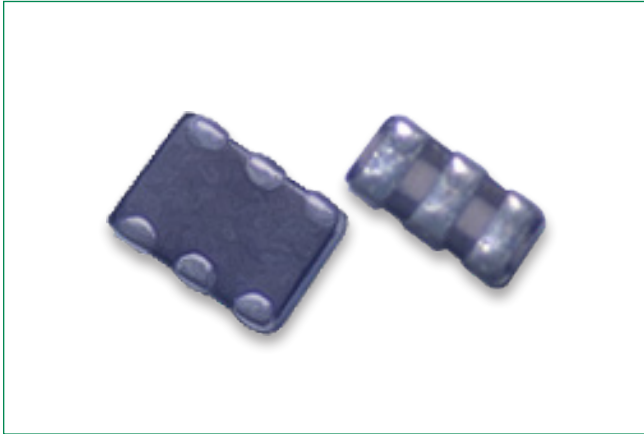


# PULSE-GUARD® ESD Suppressor

## Common Mode Noise Filter > LPF Series

**HF** **RoHS** **Pb**


### Description

Littelfuse LPF Series is a common mode noise filter that covers the specification of the requirements for high-speed differential serial interfaces, corresponding to new high-speed data transmission specification, like C-PHY.

### Features

- Effective for suppressing common mode noise and almost no effect for high-speed differential data line
- Ultra-small size as low as 0.90 X 0.68 X 0.45 mm
- Ceramic based SMD component
- Non-polarized product
- Conforming to RoHS directive

### Benefits

- Ultra-small size
- High voltage

### Application

- Mobile phone and tablet
- Portable/wearable devices
- Other consumer devices

### Additional Information



Resources

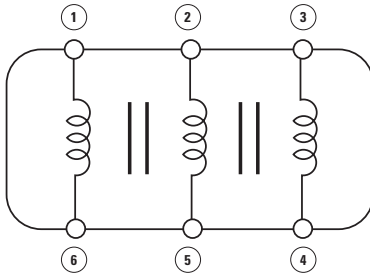


Accessories



Samples

### Functional Block Diagram



### Electrical Specifications

Part Number	Common Mode Impedance (Ω) @ 100 Mhz	Max DC Resistance (Ω) <sup>1</sup>	Minimum Insulation Resistance (MΩ) @5 V	Max Rated Current (mA) <sup>1</sup>
LPF090703A250TG	25 (+/-25%)	5	10	80
LPF090703A350TG	35 (+/-25%)	8	10	70

