

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

Characteristic	Symbol	Value	Unit	Conditions
Operating Supply Voltage	V _P - V _N	6.0	V	—
DC Voltage at any Channel Input	—	(V _N - 0.5) to (V _P + 0.5)	V	—
Peak Pulse Current	I _{PP}	5	A	8/20μs, Per Figure 2
ESD Protection – Contact Discharge	V _{ESD Contact}	±8	kV	Standard IEC 61000-4-2
ESD Protection – Air Discharge	V _{ESD Air}	±15	kV	Standard IEC 61000-4-2

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P _D	400	mW
Thermal Resistance, Junction to Ambient (Note 5)	R _{θJA}	310	°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
Operating Supply Voltage	V _P	—	3.3	5.5	V	—
Operating Supply Current (Note 6)	I _P	—	—	8.0	μA	(V _P - V _N) = 3.3V
Channel Leakage Current (Note 6)	I _R	—	±0.1	±1.0	μA	V _P = 5V, V _N = 0V
Reverse breakdown voltage	V _{BR}	6.0	—	—	V	I _R = 1mA
Clamping Voltage, Positive Transients	V _{CL1}	—	10.0	—	V	I _{PP} = 1A, t _p = 8/20μs
Clamping Voltage, Negative Transients	V _{CL2}	—	-1.7	—	V	I _{PP} = -1A, t _p = 8/20μs
Forward Voltage for Top Diode	V _{FD1}	0.60	0.80	0.95	V	I _F = 8mA, CH1 to V _P or CH2 to V _P
Forward Voltage for Bottom Diode	V _{FD2}	0.60	0.80	0.95	V	I _F = 8mA, V _N to CH1 or V _N to CH2
Dynamic Resistance	R _{DYN}	—	0.9	—	Ω	I _{PP} = 1A, t _p = 8/20μs
Channel Input Capacitance	C _T	—	0.85	1.2	pF	V _{IN} = 1.65V, V _P = 3.3V, V _N = 0V, f = 1MHz

- Notes:
- 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>.
 - Short duration pulse test used to minimize self-heating effect.
 - Measured from CH1 to V_N or CH2 to V_N.
 - Measured from V_P to V_N.
 - For information on the impact of Diodes' USB2.0 compatible ESD protectors on signal integrity including eye diagram plots, please refer to AN77 at the following URL: http://www.diodes.com/_files/products_appnote_pdfs/AN77.pdf.

