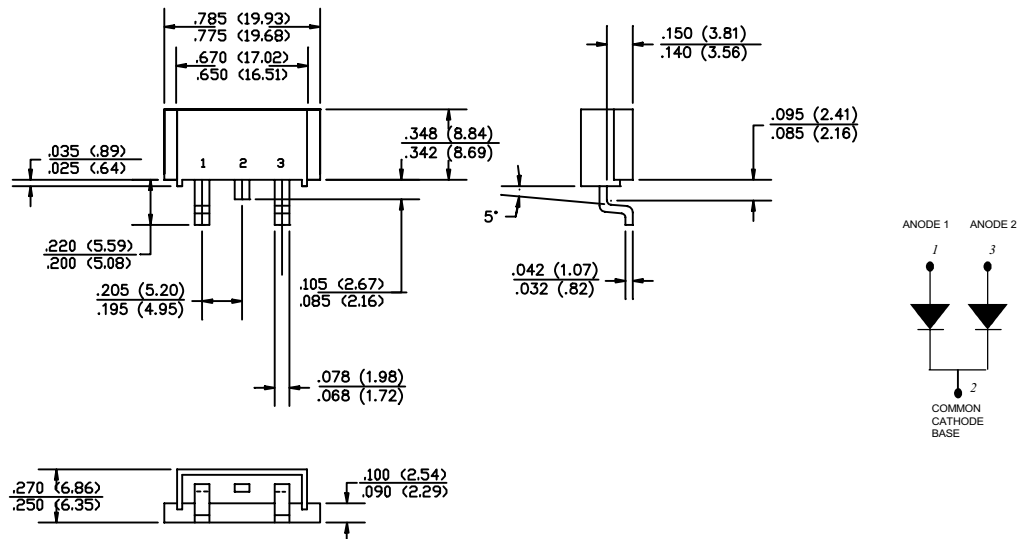
Mechanical Dimensions: In Inches / mm**D61-8 (PRM2)**



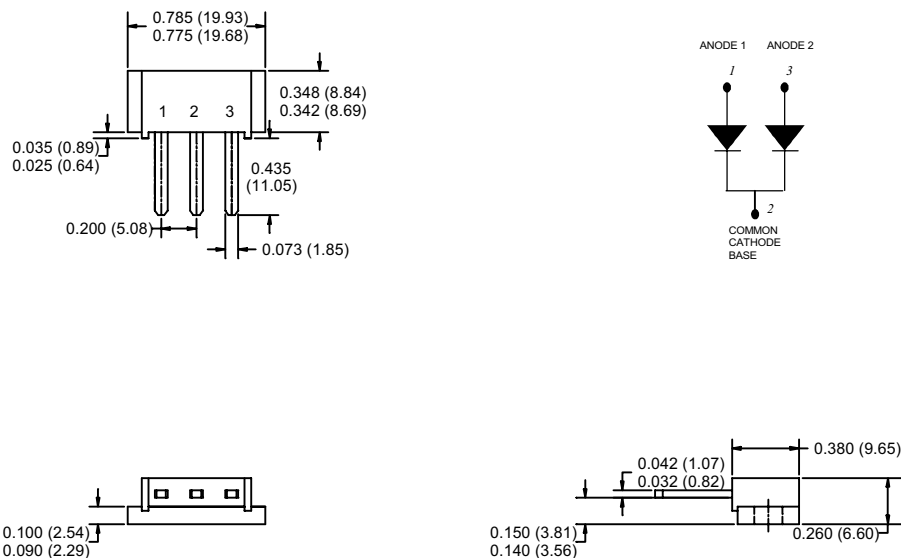
SENSITRON

SEMICONDUCTOR

89CNQ... SERIES



D61-8-SL (PRM2-SL)



D61-8-SM (PRM2-SM)

