

LPF Series

Common Mode Noise Filter

HF **RoHS** **Pb**

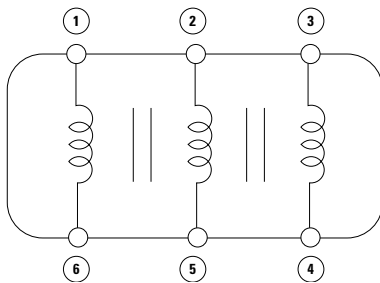

Description

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 & Benefits

- 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
- Ultra-small size
- High voltage

Functional Block Diagram



Applications

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

Electrical Specifications

| Part Number | Common Mode Impedance (Ω) @ 100 Mhz | Max DC Resistance (Ω) ¹ | Minimum Insulation Resistance (M Ω) @5 V | Max Rated Current (mA) ¹ |
|-----------------|--|---|--|-------------------------------------|
| 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

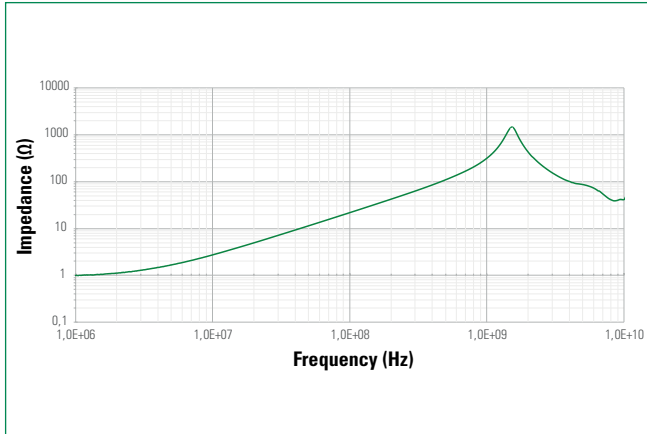
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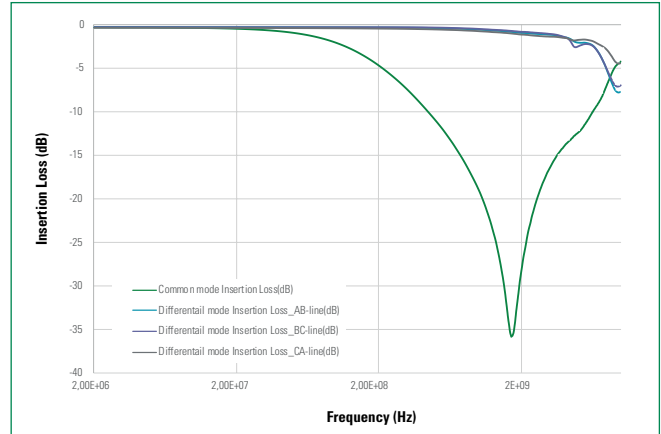
Frequency Response

LPF090703A250TG

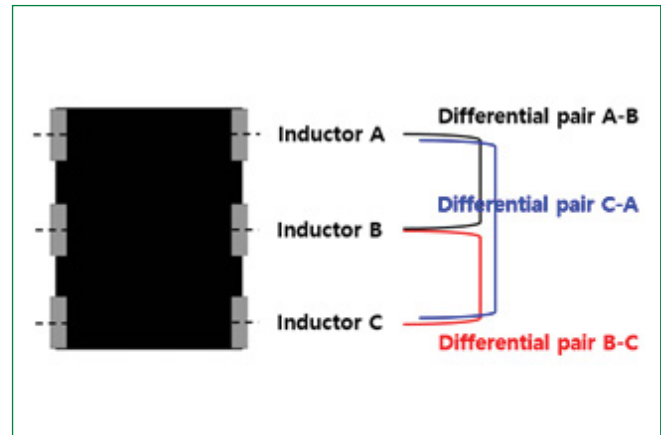
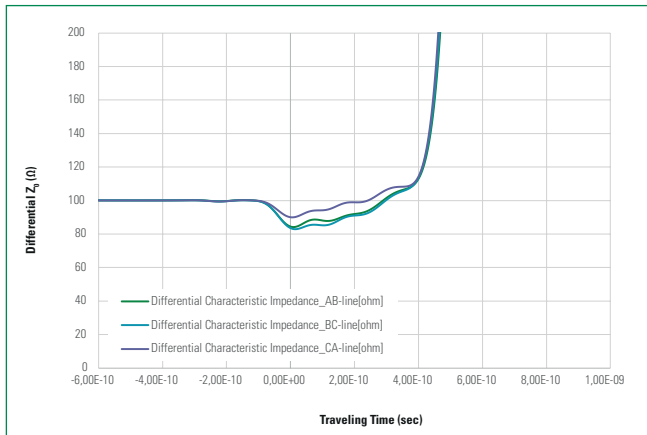
Impedance Curves



