

**SCHOTTKY RECTIFIER**  
*New GenIII D-61 Package*

80 Amp

**Major Ratings and Characteristics**




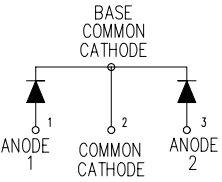
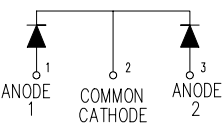
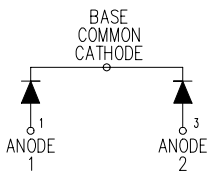
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular waveform	80	A
$V_{RRM}$	20	V
$I_{FSM}$ @tp=5 $\mu$ s sine	6000	A
$V_F$ @40Apk, $T_J=125^\circ\text{C}$ (perleg)	0.32	V
$T_J$ range	-55to150	$^\circ\text{C}$

**Description/Features**

The center tap Schottky rectifier module has been optimized for ultra low forward voltage drop specifically for 3.3V output power supplies. The proprietary barrier technology allows for reliable operation up to 150  $^\circ\text{C}$  junction temperature. Typical applications are in parallel switching power supplies, converters, reverse battery protection, and redundant power subsystems.

- 150  $^\circ\text{C}$   $T_J$  operation
- Center tap module
- Optimized for 3.3V application
- Ultra low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- *New fully transfer-mold low profile, small footprint, high current package*

**Case Styles**

83CNQ...A	83CNQ...ASM	83CNQ...ASL
		
 <p>BASE COMMON CATHODE</p> <p>1 ANODE 1 2 COMMON CATHODE 3 ANODE 2</p> <p><b>D61-8</b></p>	 <p>1 ANODE 1 2 COMMON CATHODE 3 ANODE 2</p> <p><b>D61-8-SM</b></p>	 <p>BASE COMMON CATHODE</p> <p>1 ANODE 1 2 ANODE 2 3 COMMON CATHODE</p> <p><b>D61-8-SL</b></p>



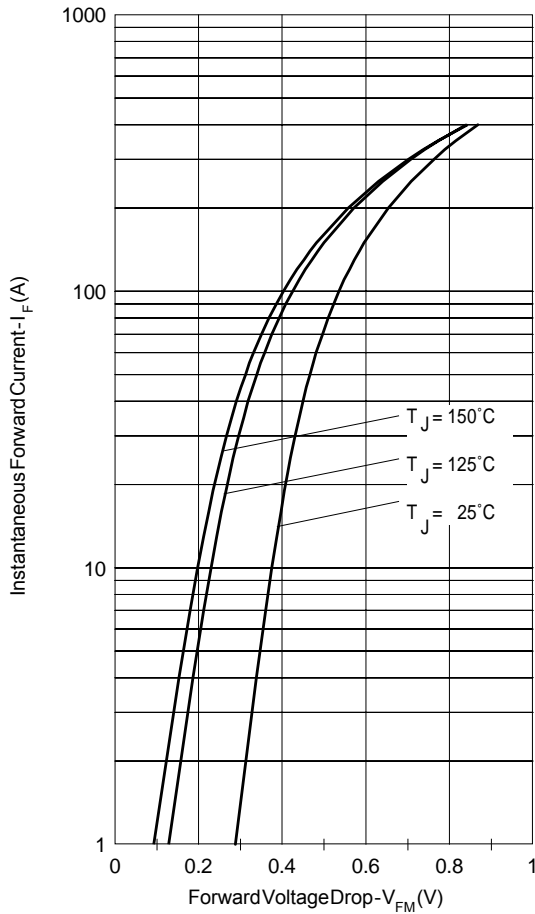


Fig. 1 - Max. Forward Voltage Drop Characteristics (Per Leg)

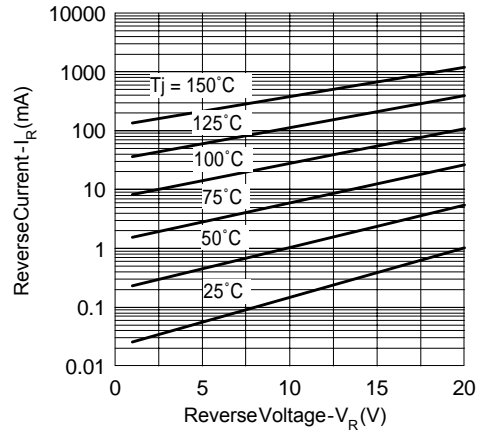


Fig. 2 - Typical Values Of Reverse Current Vs. Reverse Voltage (Per Leg)

