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

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Current, per IEC 61000-4-5	I_{PP}	±10	A	I/O to V_{SS}, 8/20 µs
Peak Pulse Power, per IEC 61000-4-5	P_{PP}	105	W	I/O to V_{SS}, 8/20 µs
Operating Voltage (DC)	V_{DC}	5.5	V	I/O to V_{SS}
ESD Protection – Contact Discharge, per IEC61000-4-2	$V_{ESD\_contact}$	±30	kV	I/O to V_{SS}
ESD Protection – Air Discharge, per IEC 61000-4-2	V_{ESD_air}	±30	kV	I/O to V_{SS}
Operating Temperature	T_{OP}	-55 to +85	°C	___
Storage Temperature	T_{STG}	-55 to +150	°C	___

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation Typical (Note 5)	P_D	300	mW
Thermal Resistance, Junction to Ambient Typical (Note 5)	$R_{\theta JA}$	417	°C/W

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Working Voltage	V_{RWM}	___	___	5.5	V	I/O to V_{SS}
Reverse Current(Note6)	I_R	___	___	1	µA	V_R = 5V, any I/O to V_{SS}
Reverse Breakdown Voltage	V_{BR}	6	___	9	V	I_R = 1mA, I/O to V_{SS}
Forward Clamping Voltage	V_F	-1.0	-0.8	___	V	I_F = -15mA, I/O to V_{SS}
Holding Voltage	V_H	5.5	___	___	V	___
Trigger Voltage	V_{TRIG}	___	9	9.5	V	___
Reverse Clamping Voltage (Note 7)	V_{C_5A}	___	7.5	___	V	I_{PP} = 5A, I/O to V_{SS}, 8/20 µs
Reverse Clamping Voltage (Note 7)	V_{C_10A}	___	9	10.5	V	I_{PP} = 10A, I/O to V_{SS}, 8/20 µs
ESD Clamping Voltage	V_{ESD}	___	9	___	V	TLP, 10A, tp = 100 ns, I/O to V_{SS}, per Fig. 7
Dynamic Resistance	R_{DIF}	___	0.25	___	Ω	TLP, 10A, tp = 100 ns, I/O to V_{SS}
Channel Input Capacitance	$C_{I/O}$	___	1.2	1.5	pF	V_R = 2.5V, f = 1MHz
Variation of Channel Input Capacitance	$\Delta C_{I/O}$	___	0.02	___	pF	Vss = 0V,I/O = 2.5V, f =1MHz, T=25°C , I/O_x to V_{SS} – I/O_y to V_{SS}

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.
7. Clamping voltage value is based on an 8x20µs peak pulse current (I_{pp}) waveform.

