

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## **PESD0402MS22-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


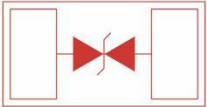
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## APPLICATIONS

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

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## Reference News

PACKAGE OUTLINE	PIN CONFIGURATION
	
0402	

**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	-	-55	125	°C
T <sub>stg</sub>	Storage Temperature Range	-	-40	85	°C

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

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
VDC	Continuous Operating Voltage	-	-	-	22	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 22V shall be applied on component	-	-	10	nA
C <sub>J</sub>	Capacitance	Measured at 10MHz	-	0.05	-	pF

### Typical Characteristics

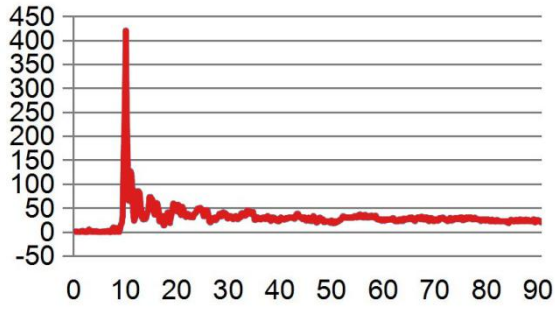


Fig. 1 Typical ESD Response  
(IEC 61000-4-2, 8kV contact discharge)

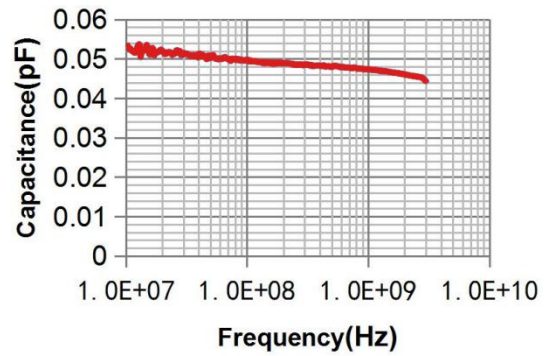


Fig.2 Typical Device Capacitance VS. Frequency

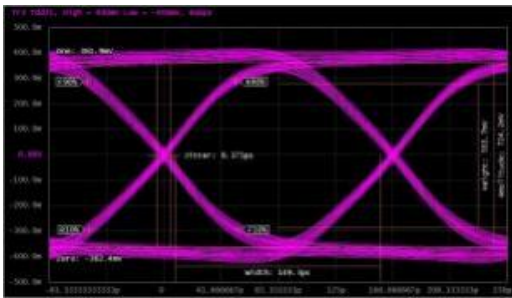
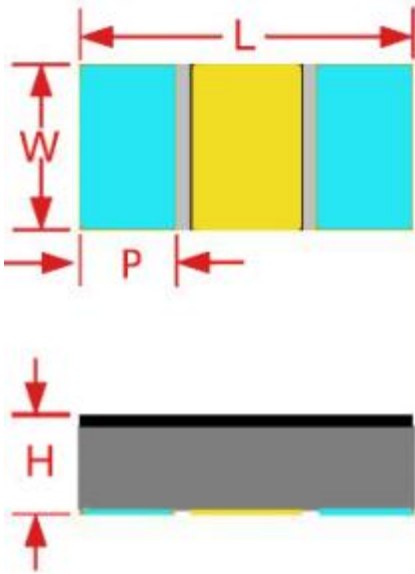
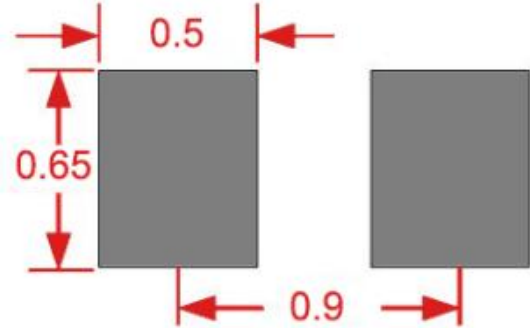


Fig.3 HDMI 2.0 Mask at 6.0 Gbps

**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
PESD0402MS22-MS	0402	10000

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