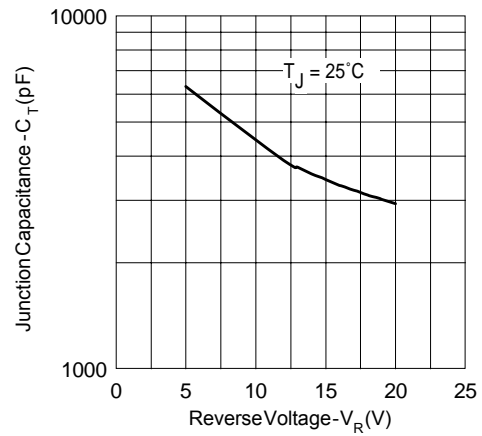


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

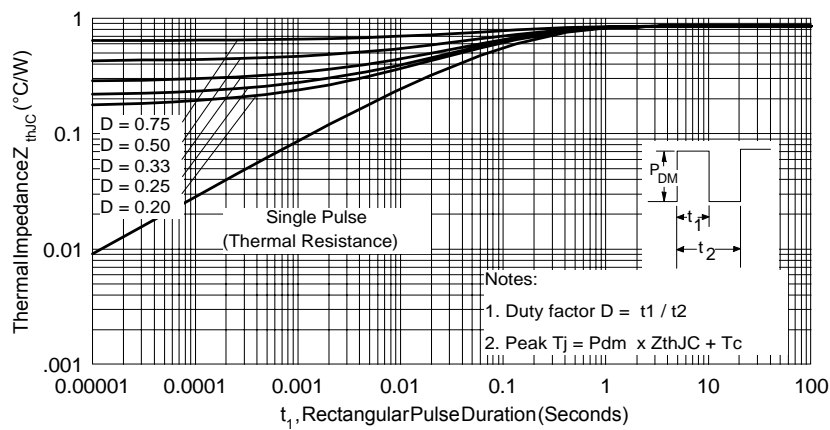


Fig. 4 - Max. Thermal Impedance  $Z_{thJC}$  Characteristics (Per Leg)

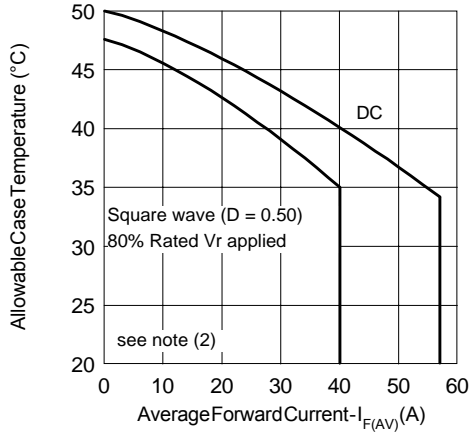


Fig. 5- Max. Allowable Case Temperature Vs. Average Forward Current (PerLeg)

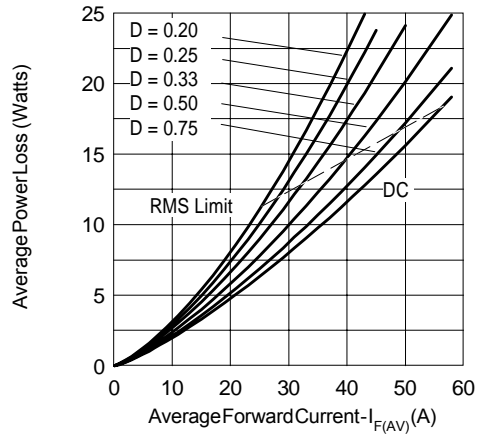


Fig. 6- Forward Power Loss Characteristics (PerLeg)

