

## Transient Voltage Suppressors for ESD Protection

### SE36D3S01GZ

#### Features

- ◆ Working voltage : 36V
- ◆ Low leakage current: 1 $\mu$ A @  $V_{RWM}$
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

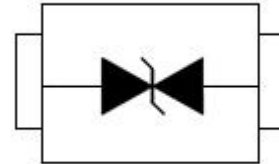
#### SOD-323



#### Applications

- ◆ Laptop Computers
- ◆ Cellular Phones
- ◆ Digital Cameras
- ◆ Personal Digital Assistants (PDA's)

#### Pin Configuration



#### Mechanical Characteristics

- ◆ SOD-323 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch

#### Absolute Maximum Rating

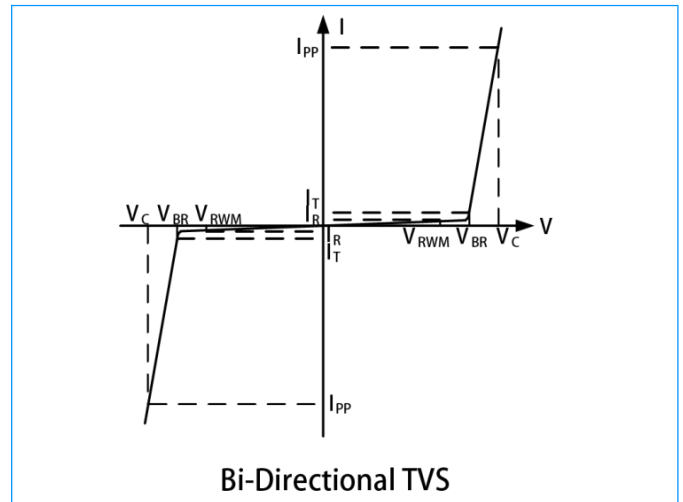
Symbol	Parameter	Value	Units
$T_{LST}$	Lead Soldering Temperature	260 (10sec)	$^{\circ}$ C
$T_{STG}$	Storage Temperature Range	-55 to +150	$^{\circ}$ C
$T_{OPT}$	Operating Temperature Range	-55 to +150	$^{\circ}$ C
$V_{ESD}$	ESD per IEC 61000-4-2(Air)	$\pm$ 30	KV
	ESD per IEC 61000-4-2 (Contact)	$\pm$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



Bi-Directional TVS

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

Symbol	Test Condition	Minimum	Typical	Maximum	Units
$V_{RWM}$	--	--	--	36	V
$I_R$	$V_{RWM}=36\text{V}$ , $T=25^\circ\text{C}$	--	--	1	$\mu\text{A}$
$V_{BR}$	$I_T = 1\text{mA}$	39.6	--	48	V
$V_C$	$I_{PP}=5\text{A}$ , $t_p=8/20\mu\text{s}$	--	--	120	V
$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$	--	20	--	pF

### Characteristic Curves

Fig1. 8/20 $\mu\text{s}$  Pulse Waveform

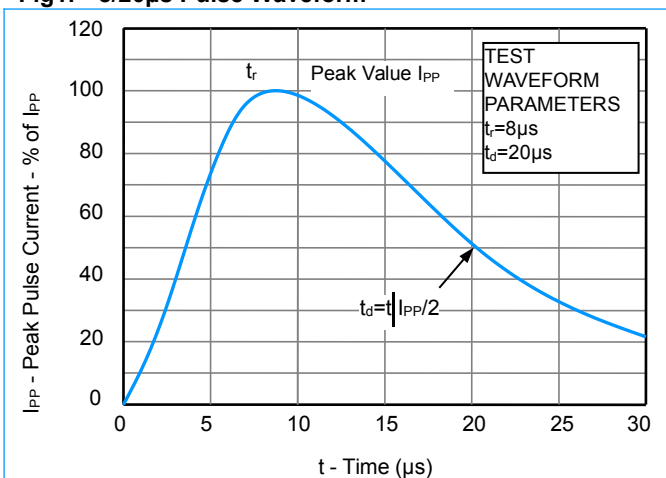
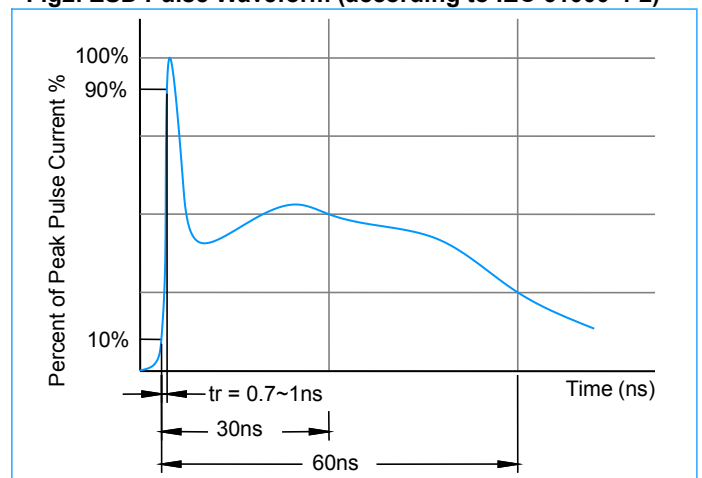


