

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): 24A, 8/20 μ s - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

- ✓ 350 Watts Peak Pulse Power per Line (tp=8/20 μ 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
- ✓ RoHS Compliant

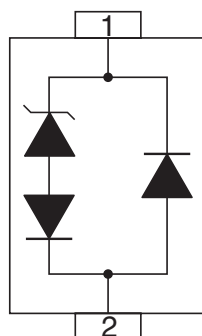
MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOD-323 Package
- ✓ Weight 5 milligrams (Approximate)
- ✓ Available in Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Device Marking: Marking Code & Polarity Band (*Unidirectional Only*)

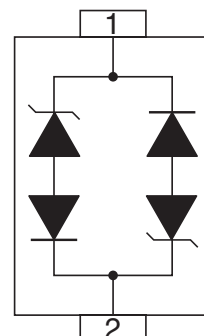


PIN CONFIGURATIONS

UNIDIRECTIONAL



BIDIRECTIONAL



GBLC03 thru GBLC24C

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_A	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

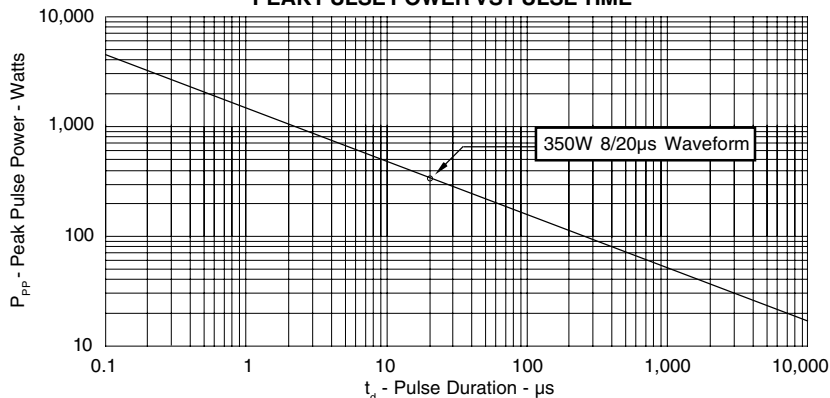
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (See Notes 1-2)	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_b 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

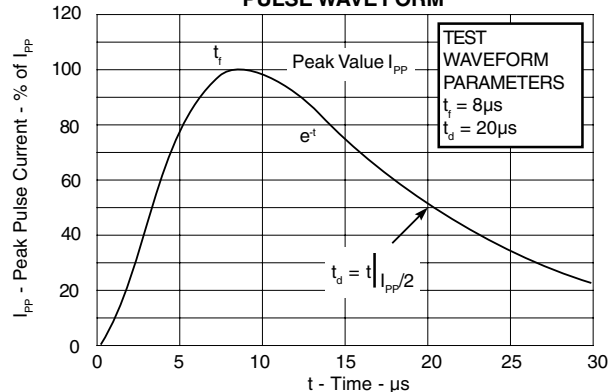
Note 1: Part numbers with an additional "C" suffix are bidirectional devices, i.e., GBLC05C.

Note 2: *Unidirectional Only:* Positive potential is applied from pin 1 to 2.

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

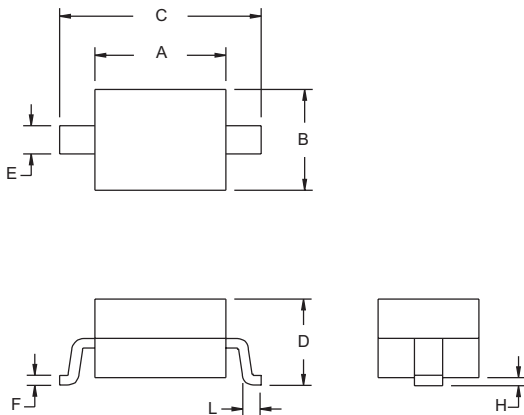
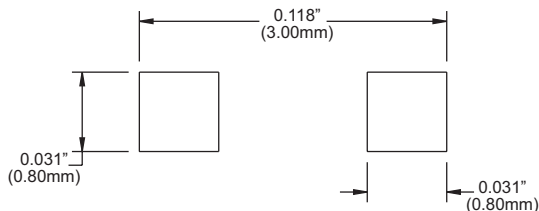


**FIGURE 2
PULSE WAVE FORM**



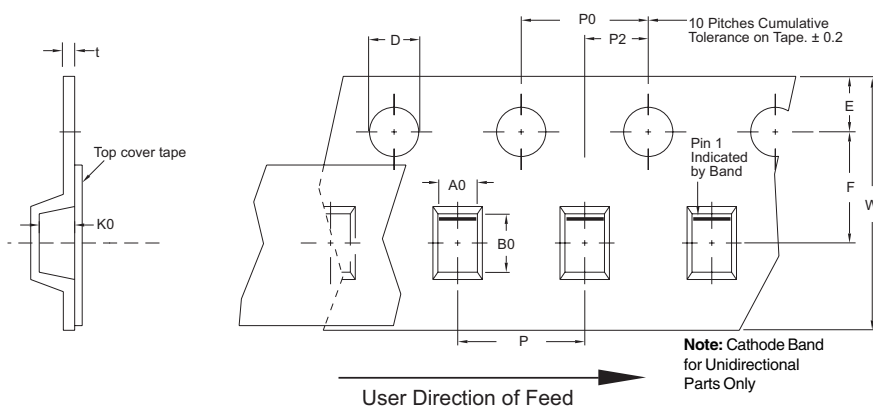
GBLC03 thru GBLC24C

SOD-323 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>2.39</td><td>2.70</td><td>0.094</td><td>0.106</td></tr><tr><td>D</td><td>0.80</td><td>1.10</td><td>0.031</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><tr><td>L</td><td>0.20</td><td>-</td><td>0.008</td><td>-</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	2.39	2.70	0.094	0.106	D	0.80	1.10	0.031	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	L	0.20	-	0.008	-
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MOUNTING PAD 	NOTES 1. Controlling Dimensions in Millimeters. 2. Dimensions are exclusive of mold flash and metal burrs. TAPE & REEL ORDERING NOMENCLATURE 1. Surface mount product is taped and reeled in accordance with EIA-481. 2. Suffix-T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., <i>GBLC05C-T7</i>. 3. Suffix -LF = Lead-Free, Pure-Tin Plating, i.e., <i>GBLC05C-LF-T7</i>. Outline & Dimensions: Rev 3 - 4/07, 06010																																																	

Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.55 ± 0.10	2.90 ± 0.10	1.35 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.25



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