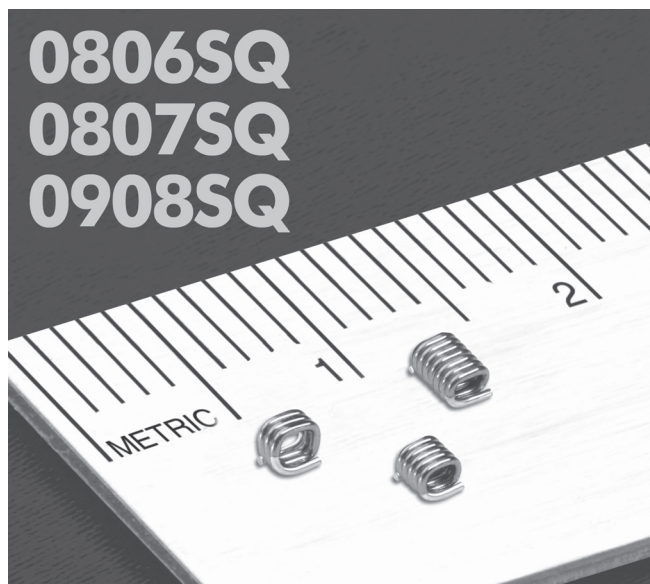




Square Air Core Inductors



- Excellent Q factors – up to 130
- Current handling as high as 4.4 Amps!
- 20 inductance values from 5.5 to 27 nH
- Flat top and bottom for reliable pick and place and mechanical stability
- All values available in 2% tolerance

Designer's Kit C424 contains 10 each of all 5% values;
Designer's Kit C424-2 contains 10 each of all 2% values

Terminations RoHS compliant tin-silver over copper

Ambient temperature –40°C to +125°C with Irms current, +125°C to +145°C with derated current

Storage temperature Component: –40°C to +125°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)

Mean Time Between Failures (MTBF) 1 billion hours

PCB washing Only pure water or alcohol recommended

| Part number ¹ | Inductance ² (nH) | % tol ³ | Q ⁴ typ | SRF typ ⁵ (GHz) | DCR max (mOhm) | Irms ⁶ (A) |
|--------------------------|---------------------------------|-----------------------|-----------------------|----------------------------------|----------------------|--------------------------|
| 0806SQ-5N5_L_ | 5.5 | 5,2 | 60 | 4.9 | 3.4 | 2.9 |
| 0806SQ-6N0_L_ | 6.0 | 5,2 | 64 | 5.2 | 6.0 | 2.9 |
| 0806SQ-8N9_L_ | 8.9 | 5,2 | 90 | 4.3 | 7.0 | 2.9 |
| 0806SQ-12N_L_ | 12.3 | 5,2 | 90 | 4.8 | 8.0 | 2.9 |
| 0806SQ-16N_L_ | 15.7 | 5,2 | 90 | 4.4 | 9.0 | 2.9 |
| 0806SQ-19N_L_ | 19.4 | 5,2 | 90 | 4.0 | 10.0 | 2.9 |
| 0807SQ-6N9_L_ | 6.9 | 5,2 | 100 | 4.6 | 6.0 | 2.7 |
| 0807SQ-10N_L_ | 10.2 | 5,2 | 100 | 4.0 | 7.0 | 2.7 |
| 0807SQ-11N_L_ | 11.2 | 5,2 | 90 | 3.6 | 6.3 | 2.7 |
| 0807SQ-14N_L_ | 13.7 | 5,2 | 100 | 4.3 | 8.0 | 2.7 |
| 0807SQ-17N_L_ | 17.0 | 5,2 | 100 | 4.0 | 9.0 | 2.7 |
| 0807SQ-22N_L_ | 22.0 | 5,2 | 100 | 3.5 | 10.0 | 2.7 |
| 0908SQ-8N1_L_ | 8.1 | 5,2 | 130 | 5.2 | 6.0 | 4.4 |
| 0908SQ-12N_L_ | 12.1 | 5,2 | 130 | 4.3 | 7.0 | 4.4 |
| 0908SQ-14N_L_ | 14.7 | 5,2 | 90 | 3.0 | 7.2 | 4.4 |
| 0908SQ-17N_L_ | 16.6 | 5,2 | 130 | 3.4 | 8.0 | 4.4 |
| 0908SQ-22N_L_ | 21.5 | 5,2 | 130 | 3.7 | 9.0 | 4.4 |
| 0908SQ-23N_L_ | 23.0 | 5,2 | 120 | 2.6 | 10.0 | 4.4 |
| 0908SQ-25N_L_ | 25.0 | 5,2 | 130 | 2.5 | 10.0 | 4.4 |
| 0908SQ-27N_L_ | 27.3 | 5,2 | 130 | 3.2 | 10.0 | 4.4 |

