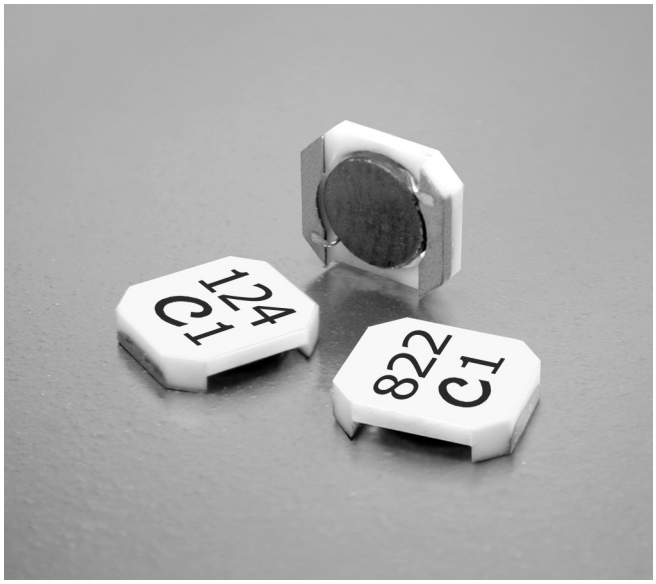
# SMT Power Inductors – LPO4815




- Very low profile - only 1.5 mm high!
- Handles current up to 1.9 Amps rms

**Designer's Kit C376** contains 3 each of all values
**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** 70.0 – 78.5 mg
**Ambient temperature** –40°C to +85°C with Irms current
**Maximum temperature** +125°C (ambient + temp rise). Derating.
**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, 0.3 mm thick, 8 mm pocket spacing, 1.6 mm pocket depth
**Recommended pick and place nozzle** OD: 4.6 mm; ID: ≤ 2.3 mm
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

| Part number[1] | Inductance[2] (µH) | DCR[3] max (Ohms) | SRF[4] typ (MHz) | Isat[5] (A) | Irms[6] (A) |
|---|---|---|---|---|---|
| LPO4815-102ML_ | 1.0 ±20% | 0.036 | 230 | 1.6 | 1.9 |
| LPO4815-152ML_ | 1.5 ±20% | 0.085 | 200 | 1.5 | 1.7 |
| LPO4815-222ML_ | 2.2 ±20% | 0.088 | 150 | 1.1 | 1.5 |
| LPO4815-332ML_ | 3.3 ±20% | 0.12 | 115 | 0.90 | 1.3 |
| LPO4815-392ML_ | 3.9 ±20% | 0.13 | 105 | 0.86 | 1.2 |
| LPO4815-472ML_ | 4.7 ±20% | 0.15 | 95 | 0.77 | 1.1 |
| LPO4815-682ML_ | 6.8 ±20% | 0.18 | 72 | 0.65 | 1.0 |
| LPO4815-822ML_ | 8.2 ±20% | 0.22 | 65 | 0.58 | 0.90 |
| LPO4815-103KL_ | 10 ±10% | 0.23 | 60 | 0.50 | 0.85 |
| LPO4815-123KL_ | 12 ±10% | 0.31 | 50 | 0.45 | 0.80 |
| LPO4815-153KL_ | 15 ±10% | 0.36 | 45 | 0.42 | 0.75 |
| LPO4815-223KL_ | 22 ±10% | 0.48 | 35 | 0.36 | 0.70 |
| LPO4815-333KL_ | 33 ±10% | 0.71 | 30 | 0.28 | 0.65 |
| LPO4815-393KL_ | 39 ±10% | 0.83 | 25 | 0.26 | 0.60 |
| LPO4815-473KL_ | 47 ±10% | 1.20 | 25 | 0.22 | 0.55 |
| LPO4815-683KL_ | 68 ±10% | 1.40 | 20 | 0.20 | 0.45 |
| LPO4815-104KL_ | 100 ±10% | 2.15 | 15 | 0.15 | 0.36 |
| LPO4815-154KL_ | 150 ±10% | 3.15 | 12 | 0.13 | 0.30 |
| LPO4815-224KL_ | 220±10% | 4.30 | 10 | 0.11 | 0.27 |

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

   **LPO4815-224KLC**

   **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 Vrms.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 4191A 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. This information is for reference only and does not represent absolute maximum ratings. Click for temperature derating information.
7. Electrical specifications at 25°C.

