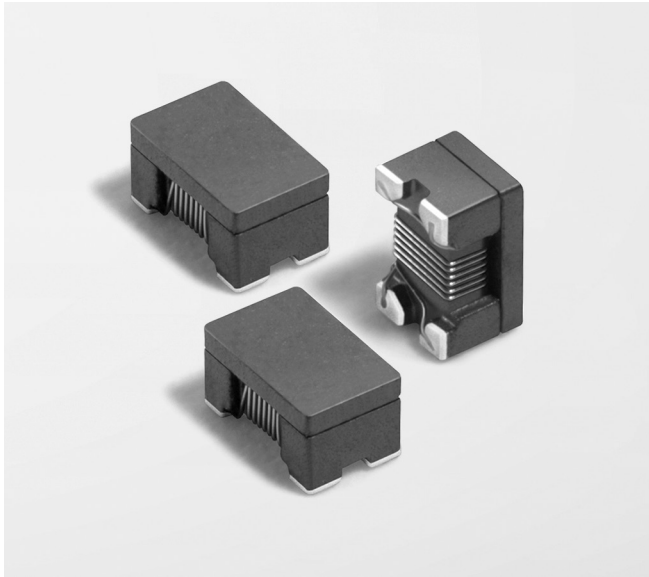




# Low Profile USB Common Mode Choke 0805



- 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)

**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, 0.23 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](#).

Part number <sup>1</sup>	Common mode peak impedance (kOhms)	Cutoff frequency <sup>2</sup> (GHz)	Common mode attenuation typ (dB)			Inductance <sup>3</sup> min (nH)	DCR max <sup>4</sup> (Ohms)	Isolation <sup>5</sup> (Vrms)	Irms <sup>6</sup> (mA)
			10 MHz	100 MHz	500 MHz				
0805USBF-421MR_	>0.14 @ >3.0 GHz	6.6	0.5	4.6	6.9	28	0.11	250	500
0805USBF-901MR_	>0.30 @ >3.0 GHz	5.8	2.1	9.1	11.8	60	0.14	250	500
0805USBF-172MR_	0.52 @ 2.5 GHz	3.3	4.0	12.8	15.7	101	0.22	250	500
0805USBF-262MR_	0.69 @ 2.0 GHz	2.4	5.7	15.4	18.5	165	0.235	250	500
0805USBF-372MR_	0.93 @ 1.8 GHz	1.4	5.8	18.1	22.3	241	0.27	250	500
0805USBF-502MR_	1.22 @ 1.5 GHz	0.93	11.2	21.6	25.2	315	0.32	250	500
0805USBF-672MR_	1.65 @ 1.2 GHz	0.69	11.3	23.3	27.7	434	0.37	250	450
0805USBF-902MR_	1.91 @ 1.0 GHz	0.73	12.6	25.4	30.0	560	0.63	250	350

1. When ordering, please specify **packaging** code:

**0805USBF-902MRC**

**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.

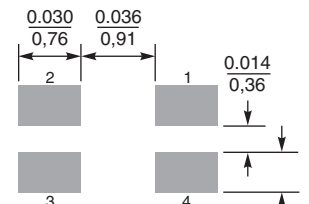
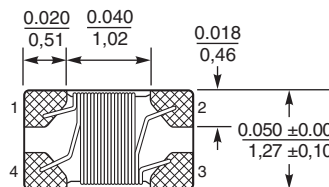
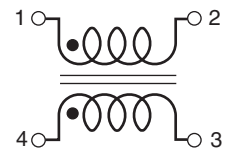
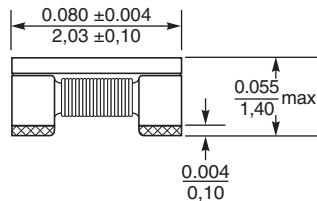
4. DCR is specified per winding.

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  $\frac{\text{inches}}{\text{mm}}$

