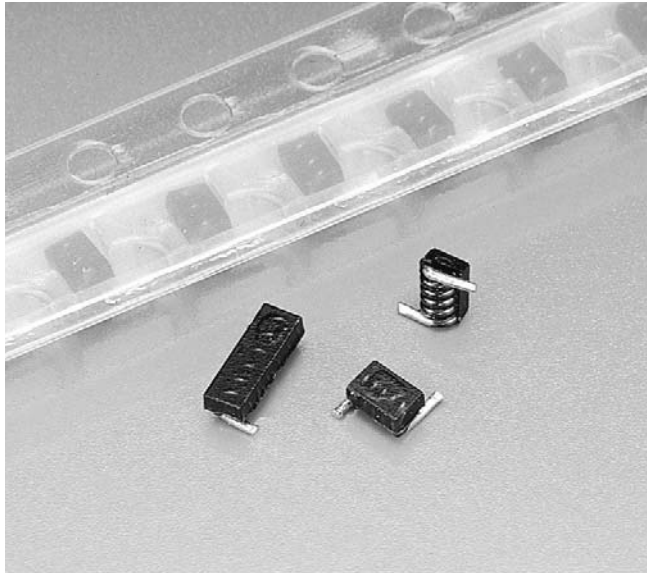




# Micro Spring™ Air Core Inductors



- 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.

**Weight 0906:** 10–12 mg; 1606: 18–27 mg

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

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

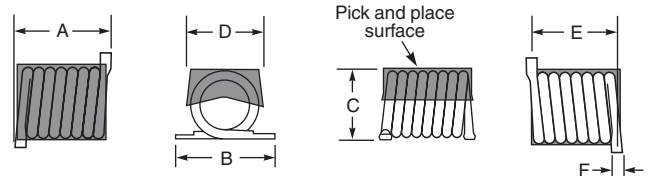
One per billion hours / one billion hours, calculated per Telcordia SR-332

**Packaging 0906:** 500 per 7" reel Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.5 mm pocket depth

**1606:** 500 per 7" reel Plastic tape: 12 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

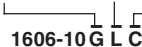
**PCB washing** Only pure water or alcohol recommended

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)
0906-2KL_	2	1.65	<b>10</b>	100	10.0	4.0	1.6
0906-3_L_	3	2.55	<b>5,2,1</b>	100	8.2	5.0	1.6
0906-4_L_	4	3.85	<b>5,2,1</b>	100	7.5	6.0	1.6
0906-5_L_	5	5.40	<b>5,2,1</b>	100	7.0	8.0	1.6
1606-6_L_	6	5.60	<b>5,2,1</b>	100	6.5	9.0	1.6
1606-7_L_	7	7.15	<b>5,2,1</b>	100	6.0	10	1.6
1606-8_L_	8	8.80	<b>5,2,1</b>	100	6.0	12	1.6
1606-9_L_	9	9.85	<b>5,2,1</b>	100	5.2	13	1.6
1606-10_L_	10	12.55	<b>5,2,1</b>	100	4.6	14	1.6



Size	A max	B max	C max	D	E	F max
0906	0.095 2,41	0.135 3,43	0.060 1,52	0.055 ±0.010 1,40 ±0,25	0.072 ±0.010 1,83 ±0,25	0.020 0,51
1606	0.165 4,19	0.135 3,43	0.062 1,58	0.055 ±0.010 1,40 ±0,25	0.144 ±0.012 3,66 ±0,30	0.020 0,51

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



**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).

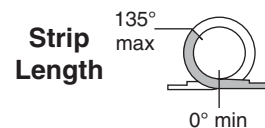
**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape, 500 parts per full reel.

**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.

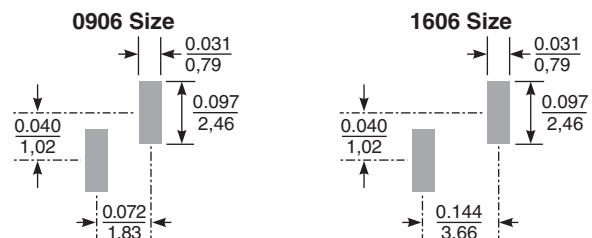
- Inductance measured at 800 MHz using Agilent/HP 4286 with Coilcraft SMD-A fixture and correlation.
- Tolerances in bold are stocked for immediate shipment.
- Q measured at 800 MHz using an Agilent/HP 4291A with an Agilent/HP 16193A test fixture.
- SRF measured using an Agilent/HP 8720D with a Coilcraft SMD-D fixture.
- DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter.
- Current that causes a 15°C temperature rise from 25°C ambient.
- 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.

