

Surface Mount ESD Suppressors

Surface Mount ESD Suppressor Array, EC1004L4V012AT



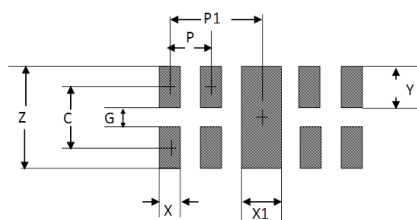
Application:

- Antenna circuit
- DVI
- USB2.0/3.0
- HDMI1.3/1.4
- IEEE-1394

Features:

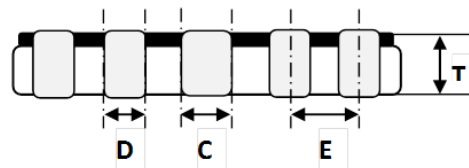
- Extremely quick response time ($<1\text{ns}$) present ideal ESD protection
- Extremely low capacitance (0.1pF typical)
- Extremely low leakage current ($0.01\mu\text{A}$)
- Zero signal distortion
- SMD (Surface Mount Device)
- Protection against ESD voltages and currents (IEC61000-4 -2 Level 4)
- Lead free, RoHS Compliance
- Operating temperature $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Storage temperature range $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$

Recommended Foot Print Dimensions:



Unit	Inch	mm
Y	0.024	0.6
G	0.008	0.2
Z	0.055	1.4
X	0.008	0.2
XL	0.012	0.3
P	0.020	0.5
P1	0.039	1.0
C	0.031	0.8

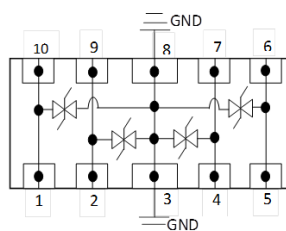
Shape and Dimensions:



Size Inch/(mm)	L	W	T	B	C	D	E
1004 (2510)	0.098 ± 0.004 (2.5 ± 0.1)	0.039 ± 0.004 (1.0 ± 0.1)	0.020 ± 0.004 (0.5 ± 0.1)	0.008 ± 0.004 (0.2 ± 0.1)	0.012 ± 0.002 (0.3 ± 0.05)	0.008 ± 0.002 (0.2 ± 0.05)	0.020 ± 0.002 (0.5 ± 0.05)

Circuit Symbol:

Pin	Description
1,2,4,5	Data Lines
6,7,9,10	Data Lines (No Internal Connection)
3,8	Ground



Packaging Information:

Package	Tape & Reel Quantity (piece)
1004 (2510)	5,000

Storage Conditions:

Storage Time: 12 months max
Storage Temperature : 5°C to 30°C
Relative Humidity: $< 60\% \text{ RH}$

Surface Mount ESD Suppressors

Surface Mount ESD Suppressor Array, EC1004L4V012AT

Electrical Characteristics (@25°C):

Characteristic	Value
IEC61000-4-2 Direct Discharge	Level 4 - 10 kV
IEC61000-4-2 Air Discharge	Level 4 - 15 kV
Trigger Voltage	300 V typical (measured per IEC61000-4-2, 8kV Direct Discharge)
Clamping Voltage	30 V typical (measured per IEC61000-4-2, 8kV Direct Discharge)
Response Time	Less than 1 ns
Capacitance @ f = 1MHz	0.1 pF typical
Leakage Current @ 12 V _{DC}	0.01 μ A max.
Rated Voltage	12 V _{DC} max.
ESD Pulse Withstand	1000 Pulses typical

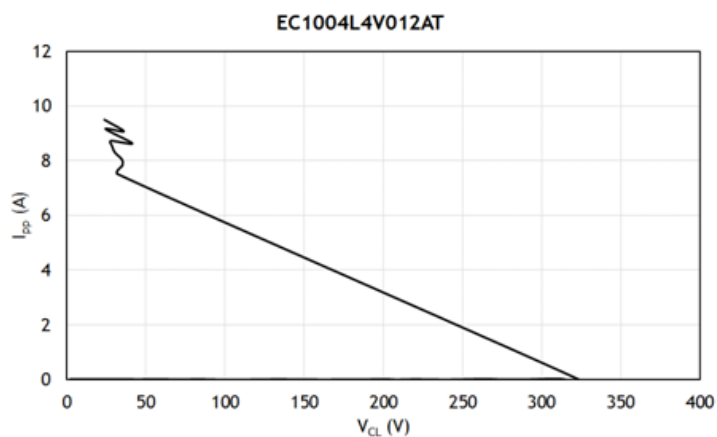


Fig. 1
Dynamic resistance with positive clamping voltage
 $t_p = 100$ ns; Transmission Line Pulse (TLP)

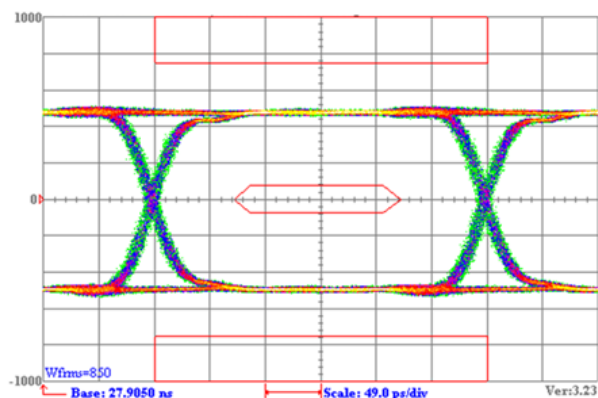


Fig. 1
Eye Diagram (HDMI 1.3)

