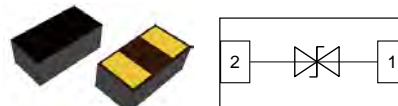


### Features

- Very low leakage current
- Fast response time
- Bidirectional configurations
- Very low leakage current
- Response time is typically < 1ns
- Extremely low capacitance (C<sub>j</sub>=0.05pF typ.)
- The best ESD protection for high frequency, low voltage applications
- Protection one data line to:  
IEC 61000-4-2 ±30kV contact ±30kV air



### Mechanical Data

- **Case:** P0201 (plastic package).  
Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

- USB3.0, Firewire, DVI, HDMI, S-ATA
- Thunderbolt, Display Port
- Mobile HDMI Link, MDDI, MIPI, SWP / NFC



Caution:  
This component is designed for signal line protection only,  
Not intended to be used under bias, not for application with  
a power line.

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Maximum Contact discharge voltage Per IEC61000-4-2	V <sub>ESD</sub>	30	kV
Maximum Air discharge voltage Per IEC61000-4-2	V <sub>ESD</sub>	30	kV
Operating temperature	T <sub>Oper</sub>	-40 to +125	°C
Storage temperature	T <sub>STG</sub>	-55 to +125	°C
Maximum Lead Solder Temperature(10 second duration)	T <sub>L</sub>	260	°C

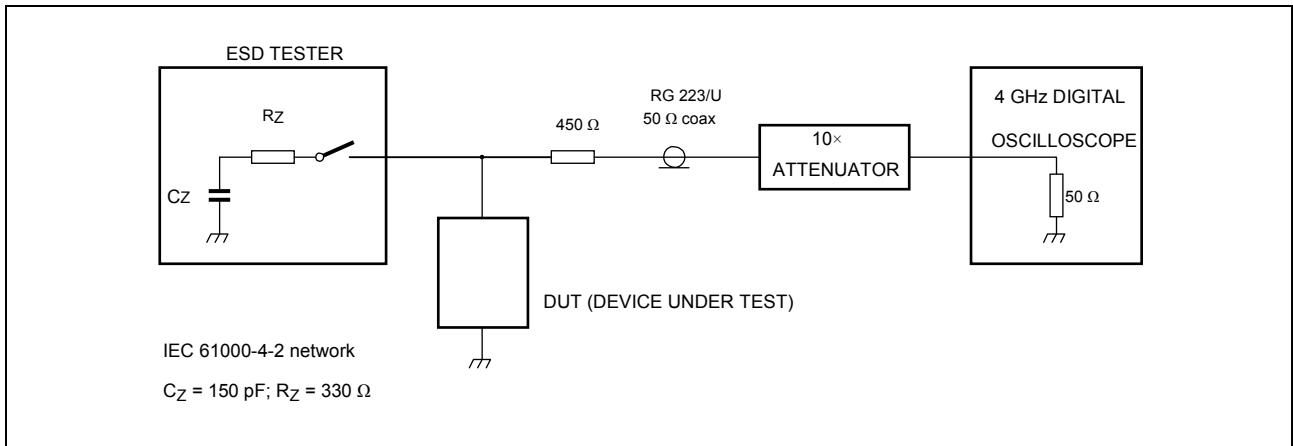
### Electrical Characteristics

(T<sub>A</sub> = 25 °C unless otherwise specified)

