

Transient Voltage Suppressors for ESD Protection

Low Capacitance

SE05D5D01GN

Feature

- u Ultra Low Capacitance 0.5 pF
- u Low Clamping Voltage
- u Stand-off Voltage: 5 V
- u Low Leakage

Applications

- u Cellular phones
- u Portable devices
- u Digital cameras
- u Power supplies

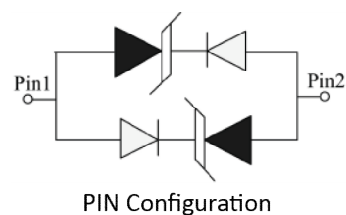
Mechanical Characteristics

- u SOD-523 Package
- u Molding Compound Flammability Rating : UL 94V-0
- u Quantity Per Reel : 5,000pcs
- u Reel Size : 7 inch

SOD-523



Functional Diagram

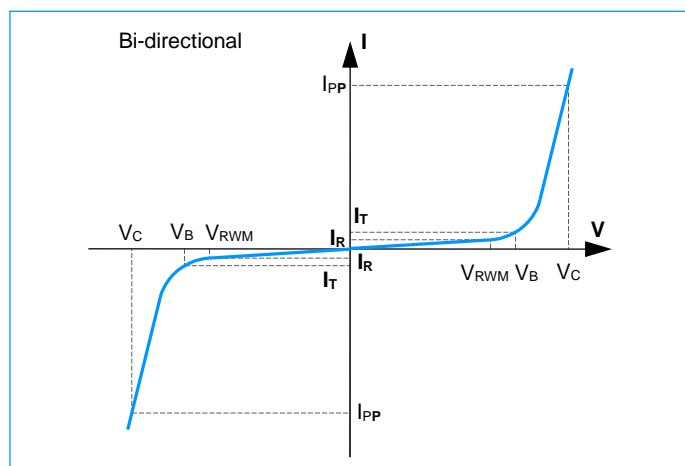


Mechanical Characteristics

Symbol	Parameter	Value	Units
T_L	Lead Soldering Temperature	260 (10sec)	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Maximum Junction Temperature	-55 to +125	°C
	IEC61000-4-2 (ESD)		
	Air Discharge	±15	KV
	Contact Discharge	±8	

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



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Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)

Symbol	Conditions	Min	Typ	Max	Units
V_R	—	—	—	5.0	V
V_{BR}	$I_T=1mA$	6.0	—	—	V
I_R	$V_R=5V$	—	—	1	μA
V_C	$I_{PP}=1A, t_p=8/20\mu S$	—	—	10	V
	$I_{PP}=5A, t_p=8/20\mu S$	—	—	13.6	V
C_J	$V_R=0V, f=1MHz$	—	0.5	0.9	pF

Characteristic Curves

Fig1. ESD Clamping Voltage Screenshot Positive 8 kV Contact per IEC61000-4-2

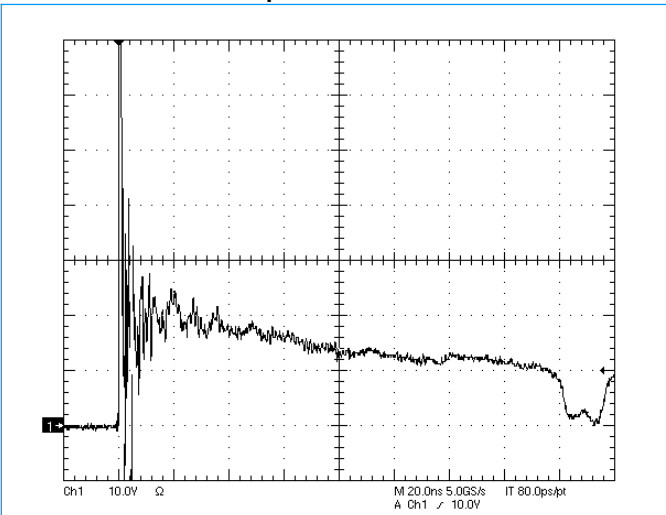
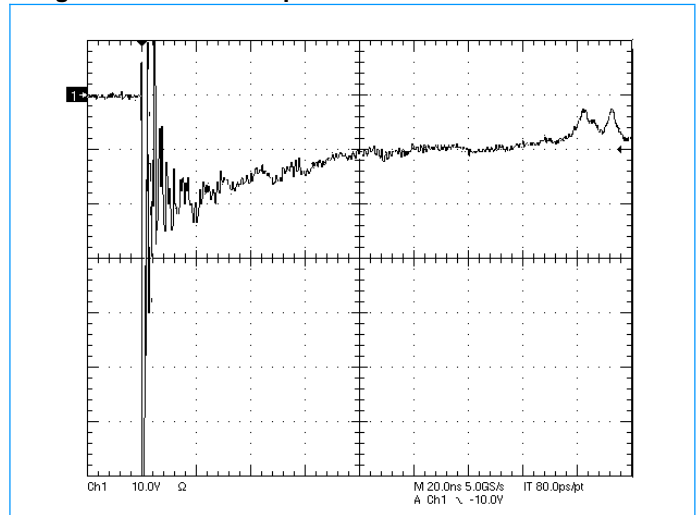


