



# SMT Power Inductors—DT1608 Series



The Coilcraft DT1608 Series represents the ultimate in cost-effective, miniature power inductors. The DT 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 free evaluation samples or to order, contact Coilcraft or visit [www.coilcraft.com](http://www.coilcraft.com).

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

| Specifications           |                                          |                   |                  | Operating Parameters                            |                                       |                                          |                               |
|--------------------------|------------------------------------------|-------------------|------------------|-------------------------------------------------|---------------------------------------|------------------------------------------|-------------------------------|
| Part number <sup>1</sup> | Inductance<br>$\pm 20\%^2$<br>( $\mu$ H) | DCR max<br>(Ohms) | SRF typ<br>(MHz) | Inductance<br>rating <sup>3</sup><br>( $\mu$ H) | Current<br>rating <sup>4</sup><br>(A) | Energy<br>storage max<br>( $\mu$ Joules) | Switching<br>frequency<br>max |
| DT1608C-102              | 1.0                                      | 0.065             | 180              | 0.60                                            | 2.0                                   | 1.8                                      | 1 MHz                         |
| DT1608C-152              | 1.5                                      | 0.070             | 120              | 0.80                                            | 1.9                                   | 1.8                                      | 1 MHz                         |
| DT1608C-222              | 2.2                                      | 0.075             | 100              | 0.90                                            | 1.5                                   | 1.8                                      | 1 MHz                         |
| DT1608C-332              | 3.3                                      | 0.080             | 70               | 1.5                                             | 1.2                                   | 1.4                                      | 1 MHz                         |
| DT1608C-472              | 4.7                                      | 0.085             | 60               | 2.0                                             | 1.2                                   | 1.6                                      | 1 MHz                         |
| DT1608C-682              | 6.8                                      | 0.090             | 50               | 3.0                                             | 1.0                                   | 1.9                                      | 1 MHz                         |
| DT1608C-103              | 10                                       | 0.125             | 45               | 5.0                                             | 0.7                                   | 1.2                                      | 1 MHz                         |
| DT1608C-153              | 15                                       | 0.135             | 35               | 6.0                                             | 0.6                                   | 1.1                                      | 1 MHz                         |
| DT1608C-223              | 22                                       | 0.160             | 25               | 10                                              | 0.5                                   | 1.2                                      | 1 MHz                         |
| DT1608C-333              | 33                                       | 0.275             | 20               | 12                                              | 0.45                                  | 1.5                                      | 1 MHz                         |
| DT1608C-473              | 47                                       | 0.300             | 17               | 20                                              | 0.34                                  | 1.3                                      | 1 MHz                         |
| DT1608C-683              | 68                                       | 0.575             | 14               | 30                                              | 0.29                                  | 1.4                                      | 1 MHz                         |
| DT1608C-104              | 100                                      | 1.10              | 2                | 40                                              | 0.24                                  | 1.5                                      | 1 MHz                         |
| DT1608C-154              | 150                                      | 1.40              | 7                | 60                                              | 0.20                                  | 1.4                                      | 500 kHz                       |
| DT1608C-224              | 220                                      | 2.25              | 7                | 90                                              | 0.17                                  | 1.6                                      | 500 kHz                       |
| DT1608C-334              | 330                                      | 2.90              | 6                | 100                                             | 0.16                                  | 1.4                                      | 500 kHz                       |
| DT1608C-474              | 470                                      | 3.60              | 4                | 150                                             | 0.14                                  | 1.5                                      | 500 kHz                       |
| DT1608C-684              | 680                                      | 4.55              | 3.5              | 200                                             | 0.12                                  | 1.4                                      | 500 kHz                       |
| DT1608C-105              | 1000                                     | 8.10              | 2.5              | 400                                             | 0.08                                  | 1.4                                      | 500 kHz                       |

1. Part number on reel label will have a suffix to indicate packaging: C = machine ready 7" reel, B = partial reel, D = machine-ready 13" 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 more detail.

4. Average maximum allowable current. DT Series inductors are designed for current spikes as high as 2 x the current rating.

5. Operating temperature range -40°C to +85°C.

6. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

See Color Coding section for part marking information.

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Specifications subject to change without notice. Document 178-1 Revised 10/31/03

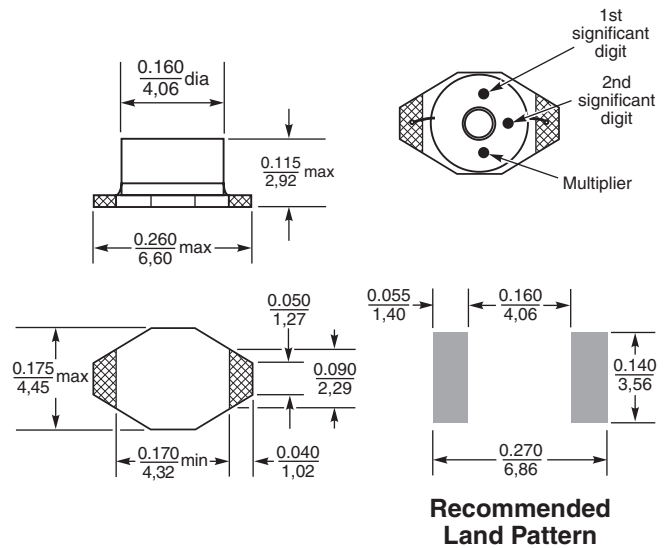
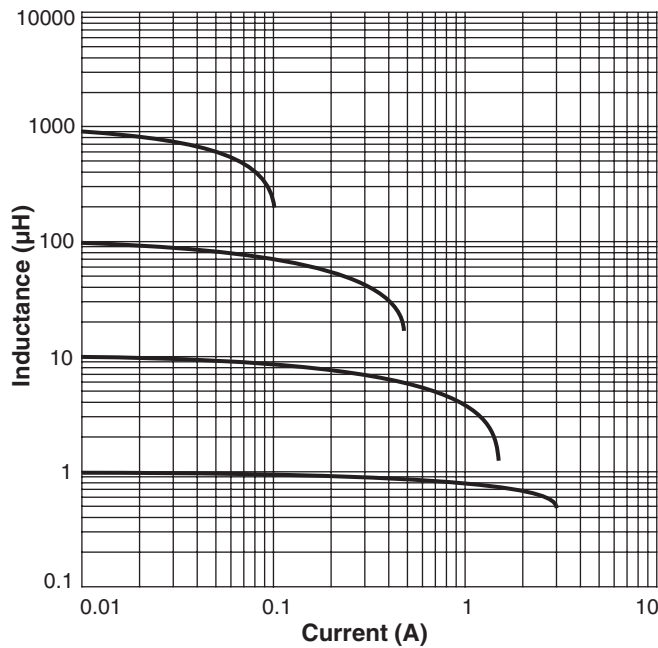
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>



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## Typical L vs Current



**Weight:** 136 – 157 mg

**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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E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>