



# SMT Power Inductors - DO5010H Series

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- Irms ratings up to 15 A; saturation currents up to 30 A
- Heavy gauge wire for low DC resistance

**Designer's Kit C355** contains 3 of each part

**Core material** Ferrite

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

**Terminations** RoHS compliant tin-silver over copper. Other terminations available at additional cost.

**Weight** 3.2 – 4.0 g

**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.  
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** 250 per 13" reel Plastic tape: 32 mm wide, 0.38 mm thick, 24 mm pocket spacing, 7.8 mm pocket depth

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

| Part Number <sup>1</sup> | Inductance <sup>2</sup><br>±20% (µH) | DCR<br>max<br>(mOhm) | SRF<br>typ <sup>3</sup><br>(MHz) | Isat <sup>4</sup><br>(A) | Irms <sup>5</sup><br>(A) |
|--------------------------|--------------------------------------|----------------------|----------------------------------|--------------------------|--------------------------|
| DO5010H-781ML            | 0.78                                 | 2.6                  | 156                              | 30                       | 15                       |
| DO5010H-152ML            | 1.5                                  | 4.0                  | 100                              | 25                       | 15                       |
| DO5010H-222ML            | 2.2                                  | 6.1                  | 75                               | 20                       | 12                       |
| DO5010H-332ML            | 3.3                                  | 8.6                  | 60                               | 17                       | 10                       |
| DO5010H-392ML            | 3.9                                  | 10                   | 55                               | 15                       | 9.0                      |
| DO5010H-472ML            | 4.7                                  | 14                   | 40                               | 13                       | 8.4                      |
| DO5010H-602ML            | 6.0                                  | 17                   | 35                               | 12                       | 7.5                      |
| DO5010H-782ML            | 7.8                                  | 18                   | 35                               | 11                       | 7.5                      |
| DO5010H-103ML            | 10                                   | 26                   | 28                               | 10                       | 6.0                      |
| DO5010H-123ML            | 12                                   | 28                   | 26                               | 8.5                      | 5.2                      |
| DO5010H-153ML            | 15                                   | 32                   | 20                               | 8.0                      | 4.4                      |
| DO5010H-223ML            | 22                                   | 47                   | 20                               | 7.0                      | 3.5                      |
| DO5010H-333ML            | 33                                   | 66                   | 15                               | 5.5                      | 3.0                      |
| DO5010H-473ML            | 47                                   | 86                   | 9                                | 4.5                      | 2.6                      |
| DO5010H-683ML            | 68                                   | 130                  | 8                                | 3.5                      | 2.3                      |
| DO5010H-104ML            | 100                                  | 190                  | 7                                | 3.0                      | 1.8                      |
| DO5010H-154ML            | 150                                  | 250                  | 6                                | 2.6                      | 1.5                      |
| DO5010H-224ML            | 220                                  | 380                  | 5                                | 2.4                      | 1.2                      |
| DO5010H-334ML            | 330                                  | 560                  | 4                                | 1.9                      | 1.0                      |
| DO5010H-474ML            | 470                                  | 850                  | 3                                | 1.4                      | 0.82                     |
| DO5010H-684ML            | 680                                  | 1100                 | 2.5                              | 1.2                      | 0.72                     |
| DO5010H-105ML            | 1000                                 | 1800                 | 2.0                              | 1.0                      | 0.56                     |

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

**DO5010H-105ML D**

**Termination:** L = RoHS compliant tin-silver 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.

B = Less than full reel. In tape, but not machine ready.  
To have a leader and trailer added (\$25 charge), use code letter D instead.

- Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4284A LCR meter or equivalent.
- SRF measured using Agilent/HP 8753D network analyzer.
- 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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Specifications subject to change without notice.  
Please check our website for latest information.

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[www.DataSheet4U.com](http://www.DataSheet4U.com)

