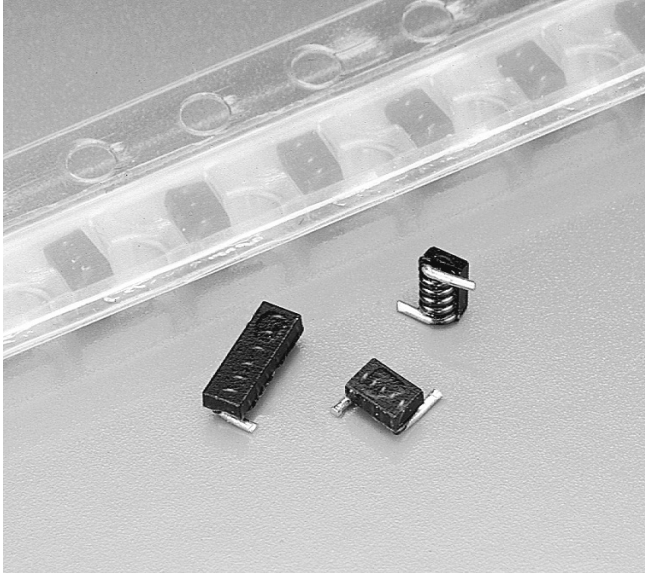




Micro Spring™ Air Core Inductors



- 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: 10–12mg; 1606: 18 – 27mg

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. 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

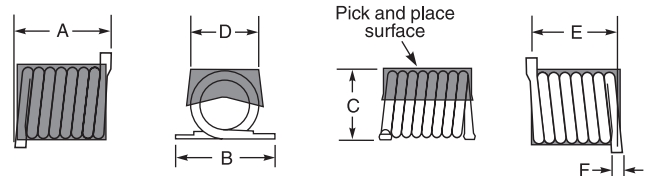
Packaging 0906: 500 per 7" reel Plastic tape: 8 mm wide,

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

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

| Part number ¹ | Turns | L ² (nH) | Percent tol ³ | Q ⁴ min | SRF min ⁵ (GHz) | DCR max ⁶ (mOhm) | Irms ⁷ (A) |
|--------------------------|-------|---------------------|--------------------------|--------------------|----------------------------|-----------------------------|-----------------------|
| 0906-2_L | 2 | 1.65 | 10,5 | 100 | 10.0 | 4.0 | 1.6 |
| 0906-3_L | 3 | 2.55 | 5,2,1 | 100 | 8.2 | 5.0 | 1.6 |
| 0906-4_L | 4 | 3.85 | 5,2,1 | 100 | 7.5 | 6.0 | 1.6 |
| 0906-5_L | 5 | 5.40 | 5,2,1 | 100 | 7.0 | 8.0 | 1.6 |
| 1606-6_L | 6 | 5.60 | 5,2,1 | 100 | 6.5 | 9.0 | 1.6 |
| 1606-7_L | 7 | 7.15 | 5,2,1 | 100 | 6.0 | 10 | 1.6 |
| 1606-8_L | 8 | 8.80 | 5,2,1 | 100 | 6.0 | 12 | 1.6 |
| 1606-9_L | 9 | 9.85 | 5,2,1 | 100 | 5.2 | 13 | 1.6 |
| 1606-10_L | 10 | 12.55 | 5,2,1 | 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:

1606-10GLC

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

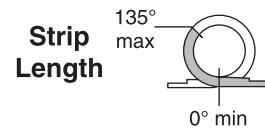
Termination: L = RoHS compliant tin-silver (96.5/3.5) over copper. Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

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

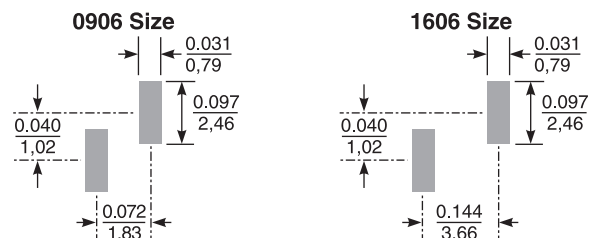
B = Less than full reel. In tape, but not machine-ready. To have a leader and trailer added (\$25 charge), use code letter C instead.

- 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.
- Electrical specifications at 25°C.

