

Low Profile Mini Spring™ Inductors



- Only 2 mm tall
- High Q over a wide range of frequencies
- Low DCR and excellent current handling capability

Designer's Kit C394 contains 10 samples each 5% part
Designer's Kit C394-2 contains 10 samples each 2% part

Terminations RoHS compliant tin-silver over copper. Other terminations available at additional cost.

Weight 48 – 130 g

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

Maximum part temperature +140°C (ambient + temp rise).

Storage temperature Component: –40°C to +140°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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging 1000/7" reel; 3500/13" reel Plastic tape: 2 mm wide, 0.23 mm thick, 8 mm pocket spacing, 2.2 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

| Part number ¹ | Turns | Inductance ² (nH) | Percent tol ³ | Q ² min | SRF min ⁴ (GHz) | DCR max ⁵ (mOhm) | Irms ⁶ (A) | Wt (mg) |
|--------------------------|-------|------------------------------|--------------------------|--------------------|----------------------------|-----------------------------|-----------------------|---------|
| 1508-5N5_L_ | 3 | 5.5 | 5,2 | 115 | 5.0 | 2.6 | 4.0 | 52 |
| 1508-9N0_L_ | 4 | 9.0 | 5,2 | 120 | 4.0 | 3.4 | 4.0 | 65 |
| 1508-13N_L_ | 5 | 13.0 | 5,2 | 100 | 3.0 | 3.9 | 4.0 | 78 |
| 2508-16N_L_ | 7 | 16.0 | 5,2 | 110 | 3.0 | 5.2 | 4.0 | 110 |
| 2508-18N_L_ | 8 | 18.0 | 5,2 | 110 | 2.9 | 6.0 | 4.0 | 118 |
| 2508-23N_L_ | 9 | 23.0 | 5,2 | 110 | 2.6 | 6.8 | 4.0 | 133 |
| 2508-27N_L_ | 10 | 27.0 | 5,2 | 110 | 2.3 | 7.9 | 4.0 | 147 |

1. Specify **tolerance, termination and packaging** codes:

2508-27NJLC

Tolerance: G = 2% J = 5%

Termination: L = RoHS compliant tin-silver (96.5/3.5) over copper.

Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (1000 parts per full reel).

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 (3500 parts per full reel).

2. L and Q measured at 250 MHz, 0.1 Vrms, 0 A using an Agilent/HP 4291A impedance analyzer with an Agilent/HP 16193A test fixture.

3. Tolerances in bold are stocked for immediate shipment.

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

5. DCR measured using a micro-ohmmeter.

6. Current that causes a 15°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.

S-Parameter files
ON OUR WEB SITE

SPICE models
ON OUR WEB SITE



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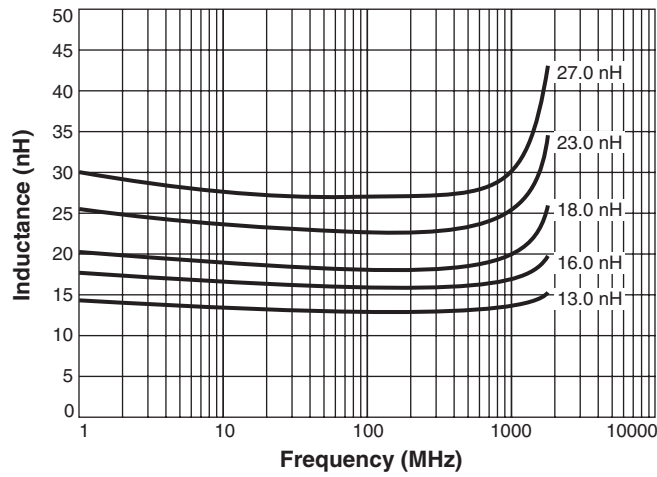
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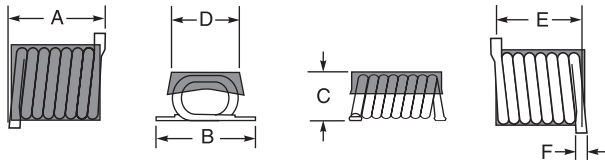
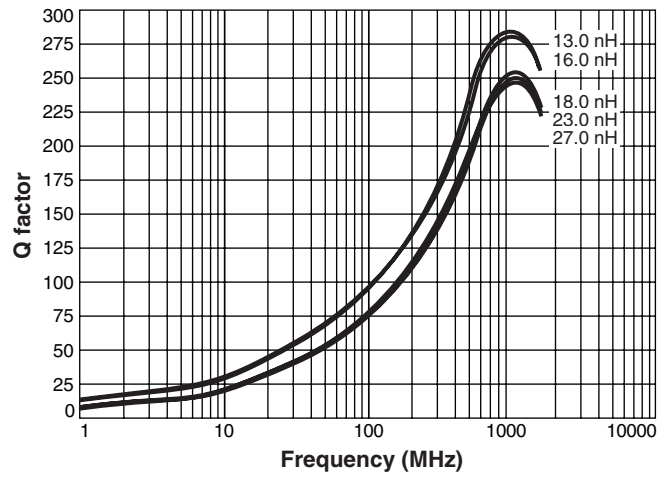


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Typical L vs Frequency

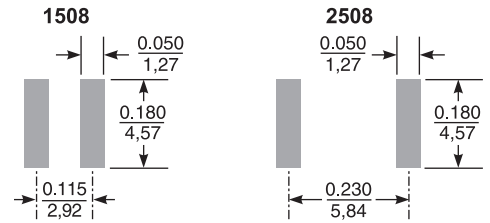


Typical Q vs Frequency

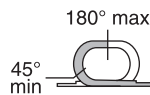


| Size | A max | B max | C max | D | E | F max |
|------|---------------|---------------|---------------|---------------|----------------------------|---------------|
| 1508 | 0.155 3,94 | 0.165 4,19 | 0.079 2,01 | 0.135 3,43 | 0.115 ±0.015 2,92 ±0,38 | 0.029 0,74 |
| 2508 | 0.270 6,86 | 0.165 4,19 | 0.079 2,01 | 0.135 3,43 | 0.230 ±0.015 5,84 ±0,38 | 0.029 0,74 |

Recommended Land Patterns



Strip Length



Dimensions are in $\frac{\text{inches}}{\text{mm}}$



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