**Note:**

1. Test condition 25 °C±2 °C  
Operating Temperature: -40 °C ~ 85 °C

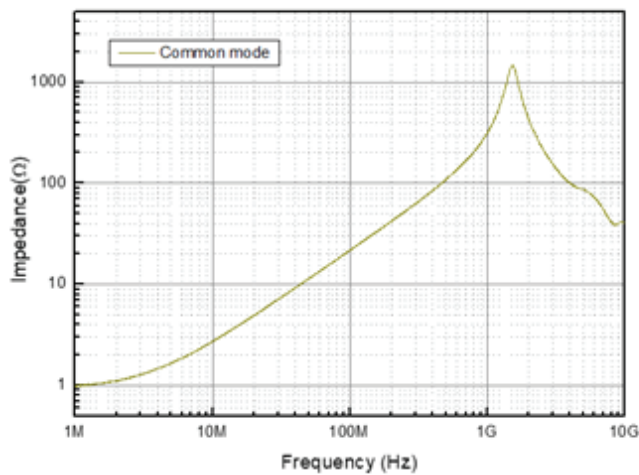
# PULSE-GUARD® ESD Suppressor

## Common Mode Noise Filter > LPF Series

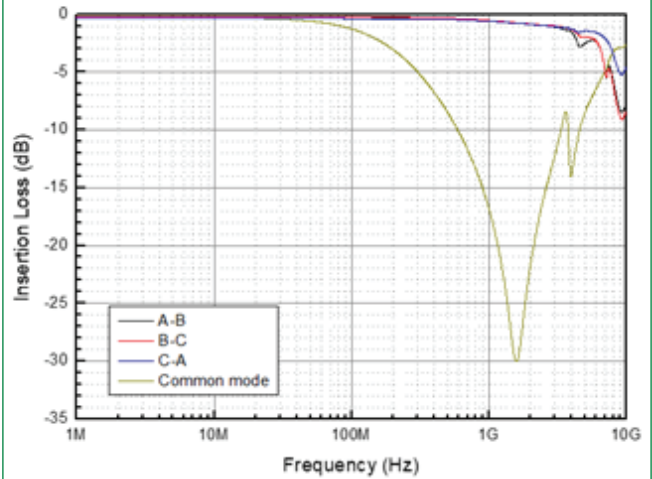
### Frequency Response

LPF090703A250TG

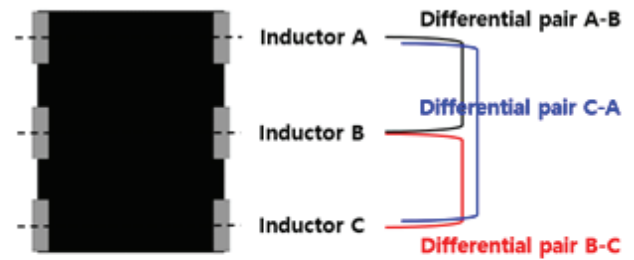
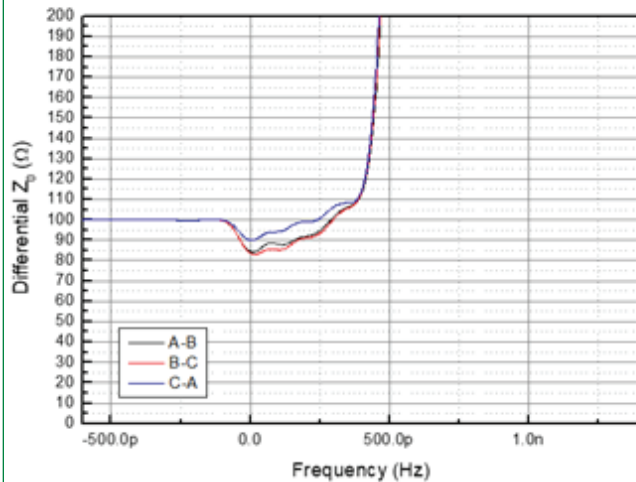
Impedance Curves



Transmission Characteristics (S-Parameter)



