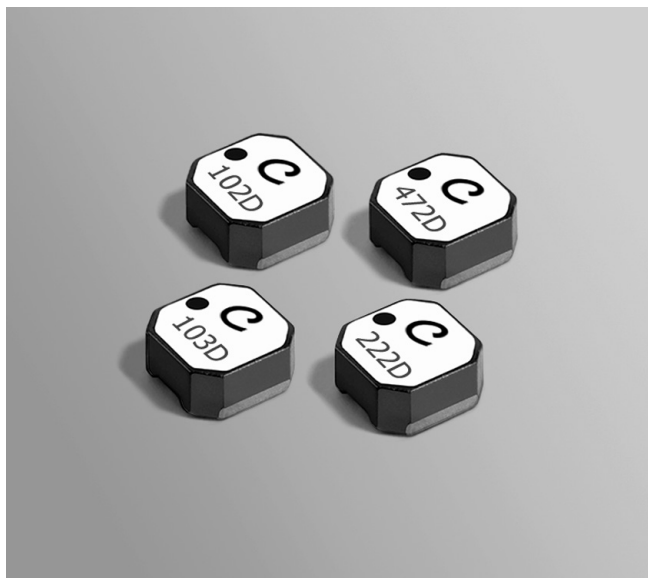


# Shielded Power Inductors – LPS4018



- Very low DCR; excellent current handling
- 4.0 × 4.0 mm footprint; less than 1.8 mm tall

**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** 54 – 100 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, 0.23 mm thick, 8 mm pocket spacing, 1.9 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 <sup>1</sup>	Inductance <sup>2</sup> (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
LPS4018-561MR_	0.56 ±20%	0.033	250	4.8	5.2	5.3	1.9	2.8
LPS4018-102NR_	1.0 ±30%	0.042	180	3.8	3.9	4.0	1.8	2.5
LPS4018-222MR_	2.2 ±20%	0.070	90	2.7	2.8	2.9	1.5	2.0
LPS4018-332MR_	3.3 ±20%	0.080	75	1.9	2.0	2.0	1.4	1.9
LPS4018-472MR_	4.7 ±20%	0.125	65	1.8	1.9	1.9	1.3	1.8
LPS4018-682MR_	6.8 ±20%	0.150	50	1.2	1.3	1.3	1.0	1.5
LPS4018-103MR_	10 ±20%	0.200	40	1.1	1.2	1.3	0.90	1.25
LPS4018-153MR_	15 ±20%	0.260	32	0.86	0.91	0.94	0.80	1.12
LPS4018-183MR_	18 ±20%	0.270	27	0.78	0.83	0.85	0.70	1.00
LPS4018-223MR_	22 ±20%	0.360	26	0.74	0.80	0.83	0.65	0.90
LPS4018-333MR_	33 ±20%	0.420	20	0.58	0.64	0.68	0.55	0.80
LPS4018-473MR_	47 ±20%	0.650	16	0.51	0.55	0.56	0.45	0.68
LPS4018-683MR_	68 ±20%	0.950	13	0.41	0.45	0.46	0.40	0.56
LPS4018-104MR_	100 ±20%	1.40	10	0.34	0.36	0.37	0.35	0.50
LPS4018-124MR_	120 ±20%	1.60	9.0	0.31	0.33	0.34	0.30	0.45
LPS4018-154MR_	150 ±20%	2.00	8.0	0.27	0.29	0.30	0.28	0.40
LPS4018-184MR_	180 ±20%	2.50	7.5	0.24	0.26	0.27	0.26	0.36
LPS4018-224MR_	220 ±20%	3.70	6.5	0.21	0.225	0.235	0.20	0.30
LPS4018-334MR_	330 ±20%	5.90	5.5	0.18	0.19	0.20	0.17	0.23
LPS4018-474MR_	470 ±20%	7.80	4.5	0.14	0.16	0.17	0.15	0.20
LPS4018-564MR_	560 ±20%	10.0	4.0	0.13	0.14	0.15	0.14	0.18
LPS4018-684MR_	680 ±20%	11.5	3.5	0.12	0.13	0.14	0.12	0.16
LPS4018-824MR_	820 ±20%	14.0	2.9	0.11	0.12	0.13	0.10	0.14
LPS4018-105MR_	1000 ±20%	18.0	2.8	0.10	0.11	0.11	0.098	0.125

Coilcraft **Designer's Kit C392** contains samples of 0.80 µH to 33 µH parts (3 each) from LPS3008, LPS3010 and LPS3015. **Kit C401** contains samples of 0.56 µH to 33 µH parts (3 each) from LPS4012 and LPS4018. **Kit C402** contains samples of 220 µH to 3300 µH parts (3 each) from all five series. For details of kit contents and to order, contact Coilcraft or visit <http://order.coilcraft.com>.

