



# Chip Inductors – 1008HS Series (2520)

Coilcraft “HS” series chip inductors have been designed especially for the needs of today’s high frequency designer. Their ceramic construction delivers the highest

possible SRF and excellent Q values. The non-magnetic coilform also ensures the utmost in thermal stability, predictability and batch consistency.

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent tolerance <sup>3</sup>	Q min <sup>4</sup>	SRF min <sup>5</sup> (MHz)	DCR max <sup>6</sup> (Ohms)	Irms <sup>7</sup> (mA)
1008HS-100T_L_	10 @ 50 MHz	<b>5</b>	50 @ 500 MHz	4100	0.08	1000
1008HS-120T_L_	12 @ 50 MHz	<b>5</b>	50 @ 500 MHz	3300	0.09	1000
1008HS-150T_L_	15 @ 50 MHz	<b>5</b>	50 @ 500 MHz	2500	0.10	1000
1008HS-180T_L_	18 @ 50 MHz	<b>5</b>	50 @ 350 MHz	2500	0.11	1000
1008HS-220T_L_	22 @ 50 MHz	<b>5</b>	55 @ 350 MHz	2400	0.12	1000
1008HS-270T_L_	27 @ 50 MHz	<b>5,2</b>	55 @ 350 MHz	1600	0.13	1000
1008HS-330T_L_	33 @ 50 MHz	<b>5,2</b>	60 @ 350 MHz	1600	0.14	1000
1008HS-390T_L_	39 @ 50 MHz	<b>5,2</b>	60 @ 350 MHz	1500	0.15	1000
1008HS-470T_L_	47 @ 50 MHz	<b>5,2,1</b>	65 @ 350 MHz	1500	0.16	1000
1008HS-560T_L_	56 @ 50 MHz	<b>5,2,1</b>	65 @ 350 MHz	1300	0.18	1000
1008HS-680T_L_	68 @ 50 MHz	<b>5,2,1</b>	65 @ 350 MHz	1300	0.20	1000
1008HS-820T_L_	82 @ 50 MHz	<b>5,2,1</b>	60 @ 350 MHz	1000	0.22	1000
1008HS-101T_L_	100 @ 25 MHz	<b>5,2,1</b>	60 @ 350 MHz	1000	0.56	650
1008HS-121T_L_	120 @ 25 MHz	<b>5,2,1</b>	60 @ 350 MHz	950	0.63	650
1008HS-151T_L_	150 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	850	0.70	580
1008HS-181T_L_	180 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	750	0.77	620
1008HS-221T_L_	220 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	700	0.84	500
1008HS-271T_L_	270 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	600	0.91	500
1008HS-331T_L_	330 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	570	1.05	450
1008HS-391T_L_	390 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	500	1.12	470
1008HS-471T_L_	470 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	450	1.19	470
1008HS-561T_L_	560 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	415	1.33	400
1008HS-621T_L_	620 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	375	1.40	300
1008HS-681T_L_	680 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	375	1.47	400
1008HS-751T_L_	750 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	360	1.54	360
1008HS-821T_L_	820 @ 25 MHz	<b>5,2,1</b>	45 @ 100 MHz	350	1.61	400
1008HS-911T_L_	910 @ 25 MHz	<b>5,2,1</b>	35 @ 50 MHz	320	1.68	380
1008HS-102T_L_	1000 @ 25 MHz	<b>5,2</b>	35 @ 50 MHz	290	1.75	370

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

1008HS-102T 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).

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 8753D 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. **Ambient temperature range:** -40°C to +125°C with I<sub>rms</sub> current  
+125°C to +140°C with derated current

9. **Storage temperature range:** Component: -40°C to +140°C  
Packaging: -40°C to +80°C

10. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds (+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room temperature between.

11. Electrical specifications at 25°C.

12. Temperature coefficient of inductance: +25 to +125 ppm/°C.

For part marking data, see Color Coding section.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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

