Shielded Power Inductors – LPS5015

- Very low DCR; excellent current handling
- 5.0 × 5.0 mm footprint; less than 1.5 mm tall

Designer's Kit C350 contains 3 each of all values
Core material Ferrite
Core and winding loss See www.coilcraft.com/coreloss
Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.
Weight 102 – 107 mg
Ambient temperature –40°C to +85°C with Irms 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 1000/7″reel; 3500/13″ reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.57 mm pocket depth
Recommended pick and place nozzle OD: 5 mm; ID: ≤ 2.5 mm
PCB washing Only pure water or alcohol recommended

Part number[1]	Inductance[2] ±20% (µH)	DCR max[3] (Ohms)	SRF typ[4] (MHz)	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
LPS5015-102ML_	1.0	0.050	183	3.6	3.8	3.9	1.90	2.65
LPS5015-132ML_	1.3	0.065	150	2.5	2.6	2.8	1.70	2.35
LPS5015-182ML_	1.8	0.075	128	2.6	2.8	2.9	1.50	2.15
LPS5015-222ML_	2.2	0.090	116	2.4	2.6	2.7	1.40	2.00
LPS5015-332ML_	3.3	0.125	88	1.9	2.0	2.0	1.30	1.80
LPS5015-472ML_	4.7	0.150	73	1.6	1.7	1.8	1.20	1.62
LPS5015-562ML_	5.6	0.175	67	1.6	1.6	1.6	1.10	1.45
LPS5015-682ML_	6.8	0.225	57	1.3	1.4	1.5	0.90	1.25
LPS5015-822ML_	8.2	0.280	49	1.3	1.3	1.4	0.85	1.05
LPS5015-103ML_	10	0.300	44	1.2	1.3	1.3	0.80	0.95
LPS5015-123ML_	12	0.350	40	1.0	1.1	1.2	0.75	0.84
LPS5015-153ML_	15	0.360	38	0.80	0.84	0.86	0.73	0.84
LPS5015-183ML_	18	0.550	35	0.75	0.77	0.80	0.70	0.83
LPS5015-223ML_	22	0.675	31	0.70	0.73	0.75	0.60	0.82
LPS5015-333ML_	33	0.750	24	0.55	0.59	0.60	0.50	0.70
LPS5015-473ML_	47	1.00	18	0.46	0.48	0.49	0.45	0.57
LPS5015-563ML_	56	1.13	17	0.40	0.43	0.45	0.40	0.52
LPS5015-683ML_	68	1.45	15	0.33	0.38	0.39	0.35	0.47
LPS5015-104ML_	100	1.95	12	0.30	0.33	0.34	0.30	0.42
LPS5015-124ML_	120	2.50	10	0.25	0.28	0.30	0.27	0.37
LPS5015-154ML_	150	3.40	9.3	0.23	0.25	0.26	0.25	0.33
LPS5015-224ML_	220	4.50	7.3	0.20	0.21	0.22	0.22	0.29
LPS5015-334ML_	330	7.40	5.7	0.15	0.17	0.18	0.17	0.22
LPS5015-474ML_	470	7.50	4.9	0.12	0.12	0.13	0.16	0.21
LPS5015-564ML_	560	8.50	4.3	0.10	0.11	0.12	0.14	0.190
LPS5015-684ML_	680	10.6	4.0	0.10	0.11	0.11	0.13	0.175
LPS5015-105ML_	1000	15.0	3.2	0.080	0.090	0.093	0.10	0.150
LPS5015-155ML_	1500	25.0	2.5	0.080	0.086	0.088	0.090	0.140
LPS5015-185ML_	1800	28.0	2.2	0.078	0.083	0.086	0.085	0.130
LPS5015-225ML_	2200	36.0	2.1	0.072	0.078	0.080	0.065	0.090
LPS5015-335ML_	3300	55.0	1.7	0.064	0.072	0.076	0.055	0.075
LPS5015-475ML_	4700	80.0	1.4	0.062	0.069	0.072	0.045	0.065

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

LPS5015-335MLC

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 1000 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 (3500 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 8753ES or equivalent.
5. DC current that causes the specified inductance drop from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

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

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Document 585-1 Revised 12/08/11

