



# Chip Inductor – 1008HT Series (2520)

- Low-profile inductors are 60% the height of our other 1008 size parts.
- They feature high SRFs and very high Q factors.

Coilcraft **Designer's Kit C322** contains samples of all 5% inductance tolerance parts. To order, please contact Coilcraft or order on-line at <http://order.coilcraft.com>.

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>(nH) | Percent tolerance <sup>3</sup> | Q min <sup>4</sup> | SRF min <sup>5</sup><br>(MHz) | DCR max <sup>6</sup><br>(Ohms) | Irms <sup>7</sup><br>(mA) |
|--------------------------|---------------------------------|--------------------------------|--------------------|-------------------------------|--------------------------------|---------------------------|
| 1008HT-3N3T_L_           | 3.3 @ 250 MHz                   | <b>5</b>                       | 65 @ 1500 MHz      | 7900                          | 0.025                          | 1000                      |
| 1008HT-6N8T_L_           | 6.8 @ 250 MHz                   | <b>5</b>                       | 70 @ 1500 MHz      | 5500                          | 0.05                           | 1000                      |
| 1008HT-7N2T_L_           | 7.2 @ 250 MHz                   | <b>5</b>                       | 70 @ 1500 MHz      | 4800                          | 0.05                           | 1000                      |
| 1008HT-12NT_L_           | 12 @ 250 MHz                    | <b>5</b>                       | 55 @ 700 MHz       | 3800                          | 0.065                          | 1000                      |
| 1008HT-15NT_L_           | 15 @ 250 MHz                    | <b>5</b>                       | 55 @ 700 MHz       | 2800                          | 0.08                           | 1000                      |
| 1008HT-18NT_L_           | 18 @ 250 MHz                    | <b>5</b>                       | 55 @ 500 MHz       | 3000                          | 0.09                           | 1000                      |
| 1008HT-22NT_L_           | 22 @ 250 MHz                    | <b>5</b>                       | 55 @ 500 MHz       | 2600                          | 0.11                           | 950                       |
| 1008HT-27NT_L_           | 27 @ 250 MHz                    | <b>5,2</b>                     | 55 @ 500 MHz       | 2400                          | 0.13                           | 850                       |
| 1008HT-33NT_L_           | 33 @ 200 MHz                    | <b>5,2</b>                     | 55 @ 350 MHz       | 2000                          | 0.135                          | 760                       |
| 1008HT-39NT_L_           | 39 @ 200 MHz                    | <b>5,2</b>                     | 55 @ 350 MHz       | 1900                          | 0.17                           | 700                       |
| 1008HT-47NT_L_           | 47 @ 200 MHz                    | <b>5,2,1</b>                   | 55 @ 350 MHz       | 1500                          | 0.18                           | 660                       |
| 1008HT-56NT_L_           | 56 @ 150 MHz                    | <b>5,2,1</b>                   | 50 @ 300 MHz       | 1500                          | 0.18                           | 620                       |
| 1008HT-68NT_L_           | 68 @ 150 MHz                    | <b>5,2,1</b>                   | 50 @ 300 MHz       | 1500                          | 0.23                           | 550                       |
| 1008HT-82NT_L_           | 82 @ 150 MHz                    | <b>5,2,1</b>                   | 40 @ 250 MHz       | 1300                          | 0.35                           | 500                       |
| 1008HT-R10T_L_           | 100 @ 100 MHz                   | <b>5,2,1</b>                   | 40 @ 250 MHz       | 1200                          | 0.64                           | 420                       |
| 1008HT-R12T_L_           | 120 @ 100 MHz                   | <b>5,2,1</b>                   | 40 @ 200 MHz       | 1090                          | 0.55                           | 350                       |
| 1008HT-R14T_L_           | 140 @ 100 MHz                   | <b>5,2,1</b>                   | 40 @ 200 MHz       | 1100                          | 0.70                           | 320                       |
| 1008HT-R15T_L_           | 150 @ 100 MHz                   | <b>5,2,1</b>                   | 40 @ 200 MHz       | 960                           | 0.75                           | 300                       |
| 1008HT-R18T_L_           | 180 @ 50 MHz                    | <b>5,2,1</b>                   | 40 @ 200 MHz       | 920                           | 1.02                           | 250                       |
| 1008HT-R22T_L_           | 220 @ 50 MHz                    | <b>5,2,1</b>                   | 34 @ 100 MHz       | 750                           | 1.15                           | 250                       |
| 1008HT-R24T_L_           | 240 @ 50 MHz                    | <b>5,2</b>                     | 32 @ 100 MHz       | 800                           | 1.15                           | 250                       |
| 1008HT-R27T_L_           | 270 @ 50 MHz                    | <b>5,2</b>                     | 32 @ 100 MHz       | 770                           | 1.25                           | 250                       |
| 1008HT-R33T_L_           | 330 @ 25 MHz                    | <b>5,2</b>                     | 32 @ 100 MHz       | 635                           | 1.35                           | 250                       |
| 1008HT-R39T_L_           | 390 @ 25 MHz                    | <b>5,2</b>                     | 32 @ 100 MHz       | 555                           | 1.45                           | 250                       |
| 1008HT-R47T_L_           | 470 @ 25 MHz                    | <b>5,2</b>                     | 32 @ 100 MHz       | 530                           | 1.65                           | 240                       |
| 1008HT-R56T_L_           | 560 @ 25 MHz                    | <b>5,2</b>                     | 32 @ 100 MHz       | 485                           | 1.90                           | 240                       |

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

1008HT-R56T J L C

**Tolerance:** F = 1% G = 2% J = 5%

(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 (7500 parts per full reel).

