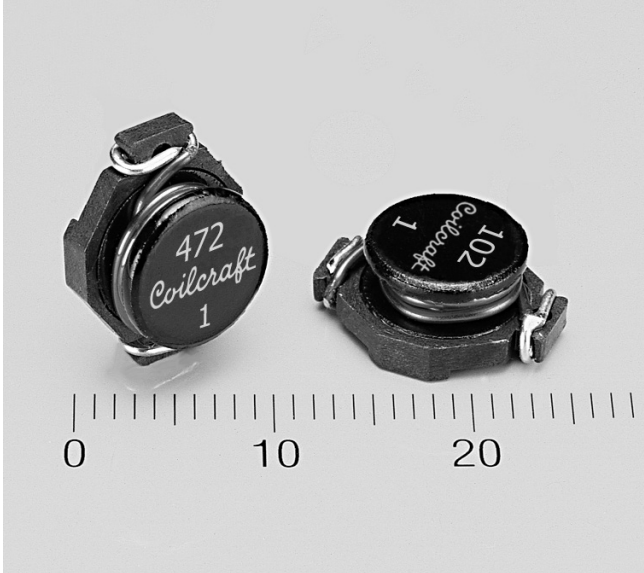


# High Temp Power Inductors DO3316T



- Designed for high temperature applications – over 125°C ambient
- AEC-Q200 Grade 1 qualified (–40°C to +125°C ambient)
- Soldered self-leaded construction for excellent solderability
- 10% tolerance for most values
- Low DCR and high current handling

**Designer's Kit C396** contains 3 of each 20% value

**Core material** Ferrite

**Core and winding loss** [Go to online calculator](#)

**Terminations** RoHS compliant tin-silver-copper over copper. Other terminations available at additional cost.

**Weight** 0.95 – 1.25 g

**Ambient temperature** –40°C to +125°C with (40°C rise) Irms current.

**Maximum part temperature** +165°C (ambient + temp rise). [Derating](#).

**Storage temperature** Component: –40°C to +165°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** 750/13" reel Plastic tape: 24 mm wide, 0.35 mm thick, 12 mm pocket spacing, 6.4 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

| Part number <sup>1</sup> | L <sup>2</sup><br>(μH) | %<br>tol <sup>3</sup> | DCR<br>max<br>(Ohms) | SRF <sup>4</sup><br>typ<br>(MHz) | Isat <sup>5</sup><br>(A) | Irms <sup>6</sup><br>(A) |
|--------------------------|------------------------|-----------------------|----------------------|----------------------------------|--------------------------|--------------------------|
| DO3316T-331ML_           | 0.33                   | <b>20</b>             | 0.002                | 200                              | 20                       | 16                       |
| DO3316T-681ML_           | 0.68                   | <b>20</b>             | 0.005                | 200                              | 13                       | 12                       |
| DO3316T-102ML_           | 1.0                    | <b>20</b>             | 0.006                | 100                              | 11                       | 10                       |
| DO3316T-152ML_           | 1.5                    | <b>20</b>             | 0.008                | 90                               | 9.0                      | 9.0                      |
| DO3316T-222_L_           | 2.2                    | <b>20,10</b>          | 0.011                | 90                               | 7.8                      | 7.4                      |
| DO3316T-272_L_           | 2.7                    | <b>20,10</b>          | 0.012                | 65                               | 7.0                      | 6.6                      |
| DO3316T-332_L_           | 3.3                    | <b>20,10</b>          | 0.014                | 60                               | 6.4                      | 5.9                      |
| DO3316T-392_L_           | 3.9                    | <b>20,10</b>          | 0.015                | 50                               | 5.9                      | 5.3                      |
| DO3316T-472_L_           | 4.7                    | <b>20,10</b>          | 0.018                | 50                               | 5.4                      | 4.8                      |
| DO3316T-562_L_           | 5.6                    | <b>20,10</b>          | 0.021                | 45                               | 4.7                      | 4.65                     |
| DO3316T-682_L_           | 6.8                    | <b>20,10</b>          | 0.024                | 43                               | 4.4                      | 4.40                     |
| DO3316T-822_L_           | 8.2                    | <b>20,10</b>          | 0.032                | 34                               | 4.0                      | 4.15                     |
| DO3316T-103_L_           | 10                     | <b>20,10</b>          | 0.034                | 31                               | 3.9                      | 3.90                     |
| DO3316T-123_L_           | 12                     | <b>20,10</b>          | 0.036                | 27                               | 3.4                      | 3.50                     |
| DO3316T-153_L_           | 15                     | <b>20,10</b>          | 0.045                | 25                               | 3.1                      | 3.10                     |
| DO3316T-183_L_           | 18                     | <b>20,10</b>          | 0.050                | 22                               | 2.8                      | 2.90                     |
| DO3316T-223_L_           | 22                     | <b>20,10</b>          | 0.070                | 18                               | 2.5                      | 2.70                     |
| DO3316T-273_L_           | 27                     | <b>20,10</b>          | 0.085                | 18                               | 2.3                      | 2.30                     |
| DO3316T-333_L_           | 33                     | <b>20,10</b>          | 0.100                | 17                               | 2.0                      | 2.10                     |
| DO3316T-393_L_           | 39                     | <b>20,10</b>          | 0.120                | 15                               | 1.8                      | 1.95                     |
| DO3316T-473_L_           | 47                     | <b>20,10</b>          | 0.150                | 14                               | 1.65                     | 1.80                     |
| DO3316T-563_L_           | 56                     | <b>20,10</b>          | 0.165                | 12                               | 1.45                     | 1.65                     |
| DO3316T-683_L_           | 68                     | <b>20,10</b>          | 0.220                | 11                               | 1.40                     | 1.50                     |
| DO3316T-823_L_           | 82                     | <b>20,10</b>          | 0.250                | 10                               | 1.30                     | 1.40                     |
| DO3316T-104_L_           | 100                    | <b>20,10</b>          | 0.280                | 9.0                              | 1.20                     | 1.30                     |
| DO3316T-124_L_           | 120                    | <b>20,10</b>          | 0.400                | 8.0                              | 1.00                     | 1.00                     |
| DO3316T-154_L_           | 150                    | <b>20,10</b>          | 0.460                | 6.0                              | 0.90                     | 0.90                     |
| DO3316T-184_L_           | 180                    | <b>20,10</b>          | 0.520                | 6.0                              | 0.85                     | 0.85                     |
| DO3316T-224_L_           | 220                    | <b>20,10</b>          | 0.700                | 5.0                              | 0.80                     | 0.80                     |
| DO3316T-274_L_           | 270                    | <b>20,10</b>          | 0.800                | 5.0                              | 0.75                     | 0.70                     |
| DO3316T-334_L_           | 330                    | <b>20,10</b>          | 1.07                 | 4.5                              | 0.60                     | 0.60                     |
| DO3316T-394_L_           | 390                    | <b>20,10</b>          | 1.14                 | 4.0                              | 0.62                     | 0.55                     |
| DO3316T-474_L_           | 470                    | <b>20,10</b>          | 1.27                 | 3.5                              | 0.50                     | 0.50                     |

