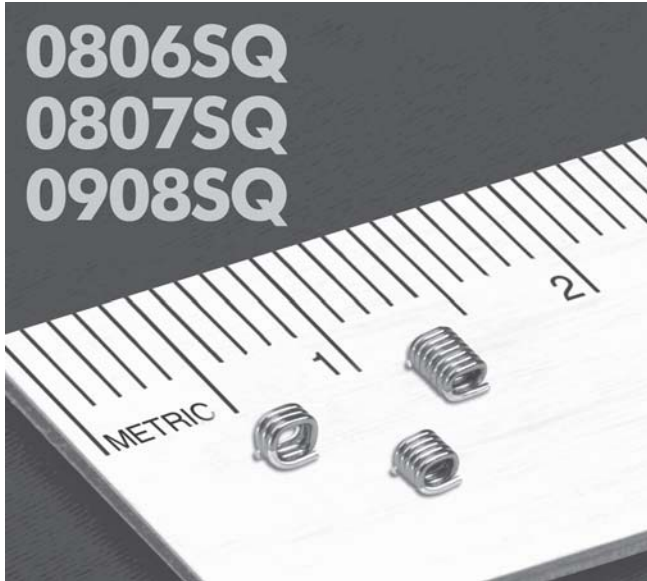




# Square Air Core Inductors



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

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

**0908SQ-27N G L C**

**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.

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

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.

Please check our website for latest information.

Document 617-1 Revised 10/27/09

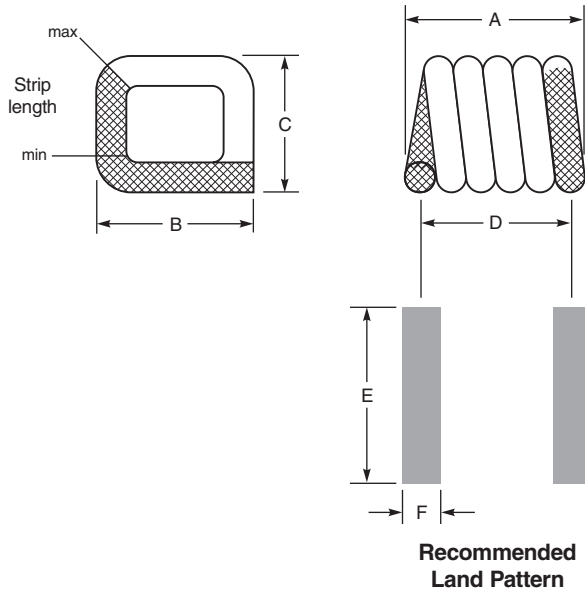
1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

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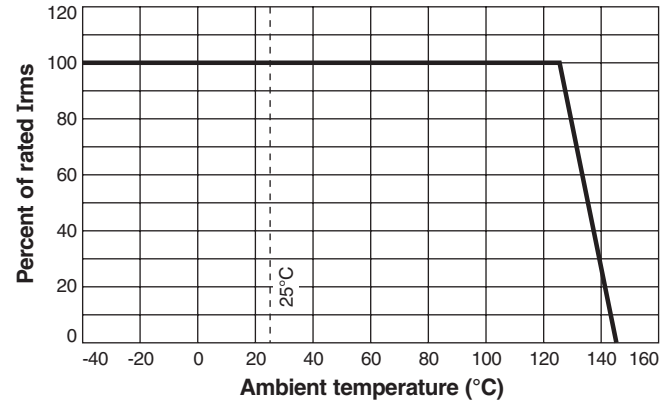


# Square Air Coil Inductors

**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)	Tapepocket 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	0,99	2,6	0,51	8,5	1,42
0806SQ-8N9	1,626±0,152	1,829±0,254	1,397±0,102	1,27	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	1,57	2,6	0,51	14,0	1,60
0807SQ-17N	2,286±0,152	1,829±0,254	1,524±0,254	1,93	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	1,01
0908SQ-27N	2,972±0,152	2,134±0,152	1,829±0,152	2,57	2,8	0,64	28,7	1,01

All dimensions are in mm.



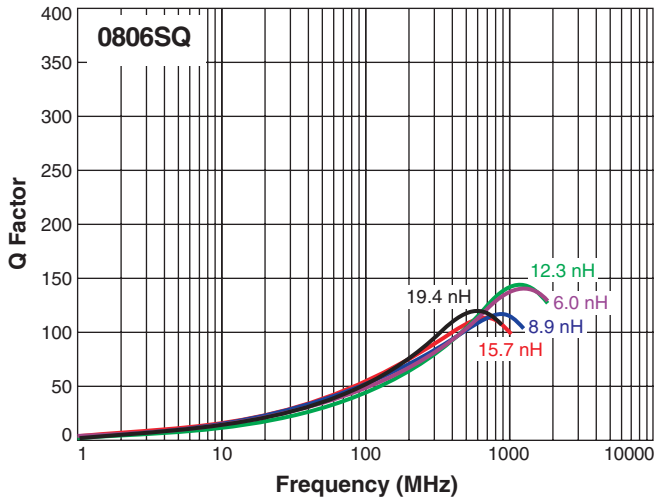
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Please check our website for latest information. Document 617-2 Revised 10/27/09

