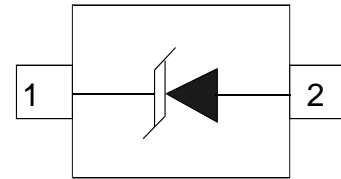


Descriptions

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

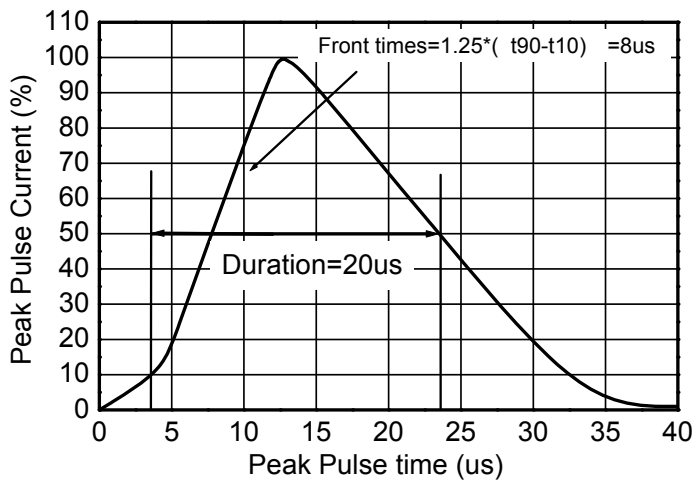
- Mobile phone
- PAD
- Notebook
- STB
- LCD TV
- Digital camera
- Other electronics equipments

Absolute maximum ratings

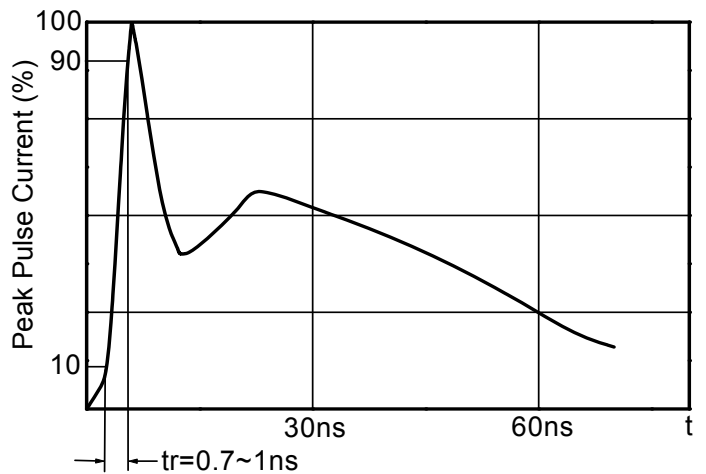
Parameter	Symbol	Rating	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)	Ppk	108	W
Peak pulse current ($t_p=8/20\mu\text{s}$)	Ipp	9	A
ESD voltage IEC61000-4-2 air	V _{ESD}	± 30	kV
ESD voltage IEC61000-4-2 contact		± 30	
Junction temperature	T _J	125	°C
Operating temperature	T _{OP}	-40~85	°C
Lead temperature	T _L	260	°C
Storage temperature	T _{STG}	-55~150	°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

