

Transient Voltage Suppressors for ESD Protection

SE05T2W12GZ

Features

- ◆ Working voltage : 5.0V
- ◆ Low leakage current: 1 μ A @ V_{RWM}
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

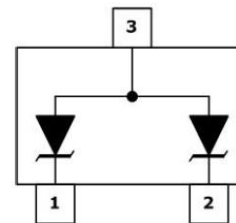
SOT23-3L



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
- ◆ Marking Code: 5M2

Absolute Maximum Rating

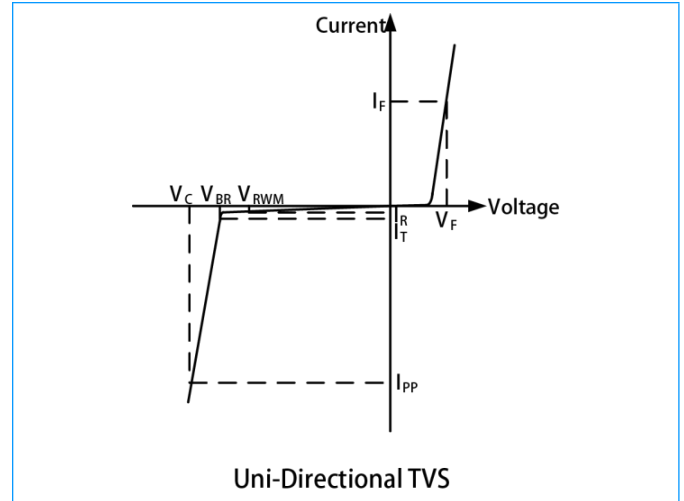
Symbol	Parameter	Value	Units
T_{LST}	Lead Soldering Temperature	260 (10sec)	$^{\circ}$ C
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}$ C
T_{OPT}	Operating Temperature Range	-55 to +125	$^{\circ}$ C
V_{ESD}	ESD per IEC 61000-4-2(Air)	\pm 30	KV
	ESD per IEC 61000-4-2 (Contact)	\pm 30	

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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	μA
V_{BR}	$I_T = 1\text{mA}$	6	--	8	V
V_C	$I_{PP}=24\text{A}$, $t_p=8/20\mu\text{s}$	--	18	--	V
C_J	$V_R=0\text{V}$, $f=1\text{MHz}$	--	180	--	pF

Electrical Characteristic Curves

Fig1. Pulse Waveform

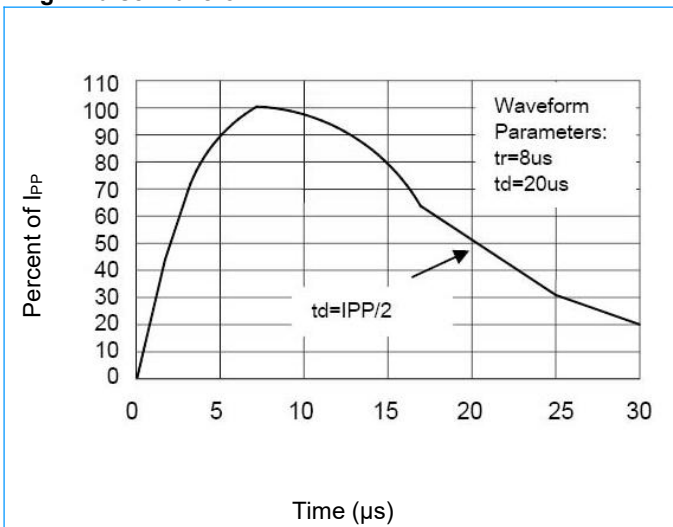
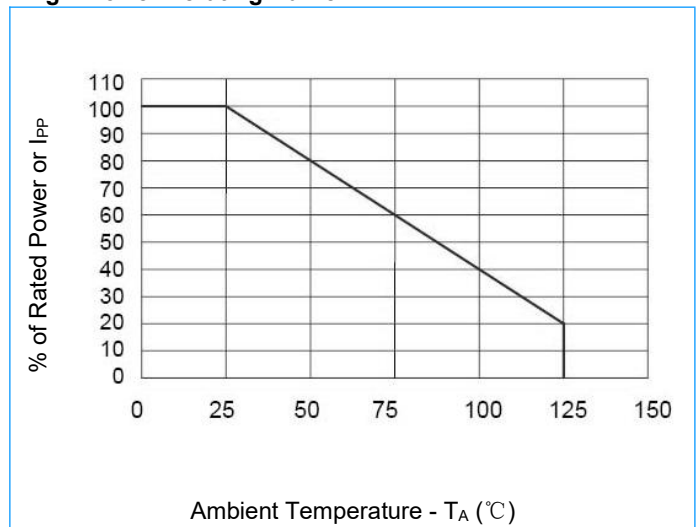


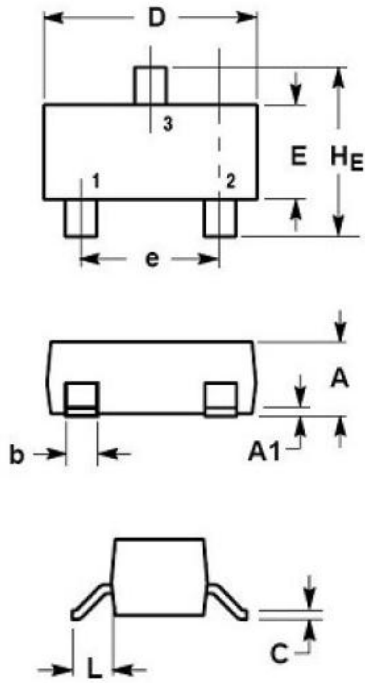
Fig2. Power Derating Curve



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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