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

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P_{PP}	200	W	8/20µs, per Figure 1
Peak Pulse Current	I_{PP}	3	A	8/20µs, per Figure 1
ESD Protection – Contact Discharge	$V_{ESD\_Contact}$	±30	kV	IEC 61000-4-2 Standard
ESD Protection – Air Discharge	V_{ESD_Air}	±30	kV	IEC 61000-4-2 Standard

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	P_D	300	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	417	°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
Reverse Standoff Voltage	V_{RWM}	—	—	24	V	—
Channel Leakage Current (Note 6)	I_{RM}	—	<1	50	nA	V_{RWM} = 24V
Clamping Voltage, Positive Transients	V_{CL}	—	—	40	V	I_{PP} = 1A, t_P = 8/20µs, Figure 1
		—	—	70		I_{PP} = 3A, t_P = 8/20µs, Figure 1
Breakdown Voltage	V_{BR}	25.4	27.8	30.3	V	I_R = 1mA
Channel Input Capacitance	C_T	—	11	17	pF	V_R = 0V, f = 1MHz
		—	9	15		
ABS Parasitic Capacitance Matching (Channel 1 – Channel 2)	Δ (C_T_Ch1-C_T _Ch2) / C_T Max	—	0.13	1.5	%	V_R = 5V, f = 250kHz
	Δ (CT_Ch1-C_T _Ch2)	—	0.02	0.22	pF	

Notes: 5. Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes Incorporated suggested pad layout, which can be found on our website at http://www.diodes.com/package-outlines.html for the latest version.

6. Short duration pulse test used to minimize self-heating effect.

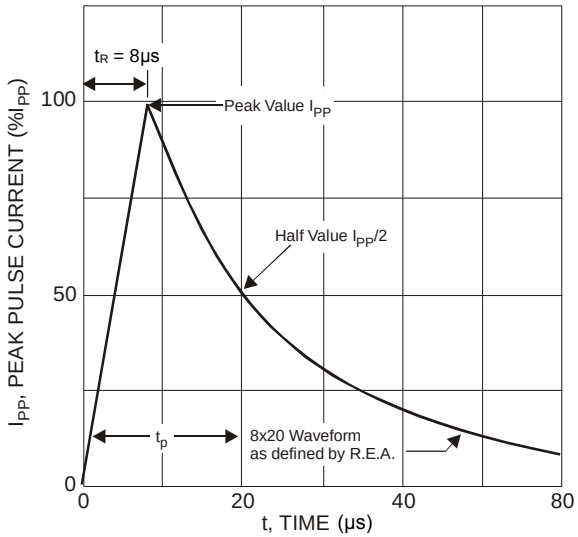


Figure 1 Pulse Waveform

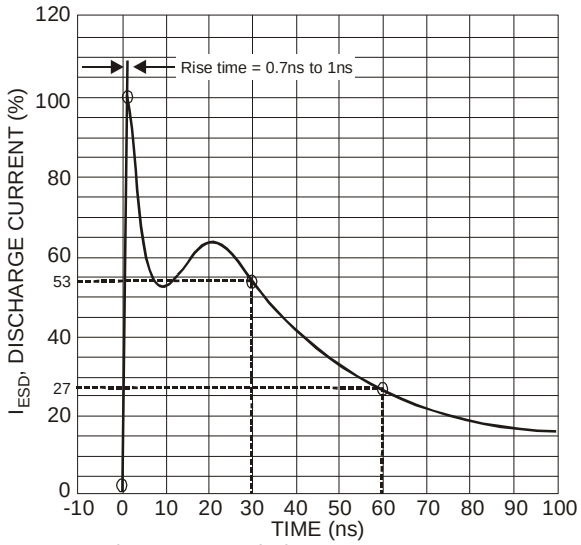


Figure 2 ESD Discharge Current Wave Form IEC 61000-4-2 (330Ω/150pF)

