



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

Terminations RoHS compliant electroplated gold (<50 μ m) 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 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 per 13" reel Plastic tape: 24 mm wide, 0.33 mm thick, 12 mm pocket spacing, 5.8 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

Part number ¹	L ² (μ H)	Percent tol ³	DCR max (Ohms)	SRF typ ⁴ (MHz)	Isat ⁵ (A)	Irms ⁶ (A)
DO3316P-102ML_	1.0	20	0.009	100	9.0	6.8
DO3316P-152ML_	1.5	20	0.010	90	8.0	6.4
DO3316P-222_L_	2.2	20 ,10	0.012	80	7.0	6.1
DO3316P-332_L_	3.3	20 ,10	0.015	65	6.4	5.4
DO3316P-472_L_	4.7	20 ,10	0.018	45	5.4	4.8
DO3316P-682_L_	6.8	20 ,10	0.027	38	4.6	4.4
DO3316P-103_L_	10	20 ,10	0.038	30	3.8	3.9
DO3316P-153_L_	15	20 ,10	0.046	27	3.0	3.1
DO3316P-223_L_	22	20 ,10	0.085	19	2.3	2.7
DO3316P-333_L_	33	20 ,10	0.10	15	2.0	2.1
DO3316P-473_L_	47	20 ,10	0.14	12	1.6	1.8
DO3316P-683_L_	68	20 ,10	0.20	10	1.4	1.5
DO3316P-104_L_	100	20 ,10	0.28	9	1.2	1.3
DO3316P-154_L_	150	20 ,10	0.40	6	1.0	1.0
DO3316P-224_L_	220	20 ,10	0.61	5	0.80	0.80
DO3316P-334_L_	330	20 ,10	1.02	4.5	0.60	0.60
DO3316P-474_L_	470	20 ,10	1.27	3.5	0.50	0.50
DO3316P-684_L_	680	20 ,10	2.02	2.5	0.40	0.40
DO3316P-105_L_	1000	20 ,10	3.00	2.0	0.30	0.30
DO3316P-155_L_	1500	20 ,10	4.49	1.7	0.29	0.27
DO3316P-335_L_	3300	20 ,10	8.97	1.1	0.19	0.17

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

DO3316P-105MLD

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 Vrms, 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.



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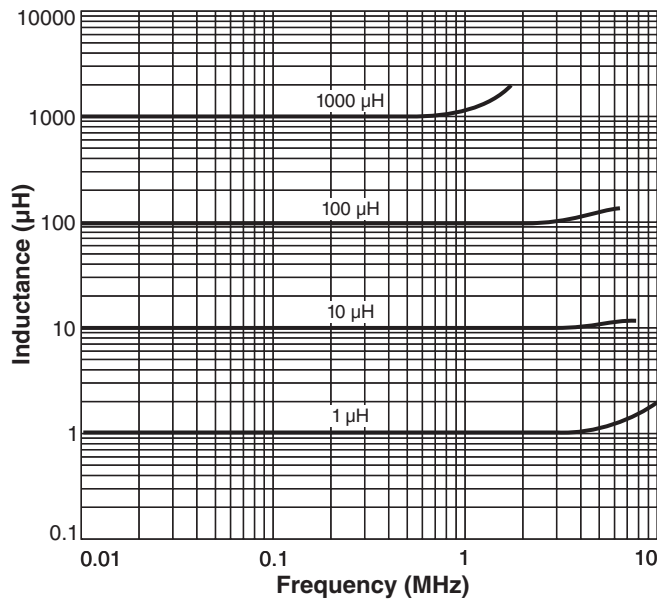
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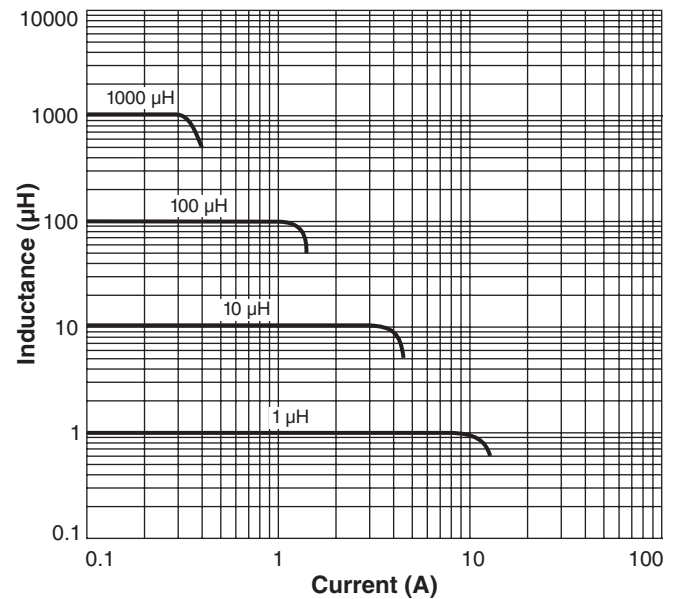


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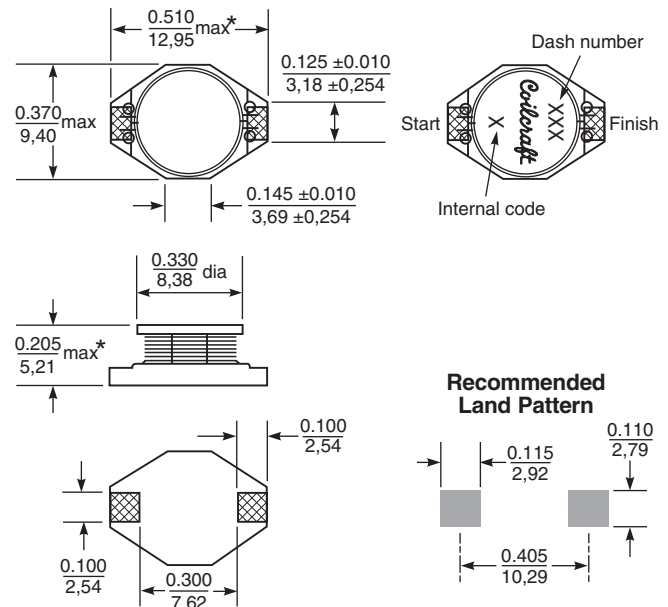
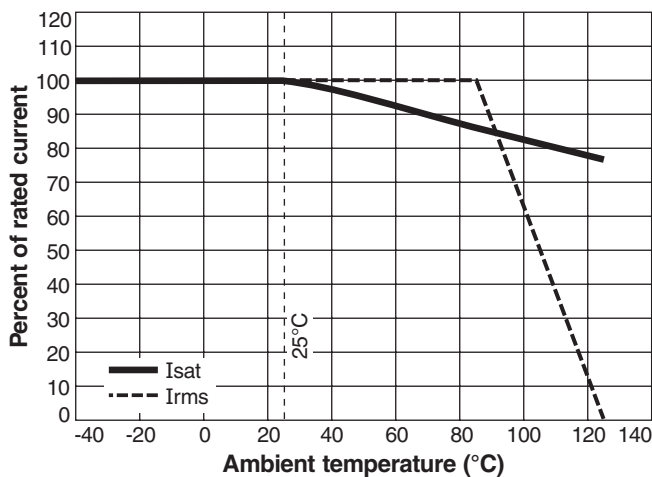
Typical L vs Frequency



Typical L vs Current



Current Derating



* Allow an additional 0.01/0.254 in length and 0.005/0.127 in height for optional tin-lead and tin-silver-copper application.

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