

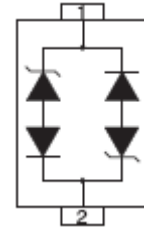
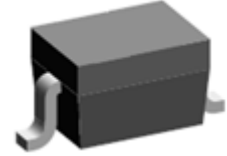


GBLC03CI---GBLC24CI

ULTRA LOW CAPACITANCE TVS ARRAY

Features

- Small SOD-323 Package
- Bi-directional Configurations
- Peak Power Dissipation 350W @8 x 20 us Pulse
- Low Leakage
- Fast Response Time < 5 ns
- Protects One Power or I/O Port
- ESD Protection to IEC 61000-4-2 Level 4, 15KV(Air), 8KV(Contact)
- ESD Protection to IEC 61000-4-2 Level 4, 30A
- 16KV Human Body Model ESD Requirements
- RoHS Compliant in Lead-Free Versions



Applications

- Cell Phone Handsets and Accessories
- Microprocessor Based Equipment
- Personal Digital Assistant (PDA)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- USB Interface

Absolute Maximum Ratings

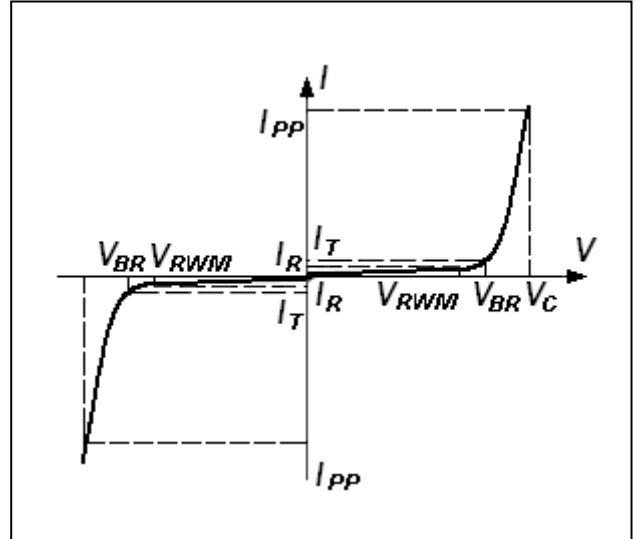
| Parameter | Symbol | Value | Units |
|---|----------------|------------|------------------|
| Peak Power Dissipation (Note 1.) @ $T_L = 25^\circ\text{C}$ | P_{PK} | 350 | W |
| IEC 61000-4-2 (ESD) | Air CONTACT | ± 15 | KV |
| | | ± 8.0 | KV |
| IEC 61000-4-4 (EFT) | | 30 | A |
| ESD Voltage Per Human Body Model | V_{PP} | 16 | KV |
| Storage Temperature Range | T_{STG} | -55 to 150 | $^\circ\text{C}$ |
| Operating Junction Temperature Range | T_J | -55 to 150 | $^\circ\text{C}$ |

1. 8 X 20 us, non-repetitive

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| 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} |
| I_T | Test Current |
| V_{BR} | Breakdown Voltage @ I_T |
| | |
| | |



Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Device | MARKI NG | V_{RWM} | $I_R(\mu A)$ | $V_{BR}(V) @ I_T$ | $I_T(mA)$ | $V_C(V)$ | $V_C(V)$ | C (pF) |
|----------|-------------|-----------|--------------|-------------------|-----------|------------|------------|-----------|
| | | (V) | @ V_{RWM} | (Note 2) | | @ $I_p=1A$ | @ I_{pp} | |
| | | Max | Max | Min | | Max | Max | TYP |
| GBLC03CI | CC | 3.0 | 20.0 | 4.0 | 1.0 | 5.15 | 13.9@8A | 0.6 |
| GBLC05CI | AC | 5.0 | 5.0 | 6.0 | 1.0 | 9.80 | 18.3@8A | 0.6 |
| GBLC08CI | BC | 8.0 | 5.0 | 8.5 | 1.0 | 13.40 | 18.5@8A | 0.6 |
| GBLC12CI | DC | 12.0 | 1.0 | 13.3 | 1.0 | 19.00 | 28.6@6A | 0.6 |
| GBLC15CI | EC | 15.0 | 1.0 | 16.7 | 1.0 | 24.00 | 31.8@5A | 0.6 |
| GBLC24CI | HC | 24.0 | 1.0 | 26.7 | 1.0 | 43.00 | 56.0@3A | 0.6 |

*Surge current waveform per Figure 1.

2. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C

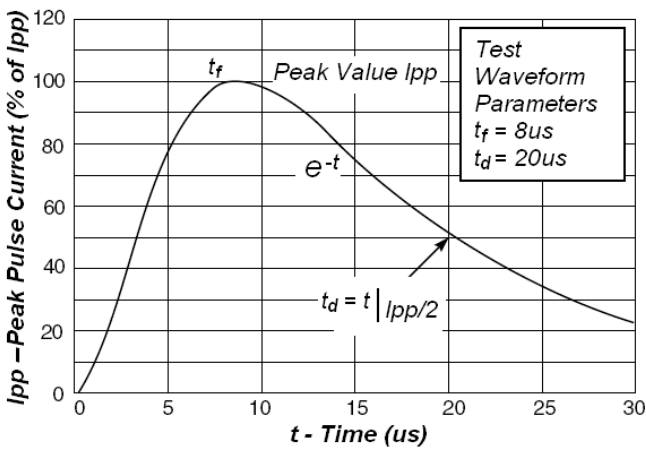


Fig1. Pulse Waveform

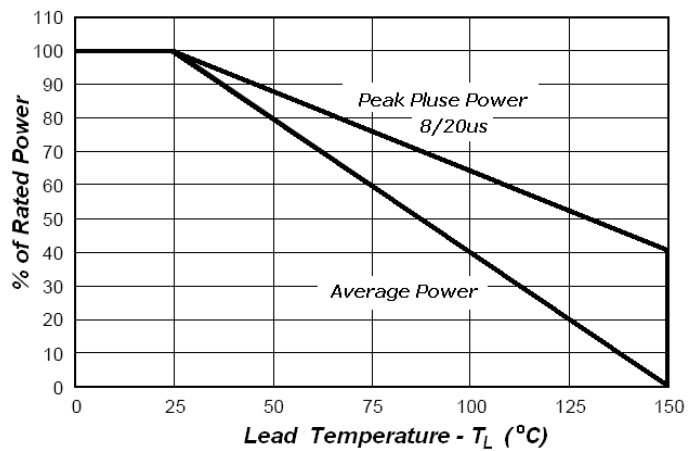


Fig2. Power Derating

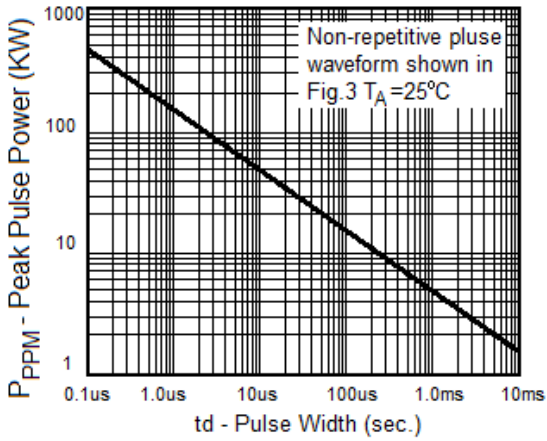
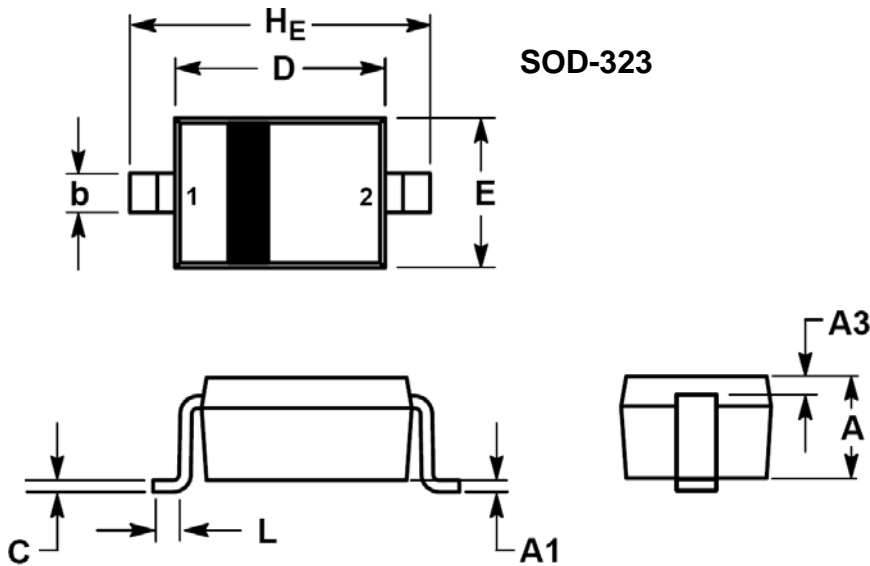


Fig3. Peak Pulse Power vs Pulse Time
Package Dimensions



| Dim | Millimeters | | | Inches | | |
|-----|-------------|------|-------|-----------|-------|-------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.80 | 0.90 | 1.00 | 0.031 | 0.035 | 0.040 |
| A1 | 0.00 | 0.05 | 0.10 | 0.000 | 0.002 | 0.004 |
| A3 | 0.15 REF | | | 0.006 REF | | |
| b | 0.25 | 0.32 | 0.4 | 0.010 | 0.012 | 0.016 |
| C | 0.080 | 0.12 | 0.177 | 0.003 | 0.005 | 0.007 |
| D | 1.60 | 1.70 | 1.80 | 0.063 | 0.066 | 0.071 |
| E | 1.15 | 1.25 | 1.40 | 0.045 | 0.049 | 0.055 |
| L | 0.08 | | | 0.003 | | |
| HE | 2.30 | 2.50 | 2.70 | 0.090 | 0.098 | 0.106 |