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

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P_{PP}	84	W	8/20µs, Per Fig. 1
Peak Pulse Current	I_{PP}	6	A	8/20µs, Per Fig. 1
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 Standoff Voltage	V_{RWM}	—	—	5	V	—
Channel Leakage Current (Note 6)	I_{RM}	—	10	100	nA	V_{RWM} = 5V
Clamping Voltage, Positive Transients	V_{CL}	—	7.0	9.0	V	I_{PP} = 1A, t_p = 8/20µS
		—	8.7	10.7		I_{PP} = 3A, t_p = 8/20µS
		—	10.5	12.0		I_{PP} = 5A, t_p = 8/20µS
		—	11.5	14.0		I_{PP} = 6A, t_p = 8/20µS
Breakdown Voltage	V_{BR}	6	7	8	V	I_R = 1mA
Differential Resistance	R_{DIF}	—	0.2	—	Ω	I_R = 1A, t_p = 8/20µS
Channel Input Capacitance	C_{IN}	—	15	20	pF	V_R = 0V, f = 1MHz

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.

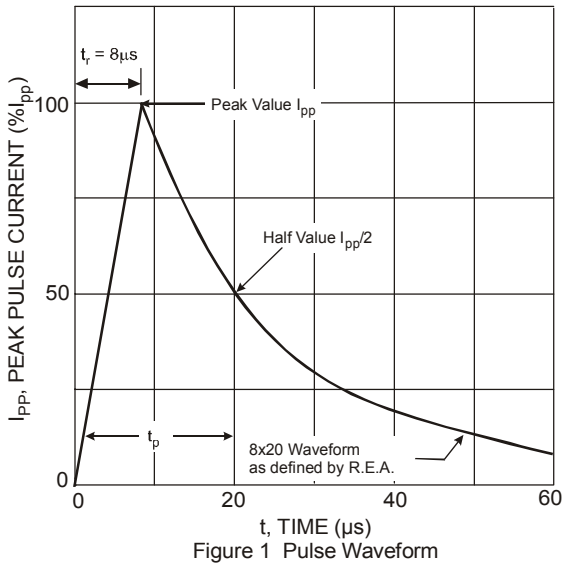


Figure 1 Pulse Waveform

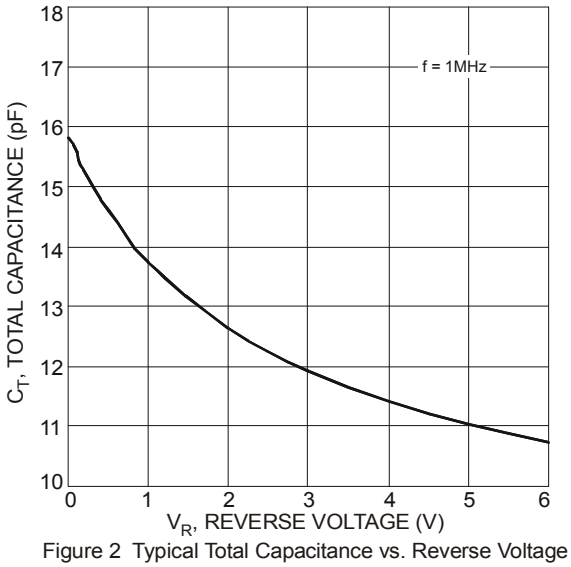


Figure 2 Typical Total Capacitance vs. Reverse Voltage

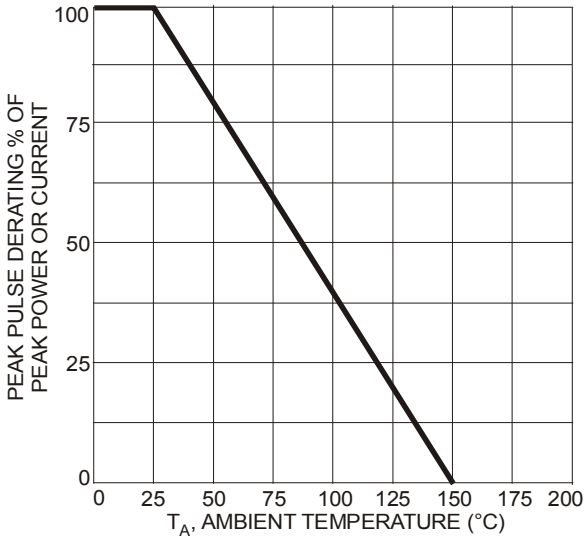


Figure 3 Pulse Derating Curve

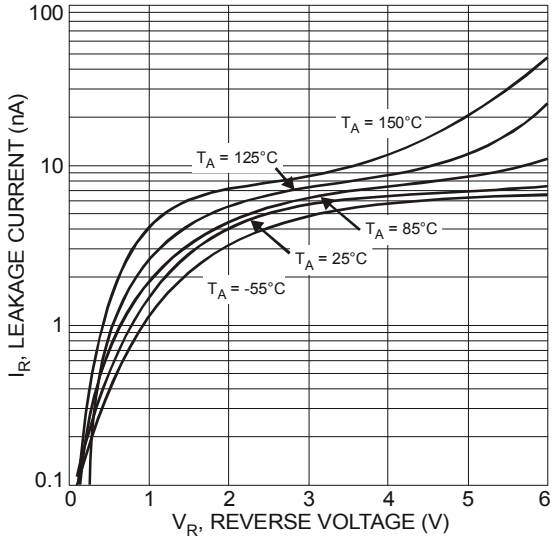


Figure 4 Typical Reverse Characteristics

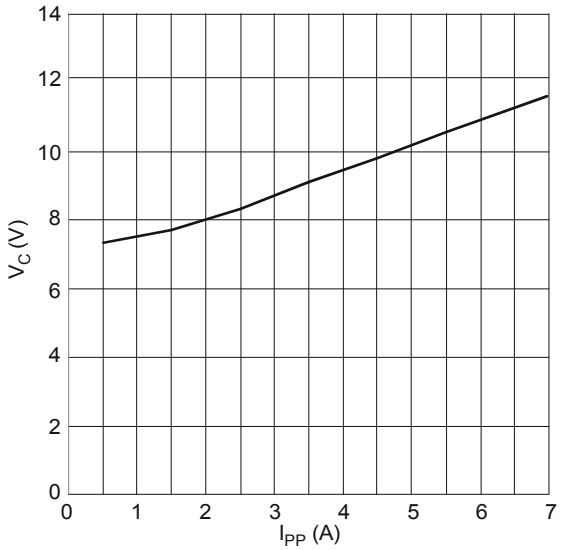


Figure 5 Typical Peak Clamping Voltage V_C vs. Peak Pulse Current I_{PP}

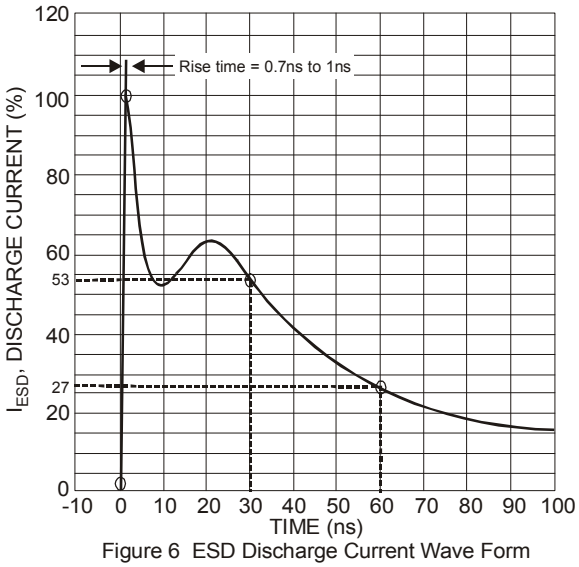


Figure 6 ESD Discharge Current Wave Form IEC 6100-4-2 (330Ω/150pF)

