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

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Current, per IEC61000-4-5	I_{PP}	±10	A	I/O to V_{SS}, 8/20 µs
Peak Pulse Current, per IEC61000-4-5	I_{PP}	±12	A	V_{CC} to V_{SS}, 8/20 µs
Peak Pulse Power, per IEC61000-4-5	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}, V_{CC} to V_{SS}
ESD Protection – Contact Discharge, per IEC61000-4-2	$V_{ESD\_CONTACT}$	±30	kV	I/O to V_{SS}, V_{CC} to V_{SS}
ESD Protection – Air Discharge, per IEC61000-4-2	V_{ESD_AIR}	±30	kV	I/O to V_{SS}, V_{CC} 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}, V_{CC} to V_{SS}
Reverse Current (Note 6)	I_R	—	—	1	µA	V_R = 5V, I/O to V_{SS}, V_{CC} to V_{SS}
Reverse Breakdown Voltage	V_{BR}	6	—	9	V	I_R = 1mA, I/O to V_{SS}, V_{CC} to V_{SS}
Forward Clamping Voltage	V_F	-1.0	-0.8	—	V	I_F = -15mA, I/O to V_{SS}, V_{CC} 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 = 100ns, I/O to V_{SS}
		—	8	—		TLP, 10A, tp = 100ns, V_{CC} to V_{SS}
Dynamic Resistance	R_{DIF}	—	0.25	—	Ω	TLP, 10A, tp = 100ns, I/O to V_{SS}
		—	0.15	—		TLP, 10A, tp = 100ns, V_{CC} to V_{SS}
Channel Input Capacitance	C_T	—	1.0	1.5	pF	$V_{I/O}$ = 2.5V, V_{CC}=5V, f = 1MHz
Variation of Channel Input Capacitance	ΔC_T	—	0.02	—	pF	V_{SS} = 0V, $V_{I/O}$ = 2.5V, f =1MHz, 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, which can be found on our website at http://www.diodes.com/package-outlines.html.
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.

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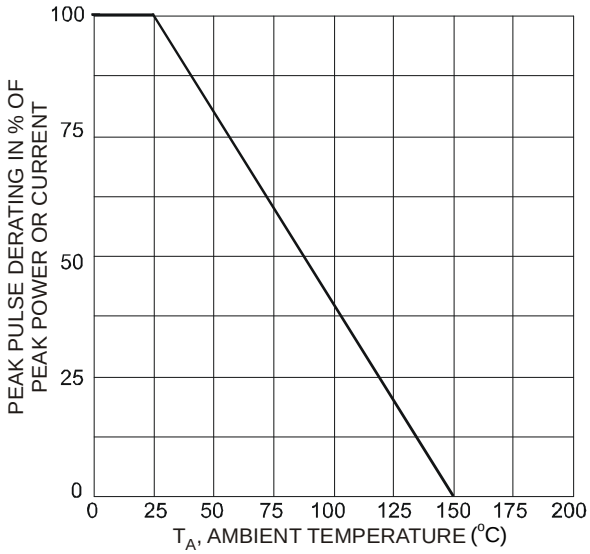

