SMT Power Inductors - DO3316H Series

RoHS COMPLIANT

AEC Q200 +85°C

- Soldered self-leaded construction for excellent solderability.
- Very low DCR values and excellent current handling

Designer's Kit C326 contains 3 of each part
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 +85°C with Irms current
Maximum part temperature +125°C (ambient + temp rise). Derating.
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 750 per 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[1]	L^2 (µH)	% tol[3]	DCR max (Ohms)	SRF[4] typ (MHz)	Isat[5] (A)	Irms[6] (A)
DO3316H-121ML_	0.12	**20**	0.0015	200	28	17
DO3316H-331ML_	0.33	**20**	0.002	200	20	16
DO3316H-681ML_	0.68	**20**	0.005	200	13	12
DO3316H-102ML_	1.0	**20**	0.006	100	11	10
DO3316H-152ML_	1.5	**20**	0.008	90	9.0	9.0
DO3316H-222_L_	2.2	**20**,10	0.011	80	7.8	7.4
DO3316H-272_L_	2.7	**20**,10	0.012	65	7.0	6.6
DO3316H-332_L_	3.3	**20**,10	0.014	60	6.4	5.9
DO3316H-392_L_	3.9	**20**,10	0.015	50	5.9	5.3
DO3316H-472_L_	4.7	**20**,10	0.018	45	5.4	4.8

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

   DO3316H-472MLD

   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).
   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.
2. Inductance 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 measured using Agilent/HP 8753D network analyzer.
5. DC current at 25°C that causes an inductance drop of 10% (typ) from its value without current. Click for temperature derating information.
6. 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
7. Electrical specifications at 25°C.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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Typical L vs Frequency

Typical L vs Current

$\dfrac{0.390}{9,91}$ max

$\dfrac{0.330}{8,38}$

$\dfrac{0.250}{6,35}$ max

$\dfrac{0.460}{11,68}$ max

$\dfrac{0.360}{9.14}$ min

$\dfrac{0.150}{3,81}$ typ

$\dfrac{0.120}{3,05}$

$\dfrac{0.520}{13,21}$ max

Recommended Land Pattern

$\dfrac{0.060}{1,52}$

$\dfrac{0.160}{4,06}$

$\dfrac{0.400}{10,16}$

Internal code   Dash number
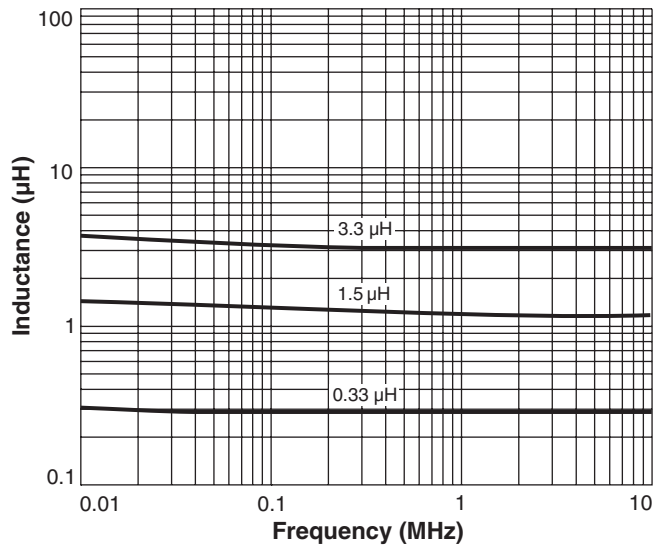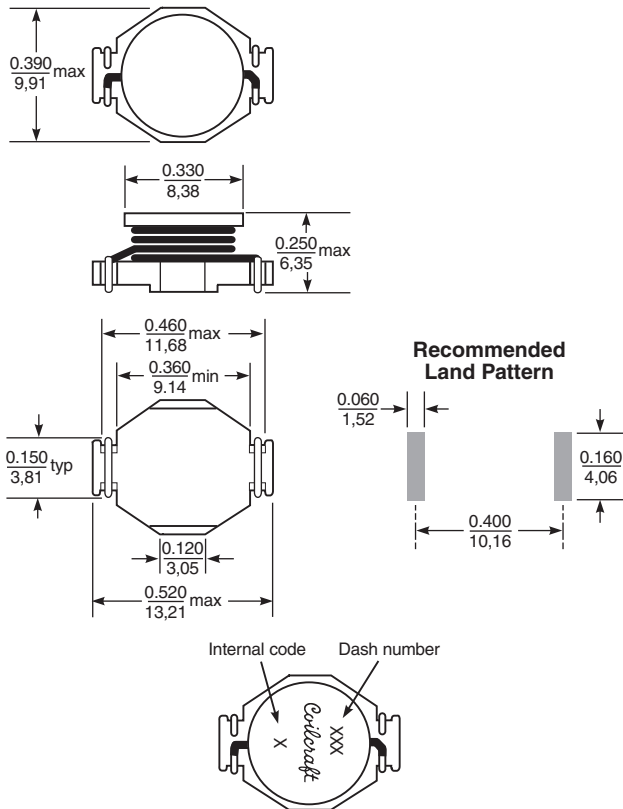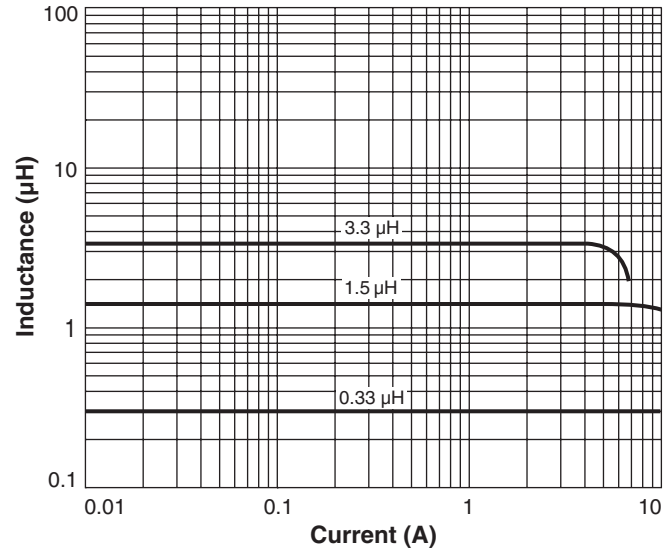
Coilcraft
X   XXX

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