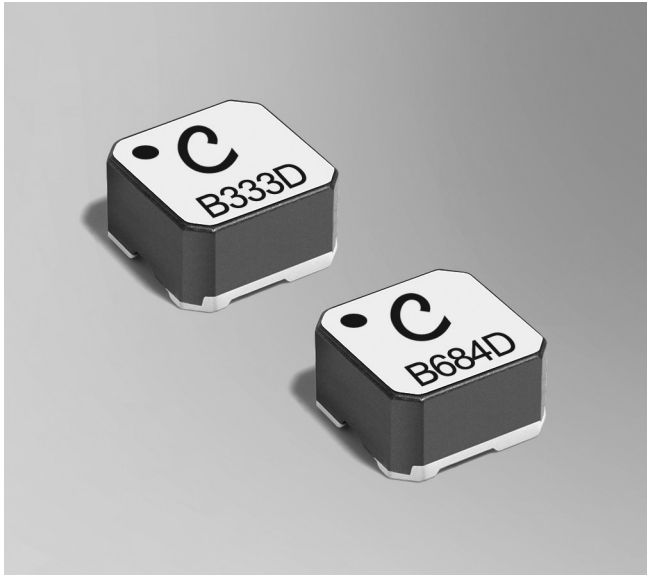


# Shielded Power Inductors LPS8045B



- Inductance values from 6.8 to 1000  $\mu\text{H}$
- 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**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with ( $40^{\circ}\text{C}$  rise) Irms current.

**Maximum part temperature**  $+125^{\circ}\text{C}$  (ambient + temp rise). [Derating](#).

**Storage temperature** Component:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

Tape and reel packaging:  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$

**Resistance to soldering heat** Max three 40 second reflows at  $+260^{\circ}\text{C}$ , parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 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](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> $\pm 20\%$ ( $\mu\text{H}$ )	DCR (Ohms)		SRF typ (MHz)	Isat (A) <sup>3</sup>			Irms (A) <sup>4</sup>	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
LPS8045B-682MR_	6.8	0.059	0.075	63	3.6	3.9	4.0	1.80	2.40
LPS8045B-103MR_	10	0.073	0.090	49	2.8	3.2	3.3	1.55	2.15
LPS8045B-153MR_	15	0.092	0.110	23	2.5	2.7	2.7	1.35	1.85
LPS8045B-223MR_	22	0.102	0.130	21	2.0	2.3	2.4	1.25	1.75
LPS8045B-333MR_	33	0.121	0.145	12	1.8	2.0	2.1	1.20	1.60
LPS8045B-473MR_	47	0.153	0.179	10	1.6	1.7	1.8	1.10	1.50
LPS8045B-683MR_	68	0.193	0.223	8.7	1.2	1.3	1.4	0.95	1.35
LPS8045B-104MR_	100	0.297	0.342	6.5	1.0	1.1	1.1	0.78	1.10
LPS8045B-154MR_	150	0.379	0.442	5.0	0.88	0.93	0.95	0.70	0.95
LPS8045B-224MR_	220	0.564	0.662	4.3	0.70	0.74	0.77	0.60	0.82
LPS8045B-334MR_	330	0.834	0.950	3.0	0.52	0.58	0.61	0.48	0.65
LPS8045B-474MR_	470	1.28	1.45	2.5	0.43	0.48	0.50	0.39	0.53
LPS8045B-684MR_	680	1.88	2.23	2.2	0.33	0.39	0.43	0.32	0.44
LPS8045B-105MR_	1000	2.92	3.22	1.3	0.31	0.34	0.36	0.23	0.32

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

LPS8045B-105MR**C**

**Termination:** **R** = RoHS compliant matte tin over nickelover 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 Adc.

3. DC current at  $25^{\circ}\text{C}$  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  $25^{\circ}\text{C}$  ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information](#).

5. Electrical specifications at  $25^{\circ}\text{C}$ .

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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**US** +1-847-639-6400 sales@coilcraft.com

**UK** +44-1236-730595 sales@coilcraft-europe.com

**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw

**China** +86-21-6218 8074 sales@coilcraft.com.cn

**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

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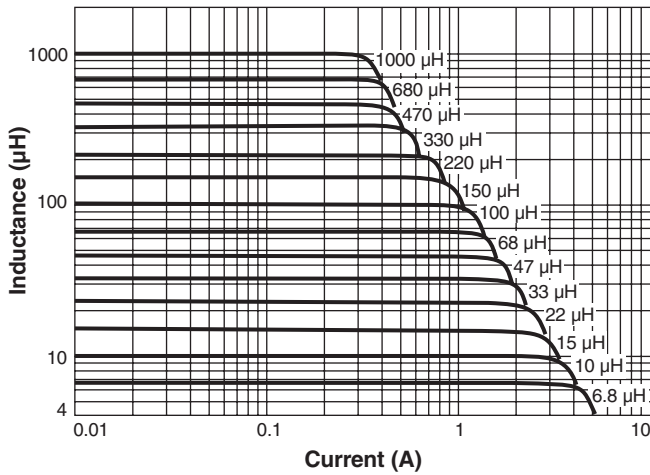
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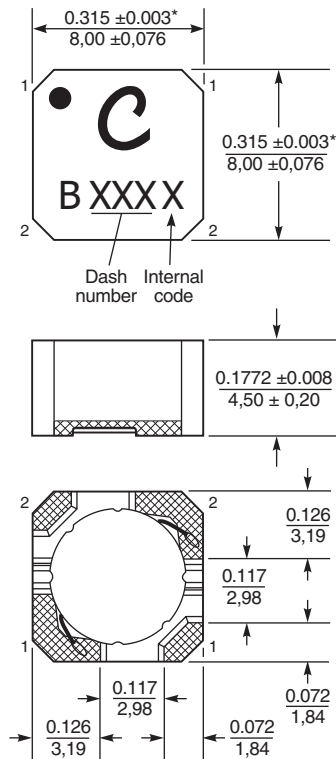
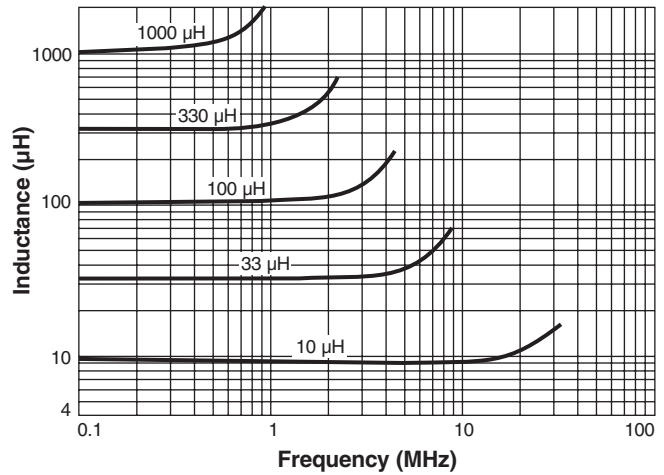


# LPS8045B Shielded Power Inductors

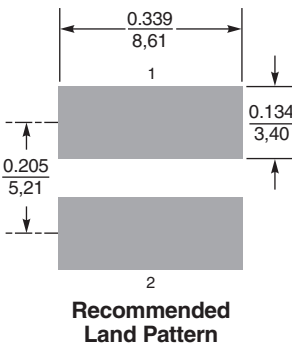
## L vs Current



## 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  $\frac{\text{inches}}{\text{mm}}$



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
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