Transmission Characteristics (S-Parameter)



Differential Characteristic Impedance



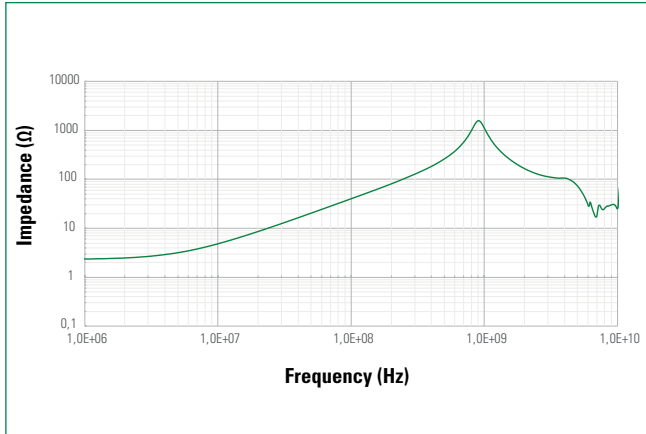
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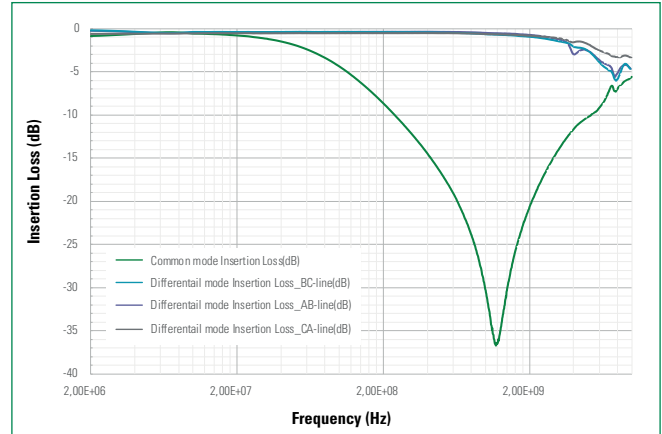
Frequency Response

LPF090703A350TG

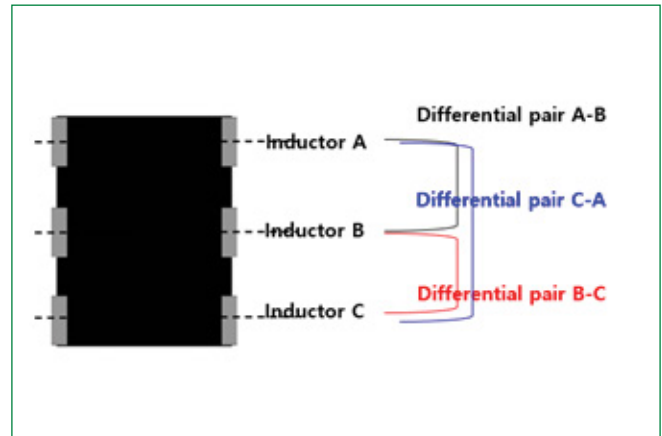
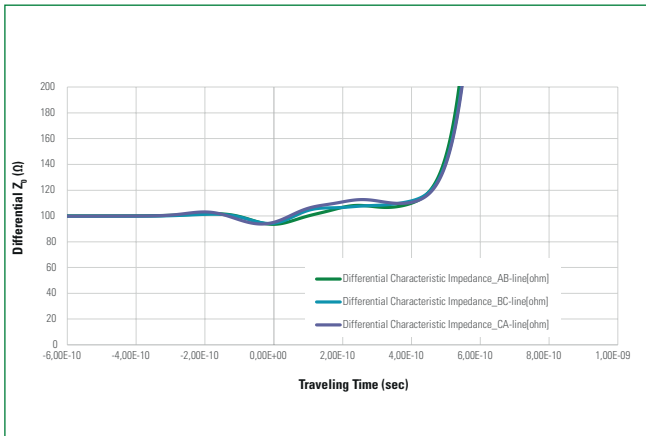
Impedance Curves



