

Shielded Power Inductors – LPS5010



- Very low DCR; excellent current handling
- 5.0 × 5.0 mm footprint; less than 1.0 mm tall

Designer's Kit C407 contains 3 each of all values

Core material Ferrite

Core and winding loss See 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 70 – 75 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)

Packaging 1000/7" reel; 3000/13" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.02 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 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
LPS5010-471MR_	0.47	0.038	290	3.1	3.3	3.4	2.0	2.7
LPS5010-821MR_	0.82	0.058	195	2.3	2.5	2.6	1.2	1.5
LPS5010-152MR_	1.5	0.072	168	1.7	1.8	1.9	0.90	1.4
LPS5010-222MR_	2.2	0.100	144	1.4	1.5	1.6	0.88	1.2
LPS5010-332MR_	3.3	0.125	105	1.1	1.2	1.3	0.86	1.1
LPS5010-472MR_	4.7	0.175	76	0.95	1.1	1.1	0.85	0.98
LPS5010-562MR_	5.6	0.240	75	0.90	0.97	1.00	0.75	0.92
LPS5010-682MR_	6.8	0.255	71	0.82	0.90	0.93	0.74	0.85
LPS5010-103MR_	10	0.350	51	0.66	0.72	0.74	0.73	0.80
LPS5010-153MR_	15	0.500	39	0.55	0.59	0.62	0.68	0.75
LPS5010-223MR_	22	0.670	32	0.47	0.51	0.53	0.46	0.62
LPS5010-333MR_	33	1.05	26	0.38	0.42	0.43	0.40	0.55
LPS5010-473MR_	47	1.45	20	0.31	0.34	0.36	0.33	0.44
LPS5010-683MR_	68	2.00	15	0.26	0.29	0.30	0.25	0.35
LPS5010-104MR_	100	3.10	12	0.21	0.23	0.24	0.21	0.28
LPS5010-124MR_	120	3.50	11	0.20	0.22	0.23	0.19	0.25
LPS5010-154MR_	150	4.25	9.0	0.18	0.20	0.21	0.17	0.23
LPS5010-224MR_	220	6.25	7.0	0.15	0.16	0.17	0.15	0.20
LPS5010-334MR_	330	8.60	5.5	0.12	0.13	0.14	0.13	0.185
LPS5010-474MR_	470	12.7	4.5	0.090	0.11	0.11	0.11	0.150
LPS5010-564MR_	560	15.7	4.0	0.090	0.10	0.10	0.10	0.135
LPS5010-684MR_	680	20.0	3.7	0.090	0.097	0.10	0.090	0.125

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

LPS5010-684MR_C

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). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

D= 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (3500 parts per full reel).

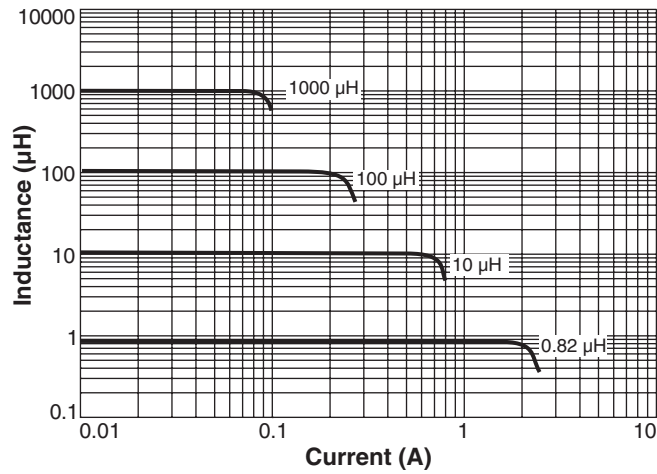
B= Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A. Inductance at 1 MHz is the same for parts with SRF ≥ 10 MHz.
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.

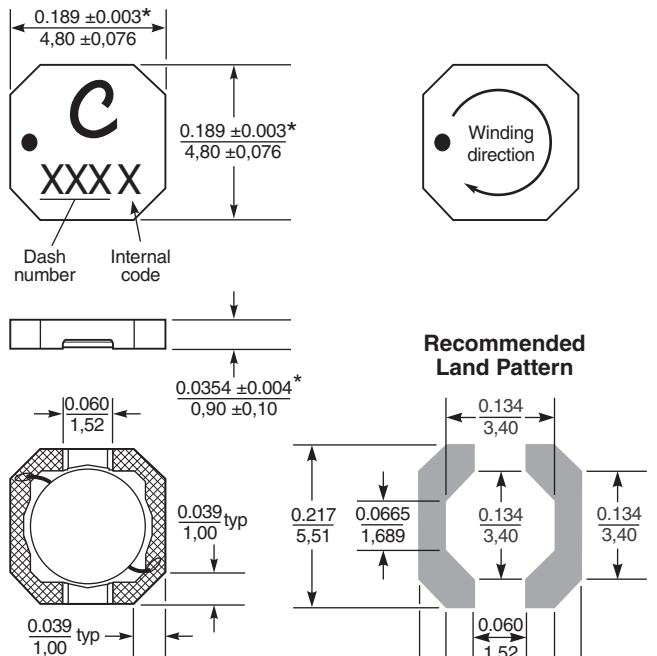
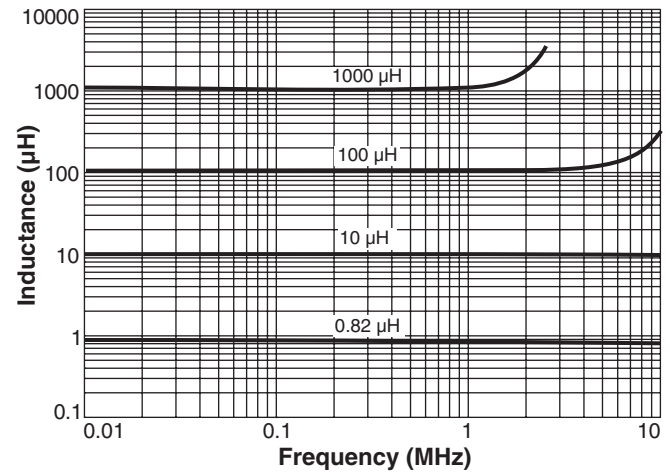


Shielded SMT Power Inductors – LPS5010 Series

Typical L vs Current



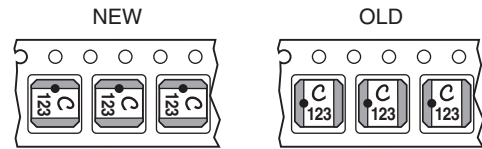
Typical L vs Frequency



* 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).

Packaging 1000/7" reel; 3000/13" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.02 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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Document 536-2 Revised 11/29/21
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