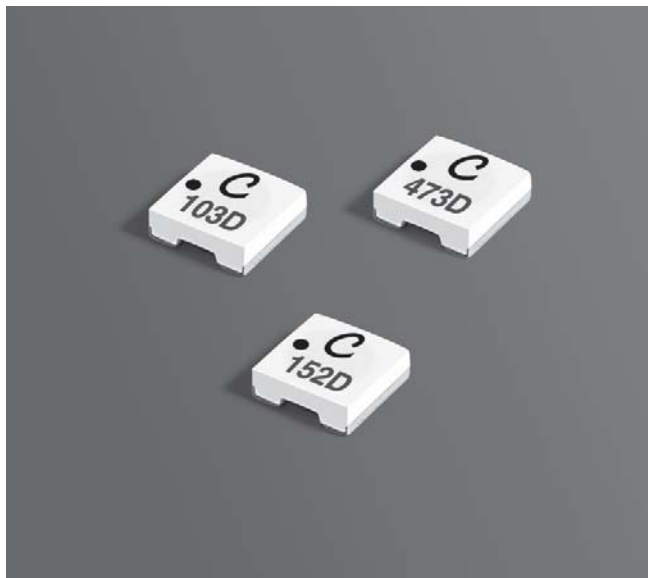




# SMT Power Inductors - LPO3010 Series



- Miniature power inductors – 3 × 3 mm, only 1.0 mm tall
- Low DCR; excellent current handling

**Designer's Kit C388** contains 3 of each part

**Core material** Ferrite

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

**Weight** 20 – 22 mg

**Ambient temperature** –40°C to +85°C with I<sub>rms</sub> 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, 0.23 mm thick, 8 mm pocket spacing, 1.14 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 <sup>1</sup>	Inductance <sup>2</sup> (μH)	DCR <sup>3</sup> max (Ohms)	SRF <sup>4</sup> typ (MHz)	Isat <sup>5</sup> (A)	I <sub>rms</sub> <sup>6</sup> (A)
LPO3010-102NL_	1.0±30%	0.140	200	1.7	1.4
LPO3010-122NL_	1.2±30%	0.160	190	1.6	1.4
LPO3010-152NL_	1.5±30%	0.200	150	1.3	1.0
LPO3010-222NL_	2.2±30%	0.265	140	1.2	0.90
LPO3010-332NL_	3.3±30%	0.335	100	0.96	0.60
LPO3010-472NL_	4.7±30%	0.570	80	0.76	0.50
LPO3010-682NL_	6.8±30%	0.650	68	0.68	0.47
LPO3010-822NL_	8.2±30%	1.00	60	0.64	0.45
LPO3010-103ML_	10±20%	1.15	50	0.50	0.45
LPO3010-153ML_	15±20%	1.57	35	0.42	0.40
LPO3010-223ML_	22±20%	2.20	30	0.37	0.35
LPO3010-333ML_	33±20%	2.80	14	0.31	0.29
LPO3010-473ML_	47±20%	4.60	12	0.30	0.28

1. When ordering, please specify **termination** and **packaging** codes:

LPO3010-473M L C

**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 (3500 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 V<sub>rms</sub> using an Agilent/HP 4192A.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an Agilent/HP 8753ES or equivalent.

5. DC current at which the inductance drops 10% (typ) from its value without current.

6. Current that causes a 40°C temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

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

**SPICE models** ON OUR WEB SITE OR CD

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.  
 Please check our website for latest information.

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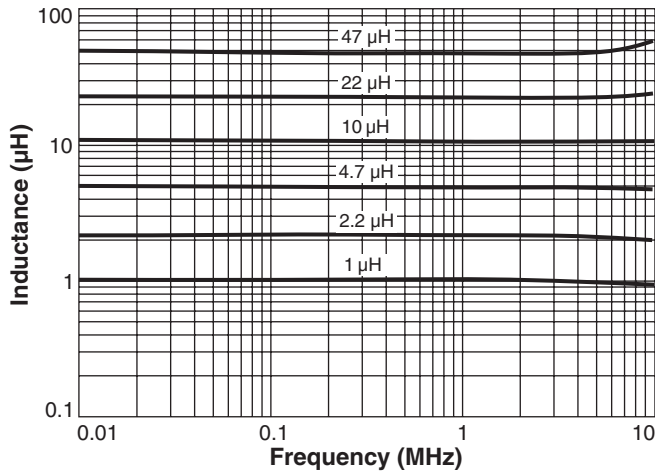
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

