

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: 0.6pF Typical
- ✓ RoHS Compliant

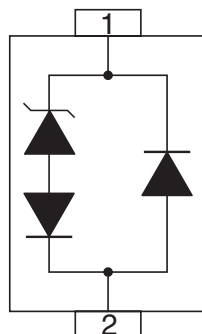
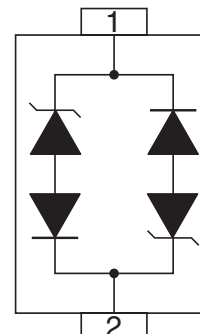
MECHANICAL CHARACTERISTICS

- ✓ 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*)


SOD-323

*PATENT PENDING

PIN CONFIGURATIONS

UNIDIRECTIONAL

BIDIRECTIONAL


GBLC03I* thru GBLC24CI*

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

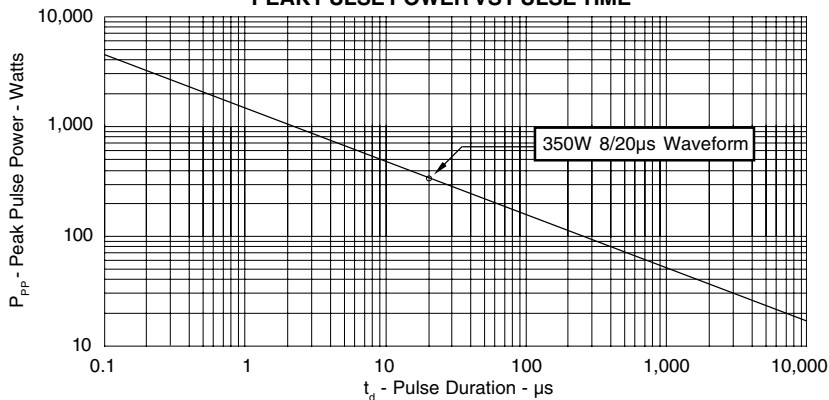
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (See Notes 1-2)	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE
		V_{WM} VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ $I_p = 1A$ V_C VOLTS	@ 8/20 μs $V_C @ I_{PP}$	@ V_{WM} I_b μA	0V @ 1 MHz C pF
GBLC03I	C	3.0	4.0	5.15	13.9V @ 15.0A	5	0.6
GBLC03CI	CC	3.0	4.0	5.15	13.9V @ 15.0A	5	0.6
GBLC05I	A	5.0	6.0	9.8	18.3V @ 17.0A	5	0.6
GBLC05CI	AC	5.0	6.0	9.8	18.3V @ 17.0A	5	0.6
GBLC08I	B	8.0	8.5	13.4	18.5V @ 17.0A	2	0.6
GBLC08CI	BC	8.0	8.5	13.4	18.5V @ 17.0A	2	0.6
GBLC12I	D	12.0	13.3	19.0	28.6V @ 11.0A	1	0.6
GBLC12CI	DC	12.0	13.3	19.0	28.6V @ 11.0A	1	0.6
GBLC15I	E	15.0	16.7	24.0	31.8V @ 10.0A	1	0.6
GBLC15CI	EC	15.0	16.7	24.0	31.8V @ 10.0A	1	0.6
GBLC18I	F	18.0	20.0	29.0	45.0V @ 8.0A	1	0.6
GBLC18CI	FC	18.0	20.0	29.0	45.0V @ 8.0A	1	0.6
GBLC24I	H	24.0	26.7	43.0	56.0V @ 6.0A	1	0.6
GBLC24CI	HC	24.0	26.7	43.0	56.0V @ 6.0A	1	0.6

