



SMT Power Inductors – DT1608C Series



The Coilcraft DT1608 Series is magnetically shielded and the materials used provide natural heat sinking. This allows these parts to be used at relatively high currents. Even at 150% of rated current, the temperature rise is less than 15°C.

Because of their “swinging” inductance vs current characteristics, the DT1608 Series can be used as ultra high L inductors at zero or low current.

For new designs, consider the LPS4018 as an alternative to this series. The LPS4018 series is more cost effective, features a smaller footprint, lower profile and better current handling. We will continue to manufacture and support the DT1608C indefinitely.

SPICE models ON OUR WEB SITE OR CD

Specifications				Operating Parameters			
Part number ¹	Inductance ² ±20% (µH)	DCR max (Ohms)	SRF typ (MHz)	Inductance rating ³ (µH)	Current rating ⁴ (A)	Energy storage max (µJoules)	Switching frequency max
DT1608C-102ML_	1.0	0.065	180	0.60	2.0	1.8	1 MHz
DT1608C-152ML_	1.5	0.070	120	0.80	1.9	1.8	1 MHz
DT1608C-222ML_	2.2	0.075	100	0.90	1.5	1.8	1 MHz
DT1608C-332ML_	3.3	0.080	70	1.5	1.2	1.4	1 MHz
DT1608C-472ML_	4.7	0.085	60	2.0	1.2	1.6	1 MHz
DT1608C-682ML_	6.8	0.090	50	3.0	1.0	1.9	1 MHz
DT1608C-103ML_	10	0.125	45	5.0	0.7	1.2	1 MHz
DT1608C-153ML_	15	0.135	35	6.0	0.6	1.1	1 MHz
DT1608C-223ML_	22	0.160	25	10	0.5	1.2	1 MHz
DT1608C-333ML_	33	0.275	20	12	0.45	1.5	1 MHz
DT1608C-473ML_	47	0.300	17	20	0.34	1.3	1 MHz
DT1608C-683ML_	68	0.575	14	30	0.29	1.4	1 MHz
DT1608C-104ML_	100	1.10	12	40	0.24	1.5	1 MHz
DT1608C-154ML_	150	1.40	7.0	60	0.20	1.4	500 kHz
DT1608C-224ML_	220	2.25	7.0	90	0.17	1.6	500 kHz
DT1608C-334ML_	330	2.90	6.0	100	0.16	1.4	500 kHz
DT1608C-474ML_	470	3.60	4.0	150	0.14	1.5	500 kHz
DT1608C-684ML_	680	4.55	3.5	200	0.12	1.4	500 kHz
DT1608C-105ML_	1000	8.10	2.5	400	0.08	1.4	500 kHz

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

DT1608C-106MLC

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. Inductance tested at 0.1 Vrms, 100 kHz, 0 Adc.

3. Measured at the rated current. Refer to L vs Current curves for details.

4. Average maximum allowable current. DT Series inductors are designed for current spikes as high as twice the current rating.

5. **Ambient temperature range:** -40°C to +85°C

6. **Storage temperature range:** Component: -40°C to +85°C
Packaging: -55°C to +80°C

7. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds (+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room temperature between.

8. Electrical specifications at 25°C.

See Color Coding section for part marking information.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Coilcraft®

Specifications subject to change without notice.

Please check our website for latest information.

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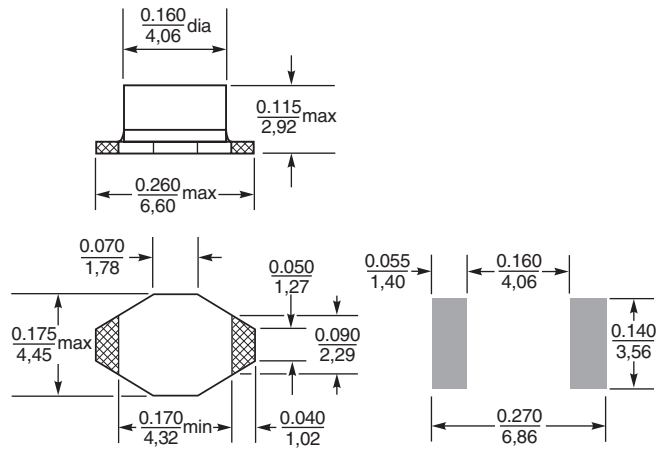
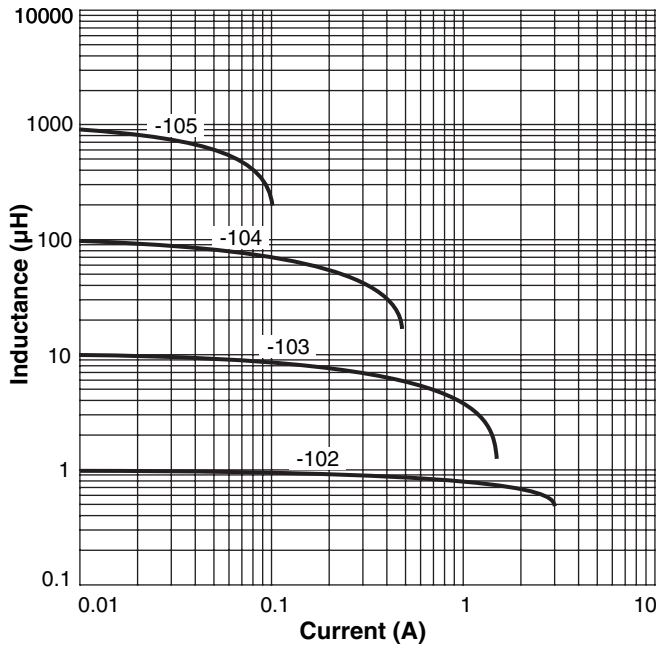
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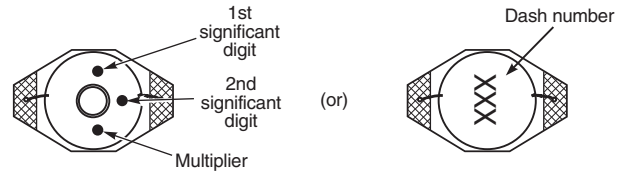
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Typical L vs Current

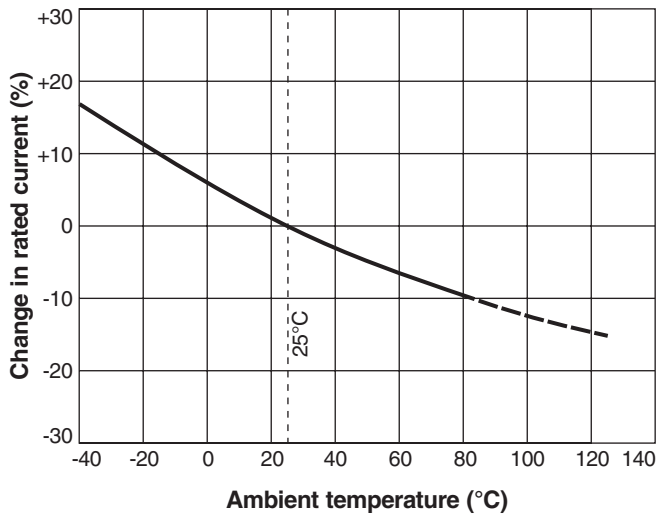


Recommended Land Pattern

Part Marking



Isat Derating



- Weight:** 136 – 157 mg
 - Terminations:** Gold over nickel over moly-manganese. Other terminations available at additional cost.
 - Tape and reel:** 750/7" reel; 2500/13" reel 12 mm tape width
- For packaging data see Tape and Reel Specifications section.



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