Low Profile USB Common Mode Choke 0805

For noise suppression in super high speed signal lines: USB 3.x, HDMI 2.0, HDBaseT™, DisplayPort, DVI, etc.; and in high speed differential signal lines: USB 2.0, IEEE1394, LVDS, etc.

- Suitable for USB-type C specification 1.0
- Up to 6 GHz differential mode 3 dB cutoff frequency; up to 30 db common mode noise attenuation in GHz range

**Core material** Ferrite
**Environmental** RoHS compliant
**Terminations** Matte tin over nickel over silver-palladium-glass frit.
**Weight** 14.7 – 15.5 mg
**Ambient temperature** -40°C to +125°C with Irms current.
**Maximum part temperature** 140°C
**Storage temperature** Component: -40°C to +140°C.
**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**
- 0805USBF-902MR: 13″ machine-ready reel. EIA-481 embossed plastic tape (7500 parts per full reel).

<table>
<thead>
<tr>
<th>Part number</th>
<th>Common mode peak impedance (kOhms)</th>
<th>Cutoff frequency (GHz)</th>
<th>Common mode attenuation typ (dB)</th>
<th>Inductance^3 (nH)</th>
<th>DCR max^4 (Ohms)</th>
<th>Isolation^5 (Vrms)</th>
<th>Irms^6 (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0805USBF-421MR</td>
<td>&gt;0.14 @ &gt;3.0 GHz</td>
<td>6.6</td>
<td>4.6</td>
<td>28</td>
<td>0.11</td>
<td>250</td>
<td>500</td>
</tr>
<tr>
<td>0805USBF-901MR</td>
<td>&gt;0.30 @ &gt;3.0 GHz</td>
<td>5.8</td>
<td>9.1</td>
<td>11.8</td>
<td>60</td>
<td>0.14</td>
<td>250</td>
</tr>
<tr>
<td>0805USBF-172MR</td>
<td>0.52 @ 2.5 GHz</td>
<td>3.3</td>
<td>12.8</td>
<td>15.7</td>
<td>101</td>
<td>0.22</td>
<td>250</td>
</tr>
<tr>
<td>0805USBF-262MR</td>
<td>0.69 @ 2.0 GHz</td>
<td>2.4</td>
<td>15.4</td>
<td>18.5</td>
<td>165</td>
<td>0.235</td>
<td>250</td>
</tr>
<tr>
<td>0805USBF-372MR</td>
<td>0.93 @ 1.8 GHz</td>
<td>1.4</td>
<td>18.1</td>
<td>22.3</td>
<td>241</td>
<td>0.27</td>
<td>250</td>
</tr>
<tr>
<td>0805USBF-502MR</td>
<td>1.22 @ 1.5 GHz</td>
<td>0.93</td>
<td>21.6</td>
<td>25.2</td>
<td>315</td>
<td>0.32</td>
<td>250</td>
</tr>
<tr>
<td>0805USBF-672MR</td>
<td>1.65 @ 1.2 GHz</td>
<td>0.69</td>
<td>23.3</td>
<td>27.7</td>
<td>434</td>
<td>0.37</td>
<td>250</td>
</tr>
<tr>
<td>0805USBF-902MR</td>
<td>1.91 @ 1.0 GHz</td>
<td>0.73</td>
<td>25.4</td>
<td>30.0</td>
<td>560</td>
<td>0.63</td>
<td>250</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - **0805USBF-902MR C** = 7” machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).
   - **0805USBF-902MR D** = 13” machine-ready reel. EIA-481 embossed plastic tape (7500 parts per full reel).

2. Frequency at which the differential mode attenuation equals −3 dB
3. Inductance measured at 100 MHz using an Agilent/HP 4286A impedance analyzer and a Coilcraft SMD-A fixture.
4. DCR is specified per winding.
5. Winding to winding isolation (hipot) tested for one minute.
6. Current per winding that causes a 15°C rise from 25°C ambient.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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**Tape and reel packaging** -40°C to +80°C

**Frequency at which the differential mode attenuation equals −3 dB**

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USB 2.0, 3.x Common Mode Filter — 0805USBF

Typical Attenuation (Ref: 50 Ohms)

![Graph showing typical attenuation vs frequency]

Typical Impedance vs Frequency

![Graph showing typical impedance vs frequency]

Designer’s Kit C470 contains 10 each of all 0603USB, 0805USB, 0805USBF, 0805USBN and 1206USB parts.

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.