**Coilcraft**®

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

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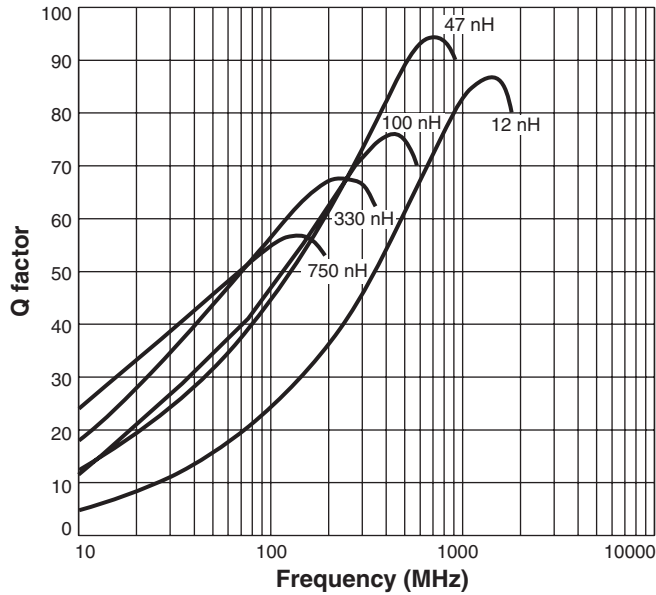
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# 1008HS Series (2520)

## Typical Q vs Frequency



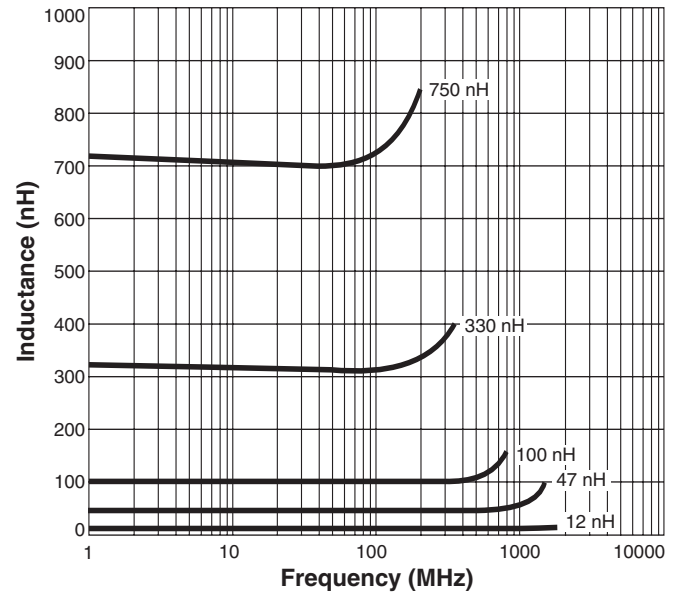
## S-Parameter files

ON OUR WEB SITE OR CD

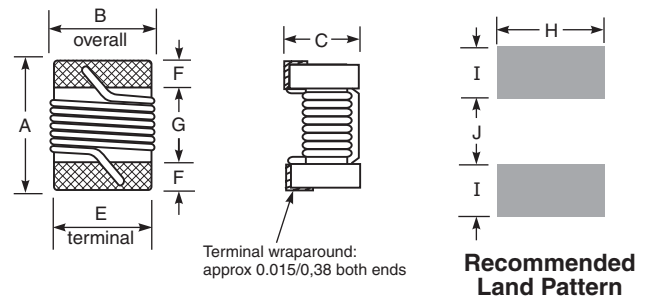
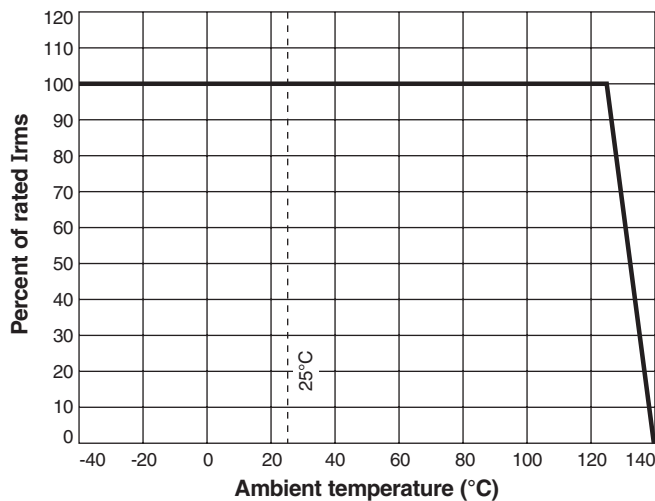
## SPICE models

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## Typical L vs Frequency



## Irms Derating



A max	B max	C max	E	F	G	H	I	J	
0.105	0.095	0.070	0.080	0.020	0.060	0.100	0.040	0.050	inches
2,67	2,41	1,78	2,03	0,51	1,52	2,54	1,02	1,27	mm

**Weight:** 28.3 – 31.5 mg

**Tape and reel:** 2000/7" reel; 7500/13" reel 8 mm tape width

For packaging data see Tape and Reel Specifications section.



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