

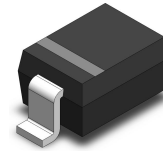
Transient Voltage Suppressors for ESD Protection

SE03D3V31GZ

Features

- ◆ Working voltage : 3.3V
- ◆ Low leakage current: 1.0 μ A @ V_{RWM}
- ◆ Low clamping voltage
- ◆ Response Time is < 1 ns

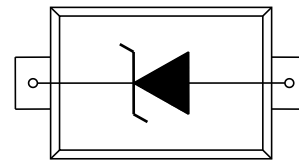
SOD-323



Applications

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

Pin Configuration



Mechanical Characteristics

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

Absolute Maximum Rating

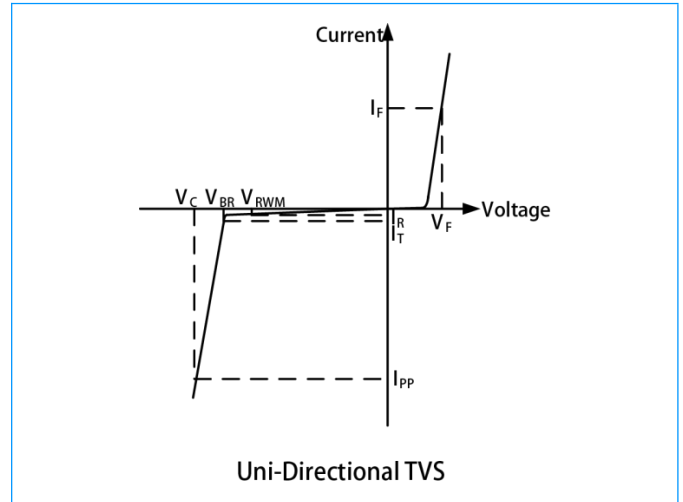
Symbol	Parameter	Value	Units
T_{LST}	Lead Soldering Temperature	260 (10sec)	$^{\circ}$ C
T_{STG}	Storage Temperature Range	-55 to +125	$^{\circ}$ C
T_{OPT}	Operating Temperature Range	-55 to +125	$^{\circ}$ C
V_{ESD}	ESD per IEC 61000-4-2(Air)	\pm 32	KV
	ESD per IEC 61000-4-2 (Contact)	\pm 16	

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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}	--	--	--	3.3	V
I_R	$V_{RWM}=3.3\text{V}, T=25^\circ\text{C}$	--	--	1.0	μA
V_{BR}	$I_T = 1\text{mA}$	5.2	--	6.2	V
V_C	$I_{PP}=13\text{A}, t_p=8/20\mu\text{s}$	--	12	--	V
C_J	$V_R=0\text{V}, f=1\text{MHz}$	--	90	--	pF

Characteristic Curves

Fig1. Peak Pulse Power vs. Pulse Time

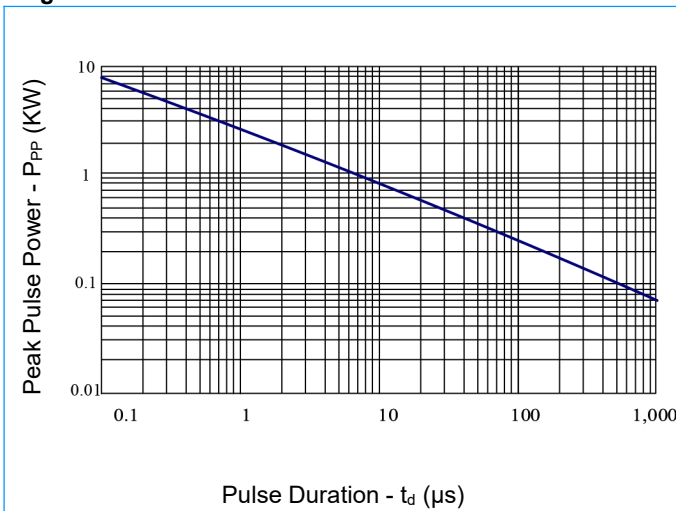
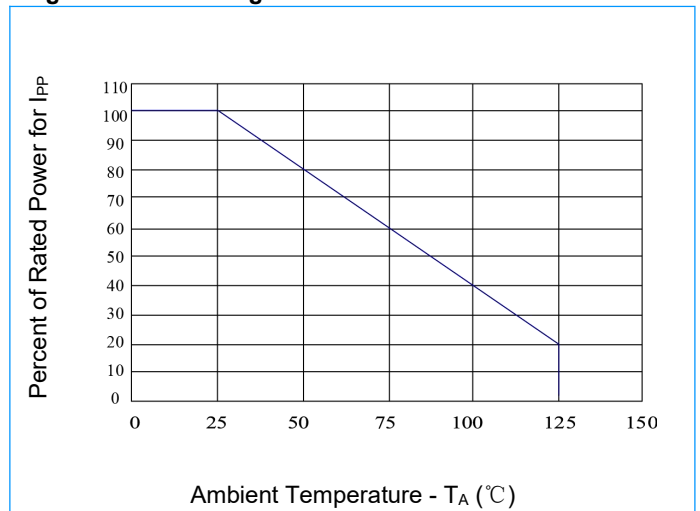


