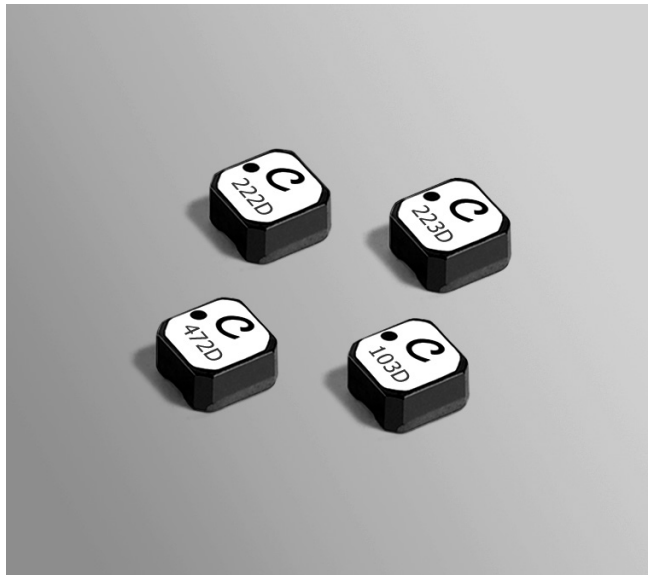


# Shielded Power Inductors – LPS3015



- Very low DCR; excellent current handling
- Miniature 3.0 × 3.0 mm footprint; less than 1.5 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** 40 – 45 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, 0.26 mm thick, 8 mm pocket spacing, 1.65 mm pocket depth

**Recommended pick and place nozzle** OD: 3 mm; ID: ≤ 1.5 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
LPS3015-102MR_	1.0	0.075	190	2.4	2.4	2.5	1.4	2.0
LPS3015-152MR_	1.5	0.100	140	2.2	2.2	2.3	1.3	1.7
LPS3015-182MR_	1.8	0.100	135	2.1	2.1	2.3	1.1	1.4
LPS3015-222MR_	2.2	0.110	110	2.0	2.1	2.1	1.1	1.4
LPS3015-332MR_	3.3	0.130	90	1.4	1.5	1.5	1.0	1.4
LPS3015-472MR_	4.7	0.200	79	1.1	1.2	1.2	0.90	1.2
LPS3015-682MR_	6.8	0.300	58	0.83	0.86	0.89	0.68	0.90
LPS3015-103MR_	10	0.440	48	0.60	0.69	0.73	0.55	0.75
LPS3015-153MR_	15	0.700	35	0.58	0.61	0.62	0.44	0.59
LPS3015-183MR_	18	0.750	33	0.56	0.58	0.59	0.43	0.58
LPS3015-223MR_	22	0.825	30	0.48	0.49	0.50	0.42	0.57
LPS3015-333MR_	33	1.30	23	0.39	0.41	0.42	0.35	0.48
LPS3015-473MR_	47	1.55	17	0.36	0.38	0.39	0.30	0.40
LPS3015-683MR_	68	2.35	14	0.29	0.30	0.31	0.25	0.33
LPS3015-104MR_	100	3.40	11	0.24	0.25	0.26	0.19	0.26
LPS3015-124MR_	120	4.65	9.0	0.21	0.22	0.22	0.17	0.23
LPS3015-154MR_	150	6.25	8.0	0.19	0.20	0.20	0.15	0.20
LPS3015-184MR_	180	8.60	7.5	0.16	0.17	0.17	0.13	0.175
LPS3015-224MR_	220	9.50	6.0	0.15	0.16	0.16	0.11	0.155

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

## LPS3015-333MR\_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 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.

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>.



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**China** +86-21-6218 8074 [sales@coilcraft.com.cn](mailto:sales@coilcraft.com.cn)  
**Singapore** + 65-6484 8412 [sales@coilcraft.com.sg](mailto:sales@coilcraft.com.sg)

