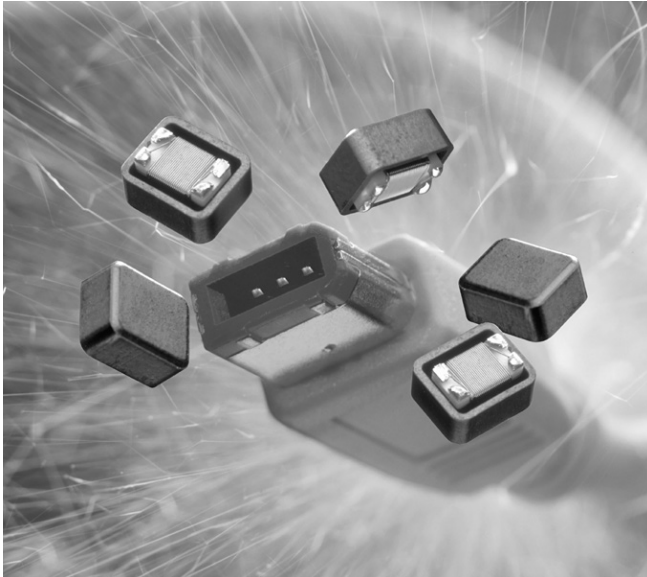




# IEEE 1394 Common Mode Choke



- 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)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**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).

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 (2200 parts per full reel).

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

3. Inductance measured at 100 MHz

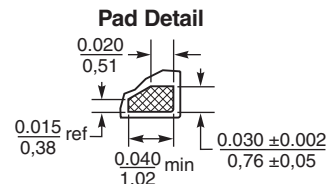
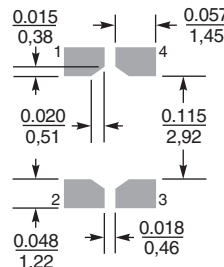
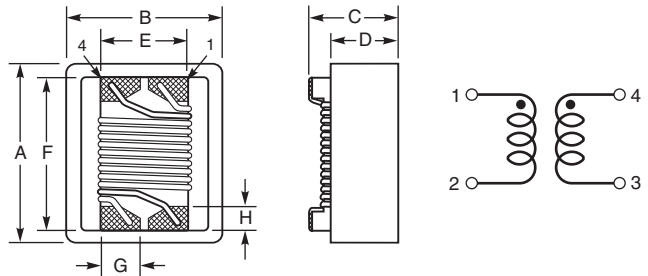
4. DCR is specified per winding.

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.



