

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

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Current	I <sub>PP</sub>	1.5	A	8/20μs, Per Figure 3
ESD Protection – Contact Discharge	V <sub>ESD Contact</sub>	±15	kV	Standard IEC 61000-4-2
ESD Protection – Air Discharge	V <sub>ESD Air</sub>	±20	kV	Standard IEC 61000-4-2

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	P <sub>D</sub>	250	mW
Thermal Resistance, Junction to Ambient (Note 5)	R <sub>θJA</sub>	500	°C/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 Conditions
Reverse Working Voltage	V <sub>RWM</sub>	—	—	5.5	V	—
Reverse Current (Note 6)	I <sub>R</sub>	—	—	100	nA	V <sub>R</sub> = 5.0V
Reverse Breakdown Voltage	V <sub>BR</sub>	6.0	—	—	V	I <sub>R</sub> = 1mA
Reverse Clamping Voltage, Positive Transients (Note 7)	V <sub>CL</sub>	—	10	12	V	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs
Dynamic Resistance	R <sub>DYN</sub>	—	0.9	—	Ω	I <sub>R</sub> = 1A, t <sub>p</sub> = 8/20μs
Capacitance (Note 8)	C <sub>T</sub>	—	0.4	0.65	pF	V <sub>R</sub> = 2.5V, f = 1MHz
		—	0.5	—	pF	V <sub>R</sub> = 0V, f = 1MHz

- Notes:
- Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at <http://www.diodes.com>.
  - Short duration pulse test used to minimize self-heating effect.
  - Clamping voltage value is based on an 8x20μs peak pulse current (I<sub>PP</sub>) waveform.
  - Measured from any I/O to GND.
  - For information on the impact of Diodes' USB 2.0 compatible ESD protectors on signal integrity including eye diagram plots, please refer to AN77 at the following URL: [http://www.diodes.com/destdtools/appnote\\_dnote.html](http://www.diodes.com/destdtools/appnote_dnote.html).

