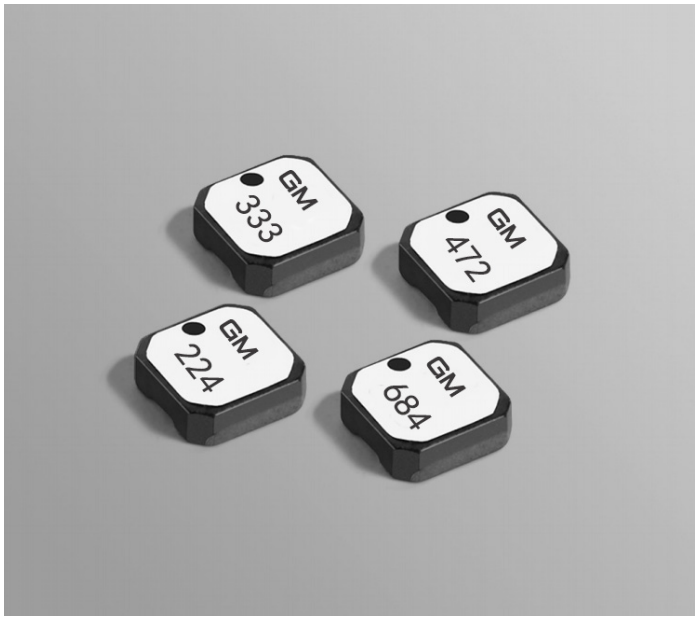
Shielded Power Inductors – LP5015



- 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
Environmental RoHS compliant, halogen free
Terminations RoHS compliant matte tin over nickel over silver. Other terminations available at additional cost.
Weight 102 – 107 mg
Ambient temperature –40°C to +85°C with (40°C rise) Irms current.
Maximum part temperature +125°C (ambient + temp rise).
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 Tested to MIL-STD-202 Method 215 plus an additional aqueous wash.

Part number	Inductance ±20% (µH)	DCR max (Ohms)	SRF typ (MHz)	Isat (A) 10% drop	Isat (A) 20% drop	Isat (A) 30% drop	Irms (A) 20°C rise	Irms (A) 40°C rise
LP5015-102MR_	1.0	0.050	183	3.6	3.8	3.9	1.90	2.65
LP5015-132MR_	1.3	0.065	150	2.5	2.6	2.8	1.70	2.35
LP5015-182MR_	1.8	0.075	128	2.6	2.8	2.9	1.50	2.15
LP5015-222MR_	2.2	0.090	116	2.4	2.6	2.7	1.40	2.00
LP5015-332MR_	3.3	0.125	88	1.9	2.0	2.0	1.30	1.80
LP5015-472MR_	4.7	0.150	73	1.6	1.7	1.8	1.20	1.62
LP5015-562MR_	5.6	0.175	67	1.6	1.6	1.6	1.10	1.45
LP5015-682MR_	6.8	0.225	57	1.3	1.4	1.5	0.90	1.25
LP5015-822MR_	8.2	0.280	49	1.3	1.3	1.4	0.85	1.05
LP5015-103MR_	10	0.300	44	1.2	1.3	1.3	0.80	0.95
LP5015-123MR_	12	0.350	40	1.0	1.1	1.2	0.75	0.84
LP5015-153MR_	15	0.360	38	0.80	0.84	0.86	0.73	0.84
LP5015-183MR_	18	0.550	35	0.75	0.77	0.80	0.70	0.83
LP5015-223MR_	22	0.675	31	0.70	0.73	0.75	0.60	0.82
LP5015-333MR_	33	0.750	24	0.55	0.59	0.60	0.50	0.70
LP5015-473MR_	47	1.00	18	0.46	0.48	0.49	0.45	0.57
LP5015-563MR_	56	1.13	17	0.40	0.43	0.45	0.40	0.52
LP5015-683MR_	68	1.45	15	0.33	0.38	0.39	0.35	0.47
LP5015-104MR_	100	1.95	12	0.30	0.33	0.34	0.30	0.42
LP5015-124MR_	120	2.50	10	0.25	0.28	0.30	0.27	0.37
LP5015-154MR_	150	3.40	9.3	0.23	0.25	0.26	0.25	0.33
LP5015-224MR_	220	4.50	7.3	0.20	0.21	0.22	0.22	0.29
LP5015-334MR_	330	7.40	5.7	0.15	0.17	0.18	0.17	0.22
LP5015-474MR_	470	7.50	4.9	0.12	0.12	0.13	0.16	0.21
LP5015-564MR_	560	8.50	4.3	0.10	0.11	0.12	0.14	0.190
LP5015-684MR_	680	10.6	4.0	0.10	0.11	0.11	0.13	0.175
LP5015-105MR_	1000	15.0	3.2	0.080	0.090	0.093	0.10	0.150
LP5015-155MR_	1500	25.0	2.5	0.080	0.086	0.088	0.090	0.140
LP5015-185MR_	1800	28.0	2.2	0.078	0.083	0.086	0.085	0.130
LP5015-225MR_	2200	36.0	2.1	0.072	0.078	0.080	0.065	0.090
LP5015-335MR_	3300	55.0	1.7	0.064	0.072	0.076	0.055	0.075
LP5015-475MR_	4700	80.0	1.4	0.062	0.069	0.072	0.045	0.065

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

LP5015-225MRC

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 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 at 25°C that causes the specified inductance drop from its value without current.
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.
7. Electrical specifications at 25°C.