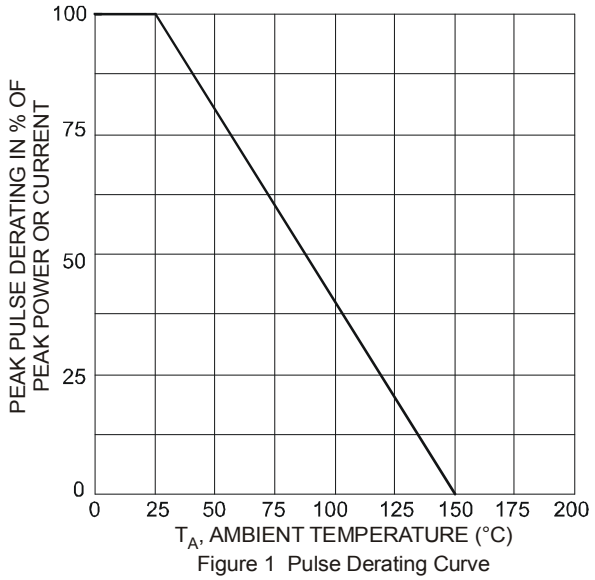


Figure 1 Pulse Derating Curve

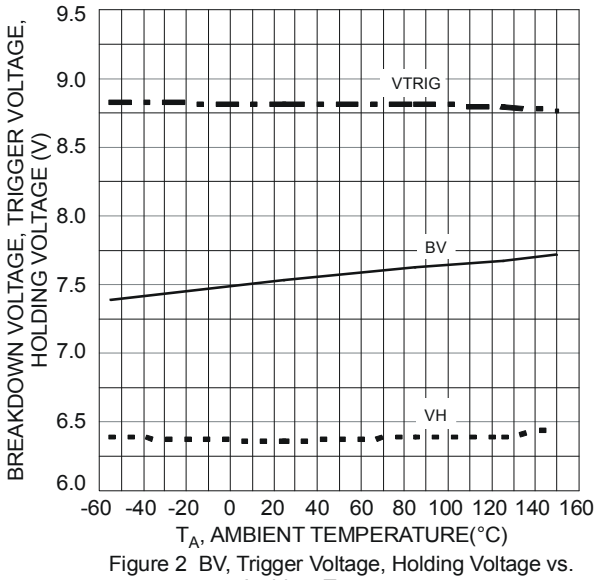


Figure 2 BV, Trigger Voltage, Holding Voltage vs. Ambient Temperature

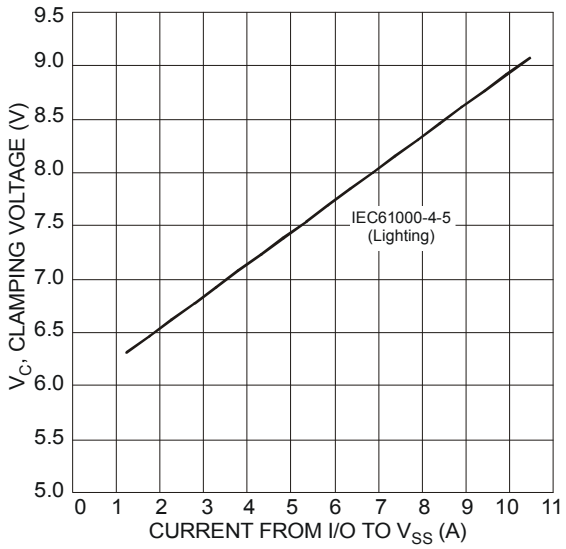


Figure 3 Clamping Voltage Characteristic

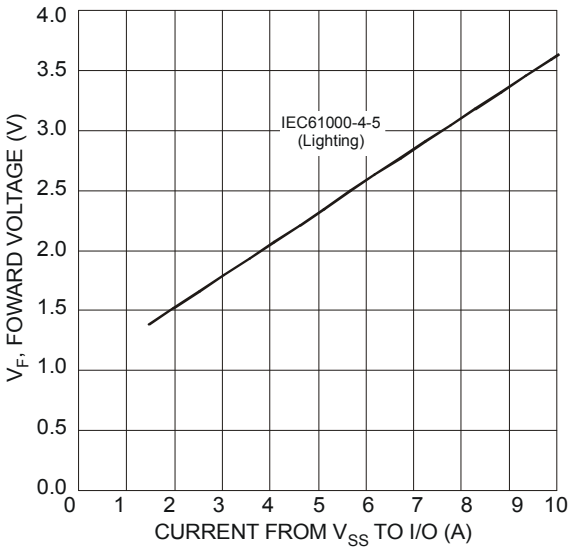


Figure 4 Forward Voltage Characteristic

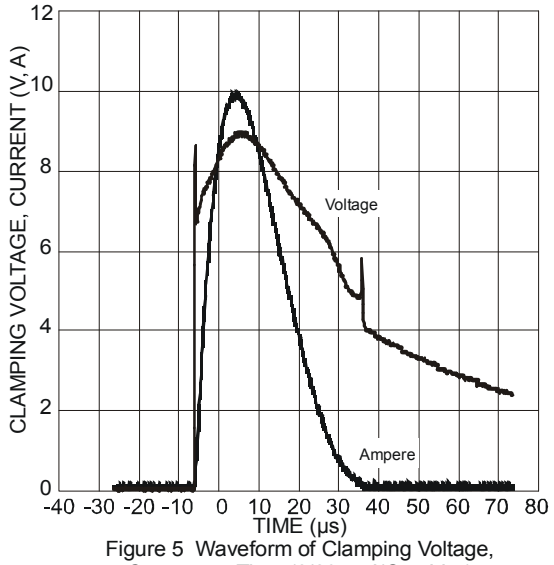


Figure 5 Waveform of Clamping Voltage, Current vs. Time (8/20µs, I/O to V_{SS})

