# 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.

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<table>
<thead>
<tr>
<th>Part number</th>
<th>Common mode peak impedance (kOhms)</th>
<th>Cutoff frequency (GHz)</th>
<th>Common mode attenuation typ (dB)</th>
<th>Inductance min (nH)</th>
<th>DCR max (Ohms)</th>
<th>Isolation (Vrms)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM1394L_0</td>
<td>0.813 @ 660 MHz</td>
<td>1.2</td>
<td>11.1</td>
<td>21.1</td>
<td>22.7</td>
<td>0.22</td>
<td>0.105</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 MHz</td>
<td>400 MHz</td>
<td>500 MHz</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:

- **CM1394L**
  - **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.
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Typical Attenuation (Ref: 50 Ohms)

Typical Impedance vs Frequency

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.