



Micro Commercial Components

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MLESD12A-1206A4

Multilayer Polymer
ESD Suppressor

Features

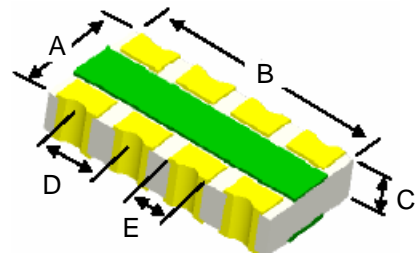
- ESD protection for high speed data lines to
IEC61000-4-2 ESD contact discharge typical 8KV, max 15KV
IEC61000-4-2 ESD air discharge typical 15KV, max 25KV
Multilayer structure
Surface mount
Extremely low capacitance
Very low leakage current
Fast response time
Bi-directional ESD protection
Lead free solder termination
The best ESD protection for high frequency, low voltage applications

Application

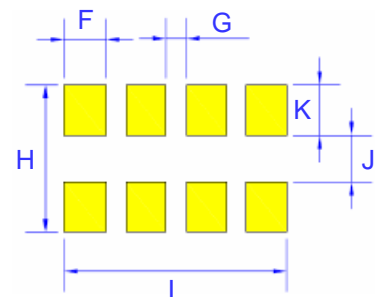
- High Definition Multi-Media Interface (HDMI)
Digital Visual Interface (DVI)
Display Port Interface
Unified Display Interface (UDI)
MDDI Ports
Gigabit Ethernet
USB2.0 and IEEE1394 interface

\* Caution: This component is designed for signal line protection only, not intended to be used under bias, not for application with a power line.

1206

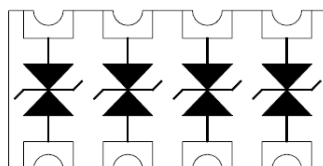


Suggested Solder Pad Layout



Environmental Specifications

- Operation temperature: -40~90°C
Moisture Resistance, Steady state: MIL-STD-833,Method 1004.7, 85% RH,85°C,1000hrs
Thermal Shock: MIL-STD-202,Method 107G,-55°C to150°C,30 min cycle,10 cycles.
Vibration: MIL-STD-202F, Method 201A, (10 to 55 to 10HZ, 1 min. cycle, 2hrs each in X-Y-Z)
Chemical Resistance: ASTM D-543, 4hrs @40°C, 3 solutions(H2O, detergent solution, deluxer )
Solder leach resistance and terminal adhesion: Per EIA-576 test



Electrical Diagram

Table with 6 columns: DIM, INCHES (MIN, MAX), MM (MIN, MAX), and NOTE. Rows A through K provide specific dimension values.

# MLESD12A-1206A4

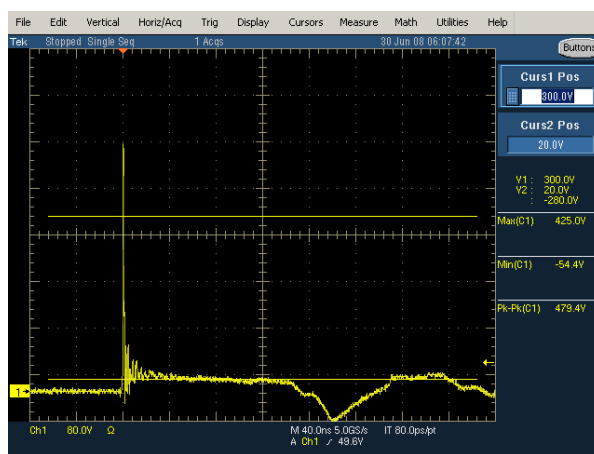
## Electrical Characteristics

Electrical Characteristics						
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Continuous operating voltage	$V_{DC}$	---	---	---	12	V
Trigger voltage	$V_T$	IEC61000-4-2 8KV contact discharge	---	300	---	V
Clamping voltage	$V_C$	IEC61000-4-2 8KV contact discharge	---	20	---	V
Leakage current	$I_L$	12V $V_{DC}$	---	0.10	10	nA
Capacitance	$C_P$	VR = 0V, f = 1MHz	---	0.15	0.3	pF
Operating Temperature	---	---	-40	---	90	°C
Storage Temperature	---	---	-55	---	150	°C
ESD pulse withstand	Pulses	IEC61000-4-2 8KV contact discharge	2000	---	---	---

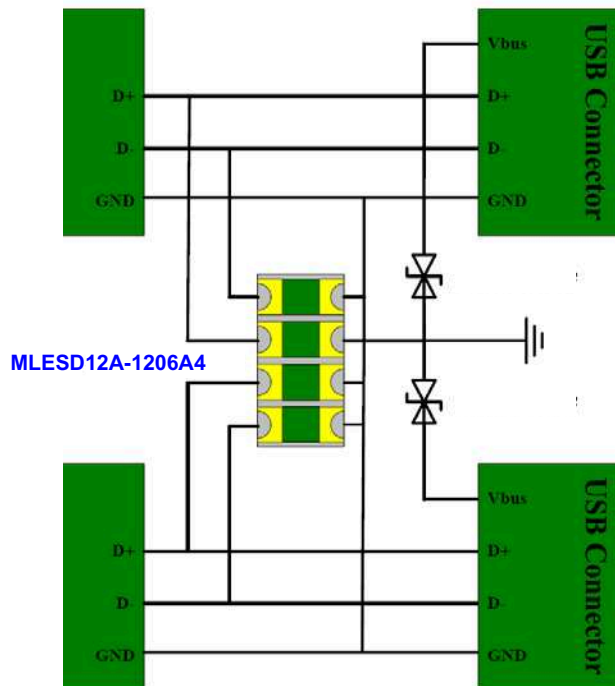
**Notes:**

1, Trigger and clamping voltage measure per IEC 61000-4-2, 8KV direct discharge method

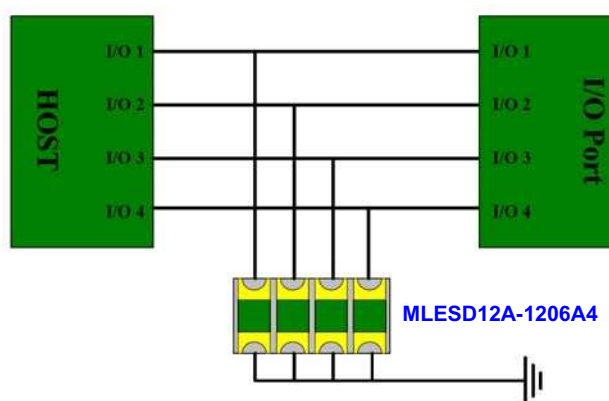
### Typical MLESD clamping for +8KV pulse per IEC61000-4-2



## Design Recommendations for Dual USB2.0



## Design Recommendations for I/O Port





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## Ordering Information

Device (Part Number)-TP	Packing Tape&Reel;3Kpcs/Reel
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