

# USB 2.0 Common Mode Choke 0805



Eliminates virtually all common mode noise in high-speed, differential mode signal transmission applications such as USB 2.0, IEEE1394, HDMI and LVDS. Most provide >25 dB common mode attenuation and >100 ohms impedance.

**Designer's Kit C384** contains 10 each of all 0603USB, 0805USB and 1206USB parts

**Core material** Ferrite

**Environmental** RoHS compliant, halogen free

**Terminations** Gold over nickel over silver-palladium-glass frit.

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

**Storage temperature** Component: -40°C to +85°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

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf

Part number <sup>1</sup>	Common mode impedance typ (Ohms)			Common mode attenuation typ (dB)			Inductance <sup>2</sup> min (nH)	DCR max <sup>3</sup> (Ohms)	Isolation (Vrms)	Irms <sup>4</sup> (mA)
	10 MHz	100 MHz	500 MHz	10 MHz	100 MHz	500 MHz				
0805USB-421ML_	14	42	70	1.1	2.3	8.4	23	0.12	250	500
0805USB-901ML_	28	90	154	1.4	4.2	16.9	47	0.17	250	500
0805USB-172ML_	57	170	303	2.3	6.7	22.0	84	0.25	250	500
0805USB-262ML_	85	260	435	3.0	8.6	27.8	147	0.26	250	500
0805USB-372ML_	118	370	641	4.5	11.9	34.3	189	0.32	250	500
0805USB-502ML_	148	500	945	4.9	14.5	31.3	273	0.37	250	500
0805USB-672ML_	246	670	1231	8.4	16.6	30.0	322	0.45	250	500
0805USB-902ML_	294	900	1715	8.7	18.7	30.5	413	0.65	250	400

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

**0805USB-902MLC**

**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. Inductance measured at 100 MHz using an Agilent/HP 4286A impedance analyzer and a Coilcraft SMD-A fixture.

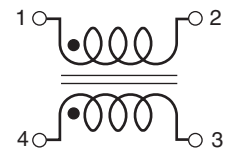
3. DCR is specified per winding.

4. Current per winding that causes a 20°C rise from 25°C ambient.

5. Operating temperature range -40°C to 85°C.

6. 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**

**Weight** 14.9 – 15.2 mg

**Packaging** 2000/7" reel; 7500/13" reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.14 mm pocket depth



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 306-1 Revised 01/18/12

© Coilcraft Inc. 2013

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.



# USB 2.0 Common Mode Filter – 0805

Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 306-2 Revised 04/03/13  
 © Coilcraft Inc. 2013  
 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.