

# Transient Voltage Suppressors for ESD Protection

## SE05D3W11GZ

### Features

- ◆ Working voltage : 5V
- ◆ Low leakage current: 1.0 $\mu$ A @  $V_{RWM}$
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

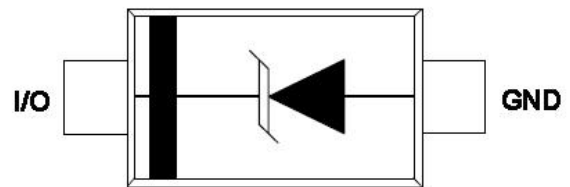
SOD-323



### Applications

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

### Pin Configuration



(Top View)

### Mechanical Characteristics

- ◆ SOD-323 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Marking Code: 05W

### Absolute Maximum Rating

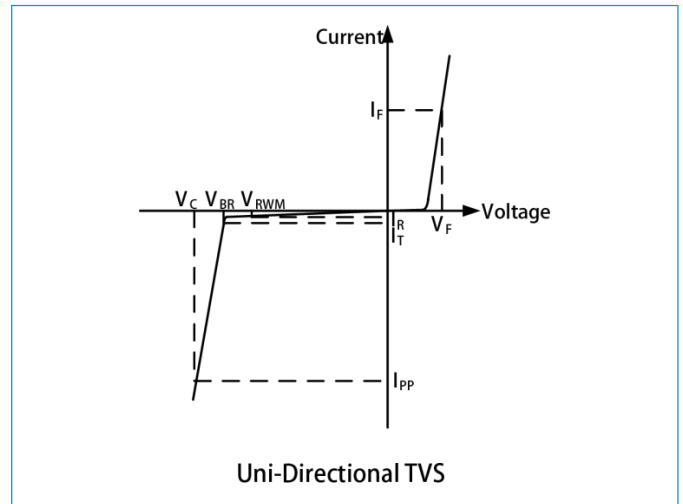
Symbol	Parameter	Value	Units
$T_{LST}$	Lead Soldering Temperature	260 (10sec)	$^{\circ}$ C
$T_{STG}$	Storage Temperature Range	-55 to +150	$^{\circ}$ C
$T_{OPT}$	Operating Temperature Range	-55 to +125	$^{\circ}$ C
$V_{ESD}$	ESD per IEC 61000-4-2(Air)	$\pm$ 30	KV
	ESD per IEC 61000-4-2 (Contact)	$\pm$ 30	

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### I-V Curve Characteristics

Symbol	Parameter
$I_{PP}$	Maximum 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 @ $I_F$

