

## 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

## FEATURES

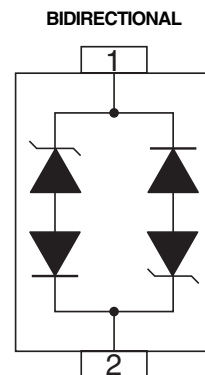
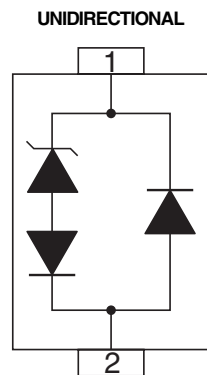
- ✓ 200 Watts Peak Pulse Power per Line (tp=8/20µs)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Replacement for MLV (0603)
- ✓ Protects One Power or I/O Port
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Clamping Voltage
- ✓ Available from 3V to 8V
- ✓ ULTRA LOW CAPACITANCE: 1.5pF Typical
- ✓ RoHS Compliant

## MECHANICAL CHARACTERISTICS

- ✓ Molded EIAJ SC-79 Package
- ✓ Weight 2 milligrams (Approximate)
- ✓ Available 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



# GBLCSC03 thru GBLCSC08C

## DEVICE CHARACTERISTICS

### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20µs) - See Figure 1	P <sub>PP</sub>	200	Watts
Storage Temperature	T <sub>STG</sub>	-55°C to 150°C	°C
Operating Temperature	T <sub>A</sub>	-55°C to 150°C	°C

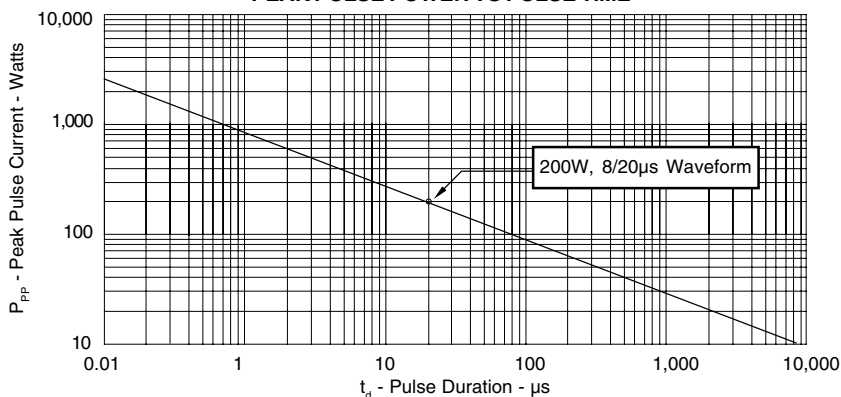
### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (See Note 1 & Note 2)	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE
		V <sub>WM</sub> VOLTS	@ 1mA V <sub>(BR)</sub> VOLTS	@ 8/20µs V <sub>C</sub> @ I <sub>PP</sub>	@ V <sub>WM</sub> I <sub>D</sub> µA	@ 0V, 1 MHz C <sub>T</sub> pF
GBLCSC03	3	3.3	4.0	13.0V @ 10.0A	1.0	1.5
GBLCSC03C	H	3.3	4.0	13.0V @ 10.0A	1.0	1.5
GBLCSC05	5	5.0	6.0	16.0V @ 10.0A	1.0	1.5
GBLCSC05C	O	5.0	6.0	16.0V @ 10.0A	1.0	1.5
GLBCSC08	I	8.0	8.5	--	1.0	1.5
GBLCSC08C	K	8.0	8.5	--	1.0	1.5

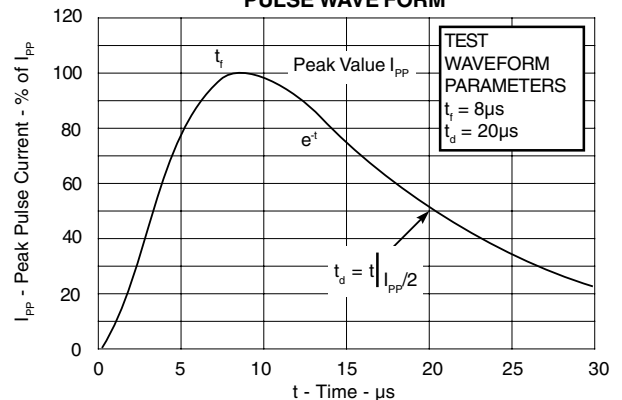
**Note 1:** Part numbers with an additional "C" suffix are bidirectional devices, i.e., GBLCSC05C. For other voltages contact factory.

