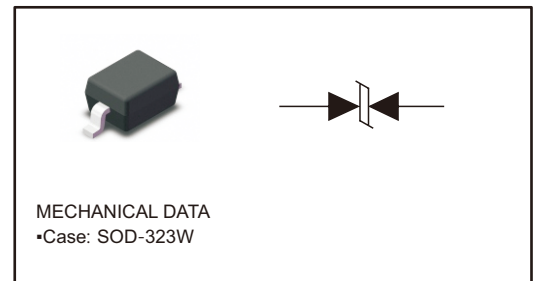




## BIDIRECTIONAL ESD PROTECTION DIODES

### Features

- 230Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny SOD-323W package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j=1.4pF$  typ.)
- Protection one data/power line
- IEC 61000-4-2  $\pm 30V$  contact  $\pm 30kV$  air



### APPLICATION

- 10/100/1000Ethernet
- Intergated Magnetics/RJ45Connectors
- LAN/WAN Equipment
- Notebooks, Desktops, and Servers
- Portable Instrumentation

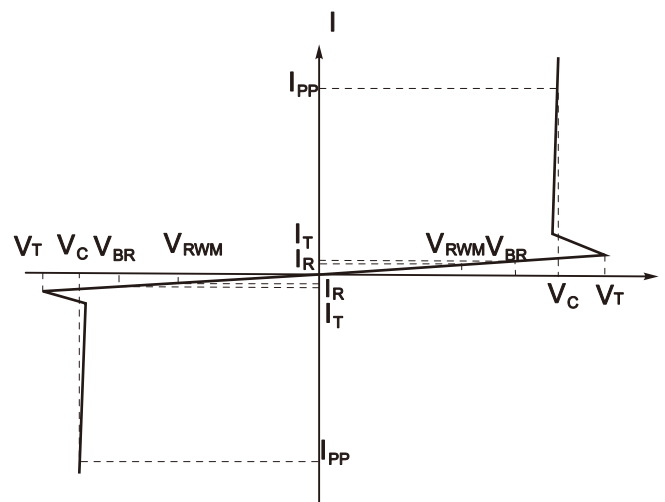
### APPLICATION

- SOD323W package
- Packaging: Tape and Reel

### Electronics Parameter

Parameter	Symbol
Maximum Reverse Peak Pulse Current	$I_{PP}$
Clamping Voltage @ $I_{PP}$	$V_C$
Peak Reverse Working Voltage	$V_{RWM}$
Reverse Leakage Current @ $V_{RWM}$	$I_R$
Trigger Voltage @ $I_T$	$V_T$
Test Current	$I_T$

- Note: 8/20us pulsed waveform





Maximum Ratings (Ta=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power(tp=8/20us)	P <sub>pk</sub>	230	W
Peak Pulse Current(tp=8/20us)	I <sub>PP</sub>	14	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2(Contact)	V <sub>ESD</sub>	±30 ±30	KV
Operating Junction Temperature	T <sub>J</sub>	-55 to +125	°C
Storage Temperature	T <sub>STG</sub>	-55 to +125	°C

Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V <sub>RWM</sub>				5.0	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6.0			V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =5V, Ta=25°C			1.0	uA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =7A, tp=8/20us			14	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =12.5A, tp=8/20us			19	V
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> =0V, f=1MHz		1.4		pF



Fig.1 Non-Repetitive Peak Pulse Power vs. Pulse Time

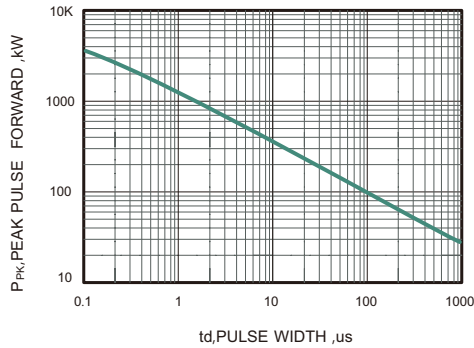


Fig.2 Power Derating Curve

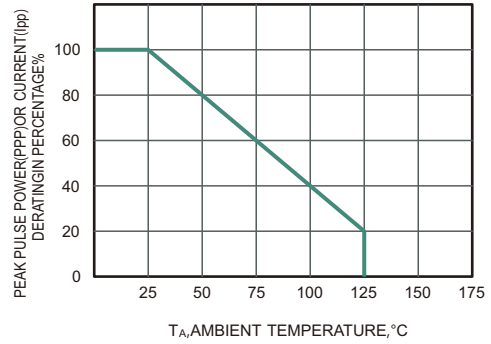


Fig.3 Clamping voltage vs Ipp

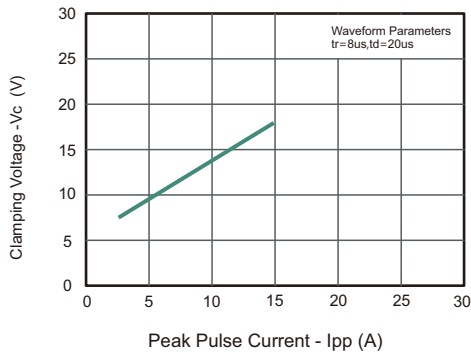
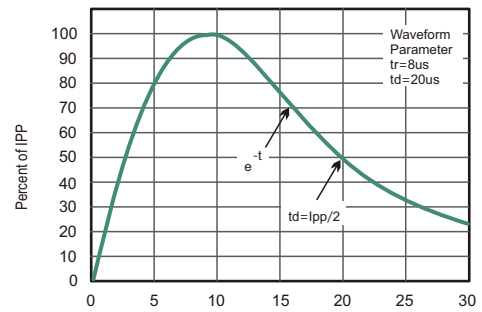


