Shielded Power Inductors – SER1390

- Exceptionally high current carrying capability
- Low DC resistance
- AEC-200 Grade 3 (−40°C to +85°C)

Core material  Ferrite
Core and winding loss  See www.coilcraft.com/coreloss
Terminations  RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.
Weight  4.0 – 4.8 g
Ambient temperature  −40°C to +85°C with (40°C rise) Irms current.
Maximum part temperature  +125°C (ambient + temp rise). Derating.
Storage temperature  Component: −40°C to +125°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  300 per 13” reel. Plastic tape: 24 mm wide, 0.5 mm thick, 20 mm pocket spacing, 9.6 mm pocket depth
PCB washing  Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance (±20% (µH))</th>
<th>DCR (mOhm)</th>
<th>SRF (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SER1390-103ML</td>
<td>10</td>
<td>13.7</td>
<td>15.0</td>
<td>26.9</td>
<td>11.32</td>
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<tr>
<td>SER1390-153ML</td>
<td>15</td>
<td>13.7</td>
<td>15.0</td>
<td>24.3</td>
<td>7.20</td>
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<tr>
<td>SER1390-223ML</td>
<td>22</td>
<td>21.0</td>
<td>23.1</td>
<td>20.3</td>
<td>6.08</td>
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<tr>
<td>SER1390-333ML</td>
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<td>21.0</td>
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<td>15.7</td>
<td>3.80</td>
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<tr>
<td>SER1390-473ML</td>
<td>47</td>
<td>21.0</td>
<td>23.1</td>
<td>13.2</td>
<td>2.60</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination and packaging codes:
   **SER1390-473MLD**

   **Termination:**  L = RoHS compliant matte-tin over nickel over phos bronze.
   Special order:  T = RoHS tin-silver-copper over copper (95.5/4/0.5) or  S = non-RoHS tin-lead (63/37).
   **Packaging:**  D = 13” machine-ready reel. EIA-481 embossed plastic tape (300 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
   **B** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A or equivalent.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using an Agilent/HP 4395A network analyzer and an Agilent/HP 16193A test fixture.
5. DC current at 25°C that causes the specified inductance drop from its value without current. Click for temperature derating information.
6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.
7. Electrical specifications at 25°C. Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
Shielded Power Inductors – SER1390 Series

L vs Current

L vs Frequency

Terminal 3 is for mounting stability only.

Dimensions are in inches, mm.

Recommended Land Pattern

Dimensions are in inches, mm.