Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P_{PP}	150	W	8/20µs
Peak Pulse Current	I_{PP}	9	A	8/20µs
ESD Protection – Contact Discharge	$V_{ESD\_Contact}$	±30	kV	IEC 61000-4-2 Standard
ESD Protection – Air Discharge	V_{ESD_Air}	±30	kV	IEC 61000-4-2 Standard

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	P_D	250	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Breakdown Voltage	V_{BR}	11	13	17	V	I_R = 1mA, pin1 to pin2
		5.8	8	11		I_R = 1mA, pin2 to pin1
Reverse Current (Note 6)	I_R	—	—	25	nA	V_R = 5V
Dynamic Resistance, from Pin 1 to Pin 2	R_{DYN}	—	0.19	—	Ω	I_{TLP} = 1A to 20A, t_P = 100ns
Dynamic Resistance, from Pin 2 to Pin 1	R_{DYN}	—	0.19	—	Ω	I_{TLP} = 1A to 20A, t_P = 100ns
Capacitance	C_T	—	26	30	pF	V_R = 0V, f = 1MHz
Clamping Voltage, from Pin 1 to Pin 2	V_{CL}	—	21	—	V	8kV contact discharge after 30ns IEC61000-4-2
Clamping Voltage, from Pin 2 to Pin 1	V_{CL}	—	12	—	V	8kV contact discharge after 30ns IEC61000-4-2

Notes:
5. 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.
6. Short duration pulse test used to minimize self-heating effect.

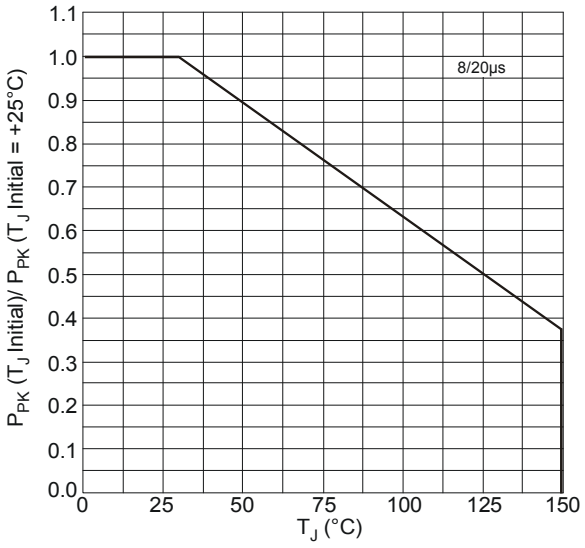


Figure 1 Normalized Peak Pulse Power vs. Initial Junction Temperature

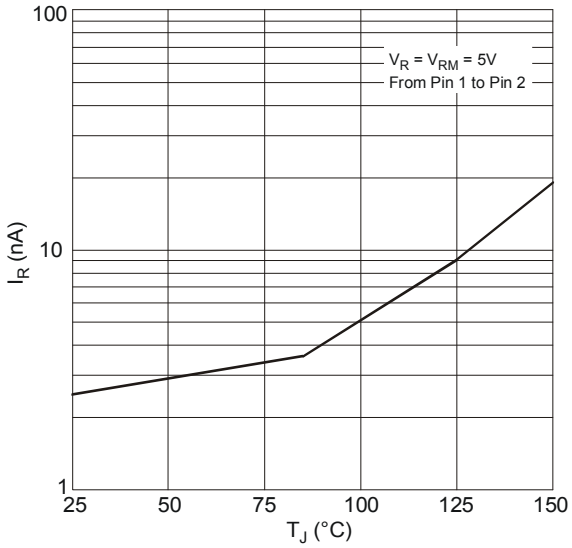


Figure 2 Leakage Current vs. Junction Temperature (Typical Values)

