



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

Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Weight 40 – 45 mg

Ambient temperature –40°C to +85°C with Irms current, +85°C to +125°C with derated current

Storage temperature Component: –40°C to +125°C.

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 Only pure water or alcohol recommended

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
LPS3015-102ML	1.0	0.075	190	1.8	2.0	2.1	1.4	2.0
LPS3015-152ML	1.5	0.100	140	1.8	2.1	2.2	1.3	1.7
LPS3015-182ML	1.8	0.100	135	1.5	1.7	2.1	1.1	1.4
LPS3015-222ML	2.2	0.110	110	2.0	2.0	2.1	1.1	1.4
LPS3015-332ML	3.3	0.130	90	1.4	1.5	1.5	1.0	1.4
LPS3015-472ML	4.7	0.200	79	1.1	1.2	1.2	0.90	1.2
LPS3015-682ML	6.8	0.300	58	0.83	0.86	0.89	0.68	0.90
LPS3015-103ML	10	0.440	48	0.60	0.69	0.73	0.55	0.75
LPS3015-153ML	15	0.700	35	0.58	0.61	0.62	0.44	0.59
LPS3015-183ML	18	0.750	33	0.56	0.58	0.59	0.43	0.58
LPS3015-223ML	22	0.825	30	0.48	0.49	0.50	0.42	0.57
LPS3015-333ML	33	1.30	23	0.39	0.41	0.42	0.35	0.48
LPS3015-473ML	47	1.55	17	0.36	0.38	0.39	0.30	0.40
LPS3015-683ML	68	2.35	14	0.29	0.30	0.31	0.25	0.33
LPS3015-104ML	100	3.40	11	0.24	0.25	0.26	0.19	0.26
LPS3015-124ML	120	4.65	9.0	0.21	0.22	0.22	0.17	0.23
LPS3015-154ML	150	6.25	8.0	0.19	0.20	0.20	0.15	0.20
LPS3015-184ML	180	8.60	7.5	0.16	0.17	0.17	0.13	0.175
LPS3015-224ML	220	9.50	6.0	0.15	0.16	0.16	0.11	0.155
LPS3015-334ML	330	23.0	5.0	0.10	0.11	0.11	0.070	0.095

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

LPS3015-333MLC

Termination: L = RoHS compliant silver-palladium-platinum-glass frit.
Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = 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 that causes the specified inductance drop from its value without current.
 - Current that causes the specified temperature rise from 25°C ambient.
 - 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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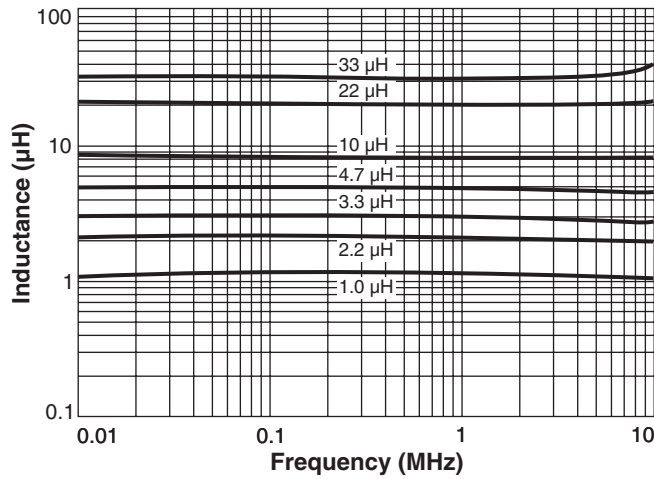
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.



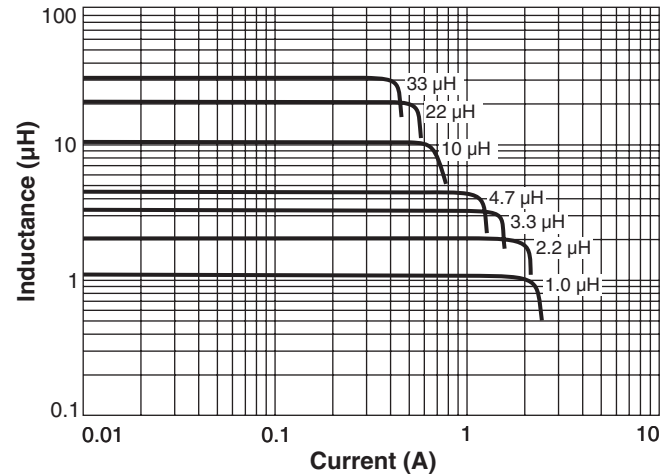
Shielded SMT Power Inductors – LPS3015 Series

SPICE models
ON OUR WEB SITE

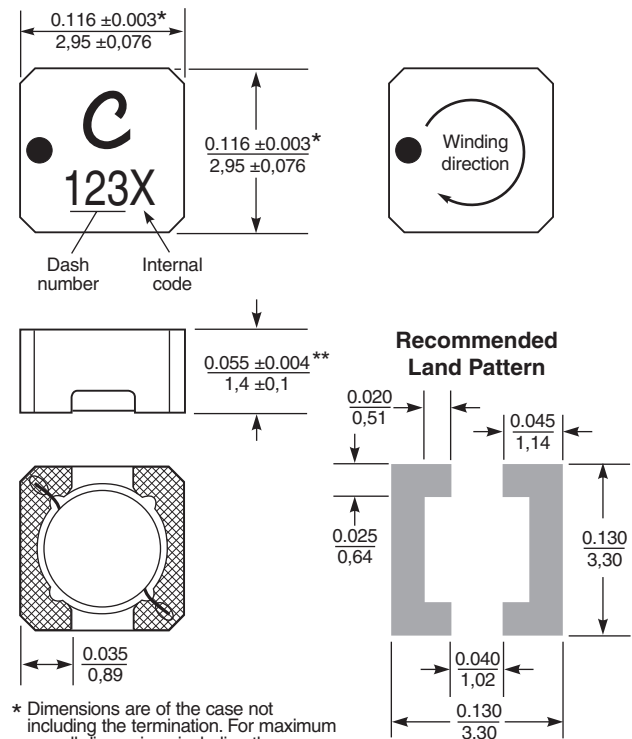
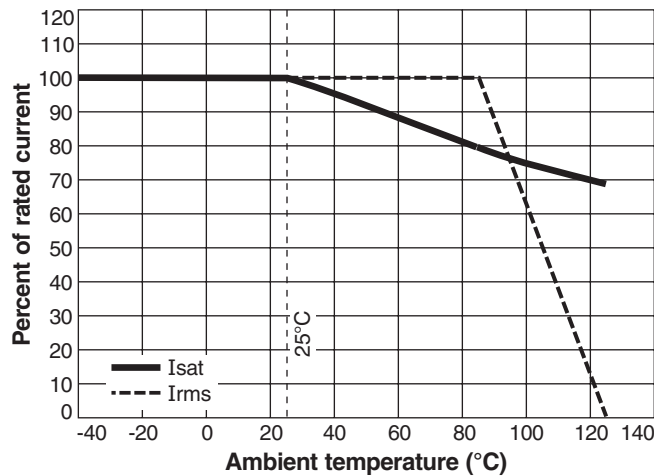
Typical L vs Frequency



Typical L vs Current



Current Derating



* 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 $\frac{\text{inches}}{\text{mm}}$



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