Differential Characteristic Impedance



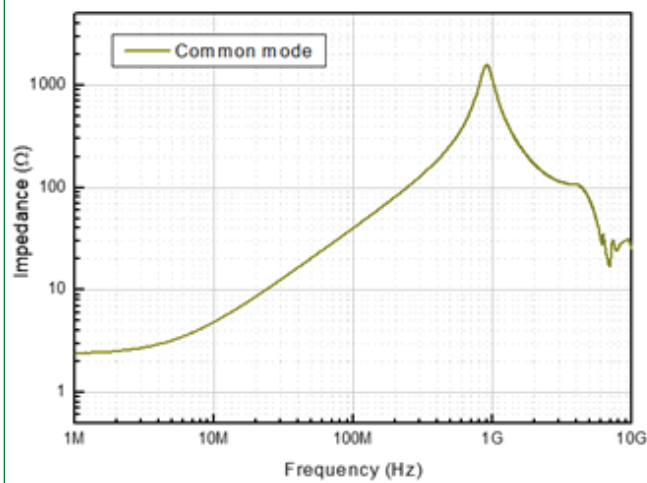
# PULSE-GUARD® ESD Suppressor

## Common Mode Noise Filter > LPF Series

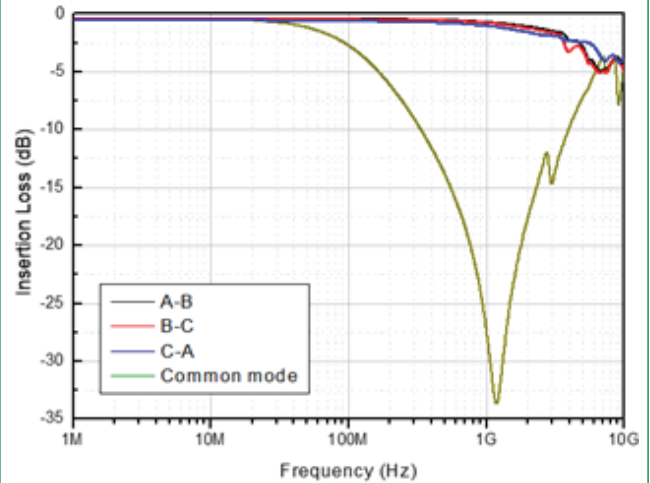
### Frequency Response

LPF090703A350TG

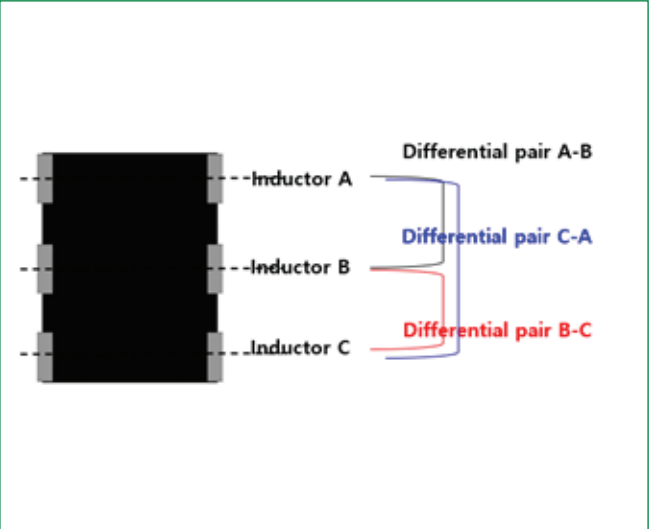
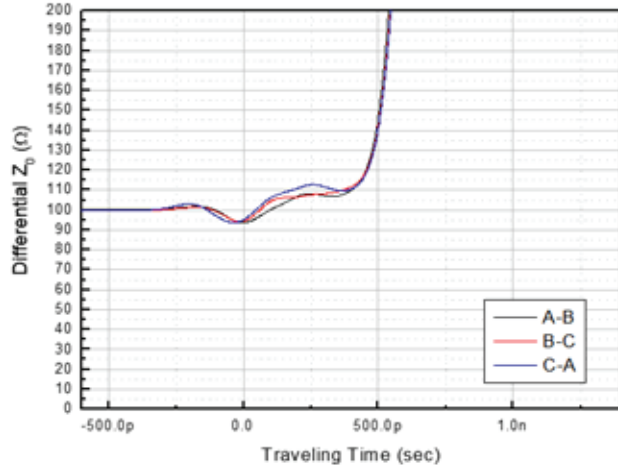
Impedance Curves



Transmission Characteristics (S-Parameter)



Differential Characteristic Impedance

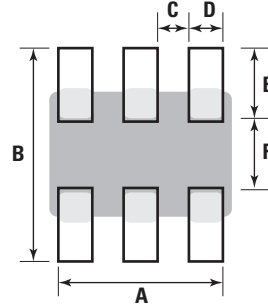
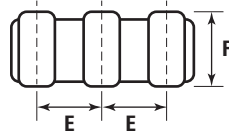
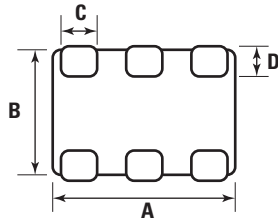