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



Recommended Land Patterns



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



www.coilcraft.com

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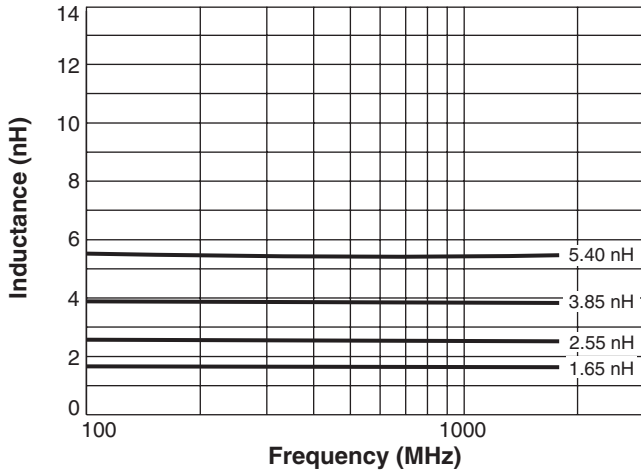
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



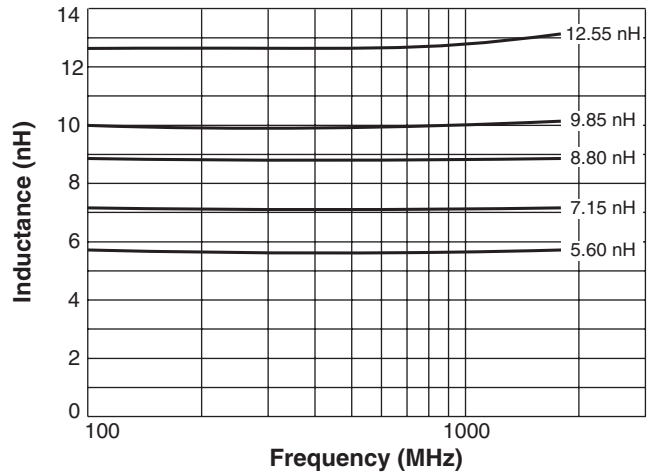
Micro Spring™ Air Core Inductors

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

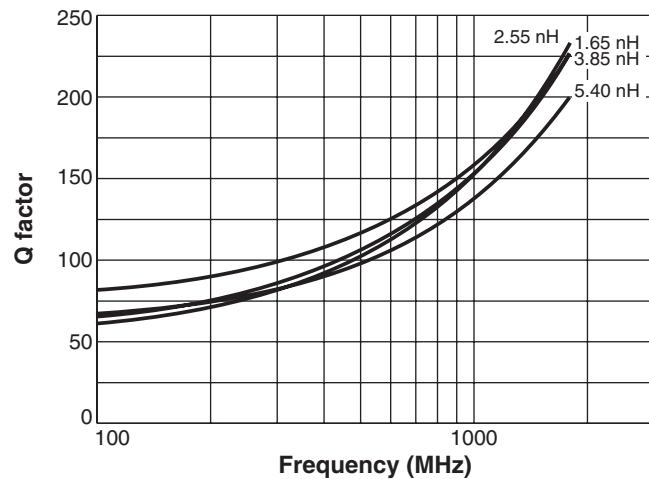
Typical L vs Frequency – 0906 Series



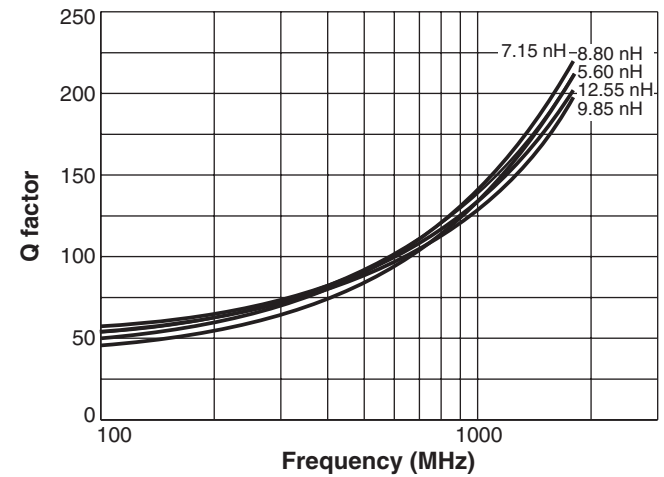
Typical L vs Frequency – 1606 Series



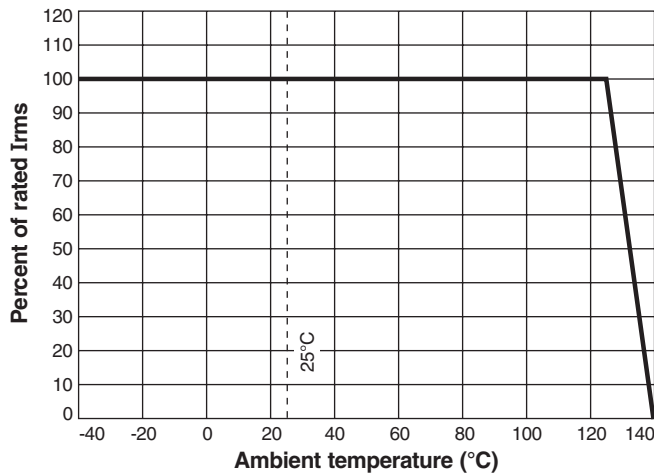
Typical Q vs Frequency – 0906 Series



Typical Q vs Frequency – 1606 Series



Typical Irms Derating



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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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