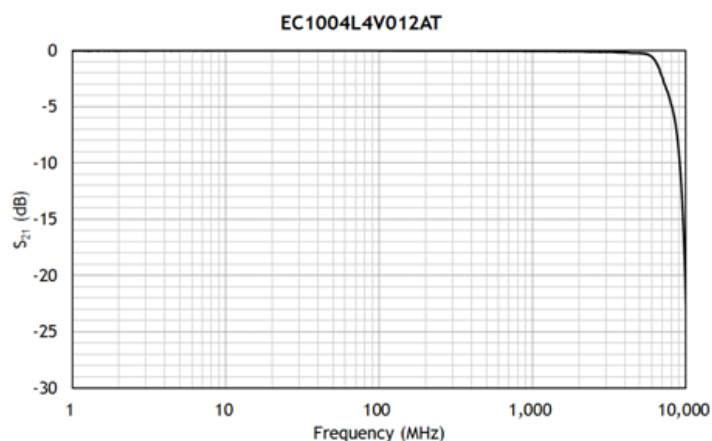
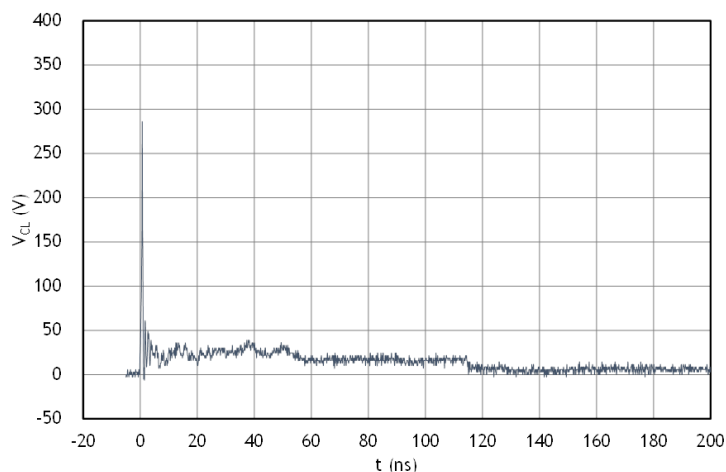


Fig. 3 Insertion loss; typical value

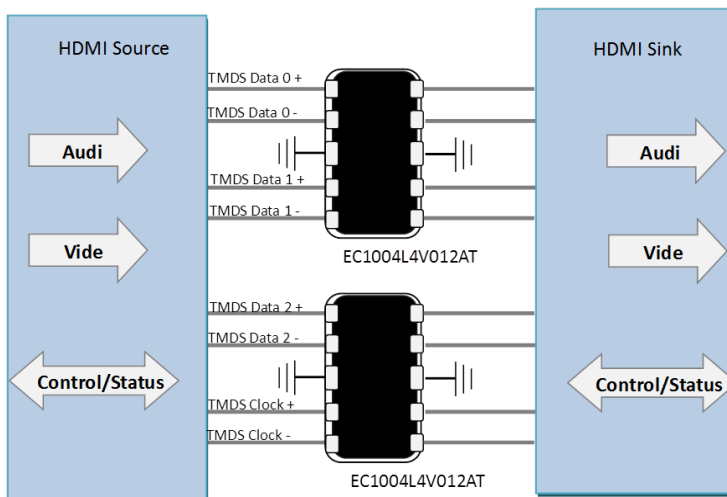
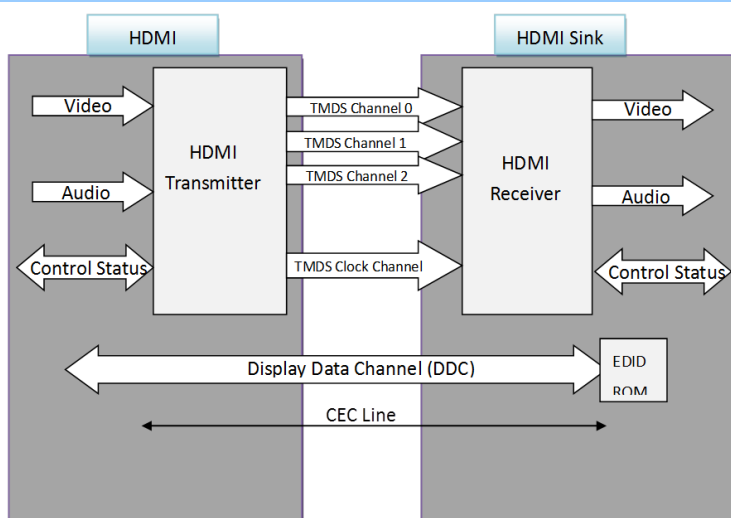
Surface Mount ESD Suppressors

Surface Mount ESD Suppressor Array, EC1004L4V012AT

Representative Test Waveform Per IEC61000-4-2 Level 4, 8kv Direct Discharge:



HDMI Interface Application:



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[AEM:](#)

[EC1004L4V012AT](#)