

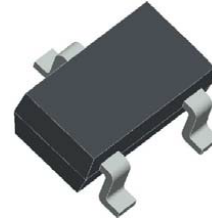
# Transient Voltage Suppressors for ESD Protection

## SE05T2W12GZ

### Features

- ⌌ Working voltage : 5.0V
- ⌌ Low leakage current: 1 $\mu$ A @  $V_{RWM}$
- ⌌ Low clamping voltage
- ⌌ Response Time is < 1 ns

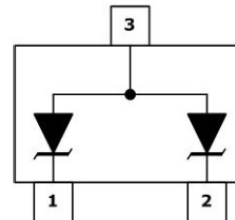
### SOT23-3L



### Applications

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

### Pin Configuration



### Mechanical Characteristics

- ⌌ SOT23-3L Package
- ⌌ Molding Compound Flammability Rating : UL 94V-0
- ⌌ Quantity Per Reel : 3,000pcs
- ⌌ Reel Size : 7 inch

### Absolute Maximum Rating

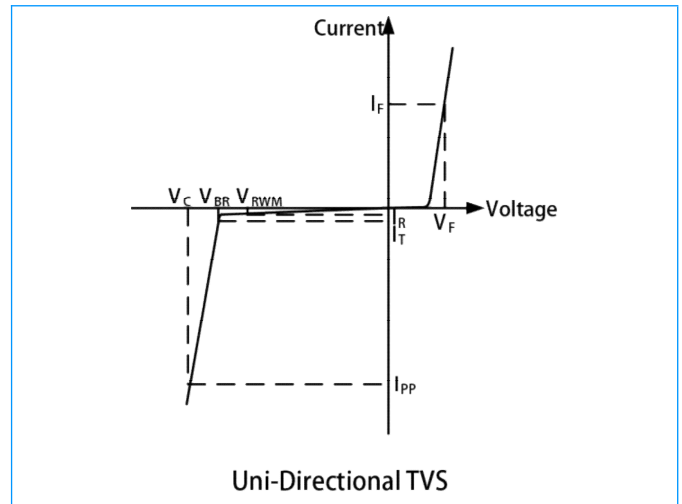
Symbol	Parameter	Value	Units
$T_{LST}$	Lead Soldering Temperature	260 (10sec)	$^{\circ}C$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^{\circ}C$
$T_{OPT}$	Operating Temperature Range	-55 to +125	$^{\circ}C$
$V_{ESD}$	ESD per IEC 61000-4-2(Air)	$\pm 30$	KV
	ESD per IEC 61000-4-2 (Contact)	$\pm 30$	

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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
$V_C$	$I_{PP}=24\text{A}$ , $t_p=8/20\mu\text{s}$	--	12	20	V
$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$	--	180	--	pF

### Electrical Characteristic Curves

Fig1. Pulse Waveform

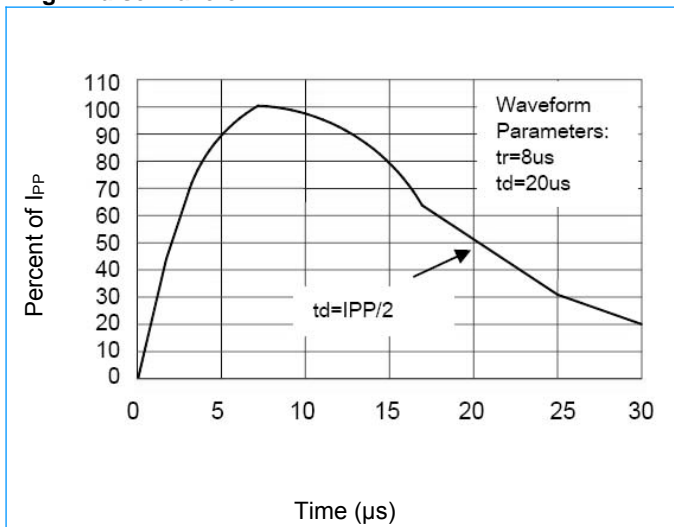
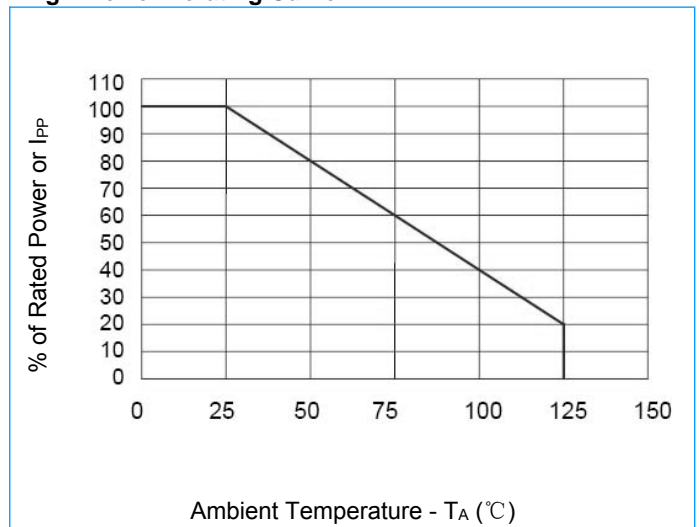


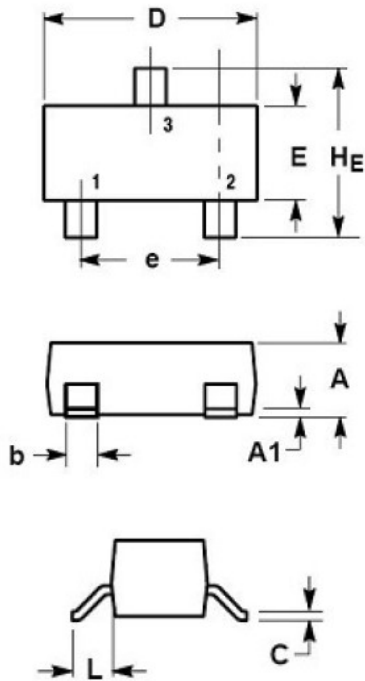
Fig2. Power Derating Curve



## Transient Voltage Suppressors for ESD Protection

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#### SOT23-3L Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104