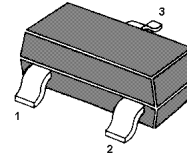
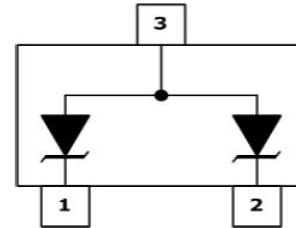


Features

- 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); $I_{PP} = 2.5 \text{ A}$
- AEC-Q101 qualified



SOT-23



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°C/10S
- MSL 1

Quick reference data

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Per diode						
V_{RWM}	reverse standoff voltage		-	-	36	V
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

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

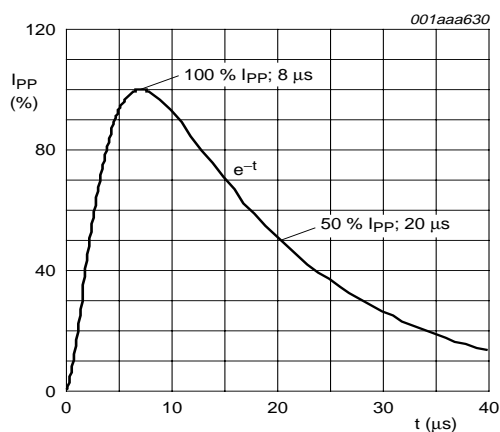
Symbol	Parameter	Conditions	Min	Max	Unit
Per diode					
V_{ESD}	electrostatic discharge voltage	IEC 61000-4-2 (contact discharge)	[1][2] -	30	kV
		machine model	[2] -	400	V
		MIL-STD-883 (human body model)	-	8	kV

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

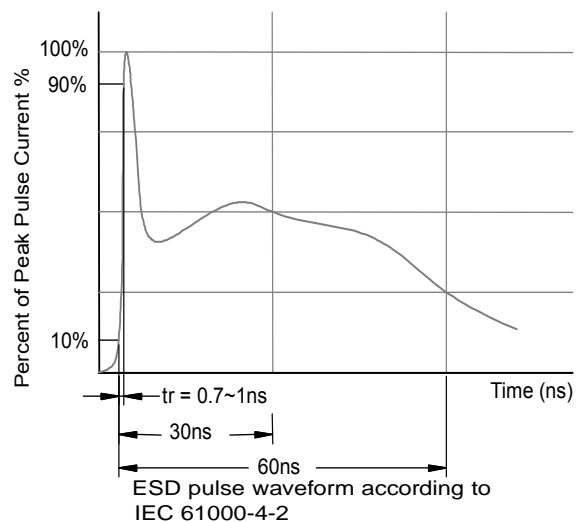
[2] Measured from pin 1 to pin 2.

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



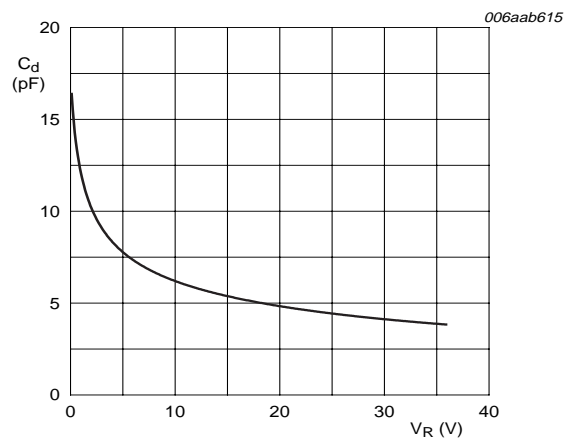
Characteristics

T_{amb} = 25 °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 V	-	< 0.02	1	μA
V _{BR}	breakdown voltage	I _R = 5 mA	40	44	-	V
C _d	diode capacitance	f = 1 MHz; V _R = 0 V	[1]	17	35	pF
V _{CL}	clamping voltage	I _{PP} = 1 A	[1][2]	55	60	V
r _{dif}	differential resistance	I _R = 0.5 mA	-	-	300	Ω

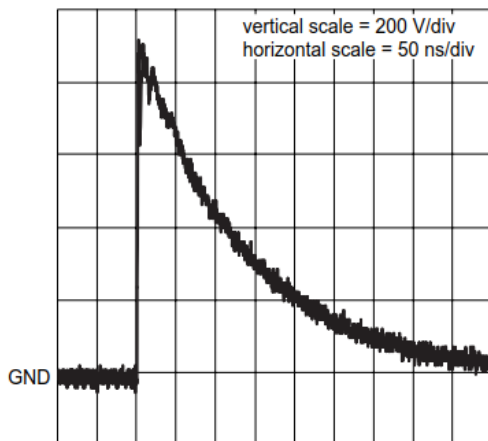
[1] Measured from pin 1 or 2 to pin 3.

