

Shielded Power Inductors – LPS4010



- Very low DCR; excellent current handling
- 4.0 × 4.0 mm footprint; less than 1.0 mm tall
- AEC-Q200 qualified

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 50 mg

Ambient temperature -40°C to +125°C with (40°C rise) Irms current.

Maximum part temperature +165°C

Storage temperature Component: -40°C to +165°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; 3500/13" reel Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 1.45 mm pocket depth

Recommended pick and place nozzle OD: 4 mm; ID: ≤ 2 mm

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

Part number ¹	L ² (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
LPS4010-381NR_	0.38 ±30%	0.028	350	4.30	4.40	4.50	2.45	3.35
LPS4010-601NR_	0.60 ±30%	0.034	240	3.50	3.60	3.70	2.30	3.10
LPS4010-861NR_	0.86 ±30%	0.043	204	3.00	3.10	3.20	2.00	2.70
LPS4010-122NR_	1.2 ±30%	0.066	173	2.50	2.60	2.70	1.70	2.20
LPS4010-152NR_	1.5 ±30%	0.088	140	2.10	2.20	2.30	1.40	1.90
LPS4010-222MR_	2.2 ±20%	0.100	112	1.90	2.00	2.10	1.30	1.75
LPS4010-332MR_	3.3 ±20%	0.140	91	1.50	1.60	1.70	1.15	1.55
LPS4010-472MR_	4.7 ±20%	0.245	72	1.20	1.30	1.40	0.850	1.15
LPS4010-562MR_	5.6 ±20%	0.260	70	1.10	1.20	1.30	0.800	1.10
LPS4010-682MR_	6.8 ±20%	0.311	59	1.00	1.10	1.20	0.750	1.00
LPS4010-822MR_	8.2 ±20%	0.430	55	0.900	0.950	1.00	0.650	0.850
LPS4010-103MR_	10 ±20%	0.468	51	0.860	0.880	0.900	0.600	0.800
LPS4010-123MR_	12 ±20%	0.630	45	0.760	0.780	0.800	0.525	0.700
LPS4010-153MR_	15 ±20%	0.700	41	0.720	0.740	0.760	0.500	0.675
LPS4010-183MR_	18 ±20%	0.775	38	0.660	0.680	0.700	0.450	0.625
LPS4010-223MR_	22 ±20%	1.04	33	0.580	0.600	0.620	0.375	0.525
LPS4010-333MR_	33 ±20%	1.65	27	0.470	0.480	0.490	0.300	0.425
LPS4010-473MR_	47 ±20%	2.23	21	0.400	0.410	0.420	0.260	0.360
LPS4010-683MR_	68 ±20%	2.97	17	0.330	0.340	0.350	0.240	0.320
LPS4010-104MR_	100 ±20%	4.36	14	0.270	0.280	0.290	0.200	0.300
LPS4010-124MR_	120 ±20%	4.90	13	0.250	0.260	0.270	0.190	0.250
LPS4010-154MR_	150 ±20%	5.85	11	0.235	0.240	0.245	0.170	0.230
LPS4010-184MR_	180 ±20%	7.55	10	0.210	0.215	0.220	0.155	0.210
LPS4010-224MR_	220 ±20%	8.66	8.9	0.190	0.195	0.200	0.145	0.190

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

LPS4010-224MRC

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).

- 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.
- 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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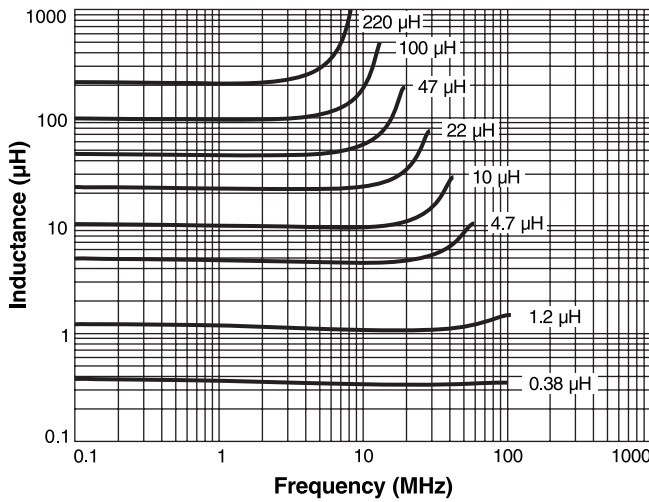
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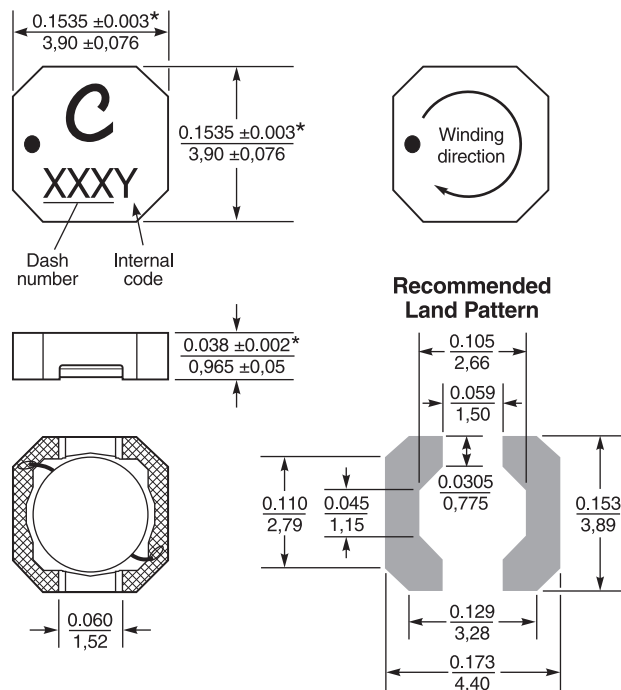
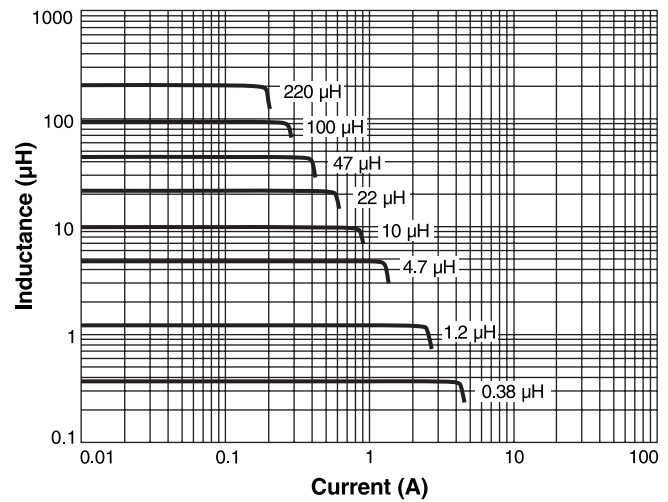


Shielded SMT Power Inductors – LPS4010 Series

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

Dimensions are in $\frac{\text{inches}}{\text{mm}}$