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

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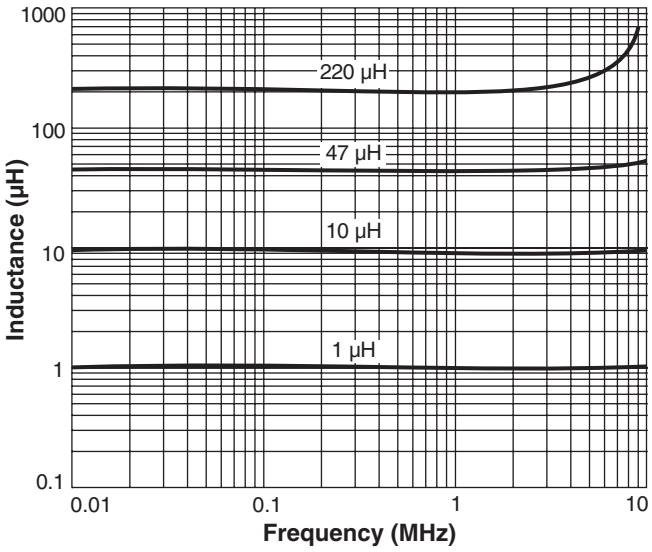
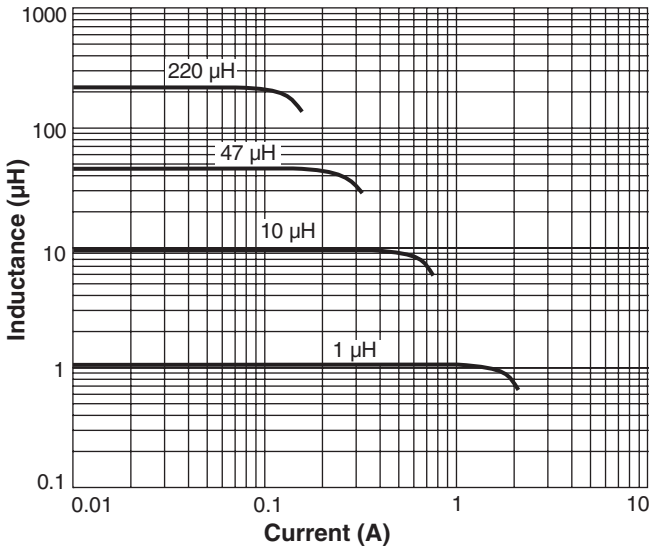
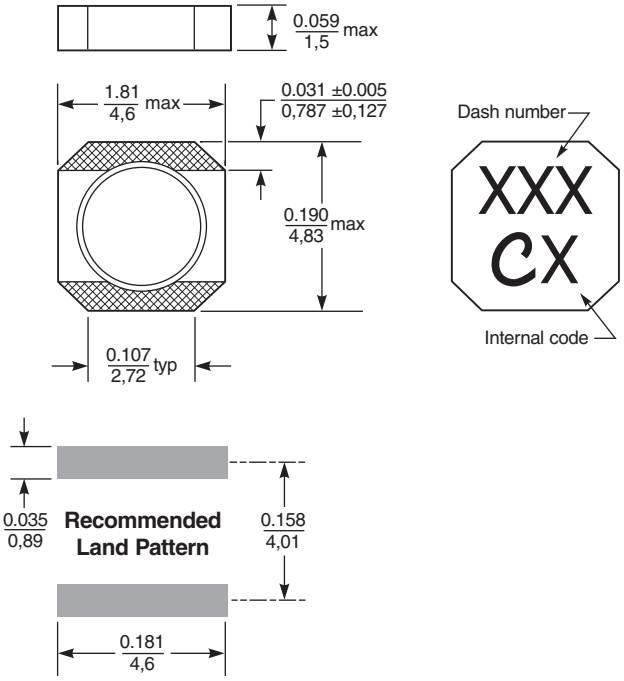
# SMT Power Inductors - LPO4815 Series

## Typical L vs Frequency




## Typical L vs Current

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