TECHNICAL DATA
DATA SHEET

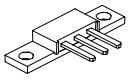
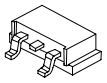
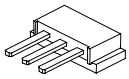
86CNQ200 SCHOTTKY RECTIFIER

Applications:

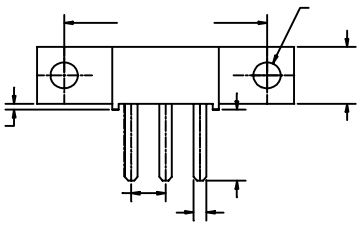
• Switching power supply • Free-Wheeling Diodes • Reverse battery protection • Converters

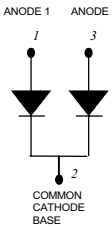
Features:

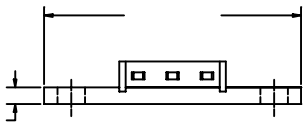
- 175°C T_J operation
- Center tap module
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- New fully transfer-mould low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

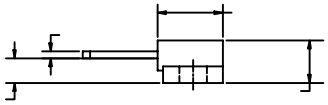
Case Styles		
86CNQ200	**86CNQ200SL**	**86CNQ200SM**
		
D61-8	**D61-8-SL**	**D61-8-SM**

Mechanical Dimensions: In Inches / mm

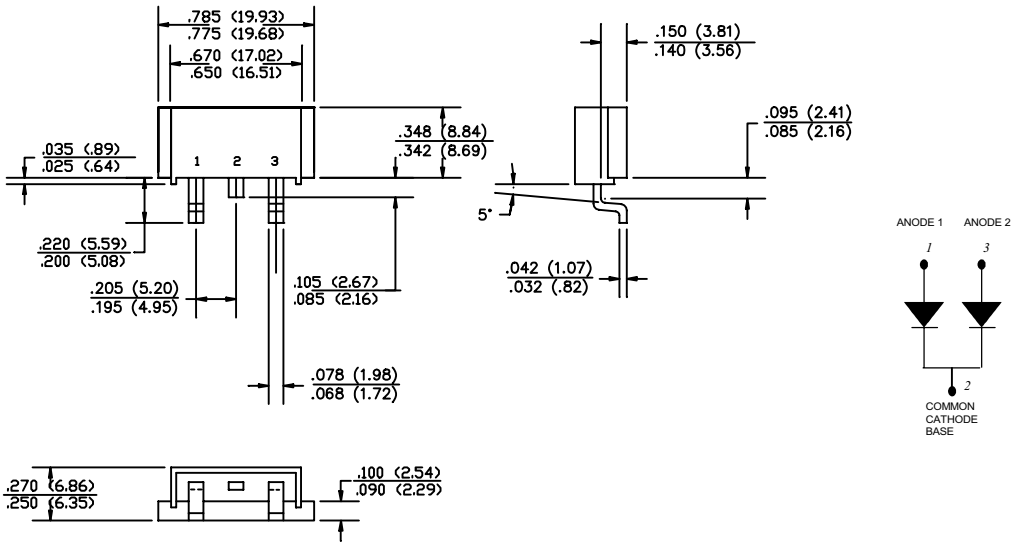




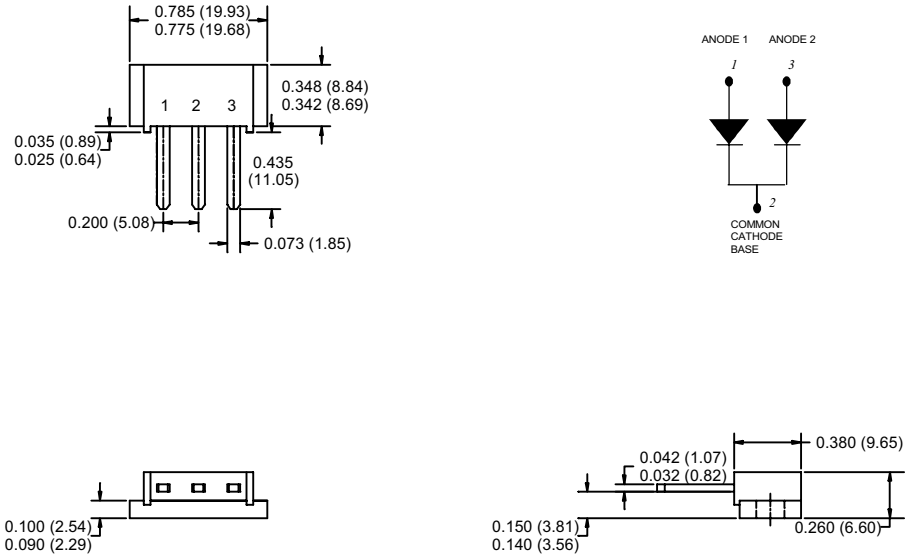




D61-8 (PRM2)



