

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load  
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
Maximum Voltage Rate of Change (Rated V <sub>R</sub> )	dv/dt	10,000	V/μs
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	V
Average Rectified Output Current	I <sub>O</sub>	3	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	45	A

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance	R <sub>θJS</sub>	5	°C/W
Thermal Resistance Junction to Soldering (Note 7)	R <sub>θJA</sub>	124	
Thermal Resistance Junction to Ambient (Note 8)	R <sub>θJC</sub>	14.3	
Thermal Resistance Junction to Case (Note 8)			
Power Dissipation (Note 8) @T <sub>A</sub> = +25°C	P <sub>D</sub>	1.2	W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 9)	V <sub>(BR)R</sub>	40	–	–	V	I <sub>R</sub> = 0.4mA
Forward Voltage Drop	V <sub>F</sub>	–	0.30	0.35	V	I <sub>F</sub> = 0.5A, T <sub>J</sub> = +25°C
			0.33	0.38		I <sub>F</sub> = 1.0A, T <sub>J</sub> = +25°C
			0.43	0.50		I <sub>F</sub> = 3.0A, T <sub>J</sub> = +25°C
			–	0.48		I <sub>F</sub> = 3.0A, T <sub>J</sub> = +125°C
Leakage Current (Note 9)	I <sub>R</sub>	–	45	250	μA	V <sub>R</sub> = 5V, T <sub>J</sub> = +25°C
			80	400	μA	V <sub>R</sub> = 40V, T <sub>J</sub> = +25°C
			9	40	mA	V <sub>R</sub> = 40V, T <sub>J</sub> = +125°C

- Notes:
7. Theoretical R<sub>θJS</sub> calculated from the top center of the die straight down to the PCB cathode tab solder junction.
  8. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/package-outlines.html>.
  9. Short duration pulse test used to minimize self-heating effect.
  10. FR-4 PCB, 2 oz. Copper, single side 16 x MRP, 1" x 1" PC Board.

