



# 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

**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** 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: –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, 0.25 mm thick, 8 mm pocket spacing, 2.3 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

Part number <sup>1</sup>	L <sup>2</sup> ±20% (µH)	DCR max (Ohms)	SRF <sup>3</sup> ref (MHz)	Isat <sup>4</sup> (A)	Irms <sup>5</sup> (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

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

DO1605T-105ML 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 Vrms.
3. SRF > 13 MHz measured using Agilent/HP 8753D network analyzer; < 13 MHz using Agilent/HP 4192A.
4. DC current at which the inductance drops 10% (typ) from its value without current.
5. Current that causes a 40°C temperature rise from 25°C ambient.
6. 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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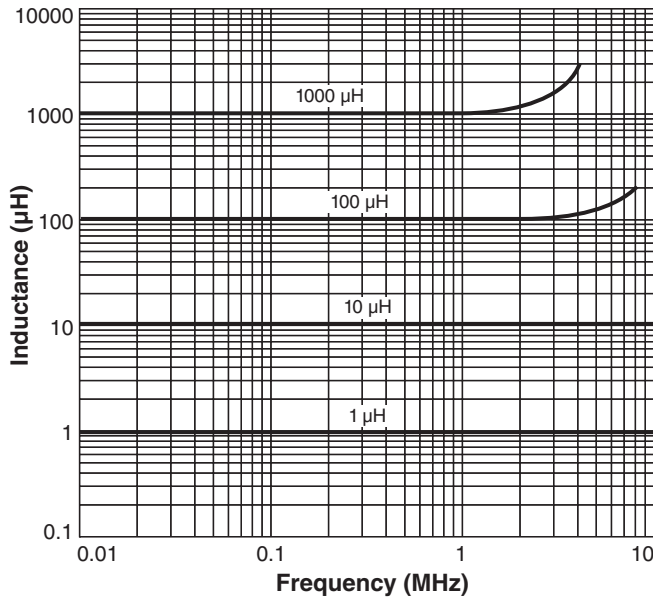
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>

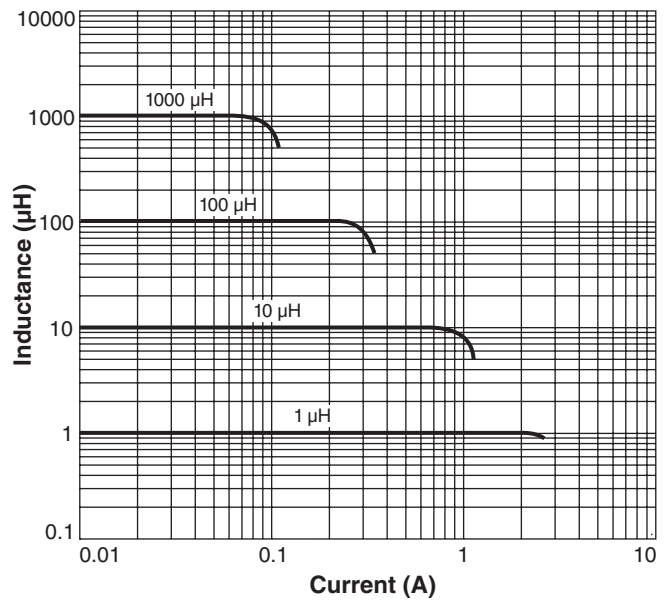


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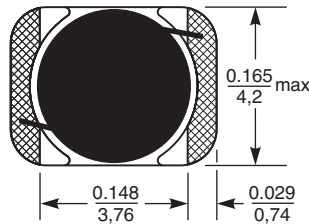
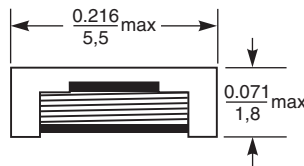
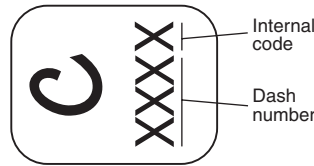
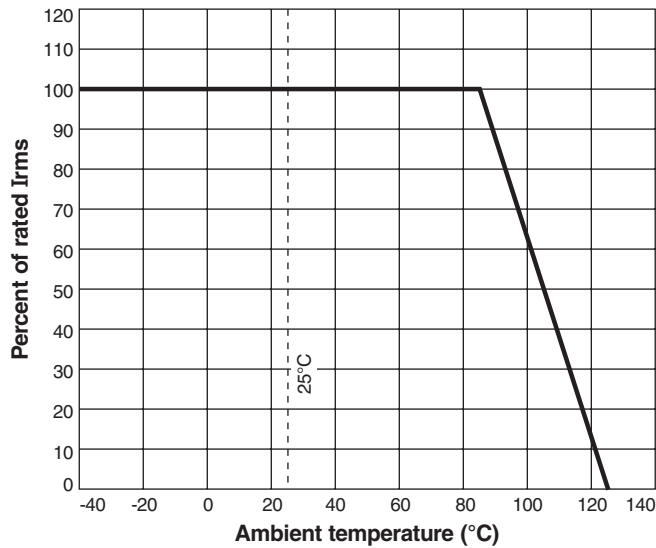
## Typical L vs Frequency



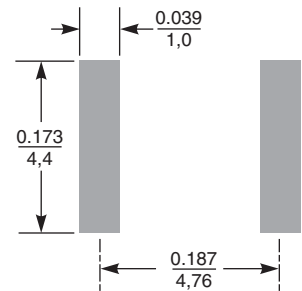
## Typical L vs Current



## Irms Derating



### Recommended Land Pattern



Dimensions are inches mm



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