

**Maximum Ratings** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P <sub>PP</sub>	130	W	8/20μs, per Fig. 1
Peak Pulse Current	I <sub>PP</sub>	12	A	8/20μs, per Fig. 1
ESD Protection – Contact Discharge	V <sub>ESD_Contact</sub>	±30	kV	IEC 61000-4-2 Standard
ESD Protection – Air Discharge	V <sub>ESD_Air</sub>	±30	kV	IEC 61000-4-2 Standard

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 6)	P <sub>D</sub>	150	mW
Thermal Resistance, Junction to Ambient (Note 6)	R <sub>θJA</sub>	833	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Standoff Voltage	V <sub>RWM</sub>	-	-	5	V	-
Channel Leakage Current (Note 7)	I <sub>RM</sub>	-	5	100	nA	V <sub>RWM</sub> = 5V
Clamping Voltage	V <sub>CL</sub>	-	-	10 14	V	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs I <sub>PP</sub> = 12A, t <sub>p</sub> = 8/20μs
Breakdown Voltage	V <sub>BR</sub>	5.5	-	9.5	V	I <sub>R</sub> = 1mA
Differential Resistance	R <sub>DIF</sub>	-	0.4	-	Ω	I <sub>R</sub> = 10A, t <sub>p</sub> = 8/20μs
Channel Input Capacitance	C <sub>T</sub>	-	35	45	pF	V <sub>R</sub> = 0V, f = 1MHz

- Notes:
6. 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>.
  7. Short duration pulse test used to minimize self-heating effect.

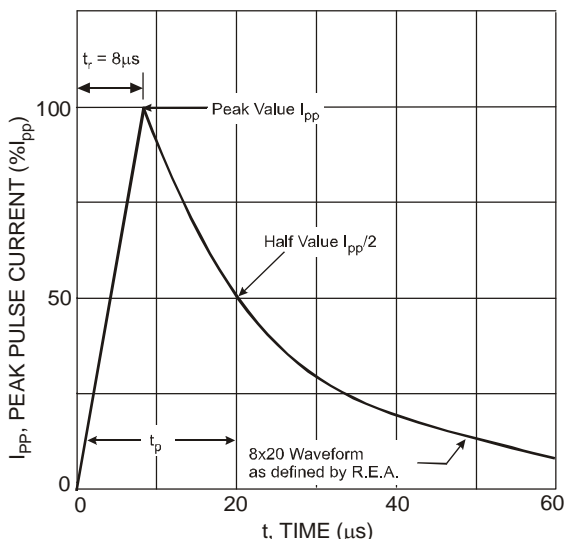


Fig. 1 Pulse Waveform

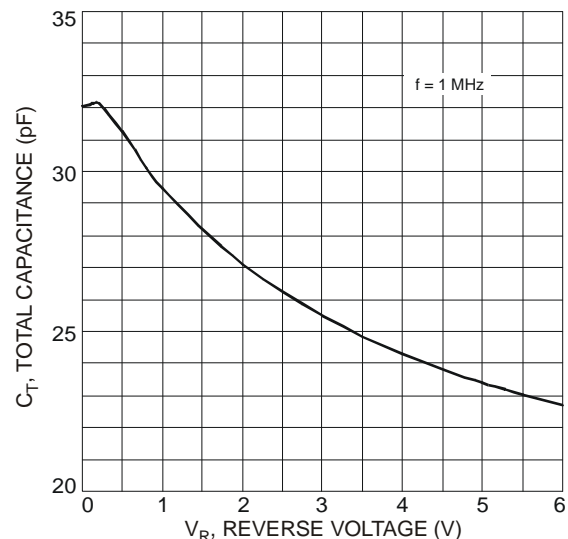


Fig. 2 Typical Total Capacitance vs. Reverse Voltage

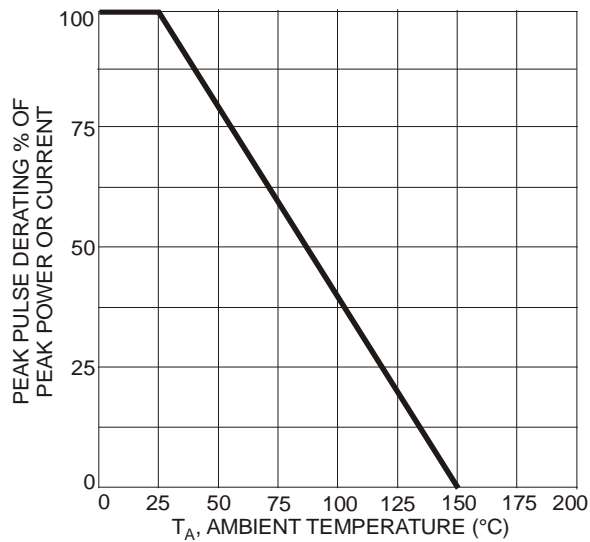


Fig. 3 Power Dissipation vs. Ambient Temperature

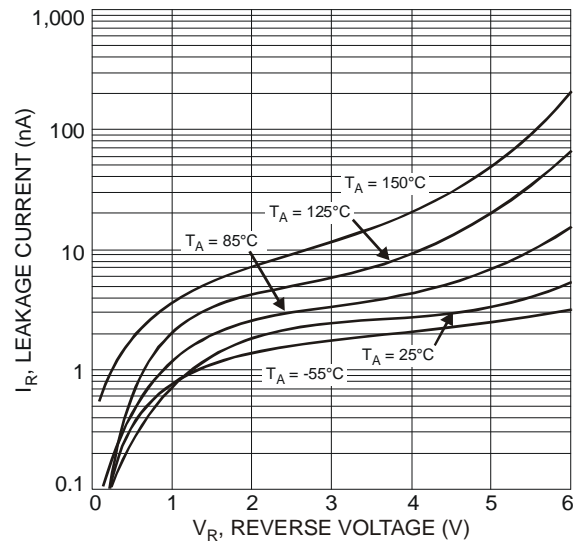
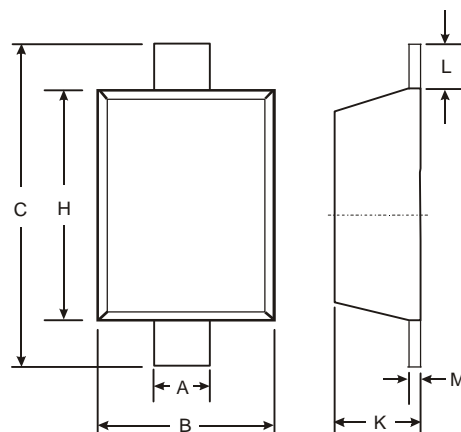


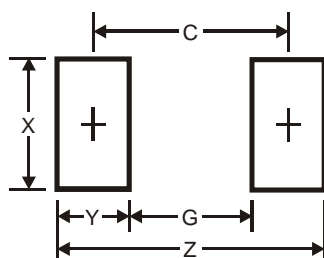
Fig. 4 Typical Reverse Characteristics

## Package Outline Dimensions



SOD523		
Dim	Min	Max
A	0.25	0.35
B	0.70	0.90
C	1.50	1.70
H	1.10	1.30
K	0.55	0.65
L	0.10	0.30
M	0.10	0.12
All Dimensions in mm		

## Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.3
G	1.1
X	0.8
Y	0.6
C	1.7

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