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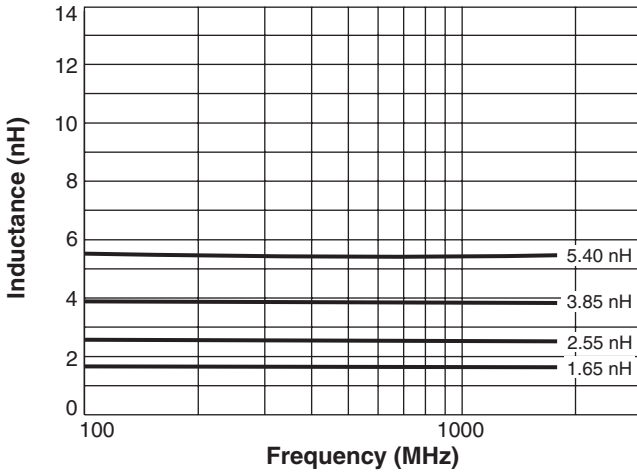
E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>



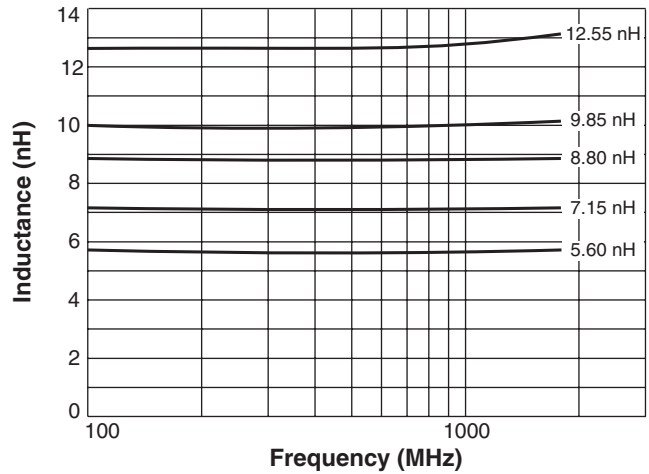
# Micro Spring™ Air Core Inductors

Designer's Kit C308 contains 12 each of all values.  
 Designer's Kit C308-2 contains 12 each of all 2% values.

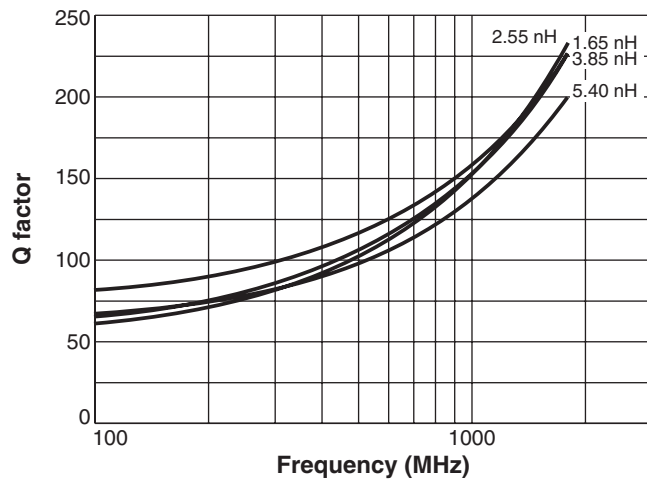
Typical L vs Frequency – 0906 Series



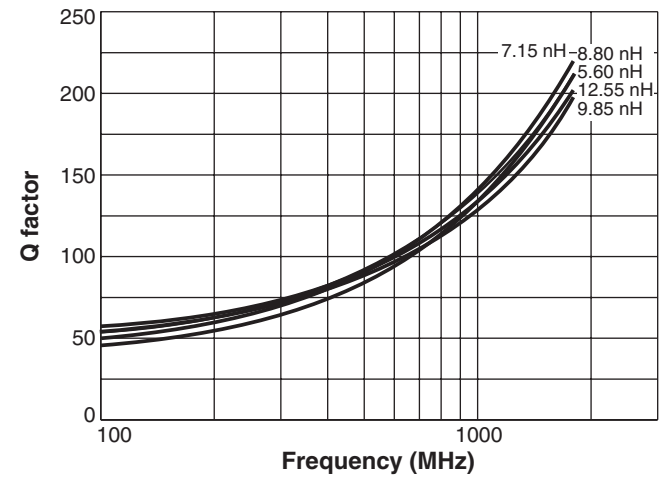
Typical L vs Frequency – 1606 Series



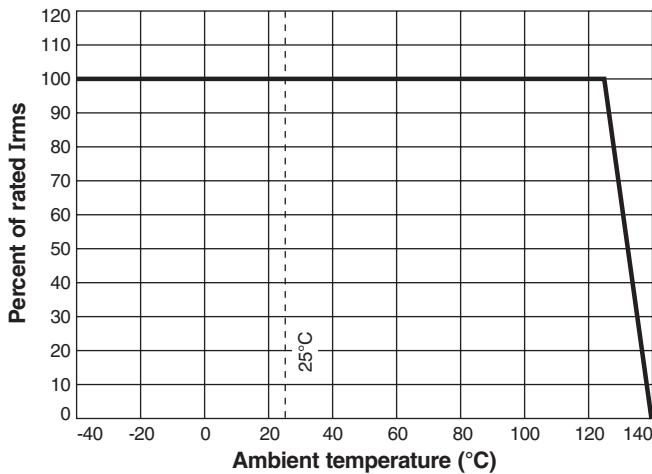
Typical Q vs Frequency – 0906 Series



Typical Q vs Frequency – 1606 Series



Typical Irms Derating



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



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

Document 163-2 Revised 12/08/10

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