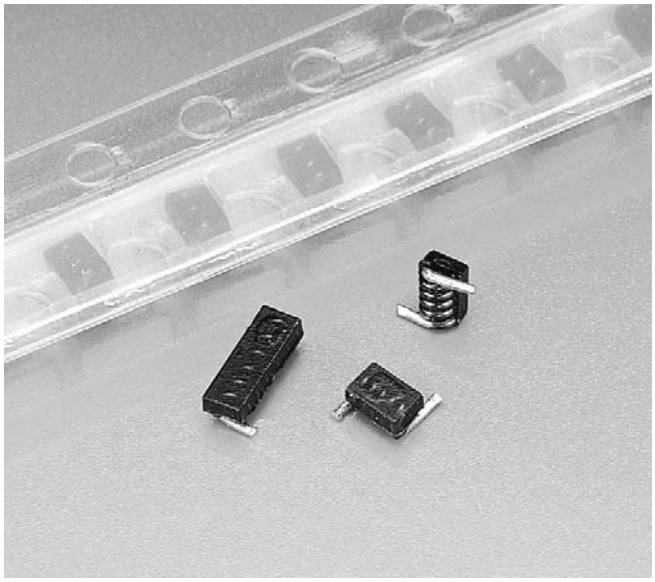
Micro Spring™ Air Core Inductors



The world's smallest surface mount air core inductors, these components provide exceptionally high Q over a wide range of frequencies. They feature tight inductance tolerance and thermal stability, which can often eliminate the need for circuit tuning.

Coilcraft's Micro Spring™ inductors are tape and reel packaged and have an acrylic jacket with a flat top, making them suitable for automatic placement and reflow or vapor phase processing. The leads are solder coated to ensure reliable soldering.

Coilcraft **Designer's Kit C308** contains samples of all 5% inductance tolerance parts. Kits with 2% tolerance are also available. To order, contact Coilcraft or visit **http://order.coilcraft.com.**

Part number[1]	Turns	Inductance[2] (nH)	Percent tolerance[3]	Q[4] min	Test freq. (MHz)	SRF min[5] (GHz)	DCR max[6] (mOhm)	Irms[6] (A)
0906-2KL_	2	1.65	**10**	100	800	10.0	4.0	1.6
0906-3JL_	3	2.55	**5**	100	800	8.2	5.0	1.6
0906-4_L_	4	3.85	**5,2**	100	800	7.5	6.0	1.6
0906-5_L_	5	5.40	**5,2**	100	800	7.0	8.0	1.6
1606-6_L_	6	5.60	**5,2**	100	800	6.5	9.0	1.6
1606-7_L_	7	7.15	**5,2**	100	800	6.0	10	1.6
1606-8_L_	8	8.80	**5,2**	100	800	6.0	12	1.6
1606-9_L_	9	9.85	**5,2**	100	800	5.2	13	1.6
1606-10_L_	10	12.55	**5,2**	100	800	4.6	14	1.6

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

1606-10 G L C

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, 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.

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 measured using Agilent/HP 8720D with 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. **Ambient temperature range:** –40°C to +125°C with Irms current
   +125°C to +140°C with derated current
9. **Storage temperature range:** Component: –40°C to +140°C
   Packaging: –55°C to +80°C
10. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds (+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room temperature between.
11. Electrical specifications at 25°C.
12. Temperature coefficient of inductance: +5 to +70 ppm/°C.

See Qualification Standards section for environmental and test data.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

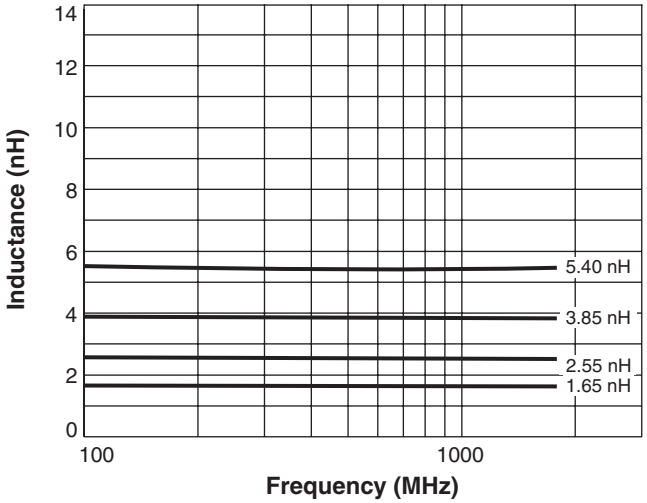
1102 Silver Lake Road Cary, Illinois 60013 **Phone** 847/639-6400 **Fax** 847/639-1469
E-mail info@coilcraft.com **Web** http://www.coilcraft.com

