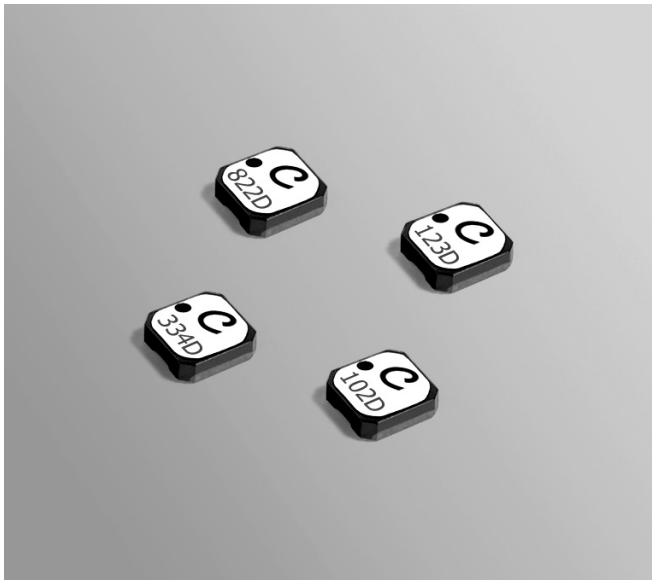
Shielded Power Inductors – LPS3008



- Very low DCR; excellent current handling
- Only 0.8 mm tall; 3.0 × 3.0 mm footprint

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 22 – 25 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. 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, 1.37 mm pocket depth

Recommended pick and place nozzle OD: 3 mm; ID: ≤ 1.5 mm

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

Part number[1]	Inductance[2] ±20% (µH)	DCR max[3] (Ohms)	SRF typ[4] (MHz)	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
LPS3008-561ML_	0.56	0.072	330	1.8	2.0	2.1	1.4	2.0
LPS3008-801ML_	0.80	0.092	255	1.6	1.7	1.8	1.1	1.6
LPS3008-102ML_	1.0	0.125	220	1.3	1.4	1.5	0.90	1.3
LPS3008-152ML_	1.5	0.134	170	1.1	1.3	1.3	0.87	1.2
LPS3008-222ML_	2.2	0.175	150	1.0	1.1	1.1	0.85	1.1
LPS3008-332ML_	3.3	0.285	114	0.81	0.86	0.88	0.74	0.95
LPS3008-472ML_	4.7	0.350	87	0.68	0.73	0.74	0.68	0.80
LPS3008-562ML_	5.6	0.450	78	0.62	0.67	0.70	0.58	0.73
LPS3008-682ML_	6.8	0.500	75	0.58	0.61	0.63	0.50	0.67
LPS3008-822ML_	8.2	0.600	61	0.52	0.56	0.58	0.45	0.60
LPS3008-103ML_	10	0.650	56	0.46	0.51	0.52	0.42	0.56
LPS3008-123ML_	12	0.790	49	0.45	0.48	0.50	0.38	0.50
LPS3008-183ML_	18	1.25	38	0.35	0.38	0.40	0.33	0.44
LPS3008-223ML_	22	1.50	35	0.29	0.33	0.34	0.29	0.38
LPS3008-333ML_	33	2.30	23	0.27	0.30	0.31	0.25	0.32
LPS3008-473ML_	47	3.00	21	0.22	0.23	0.24	0.21	0.27
LPS3008-683ML_	68	4.75	18	0.18	0.19	0.20	0.175	0.23
LPS3008-104ML_	100	6.85	14	0.15	0.16	0.16	0.160	0.21
LPS3008-124ML_	120	7.00	13	0.084	0.094	0.10	0.140	0.190
LPS3008-154ML_	150	8.00	11	0.080	0.088	0.092	0.130	0.175
LPS3008-184ML_	180	9.00	10	0.070	0.078	0.082	0.120	0.160
LPS3008-224ML_	220	11.5	9	0.067	0.073	0.076	0.100	0.145
LPS3008-334ML_	330	18.0	7	0.059	0.064	0.066	0.090	0.130

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

LPS3008-104MLC

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 parts per full reel).

