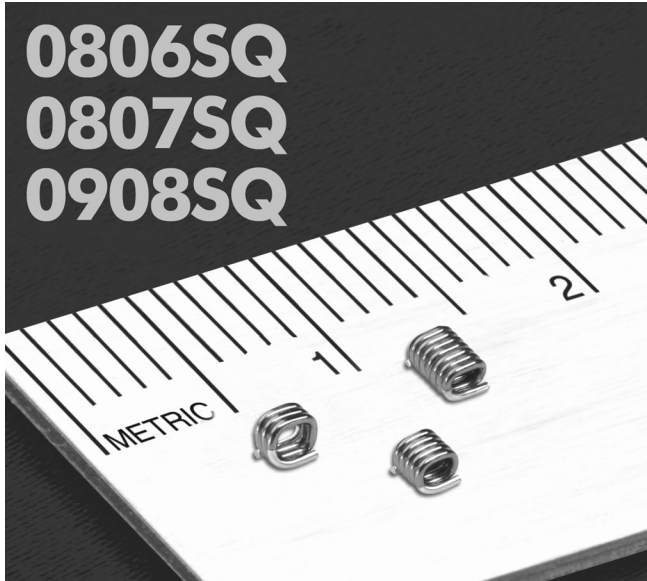




# Square Air Core Inductors



- 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**  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  with Irms current

**Maximum part temperature**  $+145^{\circ}\text{C}$  (ambient + temp rise).

**Storage temperature** Component:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

Tape and reel packaging:  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$

**Resistance to soldering heat** Max three 40 second reflows at  $+260^{\circ}\text{C}$ , parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)**  $+5$  to  $+70$  ppm/ $^{\circ}\text{C}$

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 85% relative humidity)

**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  
**S** = non-RoHS tin-lead (63/37) over copper.

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape. Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**B** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

**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 CCF1142 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.

**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
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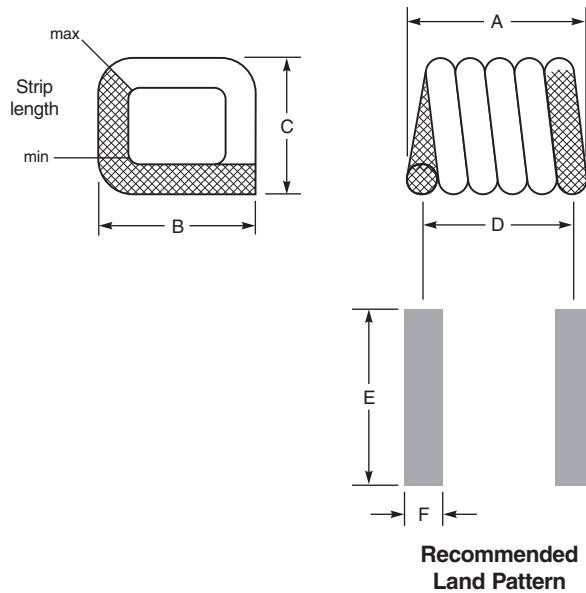
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# Square Air Core Inductors