2. Inductance measured using a 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 using an Agilent/HP 4291A with an Agilent/HP 16193 test  
fixture.

5. SRF measured using an Agilent/HP 8720D network analyzer and a  
Coilcraft SMD-D test fixture.

6. DCR measured on a Cambridge Technology micro-ohmmeter and a  
Coilcraft CCF840 test fixture.

7. Current that causes a 15°C temperature rise from 25°C ambient.

8. Electrical specifications at 25°C.

See Color Coding section for part marking data.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**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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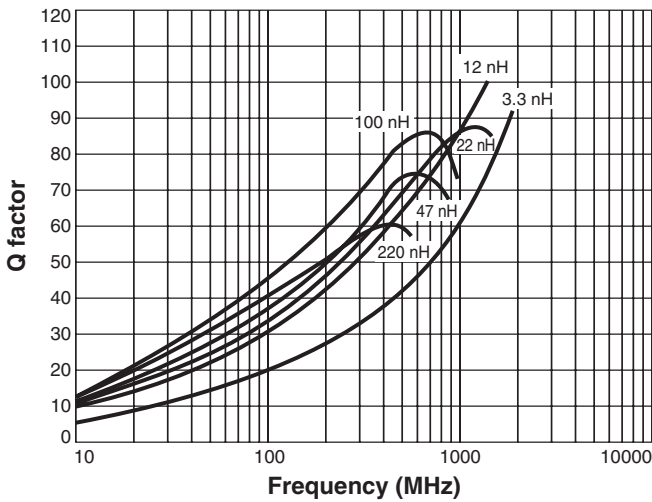
E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>



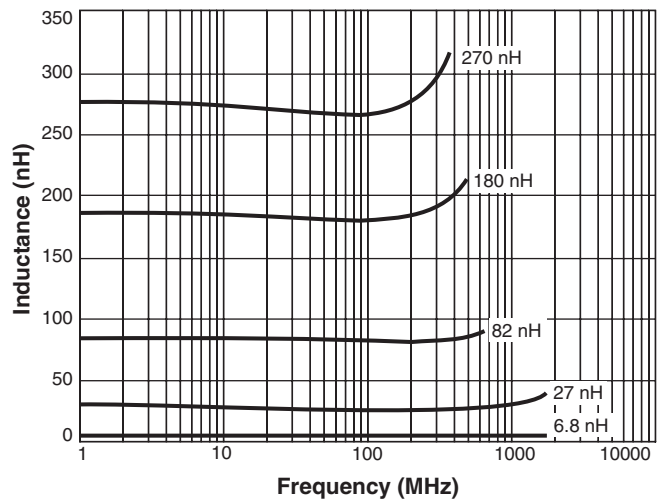
# Chip Inductor – 1008HT Series (2520)

**S-Parameter files**  
ON OUR WEB SITE OR CD  
**SPICE models**  
ON OUR WEB SITE OR CD

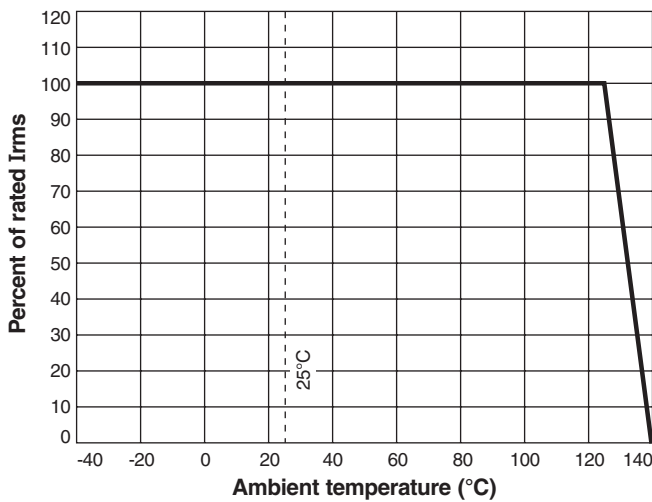
## Typical Q vs Frequency



## Typical L vs Frequency



## Irms Derating



**Core material** Ceramic

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

**Weight** 16.0 – 17.6 mg

**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

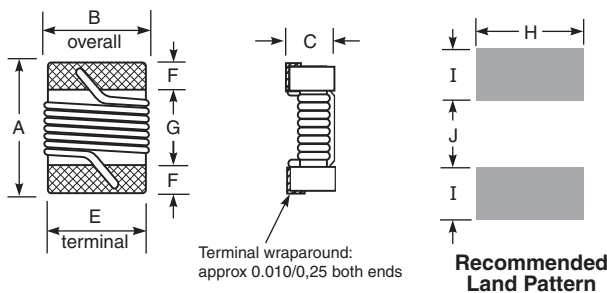
**Temperature Coefficient of Inductance (TCL)** +25 to +125 ppm/°C

**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** 2000/7" reel; 7500/13" reel Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.14 mm pocket depth

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



| A     | B     | C     | E     | F     | G     | H     | I     | J     |        |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| max   | max   | max   |       |       |       |       |       |       | inches |
| 0.105 | 0.095 | 0.045 | 0.080 | 0.020 | 0.060 | 0.100 | 0.040 | 0.050 |        |
| 2,67  | 2,41  | 1,14  | 2,03  | 0,51  | 1,52  | 2,54  | 1,02  | 1,27  | mm     |



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Please check our website for latest information.

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