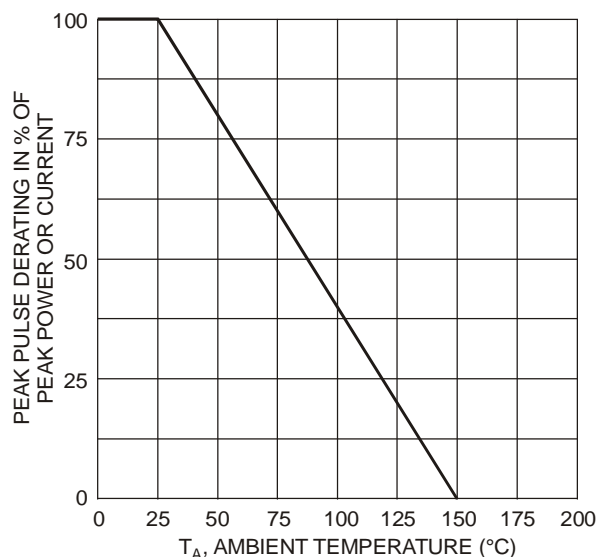


Fig. 1 Pulse Derating Curve

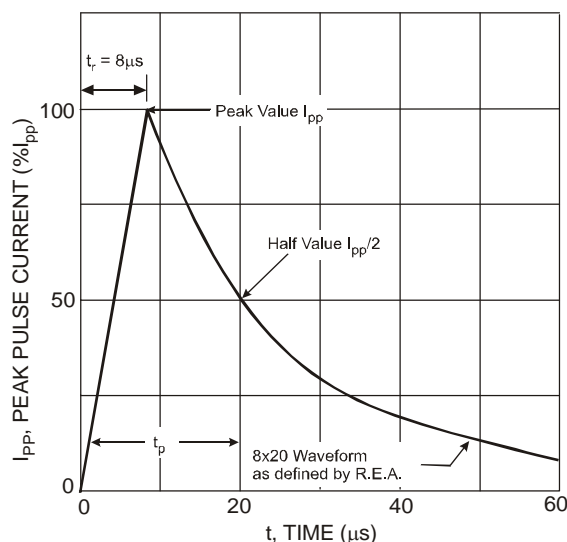


Fig. 2 Pulse Waveform

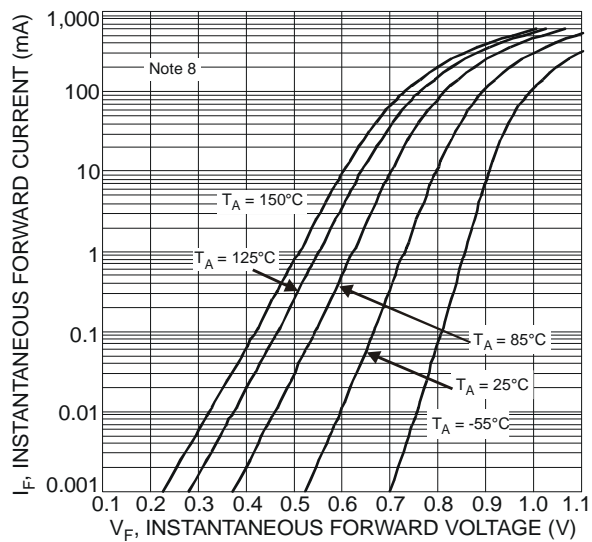


Fig. 3 Typical Forward Characteristics

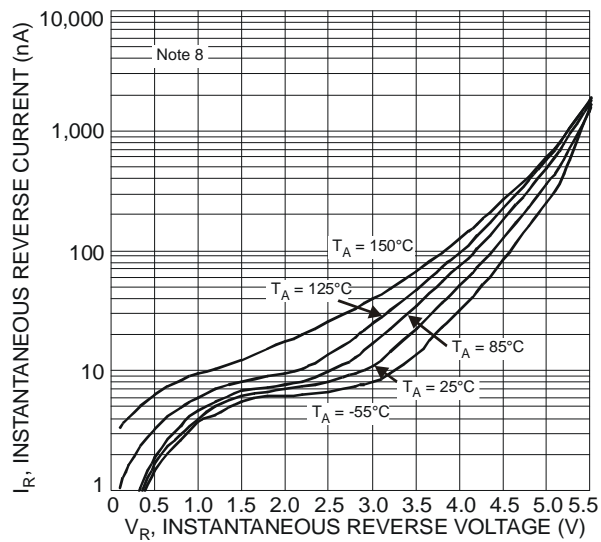


Fig. 4 Typical Reverse Characteristics

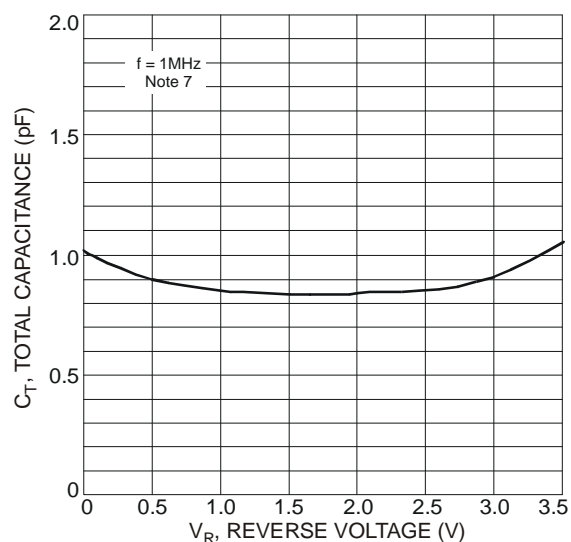
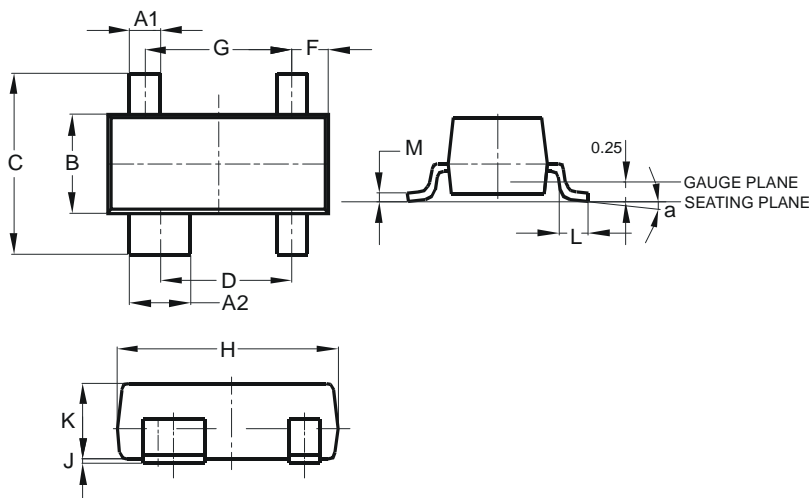


Fig. 5 Typical Total Capacitance vs. Reverse Voltage

Package Outline Dimensions

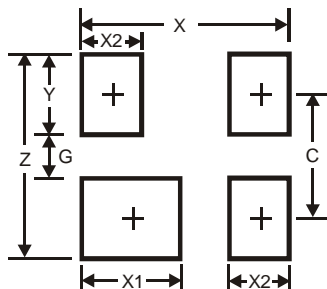
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



SOT143			
Dim	Min	Max	Typ
A1	0.37	0.51	0.400
A2	0.77	0.93	0.800
B	1.20	1.40	1.30
C	2.28	2.48	2.38
D	1.58	1.83	1.72
F	0.45	0.60	0.49
G	1.78	2.03	1.92
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.89	1.00	-
L	0.46	0.60	0.50
M	0.085	0.18	0.11
a	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	2.70
G	1.30
X	2.50
X1	1.0
X2	0.60
Y	0.70
C	2.0

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