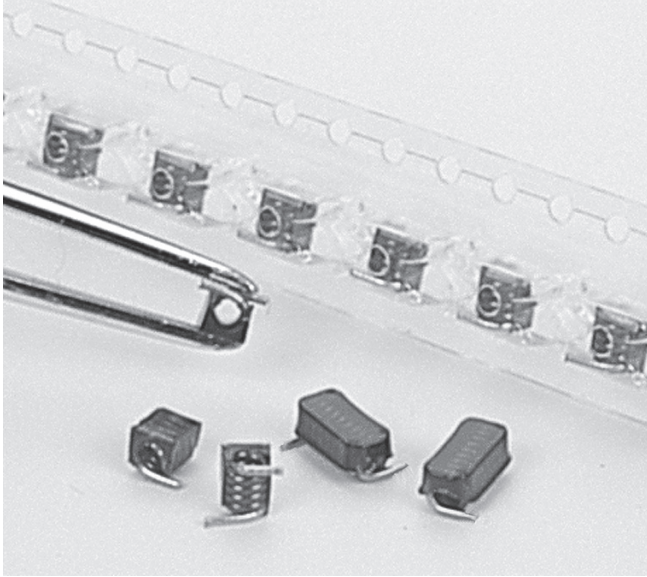




# Mini Spring™ Air Core Inductors



- 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

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

**Ambient temperature** -40°C to +125°C with Irms current, +125°C to +140°C with derated current

**Storage temperature** Component: -40°C to +140°C. Packaging: -40°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 Sensivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

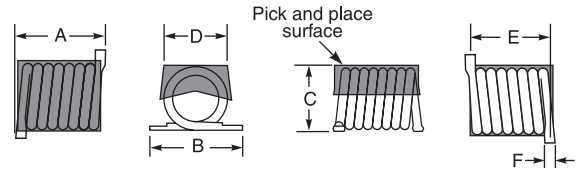
One per billion hours / one billion hours, calculated per Telcordia SR-332

**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 <sup>1</sup>	Turns	L <sup>2</sup> (nH)	Percent tol <sup>3</sup>	Q <sup>4</sup> min	SRF min <sup>5</sup> (GHz)	DCR max <sup>6</sup> (mOhm)	Irms <sup>7</sup> (A)	Weight (mg)
A01TKL_	1	2.5	<b>10</b>	145	12.5	1.1	4	31
A02T_L_	2	5.0	<b>5,2,1</b>	140	6.5	1.8	4	42
A03T_L_	3	8.0	<b>5,2,1</b>	140	5.0	2.6	4	52
A04T_L_	4	12.5	<b>5,2,1</b>	137	3.3	3.4	4	65
A05T_L_	5	18.5	<b>5,2,1</b>	132	2.5	3.9	4	78
B06T_L_	6	17.5	<b>5,2,1</b>	100	2.2	4.5	4	100
B07T_L_	7	22.0	<b>5,2,1</b>	102	2.1	5.2	4	110
B08T_L_	8	28.0	<b>5,2,1</b>	105	1.8	6.0	4	118
B09T_L_	9	35.5	<b>5,2,1</b>	112	1.5	6.8	4	133
B10T_L_	10	43.0	<b>5,2,1</b>	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	0.124	0.110 ±0.010	0.115 ±0.010 2,92 ±0,25	0.029 inch
B	0.270 6,86	4,45	3,15	2,79 ±0,25	0.230 ±0.015 5,84 ±0,38	0,74 mm

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

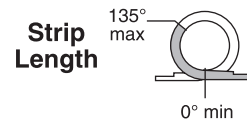
**A02TGLC**

**Tolerance:** F = 1% G = 2% J = 5% K = 10% (Table shows stock tolerances in bold.)

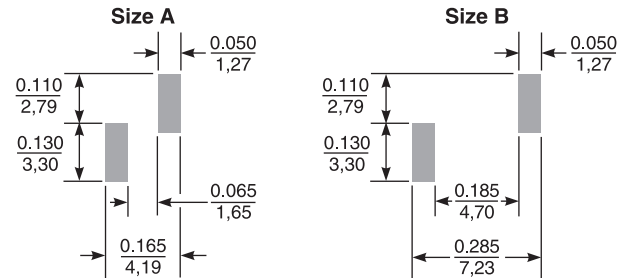
**Termination:** L = RoHS compliant tin-silver (96.5/3.5) over copper. Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

**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.

- Inductance measured at 150 MHz with an Agilent/HP 4286 or equivalent, a Coilcraft SMD-A and correlation.
  - Tolerances in bold are stocked for immediate shipment.
  - Q measured at 150 MHz using an Agilent/HP 4291A with an Agilent/HP 16193A test fixture or equivalents.
  - SRF tested on an Agilent/HP 8720D or equivalent and a Coilcraft SMD-D fixture.
  - DCR tested on the Cambridge Technology Model Micro-ohmmeter or equivalent.
  - Current that causes a 15°C temperature rise from 25°C ambient.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



