# SMT Power Inductors – DO1608C


- High energy storage and very low resistance
- Defense Supply Center CID A-A-59742

**Designer's Kit C377** contains 3 of each stocked part
**Core material** Ferrite
**Core and winding loss** See www.coilcraft.com/coreloss
**Terminations** RoHS compliant electroplated gold (<50 µin) over nickel over moly-manganese. Other terminations available at additional cost.
**Weight** 128– 164 mg
**Ambient temperature** –40°C to +85°
**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** 750/7″ reel; 2500/13″ reel Plastic tape: 12 mm wide, 0.28 mm thick, 4 mm pocket spacing, 3 mm pocket depth
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

| Part number[1] | L[2] (µH) | % tol[3] | DCR max (Ohms) | SRF typ (MHz) | Isat[4] (A) | Irms (A)[5] 20°C rise | Irms (A)[5] 40°C rise |
|---|---|---|---|---|---|---|---|
| DO1608C-102ML_ | 1.0 | **20** | 0.05 | 130 | 2.9 | 1.90 | 2.70 |
| DO1608C-152ML_ | 1.5 | **20** | 0.06 | 115 | 2.6 | 1.90 | 2.65 |
| DO1608C-222ML_ | 2.2 | **20** | 0.07 | 100 | 2.3 | 1.85 | 2.55 |
| DO1608C-272ML_ | 2.7 | **20** | 0.08 | 75 | 2.1 | 1.80 | 2.45 |
| DO1608C-332ML_ | 3.3 | **20** | 0.08 | 70 | 2.0 | 1.60 | 2.20 |
| DO1608C-472ML_ | 4.7 | **20** | 0.09 | 50 | 1.5 | 1.40 | 1.90 |
| DO1608C-682ML_ | 6.8 | **20** | 0.13 | 45 | 1.2 | 1.20 | 1.60 |
| DO1608C-822ML_ | 8.2 | **20** | 0.16 | 40 | 1.15 | 1.10 | 1.55 |
| DO1608C-103ML_ | 10 | **20** | 0.16 | 35 | 1.10 | 1.10 | 1.50 |
| DO1608C-153ML_ | 15 | **20** | 0.23 | 30 | 0.90 | 0.90 | 1.25 |
| DO1608C-223_L_ | 22 | **20**,10 | 0.37 | 20 | 0.70 | 0.75 | 0.95 |
| DO1608C-333_L_ | 33 | **20**,10 | 0.51 | 15 | 0.58 | 0.60 | 0.80 |
| DO1608C-473_L_ | 47 | **20**,10 | 0.64 | 14 | 0.50 | 0.52 | 0.70 |
| DO1608C-683_L_ | 68 | **20**,10 | 0.86 | 11 | 0.40 | 0.44 | 0.60 |
| DO1608C-104_L_ | 100 | **20**,10 | 1.27 | 9.0 | 0.31 | 0.37 | 0.50 |
| DO1608C-154_L_ | 150 | **20**,10 | 2.00 | 6.0 | 0.27 | 0.28 | 0.39 |
| DO1608C-224_L_ | 220 | **20**,10 | 3.11 | 5.5 | 0.22 | 0.23 | 0.31 |
| DO1608C-334_L_ | 330 | **20**,10 | 3.80 | 5.0 | 0.18 | 0.22 | 0.30 |
| DO1608C-474_L_ | 470 | **20**,10 | 5.06 | 4.0 | 0.16 | 0.20 | 0.26 |
| DO1608C-684_L_ | 680 | **20**,10 | 9.20 | 3.0 | 0.14 | 0.14 | 0.19 |
| DO1608C-105_L_ | 1000 | **20**,10 | 13.8 | 2.0 | 0.10 | 0.11 | 0.15 |

