SOD-323 Plastic-Encapsulate ESD Protection 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 8/20μs wave shape.

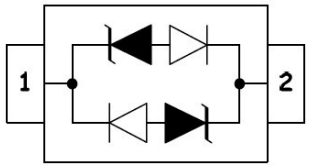
The GBLCxxCI and Series meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This series offers a ultra low capacitance and low leakage current in a miniature SOD-323 package.

Features

- Peak Power Dissipation 350 W (8/20μs)
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Protects one I/O line (bidirectional)
- Low clamping voltage
- Working voltages : 3.3V, 5V, 8V, 12V, 15V, 18V
- 20V,24V,36V
- Response Time is < 1 ns
- Meets MSL 1 Requirements

Pin Configuration

Cir



Applications

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

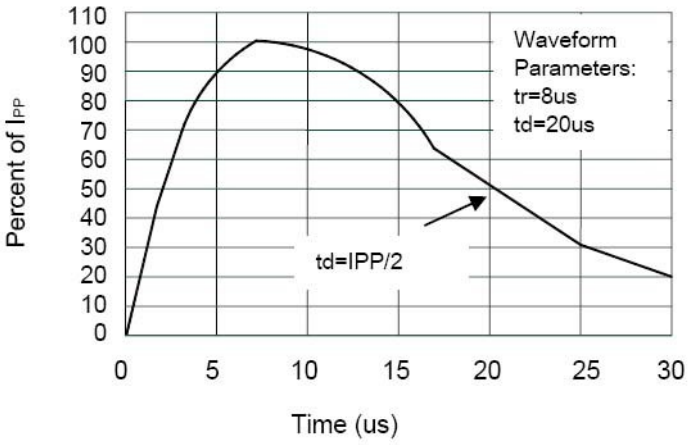
Parameter	Symbol	Value	Unit
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	± 30 ± 30	kV
Peak Pulse Power(tp=8/20us waveform)	P_{PP}	350	W
Operating Temperature	T_{OPT}	−55 to +150	°C
Storage Temperature	T_{STG}	−55 to +150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260(10 sec.)	°C

The above data are for reference only.

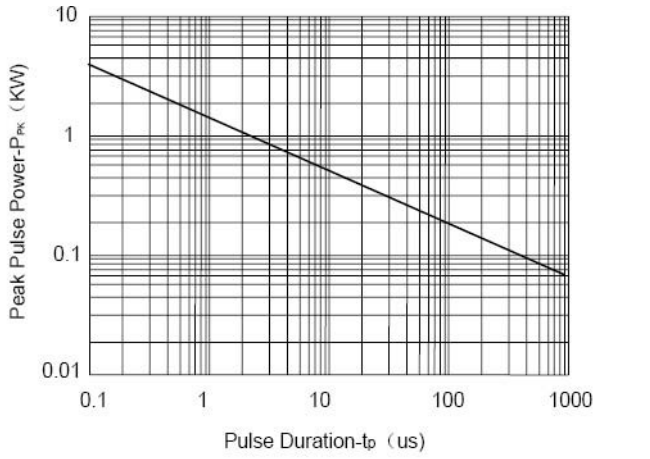
Electrical Characteristics (T_A=25°C unless otherwise specified)

PART NUMBER	DEVICE MARKING	V_{RWM} (V)	V_B@1mA (V)	V_C@1A (V)	V_C@Ipp (V)		V_C@Ipp (V)		I_R (μA)	C_T (pF)
		Max	Min	Max	Max	Ipp (A)	Max	Ipp (A)	Max	Typ.
GBLC03CI	CC	3.3	4.0	7.0	13.9	8	20.0	20	0.1	0.8
GBLC05CI	AC	5.0	6.0	9.8	18.3	8	20.0	18	0.1	0.8
GBLC08CI	BC	8.0	8.5	13.4	18.5	8	24.0	18	0.1	0.8
GBLC12CI	DC	12.0	13.3	19.0	24.0	6	28.6	12	0.1	0.8
GBLC15CI	EC	15.0	16.7	24.0	29.0	5	31.8	10	0.1	0.8
GBLC18CI	FC	18.0	20.0	35.0	45.0	5	53.0	7	0.1	0.8
GBLC20CI	GC	20.0	22.0	38.0	45.0	4	55.0	7	0.1	0.8
GBLC24CI	HC	24.0	26.7	43.0	45.0	3	56.0	6	0.1	0.8
GBLC36CI	IC	36.0	40.0	60.0	65.0	2	75.0	4.5	0.1	0.8

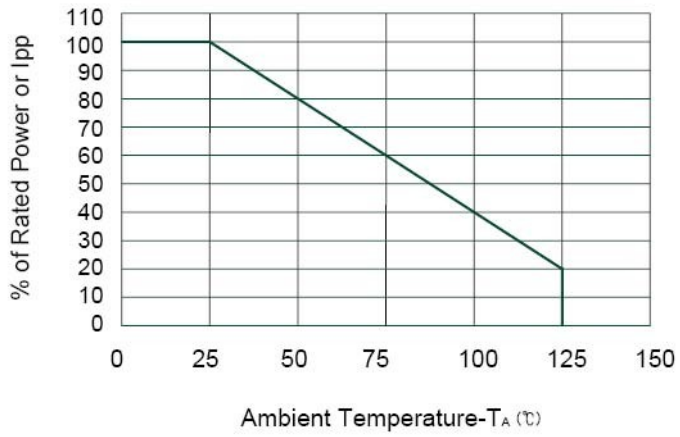
ELECTRICAL CHARACTERISTICS CURVE



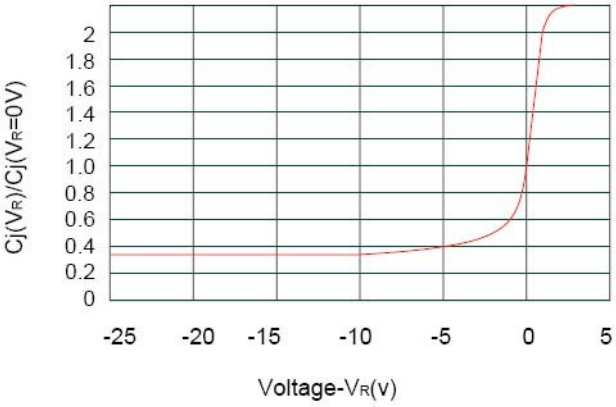
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



Junction Capacitance vs. Reverse Voltage