- When ordering, specify **tolerance, termination and packaging** codes:

**DO3316T-474MLD**

**Tolerance:** **M** = 20%, **K** = 10% (Table shows stock tolerances in bold.)

**Termination:** **L** = RoHS compliant tin-silver-copper over copper.

Special order: **S** = non-RoHS tin-lead (63/37).

**Packaging:** **D** = 13" machine-ready reel. EIA-481 embossed plastic tape (750 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**B** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.
- Tolerances in bold are stocked for immediate shipment.
- SRF measured using Agilent/HP 8753D network analyzer.
- DC current at 25°C that causes an inductance drop of 10% (typ) from its value without current. [Click for temperature derating information](#).
- Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information](#).
- Electrical specifications at 25°C.

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



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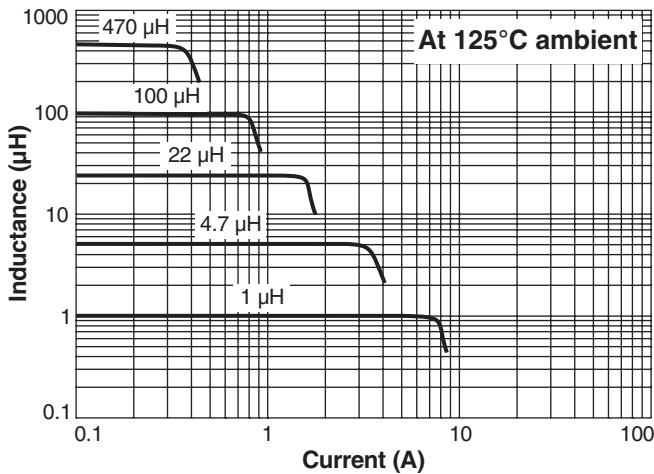
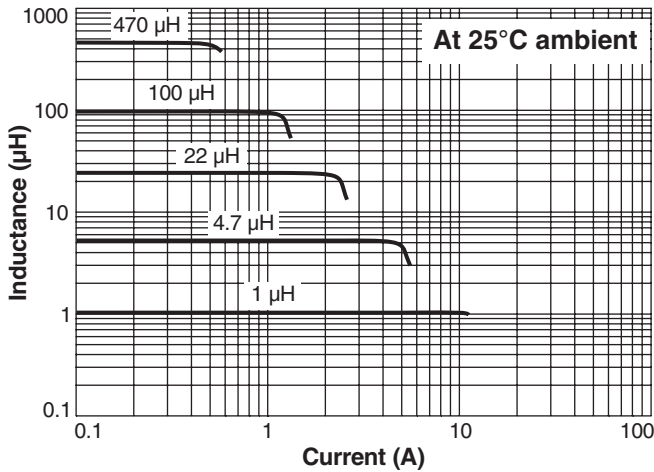
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

