



# SMT Power Inductors - LPO6013



- Very low profile – only 1.3 mm high!
- Handles saturating current up to 1.9 Amps

**Designer's Kit C352** contains 3 each of all values

**Core material** Ferrite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

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

**Weight** 111 – 122 mg

**Ambient temperature** –40°C to +85°C with Irms current

**Maximum part temperature** +125°C (ambient + temp rise)

**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, 1.4 mm pocket depth

**Recommended pick and place nozzle** OD: 5.6 mm; ID: ≤ 2.8 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> | L <sup>2</sup><br>(μH) | DCR<br>max<br>(Ohms) | SRF<br>typ<br>(MHz) | Isat <sup>3</sup><br>(A) | Irms <sup>4</sup><br>(A) |
|--------------------------|------------------------|----------------------|---------------------|--------------------------|--------------------------|
| LPO6013-102ML_           | 1.0 ±20%               | 0.06                 | 200                 | 1.9                      | 1.5                      |
| LPO6013-152ML_           | 1.5 ±20%               | 0.07                 | 200                 | 1.6                      | 1.4                      |
| LPO6013-222ML_           | 2.2 ±20%               | 0.08                 | 150                 | 1.3                      | 1.3                      |
| LPO6013-332ML_           | 3.3 ±20%               | 0.11                 | 110                 | 1.1                      | 1.3                      |
| LPO6013-392ML_           | 3.9 ±20%               | 0.13                 | 100                 | 1.0                      | 1.2                      |
| LPO6013-472ML_           | 4.7 ±20%               | 0.15                 | 90                  | 0.90                     | 1.2                      |
| LPO6013-682ML_           | 6.8 ±20%               | 0.20                 | 70                  | 0.70                     | 1.2                      |
| LPO6013-822ML_           | 8.2 ±20%               | 0.22                 | 65                  | 0.70                     | 1.0                      |
| LPO6013-103KL_           | 10 ±10%                | 0.30                 | 60                  | 0.60                     | 1.0                      |
| LPO6013-153KL_           | 15 ±10%                | 0.38                 | 47                  | 0.55                     | 0.85                     |
| LPO6013-223KL_           | 22 ±10%                | 0.52                 | 37                  | 0.45                     | 0.80                     |
| LPO6013-333KL_           | 33 ±10%                | 0.73                 | 30                  | 0.40                     | 0.74                     |
| LPO6013-393KL_           | 39 ±10%                | 0.96                 | 28                  | 0.35                     | 0.67                     |
| LPO6013-473KL_           | 47 ±10%                | 1.0                  | 25                  | 0.30                     | 0.60                     |
| LPO6013-683KL_           | 68 ±10%                | 1.7                  | 21                  | 0.28                     | 0.49                     |
| LPO6013-104KL_           | 100 ±10%               | 3.2                  | 17                  | 0.22                     | 0.35                     |
| LPO6013-154KL_           | 150 ±10%               | 4.3                  | 14                  | 0.19                     | 0.30                     |
| LPO6013-224KL_           | 220 ±10%               | 5.8                  | 10                  | 0.15                     | 0.26                     |
| LPO6013-334KL_           | 330 ±10%               | 7                    | 8                   | 0.13                     | 0.23                     |
| LPO6013-474KL_           | 470 ±10%               | 10                   | 7                   | 0.10                     | 0.20                     |
| LPO6013-684KL_           | 680 ±10%               | 14                   | 5.6                 | 0.09                     | 0.18                     |
| LPO6013-105KL_           | 1000 ±10%              | 21                   | 4.7                 | 0.07                     | 0.13                     |

- When ordering, please specify **termination** and **packaging** code:

**LPO6013-473KLC**

**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).

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.
- DC current at which the inductance drops 10% (typ) from its value without current.
- Current that causes a 40°C temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

