

OPTIMIZED FOR USB 3.0 AND HDMI



USB 3.0 Common Mode Choke – 0603



- Designed for high-speed USB 3.0, HDMI, SATA, IEEE1394 and LVDS applications.
- Supports data rates up to 4.8 Gbit/s.
- Miniature EIA 0603 footprint; only 1.07 mm tall
- Most values provide >15 dB common mode attenuation and >100 ohms impedance.

Core material Ferrite

Terminations RoHS compliant gold over nickel over silver-palladium-glass frit

Ambient temperature -40°C to +85°C with Irms current, +85°C to +105°C with derated current

Storage temperature Component: -40°C to +105°C.
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 Only pure water or alcohol recommended

Part number ¹	Common mode impedance typ (Ohms)			Common mode attenuation typ (dB)			Inductance ² min (nH)	DCR max ³ (Ohms)	Isolation (Vrms)	Irms ⁴ (mA)
	100 MHz	500 MHz	1 GHz	100 MHz	500 MHz	1 GHz				
0603USB-251ML_	25	44	64	1.31	3.16	8.45	18	0.077	250	500
0603USB-601ML_	60	99	142	3.00	6.88	13.27	37	0.109	250	500
0603USB-951ML_	95	156	234	4.62	9.75	16.06	63	0.142	250	500
0603USB-142ML_	145	242	353	6.85	12.80	18.16	98	0.174	250	500
0603USB-222ML_	225	384	592	9.14	16.53	20.29	150	0.209	250	500

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

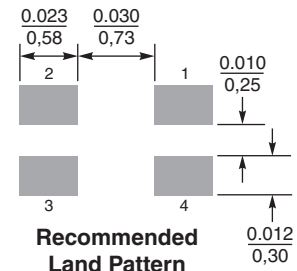
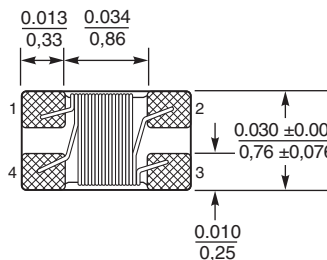
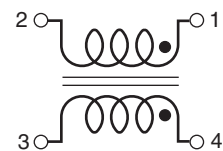
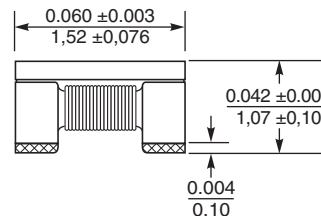
0603USB-222ML C

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. Electrical specifications at 25°C.