**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 ±0,203	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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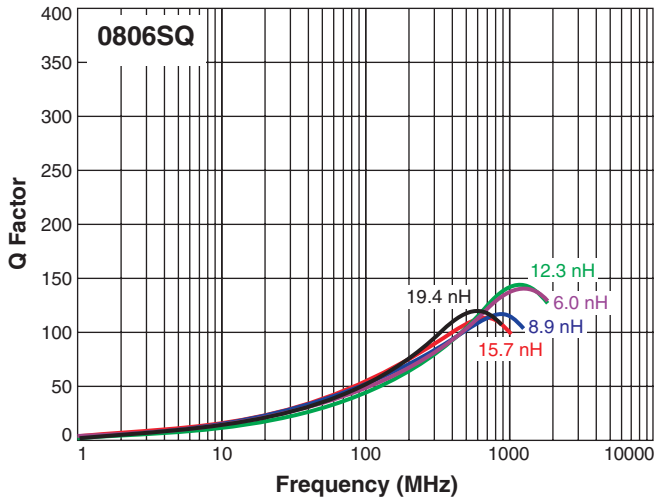
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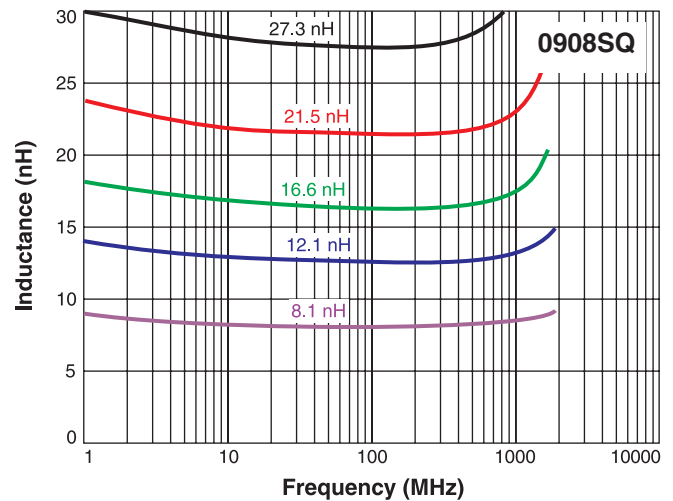
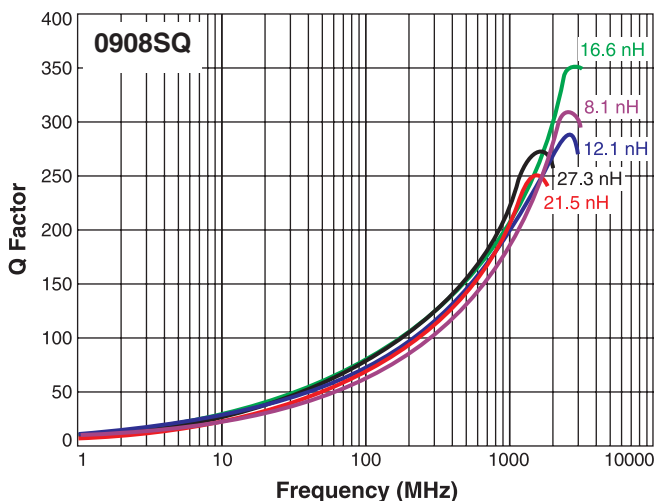
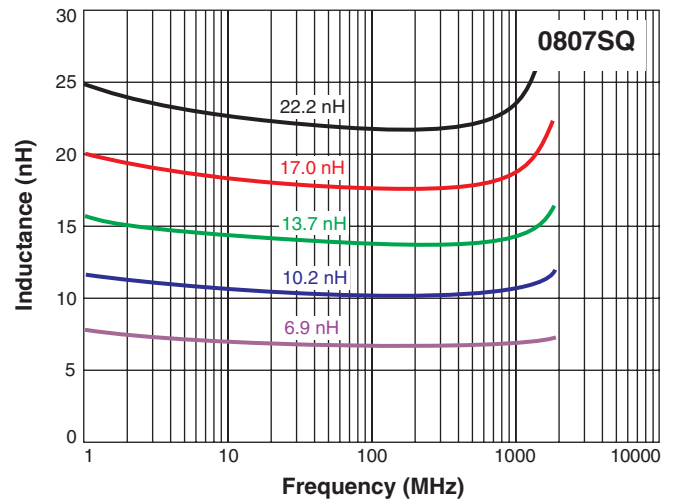
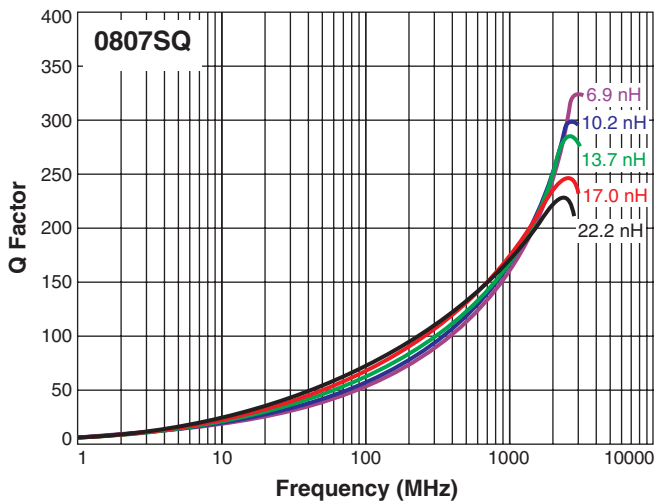
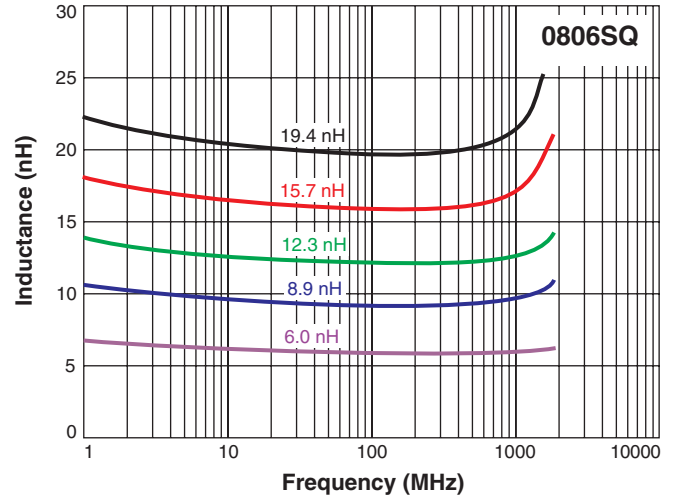


# Square Air Core Inductors

## Typical Q vs Frequency



## Typical L vs Frequency



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