

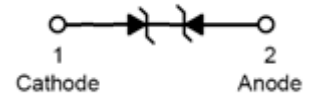
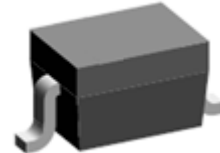


# SD05C SERIES

## STANDARD CAPACITANCE TVS

### Features

- Small SOD-323 Package
- Bidirectional Configurations
- Peak Power Dissipation 350W @8 x 20 us Pulse
- Low Leakage
- Fast Response Time < 5 ns
- Protects One Power or I/O Port
- ESD Protection to IEC 61000-4-2 Level 4, 15KV(Air), 8KV(Contact)
- ESD Protection to IEC 61000-4-2 Level 4, 30A
- 16KV Human Body Model ESD Requirements
- RoHS Compliant in Lead-Free Versions



### Applications

- Cell Phone Handsets and Accessories
- Microprocessor Based Equipment
- Personal Digital Assistant (PDA)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

### Absolute Maximum Ratings

Parameter	Symbol	Value	Units	
Peak Power Dissipation (Note 1.) @ $T_L = 25^\circ\text{C}$	$P_{PK}$	350	W	
IEC 61000-4-2 (ESD)	Air	$\pm 15$	KV	
	CONTACT	$\pm 8.0$	KV	
IEC 61000-4-4 (EFT)		30	A	
ESD Voltage	Per Human Body Model	$V_{PP}$	16	KV
Storage Temperature Range	$T_{STG}$	-55 to 150	$^\circ\text{C}$	
Operating Junction Temperature Range	$T_J$	-55 to 150	$^\circ\text{C}$	

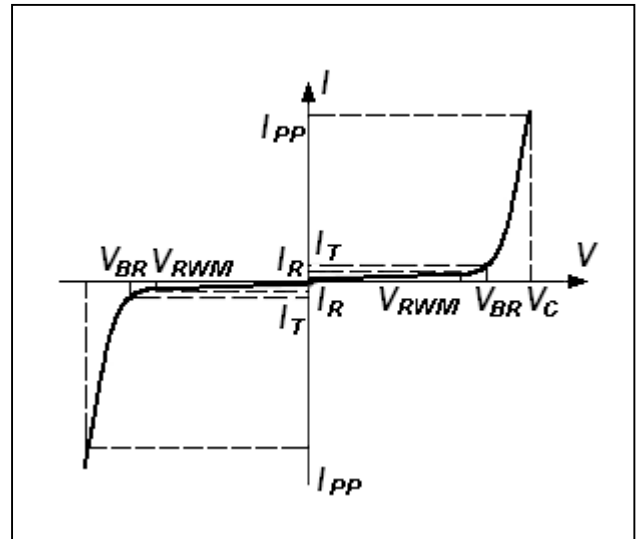
1. 8 X 20 us, non-repetitive

# SD05C SERIES

## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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 @ $V_{RWM}$
$I_T$	Test Current
$V_{BR}$	Breakdown Voltage @ $I_T$

