

Technical Data
Data Sheet 2961, Rev. -

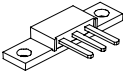
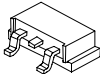
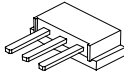
85CNQ015 SCHOTTKY RECTIFIER

Applications:

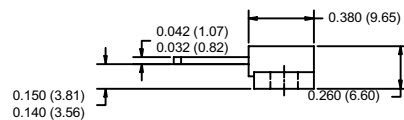
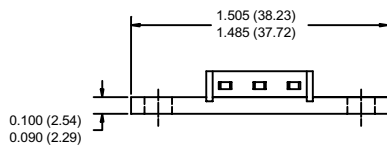
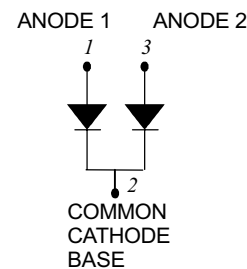
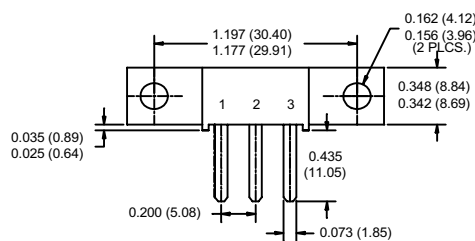
- Parallel switching power supply • Redundant power subsystems • Reverse battery protection
- Converters

Features:

- 125°C T_J operation (V_R <5V)
- Center tap module
- Optimized for OR-ing applications
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Ultra 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

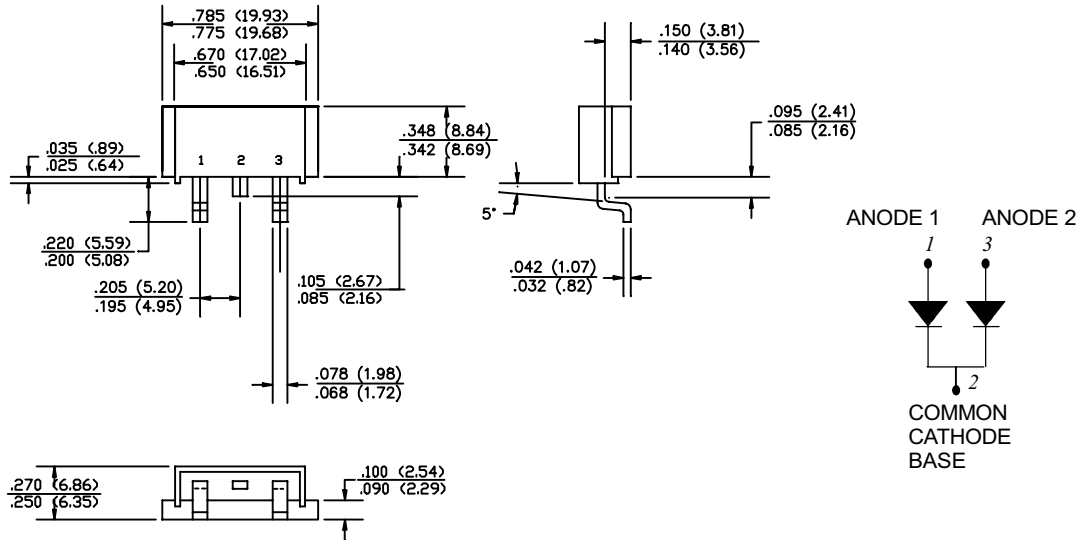
Case styles		
85CNQ015  PRM2	85CNQ015SL  PRM2-SL	85CNQ015SM  PRM2-SM