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)



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### Characteristic Curves (Continue)

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

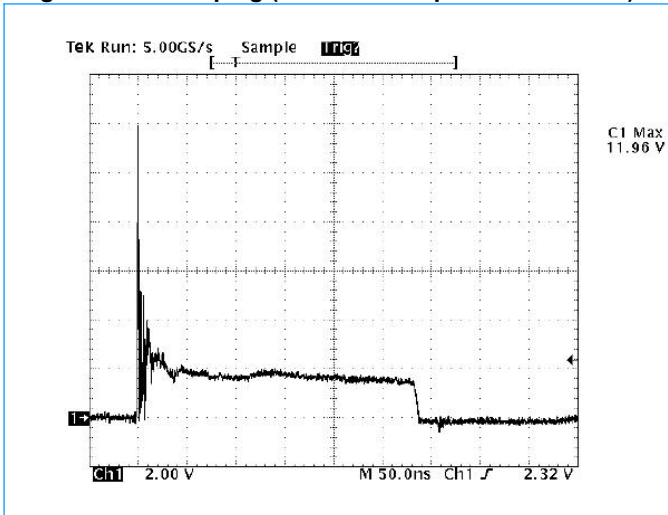
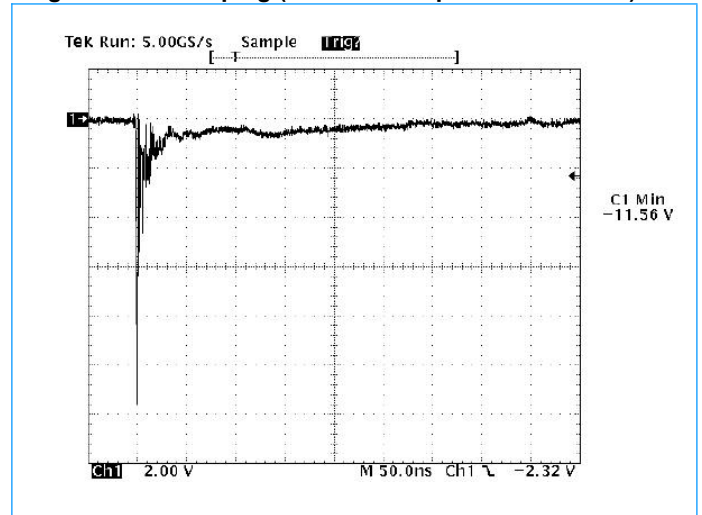
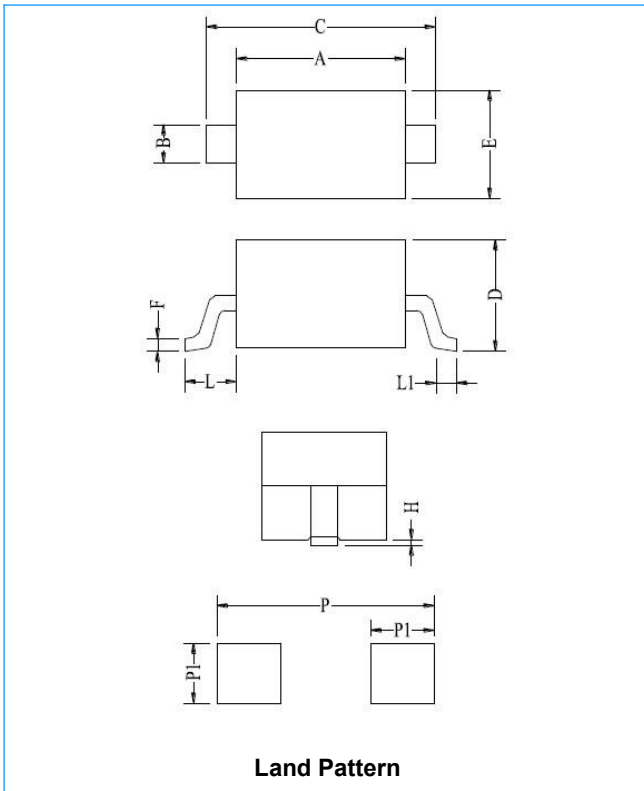


Fig4. ESD Clamping (-8KV Contac per IEC61000-4-2)



### SOD-323 Package Mechanical Data



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.80	0.063	0.071
B	0.25	0.35	0.010	0.014
C	2.50	2.70	0.098	0.106
D	0.00	1.00	0.000	0.039
E	1.20	1.40	0.047	0.055
F	0.08	0.15	0.003	0.006
L	0.475REF		0.019REF	
L1	0.25	0.40	0.010	0.016
H	0.00	0.10	0.000	0.004
P	3.00		0.118	
P1	0.80		0.031	