

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

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Current, per IEC 61000-4-5	I _{PP_I/O}	±6	A	I/O to V _{SS} , 8/20 μs
Peak Pulse Power, per IEC 61000-4-5	P _{PP_I/O}	55	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 IEC 61000-4-2	V _{ESD_I/O}	±16	kV	I/O to V _{SS}
ESD Protection – Air Discharge, per IEC 61000-4-2	V _{ESD_I/O}	+27/-19	kV	I/O to V _{SS}
Operating Temperature	T _{OP}	-55 to +85	°C	—
Storage Temperature	T _{STG}	-55 to +150	°C	—

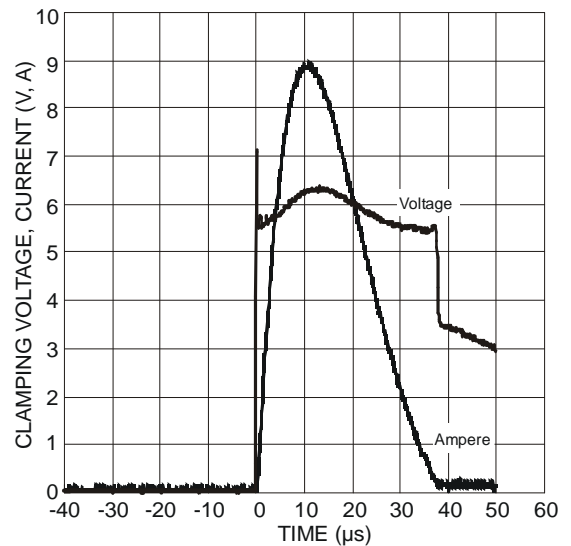
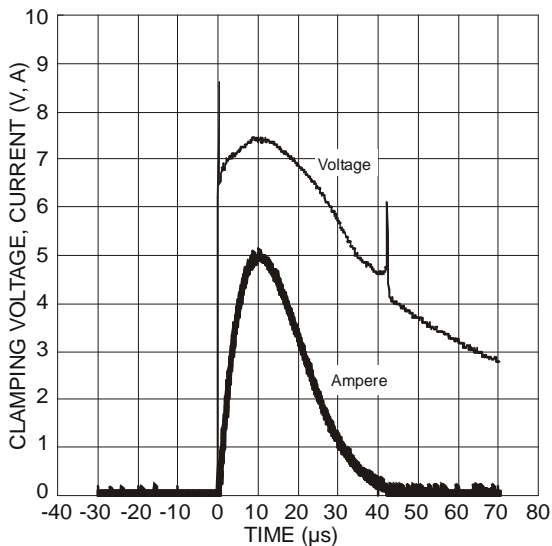
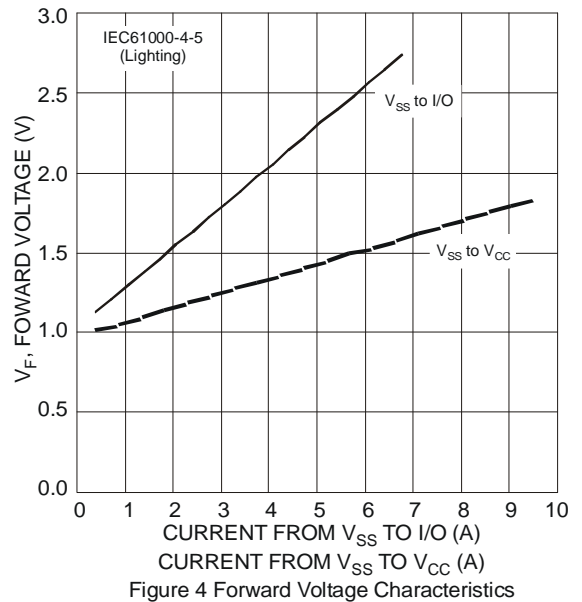
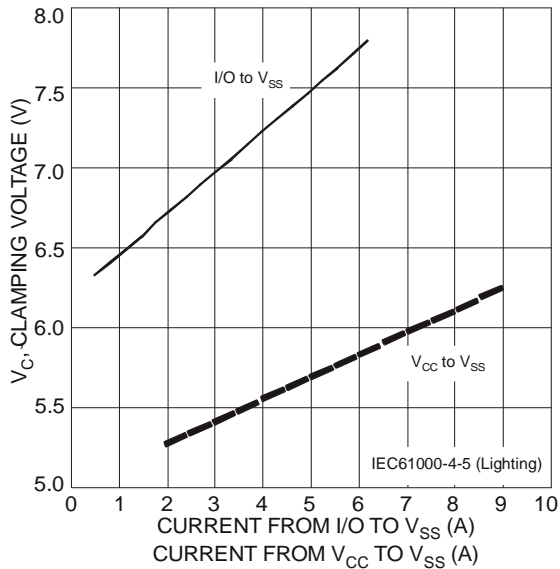
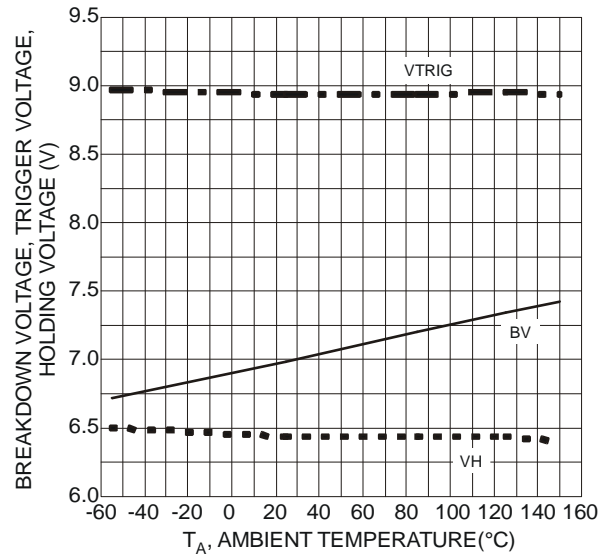
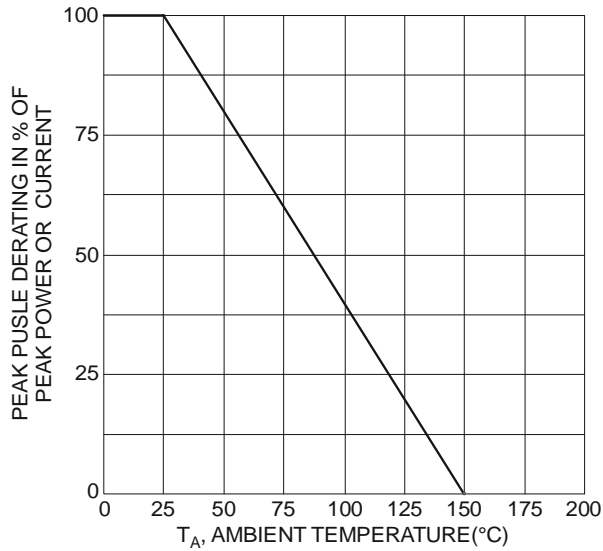
Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation Typical (Note 5)	P _D	300	mW
Thermal Resistance, Junction to Ambient Typical (Note 5)	R _{θJA}	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}	—	—	5.0	V	V _{CC} to V _{SS}
