

# Transient Voltage Suppressors for ESD Protection

## SE36D5S11GW

### Features

- ◆ IEC 61000-4-2 Level 4 ESD Protection.
- ◆ Protects one directional I/O line.
- ◆ Low clamping voltage.
- ◆ Working voltages: 36V.
- ◆ Low leakage current.

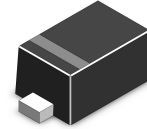
### Applications

- ◆ Microprocessor based equipment.
- ◆ Personal Digital Assistants (PDA's).
- ◆ Notebooks, Desktops, and Servers.
- ◆ Portable Instrumentation.
- ◆ Peripherals.
- ◆ Pagers.

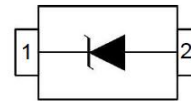
### Mechanical Characteristics

- ◆ Package: SOD-523 .
- ◆ Material: Halogen free and RoHS compliant.
- ◆ Packaging: Tape and Reel.
- ◆ Quantity per Reel: 3,000pcs.
- ◆ Reel size: 7 inch.

### SOD-523



### PIN Configuration



### Absolute Maximum Rating

Symbol	Parameter	Value	Unit
$V_{ESD}$	ESD per IEC 61000-4-2 (Air)	$\pm 15$	KV
	ESD per IEC 61000-4-2 (Contact)	$\pm 8$	
$T_{OPT}$	Operating Temperature	-55 to +125	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55 to +150	$^{\circ}C$

*These ratings are limiting values above which the serviceability of the diode may be impaired.*

### Electrical Characteristics ( $T_{amb}=25^{\circ}C$ )

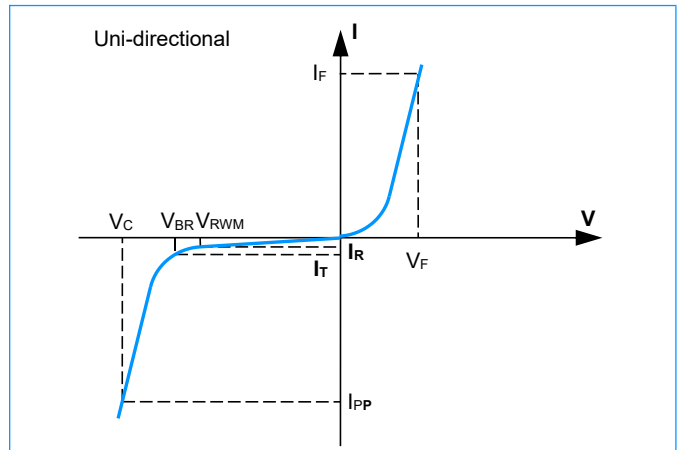
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	$V_{RWM}$	--	--	--	36	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	40	--	--	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 36V$	--	--	1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 3A, t_P = 8/20\mu s$	--	60	--	V
Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$	--	16	--	pF

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Electrical Parameters ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

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
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



