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

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 µH); 5.7 – 7.0 g (15 –1400 µH)

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

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

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

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

1. 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.

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

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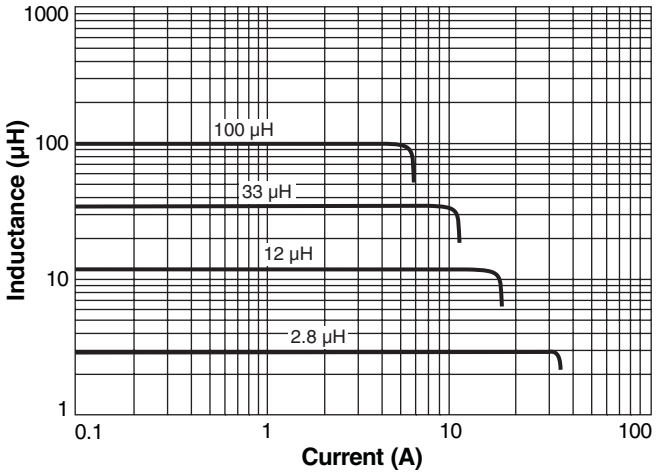
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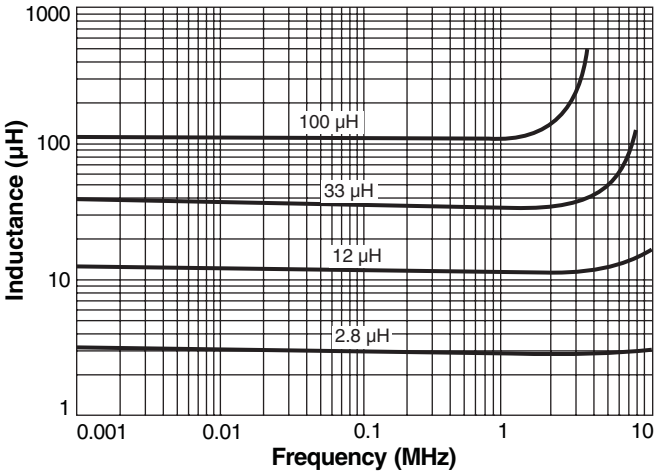
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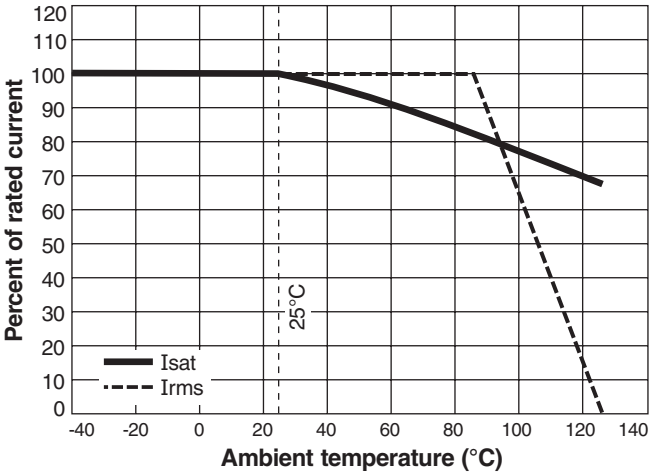
Typical L vs Current



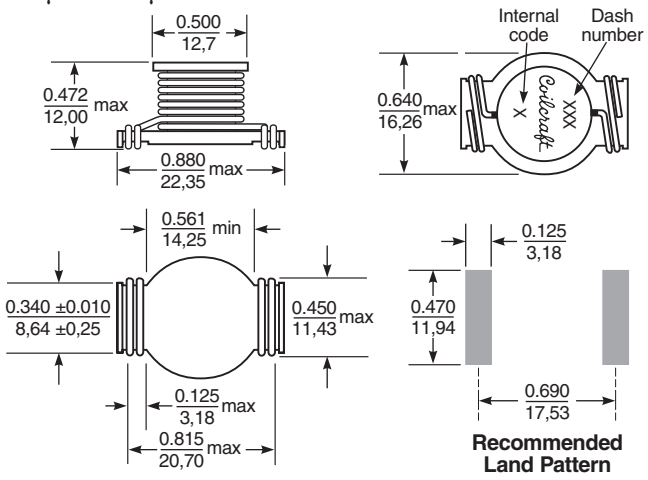
Typical L vs Frequency



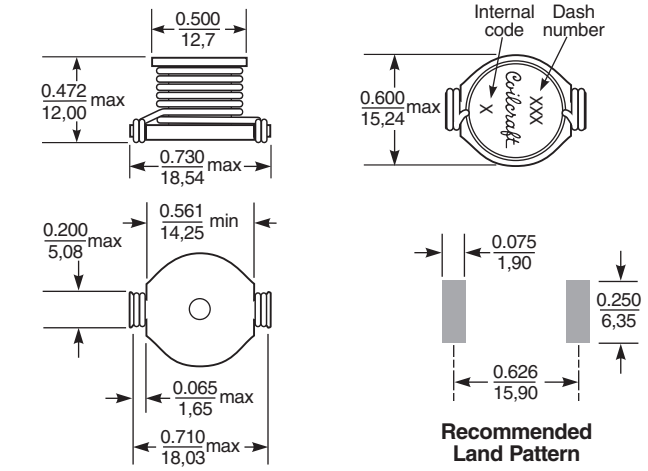
Current Derating



2.8 µH – 12 µH



15 µH – 1400 µH



Dimensions are in inches / mm

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