

Chip Inductors – 1008HQ Series (2520)

The 1008HQ Series offers the highest Q factors of any Coilcraft chip inductor family, roughly 20% higher than our popular 1008CS and HS parts. In addition, current handling has also been improved with significantly lower DCR values.

Like all Coilcraft wire wound ceramic chip inductors, the 1008HQ Series provides exceptional SRFs, tight inductance tolerance and batch consistency.

For even higher Qs, consider our surface mount spring inductors that combine the high Q of an air wound coil with the convenience of automatic placement.

Coilcraft **Designer's Kit C123** 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_B_2	3.0 @ 50 MHz	10, 5	70 @ 1500 MHz	8.10	0.04	1.6
1008HQ-4N1X_B_	4.1 @ 50MHz	10, 5	75 @ 1500 MHz	6.20	0.05	1.6
1008HQ-7N8X_B_2	7.8 @ 50MHz	10, 5	75 @ 500 MHz	3.80	0.05	1.6
1008HQ-10NX_B_	10 @ 50MHz	10, 5,2	60 @ 500 MHz	3.60	0.06	1.6
1008HQ-12NX_B_	12 @ 50MHz	10, 5,2	70 @ 500 MHz	2.80	0.06	1.5
1008HQ-18NX_B_	18 @ 50MHz	10, 5,2	62 @ 350 MHz	2.70	0.07	1.4
1008HQ-22NX_B_	22 @ 50MHz	10, 5,2	62 @ 350 MHz	2.05	0.07	1.4
1008HQ-33NX_B_	33 @ 50MHz	10, 5,2	75 @ 350 MHz	1.70	0.09	1.3
1008HQ-39NX_B_	39 @ 50MHz	10, 5,2	75 @ 350 MHz	1.30	0.09	1.3
1008HQ-47NX_B_	47 @ 50MHz	10, 5,2,1	75 @ 350 MHz	1.45	0.12	1.2
1008HQ-56NX_B_	56 @ 50MHz	10, 5,2,1	75 @ 350 MHz	1.23	0.12	1.2
1008HQ-68NX_B_	68 @ 50MHz	10, 5,2,1	80 @ 350 MHz	1.15	0.13	1.1
1008HQ-82NX_B_	82 @ 50MHz	10, 5,2	80 @ 350 MHz	1.06	0.16	1.1
1008HQ-R10X_B_	100 @ 50MHz	10, 5,2	62 @ 350 MHz	0.82	0.16	1.0

1. Specify **tolerance** and **packaging** codes:

1008HQ-R10XGB C

Tolerance: F = 1% G = 2% J = 5% K = 10%

(Table shows stock tolerances in bold.)

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. Part is wound on low profile coilform.

3. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.

4. Tolerances in bold are stocked for immediate shipment.

5. Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.

6. 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.

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

8. Average current for a 15°C rise above 25°C ambient.

9. Operating temperature range -40°C to +125°C.

10. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

See Color Coding section for part marking data.

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

Coilcraft®

Specifications subject to change without notice. Document 190-1 Revised 05/19/03

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

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

S-Parameter files

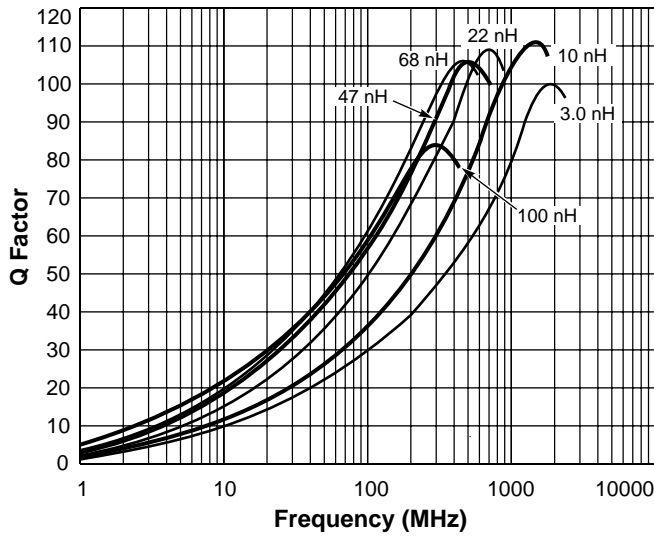
ON OUR WEB SITE OR CD

SPICE models

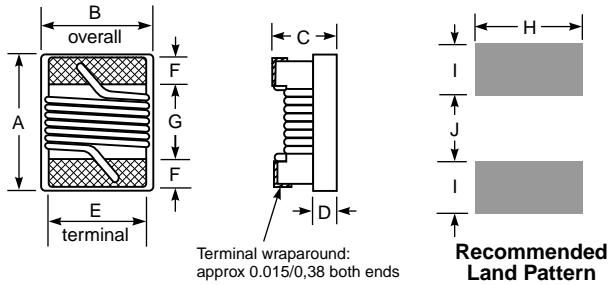
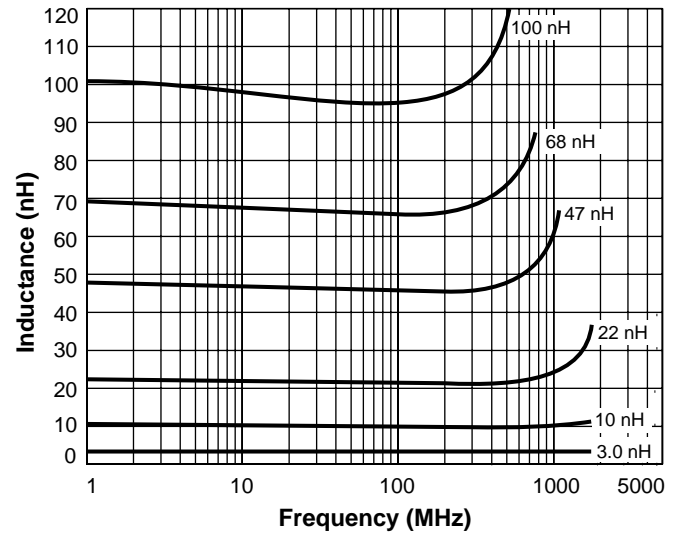
ON OUR WEB SITE OR CD

Chip Inductors – 1008HQ Series (2520)

Typical Q vs Frequency



Typical L vs Frequency



A max	B max	C max*	D ref	E	F	G	H	I	J
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

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

Tape and reel: 2000/7" reel; 7500/13" reel 8 mm tape width
For packaging data see Tape and Reel Specifications section.

Coilcraft®

Specifications subject to change without notice. Document 190-2 Revised 08/12/03

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

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