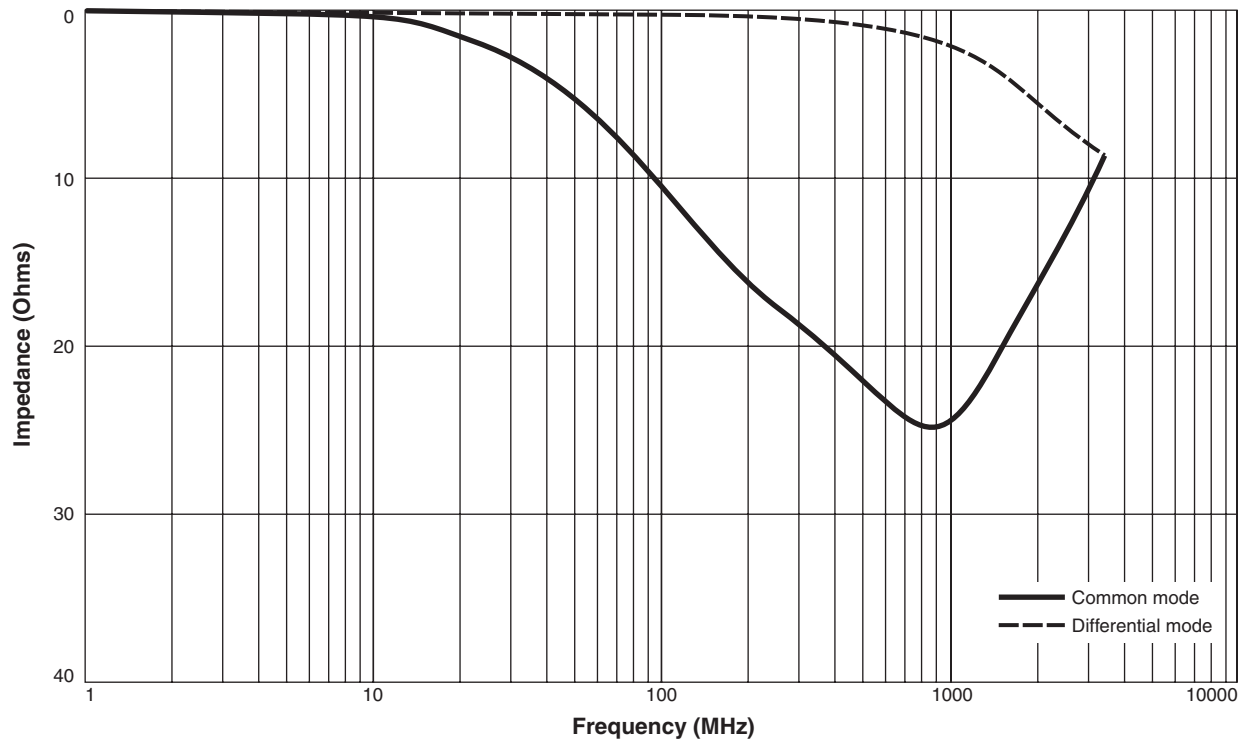
**Recommended Land Pattern**

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

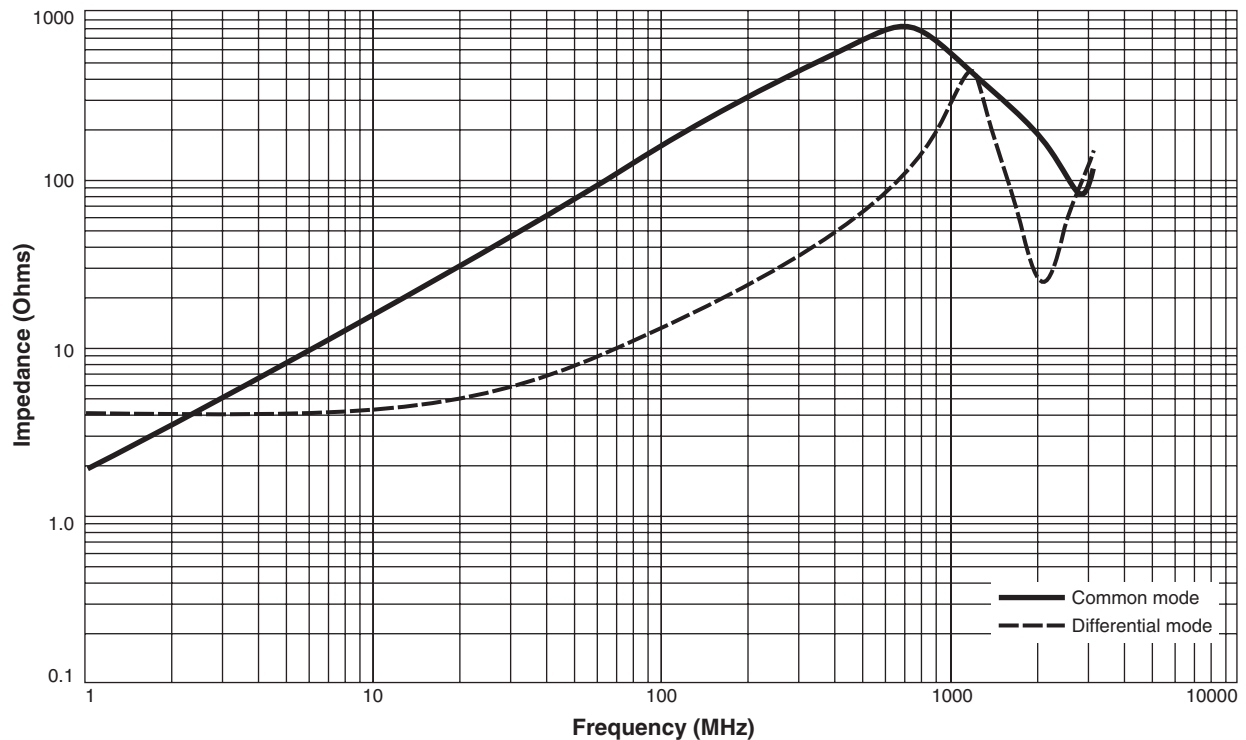


# IEEE 1394 Common Mode Choke

Typical Attenuation (Ref: 50 Ohms)



Typical Impedance vs Frequency



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