### Electrical Characteristics Curve

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

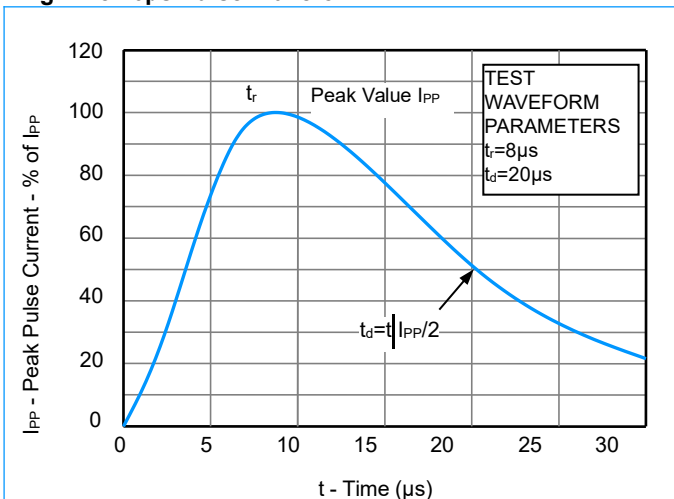


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

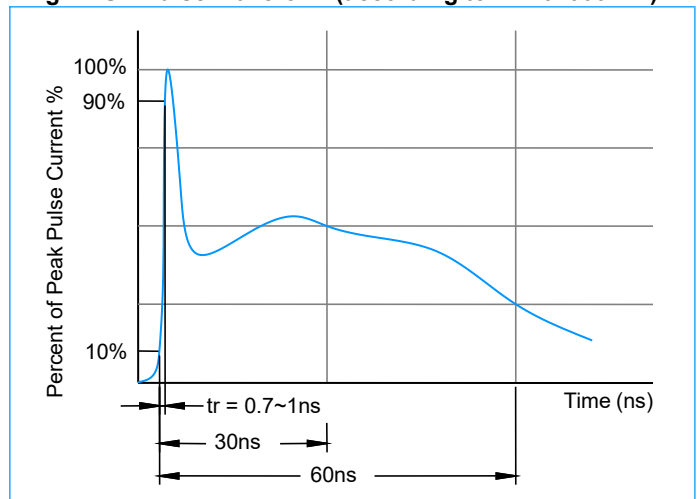
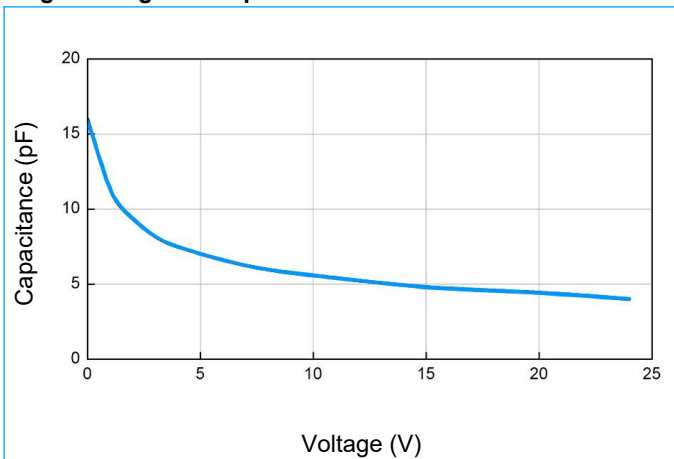


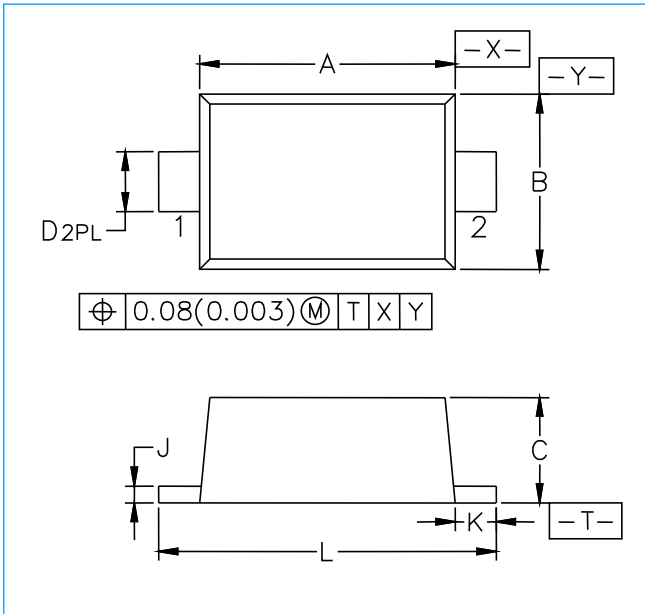
Fig3. Voltage vs. Capacitance



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### SOD-523 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
<b>A</b>	1.10	1.20	1.30	0.043	0.047	0.051
<b>B</b>	0.70	0.80	0.90	0.028	0.032	0.035
<b>C</b>	0.50	0.60	0.70	0.020	0.024	0.028
<b>D</b>	0.25	0.30	0.35	0.010	0.012	0.014
<b>J</b>	0.07	0.14	0.20	0.0028	0.0055	0.0079
<b>K</b>	0.15	0.20	0.25	0.006	0.008	0.010
<b>L</b>	1.50	1.60	1.70	0.059	0.063	0.067

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