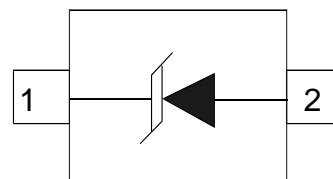


## Descriptions

The ESD5Z3V3 is a transient voltage suppressors (TVS) which provide a very high level protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD). It is designed to replace multilayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

The ESD5Z3V3 was past ESD transient voltage up to  $\pm 30\text{kV}$  (contact) according to IEC61000-4-2 and withstand peak current up to 9A for 8/20us pulse according to IEC61000-4-5.

The ESD5Z3V3 is available in SOD-523 package. Standard products are Pb-free and Halogen-free.



## Features

- Working voltage: 3.3V
- Peak power ( $t_p=8/20\mu\text{s}$ ): 108W
- ESD protection  
IEC61000-4-2 (Contact):  $\pm 30\text{kV}$   
IEC61000-4-2 (Air):  $\pm 30\text{kV}$
- Low leakage current
- Small package

## Applications

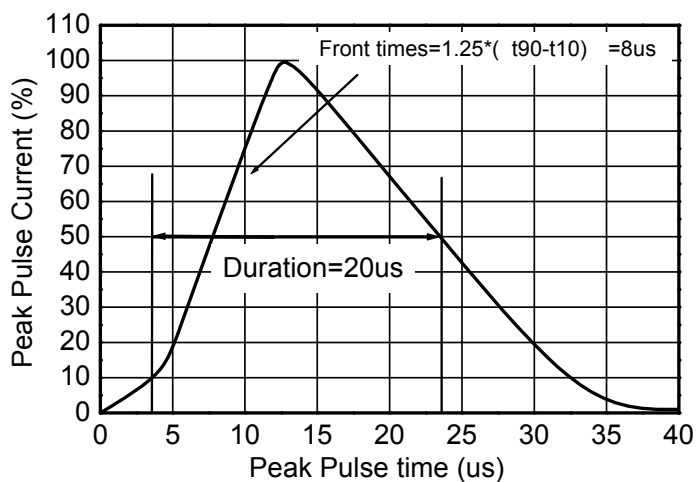
- Mobile phone
- PAD
- Notebook
- STB
- LCD TV
- Digital camera
- Other electronics equipments

## Absolute maximum ratings

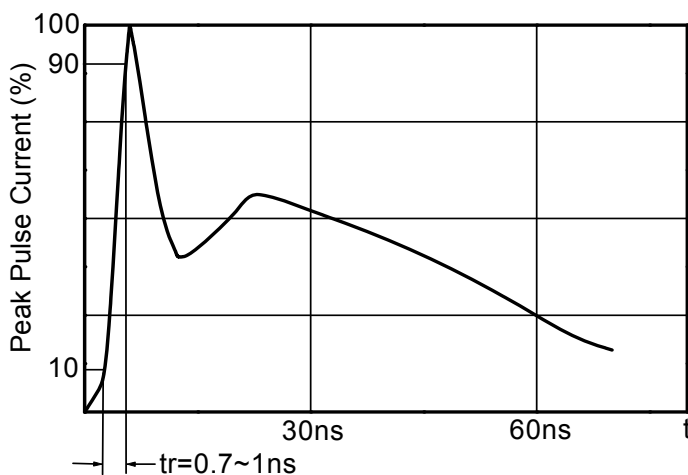
Parameter	Symbol	Rating	Unit
Peak pulse power ( $t_p=8/20\mu\text{s}$ )	Ppk	108	W
Peak pulse current ( $t_p=8/20\mu\text{s}$ )	Ipp	9	A
ESD voltage IEC61000-4-2 air	$V_{\text{ESD}}$	$\pm 30$	kV
ESD voltage IEC61000-4-2 contact		$\pm 30$	
Junction temperature	$T_J$	125	$^{\circ}\text{C}$
Operating temperature	$T_{\text{OP}}$	-40~85	$^{\circ}\text{C}$
Lead temperature	$T_L$	260	$^{\circ}\text{C}$
Storage temperature	$T_{\text{STG}}$	-55~150	$^{\circ}\text{C}$

