**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

**Applications**

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

**Electrical Specifications**

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

*Note:*

1. Test condition 25°C±2°C
   Operating Temperature: -40°C ~ 85°C
LPF Series
Common Mode Noise Filter

Frequency Response
LPF090703A250TG

Impedance Curves
Transmission Characteristics (S-Parameter)

Differential Characteristic Impedance
LPF Series
Common Mode Noise Filter

Frequency Response
LPF090703A350TG

Impedance Curves
Transmission Characteristics (S-Parameter)

Differential Characteristic Impedance
**C-PHY Filter**

**Datasheet**

**LPF Series**

*Common Mode Noise Filter*

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**Dimension and Recommended Footprint**

All dimensions in mm

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**Tape and Reel Information**

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### Table: Dimension and Tolerance

<table>
<thead>
<tr>
<th>Symbol</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>D0</th>
<th>P1</th>
<th>P2</th>
<th>P0</th>
<th>10P0</th>
<th>W</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimension</strong></td>
<td>0.81</td>
<td>1.12</td>
<td>1.75</td>
<td>3.50</td>
<td>1.55</td>
<td>2.00</td>
<td>2.00</td>
<td>4.00</td>
<td>40.00</td>
<td>8.00</td>
<td>0.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tolerance</strong></td>
<td>±0.03</td>
<td>±0.03</td>
<td>±0.05</td>
<td>±0.05</td>
<td>±0.03</td>
<td>±0.05</td>
<td>±0.05</td>
<td>±0.05</td>
<td>±0.10</td>
<td>±0.10</td>
<td>±0.04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Specifications are subject to change without notice.
Revised: GD. 10/11/23
LPF Series
Common Mode Noise Filter

Recommended Land Pattern

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

<table>
<thead>
<tr>
<th>Code</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>W</th>
<th>t</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
<td>Ø178±2</td>
<td>Min. Ø50</td>
<td>Ø13±0.5</td>
<td>Ø20±0.8</td>
<td>Ø3.0±0.5</td>
<td>10±1.5</td>
<td>1.3±0.2</td>
<td>1.0±0.2</td>
</tr>
</tbody>
</table>

Unit = mm