

## BIDIRECTIONAL ESD PROTECTION DIODES

### Features

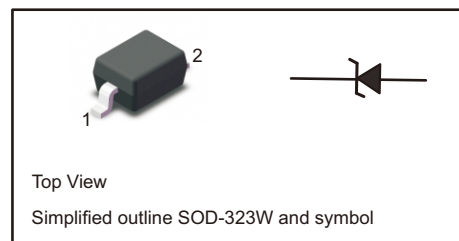
- 350 Watts Peak Pulse Power per (8/20 $\mu$ s)
- IEC61000-4-2 (ESD)  $\pm 15$ kV (air),  $\pm 15$ kV (contact)
- Protects one I/O line (unidirectional)
- Low clamping voltage
- Low leakage current
- Working voltages : 20V

### Applications

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

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

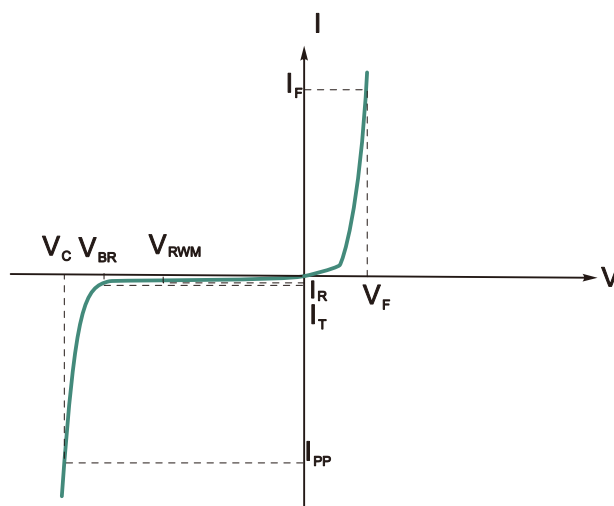


### Mechanical Characteristics

- SOD323W package
- Marking : Maeking Code
- RoHS Compliant
- Packaging: Tape and Reel per EIA 481

### 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	$I_T$
Forward Current	$I_F$
Forward Voltage @ $I_F$	$V_F$





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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μS)	Ppk	350	W
Peak Pulse Current	Ipp	8	A
ESD per IEC 61000-4-2(Air)	VESD	±15	KV
ESD per IEC 61000-4-2(Contact)		±15	
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				20	V
Breakdown Voltage	VBR	IT=1mA	22.3			V
Reverse Leakage Current	IR	V=VRWM, Ta=25°C			1	μA
Clamping Voltage	VC	IPP=1A, tp=8/20μs			35	V
	VC	IPP=8A, tp=8/20μs			50	V
Junction Capacitance	Cj	VR=0V, f=1MHz			90	pF



Fig.1 Pulse Waveform

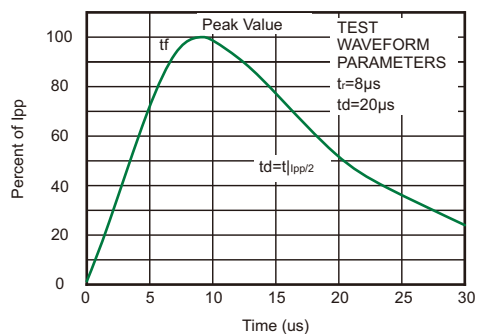


Fig.2 Contact discharge current waveform per IEC61000-4-2

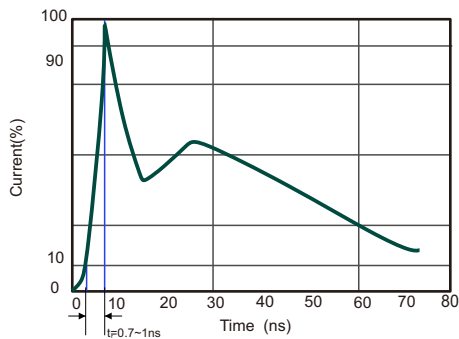
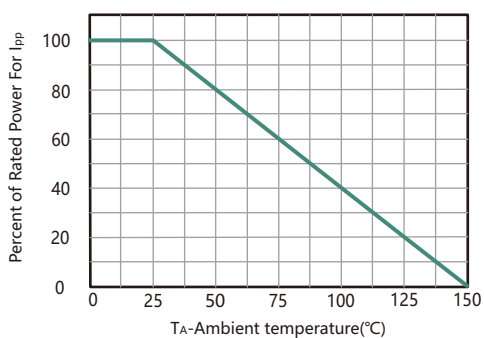


Fig.3 Power Derating Curve

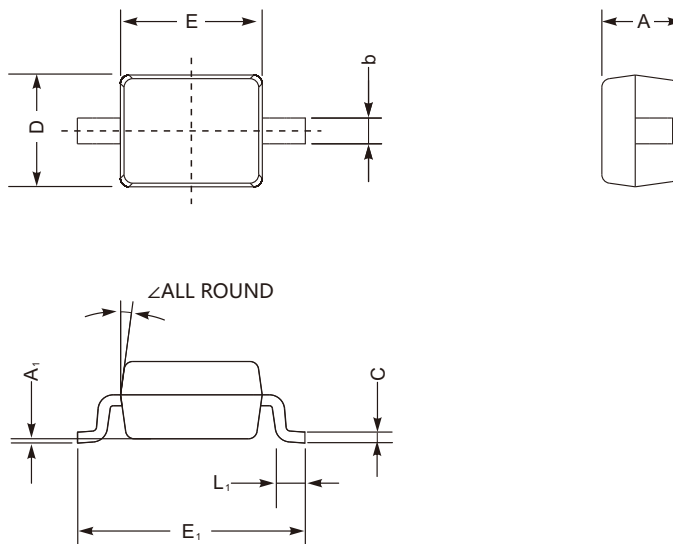




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

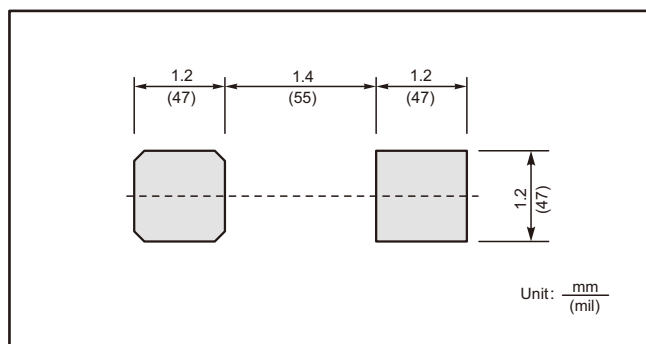
SOD-323W



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
ESD20V0D3	20



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