**Shielded Power Inductors – SER1400**

- Designed for high current power supply applications
- Flat wire windings provide exceptionally low DCR
- Specially formed terminations provide small footprint
- Isat ratings as high as 105.9 A!

**Designer's Kit C427** contains 3 each of all values

**Core material** Ferrite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Environment** RoHS compliant, halogen free

Terminations RoHS compliant tin-silver over copper. Other terminations available at additional cost.

**Ambient temperature** –40°C to +125°C with (40°C rise) Irms current.

**Maximum part temperature** +165°C (ambient + temp rise). Derating.

**Storage temperature** Component: –40°C to +165°C.

**Resistance to soldering heat** Max three 40 second reflovs 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

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](http://www.coilcraft.com/coreloss)

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### High Isat for high peak current applications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance² ±20% (µH)</th>
<th>DCR typ³ (mOhms)</th>
<th>DCR max³ (mOhms)</th>
<th>SRF typ⁴ (MHz)</th>
<th>Isat (A)⁵</th>
<th>Irms (A)⁶</th>
</tr>
</thead>
<tbody>
<tr>
<td>SER1412-301ME</td>
<td>0.30</td>
<td>1.30</td>
<td>1.43</td>
<td>154</td>
<td>87.0</td>
<td>92.8</td>
</tr>
<tr>
<td>SER1412-501ME</td>
<td>0.50</td>
<td>1.30</td>
<td>1.43</td>
<td>122</td>
<td>56.1</td>
<td>59.3</td>
</tr>
<tr>
<td>SER1412-681ME</td>
<td>0.68</td>
<td>1.30</td>
<td>1.43</td>
<td>100</td>
<td>41.2</td>
<td>43.5</td>
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<tr>
<td>SER1412-102ME</td>
<td>1.0</td>
<td>1.30</td>
<td>1.43</td>
<td>78</td>
<td>28.9</td>
<td>31.0</td>
</tr>
<tr>
<td>SER1412-152ME</td>
<td>1.5</td>
<td>1.30</td>
<td>1.43</td>
<td>53</td>
<td>21.8</td>
<td>23.6</td>
</tr>
<tr>
<td>SER1412-202ME</td>
<td>2.0</td>
<td>1.30</td>
<td>1.43</td>
<td>35</td>
<td>16.9</td>
<td>18.5</td>
</tr>
<tr>
<td>SER1412-362ME</td>
<td>3.6</td>
<td>1.30</td>
<td>1.43</td>
<td></td>
<td>9.6</td>
<td>11.2</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination and packaging codes:

   **SER1410-202MED**

   **Termination:** E = RoHS compliant tin-silver-over copper.
   **Special order:** T = RoHS tin-silver-copper over copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37/3).

   **Packaging:** D = 13” machine-ready reel. EIA-481 embossed plastic tape. 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.

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### Low DCR for high average current applications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance² ±20% (µH)</th>
<th>DCR typ³ (mOhms)</th>
<th>DCR max³ (mOhms)</th>
<th>SRF typ⁴ (MHz)</th>
<th>Isat (A)⁵</th>
<th>Irms (A)⁶</th>
</tr>
</thead>
<tbody>
<tr>
<td>SER1408-301ME</td>
<td>0.30</td>
<td>0.48</td>
<td>0.55</td>
<td>140</td>
<td>43.2</td>
<td>49.6</td>
</tr>
<tr>
<td>SER1408-501ME</td>
<td>0.50</td>
<td>0.48</td>
<td>0.55</td>
<td>83</td>
<td>25.8</td>
<td>29.6</td>
</tr>
<tr>
<td>SER1408-681ME</td>
<td>0.68</td>
<td>0.48</td>
<td>0.55</td>
<td>63</td>
<td>18.8</td>
<td>21.6</td>
</tr>
<tr>
<td>SER1408-102ME</td>
<td>1.0</td>
<td>0.48</td>
<td>0.55</td>
<td>48</td>
<td>12.1</td>
<td>14.2</td>
</tr>
<tr>
<td>SER1408-152ME</td>
<td>1.5</td>
<td>0.90</td>
<td>0.99</td>
<td>53</td>
<td>16.8</td>
<td>18.9</td>
</tr>
<tr>
<td>SER1408-202ME</td>
<td>2.0</td>
<td>0.90</td>
<td>0.99</td>
<td>45</td>
<td>12.1</td>
<td>13.9</td>
</tr>
</tbody>
</table>

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B LCR meter or equivalent.

3. DCR measured on a Keithley 580 micro-ohmmeter or equivalent.

4. SRF measured using an Agilent/HP 4395A network analyzer and an Agilent/HP 4263B LCR meter.

5. Typical dc current at 25°C that causes the specified inductance drop from 85% value without current. Click for temperature derating information.

6. Typical 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 [Doc787_PCB_Washing.pdf](http://www.coilcraft.com/coreloss) for more information.

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**Coilcraft**

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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.
Shielded Power Inductors – SER1400 Series

Dimensions are in inches/mm

<table>
<thead>
<tr>
<th>Series</th>
<th>Height max (inches/mm)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>SER1408</td>
<td>0.325 / 8.26</td>
<td>3.5 – 3.8 g</td>
</tr>
<tr>
<td>SER1410</td>
<td>0.416 / 10.56</td>
<td>4.8 – 5.2 g</td>
</tr>
<tr>
<td>SER1412</td>
<td>0.498 / 12.66</td>
<td>6.1 – 6.7 g</td>
</tr>
</tbody>
</table>

Packaging
SER1408  300/13” reel  Plastic tape: 32 mm wide, 0.5 mm thick, 20 mm pocket spacing, 8.6 mm pocket depth
SER1410  250/13” reel  Plastic tape: 32 mm wide, 0.5 mm thick, 20 mm pocket spacing, 10.8 mm pocket depth
SER1412  250/13” reel  Plastic tape: 32 mm wide, 0.5 mm thick, 20 mm pocket spacing, 12.8 mm pocket depth
Shielded Power Inductors – SER1400 Series

L vs Frequency (High Isat Versions)

L vs Current (High Isat Versions)

L vs Frequency (Low DCR Versions)

L vs Current (Low DCR Versions)