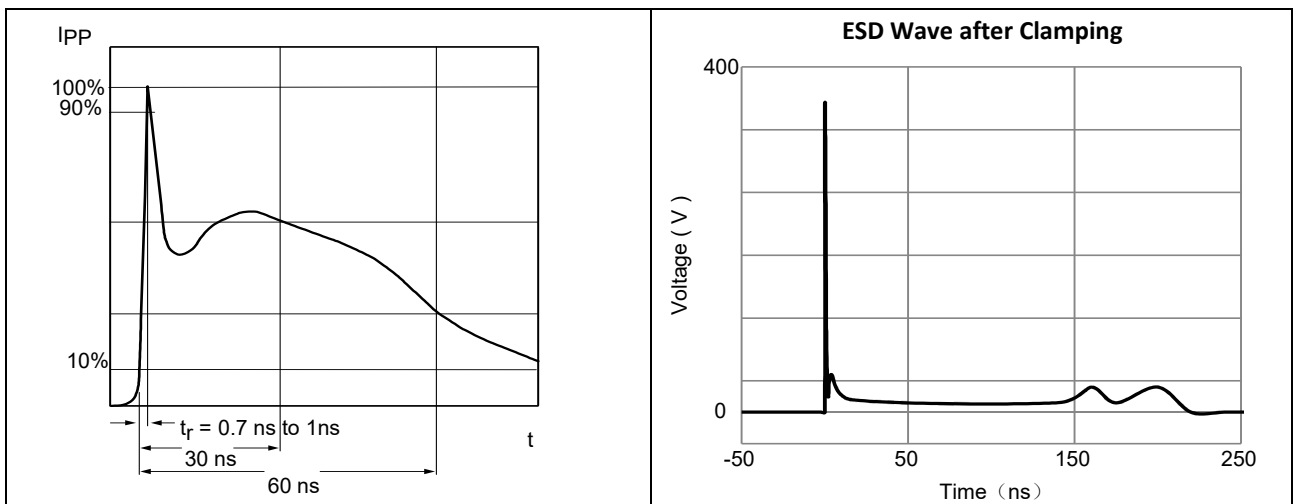
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Rated Voltage	V <sub>R</sub>	---			30	V
Trigger voltage	V <sub>T</sub>	IEC61000-4-2 8KV contact discharge		350		V
Leakage current	I <sub>L</sub>	DC 12V shall be applied on component			0.1	uA
Clamping Voltage	V <sub>C</sub>	IEC61000-4-2 8KV contact discharge		35		V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, f=1MHz		0.05		pF

Note: 1. Trigger and clamping voltage are measured per IEC 61000-4-2, 8KV contact discharge method.  
2. After reliability tests such as high temp storage, temp cycles, continuous ESD strike etc, the maximum leakage current is less than 10uA.

