

# 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](http://www.coilcraft.com/coreloss)

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

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

**LPS5015-225MRC**

**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).

- Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A.
- DCR measured on a micro-ohmmeter.
- SRF measured using Agilent/HP 8753ES or equivalent.
- DC current at 25°C that causes the specified inductance drop from its value without current.  
[Click for temperature derating information.](#)
- 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.](#)
- Electrical specifications at 25°C.  
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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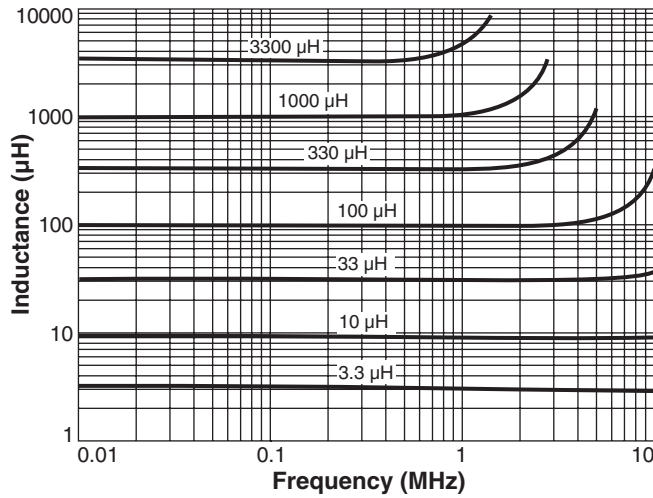
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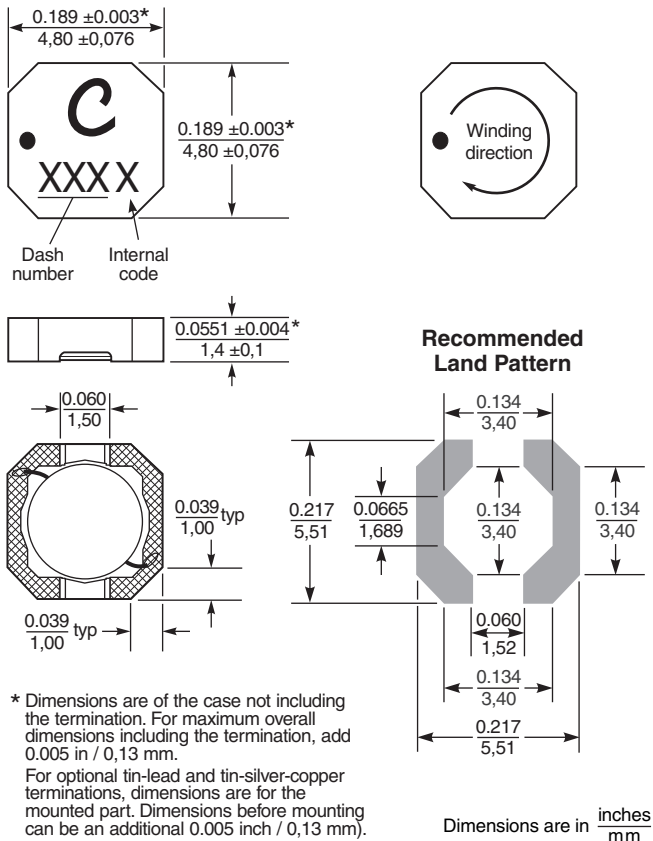
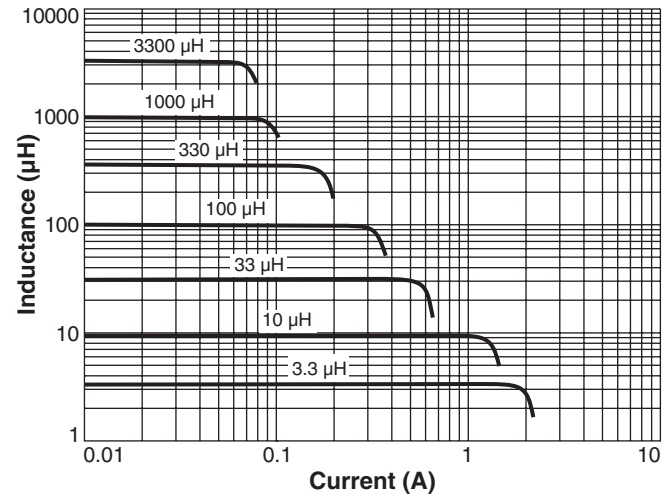


# Shielded Power Inductors – LPS5015 Series

## Typical L vs Frequency

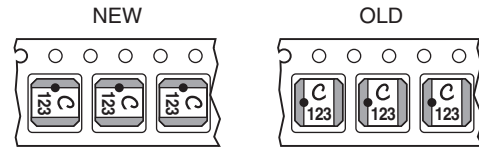


## Typical L vs Current



**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.



\* 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).