Features

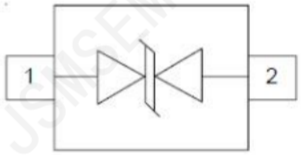
- ◆150W(8x20us)Peak Pulse Power
- ◆Low Clamping Voltage
- ◆SOD-323 Package
- ◆RoHS Compliant
- ◆Matte Tin Lead finish(Pb-Free)
- ◆Protect OneI/O or Power Line
- ◆Meet IEC61000-4-2 Level 4:
  - Contact Discharge>25kV
  - Air Discharge>25kV

SOD-323

Circuit Diagram

Applications

- ◆Smart Phones
- ◆Laptop Computers
- ◆Portable Electronics



PIN Diagram

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter		Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	Air Model	V_{ESD}(1)	±25	kV
	Contact Model		±25	
JESD22-A114-B ESD Voltage	Per Human Body Model		±16	
ESD Voltage	Machine Model		±0.4	
Peak Pulse Power		P_{PP}(2)	150	W
Peak Pulse Current		I_{PP}(2)	10	A
Lead Solder Temperature – Maximum (10 Second Duration)		T_L	260	℃
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ +150	℃

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

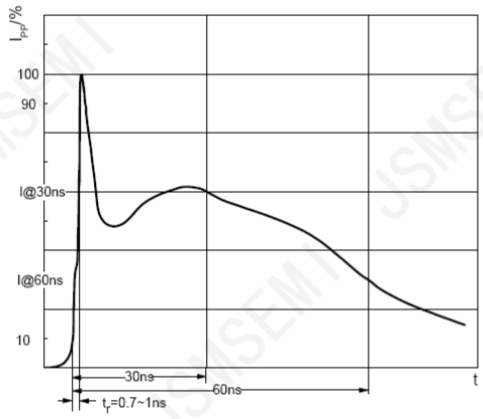
ESD standards compliance

IEC61000-4-2 Standard

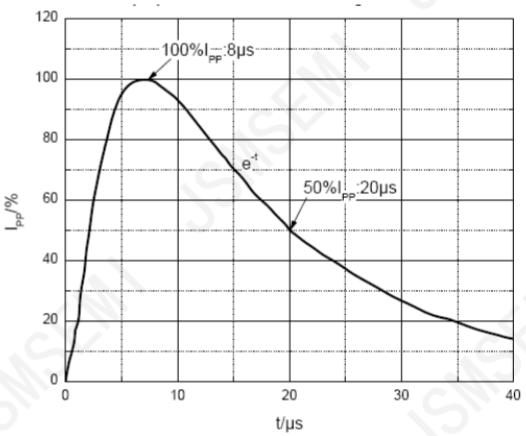
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

JESD22-A114-B Standard

ESD Class	Human Body Discharge V
0	0～249
1A 1B 1C	250～499 500～999 1000～1999
2	2000～3999
3A 3B	4000～7999 8000～15999



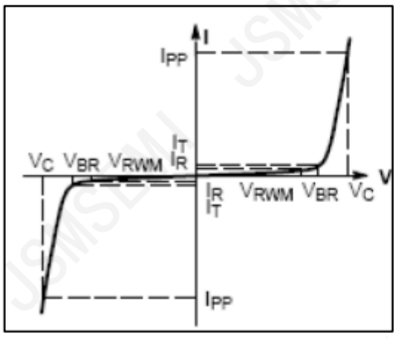
ESD pulse waveform according to IEC61000-4-2



8/20μs pulse waveform according to IEC 61000-4-5

ELECTRICAL PARAMETER

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



V-I characteristics for a Bi-directional TVS

ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise specified)

