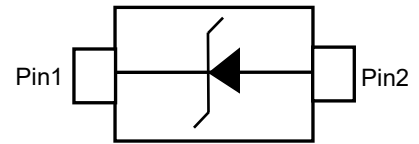


DESCRIPTION

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 which are exposed to ESD.

The combination of small size, high level of ESD protection It is designed to replace multiplayer varistors (MLV) .



FEATURES

- Uni-directional ESD protection of one line
- Reverse stand-off voltage: 36V
- Low reverse clamping voltage
- Low leakage current
- Excellent package: 1.2mm X 0.8mm X 0.6mm
- Fast response time
- IEC 61000-4-2 level 4 ESD protection

APPLICATIONS

- Computers and peripherals
- Digital cameras
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Other electronics equipment communication systems

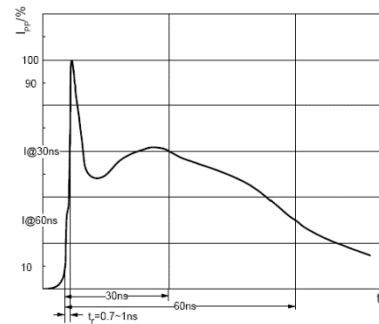
MAXIMUM RATINGS (T_j = 25°C unless otherwise specified)

Parameter		Symbol	Value	Unit
IEC 61000-4-2 ESD voltage	Air model	V _{ESD} ¹⁾	±8	kV
	Contact model		±8	
JESD22-A114-B ESD voltage per human body model			±15	
ESD voltage per machine model			±0.4	
Peak pulse power		P _{PP} ²⁾	240	W
Peak pulse current		I _{PP} ²⁾	3	A
Maximum lead solder temperature (10 second duration)		T _L	260	°C
Operation junction and storage temperature range		T _j , T _{stg}	-55 ~ 150	°C

ESD STANDARD COMPLIANCE

IEC61000-4-2 standard

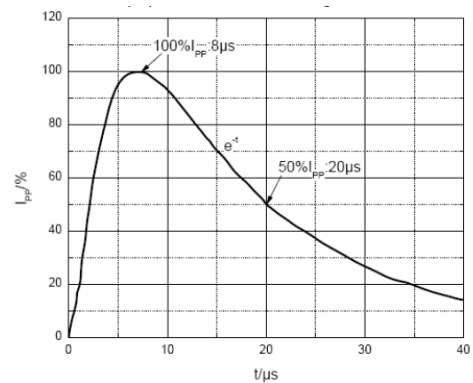
Contact discharge		Air discharge	
Level	Test voltage (kV)	Level	Test voltage (kV)
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15



ESD pulse waveform according to IEC61000-4-2

JESD22-A114-B standard

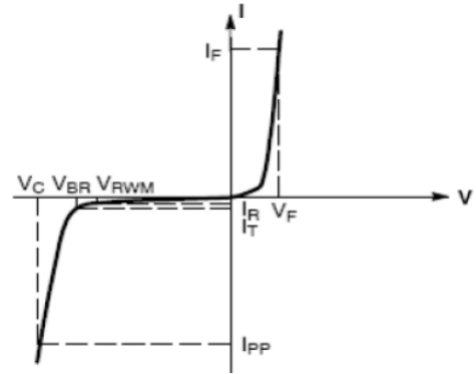
ESD class	Human body discharge (V)
0	0 ~ 249
1A	250 ~ 499
1B	500 ~ 999
1C	1000 ~ 1999
2	2000 ~ 3999
3A	4000 ~ 7999
3B	8000 ~ 15999



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

ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

Parameter	Symbol
Clamping voltage @ I _{PP}	V _C
Peak pulse current	I _{PP}
Breakdown voltage @ I _T	V _{BR}
Test current	I _T
Reverse leakage current @ V _{RWM}	I _R
Reverse standoff voltage	V _{RWM}
V _F Forward Voltage@ I _F	V _F
Forward Current	I _F

