

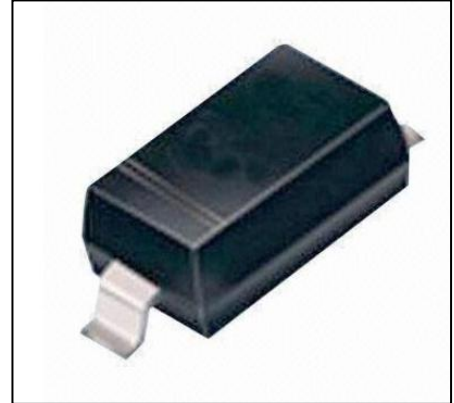


## Features

- 350 Watts Peak Pulse Power per Line ( $t_p = 8/20\mu s$ )
- Bidirectional Configuration
- Protects One Power or I/O Port
- Low Clamping Voltages
- Ultra Low Capacitance: 1.0 pF Typical

## IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5(Surge): 20A, 8/20 $\mu s$



SOD-323

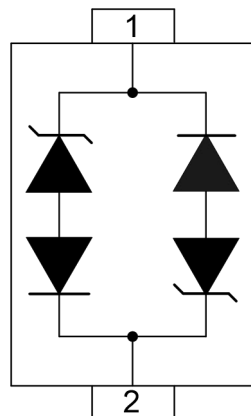
## Mechanical Characteristics

- Molded JEDEC SOD-323 package
- Weight 10 milligrams (Approximate)
- Flammability rating UL 94V-0
- 8mm Tape and Reel Per EIA Standard 481
- Device Marking: Marking Code
- RoHS/WEEE Compliant

## Applications

- Ethernet - 10/100/1000 Base T
- Cellular Phones
- Handheld - Wireless Systems
- Personal Digital Assistant (PDA)
- USB Interface

## PIN Configuration



**BIDIRECTIONAL**

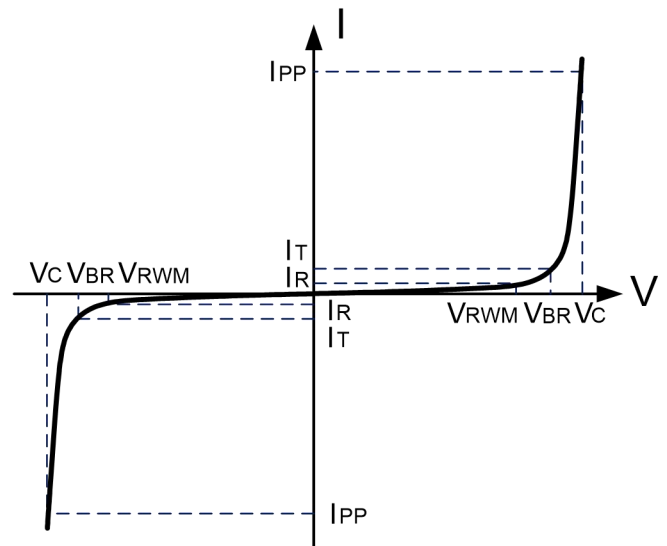


### Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ ) - See Figure 1	$P_{PP}$	350	Watts
Operating Temperature	$T_J$	-55 to + 150	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

### Electrical Parameters (T=25°C)

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

PART NUMBER (See Note 1 & Note 2)	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE
		$V_{WM}$ (Volts)	@ 1mA $V_{BR}$ (Volts)	@ $I_P = 1A$ $V_C$ (Volts)	@8/20 $\mu s$ $V_C$ @ $I_{PP}$	@ $V_{WM}$ $I_d$ ( $\mu A$ )	@0V, 1 MHz C(pF)
SV05LC-B	A L	5.0	6.0	9.8	18.3V @ 8.0A	1	0.8

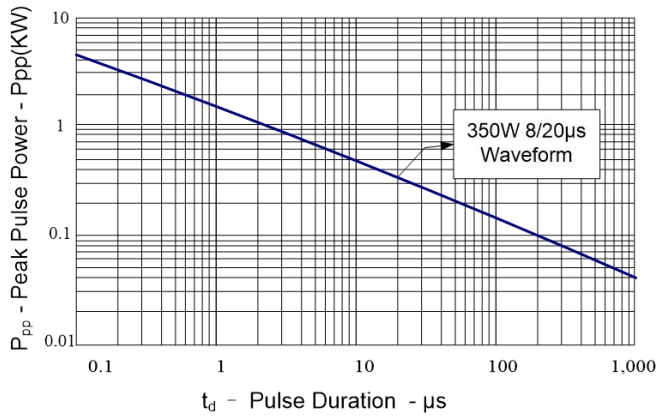
**Note 1:** Part numbers with an additional "B" suffix are bidirectional devices