### Recommended Land Patterns



Dimensions are in inches/mm



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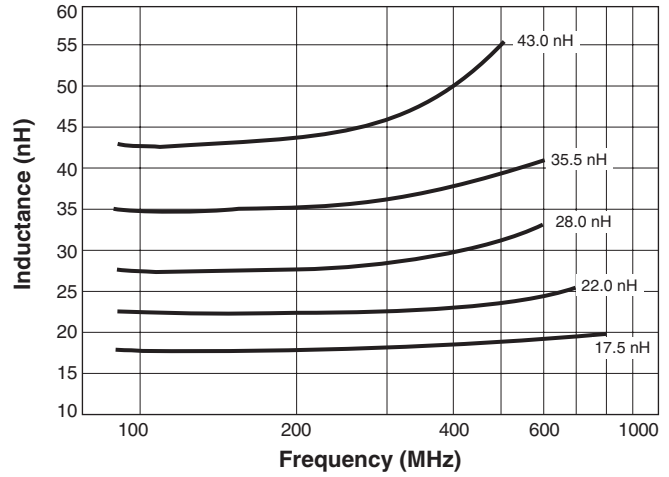
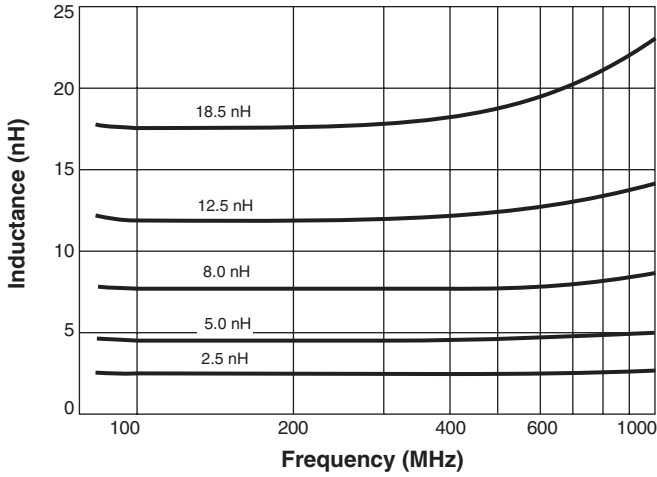
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 This product may not be used in medical of high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check out web site for latest information.



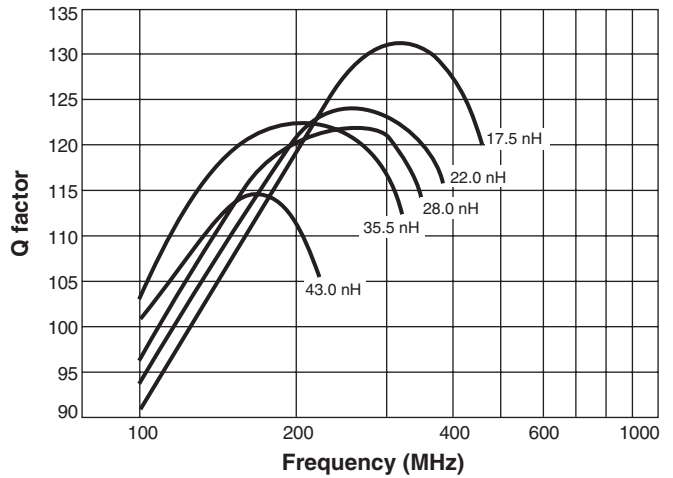
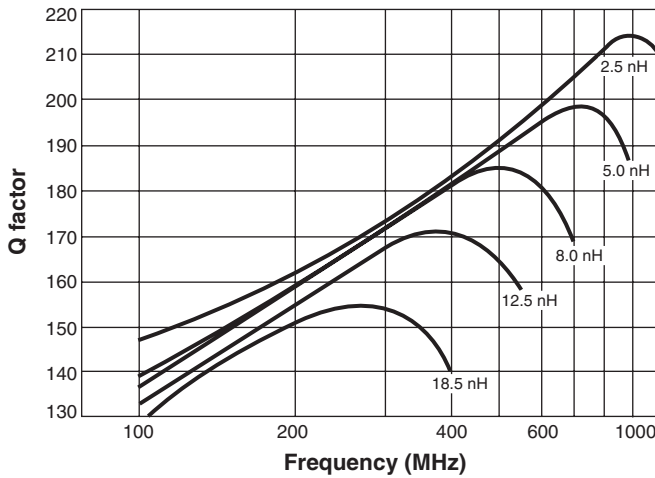
# Mini Spring™ Air Core Inductors

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

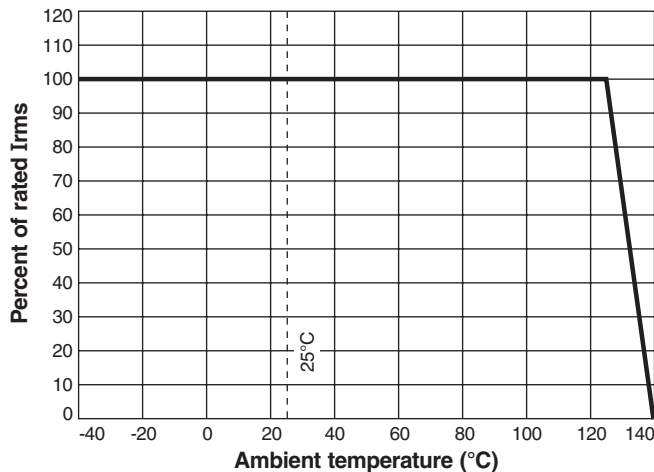
## Typical L vs Frequency



## Typical Q vs Frequency



## Typical Irms Derating



**S-Parameter files**  
 ON OUR WEB SITE  
**SPICE models**  
 ON OUR WEB SITE



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