

**NEW!**

# USB 2.0 Common Mode Filter – 0603



These Coilcraft filters are designed to eliminate virtually all common mode noise in high-speed, differential mode signal transmission applications such as USB 2.0, IEEE1394 and LVDS. Most provide greater than 15 dB common mode attenuation and greater than 100 ohms impedance.

These low profile parts are designed for applications where space is at a premium, requiring less than half the board space of our 0805USB filters.

These dual-wound filters feature very low DC resistance and are available in five impedance values to meet your specific requirements.

Coilcraft **Designer's Kit C184** contains samples of all values shown here plus all values in our 1206USB and 0805USB series. To order, contact Coilcraft or purchase online at <http://order.coilcraft.com>.

| 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) |
|--------------------------|----------------------------------|---------|-------|----------------------------------|---------|-------|----------------------------------|-----------------------------|------------------|------------------------|
|                          | 100 MHz                          | 500 MHz | 1 GHz | 100 MHz                          | 500 MHz | 1 GHz |                                  |                             |                  |                        |
| 0603USB-251MB            | 25                               | 44      | 64    | 1.31                             | 3.16    | 8.45  | 18                               | 0.077                       | 250              | 500                    |
| 0603USB-601MB            | 60                               | 99      | 142   | 3.00                             | 6.88    | 13.27 | 37                               | 0.109                       | 250              | 500                    |
| 0603USB-951MB            | 95                               | 156     | 234   | 4.62                             | 9.75    | 16.06 | 63                               | 0.142                       | 250              | 500                    |
| 0603USB-142MB            | 145                              | 242     | 353   | 6.85                             | 12.80   | 18.16 | 98                               | 0.174                       | 250              | 500                    |
| 0603USB-222MB            | 225                              | 384     | 592   | 9.14                             | 16.53   | 20.29 | 150                              | 0.209                       | 250              | 500                    |

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

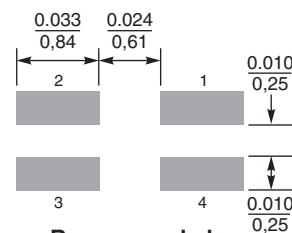
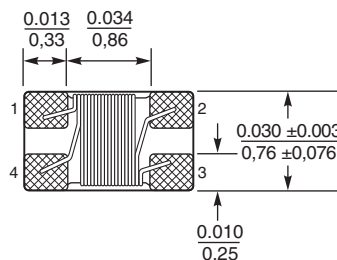
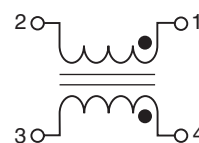
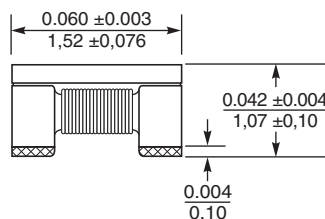
**0603USB-222MBC**

**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).

- Inductance measured at 100 MHz using an Agilent/HP 4286A impedance analyzer and a Coilcraft SMD-A fixture.
- DCR is specified per winding.
- Average current per winding for a 20°C rise from 25°C ambient.
- Operating temperature range -40°C to 85°C.
- Electrical specifications at 25°C.



**Recommended Land Pattern**

**Terminations:** Nickel/gold over silver palladium

**Tape and reel:** 2000/7" reel; 7500/13" reel 8 mm tape width

For packaging data see Tape and Reel Specifications section.

# Coilcraft®

Specifications subject to change without notice.  
Please check our website for latest information.

