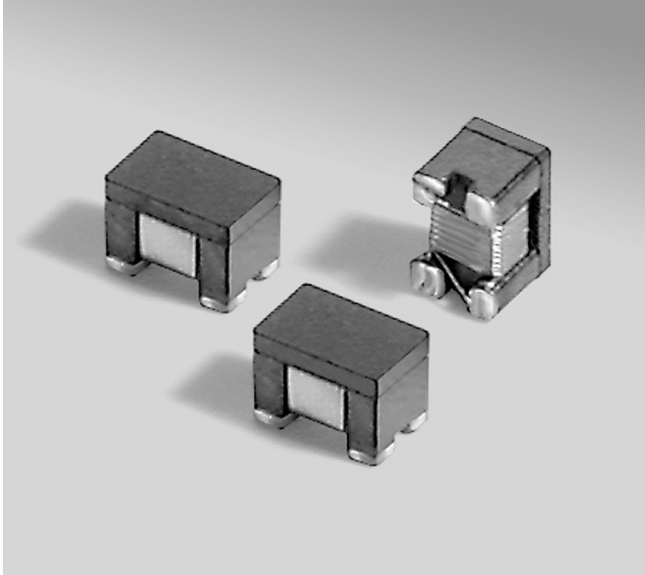


# USB 2.0 Common Mode Choke 0805



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.

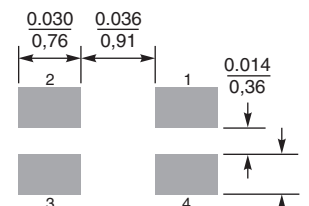
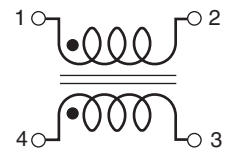
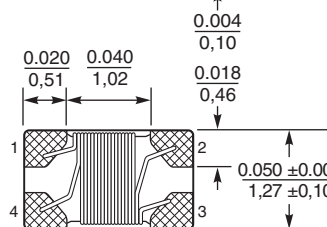
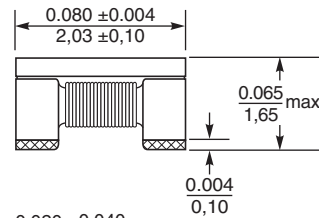
3. DCR is specified per winding.

