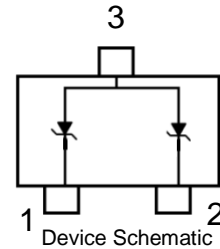


## DESCRIPTION

Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.

It is designed to replace multilayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.



## FEATURES

- Uni-directional ESD protection of two line
- Reverse stand-off voltage: 24V
- Low reverse clamping voltage
- Low leakage current
- Excellent package: 2.9mm × 1.3mm × 1.0mm
- Fast response time

## APPLICATIONS

- Computers and peripherals
- Digital Cameras
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Other electronics equipments communi-
- cation systems

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

Parameter	Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	Air Model	$\pm 25$	kV
	Contact Model	$\pm 25$	
	Per Human Body Model	$\pm 16$	
	Machine Model	$\pm 0.4$	
Peak Pulse Power	$P_{PP}^{(2)}$	406	W
Peak Pulse Current	$I_{PP}^{(2)}$	7	A
Lead Solder Temperature – Maximum (10 Second Duration)	$T_L$	260	$^{\circ}\text{C}$
Operation Junction and Storage Temperature Range	$T_J, T_{stg}$	-55 ~ +150	$^{\circ}\text{C}$

- (1).Device stressed with ten non-repetitive ESD pulses.
- (2).Non-repetitive current pulse 8/20 $\mu\text{s}$  exponential decay waveform .

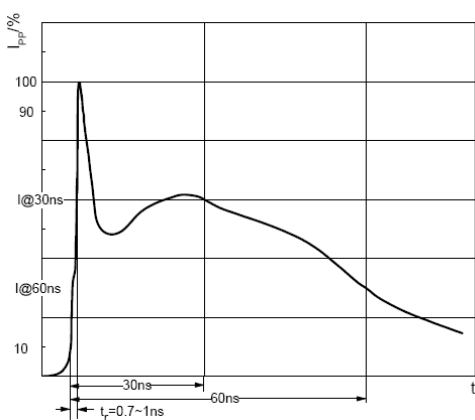
**ESD standards compliance**

**IEC61000-4-2 Standard**

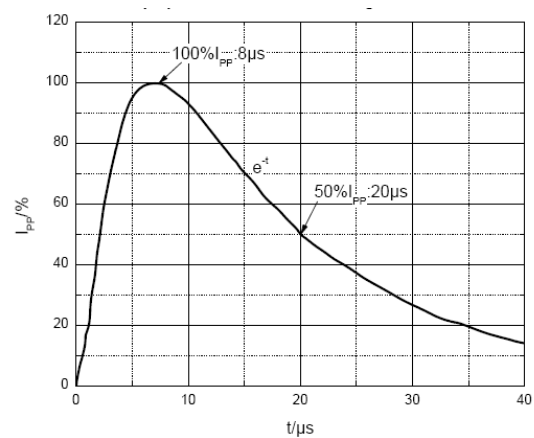
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

**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



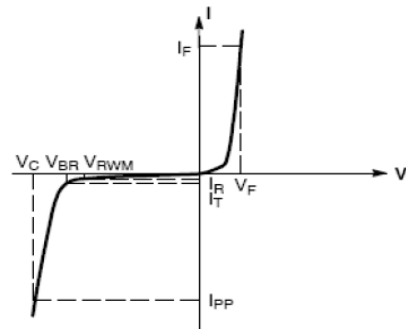
ESD pulse waveform according to IEC61000-4-2



8/20 $\mu\text{s}$  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
$V_F$	Forward Voltage@ $I_F$
$I_F$	Forward Current



V-I characteristics for a uni-directional TVS

**ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}C$  unless otherwise specified)**

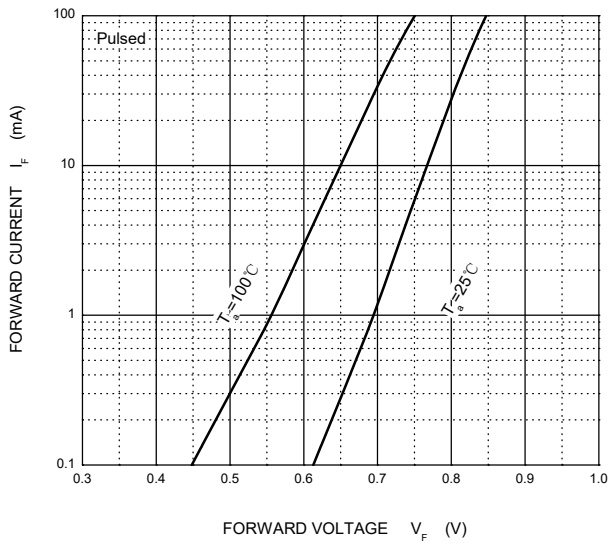
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	$V_{RWM}^{(1)}$				24	V
Reverse leakage current	$I_R$	$V_{RWM}=24V$			1	$\mu A$
Breakdown voltage	$V_{(BR)}$	$I_T=1mA$	26.7		33	V
Clamping voltage	$V_C^{(2)}$	$I_{PP}=7A$			58	V
Forward voltage	$V_F$	$I_F=10mA$			0.9	V
Junction capacitance	$C_J$	$V_R=0V, f=1MHz$		36		pF

(1).Other voltages available upon request.

