



# SMT Power Inductors – DO3308P



- Handle saturating currents up to 4.2 Amps
- Defense Supply Center CID: A-A-59738

**Designer's Kit C309** contains 3 each of all values

**Core material** Ferrite

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

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

**Weight** 594 – 640 mg

**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** 1000/13" reel Plastic tape: 24 mm wide, 0.4 mm thick, 12 mm pocket spacing, 3.7 mm pocket depth

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf

| Part number <sup>1</sup> | L ±20% <sup>2</sup><br>(µH) | Percent<br>tol <sup>3</sup> | DCR<br>max<br>(Ohms) | SRF<br>typ<br>(MHz) | Isat <sup>4</sup><br>(A) | Irms <sup>5</sup><br>(A) |
|--------------------------|-----------------------------|-----------------------------|----------------------|---------------------|--------------------------|--------------------------|
| DO3308P-472_L_           | 4.7                         | <b>20</b> ,10               | 0.036                | 50                  | 4.2                      | 3.2                      |
| DO3308P-682_L_           | 6.8                         | <b>20</b> ,10               | 0.060                | 47                  | 3.9                      | 2.6                      |
| DO3308P-103_L_           | 10                          | <b>20</b> ,10               | 0.085                | 37                  | 2.7                      | 2.3                      |
| DO3308P-153_L_           | 15                          | <b>20</b> ,10               | 0.12                 | 35                  | 2.3                      | 1.9                      |
| DO3308P-223_L_           | 22                          | <b>20</b> ,10               | 0.18                 | 26                  | 1.8                      | 1.5                      |
| DO3308P-333_L_           | 33                          | <b>20</b> ,10               | 0.25                 | 19                  | 1.6                      | 1.2                      |
| DO3308P-473_L_           | 47                          | <b>20</b> ,10               | 0.32                 | 14                  | 1.3                      | 1.0                      |
| DO3308P-683_L_           | 68                          | <b>20</b> ,10               | 0.54                 | 12                  | 1.1                      | 0.9                      |
| DO3308P-104_L_           | 100                         | <b>20</b> ,10               | 0.69                 | 11                  | 0.87                     | 0.73                     |
| DO3308P-154_L_           | 150                         | <b>20</b> ,10               | 0.94                 | 9.0                 | 0.74                     | 0.62                     |
| DO3308P-224_L_           | 220                         | <b>20</b> ,10               | 1.60                 | 6.0                 | 0.56                     | 0.51                     |
| DO3308P-334_L_           | 330                         | <b>20</b> ,10               | 2.15                 | 5.5                 | 0.50                     | 0.40                     |
| DO3308P-474_L_           | 470                         | <b>20</b> ,10               | 3.30                 | 4.5                 | 0.40                     | 0.33                     |
| DO3308P-684_L_           | 680                         | <b>20</b> ,10               | 4.40                 | 3.5                 | 0.33                     | 0.28                     |
| DO3308P-105_L_           | 1000                        | <b>20</b> ,10               | 7.00                 | 2.5                 | 0.29                     | 0.23                     |