1. Please specify **tolerance, termination and packaging** codes:

0908SQ-27NGLC

Tolerance: **G** = 2%, **J** = 5% (Table shows stock tolerances in bold.)

Termination: **L** = RoHS compliant tin-silver (96.5/3.5) over copper.

Special order, added cost:

T = RoHS tin-silver-copper (95.5/4/0.5) over copper
 or **S** = non-RoHS tin-lead (63/37) over copper.

Packaging: **C** = 7" machine-ready reel. EIA-481 embossed plastic tape.

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.

2. Inductance measured at 400 MHz, 0.1 Vrms, 0 A using an Agilent/HP 4287A LCR meter or equivalent with a Coilcraft SMD-A test fixture and Coilcraft-provided correlation pieces.
3. Tolerances in bold are stocked for immediate shipment.
4. Q measured at 400 MHz using an Agilent/HP 4291A impedance analyzer or equivalent.
5. SRF measured using an Agilent/HP 8753 network analyzer and a Coilcraft SMD-D test fixture.
6. Current that causes a 20°C temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

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



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

Document 617-1 Revised 06/14/11

© Coilcraft Inc. 2011

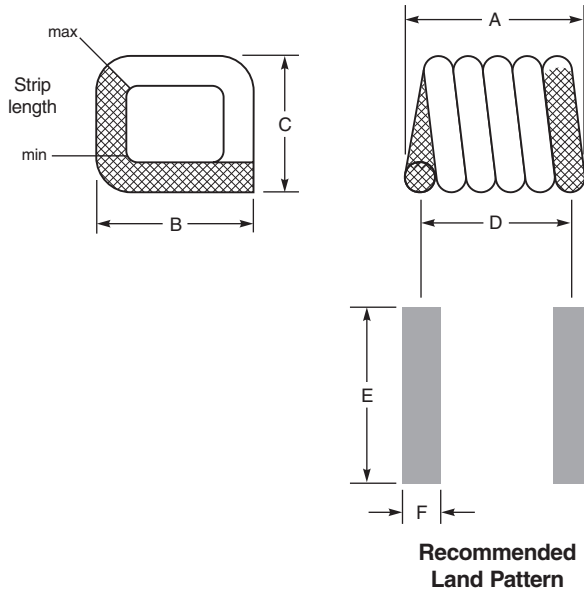
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

COILCRAFT ACCURATE
PRECISION REPEATABLE
 MEASUREMENTS
 SEE INDEX **TEST FIXTURES**

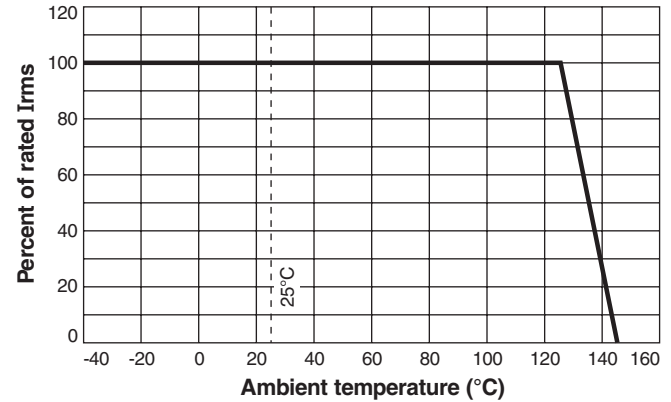


Square Air Coil Inductors

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



Irms Derating



Packaging 2000/7" reel; 7500/13" reel
Plastic tape: 12 mm wide, 0.254 mm thick, 4 mm pocket spacing

