

Transient Voltage Suppressors for ESD Protection

SE05D5L01GZ

Features

- ◆ Working voltages : 5.0 V
- ◆ Low leakage current
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

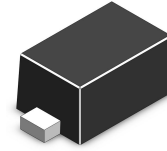
Applications

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

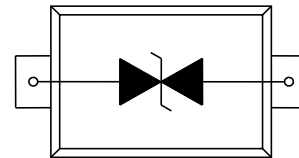
Mechanical Characteristics

- ◆ SOD-523 package
- ◆ Molding Compound Flammability Rating: UL 94V-0
- ◆ Quantity Per Reel:3,000pcs
- ◆ Reel size: 7inch
- ◆ Marking Code: 5S

SOD-523



Functional Diagram



Absolute Maximum Rating

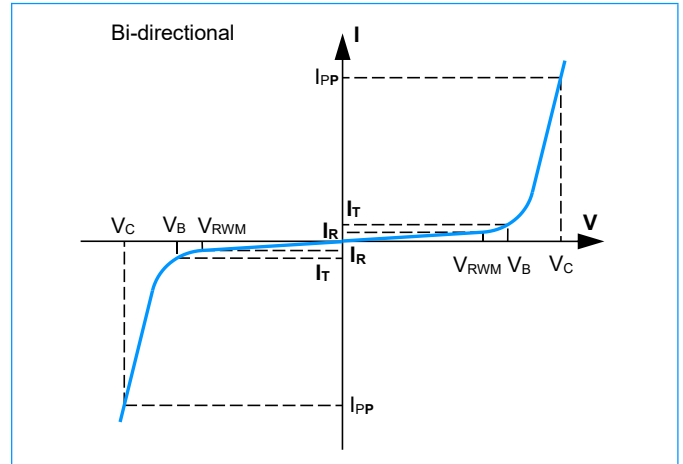
Symbol	Parameter	Value	Units
T_L	Lead Soldering Temperature	260 (10sec)	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_{OP}	Operating Temperature Range	-55 to +125	°C
V_{ESD}	Air Discharge Contact Discharge	±25 ±25	KV

Transient Voltage Suppressors for ESD Protection

SE05D5L01GZ

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



Electrical Characteristics (T = 25°C)

Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}	—	—	—	5.0	V
I_R	$V_{RWM} = 5.0V, T = 25^\circ C$	—	—	1.0	μA
V_{BR}	$I_T = 1mA$	6.5	—	9.5	V
V_C	$I_{PP} = 4A, t_p = 8/20\mu s$	—	20	—	V
C_J	$V_R = 0V, f = 1MHz$	—	0.4	—	pF

Characteristic Curves

Fig1. 8/20 μs Pulse Waveform

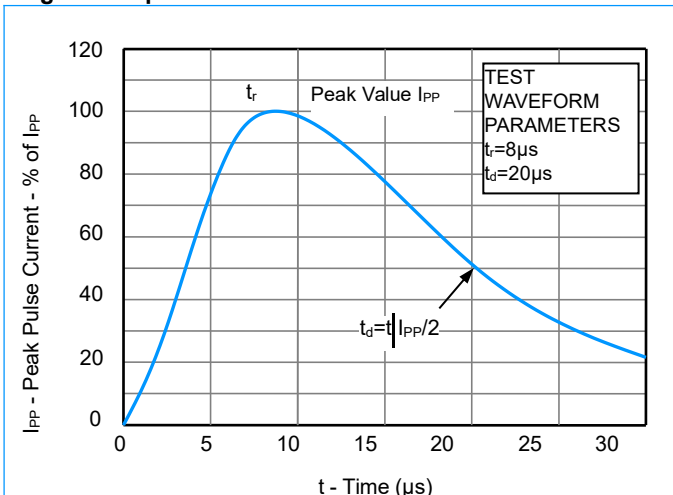
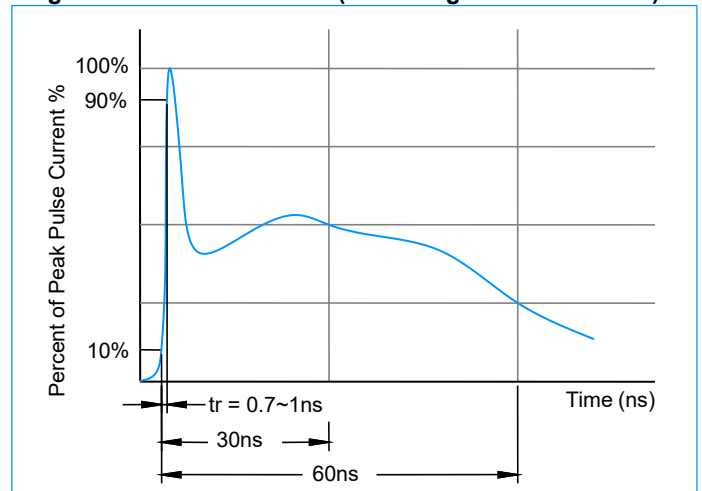