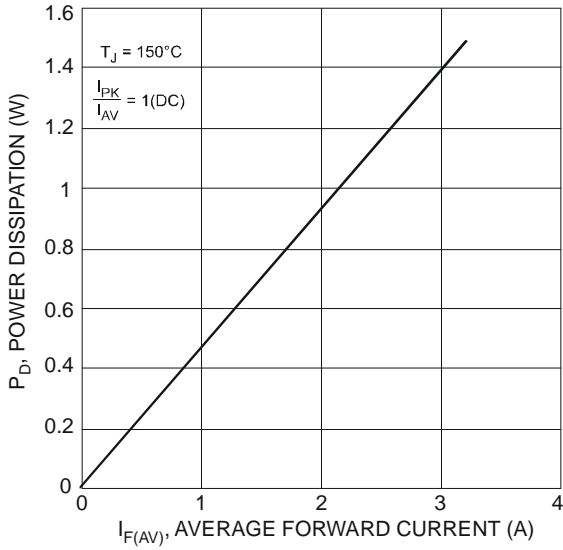


Fig. 1 Forward Power Dissipation

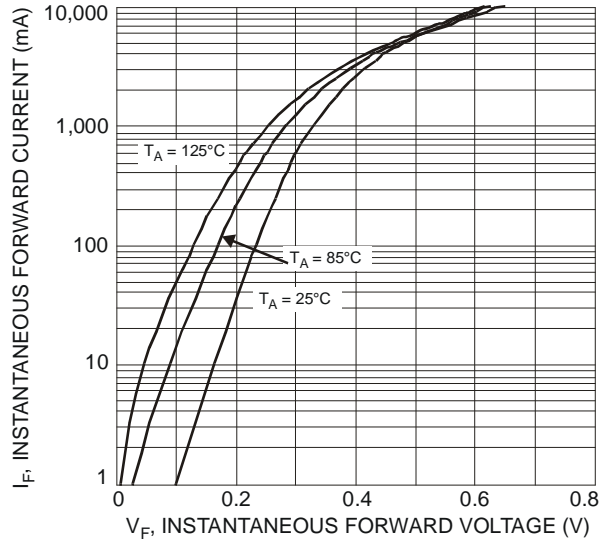


Fig. 2 Typical Forward Characteristics

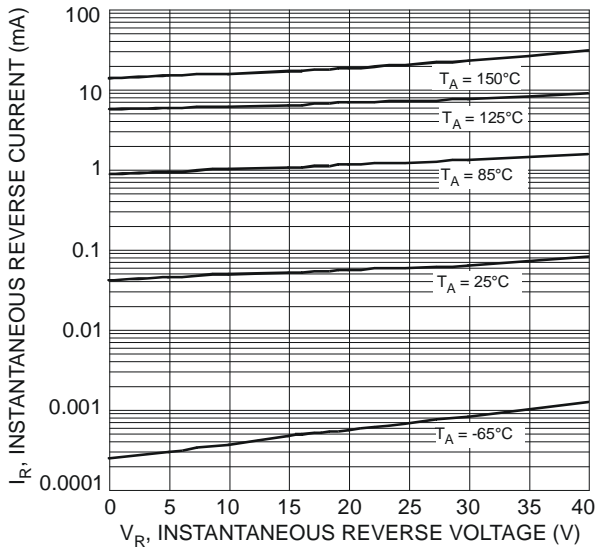


Fig. 3 Typical Reverse Characteristics

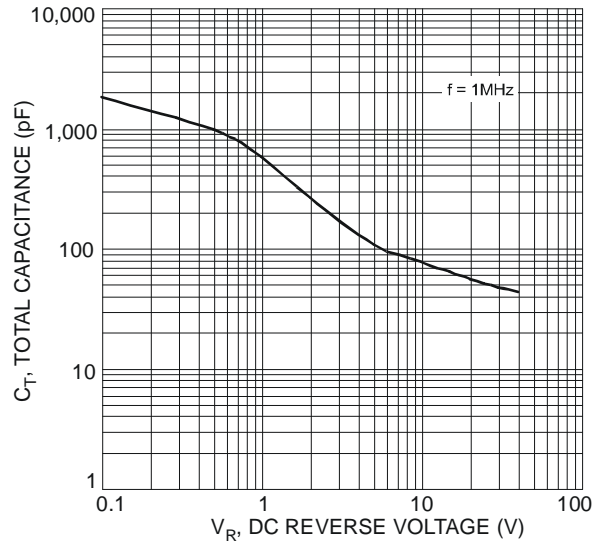


Fig. 4 Total Capacitance vs. Reverse Voltage

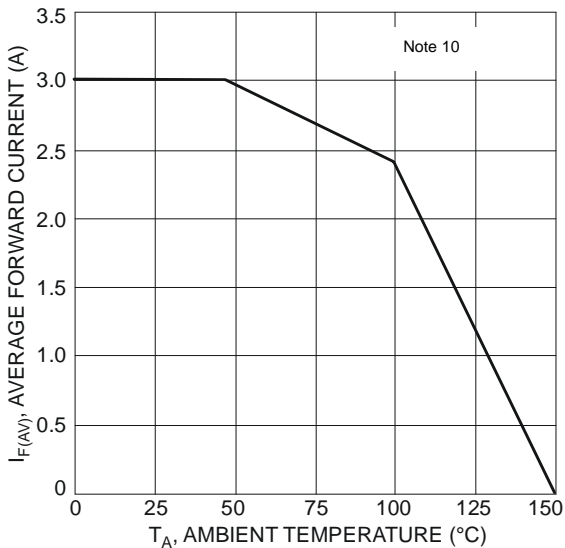


Fig. 5 Forward Current Derating Curve

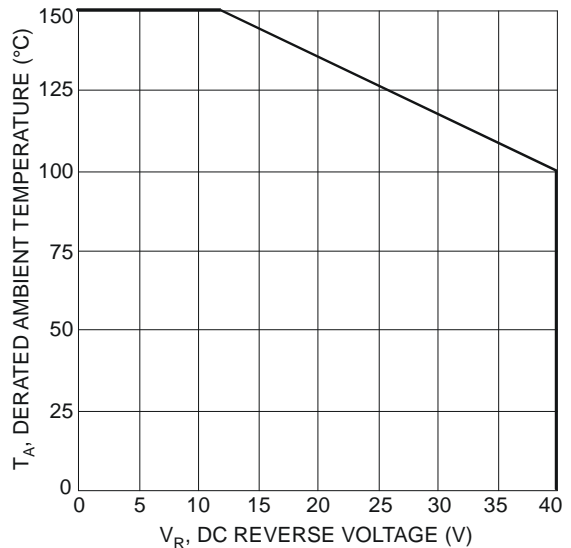
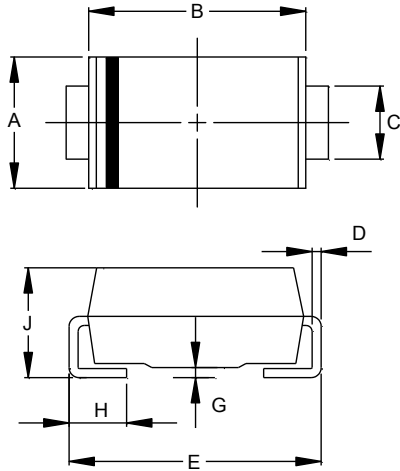


Fig. 6 Operating Temperature Derating

## Package Outline Dimensions

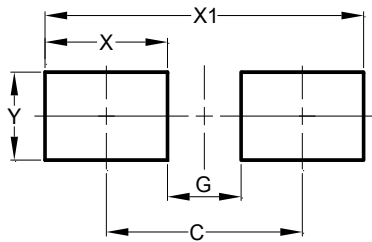
Please see <http://www.diodes.com/package-outlines.html> for the latest version.



SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.05	0.20
H	0.76	1.52
J	1.96	2.40
All Dimensions in mm		

## Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.



Dimensions	Value (in mm)
C	4.00
G	1.50
X	2.50
X1	6.50
Y	1.70

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