



# SMT Power Inductors – DO1608C Series



- High energy storage and very low resistance
- Defense Supply Center CID A-A-59742

**Designer's Kit C377** contains 3 of each part

**Core material** Ferrite

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

**Terminations** RoHS compliant gold over nickel over moly-manganese. Other terminations available at additional cost.

**Weight** 28 – 164 mg

**Ambient temperature** –40°C to +85°C with I<sub>rms</sub> current, +85°C to +100°C with derated current

**Storage temperature** Component: –40°C to +100°C. 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** 750/7" reel; 2500/13" reel Plastic tape: 12 mm wide, 0.28 mm thick, 4 mm pocket spacing, 3 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

Part number <sup>1</sup>	L ±20% <sup>2</sup> (µH)	DCR max (Ohms)	SRF typ (MHz)	Isat <sup>3</sup> (A)	I <sub>rms</sub> (A) <sup>4</sup>	
					20°C rise	40°C rise
DO1608C-102ML_	1.0	0.05	130	2.9	1.90	2.70
DO1608C-152ML_	1.5	0.06	115	2.6	1.90	2.65
DO1608C-222ML_	2.2	0.07	100	2.3	1.85	2.55
DO1608C-272ML_	2.7	0.08	75	2.1	1.80	2.45
DO1608C-332ML_	3.3	0.08	70	2.0	1.60	2.20
DO1608C-472ML_	4.7	0.09	50	1.5	1.40	1.90
DO1608C-682ML_	6.8	0.13	45	1.2	1.20	1.60
DO1608C-822ML_	8.2	0.16	40	1.15	1.10	1.55
DO1608C-103ML_	10	0.16	35	1.10	1.10	1.50
DO1608C-153ML_	15	0.23	30	0.90	0.90	1.25
DO1608C-223ML_	22	0.37	20	0.70	0.75	0.95
DO1608C-333ML_	33	0.51	15	0.58	0.60	0.80
DO1608C-473ML_	47	0.64	14	0.50	0.52	0.70
DO1608C-683ML_	68	0.86	11	0.40	0.44	0.60
DO1608C-104ML_	100	1.27	9.0	0.31	0.37	0.50
DO1608C-154ML_	150	2.00	6.0	0.27	0.28	0.39
DO1608C-224ML_	220	3.11	5.5	0.22	0.23	0.31
DO1608C-334ML_	330	3.80	5.0	0.18	0.22	0.30
DO1608C-474ML_	470	5.06	4.0	0.16	0.20	0.26
DO1608C-684ML_	680	9.20	3.0	0.14	0.14	0.19
DO1608C-105ML_	1000	13.8	2.0	0.10	0.11	0.15

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

DO1608C-105M L C

**Termination:** L = RoHS compliant gold over nickel over moly-manganese.

Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

**Packaging:** C = 7" 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.

D = 13" machine-ready reel. EIA-481 embossed plastic tape (2500 parts per full reel).

2. Tested at 100 kHz, 0.1 V<sub>rms</sub>, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.

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

4. Current that causes the specified temperature rise from 25°C ambient.

5. Electrical specifications at 25°C.

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

**SPICE models** ON OUR WEB SITE OR CD

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.

Please check our website for latest information.