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

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

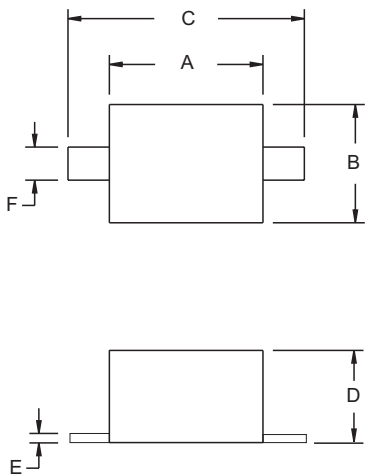



**FIGURE 2  
PULSE WAVE FORM**

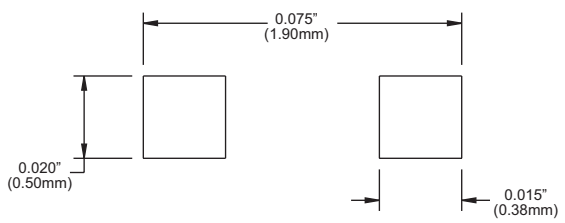


# GBLCSC03 thru GBLCSC08C

## SC-79 PACKAGE OUTLINE & DIMENSIONS

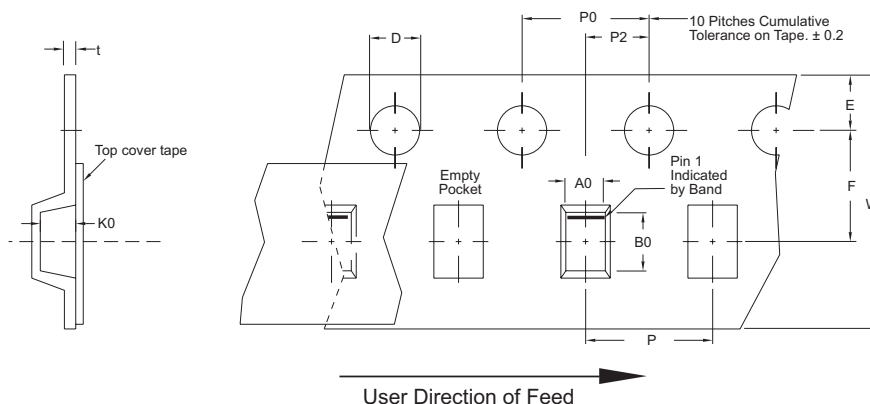
<b>PACKAGE OUTLINE</b> 		<b>SC79 PACKAGE</b> 		
<b>PACKAGE DIMENSIONS</b>				
DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.043	0.049	1.10	1.30
B	0.028	0.035	0.70	0.90
C	0.059	0.066	1.50	1.70
D	0.020	0.028	0.50	0.70
E	0.003	0.008	0.08	0.20
F	0.012 BSE		0.30 BSE	

<b>MOUNTING PAD</b> 		<b>NOTES</b> 1. Controlling Dimensions in Millimeters. 2. Dimensions are exclusive of mold flash and metal burrs.  <b>TAPE &amp; REEL ORDERING NOMENCLATURE</b> 1. Surface mount product is taped and reeled in accordance with EIA-481. 2. Suffix-T7 = 7 Inch Reel - 4,000 pieces per 8mm tape, i.e., GBLCSC05-LF-T74. 3. Suffix-LF = Lead-Free, Pure Tin Plating, i.e., GBLCSC05C-LF-T74.  <b>Outline &amp; Dimensions: Rev 2 - 9/05, 06037</b>	
-----------------------------------------------------------------------------------------------------------	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.00 ± 0.10	1.95 ± 0.05	0.75 ± 0.05	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



COPYRIGHT © ProTek Devices 2007

SPECIFICATIONS: ProTek reserves the right to change the electrical and or mechanical characteristics described herein without notice (except JEDEC).

DESIGN CHANGES: ProTek reserves the right to discontinue product lines without notice, and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance, ProTek assumes no responsibility with respect to the selection or specifications of such products.

**ProTek Devices**  
 2929 South Fair Lane, Tempe, AZ 85282  
 Tel: 602-431-8101 Fax: 602-431-2288  
 E-Mail: [sales@protekdevices.com](mailto:sales@protekdevices.com)  
 Web Site: [www.protekdevices.com](http://www.protekdevices.com)