Shielded Power Inductors – SER1390

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

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 reflo ws 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 / 26,315,788 hours, calculated per Telcordia SR-332  
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</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>±20% (µH)</td>
<td>typ 10% drop</td>
<td>max 20% drop</td>
<td>30% drop</td>
<td>20°C rise</td>
</tr>
<tr>
<td>SER1390-153ML</td>
<td>15</td>
<td>13.7</td>
<td>15.0</td>
<td>24.3</td>
<td>7.20</td>
</tr>
<tr>
<td>SER1390-223ML</td>
<td>22</td>
<td>21.0</td>
<td>23.1</td>
<td>20.3</td>
<td>6.08</td>
</tr>
<tr>
<td>SER1390-333ML</td>
<td>33</td>
<td>21.0</td>
<td>23.1</td>
<td>15.7</td>
<td>3.80</td>
</tr>
<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. When ordering, simply change the last letter of your part number from B to D.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4294A 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

© Coilcraft Inc. 2020
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.