Shielded Power Inductors LPS8045B

- Inductance values from 6.8 to 1000 µH
- Low DCR; excellent current handling

Core material  Ferrite
Weight  0.88 – 1.1 g
Environmental  RoHS compliant, halogen free
Terminations  RoHS compliant matte tin over nickel over silver. Other terminations available at additional cost.
Ambient temperature  -40°C to +85°C with (40°C rise) Ims 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
- 250/7” reel; 1000/13” reel; Plastic tape: 16 mm wide, 0.28 mm thick, 12 mm pocket spacing, 4.83 mm pocket depth
- Recommended pick and place nozzle: OD: 8 mm; ID: 4 mm

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 (µH)</th>
<th>DCR (Ohms)</th>
<th>SRF typ (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>± 20% typ max</td>
<td></td>
<td>10% drop 20% drop 30% drop</td>
<td>20°C rise 40°C rise</td>
<td></td>
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<tr>
<td>LPS8045B-682MR</td>
<td>6.8</td>
<td>0.059 0.075</td>
<td>63</td>
<td>3.6 3.9 4.0</td>
<td>1.80 2.40</td>
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<tr>
<td>LPS8045B-103MR</td>
<td>10</td>
<td>0.073 0.090</td>
<td>49</td>
<td>2.8 3.2 3.3</td>
<td>1.55 2.15</td>
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<tr>
<td>LPS8045B-153MR</td>
<td>15</td>
<td>0.092 0.110</td>
<td>23</td>
<td>2.5 2.7 2.7</td>
<td>1.35 1.85</td>
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<tr>
<td>LPS8045B-223MR</td>
<td>22</td>
<td>0.102 0.130</td>
<td>21</td>
<td>2.0 2.3 2.4</td>
<td>1.25 1.75</td>
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<tr>
<td>LPS8045B-333MR</td>
<td>33</td>
<td>0.121 0.145</td>
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<td>1.20 1.60</td>
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<tr>
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<td>0.153 0.179</td>
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<td>1.6 1.7 1.8</td>
<td>1.10 1.50</td>
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<tr>
<td>LPS8045B-683MR</td>
<td>68</td>
<td>0.193 0.223</td>
<td>8.7</td>
<td>1.2 1.3 1.4</td>
<td>0.95 1.35</td>
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<td>LPS8045B-104MR</td>
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<td>0.297 0.342</td>
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<td>0.78 1.10</td>
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<td>LPS8045B-154MR</td>
<td>150</td>
<td>0.379 0.442</td>
<td>5.0</td>
<td>0.88 0.93 0.95</td>
<td>0.70 0.95</td>
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<td>LPS8045B-224MR</td>
<td>220</td>
<td>0.564 0.662</td>
<td>4.3</td>
<td>0.70 0.74 0.77</td>
<td>0.60 0.82</td>
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<td>LPS8045B-334MR</td>
<td>330</td>
<td>0.834 0.950</td>
<td>3.0</td>
<td>0.52 0.58 0.61</td>
<td>0.48 0.65</td>
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<td>LPS8045B-474MR</td>
<td>470</td>
<td>1.28 1.45</td>
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<td>0.43 0.48 0.50</td>
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<tr>
<td>LPS8045B-684MR</td>
<td>680</td>
<td>1.88 2.23</td>
<td>2.2</td>
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<td>LPS8045B-105MR</td>
<td>1000</td>
<td>2.92 3.22</td>
<td>1.3</td>
<td>0.31 0.34 0.36</td>
<td>0.23 0.32</td>
</tr>
</tbody>
</table>

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

   LPS8045B-105MR

   **Termination:** R = RoHS compliant matte tin over nickel over silver.
   Special order, added cost:
   Q = RoHS tin-silver-copper (95.5/4/0.5) or P = non-RoHS tin-lead (63/37).
   **Packaging:**
   C = 7” machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel).
   B = Less than full reel. In tape, but not machine ready.
   To have a leader and trailer added ($25 charge), use code letter C instead.
   D = 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (1000 parts per full reel).

2. Inductance at 100 kHz, 0.1 Vrms, 0.1 Vrms. 0 Adc.
3. DC current at 25°C that causes the specified inductance drop from its value without current. Click for temperature derating information.
4. 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.
5. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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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.
LPS8045B Shielded Power Inductors

L vs Current

Typical L vs Frequency

* 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.

Dimensions are in inches

Dimensions are in mm

Recommended Land Pattern

Dash Internal code

RoHS Compliant

Halogen Free