



# Shielded Power Inductors – DT1608C



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

Specifications				Operating Parameters			
Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR max (Ohms)	SRF typ (MHz)	Inductance rating <sup>3</sup> (µH)	Current rating <sup>4</sup> (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.



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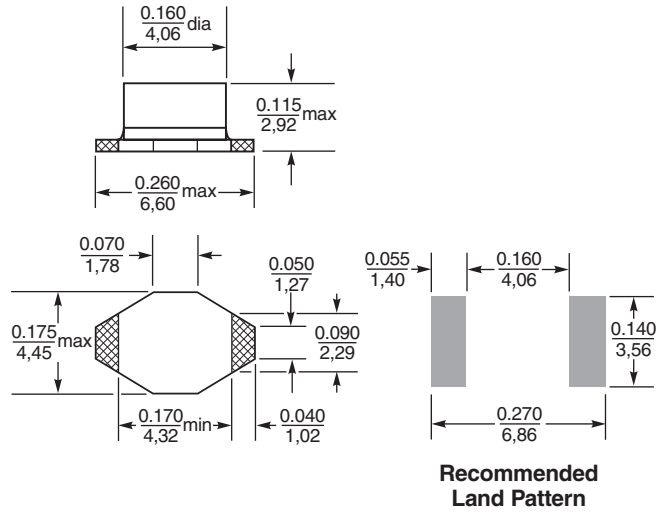
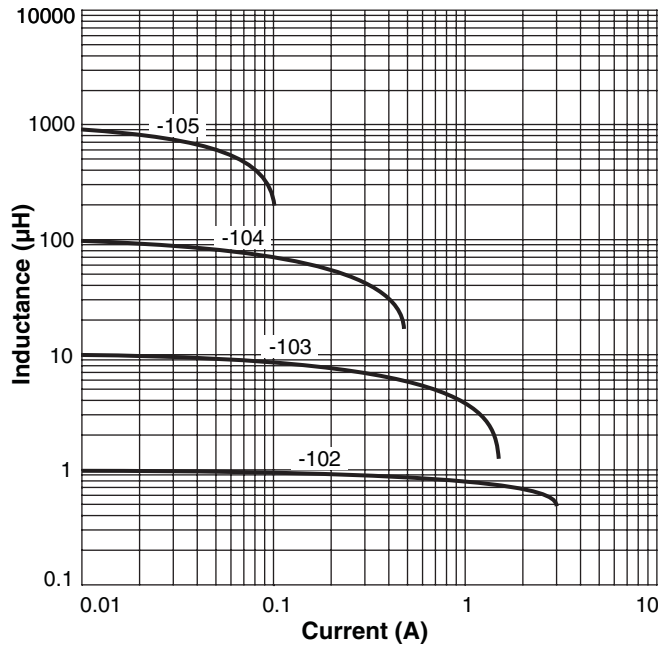
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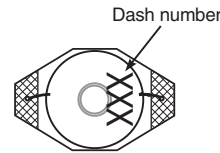


# Shielded Power Inductors – DT1608C Series

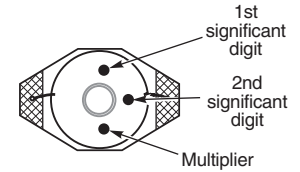
## Typical L vs Current



### Part Marking

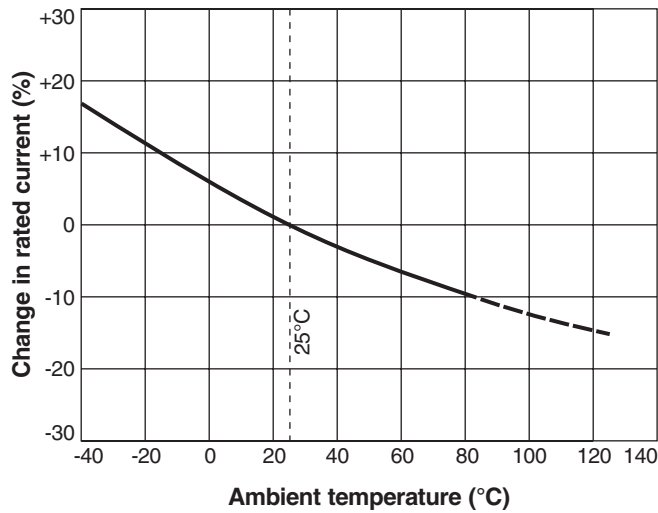


Part marking since Feb. 2005.  
Parts manufactured prior to that date may have color dots.



Part marking prior to Feb. 2005  
Visit [www.coilcraft.com/colrpwr.cfm](http://www.coilcraft.com/colrpwr.cfm) for color dot marking details.

## 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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