

Transient Voltage Suppressors for ESD Protection

SE12D5V11GW

Feature

- ◆ Protects one I/O line
- ◆ Low clamping voltage
- ◆ Working voltages : 12V
- ◆ Low leakage current

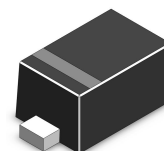
Applications

- ◆ Cellular Handsets and Accessories
- ◆ Portable Electronics
- ◆ Servers, Notebook, and Desktop PC
- ◆ Display Portst

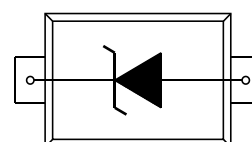
Mechanical Characteristics

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

SOD-523



Functional Diagram



Mechanical Characteristics

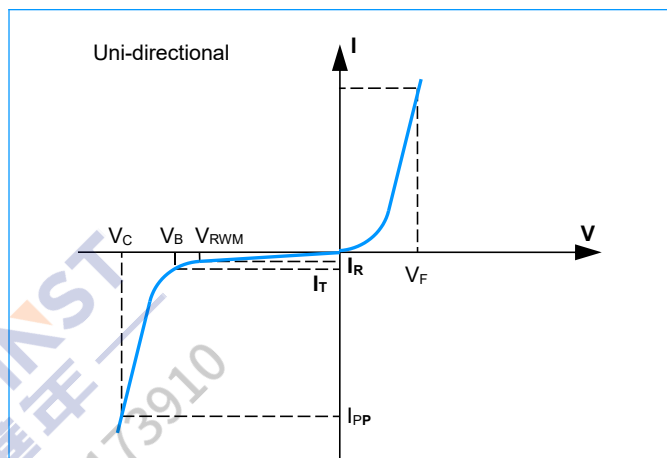
Symbol	Parameter	Value	Units
T _L	Lead Soldering Temperature	260 (10sec)	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _{OP}	Operating Temperature Range	-55 to +150	°C
	IEC61000-4-2 (ESD)	Air Discharge ±30 Contact Discharge ±30	KV
	IEC61000-4-4 (EFT)	40	A

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I-V Curve Characteristics

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_B	Breakdown Voltage @ I_T
I_F	Forward Current
V_F	Forward Voltage @ I_F
C	Max Capacitance @ $V_R=0V$ & $f=1MHz$



Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Symbol	Conditions	Min	Typ	Max	Unit
V_{RWM}	---	---	---	12.0	V
V_{BR}	$I_T = 1\text{ mA}$	14.1	---	---	V
I_R	$V_R = 12V$	---	---	0.1	μA
V_C	$I_{PP} = 5.0A$, $t_p = 8/20\mu s$	---	---	25.0	V
C_J	$V_R = 0V$, $f = 1MHz$	---	55.0	---	pF