**Electronics characteristics (Ta=25°C, unless otherwise noted)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse maximum working voltage	$V_{RWM}$				3.3	V
Reverse leakage current	$I_R$	$V_{RWM}=1V$			0.1	uA
		$V_{RWM}=4.2V$			10	uA
Reverse breakdown voltage	$V_{BR}$	$I_T=1mA$	4.8	5.2	5.4	V
Forward voltage	$V_F$	$I_F=-10mA$	0.55	0.8	1.25	V
Clamping voltage	$V_C$	$I_{pp}=1A$ $t_p=8/20us$			6.5	V
		$I_{pp}=9A$ $t_p=8/20us$			12	V
Junction capacitance	C	$F=1MHz, V_R=0V$		70	90	pF

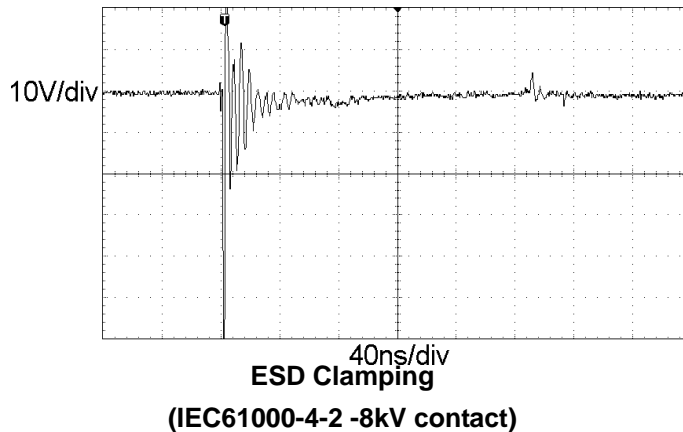
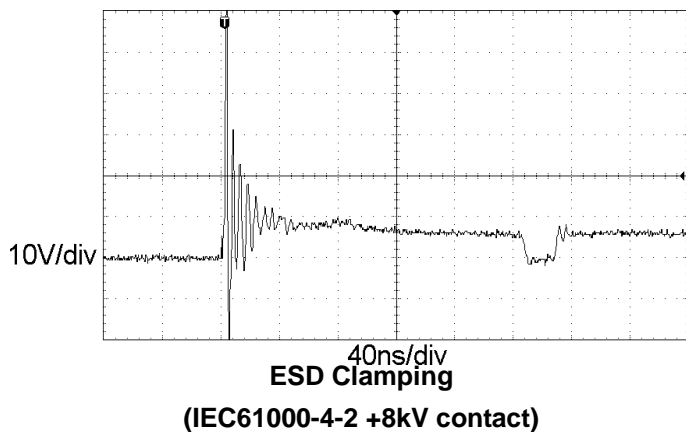
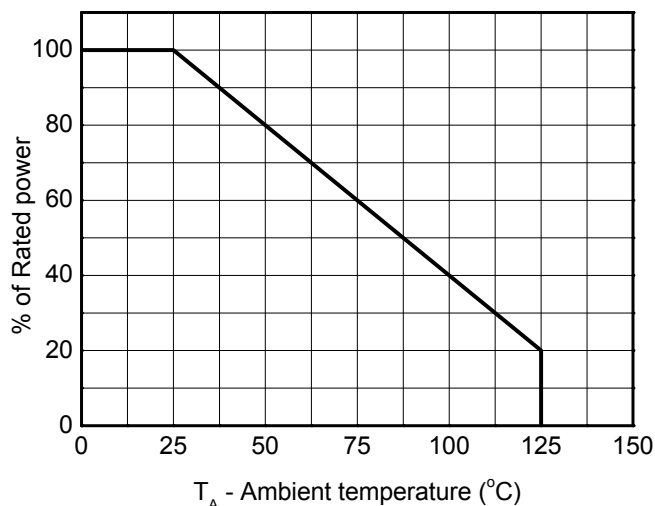
