

Transient Voltage Suppressors for ESD Protection

Applications

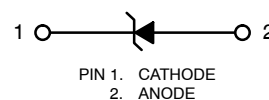
- | Cellular phones audio
- | Digital cameras
- | Portable applications
- | Mobile telephone



SOD-923

Features

- | Small Body Outline Dimensions:
0.039 " x 0.024 " (1.0 mm x 0.60 mm)
- | Low Body Height: 0.017 " (0.43 mm) Max
- | Stand-off Voltage: 5 V
- | Low Leakage
- | Response Time is Typically < 1 ns
- | ESD Rating of Class 3 per Human Body Model
- | IEC61000-4-2 Level 4 ESD Protection
- | These are Pb-Free Devices
- | We declare that the material of product compliance with RoHS requirements and Halogen Free.



MARKING : G

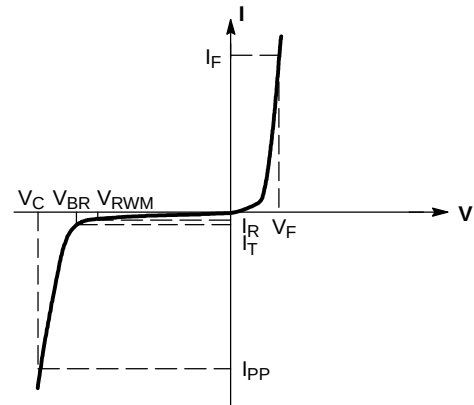
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge Contact discharge		±30 ±30	kV kV
Peak Pulse Power	PPK	100	W
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C

ELECTRICAL CHARACTERISTICS

($T_A = 25^\circ\text{C}$ unless otherwise noted)

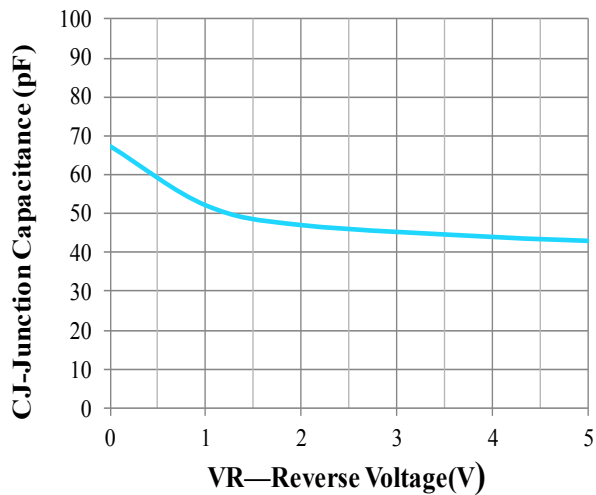
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Capacitance @ $V_R = 0$ and $f = 1.0\text{ MHz}$



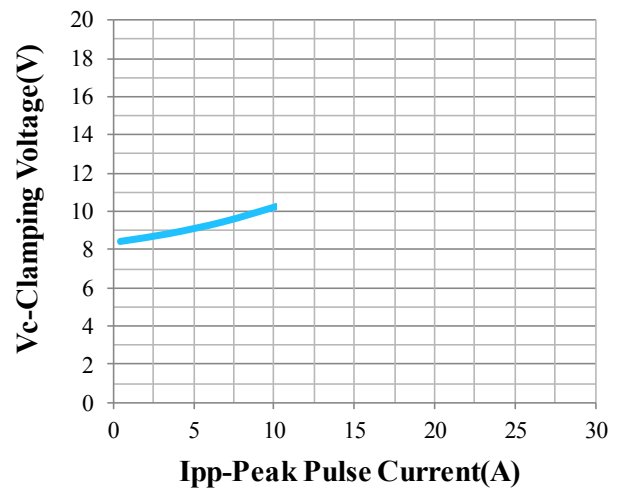
Electrical Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	$I_T = 1\text{ mA}$	6	6.8	8	V
IR	Reverse Leakage Current	$V_{RWM} = 5.0\text{ V}$			0.2	μA
VC	Clamping Voltage	$I_{PP} = 1\text{ A (8/20}\mu\text{s)}$			9	V
VC	Clamping Voltage	$I_{PP} = 8\text{ A (8/20}\mu\text{s)}$			12.5	V
Ipp	Peak Pulse Current	$t_p = 8/20\mu\text{s}$			8	A
CJ	Capacitance	$V_R = 0\text{ V, } f = 1\text{ MHz}$		50	70	pF

