



# SMT Power Inductors - DO1605 Series



This series is designed for applications requiring high inductance, high current and an ultra-low profile.

The DO1605 measures a mere 1,8 mm high and has a footprint of just 4,2 × 5,4 mm. But despite this small size, it is available in versions that will handle up to 2.5 Amps. The series covers a wide range of inductance values from 1  $\mu$ H to 1.0 mH.

The flat top of the ceramic case provides the optimum surface for reliable pick and place operations.

Coilcraft **Designer's Kit C353** contains samples of each of the standard parts shown. To order, contact Coilcraft or visit <http://order.coilcraft.com>.



**SPICE models**  
ON OUR WEB SITE OR CD

Part number <sup>1</sup>	L <sup>2</sup> $\pm 20\%$ ( $\mu$ H)	DCR max (Ohms)	SRF <sup>3</sup> ref (MHz)	Isat <sup>4</sup> (A)	I <sub>rms</sub> <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 **packaging** code:

**DO1605T-105ML C**

**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 V<sub>rms</sub>.

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. Average current for a 40°C temperature rise above 25°C ambient.

6. Operating temperature range -40°C to +85°C.

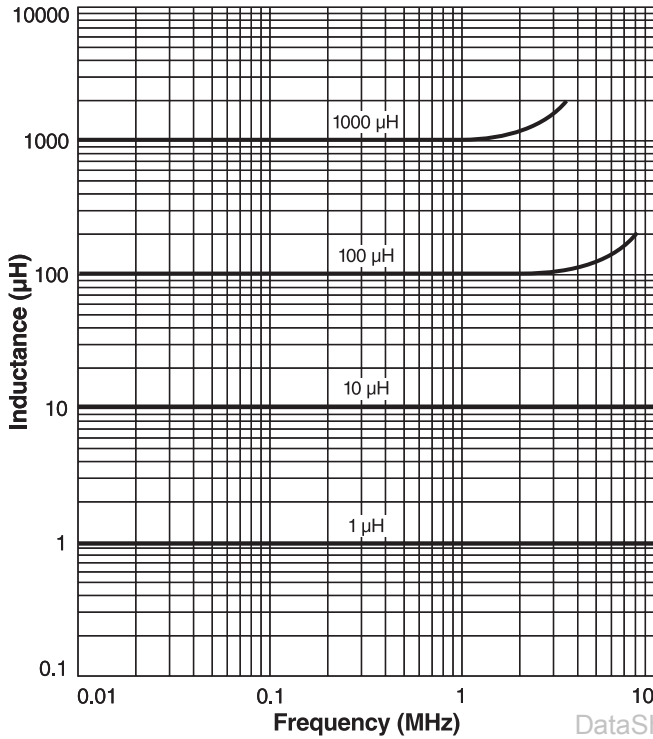
7. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

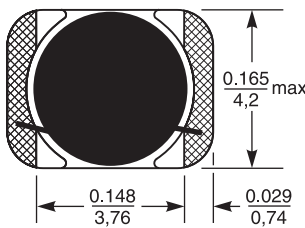
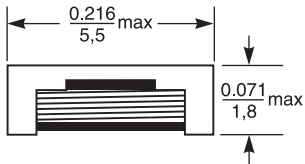
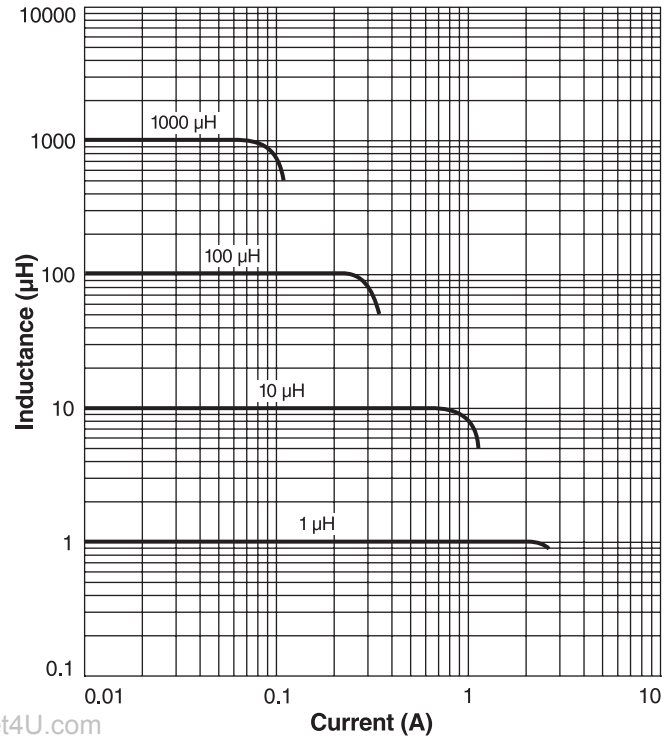


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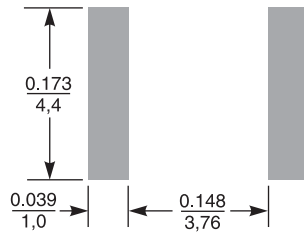
## Typical L vs Frequency



## Typical L vs Current



### Recommended Land Pattern



**Weight:** 101 – 110 mg  
**Terminations:** Silver-palladium-platinum  
**Tape and reel:** 1000/7" reel; 3500/13" reel 12 mm tape width  
 For packaging data see Tape and Reel Specifications section.