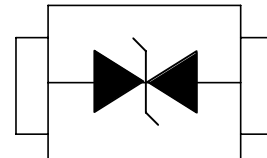


FEATURES

- Bi-directional ESD protection of one line
- Low capacitance: 12pF(Typ.)
- Low reverse stand-off voltage: 5.0V
- Low reverse clamping voltage
- Low leakage current
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection
- Marking: CA OR B5

SOD-323



Pin Configuration

APPLICATIONS

- Computers and peripherals
- PAD
- Audio and video equipment
- Cellular handsets and accessories
- Subscriber identity module(SIM) card protection
- Portable electronics
- Other electronics equipments communication systems

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	$V_{\text{ESD}}^{(1)}$	± 25	kV
Air Model			
Contact Model		± 25	
JESD22-A114-B ESD Voltage		± 16	
ESD Voltage		± 0.4	
Machine Model			
Peak Pulse Power	$P_{\text{PP}}^{(2)}$	120	W
Peak Pulse Current	$I_{\text{PP}}^{(2)}$	5	A
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	$^\circ\text{C}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^\circ\text{C}$

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

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

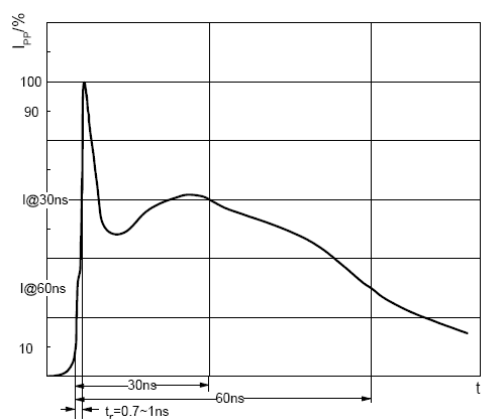
ESD standards compliance

IEC61000-4-2 Standard

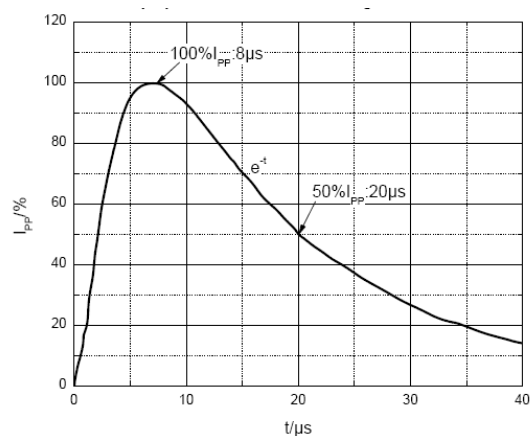
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

JESD22-A114-B Standard

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



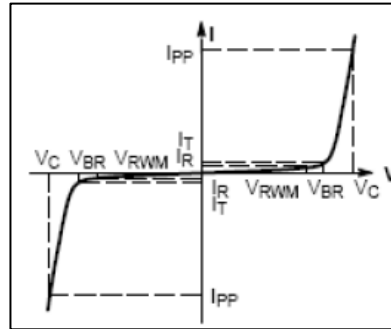
ESD pulse waveform according to IEC61000-4-2