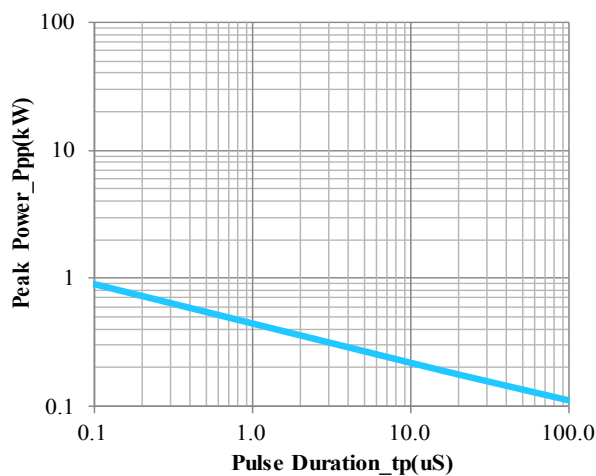
Typical Characteristics



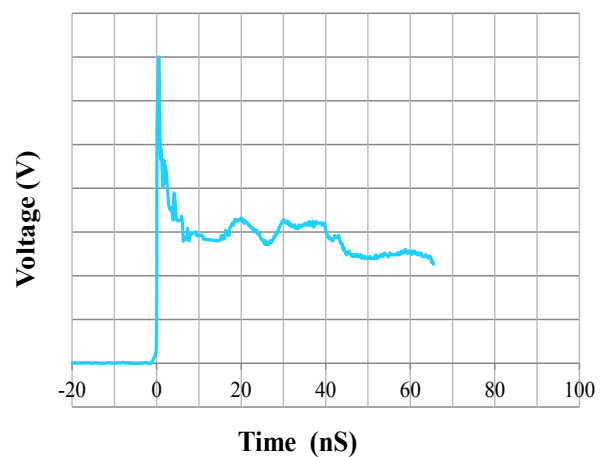
Junction Capacitance vs. Reverse Voltage



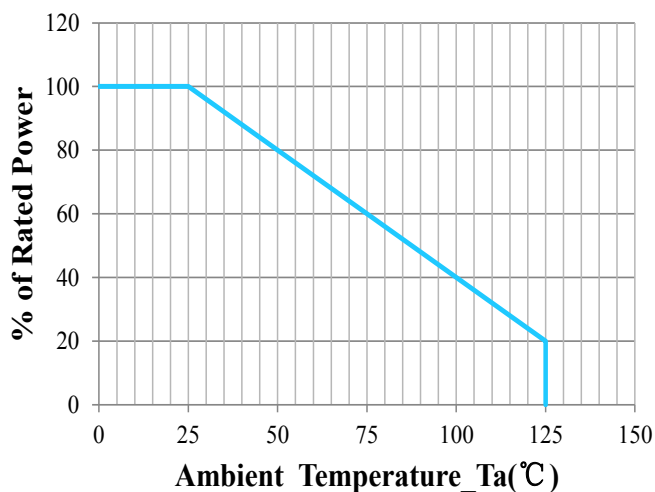
Clamping Voltage vs. Peak Pulse Current



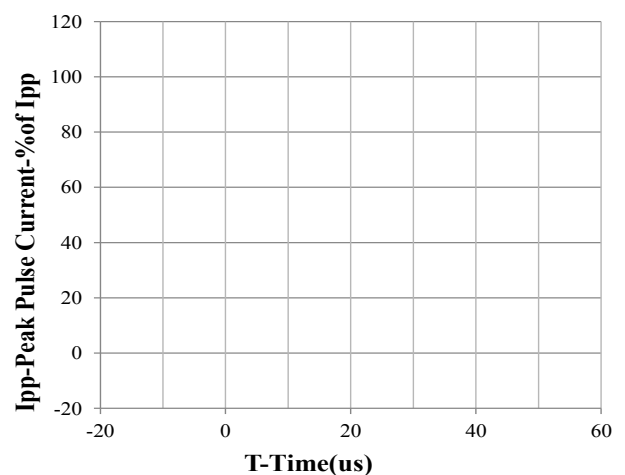
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



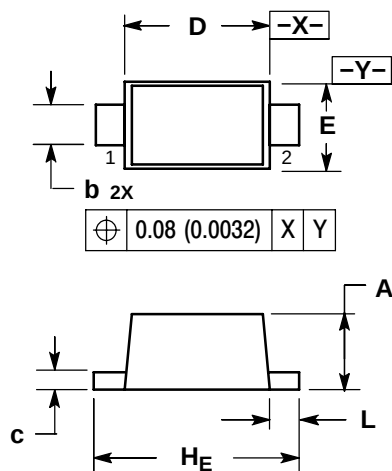
Power Derating Curve



8 X 20us Pulse Waveform

Package Dimensions

SOD-923

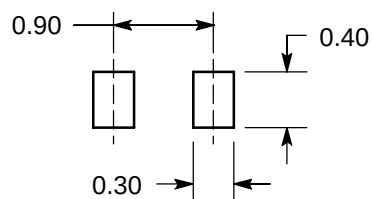


NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.34	0.37	0.40	0.013	0.015	0.016
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
HE	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS