

Transient Voltage Suppressors for ESD Protection

APPLICATIONS

Ethernet - 10/100/1000 Base T
 Cellular Phones
 Handheld - Wireless Systems
 Personal Digital Assistant (PDA)
 USB Interface

IEC COMPATIBILITY (EN61000-4)

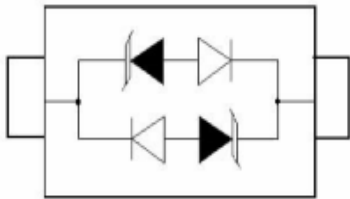
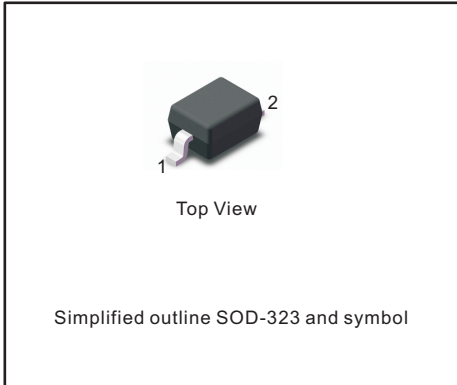
61000-4-2 (ESD): Air - 15kV, Contact - 8kV
 61000-4-4 (EFT): 40A - 5/50ns
 61000-4-5 (Surge): 24A, 8/20 μ s - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

350 Watts Peak Pulse Power per Line ($t_p=8/20\mu s$)
 Unidirectional & Bidirectional Configurations
 Replacement for MLV (0805)
 Protects One Power or I/O Port
 ESD Protection > 40 kilovolts
 Low Clamping Voltage
 Available in Multiple Voltage Types Ranging From 24V
 Ultra Low Capacitance: 0.6pF Typical
 RoHS Compliant

MECHANICAL CHARACTERISTICS

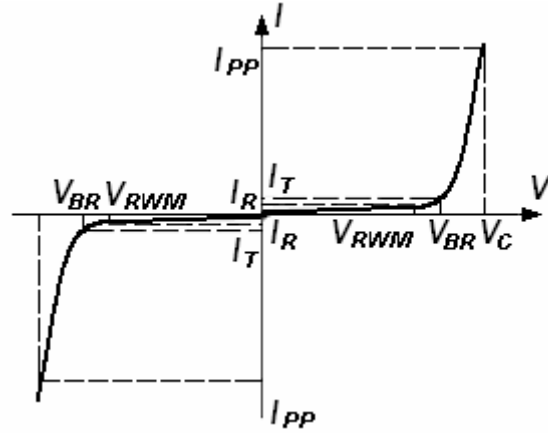
Molded JEDEC SOD-323 Package
 Weight 5 milligrams (Approximate)
 Available in Lead-Free Pure-Tin Plating(Annealed)
 Solder Reflow Temperature:
 Pure-Tin - Sn, 100: 260-270°C
 Consult Factory for Leaded Device Availability
 Flammability Rating UL 94V-0
 8mm Tape and Reel Per EIA Standard 481
 Device Marking: Marking Code & Polarity Band (*Unidirectional Only*)



Absolute Ratings ($T_{amb}=25^{\circ}C$)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power ($t_p = 8/20 \mu s$)	150	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +155	°C
T_{op}	Operating Temperature Range	-40 to +125	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD)	air discharge contact discharge	± 15 ± 8 KV
	IEC61000-4-4 (EFT)		40 A
	ESD Voltage	Per Human Body Model	16 KV

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}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T



Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified. VF = 0.9V at IF = 10mA

Device	Device Marking	V_{RWM} (V)	I_R (uA) @ V_{RWM}	V_{BR} (V) @ I_T (Note 1)	I_T	V_C (V) @ $I_{PP}=1A^*$	V_C (V) @ Max I_{PP}^*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
		Max	Max	Min	mA	Typ	Max	Max	Max	Typ
ESD56241D22	HC	24	1.0	26.7	1.0	43	56	3.0	168	1.5

1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

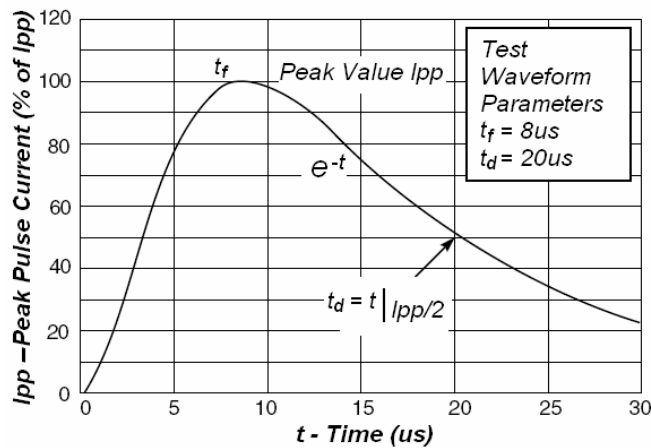
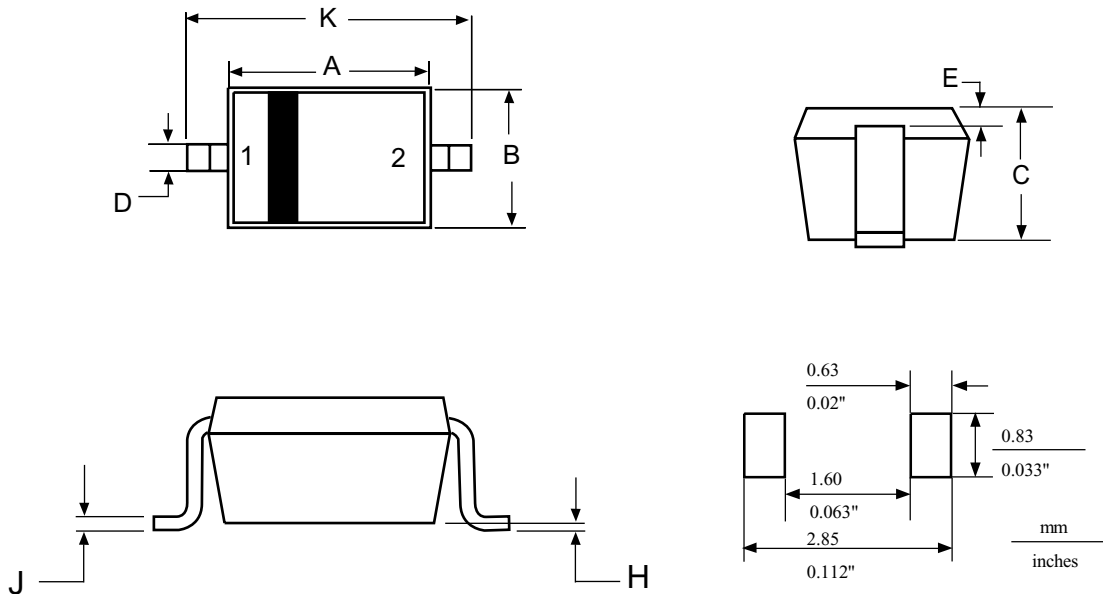


Fig1. Pulse Waveform

SOD-323



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106

PIN: 1. CATHODE
2. ANODE