Common Mode Chokes – PFD3215

- Miniature surface mount component, only 3.2 x 2.3 mm footprint and 1.5 mm tall
- Ideal for use in both power line and signal line applications
- Common- and differential-mode filtering in a single device
- Up to 490 MHz differential mode cutoff frequency

**Core material** Ferrite

**Environmental** RoHS compliant, halogen free

**Weight** 18 – 28 mg

**Terminations** Silver-palladium-platinum-glass frit

**Ambient temperature** –40°C to +85°C with Irms current

**Maximum Part temperature** +125°C (ambient + temp rise)

**Winding to winding isolation** 250 Vrms, one minute

**Storage temperature** Component: –40°C to +125°C.

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

- 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging**

- 2000/7” reel; 7500/13” reel Plastic tape: 8 mm wide, 0.20 mm thick, 4 mm pocket spacing, 1.21 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

### Specifications

<table>
<thead>
<tr>
<th>Partnumber</th>
<th>Common Mode peak impedance (kOhms)</th>
<th>Cutoff frequency (MHz)</th>
<th>Inductance (µH)</th>
<th>DCR max (Ohms)</th>
<th>Isolation (Vrms)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>min</td>
<td>nom</td>
<td></td>
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</tr>
<tr>
<td>PFD3215-391ME</td>
<td>1.02 @ 700 MHz</td>
<td>490</td>
<td>0.31</td>
<td>0.39</td>
<td>0.070</td>
<td>250</td>
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<tr>
<td>PFD3215-102ME</td>
<td>2.46 @ 420 MHz</td>
<td>240</td>
<td>0.80</td>
<td>1.0</td>
<td>0.123</td>
<td>250</td>
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<tr>
<td>PFD3215-182ME</td>
<td>4.24 @ 270 MHz</td>
<td>310</td>
<td>1.4</td>
<td>1.8</td>
<td>0.250</td>
<td>250</td>
</tr>
<tr>
<td>PFD3215-222ME</td>
<td>5.50 @ 220 MHz</td>
<td>300</td>
<td>1.7</td>
<td>2.2</td>
<td>0.265</td>
<td>250</td>
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<tr>
<td>PFD3215-332ME</td>
<td>6.51 @ 230 MHz</td>
<td>260</td>
<td>2.6</td>
<td>3.3</td>
<td>0.360</td>
<td>250</td>
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<tr>
<td>PFD3215-472ME</td>
<td>9.42 @ 180 MHz</td>
<td>190</td>
<td>3.7</td>
<td>4.7</td>
<td>0.450</td>
<td>250</td>
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<tr>
<td>PFD3215-682ME</td>
<td>13.06 @ 170 MHz</td>
<td>190</td>
<td>5.4</td>
<td>6.8</td>
<td>0.630</td>
<td>250</td>
</tr>
<tr>
<td>PFD3215-103ME</td>
<td>17.94 @ 130 MHz</td>
<td>170</td>
<td>8.0</td>
<td>10</td>
<td>1.25</td>
<td>250</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - PFD3215-103ME | C = 7” machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).
   - B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
   - D = 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).

2. Frequency at which the differential mode attenuation equals −3 dB
3. Inductance shown for each winding, measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR meter or equivalent.
4. DCR is for each winding.
5. Interwinding isolation (hipot) tested for one minute.
6. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
Common Mode Chokes – PFD3215 Series

Typical Attenuation (Ref: 50 Ohms)

Typical Impedance vs Frequency