PROTEK DEVICES

GBLC03I*
thru
GBLC24CI*

ULTRA LOW CAPACITANCE TVS ARRAY

SOD-323

***PATENT PENDING**

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, 8/20µs - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

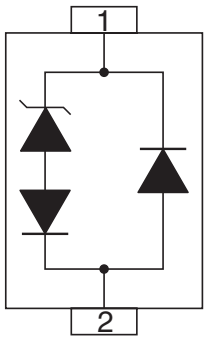
✔ 350 Watts Peak Pulse Power per Line (tp=8/20µs)
✔ Unidirectional & Bidirectional Configurations
✔ Replacement for MLV (0805)
✔ Protects One Power or I/O Port
✔ ESD Protection > 40 kilovolts
✔ Low Clamping Voltage
✔ Available in Multiple Voltage Types Ranging From 3V to 24V
✔ Ultra Low Capacitance: 0.6pF Typical
✔ RoHS Compliant

MECHANICAL CHARACTERISTICS

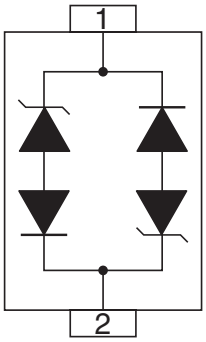
✔ Molded JEDEC SOD-323 Package
✔ Weight 5 milligrams (Approximate)
✔ Available in Lead-Free Pure-Tin Plating(Annealed)
✔ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
✔ Consult Factory for Leaded Device Availability
✔ Flammability Rating UL 94V-0
✔ 8mm Tape and Reel Per EIA Standard 481
✔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

PIN CONFIGURATIONS

UNIDIRECTIONAL



BIDIRECTIONAL



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	**SYMBOL**	**VALUE**	**UNITS**
Peak Pulse Power (t_p = 8/20µs) - 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 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
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

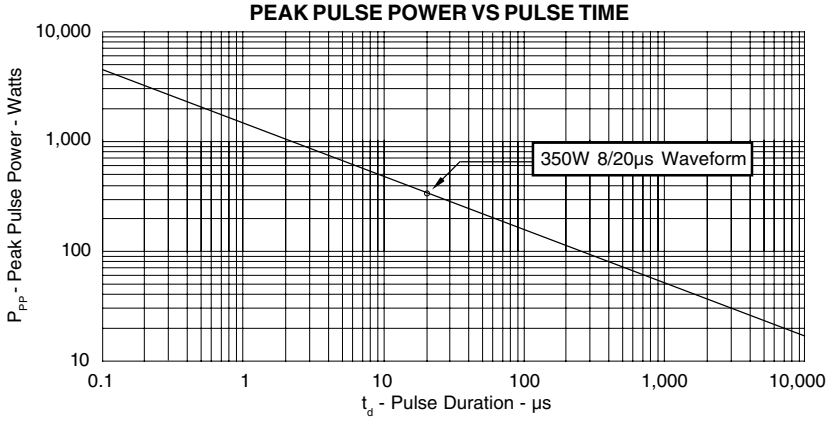
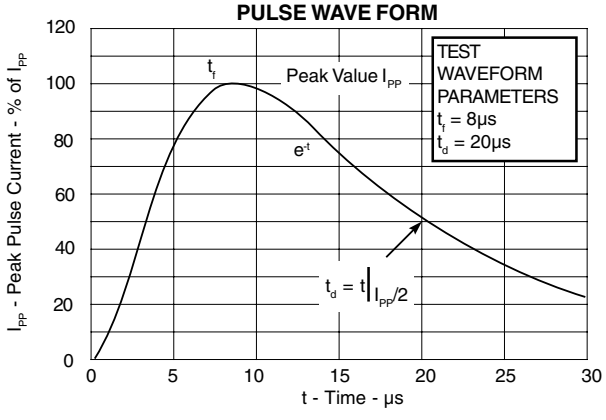
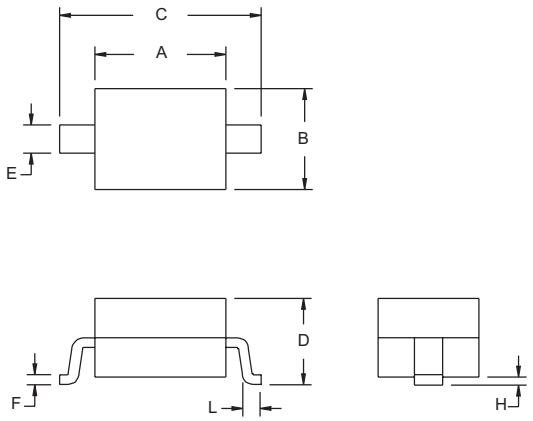


FIGURE 2
PULSE WAVE FORM



SOD-323 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE

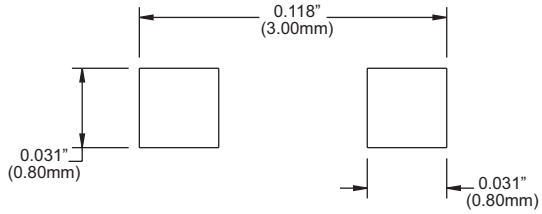


SOD-323 PACKAGE

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

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

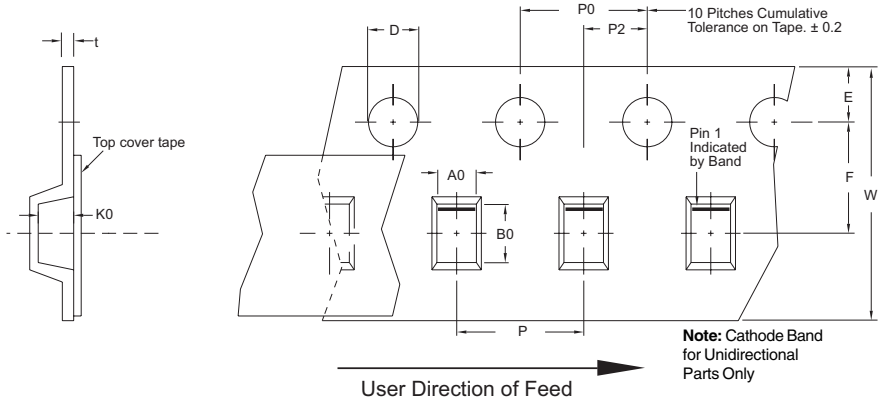
TAPE & REEL ORDERING NOMENCLATURE

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., *GBLC05CI-T7*.
3. Suffix - LF = Lead-Free, Pure-Tin Plating, i.e., *GBLC05CI-LF-T7*.

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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