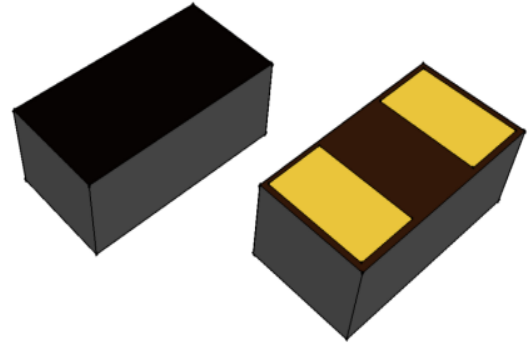




## Features

- The best ESD protection for high speed, low voltage applications
- RoHS compliant and halogen free
- Ultra low capacitance, 0.05 pF (typ.)
- Low leakage current (<10nA)
- Fast response time (<1ns)
- Bi-directional, single line protection
- Surface mount



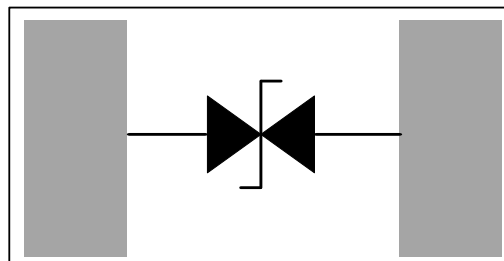
## Applications

- Smart Phone/Mobile Internet Device
- Laptop/Desktop Computer
- Antennas
- High Speed Ethernet
- USB 2.0 and USB 3.0
- Lightning and Thunder Bolt Interface

## Mechanical Data

- Surface mount
- RoHS Compliant
- Halogen Free

## Schematic & PIN Configuration





### Absolute Maximum Rating

Rating	Symbol	Conditions	Value	Units
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$		15 8	kV
Lead Soldering Temperature	$T_L$		260(10seconds)	°C
Operating Temperature	$T_O$		-55 to + 125	°C
Storage Temperature	$T_{stg}$		-40 to + 125	°C

### Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Continuous Operating Voltage	$V_{DC}$				5.0	V
Trigger Voltage	$V_T$	IEC61000-4-2 8KV contact discharge		450		V
Leakage Current	$I_L$	$V_{DC}=5V, T=25^{\circ}C$			10	nA
Clamping Voltage	$V_C$	IEC61000-4-2 8KV contact discharge		40		V
Capacitance	$C_p$	Measured at 10MHz		0.05		pF
ESD Pulse Withstand	Pulses	IEC61000-4-2 8KV contact discharge	1000			



