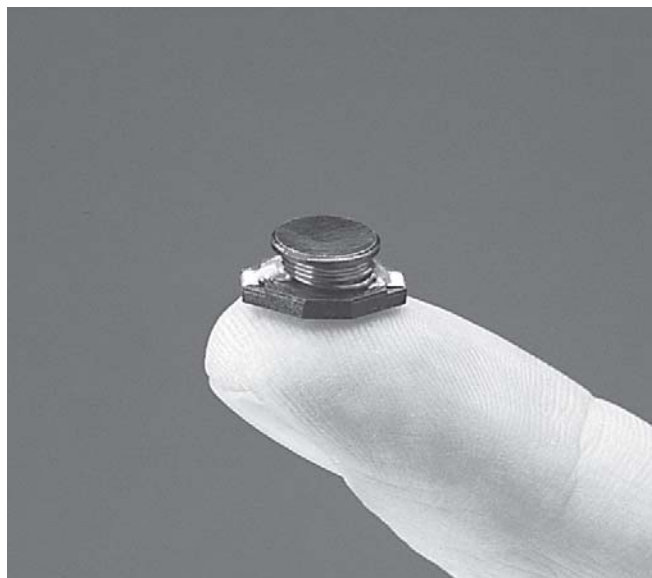




# SMT Power Inductors – DO3316 Series



The DO3316 Series of surface mount inductors is designed for the smallest possible size, lowest cost and highest performance. Their high energy storage and very low resistance make them the ideal inductors for DC-DC conversion in notebook computers, PDAs, step-up or step-down converters, flash memory programmers, etc.

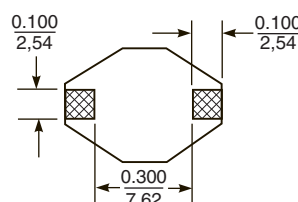
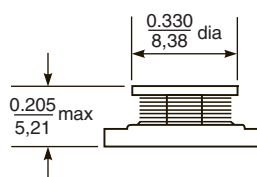
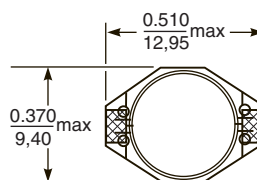
For reliable surface mounting, we've designed the DO Series with a flat top and robust temperature deflection to prevent damage during solder reflow.

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

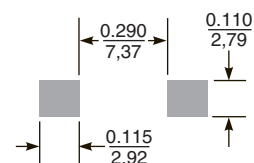
Coilcraft **Designer's Kit C178** contains three samples each of the parts shown. To order, contact Coilcraft or visit <http://order.coilcraft.com>.

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

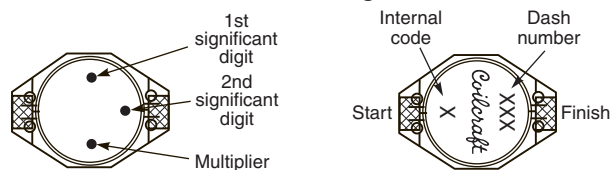
| Part number        | L $\pm 20\%$ <sup>1</sup><br>( $\mu$ H) | DCR max<br>(Ohms) | SRF typ <sup>2</sup><br>(MHz) | Isat <sup>3</sup><br>(A) | Irms <sup>4</sup><br>(A) |
|--------------------|---|-------------------|-------------------------------|--------------------------|--------------------------|
| DO3316P-102        | 1.0                                     | 0.009             | 100                           | 9.0                      | 6.8                      |
| DO3316P-152        | 1.5                                     | 0.010             | 90                            | 8.0                      | 6.4                      |
| DO3316P-222        | 2.2                                     | 0.012             | 80                            | 7.0                      | 6.1                      |
| DO3316P-332        | 3.3                                     | 0.015             | 65                            | 6.4                      | 5.4                      |
| DO3316P-472        | 4.7                                     | 0.018             | 45                            | 5.4                      | 4.8                      |
| DO3316P-682        | 6.8                                     | 0.027             | 38                            | 4.6                      | 4.4                      |
| DO3316P-103        | 10                                      | 0.038             | 30                            | 3.8                      | 3.9                      |
| <b>DO3316P-153</b> | <b>15</b>                               | <b>0.046</b>      | <b>27</b>                     | <b>3.0</b>               | <b>3.1</b>               |
| <b>DO3316P-223</b> | <b>22</b>                               | <b>0.085</b>      | <b>19</b>                     | <b>2.6</b>               | <b>2.7</b>               |
| <b>DO3316P-333</b> | <b>33</b>                               | <b>0.10</b>       | <b>15</b>                     | <b>2.0</b>               | <b>2.1</b>               |
| <b>DO3316P-473</b> | <b>47</b>                               | <b>0.14</b>       | <b>12</b>                     | <b>1.6</b>               | <b>1.8</b>               |
| <b>DO3316P-683</b> | <b>68</b>                               | <b>0.20</b>       | <b>10</b>                     | <b>1.4</b>               | <b>1.5</b>               |
| <b>DO3316P-104</b> | <b>100</b>                              | <b>0.28</b>       | <b>9</b>                      | <b>1.2</b>               | <b>1.3</b>               |
| <b>DO3316P-154</b> | <b>150</b>                              | <b>0.40</b>       | <b>6</b>                      | <b>1.0</b>               | <b>1.0</b>               |
| <b>DO3316P-224</b> | <b>220</b>                              | <b>0.61</b>       | <b>5</b>                      | <b>0.8</b>               | <b>0.8</b>               |
| <b>DO3316P-334</b> | <b>330</b>                              | <b>1.02</b>       | <b>4.5</b>                    | <b>0.6</b>               | <b>0.6</b>               |
| DO3316P-474        | 470                                     | 1.27              | 3.5                           | 0.5                      | 0.5                      |
| DO3316P-684        | 680                                     | 2.02              | 2.5                           | 0.4                      | 0.4                      |
| DO3316P-105        | 1000                                    | 3.00              | 2.0                           | 0.3                      | 0.3                      |