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

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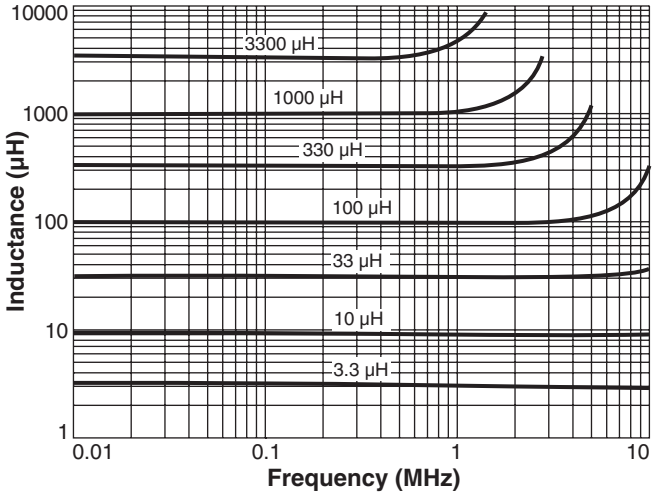
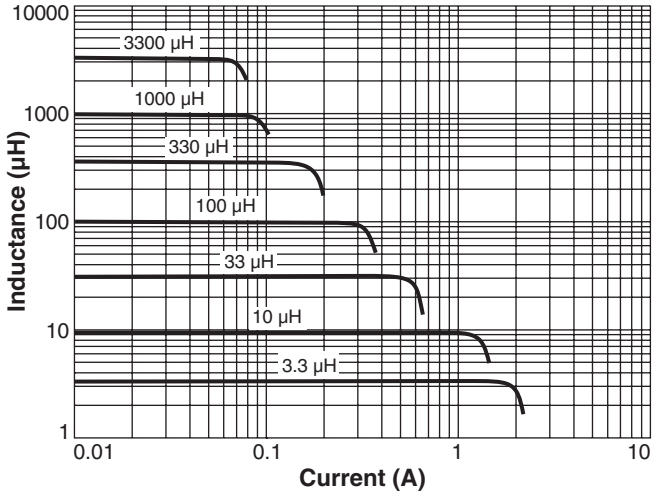
Specification subject to change without notice.
Please check web site for latest information.

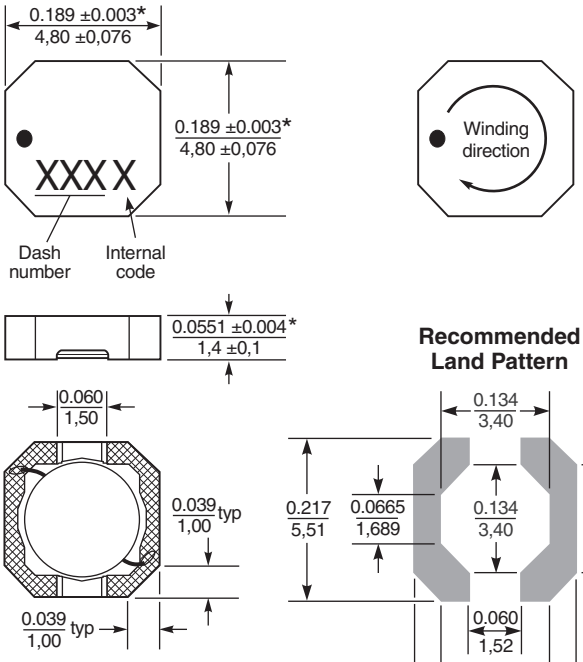
Shielded Power Inductors – LP5015 Series

Typical L vs Frequency



Typical L vs Current



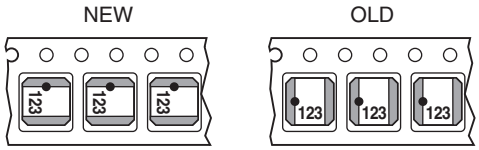


* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0,13 mm.
For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0,13 mm).

Dimensions are in inches / mm

Packaging 1000/7″ reel; 3500/13″ reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.57 mm pocket depth

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



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