



# Chip Inductors– 1008HQ (2520)

- Highest Q factors of any Coilcraft chip this body size, roughly 20% higher than our popular 1008CS and HS parts.
- Exceptional SRFs, tight tolerance and batch consistency

Coilcraft **Designer's Kit C323** contains samples of all 5% inductance tolerance parts. Kits with 2% tolerance are also available. To order, contact Coilcraft or purchase on-line at <http://order.coilcraft.com>.

| Part number <sup>1</sup> | Inductance <sup>3</sup><br>(nH) | Percent tolerance <sup>4</sup> | Q min <sup>5</sup> | SRF min <sup>6</sup><br>(GHz) | DCR max <sup>7</sup><br>(Ohms) | Irms <sup>8</sup><br>(A) |
|--------------------------|---------------------------------|--------------------------------|--------------------|-------------------------------|--------------------------------|--------------------------|
| 1008HQ-3N0X_L_2          | 3.0 @ 50 MHz                    | <b>5</b>                       | 70 @ 1500 MHz      | 8.10                          | 0.04                           | 1.6                      |
| 1008HQ-4N1X_L_           | 4.1 @ 50 MHz                    | <b>5</b>                       | 75 @ 1500 MHz      | 6.20                          | 0.05                           | 1.6                      |
| 1008HQ-7N8X_L_2          | 7.8 @ 50 MHz                    | <b>5</b>                       | 75 @ 500 MHz       | 3.80                          | 0.05                           | 1.6                      |
| 1008HQ-10NX_L_           | 10 @ 50 MHz                     | <b>5,2</b>                     | 60 @ 500 MHz       | 3.60                          | 0.06                           | 1.6                      |
| 1008HQ-12NX_L_           | 12 @ 50 MHz                     | <b>5,2</b>                     | 70 @ 500 MHz       | 2.80                          | 0.06                           | 1.5                      |
| 1008HQ-18NX_L_           | 18 @ 50 MHz                     | <b>5,2,1</b>                   | 62 @ 350 MHz       | 2.70                          | 0.07                           | 1.4                      |
| 1008HQ-22NX_L_           | 22 @ 50 MHz                     | <b>5,2</b>                     | 62 @ 350 MHz       | 2.05                          | 0.07                           | 1.4                      |
| 1008HQ-33NX_L_           | 33 @ 50 MHz                     | <b>5,2</b>                     | 75 @ 350 MHz       | 1.70                          | 0.09                           | 1.3                      |
| 1008HQ-36NX_L_           | 36 @ 50 MHz                     | <b>5,2</b>                     | 65 @ 350 MHz       | 1.40                          | 0.09                           | 1.3                      |
| 1008HQ-39NX_L_           | 39 @ 50 MHz                     | <b>5,2</b>                     | 75 @ 350 MHz       | 1.30                          | 0.09                           | 1.3                      |
| 1008HQ-47NX_L_           | 47 @ 50 MHz                     | <b>5,2,1</b>                   | 75 @ 350 MHz       | 1.45                          | 0.12                           | 1.2                      |
| 1008HQ-56NX_L_           | 56 @ 50 MHz                     | <b>5,2,1</b>                   | 75 @ 350 MHz       | 1.23                          | 0.12                           | 1.2                      |
| 1008HQ-68NX_L_           | 68 @ 50 MHz                     | <b>5,2,1</b>                   | 80 @ 350 MHz       | 1.15                          | 0.13                           | 1.1                      |
| 1008HQ-82NX_L_           | 82 @ 50 MHz                     | <b>5,2</b>                     | 80 @ 350 MHz       | 1.06                          | 0.16                           | 1.1                      |
| 1008HQ-R10X_L_           | 100 @ 50 MHz                    | <b>5,2</b>                     | 62 @ 350 MHz       | 0.82                          | 0.16                           | 1.0                      |

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

1008HQ-R10XGLC

**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 Factory order only, not stocked (7500 parts per full reel).

- Part is wound on low profile coilform.
- Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
- Tolerances in bold are stocked for immediate shipment.
- Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
- For SRF less than 6 GHz, measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture. For SRF greater than 6 GHz, measured using an Agilent/HP 8722ES network analyzer and a Coilcraft SMD-D test fixture.
- DCR measured on a Cambridge Technology micro-ohmmeter and a Coilcraft CCF840 test fixture.
- Current that causes a 15°C temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

For part marking data, visit <http://www.coilcraft.com/colrcode.cfm>.

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

**Core material** Ceramic

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

**Weight** 32.4– 35.7 mg; 17.1– 17.7 mg (Low profile parts)

**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. 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)** +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

Standard height parts: Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.8 mm pocket depth

Low profile parts: Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf.