Fig2. Power Derating Curve



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Characteristic Curves (Continue)

Fig3. Clamping Voltage vs. Peak Pulse Current

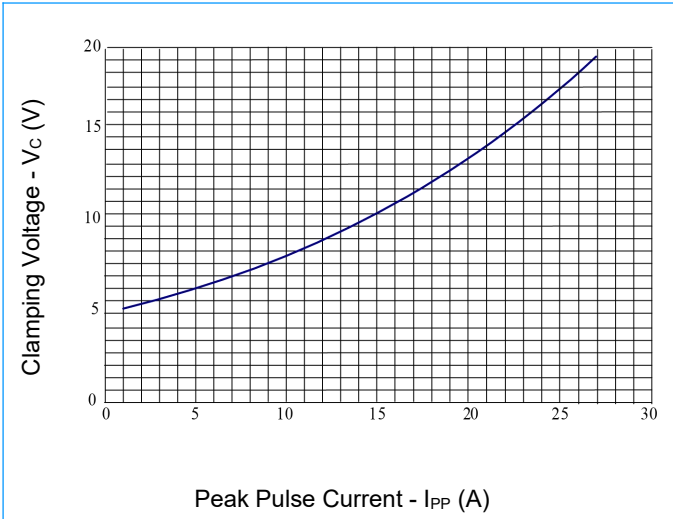


Fig4. Normalized Junction Capacitance vs. Reverse Voltage

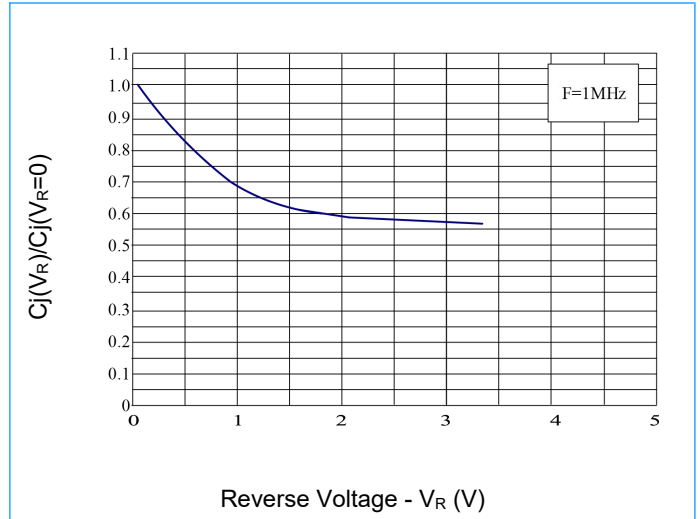
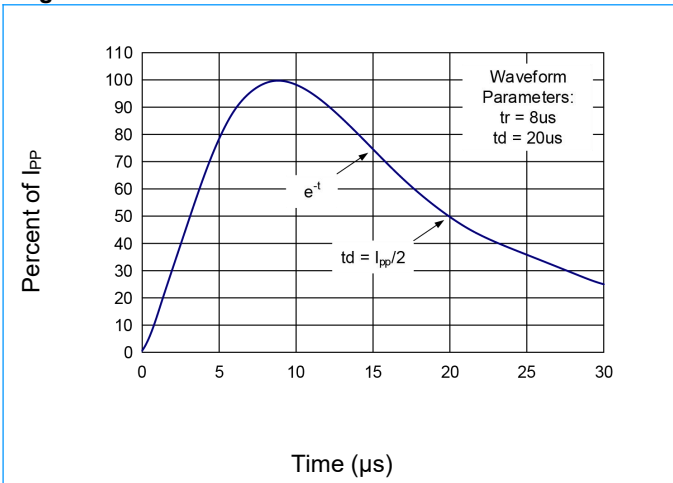


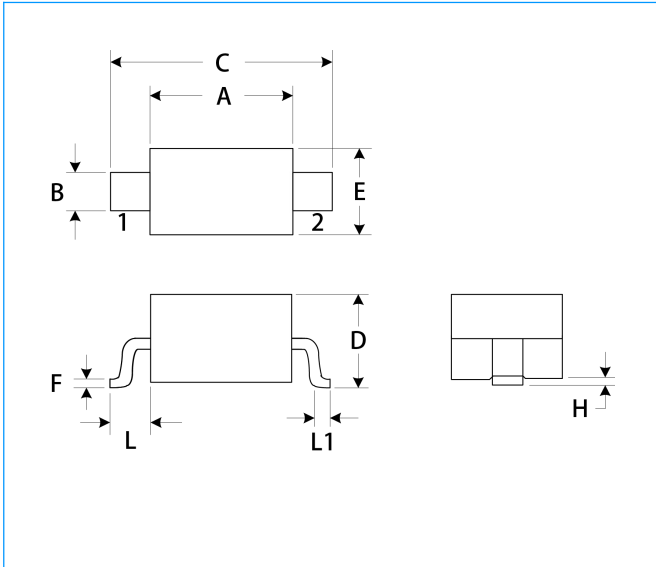
Fig5. Pulse Waveform Current



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SOD-323 Package Outline & Dimensions



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D	--	1.000	--	0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004