

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

PESD0402MS12-MS

Product specification

FEATURES

- Ultra-Low capacitance:0.05pF(typ.)
- Low leakage current(<10nA)
- Fast response time(<1ns)
- Bi-directional,single line protection
- IEC 61000-4-2 (ESD Air): 15kV
- IEC 61000-4-2 (ESD Contact): 8kV


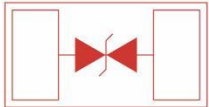
MACHANICAL DATA

- 0402
- Packaging: Tape and Reel
- Reel size: 7 inch
- 10000PCS/Reel

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>0402</p> | |

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 | - | -55 | 125 | °C |
| T _{stg} | Storage Temperature Range | - | -40 | 85 | °C |

ELECTRICAL CHARACTERISTICS (Tamb=25°C)

| Symbol | Parameter | Conditions | Min | Typ. | Max | Unit |
|----------------|------------------------------|--------------------------------------|-----|------|-----|------|
| VDC | 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 | - | - | 10 | nA |
| C _J | Capacitance | Measured at 10MHz | - | 0.05 | - | pF |

Typical Characteristics

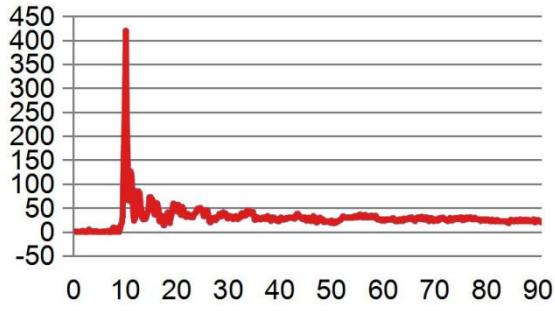


Fig. 1 Typical ESD Response
(IEC 61000-4-2, 8kV contact discharge)

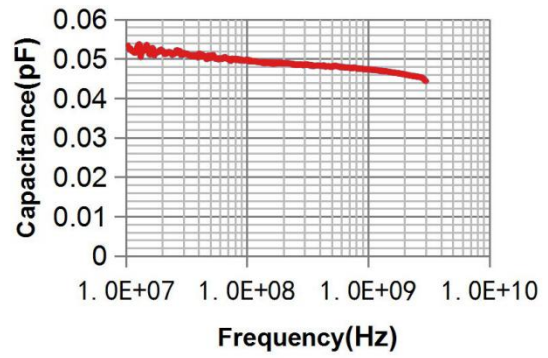


Fig.2 Typical Device Capacitance VS. Frequency

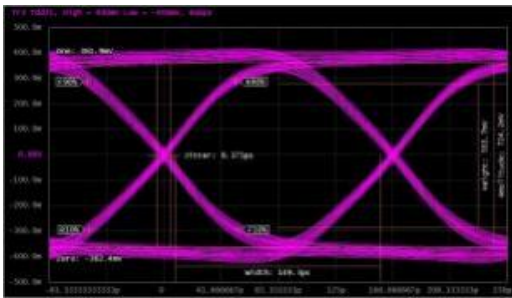
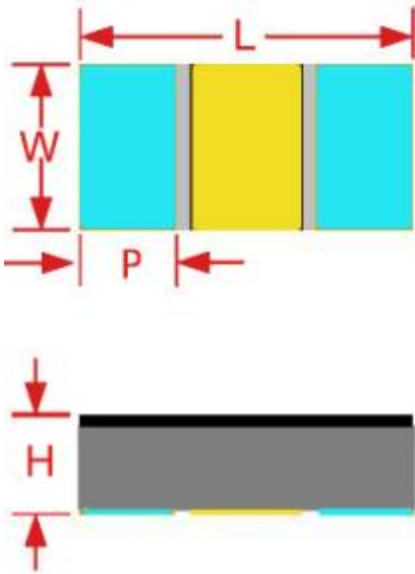
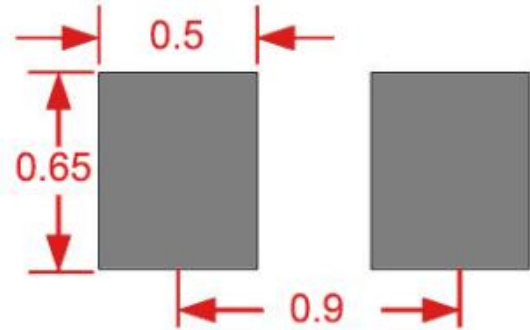


Fig.3 HDMI 2.0 Mask at 6.0 Gbps

PACKAGE MECHANICAL DATA



Recommended Solder Pad Footprint



Notes:

This solder pad layout is for reference purposes only.

| Dimension | Unit: Millimeters | |
|-----------|-------------------|------|
| | Min | Max |
| L | 0.90 | 1.10 |
| W | 0.42 | 0.62 |
| P | 0.15 | 0.35 |
| H | 0.25 | 0.45 |

REEL SPECIFICATION

| P/N | PKG | QTY |
|-----------------|------|-------|
| PESD0402MS12-MS | 0402 | 10000 |

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