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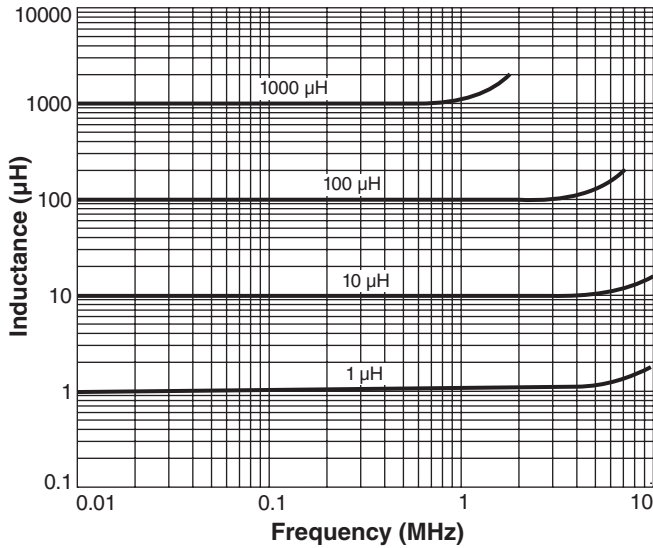
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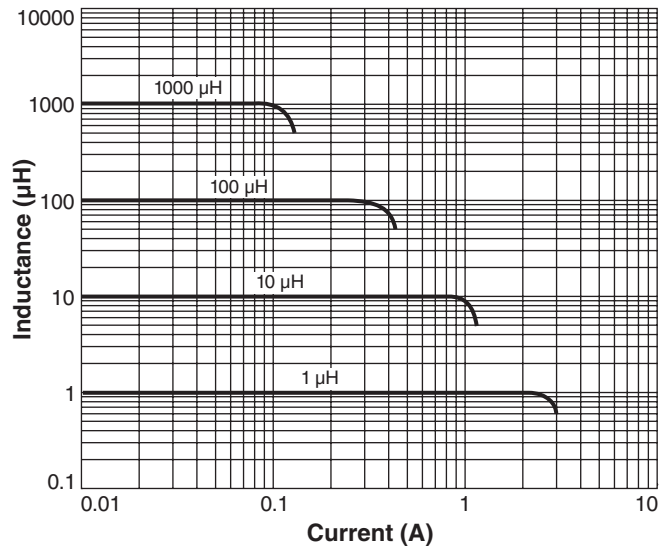


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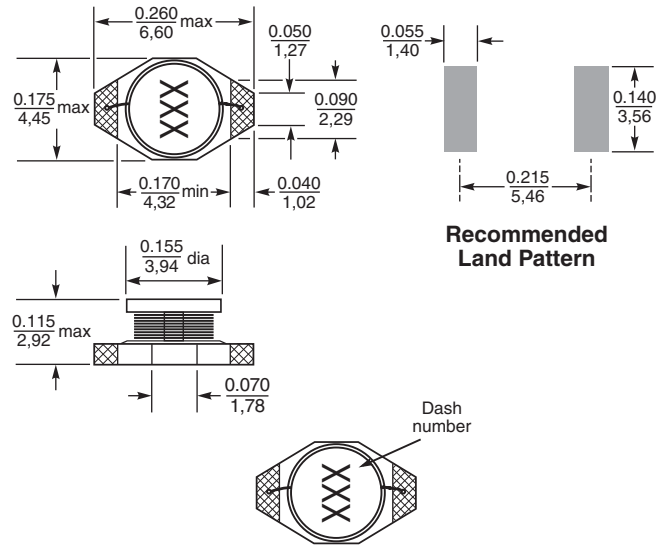
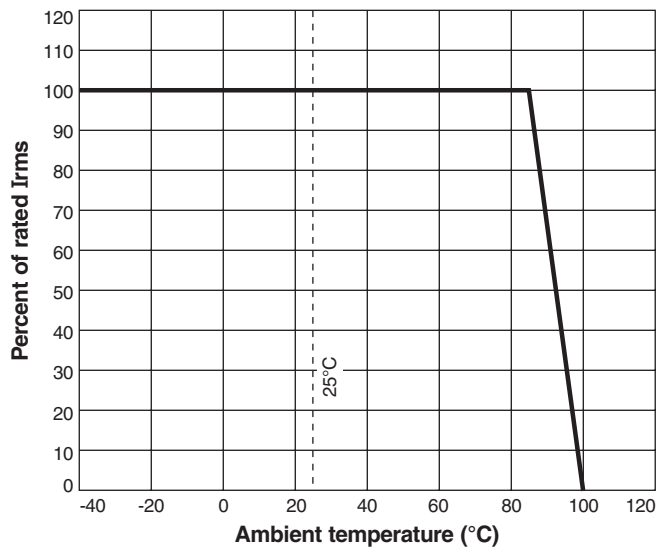
## Typical L vs Frequency



## Typical L vs Current



## Irms Derating



**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 details.

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



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