Figure 1 Pulse Derating Curve

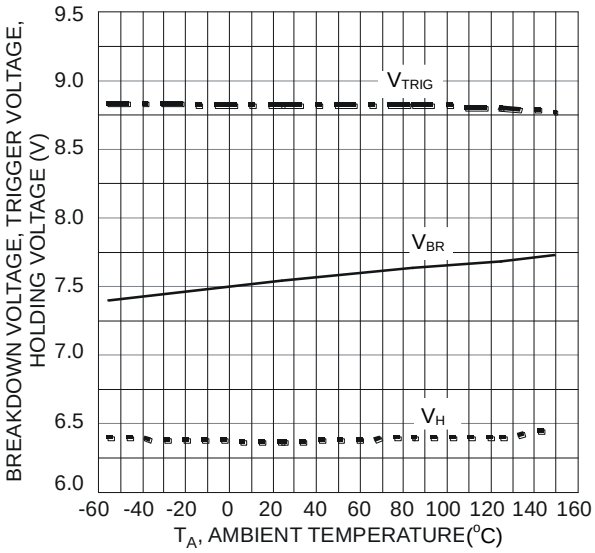

Figure 2 V_{BR}, Trigger Voltage, Holding Voltage vs. Ambient Temperature

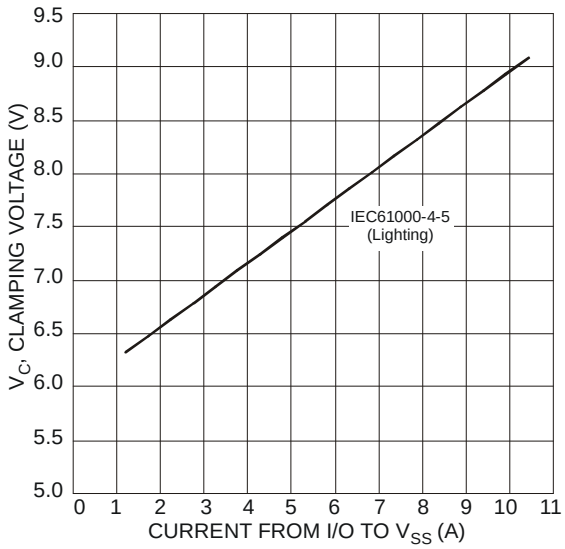

Figure 3 Clamping Voltage Characteristic

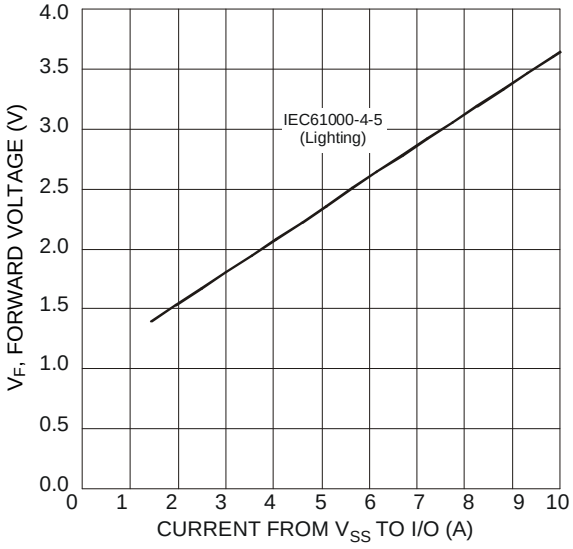

Figure 4 Forward Voltage Characteristic

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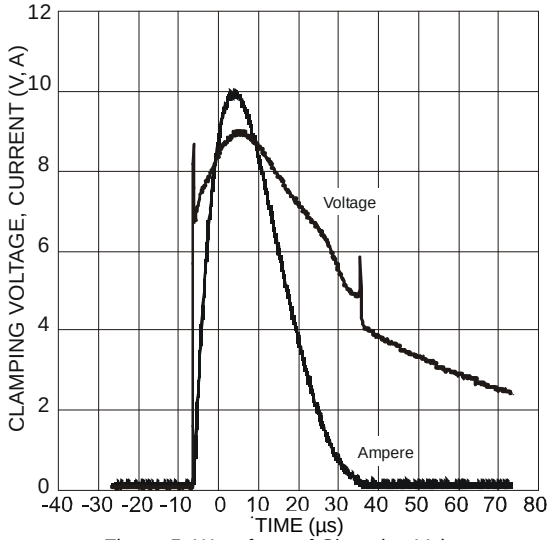

Figure 5 Waveform of Clamping Voltage, Current vs. Time (8/20µs, I/O to V_{SS})

