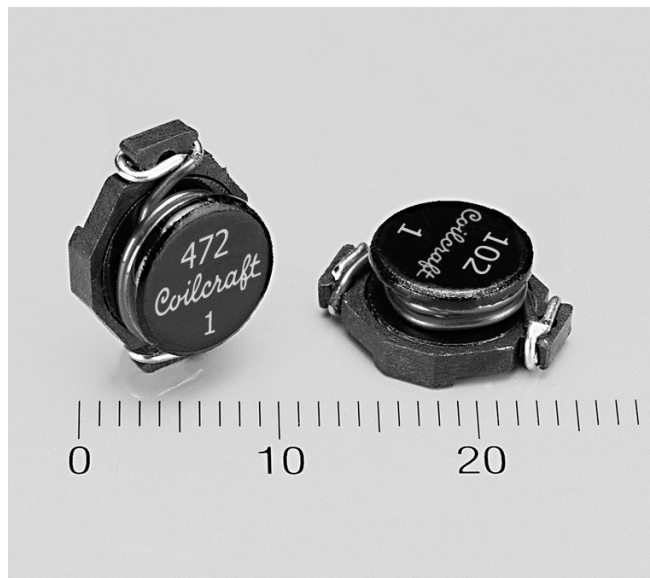




HIGH TEMPERATURE

SMT Power Inductors – DO3316T



- Designed for high temperature applications – over 125°C ambient
- AEC-Q200 qualified; ideal for many automotive applications
- 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 See www.coilcraft.com/coreloss

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 +155°C. See derating curve for Irms vs Temperature.

Storage temperature Component: –40°C to +155°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 Only pure water or alcohol recommended

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

1. 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 over copper.

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 (750 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 **C** instead.

- 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 which the inductance drops 10% (typ) from its value without current.
- Current that causes a 40°C temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

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



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore +65-6484 8412 sales@coilcraft.com.sg

Document 365-1 Revised 09/25/12

© Coilcraft Inc. 2012

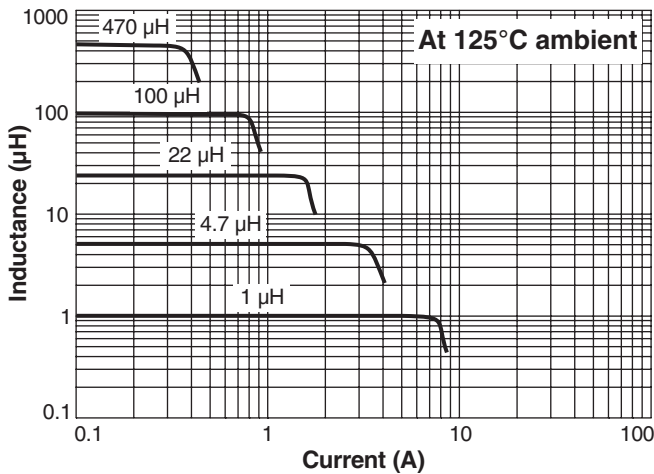
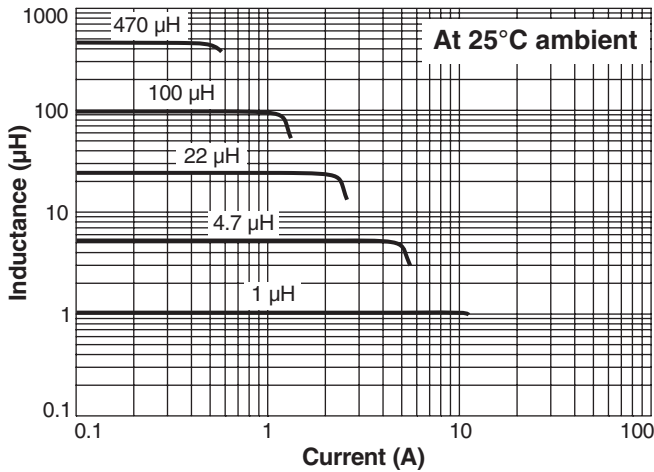
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check out web site for latest information.



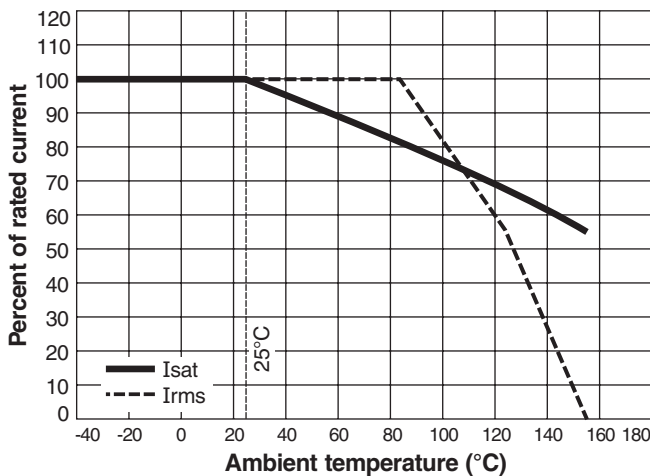
HIGH TEMPERATURE

SMT Power Inductors – DO3316T Series

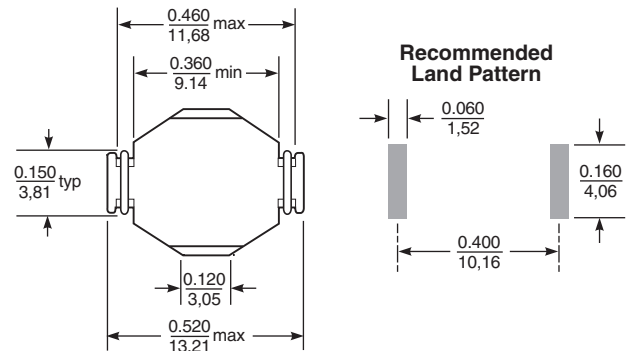
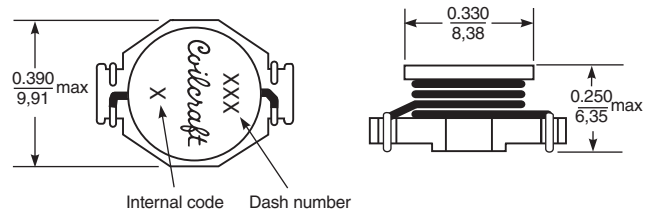
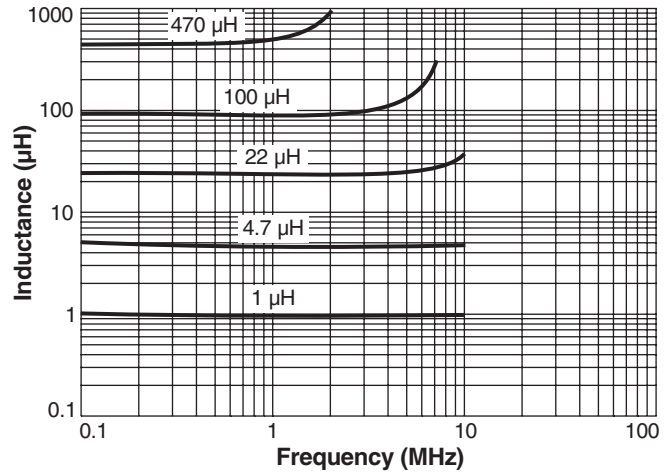
Typical L vs Current



Current Derating



Typical L vs Frequency



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