

# Square Air Coil 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  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  with Irms current,  $+125^{\circ}\text{C}$  to  $+145^{\circ}\text{C}$  with derated current

Storage temperature Component:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .  
Tape and reel packaging:  $-40^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$

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)

Mean Time Between Failures (MTBF) 1 billion hours

PCB washing Tested with pure water or alcohol only. For other solvents, 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)
SMT0806-5N5-L	5.5	<b>5,2</b>	60	4.9	3.4	2.9
SMT0806-6N0-L	6.0	<b>5,2</b>	64	5.2	6.0	2.9
SMT0806-8N9-L	8.9	<b>5,2</b>	90	4.3	7.0	2.9
SMT0806-12N-L	12.3	<b>5,2</b>	90	4.8	8.0	2.9
SMT0806-16N-L	15.7	<b>5,2</b>	90	4.4	9.0	2.9
SMT0806-19N-L	19.4	<b>5,2</b>	90	4.0	10.0	2.9
SMT0807-6N9-L	6.9	<b>5,2</b>	100	4.6	6.0	2.7
SMT0807-10N-L	10.2	<b>5,2</b>	100	4.0	7.0	2.7
SMT0807-11N-L	11.2	<b>5,2</b>	90	3.6	6.3	2.7
SMT0807-14N-L	13.7	<b>5,2</b>	100	4.3	8.0	2.7
SMT0807-17N-L	17.0	<b>5,2</b>	100	4.0	9.0	2.7
SMT0807-22N-L	22.0	<b>5,2</b>	100	3.5	10.0	2.7
SMT0908-8N1-L	8.1	<b>5,2</b>	130	5.2	6.0	4.4
SMT0908-12N-L	12.1	<b>5,2</b>	130	4.3	7.0	4.4
SMT0908-14N-L	14.7	<b>5,2</b>	90	3.0	7.2	4.4
SMT0908-17N-L	16.6	<b>5,2</b>	130	3.4	8.0	4.4
SMT0908-22N-L	21.5	<b>5,2</b>	130	3.7	9.0	4.4
SMT0908-23N-L	23.0	<b>5,2</b>	120	2.6	10.0	4.4
SMT0908-25N-L	25.0	<b>5,2</b>	130	2.5	10.0	4.4
SMT0908-27N-L	27.3	<b>5,2</b>	130	3.2	10.0	4.4

1. Please specify tolerance, termination and packaging codes:

SMT0908-27N-L

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

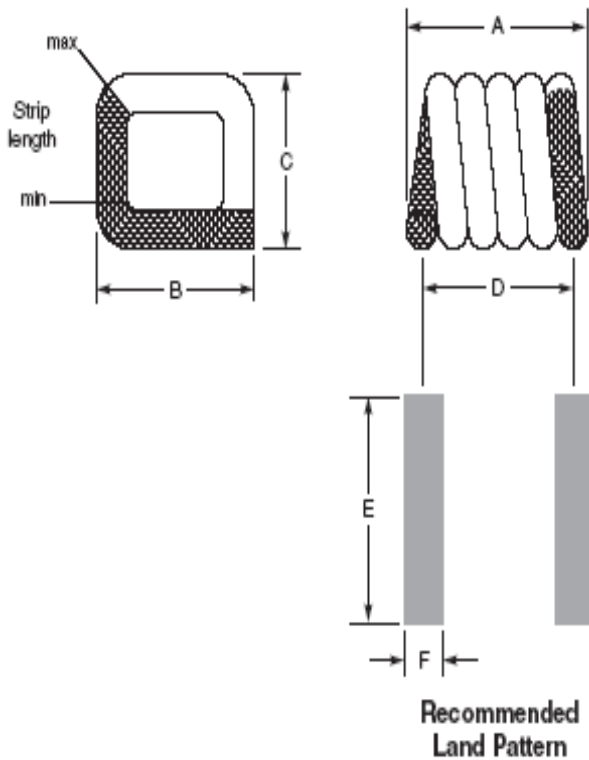
5. SRF measured using an Agilent/HP 8753 network analyzer and a Coilcraft SMD-D test fixture.

6. Current that causes a 20°C temperature rise from 25°C ambient.

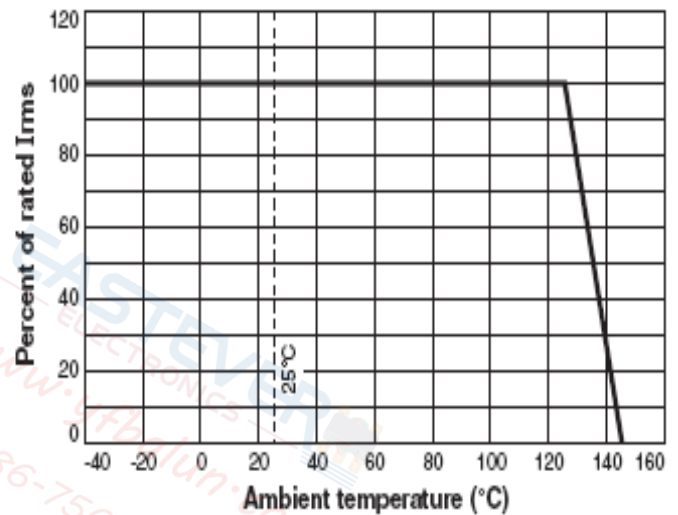
7. Electrical specifications at 25°C.