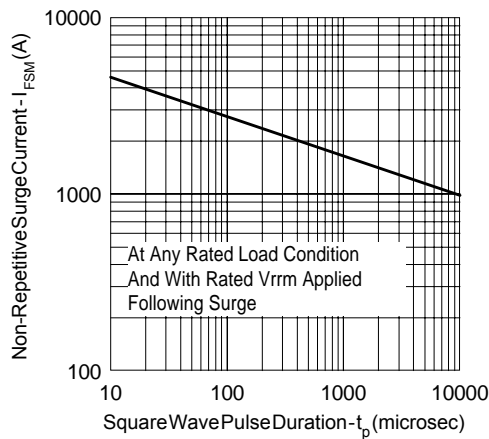


Fig. 7- Max. Non-Repitative Surge Current (PerLeg)

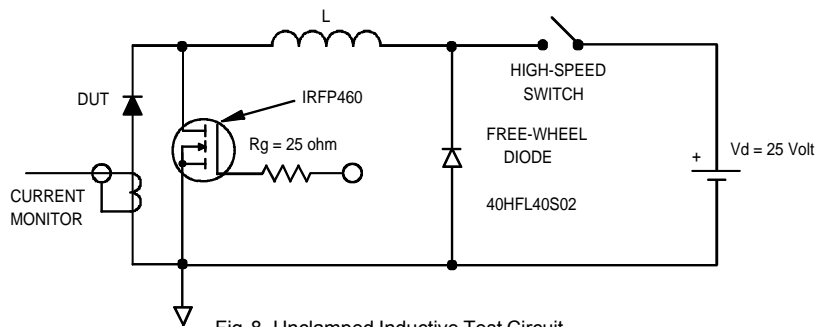


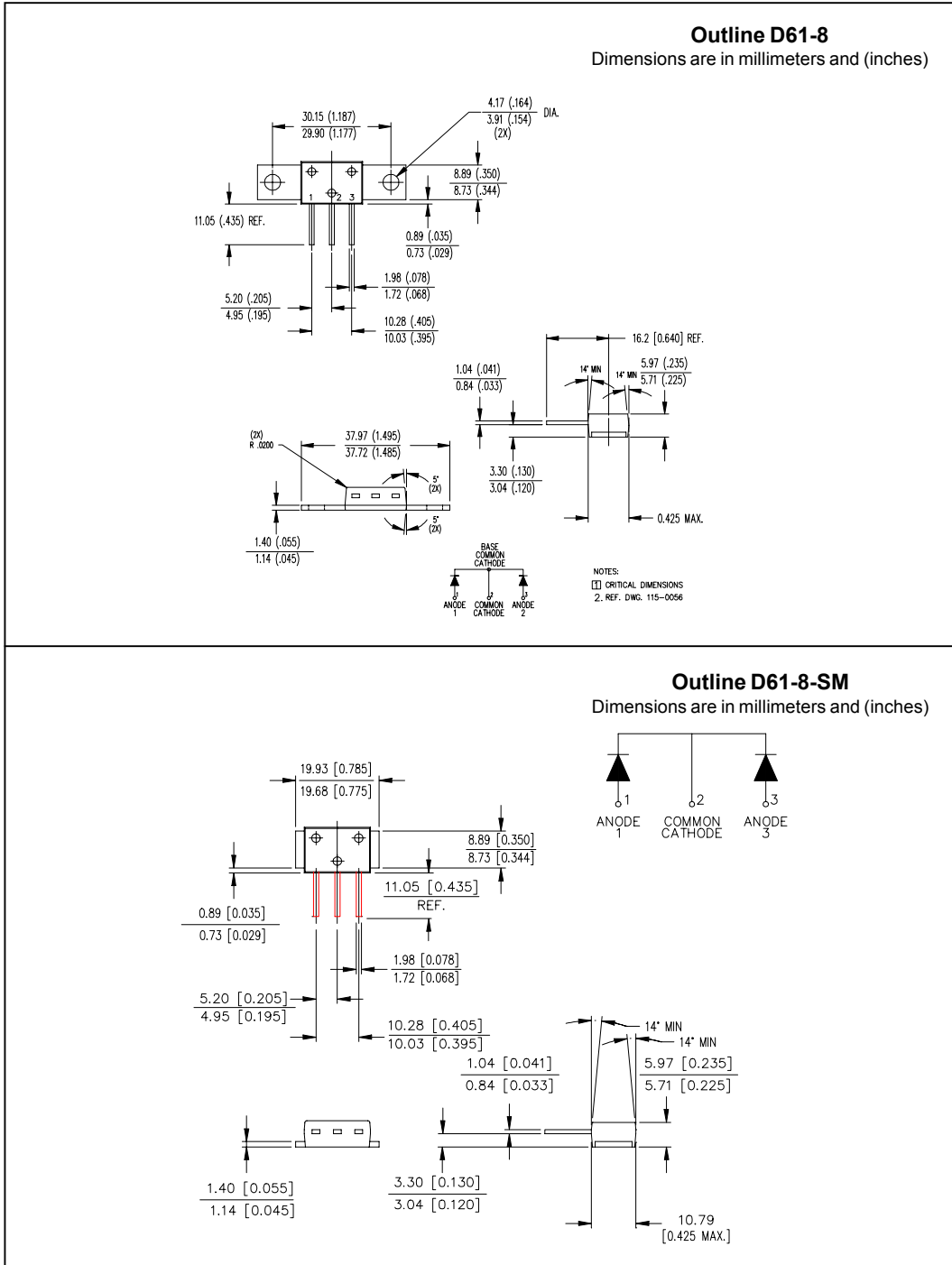
Fig. 8- Unclamped Inductive Test Circuit

