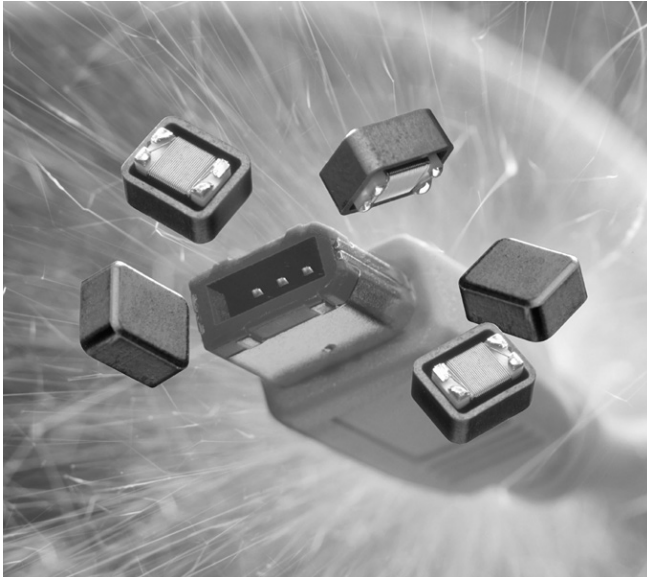




# IEEE 1394 Common Mode Choke



- Designed for IEEE 1394 and other high-speed twisted pair interfaces.
- Shielded 1812 size filter
- Provides over 21 dB attenuation of common mode noise at 400 MHz with a cutoff frequency of 1.2 GHz

**Core material** Ferrite

**Terminations** RoHS compliant gold over nickel over moly-manganese

**Weight:** 30 mg

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

**Maximum part temperature** +100°C (ambient + temp rise).

**Storage temperature** Component: -40°C to +100°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)

**Packaging** 600/7" reel; 2200/13" reel Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 3.9 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Common mode peak impedance (kOhms)	Cutoff frequency <sup>2</sup> (GHz)	Common mode attenuation typ (dB)			Inductance <sup>3</sup> min (μH)	DCR max <sup>4</sup> (Ohms)	Isolation <sup>5</sup> (Vrms)	Irms <sup>6</sup> (A)
			100 MHz	400 MHz	500 MHz				
CM1394L_	0.813 @ 660 MHz	1.2	11.1	21.1	22.7	0.22	0.105	50	1.5

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

**CM1394LC**

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

D = 13" machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

2. Frequency at which the differential mode attenuation equals -3 dB

3. Inductance measured at 100 MHz

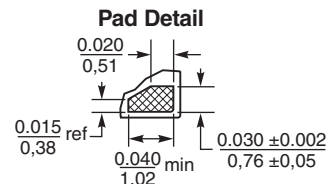
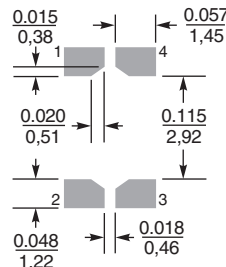
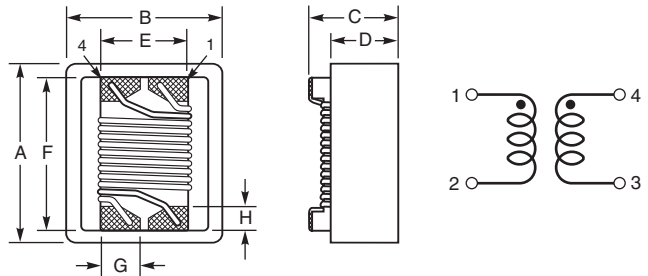
4. DCR is specified per winding.

