

ULTRA LOW CAPACITANCE TVS ARRAY

APPLICATIONS

- ✓ Ethernet - 10/100/1000 Base T
- ✓ Cellular Phones
- ✓ Handheld - Wireless Systems
- ✓ Personal Digital Assistant (PDA)
- ✓ USB Interface

IEC COMPATIBILITY (EN61000-4)

- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20 μ s - Level 1(Line-Ground) & Level 2(Line-Line)

FEATURES

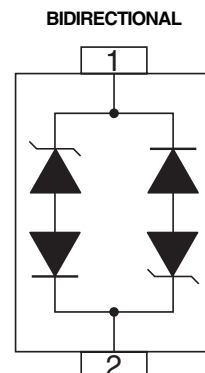
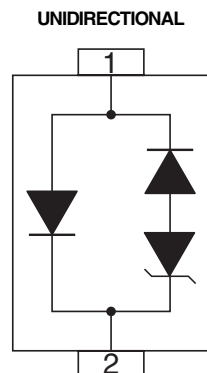
- ✓ 350 Watts Peak Pulse Power per Line ($t_p = 8/20\mu$ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Replacement for MLV (0805)
- ✓ Protects One Power or I/O Port
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Clamping Voltage
- ✓ Available in Multiple Voltage Types Ranging from 3V to 24V
- ✓ **ULTRA LOW CAPACITANCE: 3pF Typical**

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOD-323
- ✓ Weight 10 milligrams (Approximate)
- ✓ Flammability rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Device Marking: Marking Code & Polarity Band (*Unidirectional Only*)



PIN CONFIGURATIONS



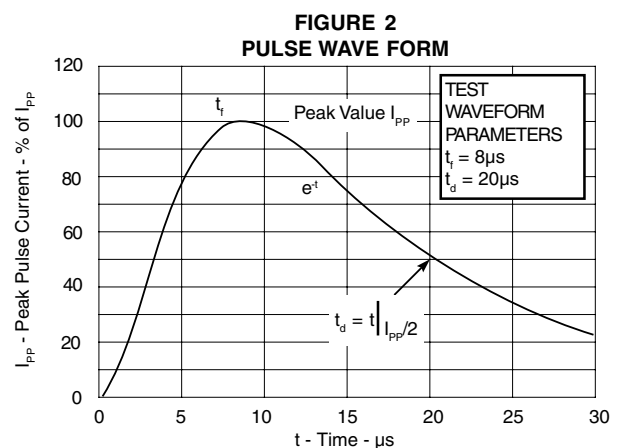
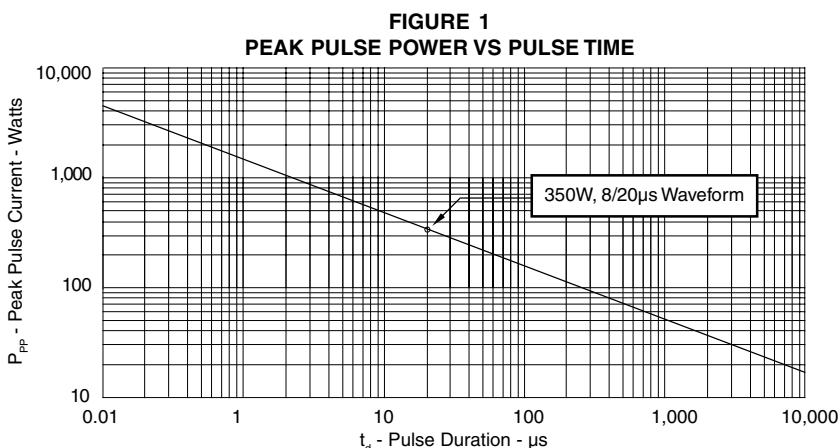
DEVICE CHARACTERISTICS

| MAXIMUM RATINGS @ 25°C Unless Otherwise Specified | | | |
|---|-----------|----------------|-------|
| PARAMETER | SYMBOL | VALUE | UNITS |
| Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1 | P_{PP} | 350 | Watts |
| Operating Temperature | T_J | -55°C to 150°C | °C |
| Storage Temperature | T_{STG} | -55°C to 150°C | °C |

