

## 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>	20	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	V
Average Rectified Output Current (See Figure 1)	I <sub>O</sub>	0.2	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	5.0	A

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance	R <sub>θJS</sub>	17	°C/W
Thermal Resistance Junction to Soldering (Note 5)	R <sub>θJA</sub>	304	
Thermal Resistance Junction to Ambient (Note 6)			
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 7)	V <sub>(BR)R</sub>	20	-	-	V	I <sub>R</sub> = 400μA
Forward Voltage Drop	V <sub>F</sub>	-	0.38	0.42	V	I <sub>F</sub> = 0.1A, T <sub>J</sub> = +25°C
			0.30	0.33		I <sub>F</sub> = 0.1A, T <sub>J</sub> = +150°C
			0.44	0.48		I <sub>F</sub> = 0.2A, T <sub>J</sub> = +25°C
			0.38	0.41		I <sub>F</sub> = 0.2A, T <sub>J</sub> = +150°C
Leakage Current (Note 7)	I <sub>R</sub>	-	2	50	μA	V <sub>R</sub> = 20V, T <sub>J</sub> = +25°C
			0.43	1.3	mA	V <sub>R</sub> = 20V, T <sub>J</sub> = +150°C

Notes: 5. Theoretical R<sub>θJS</sub> calculated from the top center of the die straight down to the PCB cathode tab solder junction.  
6. FR-4 PCB, 2oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>.  
7. Short duration pulse test used to minimize self-heating effect.