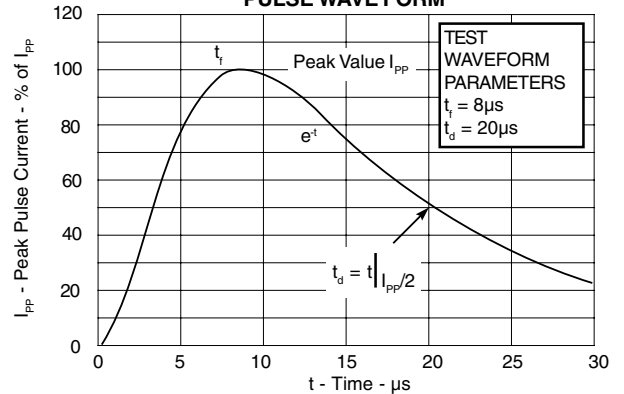
Note 1: Part numbers with an additional "C" suffix are bidirectional devices, i.e., GBLC05CI.

Note 2: *Unidirectional Only:* Positive potential is applied from pin 2 to 1 or pin 3 to 4.

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

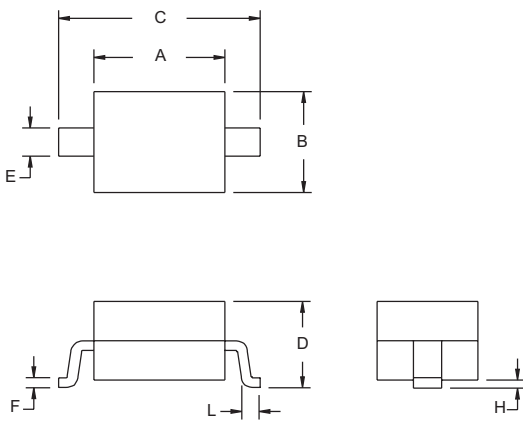

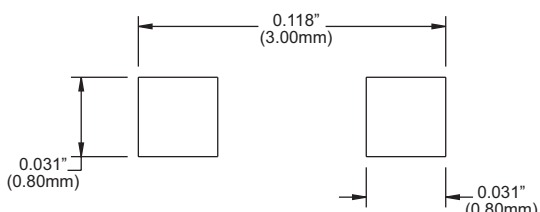


**FIGURE 2
PULSE WAVE FORM**



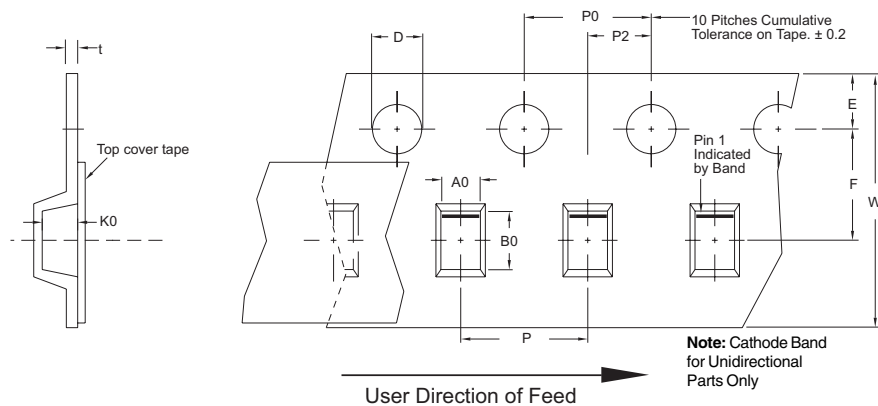
GBLC031* thru GBLC24CI*

SOD-323 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		SOD-323 PACKAGE			
					
PACKAGE DIMENSIONS					
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	0.033	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	-	
MOUNTING PAD		NOTES			
		<p>1. Controlling Dimensions in Millimeters. 2. Dimensions are exclusive of mold flash and metal burrs.</p> <p>TAPE & REEL ORDERING NOMENCLATURE</p> <p>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>GBLC05CI-T7</i>. 3. Suffix -LF = Lead-Free, Pure-Tin Plating, i.e., <i>GBLC05CI-LF-T7</i>.</p>			
		Outline & Dimensions: Rev 3 - 2/07, 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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