



Micro Commercial Components



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MLESD24B-0603

Features

- ESD protection for high speed data lines to IEC61000-4-2 ESD contact discharge 8KV, max 15KV
IEC61000-4-2 ESD air discharge 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

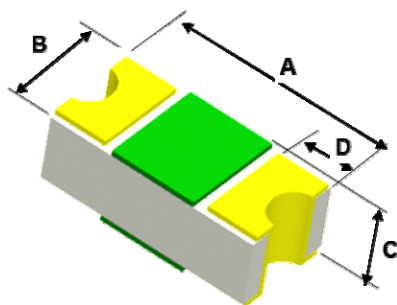
* Caution: This component is designed for signal line protection only, not intended to be used under bias, not for application with a power line.

Environmental Specifications

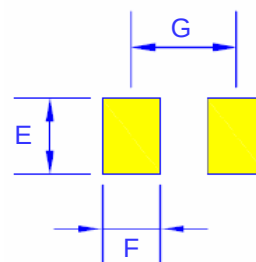
- Operation temperature: -40~90°C
- Moisture Resistance, Steady state: MIL-STD-833, Method 1004.7, 85% RH, 85°C, 1000hrs
- Thermal Shock: MIL-STD-202, Method 107G, -55°C to 150°C, 30 min cycle, 10 cycles.
- Vibration: MIL-STD-202F, Method 201A, (10 to 55 to 10HZ, 1 min. cycle, 2hrs each in X-Y-Z)
- Chemical Resistance: ASTM D-543, 4hrs @40°C, 3 solutions (H₂O, detergent solution, deluxer)
- Solder leach resistance and terminal adhesion: Per EIA-576 test

Multilayer Polymer ESD Suppressor

0603



Suggested Solder
Pad Layout



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.057	.069	1.45	1.75	
B	.027	.038	0.70	0.95	
C	.011	.019	0.27	0.47	
D	.008	.020	0.20	0.50	
E	.035	.040	0.90	1.00	
F	.023	.028	0.60	0.70	
G	.051	.056	1.30	1.40	

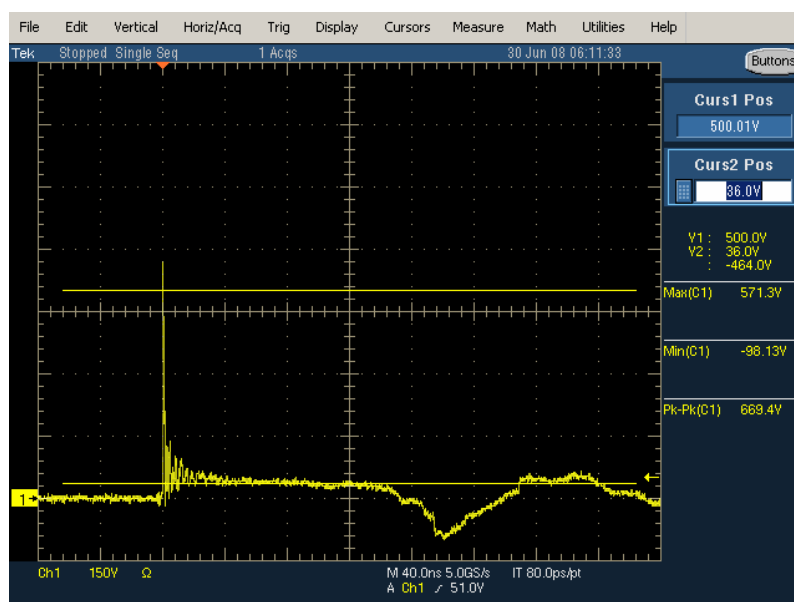
Electrical Characteristics

Electrical Characteristics						
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Continuous operating voltage	V_{DC}	---	---	---	24	V
Trigger voltage	V_T	IEC61000-4-2 8KV contact discharge	---	500	---	V
Clamping voltage	V_C	EC61000-4-2 8KV contact discharge	---	36	---	V
Leakage current	I_L	24V V_{DC}	---	0.20	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	EC61000-4-2 8KV contact discharge	2000	---	---	---

Notes:

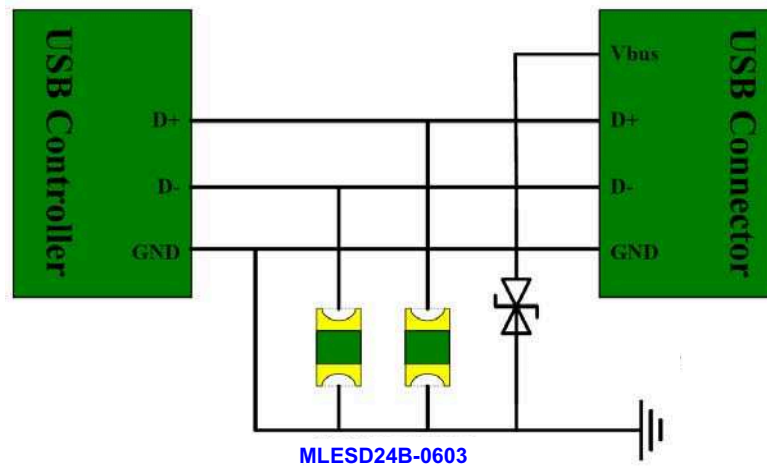
1, Trigger and clamping voltage measure per IEC 61000-4-2, 8KV direct discharge method

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



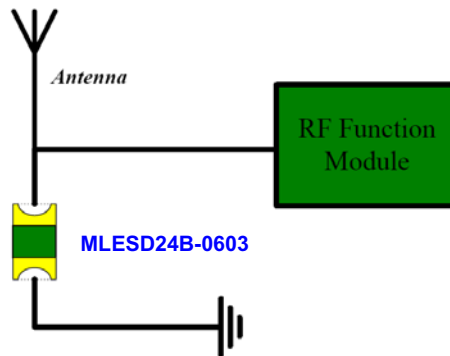
Design Recommendations for USB2.0

For USB2.0 port



Design Recommendations for Antenna

For antenna line



Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;5Kpcs/Reel

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