

## 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 $\mu$ s - Level 1(Line-Ground) & Level 2(Line-Line)

### FEATURES

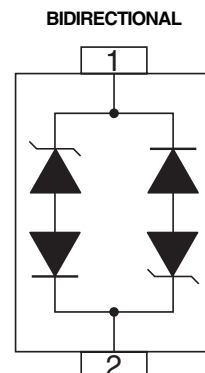
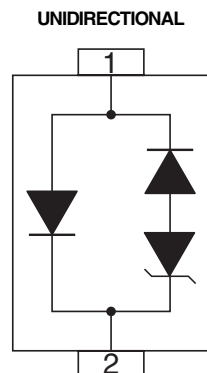
- ✓ 350 Watts Peak Pulse Power per Line ( $t_p = 8/20\mu$ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Replacement for MLV (0805)
- ✓ Protects One Power or I/O Port
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Clamping Voltage
- ✓ Available in Multiple Voltage Types Ranging from 3V to 24V
-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

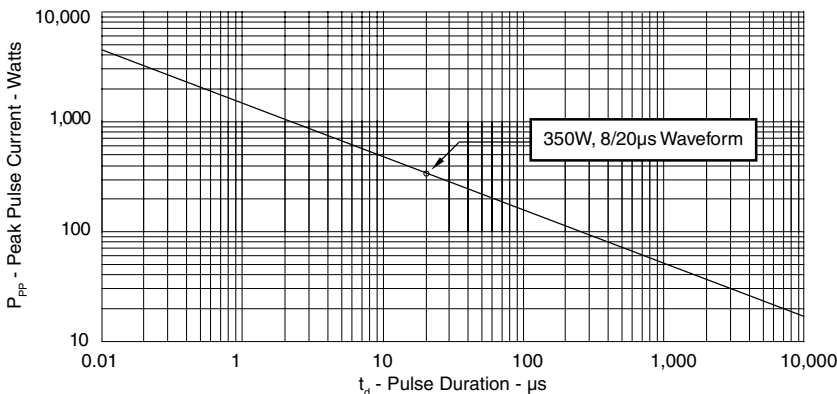
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ( $t_p = 8/20\mu s$ ) - See Figure 1	$P_{PP}$	350	Watts
Operating Temperature	$T_J$	-55°C to 150°C	°C
Storage Temperature	$T_{STG}$	-55°C to 150°C	°C

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

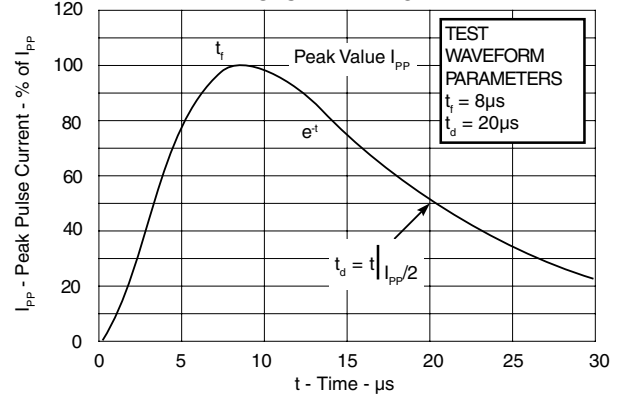
**Note 1:** Part numbers with an additional "C" suffix are bidirectional devices, i.e., GBLC05C.

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

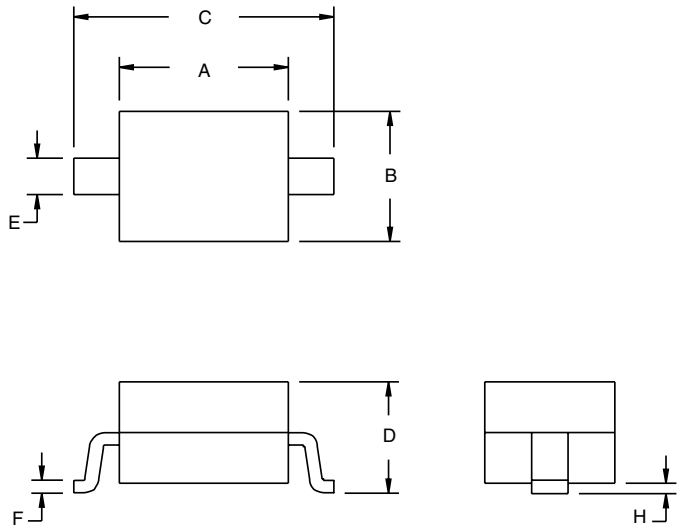

**FIGURE 1**  
**PEAK PULSE POWER VS PULSE TIME**



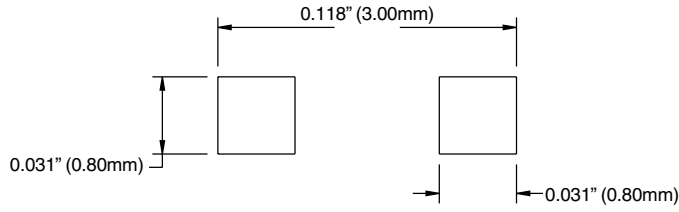
**FIGURE 2**  
**PULSE WAVE FORM**



**PACKAGE OUTLINE & DIMENSIONS**

<p style="text-align: center;"><b>PACKAGE OUTLINE</b></p> 	<p style="text-align: center;"><b>SOD-323 PACKAGE</b></p> 			
<b>PACKAGE DIMENSIONS</b>				
<b>DIM</b>	<b>MILLIMETERS</b>		<b>INCHES</b>	
	<b>MIN</b>	<b>MAX</b>	<b>MIN</b>	<b>MAX</b>
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

**MOUNTING PAD**



**NOTES**

- Controlling Dimensions in Millimeters.
- Dimensions are exclusive of mold flash and metal burrs.

**TAPE & REEL ORDERING NOMENCLATURE**

- 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., *GBLC05C-T7*.

**Outline & Dimensions: Rev 1 - 11/01, 06010**

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