



# 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, +125°C to +140°C with derated current

**Storage temperature** Component: –40°C to +140°C.  
 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** Only pure water or alcohol recommended

Part number <sup>1</sup>	Turns	L <sup>2</sup> (nH)	% 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:

2508-27N**J**L**C**

**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.

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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Document 404-1 Revised 10/03/11

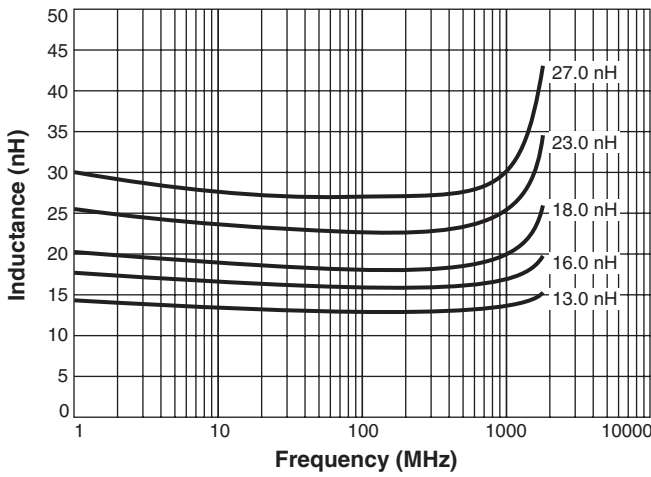
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

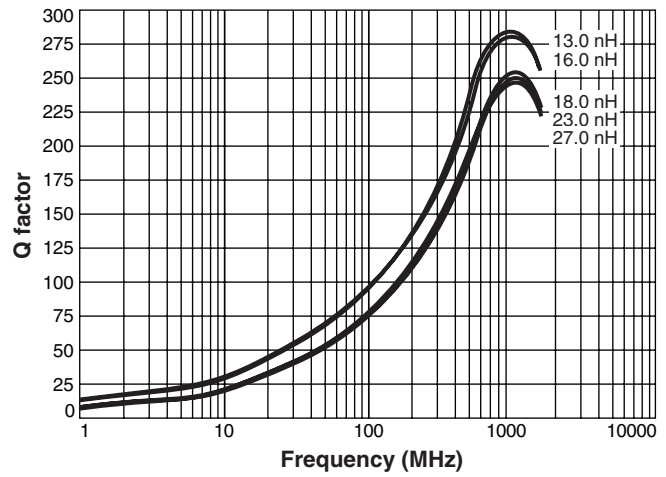


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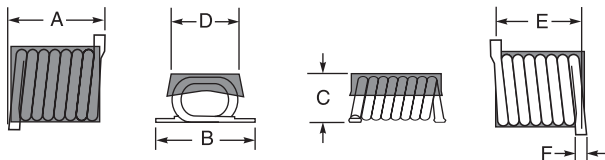
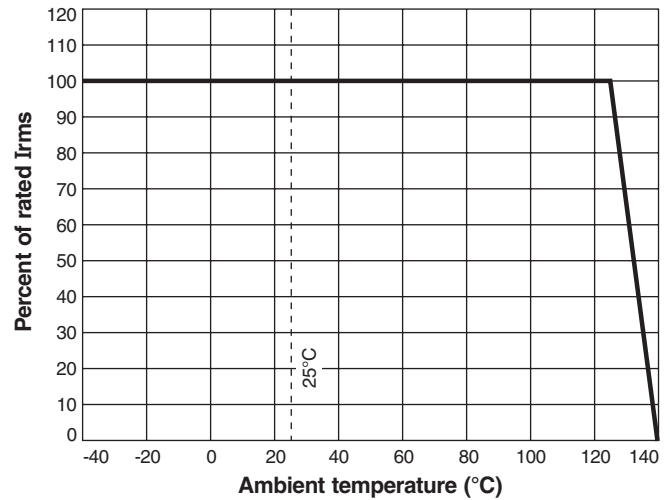
## Typical L vs Frequency



## Typical Q vs Frequency

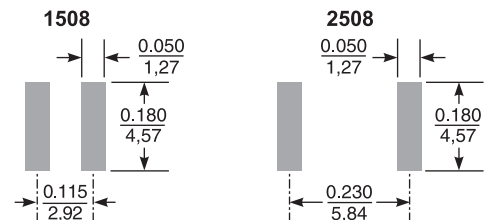


## Irms Derating

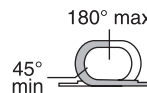


Size	A max	B max	C max	D	E	F max
1508	0.155 3,94	0.165 4,19	0.079 2,01	0.135 3,43	0.115 ±0.015 2,92 ±0,38	0.029 0,74
2508	0.270 6,86	0.165 4,19	0.079 2,01	0.135 3,43	0.230 ±0.015 5,84 ±0,38	0.029 0,74

## Recommended Land Patterns



## Strip Length



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



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Document 404-2 Revised 12/05/08  
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