Shielded Power Inductor – SER2000

- Designed for high current power supply applications
- Flat wire windings provide exceptionally low DCR
- Isat ratings as high as 100 A

Designer’s Kit C374 contains 2 each of nine parts.
Core material Ferrite
Core and winding loss See www.coilcraft.com/coreloss
Terminations RoHS compliant tin-silver-copper over copper. Other terminations available at additional cost.
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)
Failures in Time (FIT) / Mean Time Between Failures (MTBF) 0.48 per billion hours / 2.083E+09 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.

Caution:
Terminal 3 is provided for mounting stability only. This terminal is connected to the winding of the inductor and must not be connected to ground or any circuitry.

Recommended Land Pattern

Packaging
SER2009 200 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 9.25 pocket depth
SER2010 200 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 10.5 pocket depth
SER2011 170 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 11.6 pocket depth
SER2012 150 per 13" reel; Plastic tape: 44 mm wide, 0.4 mm thick, 32 mm pocket spacing, 13.0 pocket depth
SER2013 150 per 13" reel; Plastic tape: 44 mm wide, 0.5 mm thick, 32 mm pocket spacing, 14.0 pocket depth
SER2014 125 per 13" reel; Plastic tape: 44 mm wide, 0.5 mm thick, 32 mm pocket spacing, 15.0 pocket depth
**Shielded Power Inductors – SER2000 Series**

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance (µH)</th>
<th>DCR (mΩ)</th>
<th>SRF (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
<th>20°C rise (mm)</th>
<th>40°C rise (mm)</th>
<th>Height (mm)</th>
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</thead>
<tbody>
<tr>
<td>SER2000-301ML</td>
<td>0.30</td>
<td>0.630</td>
<td>0.740</td>
<td>550</td>
<td>100</td>
<td>41</td>
<td>54</td>
<td>8.64</td>
</tr>
<tr>
<td>SER2010-301ML</td>
<td>0.30</td>
<td>0.900</td>
<td>1.00</td>
<td>182</td>
<td>100</td>
<td>36</td>
<td>45</td>
<td>9.40</td>
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<tr>
<td>SER2009-501ML</td>
<td>0.50</td>
<td>0.630</td>
<td>0.740</td>
<td>544</td>
<td>60</td>
<td>41</td>
<td>54</td>
<td>8.64</td>
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<tr>
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<td>0.50</td>
<td>0.900</td>
<td>1.00</td>
<td>148</td>
<td>81</td>
<td>36</td>
<td>45</td>
<td>9.40</td>
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<tr>
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<td>0.50</td>
<td>1.20</td>
<td>1.34</td>
<td>161</td>
<td>100</td>
<td>30</td>
<td>40</td>
<td>10.67</td>
</tr>
<tr>
<td>SER2009-601ML</td>
<td>0.60</td>
<td>0.630</td>
<td>0.740</td>
<td>648</td>
<td>49</td>
<td>41</td>
<td>54</td>
<td>8.64</td>
</tr>
<tr>
<td>SER2010-601ML</td>
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<td>0.900</td>
<td>1.00</td>
<td>115</td>
<td>70</td>
<td>36</td>
<td>45</td>
<td>9.40</td>
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<tr>
<td>SER2011-601ML</td>
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<td>1.20</td>
<td>1.34</td>
<td>124</td>
<td>90</td>
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<td>40</td>
<td>10.67</td>
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<tr>
<td>SER2012-601ML</td>
<td>0.60</td>
<td>1.44</td>
<td>1.60</td>
<td>115</td>
<td>97</td>
<td>25</td>
<td>35</td>
<td>11.94</td>
</tr>
</tbody>
</table>

1. Please specify termination and packaging codes:
   - **SER2013-472MLD**
     - **Termination:** L = RoHS compliant tin-silver-copper over copper.
     - **Special order:** S = non-RoHS tin-lead (63/37).
     - **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.

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.
4. SRF measured using an Agilent/HP 4395A network analyzer and an Agilent/HP 16092A test fixture.
5. DC current at 25°C that causes a 10% (typ) inductance drop from its value without current.
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.
7. Electrical specifications at 25°C.

**Temperature Rise vs Current**

![Temperature Rise vs Current Graph](image-url)

Parts shown in bold are included in Coilcraft Designer’s Kit C374.
Shielded Power Inductors – SER2000 Series

L vs Frequency

**SER2009**

**SER2010**

**SER2011**

**SER2012**

**SER2013**

**SER2014**

Product information and specifications are subject to change without notice. Please check the website for the latest information. This product may not be used in medical or high risk applications without prior Coilcraft approval.
Shielded Power Inductors – SER2000 Series

L vs Current

SER2009

SER2010

SER2011

SER2012

SER2013

SER2014

Inductance (µH)

Current (A)