

# Shielded Power Inductors – LPS3314



- Very low DCR; excellent current handling
- Miniature 3.3 × 3.3 mm footprint; less than 1.4 mm tall

**Designer's Kit C330** 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** 44.1 – 46.5 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, 1.52 mm pocket depth

**Recommended pick and place nozzle** OD: 3.3 mm; ID: ≤ 1.65 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
LPS3314-102MR_	1.0	0.062	215	1.8	1.9	2.0	1.6	2.10
LPS3314-222MR_	2.2	0.100	140	1.3	1.4	1.5	1.2	1.60
LPS3314-332MR_	3.3	0.145	115	1.1	1.2	1.3	1.0	1.35
LPS3314-472MR_	4.7	0.175	86	0.97	0.99	1.0	0.90	1.25
LPS3314-562MR_	5.6	0.220	74	0.92	0.95	0.98	0.82	1.10
LPS3314-682MR_	6.8	0.240	72	0.87	0.90	0.91	0.82	1.10
LPS3314-822MR_	8.2	0.270	60	0.58	0.75	0.78	0.70	1.00
LPS3314-103MR_	10	0.330	55	0.56	0.66	0.70	0.65	0.87
LPS3314-153MR_	15	0.440	45	0.46	0.56	0.59	0.62	0.82
LPS3314-183MR_	18	0.575	37	0.44	0.51	0.54	0.52	0.68
LPS3314-223MR_	22	0.720	34	0.44	0.48	0.49	0.45	0.60
LPS3314-333MR_	33	0.920	27	0.30	0.38	0.40	0.43	0.58
LPS3314-473MR_	47	1.40	22	0.28	0.33	0.34	0.35	0.47
LPS3314-563MR_	56	1.55	19	0.26	0.30	0.31	0.32	0.42
LPS3314-683MR_	68	1.80	17	0.22	0.26	0.29	0.30	0.40
LPS3314-823MR_	82	2.00	14	0.20	0.24	0.26	0.29	0.39
LPS3314-104MR_	100	2.75	13	0.19	0.23	0.24	0.24	0.32
LPS3314-124MR_	120	3.45	11	0.19	0.21	0.22	0.22	0.30
LPS3314-154MR_	150	4.10	10	0.16	0.19	0.20	0.20	0.27
LPS3314-184MR_	180	4.80	9.0	0.14	0.17	0.18	0.19	0.25
LPS3314-224MR_	220	6.00	7.0	0.14	0.16	0.17	0.16	0.22
LPS3314-334MR_	330	9.30	6.0	0.11	0.12	0.13	0.13	0.18
LPS3314-474MR_	470	12.0	4.5	0.10	0.11	0.11	0.12	0.16
LPS3314-564MR_	560	14.0	4.5	0.095	0.105	0.11	0.11	0.145
LPS3314-684MR_	680	18.5	4.0	0.092	0.100	0.105	0.095	0.125
LPS3314-824MR_	820	24.0	3.7	0.086	0.099	0.100	0.085	0.110

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

**LPS3314-824MR\_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).

**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).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4192A impedance analyzer or equivalent. 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.](#)

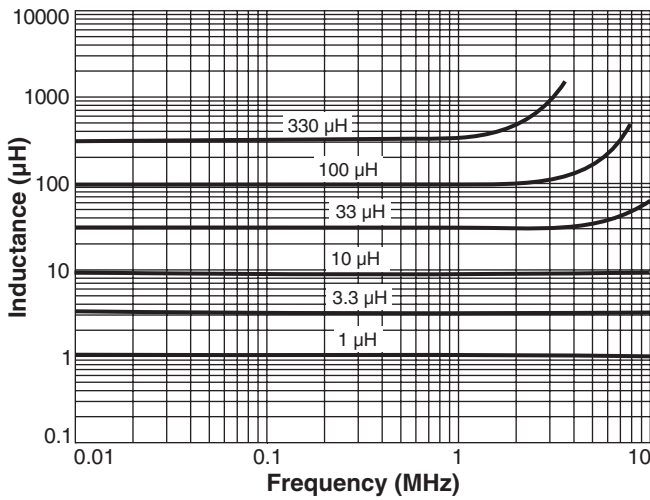
7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

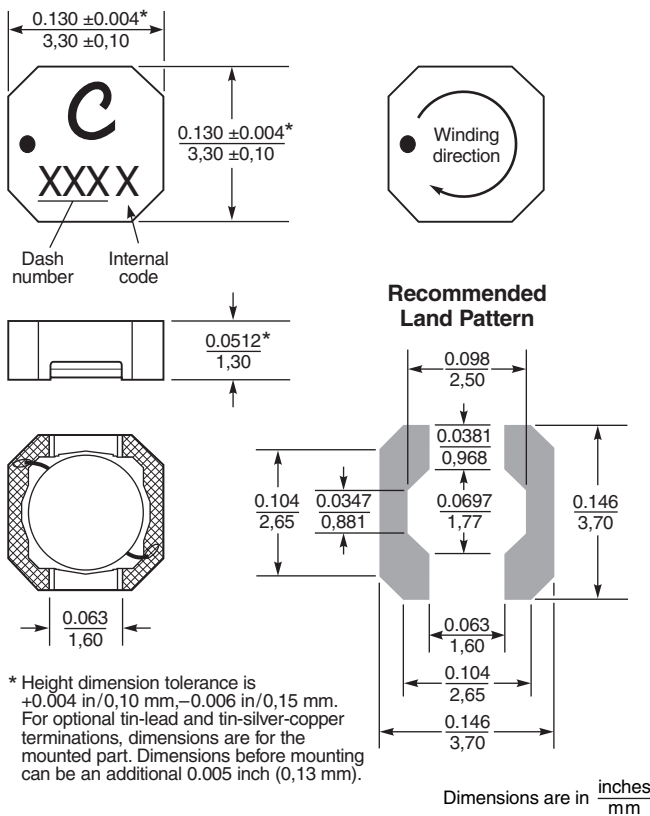
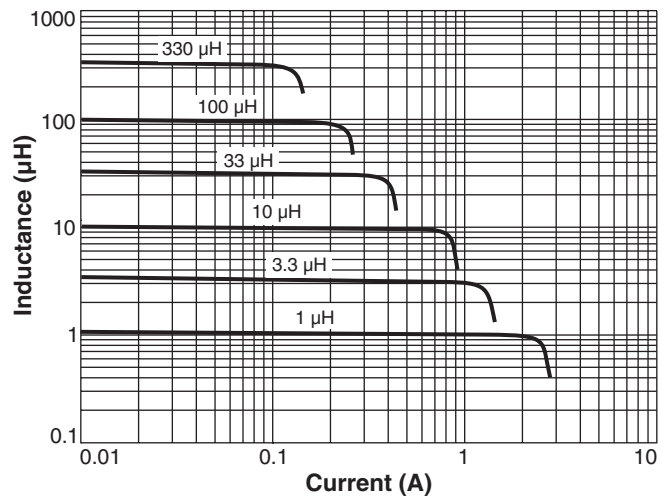


# Shielded Power Inductors – LPS3314 Series

## Typical L vs Frequency



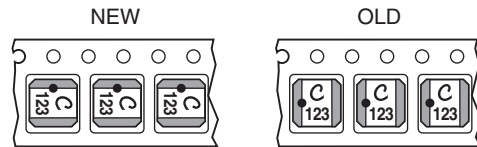
## Typical L vs Current



\* Height dimension tolerance is +0.004 in/0.10 mm, -0.006 in/0.15 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; 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.



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

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