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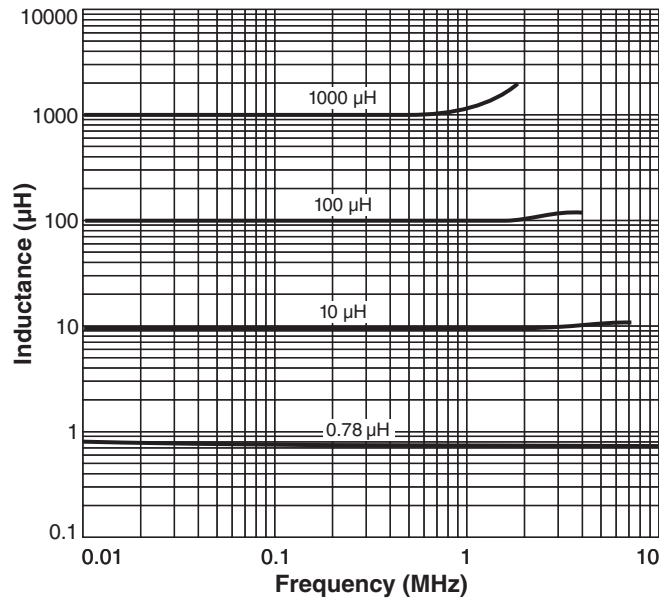
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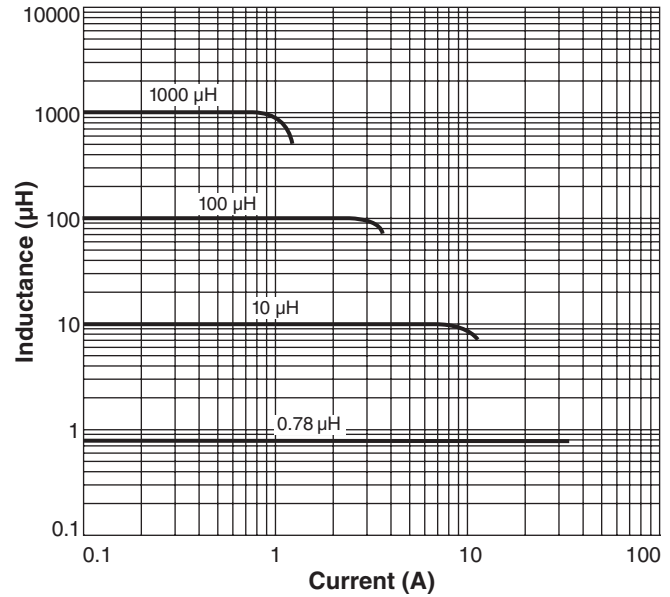
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**SPICE models** ON OUR WEB SITE OR CD  
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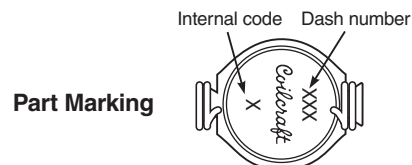
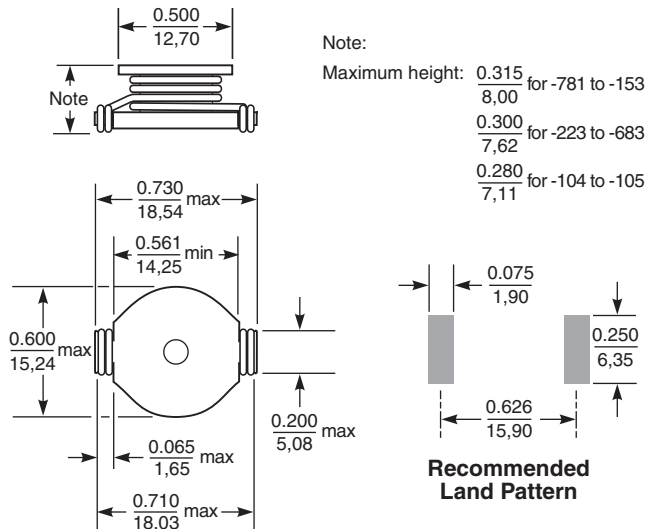
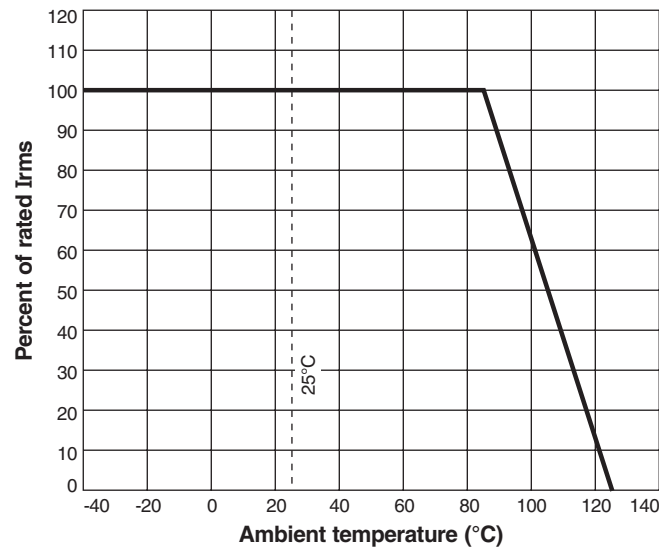
## Typical L vs Frequency



## Typical L vs Current



## Irms Derating



Part marking since Feb. 2005. Parts manufactured prior to that date may have color dots.  
 Visit [www.coilcraft.com/colpowr.cfm](http://www.coilcraft.com/colpowr.cfm) for details.

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

**Coilcraft**<sup>®</sup>

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