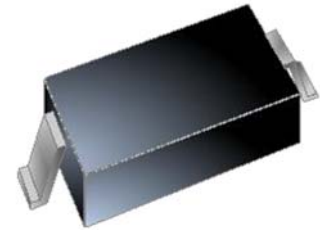




### FEATURES

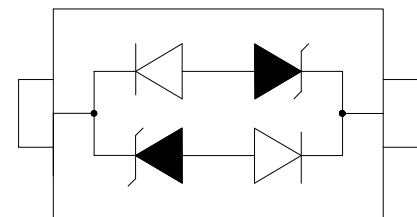
- ◇ 350 watts peak pulse power per line ( $t_P=8/20\mu s$ )
- ◇ Protects one bi-directional I/O line
- ◇ Low clamping voltage
- ◇ Working voltage:3.3V
- ◇ Low leakage current
- ◇ RoHS compliant



SOD-323

### MAIN APPLICATIONS

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



Pin Configuration

### 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) 20A (8/20 $\mu s$ )

### MECHANICAL CHARACTERISTICS

- ◇ SOD-323 package
- ◇ Molding compound flammability rating: UL 94V-0
- ◇ Weight 5 milligrams (approximate)
- ◇ Quantity per reel: 3,000pcs
- ◇ Lead finish: lead free
- ◇ Marking code: CA1

**ABSOLUTE MAXIMUM RATINGS** (T<sub>A</sub>=25°C, RH=45%-75%, unless otherwise noted)

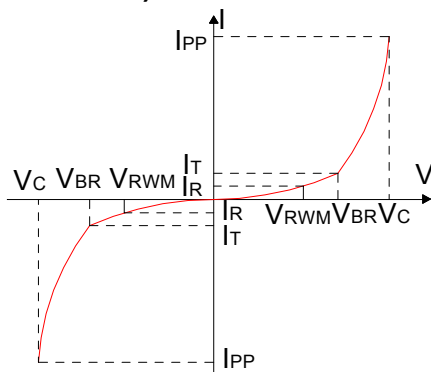
Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20μs waveform	P <sub>PP</sub>	350	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	+/- 30 +/- 30	kV
Lead soldering temperature	T <sub>L</sub>	260 (10 sec.)	°C
Operating junction temperature range	T <sub>J</sub>	-55 to +125	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

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

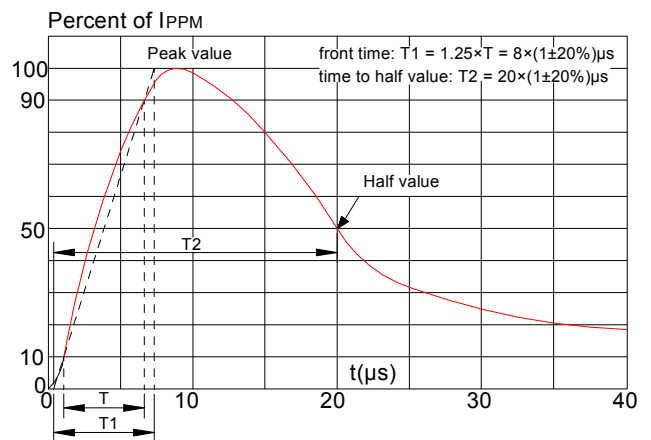
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V <sub>RWM</sub>				3.3	V
Reverse breakdown voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	4			V
Reverse leakage current	I <sub>R</sub>	V <sub>RWM</sub> =3.3V			0.1	μA
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, t <sub>P</sub> =8/20μs			6.5	V
		I <sub>PP</sub> =10A, t <sub>P</sub> =8/20μs			12	V
		I <sub>PP</sub> =20A, t <sub>P</sub> =8/20μs			17.5	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)

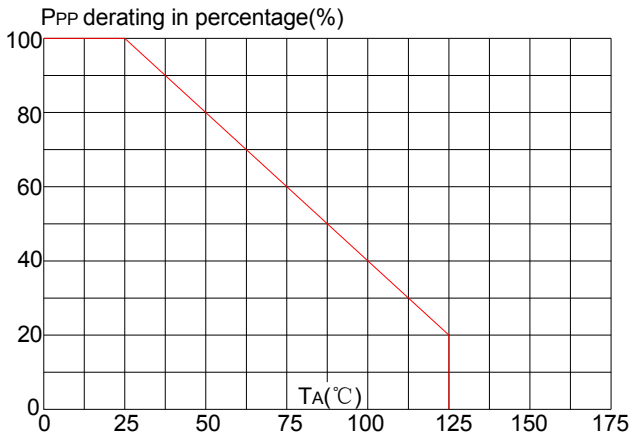
**FIG.1:V- I curve characteristics (Bi-directional)**