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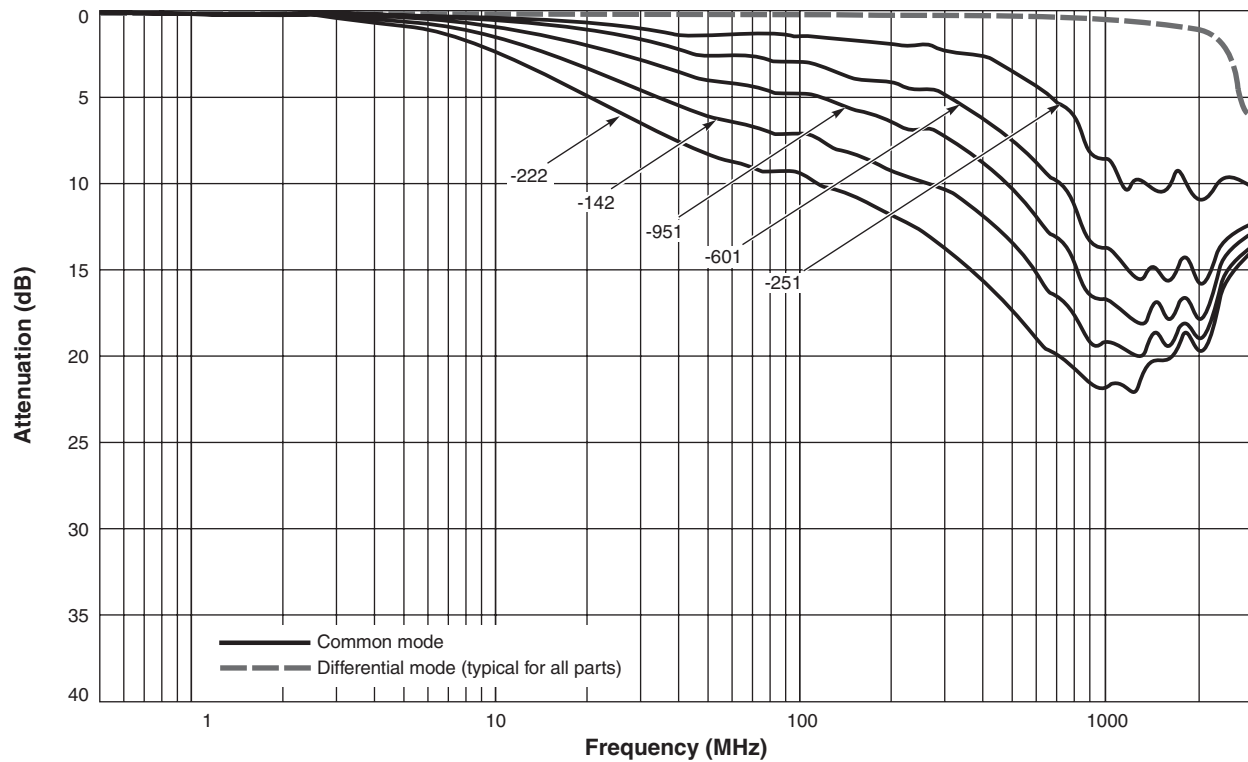
E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>



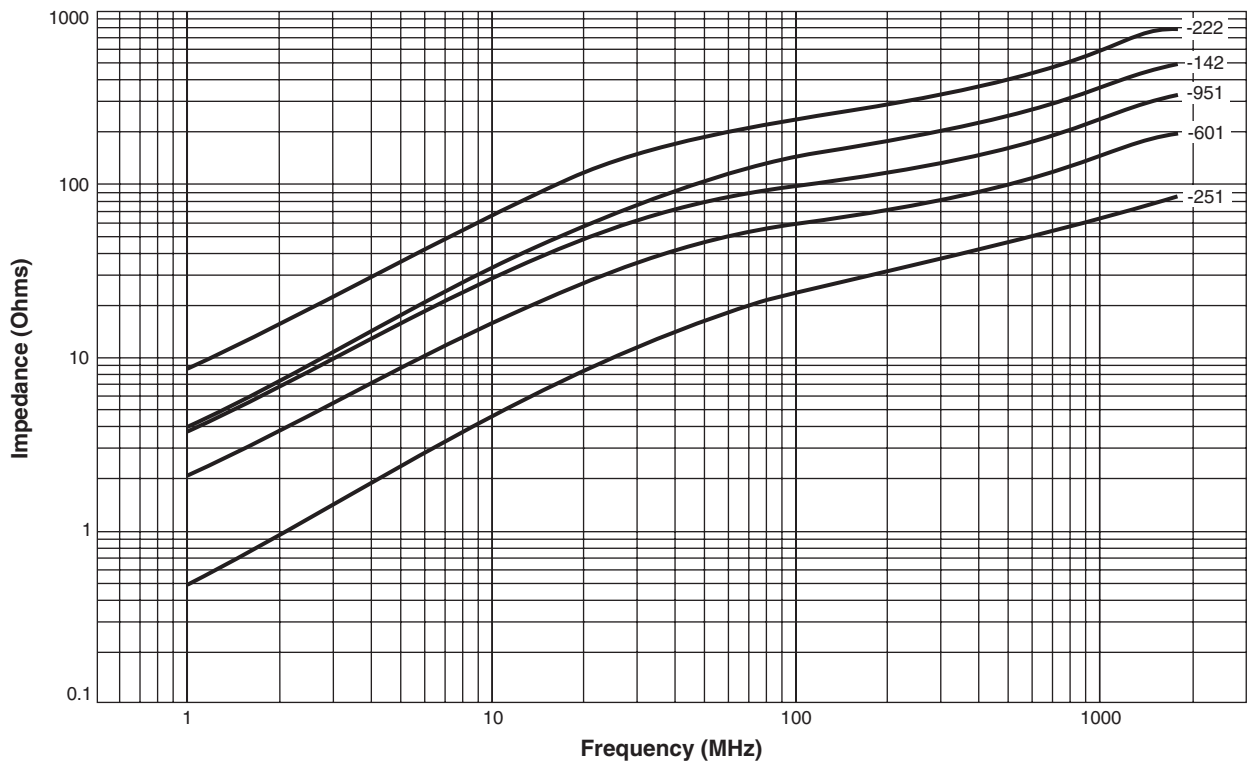
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## Typical Attenuation



## Typical Impedance vs Frequency



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