

## Bidirectional Ultra Low Capacitance TVS Array

### Description

The SBLCxxCI Series are ultra low capacitance transient voltage suppressor arrays, designed to protect applications such as portable electronics and SMART phones. This series is available in both unidirectional and bidirectional configurations and is rated at 350 Watts for an 8/20 $\mu$ s waveshape.

The SBLCxxCI Series meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers a ultra low capacitance and low leakage current in a miniature SOD-323 package.

### Ordering Information

- Device: SBLCxxCI
- Package: SOD-323
- Material: Halogen free
- Packing: Tape & Reel
- Quantity per reel: 3,000pcs

### Features

- IEC61000-4-2 (ESD)  $\pm$ 15kV (air),  $\pm$ 8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50 $\mu$ s)
- Protects one I/O line (bidirectional)
- Low clamping voltage
- Working voltages : 3V, 5V, 8V, 12V, 15V, 24V
- Low leakage current
- Response Time is < 1 ns

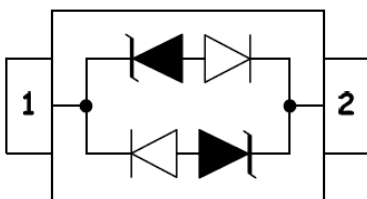
### Mechanical Data

- SOD-323 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed:260 $^{\circ}$ C/10s
- Reel size: 7 inch

### Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Peripherals
- USB Interface

### Pin Configuration



### Package Outline



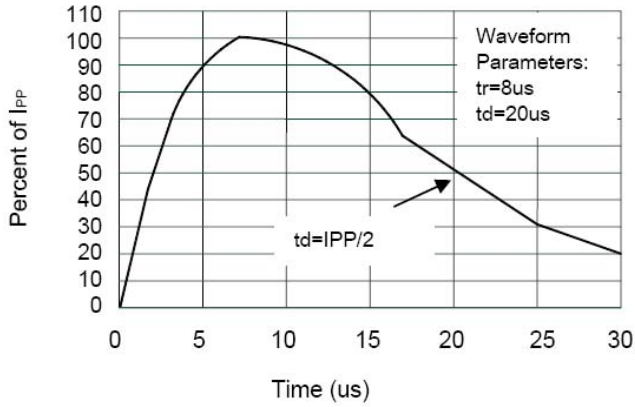
## Absolute Maximum Rating

Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 15$ $\pm 8$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	250	W
$T_{OPT}$	Operating Temperature	-55/+150	$^{\circ}$ C
$T_{STG}$	Storage Temperature	-55/+150	$^{\circ}$ C
$T_L$	Lead Soldering Temperature	260	$^{\circ}$ C

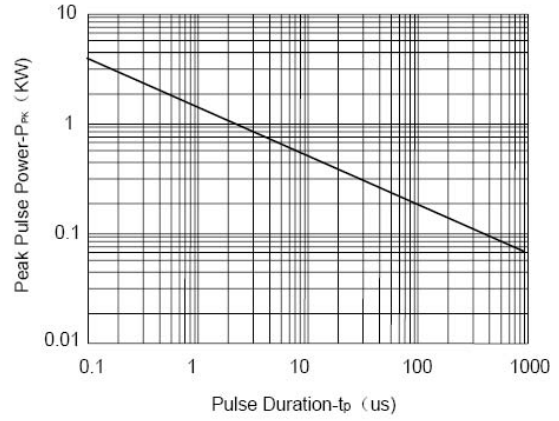
## Electrical Characteristics( $T_{amb}=25^{\circ}$ C)

PART NUMBER	DEVICE MARKING	$V_{RWM}$	$V_B$	$I_T$	$V_C@1A$	$V_C$		$I_R$	$C_T$
		(V) (max.)	(V) (min.)	(mA)	(V) (max.)	(V) (max.)	(@A)	( $\mu$ A) (max.)	(pF) (typ.)
SBLC03CI	CC	3.0	4.0	1	7.0	13.9	8	20	0.8
SBLC05CI	AC	5.0	6.0	1	9.8	18.3	8	5	0.8
SBLC08CI	BC	8.0	8.5	1	13.4	18.5	8	2	0.8
SBLC12CI	DC	12.0	13.3	1	19.0	28.6	6	1	0.8
SBLC15CI	EC	15.0	16.7	1	24.0	31.8	5	1	0.8
SBLC24CI	HC	24.0	26.7	1	43.0	56.0	3	1	0.8