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



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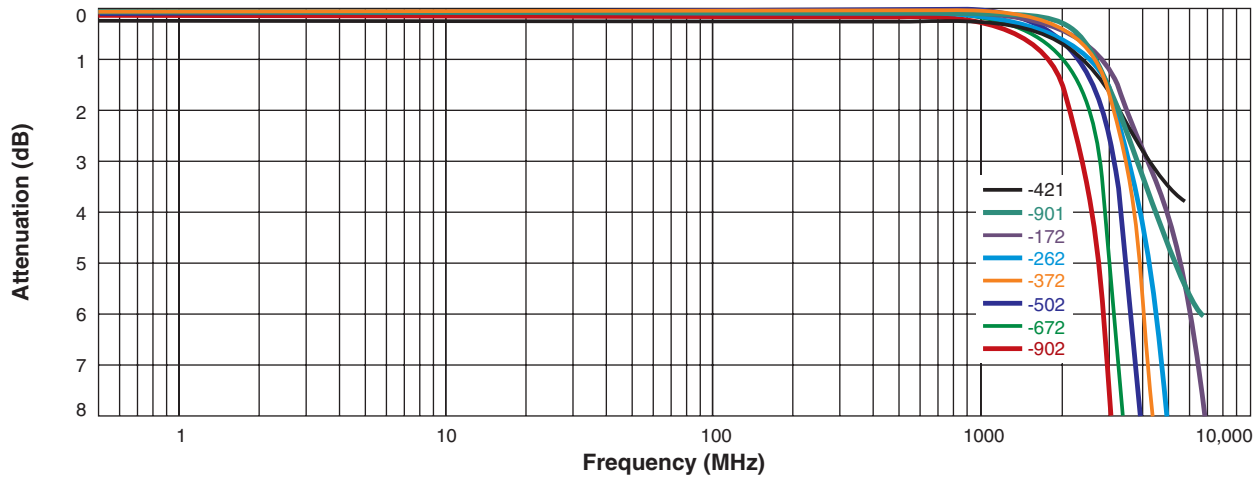
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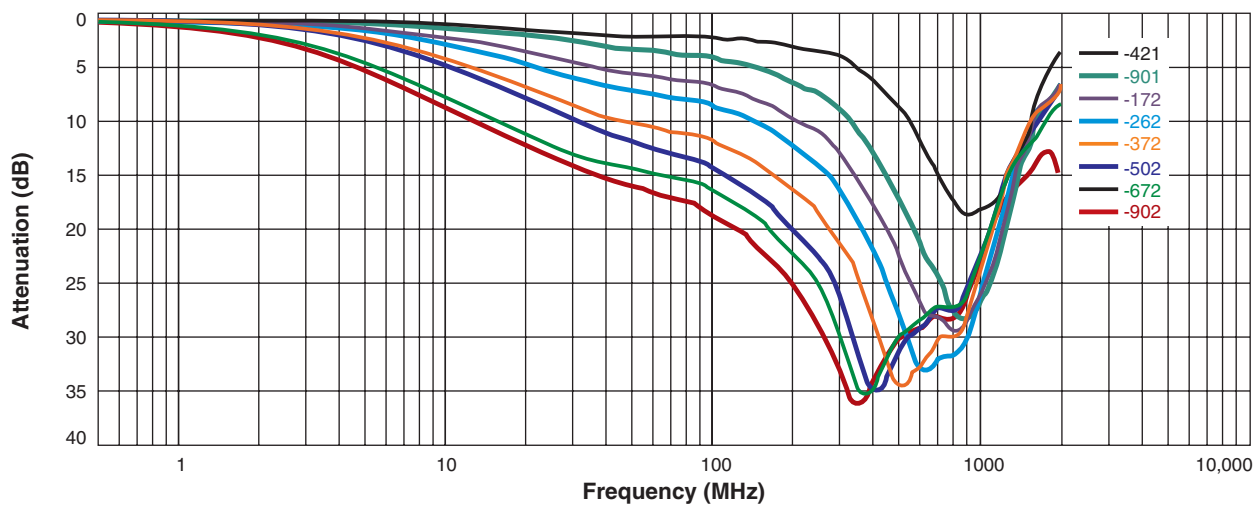


# USB 2.0 Common Mode Filter – 0805

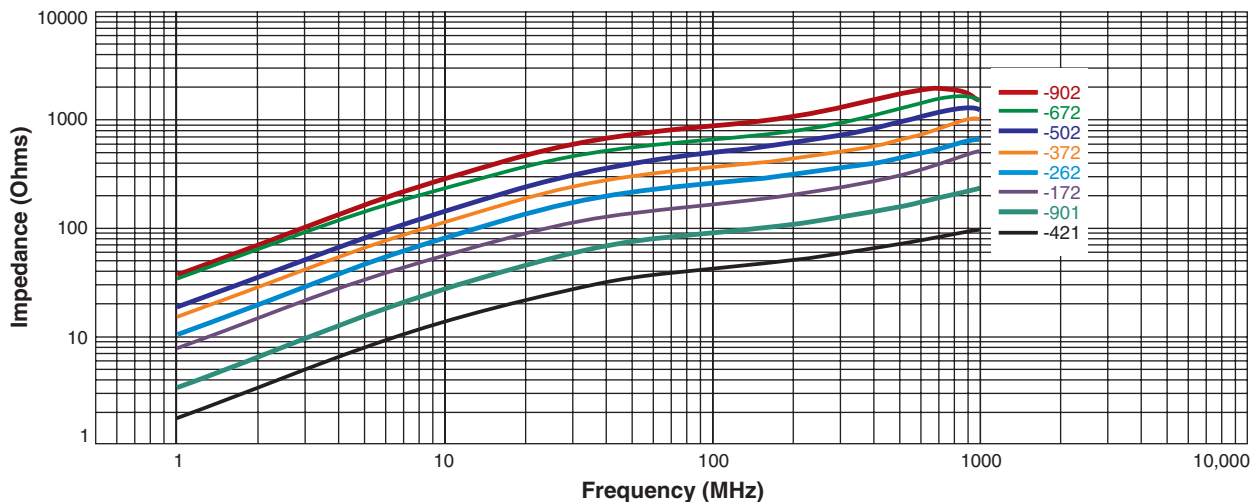
Typical Differential Mode Attenuation (Ref: 50 Ohms)



Typical Common Mode Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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