

## Transient Voltage Suppressors for ESD Protection

### SE05T2C02GK

#### Features

- ◆ Working voltage: 5V
- ◆ Low leakage current:  $0.1\mu\text{A} @ V_{\text{RWM}}$
- ◆ Low clamping voltage
- ◆ Response Time is  $< 1 \text{ ns}$

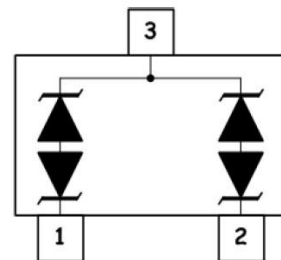
#### SOT-23



#### Applications

- ◆ Portable Instrumentation.
- ◆ Networking and Telecom.
- ◆ Serial and Parallel Ports.
- ◆ Peripherals.

#### Pin Configuration



#### Mechanical Characteristics

- ◆ SOT-23 Package
- ◆ Molding Compound Flammability Rating: UL 94V-0
- ◆ Quantity Per Reel: 3,000pcs
- ◆ Reel Size: 7 inch

#### Absolute Maximum Rating

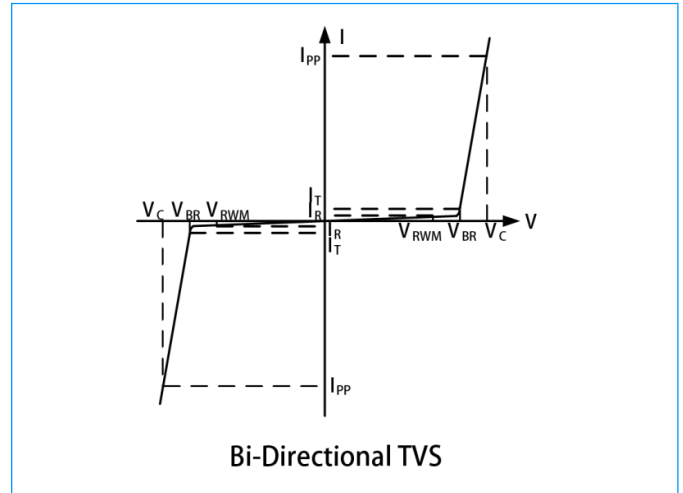
Symbol	Parameter	Value	Units
$T_{\text{LST}}$	Lead Soldering Temperature	260 (10sec)	$^{\circ}\text{C}$
$T_{\text{STG}}$	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
$T_{\text{OPT}}$	Operating Temperature Range	-55 to +150	$^{\circ}\text{C}$
$V_{\text{ESD}}$	ESD per IEC 61000-4-2(Air)	$\pm 15$	KV
	ESD per IEC 61000-4-2 (Contact)	$\pm 8$	

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#### I-V Curve Characteristics

Symbol	Parameter
$I_{PP}$	Maximum 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