D61-8-SL (PRM2-SL)



D61-8-SM (PRM2-SM)

Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	200		V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C =130°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	700		A
Non-Repetitive Avalanche Energy (per leg)	E_{AS}	T_J = 25 °C, I_{AS} =1A, L =18mH	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 x V_R typical	1.0		A

Electrical Characteristics:

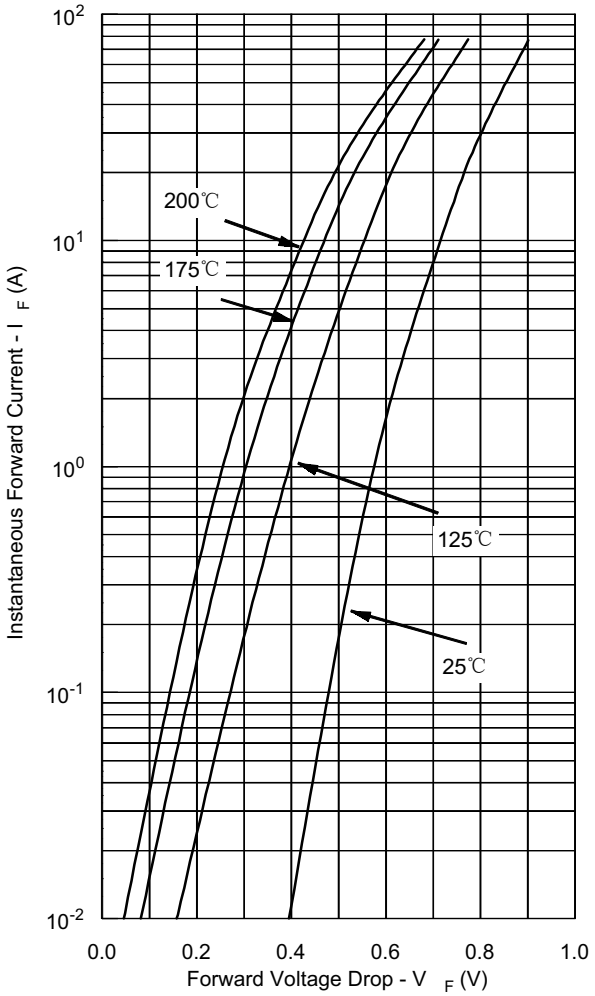
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V_{F1}	@ 40A, Pulse, T_J = 25 °C @ 80 A, Pulse, T_J = 25 °C	0.99 1.14	V
	V_{F2}	@ 40 A, Pulse, T_J = 125 °C @ 80 A, Pulse, T_J = 125 °C	0.69 0.78	V
Max. Reverse Current (per leg)*	I_{R1}	@V_R = rated V_R T_J = 25 °C	1.1	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	24	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	900	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%

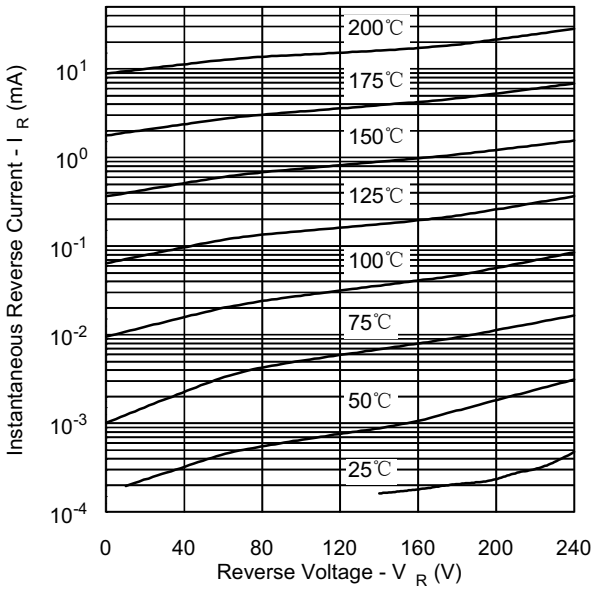
Thermal-Mechanical Specifications:

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
Maximum Thermal Resistance, Case to Heat Sink (D61-8 Only)	$R_{\theta CS}$	Mounting surface, smooth and greased Device flatness < 5 mils	0.30	°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