

## Transient Voltage Suppressors for ESD Protection

### SE05D3W11GC

#### Feature

- ◆ Protects one I/O line or power line
- ◆ Low clamping voltage
- ◆ Working voltages : 5V
- ◆ Low leakage current

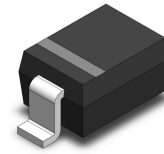
#### Applications

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

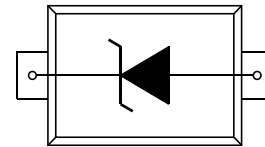
#### Mechanical Characteristics

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

SOD-323



#### Functional Diagram

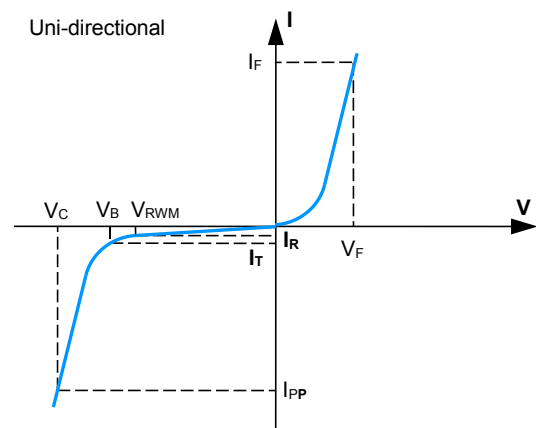


#### Mechanical Characteristics

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	±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 @ $I_T$
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$
$P_{PK}$	Peak Power Dissipation
$C$	Max Capacitance @ $V_R=0V$ & $f=1MHz$



# Transient Voltage Suppressors for ESD Protection

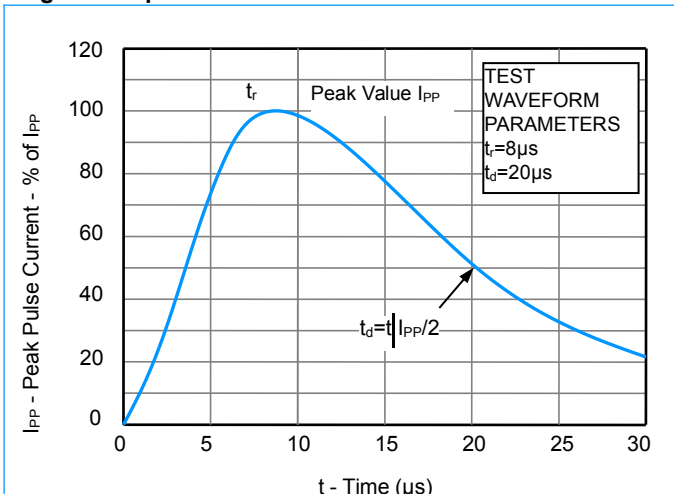
**SE05D3W11GC**

Electrical Characteristics (@ 25°C Unless Otherwise Specified )

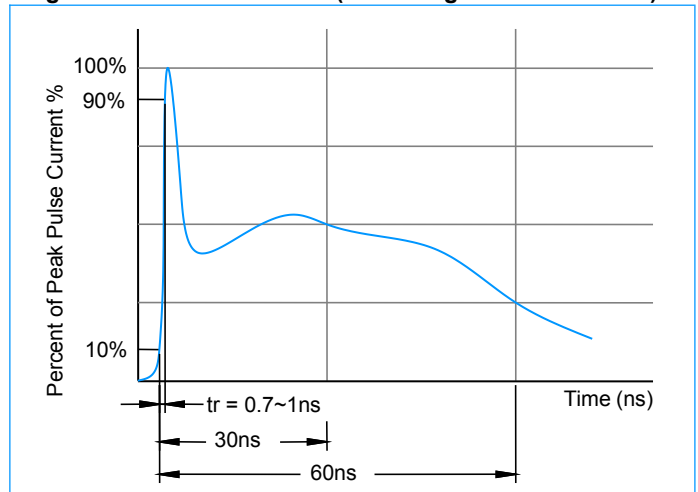
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Working Voltage	$V_R$	---	---	---	5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1 \text{ mA}$	6.0	---	---	V
Reverse Leakage Current	$I_R$	$V_R = 5V$	---	---	1.0	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20\mu\text{s}$	---	---	9.8	V
		$I_{PP} = 24A, t_p = 8/20\mu\text{s}$	---	---	20	V
Junction Capacitance	$C_J$	$V_R = 0V, f = 1\text{MHz}$	---	150	---	pF

