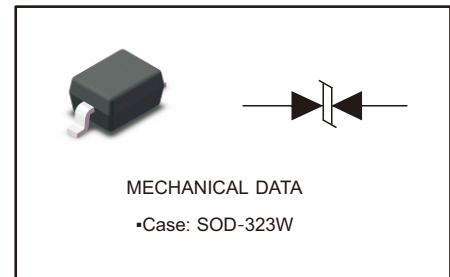




## BIDIRECTIONAL ESD PROTECTION DIODES

### Features

- 120 Watts peak pulse power ( $t_p=8/20\mu s$ )
- Tiny SOD-323W package
- Bidirectional configurations
- Low clamping voltage
- Low leakage current
- Protection one data/power line

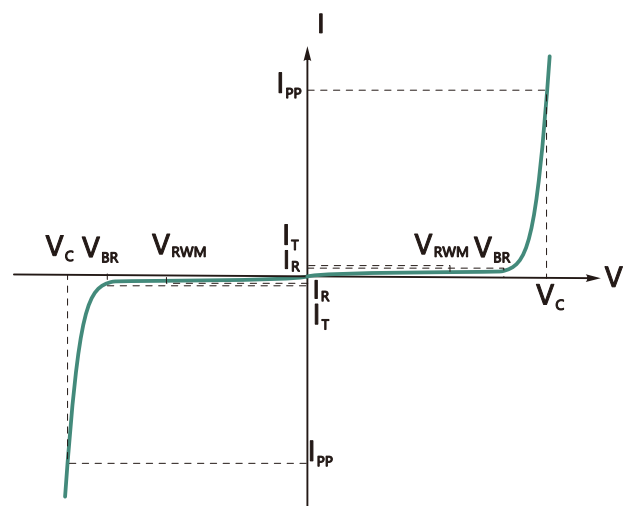


### APPLICATION

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

### 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 @ $V_{RWM}$	$I_R$
Breakdown Viltage @ $I_T$	$V_{BR}$
Test Current	$I_T$





### Absolute Ratings

(T<sub>amb</sub>=25°C )

Parameter	Symbol	Value	Unit
Peak Pulse Power(tp=8/20us)	P <sub>PK</sub>	120	W
Peak Pulse Current(tp=8/20us)	I <sub>PP</sub>	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2(Contact)	V <sub>ESD</sub>	±25 ±25	KV
Operating Junction Temperature	T <sub>J</sub>	-55 to +150	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

### Electrical Characteristics

Ratings at 25 °C ambient temperature 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	5.8		8.8	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =5V, T <sub>a</sub> =25°C			1.0	uA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =8A, t <sub>p</sub> =8/20us			15	V
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> =0V, f=1MHz		27	50	pF



Fig.1 Pulse Waveform

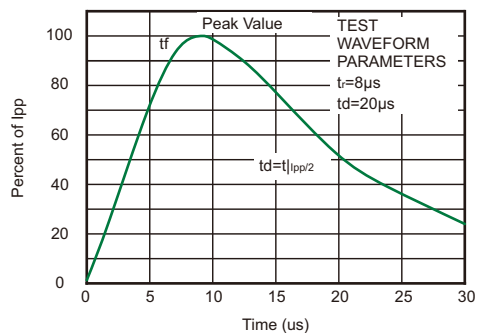


Fig.2 Power Derating Curve

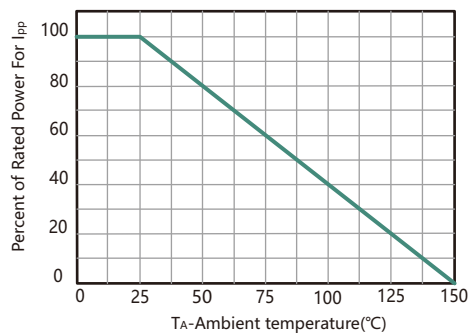


Fig.3 Capacitance vs. Reverse voltage

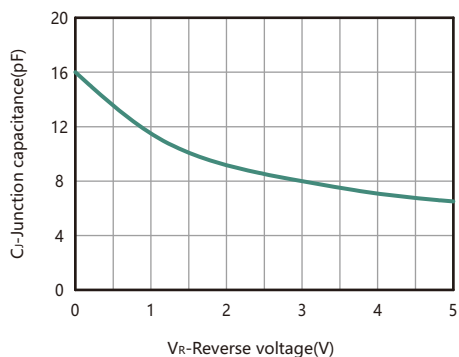
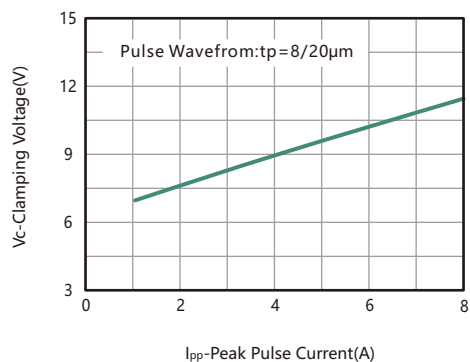


Fig.4 Clamping Voltage vs. Peak Pulse Current

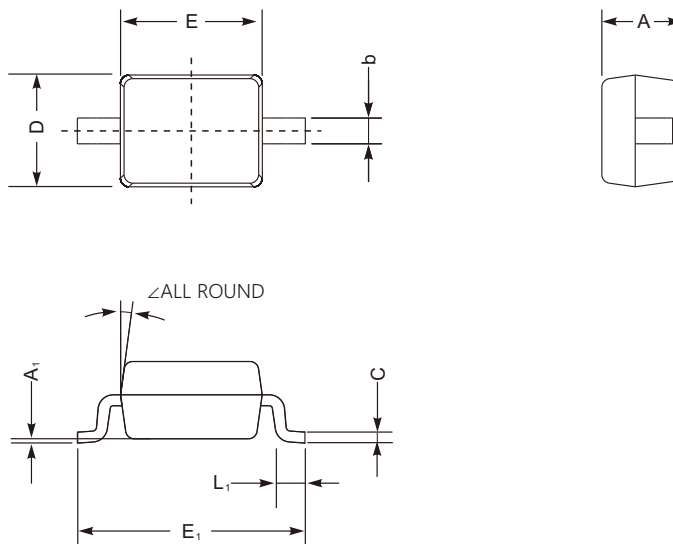




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

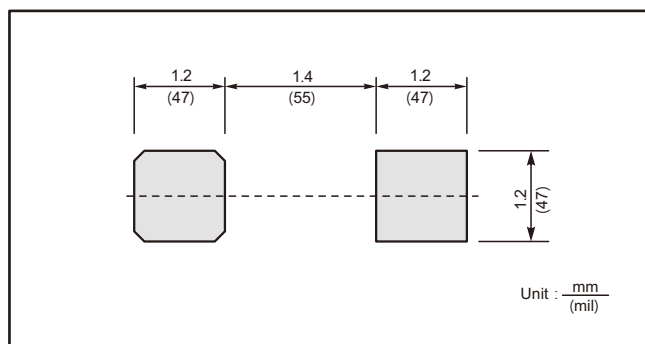
SOD-323W



SOD-323W mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	b	L <sub>1</sub>	A <sub>1</sub>	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

The recommended mounting pad size



Marking

Type number	Marking code
ESDB5V0D3	BE



## Important Notice and Disclaimer

Jingdao Microelectronics reserves the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Jingdao Microelectronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does Jingdao Microelectronics assume any liability for application assistance or customer product design.

Jingdao Microelectronics does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Jingdao Microelectronics.

Jingdao Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of Jingdao Microelectronics.