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

ELECTRICAL PARAMETER

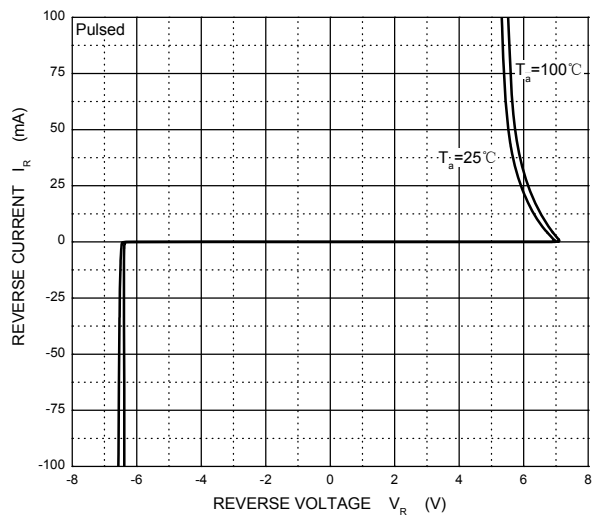
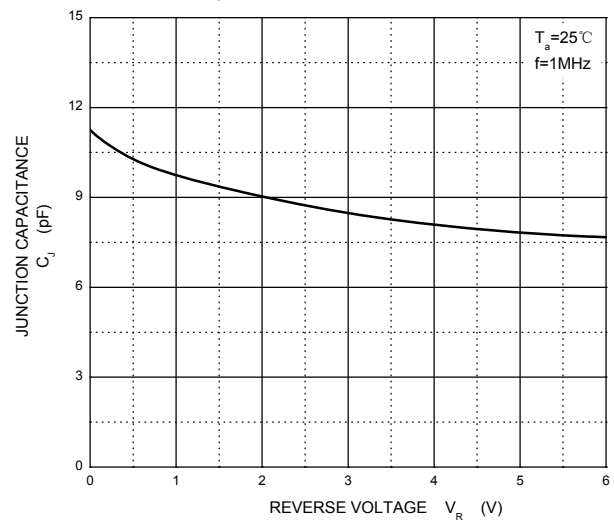
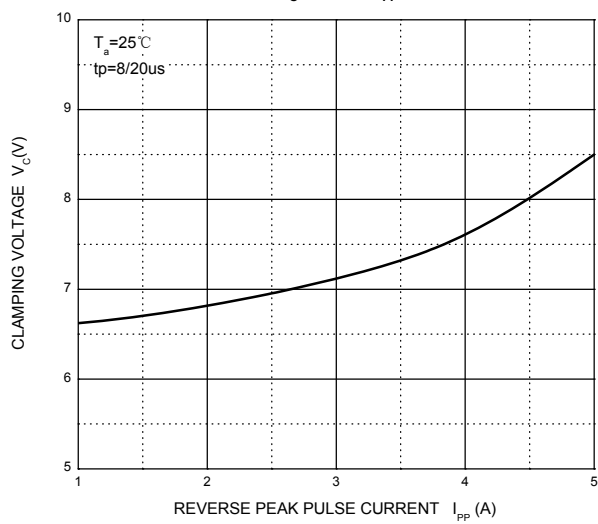
Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage

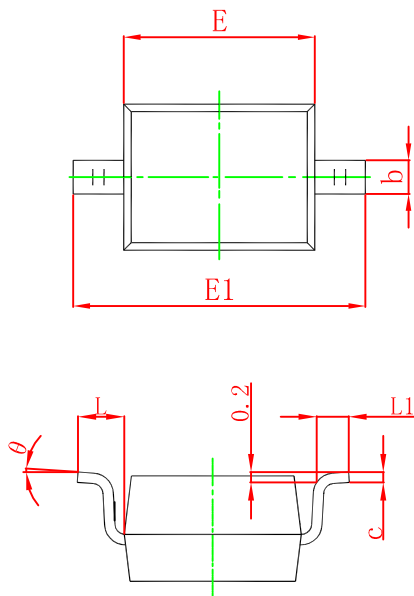

V-I characteristics for a Bi-directional TVS
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	$V_{RWM}^{(1)}$				5	V
Reverse leakage current	I_R	$V_{RWM}=5\text{V}$			0.1	μA
Breakdown voltage	$V_{(BR)}$	$I_T=1\text{mA}$	5.8		8.3	V
Clamping voltage	$V_C^{(2)}$	$I_{PP}=5\text{A}$			10	V
Junction capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		12	15	pF

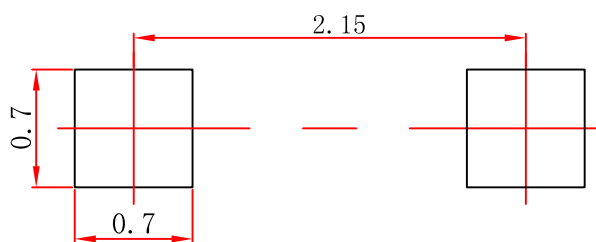
(1). Other voltages available upon request.

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

TYPICAL CHARACTERISTICS
Reverse Characteristics

Capacitance Characteristics

 V_C — I_{PP}


PACKAGE OUTLINE AND PAD LAYOUT INFORMATION
SOD-323 Package Outline Dimensions


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.