Characteristic Curves

Fig1. 8/20 μs Pulse Waveform

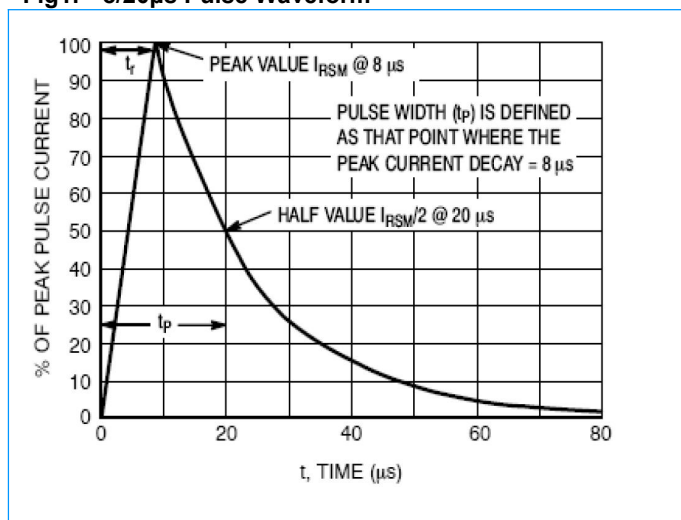
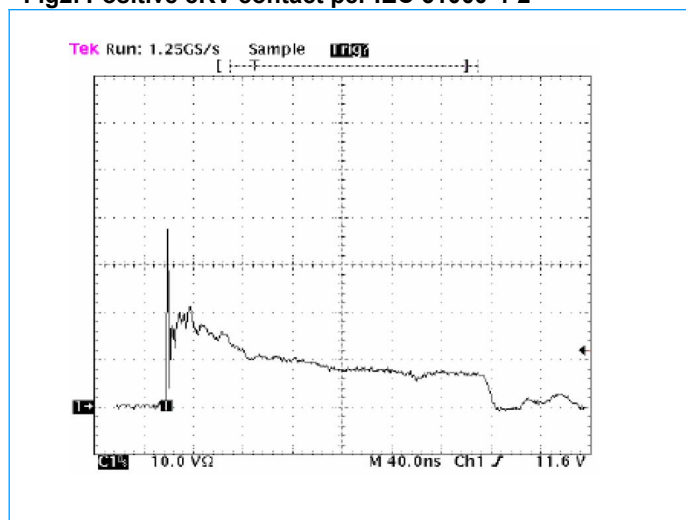


Fig2. Positive 8KV contact per IEC 61000-4-2

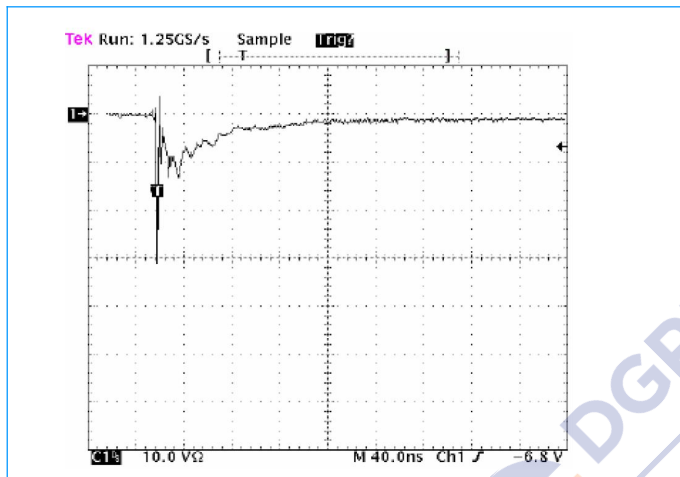


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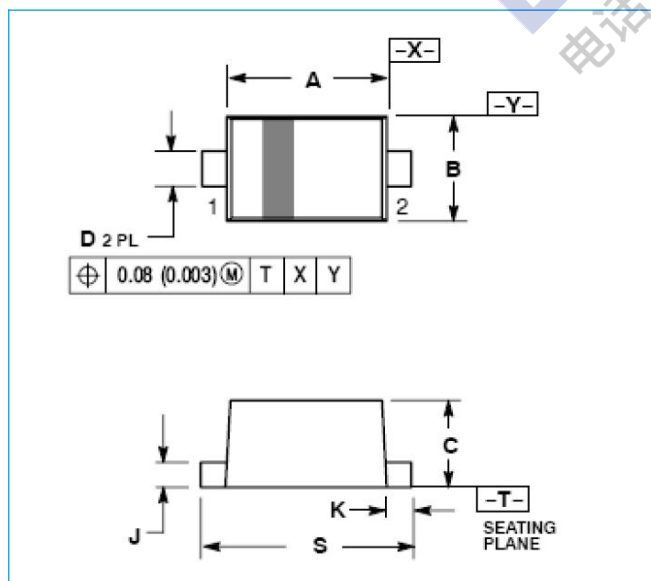
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Characteristic Curves (Continue)

Fig3. Negative 8KV contact per IEC 61000-4-2



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
S	1.50	1.60	1.70	0.059	0.063	0.067