**Note 2:** For Bidirectional Devices Only: Electrical characteristics apply in both directions.

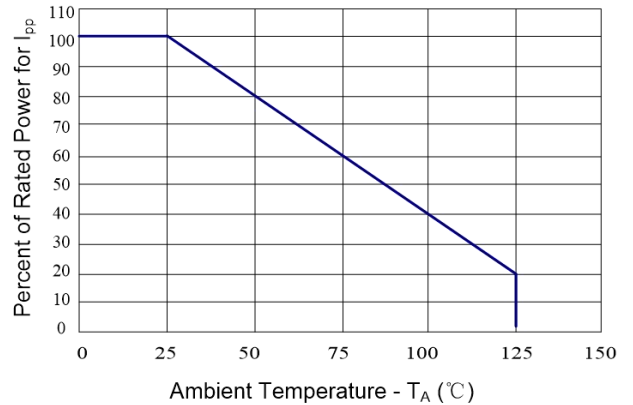


## Typical Characteristics

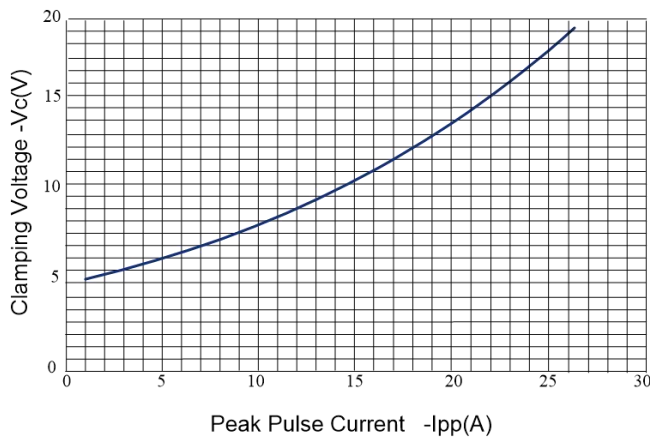
**Figure 1: Peak Pulse Power vs. Pulse Time**



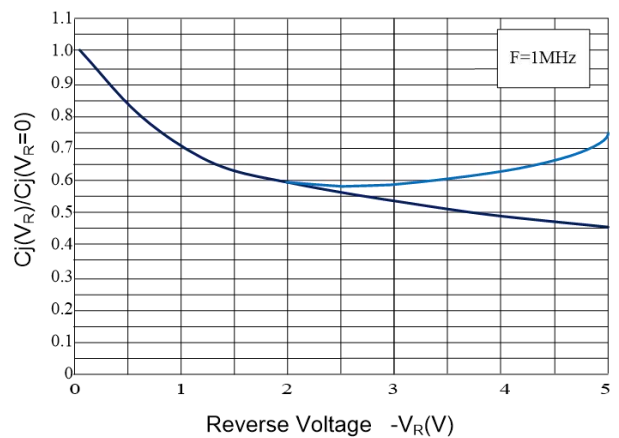
**Figure 2: Power Derating Curve**



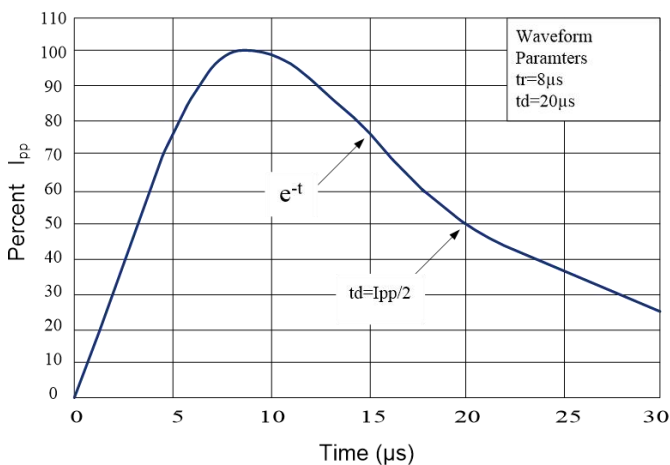
**Figure 3: Clamping Voltage vs. Peak Pulse Current**



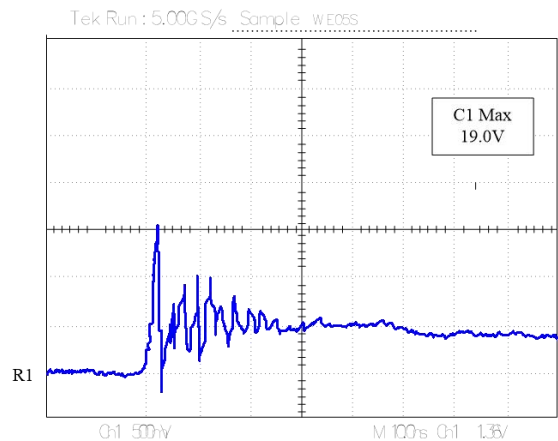
**Figure 4: Normalized Junction Capacitance vs. Reverse Voltage**



**Figure 5: Pulse Waveform**



**Figure 6: ESD Clamping (8kV Contact per IEC 61000-4-2)**





**Outline Drawing – SOD323**

PACKAGE OUTLINE		DIMENSIONS			
SYMBOL	MILLIMETER		INCHES		
	MIN	MAX	MIN	MAX	
A	1.60	1.90	0.063	0.075	
B	1.15	1.45	0.045	0.057	
C	2.39	2.70	0.094	0.106	
D	0.92	1.10	0.036	0.043	
E	0.25	0.40	0.010	0.016	
F	0.10	0.20	0.004	0.008	
H	-	0.10	-	0.004	

MOUNTING PAD	
	<p><b>Notes</b></p> <ol style="list-style-type: none"> <li>Controlling Dimensions in Millimeters.</li> <li>Dimensions are exclusive of mold flash and metal burrs.</li> </ol> <p><b>TAPE &amp; REEL ORDERING NOMENCLATURE</b></p> <ol style="list-style-type: none"> <li>Surface mount product is taped and reeled in accordance with EIA-481.</li> </ol>

**Marking Codes**

Part Number	Marking Code
SV05LC-B	AL