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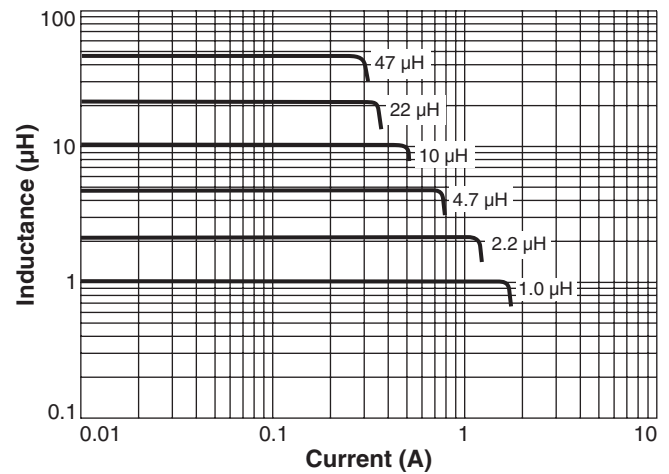


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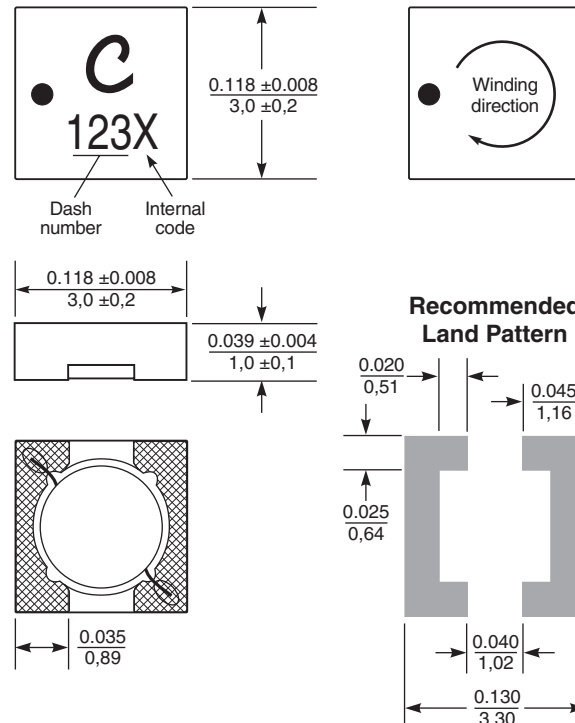
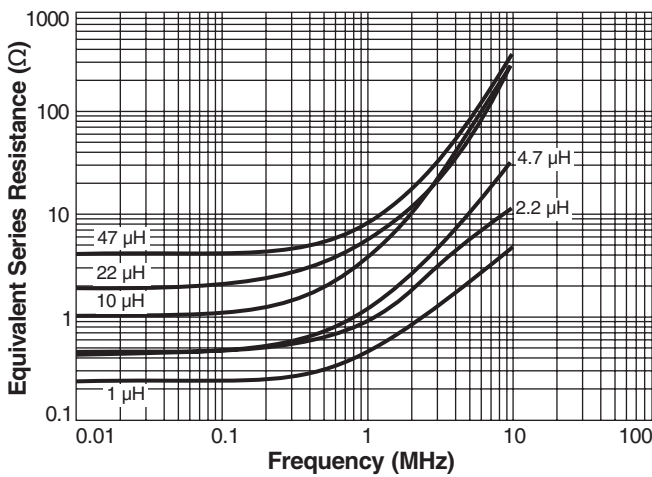
## Typical L vs Frequency



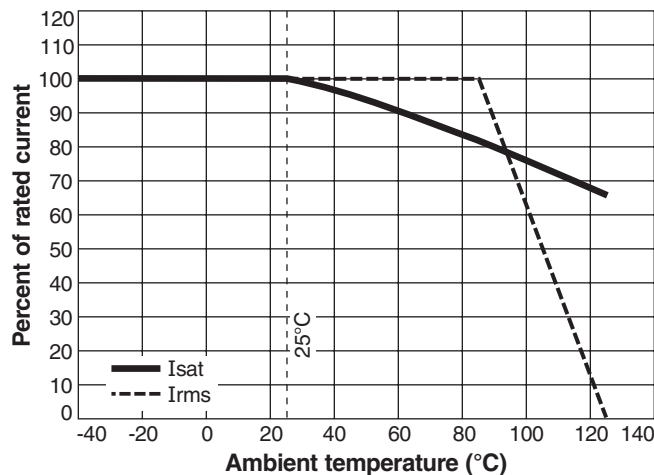
## Typical L vs Current



## Typical ESR vs Frequency



## Current Derating



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