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

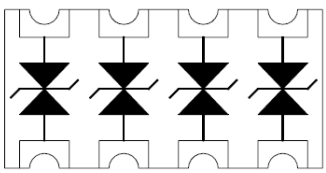
Application

- 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.

Environmental Specifications

- Operation temperature: -40~90℃
- Moisture Resistance, Steady state: MIL-STD-833,Method 1004.7, 85% RH,85℃,1000hrs
- Thermal Shock: MIL-STD-202,Method 107G,-55℃ to150℃,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℃, 3 solutions(H_2O, detergent solution, deluxer)
- Solder leach resistance and terminal adhesion: Per EIA-576 test



Electrical Diagram

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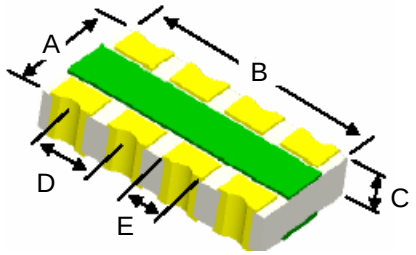
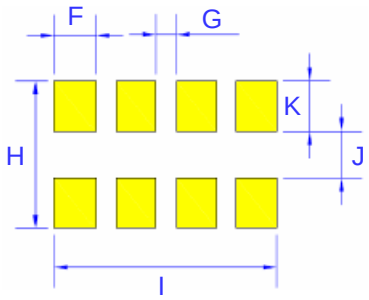


Suggested Solder Pad Layout



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.059	.067	1.50	1.70	
B	.138	.147	3.52	3.72	
C	.013	.017	0.33	0.43	
D	.033	.041	0.83	1.03	
E	.020	.025	0.52	0.62	
F	.021	.026	0.55	0.65	
G	.010	.014	0.25	0.35	
H	.082	.091	2.10	2.30	
I	.126	.134	3.20	3.40	
J	.025	.030	0.65	0.75	
K	.027	.032	0.70	0.80	

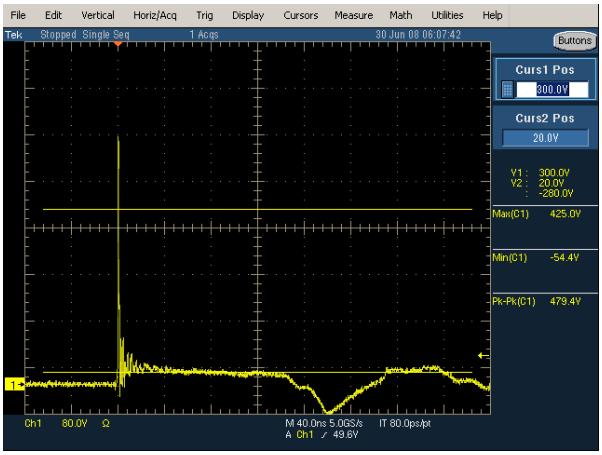
Electrical Characteristics

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	℃
Storage Temperature	---	---	-55	---	150	℃
ESD pulse withstand	Pulses	IEC61000-4-2 8KV contact discharge	2000	---	---	---

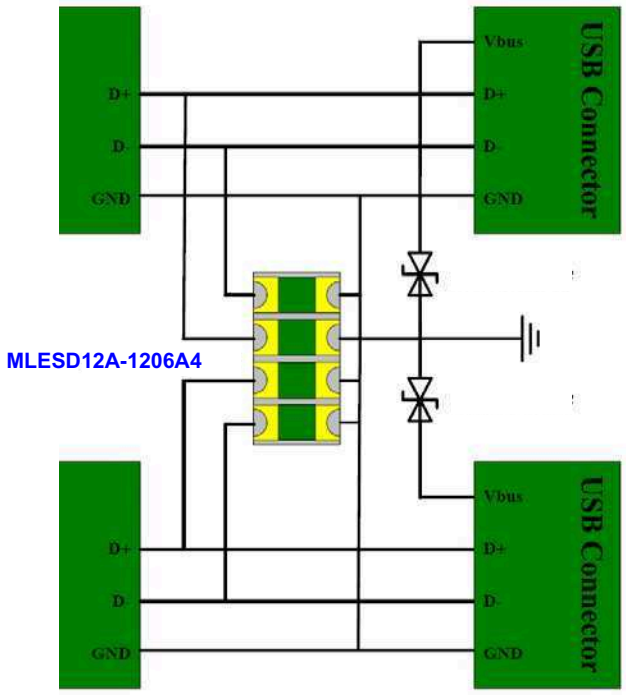
Notes:

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

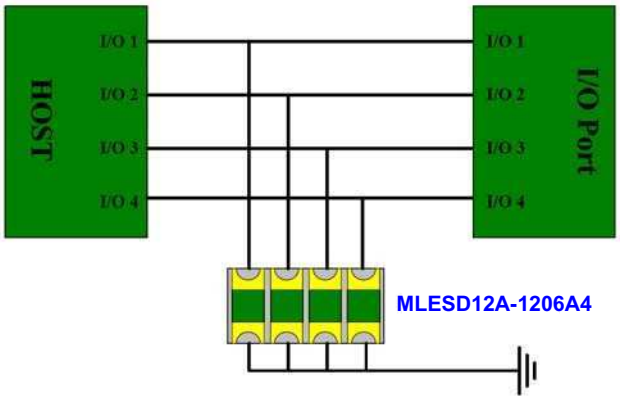
Typical MLESD clamping for +8KV pulse per IEC61000-4-2



Design Recommendations for Dual USB2.0



Design Recommendations for I/O Port



Ordering Information

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