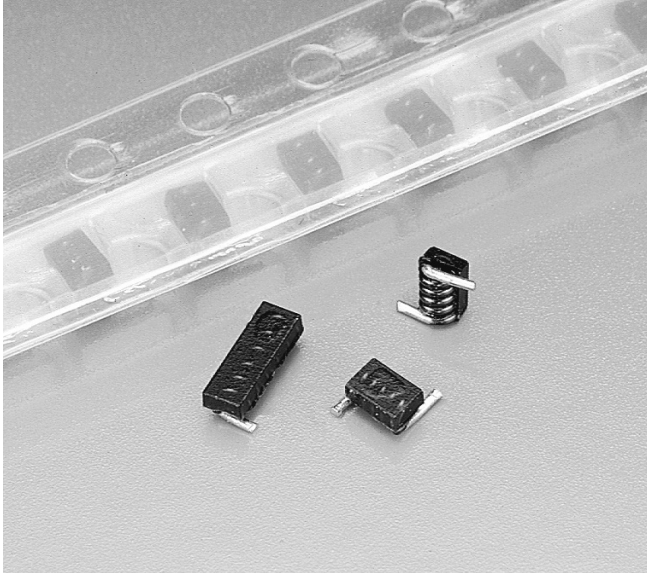


# Micro Spring™ Air Core Inductors



- 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

**Maximum part temperature** +140°C (ambient + temp rise)

**Storage temperature** Component: –40°C to +140°C.

Tape and reel 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

Recommended pick and place nozzle: OD: 0.059"; ID: 0.035"

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Turns	Inductance <sup>2</sup> (nH)	Percent tolerance <sup>3</sup>	Q <sup>4</sup> min	SRFmin <sup>5</sup> (GHz)	DCR max <sup>6</sup> (mOhm)	Irms <sup>7</sup> (A)
0906-2_L_	2	1.65	<b>10,5,2</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

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

1606-10GLC

**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.  
 P = 7" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (3000 parts per full reel).

- Inductance measured at 800 MHz using Agilent/HP 4286 or equivalent with a 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 or equivalents.
  - SRF measured using an Agilent/HP 8720D or equivalent with a Coilcraft SMD-D fixture.
  - DCR tested on the Cambridge Technology Model 510 Micro-ohmmeter or equivalent.
  - Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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