| Part number | A | B | C | D | E | F | Weight (mg) | Tape pocket depth (mm) |
|-------------|--------------|--------------|--------------|-------|-----|------|-------------|------------------------|
| 0806SQ-5N5 | 1,346 ±0,102 | 1,829 ±0,254 | 1,397 ±0,102 | 0,962 | 2,6 | 0,51 | 9,9 | 1,42 |
| 0806SQ-6N0 | 1,295 ±0,102 | 1,829 ±0,254 | 1,397 ±0,102 | 1,02 | 2,6 | 0,51 | 8,5 | 1,42 |
| 0806SQ-8N9 | 1,626 ±0,152 | 1,829 ±0,254 | 1,397 ±0,102 | 1,32 | 2,6 | 0,51 | 10,8 | 1,55 |
| 0806SQ-12N | 1,930 ±0,152 | 1,829 ±0,254 | 1,397 ±0,102 | 1,63 | 2,6 | 0,51 | 13,6 | 1,52 |
| 0806SQ-16N | 2,286 ±0,152 | 1,829 ±0,254 | 1,397 ±0,102 | 1,96 | 2,6 | 0,51 | 16,1 | 1,50 |
| 0806SQ-19N | 2,591 ±0,152 | 1,829 ±0,254 | 1,397 ±0,102 | 2,29 | 2,6 | 0,51 | 18,7 | 1,55 |
| <hr/> | | | | | | | | |
| 0807SQ-6N9 | 1,295 ±0,102 | 1,829 ±0,254 | 1,524 ±0,254 | 1,02 | 2,6 | 0,51 | 9,1 | 1,60 |
| 0807SQ-10N | 1,626 ±0,152 | 1,829 ±0,254 | 1,524 ±0,254 | 1,32 | 2,6 | 0,51 | 11,5 | 1,57 |
| 0807SQ-11N | 1,549 ±0,152 | 1,829 ±0,254 | 1,524 ±0,254 | 1,24 | 2,6 | 0,51 | 11,5 | 1,55 |
| 0807SQ-14N | 1,930 ±0,152 | 1,829 ±0,254 | 1,524 ±0,254 | 1,63 | 2,6 | 0,51 | 14,0 | 1,60 |
| 0807SQ-17N | 2,286 ±0,152 | 1,829 ±0,254 | 1,524 ±0,254 | 1,96 | 2,6 | 0,51 | 16,8 | 1,68 |
| 0807SQ-22N | 2,591 ±0,152 | 1,829 ±0,254 | 1,524 ±0,254 | 2,29 | 2,6 | 0,51 | 19,4 | 1,68 |
| <hr/> | | | | | | | | |
| 0908SQ-8N1 | 1,473 ±0,152 | 2,134 ±0,152 | 1,829 ±0,152 | 1,12 | 2,8 | 0,64 | 12,8 | 2,01 |
| 0908SQ-12N | 1,854 ±0,152 | 2,134 ±0,152 | 1,829 ±0,152 | 1,45 | 2,8 | 0,64 | 16,9 | 1,96 |
| 0908SQ-14N | 1,549 ±0,152 | 2,134 ±0,152 | 1,829 ±0,152 | 1,24 | 2,8 | 0,64 | 13,5 | 1,52 |
| 0908SQ-17N | 2,210 ±0,152 | 2,134 ±0,152 | 1,829 ±0,152 | 1,83 | 2,8 | 0,64 | 21,1 | 2,01 |
| 0908SQ-22N | 2,565 ±0,152 | 2,134 ±0,152 | 1,829 ±0,152 | 2,18 | 2,8 | 0,64 | 24,7 | 1,98 |
| 0908SQ-23N | 2,235 ±0,152 | 2,134 ±0,152 | 1,829 ±0,152 | 1,90 | 2,8 | 0,64 | 19,2 | 1,98 |
| 0908SQ-25N | 2,972 ±0,152 | 2,134 ±0,152 | 1,829 ±0,152 | 2,57 | 2,8 | 0,64 | 27,6 | 2,01 |
| 0908SQ-27N | 2,972 ±0,152 | 2,134 ±0,152 | 1,829 ±0,152 | 2,57 | 2,8 | 0,64 | 28,7 | 2,01 |