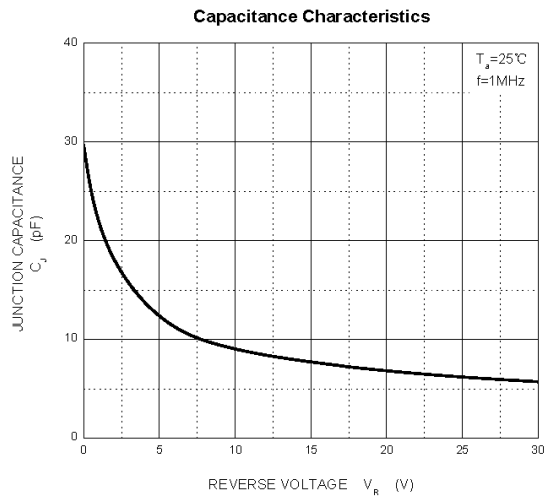
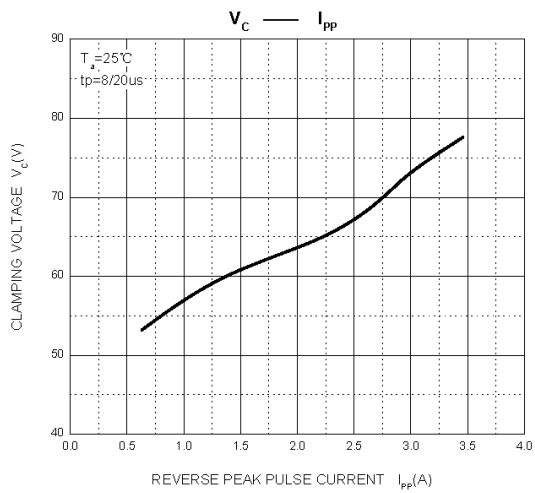
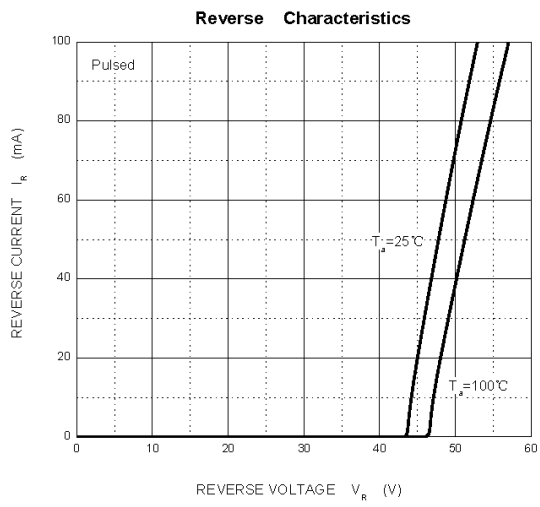
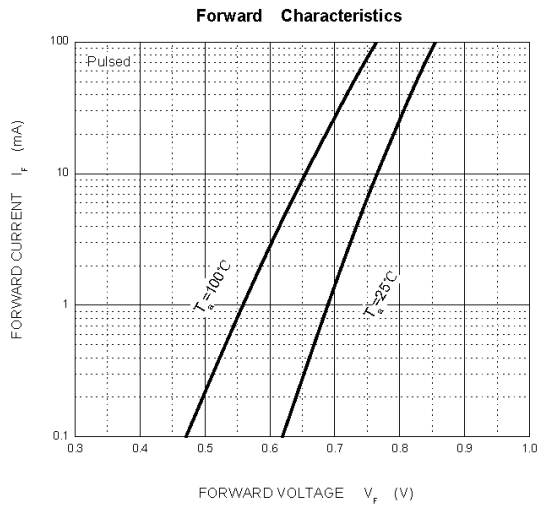


V-I characteristics for a uni-directional TVS

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Reverse standoff voltage	V _{RWM} ¹⁾				36	V
Reverse leakage current	I _R	V _{RWM} = 36V			1	μA
Breakdown voltage	V _{BR}	I _T = 1mA	40		48	V
Clamping voltage	V _C ²⁾	I _{PP} = 3A			80	V
Forward voltage	V _F	I _F = 10mA			0.9	V
Junction capacitance	C _J	V _R = 0V, f = 1MHz		30		pF

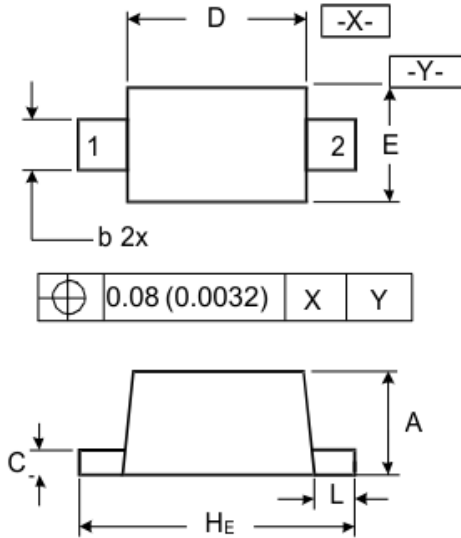
1) Device stressed with ten non-repetitive ESD pulses.
 2) Non-repetitive current pulse 8/20μs exponential decay waveform .

TYPICAL CHARACTERISTICS



Package outline dimensions

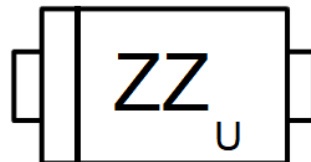
SOD-523



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H _E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
UMW ESD36VD5	SOD-523	3000	Tape and reel