Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp = 8×20µs, per Figure 2)	P_{PK}	300	W
Peak Forward Voltage (I_{PP} = 1A, tp = 8×20µs, per Figure 2)	V_{FP}	2.1	V
Diode Peak Repetitive Reverse Voltage	V_{RRM}	75	V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Ambient (Note 10)	$R_{\Theta JA}$	417	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Reverse Standoff Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Reverse Leakage @ V_{RWM} (Note 9)	Max. Clamping Voltage @ I_{pp} = 1A (Note 8)	Typical Peak Pulse Current (Note 7)	Typical Total Capacitance (Note 6)
V_{RWM} (V)	Min (V)	Max (V)	I_T (mA)	I_R (µA)	V_C (V)	(A)	(pF)
5	6.0	—	1.0	20	9.8	17	1.9

Notes:
6. V_R = 0V, f = 1MHz from line to be protected to ground pin.
7. tp = 8×20µs.
8. Clamping voltage value is based on an 8×20µs peak pulse current (I_{pp}) waveform.
9. Short duration pulse test used to minimize self-heating effect.
10. 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.

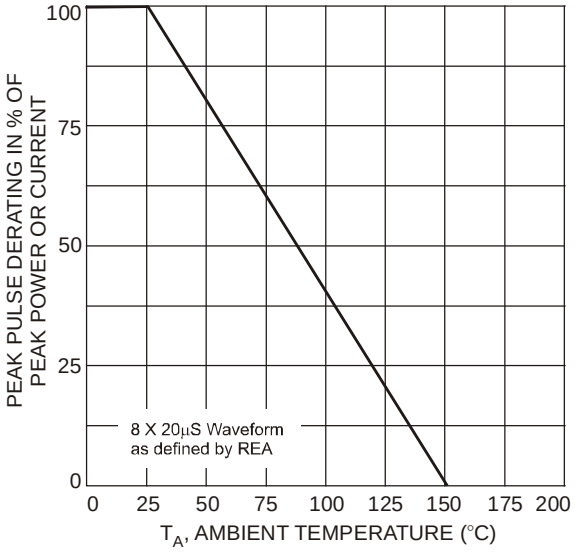


Fig. 1 Pulse Derating Curve