1. Please specify **tolerance**, **termination** and **packaging** codes:
   **DO1608C-105MLC**
   **Tolerance:** **K** = 10%, M = 20% (Table shows stock tolerances in bold.)
   **Termination:** **L** = RoHS compliant gold over nickel over moly-manganese. 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 (750 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 (2500 parts per full reel).
2. Tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. Tolerances in bold are stocked for immediate shipment
4. DC current at 25°C that causes 10% (typ) inductance drop from its value without current. Click for temperature derating information.
5. 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.
6. 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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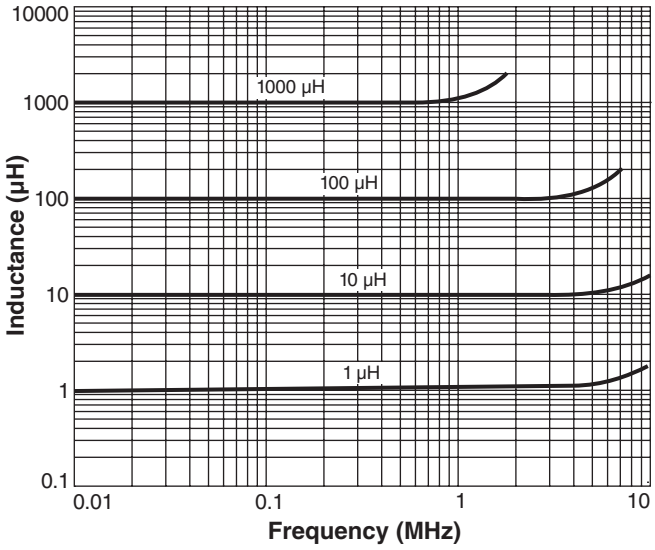
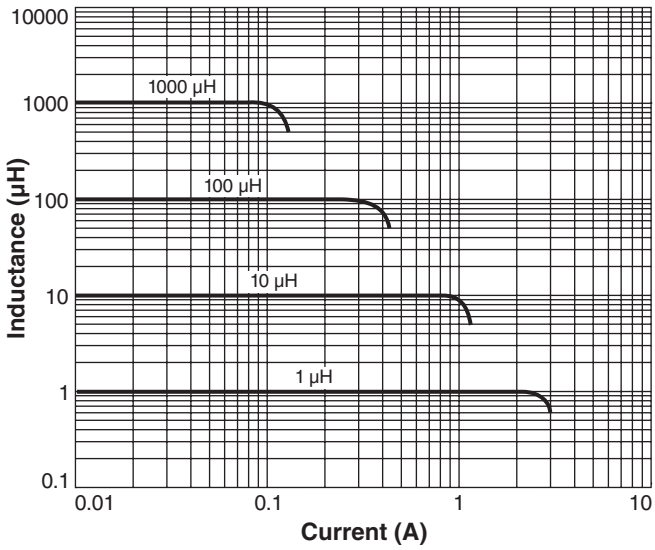
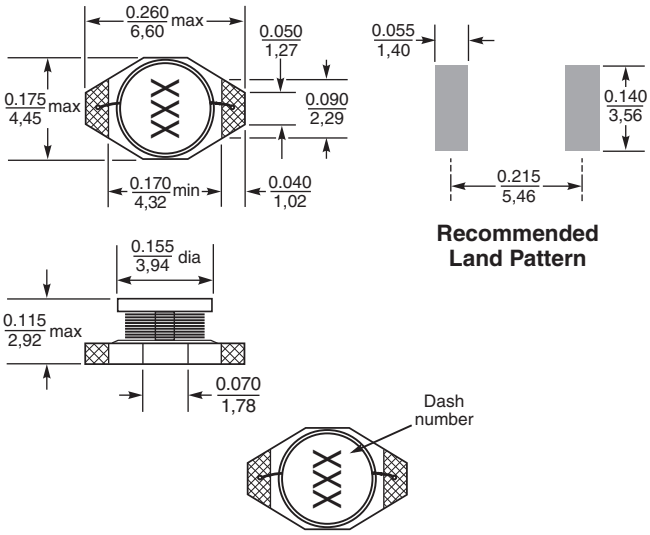
# SMT Power Inductors – DO1608C Series

## Typical L vs Frequency




## Typical L vs Current




Dimensions are in inches / mm

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