Reverse Current (Note 6)	I _{R(VCC to VSS)}	—	—	1.0	μA	V _R = V _{RWM} = 5V, V _{CC} to V _{SS}
Reverse Current (Note 6)	I _{R(I/O to VSS)}	—	—	0.5	μA	V _R = V _{RWM} = 5V, any I/O to V _{SS}
Reverse Breakdown Voltage	V _{BR}	6.2	—	—	V	I _R = 1mA, V _{CC} to V _{SS}
Forward Clamping Voltage	V _F	-1.0	-0.8	—	V	I _F = -15mA, V _{CC} to V _{SS}
Reverse Clamping Voltage(Note 7)	V _{C_VCC}	—	6.3	—	V	I _{PP} = 9A, V _{CC} to V _{SS} , 8/20 μs
	V _{C_I/O}	—	7.7	9	V	I _{PP} = 6A, I/O to V _{SS} , 8/20 μs
ESD Clamping Voltage	V _{ESD_VCC}	—	6.8	—	V	TLP, 10A, tp = 100 ns, V _{CC} to V _{SS} , per Fig. 8
	V _{ESD_I/O}	—	9	—	V	TLP, 10A, tp = 100 ns, I/O to V _{SS} , per Fig. 8
Dynamic Resistance	R _{DIF_VCC}	—	0.1	—	Ω	TLP, 10A, tp = 100 ns, V _{CC} to V _{SS}
	R _{DIF_I/O}	—	0.25	—	Ω	TLP, 10A, tp = 100 ns, I/O to V _{SS}
Channel Input Capacitance	C _{I/O to VSS}	—	0.65	0.8	pF	V _R = 2.5V, V _{CC} = 5V, f = 1MHz
Variation of Channel Input Capacitance	ΔC _{I/O}	—	0.02	—	pF	V _{CC} = 5V, V _{SS} = 0V, I/O = 2.5V, f = 1MHz, T = +25°C, I/O _x to V _{SS} – I/O _y to V _{SS}

