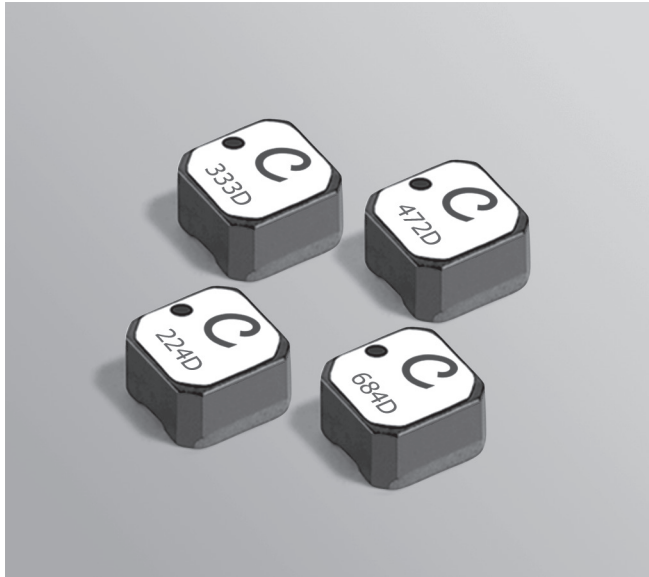


# Shielded Power Inductors - LPS5030



- Very low DCR; excellent current handling
- 4.9 × 4.9 mm footprint; less than 3 mm tall

**Designer's Kit C420** contains 3 each of all values

**Core material** Ferrite

**Environmental** RoHS compliant, halogen free

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

**Weight** 226 – 244 mg

**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)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 750/7" reel; 2500/13" reel Plastic tape: 12 mm wide, 0.32 mm thick, 8 mm pocket spacing, 3.1 mm pocket depth

**Recommended pick and place nozzle** OD: 5 mm; ID: ≤ 2.5 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> ±20% (µH)	DCR max <sup>3</sup> (Ohms)	SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
LPS5030-901MR_	0.90	0.040	250	3.8	4.0	4.1	2.10	2.80
LPS5030-122MR_	1.2	0.043	210	3.5	3.6	3.7	2.00	2.65
LPS5030-172MR_	1.7	0.051	190	3.0	3.2	3.3	1.90	2.50
LPS5030-222MR_	2.2	0.057	168	2.9	3.1	3.2	1.60	2.15
LPS5030-332MR_	3.3	0.066	125	2.3	2.5	2.6	1.40	1.80
LPS5030-472MR_	4.7	0.083	84	1.9	2.0	2.0	1.30	1.75
LPS5030-562MR_	5.6	0.089	70	1.8	1.8	1.9	1.25	1.65
LPS5030-682MR_	6.8	0.099	56	1.6	1.7	1.7	1.20	1.60
LPS5030-822MR_	8.2	0.125	45	1.6	1.7	1.7	1.10	1.55
LPS5030-103MR_	10.0	0.127	30	1.4	1.4	1.4	1.00	1.50
LPS5030-123MR_	12.0	0.155	24	1.3	1.4	1.4	0.95	1.40
LPS5030-153MR_	15.0	0.160	32	0.80	0.90	0.90	0.92	1.40
LPS5030-183MR_	18.0	0.170	27	0.80	0.82	0.87	0.90	1.30
LPS5030-223MR_	22.0	0.190	24	0.70	0.75	0.78	0.88	1.25
LPS5030-333MR_	33.0	0.260	19	0.60	0.63	0.64	0.85	1.20
LPS5030-473MR_	47.0	0.330	16	0.50	0.53	0.55	0.75	1.00
LPS5030-683MR_	68.0	0.440	12	0.40	0.43	0.44	0.65	0.900
LPS5030-823MR_	82.0	0.470	11	0.38	0.40	0.40	0.60	0.830
LPS5030-104MR_	100	0.600	10	0.27	0.31	0.32	0.55	0.750
LPS5030-124MR_	120	0.800	9	0.26	0.29	0.30	0.45	0.660
LPS5030-154MR_	150	0.860	7.5	0.22	0.25	0.263	0.42	0.570
LPS5030-224MR_	220	1.35	6.0	0.21	0.235	0.245	0.36	0.500
LPS5030-334MR_	330	1.80	5.0	0.155	0.155	0.200	0.32	0.420
LPS5030-474MR_	470	2.80	4.0	0.117	0.134	0.146	0.28	0.370
LPS5030-564MR_	560	3.20	3.6	0.110	0.130	0.140	0.23	0.320
LPS5030-684MR_	680	3.80	3.0	0.100	0.120	0.126	0.20	0.290
LPS5030-105MR_	1000	5.10	2.5	0.100	0.110	0.110	0.18	0.250
LPS5030-155MR_	1500	7.60	2.0	0.068	0.080	0.089	0.15	0.210
LPS5030-185MR_	1800	10.0	1.8	0.069	0.081	0.086	0.13	0.170
LPS5030-225MR_	2200	11.0	1.6	0.063	0.074	0.080	0.10	0.150
LPS5030-335MR_	3300	19.5	1.3	0.056	0.063	0.067	0.090	0.125
LPS5030-475MR_	4700	26.0	1.1	0.049	0.056	0.059	0.080	0.110