Fig2. ESD Clamping Voltage Screenshot Negative 8 kV Contact per IEC61000-4-2



Test Waveforms & Setup

Fig3. ESD Pulse Waveform (according to IEC 61000-4-2)

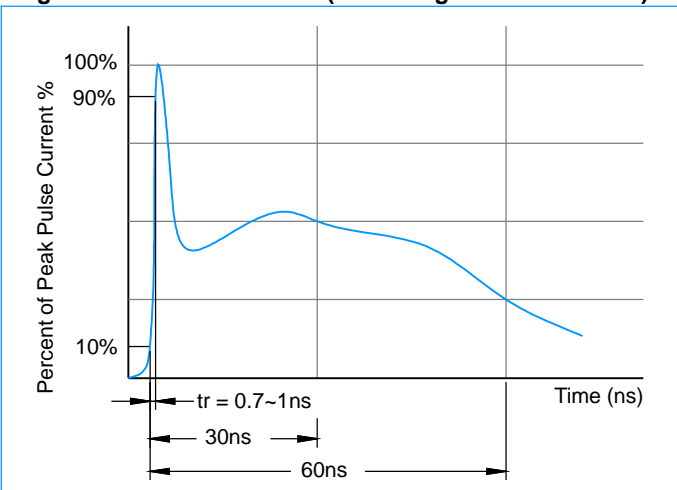
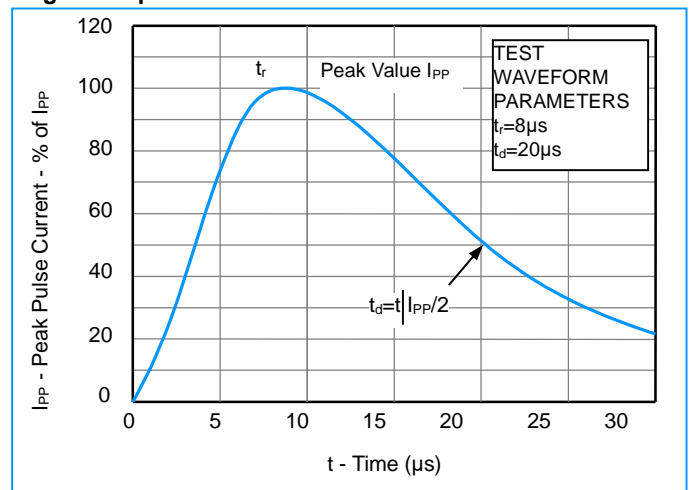
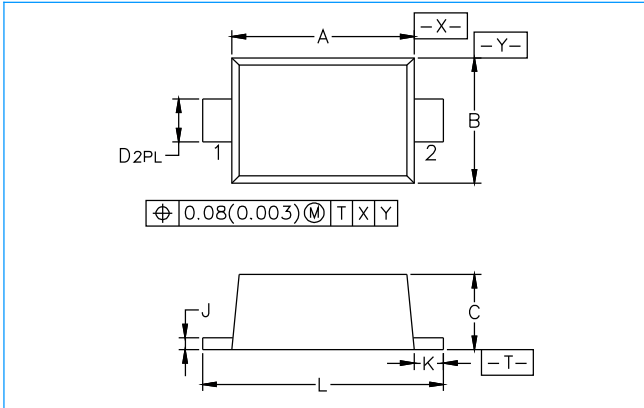
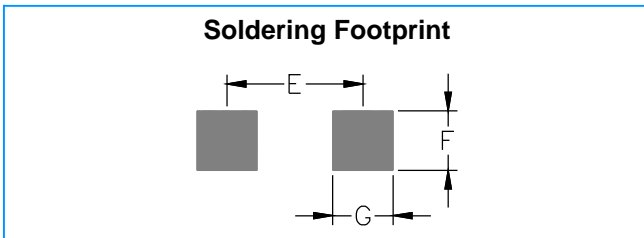


Fig4. 8x20µs Pulse Waveform



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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