



# SMT Power Inductors – DO5022 Series



This series of surface mount power inductors is designed for the higher current requirements of notebook computers and other portable and handheld devices.

A 1  $\mu$ H inductor is rated at 8.6 Arms with a saturation current of 20 Amps. Exceptionally low dc resistance (as low as 0.009 Ohm) keeps power losses to a minimum.

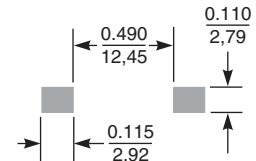
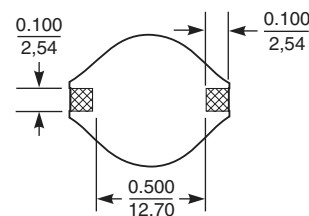
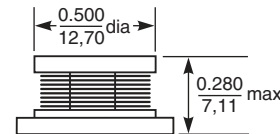
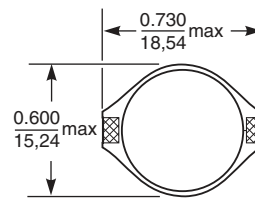
The DO5022 Series was designed specifically for surface mounting. It has a flat top for reliable pick-and place operations and features robust temperature deflection.

In addition to the standard versions shown here, custom inductors are available to meet your exact requirements.

Coilcraft **Designer's Kit C111** contains three samples each of the standard parts shown. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

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

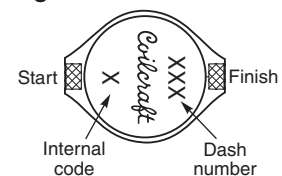
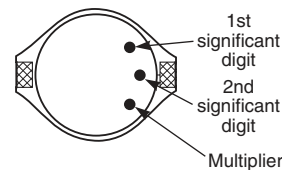
Part number	L $\pm 20\%$ <sup>1</sup> ( $\mu$ H)	DCR max (Ohms)	SRF typ <sup>2</sup> (MHz)	Isat <sup>3</sup> (A)	Irms <sup>4</sup> (A)
DO5022P-102	1.0	0.009	80	20	8.6
DO5022P-222	2.2	0.014	80	16	7.1
DO5022P-332	3.3	0.018	60	14	6.2
DO5022P-562	5.6	0.020	40	12	5.3
DO5022P-103	10	0.031	30	10	4.3
<b>DO5022P-153</b>	<b>15</b>	<b>0.036</b>	<b>22</b>	<b>8.0</b>	<b>4.0</b>
<b>DO5022P-223</b>	<b>22</b>	<b>0.047</b>	<b>20</b>	<b>7.0</b>	<b>3.5</b>
<b>DO5022P-333</b>	<b>33</b>	<b>0.066</b>	<b>15</b>	<b>5.5</b>	<b>3.0</b>
<b>DO5022P-473</b>	<b>47</b>	<b>0.086</b>	<b>9</b>	<b>4.5</b>	<b>2.6</b>
<b>DO5022P-683</b>	<b>68</b>	<b>0.13</b>	<b>8</b>	<b>3.5</b>	<b>2.3</b>
<b>DO5022P-104</b>	<b>100</b>	<b>0.19</b>	<b>7</b>	<b>3.0</b>	<b>1.8</b>
<b>DO5022P-154</b>	<b>150</b>	<b>0.25</b>	<b>6</b>	<b>2.6</b>	<b>1.5</b>
<b>DO5022P-224</b>	<b>220</b>	<b>0.38</b>	<b>5</b>	<b>2.4</b>	<b>1.2</b>
<b>DO5022P-334</b>	<b>330</b>	<b>0.56</b>	<b>4</b>	<b>1.9</b>	<b>1.0</b>
DO5022P-474	470	0.85	3	1.4	0.82
DO5022P-684	680	1.1	2.5	1.2	0.72
DO5022P-105	1000	1.8	2	1.0	0.56



**Recommended Land Pattern**

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.
  - SRF >13 MHz measured using Agilent/HP 8753D network analyzer; <13 MHz using Agilent/HP 4192A.
  - DC current at which inductance drops 10% (typ) from its value without current.
  - Average current for 40°C temperature rise from 25°C ambient.
  - Operating temperature range -40°C to +85°C.
  - Electrical specifications at 25°C.
- See Qualification Standards section for environmental and test data.  
See Color Coding section for part marking data.

