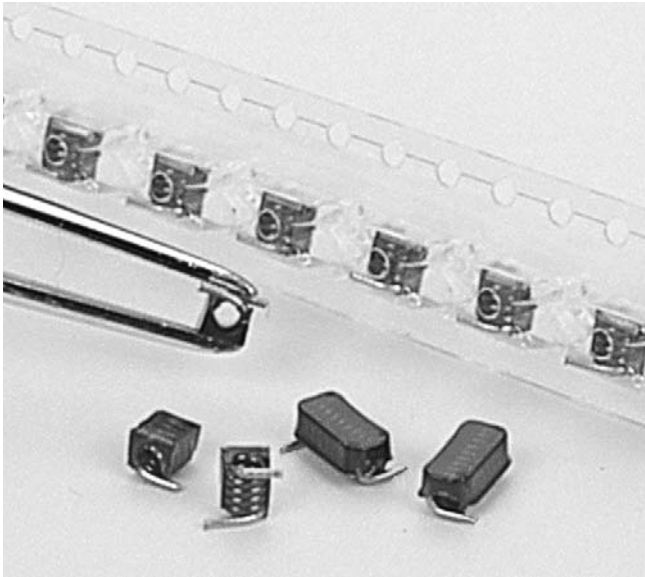




Mini Spring™ Air Core Inductors



- Small air core inductors feature high Q and tight tolerances
- Acrylic jacket provides a flat top for pick and place
- Solder coated leads ensure reliable soldering

Designer's Kit C302 contains 12 each of all 5% values.
Kit C302-2 contains 12 each of all 2% values.

Terminations RoHS compliant tin-silver over copper. Other terminations available at additional cost.

Ambient temperature -40°C to +125°C with I_{rms} current, +125°C to +140°C with derated current

Storage temperature Component: -40°C to +140°C.
Packaging: -55°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) +5 to +70 ppm/°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

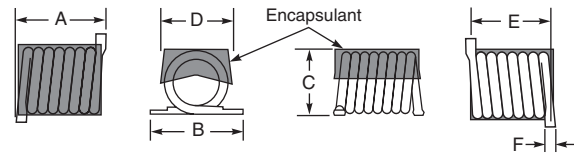
Mean Time Between Failures (MTBF) One billion hours

Packaging A0xT: 700/7" reel; 2500/13" reel Plastic tape: 12 mm wide, 0.32 mm thick, 8 mm pocket spacing, 3.3 mm pocket depth

BxxT: 500/7" reel; 2200/13" reel Plastic tape: 16 mm wide, 0.28 mm thick, 8 mm pocket spacing, 3.4 mm pocket depth

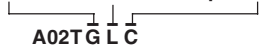
PCB washing Only pure water or alcohol recommended

| Part number ¹ | Turns | L ² (nH) | Percent tol ³ | Q ⁴ min | SRF min ⁵ (GHz) | DCR max ⁶ (mOhm) | I _{rms} ⁷ (A) | Weight (mg) |
|--------------------------|-------|---------------------|--------------------------|--------------------|----------------------------|-----------------------------|-----------------------------------|-------------|
| A01TKL_ | 1 | 2.5 | 10 | 145 | 12.5 | 1.1 | 4 | 31 |
| A02T_L_ | 2 | 5.0 | 5,2 | 140 | 6.5 | 1.8 | 4 | 42 |
| A03T_L_ | 3 | 8.0 | 5,2 | 140 | 5.0 | 2.6 | 4 | 52 |
| A04T_L_ | 4 | 12.5 | 5,2 | 137 | 3.3 | 3.4 | 4 | 65 |
| A05T_L_ | 5 | 18.5 | 5,2 | 132 | 2.5 | 3.9 | 4 | 78 |
| B06T_L_ | 6 | 17.5 | 5,2 | 100 | 2.2 | 4.5 | 4 | 100 |
| B07T_L_ | 7 | 22.0 | 5,2 | 102 | 2.1 | 5.2 | 4 | 110 |
| B08T_L_ | 8 | 28.0 | 5,2 | 105 | 1.8 | 6.0 | 4 | 118 |
| B09T_L_ | 9 | 35.5 | 5,2 | 112 | 1.5 | 6.8 | 4 | 133 |
| B10T_L_ | 10 | 43.0 | 5,2 | 106 | 1.2 | 7.9 | 4 | 147 |



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

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



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

Termination: L = RoHS compliant tin-silver (96.5/3.5) 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 with an Agilent/HP 4286, a Coilcraft SMD-A and correlation.

3. Tolerances in bold are stocked for immediate shipment.

4. Q measured at 150 MHz using an Agilent/HP 4291A with an Agilent/HP 16193A test fixture.

5. SRF tested on an Agilent/HP 8720D and a Coilcraft SMD-D test fixture.

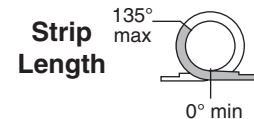
6. DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter.

7. Current that causes a 15°C temperature rise from 25°C ambient.

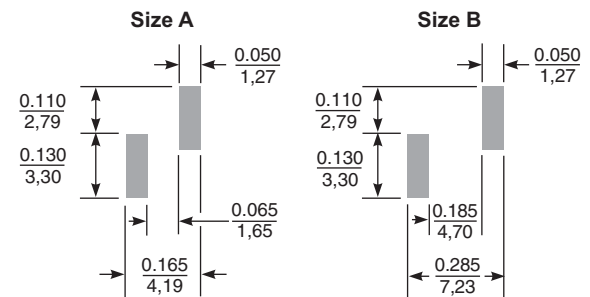
8. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

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



Recommended Land Patterns



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



Specifications subject to change without notice.
Please check our website for latest information.