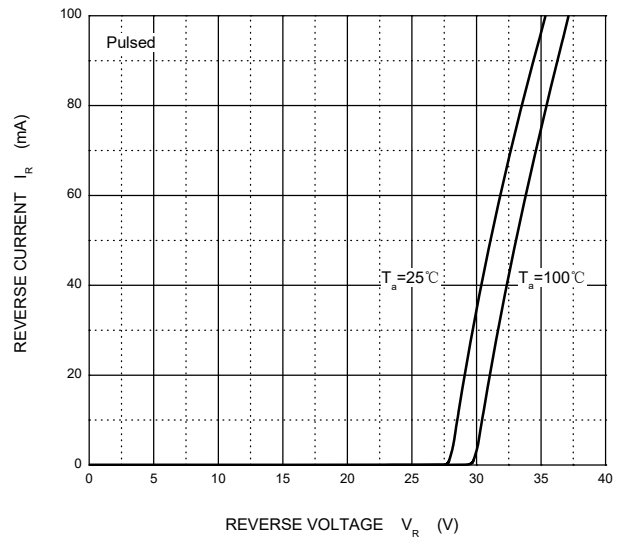
(2).Non-repetitive current pulse 8/20 $\mu s$  exponential decay waveform

TYPICAL CHARACTERISTICS

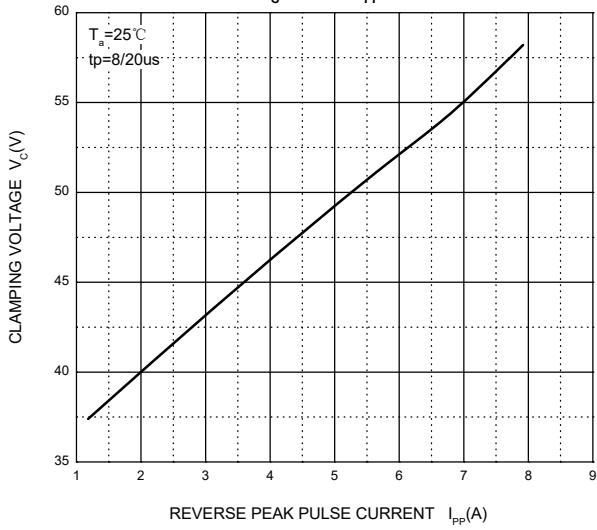
Forward Characteristics



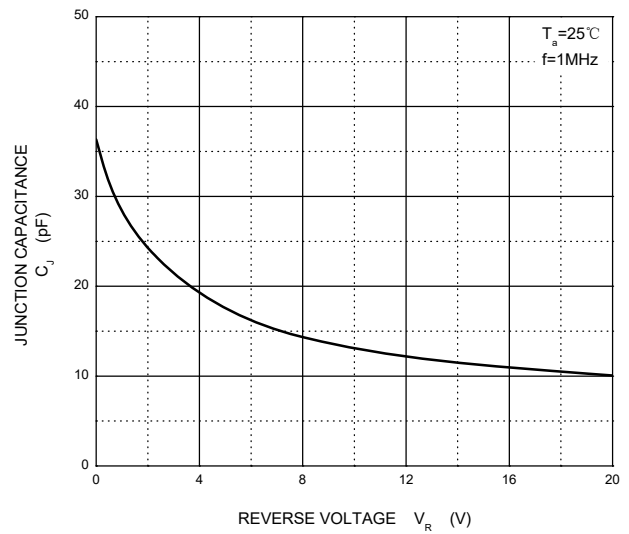
Reverse Characteristics



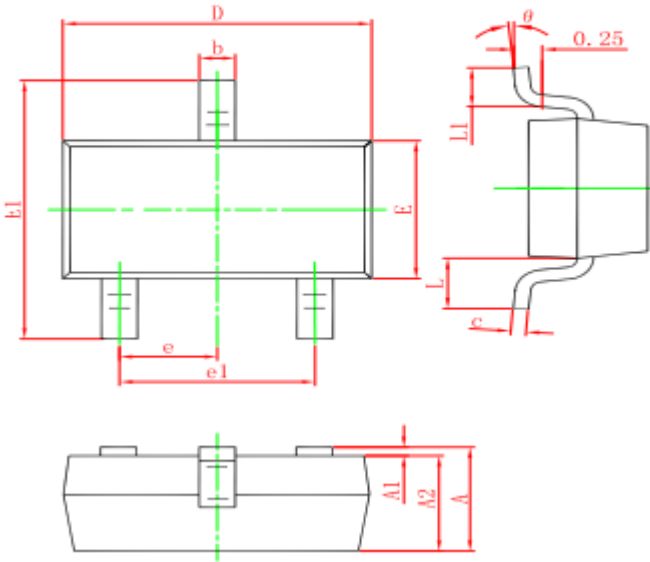
$V_C$  —  $I_{PP}$



Capacitance Characteristics

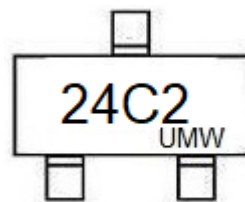


**SOT-23 PACKAGE OUTLINE DIMENSIONS**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

**Marking**



**Ordering information**

Order code	Package	Baseqty	Deliverymode
UMW ESD24VC2	SOT-23	3000	Tape and reel

单击下面可查看定价，库存，交付和生命周期等信息

[>>UMW\(友台半导体\)](#)