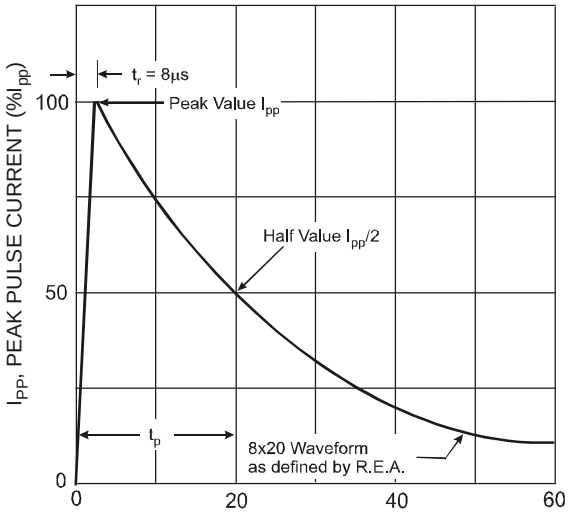


Figure 2. Pulse Waveform

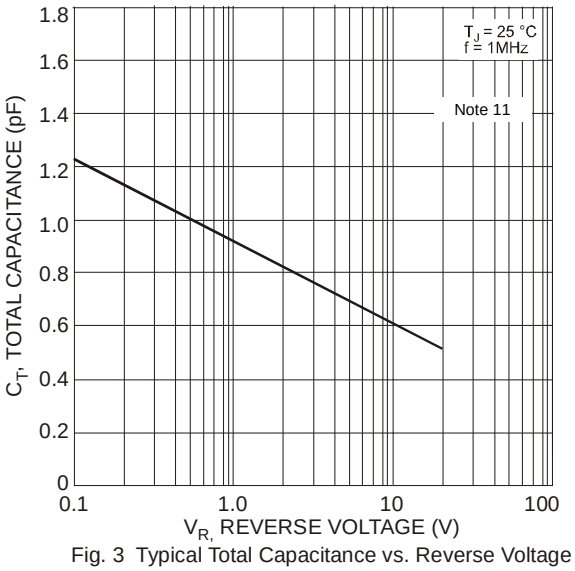


Fig. 3 Typical Total Capacitance vs. Reverse Voltage

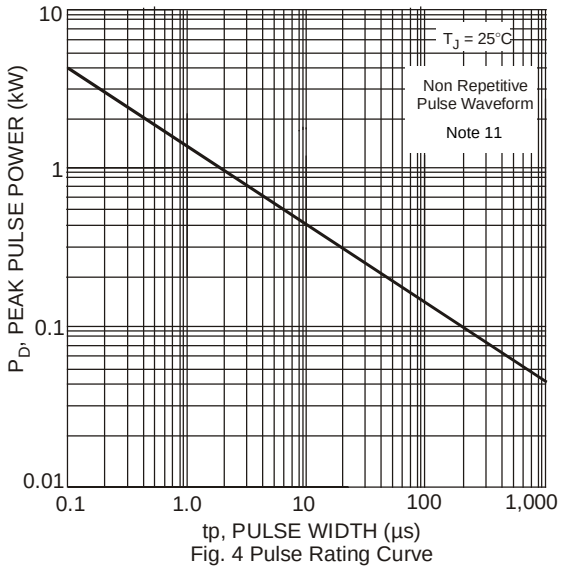


Fig. 4 Pulse Rating Curve

Notes: 11. Measured from line to be protected to ground pin.

Typical Application Schematics

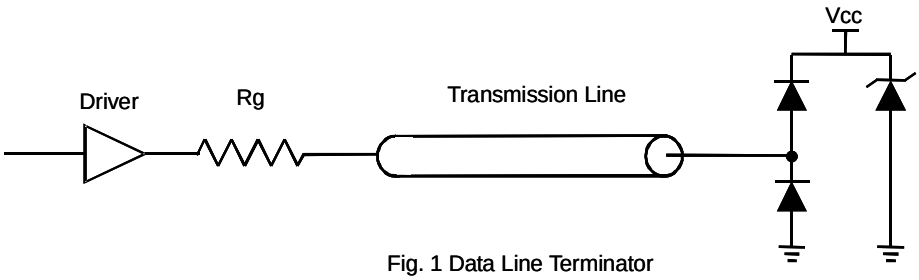


Fig. 1 Data Line Terminator

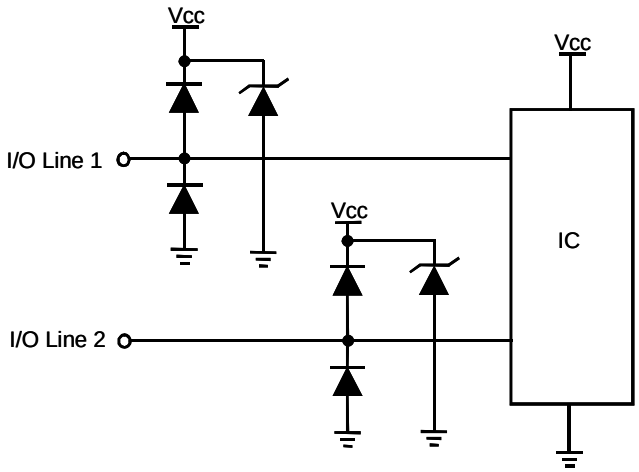
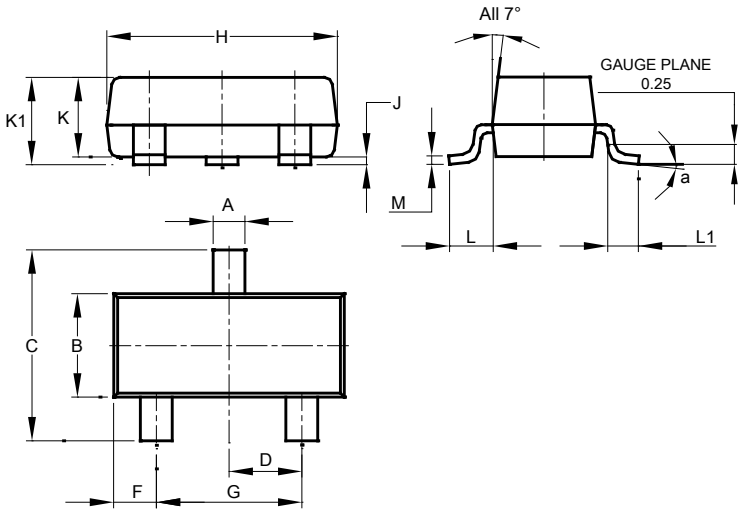


Fig. 2 Data Line Protection

Package Outline Dimensions

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

SOT23

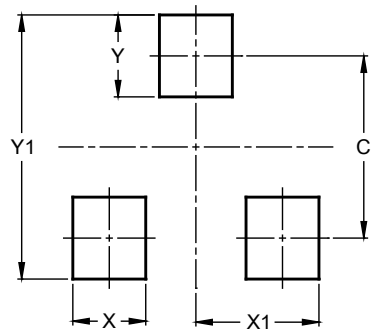


SOT23			
Dim	**Min**	**Max**	**Typ**
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.890	1.00	0.975
K1	0.903	1.10	1.025
L	0.45	0.61	0.55
L1	0.25	0.55	0.40
M	0.085	0.150	0.110
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

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

SOT23



Dimensions	Value (in mm)
C	2.0
X	0.8
X1	1.35
Y	0.9
Y1	2.9

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