



### 1. Features

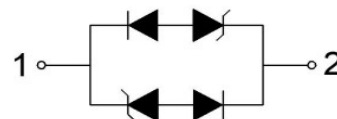
- 2-pin lead-less package
- Junction capacitance (Max value: 1.5pF)
- Peak Pulse current (8/20μs) Max:20A
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:5V
- RoHS Compliant

SOD323



### 2. Mechanical Data

- Case:Molded Plastic,SOD323.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:AC
- Marking:marked on body.



### 3. Maximum Ratings

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P <sub>PP</sub>	400	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	20	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	KV
ESD per IEC 61000-4-2 (Contact)		±30	
Junction Temperature	T <sub>j</sub>	-55~+125	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C

### 4. Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Characteristics	Symbol	Condition	Min	TYP	Max	Unit
Reverse Working Voltage	V <sub>RWM</sub>		-	-	5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> = 1mA	6.2	-	9	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	0.2	uA
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A,T <sub>P</sub> =8/20us	-	-	10.5	V
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> = 20A,T <sub>P</sub> =8/20us	-	-	20	V
Junction capacitance	C <sub>J</sub>	V <sub>R</sub> =0V,f =1MHz	-	1	1.5	pF



### 5. Rating And Characteristic Curves

Fig.1 Power rating derating curve

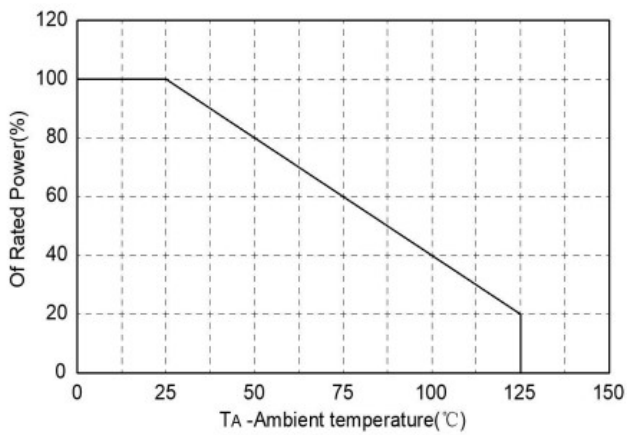


Fig.2 pulse Waveform

