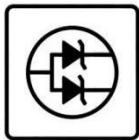


# MSKSEMI 美森科

SEMICONDUCTOR



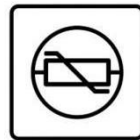
ESD



TVS



TSS



MOV



GDT



PLED

## **PESD0603MS12-MS**

**Product specification**


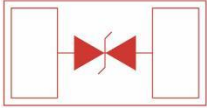
**FEATURES**

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

**Applications**

- USB 3.0/3. 1
- HDMI 1.3/ 1.4/2.0
- RF Antenna
- SATA and eSATA Interface

**Reference News**

PACKAGE OUTLINE	PIN CONFIGURATION
	
<p>0603</p>	

**Limiting Values(TA = 25 °C, unless otherwise specified)**

Symbol	Parameter	Conditions	Min	Max	Unit
V <sub>ESD</sub>	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	8	kV
		IEC 61000-4-2; Air Discharge	-	15	kV
T <sub>A</sub>	Operating Temperature Range	-	-40	90	°C
T <sub>stg</sub>	Storage Temperature Range	-	-55	125	°C

**ELECTRICAL CHARACTERISTICS (Tamb=25°C)**

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V <sub>DC</sub>	Continuous Operating Voltage	-	-	-	12	V
V <sub>T</sub>	Trigger Voltage	IEC61000-4-2 8kV contact discharge	-	450	-	V
V <sub>C</sub>	Clamping Voltage	IEC61000-4-2 8kV contact discharge	-	40	-	V
I <sub>L</sub>	Leakage Current	DC 12V shall be applied on component	-	-	100	nA
C <sub>J</sub>	Capacitance	Measured at 10MHz	-	0.05	-	pF

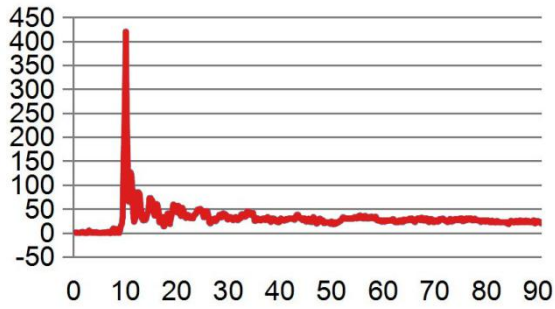


Fig. 1 Typical ESD Response  
(IEC 61000-4-2, 8kV contact discharge)

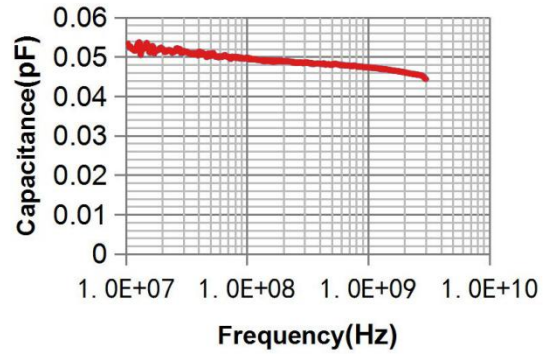
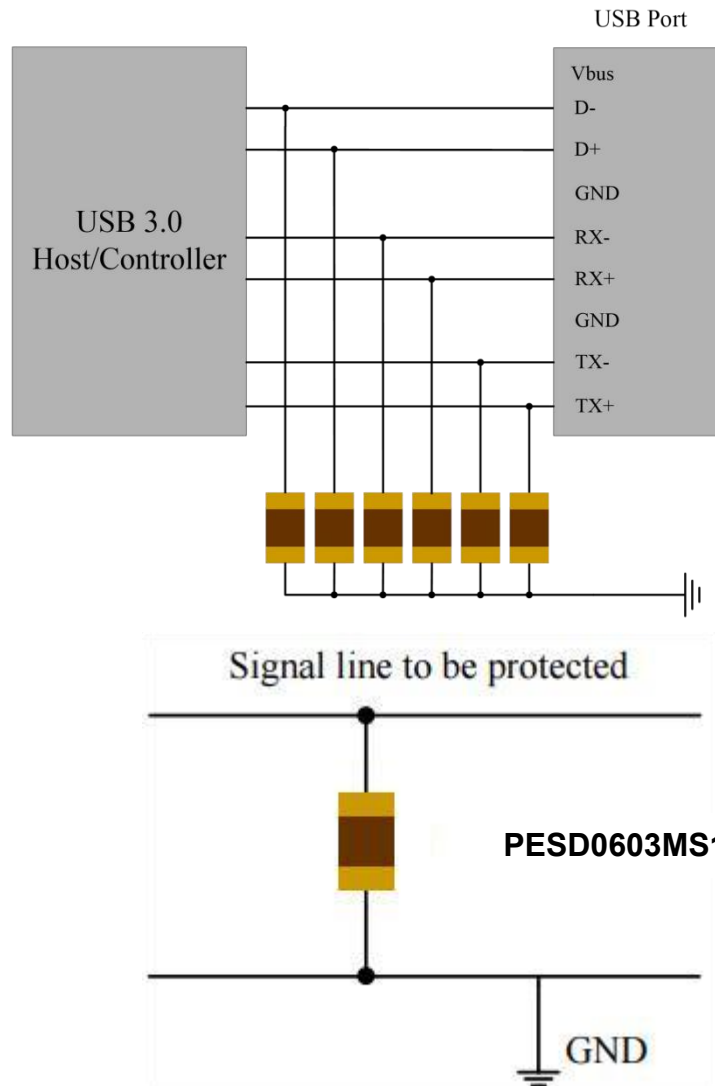


Fig.2 Typical Device Capacitance VS. Frequency

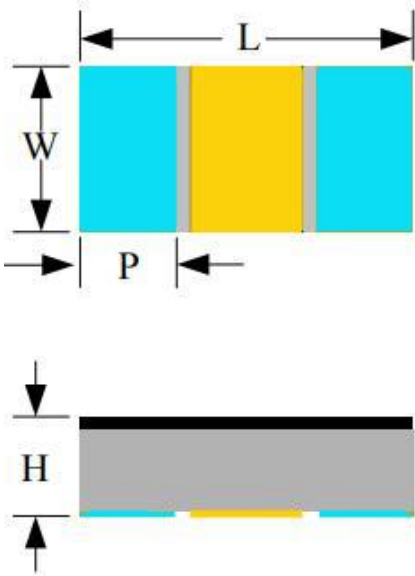
## ESD Protection for Signal Line

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

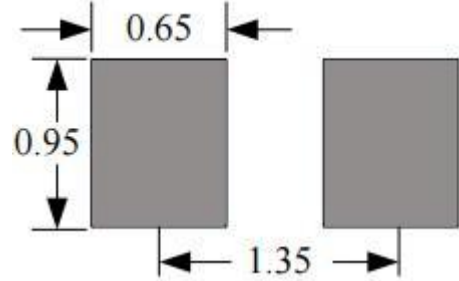
- Place the PESD as close to the input terminal or connector as possible.
- Minimize the path length between the PESD and the protected signal line.
- Use ground planes whenever possible.



**PACKAGE MECHANICAL DATA**



**Recommended Solder Pad Footprint**



**Notes:**

This solder pad layout is for reference purposes only.

Dimension	Unit: Millimeters	
	Min	Max
L	1.45	1.75
W	0.70	0.95
P	0.20	0.50
H	0.26	0.46

**REEL SPECIFICATION**

P/N	PKG	QTY
PESD0603MS12-MS	0603	5000

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