

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

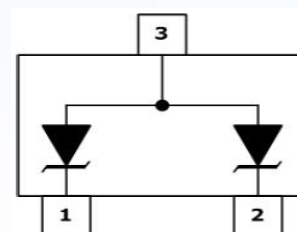
Product Specification

▶ Domestic	Part Number	PESD36VS2UT
▶ Overseas	Part Number	PESD36VS2UT
▶ Equivalent	Part Number	PESD36VS2UT

EV is the abbreviation of name EVVO

Features

- Unidirectional ESD protection of two lines
- Low diode capacitance: $C_d = 17 \text{ pF}$
- Max. peak pulse power: $P_{PP} = 160 \text{ W}$
- Low clamping voltage: $V_{CL} = 55 \text{ V}$
- Ultra low leakage current: $I_{RM} \leq 1 \mu\text{A}$
- ESD protection up to 30 kV
- IEC 61000-4-2; level 4 (ESD)
- IEC 61000-4-5 (surge); $I_{PP} = 2.5 \text{ A}$



Applications

- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Subscriber Identity Module (SIM) card protection
- Portable electronics
- Communication systems
- 10/100 Mbit/s Ethernet

MACHANICAL DATA

- SOT-23 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed: $260^\circ\text{C}/10\text{S}$
- MSL 1

Quick reference data

$T_{amb} = 25^\circ\text{C}$ unless otherwise specified.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Per diode						
V_{RWM}	reverse standoff voltage		-	-	36	V
C_d	diode capacitance	$f = 1 \text{ MHz}; V_R = 0 \text{ V}$	-	17	35	pF

Limiting values

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

Symbol	Parameter	Conditions		Min	Max	Unit
Per diode						
P_{PP}	peak pulse power	$t_p = 8/20 \mu s$	[1][2]	-	160	W
I_{PP}	peak pulse current	$t_p = 8/20 \mu s$	[1][2]	-	2.5	A
Per device						
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 or 2 to pin 3.

ESD maximum ratings

$T_{amb} = 25^\circ C$ unless otherwise specified.

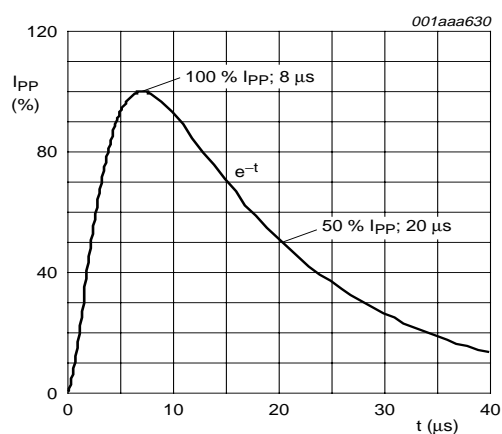
Symbol	Parameter	Conditions		Min	Max	Unit
Per diode						
V_{ESD}	electrostatic discharge voltage	IEC 61000-4-2 (contact discharge)	[1][2]	-	30	kV
		machine model	[2]	-	400	V
		MIL-STD-883 (human body model)		-	8	kV

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

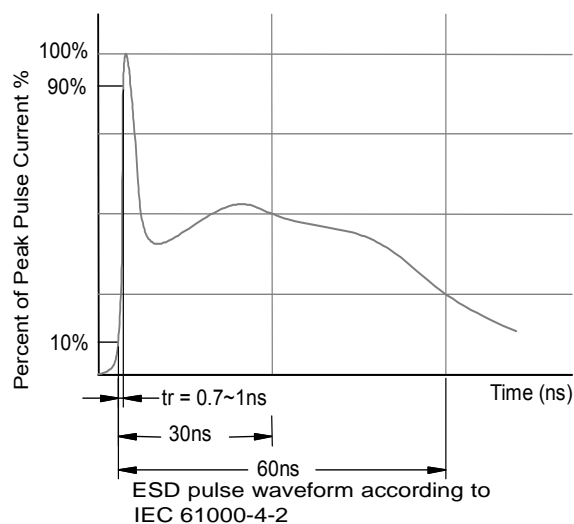
[2] Measured from pin 1 to pin 2.

ESD standards compliance

Standard	Conditions
Per diode	
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

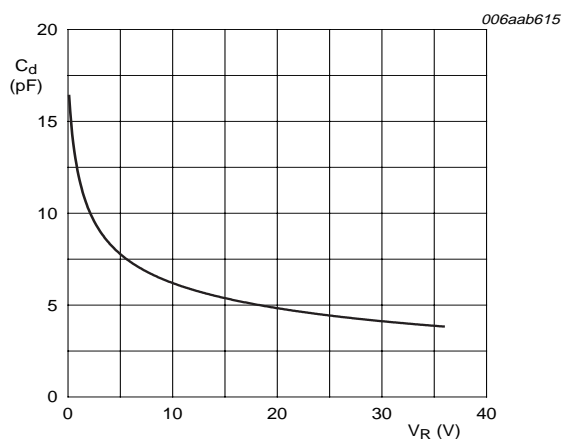
Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified.