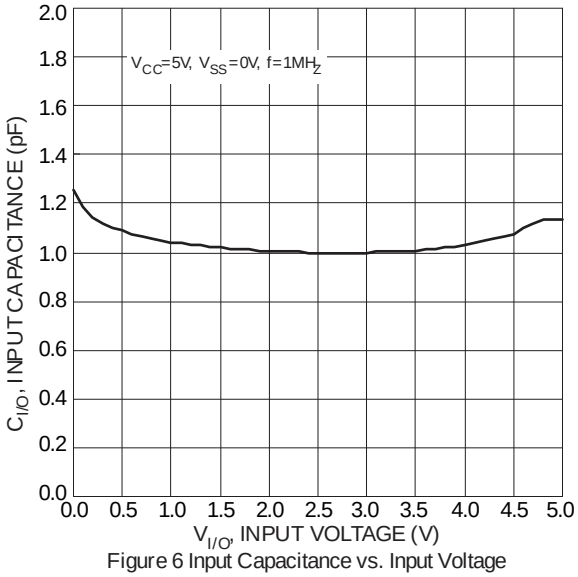

Figure 6 Input Capacitance vs. Input Voltage

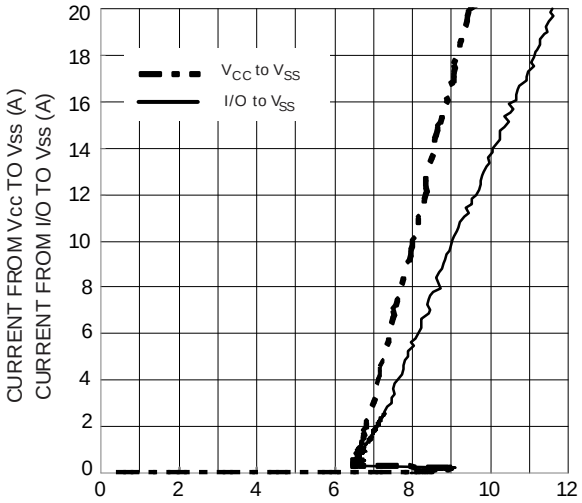

Figure 7 Current vs. Voltage

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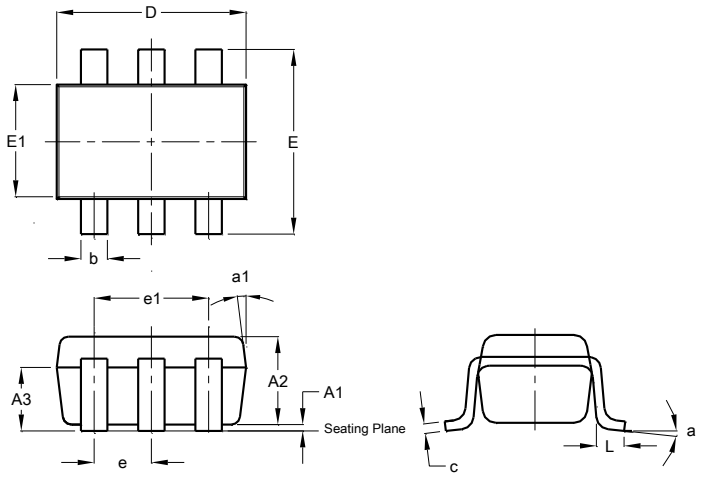
Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOT26

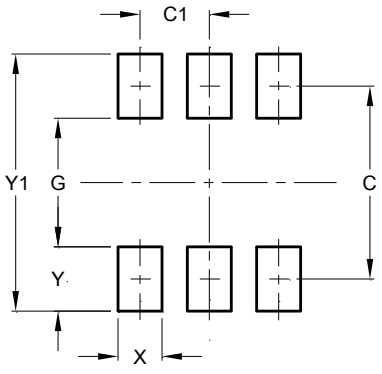


SOT26			
Dim	**Min**	**Max**	**Typ**
A1	0.013	0.10	0.05
A2	1.00	1.30	1.10
A3	0.70	0.80	0.75
b	0.35	0.50	0.38
c	0.10	0.20	0.15
D	2.90	3.10	3.00
e	-	-	0.95
e1	-	-	1.90
E	2.70	3.00	2.80
E1	1.50	1.70	1.60
L	0.35	0.55	0.40
a	-	-	8°
a1	-	-	7°
All Dimensions in mm			

Suggested Pad Layout

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOT26



Dimensions	Value (in mm)
C	2.40
C1	0.95
G	1.60
X	0.55
Y	0.80
Y1	3.20

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