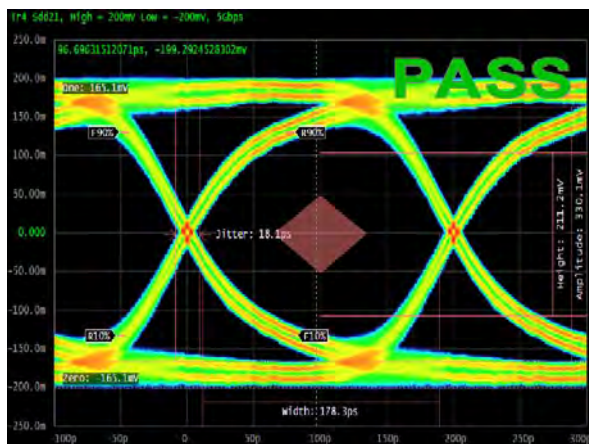
### ESD Clamping Test



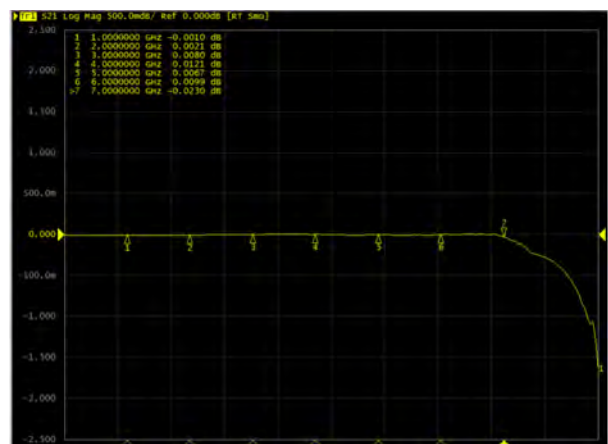
### ESD Clamping Test Waveforms



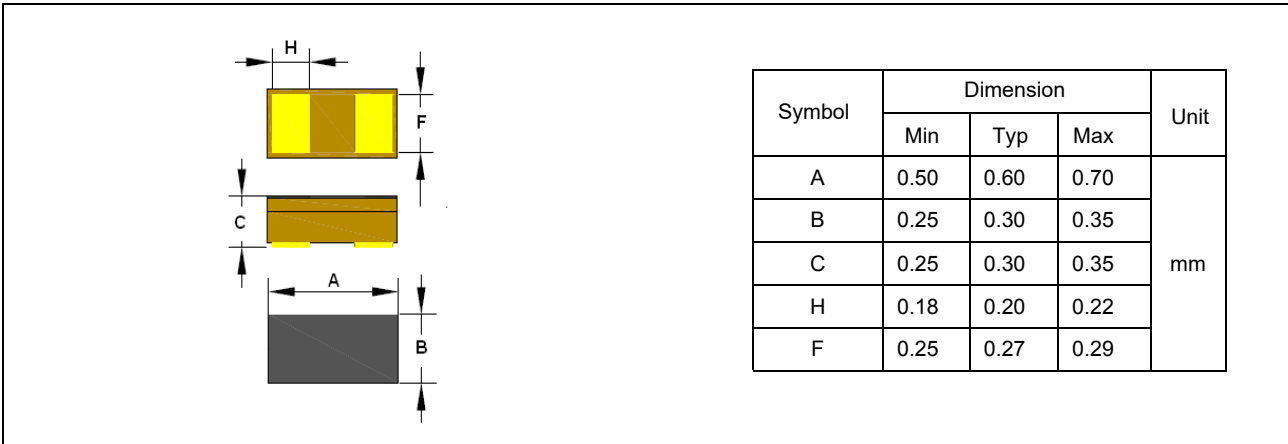
### Eye Diagram Measurement USB3.0 Mask at 5.0 Gbps



### Insertion Loss S21



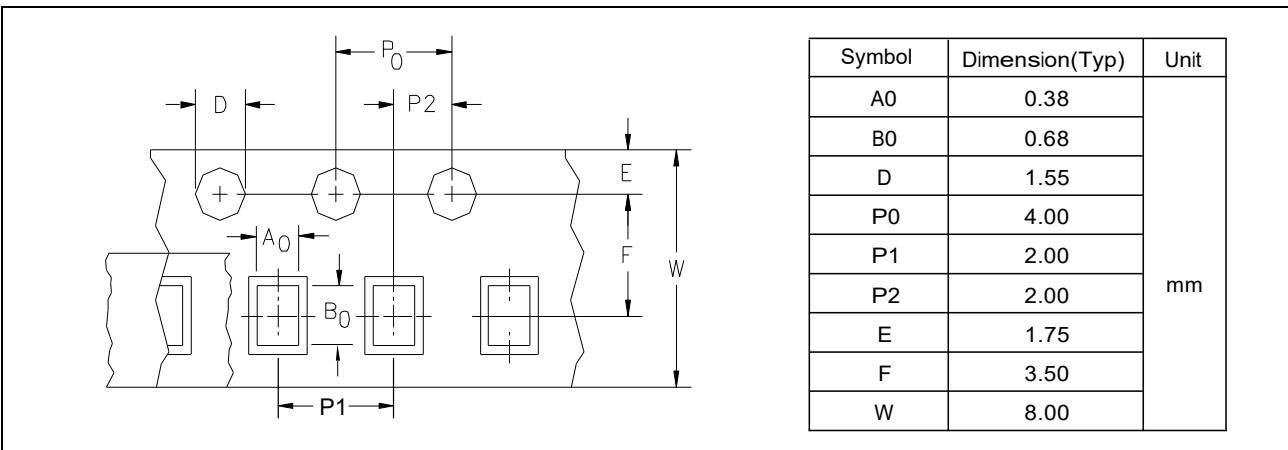
### Product Dimension



### Pad Dimensions



### Package Information



### Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
YEUP02230R05B	P0201	Tape and reel	15000pcs / reel	EIA STD RS-481