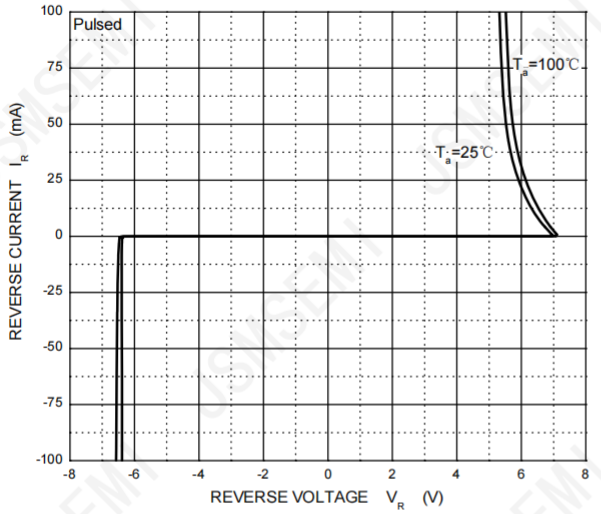
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	V_{RWM} (1)				3.3	V
Reverse leakage current	I_R	V_{RWM}=3.3V			1	μA
Breakdown voltage	$V_{(BR)}$	I_T=1mA	5.8	6.7	7.5	V
Clamping voltage	V_C (2)	I_{PP}=10A			15	V
Junction capacitance	C_J	V_R=0V,f=1MHz		10	15	pF

(1).Other voltages available upon request.

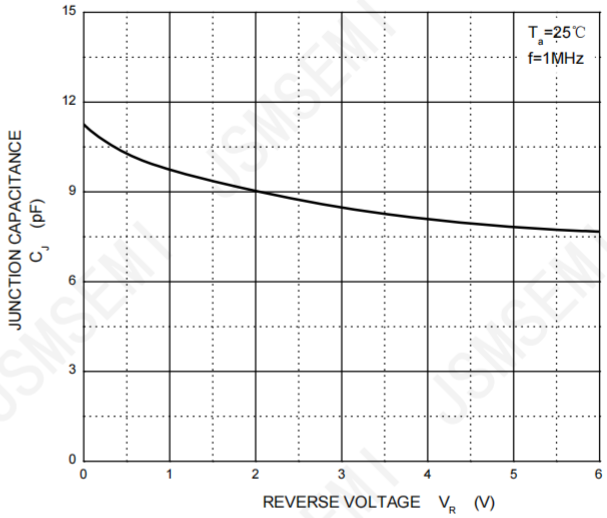
(2).Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5

TYPICAL CHARACTERISTICS

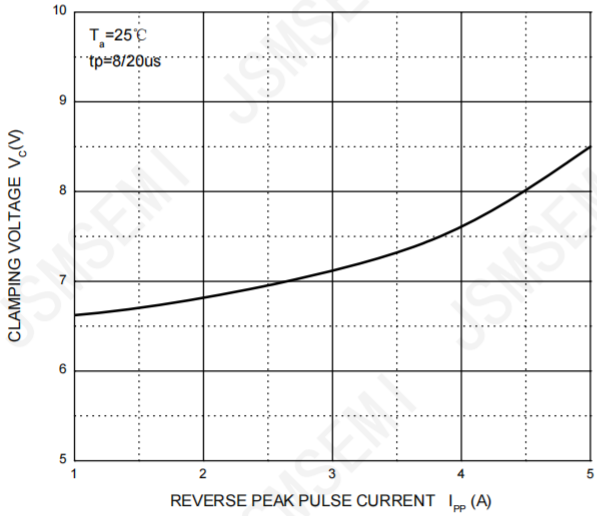
Reverse Characteristics



Capacitance Characteristics

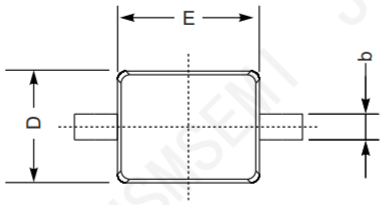


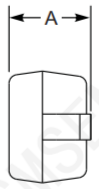
V_C — I_{PP}

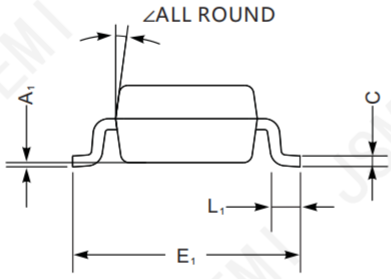


Package Information

SOD-323



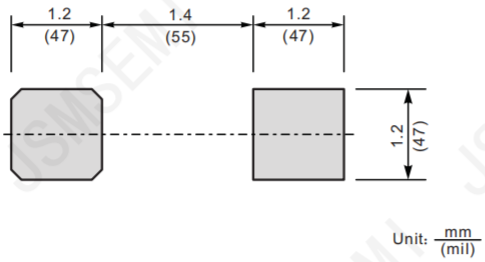




SOD-323 mechanical data

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



Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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