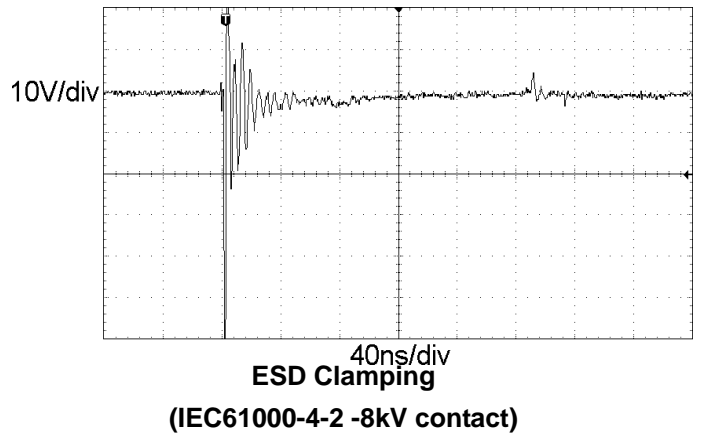
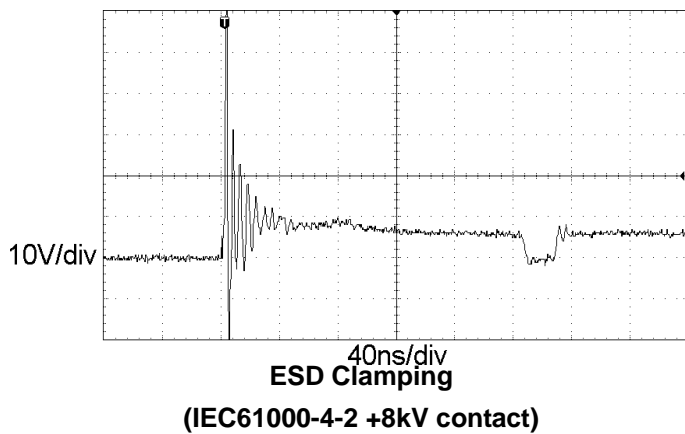
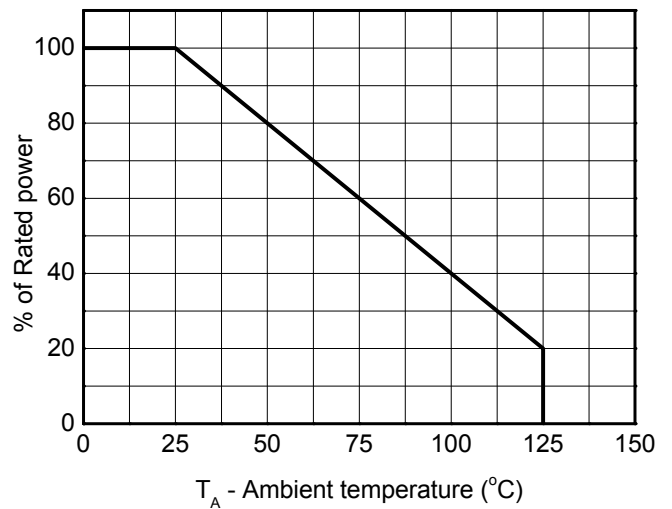
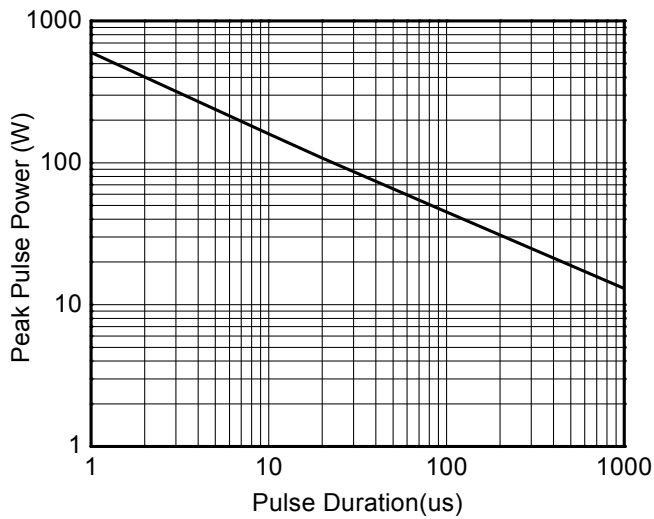
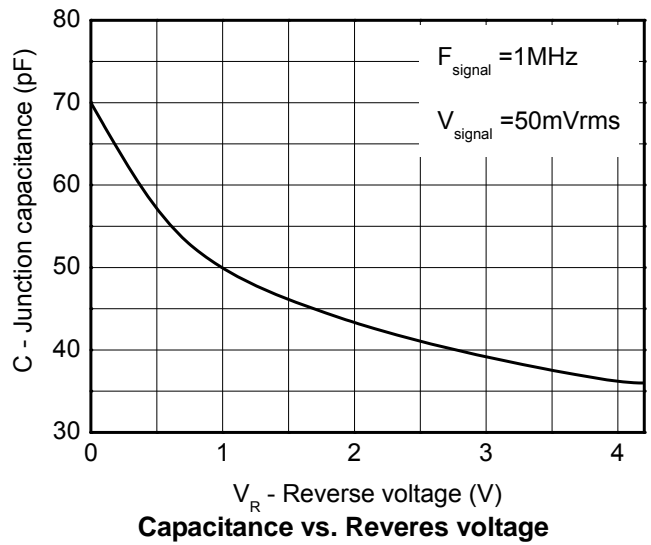
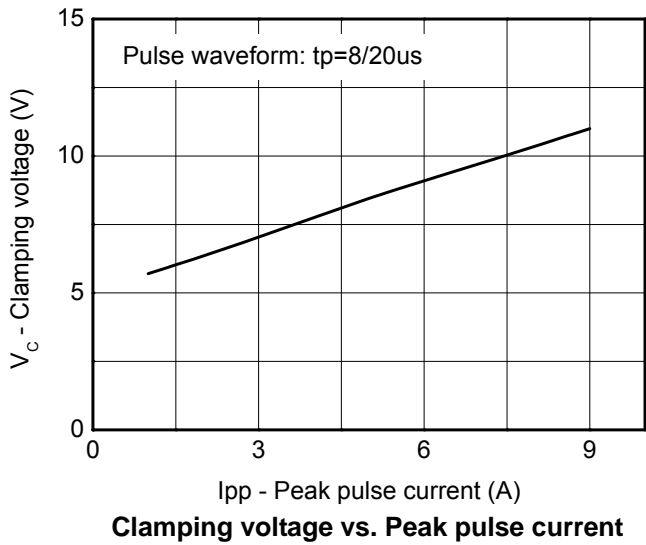


8/20us waveform

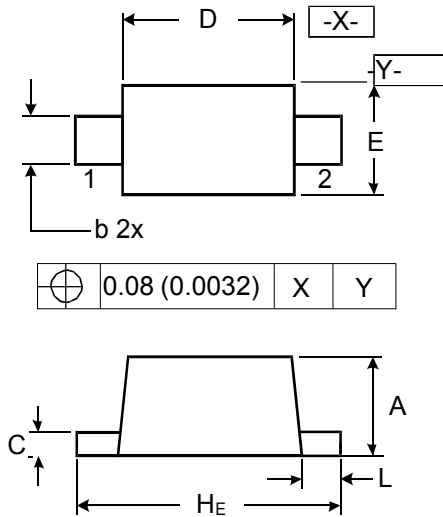


IEC61000-4-2 waveform

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 _E	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
ESD5Z3V3	SOD-523	3000	Tape and reel