# PULSE-GUARD® ESD Suppressor

## Common Mode Noise Filter > LPF Series

### Dimension and Recommended Footprint

All dimensions in mm



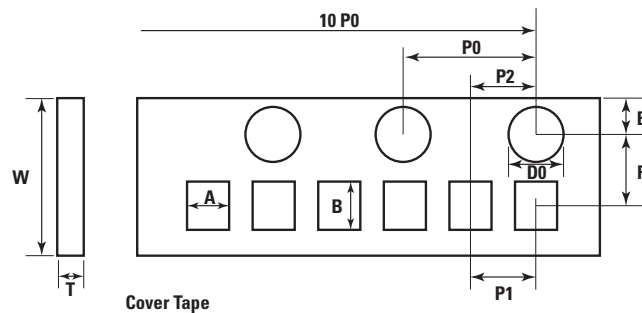
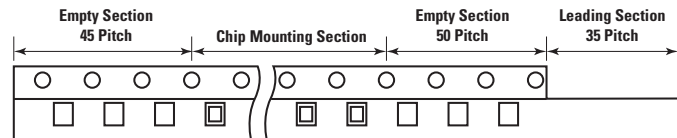
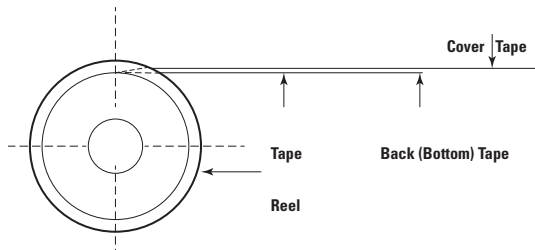
A	B	C	D	E	F
0.90	0.68	0.18	0.13	0.35	0.45

Tolerance +/- 0.05 mm

A	B	C	D	E	F
0.85	0.99	0.20	0.15	0.33	0.33

Tolerance +/- 0.05 mm

### Tape and Reel Information

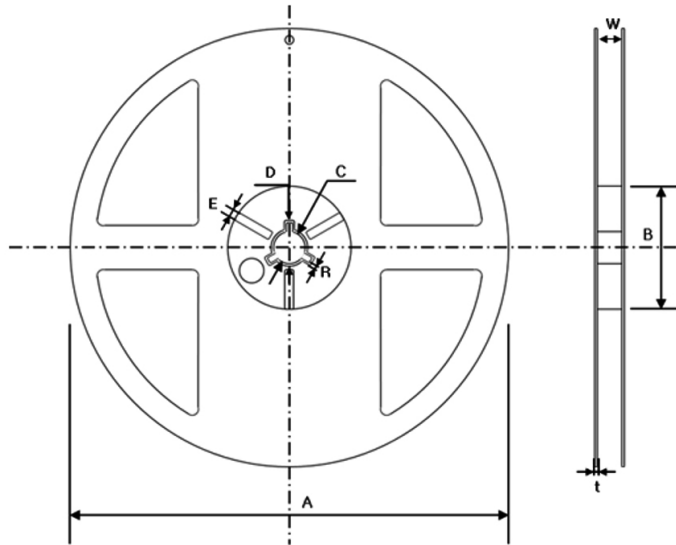


Symbol	A	B	E	F	D0	P1	P2	P0	10P0	W	T	Unit = mm
Dimension	0.81	1.12	1.75	3.50	1.55	2.00	2.00	4.00	40.00	8.00	0.58	
Tolerance	±0.03	±0.03	±0.05	±0.05	±0.03	±0.05	±0.05	±0.05	±0.10	±0.10	±0.04	

# PULSE-GUARD® ESD Suppressor

## Common Mode Noise Filter > LPF Series

### Recommended Land Pattern



1. Reel Materials : Polystyrene
2. Label
3. Taping
  - Standard Packing Quantity per Reel (Ø178)
  - Paper Tape: 10,000 pcs/reel

Unit = mm

Code	A	B	C	D	E	W	t	R
Dimension	Ø178±2	Min. Ø50	Ø13±0.5	Ø20±0.8	Ø3.0±0.5	10±1.5	1.3±0.2	1.0±0.2

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