



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

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

1008HQ-R10X G 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 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.
- Electrical specifications at 25°C.
- Temperature coefficient of inductance: +25 to +125 ppm/°C. See Qualification Standards section for environmental and test data. See Color Coding section for part marking data. 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. Packaging: –55°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)

Mean Time Between Failures (MTBF) 1 billion hours

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 Only pure water or alcohol recommended

Coilcraft®

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

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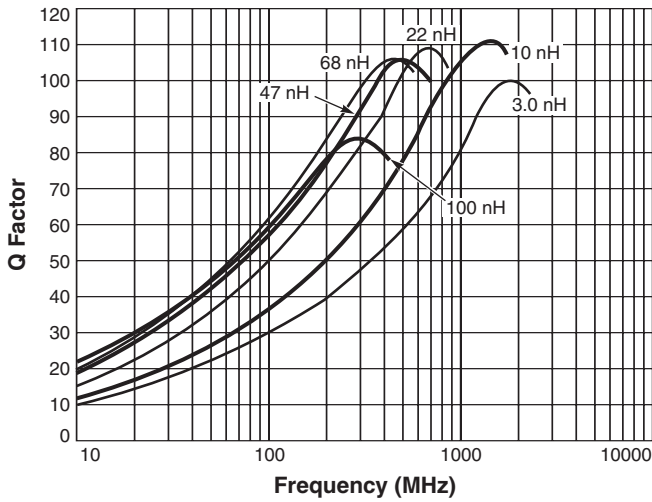
E-mail info@coilcraft.com Web <http://www.coilcraft.com>



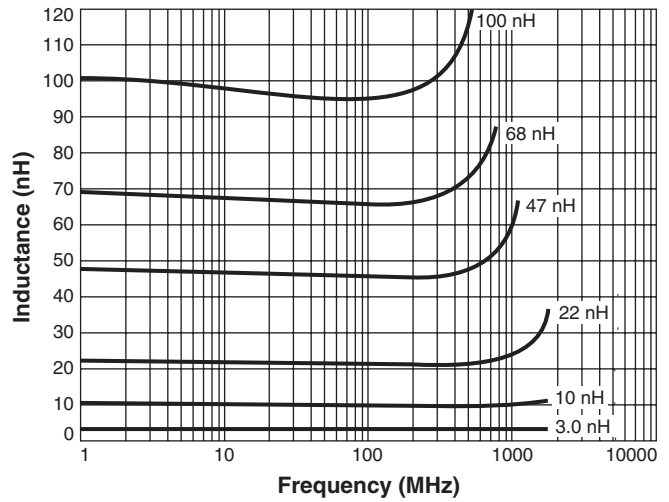
Chip Inductors – 1008HQ Series (2520)

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

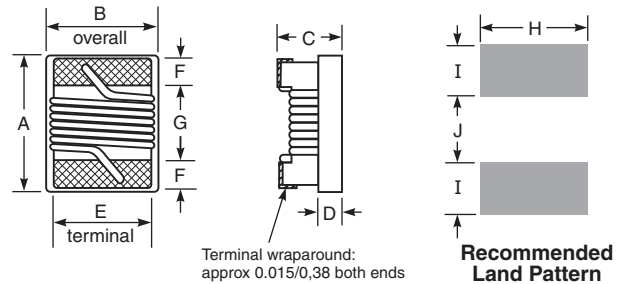
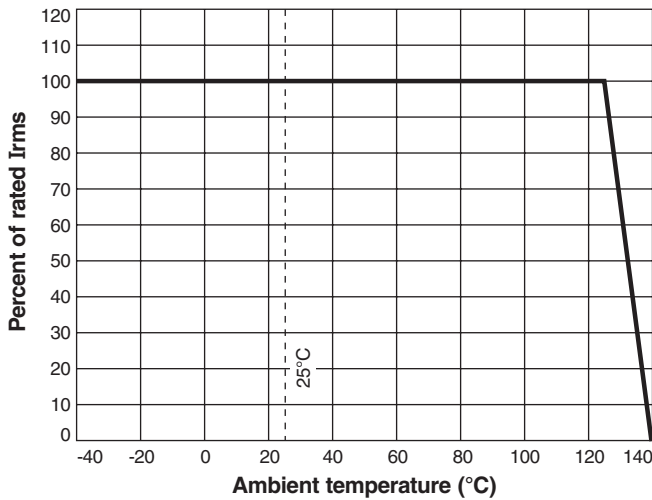
Typical Q vs Frequency



Typical L vs Frequency



Irms Derating



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



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