



## BIDIRECTIONAL ESD PROTECTION DIODES

### Features

- 600 Watts Peak Pulse Power per Line ( $t_p = 8/20\mu s$ )
- Protects One Power or/IO Port
- Low Clamping Voltage
- Bidirectional Configuration

### Applications

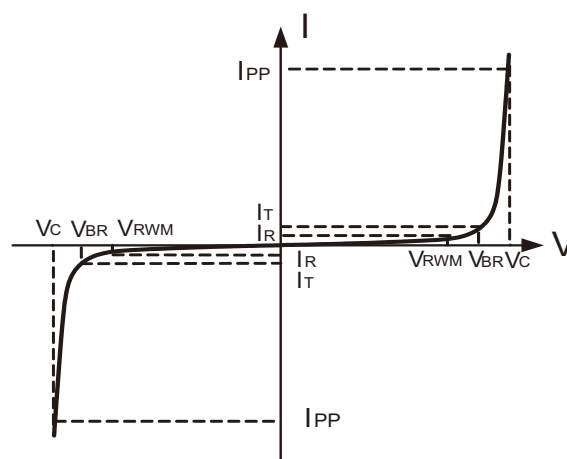
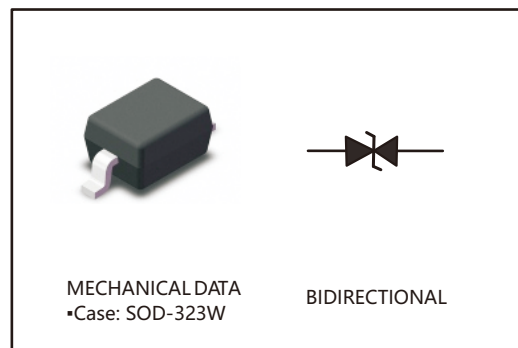
- Ethernet - 10/100/1000 Base T
- Handheld - Wireless Systems
- Personal Digital Assistant(PDA)
- USB Interface

### Mechanical Characteristics

- SOD-323W package
- Packaging:Tape and Reel per EIA481
- Marking : Marking Code
- RoHS Compliant

### Electrical Parameters (T=25 °C )

Symbol	Parameter
$I_{PP}$	Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Reverse Stand-off Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current





MAXIMUM RATINGS (Ta = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu$ S)	Ppk	600	W
Peak Pulse Current	Ipp	40	A
ESD per IEC61000-4-2(Air)	VESD	$\pm 30$	KV
ESD per IEC61000-4-2(Contact)		$\pm 30$	
Operating Temperature Range	TJ	-55 ~ +150	°C
Storage Temperature Range	Tstg	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS ( TA = 25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand-off voltage	VRWM				5	V
Breakdown Voltage	VBR	IT=1mA	6			V
Reverse Leakage Current	IR	VRWM=5V, Ta=25°C			1	$\mu$ A
Clamping Voltage	VC	IPP=40A , tp=8/20us		15		V
Junction Capacitance	Cj	VR=0V , f=1HMz		140		pF



Fig.1 Peak Pulse Power vs. PulseTime

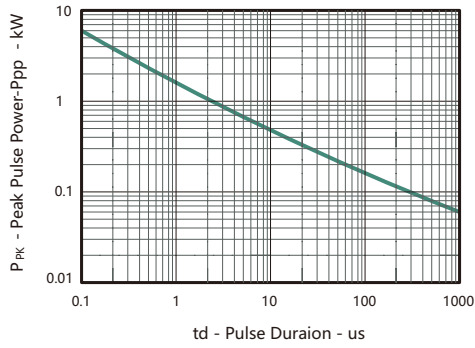


Fig.2 Forward Current Derating Curve

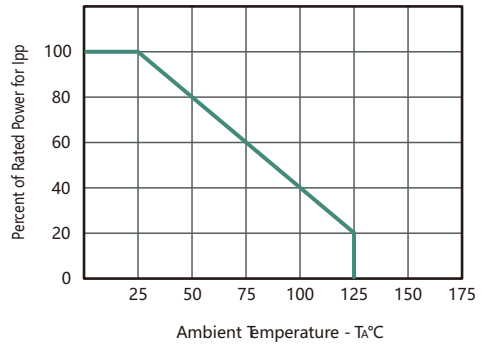


Fig.3 Clamping voltage vs Ipp

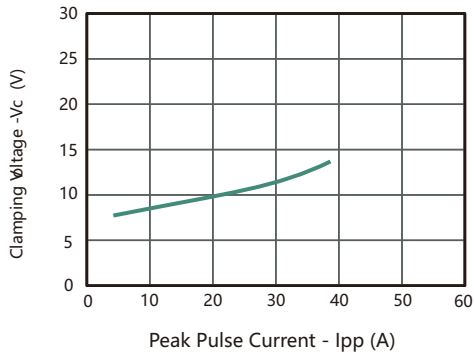
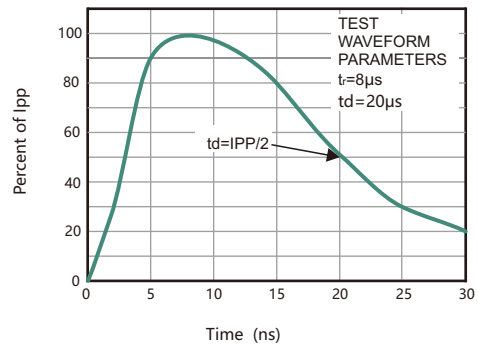


Fig.4 Pulse Waveform

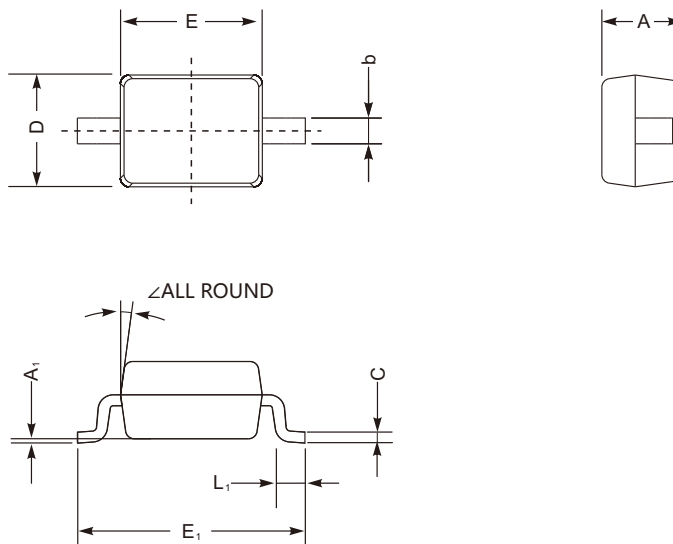




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

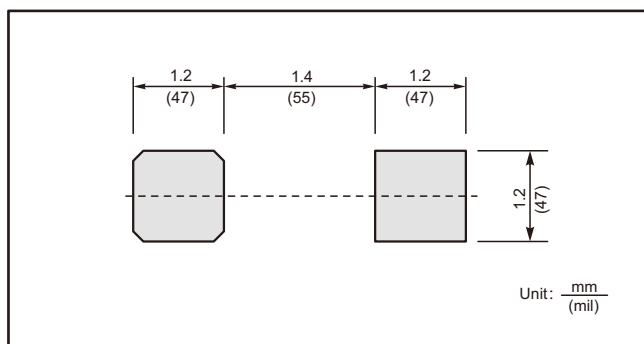
SOD-323W



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
ESDB5V0D3P	B5



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