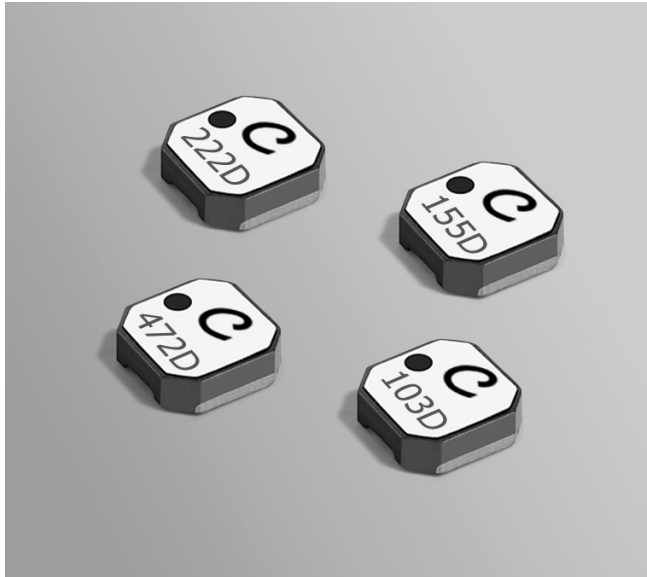


Shielded Power Inductors – LPS4414



- Very low DCR; excellent current handling
- 4.4 × 4.4 mm footprint; only 1.4 mm tall

Designer's Kit C340 contains 3 of each 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 82.3 – 89.8 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; 3500/13" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.52 mm pocket depth

Recommended pick and place nozzle: OD: 4.5 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 | 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 |
| LPS4414-301MR_ | 0.30 | 0.040 | 470 | 5.6 | 5.7 | 5.8 | 2.35 | 3.25 |
| LPS4414-501MR_ | 0.50 | 0.050 | 330 | 4.3 | 4.4 | 4.5 | 2.10 | 2.80 |
| LPS4414-701MR_ | This part number has been changed to LPS4414-801. | | | | | | | |
| LPS4414-801MR_ | 0.80 | 0.055 | 225 | 3.7 | 3.75 | 3.8 | 1.85 | 2.50 |
| LPS4414-102MR_ | 1.0 | 0.060 | 190 | 3.0 | 3.1 | 3.2 | 1.75 | 2.30 |
| LPS4414-152MR_ | 1.5 | 0.078 | 150 | 2.9 | 3.1 | 3.2 | 1.55 | 2.00 |
| LPS4414-182MR_ | 1.8 | 0.087 | 130 | 2.7 | 2.8 | 2.9 | 1.50 | 1.90 |
| LPS4414-222MR_ | 2.2 | 0.110 | 115 | 2.2 | 2.3 | 2.35 | 1.25 | 1.60 |
| LPS4414-332MR_ | 3.3 | 0.165 | 85.0 | 1.8 | 1.9 | 1.95 | 1.15 | 1.50 |
| LPS4414-472MR_ | 4.7 | 0.215 | 68.0 | 1.4 | 1.5 | 1.55 | 0.90 | 1.20 |
| LPS4414-562MR_ | 5.6 | 0.260 | 58.0 | 1.4 | 1.4 | 1.5 | 0.75 | 1.10 |
| LPS4414-682MR_ | 6.8 | 0.270 | 54.0 | 1.2 | 1.3 | 1.4 | 0.70 | 1.00 |
| LPS4414-822MR_ | 8.2 | 0.350 | 50.0 | 1.1 | 1.3 | 1.3 | 0.70 | 0.98 |
| LPS4414-103MR_ | 10 | 0.380 | 43.0 | 1.1 | 1.2 | 1.3 | 0.70 | 0.95 |
| LPS4414-123MR_ | 12 | 0.380 | 38.0 | 0.94 | 0.97 | 1.0 | 0.66 | 0.88 |
| LPS4414-153MR_ | 15 | 0.440 | 36.0 | 0.85 | 0.89 | 0.92 | 0.63 | 0.82 |
| LPS4414-183MR_ | 18 | 0.530 | 31.0 | 0.76 | 0.80 | 0.82 | 0.56 | 0.75 |
| LPS4414-223MR_ | 22 | 0.590 | 27.0 | 0.69 | 0.72 | 0.74 | 0.53 | 0.68 |
| LPS4414-333MR_ | 33 | 0.715 | 23.0 | 0.47 | 0.49 | 0.51 | 0.49 | 0.65 |
| LPS4414-473MR_ | 47 | 0.935 | 18.0 | 0.39 | 0.42 | 0.43 | 0.44 | 0.58 |
| LPS4414-563MR_ | 56 | 1.15 | 16.0 | 0.37 | 0.39 | 0.40 | 0.42 | 0.54 |
| LPS4414-683MR_ | 68 | 1.35 | 14.6 | 0.32 | 0.33 | 0.34 | 0.36 | 0.48 |
| LPS4414-104MR_ | 100 | 1.90 | 11.0 | 0.26 | 0.28 | 0.285 | 0.31 | 0.40 |
| LPS4414-124MR_ | 120 | 2.60 | 10.0 | 0.23 | 0.24 | 0.25 | 0.27 | 0.34 |
| LPS4414-154MR_ | 150 | 3.10 | 9.0 | 0.22 | 0.23 | 0.24 | 0.24 | 0.32 |
| LPS4414-224MR_ | 220 | 4.10 | 6.7 | 0.18 | 0.20 | 0.20 | 0.22 | 0.29 |
| LPS4414-334MR_ | 330 | 6.00 | 5.6 | 0.14 | 0.16 | 0.165 | 0.17 | 0.23 |
| LPS4414-474MR_ | 470 | 9.50 | 4.3 | 0.13 | 0.14 | 0.145 | 0.14 | 0.23 |
| LPS4414-564MR_ | 560 | 10.7 | 4.0 | 0.12 | 0.13 | 0.14 | 0.13 | 0.17 |
| LPS4414-684MR_ | 680 | 11.7 | 3.5 | 0.10 | 0.11 | 0.12 | 0.13 | 0.17 |
| LPS4414-824MR_ | 820 | 15.1 | 3.0 | 0.10 | 0.105 | 0.11 | 0.11 | 0.14 |
| LPS4414-105MR_ | 1000 | 16.3 | 2.6 | 0.10 | 0.102 | 0.106 | 0.10 | 0.13 |

