### Square Air Core Inductors

#### Part number | Inductance (nH) | % tol | Q typ | SRF typ (GHz) | DCR max (mOhm) | I rms (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

- 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

**Designers’ Kit C424** contains 10 each of all 5% values; **Designers’ 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 20 second refloows 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

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.

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

6. **I rms** measured using an Agilent/HP 4291A impedance analyzer.

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

8. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
Square Air Coil Inductors

Recommended Land Pattern

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

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<th>A ±0.102</th>
<th>B ±0.254</th>
<th>C ±0.102</th>
<th>D ±0.254</th>
<th>E (mm)</th>
<th>F (mm)</th>
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</table>

All dimensions are in mm.

Irms Derating

Ambient temperature (°C)

Percent of rated Irms

25°C Irms Derating
Square Air Coil Inductors

Typical Q vs Frequency

Typical L vs Frequency