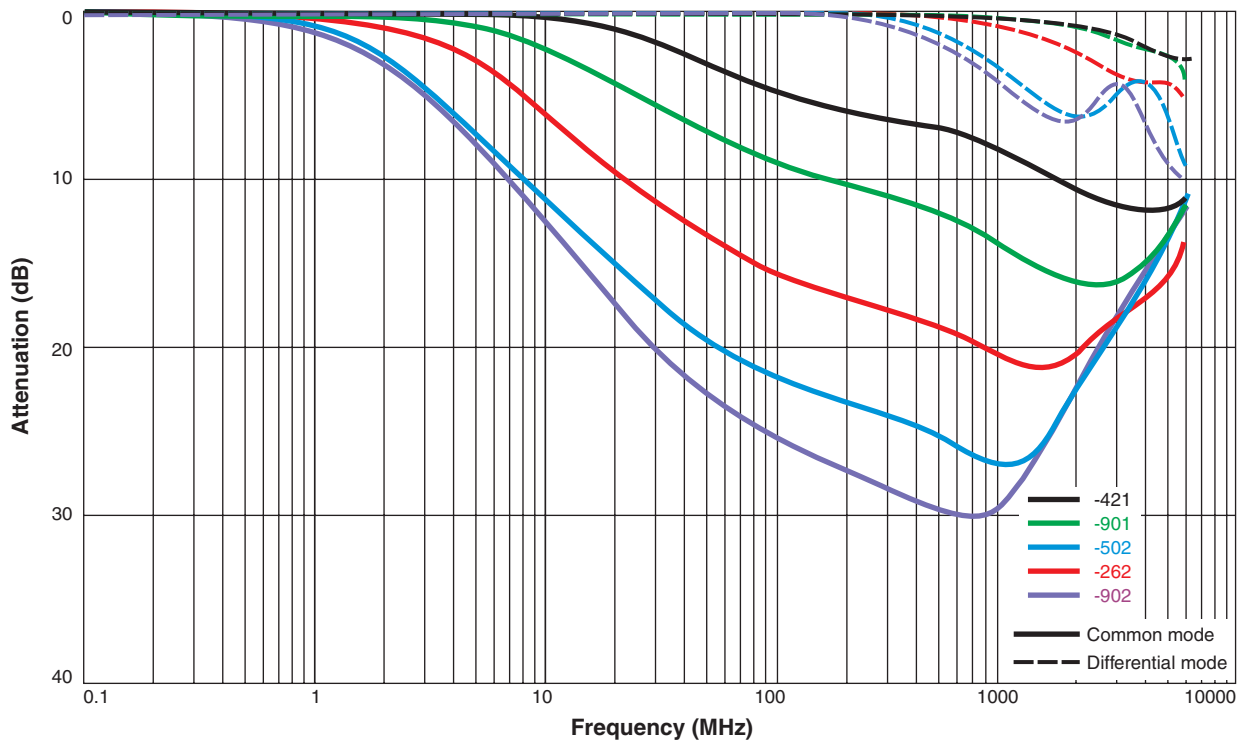
**Recommended Land Pattern**

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

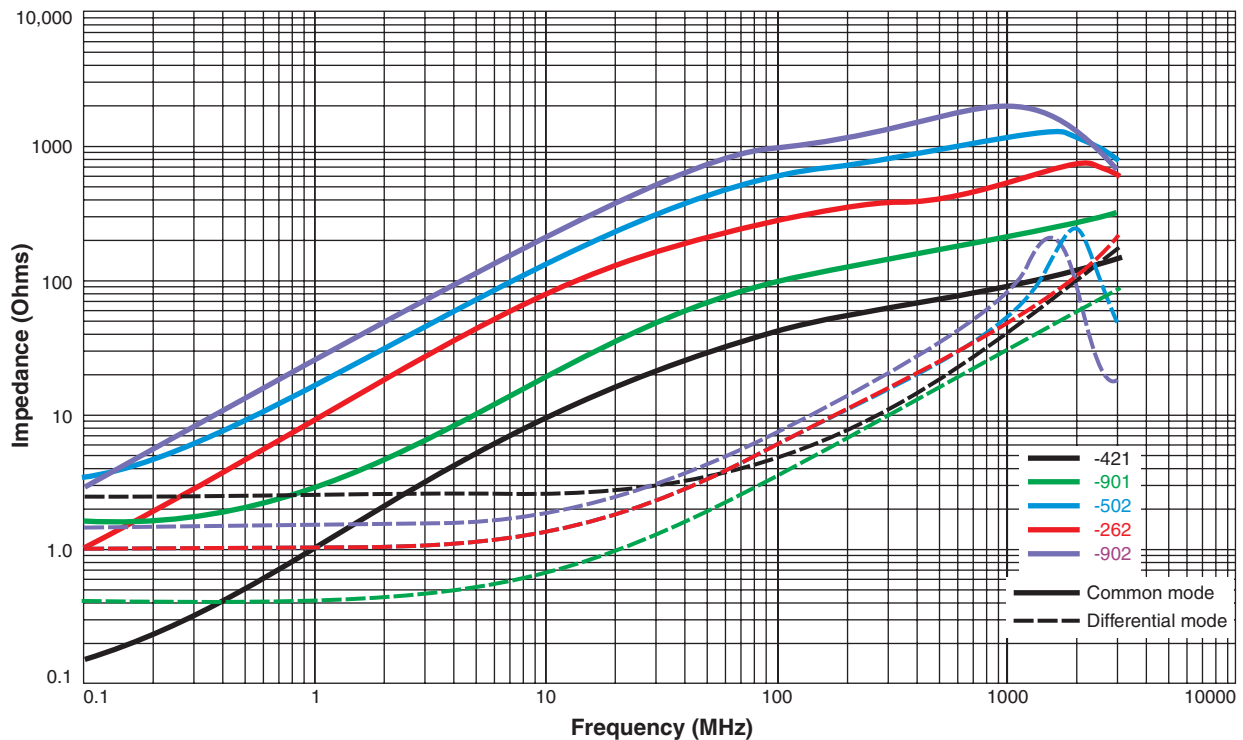


# USB 2.0, 3.x Common Mode Filter – 0805USBF

Typical Attenuation (Ref: 50 Ohms)



## Typical Impedance vs Frequency



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