

1.Features

- Unidirectional ESD protection of two lines
- ESD protection up to 30 kV
- Low diode capacitance: $C_d=17\text{pF}$
- IEC 61000-4-2; level 4 (ESD)
- Max. peak pulse power: $P_{pp}=160\text{W}$
- IEC 61000-4-5 (surge); $I_{pp}=2.5\text{A}$
- Low clamping voltage: $V_{CL}=55\text{V}$
- AEC-Q101 qualified
- Ultra low leakage current: $IRM \leq 1\mu\text{A}$

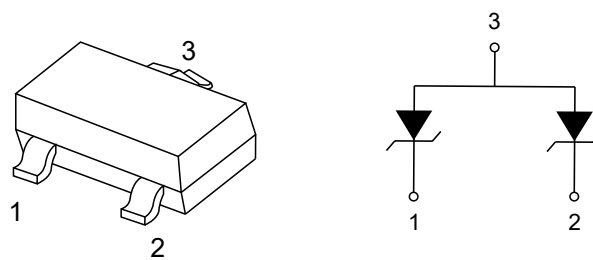
3.Mechanical Data

- SOT-23 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel

2.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

4.Pinning information



SOT-23



5. Quick reference data

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

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

6. Limiting values

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
peak pulse power	P_{PP}	$t_p=8/20\mu\text{s}$ ①②			160	W
peak pulse current	I_{PP}	$t_p=8/20\mu\text{s}$ ①②			2.5	A
junction temperature	T_J				150	$^{\circ}\text{C}$
ambient temperature	T_{amb}		-55		150	$^{\circ}\text{C}$
storage temperature	T_{STG}		-65		150	$^{\circ}\text{C}$

Notes:

- 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.

7. ESD maximum ratings

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
electrostatic discharge voltage	V_{ESD}	IEC 61000-4-2 (contact discharge) ①②			30	kV
		machine model ②			400	V
		MIL-STD-883 (human body model)			8	kV

Notes:

- ① Device stressed with ten non-repetitive ESD pulses.
- ② Measured from pin 1 to pin 2.



8.ESD standards compliance

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

9.Electrical Characteristic (T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
reverse standoff voltage	V _{RWM}				36	V
reverse leakage current	I _{RM}	V _{RWM} =30V		<0.02	1	μA
breakdown voltage	V _{BR}	I _R =5mA	40	44		V
diode capacitance	C _d	V _R =0V, f=1MHz ①		17	35	pF
clamping voltage	V _{CL}	I _{PP} =1A ①②		55	60	V
differential resistance	r _{dif}	I _{PP} =0.5A			300	Ω

Notes:

① Measured from pin 1 or 2 to pin 3.

② Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC 61000-4-5.

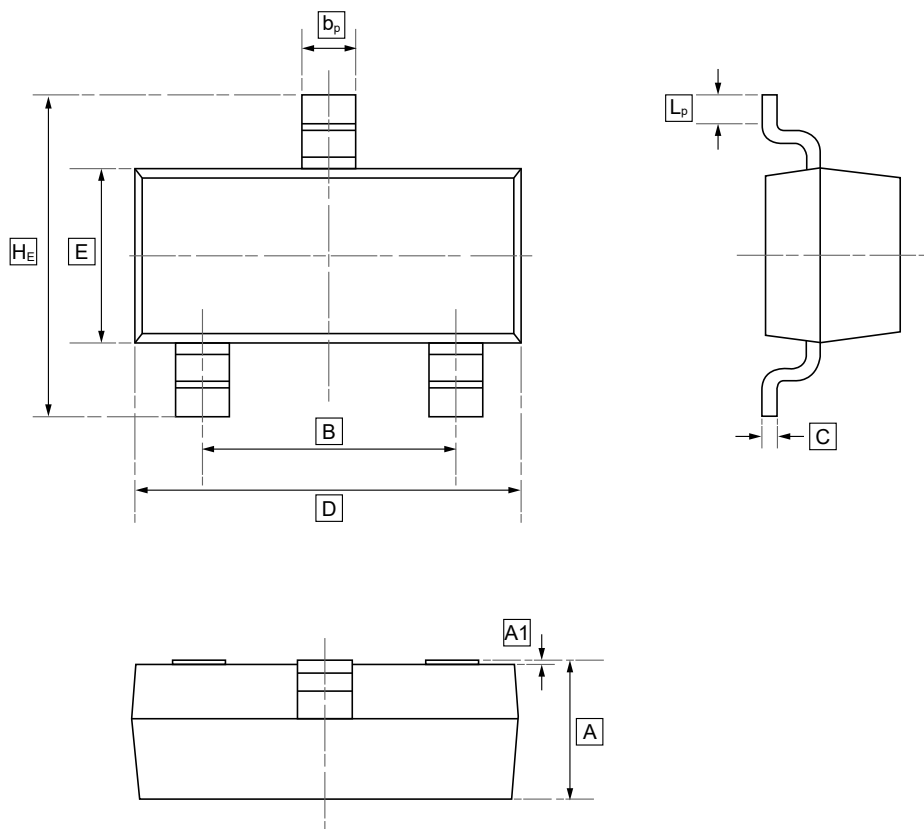


10.1Typical characteristic

Figure 1: 8/20 μ s pulse waveform according to IEC 61000-4-5	Figure 2: ESD pulse waveform according to IEC 61000-4-2
Figure 3: unclamped +1 kV ESD voltage waveform (IEC61000-4-2 network)	Figure 4: unclamped +1 kV ESD voltage waveform (IEC61000-4-2 network)
$f=1\text{MHz}; T_{\text{amb}}=25^{\circ}\text{C}$	
Figure 5: Diode capacitance as a function of reverse voltage; typical values	



9.SOT-23 Package Outline Dimensions

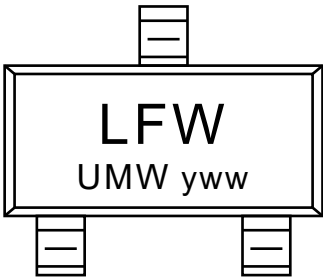


DIMENSIONS (mm are the original dimensions)

Symbol	A	B	b_p	C	D	E	H_E	A1	L_p
Min	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20
Max	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50



10.Ordering information



yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW PESD36VS2UT	SOT-23	3000	Tape and reel



13.Disclaimer

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