

## FEATURES

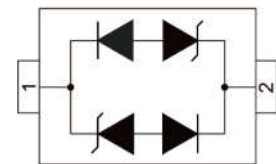
- ✧ 360 watts peak pulse power per line ( $t_p=8/20\mu s$ )
- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Working voltages: 5V
- ✧ Low leakage current
- ✧ RoHS compliant



SOD-323

## MAIN APPLICATIONS

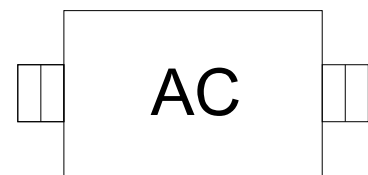
- ✧ Cell phone handsets and accessories
- ✧ Microprocessor based equipment
- ✧ Personal digital assistants (PDA's)
- ✧ Notebooks, desktops, and servers
- ✧ Portable instrumentation
- ✧ Peripherals
- ✧ USB interface



PIN Configuration

## PROTECTION SOLUTION TO MEET

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



Marking Code

## 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:AC

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

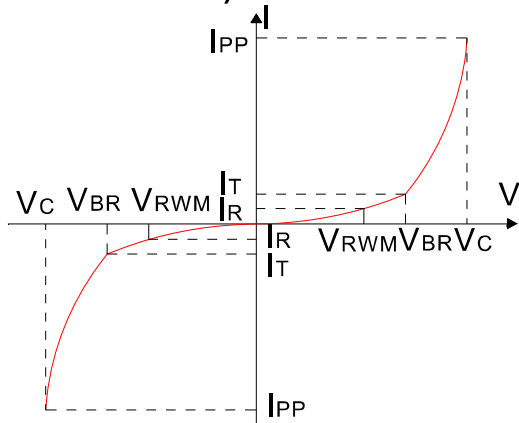
Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 $\mu\text{s}$ waveform	$P_{PP}$	360	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	+/- 30 +/- 30	kV
Lead soldering temperature	$T_L$	260 (10 sec.)	$^{\circ}\text{C}$
Operating junction temperature range	$T_J$	-55 to +125	$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$ )

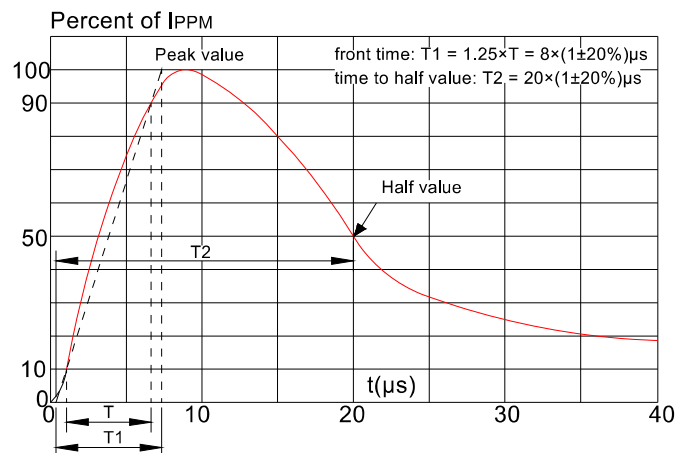
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	$V_{RWM}$				5.0	V
Reverse breakdown voltage	$V_{BR}$	$I_T = 1\text{mA}$	6.0		8.0	V
Reverse leakage current	$I_R$	$V_{RWM} = 5\text{V}$			1	$\mu\text{A}$
Clamping voltage	$V_C$	$I_{PP}=1\text{A}$ , $t_p = 8/20\mu\text{s}$			9.8	V
		$I_{PP}=18\text{A}$ , $t_p = 8/20\mu\text{s}$			20	V
Junction capacitance	$C_J$	$V_{RWM} = 0\text{V}$ , $f = 1\text{MHz}$		0.6		pF

**RATINGS AND V-I CHARACTERISTICS CURVES** ( $T_A=25^{\circ}\text{C}$ , unless otherwise noted)

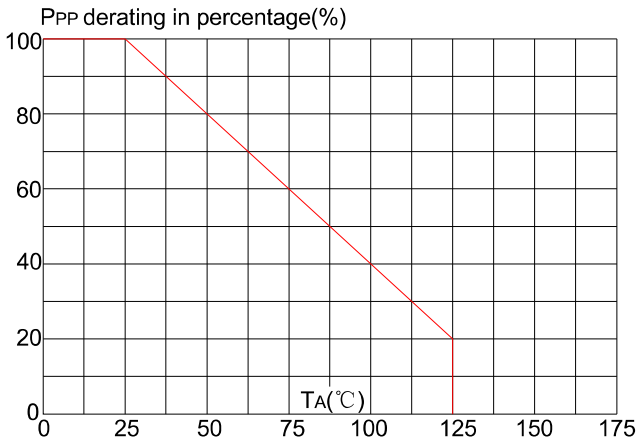
**FIG.1: V- I curve characteristics (Bi-directional)**



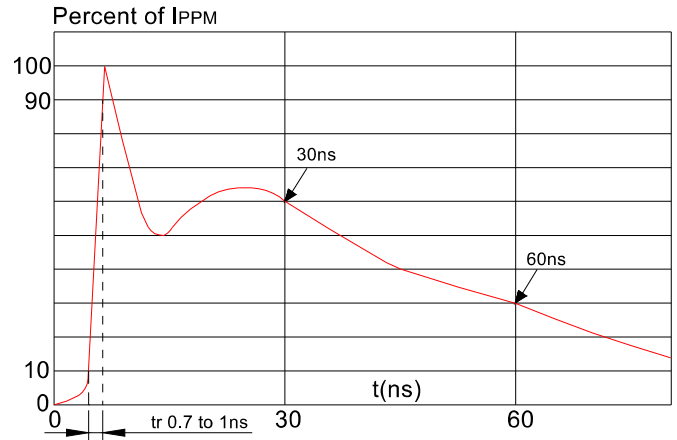
**FIG.2: Pulse waveform (8/20 $\mu\text{s}$ )**



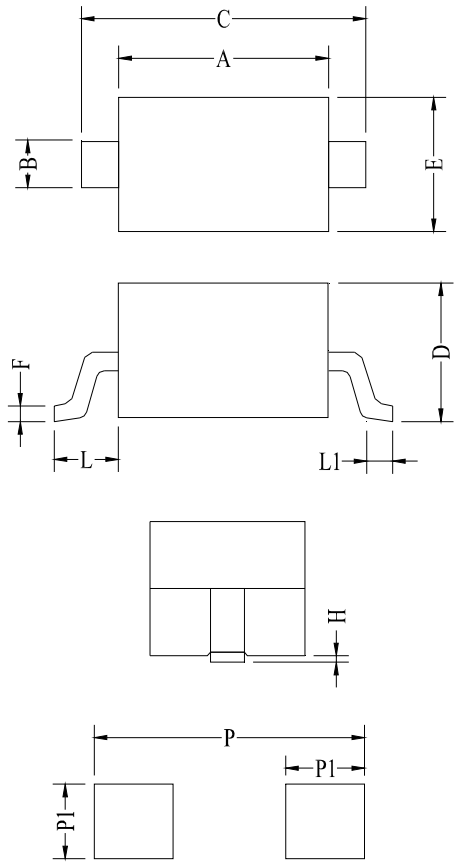
**FIG.3: Pulse derating curve**



**FIG.4: ESD clamping (8KV contact)**



## PACKAGE MECHANICAL DATA



**Land Pattern**

Symbol	Millimeter		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	2.70	0.098	0.106
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	

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