



SMT Power Inductors - DO1605T Series



- Only 1.8 mm high
- Handles current up to 2.3 Amps rms



Designer's Kit C353 contains 3 each of all values
Core material Ferrite

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

Weight 101 – 110 mg

Ambient temperature -40°C to +85°C with I_{rms} current, +85°C to +125°C with derated current

Storage temperature Component: -40°C to +125°C.
 Packaging: -55°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)

Mean Time Between Failures (MTBF) 26,315,789 hours

Packaging 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 2.3 mm pocket depth

PCB washing Only pure water or alcohol recommended

| Part number ¹ | L ² ±20% (μH) | DCR max (Ohms) | SRF ³ ref (MHz) | Isat ⁴ (A) | I _{rms} ⁵ (A) |
|--------------------------|--------------------------------|----------------------|----------------------------------|--------------------------|--------------------------------------|
| DO1605T-102ML_ | 1.0 | 0.04 | 230 | 2.5 | 2.3 |
| DO1605T-152ML_ | 1.5 | 0.06 | 180 | 2.2 | 2.1 |
| DO1605T-222ML_ | 2.2 | 0.07 | 140 | 1.8 | 1.7 |
| DO1605T-332ML_ | 3.3 | 0.12 | 110 | 1.4 | 1.3 |
| DO1605T-472ML_ | 4.7 | 0.15 | 100 | 1.2 | 1.1 |
| DO1605T-682ML_ | 6.8 | 0.20 | 80 | 1.1 | 1.0 |
| DO1605T-822ML_ | 8.2 | 0.23 | 70 | 1.0 | 0.95 |
| DO1605T-103ML_ | 10 | 0.27 | 60 | 1.0 | 0.90 |
| DO1605T-153ML_ | 15 | 0.35 | 45 | 0.8 | 0.70 |
| DO1605T-223ML_ | 22 | 0.54 | 35 | 0.6 | 0.50 |
| DO1605T-333ML_ | 33 | 0.74 | 30 | 0.5 | 0.45 |
| DO1605T-473ML_ | 47 | 1.1 | 22 | 0.45 | 0.40 |
| DO1605T-683ML_ | 68 | 1.6 | 20 | 0.35 | 0.35 |
| DO1605T-104ML_ | 100 | 2.3 | 15 | 0.30 | 0.30 |
| DO1605T-154ML_ | 150 | 3.5 | 10 | 0.25 | 0.25 |
| DO1605T-224ML_ | 220 | 5.7 | 9 | 0.20 | 0.18 |
| DO1605T-334ML_ | 330 | 8.2 | 8 | 0.16 | 0.16 |
| DO1605T-474ML_ | 470 | 10.8 | 7 | 0.14 | 0.12 |
| DO1605T-684ML_ | 680 | 17.2 | 5 | 0.12 | 0.10 |
| DO1605T-105ML_ | 1000 | 22.6 | 4 | 0.08 | 0.08 |

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

DO1605T-105M 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).

- Inductance tested at 100 kHz, 0.1 V_{rms}.
- SRF >13 MHz measured using Agilent/HP 8753D network analyzer; <13 MHz using Agilent/HP 4192A.
- 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.

See Qualification Standards section for environmental and test data.

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

SPICE models
 ON OUR WEB SITE OR CD

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Specifications subject to change without notice.

Please check our website for latest information. Document 253-1 Revised 09/17/07

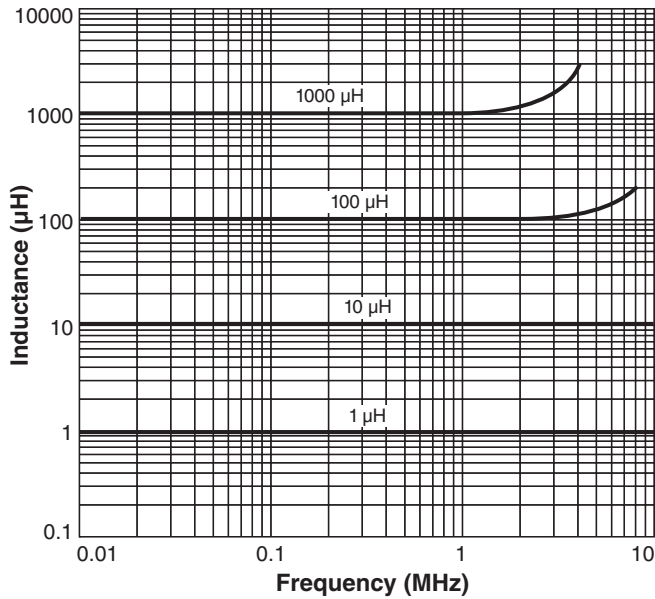
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail info@coilcraft.com Web <http://www.coilcraft.com>

