Shielded Power Inductors  

LPS8045B

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

Core material  
Ferrite

Environmental  
RoHS compliant, halogen free

Terminations  
RoHS compliant matte tin over nickel over silver. Other terminations available at additional cost.

Operating voltage  
400 V max

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)

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.

Inductance values from 6.8 to 1000 µH

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance</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% (µH)</td>
<td>typ</td>
<td>max</td>
<td>10% drop</td>
<td>20% drop</td>
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<tr>
<td>LPS8045B-682MR</td>
<td>6.8</td>
<td>0.059</td>
<td>0.075</td>
<td>63</td>
<td>3.6</td>
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<td>LPS8045B-103MR</td>
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<td>0.073</td>
<td>0.090</td>
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<td>LPS8045B-223MR</td>
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<td>0.223</td>
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<tr>
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<td>1.88</td>
<td>2.23</td>
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<td>0.33</td>
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<tr>
<td>LPS8045B-105MR</td>
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<td>2.92</td>
<td>3.22</td>
<td>1.3</td>
<td>0.31</td>
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</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). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).

D = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (1000 parts per full reel).

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 C.

2. Inductance at 100 kHz, 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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L vs Current

Typical L vs Frequency

Dimensions are in inches

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.

Recommended Land Pattern

* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0.13 mm.