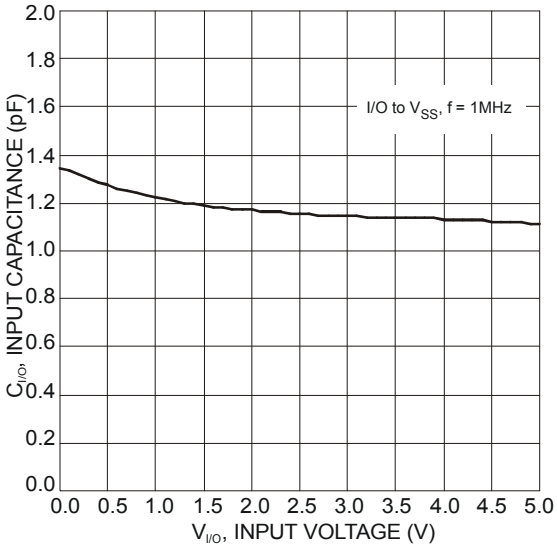


Figure 6 Input Capacitance vs. Input Voltage

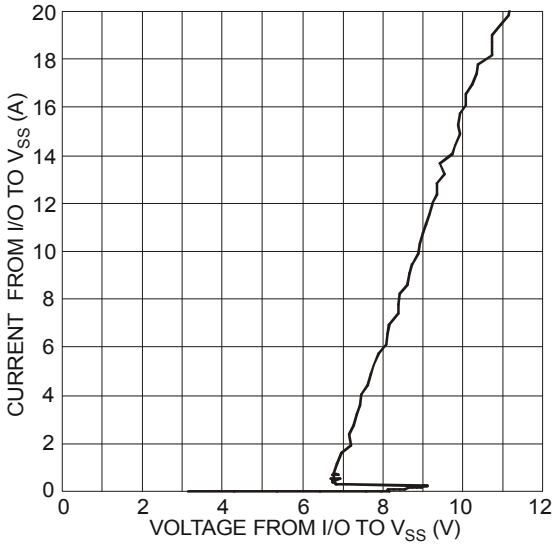
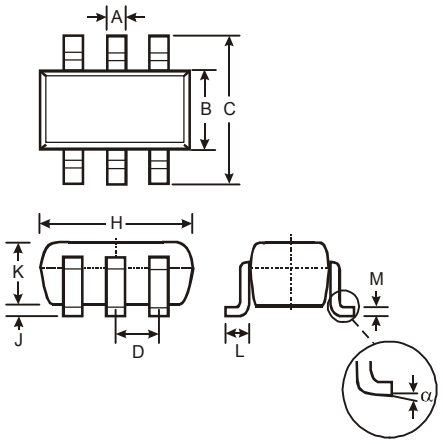


Figure 7 Current vs. Voltage

Package Outline Dimensions

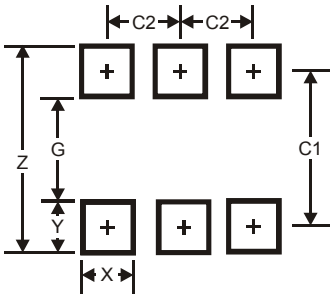
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



SOT26			
Dim	**Min**	**Max**	**Typ**
A	0.35	0.50	0.38
B	1.50	1.70	1.60
C	2.70	3.00	2.80
D	—	—	0.95
H	2.90	3.10	3.00
J	0.013	0.10	0.05
K	1.00	1.30	1.10
L	0.35	0.55	0.40
M	0.10	0.20	0.15
α	0°	8°	—
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)
Z	3.20
G	1.60
X	0.55
Y	0.80
C1	2.40
C2	0.95

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