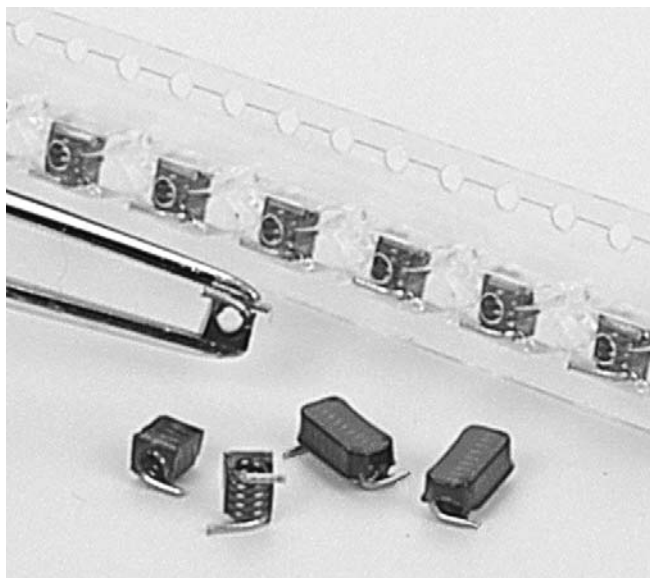




# Mini Spring™ Air Core Inductors



These surface mount air core “spring” inductors provide extremely high Q over a wide frequency range.

They’re jacketed with a high temperature material that ensures mechanical stability and very tight tolerance. It also forms a flat top, making them suitable for automatic placement and reflow or vapor phase processing. Solder coated leads ensure reliable soldering.

Coilcraft Mini Spring™ inductors are available in standard EIA tape and reel packaging: 12 mm for AxxT, and 16 mm for size BxxT parts.

Coilcraft **Designer’s Kit C302** contains samples of all 5% inductance tolerance parts. Kits with 2% tolerance parts are also available. To order, contact Coilcraft or purchase them at <http://order.coilcraft.com>.

| Part number <sup>1</sup> | Turns | Inductance <sup>2</sup><br>(nH) | Percent tolerance <sup>3</sup> | Q <sup>4</sup><br>min | Test freq.<br>(MHz) | SRF min <sup>5</sup><br>(GHz) | DCRmax <sup>6</sup><br>(mOhm) | Irms <sup>7</sup><br>(A) | Weight<br>(mg) |
|--------------------------|-------|---------------------------------|--------------------------------|-----------------------|---------------------|-------------------------------|-------------------------------|--------------------------|----------------|
| A01T_L_                  | 1     | 2.5                             | <b>10</b>                      | 145                   | 150                 | 12.5                          | 1.1                           | 4                        | 31             |
| A02T_L_                  | 2     | 5.0                             | <b>5,2</b>                     | 140                   | 150                 | 6.5                           | 1.8                           | 4                        | 42             |
| A03T_L_                  | 3     | 8.0                             | <b>5,2</b>                     | 140                   | 150                 | 5.0                           | 2.6                           | 4                        | 52             |
| A04T_L_                  | 4     | 12.5                            | <b>5,2</b>                     | 137                   | 150                 | 3.3                           | 3.4                           | 4                        | 65             |
| A05T_L_                  | 5     | 18.5                            | <b>5,2</b>                     | 132                   | 150                 | 2.5                           | 3.9                           | 4                        | 78             |
| B06T_L_                  | 6     | 17.5                            | <b>5,2</b>                     | 100                   | 150                 | 2.2                           | 4.5                           | 4                        | 100            |
| B07T_L_                  | 7     | 22.0                            | <b>5,2</b>                     | 102                   | 150                 | 2.1                           | 5.2                           | 4                        | 110            |
| B08T_L_                  | 8     | 28.0                            | <b>5,2</b>                     | 105                   | 150                 | 1.8                           | 6.0                           | 4                        | 118            |
| B09T_L_                  | 9     | 35.5                            | <b>5,2</b>                     | 112                   | 150                 | 1.5                           | 6.8                           | 4                        | 133            |
| B10T_L_                  | 10    | 43.0                            | <b>5,2</b>                     | 106                   | 150                 | 1.2                           | 7.9                           | 4                        | 147            |