Mechanical Dimensions: In Inches / mm

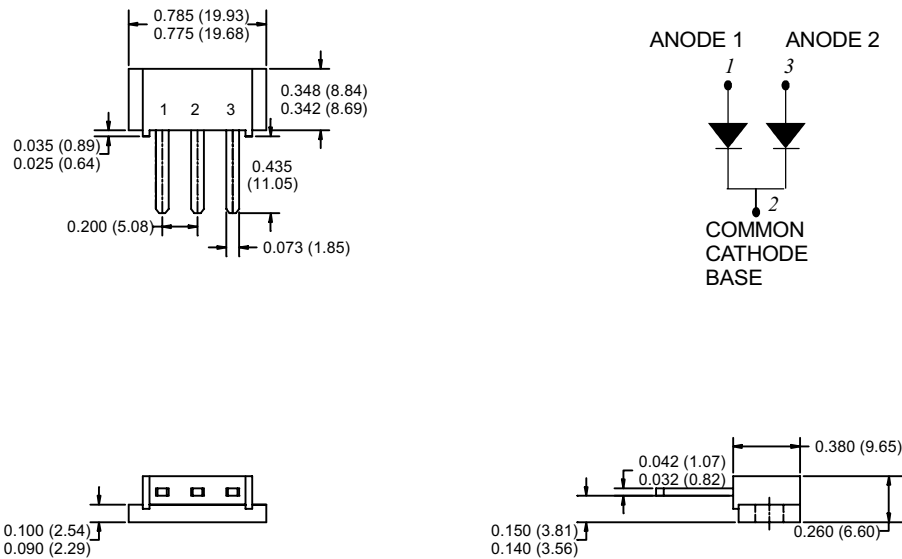


PRM2

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PRM2-SL



PRM2-SM

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	15 (DC) 25 (Working)	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 78^\circ\text{C}$, rectangular wave form	80	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	1000	A
Non-Repetitive Avalanche Energy (per leg)	E_{AS}	$T_J = 25^\circ\text{C}$, $I_{AS} = 2\text{ A}$, $L = 4.50\text{ mH}$	9	mJ
Repetitive Avalanche Current (per leg)	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. $V_A = 3 \times V_R$ typical	2	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 40 A, Pulse, $T_J = 25^\circ\text{C}$ @ 80 A, Pulse, $T_J = 25^\circ\text{C}$	0.36 0.45	V
	V_{F2}	@ 40 A, Pulse, $T_J = 75^\circ\text{C}$ @ 80 A, Pulse, $T_J = 75^\circ\text{C}$	0.32 0.42	V
Max. Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	20	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 100^\circ\text{C}$	1000	mA
	I_{R3}	@ $V_R = 12\text{V}$ $T_J = 100^\circ\text{C}$	890	mA
	I_{R4}	@ $V_R = 5\text{V}$ $T_J = 100^\circ\text{C}$	540	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	3600	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

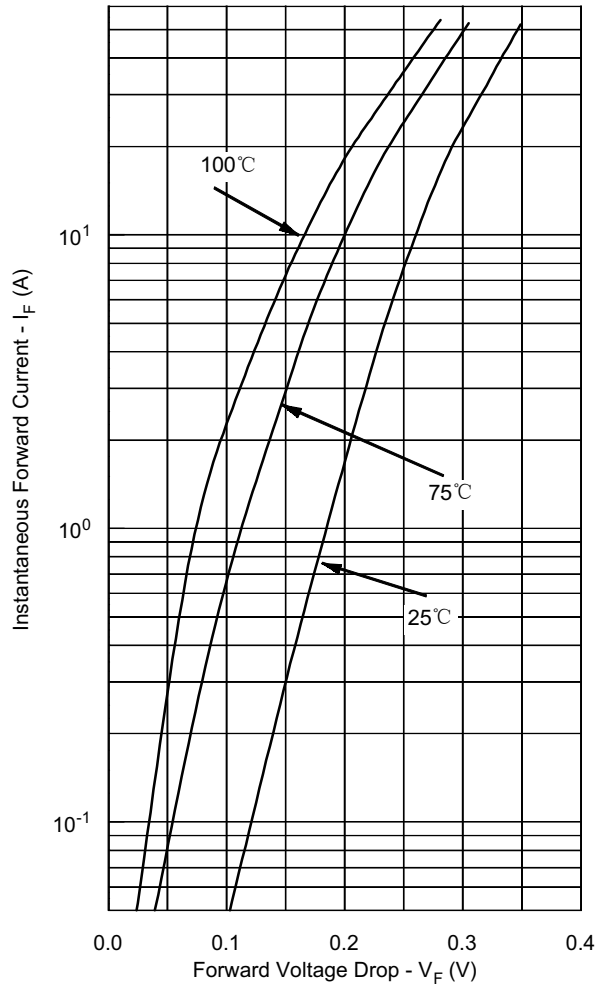
* Pulse Width < 300 μs , Duty Cycle <2%

Thermal-Mechanical Specifications:

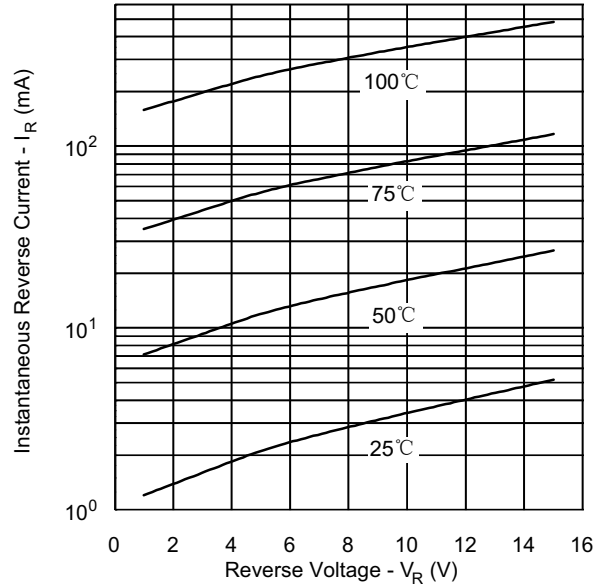
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +125	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	0.85	$^\circ\text{C/W}$
Maximum Thermal 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	
Mounting Torque (D61-8 Only)	T_M	-	40 (min) 58 (max)	Kg-cm
Case Style	PRM2 PRM2-SL PRM2-SM			

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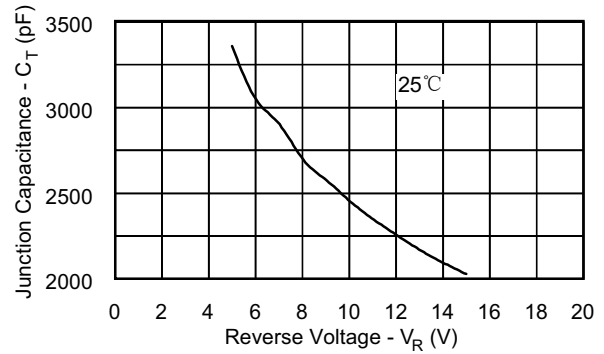
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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