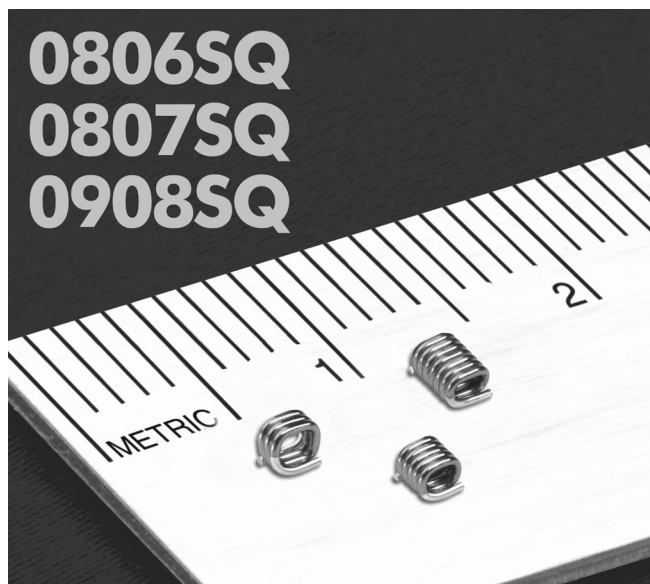




# Square Air Core Inductors



- Excellent Q factors – up to 130; current ratings up to 4.4 Amps!
- 20 values from 5.5 to 27 nH, at 5% and 2% tolerance
- Flat top and bottom for reliable pick and place and mechanical stability

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

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant tin-silver over copper

**Ambient temperature** –40°C to +125°C with Irms current

**Maximum part temperature** +145°C (ambient + temp rise).

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

**Mean Time Between Failures (MTBF)** 1 billion hours

**Packaging** 2000/7" reel; 7500/13" reel

Plastic tape: 12 mm wide, 0.254 mm thick, 4 mm pocket spacing

**Recommended pick and place nozzle:** OD: 0.054"; ID: 0.031"

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

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-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 CCF1166 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. This information is for reference only and does not represent absolute maximum ratings.
7. Electrical specifications at 25°C.

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



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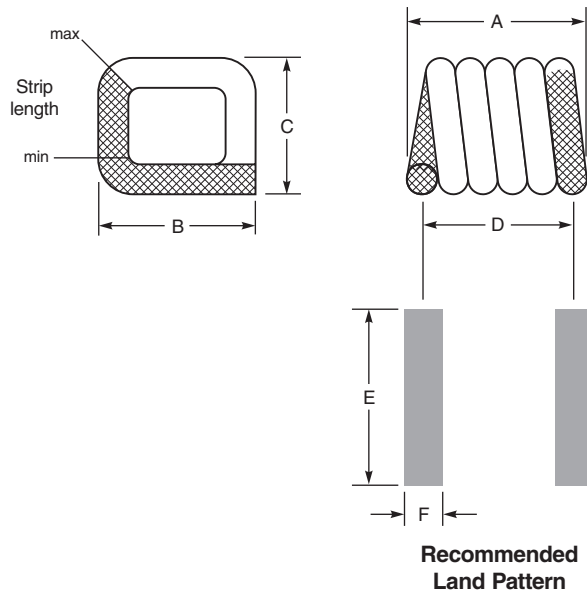
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**PRECISION** REPEATABLE  
 MEASUREMENTS  
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# Square Air Core Inductors