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

A02T G L C

**Tolerance:** G = 2% J = 5% K = 10% (Table shows stock tolerances in bold.)

**Termination:** L = RoHS compliant tin-silver over copper.

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, 700 (AxxT) or 500 (BxxT) 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. Factory order only, not stocked, 2500 (AxxT) or 2200 (BxxT) parts per full reel.

2. Inductance measured using Agilent/HP 4286 with Coilcraft SMD-A fixture and correlation.

3. Tolerances in bold are stocked for immediate shipment.

4. Q measured using Agilent/HP 4291A with Agilent/HP 16193A test fixture.

5. SRF tested on the Agilent/HP 8720D and the SMD-D test fixture.

6. DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter.

7. Average current for a 15°C rise above 25°C ambient.

8. Operating temperature range -40°C to +125°C.

9. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

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Specifications subject to change without notice.

Please check our website for latest information. Document 107-1 Revised 03/23/06

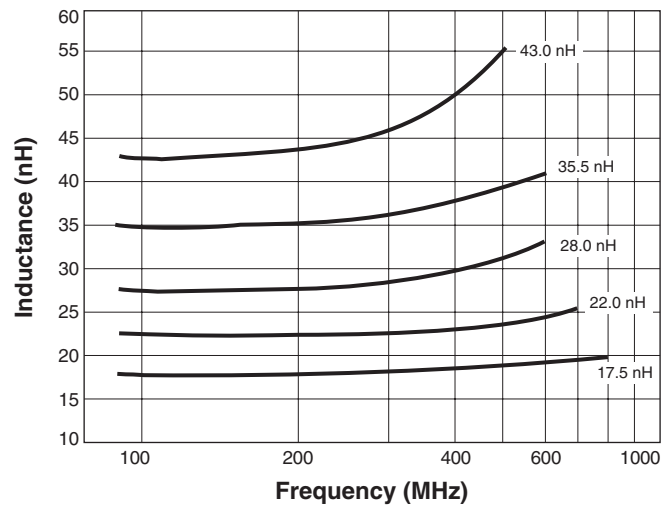
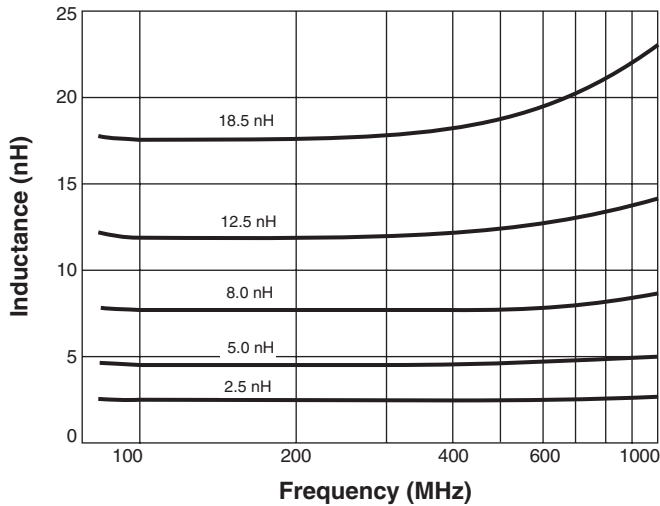
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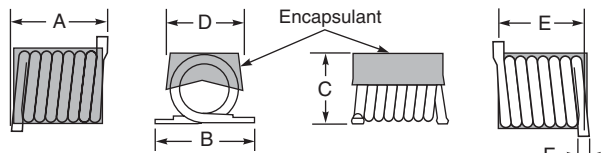
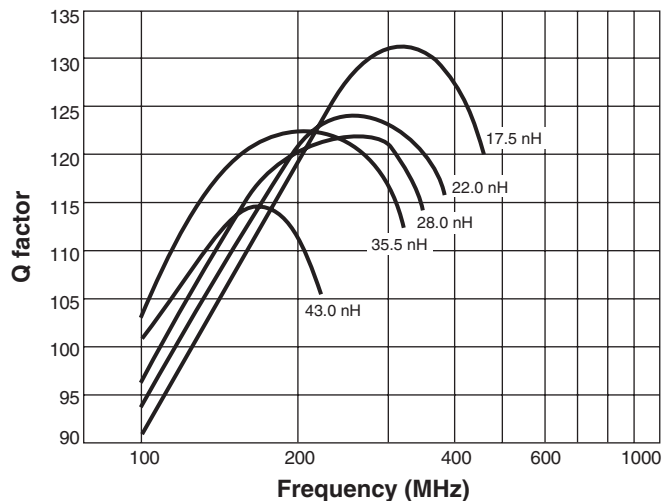
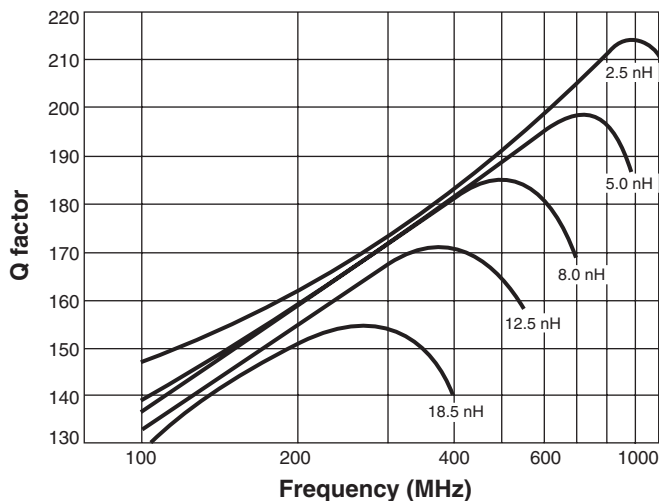