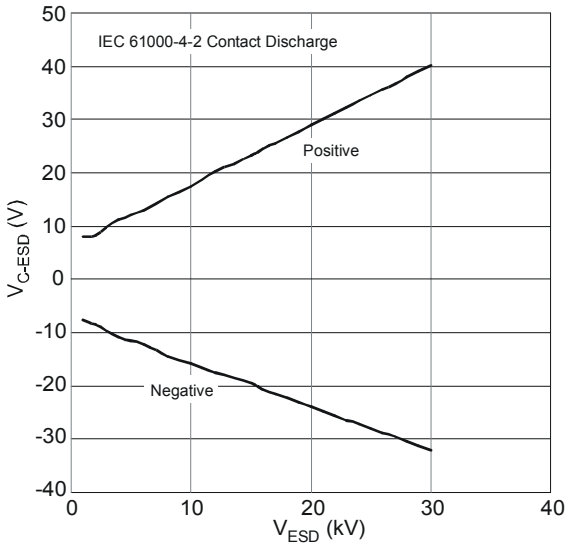


Figure 7 Typical Clamping Voltage vs. Contact Discharge Voltage

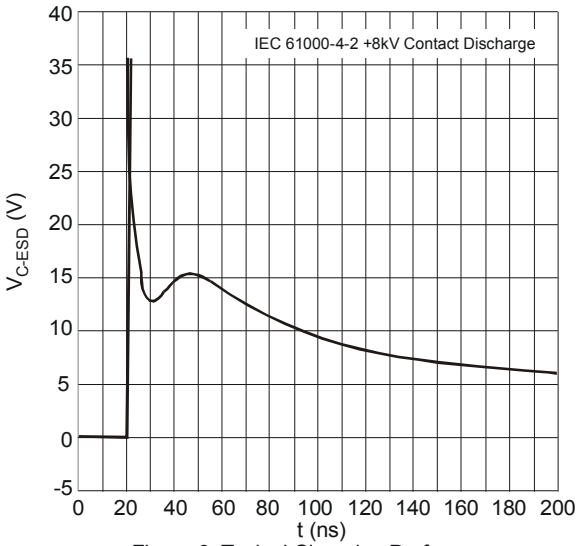


Figure 8 Typical Clamping Performance @ 8kV Contact Discharge

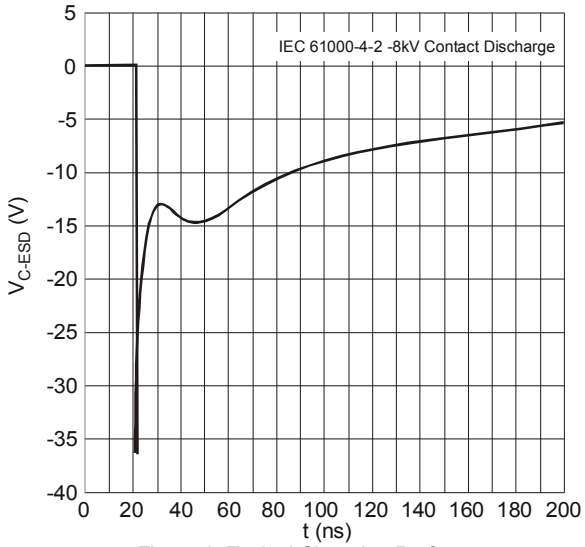
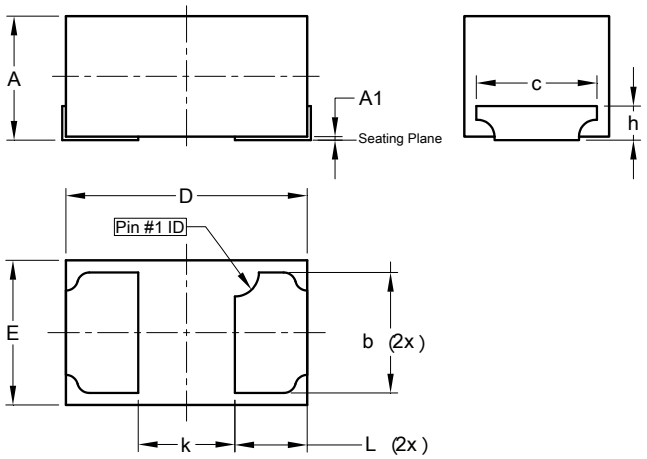


Figure 9 Typical Clamping Performance @ -8kV Contact Discharge

Package Outline Dimensions

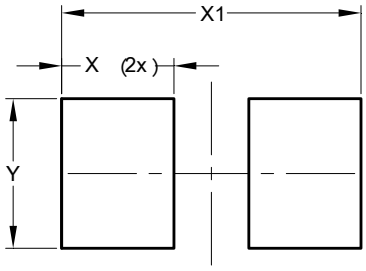
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for the latest version.



U-DFN1006-2/SWP			
Dim	**Min**	**Max**	**Typ**
A	0.47	0.53	0.50
A1	0.0	0.05	0.03
b	0.45	0.55	0.50
c	0.55 REF		
D	0.95	1.05	1.00
E	0.55	0.65	0.60
h	0.17 REF		
k	0.37 REF		
L	0.25	0.35	0.30
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)
X	0.45
X1	1.20
Y	0.60

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