- Notes:
- Device mounted on Polyimide 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_{pp}) waveform.



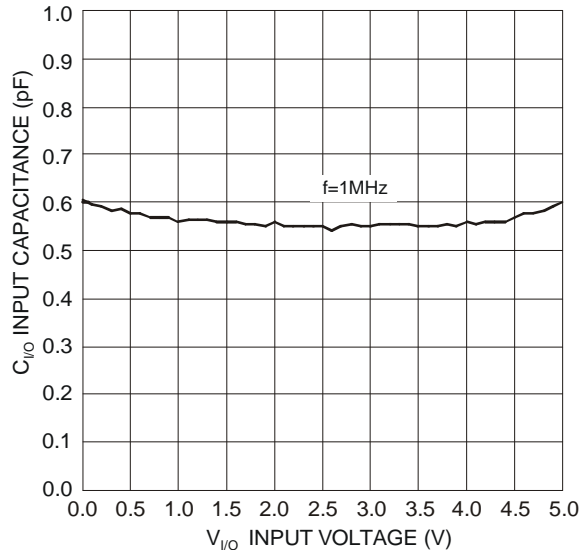


Figure 7 Input Capacitance vs. Input Voltage

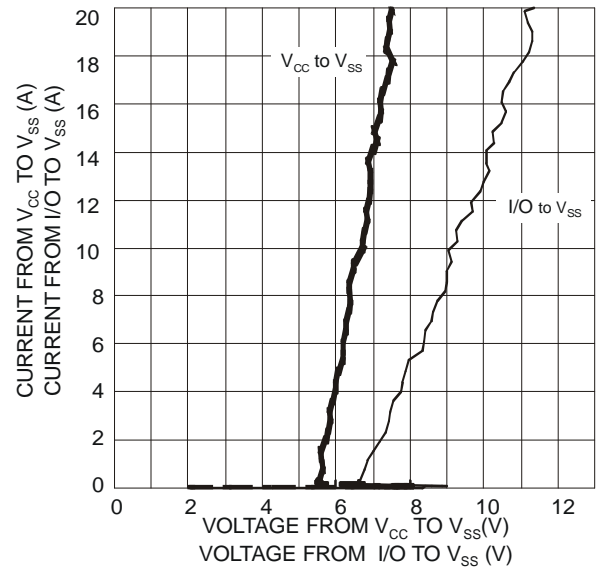
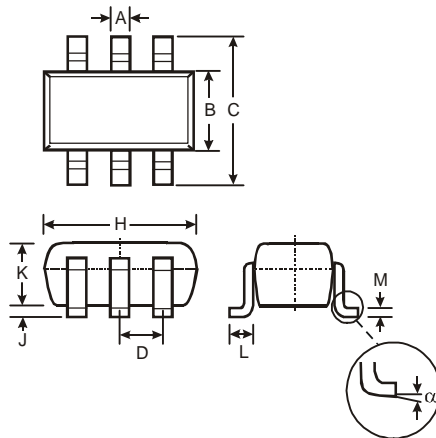


Figure 8. Current vs. Voltage

Package Outline Dimensions

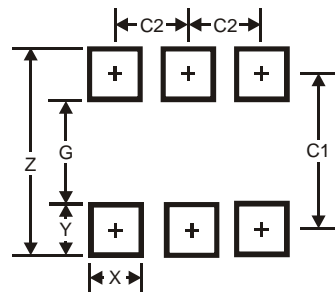
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



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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