Shielded Power Inductors – LPS3008

- Very low DCR; excellent current handling
- Only 0.8 mm tall; 3.0 × 3.0 mm footprint

Core material: Ferrite
Core and winding loss: See www.coilcraft.com/coreloss
Environmental: RoHS compliant, halogen free
Terminations: RoHS compliant matte tin over nickel over silver. Other terminations available at additional cost.
Weight: 22 – 25 mg
Ambient temperature: -40°C to +85°C with (40°C rise) Imax 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:
- 1000/7” reel; 3500/13” reel; Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.37 mm pocket depth
- Recommended pick and place nozzle: OD: 3 mm; ID: ≤ 1.5 mm

1. Please specify termination and packaging codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC</td>
<td>RoHS compliant matte tin over nickel over silver.</td>
</tr>
<tr>
<td>RC-N</td>
<td>Non-RoHS tin-lead (63/37).</td>
</tr>
<tr>
<td>R8</td>
<td>RoHS tin-silver-copper (95.5/4/0.5)</td>
</tr>
<tr>
<td>+/-C</td>
<td>RoHS tin-lead (63/37, parts cooled to room temperature between cycles)</td>
</tr>
<tr>
<td>+/-N</td>
<td>Parts cooled to room temperature between cycles</td>
</tr>
<tr>
<td>+/-M</td>
<td>Parts cooled to room temperature between cycles</td>
</tr>
<tr>
<td>+/-E</td>
<td>Parts cooled to room temperature between cycles</td>
</tr>
</tbody>
</table>

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A. Inductance at 1 MHz is the same for parts with SRF ≥ 10 MHz.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using an Agilent/HP 8753ES or equivalent.
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.

Coilcraft Designer’s Kit C392 contains samples of 0.80 µH to 33 µH parts (3 each) from LPS3008, LPS3010 and LPS3015. Kit C401 contains samples of 0.56 µH to 33 µH parts (3 each) from LPS4012 and LPS4018. Kit C402 contains samples of 220 µH to 3300 µH parts (3 each) from all five series. For details of kit contents and to order, contact Coilcraft or visit http://order.coilcraft.com.
Shielded Power Inductors – LPS3008 Series

Typical L vs Current

![Graph showing typical L vs Current](image)

Typical L vs Frequency

![Graph showing typical L vs Frequency](image)

Packaging

1000/7” reel; 3500/13” reel; Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.37 mm pocket depth

NOTE NEW PART ORIENTATION

Parts are rotated 90° in the packaging tape compared to previous versions of this product.

Recommended Land Pattern

![Recommended Land Pattern](image)

Dimensions are in inches / mm

*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0.13 mm. For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0.13 mm. 