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

LPS4414-223MRC

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). 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, 0 Adc.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 8753ES or equivalent.
5. DC current at which the inductance drops the specified amount 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.



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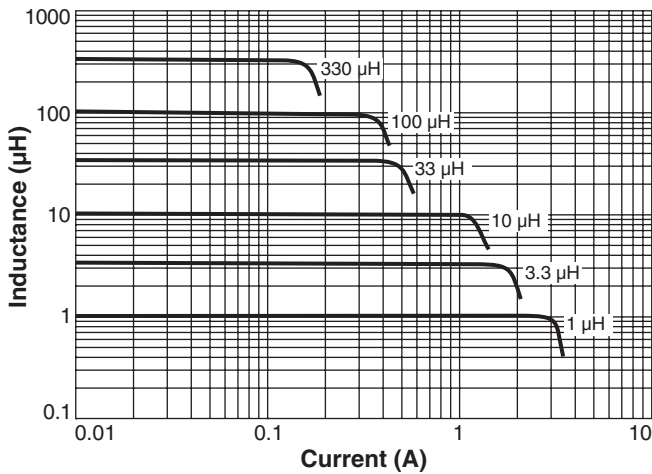
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

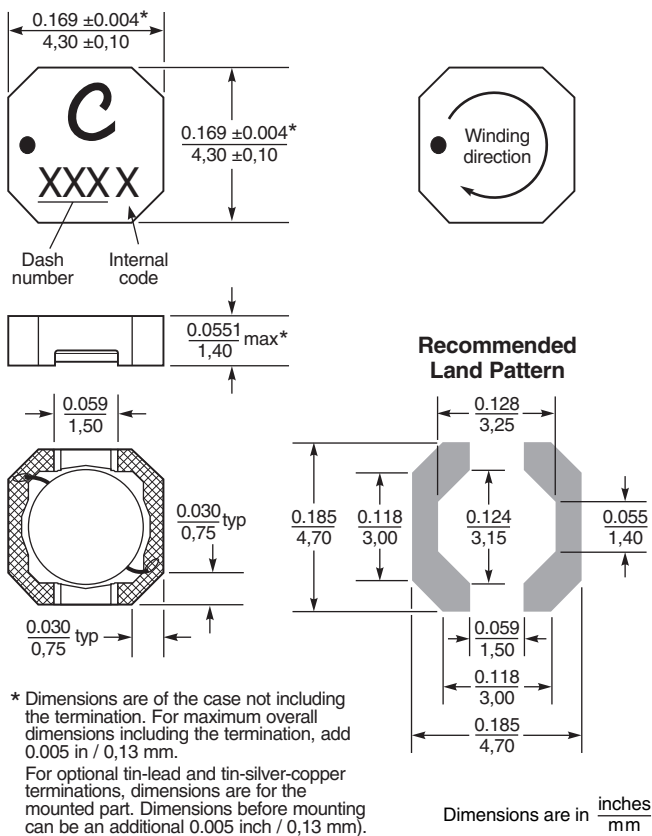
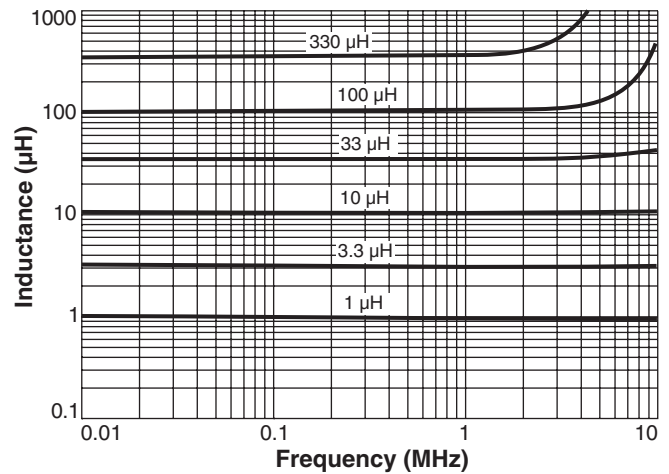


Shielded Power Inductors – LPS4414 Series

Typical L vs Current

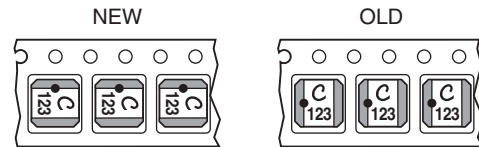


Typical L vs Frequency



Packaging 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.52 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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