



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

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

Maximum part temperature +125°C (ambient + temp rise)

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

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

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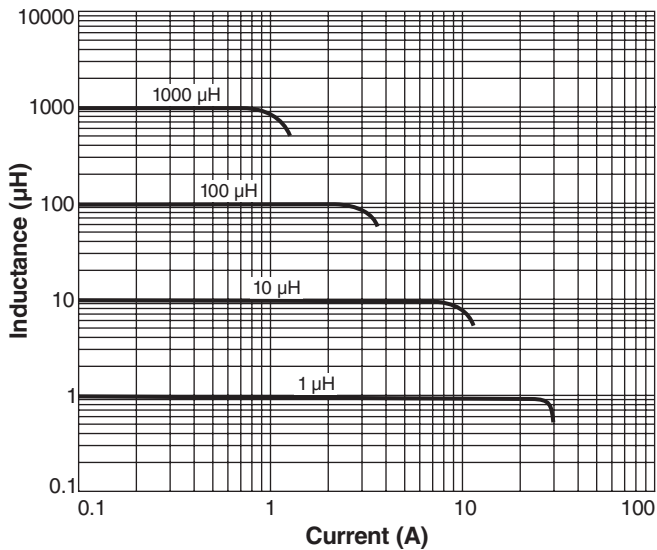
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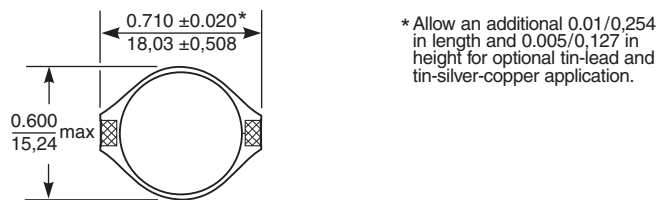
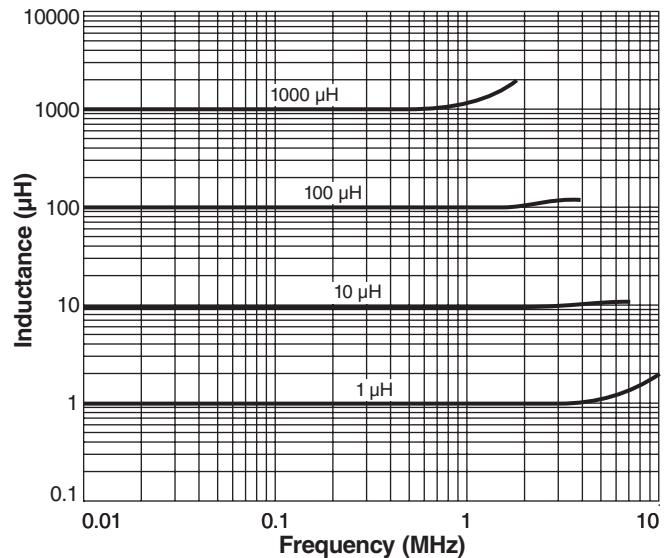


SMT Power Inductors – DO5022P Series

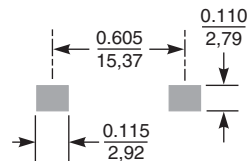
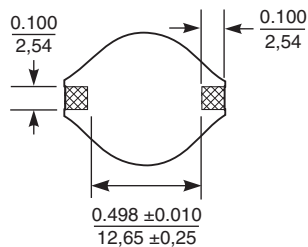
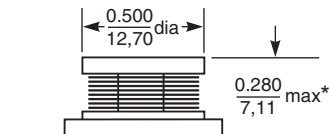
Typical L vs Current



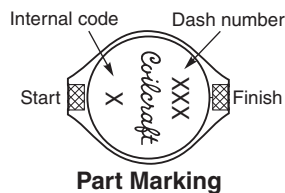
Typical L vs Frequency



* Allow an additional 0.01/0.254 in length and 0.005/0.127 in height for optional tin-lead and tin-silver-copper application.



Recommended Land Pattern



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



www.coilcraft.com

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

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