S-Parameter files
ON OUR WEB SITE OR CD

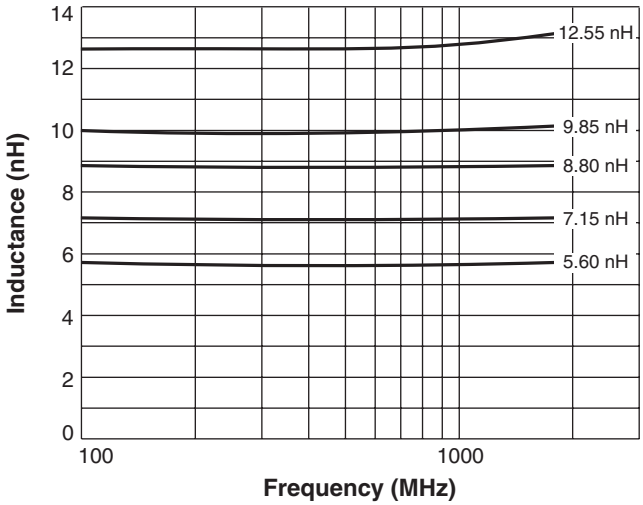
SPICE models
ON OUR WEB SITE OR CD

Micro Spring™ Air Core Inductors

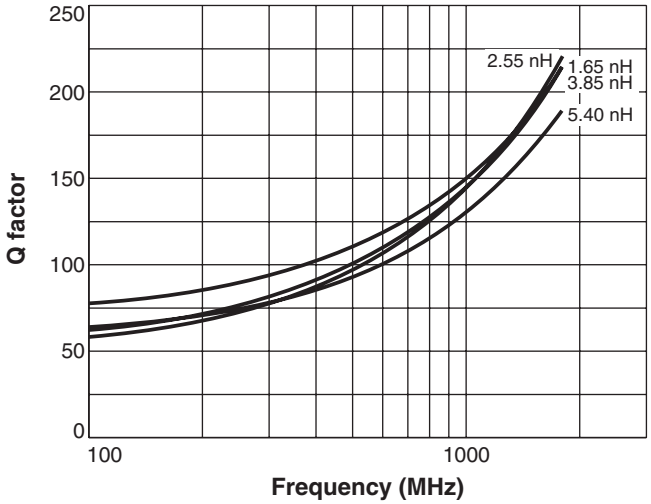
Typical L vs Frequency – 0906 Series



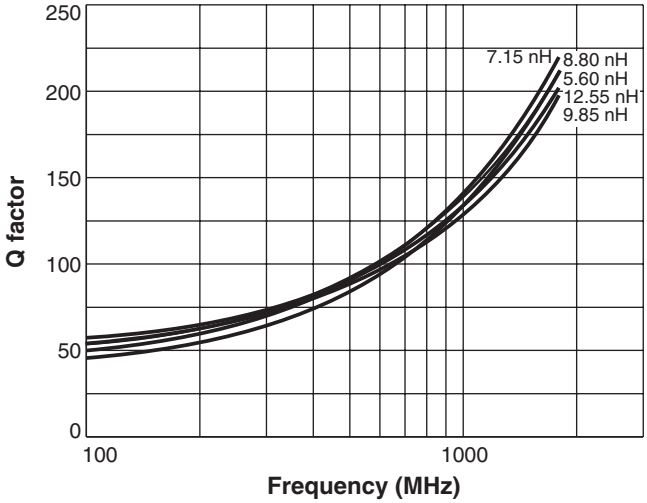
Typical L vs Frequency – 1606 Series

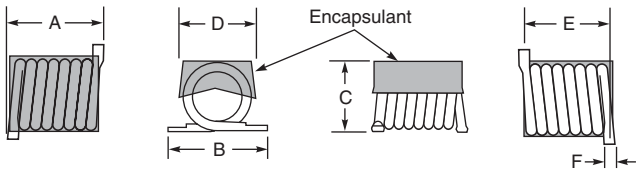


Typical Q vs Frequency – 0906 Series



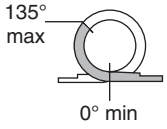
Typical Q vs Frequency – 1606 Series



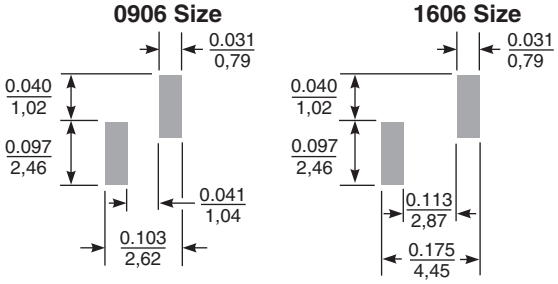


Size	A max	B max	C max	D	E	F max
0906	0.095 2,41	0.135 3,43	0.060 1,52	0.055 ±0.010 1,40 ±0,25	0.072 ±0.010 1,83 ±0,25	0.020 0,51
1606	0.165 4,19	0.135 3,43	0.062 1,58	0.055 ±0.010 1,40 ±0,25	0.144 ±0.012 3,66 ±0,30	0.020 0,51

Strip Length



Recommended Land Patterns



Weight:	8 – 14 mg	18 – 25 mg
Tape and reel:	500/7″ reel* 8 mm tape width	500/7″ reel* 12 mm tape width

*Reels shipped from stock. Larger orders are 2000 per 7″ reel.
For packaging data see Tape and Reel Specifications section.
Terminations: Tin-silver over copper

Specifications subject to change without notice.
Please check our website for latest information. Document 163-2 Revised 10/03/07

Coilcraft®
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