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

6. Current per winding that causes a 15°C rise from 25°C ambient.

7. Electrical specifications at 25°C.

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



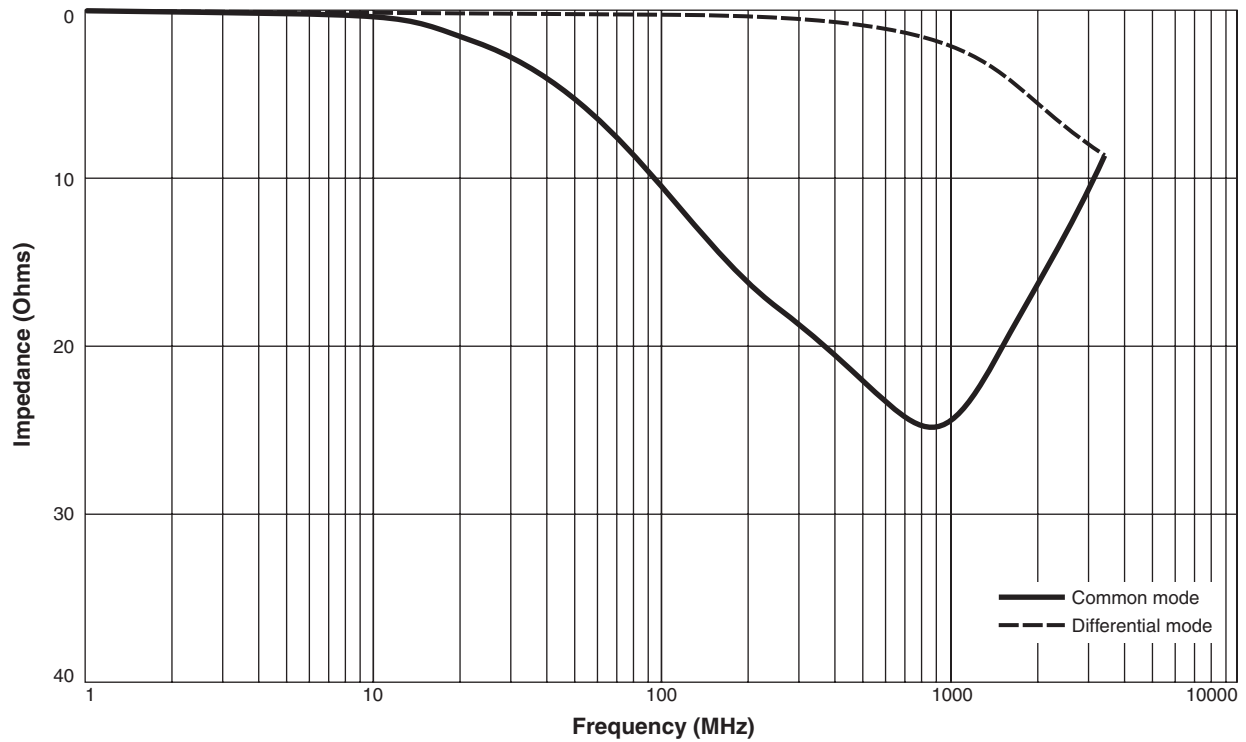
**Recommended Land Pattern**

A max	B max	C max	D ref	E ref	F ref	G min	H
0.231	0.196	0.150	0.107	0.100	0.178	0.04	0.03
5,87	4,98	3,81	2,72	2,54	4,52	1,02	0,76

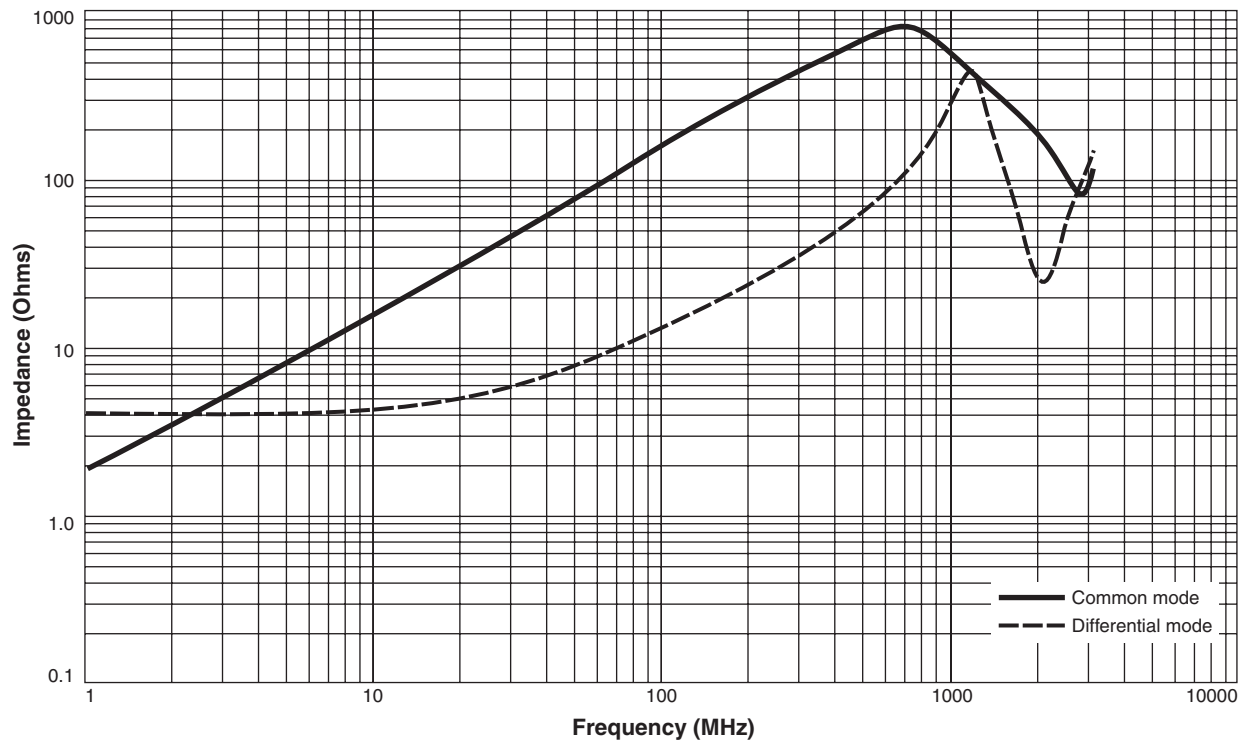


# IEEE 1394 Common Mode Choke

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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