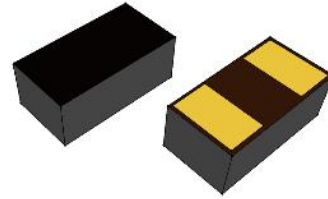


Features

- Ultra-Low capacitance:0.05pF(typ.)
- Low leakage current(<100nA)
- Fast response time(<1ns)
- Bi-directional,single line protection
- IEC 61000-4-2 (Air): 15kV
IEC 61000-4-2 (Contact): 8kV

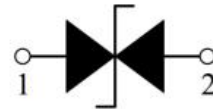
Pin Description



Applications

- USB 3.0/3.1
- HDMI 1.3/1.4/2.0
- RF Antenna
- SATA and eSATA Interface

Schematic Diagram



Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
PESD1821U005	0201	0.60x0.30x0.32	7" T&R	15,000

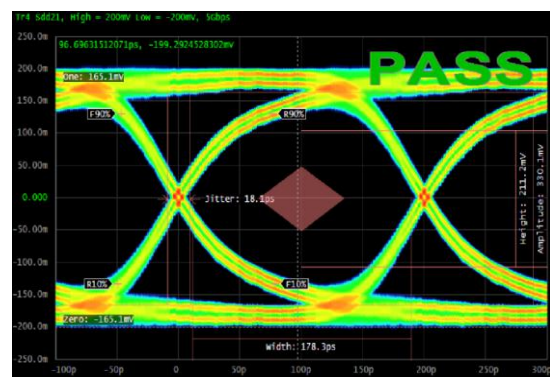
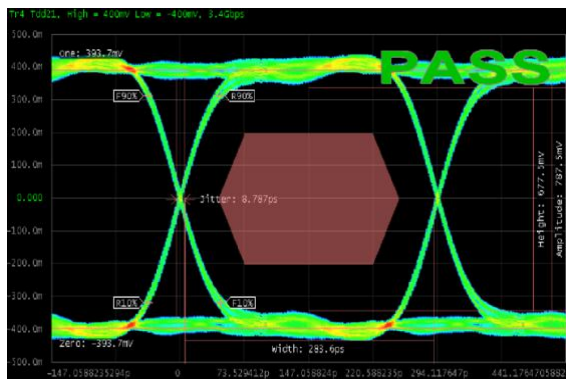
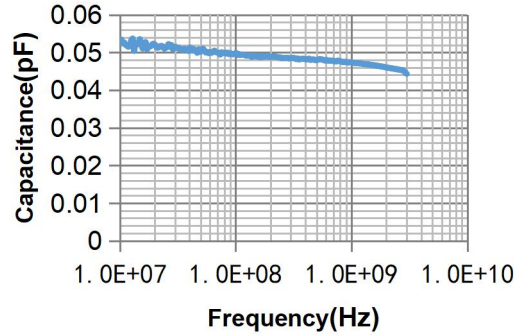
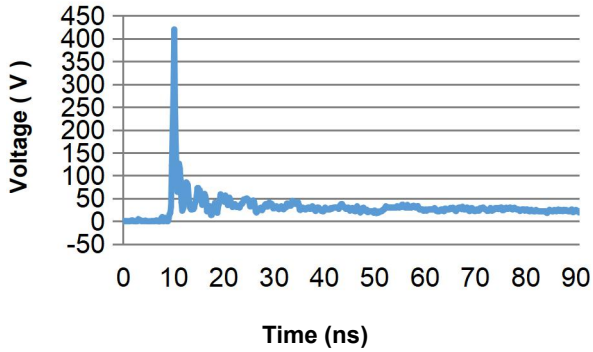
Limiting Values($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
V_{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	8	kV
		IEC 61000-4-2; Air Discharge	-	15	kV
T_A	Operating Temperature Range	-	-40	90	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-	-55	125	$^\circ\text{C}$

Electrical Characteristics($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{DC}	Continuous Operating Voltage	-	-	-	18.0	V
V_T	Trigger Voltage	IEC61000-4-2 8kV contact discharge	-	450	-	V
V_C	Clamping Voltage	IEC61000-4-2 8kV contact discharge	-	40	-	V
I_L	Leakage Current	DC 18V shall be applied on component	-	-	100	nA
C_J	Capacitance	Measured at 10MHz	-	0.05	-	pF