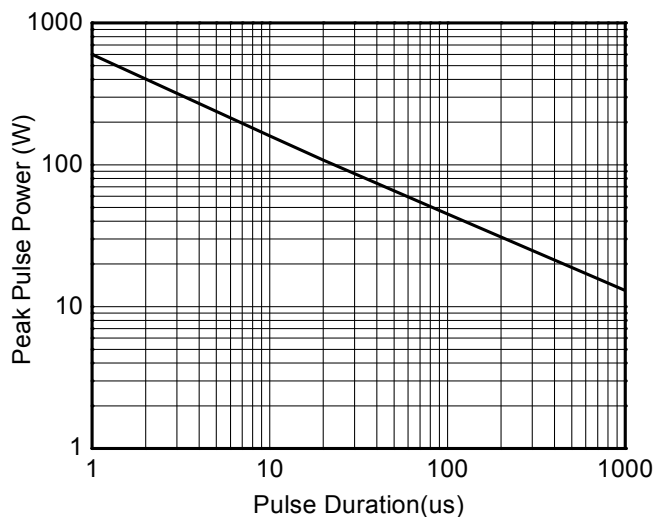
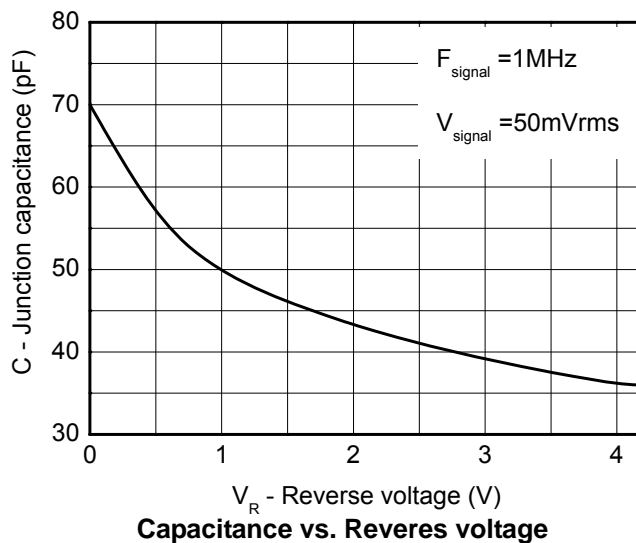
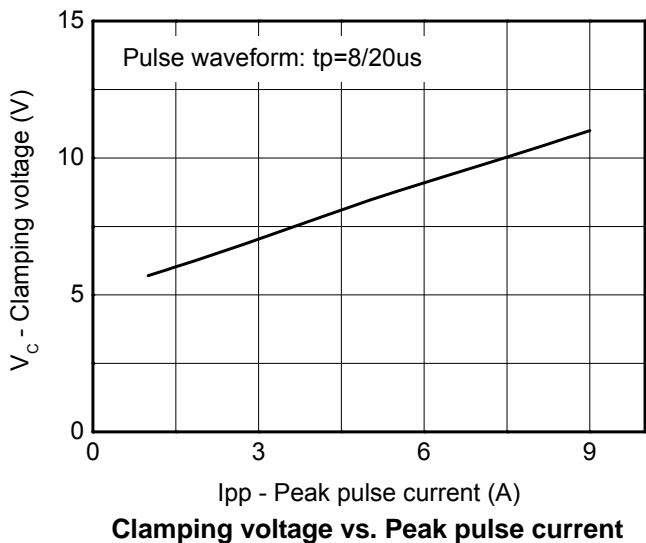


**8/20us waveform**

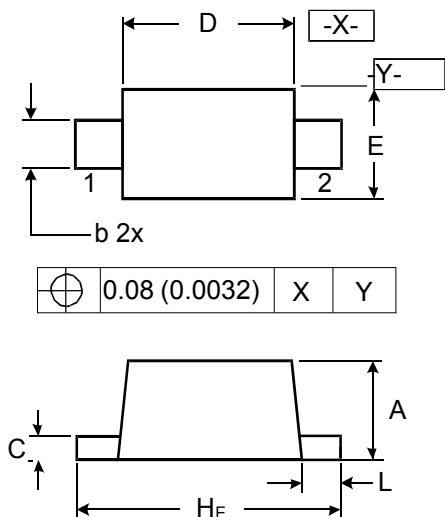


**IEC61000-4-2 waveform**

Typical characteristics (Ta=25 °C, unless otherwise noted)



### Outline Drawing – 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 <sub>E</sub>	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

### Marking



### Ordering information

Order code	Package	Baseqty	Deliverymode
UMW ESD5Z3V3	SOD-523	3000	Tape and reel

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