

# SMT Power Inductors – DO5040H



- Heavy gauge wire and self-leaded terminations for low DCR
- Saturation current ratings as high as 33.4 A

**Core material** Ferrite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Terminations** RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.

**Weight** 5.8 – 7.6 g (2.8 – 12  $\mu$ H); 5.7 – 7.0 g (15 – 1400  $\mu$ H)

**Ambient temperature** –40°C to +85°C with Irms current, +85°C to +125°C with derated current

**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)

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> ( $\mu$ H)	DCR max (mOhms)	SRF <sup>4</sup> typ (MHz)	Isat <sup>4</sup> (A)	Irms <sup>5</sup> (A)
DO5040H-282ML_	2.8 $\pm$ 20%	5.2	65	33.4	12.1
DO5040H-392ML_	3.9 $\pm$ 20%	6.0	40	26.8	11.2
DO5040H-682ML_	6.8 $\pm$ 20%	9.0	30	22.5	9.6
DO5040H-103ML_	10 $\pm$ 20%	11	22	17.8	8.6
DO5040H-123ML_	12 $\pm$ 20%	13	21	15.9	7.4
DO5040H-153ML_	15 $\pm$ 20%	20	18	13.8	6.5
DO5040H-183ML_	18 $\pm$ 20%	22	14	13.2	6.0
DO5040H-223ML_	22 $\pm$ 20%	24	13	11.8	5.7
DO5040H-333ML_	33 $\pm$ 20%	37	10	9.6	4.5
DO5040H-473ML_	47 $\pm$ 20%	52	8.0	7.8	3.7
DO5040H-683ML_	68 $\pm$ 20%	67	7.0	6.7	3.4
DO5040H-104ML_	100 $\pm$ 20%	115	6.0	5.6	2.8
DO5040H-334KL_	330 $\pm$ 10%	325	3.0	3.0	1.5
DO5040H-684KL_	680 $\pm$ 10%	780	1.6	2.0	1.1
DO5040H-145KL_	1400 $\pm$ 10%	1300	1.0	1.5	0.7

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

DO5040H-104MLD

**Termination:** L = RoHS compliant tin-silver (96.5/3.5) over copper.

**Special order:**

T = RoHS tin-silver-copper (95.5/4/0.5) or

S = non-RoHS tin-lead (63/37).

**Packaging:** D = 13" machine-ready reel. EIA-481 embossed plastic tape (175 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

- Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using Coilcraft SMD-A fixture in Agilent/HP 4284A impedance analyzer.
- SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.
- 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.

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



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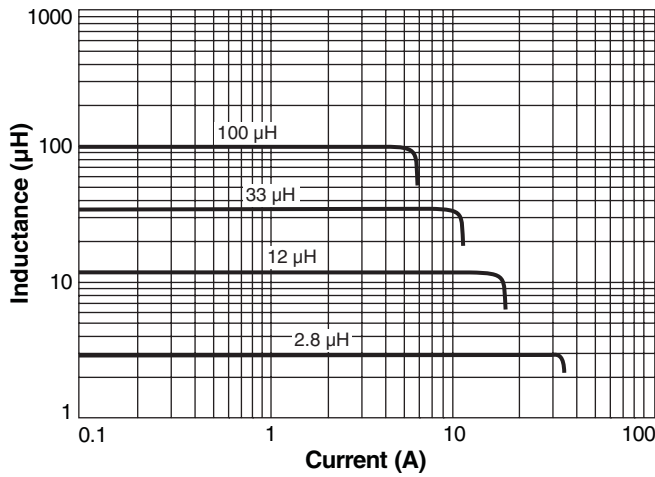
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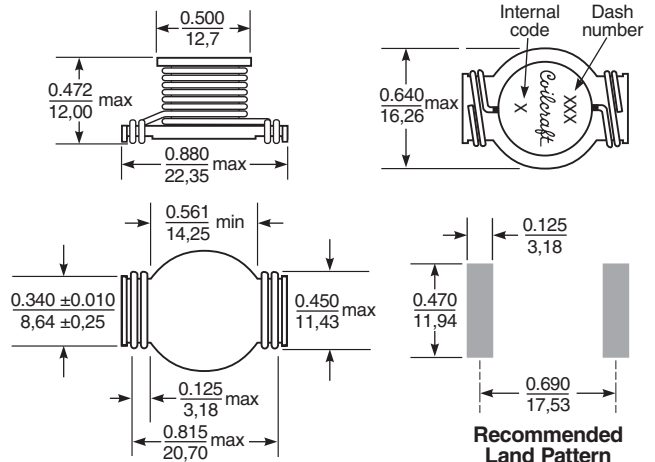


# SMT Power Inductors - DO5040H Series

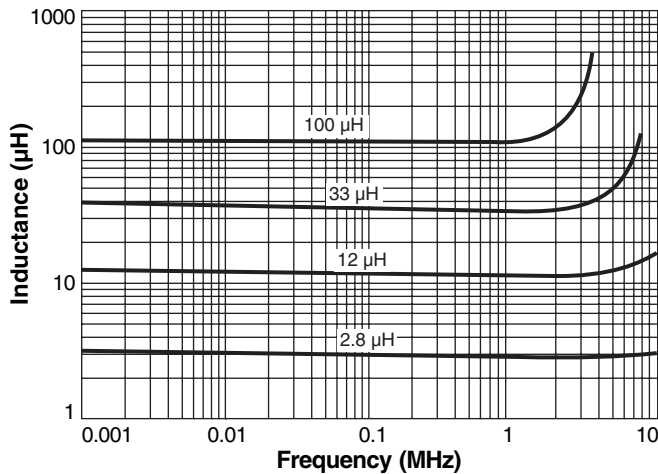
## Typical L vs Current



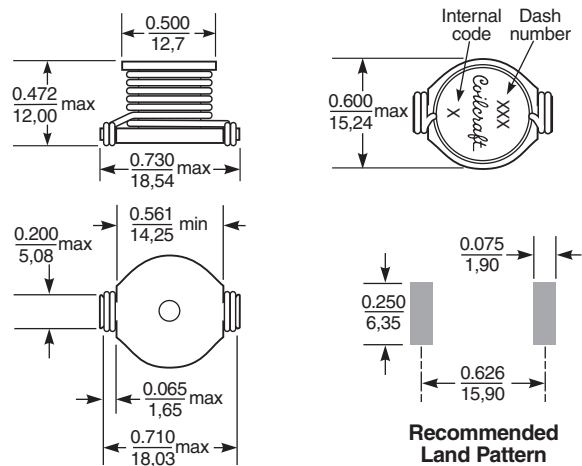
## 2.8 µH – 12 µH



## Typical L vs Frequency



## 15 µH – 1400 µH



Dash number	Number of wire wraps
-282	2
-392	2
-682	2
-103	2
-123	2

Dash number	Number of wire wraps
-153	1
-183	1
-223	1
-333	1
-473	1
-683	1
-104	1
-334	2
-684	3
-145	4

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

**Packaging** 175 per 13" reel  
**2.8 – 12 µH parts** Plastic tape: 44 mm wide, 0.5 mm thick, 24 mm pocket spacing, 12.8 mm pocket depth  
**15 – 1400 µH parts** Plastic tape: 32 mm wide, 0.4 mm thick, 24 mm pocket spacing, 12.1 mm pocket depth



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