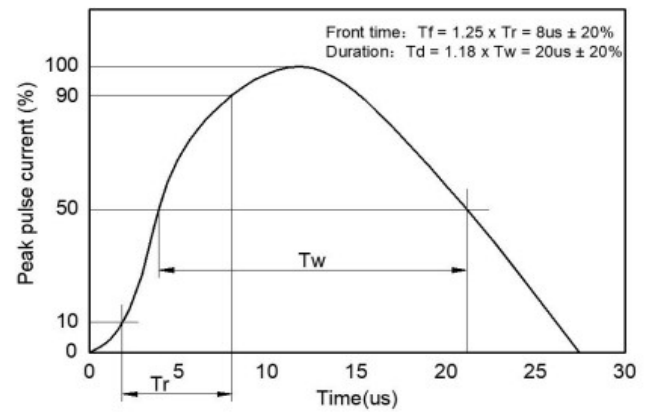


Fig.3 Capacitance between terminals characteristics

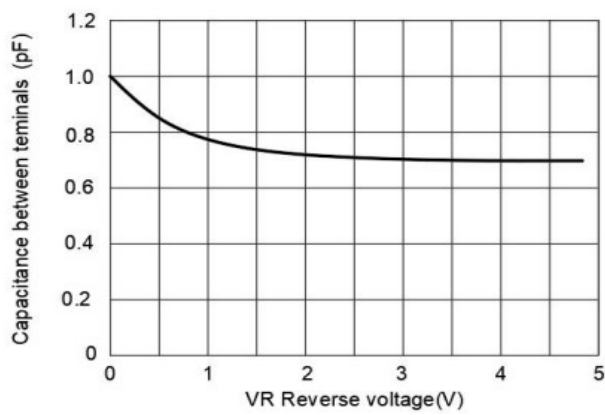
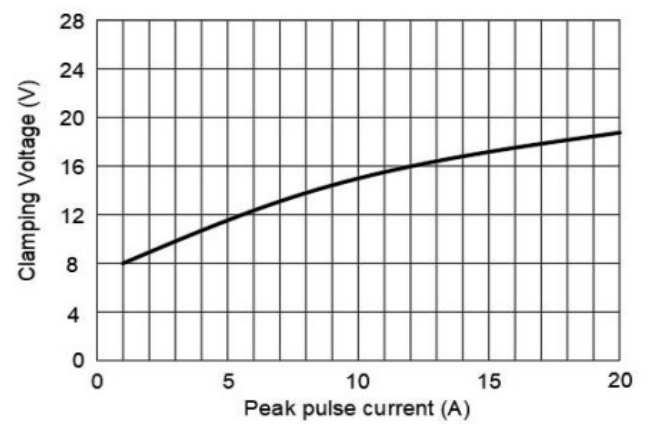
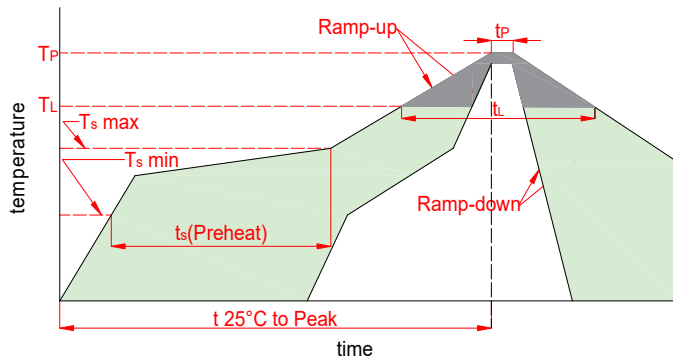


Fig.4 Clamping Voltage vs. Peak Pulse Current



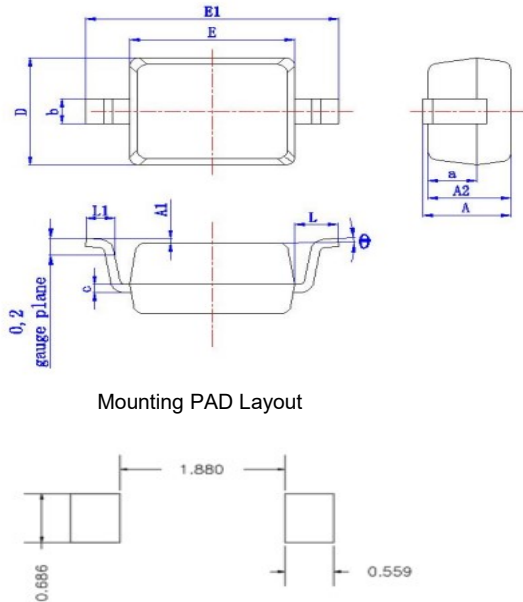


### 6. Soldering Parameters



Reflow Condition		Lead-free
Pre Heat	Temp. min( $T_s$ (min))	150°C
	Temp. max( $T_s$ (min))	200°C
	Time(min to max)( $t_s$ )	60~120s
Aver. ramp up rate(Liquidus Temp.)( $T_L$ )to peak		3°C/s max
$T_s$ (max) to $T_L$ -Ramp-up Rate		3°C/s max
Reflow	Temp.( $T_L$ )(Liquidus)	217°C
	Temp.( $t_L$ )(Liquidus)	60~150s
Peak Temp.( $T_P$ )		260 <sup>+0/-5</sup> °C
Time within actual peak Temp.( $t_p$ )		30s max
Ramp-down Rate		6°C/s max
Time 25°C to peak Tempe.( $T_P$ )		8 minutes max
Do not exceed		260°C

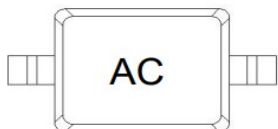
### 7. Dimensions



Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	0.031	0.045	0.80	1.15
A1	0.000	0.004	0.00	0.10
A2	0.031	0.039	0.80	1.00
a	0.020		0.50	
D	0.045	0.057	1.15	1.45
E	0.063	0.073	1.60	1.85
E1	0.098	0.110	2.50	2.80
b	0.010	0.016	0.25	0.40
c	0.003	0.006	0.08	0.15
L	0.019		0.48	
L1	0.010	0.018	0.25	0.45
$\theta$	0°	8°	0°	8°

### 8. Part Marking System

Cathode Band



### 9. Package Information

Package	Part Number	Marking Code	Quantity(pcs)
SOD323	ESDLC5V001D3B	AC	3000



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