

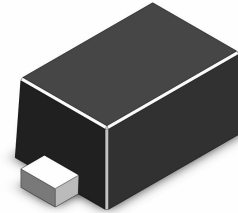
Transient Voltage Suppressors for ESD Protection

SE03D5S21HZ

Features

- ◆ Working voltage : 3.3V
- ◆ Low leakage current: 1.0 μ A @ V_{RWM}
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

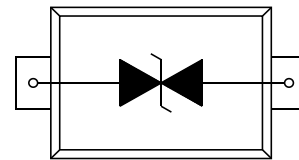
SOD-523



Applications

- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants (PDA's)
- ◆ Notebooks, Desktops, and Servers

Pin Configuration



Mechanical Characteristics

- ◆ SOD-523 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Marking Code: CT

Absolute Maximum Rating

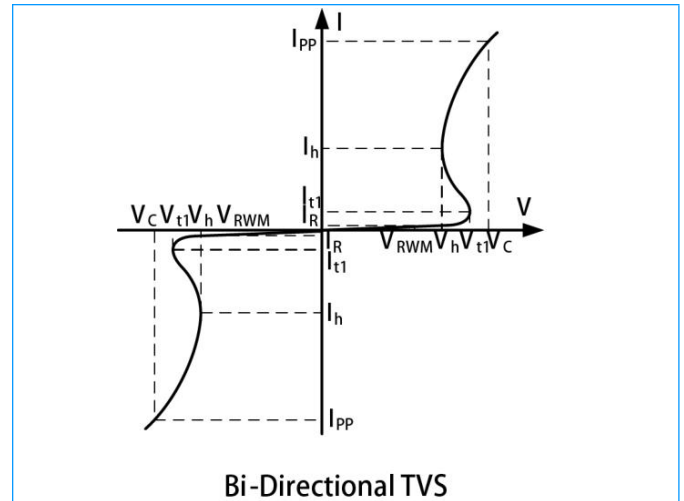
Symbol	Parameter	Value	Units
T_{LST}	Lead Soldering Temperature	260 (10sec)	$^{\circ}$ C
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}$ C
T_{OPT}	Operating Temperature Range	-55 to +125	$^{\circ}$ C
V_{ESD}	ESD per IEC 61000-4-2(Air)	\pm 30	KV
	ESD per IEC 61000-4-2 (Contact)	\pm 30	

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I-V Curve Characteristics

Symbol	Parameter
I_{PP}	Maximum Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{t1}	Trigger Voltage
I_{t1}	Trigger Current @ V_{t1}
V_h	Holding Voltage
I_h	Holding Current @ V_h



Bi-Directional TVS

Electrical Characteristics (@ $T_A=25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}	--	--	--	3.3	V
I_R	$V_{RWM}=3.3\text{V}$, $T=25^\circ\text{C}$	--	--	1	μA
V_{BR}	$I_T = 1\text{mA}$	3.6	--	5	V
V_C	$I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$	--	7	--	V
V_C	$I_{PP}=9\text{A}$, $t_p=8/20\mu\text{s}$	--	10	--	V
C_J	$V_R=0\text{V}$, $f=1\text{MHz}$	--	13	--	pF

Characteristic Curves

Fig1. 8/20 μs Pulse Waveform

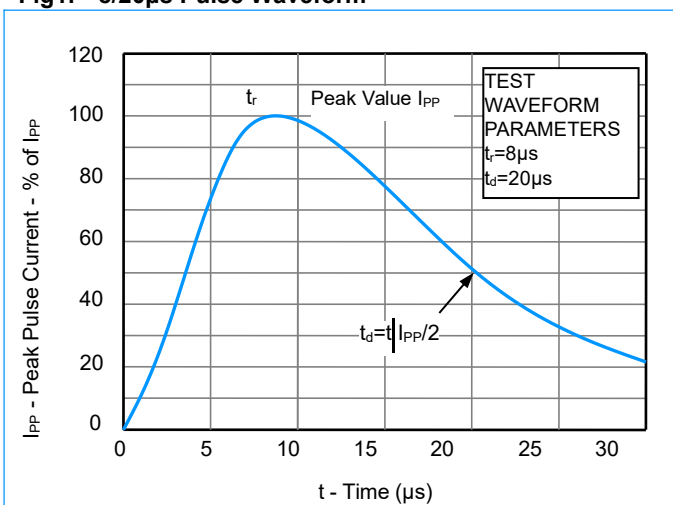
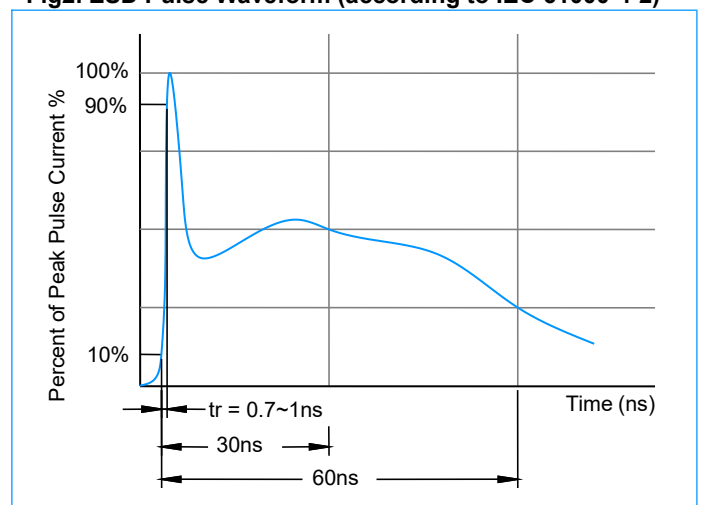