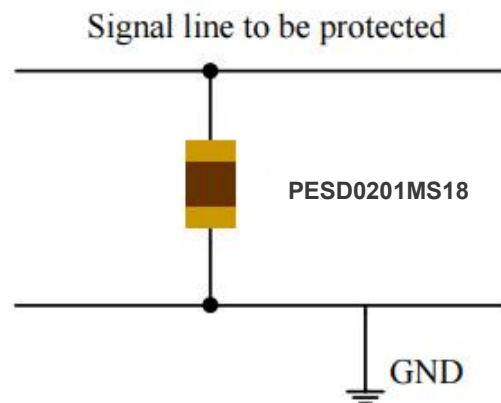
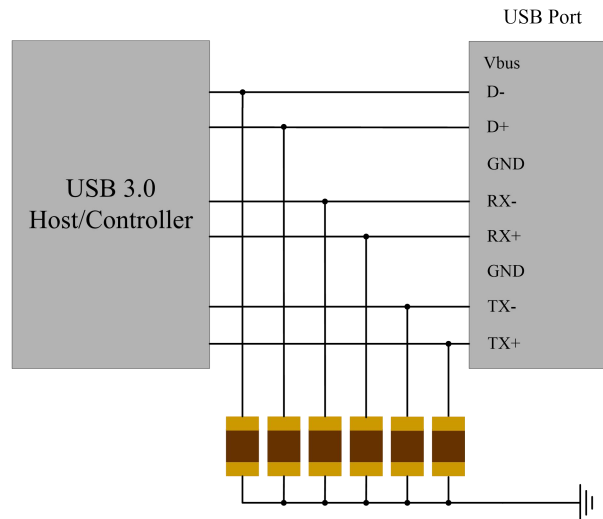
Typical Characteristics



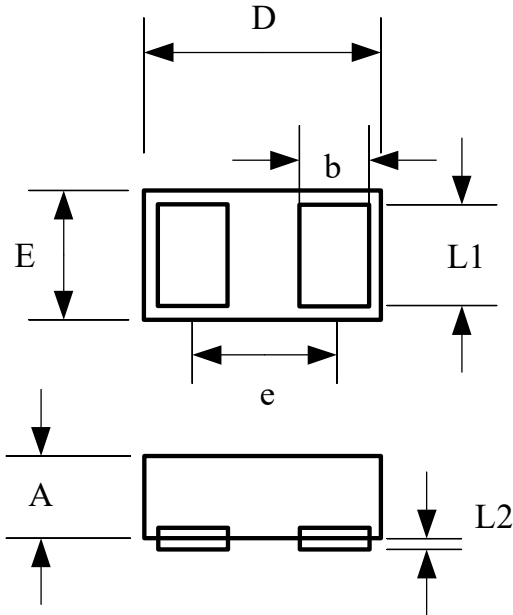
ESD Protection for Signal Line

The PESD is designed for the protection of one bidirectional data line from ESD damage.

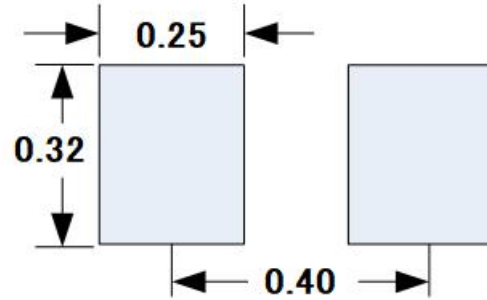
- Place the PESD as close to the input terminal or connector as possible.
- Minimize the path length between the PESD and the protected signal line.
- Use ground planes whenever possible.



