

# 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)**

0.22 per billion hours / 4.545E+09 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 <sup>1</sup>	Turns	Inductance <sup>2</sup> (nH)	Percent tol <sup>3</sup>	Q <sup>2</sup> min	SRF min <sup>4</sup> (GHz)	DCR max <sup>5</sup> (mOhm)	Irms <sup>6</sup> (A)	Wt (mg)
1508-5N5_L_	3	5.5	<b>5,2</b>	115	5.0	2.6	4.0	52
1508-9N0_L_	4	9.0	<b>5,2</b>	120	4.0	3.4	4.0	65
1508-13N_L_	5	13.0	<b>5,2</b>	100	3.0	3.9	4.0	78
2508-16N_L_	7	16.0	<b>5,2</b>	110	3.0	5.2	4.0	110
2508-18N_L_	8	18.0	<b>5,2</b>	110	2.9	6.0	4.0	118
2508-23N_L_	9	23.0	<b>5,2</b>	110	2.6	6.8	4.0	133
2508-27N_L_	10	27.0	<b>5,2</b>	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). 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 (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



www.coilcraft.com

**US** +1-847-639-6400 sales@coilcraft.com

**UK** +44-1236-730595 sales@coilcraft-europe.com

**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw

**China** +86-21-6218 8074 sales@coilcraft.com.cn

**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

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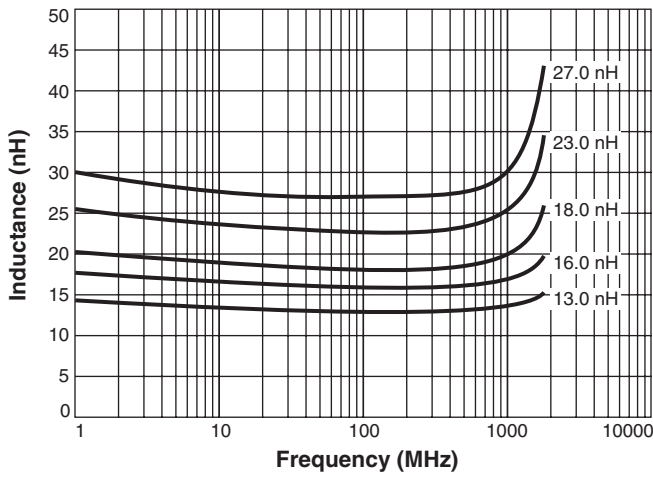
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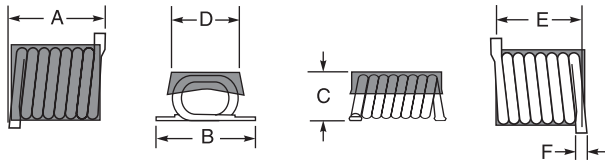
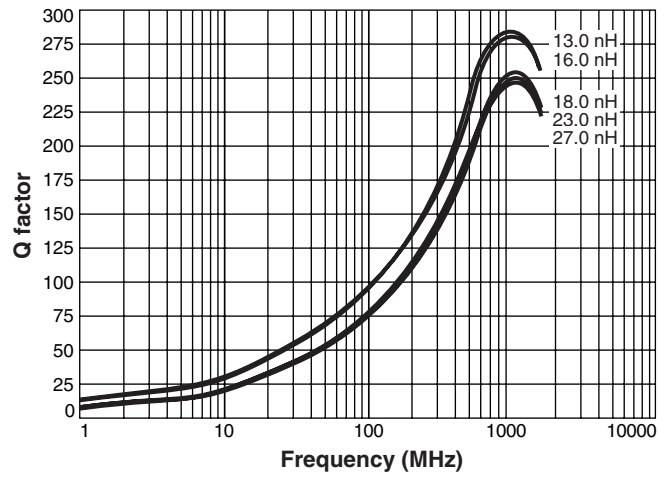


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## Typical L vs Frequency

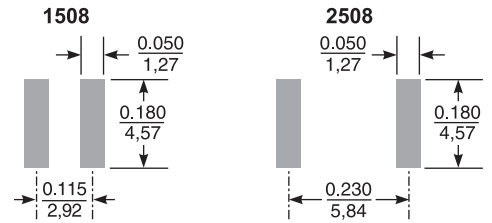


## Typical Q vs Frequency

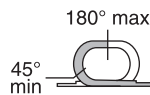


Size	A max	B max	C max	D	E	F max
1508	0.155 3,94	0.165 4,19	0.079 2,01	0.135 3,43	0.115 ±0.015 2,92 ±0,38	0.029 0,74
2508	0.270 6,86	0.165 4,19	0.079 2,01	0.135 3,43	0.230 ±0.015 5,84 ±0,38	0.029 0,74

### Recommended Land Patterns



### Strip Length



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



**US** +1-847-639-6400 sales@coilcraft.com  
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**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

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