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

**SPICE models** ON OUR WEB SITE



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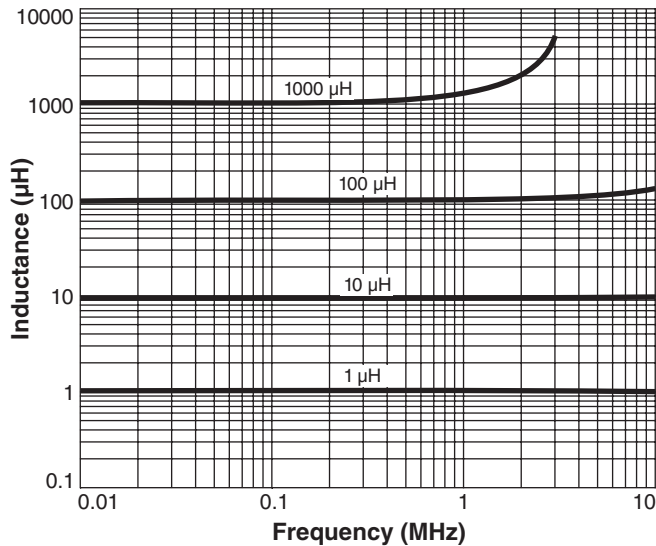
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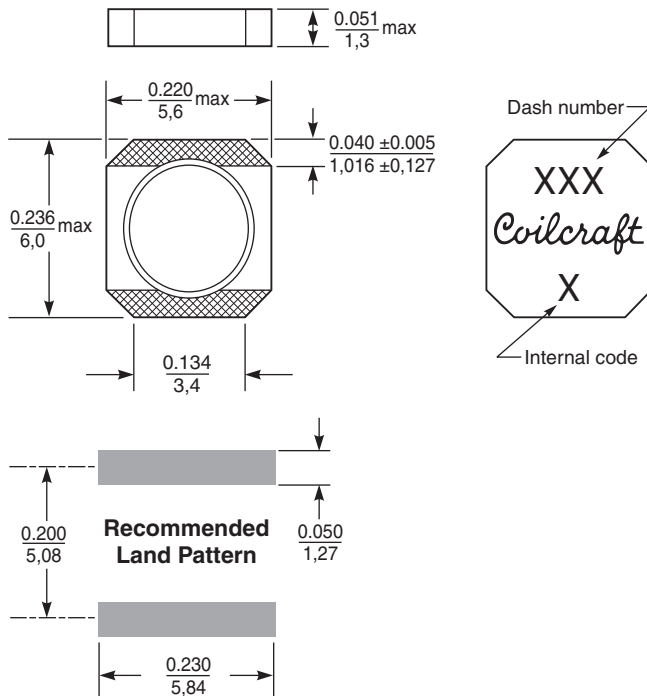
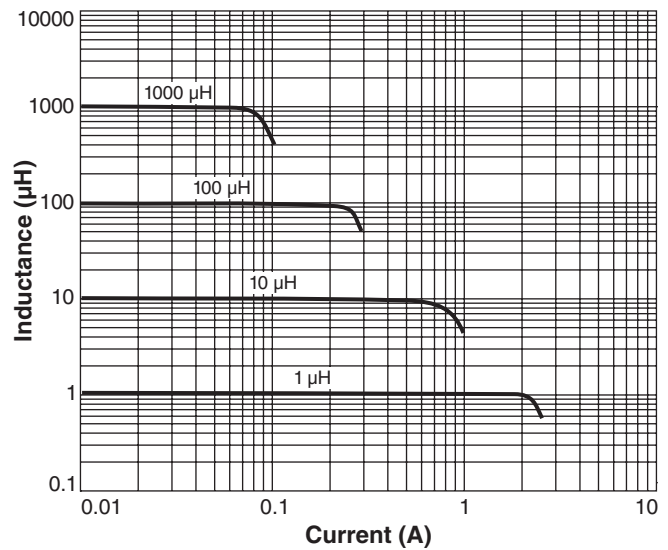


# SMT Power Inductors - LPO6013 Series

## Typical L vs Frequency



## Typical L vs Current



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



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| <a href="#"><u>LPO6013-105KLB</u></a> | <a href="#"><u>LPO6013-474KLB</u></a> | <a href="#"><u>C352</u></a>           |                                       |                                       |                                       |