Document 107-1 Revised 06/17/08

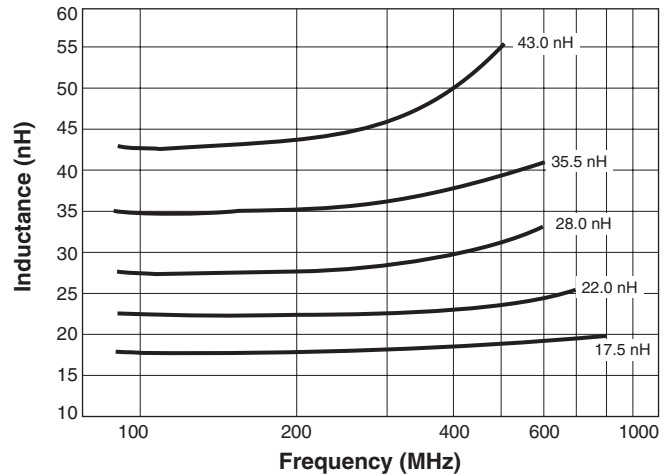
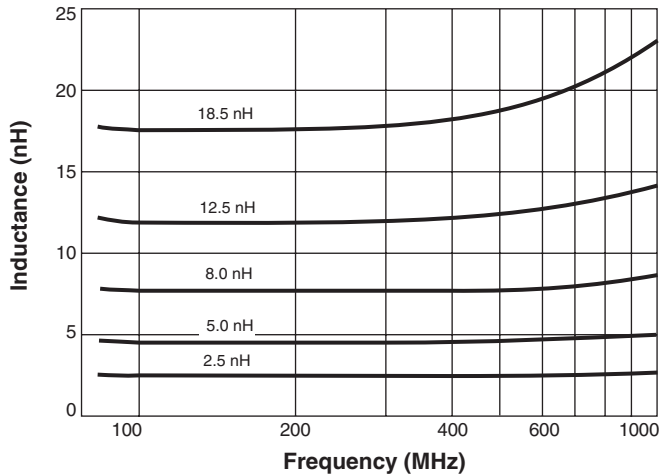
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail info@coilcraft.com Web http://www.coilcraft.com

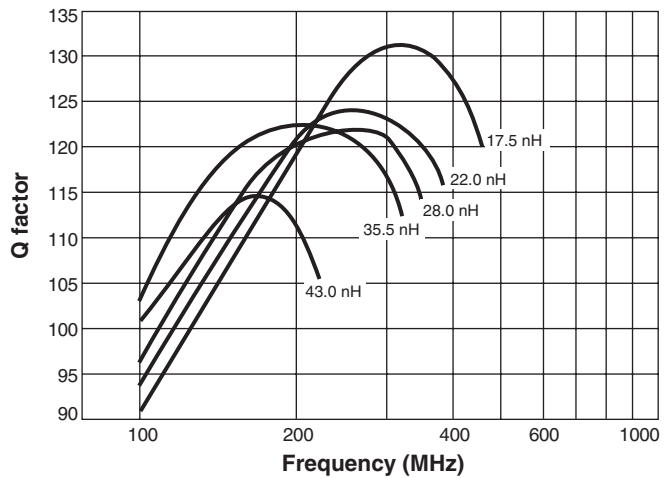
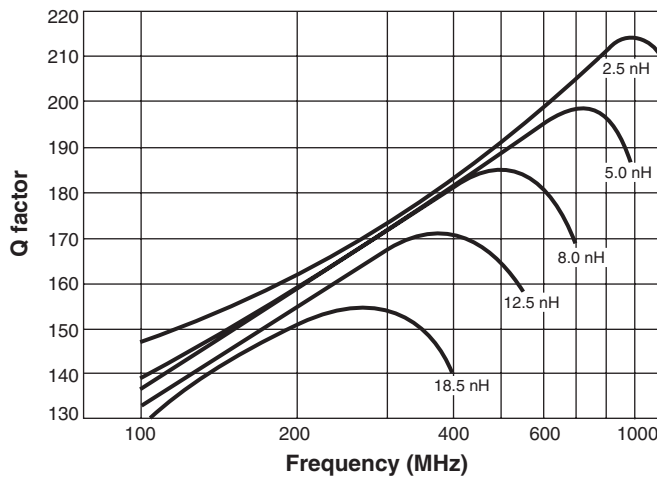


Mini Spring™ Air Core Inductors

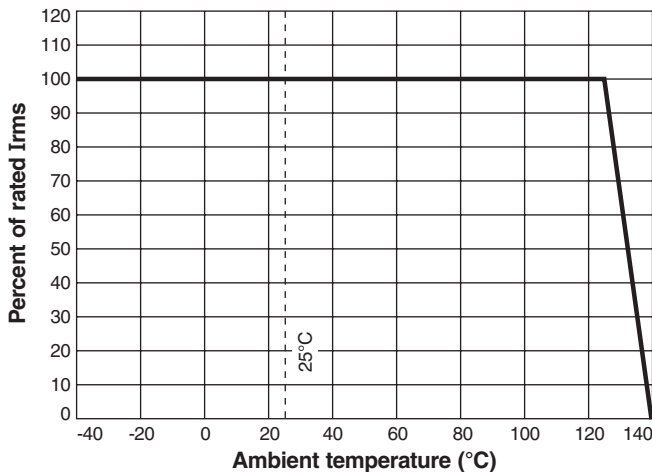
Typical L vs Frequency



Typical Q vs Frequency



Typical Irms Derating



Specifications subject to change without notice.
Please check our website for latest information.

Document 107-2 Revised 06/17/08

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

E-mail info@coilcraft.com Web <http://www.coilcraft.com>