

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 3
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' USB 2.0 compatible ESD protectors on signal integrity including eye diagram plots, please refer to AN77 at the following URL: http://www.diodes.com/destdtools/apnote_dnote.html.

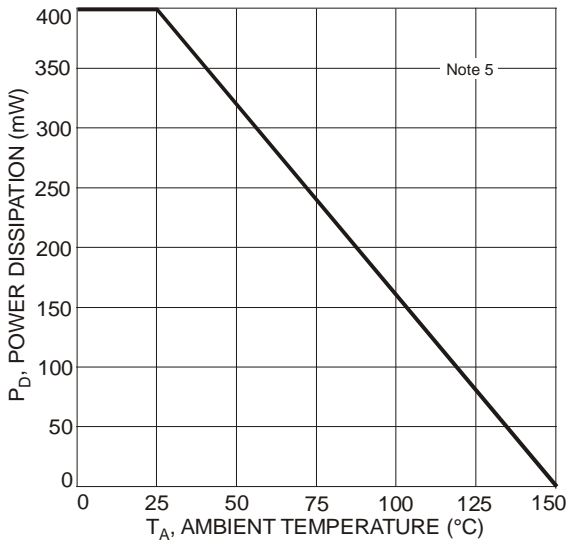


Figure 1 Power Dissipation vs. Ambient Temperature

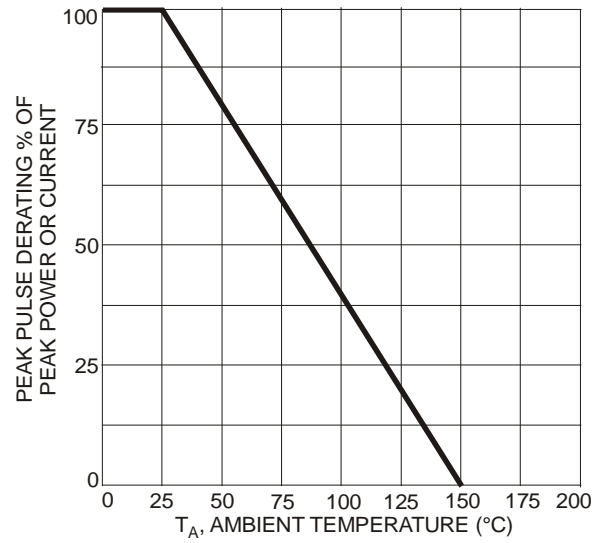


Figure 2 Pulse Derating Curve

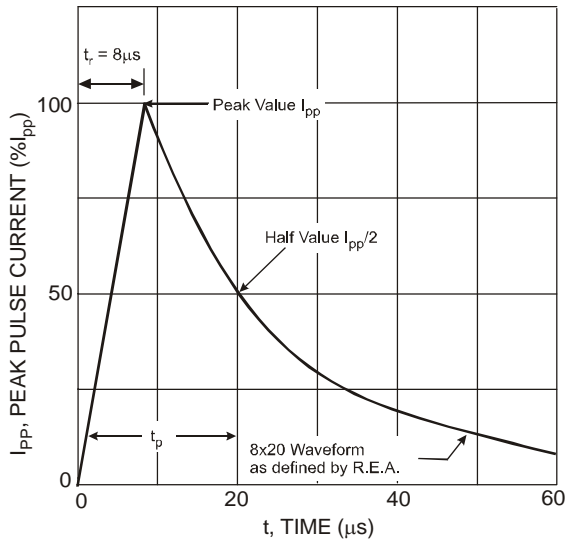


Figure 3 Pulse Waveform

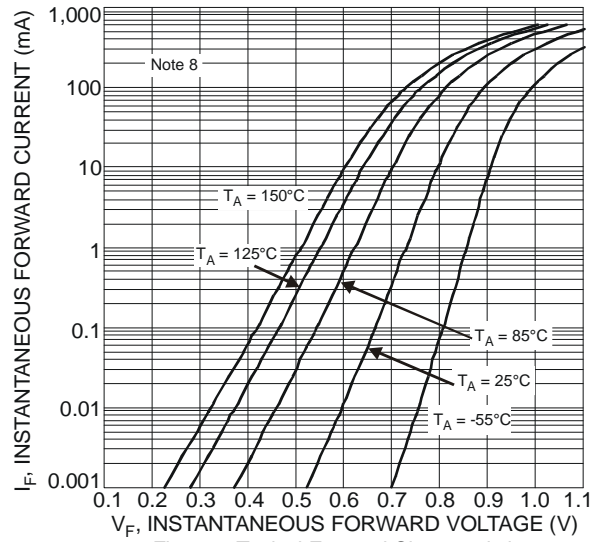