[www.coilcraft.com](http://www.coilcraft.com)

**US** +1-847-639-6400 [sales@coilcraft.com](mailto:sales@coilcraft.com)  
**UK** +44-1236-730595 [sales@coilcraft-europe.com](mailto:sales@coilcraft-europe.com)  
**Taiwan** +886-2-2264 3646 [sales@coilcraft.com.tw](mailto:sales@coilcraft.com.tw)  
**China** +86-21-6218 8074 [sales@coilcraft.com.cn](mailto:sales@coilcraft.com.cn)  
**Singapore** + 65-6484 8412 [sales@coilcraft.com.sg](mailto:sales@coilcraft.com.sg)

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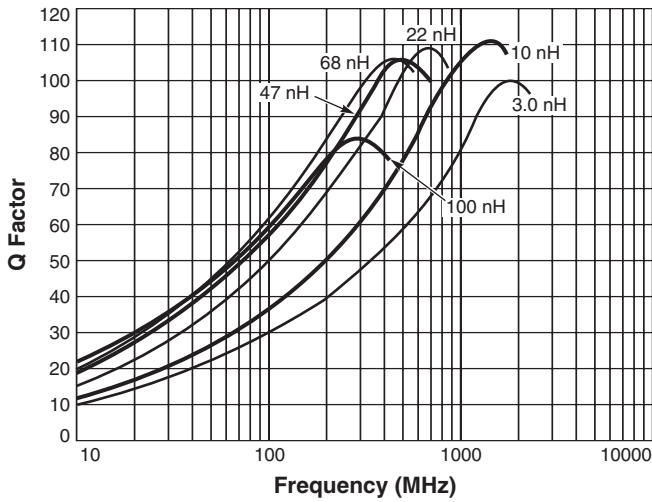
**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
 MEASUREMENTS  
**TEST FIXTURES**  
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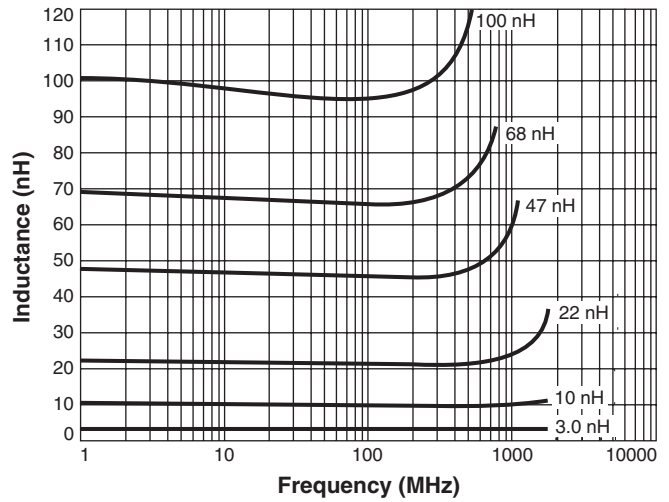
# Chip Inductors – 1008HQ Series (2520)

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

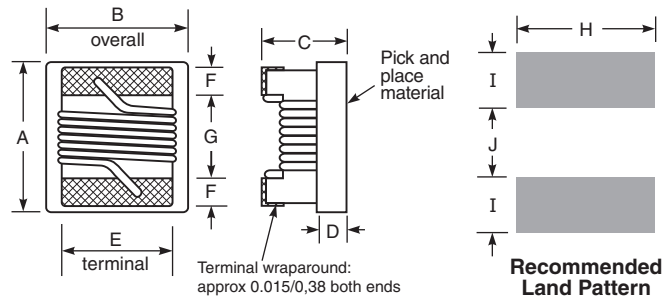
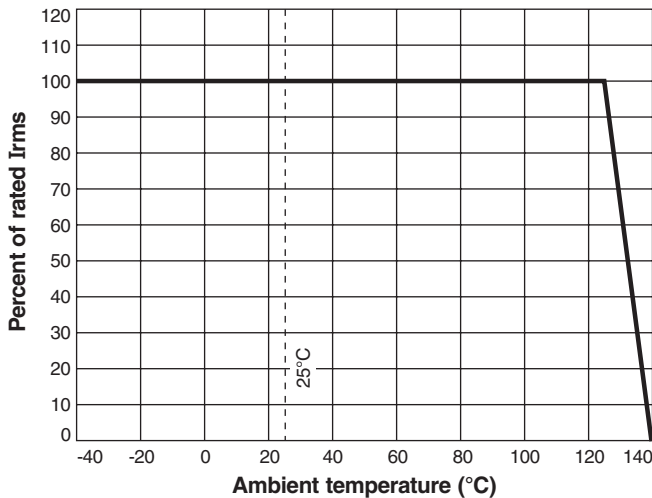
## Typical Q vs Frequency



## Typical L vs Frequency



## Irms Derating



| A     | B     | C     | D     | E     | F     | G     | H     | I     | J     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| max   | max   | max*  | ref   |       |       |       |       |       |       |
| 0.115 | 0.110 | 0.080 | 0.020 | 0.080 | 0.020 | 0.060 | 0.100 | 0.040 | 0.050 |
| 2,92  | 2,79  | 2,03  | 0,51  | 2,03  | 0,51  | 1,52  | 2,54  | 1,02  | 1,27  |

\* Low profile parts: 0.050/1,27  
 Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.



**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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С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

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- Подбор аналогов.
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- Работу по проектам и поставку образцов.
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- Оценку стоимости проекта по компонентам.
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Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)