### Shielded Power Inductors – SLC7530

- Designed for high-speed switch mode applications
- Can be used as a 1:1 transformer or in SEPIC applications

**Designers’ Kit C379** contains 3 each of all values.
**Designers’ Kit C467** contains 3 each of select values.
- **Core Material**: Ferrite
- **Core and Winding Loss**: See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)
- **Terminations**: RoHS compliant matte tin over nickel over copper
- Other terminations available at additional cost.
- **Weight**: 0.44 – 0.47 g
- **Ambient Temperature**: –40°C to +85°C with (40°C rise) I<sub>irms</sub> 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)**: 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332
- **Packaging**:
  - 500/7" reel: 1700/13" reel: Plastic tape: 16 mm wide, 0.33 mm thick, 12 mm pocket spacing, 3.12 mm pocket depth
  - **PCB Washing**: Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf

**Shielded Power Inductors – SLC7530**

**Single Conductor**

<table>
<thead>
<tr>
<th>Part number</th>
<th>L±20% (µH)</th>
<th>DCR ±5% (mOhms)</th>
<th>SRF typ (GHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLC7530S-500ML</td>
<td>0.050</td>
<td>0.123</td>
<td>3.80</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>SLC7530S-640ML</td>
<td>0.064</td>
<td>0.123</td>
<td>3.65</td>
<td>32</td>
<td>40</td>
</tr>
<tr>
<td>SLC7530S-820ML</td>
<td>0.082</td>
<td>0.123</td>
<td>3.75</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td>SLC7530S-101ML</td>
<td>0.100</td>
<td>0.123</td>
<td>3.75</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

1. **I<sub>irms</sub> Testing**
   - I<sub>irms</sub> testing was performed on 0.75 inch wide x 0.25 inch thick copper traces in still air.

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4263B LCR meter or equivalent.

3. **Temperature rise should be verified in application conditions.**

**Dual Conductor**

<table>
<thead>
<tr>
<th>Leads connected in parallel</th>
<th>Leads connected in series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part number</td>
<td>L±20% (µH)</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------</td>
</tr>
<tr>
<td>SLC7530D-500ML</td>
<td>0.050</td>
</tr>
<tr>
<td>SLC7530D-640ML</td>
<td>0.064</td>
</tr>
<tr>
<td>SLC7530D-820ML</td>
<td>0.082</td>
</tr>
<tr>
<td>SLC7530D-101ML</td>
<td>0.100</td>
</tr>
</tbody>
</table>

1. When ordering, please specify **termination** and **packaging** codes:
   - **SLC7530S-101ML**
   - **SLC7530S-500ML**
   - **SLC7530S-640ML**
   - **SLC7530S-820ML**
   - **SLC7530S-101ML**

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4263B LCR meter or equivalent.

3. **DCR** is measured on a micro-ohmmeter at points indicated in the diagram.

4. **SRF** measured using an Agilent/HP 8753ES network analyzer and a Coilcraft SMD-D fixture.

5. **DC Current** at 25°C that causes a 20% (typ) inductance drop from its value without current. Click for temperature derating information.

6. **Current** that causes a 40°C 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**

- **I<sub>irms</sub> Testing**
- **I<sub>irms</sub>** testing was performed on 0.75 inch wide x 0.25 inch thick copper traces in still air.
- **Temperature rise should be verified in application conditions.**

- **Points used for measuring DCR**

6. **SRF measured using an Agilent/HP 8753ES network analyzer and a Coilcraft SMD-D fixture.**

7. **DC Current** at 25°C that causes a 20% (typ) inductance drop from its value without current. Click for temperature derating information.

8. **Current** that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.

- **I<sub>irms</sub> Testing**
- **I<sub>irms</sub>** testing was performed on 0.75 inch wide x 0.25 inch thick copper traces in still air.
- **Temperature rise should be verified in application conditions.**

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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 - SLC7530 Series

Typical L vs Current

Single Conductor

![Typical L vs Current Single Conductor Graph](image)

Dual Conductor

![Typical L vs Current Dual Conductor Graph](image)

Typical L vs Frequency

Single Conductor

![Typical L vs Frequency Single Conductor Graph](image)

Dual Conductor

![Typical L vs Frequency Dual Conductor Graph](image)
Shielded Power Inductors - SLC7530 Series

Dimensions – Single Conductor

Dimensions – Dual Conductor

Recommended Land Patterns

Typical Temperature Rise vs Current

Dimensions are in inches

Dimensions are in mm