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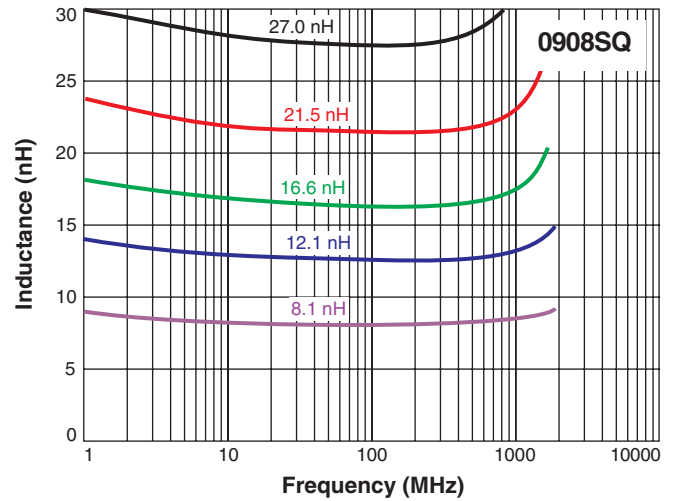
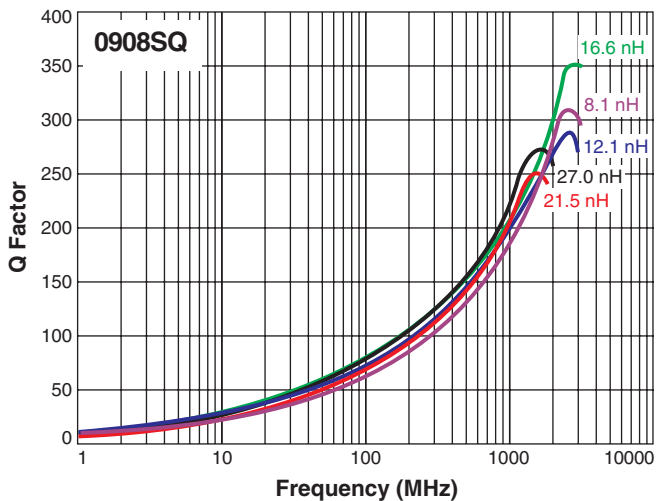
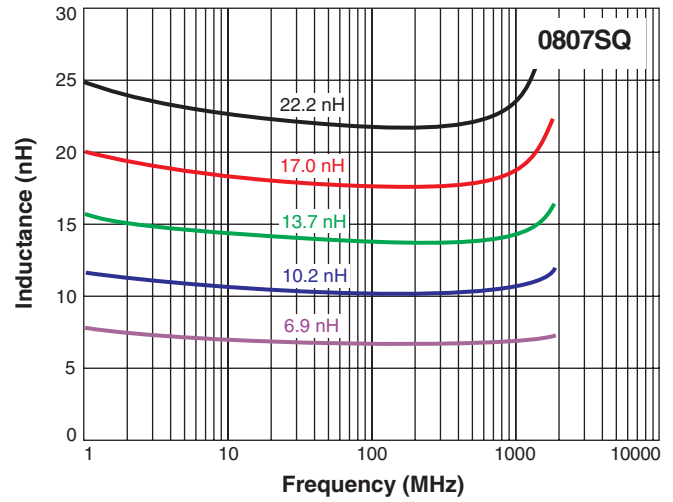
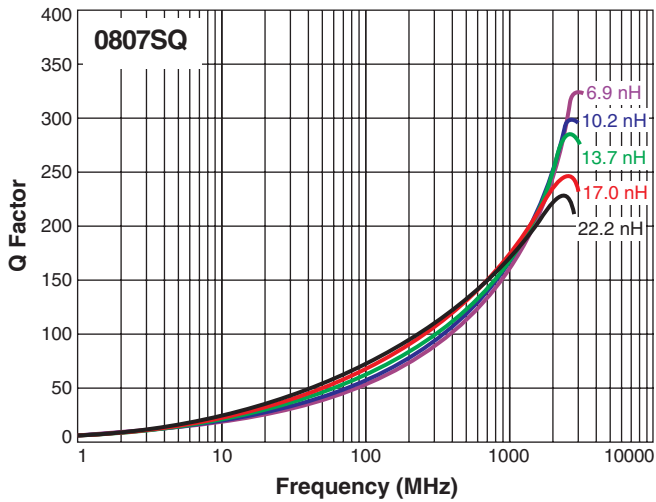
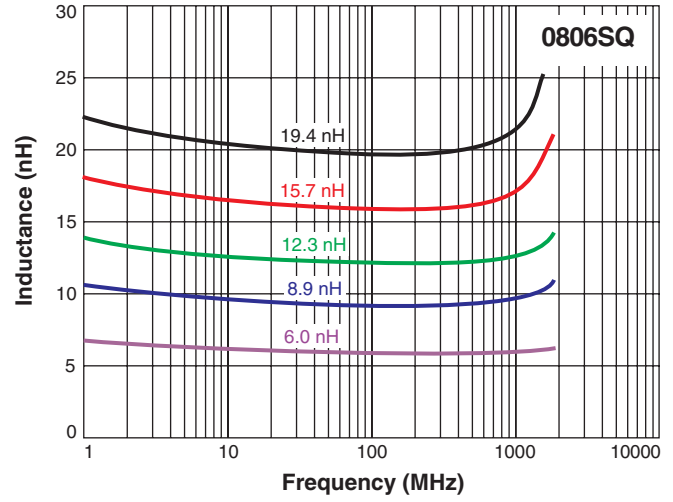


# Square Air Coil Inductors

## Typical Q vs Frequency



## Typical L vs Frequency



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