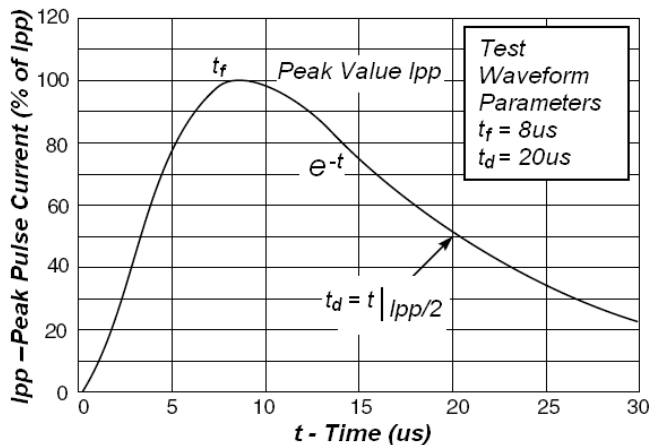


## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

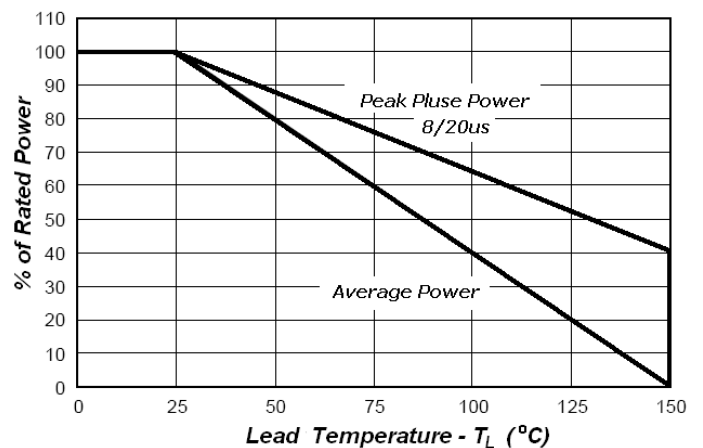
Device	$V_{RWM}$ (V)	$I_R$ ( $\mu$ A) @ $V_{RWM}$	$V_{BR}$ (V) @ $I_T$ (Note 1)		$I_T$	$V_C$ (V) @ $I_{PP}=5A^*$	$V_C$ (V) @ Max $I_{PP}^*$	$I_{PP}$ (A)*
	Max	Max	Min	Max	mA	Typ	Max	Max
SD03C	3.0	10	4.0	6.1	1	9.0	13.3	20
SD05C	5.0	10	5.0	7.3	1	9.8	14.5	20
SD12C	12	1.0	13.3	15.75	1	19	25	12

\*Surge current waveform per Figure 1.

- $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of 25°C.



**Fig1. Pulse Waveform**

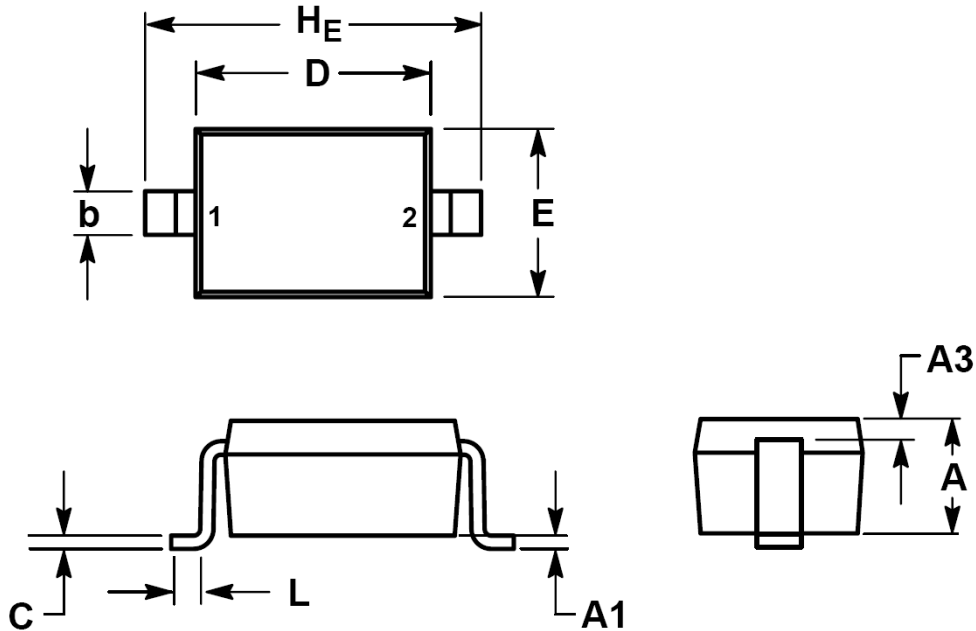


**Fig2. Power Derating**

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## Package Dimensions

### SOD-323



Dim	Millimeters			Inches		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.080	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.063	0.066	0.071
E	1.15	1.25	1.40	0.045	0.049	0.055
L	0.08			0.003		
$H_E$	2.3	2.5	2.7	0.090	0.098	0.106