1. Please specify **tolerance**, **termination** and **packaging** codes:

DO3308P-105MLD

**Tolerance:** M = 20% K = 10%

**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. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.

3. Tolerances in bold are stocked for immediate shipment

4. DC current at which inductance drops 10% (typ) from its value without current.

5. Current that causes a 40°C temperature rise from 25°C ambient.

6. Electrical specifications at 25°C.

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

**SPICE models** ON OUR WEB SITE



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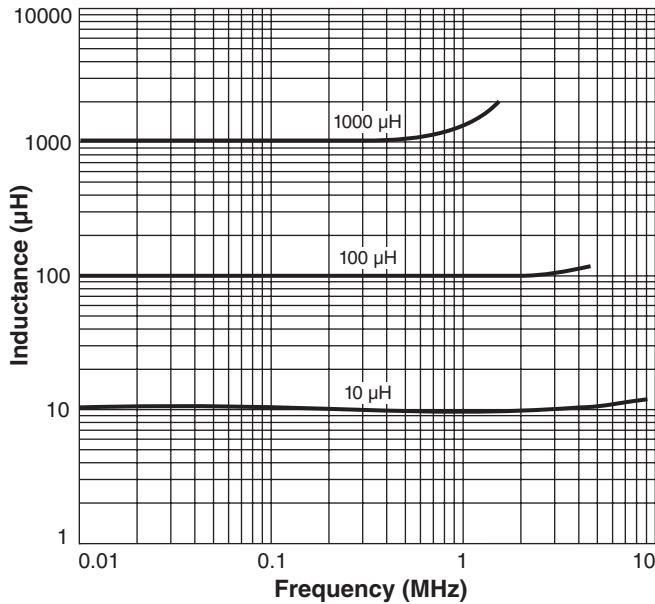
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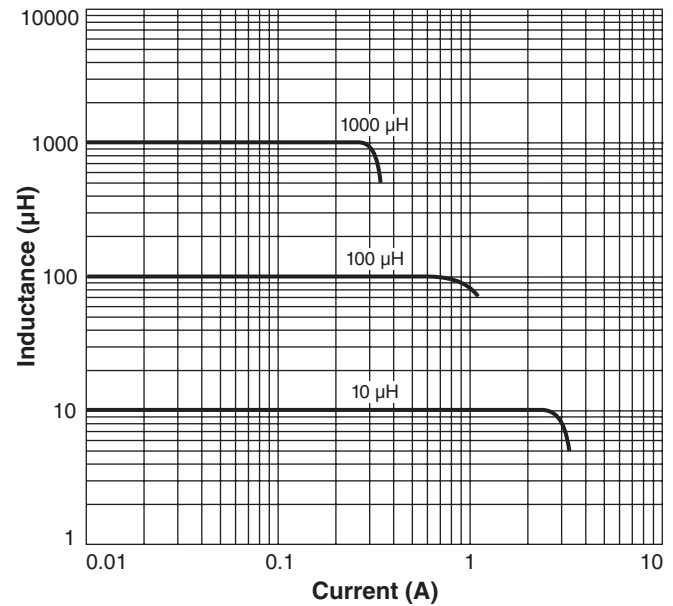


# SMT Power Inductors – DO3308P Series

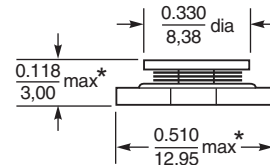
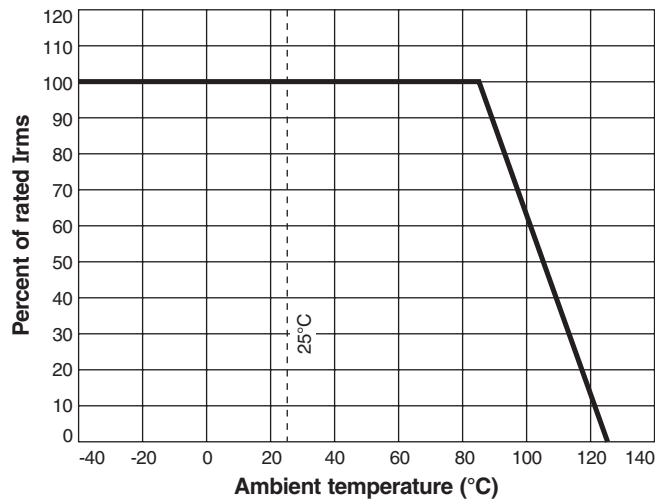
## Typical L vs Frequency



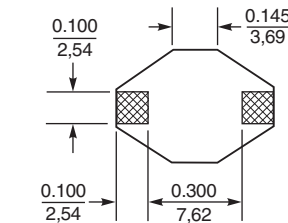
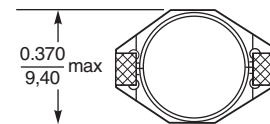
## Typical L vs Current



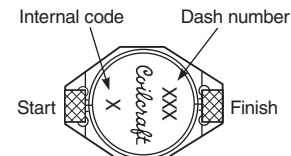
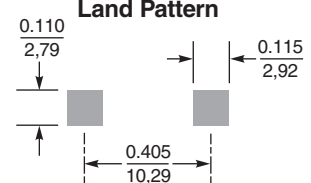
## Irms Derating



\* 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



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 color dot marking details.

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