### Recommended Land Pattern



### Part Marking



**Weight:** 0.92 – 1.23 g  
**Terminations:** Nickel/gold over phos bronze  
**Tape and reel:** 1000/13" reel 24 mm tape width  
 For packaging data see Tape and Reel Specifications section.

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

# Coilcraft®

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

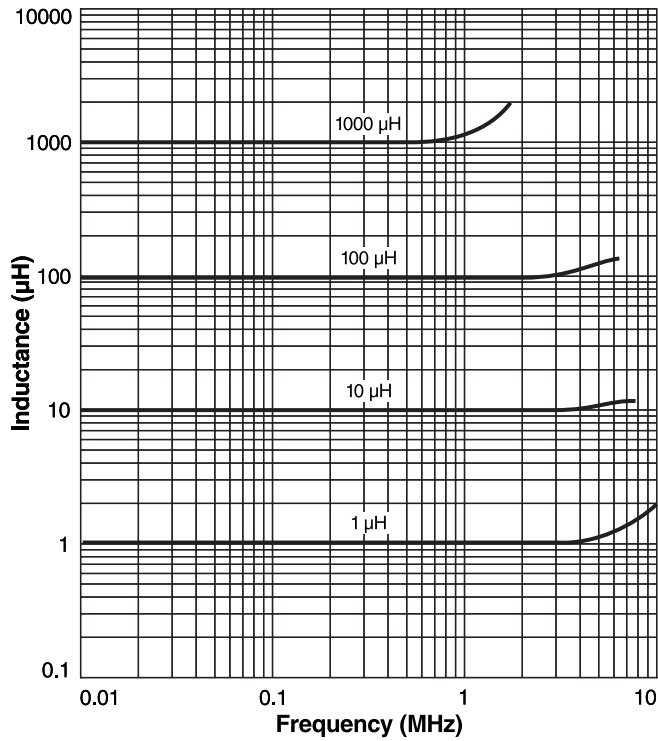
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 E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>

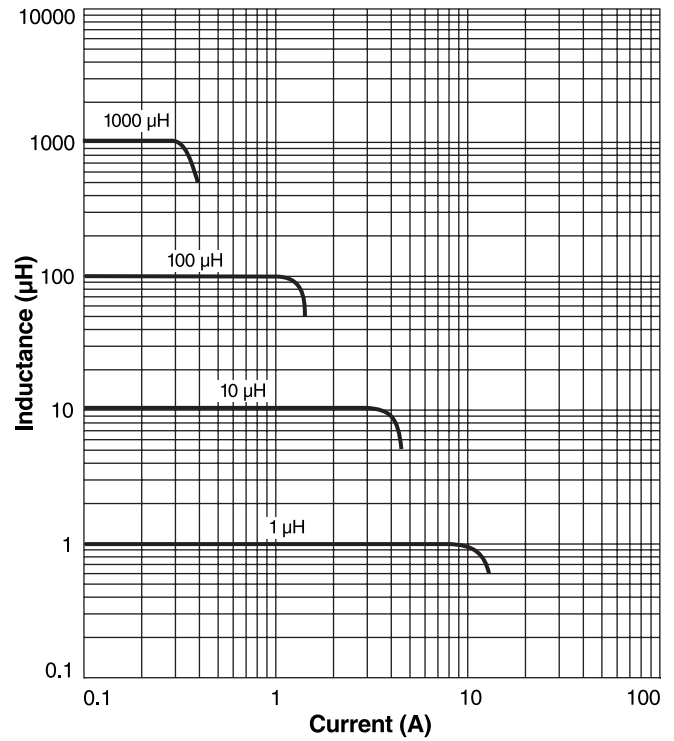


# SMT Power Inductors – DO3316 Series

## Typical L vs Frequency



## Typical L vs Current



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Please check our website for latest information.

Document 179-2 Revised 10/31/03

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