USB 2.0 Common Mode Choke 1206

- For common mode noise suppression in high speed differential signal lines: USB2.0, IEEE1394, LVDS, etc.
- Up to 2.7 GHz differential mode 3 dB cutoff frequency
- Up to 2.24 kOhms common mode peak impedance and 40 dB common mode noise attenuation

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

Maximum part temperature +105°C (ambient + temp rise)

Storage temperature Component: –40°C to +105°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 to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Part number[1]	Common mode peak impedance (kOhms)	Cutoff frequency[2] (GHz)	Common mode attenuation typ (dB) 10 MHz	100 MHz	500 MHz	Inductance[3] min (nH)	DCR max[4] (Ohms)	Isolation[5] (Vrms)	Irms[6] (mA)
1206USB-371ML_	0.21 @ 3.0 GHz	2.7	1.0	2.1	12.0	31	0.10	250	1000
1206USB-102ML_	0.36 @ 1.9 GHz	2.2	1.5	4.2	19.0	66	0.14	250	850
1206USB-172ML_	0.55 @ 1.5 GHz	2.1	2.3	6.8	26.0	107	0.18	250	700
1206USB-262ML_	0.76 @ 1.1 GHz	2.0	3.0	9.7	31.0	161	0.22	250	600
1206USB-372ML_	1.11 @ 1.1 GHz	1.2	4.7	12.0	33.0	226	0.26	250	600
1206USB-532ML_	1.45 @ 0.93 GHz	0.78	5.5	15.0	35.0	319	0.30	250	600
1206USB-672ML_	1.67 @ 0.81 GHz	0.75	7.3	16.5	33.0	412	0.34	250	500
1206USB-872ML_	1.78 @ 0.50 GHz	0.53	9.1	18.0	32.0	510	0.39	250	500
1206USB-113ML_	2.24 @ 0.66 GHz	0.51	10.2	21.0	31.0	623	0.44	250	500
1206USB-223ML_	3.36 @ 0.34 GHz	0.22	22.4	33.1	32.3	1040	0.85	250	120

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

1206USB-113MLC

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.

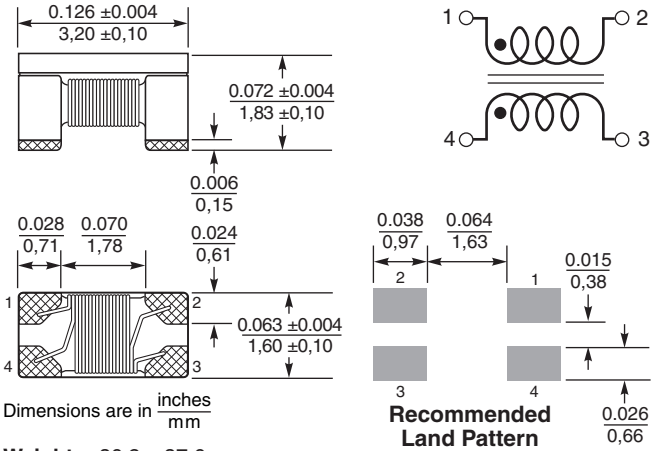
4. DCR is specified per winding.

5. Winding to winding isolation (hipot) tested for one minute.

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

7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



Weight: 36.2 – 37.6 mg

Packaging 2000/7″ reel; 7500/13″ reel Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.9 mm pocket depth