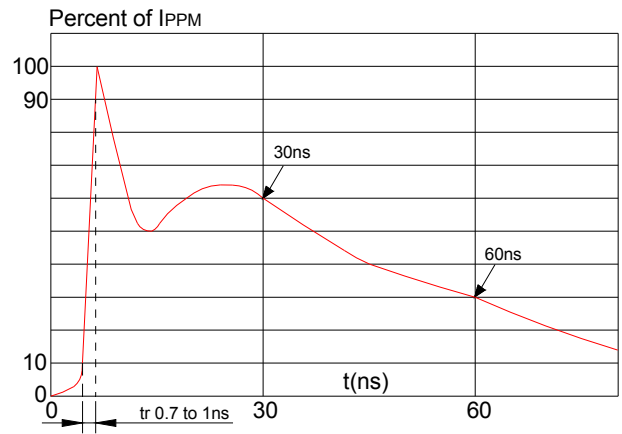
**FIG.2: Pulse waveform (8/20μs)**



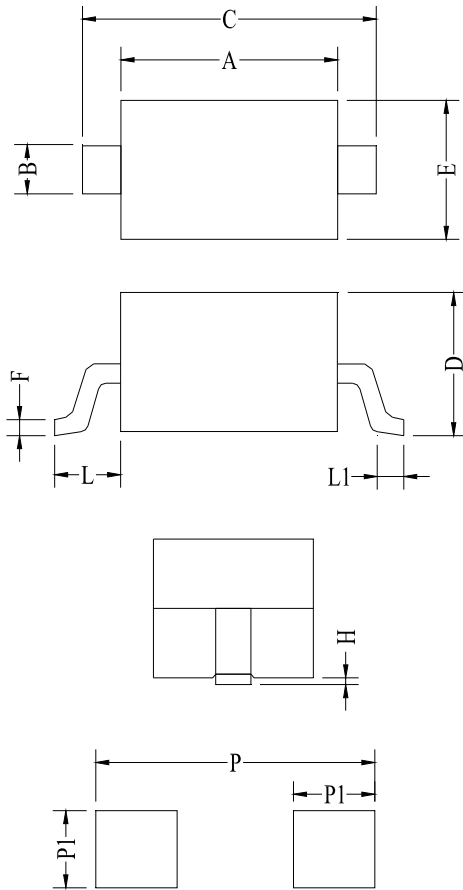
**FIG.3: Pulse derating curve**



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



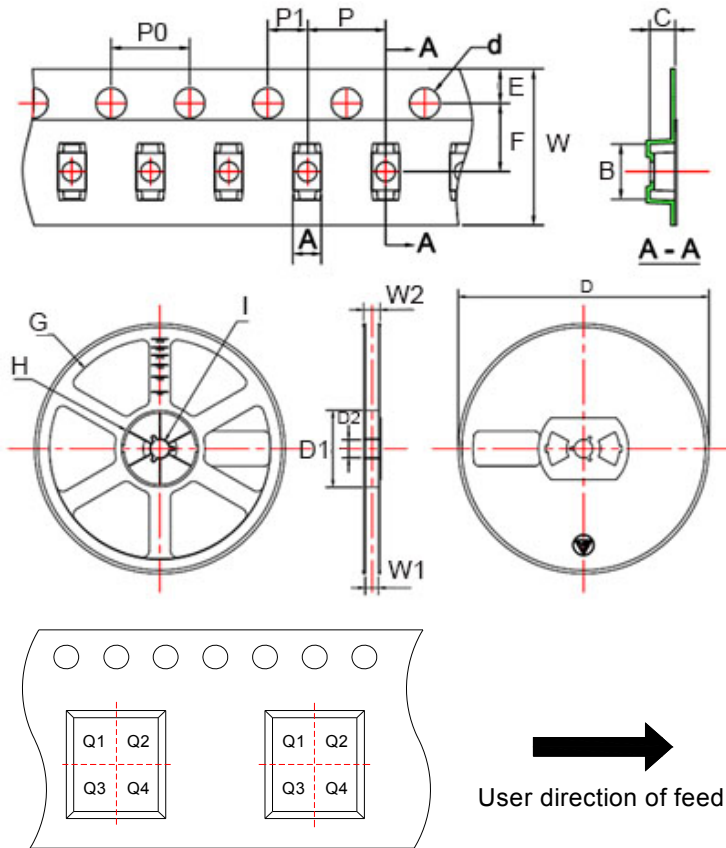
**PACKAGE MECHANICAL DATA**



**Land Pattern**

Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	1.60	1.80	0.063	0.071
B	0.25	0.35	0.010	0.014
C	2.50	2.75	0.098	0.108
D	0.00	1.00	0.000	0.039
E	1.20	1.40	0.047	0.055
F	0.08	0.15	0.003	0.006
L	0.475REF		0.019REF	
L1	0.25	0.40	0.010	0.016
H	0.00	0.10	0.000	0.004
P	3.00		0.118	
P1	0.80		0.031	

**TAPE AND REEL INFORMATION-SOD-323**



Pin 1 quadrant:Q1&Q2

**Packaging description:**

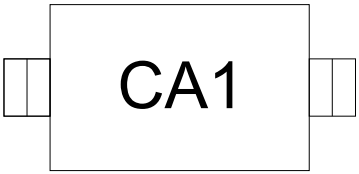
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. The reels are blue in color and made of recyclable plastic.

Symbol	Millimeters	Inches
A	1.46±0.05	0.057±0.002
B	2.90±0.05	0.114±0.002
C	1.25±0.05	0.049±0.002
d	ø1.50±0.1	ø0.059±0.004
E	1.75±0.1	0.069±0.004
F	3.50±0.1	0.138±0.004
P0	4.0±0.1	0.157±0.004
P	4.0±0.1	0.157±0.004
P1	2.0±0.1	0.079±0.004
W	8.00+0.3/-0.1	0.315+0.012/-0.004
D	ø178.0±2	ø7.008±0.079
D1	54.40±1	2.142±0.039
D2	13.0±1	0.512±0.039
G	R78.0±1	R3.071±0.039
H	R25.60±1	R1.008±0.039
I	R6.50±1	R0.256±0.039
W1	9.50±1	0.374±0.039
W2	12.30±1	0.484±0.039

**ORDERING INFORMATION**

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCRIPTION
JEB03CX	SOD-323	3,000	7 inch reel pack

**MARKING CODE**

Part Number	Marking Code
JEB03CX	

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