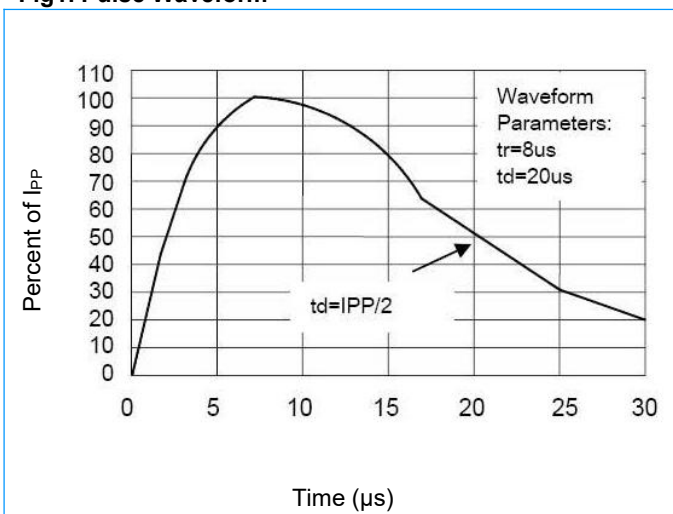


### Electrical Characteristics (@ $T_A=25^\circ\text{C}$ Unless Otherwise Specified)

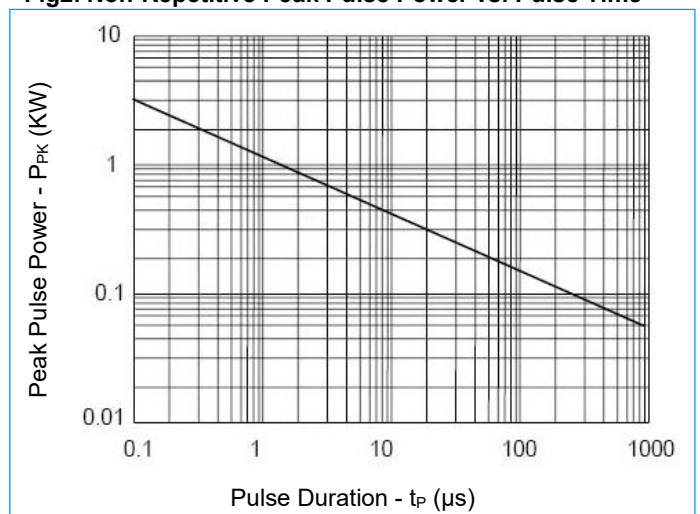
Symbol	Test Condition	Minimum	Typical	Maximum	Units
$V_{RWM}$	--	--	--	5	V
$I_R$	$V_{RWM}=5\text{V}, T=25^\circ\text{C}$	--	0.01	1	$\mu\text{A}$
$V_{BR}$	$I_T = 1\text{mA}$	6	--	8	V
$V_C$	$I_{PP}=25\text{A}, t_p=8/20\mu\text{s}$	--	12	20	V
$C_J$	$V_R=0\text{V}, f=1\text{MHz}$	--	180	--	pF

### Characteristic Curves

**Fig1. Pulse Waveform**



**Fig2. Non-Repetitive Peak Pulse Power vs. Pulse Time**

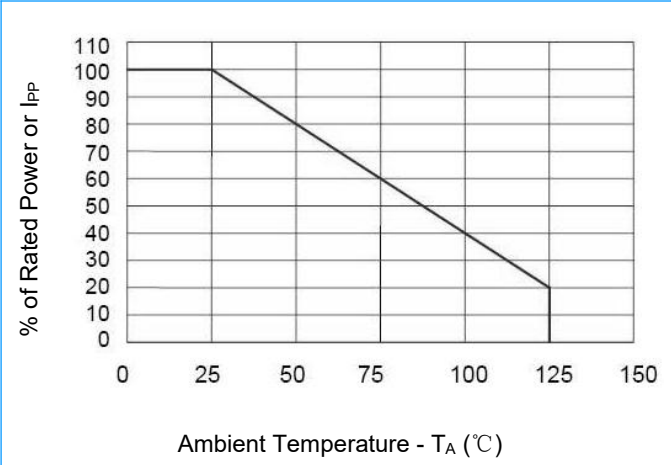


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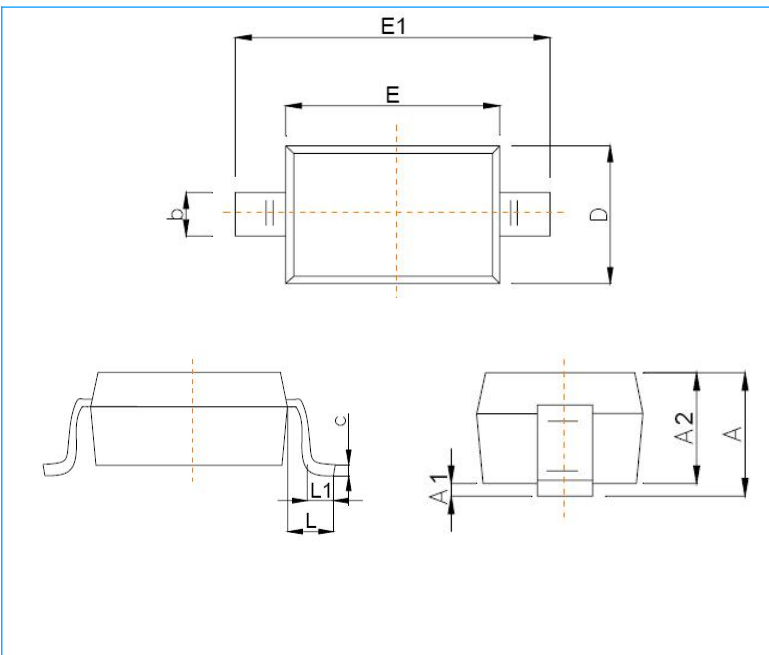
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### Characteristic Curves (Continue)

**Fig3. Power Derating Curve**



### SOD-323 Package Outline & Dimensions



Symbol	Dimensions in Millimeters	
	Min.	Max.
<b>A</b>	--	1.00
<b>A1</b>	0.00	0.10
<b>A2</b>	0.80	0.90
<b>b</b>	0.25	0.35
<b>c</b>	0.08	0.15
<b>D</b>	1.20	1.40
<b>E</b>	1.60	1.80
<b>E1</b>	2.50	2.70
<b>e</b>	1.80	2.04
<b>L</b>	0.475 REF	
<b>L1</b>	0.25	0.40
$\theta$	0°	8°

### Recommended Pad Outline

