

### FEATURES

- 350 watts peak pulse power per line ( $t_p=8/20\mu s$ )
- Protects one bi-directional I/O line
- Low clamping voltage
- Working voltage: 8V
- Low leakage current
- RoHS compliant
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

### MAIN APPLICATIONS

- Cell phone handsets and accessories
- Microprocessor based equipment
- Personal digital assistants (PDA's)
- Notebooks, desktops, and servers
- Portable instrumentation
- Peripherals
- USB interface

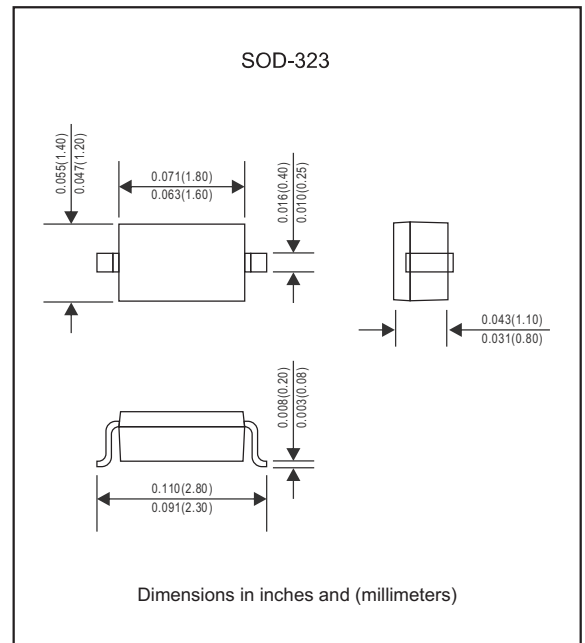
### PROTECTION SOLUTION TO MEET

- IEC61000-4-2 (ESD)  $\pm 30kV$ (air),  $\pm 30kV$  (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (lightning) 18A (8/20 $\mu s$ )

### MECHANICAL CHARACTERISTICS

- SOD-323 package
- Molding compound flammability rating: UL 94V-0
- Lead finish: lead free

### PACKAGE OUTLINE



### ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ C$ , RH=45%-75%, unless otherwise noted)

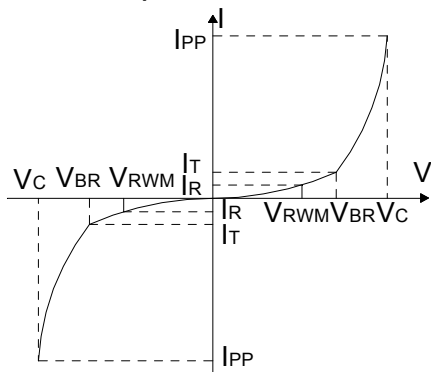
Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 $\mu s$ waveform	$P_{PP}$	350	W
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	+/- 30	kV
ESD per IEC 61000-4-2 (Contact)		+/- 30	
Lead soldering temperature	$T_L$	260 (10 sec.)	$^\circ C$
Operating junction temperature range	$T_J$	-55 to +125	$^\circ C$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ C$

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

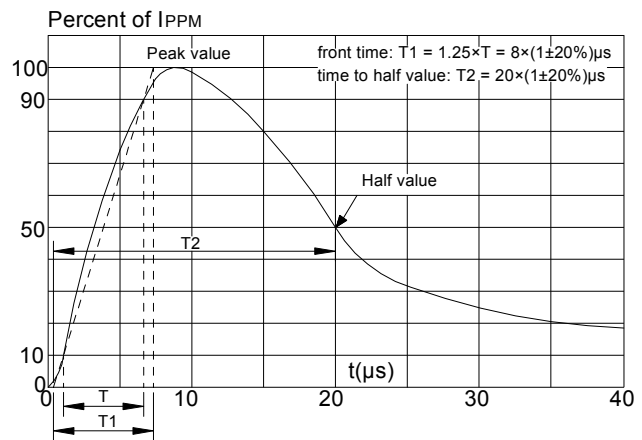
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V <sub>RWM</sub>				8	V
Reverse breakdown voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	8.5			V
Reverse leakage current	I <sub>R</sub>	V <sub>RWM</sub> =8V			1	μA
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, t <sub>P</sub> =8/20μs			13.5	V
		I <sub>PP</sub> =18A, t <sub>P</sub> =8/20μs			23	V
Junction capacitance	C <sub>J</sub>	V <sub>RWM</sub> =0V, f=1MHz		1.0	1.5	pF

### RATINGS AND V-I CHARACTERISTICS CURVES (T<sub>A</sub>=25°C, unless otherwise noted)

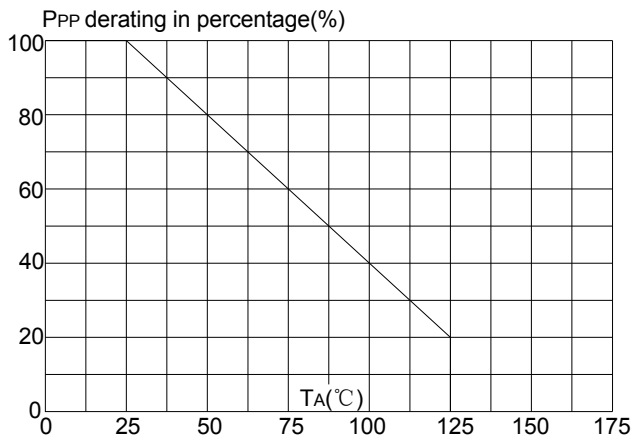
**FIG.1: V- I curve characteristics (Bi-directional)**



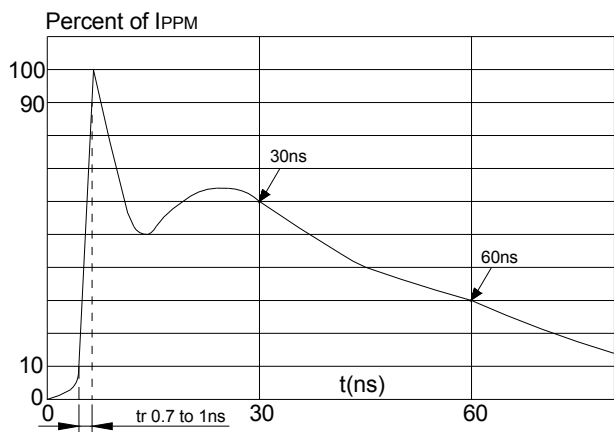
**FIG.2: Pulse waveform (8/20μs)**




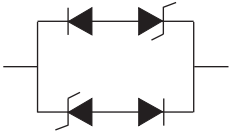
**FIG.3: Pulse derating curve**



**FIG.4: ESD clamping (30kV contact)**



## PINNING INFORMATION

Pin	Simplified outline	Symbol
Bi-Directional		

## MARKING

Type number	Marking code
GBLC08DC-Q1	8BLC