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)



Transient Voltage Suppressors for ESD Protection

SE05D5L01GZ

Characteristic Curves

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

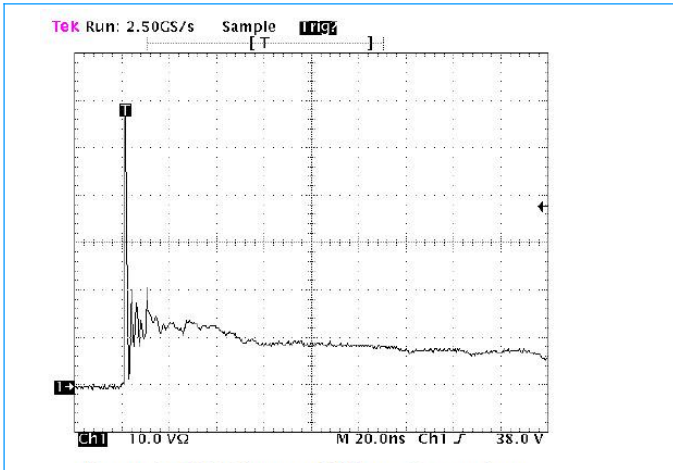
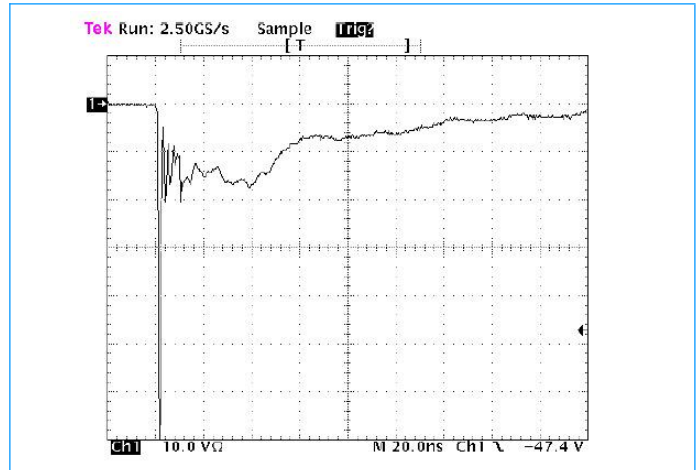
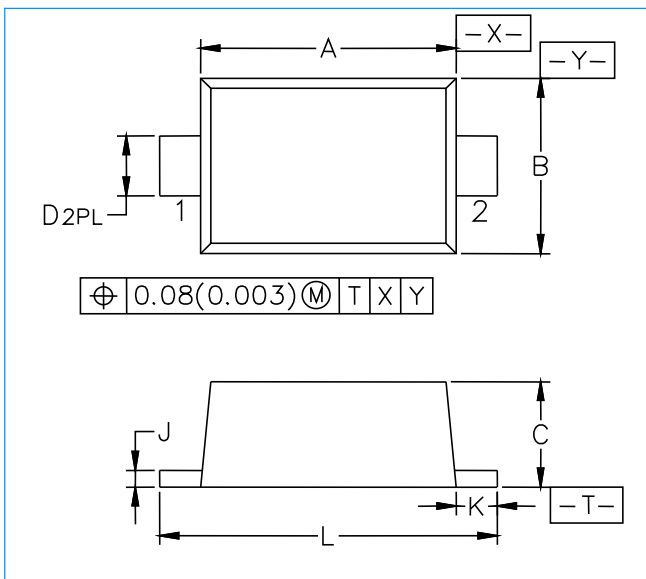


Fig4. ESD Clamping (-8KV Contac per IEC61000-4-2)

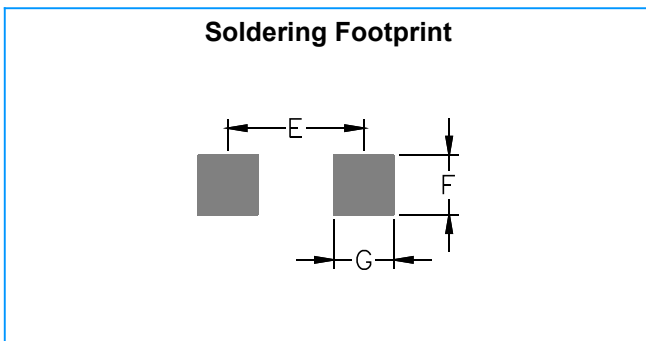


SOD-523 Package Outline & Dimensions



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

Soldering Footprint



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