All dimensions are in 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

Document 617-2 Revised 06/14/11

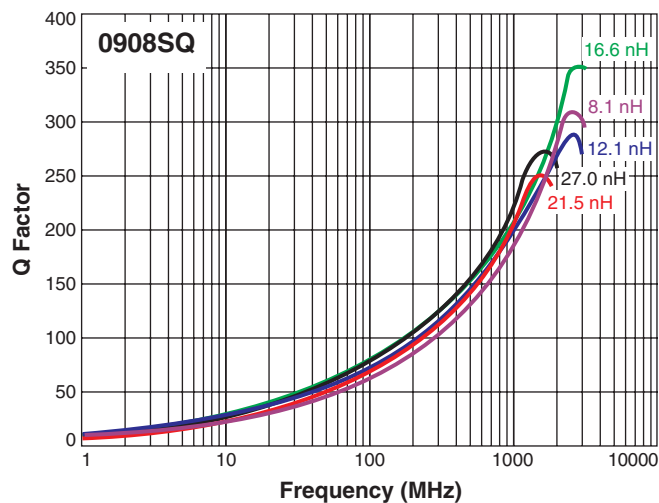
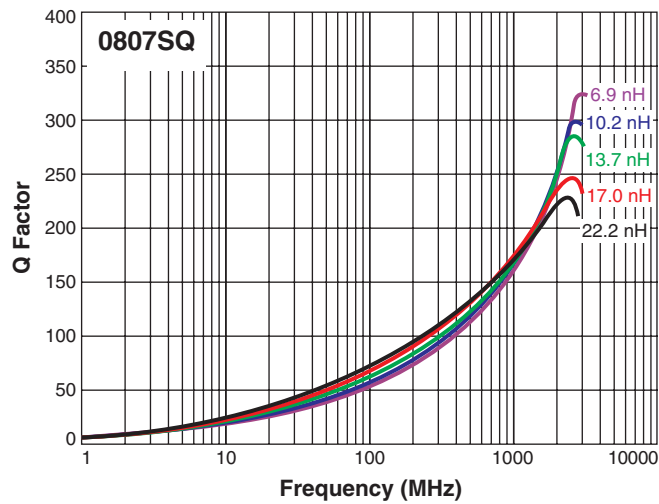
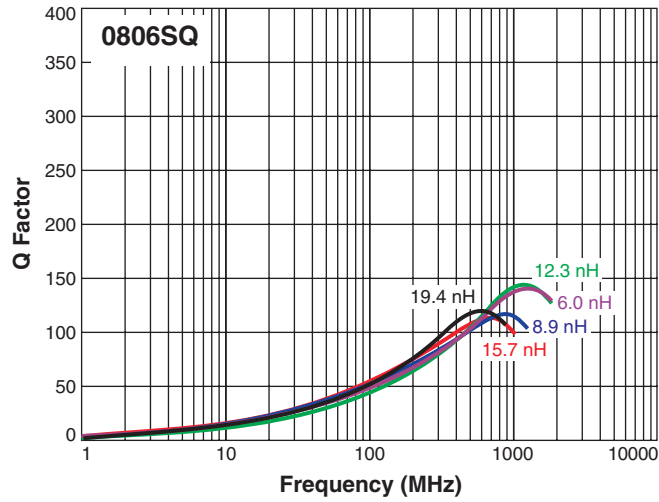
© Coilcraft Inc. 2011