Package Dimension



Recommended Solder Pad Footprint



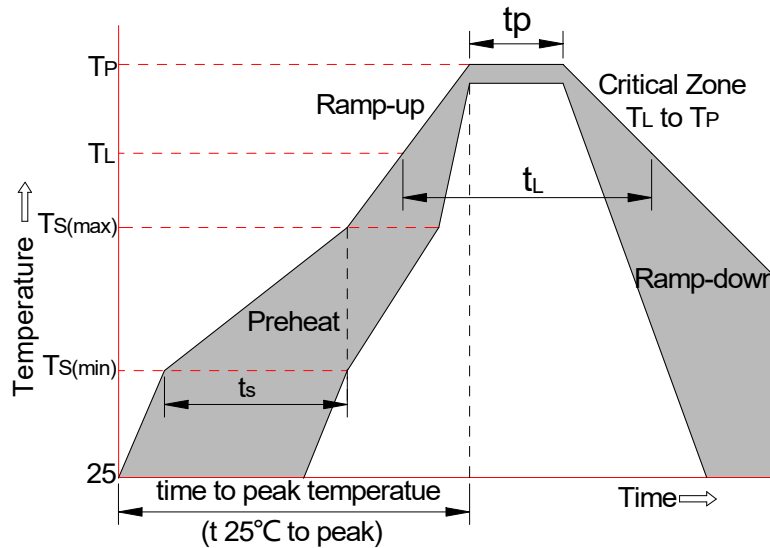
***Sizes in mm**

Notes:

This solder pad layout is for reference purposes only.

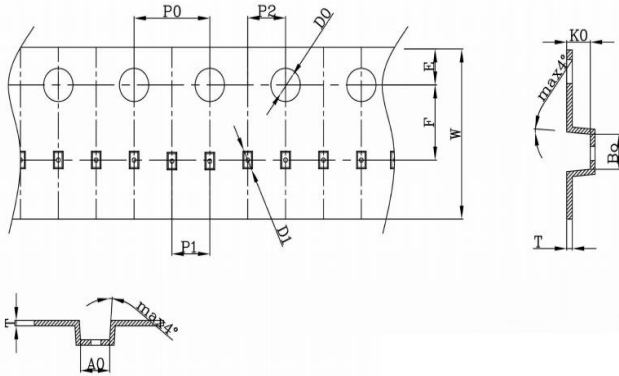
Dimension	Unit: Millimeters	
	Min.	Max.
A	0.25	0.40
b	0.14	0.24
D	0.50	0.70
E	0.25	0.35
e	0.38BSC	
L1	0.20	0.30
L2	0.00	0.05

Soldering Parameters

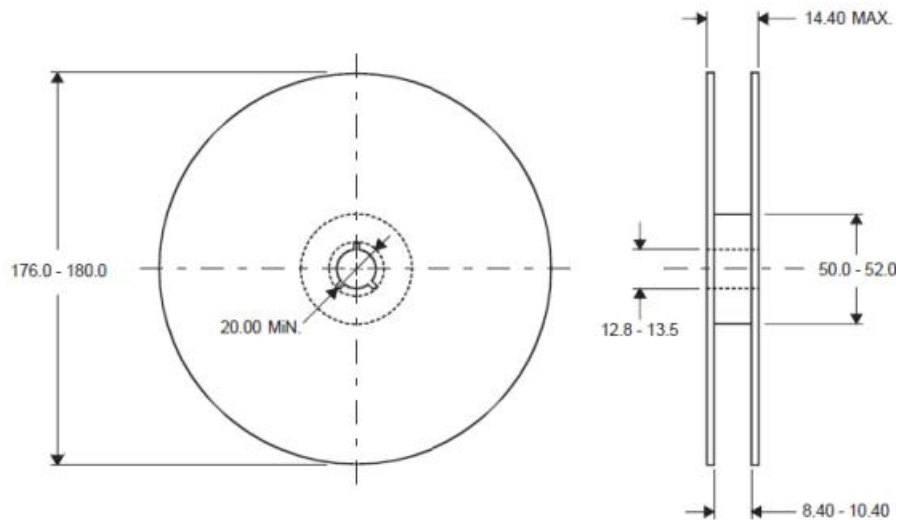


Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C

Package Information



Dimension	Typical	Unit
A0	0.38	mm
B0	0.68	
K0	0.32	
P0	4.00	
P1	2.00	
P2	2.00	
T	0.20	
E	1.75	
F	3.50	
D0	1.55	
D1	0.20	
W	8.00	



DIMENSIONS ARE: MILLIMETERS