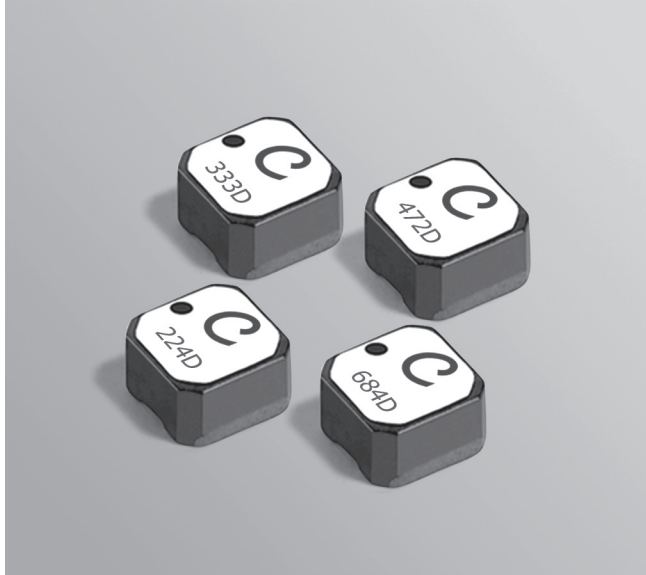


Shielded Power Inductors – LPS5030



- 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

Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Weight 226 – 244 mg

Ambient temperature –40°C to +85°C with I_{rms} current, +85°C to +125°C with derated current

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 with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

Part number ¹	Inductance ² ±20% (μH)	DCR max ³ (Ohms)	SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
LPS5030-901ML_	0.90	0.040	250	3.8	4.0	4.1	2.10	2.80
LPS5030-122ML_	1.2	0.043	210	3.5	3.6	3.7	2.00	2.65
LPS5030-172ML_	1.7	0.051	190	3.0	3.2	3.3	1.90	2.50
LPS5030-222ML_	2.2	0.057	168	2.9	3.1	3.2	1.60	2.15
LPS5030-332ML_	3.3	0.066	125	2.3	2.5	2.6	1.40	1.80
LPS5030-472ML_	4.7	0.083	84	1.9	2.0	2.0	1.30	1.75
LPS5030-562ML_	5.6	0.089	70	1.8	1.8	1.9	1.25	1.65
LPS5030-682ML_	6.8	0.099	56	1.6	1.7	1.7	1.20	1.60
LPS5030-822ML_	8.2	0.125	45	1.6	1.7	1.7	1.10	1.55
LPS5030-103ML_	10.0	0.127	30	1.4	1.4	1.4	1.00	1.50
LPS5030-123ML_	12.0	0.155	24	1.3	1.4	1.4	0.95	1.40
LPS5030-153ML_	15.0	0.160	32	0.80	0.90	0.90	0.92	1.40
LPS5030-183ML_	18.0	0.170	27	0.80	0.82	0.87	0.90	1.30
LPS5030-223ML_	22.0	0.190	24	0.70	0.75	0.78	0.88	1.25
LPS5030-333ML_	33.0	0.260	19	0.60	0.63	0.64	0.85	1.20
LPS5030-473ML_	47.0	0.330	16	0.50	0.53	0.55	0.75	1.00
LPS5030-683ML_	68.0	0.440	12	0.40	0.43	0.44	0.65	0.900
LPS5030-823ML_	82.0	0.470	11	0.38	0.40	0.40	0.60	0.830
LPS5030-104ML_	100	0.600	10	0.27	0.31	0.32	0.55	0.750
LPS5030-124ML_	120	0.800	9	0.26	0.29	0.30	0.45	0.660
LPS5030-154ML_	150	0.860	7.5	0.22	0.25	0.263	0.42	0.570
LPS5030-224ML_	220	1.35	6.0	0.21	0.235	0.245	0.36	0.500
LPS5030-334ML_	330	1.80	5.0	0.155	0.155	0.200	0.32	0.420
LPS5030-474ML_	470	2.80	4.0	0.117	0.134	0.146	0.28	0.370
LPS5030-564ML_	560	3.20	3.6	0.110	0.130	0.140	0.23	0.320
LPS5030-684ML_	680	3.80	3.0	0.100	0.120	0.126	0.20	0.290
LPS5030-105ML_	1000	5.10	2.5	0.100	0.110	0.110	0.18	0.250
LPS5030-155ML_	1500	7.60	2.0	0.068	0.080	0.089	0.15	0.210
LPS5030-185ML_	1800	10.0	1.8	0.069	0.081	0.086	0.13	0.170
LPS5030-225ML_	2200	11.0	1.6	0.063	0.074	0.080	0.10	0.150
LPS5030-335ML_	3300	19.5	1.3	0.056	0.063	0.067	0.090	0.125
LPS5030-475ML_	4700	26.0	1.1	0.049	0.056	0.059	0.080	0.110

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

LPS5030-105MLC

Termination: L = RoHS compliant silver-palladium-platinum-glass frit.
Special order:
T = RoHS tin-silver-copper (95.5/4/0.5) or S = 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).