- Please specify **termination** and **packaging** codes:

## LPS4018-223MRC

**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. 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.



[www.coilcraft.com](http://www.coilcraft.com)

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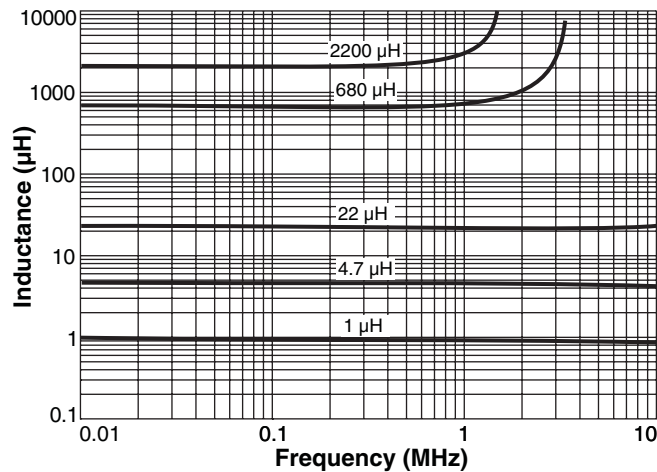
Document 435-1 Revised 09/02/15

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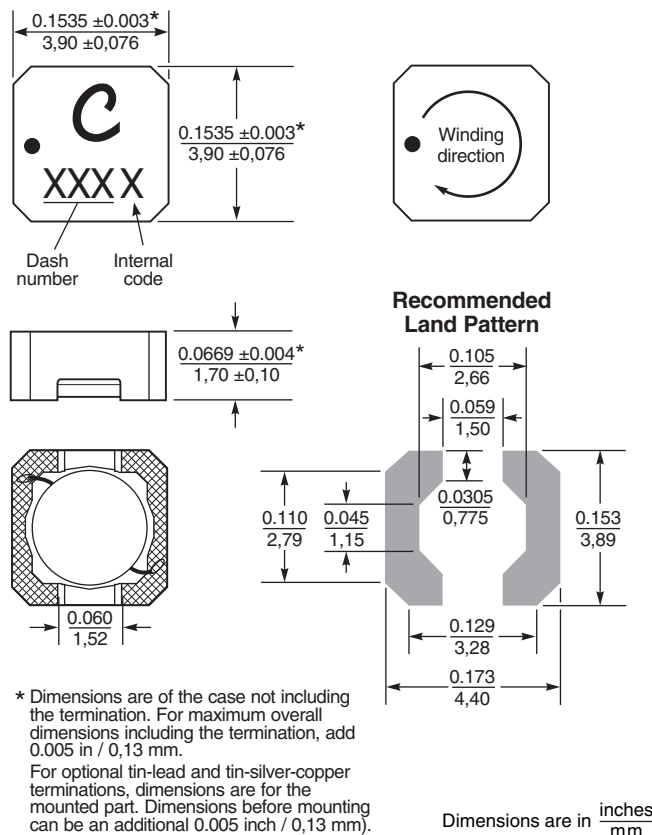
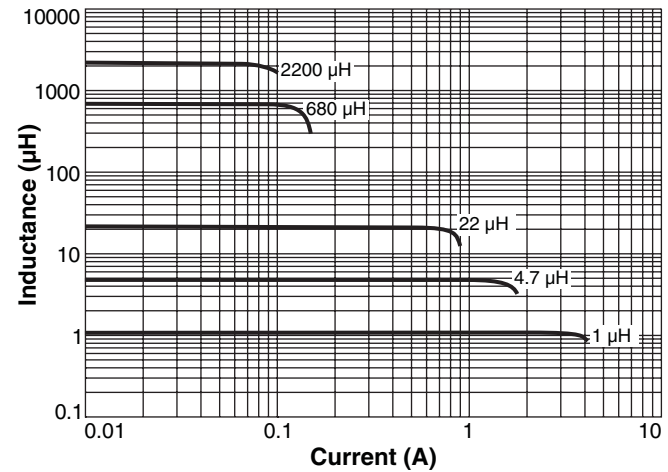
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