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

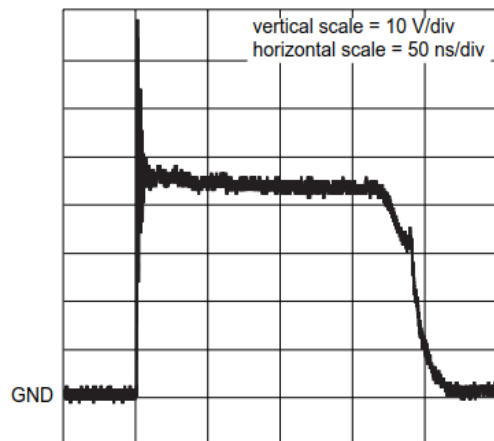


f = 1 MHz; T_{amb} = 25 °C

Diode capacitance as a function of reverse voltage; typical values



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

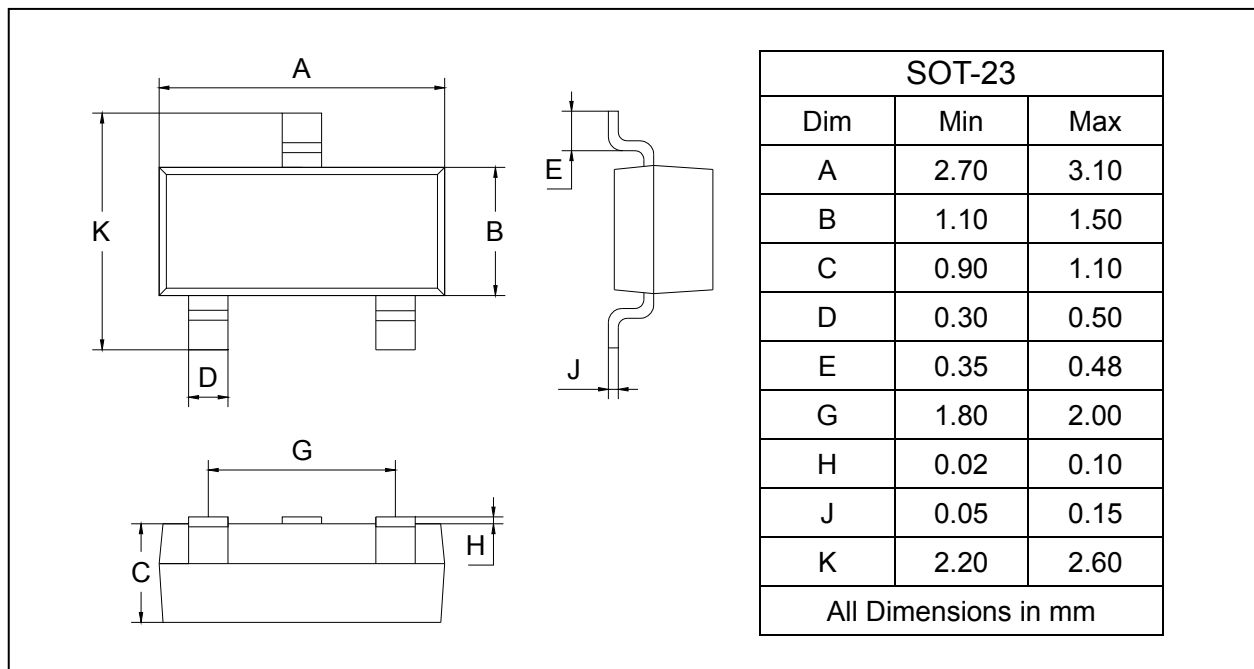


clamped +1 kV ESD voltage waveform
(IEC61000-4-2 network)

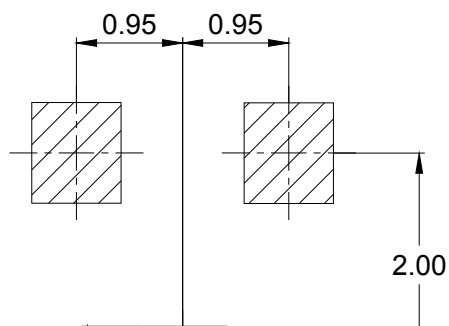
SOT-23 PACKAGE OUTLINE DIMENSIONS

Plastic surface mounted package

SOT-23



Suggested Pad Layout



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

0.60