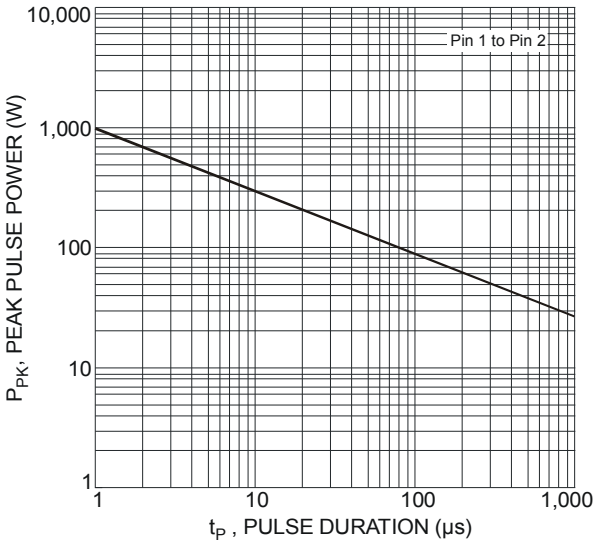


Figure 3 Peak Pulse Power vs. Pulse Duration

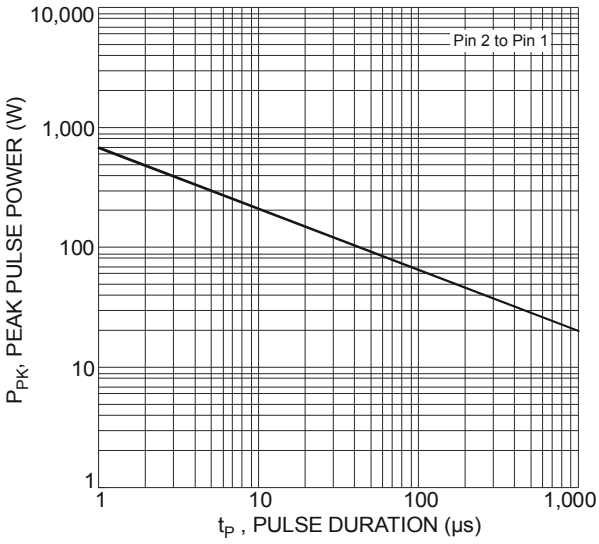


Figure 4 Peak Pulse Power vs. Pulse Duration

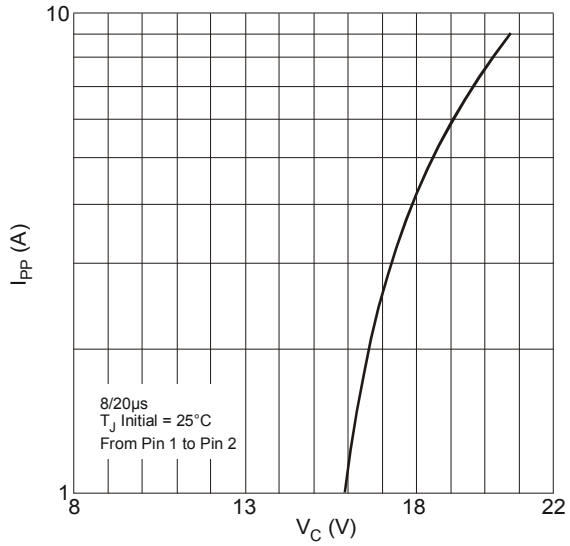


Figure 5 Clamping Voltage vs. Peak Pulse Current
(Typical Values)

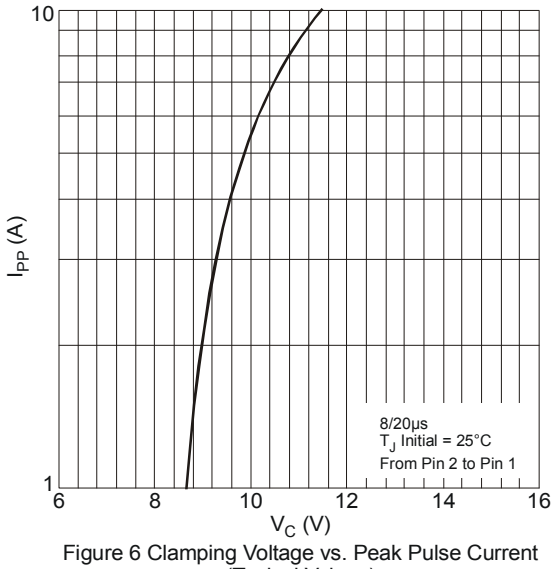


Figure 6 Clamping Voltage vs. Peak Pulse Current
(Typical Values)

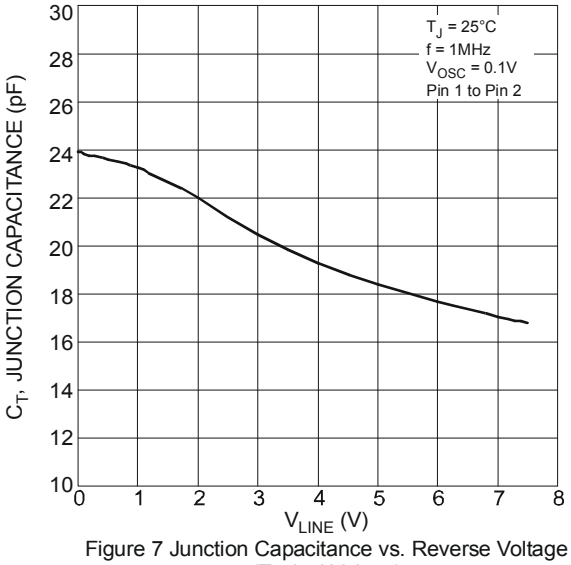


Figure 7 Junction Capacitance vs. Reverse Voltage
(Typical Values)