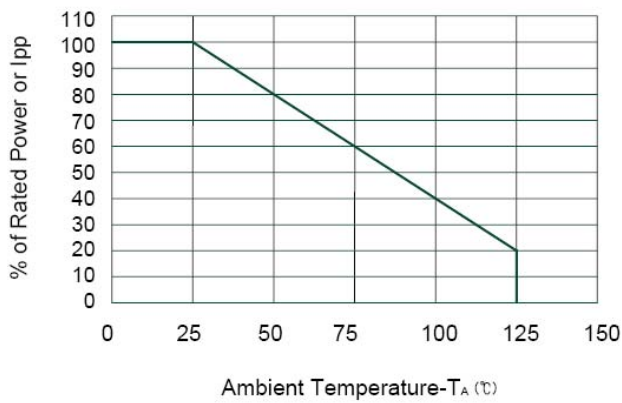
## Electrical Characteristics Curve



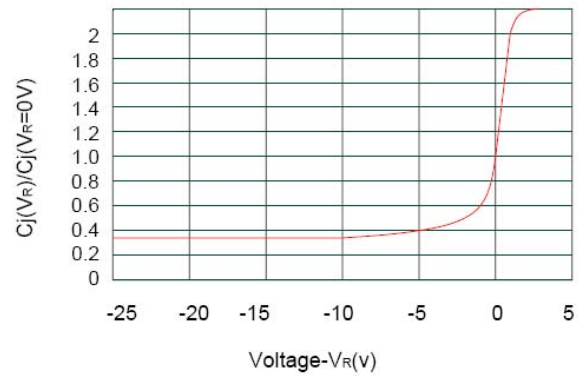
**Pulse Waveform**



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

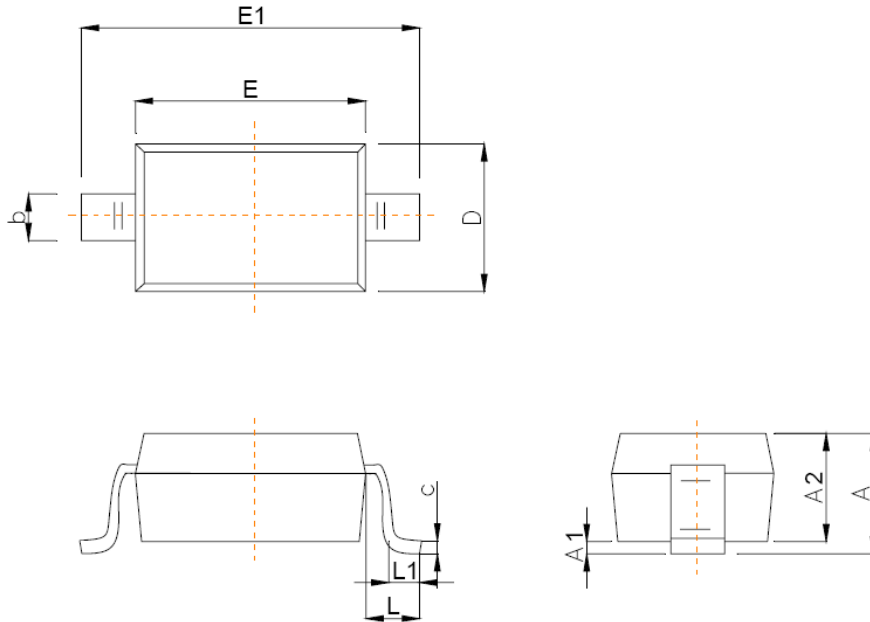


**Power Derating Curve**

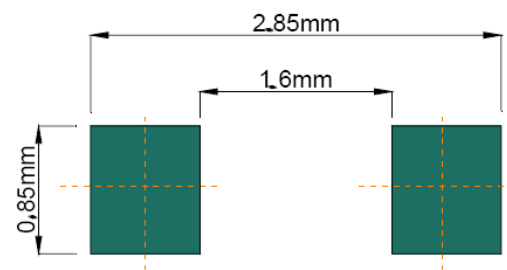


**Junction Capacitance vs. Reverse Voltage**

## SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters	
	Min	Max
A		1.00
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
e	1.800	2.040
L	0.475 REF	
L1	0.250	0.400
θ	0°	8°



**Recommended Pad outline**

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