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

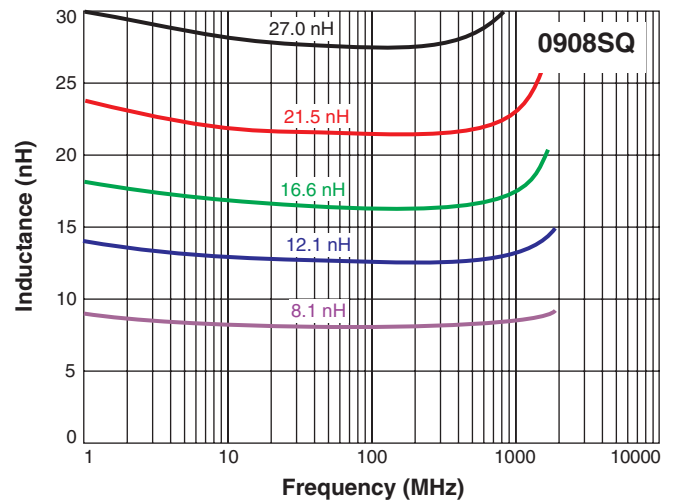
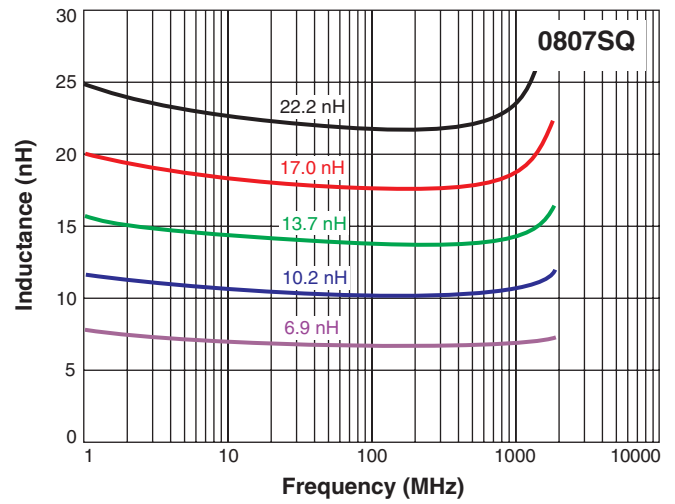
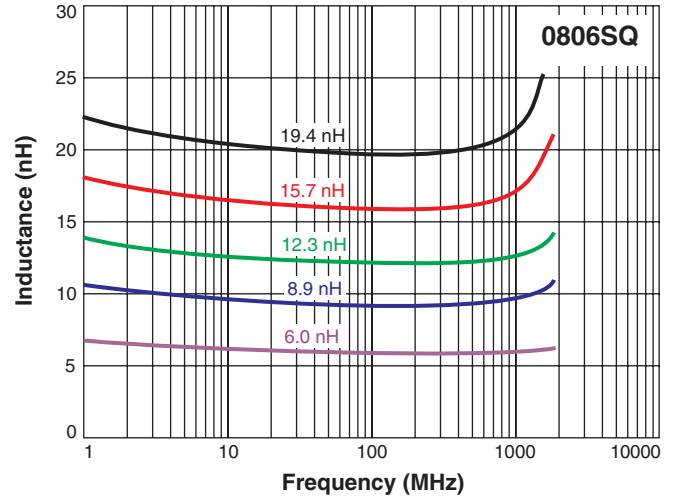


Square Air Coil Inductors

Typical Q vs Frequency



Typical L vs Frequency



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

Document 617-2 Revised 06/14/11

© Coilcraft Inc. 2011
 This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.