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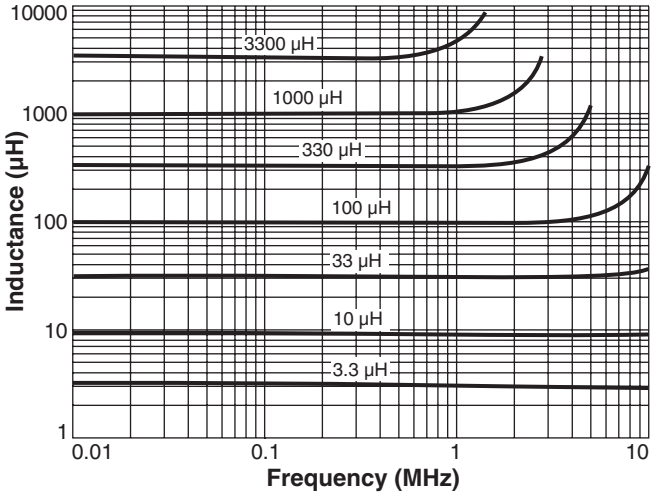
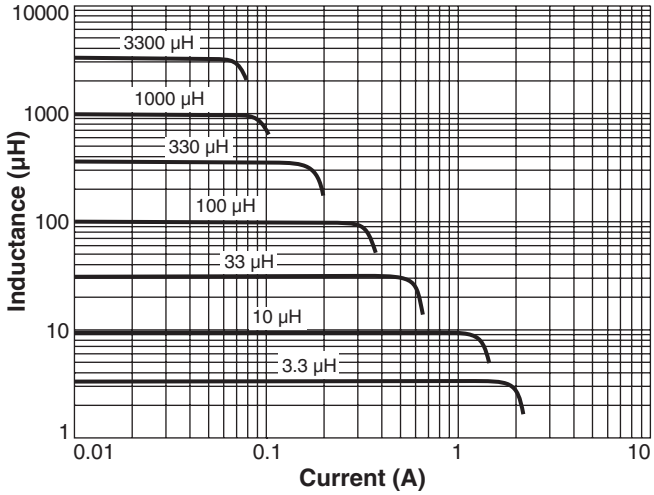
Shielded Power Inductors – LPS5015 Series

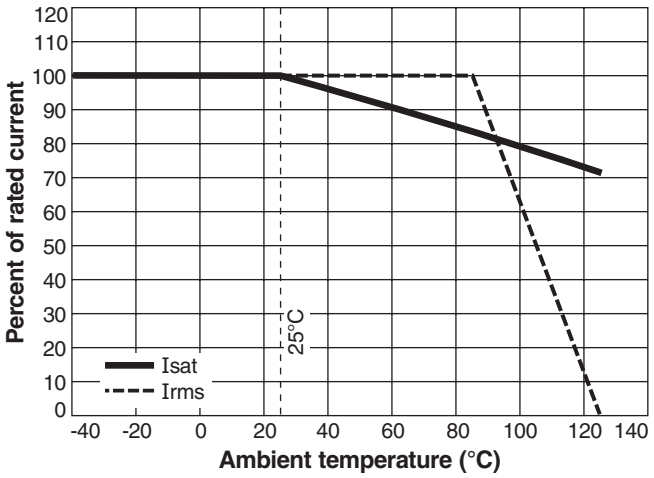
Typical L vs Frequency

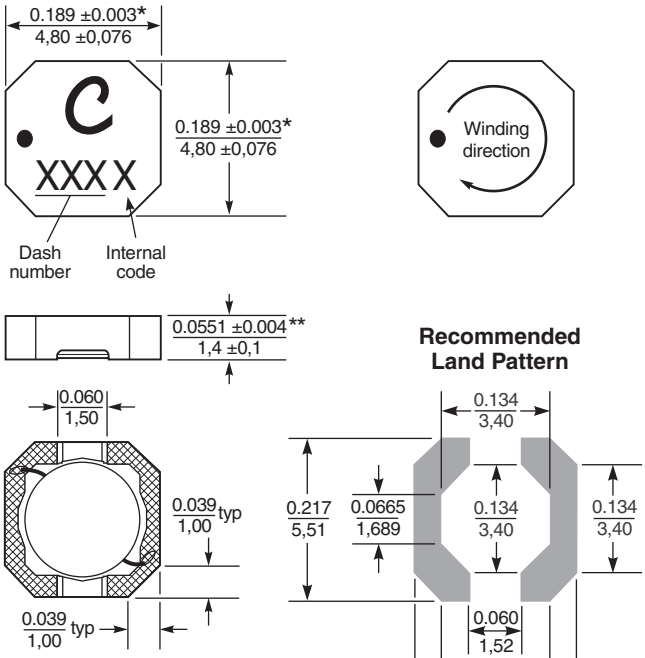


Typical L vs Current



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 inches / mm

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Document 585-2 Revised 12/08/11

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