### ESD Clamping Test

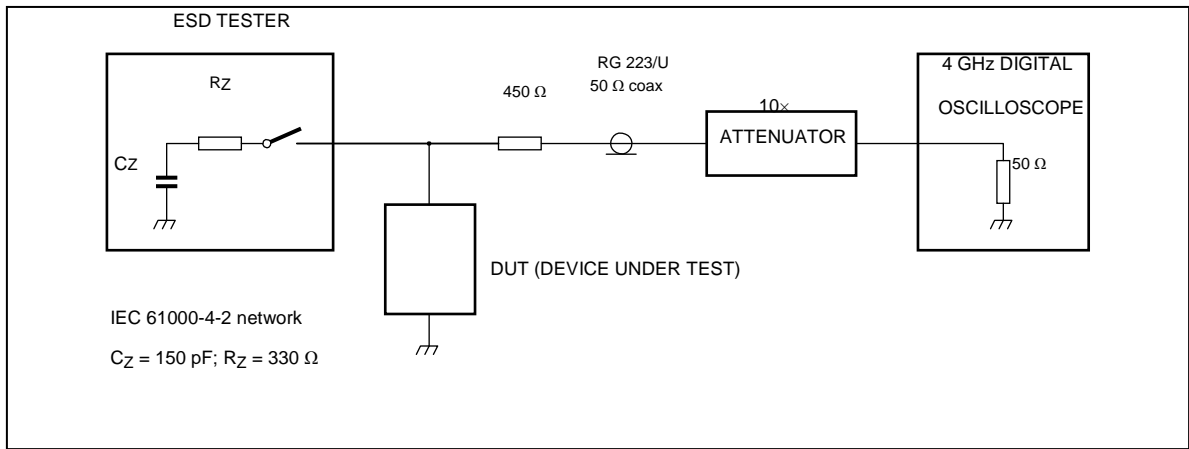


Fig.1 ESD Clamping Test Waveform

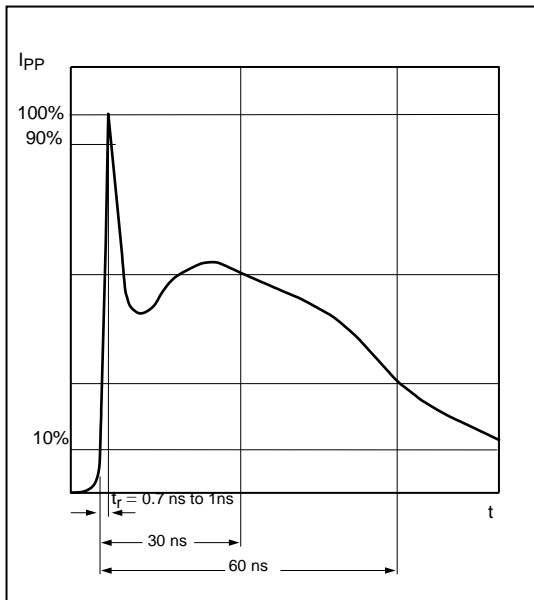


Fig.3 Capacitance VS Frequency

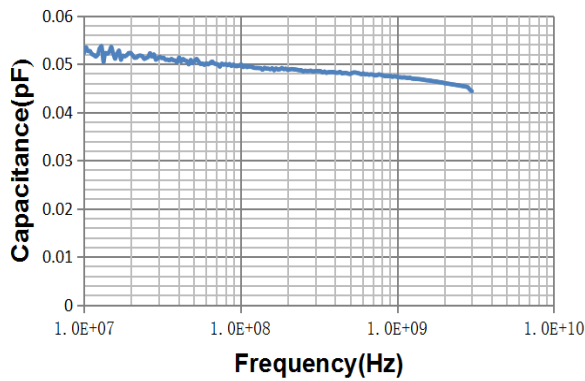
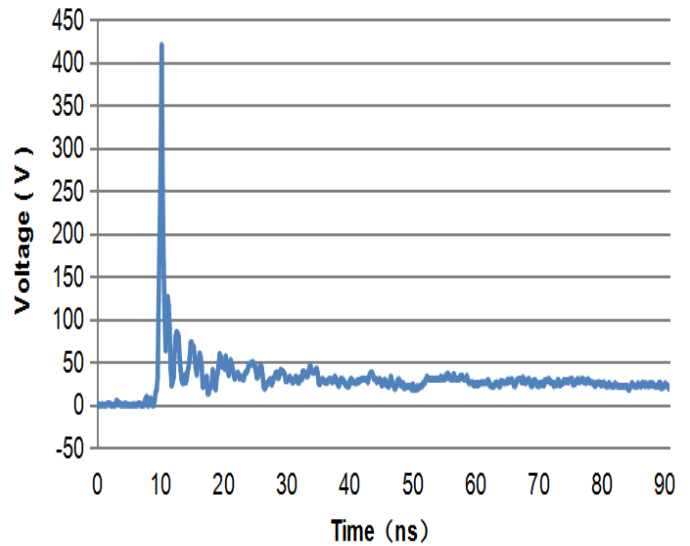
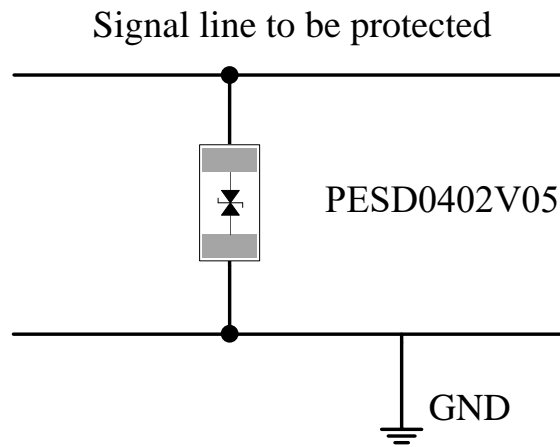