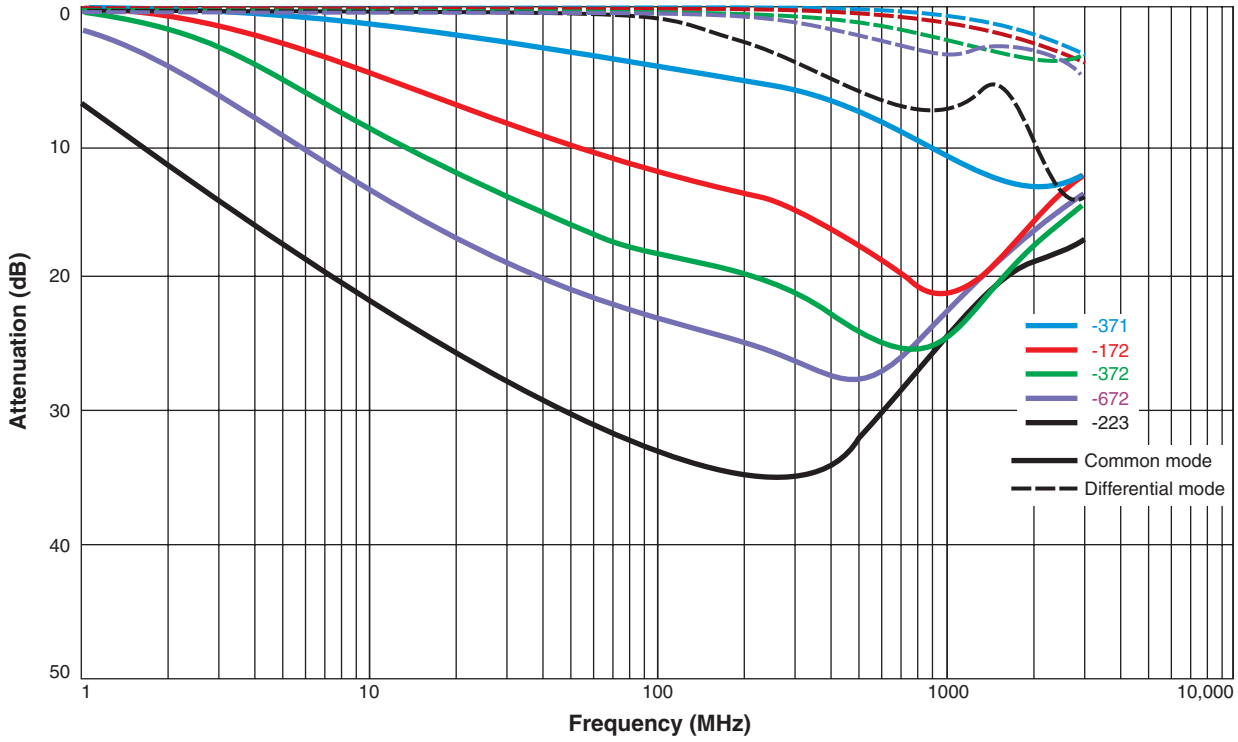
Coilcraft
www.coilcraft.com

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

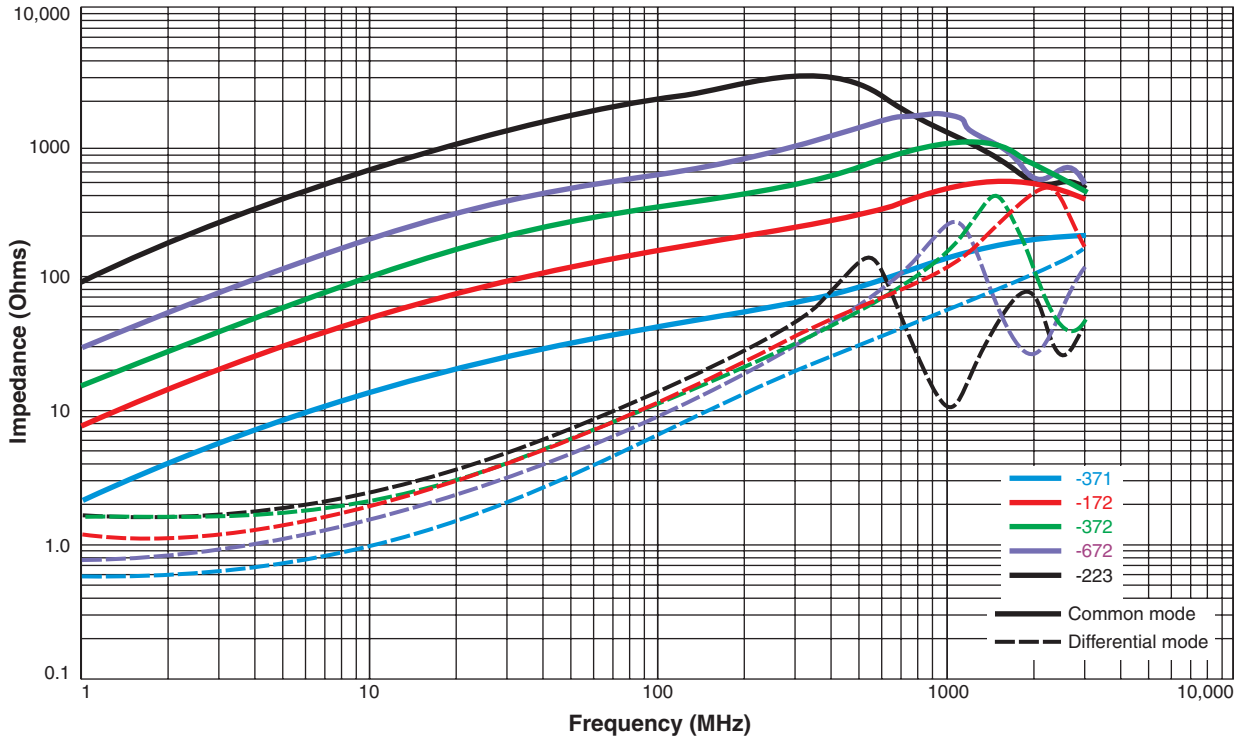
Document 386-1 Revised 09/12/17

USB 2.0 Common Mode Filter – 1206

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



Coilcraft
www.coilcraft.com

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 386-2 Revised 09/12/17