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

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## Irms Derating



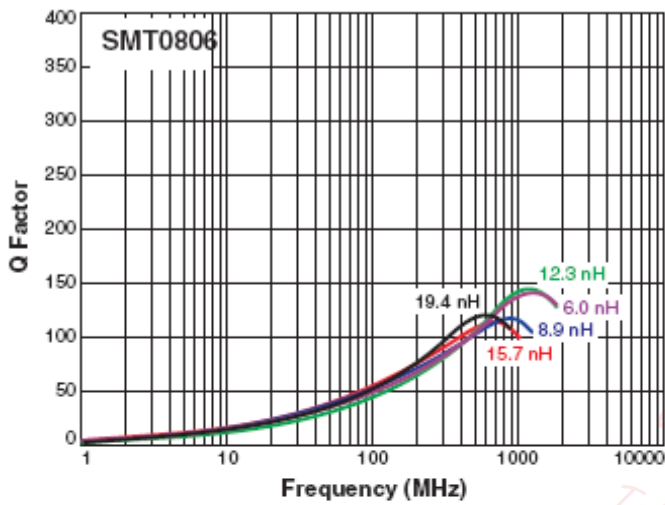
Packaging 2000/7" reel; 7500/13" reel  
Plastic tape: 12 mm wide, 0.254 mm thick, 4 mm pocket spacing

Part number	A	B	C	D	E	F	Weight (mg)	Tape pocket depth (mm)
SMT0906-5N5	1,346 ±0,102	1,829 ±0,254	1,397 ±0,102	0,962	2,6	0,51	9,9	1,42
SMT0906-6N0	1,295 ±0,102	1,829 ±0,254	1,397 ±0,102	1,02	2,6	0,51	8,5	1,42
SMT0906-8N9	1,626 ±0,152	1,829 ±0,254	1,397 ±0,102	1,32	2,6	0,51	10,8	1,55
SMT0906-12N	1,930 ±0,152	1,829 ±0,254	1,397 ±0,102	1,63	2,6	0,51	13,6	1,52
SMT0906-16N	2,286 ±0,152	1,829 ±0,254	1,397 ±0,102	1,96	2,6	0,51	16,1	1,50
SMT0906-19N	2,591 ±0,152	1,829 ±0,254	1,397 ±0,102	2,29	2,6	0,51	18,7	1,55
SMT0907-6N9	1,295 ±0,102	1,829 ±0,254	1,524 ±0,254	1,02	2,6	0,51	9,1	1,60
SMT0907-10N	1,626 ±0,152	1,829 ±0,254	1,524 ±0,254	1,32	2,6	0,51	11,5	1,57
SMT0907-11N	1,549 ±0,152	1,829 ±0,254	1,524 ±0,254	1,24	2,6	0,51	11,5	1,55
SMT0907-14N	1,930 ±0,152	1,829 ±0,254	1,524 ±0,254	1,63	2,6	0,51	14,0	1,60
SMT0907-17N	2,286 ±0,152	1,829 ±0,254	1,524 ±0,254	1,96	2,6	0,51	16,8	1,68
SMT0907-22N	2,591 ±0,152	1,829 ±0,254	1,524 ±0,254	2,29	2,6	0,51	19,4	1,68
SMT0908-8N1	1,473 ±0,152	2,134 ±0,152	1,829 ±0,203	1,12	2,8	0,64	12,8	2,01
SMT0908-12N	1,854 ±0,152	2,134 ±0,152	1,829 ±0,203	1,45	2,8	0,64	16,9	1,96
SMT0908-14N	1,549 ±0,152	2,134 ±0,152	1,829 ±0,203	1,24	2,8	0,64	13,5	1,52
SMT0908-17N	2,210 ±0,152	2,134 ±0,152	1,829 ±0,203	1,83	2,8	0,64	21,1	2,01
SMT0908-22N	2,565 ±0,152	2,134 ±0,152	1,829 ±0,203	2,18	2,8	0,64	24,7	1,98
SMT0908-23N	2,235 ±0,152	2,134 ±0,152	1,829 ±0,203	1,90	2,8	0,64	19,2	1,98
SMT0908-25N	2,972 ±0,152	2,134 ±0,152	1,829 ±0,203	2,57	2,8	0,64	27,6	2,01
SMT0908-27N	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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### Typical Q vs Frequency



### Typical L vs Frequency

