EVVOSEMI®

THINK CHANGE DO

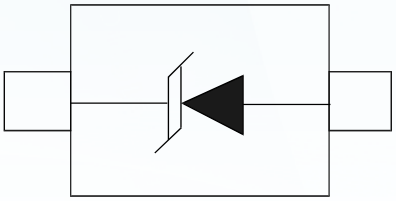
ESD TVS MOS LDO Diode Sensor DC-DC

Product Specification

Domestic Part Number	PESD3V3L1UB
Overseas Part Number	PESD3V3L1UB
Equivalent Part Number	PESD3V3L1UB

Features

- Unidirectional ESD protection of one line
- Low diode capacitance: C_d = 34 pF
- Low clamping voltage: V_{CL} = 11 V
- Very low leakage current: I_{RM} = 100 nA
- ESD protection up to 30 kV
- IEC 61000-4-2; level 4 (ESD)
- AEC-Q101 qualified



Applications

- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Communication systems
- Subscriber Identity Module (SIM) card protection
- Portable electronics
- FireWire
- High-speed data lines

MACHANICAL DATA

- SOD-523 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranted:260℃/10S

Quick reference data

T_{amb} = 25 °C unless otherwise specified.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RWM}	reverse standoff voltage		-	-	3.3	V
C_d	diode capacitance	f = 1 MHz; V_R = 0 V	-	34	40	pF

Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134).

Symbol	Parameter	Conditions		Min	Max	Unit
P_{PP}	peak pulse power	t_p = 8/20 µs	[1][2]	-	45	W
I_{PP}	peak pulse current	t_p = 8/20 µs	[1][2]	-	4.5	A
T_j	junction temperature			-	150	°C
T_{amb}	ambient temperature			–55	+150	°C
T_{stg}	storage temperature			–65	+150	°C

[1] Non-repetitive current pulse 8/20 µs exponential decay waveform according to IEC 61000-4-5.

[2] Measured from pin 1 to pin 2.

ESD maximum ratings

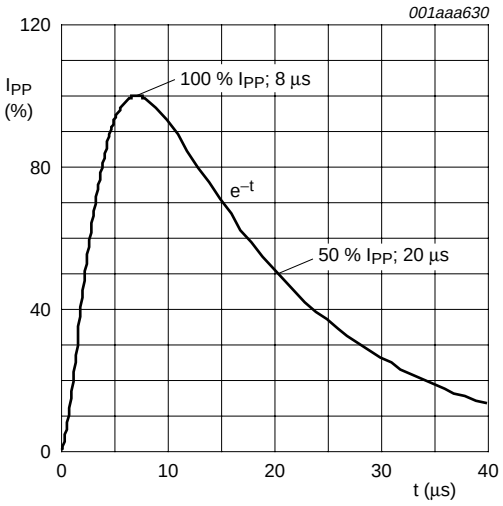
T_{amb} = 25 °C unless otherwise specified.

Symbol	Parameter	Conditions		Min	Max	Unit
V_{ESD}	electrostatic discharge voltage	IEC 61000-4-2 (contact discharge)	[1]	-	30	kV
		machine model		-	400	V
		MIL-STD-883 (human body model)		-	10	kV

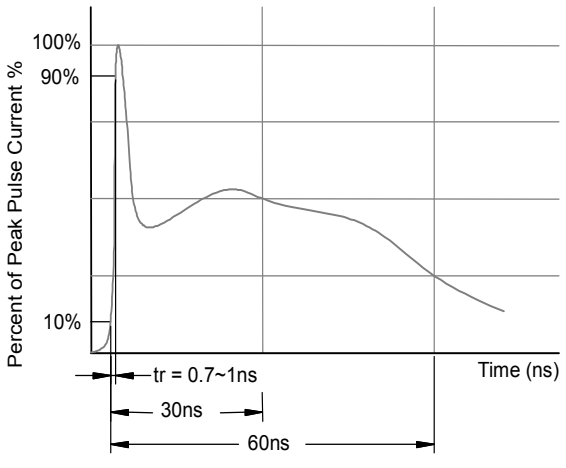
[1] Device stressed with ten non-repetitive ESD pulses.

