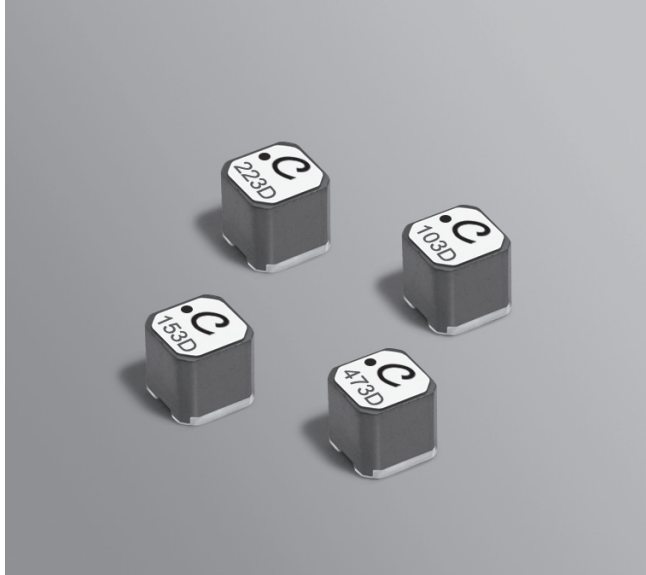


# Shielded Power Inductors - LPS3030



- Small 3.0 × 3.0 mm footprint
- Very low DCR; excellent current handling
- AEC-Q200 Grade 1 qualified (−40°C to +125°C ambient)
- Samples of all values are available in Designer's Kit C485

**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** 80 – 90 mg

**Ambient temperature** −40°C to +125°C with (40°C rise) Irms current.

**Maximum part temperature** +165°C (ambient + temp rise). [Derating](#).

**Storage temperature** Component: −40°C to +165°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

**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
LPS3030-103MR_	10	0.150	42.8	0.64	0.68	0.70	0.90	1.20
LPS3030-153MR_	15	0.240	35.7	0.54	0.56	0.60	0.75	1.00
LPS3030-183MR_	18	0.270	26.1	0.50	0.52	0.54	0.70	0.90
LPS3030-223MR_	22	0.310	26.0	0.42	0.46	0.48	0.65	0.85
LPS3030-333MR_	33	0.390	19.6	0.36	0.40	0.42	0.60	0.80
LPS3030-473MR_	47	0.580	14.6	0.32	0.32	0.33	0.50	0.65
LPS3030-683MR_	68	0.730	12.1	0.24	0.26	0.27	0.45	0.62
LPS3030-104MR_	100	1.12	9.8	0.21	0.22	0.23	0.35	0.46
LPS3030-124MR_	120	1.44	8.7	0.19	0.20	0.21	0.32	0.42
LPS3030-154MR_	150	1.94	7.4	0.17	0.18	0.19	0.26	0.34
LPS3030-184MR_	180	2.11	7.0	0.16	0.16	0.17	0.24	0.32
LPS3030-224MR_	220	2.52	6.0	0.14	0.15	0.16	0.22	0.30
LPS3030-334MR_	330	4.30	4.9	0.11	0.12	0.13	0.18	0.23
LPS3030-474MR_	470	5.60	4.1	0.10	0.10	0.11	0.16	0.20
LPS3030-564MR_	560	7.92	3.3	0.08	0.09	0.10	0.12	0.16
LPS3030-684MR_	680	8.89	2.9	0.07	0.08	0.09	0.11	0.15
LPS3030-824MR_	820	10.9	2.9	0.06	0.07	0.08	0.10	0.14

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

**LPS3030-824MRC**

**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 (600 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 (2000 parts per full reel).

- 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.
  - DCR measured on a micro-ohmmeter.
  - SRF measured using an 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.



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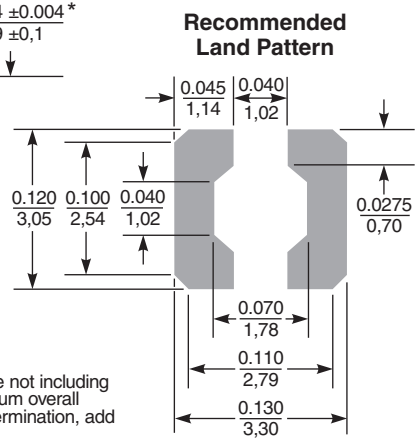
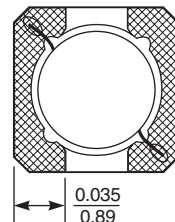
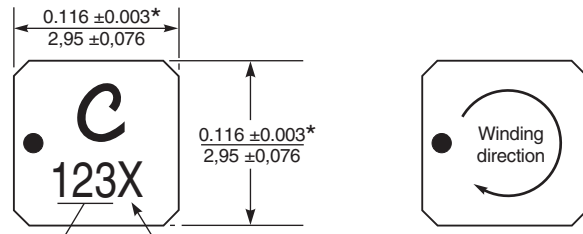
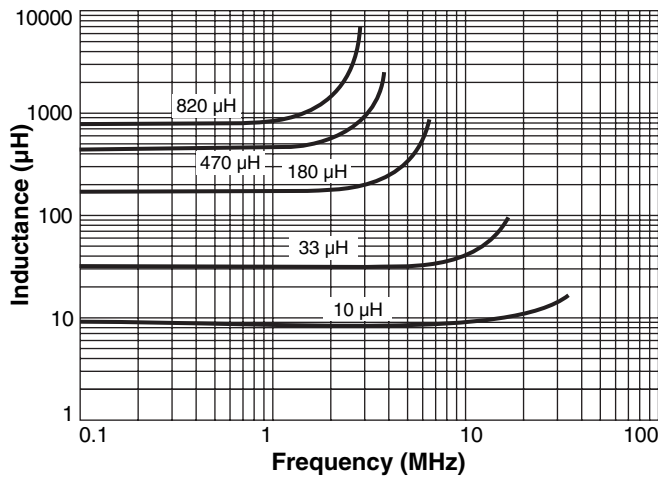
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# Shielded SMT Power Inductors – LPS3030 Series

## L vs Frequency



\* 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** 600/7" reel; 2000/13" reel; Plastic tape: 12 mm wide, 0.30 mm thick, 8 mm pocket spacing, 3.3 mm pocket depth



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