

## Bidirectional TVS Diodes

## Description

The GBLCxxCI 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 8/20us wave shape.

The GBLCxxCI Series meets IEC 61000-4-2(ESD) and IEC 6100-4-4(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.

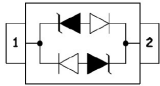
## Package outline



## Features

- IEC61000-4-2(ESD)  $\pm 15\text{kV}$ (air),  $\pm 8\text{kV}$ (contact)
- IEC61000-4-4(EFT) 40A(5/50  $\mu\text{s}$ )
- IEC61000-4-5(Lightning) 12A(8/20us)
- Protects one I/O line(unidirectional)
- Low clamping voltage
- Working voltages: 3V, 5V, 8V, 12V, 15V, 24V
- Low leakage current
- Response Time is  $<1\text{ns}$

## Pin Configuration



## Mechanical Data

- SOD-323 Package
- Flammability Rating: UL 94V-0
- High temperature soldering guaranteed:  $260^\circ\text{C}/10\text{s}$

## Ordering Information

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

## Applications

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

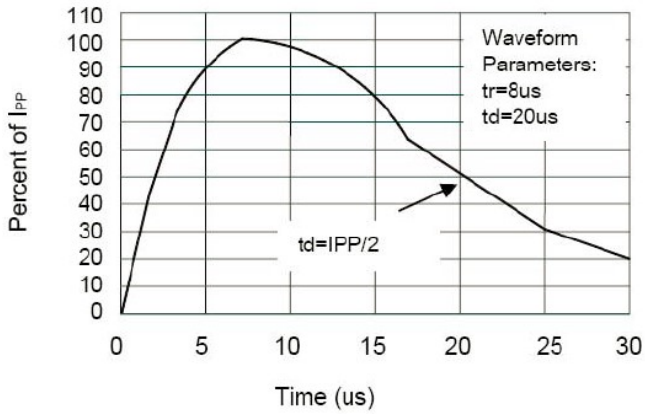
## ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Value	Unit
ESD per IEC61000-4-2(Air)	V <sub>ESD</sub>	$\pm 15$	kV
ESD per IEC61000-4-2(Contact)		$\pm 8$	
Peak Pulse Power (8/20us)	P <sub>PP</sub>	350	W
Operating temperature	T <sub>OPT</sub>	-55-+150	$^\circ\text{C}$
Storage temperature range	T <sub>STG</sub>	-55-+150	$^\circ\text{C}$
Lead Soldering temperature	T <sub>L</sub>	260(10 sec.)	$^\circ\text{C}$

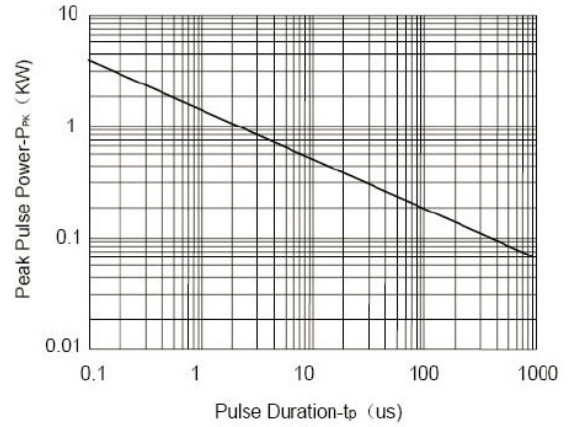
Electrical Characteristics (Ratings at 25 $^\circ\text{C}$  ambient temperature unless otherwise specified).

PART NUMBER	DEVICE MARKING	VRWM (V) (max.)	VB (V) (min.)	IT (mA)	V <sub>c@1A</sub> (V) (max.)	V <sub>c</sub> (V) (max.) (@A)	IR (uA) (max.)	CT (pF) (max.)
GBLC03CI	CC	3.3	4.0	1	7.5	13.9	8	20
GBLC05CI	AC	5.0	6.0	1	9.8	18.3	8	5
GBLC08CI	BC	8.0	8.5	1	13.4	18.5	8	2
GBLC12CI	DC	12.0	13.3	1	19.0	28.6	6	1
GBLC15CI	EC	15.0	16.7	1	24.0	31.8	5	1
GBLC24CI	HC	24.0	26.7	1	43.0	56.0	3	1

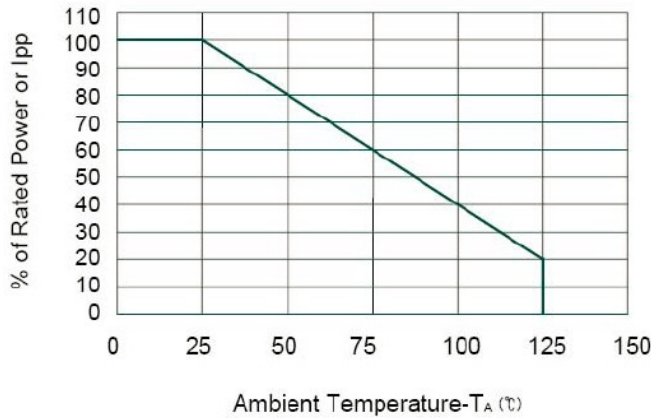
**ELECTRICAL CHARACTERISTICS CURVE**



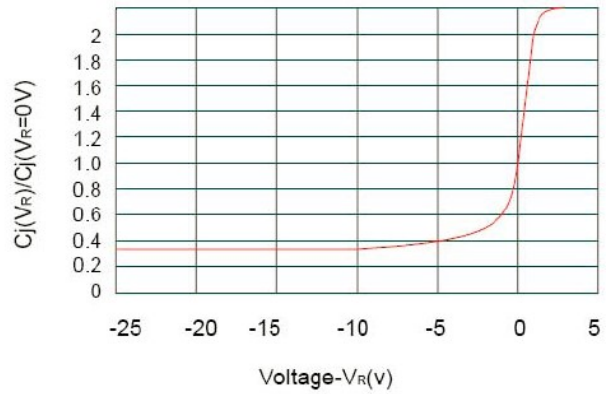
**Pulse Waveform**



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



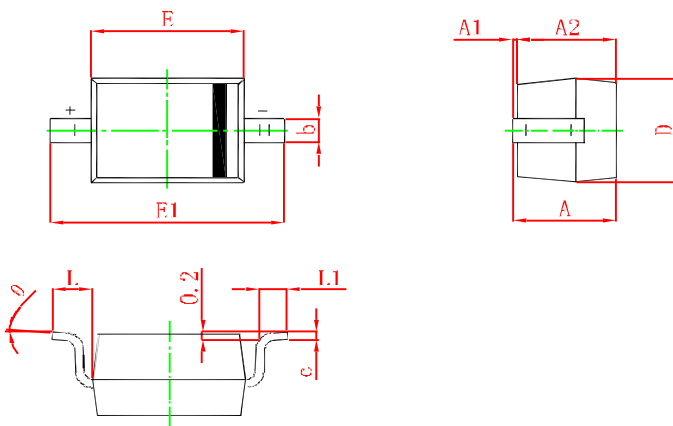
**Power Derating Curve**



**Junction Capacitance vs. Reverse Voltage**

**SOD-323 PACKAGE OUTLINE** Plastic surface mounted package

**SOD-323**



Symbol	Min.(mm)	Max.(mm)
A		1.000
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
L	0.475REF	
L1	0.250	0.400
θ	0°	8°