Fig.2 ESD Waveform after Clamping

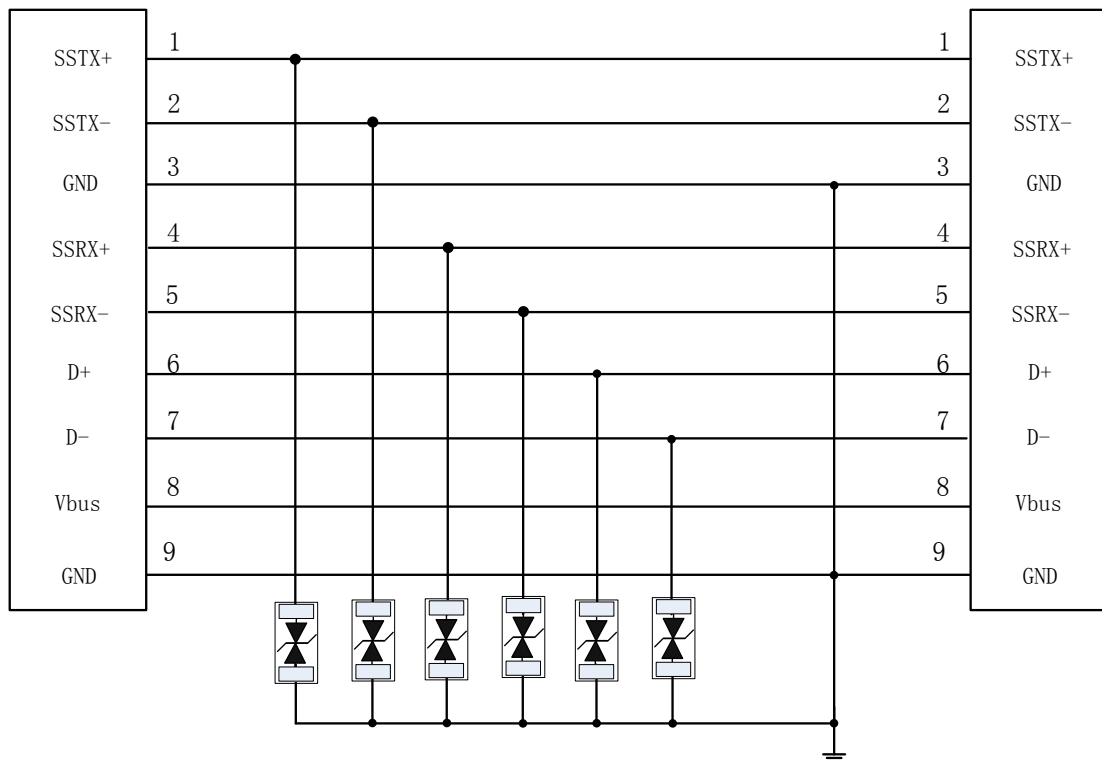




### Application Information



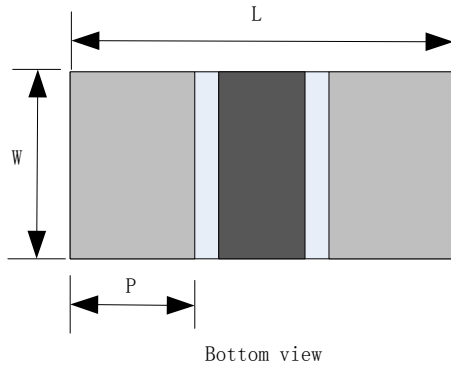
PESD0402V05 in Signal line protected



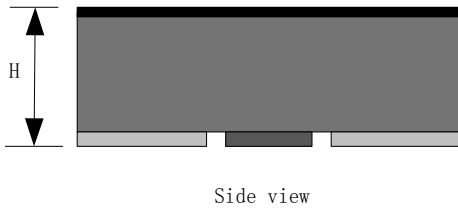
PESD0402V05 in USB3.0 application



### Outline Drawing



Dimension	Unit: Millimeters		
	Min.	Typ.	Max.
L	0.90	1.00	1.10
W	0.42	0.52	0.62
P	0.15	0.25	0.35
H	0.25	0.38	0.45



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