2. 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.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using an Agilent/HP 8753ES or equivalent.
5. DC current that causes the specified inductance drop from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient.
7. 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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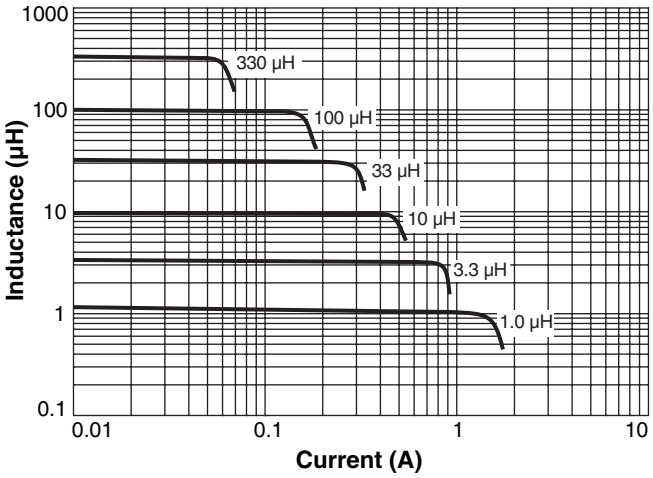
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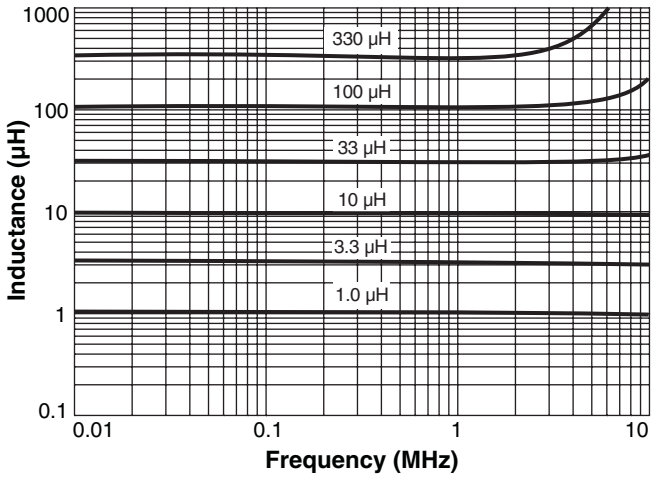
SPICE models
ON OUR WEB SITE

Shielded SMT Power Inductors – LPS3008 Series

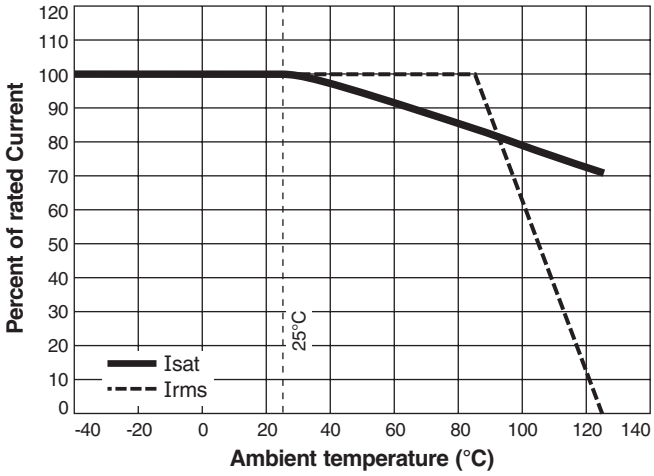
Typical L vs Current

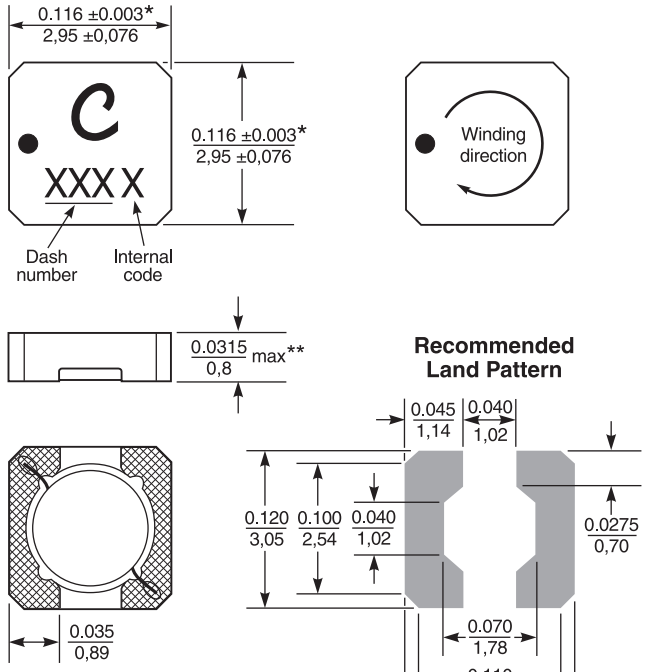


Typical L vs Frequency



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 inches / mm

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