

# 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)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**  
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**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).

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.

- 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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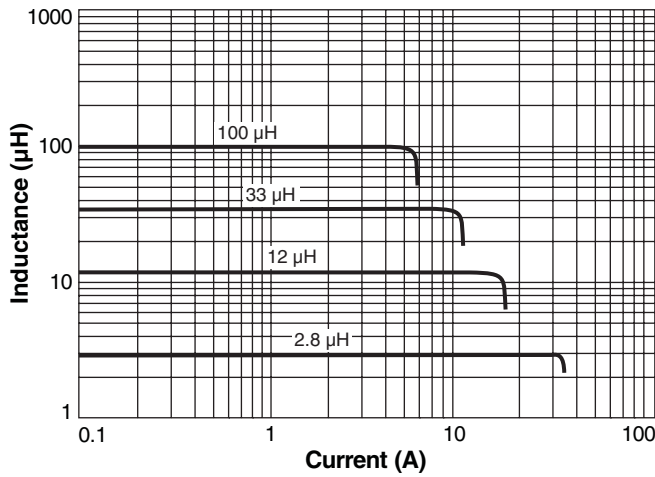
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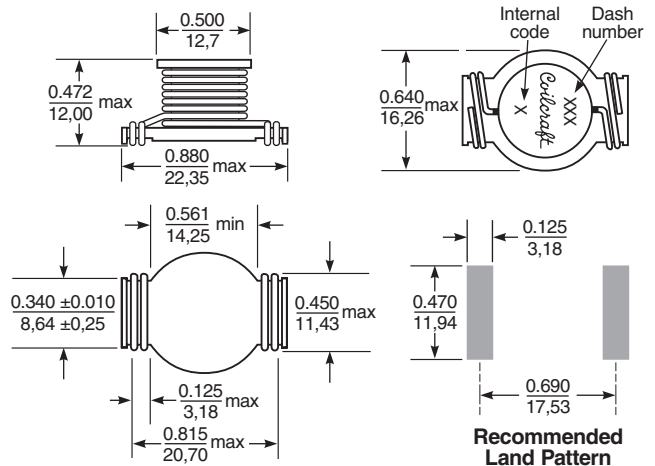


# SMT Power Inductors - DO5040H Series

## Typical L vs Current

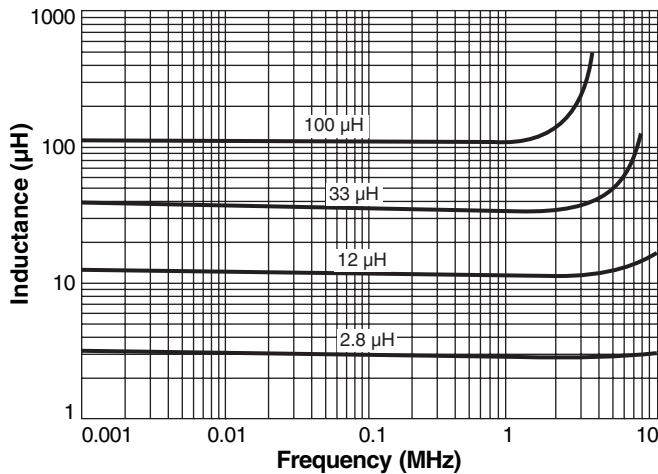


## 2.8 µH – 12 µH

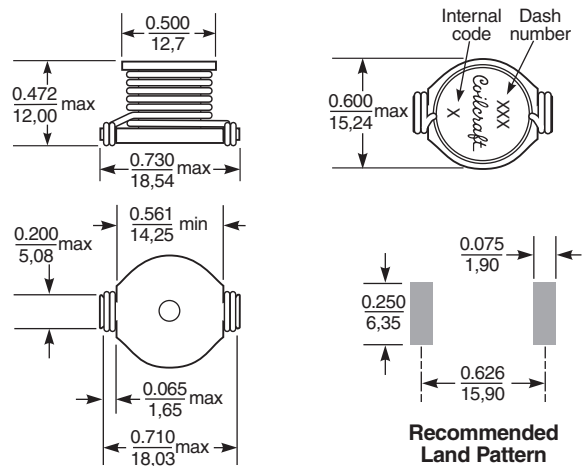


Dash number	Number of wire wraps
-282	2
-392	2
-682	2
-103	2
-123	2

## Typical L vs Frequency



## 15 µH – 1400 µH



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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