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 ±0,203	1,12	2,8	0,64	12,8	2,01
0908SQ-12N	1,854 ±0,152	2,134 ±0,152	1,829 ±0,203	1,45	2,8	0,64	16,9	1,96
0908SQ-14N	1,549 ±0,152	2,134 ±0,152	1,829 ±0,203	1,24	2,8	0,64	13,5	1,52
0908SQ-17N	2,210 ±0,152	2,134 ±0,152	1,829 ±0,203	1,83	2,8	0,64	21,1	2,01
0908SQ-22N	2,565 ±0,152	2,134 ±0,152	1,829 ±0,203	2,18	2,8	0,64	24,7	1,98
0908SQ-23N	2,235 ±0,152	2,134 ±0,152	1,829 ±0,203	1,90	2,8	0,64	19,2	1,98
0908SQ-25N	2,972 ±0,152	2,134 ±0,152	1,829 ±0,203	2,57	2,8	0,64	27,6	2,01
0908SQ-27N	2,972 ±0,152	2,134 ±0,152	1,829 ±0,203	2,57	2,8	0,64	28,7	2,01

All dimensions are in mm.



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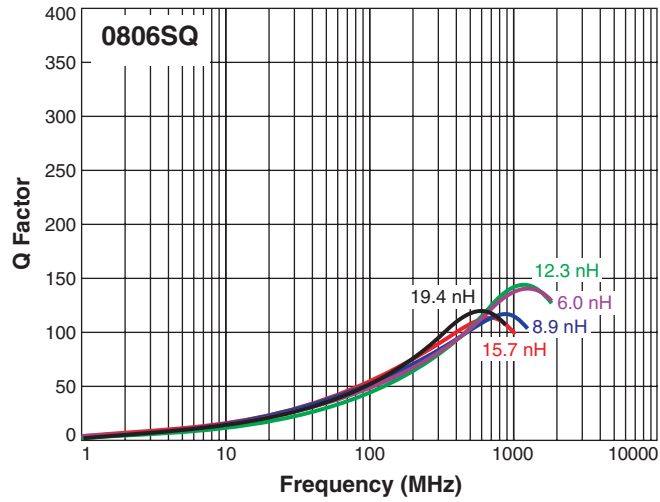
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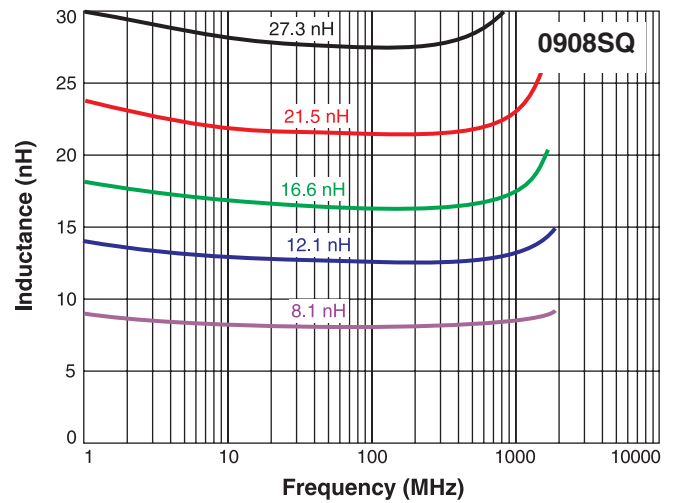
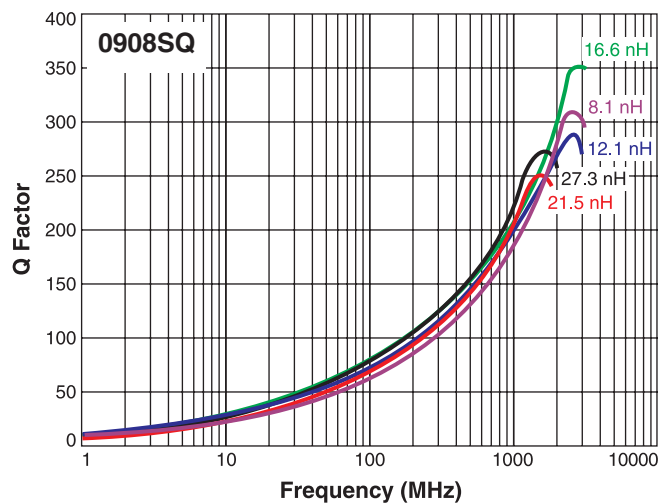
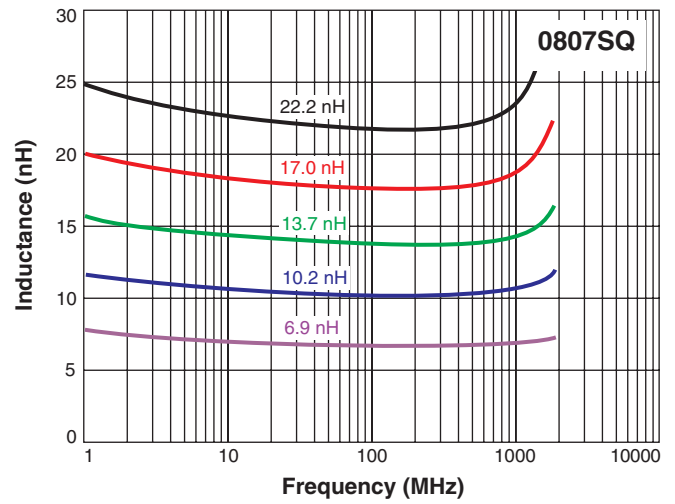
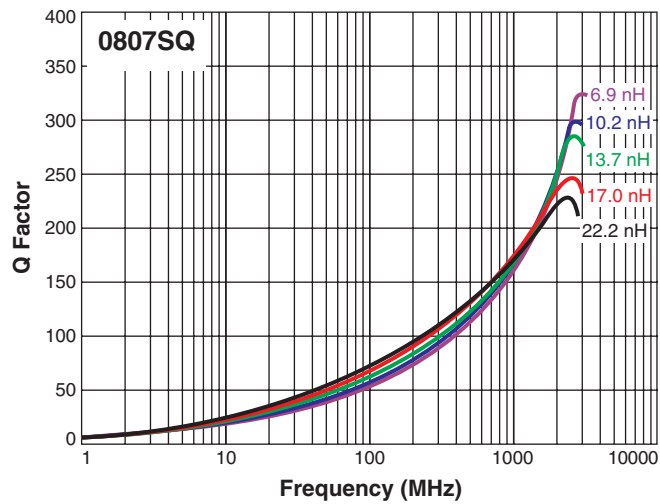
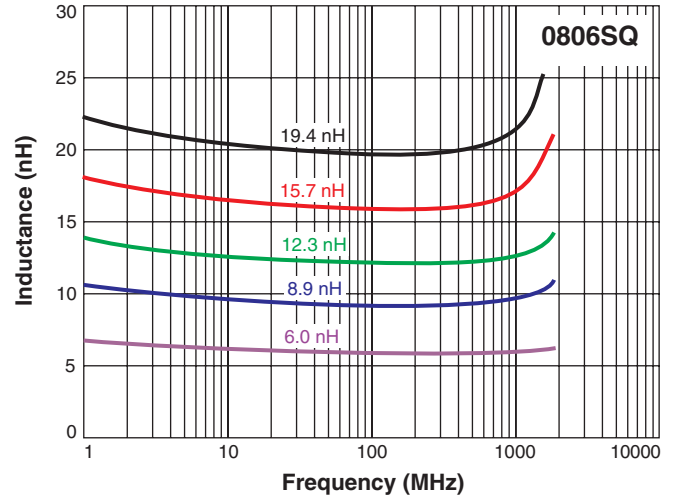


# Square Air Core Inductors

## Typical Q vs Frequency



## Typical L vs Frequency



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[0807SQ-14NJLB](#) [0806SQ-5N5GLB](#) [0908SQ-12NJLB](#) [0806SQ-16NJLB](#) [0908SQ-25NJLB](#) [0806SQ-5N5JLC](#) [0807SQ-](#)  
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