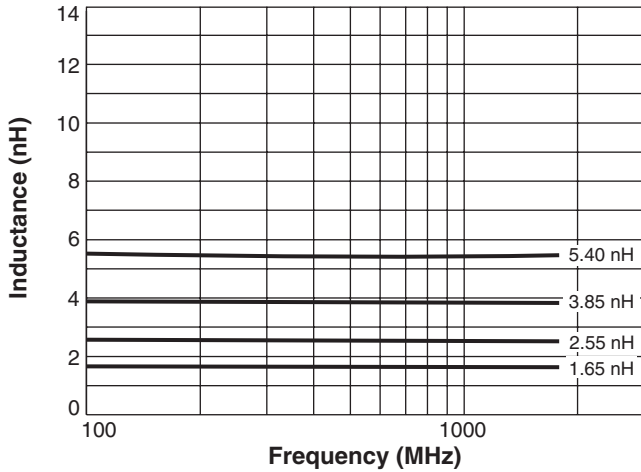
**SPICE models**  
ON OUR WEB SITE

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

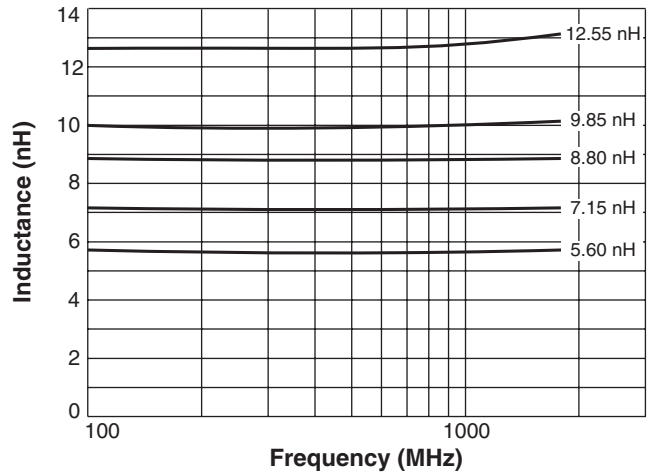


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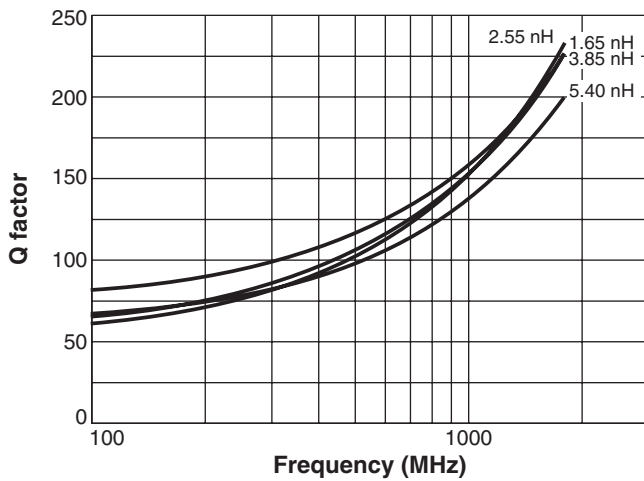
## Typical L vs Frequency – 0906 Series



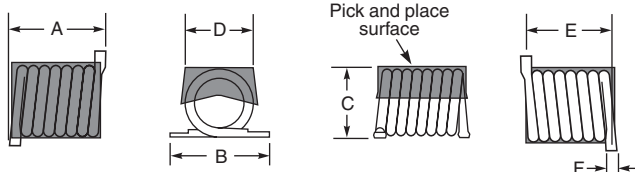
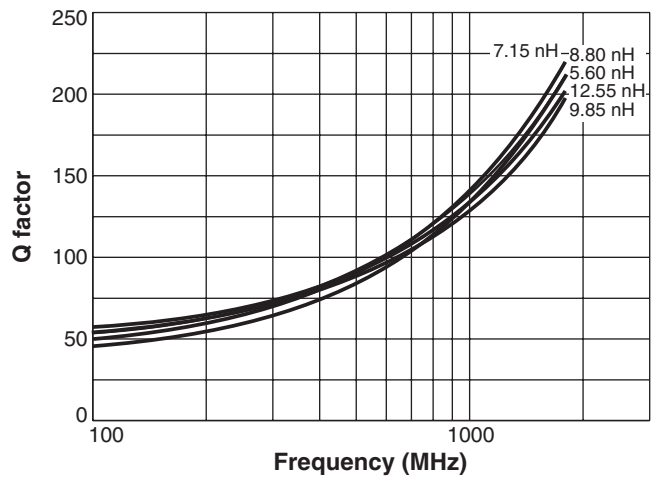
## Typical L vs Frequency – 1606 Series



## Typical Q vs Frequency – 0906 Series

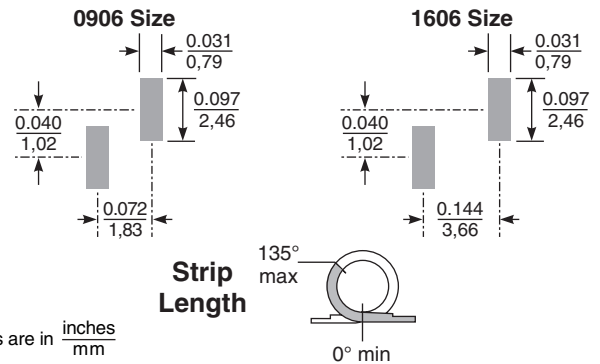


## Typical Q vs Frequency – 1606 Series



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

### Recommended Land Patterns



Dimensions are in inches/mm



US +1-847-639-6400 sales@coilcraft.com  
 UK +44-1236-730595 sales@coilcraft-europe.com  
 Taiwan +886-2-2264 3646 sales@coilcraft.com.tw  
 China +86-21-6218 8074 sales@coilcraft.com.cn  
 Singapore + 65-6484 8412 sales@coilcraft.com.sg

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