# Mini Spring™ Air Core Inductors

## Typical L vs Frequency

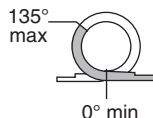


## Typical Q vs Frequency

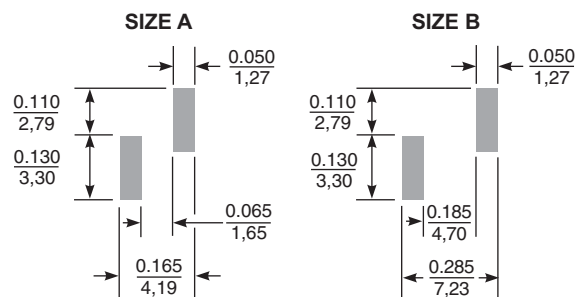


| Size | A max         | B max         | C max         | D                          | E                          | F max         |
|------|---------------|---------------|---------------|----------------------------|----------------------------|---------------|
| A    | 0.155<br>3,94 | 0.175<br>4,45 | 0.124<br>3,15 | 0.125 ±0.010<br>3,18 ±0,25 | 0.115 ±0.010<br>2,92 ±0,25 | 0.029<br>0,74 |
| B    | 0.270<br>6,86 | 0.175<br>4,45 | 0.124<br>3,15 | 0.125 ±0.010<br>3,18 ±0,25 | 0.230 ±0.015<br>5,84 ±0,38 | 0.029<br>0,74 |

### Strip Length



### Recommended Land Patterns



**Tape and reel:** 700/7" reel; 2500/13" reel 12 mm tape width 500/7" reel; 2200/13" reel 16 mm tape width

For packaging data see Tape and Reel Specifications section.

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