# Shielded SMT Power Inductors – LPS4018 Series

## Typical L vs Frequency

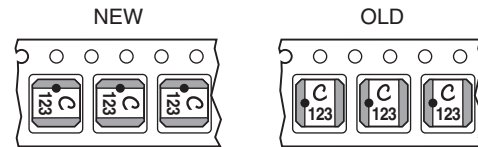


## Typical L vs Current



**Packaging** 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.9 mm pocket depth

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



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Coilcraft:

[LPS4018-224MLB](#) [LPS4018-472MLC](#) [LPS4018-124MLC](#) [LPS4018-334MLC](#) [LPS4018-223MLC](#) [LPS4018-473MLC](#)  
[LPS4018-335MLC](#) [LPS4018-184MLB](#) [LPS4018-103MLB](#) [LPS4018-683MLB](#) [LPS4018-185MLC](#) [LPS4018-102NLC](#)  
[LPS4018-683MLC](#) [LPS4018-684MLB](#) [LPS4018-184MLC](#) [LPS4018-564MLC](#) [LPS4018-332MLB](#) [LPS4018-334MLB](#)  
[LPS4018-561MLB](#) [LPS4018-105MLB](#) [LPS4018-153MLB](#) [LPS4018-564MLB](#) [LPS4018-222MLB](#) [LPS4018-333MLB](#)  
[LPS4018-682MLC](#) [LPS4018-224MLC](#) [LPS4018-104MLC](#) [LPS4018-474MLC](#) [LPS4018-473MLB](#) [LPS4018-105MLC](#)  
[LPS4018-155MLC](#) [LPS4018-183MLB](#) [LPS4018-154MLC](#) [LPS4018-225MLC](#) [LPS4018-155MLB](#) [LPS4018-333MLC](#)  
[LPS4018-684MLC](#) [LPS4018-104MLB](#) [LPS4018-682MLB](#) [LPS4018-185MLB](#) [LPS4018-824MLC](#) [LPS4018-474MLB](#)  
[LPS4018-335MLB](#) [LPS4018-472MLB](#) [LPS4018-561MLC](#) [LPS4018-103MLC](#) [LPS4018-153MLC](#) [LPS4018-222MLC](#)  
[LPS4018-183MLC](#) [LPS4018-225MLB](#) [LPS4018-102NLB](#) [LPS4018-824MLB](#) [LPS4018-223MLB](#) [LPS4018-124MLB](#)  
[LPS4018-332MLC](#) [LPS4018-154MLB](#) [LPS4018-222MRB](#) [LPS4018-561MRB](#) [LPS4018-222MRC](#) [LPS4018-561MRC](#)  
[LPS4018-102NRB](#) [LPS4018-334MRC](#) [LPS4018-474MRC](#) [LPS4018-564MRB](#) [LPS4018-683MRC](#) [LPS4018-684MRB](#)  
[LPS4018-103MRC](#) [LPS4018-104MRC](#) [LPS4018-333MRC](#) [LPS4018-154MRB](#) [LPS4018-474MRB](#) [LPS4018-](#)  
[223MRB](#) [LPS4018-564MRC](#) [LPS4018-102NRC](#) [LPS4018-824MRB](#) [LPS4018-103MRB](#) [LPS4018-105MRB](#)  
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[332MRB](#) [LPS4018-332MRC](#) [LPS4018-333MRB](#) [LPS4018-334MRB](#) [LPS4018-124MRC](#) [LPS4018-153MRB](#)  
[LPS4018-154MRC](#) [LPS4018-183MRC](#) [LPS4018-184MRB](#) [LPS4018-223MRC](#) [LPS4018-184MRC](#) [LPS4018-683MRB](#)