(2) Formula used:  $T_c = T_j - (P_d + P_{d_{REV}}) \times R_{thJC}$ ;

$P_d$  = Forward Power Loss =  $I_{F(AV)} \times V_{FM} @ (I_{F(AV)} / D)$  (see Fig. 6);

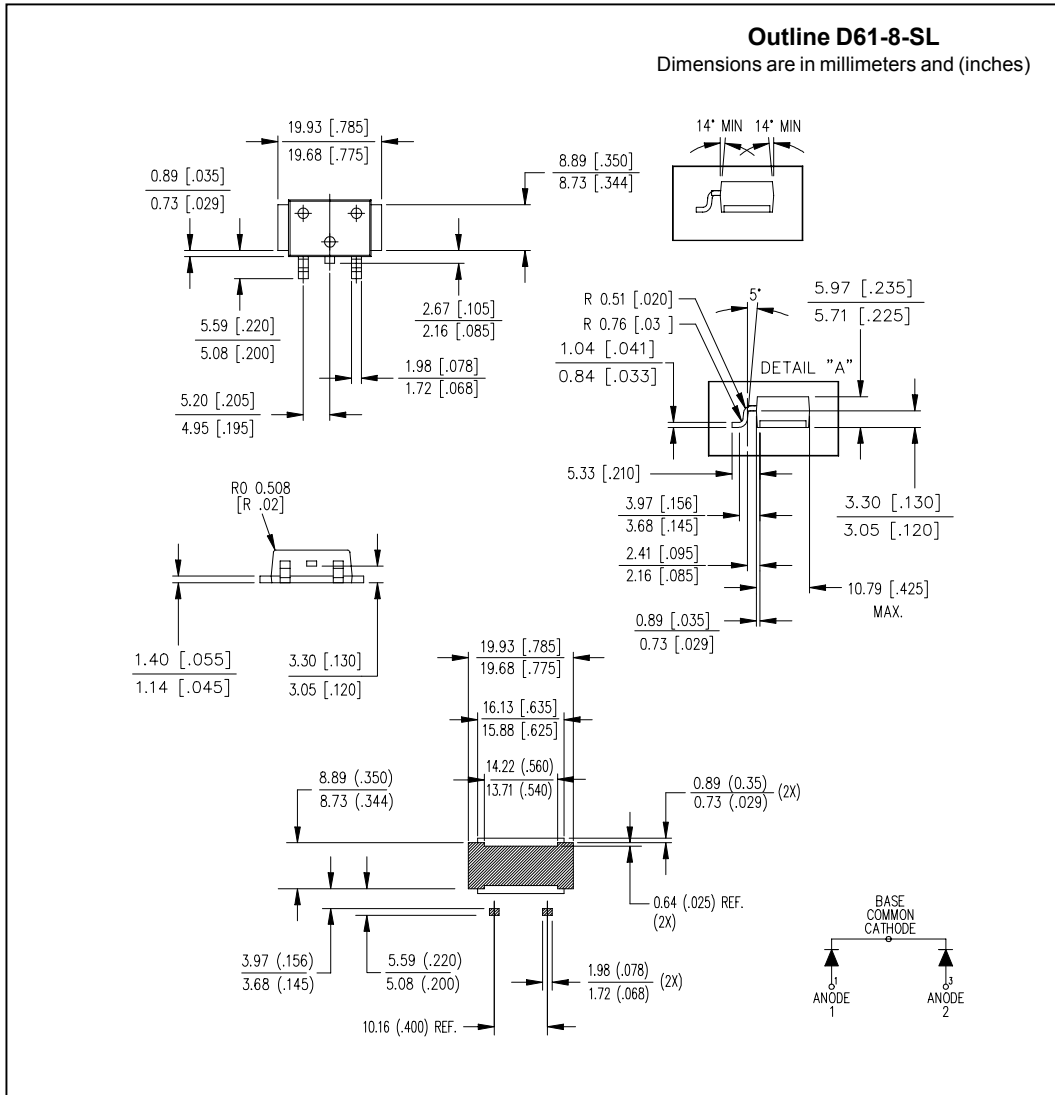
$P_{d_{REV}}$  = Inverse Power Loss =  $V_{R1} \times I_R (1 - D)$ ;  $I_R @ V_{R1} = 80\%$  rated  $V_R$