Figure 4 Typical Forward Characteristics

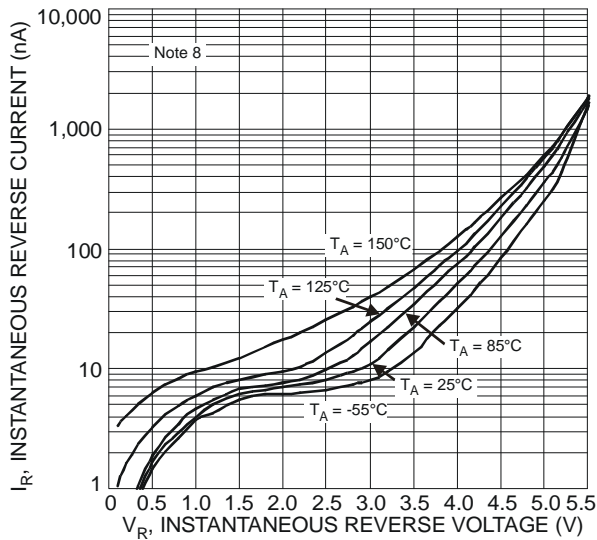


Figure 5 Typical Reverse Characteristics

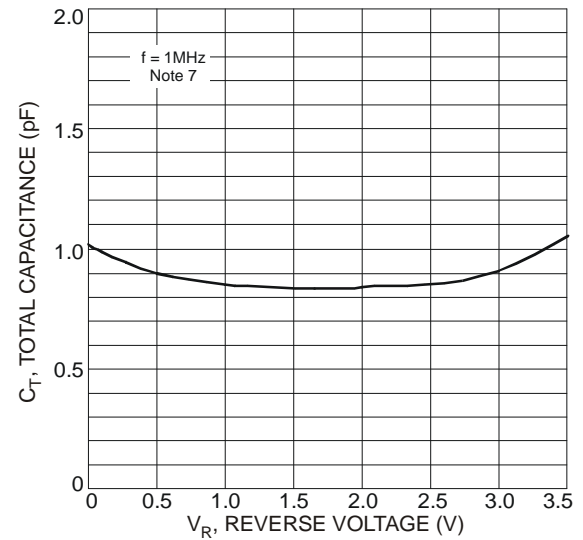
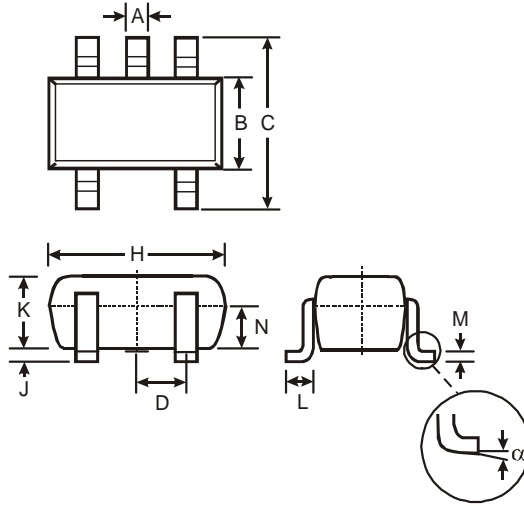


Figure 6 Typical Total Capacitance vs. Reverse Voltage

Package Outline Dimensions

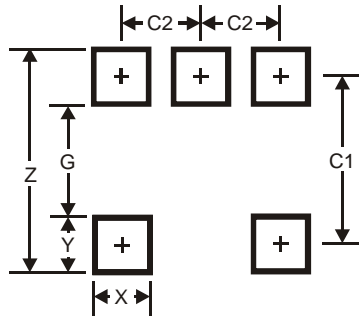
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



SOT25			
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
N	0.70	0.80	0.75
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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