Fig.4 Pulse Waveform

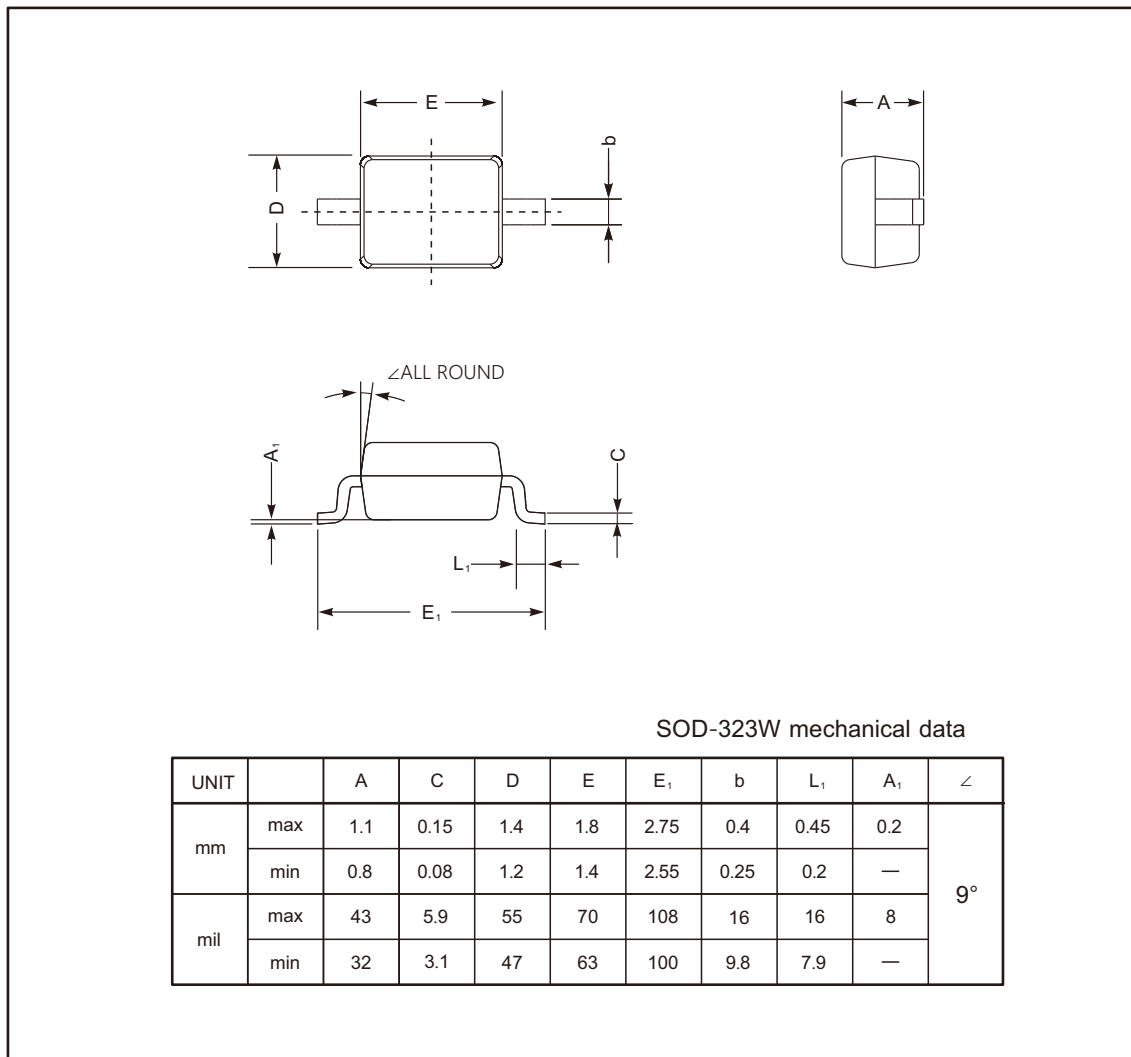




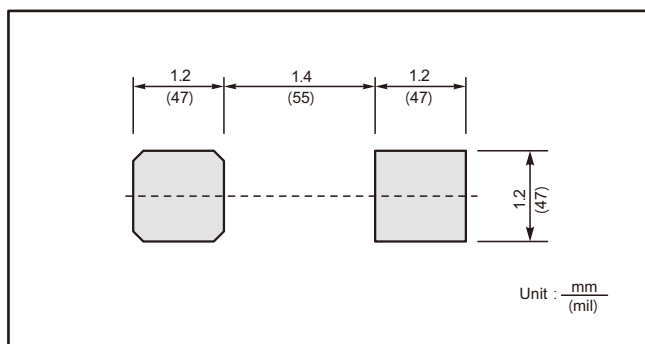
**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SOD-323W



**The recommended mounting pad size**



**Marking**

Type number	Marking code
ESDBLC5V0D3A	5L



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