

# SMT Power Inductors – DO5022P



- Excellent current handling – up to 28.8 Asat.
- Low dc resistance keeps power losses to a minimum

**Designer's Kit C311** contains 3 of each 20% tolerance part

**Core material** Ferrite

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

**Terminations** RoHS compliant electroplated gold (<50 µin) 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.

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

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

Part number <sup>1</sup>	L <sup>2</sup> (µH)	Percent tol <sup>3</sup>	DCR max (Ohms)	SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>		Irms <sup>6</sup> (A)
					10% drop	20% drop	
DO5022P-102ML_	1.0	<b>20</b>	0.009	80	27.6	28.8	8.6
DO5022P-222ML_	2.2	<b>20</b>	0.014	80	18.5	19.8	7.1
DO5022P-332ML_	3.3	<b>20</b>	0.018	60	14.5	15.5	6.2
DO5022P-562ML_	5.6	<b>20</b>	0.020	40	12.5	13.8	5.3
DO5022P-822ML_	8.2	<b>20</b>	0.029	30	10.3	11.5	4.8
DO5022P-103ML_	10	<b>20</b>	0.031	30	9.4	10.5	4.3
DO5022P-153ML_	15	<b>20</b>	0.036	22	7.5	8.2	4.0
DO5022P-223ML_	22	<b>20</b>	0.047	20	6.5	7.2	3.5
DO5022P-333ML_	33	<b>20</b>	0.066	15	5.2	6.1	3.0
DO5022P-473ML_	47	<b>20</b>	0.086	9	4.2	4.7	2.6
DO5022P-683_L_	68	<b>20,10</b>	0.13	8	3.7	4.1	2.3
DO5022P-104_L_	100	<b>20,10</b>	0.19	7	3.0	3.4	1.8
DO5022P-154_L_	150	<b>20,10</b>	0.25	6	2.5	2.8	1.5
DO5022P-224_L_	220	<b>20,10</b>	0.38	5	2.0	2.3	1.2
DO5022P-334_L_	330	<b>20,10</b>	0.56	4	1.7	1.9	1.0
DO5022P-474_L_	470	<b>20,10</b>	0.85	3	1.5	1.7	0.82
DO5022P-684_L_	680	<b>20,10</b>	1.1	2.5	1.2	1.3	0.72
DO5022P-105_L_	1000	<b>20,10</b>	1.8	2.0	0.95	1.1	0.56

1. Specify **tolerance, termination and packaging** codes:

DO5022P-105MLD

**Tolerance:** **M** = 20%, **K** = 10% (Table shows stock tolerances in bold.)

**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. Tolerances in bold are stocked for immediate shipment.
4. SRF >13 MHz measured using Agilent/HP 8753D network analyzer; <13 MHz using Agilent/HP 4192A.
5. DC current at which inductance drops the specified amount from its value without current.
6. Current that causes a 40°C temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

