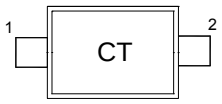
Transient Voltage Suppressors for ESD Protection

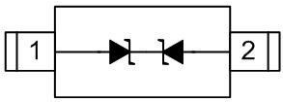
Features

◇ 60W (8/20μs) Peak Pulse Power
◇ Low Capacitance ESD Protection
◇ SOD-523 Package
◇ RoHS Compliant
◇ Matte Tin Lead finish (Pb-Free)
◇ Protect One High Speed Data Line
◇ Meet IEC61000-4-2 Level 4:
Contact Discharge > 25kV
Air Discharge > 25kV

SOD-523



PIN Diagram

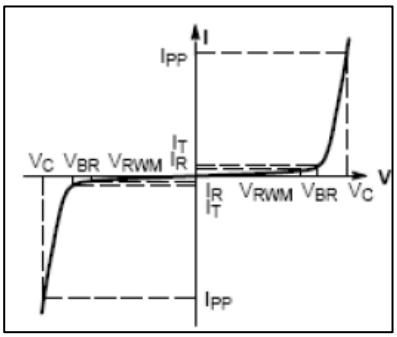


Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
P_{PK}	Peak Pulse Power	60	W
I_{PP}	Peak Pulse Current	5	A
V_{ESD} (Contact)	Contact ESD Voltage per IEC61000-4-2	25	kV
V_{ESD} (Air)	Air ESD Voltage per IEC61000-4-2	25	kV
TJ	Junction Temperature	-55 to +150	℃
TSTG	Storage Temperature	-55 to +150	℃

ELECTRICAL PARAMETER

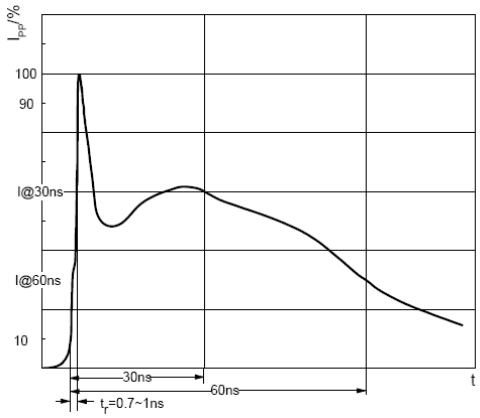
Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage



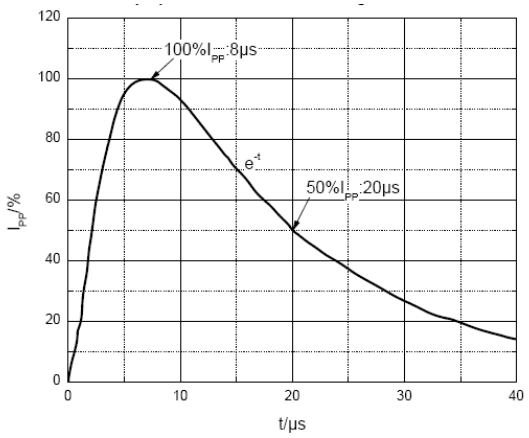
V-I characteristics for a Bi-directional TVS

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				3.3	V
VBR	Reverse Breakdown Voltage	IT = 1mA	4		6.3	V
IR	Reverse Leakage Current	VRWM = 3.3V			1	μA
VC	Clamping Voltage	IPP = 4.5A (8/20μs)			15	V
VC	Clamping Voltage	IPP = 5A (8/20 μs)			16	V
CJ	Capacitance	VR = 0V, f = 1MHz		9.6	15	pF

ESD stand ards compliance

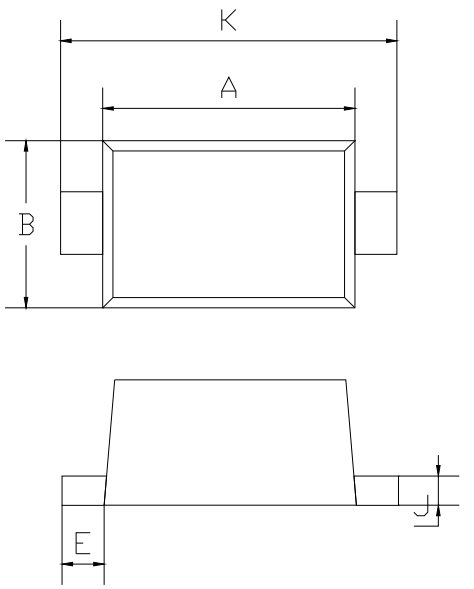


ESD pulse waveform according to IEC61000-4-2



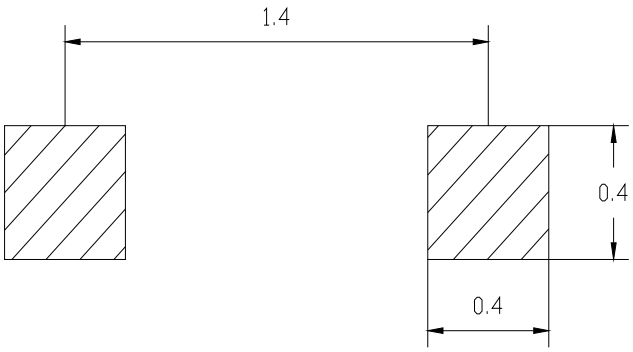
8/20μs pulse waveform according to IEC 61000-4-5

Plastic surface mounted package SOD-523



SOD-523		
Dim	Min	Max
A	1.1	1..3
B	0.7	0.9
C	0.5	0.7
D	0.3 Typical	
E	0.15	0.25
J	0.1 Typical	
K	1.5	1.7
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit：mm