1. Please specify **termination** and **packaging** codes:

**LPS5030-105MRC**

**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 (750 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 (2500 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4192A impedance analyzer or equivalent.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using 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.



www.coilcraft.com

**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

Document 581-1 Revised 09/02/15

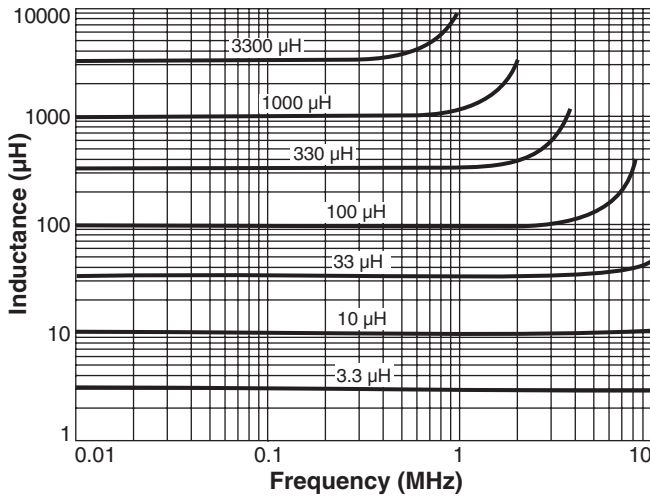
© Coilcraft Inc. 2017

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.

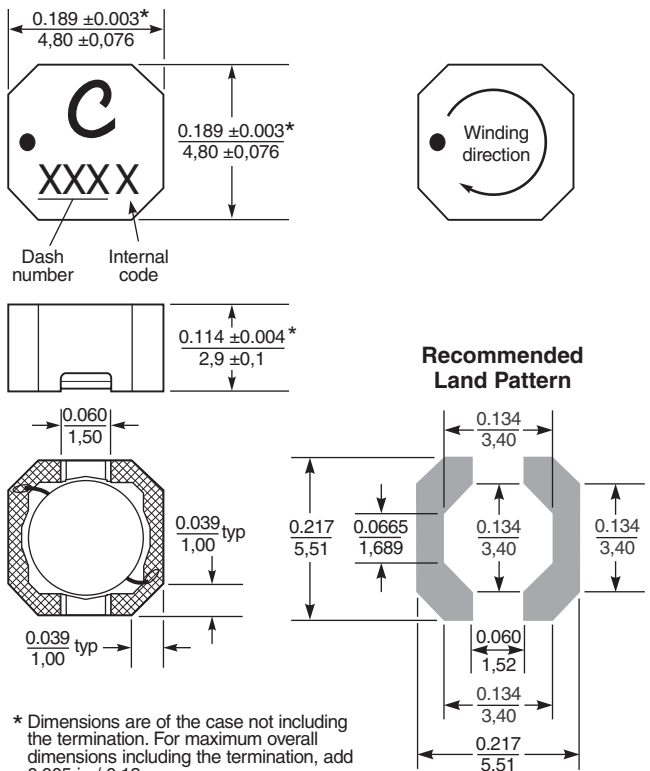
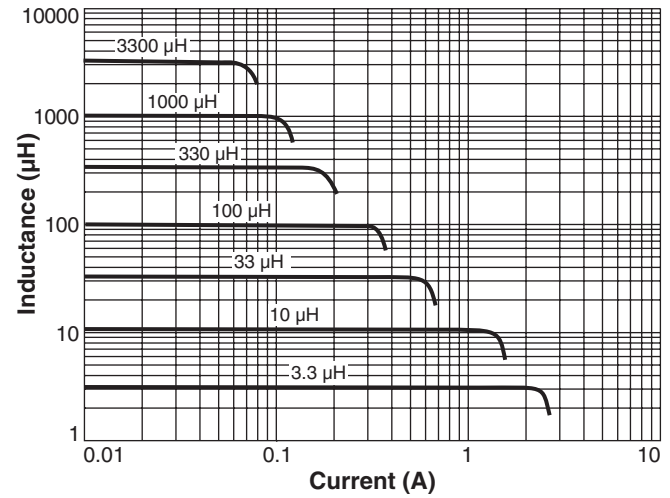


# Shielded Power Inductors – LPS5030 Series

## Typical L vs Frequency



## Typical L vs Current

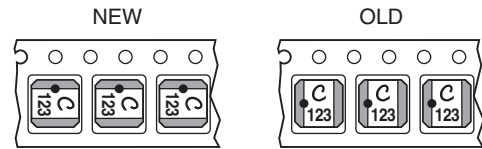


\* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0.13 mm.  
For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch /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

Dimensions are in inches / mm

**Packaging** 750/7" reel; 2500/13" reel Plastic tape: 12 mm wide, 0.32 mm thick, 8 mm pocket spacing, 3.1 mm pocket depth

**NOTE NEW PART ORIENTATION** Parts are rotated 90° in the packaging tape compared to previous versions of this product.



**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

Document 581-2 Revised 09/02/15  
 © Coilcraft Inc. 2017  
 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.