



# SMT Power Inductors – DO5022P Series



- Excellent current handling – up to 20 Asat.
- Low dc resistance keeps power losses to a minimum

**Designer's Kit C311** contains 3 of each part

**Core material** Ferrite

**Terminations** RoHS compliant gold over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 2.8 – 3.9 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: –55°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)

**Mean Time Between Failures (MTBF)** 26,315,789 hours

**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>	L ±20% <sup>2</sup> (µH)	DCR max (Ohms)	SRF typ <sup>3</sup> (MHz)	Isat <sup>4</sup> (A)	Irms <sup>5</sup> (A)
DO5022P-102ML_	1.0	0.009	80	20	8.6
DO5022P-222ML_	2.2	0.014	80	16	7.1
DO5022P-332ML_	3.3	0.018	60	14	6.2
DO5022P-562ML_	5.6	0.020	40	12	5.3
DO5022P-822ML_	8.2	0.029	30	10	4.8
DO5022P-103ML_	10	0.031	30	10	4.3
DO5022P-153ML_	15	0.036	22	8.0	4.0
DO5022P-223ML_	22	0.047	20	7.0	3.5
DO5022P-333ML_	33	0.066	15	5.5	3.0
DO5022P-473ML_	47	0.086	9	4.5	2.6
DO5022P-683ML_	68	0.13	8	3.5	2.3
DO5022P-104ML_	100	0.19	7	3.0	1.8
DO5022P-154ML_	150	0.25	6	2.6	1.5
DO5022P-224ML_	220	0.38	5	2.4	1.2
DO5022P-334ML_	330	0.56	4	1.9	1.0
DO5022P-474ML_	470	0.85	3	1.4	0.82
DO5022P-684ML_	680	1.1	2.5	1.2	0.72
DO5022P-105ML_	1000	1.8	2	1.0	0.56

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

**DO5022P-105M L D**

**Termination:** L = RoHS compliant gold over nickel over phos bronze.  
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 (250 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 D instead.

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.

3. SRF >13 MHz measured using Agilent/HP 8753D network analyzer; <13 MHz using Agilent/HP 4192A.

4. DC current at which 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.

See Qualification Standards section for environmental and test data.

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

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

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.  
Please check our website for latest information.

Document 172-1 Revised 09/19/07

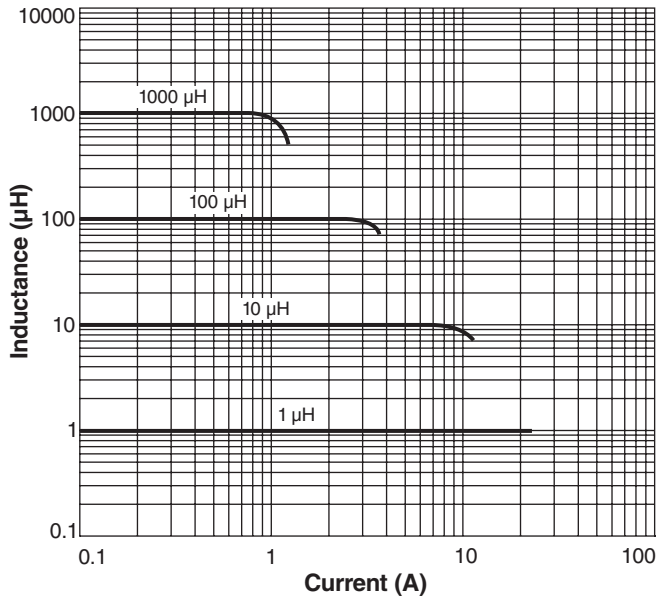
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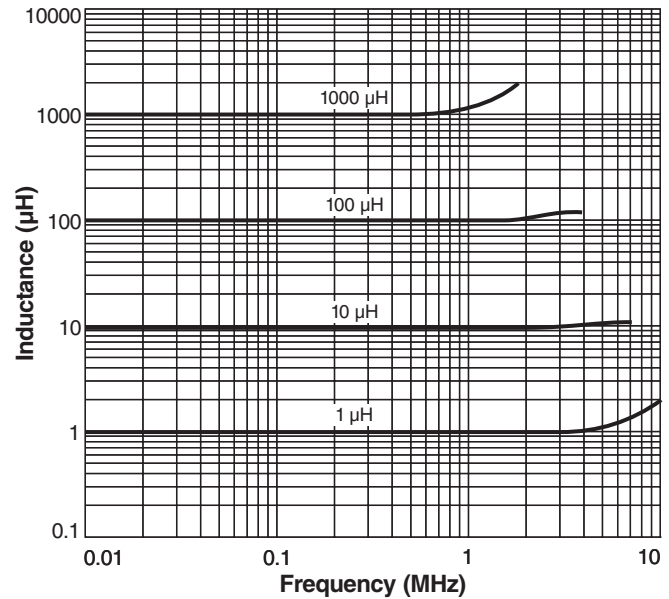


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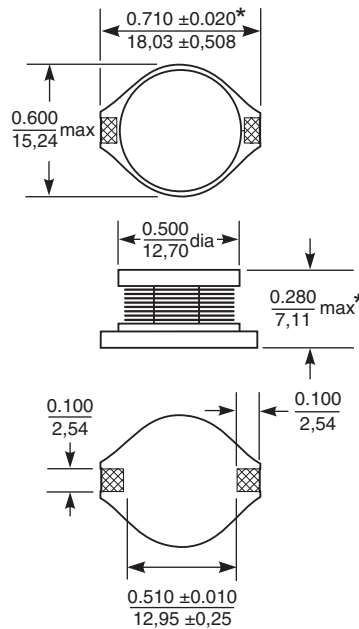
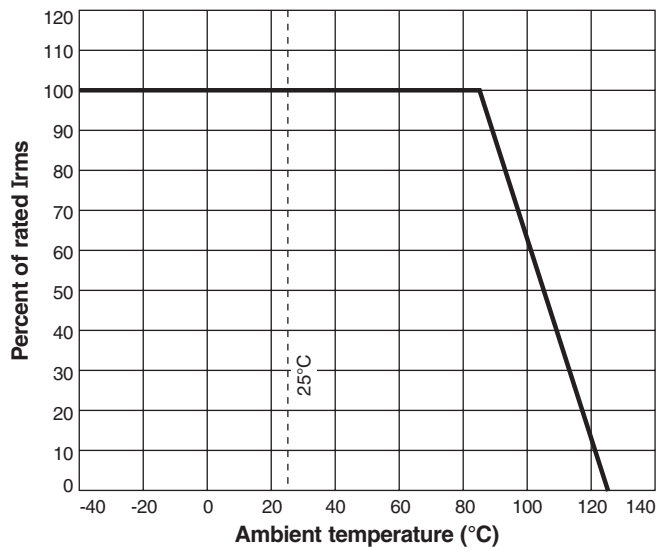
## Typical L vs Current



## Typical L vs Frequency

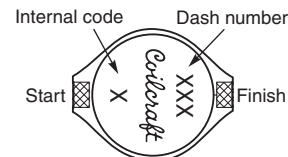


## Current Derating



\* Allow an additional 0.02/0.508 in width and 0.01/0.254 in height for optional tin-lead and tin-silver-copper application.

### Recommended Land Pattern



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  $\frac{\text{inches}}{\text{mm}}$



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Document 172-2 Revised 09/19/07

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