

ULTRA LOW CAPACITANCE TVS ARRAYS (GIGABIT ETHERNET)

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 - 8kw
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

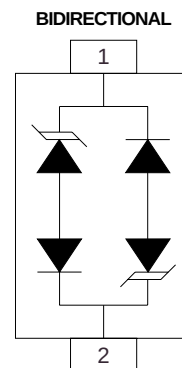
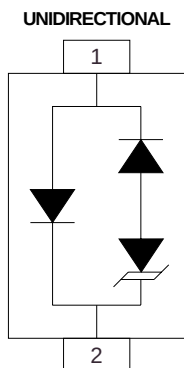
- ✓ 350 Watts Peak Pulse Power Dissipation at ($t_p = 8/20\mu s$)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Replacement for MLV (0805)
- ✓ Protects One Power or I/O Port
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Clamping Voltage
- ✓ **ULTRA LOW CAPACITANCE 3pF PER DIODE**

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOD-323
- ✓ Weight 10 milligrams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ Tape and Reel Per EIA Standard 481-1-A
- ✓ Device Marking Code & Polarity Band (*Unidirectional Only*)



CIRCUIT DIAGRAMS



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C

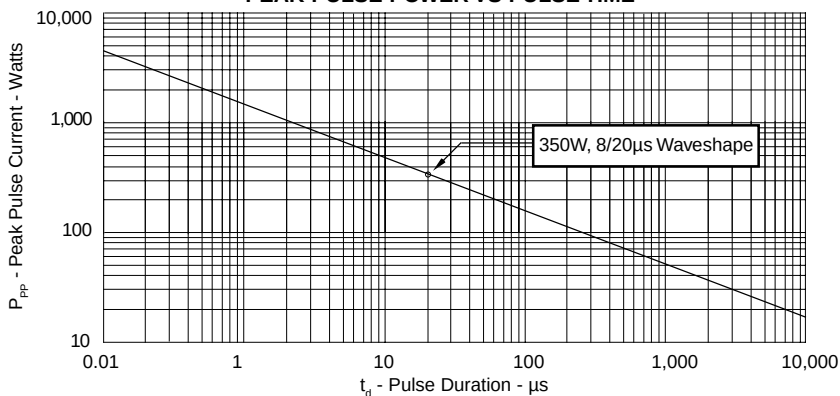
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

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) @ 8/20 μs 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	14.6V @ 24A	75	3
GBLC03C	3C	3.3	4.0	7.0	14.6V @ 24A	75	3
GBLC05	5	5.0	6.0	9.8	17.5V @ 20A	5	3
GBLC05C	5C	5.0	6.0	9.8	17.5V @ 20A	5	3
GBLC08	8	8.0	8.5	13.4	21.1V @ 16.6A	2	3
GBLC08C	8C	8.0	8.5	13.4	21.1V @ 16.6A	2	3
GBLC12	2	12.0	13.3	19.0	28.0V @ 12.5A	1	3
GBLC12C	2C	12.0	13.3	19.0	28.0V @ 12.5A	1	3
GBLC15	6	15.0	16.7	24.0	42.0V @ 8.3A	1	3
GBLC15C	6C	15.0	16.7	24.0	42.0V @ 8.3A	1	3
GBLC18	1	18.0	20.0	29.0	50.0V @ 7A	1	3
GBLC18C	1C	18.0	20.0	29.0	50.0V @ 7A	1	3

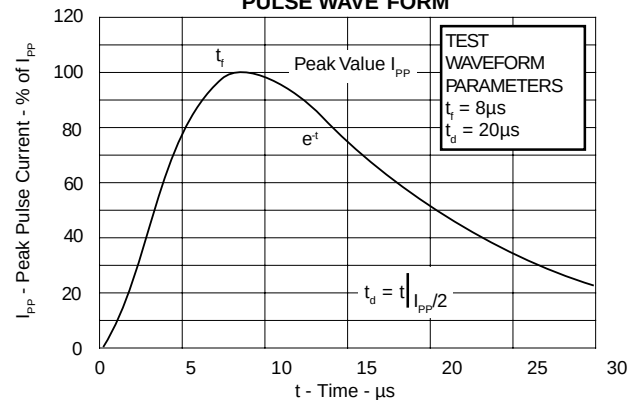
Note 1: Part numbers with an additional "C" suffix are bidirectional devices, i.e., GBLC05C.

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

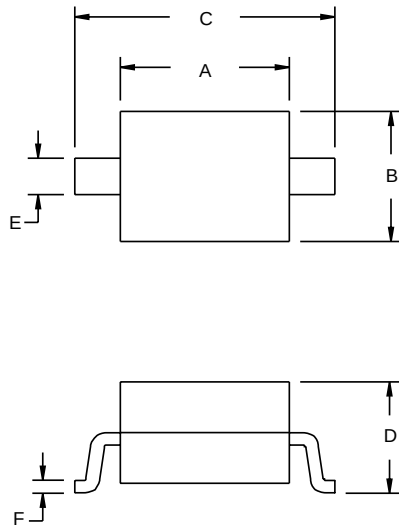
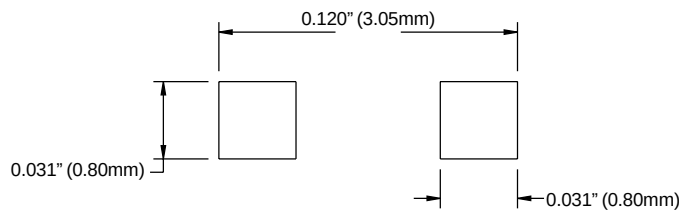
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVE FORM**



PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE 	SOD-323 PACKAGE  PACKAGE DIMENSIONS <table><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><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>2.30</td><td>2.70</td><td>0.094</td><td>0.106</td></tr><tr><td>D</td><td>0.90</td><td>1.17</td><td>0.036</td><td>0.046</td></tr><tr><td>E</td><td>0.33</td><td>0.43</td><td>0.013</td><td>0.017</td></tr><tr><td>F</td><td>0.10</td><td>0.15</td><td>0.004</td><td>0.006</td></tr><tr><td>H</td><td>-</td><td>0.10</td><td>-</td><td>0.004</td></tr></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	2.30	2.70	0.094	0.106	D	0.90	1.17	0.036	0.046	E	0.33	0.43	0.013	0.017	F	0.10	0.15	0.004	0.006	H	-	0.10	-	0.004
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MOUNTING PAD 	NOTES: 1. Controlling Dimensions in Millimeters.																																												

TAPE & REEL PACKAGING:

Surface mount product is taped and reeled in accordance with EIA-481, reel quantities and sizes are as follows:

7 Inch Reel - 3,000 pieces per reel; 13 Inch Reel - Not Available

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