## Part Marking



**Weight:** 2.8 – 3.9 g  
**Terminations:** Nickel/gold over phos bronze  
**Tape and reel:** 250/13" reel 32 mm tape width  
 For packaging data see Tape and Reel Specifications section.

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice. Document 172 Revised 12/10/04

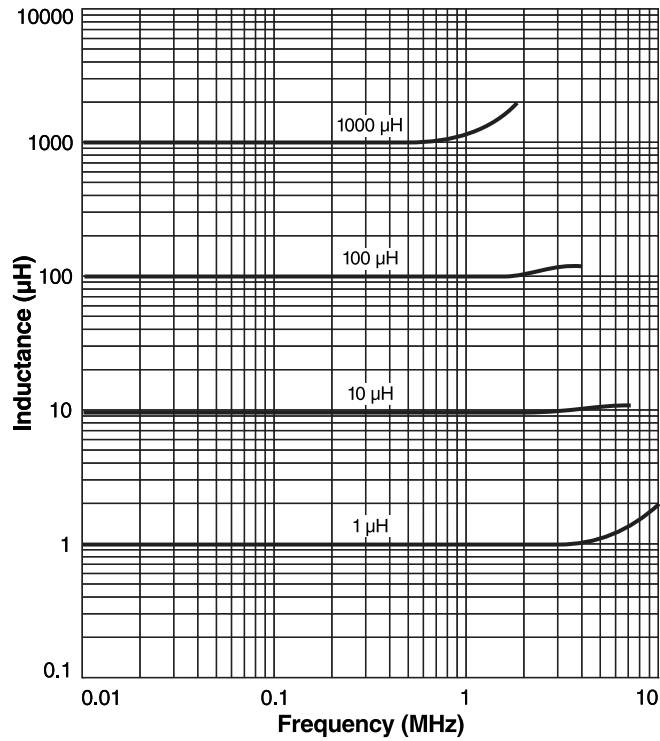
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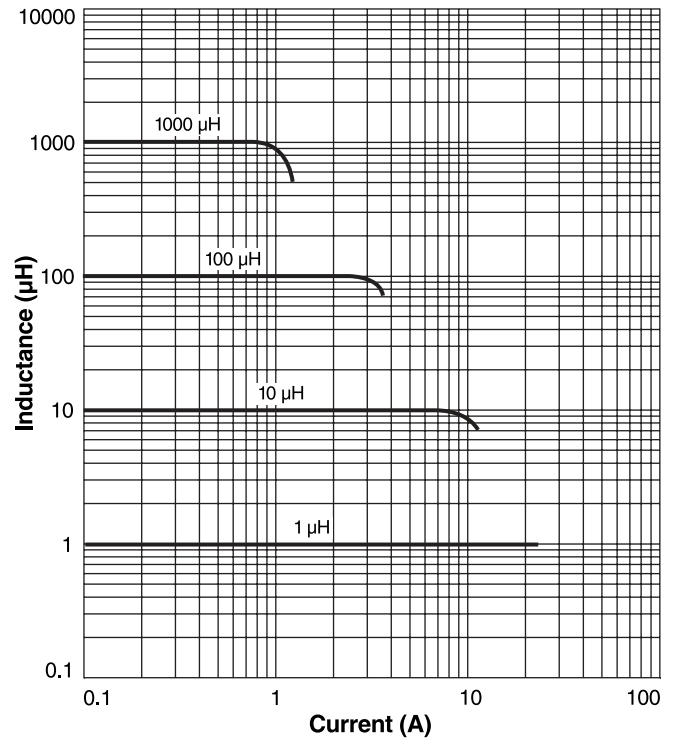


# SMT Power Inductors – DO5022 Series

## Typical L vs Frequency



## Typical L vs Current



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