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4192A impedance analyzer or equivalent.
- DCR measured on a micro-ohmmeter.
- SRF measured using Agilent/HP 8753ES or equivalent.
- DC current at which the inductance drops the specified amount from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- 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 01/23/12

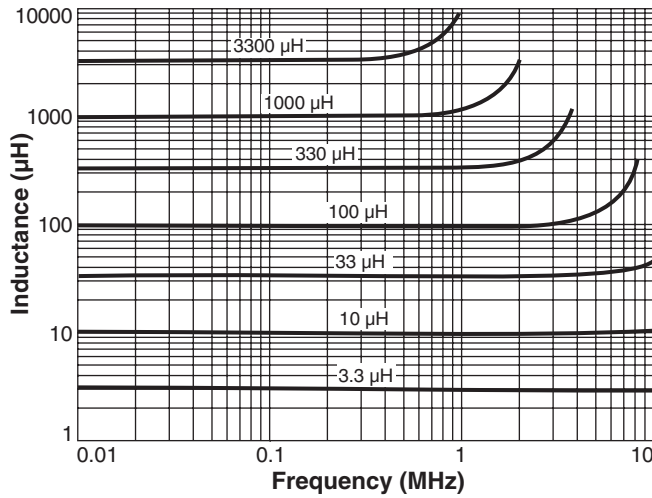
© Coilcraft Inc. 2013

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.

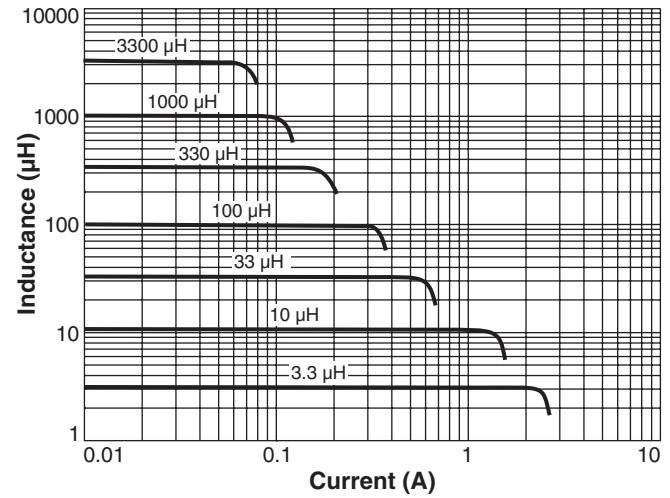


Shielded Power Inductors – LPS5030 Series

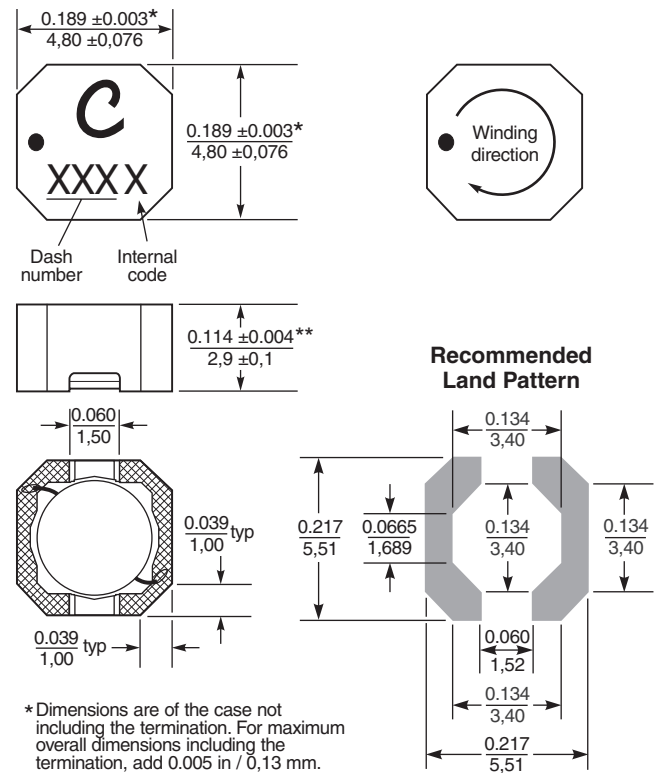
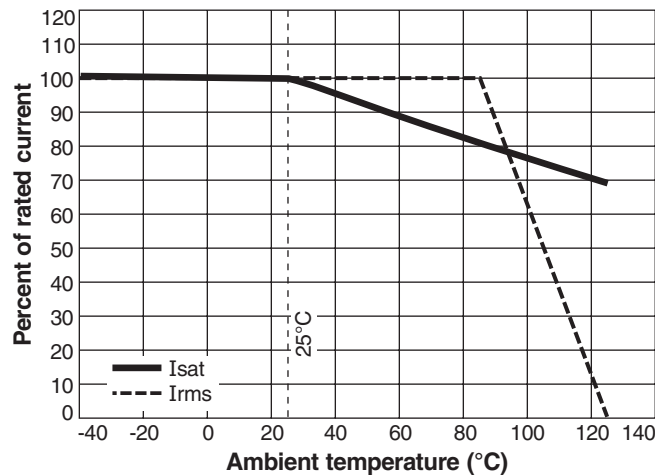
Typical L vs Frequency



Typical L vs Current



Typical Current Derating



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

Document 581-2 Revised 01/23/12
 © Coilcraft Inc. 2013
 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.