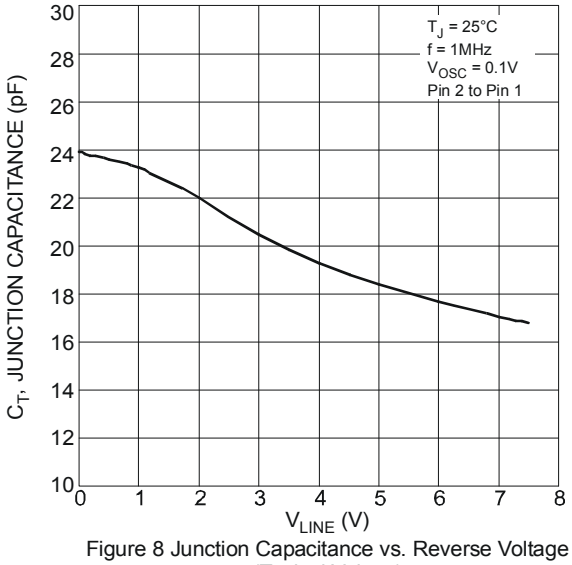


Figure 8 Junction Capacitance vs. Reverse Voltage
(Typical Values)

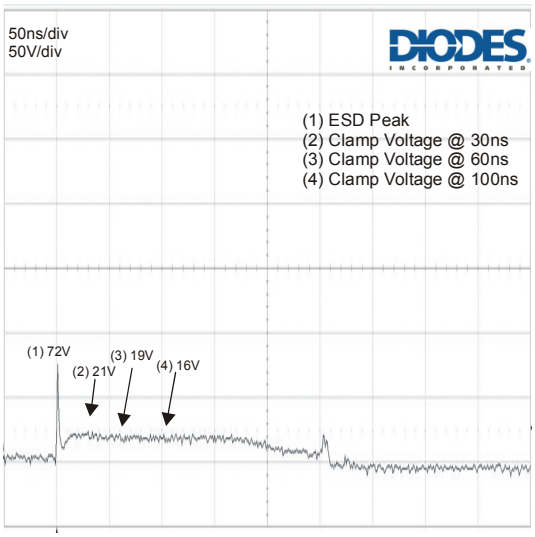


Figure 9 ESD Response to IEC 6100-4-2
(+8kV Contact Discharge)

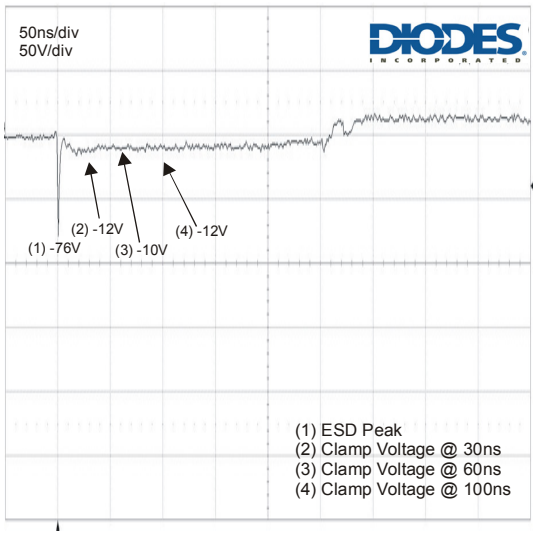


Figure 10 ESD Response to IEC 6100-4-2
(-8kV Contact Discharge)

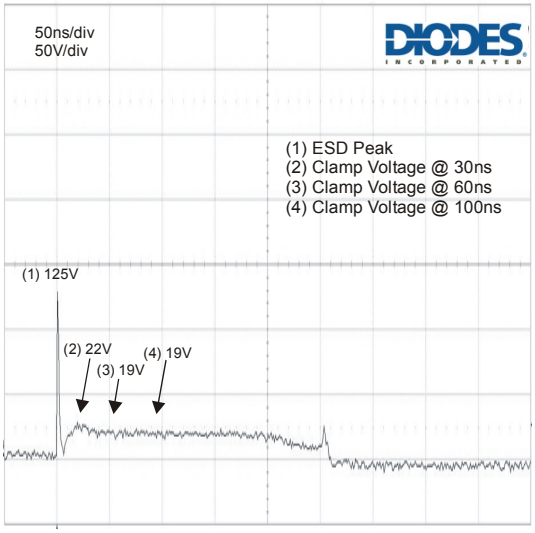


Figure 11 ESD Response to IEC 6100-4-2
(+15kV Contact Discharge)