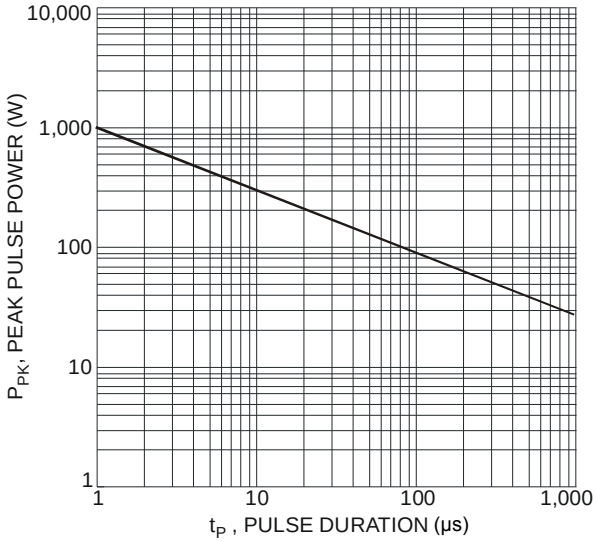


Figure 3 Peak Pulse Power vs. Pulse Duration

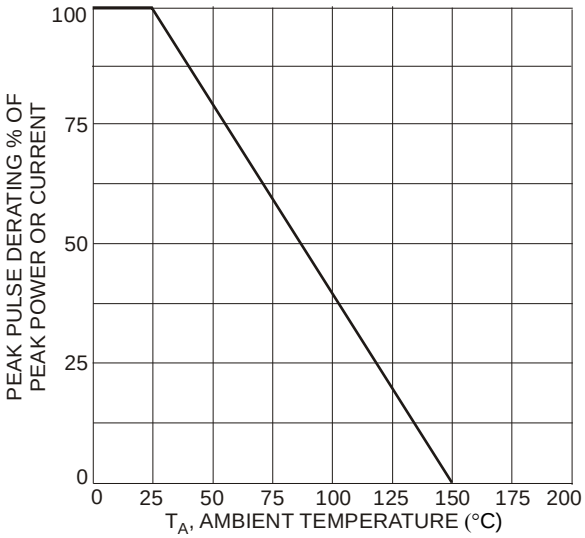


Figure 4 Pulse Derating Curve

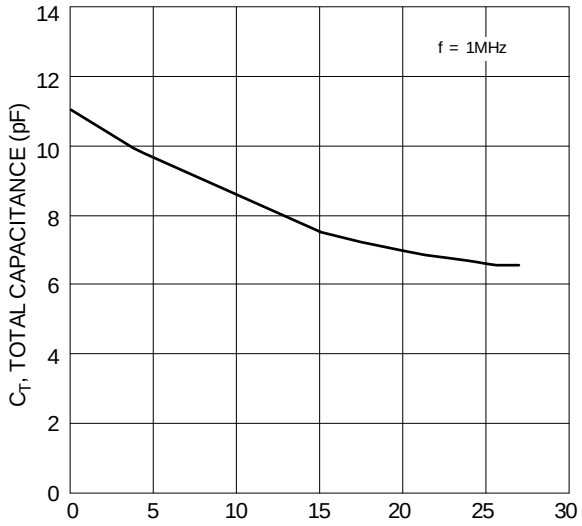


Figure 5 Total Capacitance vs. Reverse Voltage

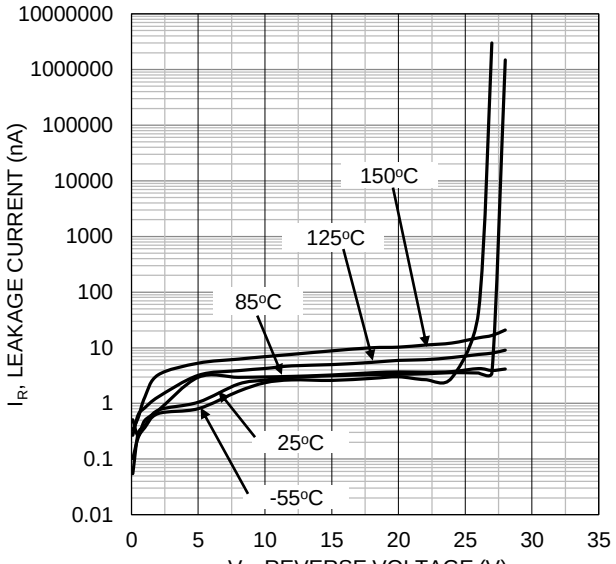


Figure 6. Leakage Current vs. Reverse Voltage

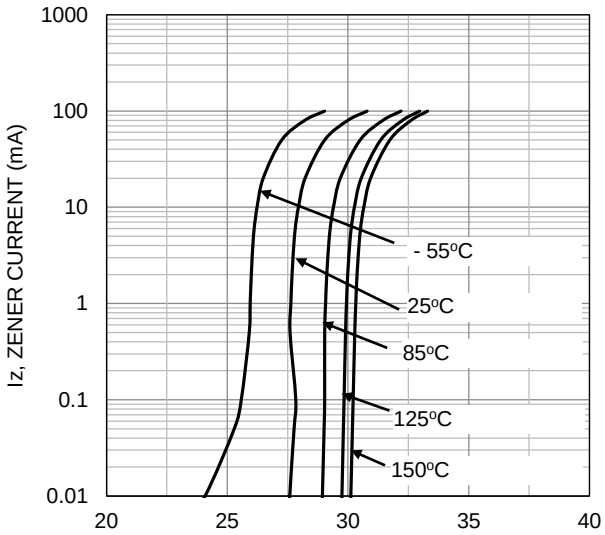
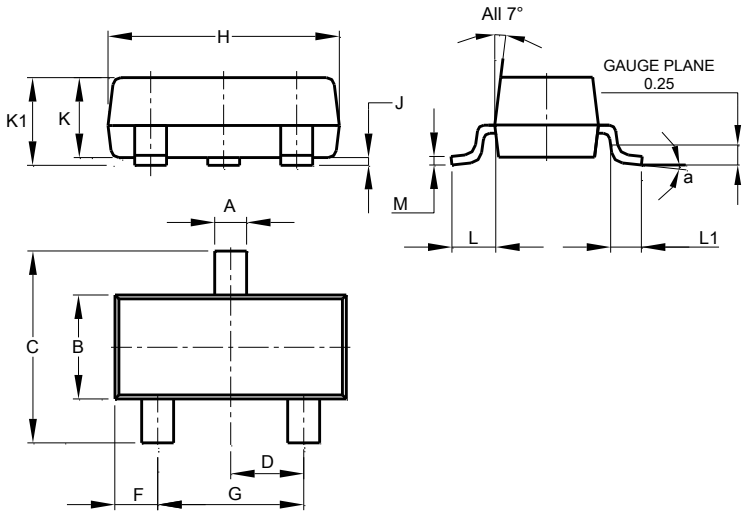


Figure 7. Zener Current vs. Zener Voltage

Package Outline Dimensions

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

SOT23

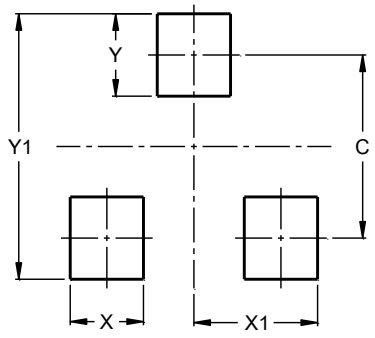


SOT23			
Dim	**Min**	**Max**	**Typ**
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.890	1.00	0.975
K1	0.903	1.10	1.025
L	0.45	0.61	0.55
L1	0.25	0.55	0.40
M	0.085	0.150	0.110
a	0°	8°	--
All Dimensions in mm			

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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