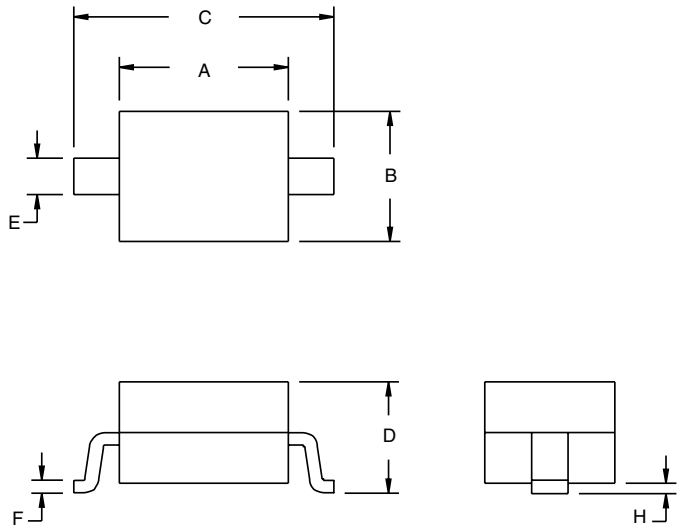

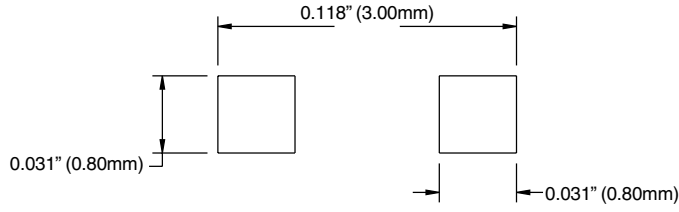
| ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified | | | | | | | |
|---|----------------|--|---|--|--|--|---|
| PART NUMBER (See Note 1 & Note 2) | DEVICE MARKING | RATED STAND-OFF VOLTAGE V_{WM} VOLTS | MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS | MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_p = 1A$ V_C VOLTS | MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 8/20µs $V_C @ I_{PP}$ | MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D µA | TYPICAL CAPACITANCE @ 0V, 1 MHz C pF |
| | | | | | | | |
| GBLC03 | 3 | 3.3 | 4.0 | 7.0 | 19.0V @ 20.0A | 5 | 3 |
| GBLC03C | 3C | 3.3 | 4.0 | 7.0 | 19.0V @ 20.0A | 5 | 3 |
| GBLC05 | 5 | 5.0 | 6.0 | 9.8 | 18.3V @ 17.0A | 5 | 3 |
| GBLC05C | 5C | 5.0 | 6.0 | 9.8 | 18.3V @ 17.0A | 5 | 3 |
| GBLC08 | 8 | 8.0 | 8.5 | 13.4 | 18.5V @ 17.0A | 2 | 3 |
| GBLC08C | 8C | 8.0 | 8.5 | 13.4 | 18.5V @ 17.0A | 2 | 3 |
| GBLC12 | 2 | 12.0 | 13.3 | 19.0 | 28.6V @ 11.0A | 1 | 3 |
| GBLC12C | 2C | 12.0 | 13.3 | 19.0 | 28.6V @ 11.0A | 1 | 3 |
| GBLC15 | 6 | 15.0 | 16.7 | 24.0 | 31.8V @ 10.0A | 1 | 3 |
| GBLC15C | 6C | 15.0 | 16.7 | 24.0 | 31.8V @ 10.0A | 1 | 3 |
| GBLC18 | 1 | 18.0 | 20.0 | 29.0 | 45.0V @ 8.0A | 1 | 3 |
| GBLC18C | 1C | 18.0 | 20.0 | 29.0 | 45.0V @ 8.0A | 1 | 3 |
| GBLC24 | 4 | 24.0 | 26.7 | 43.0 | 56.0V @ 6.0A | 1 | 3 |
| GBLC24C | 4C | 24.0 | 26.7 | 43.0 | 56.0V @ 6.0A | 1 | 3 |

Note 1: Part numbers with an additional "C" suffix are bidirectional devices, i.e., GBLC05C.

Note 2: For Bidirectional Devices Only: Electrical characteristics apply in both directions.



PACKAGE OUTLINE & DIMENSIONS

| <p style="text-align: center;">PACKAGE OUTLINE</p>  | <p style="text-align: center;">SOD-323 PACKAGE</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------|-------------|-------|--------|--|-----|-----|-----|-----|---|------|------|-------|-------|---|------|------|-------|-------|---|------|------|-------|-------|---|------|------|-------|-------|---|------|------|-------|-------|---|------|------|-------|-------|---|---|------|---|-------|
| PACKAGE DIMENSIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">DIM</th> <th colspan="2">MILLIMETERS</th> <th colspan="2">INCHES</th> </tr> <tr> <th>MIN</th> <th>MAX</th> <th>MIN</th> <th>MAX</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>1.60</td> <td>1.90</td> <td>0.063</td> <td>0.075</td> </tr> <tr> <td>B</td> <td>1.15</td> <td>1.45</td> <td>0.045</td> <td>0.057</td> </tr> <tr> <td>C</td> <td>2.39</td> <td>2.70</td> <td>0.094</td> <td>0.106</td> </tr> <tr> <td>D</td> <td>0.92</td> <td>1.10</td> <td>0.036</td> <td>0.043</td> </tr> <tr> <td>E</td> <td>0.25</td> <td>0.40</td> <td>0.010</td> <td>0.016</td> </tr> <tr> <td>F</td> <td>0.10</td> <td>0.20</td> <td>0.004</td> <td>0.008</td> </tr> <tr> <td>H</td> <td>-</td> <td>0.10</td> <td>-</td> <td>0.004</td> </tr> </tbody> </table> | | DIM | MILLIMETERS | | INCHES | | MIN | MAX | MIN | MAX | A | 1.60 | 1.90 | 0.063 | 0.075 | B | 1.15 | 1.45 | 0.045 | 0.057 | C | 2.39 | 2.70 | 0.094 | 0.106 | D | 0.92 | 1.10 | 0.036 | 0.043 | E | 0.25 | 0.40 | 0.010 | 0.016 | F | 0.10 | 0.20 | 0.004 | 0.008 | H | - | 0.10 | - | 0.004 |
| DIM | MILLIMETERS | | INCHES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| F | 0.10 | 0.20 | 0.004 | 0.008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | - | 0.10 | - | 0.004 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p style="text-align: center;">MOUNTING PAD</p>  | <p>NOTES</p> <ol style="list-style-type: none"> Controlling Dimensions in Millimeters. Dimensions are exclusive of mold flash and metal burrs. <p>TAPE & REEL ORDERING NOMENCLATURE</p> <ol style="list-style-type: none"> Surface mount product is taped and reeled in accordance with EIA-481. Suffix -T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., <i>GBLC05C-T7</i>. <p style="text-align: right;">Outline & Dimensions: Rev 1 - 11/01, 06010</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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