**Maximum Ratings:**

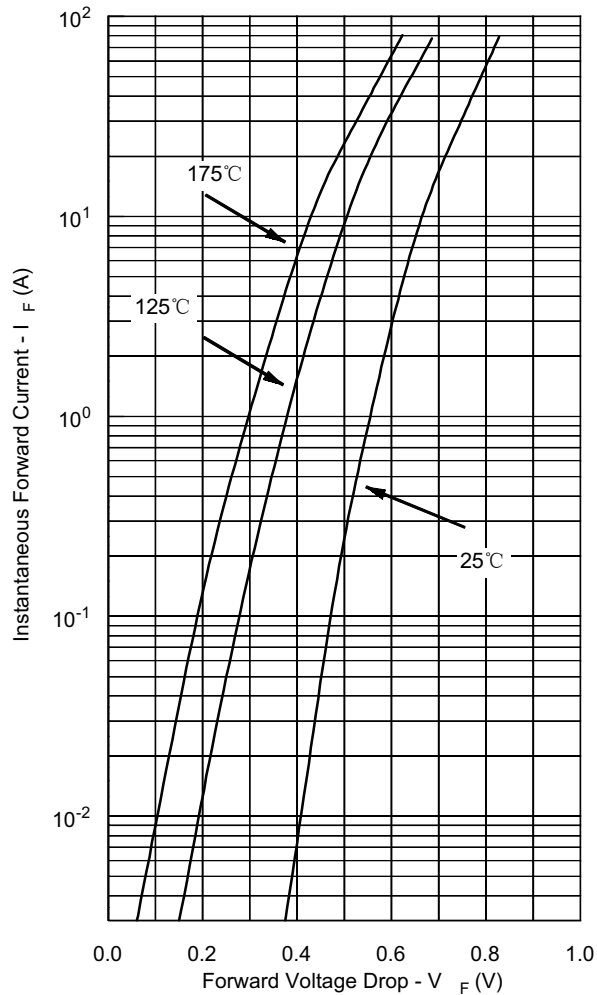
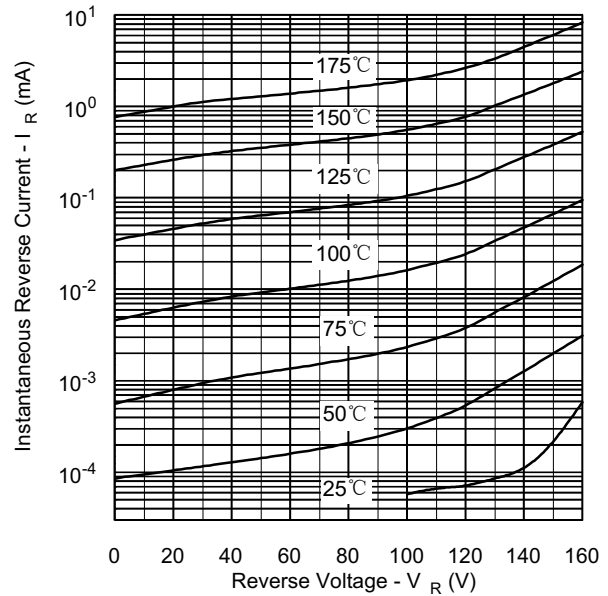
Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	135	(89CNQ135)	V
			150	(89CNQ150)	
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 130^\circ\text{C}$, rectangular wave form	40	(per leg)	A
			80	(per device)	
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	600		A
Non-Repetitive Avalanche Energy (per leg)	E_{AS}	$T_J = 25^\circ\text{C}$, $I_{AS} = 1\text{A}$, $L = 18\text{mH}$	290		mJ
Repetitive Avalanche Current (per leg)	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. $V_A = 1.5 \times V_R$ typical	1.0		A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V_{F1}	@ 40A, Pulse, $T_J = 25^\circ\text{C}$	0.99	V
		@ 80 A, Pulse, $T_J = 25^\circ\text{C}$	1.14	
	V_{F2}	@ 40 A, Pulse, $T_J = 125^\circ\text{C}$	0.69	V
		@ 80 A, Pulse, $T_J = 125^\circ\text{C}$	0.78	
Max. Reverse Current (per leg)*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	1.5	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	21	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	980	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 < 300 μs , Duty Cycle <2%**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.85	$^\circ\text{C/W}$
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.42	$^\circ\text{C/W}$
Maximum Thermal Resistance, Case to Heat Sink (D61-8 Only)	$R_{\theta CS}$	Mounting surface, smooth and greased Device flatness < 5 mils	0.30	$^\circ\text{C/W}$
Approximate Weight	wt	-	7.8	g
Mounting Torque (D61-8 Only)	T_M	-	40 (min) 58 (max)	Kg-cm
Case Style	PRM2 PRM2-SL PRM2-SM			

**Typical Forward Characteristics****Typical Reverse Characteristics****Typical Junction Capacitance**