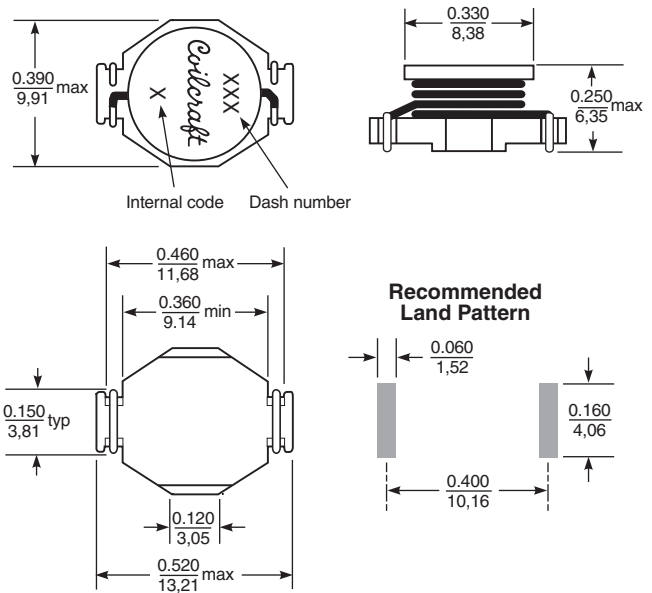
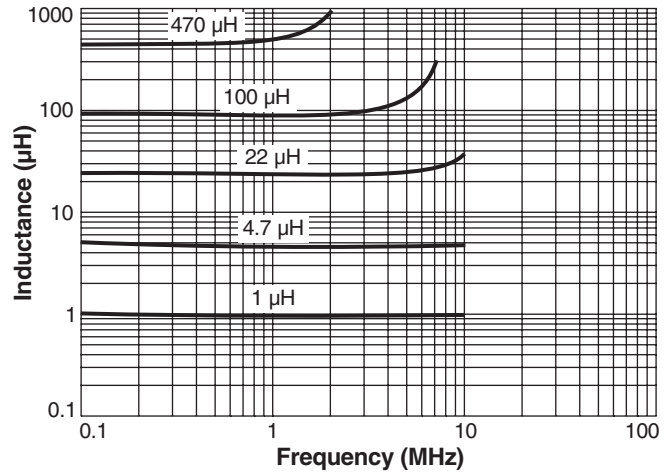
# HIGH TEMPERATURE

## SMT Power Inductors – DO3316T Series

### Typical L vs Current



### Typical L vs Frequency



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

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Coilcraft:

[DO3316T-183MLB](#) [DO3316T-153MLD](#) [DO3316T-822MLD](#) [DO3316T-273MLD](#) [DO3316T-823MLB](#) [DO3316T-223MLB](#) [DO3316T-682MLD](#) [DO3316T-823MLD](#) [DO3316T-183MLD](#) [DO3316T-104MLD](#) [DO3316T-392MLD](#) [DO3316T-103MLD](#) [DO3316T-184MLD](#) [DO3316T-102MLB](#) [DO3316T-152MLB](#) [DO3316T-822MLB](#) [DO3316T-332MLD](#) [DO3316T-334MLD](#) [DO3316T-222MLD](#) [DO3316T-124MLD](#) [DO3316T-184MLB](#) [DO3316T-124MLB](#) [DO3316T-224MLB](#) [DO3316T-272MLB](#) [DO3316T-472MLB](#) [DO3316T-474MLB](#) [DO3316T-222MLB](#) [DO3316T-683MLB](#) [DO3316T-683MLD](#) [DO3316T-394MLD](#) [DO3316T-331MLD](#) [DO3316T-102MLD](#) [DO3316T-223MLD](#) [DO3316T-393MLB](#) [DO3316T-393MLD](#) [DO3316T-682MLB](#) [DO3316T-103MLB](#) [DO3316T-153MLB](#) [DO3316T-154MLB](#) [DO3316T-274MLB](#) [DO3316T-681MLD](#) [DO3316T-331MLB](#) [DO3316T-332MLB](#) [DO3316T-392MLB](#) [DO3316T-152MLD](#) [DO3316T-274MLD](#) [DO3316T-333MLD](#) [DO3316T-562MLB](#) [DO3316T-123MLB](#) [DO3316T-562MLD](#) [DO3316T-473MLD](#) [DO3316T-224MLD](#) [DO3316T-104MLB](#) [DO3316T-272MLD](#) [DO3316T-472MLD](#) [DO3316T-473MLB](#) [DO3316T-154MLD](#) [DO3316T-474MLD](#) [DO3316T-681MLB](#) [DO3316T-333MLB](#) [DO3316T-563MLB](#) [DO3316T-334MLB](#) [DO3316T-563MLD](#) [DO3316T-394MLB](#) [DO3316T-123MLD](#) [DO3316T-273MLB](#)