Transmission Characteristics (S-Parameter)



Differential Characteristic Impedance

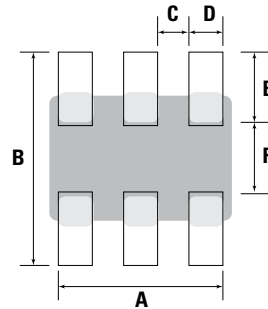
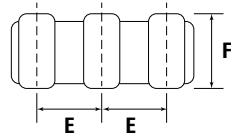
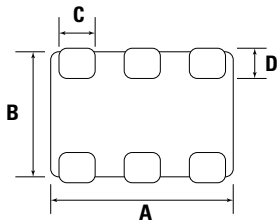


LPF Series

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Dimension and Recommended Footprint

All dimensions in mm



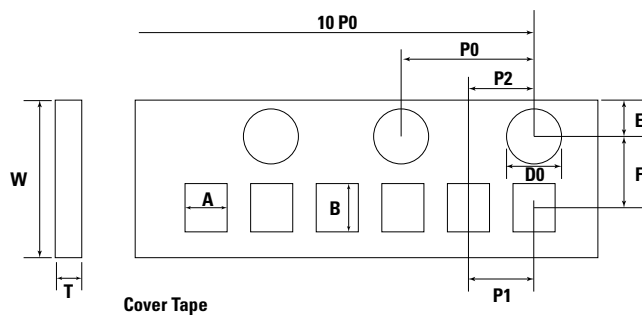
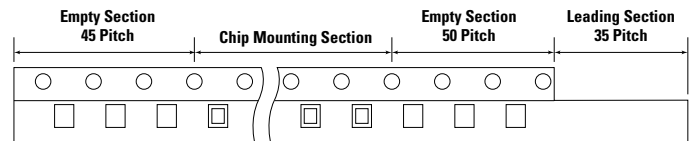
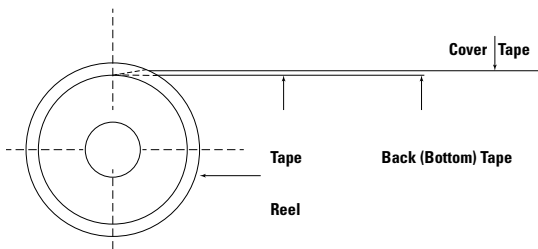
| A | B | C | D | E | F |
|------|------|------|------|------|------|
| 0.90 | 0.68 | 0.18 | 0.13 | 0.35 | 0.45 |

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



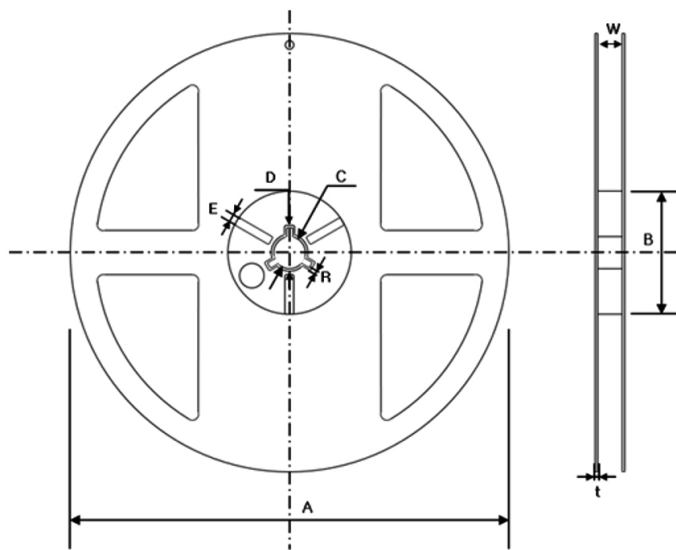
| Symbol | A | B | E | F | D0 | P1 | P2 | P0 | 10P0 | W | T |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Dimension | 0.81 | 1.12 | 1.75 | 3.50 | 1.55 | 2.00 | 2.00 | 4.00 | 40.00 | 8.00 | 0.58 |
| Tolerance | ±0.03 | ±0.03 | ±0.05 | ±0.05 |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

Unit = mm

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Recommended Land Pattern



Notes:

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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