

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

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

1008HS-102TGLC

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. Electrical specifications at 25°C.

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

For part marking data, please visit <http://www.coilcraft.com/colrcode.cfm>.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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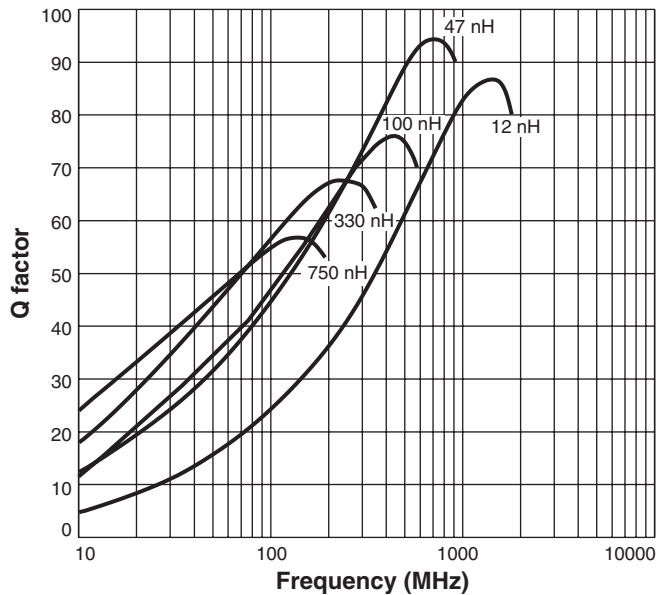
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

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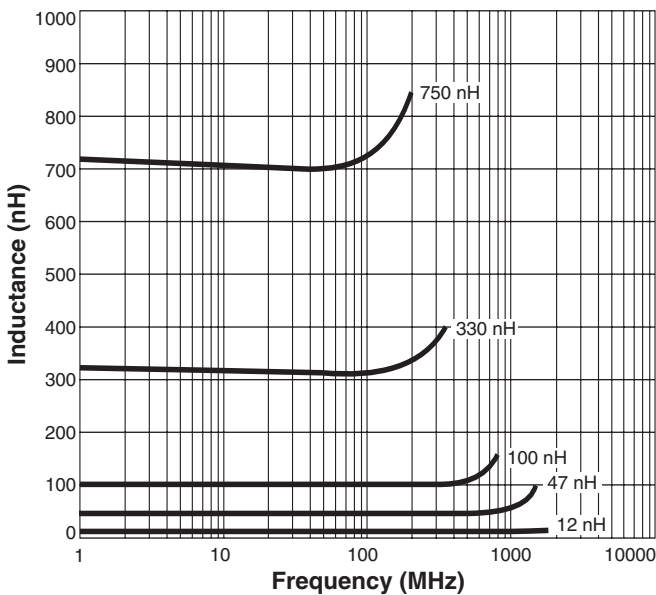
S-Parameter files
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SPICE models
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1008HS Series (2520)

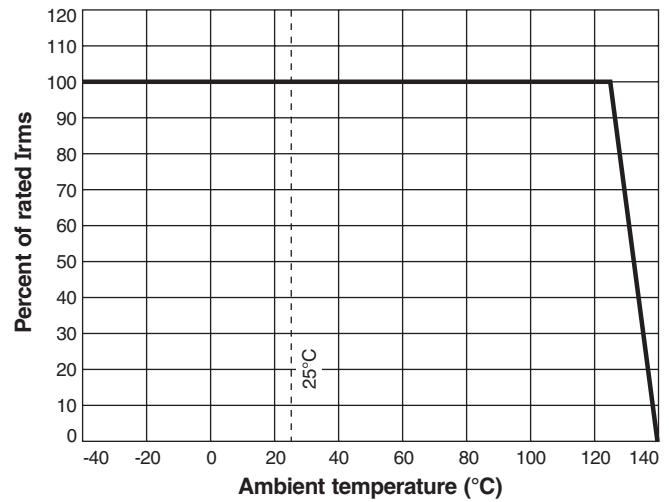
Typical Q vs Frequency



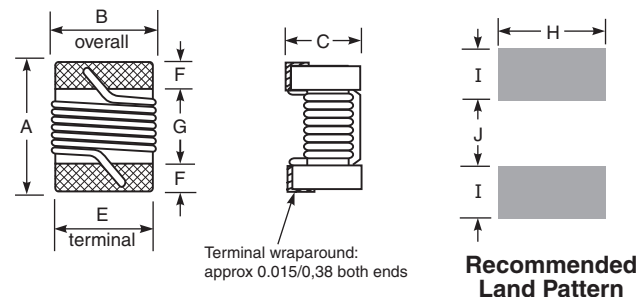
Typical L vs Frequency



Irms Derating



- Core material** Ceramic
- Terminations** RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.
- Weight** 28.3–31.5 mg
- Ambient temperature** –40°C to +125°C with I_{rms} 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 Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.3 mm pocket depth
- PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.



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
2,67	2,41	1,78	2,03	0,51	1,52	2,54	1,02	1,27

Note: Height dimension is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.



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