



# SMT Power Inductors – DO3316P Series



- High energy storage and very low resistance
- High inductance values are perfect for EL driver applications.

**Designer's Kit C378** contains 3 of each 20% part

**Core material** Ferrite

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

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

**Weight** 0.92 – 1.23 g

**Ambient temperature** –40°C to +85°C with I<sub>rms</sub> current, +85°C to +125°C with derated current

**Storage temperature** Component: –40°C to +125°C. 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** 1000 per 13" reel Plastic tape: 24 mm wide, 0.33 mm thick, 12 mm pocket spacing, 5.8 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

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 <sup>5</sup> (A)	Irms <sup>6</sup> (A)
DO3316P-102ML_	1.0	<b>20</b>	0.009	100	9.0	6.8
DO3316P-152ML_	1.5	<b>20</b>	0.010	90	8.0	6.4
DO3316P-222ML_	2.2	<b>20</b>	0.012	80	7.0	6.1
DO3316P-332ML_	3.3	<b>20</b>	0.015	65	6.4	5.4
DO3316P-472ML_	4.7	<b>20</b>	0.018	45	5.4	4.8
DO3316P-682_L_	6.8	<b>20</b> ,10	0.027	38	4.6	4.4
DO3316P-103_L_	10	<b>20</b> ,10	0.038	30	3.8	3.9
DO3316P-153_L_	15	<b>20</b> ,10	0.046	27	3.0	3.1
DO3316P-223_L_	22	<b>20</b> ,10	0.085	19	2.3	2.7
DO3316P-333_L_	33	<b>20</b> ,10	0.10	15	2.0	2.1
DO3316P-473_L_	47	<b>20</b> ,10	0.14	12	1.6	1.8
DO3316P-683_L_	68	<b>20</b> ,10	0.20	10	1.4	1.5
DO3316P-104_L_	100	<b>20</b> ,10	0.28	9	1.2	1.3
DO3316P-154_L_	150	<b>20</b> ,10	0.40	6	1.0	1.0
DO3316P-224_L_	220	<b>20</b> ,10	0.61	5	0.80	0.80
DO3316P-334_L_	330	<b>20</b> ,10	1.02	4.5	0.60	0.60
DO3316P-474_L_	470	<b>20</b> ,10	1.27	3.5	0.50	0.50
DO3316P-684_L_	680	<b>20</b> ,10	2.02	2.5	0.40	0.40
DO3316P-105_L_	1000	<b>20</b> ,10	3.00	2.0	0.30	0.30
DO3316P-155_L_	1500	<b>20</b> ,10	4.49	1.7	0.29	0.27
DO3316P-335_L_	3300	<b>20</b> ,10	8.97	1.1	0.19	0.17

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

DO3316P-105 M L D

**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 (1000 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. Tested at 100 kHz, 0.1 V<sub>rms</sub>, 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 10% (typ) 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 OR CD

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.

Please check our website for latest information.

