



# Chip Inductors – 1008AF Series (2520)

- Lowest DCR and highest current rating of our 1008 size inductors
- Available in 14 inductance values from 0.9 to 10  $\mu$ H.

Request free evaluation samples by contacting Coilcraft or visiting [www.coilcraft.com](http://www.coilcraft.com).

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>( $\mu$ H) | Percent tolerance <sup>3</sup> | Q typ <sup>4</sup> | SRF min <sup>5</sup><br>(MHz) | DCR max <sup>6</sup><br>(Ohms) | Isat <sup>7</sup><br>(A) | Irms <sup>8</sup><br>(A) |
|--------------------------|---------------------------------------|--------------------------------|--------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|
| 1008AF-901X_L_           | 0.9                                   | <b>10,5</b>                    | 25                 | 415                           | 0.100                          | 1.4                      | 1.3                      |
| 1008AF-112X_L_           | 1.1                                   | <b>10,5</b>                    | 24                 | 376                           | 0.105                          | 1.3                      | 1.2                      |
| 1008AF-132X_L_           | 1.3                                   | <b>10,5</b>                    | 37                 | 198                           | 0.110                          | 1.2                      | 1.1                      |
| 1008AF-152X_L_           | 1.5                                   | <b>10,5</b>                    | 22                 | 135                           | 0.125                          | 1.1                      | 1.0                      |
| 1008AF-192X_L_           | 1.9                                   | <b>10,5</b>                    | 29                 | 126                           | 0.140                          | 1.0                      | 1.0                      |
| 1008AF-222X_L_           | 2.2                                   | <b>10,5</b>                    | 21                 | 106                           | 0.155                          | 0.95                     | 0.95                     |
| 1008AF-272X_L_           | 2.7                                   | <b>10,5</b>                    | 22                 | 70                            | 0.190                          | 0.80                     | 0.90                     |
| 1008AF-332X_L_           | 3.3                                   | <b>10,5</b>                    | 21                 | 59                            | 0.210                          | 0.75                     | 0.80                     |
| 1008AF-392X_L_           | 3.9                                   | <b>10,5</b>                    | 21                 | 55                            | 0.220                          | 0.70                     | 0.80                     |
| 1008AF-472X_L_           | 4.7                                   | <b>10,5</b>                    | 27                 | 48                            | 0.435                          | 0.70                     | 0.65                     |
| 1008AF-582X_L_           | 5.8                                   | <b>10,5</b>                    | 21                 | 37                            | 0.280                          | 0.55                     | 0.75                     |
| 1008AF-682X_L_           | 6.8                                   | <b>10,5</b>                    | 20                 | 33                            | 0.315                          | 0.50                     | 0.70                     |
| 1008AF-822X_L_           | 8.2                                   | <b>10,5</b>                    | 20                 | 34                            | 0.395                          | 0.50                     | 0.65                     |
| 1008AF-103X_L_           | 10.0                                  | <b>10,5</b>                    | 22                 | 26                            | 0.480                          | 0.45                     | 0.55                     |

1. When ordering, specify **tolerance, termination and packaging** codes:

1008AF-103X J L C

**Tolerance:** J = 5% K = 10%

(Table shows stock tolerances in bold.)

**Termination:** L = RoHS compliant silver-palladium-platinum-glass frit.  
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 (2000 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 (7500 parts per full reel).

2. Inductance measured at 2.5 MHz using Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
3. Tolerances in bold are stocked for immediate shipment.
4. Q measured at 2.5 MHz using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
5. SRF measured using an Agilent/HP 8753D network analyzer with a Coilcraft SMD-D fixture.
6. DCR measured on a Cambridge Technology Micro-ohmmeter.
7. DC current at which the inductance drops 10% (typ.) from its value without current.
8. Current that causes a 40°C temperature rise from 25°C ambient.
9. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.  
For part marking data, see Color Coding section.

**Designer's Kit C414** contains 10 of each 5% value

**Core material** Ferrite

**Terminations** RoHS compliant silver-palladium-platinum-glass frit.  
Other terminations available at additional cost.

**Weight** 28 – 33 mg

**Ambient temperature** –40°C to +85°C with Irms current, +85°C to +125°C with derated current

**Storage temperature** Component: –40°C to +125°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)** +100 to +350 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** 2000 per 7" reel; 7500 per 13" reel

Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing,  
2.0 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE INDEX **TEST FIXTURES**

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.  
Please check our website for latest information.

