

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

PESD0603MS12-MS

Product specification


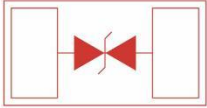
FEATURES

- 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 |
|---|---|
|  |  |
| 0603 | |

Limiting Values(TA = 25 °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 | °C |
| T _{stg} | Storage Temperature Range | - | -55 | 125 | °C |

ELECTRICAL CHARACTERISTICS (Tamb=25°C)

| Symbol | Parameter | Conditions | Min | Typ. | Max | Unit |
|-----------------|------------------------------|---|-----|------|-----|------|
| V _{DC} | Continuous Operating Voltage | - | - | - | 12 | 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 12V shall be applied on component | - | - | 100 | nA |
| C _J | Capacitance | Measured at 10MHz | - | 0.05 | - | pF |

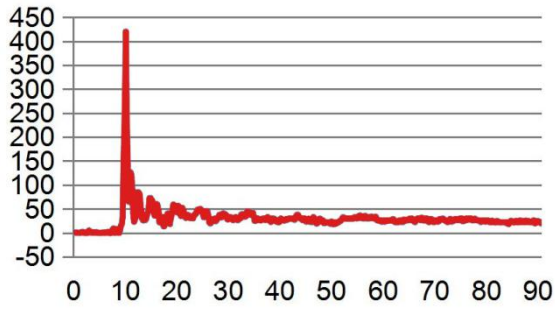


Fig. 1 Typical ESD Response
(IEC 61000-4-2, 8kV contact discharge)

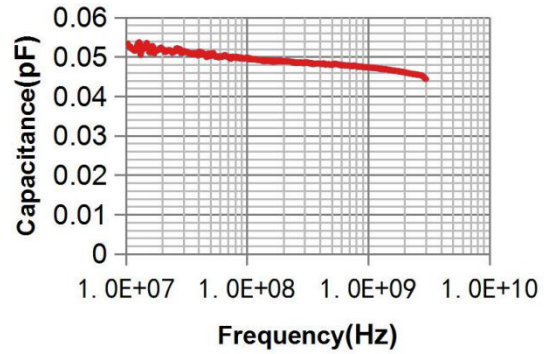
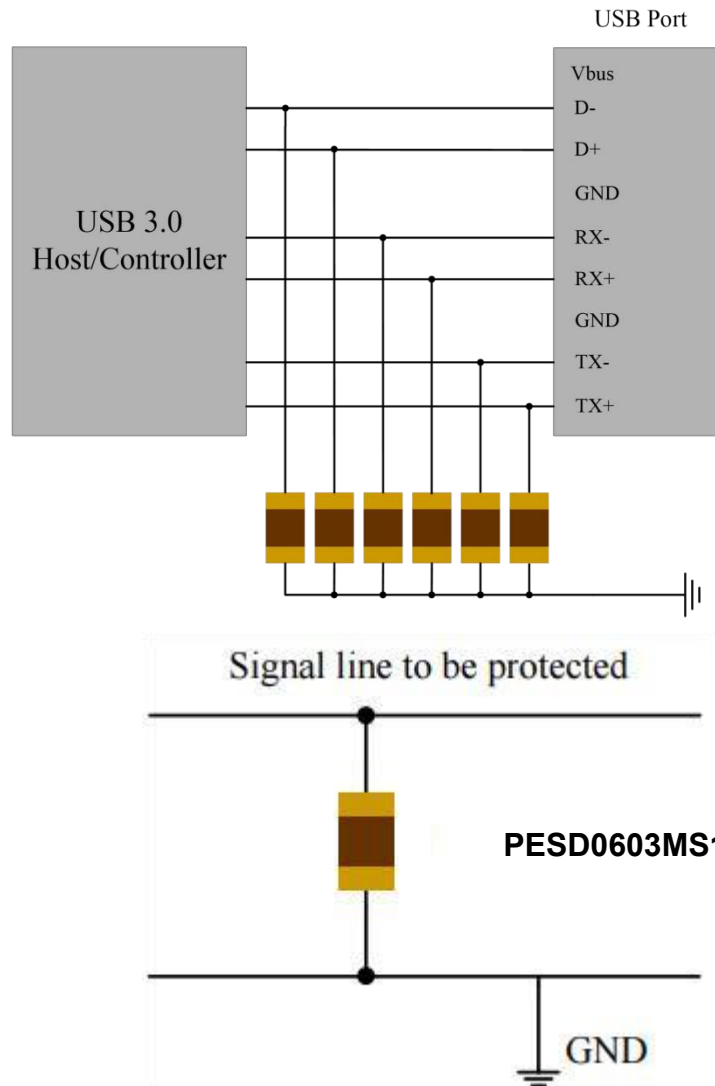


Fig.2 Typical Device Capacitance VS. Frequency

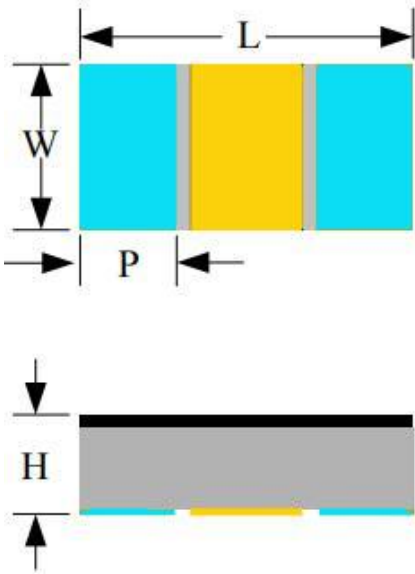
ESD Protection for Signal Line

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

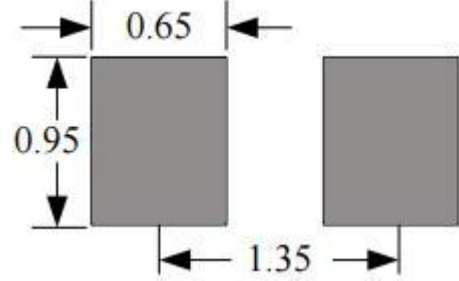
- Place the PESD as close to the input terminal or connector as possible.
- Minimize the path length between the PESD and the protected signal line.
- Use ground planes whenever possible.



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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