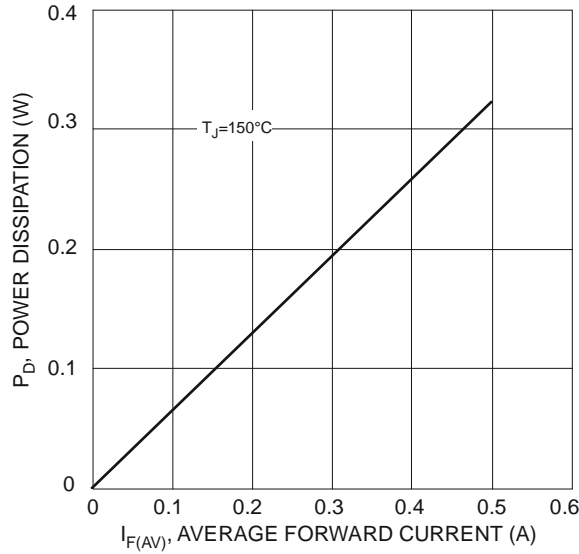


Fig. 1 Forward Power Dissipation

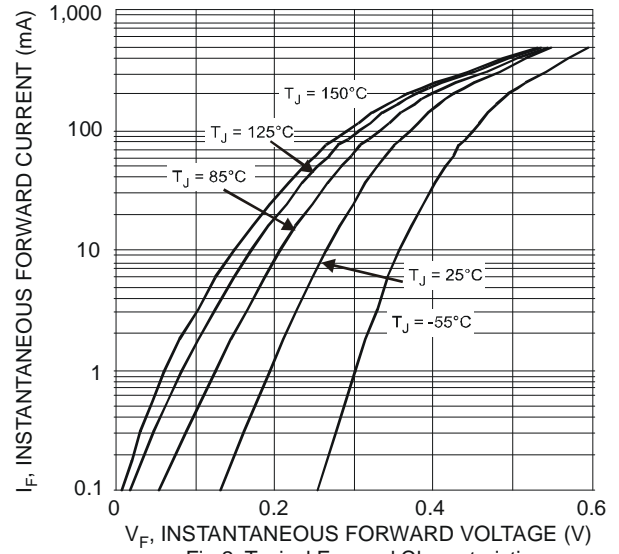


Fig. 2 Typical Forward Characteristics

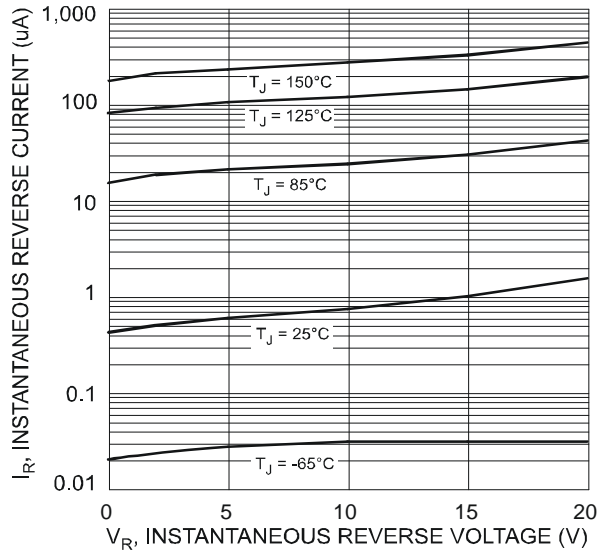


Fig. 3 Typical Reverse Characteristics

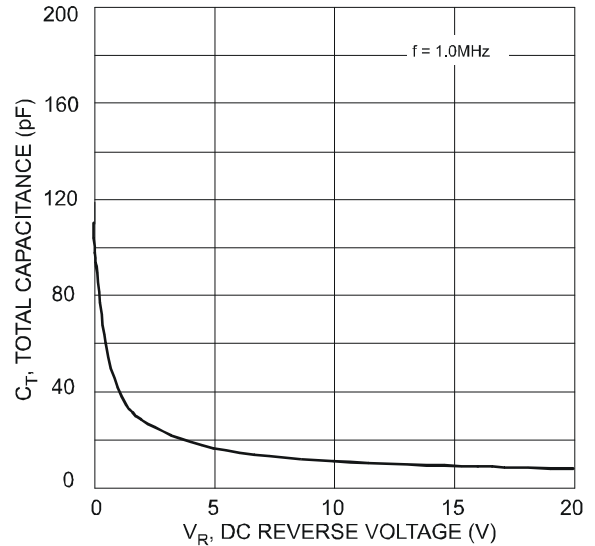


Fig. 4 Total Capacitance vs. Reverse Voltage

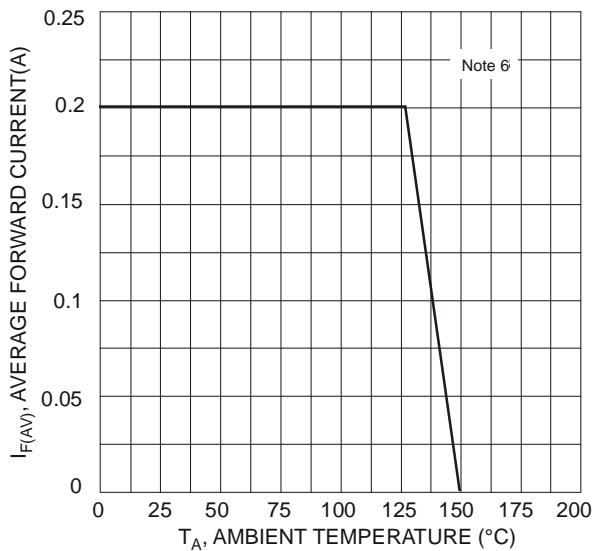


Fig. 5 Forward Current Derating Curve

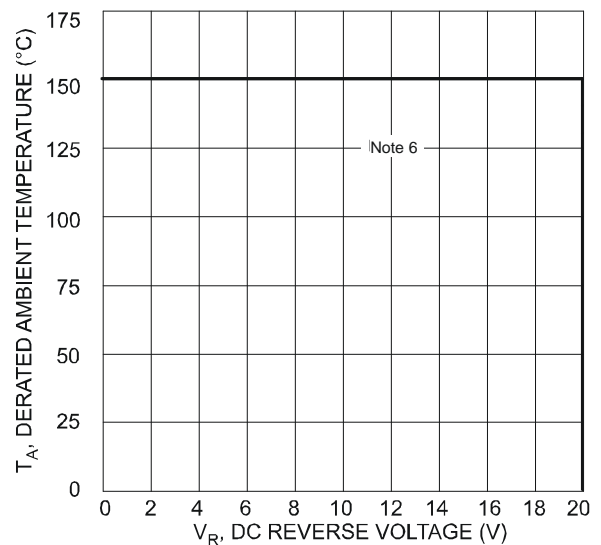
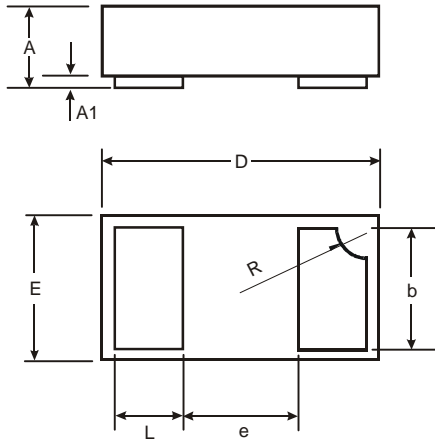


Fig. 6 Operating Temperature Derating

## Package Outline Dimensions

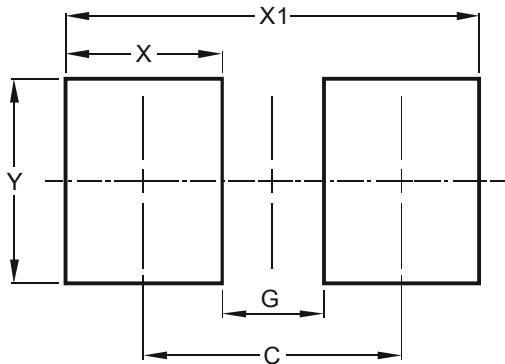
Please see AP02001 at [http://www.diodes.com/\\_files/datasheets/ap02001.pdf](http://www.diodes.com/_files/datasheets/ap02001.pdf) for the latest version.



X1-DFN1006-2			
Dim	Min	Max	Typ
A	0.47	0.53	0.50
A1	0	0.05	0.03
b	0.45	0.55	0.50
D	0.95	1.075	1.00
E	0.55	0.675	0.60
e	-	-	0.40
L	0.20	0.30	0.25
R	0.05	0.15	0.10
All Dimensions in mm			

## Suggested Pad Layout

Please see AP02001 at [http://www.diodes.com/\\_files/datasheets/ap02001.pdf](http://www.diodes.com/_files/datasheets/ap02001.pdf) for the latest version.



Dimensions	Value (in mm)
C	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

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