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.
Tape and reel packaging: −40°C to +80°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)
Packaging  2000/7” reel; 7500/13” reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.295 mm pocket depth
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

<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 (nH)</th>
<th>DCR max (Ohms)</th>
<th>Isolation (Vrms)</th>
<th>Irms (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0805USBF-421MR_</td>
<td>&gt;0.14 @ &gt;3.0 GHz</td>
<td>6.6 0.5</td>
<td>4.6 6.9</td>
<td>28</td>
<td>0.11</td>
<td>250 500</td>
<td></td>
</tr>
<tr>
<td>0805USBF-901MR_</td>
<td>&gt;0.30 @ &gt;3.0 GHz</td>
<td>5.8 2.1</td>
<td>9.1 11.8</td>
<td>60</td>
<td>0.14</td>
<td>250 500</td>
<td></td>
</tr>
<tr>
<td>0805USBF-172MR_</td>
<td>0.52 @ 2.5 GHz</td>
<td>3.3 4.0</td>
<td>12.8 15.7</td>
<td>101</td>
<td>0.22</td>
<td>250 500</td>
<td></td>
</tr>
<tr>
<td>0805USBF-262MR_</td>
<td>0.69 @ 2.0 GHz</td>
<td>2.4 5.7</td>
<td>15.4 18.5</td>
<td>165</td>
<td>0.235</td>
<td>250 500</td>
<td></td>
</tr>
<tr>
<td>0805USBF-372MR_</td>
<td>0.93 @ 1.8 GHz</td>
<td>1.4 5.8</td>
<td>18.1 22.3</td>
<td>241</td>
<td>0.27</td>
<td>250 500</td>
<td></td>
</tr>
<tr>
<td>0805USBF-502MR_</td>
<td>1.22 @ 1.5 GHz</td>
<td>0.93 11.2</td>
<td>21.6 25.2</td>
<td>315</td>
<td>0.32</td>
<td>250 500</td>
<td></td>
</tr>
<tr>
<td>0805USBF-672MR_</td>
<td>1.65 @ 1.2 GHz</td>
<td>0.69 11.3</td>
<td>23.3 27.7</td>
<td>434</td>
<td>0.37</td>
<td>250 450</td>
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<tr>
<td>0805USBF-902MR_</td>
<td>1.91 @ 1.0 GHz</td>
<td>0.73 12.6</td>
<td>25.4 30.0</td>
<td>560</td>
<td>0.63</td>
<td>250 350</td>
<td></td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

   0805USBF-902MR

   Packaging: C = 7” machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
   D = 13” machine-ready reel. EIA-481 embossed plastic tape (7500 parts per full reel).
   B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

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

Typical Attenuation (Ref: 50 Ohms)

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.