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)



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Characteristic Curves (Continue)

Fig3. ESD Clamping (+8KV Contac per IEC61000-4-2)

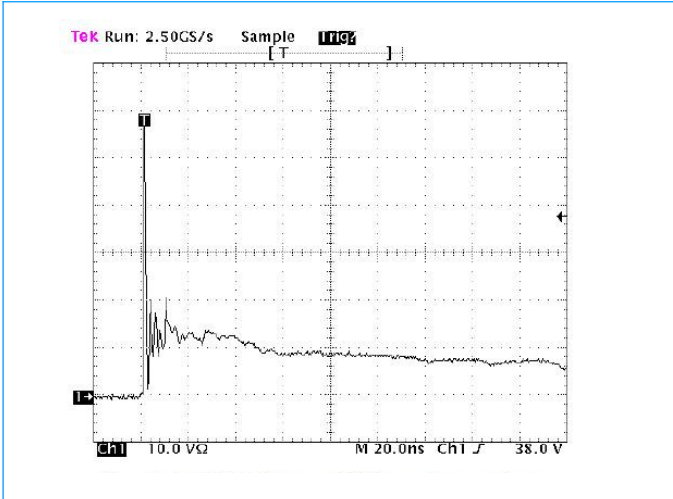
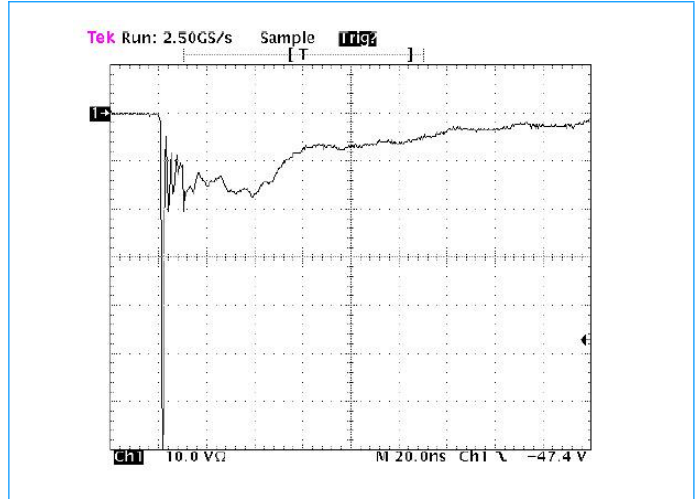
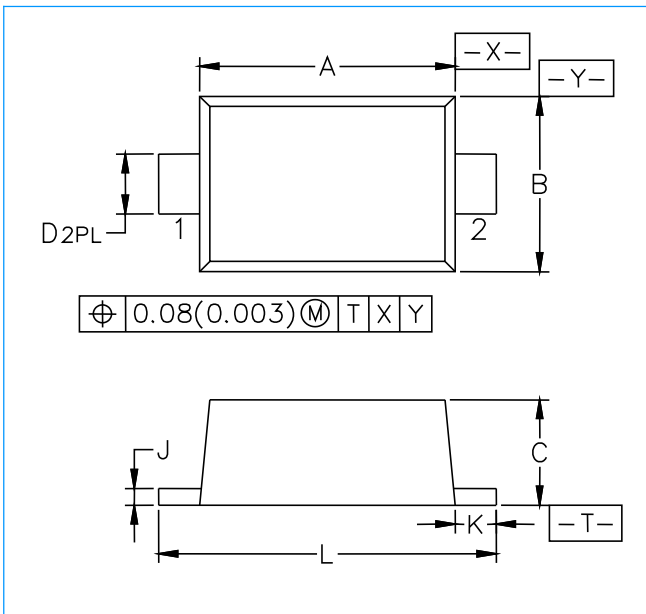


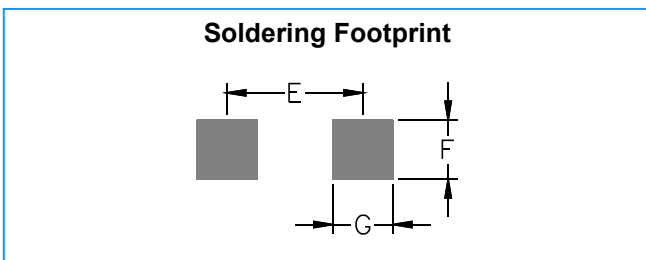
Fig4. ESD Clamping (-8KV Contac per IEC61000-4-2)



SOD-523 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
L	1.50	1.60	1.70	0.059	0.063	0.067



Symbol	Millimeters	Inches
E	1.40	0.0547
F	0.40	0.0157
G	0.40	0.0157