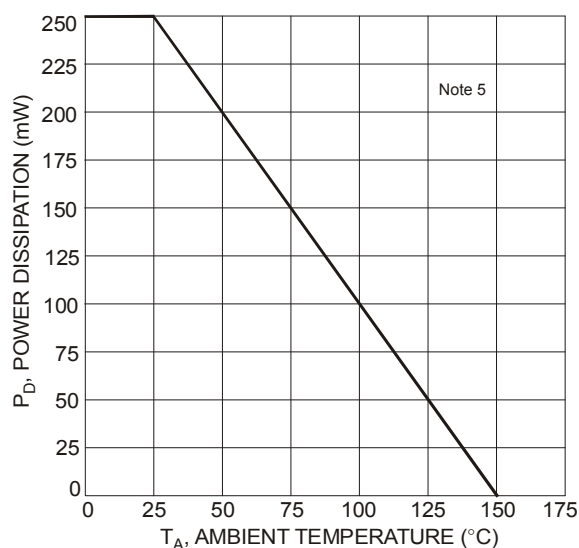


Figure 1 Power Derating Curve

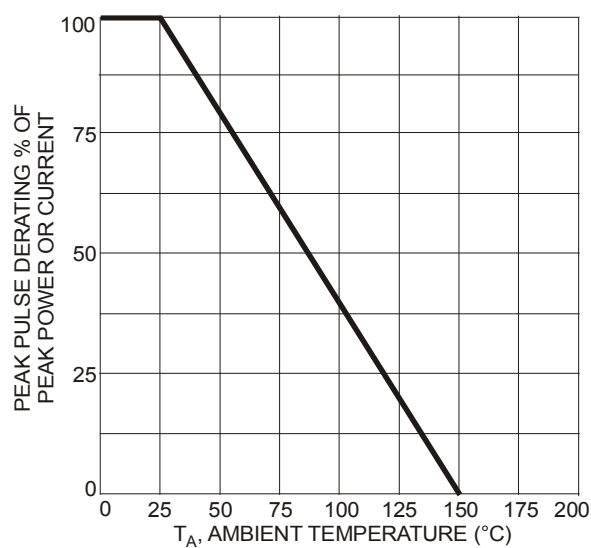


Figure 2 Pulse Derating Curve

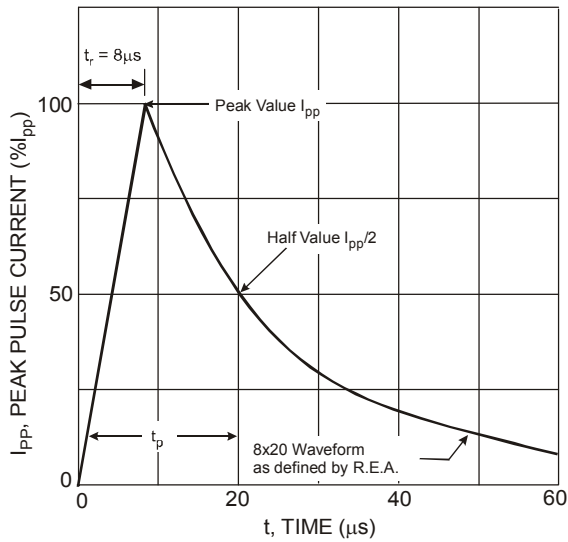


Figure 3 Pulse Waveform

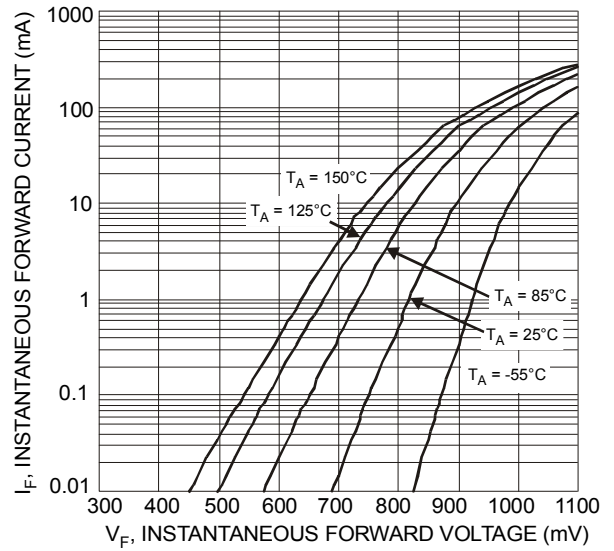


Figure 4 Typical Forward Characteristics

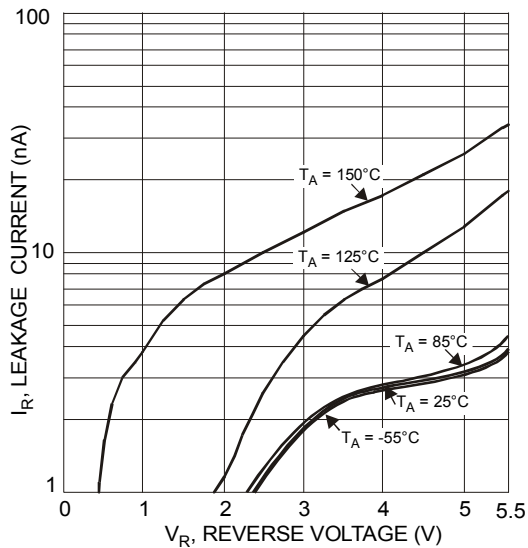


Figure 5 Typical Reverse Characteristics

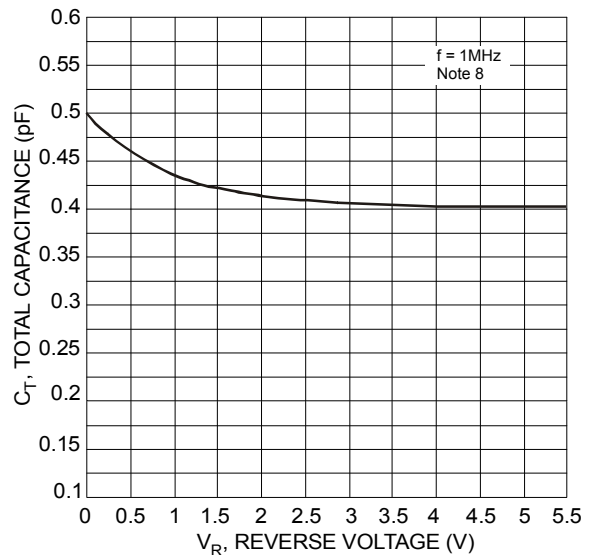
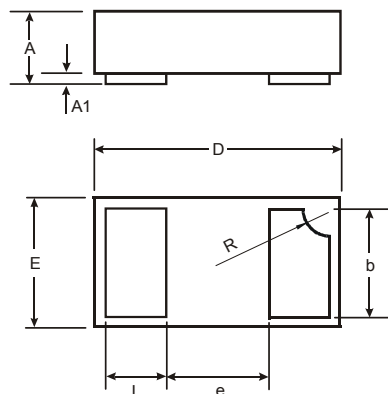


Figure 6 Total Capacitance vs. Reverse Voltage

## Package Outline Dimensions

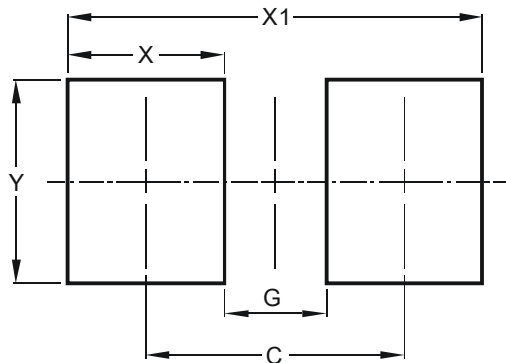
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



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/datasheets/ap02001.pdf> for the latest version.



Dimensions	Value (in mm)
<b>C</b>	0.70
<b>G</b>	0.30
<b>X</b>	0.40
<b>X1</b>	1.10
<b>Y</b>	0.70

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