## Ultra Low Profile Common Mode Choke 0805

### Features
- 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.
- Up to 6.5 GHz differential mode 3 dB cutoff frequency; up to 35 dB common mode noise attenuation in GHz range
- Lowest profile 0805 common mode choke – 0.93 mm tall

### Core material
- Ferrite

### Environmental
- RoHS compliant

### Terminations
- Matte tin over nickel over silver-palladium-glass frit.

### Weight
- 9.0 – 13.0 mg

### Ambient temperature
- –40°C to +125°C with I_{rms} 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)

### Failures in Time (FIT) / Mean Time Between Failures (MTBF)
- 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

### Package
- 2000/7″ reel; 7500/13″ reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.07 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>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>I_{rms} (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0805USBN-121MR_</td>
<td>0.14 @ 2.6 GHz</td>
<td>6.4</td>
<td>0.04</td>
<td>0.5</td>
<td>5.0</td>
<td>14</td>
<td>0.11</td>
</tr>
<tr>
<td>0805USBN-271MR_</td>
<td>0.30 @ 2.5 GHz</td>
<td>5.1</td>
<td>0.09</td>
<td>1.4</td>
<td>10.0</td>
<td>30</td>
<td>0.14</td>
</tr>
<tr>
<td>0805USBN-481MR_</td>
<td>0.60 @ 3.0 GHz</td>
<td>3.4</td>
<td>0.13</td>
<td>3.5</td>
<td>14.7</td>
<td>53</td>
<td>0.22</td>
</tr>
<tr>
<td>0805USBN-701MR_</td>
<td>0.79 @ 2.0 GHz</td>
<td>3.4</td>
<td>0.18</td>
<td>5.3</td>
<td>17.4</td>
<td>77</td>
<td>0.235</td>
</tr>
<tr>
<td>0805USBN-941MR_</td>
<td>1.28 @ 1.4 GHz</td>
<td>3.5</td>
<td>0.30</td>
<td>7.6</td>
<td>21.1</td>
<td>105</td>
<td>0.27</td>
</tr>
<tr>
<td>0805USBN-132MR_</td>
<td>1.61 @ 1.2 GHz</td>
<td>2.3</td>
<td>0.50</td>
<td>10.0</td>
<td>24.4</td>
<td>140</td>
<td>0.32</td>
</tr>
<tr>
<td>0805USBN-162MR_</td>
<td>2.00 @ 1.0 GHz</td>
<td>1.5</td>
<td>0.78</td>
<td>12.1</td>
<td>27.3</td>
<td>182</td>
<td>0.37</td>
</tr>
<tr>
<td>0805USBN-222MR_</td>
<td>2.47 @ 0.96 GHz</td>
<td>1.7</td>
<td>1.14</td>
<td>14.0</td>
<td>30.0</td>
<td>252</td>
<td>0.63</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code: 0805USBN-222MR

Packaging:
- 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 (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.

Dimensions are in inches/mm
Ultra Low Profile Common Mode Choke — 0805

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 website for latest information.