

BIDIRECTIONAL ESD PROTECTION DIODES

Features

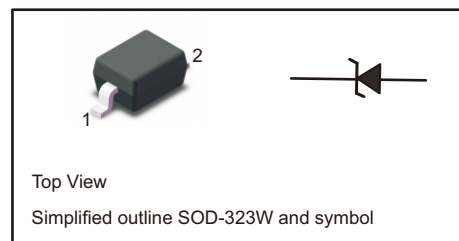
- 350 Watts Peak Pulse Power per (8/20 μ s)
- IEC61000-4-2 (ESD) ± 15 kV (air), ± 15 kV (contact)
- Protects one I/O line (unidirectional)
- Low clamping voltage
- Low leakage current
- Working voltages : 12V

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

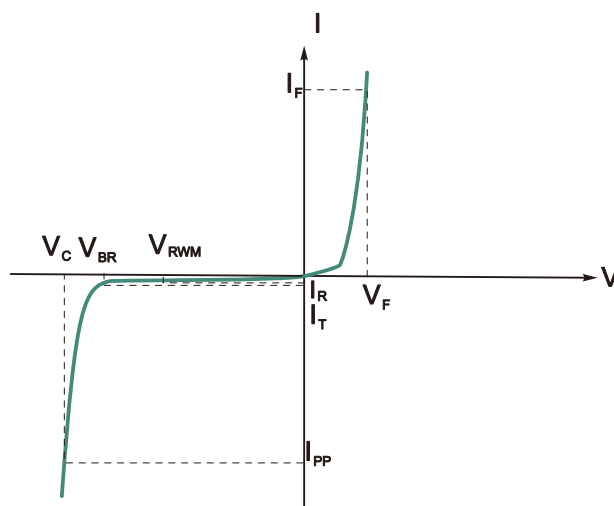


Mechanical Characteristics

- 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	11	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				12	V
Breakdown Voltage	VBR	IT=1mA	13.3			V
Reverse Leakage Current	IR	V=VRWM, Ta=25°C			1	μA
Clamping Voltage	VC	IPP=1A, tp=8/20μs			19	V
	VC	IPP=11A, tp=8/20μs			32	V
Junction Capacitance	Cj	VR=0V, f=1MHz			130	pF



Fig.1 Pulse Waveform

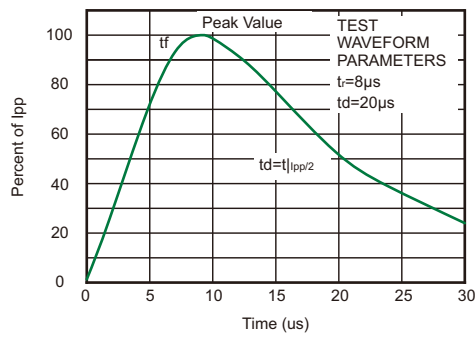


Fig.2 Contact discharge current waveform per IEC61000-4-2

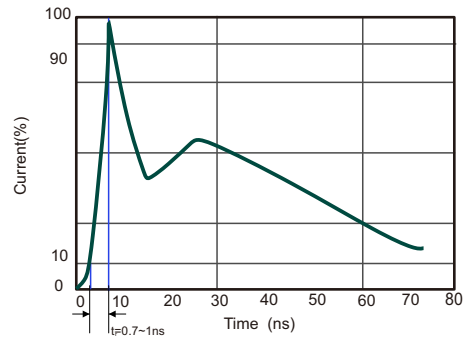
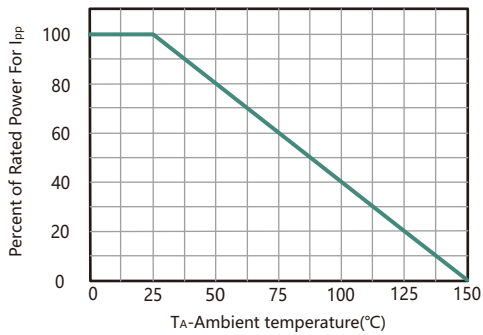


Fig.3 Power Derating Curve

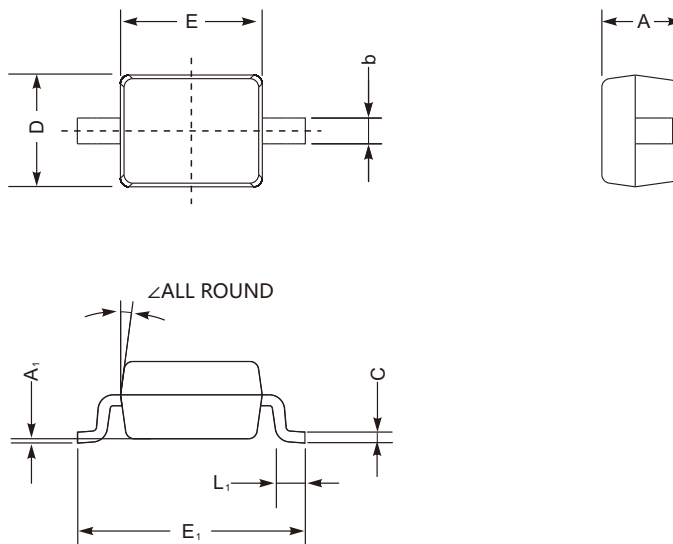




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

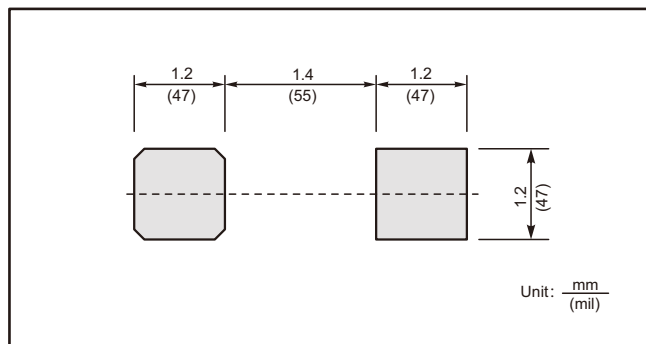
SOD-323W



SOD-323W mechanical data

UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
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
ESD12V0D3	12



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