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

**SPICE models**  
ON OUR WEB SITE



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

**US** +1-847-639-6400 [sales@coilcraft.com](mailto:sales@coilcraft.com)

**UK** +44-1236-730595 [sales@coilcraft-europe.com](mailto:sales@coilcraft-europe.com)

**Taiwan** +886-2-2264 3646 [sales@coilcraft.com.tw](mailto:sales@coilcraft.com.tw)

**China** +86-21-6218 8074 [sales@coilcraft.com.cn](mailto:sales@coilcraft.com.cn)

**Singapore** + 65-6484 8412 [sales@coilcraft.com.sg](mailto:sales@coilcraft.com.sg)

Document 172-1 Revised 12/09/11

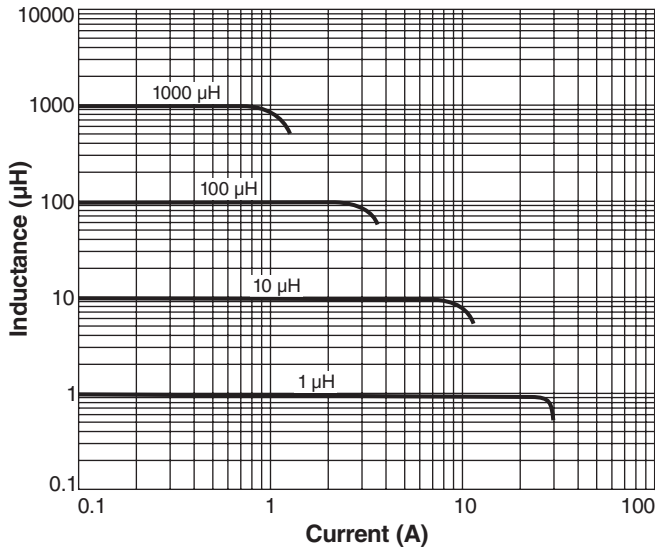
© Coilcraft Inc. 2015

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

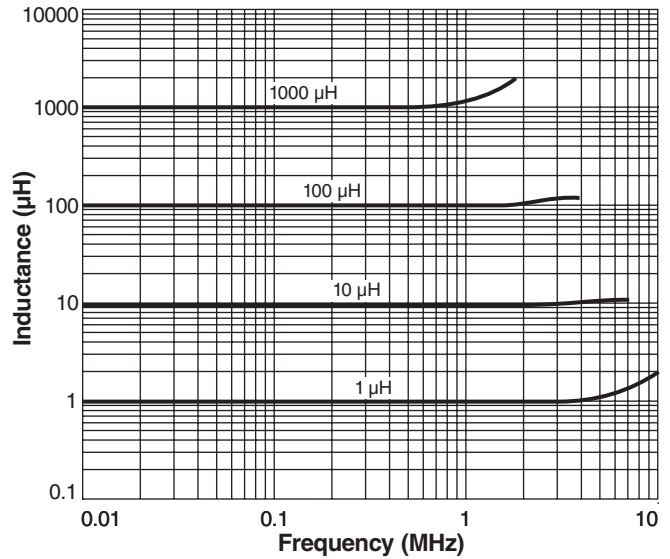


# SMT Power Inductors – DO5022P Series

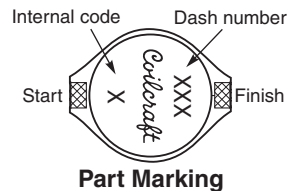
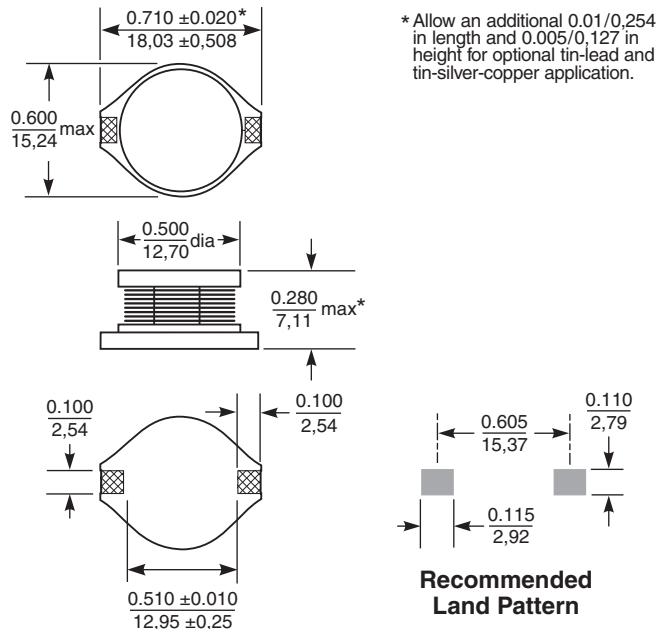
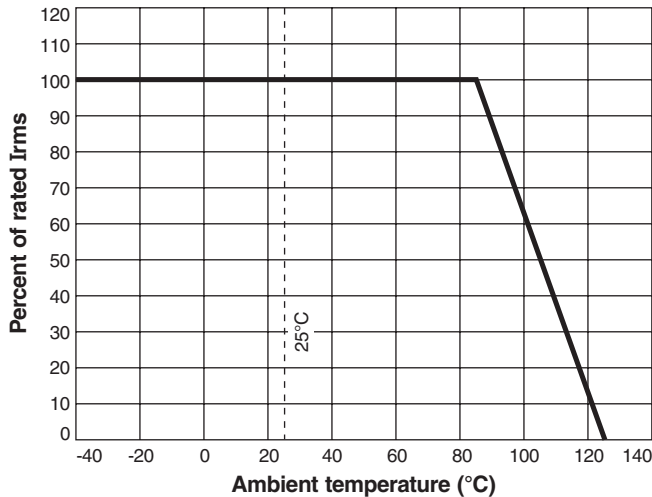
## Typical L vs Current



## Typical L vs Frequency



## Current Derating



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



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 172-2 Revised 12/09/11  
 © Coilcraft Inc. 2015  
 This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.