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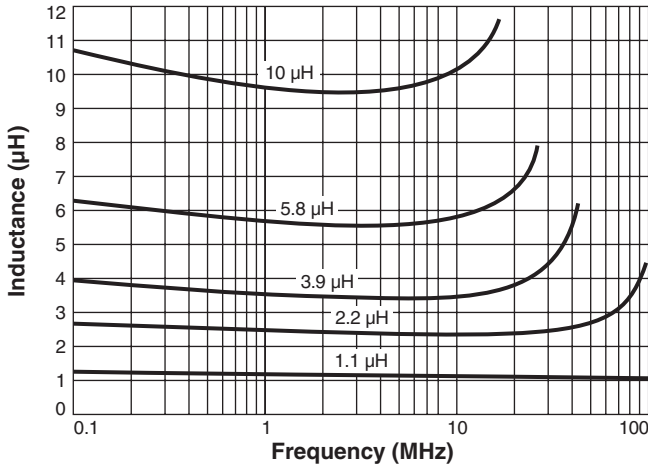
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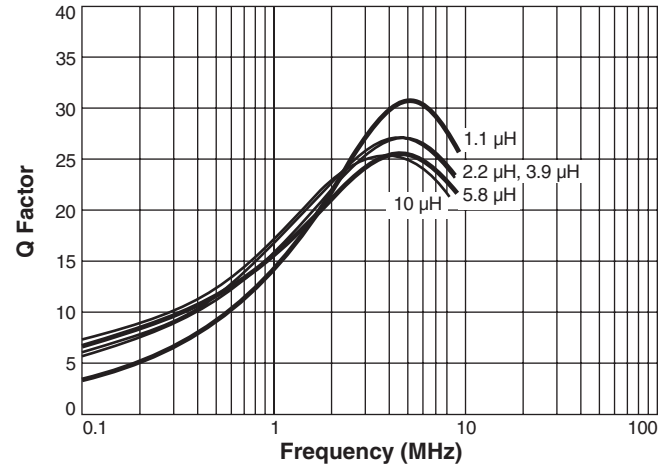


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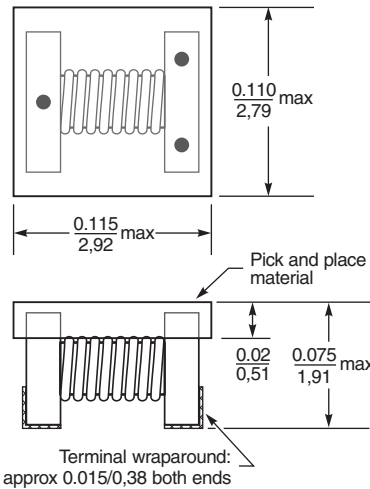
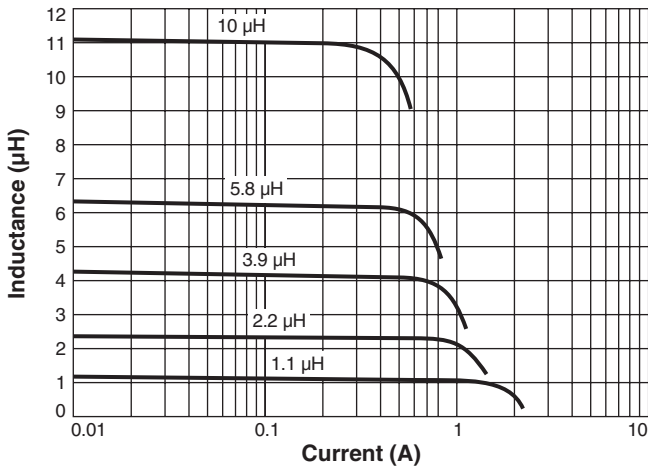
## Typical L vs Frequency



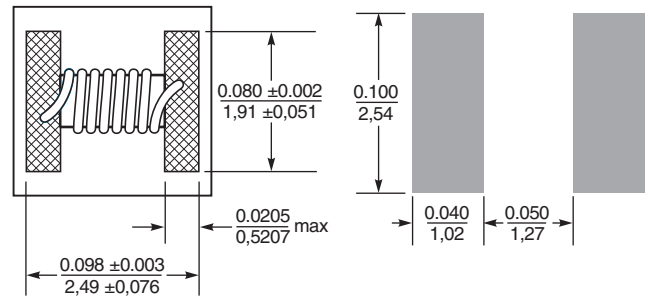
## Typical Q vs Frequency



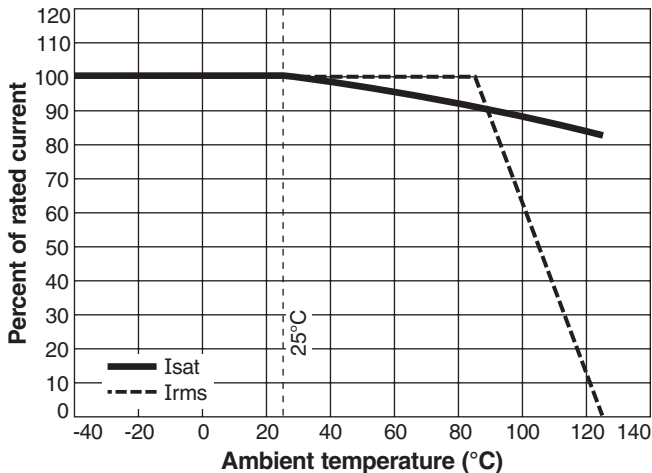
## Typical L vs Current



### Recommended Land Pattern



## Typical Current Derating



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