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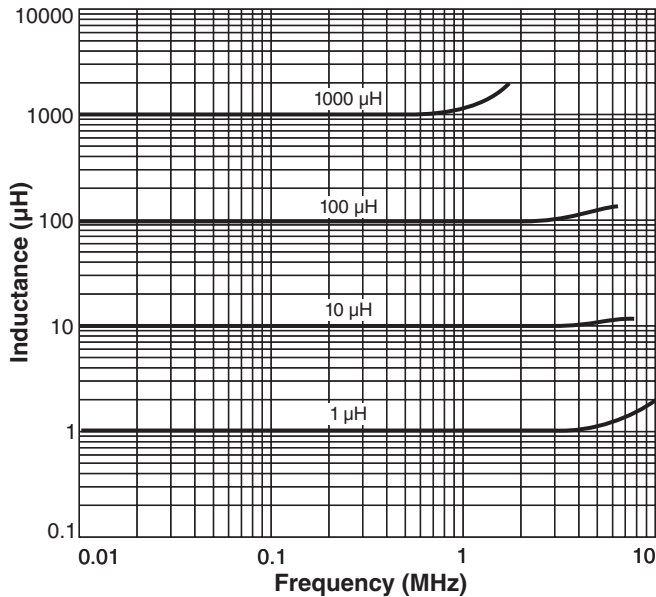
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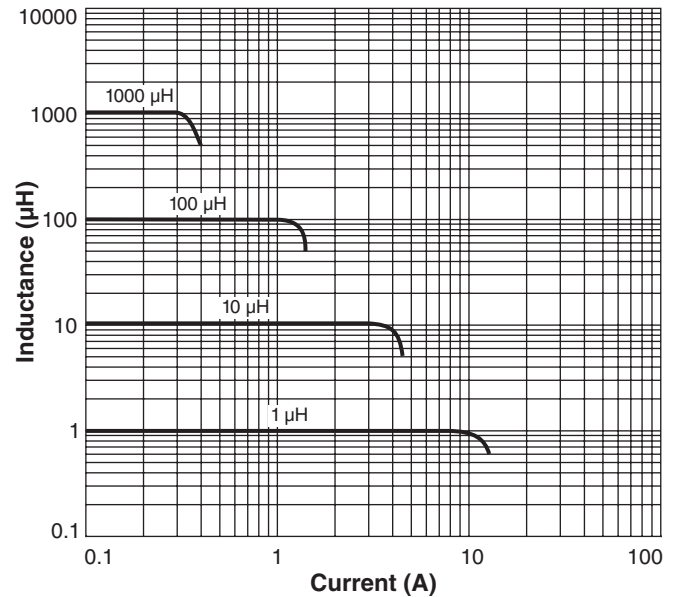


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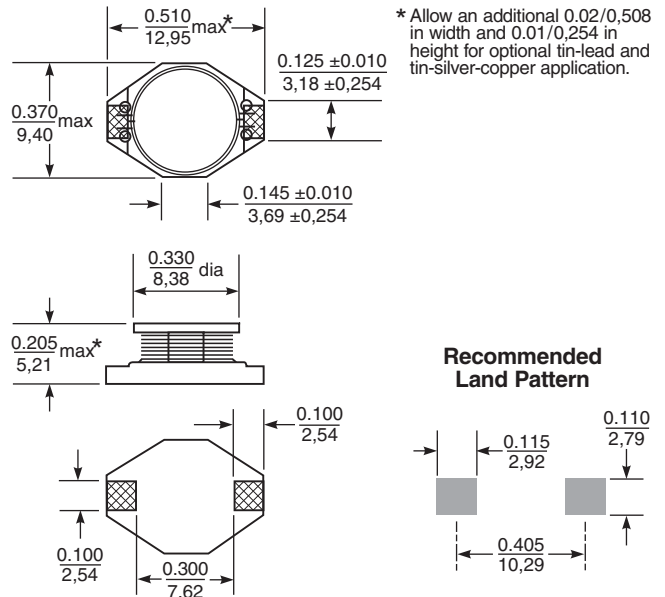
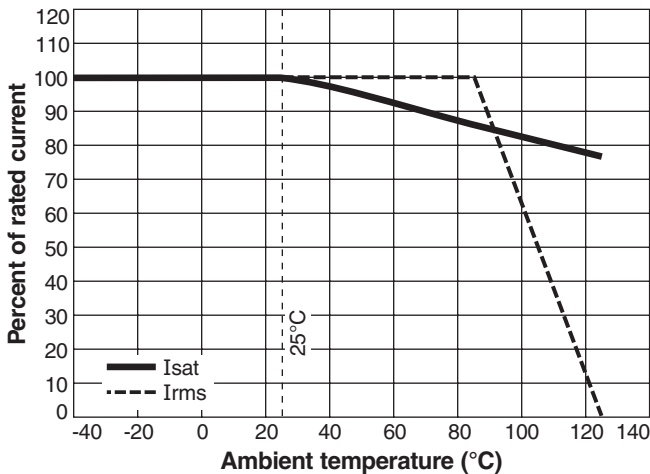
## Typical L vs Frequency



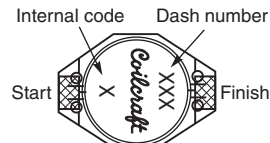
## Typical L vs Current



## 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.



Part marking since Feb. 2005. Parts manufactured prior to that date may have color dots. Visit [www.coilcraft.com/colrpowr.cfm](http://www.coilcraft.com/colrpowr.cfm) for details.

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



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