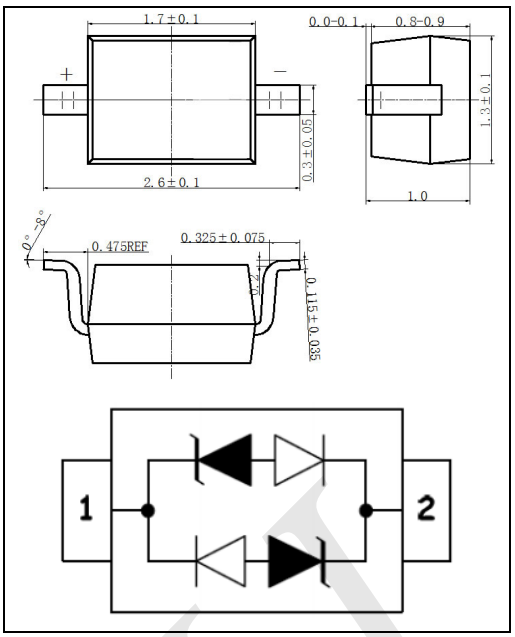
SOD-323 Plastic-Encapsulate Diodes

GBLCxxCI Series

Bidirectional Ultra Low Capacitance TVS Array



Features

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ηs)
- IEC61000-4-5 (Lightning) 12A (8/20μs)
- 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

Applications

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

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 8/20μs wave shape.

The GBLCxxCI and 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.

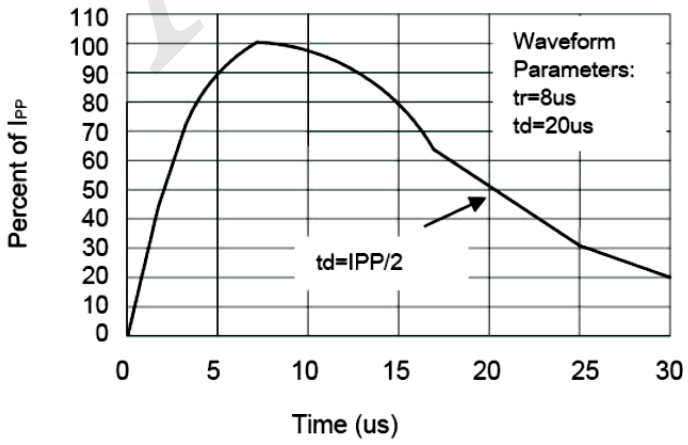
Maximum Ratings (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±15 ±8	kV
P_{PP}	Peak Pulse Power (8/20μs)	350	W
T_{OPT}	Operating Temperature	-55 ~ +150	°C
T_{STG}	Storage Temperature	-55 ~ +150	°C
T_L	Lead Soldering Temperature	260	°C

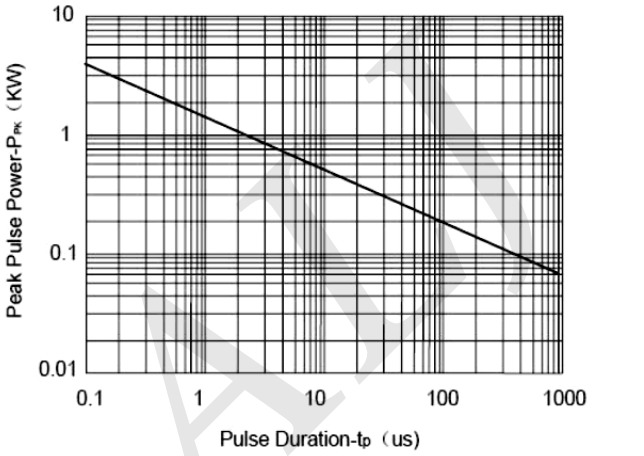
Electrical Characteristics (T_a=25°C unless otherwise specified)

Part Number	Device Marking	V_{RWM} (V) (max.)	V_B (V) (min.)	I_T (mA)	V_C@1A (V) (max.)	V_C (V) (max.)	(@A)	I_R (μA) (max.)	C_T (pF) (typ.)
GBLC03CI	CC	3.0	4.0	1	7.0	13.9	8	20	0.8
GBLC05CI	AC	5.0	6.0	1	9.8	18.3	8	5	0.8
GBLC08CI	BC	8.0	8.5	1	13.4	18.5	8	2	0.8
GBLC12CI	DC	12.0	13.3	1	19.0	28.6	6	1	0.8
GBLC15CI	EC	15.0	16.7	1	24.0	31.8	5	1	0.8
GBLC24CI	HC	24.0	26.7	1	43.0	56.0	3	1	0.8

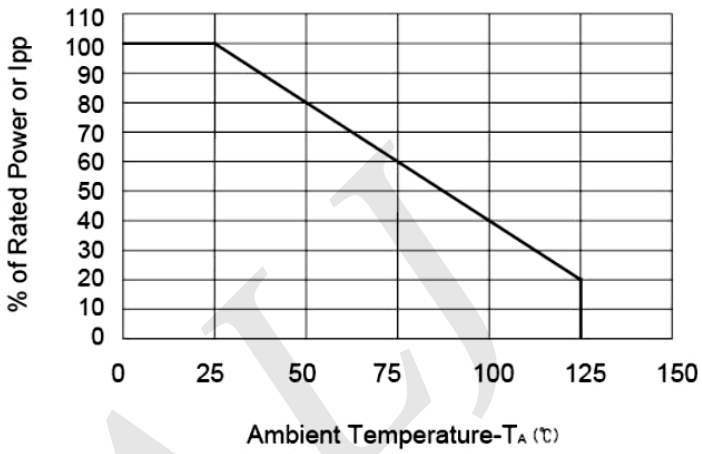
Typical Characteristics



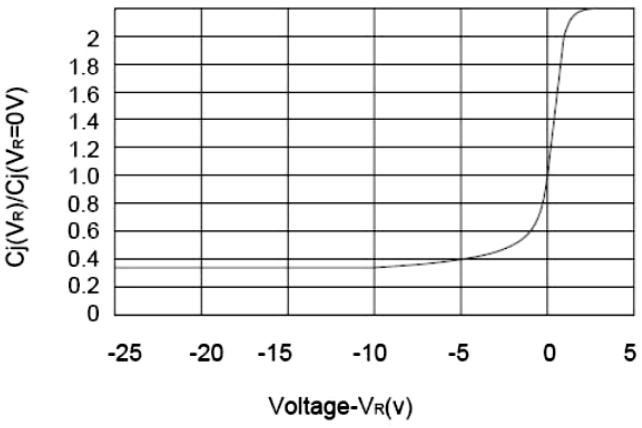
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



Junction Capacitance vs. Reverse Voltage