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
Per diode							
V_{RWM}	reverse standoff voltage			-	-	36	V
I_{RM}	reverse leakage current	$V_{RWM} = 30\text{ V}$		-	< 0.02	1	μA
V_{BR}	breakdown voltage	$I_R = 5\text{ mA}$		40	44	-	V
C_d	diode capacitance	$f = 1\text{ MHz};$ $V_R = 0\text{ V}$	[1]	-	17	35	pF
V_{CL}	clamping voltage	$I_{PP} = 1\text{ A}$	[1][2]	-	55	60	V
r_{dif}	differential resistance	$I_R = 0.5\text{ mA}$		-	-	300	Ω

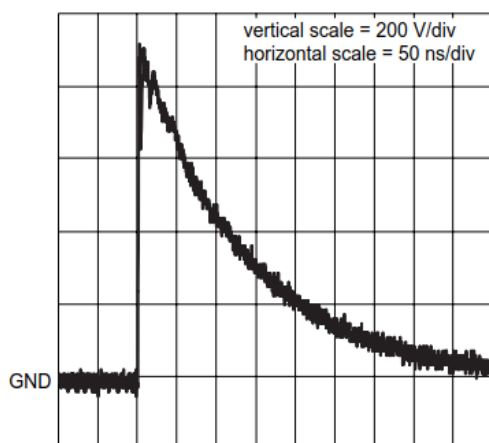
[1] Measured from pin 1 or 2 to pin 3.

[2] Non-repetitive current pulse $8/20\text{ }\mu\text{s}$ exponential decay waveform according to IEC 61000-4-5.

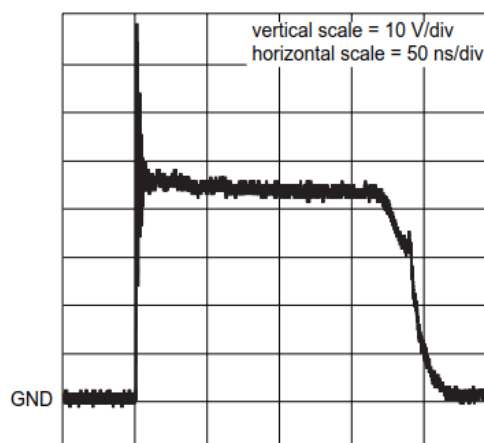


$f = 1\text{ MHz}; T_{amb} = 25\text{ }^{\circ}\text{C}$

Diode capacitance as a function of reverse voltage; typical values

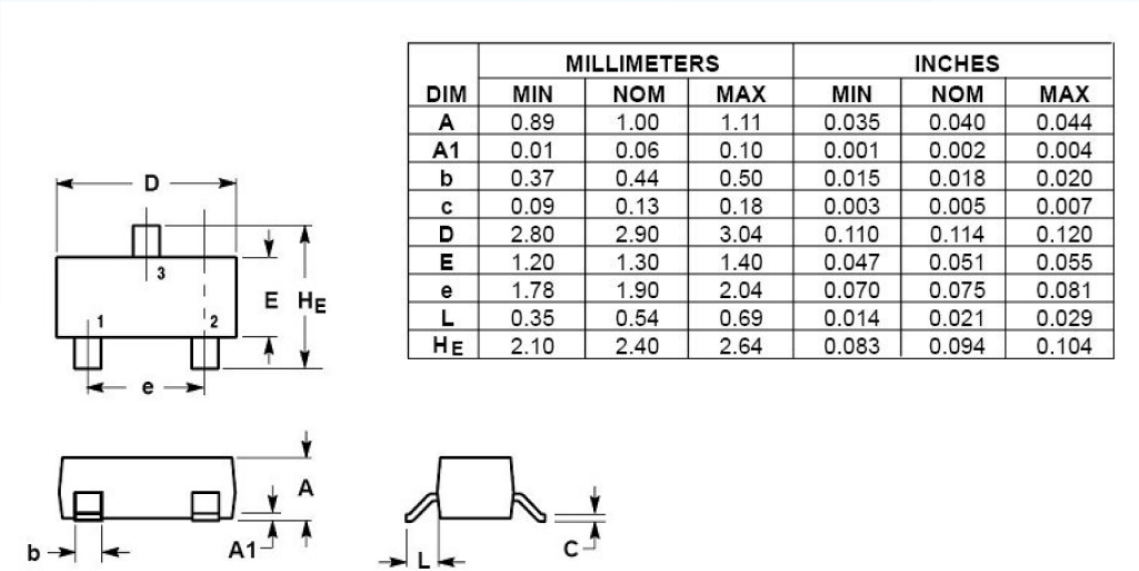


unclamped +1 kV ESD voltage waveform
(IEC61000-4-2 network)

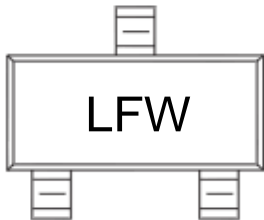


clamped +1 kV ESD voltage waveform
(IEC61000-4-2 network)

SOT-23 PACKAGE OUTLINE DIMENSIONS



Marking



Ordering information

Order code	Package	Baseqty	Deliverymode
PESD36VS2UT	SOT-23	3000	Tape and reel

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