Dimensions are in $\frac{\text{inches}}{\text{mm}}$

Weight 4.9 – 5.2 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

Coilcraft®

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

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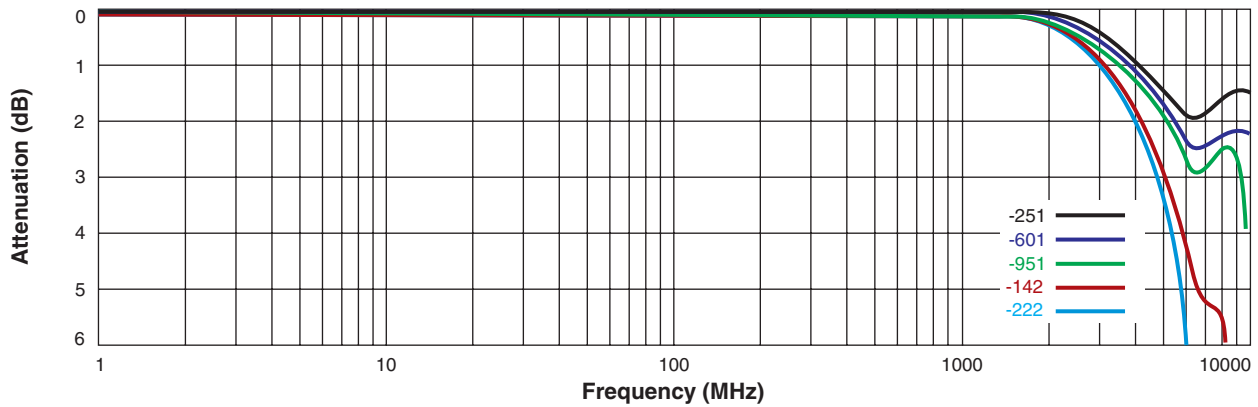
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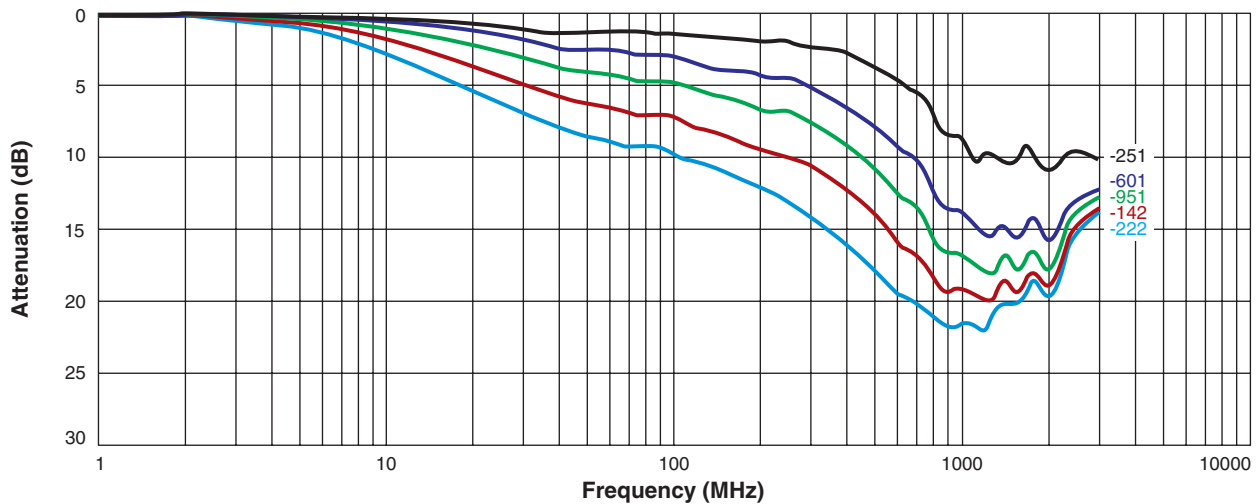


USB 3.0 Common Mode Filter – 0603

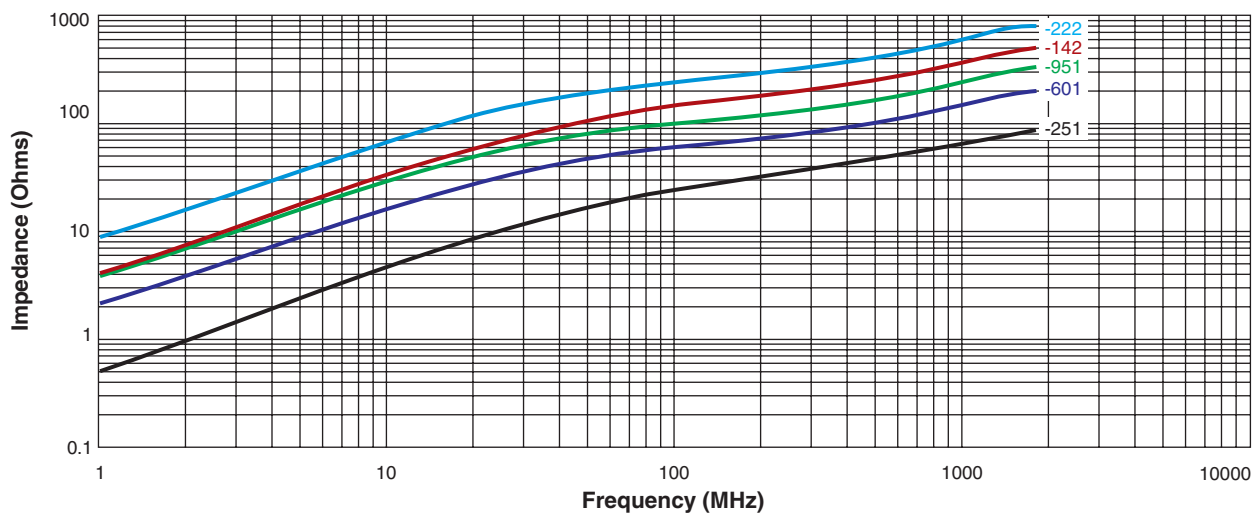
Typical differential mode attenuation (Ref: 50 Ohms)



Typical common mode attenuation (Ref: 50 Ohms)



Typical impedance vs frequency



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