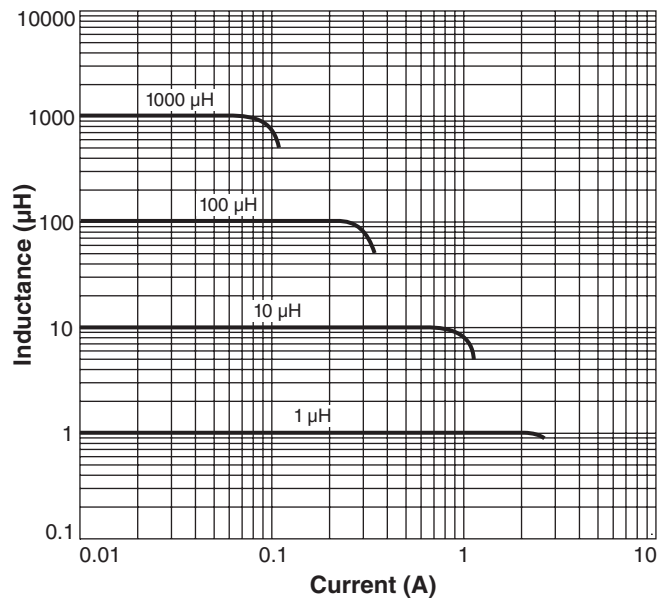


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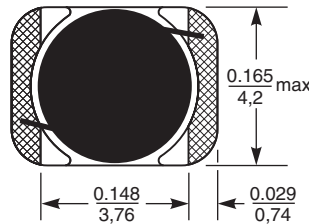
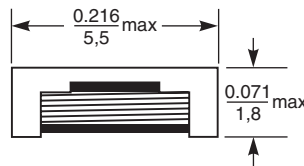
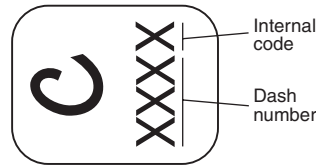
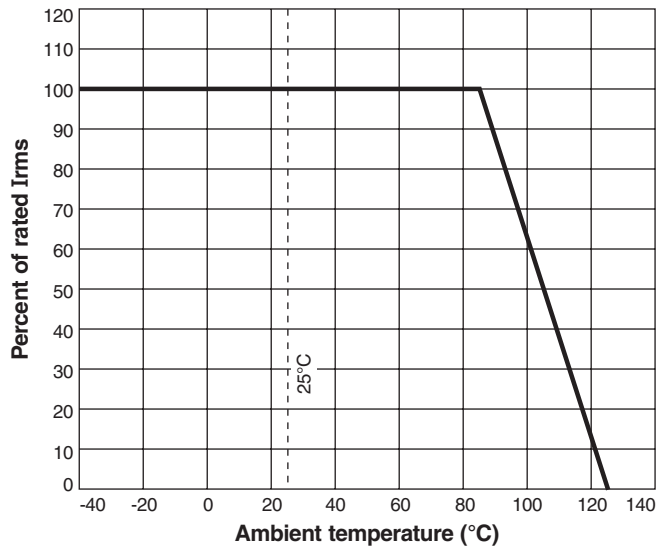
Typical L vs Frequency



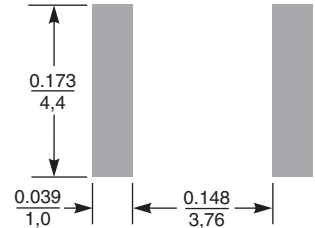
Typical L vs Current



Irms Derating



Recommended Land Pattern



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



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