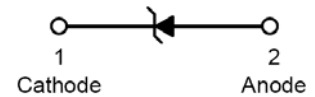
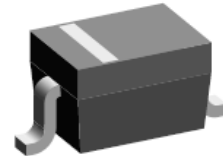




STANDARD CAPACITANCE TVS

Features

- Small SOD-323 Package
- Unidirectional Configurations
- Peak Power Dissipation 350W @8 x 20 us Pulse
- Low Leakage
- Fast Response Time < 1 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, 40A
- 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.) @ $T_L = 25^{\circ}C$	$P_{PK}$	350	W
IEC 61000-4-2 (ESD)		Air	$\pm 15$ KV
		CONTACT	$\pm 8.0$ KV
IEC 61000-4-4 (EFT)		40	A
ESD Voltage Per Human Body Model	$V_{PP}$	30	KV
Storage Temperature Range	$T_{STG}$	-55 to 150	$^{\circ}C$
Operating Junction Temperature Range	$T_J$	-55 to 150	$^{\circ}C$

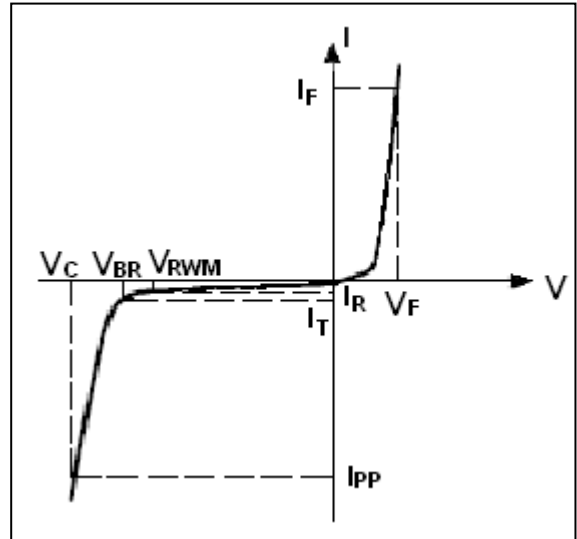
1. 8 X 20 us, non-repetitive

# SD05 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 @ $I_T$
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$

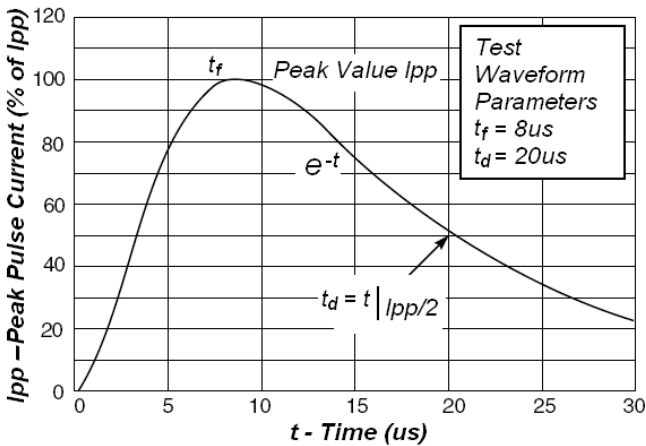


## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

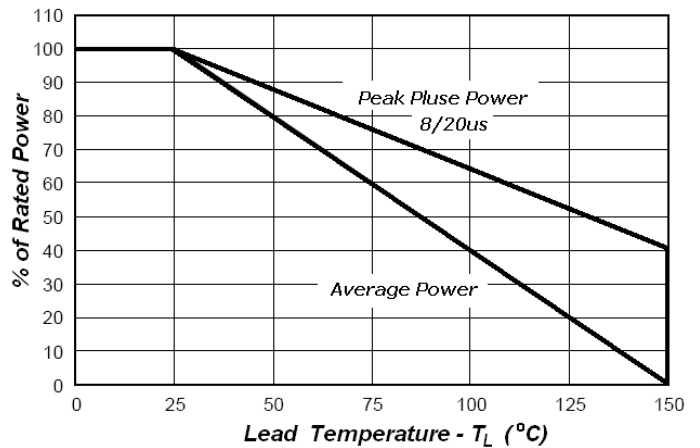
Device	$V_{RWM}$ (V)	$I_R$ (uA) @ $V_{RWM}$	$V_{BR}$ (V) @ $I_T$ (Note 1)		$I_T$ (mA)	$V_C$ (V) @ $I_{PP}=5 A^*$	$V_C$ (V) @ Max $I_{PP}^*$	$I_{PP}$ (A)*	$C@OV$ 1MHz (pF)
	Max	Max	Min	Max		Typ	Max		Typ
SD05	5.0	10	6.2	7.3	1.0	9.8	14.5	24	350
SD12	12	1.0	13.3	15.75	1.0	19	25	15	150