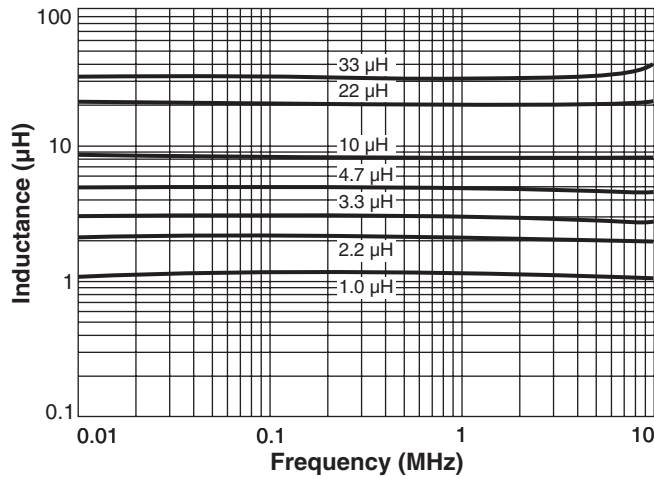
Document 436-1 Revised 09/02/15

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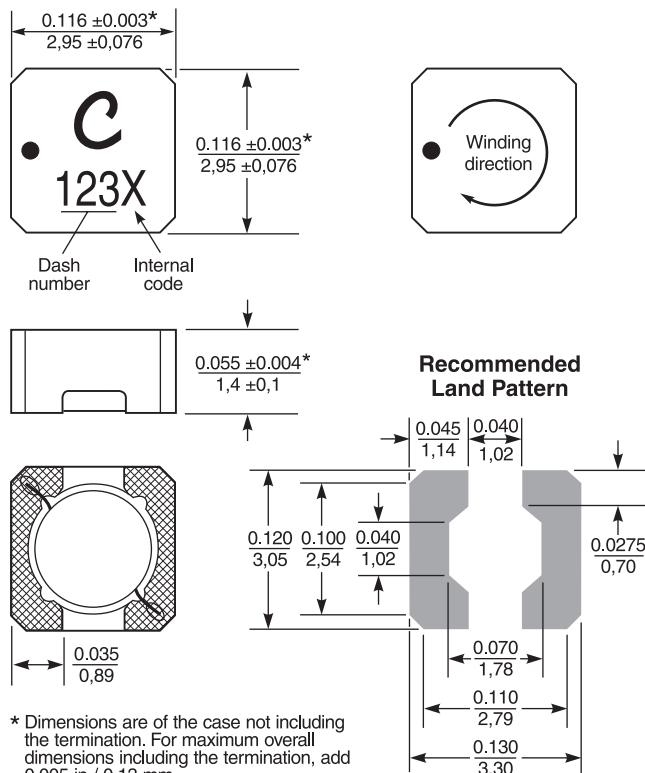
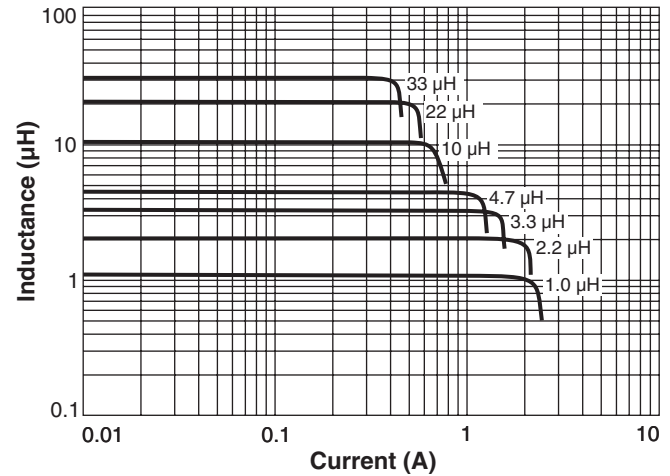
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

# Shielded Power Inductors – LPS3015 Series

## Typical L vs Frequency



## Typical L vs Current

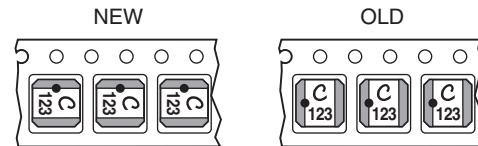


\* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0.13 mm.  
 For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0.13 mm).

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

**Packaging** 1000/7" reel; 3500/13" reel; Plastic tape: 12 mm wide, 0.26 mm thick, 8 mm pocket spacing, 1.65 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:

[LPS3015-153MLC](#) [LPS3015-223MLC](#) [LPS3015-104MLC](#) [LPS3015-683MLC](#) [LPS3015-472MLC](#) [LPS3015-334MLC](#)  
[LPS3015-223MLB](#) [LPS3015-224MLB](#) [LPS3015-103MLB](#) [LPS3015-154MLB](#) [LPS3015-682MLB](#) [LPS3015-683MLB](#)  
[LPS3015-473MLC](#) [LPS3015-332MLB](#) [LPS3015-183MLC](#) [LPS3015-222MLB](#) [LPS3015-152MLC](#) [LPS3015-154MLC](#)  
[LPS3015-334MLB](#) [LPS3015-333MLB](#) [LPS3015-184MLC](#) [LPS3015-153MLB](#) [LPS3015-102MLC](#) [LPS3015-182MLC](#)  
[LPS3015-472MLB](#) [LPS3015-124MLB](#) [LPS3015-152MLB](#) [LPS3015-473MLB](#) [LPS3015-333MLC](#) [LPS3015-124MLC](#)  
[LPS3015-332MLC](#) [LPS3015-224MLC](#) [LPS3015-222MLC](#) [LPS3015-103MLC](#) [LPS3015-682MLC](#) [LPS3015-102MLB](#)  
[LPS3015-184MLB](#) [LPS3015-182MLB](#) [LPS3015-183MLB](#) [LPS3015-104MLB](#) [LPS3015-152MRC](#) [LPS3015-102MRC](#)  
[LPS3015-102MRB](#) [LPS3015-152MRB](#) [LPS3015-104MRC](#) [LPS3015-153MRB](#) [LPS3015-154MRC](#) [LPS3015-183MRB](#)  
[LPS3015-683MRC](#) [LPS3015-223MRC](#) [LPS3015-222MRB](#) [LPS3015-682MRC](#) [LPS3015-683MRB](#) [LPS3015-](#)  
[222MRC](#) [LPS3015-472MRC](#) [LPS3015-473MRB](#) [LPS3015-473MRC](#) [LPS3015-682MRB](#) [LPS3015-332MRB](#)  
[LPS3015-182MRB](#) [LPS3015-224MRB](#) [LPS3015-224MRC](#) [LPS3015-332MRC](#) [LPS3015-333MRB](#) [LPS3015-333MRC](#)  
[LPS3015-472MRB](#) [LPS3015-153MRC](#) [LPS3015-154MRB](#) [LPS3015-182MRC](#) [LPS3015-183MRC](#) [LPS3015-](#)  
[184MRB](#) [LPS3015-223MRB](#) [LPS3015-184MRC](#) [LPS3015-103MRB](#) [LPS3015-103MRC](#) [LPS3015-104MRB](#)  
[LPS3015-124MRB](#) [LPS3015-124MRC](#)