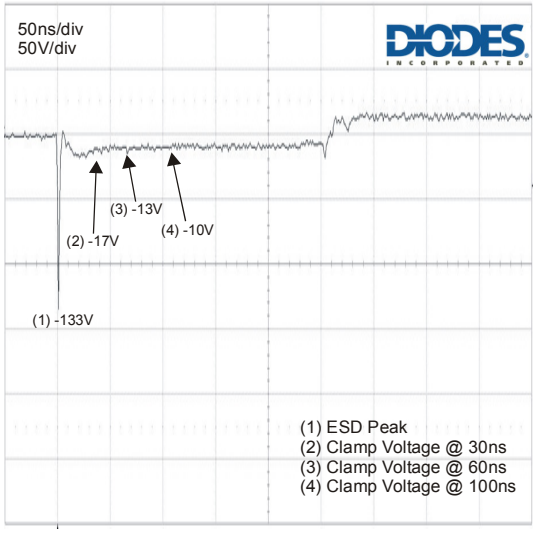


Figure 12 ESD Response to IEC 6100-4-2
(-15kV Contact Discharge)

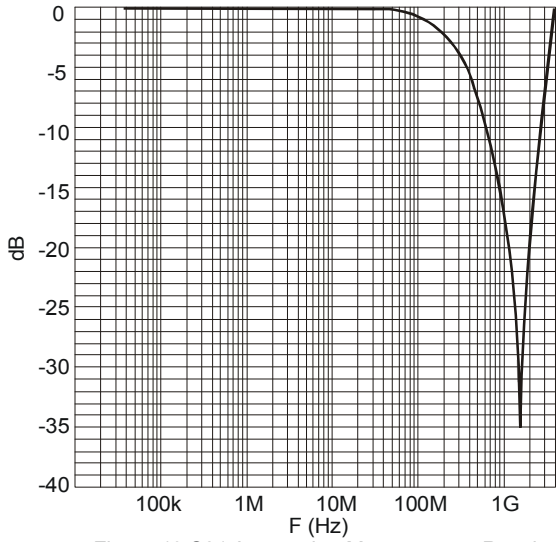


Figure 13 S21 Attenuation Measurement Result

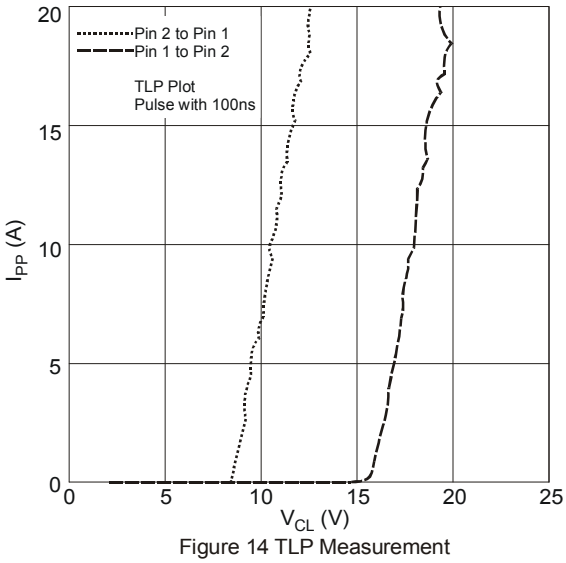
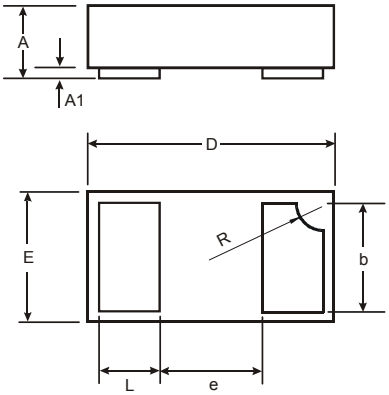


Figure 14 TLP Measurement

Package Outline Dimensions

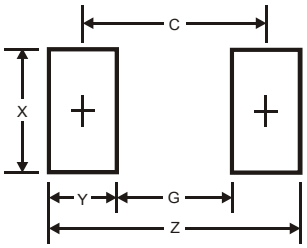
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



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 latest version.



Dimensions	Value (in mm)
Z	1.1
G	0.3
X	0.7
Y	0.4
C	0.7

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