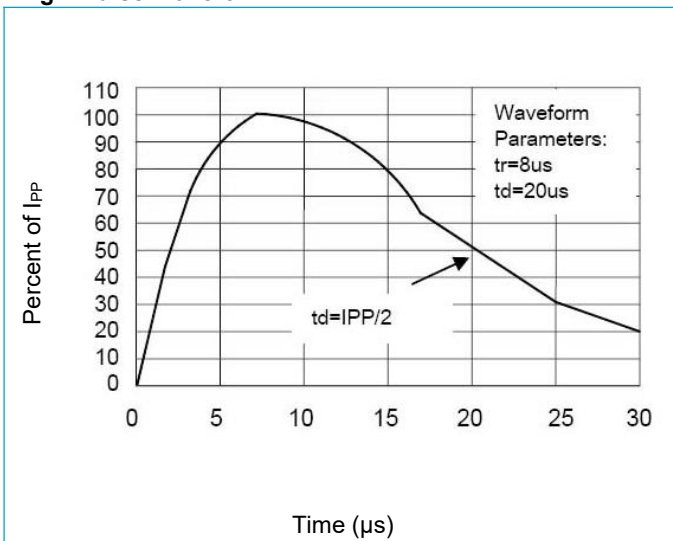


#### Electrical Characteristics (@ $T_A=25^\circ\text{C}$ Unless Otherwise Specified )

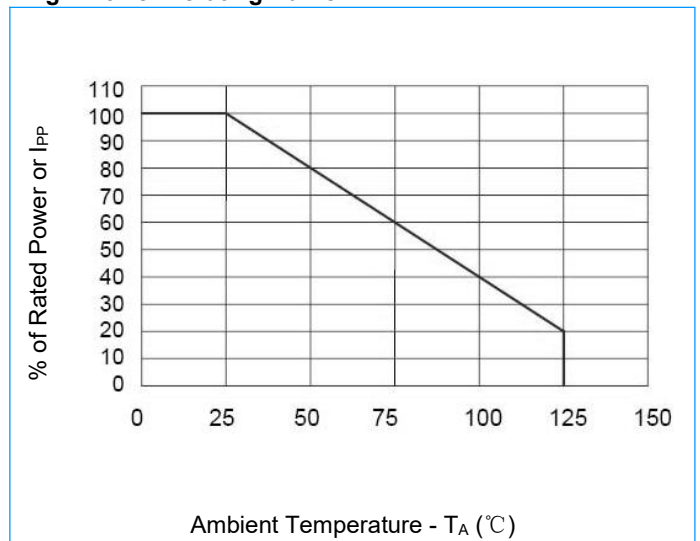
Symbol	Test Condition	Minimum	Typical	Maximum	Units
$V_{RWM}$	--	--	--	5	V
$I_R$	$V_{RWM}=5\text{V}, T=25^\circ\text{C}$	--	--	0.1	$\mu\text{A}$
$V_{BR}$	$I_T=1\text{mA}$	6	--	--	V
$V_C$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	--	14	--	V
$V_C$	$I_{PP}=4\text{A}, t_p=8/20\mu\text{s}$	--	22	--	V
$C_J$	$V_R=0\text{V}, f=1\text{MHz}$	--	0.3	--	pF

#### Electrical Characteristic Curves

**Fig1. Pulse Waveform**



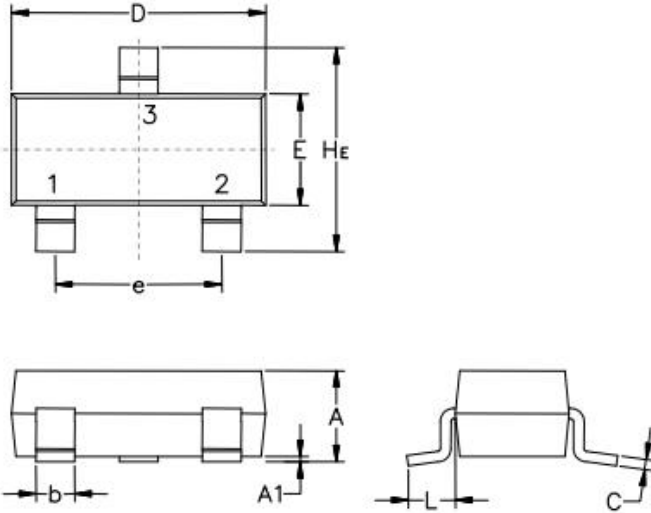
**Fig2. Power Derating Curve**



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### SOT-23 Package Outline & Dimensions



Symbol	Millimeters		
	Min.	Nom.	Max.
A	0.89	1.00	1.11
A1	0.01	0.06	0.10
b	0.37	0.44	0.50
c	0.09	0.13	0.18
D	2.80	2.90	3.04
E	1.20	1.30	1.40
e	1.78	1.90	2.04
L	0.35	0.54	0.69
H <sub>E</sub>	2.10	2.40	2.64

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