\*Surge current waveform per Figure 1.

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

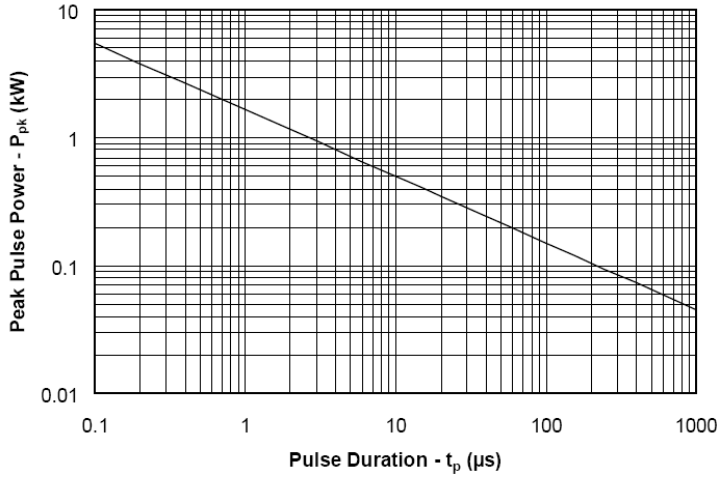


**Fig1. Pulse Waveform**

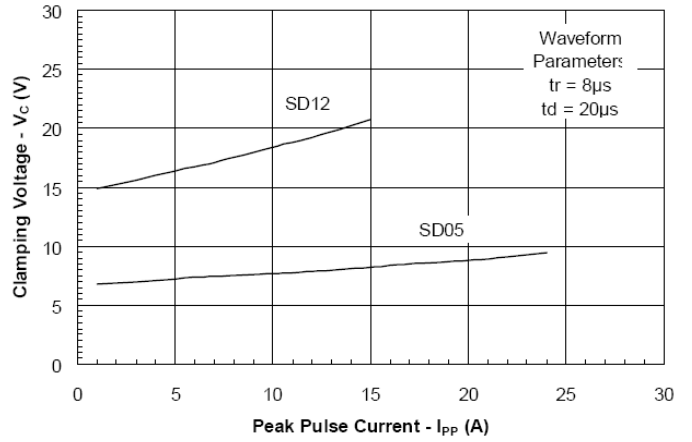


**Fig2. Power Derating**

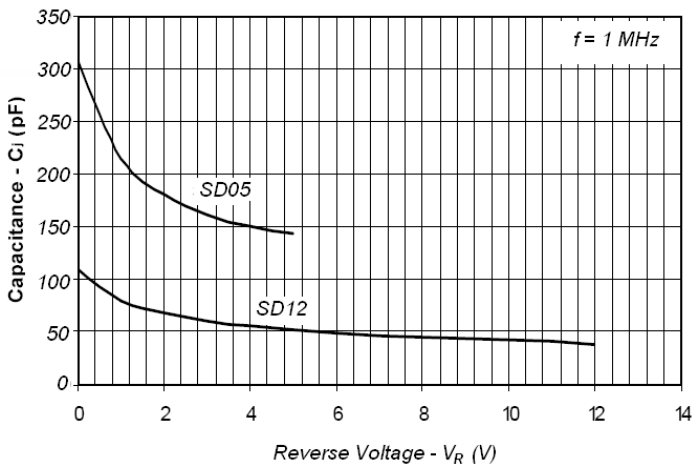
# SD05 SERIES



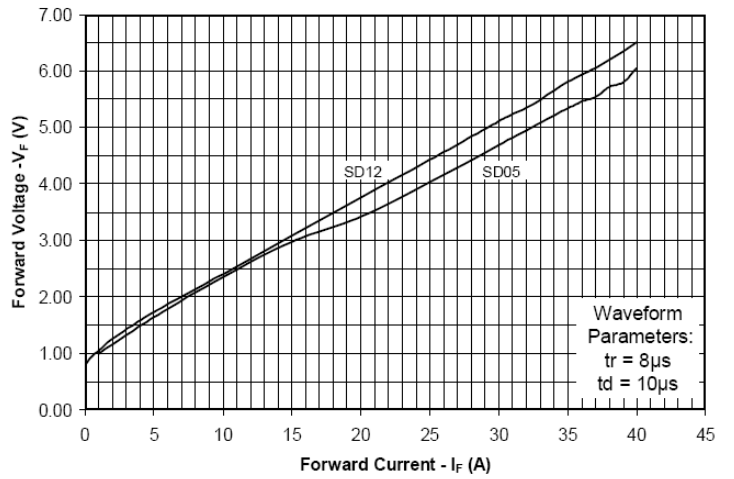
**Fig3. Non-Repetitive Peak Pulse Power vs. Pulse Time**



**Fig4. Clamping Voltage vs. Peak Pulse Current**



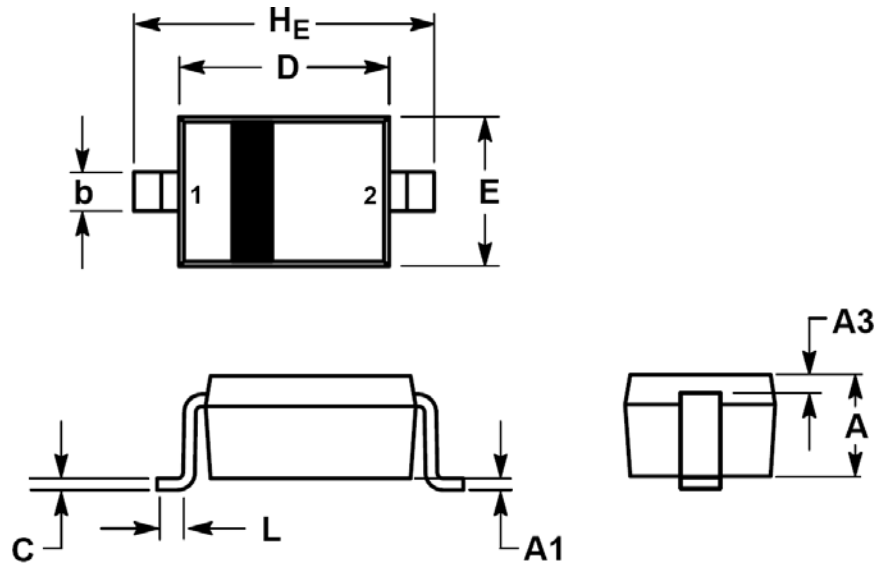
**Fig5. Capacitance vs. Reverse Voltage**



**Fig6. Forward Voltage vs. Forward Current**

# Package Dimensions

## SOD-323



<i>Dim</i>	<i>Millimeters</i>			<i>Inches</i>		
	<i>MIN</i>	<i>NOM</i>	<i>MAX</i>	<i>MIN</i>	<i>NOM</i>	<i>MAX</i>
<i>A</i>	0.80	0.90	1.00	0.031	0.035	0.040
<i>A1</i>	0.00	0.05	0.10	0.000	0.002	0.004
<i>A3</i>	0.15 REF			0.006 REF		
<i>b</i>	0.25	0.32	0.4	0.010	0.012	0.016
<i>C</i>	0.089	0.12	0.177	0.003	0.005	0.007
<i>D</i>	1.60	1.70	1.80	0.062	0.066	0.070
<i>E</i>	1.15	1.25	1.35	0.045	0.049	0.053
<i>L</i>	0.08			0.003		
<i>H<sub>E</sub></i>	2.30	2.50	2.70	0.090	0.098	0.105