Outline Table



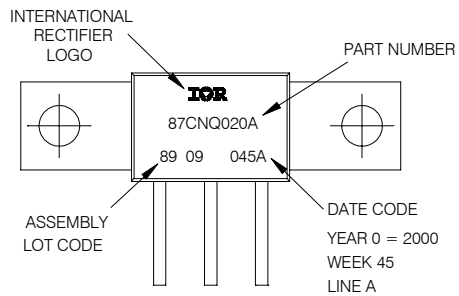
**Outline D61-8-SM**  
 Dimensions are in millimeters and (inches)

Outline Table



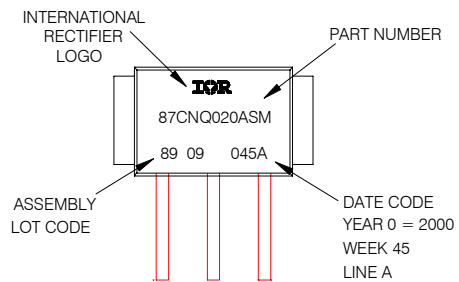
Part Marking Information

EXAMPLE: THIS IS A 87CNQ020A WITH  
 LOT CODE 89 09  
 ASSEMBLED ON WW 45, 2000  
 IN THE ASSEMBLY LINE "A"



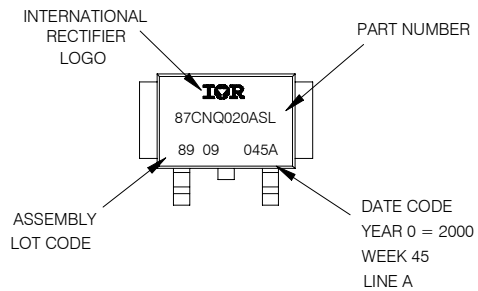
D61-8

EXAMPLE: THIS IS A 87CNQ020ASM WITH  
 LOT CODE 89 09  
 ASSEMBLED ON WW 45, 2000  
 IN THE ASSEMBLY LINE "A"



D61-8-SM

EXAMPLE: THIS IS A 87CNQ020ASL WITH  
 LOT CODE 89 09  
 ASSEMBLED ON WW 45, 2000  
 IN THE ASSEMBLY LINE "A"



D61-8-SL

87CNQ020A

Bulletin PD-20045 rev. A 09/01

International  
**IOR** Rectifier

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Data and specifications subject to change without notice.  
This product has been designed and qualified for Industrial Level.  
Qualification Standards can be found on IR's Web site.

International  
**IOR** Rectifier

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