ESD standards compliance

Standard	Conditions
IEC 61000-4-2; level 4 (ESD)	> 15 kV (air); > 8 kV (contact)
MIL-STD-883; class 3 (human body model)	> 4 kV



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



ESD pulse waveform according to IEC 61000-4-2

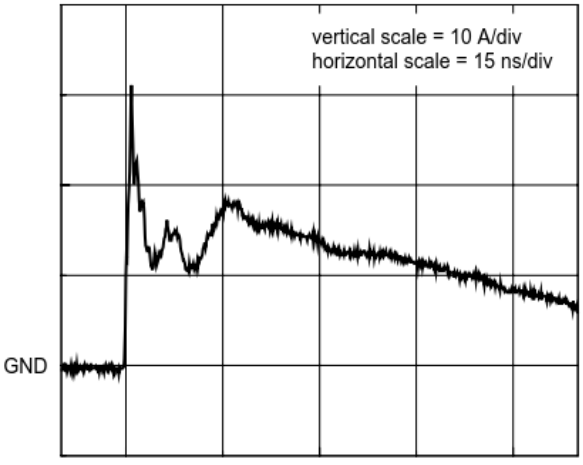
Characteristics

T_{amb} = 25 °C unless otherwise specified.

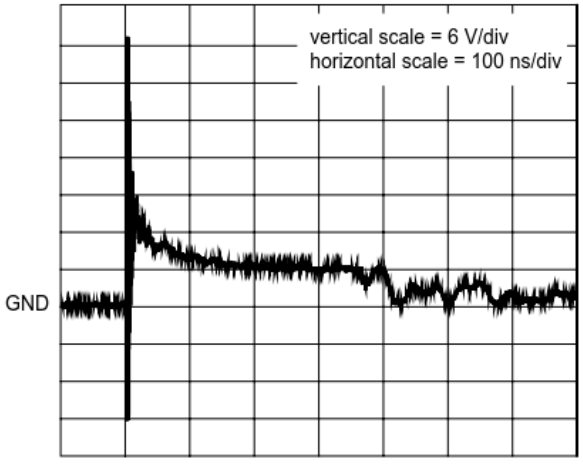
Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V_{RWM}	reverse standoff voltage			-	-	3.3	V
I_{RM}	reverse leakage current	V_{RWM} = 3.3 V		-	100	300	nA
V_{BR}	breakdown voltage	I_R = 5 mA		5.3	5.6	6.0	V
C_d	diode capacitance	f = 1 MHz; V_R = 0 V		-	34	40	pF
V_{CL}	clamping voltage		[1][2]				
		I_{PP} = 1 A		-	-	8	V
		I_{PP} = 4.5 A		-	-	11	V
r_{dif}	differential resistance	I_R = 5 mA		-	-	30	Ω
V_F	forward voltage	I_F = 200 mA		-	-	1.2	V

[1] Non-repetitive current pulse 8/20 µs exponential decay waveform according to IEC 61000-4-5.

[2] Measured from pin 1 to pin 2.

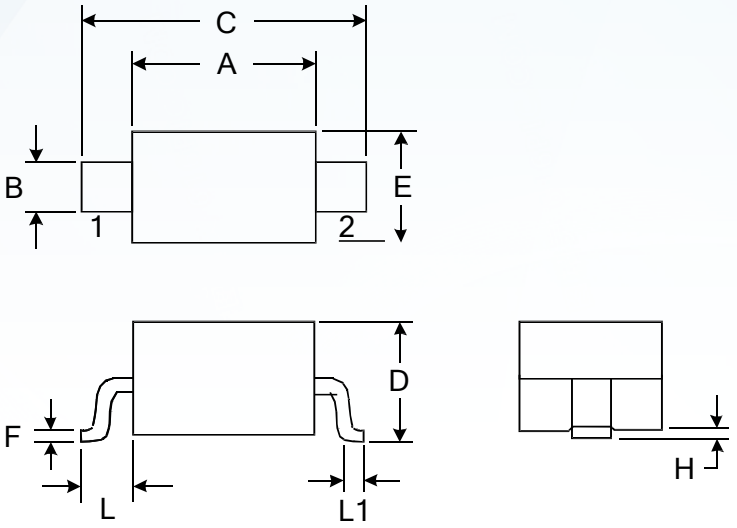


unclamped +8 kV ESD pulse waveform
(IEC 61000-4-2 network)



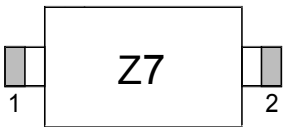
clamped +8 kV ESD pulse waveform
(IEC 61000-4-2 network)

Outline Drawing – SOD-323



DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D		1.000		0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Marking



Ordering information

Order code	Package	Baseqty	Deliverymode
PESD3V3L1UB	SOD-523	3000	Tape and reel

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