## Characteristic Curves

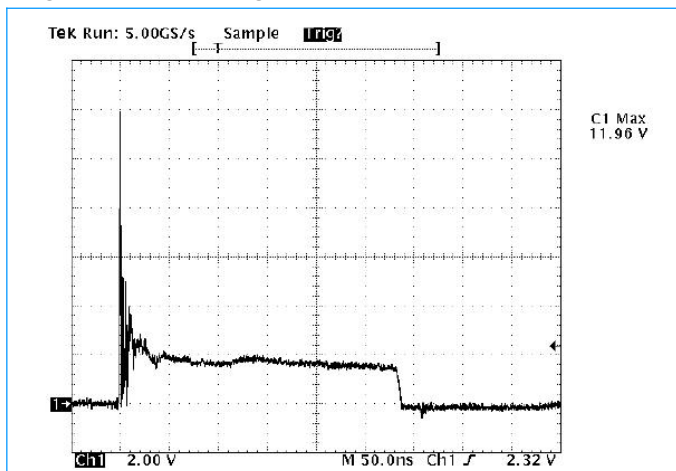
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



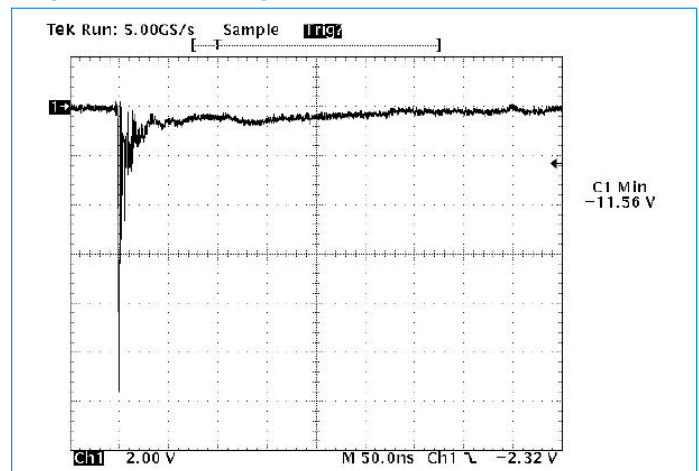
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



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



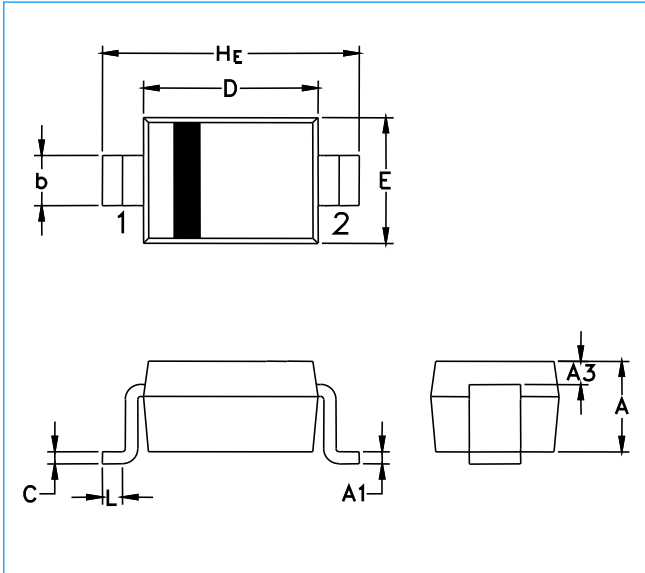
**Fig4. ESD Clamping (-8KV Contac per IEC61000-4-2)**



# Transient Voltage Suppressors for ESD Protection

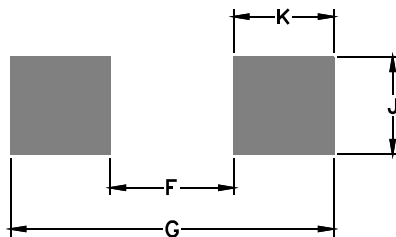
## SE05D3W11GC

### SOD-323 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
<b>A</b>	0.80	0.90	1.00	0.031	0.035	0.040
<b>A1</b>	0.00	0.05	0.10	0.000	0.002	0.004
<b>A3</b>	0.15 REF			0.006 REF		
<b>b</b>	0.25	0.32	0.40	0.010	0.012	0.016
<b>C</b>	0.089	0.12	0.177	0.003	0.005	0.007
<b>D</b>	1.60	1.70	1.80	0.062	0.066	0.070
<b>E</b>	1.15	1.25	1.35	0.045	0.049	0.053
<b>L</b>	0.08			0.003		
<b>HE</b>	2.30	2.50	2.70	0.090	0.098	0.105

### Soldering Footprint



Symbol	Millimeters	Inches
<b>F</b>	1.60	0.063
<b>G</b>	2.85	0.112
<b>J</b>	0.83	0.033
<b>K</b>	0.63	0.025