



# Chip Inductor – 1008HT Series (2520)

- Low-profile inductors are 60% the height of our other 1008 size parts.
- They feature high SRFs and very high Q factors.

Coilcraft **Designer's Kit C322** contains samples of all 5% inductance tolerance parts. To order, please contact Coilcraft or order on-line at <http://order.coilcraft.com>.

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)
1008HT-3N3T_L_	3.3 @ 250 MHz	<b>5</b>	65 @ 1500 MHz	7900	0.025	1000
1008HT-6N8T_L_	6.8 @ 250 MHz	<b>5</b>	70 @ 1500 MHz	5500	0.05	1000
1008HT-7N2T_L_	7.2 @ 250 MHz	<b>5</b>	70 @ 1500 MHz	4800	0.05	1000
1008HT-12NT_L_	12 @ 250 MHz	<b>5</b>	55 @ 700 MHz	3800	0.065	1000
1008HT-15NT_L_	15 @ 250 MHz	<b>5</b>	55 @ 700 MHz	2800	0.08	1000
1008HT-18NT_L_	18 @ 250 MHz	<b>5</b>	55 @ 500 MHz	3000	0.09	1000
1008HT-22NT_L_	22 @ 250 MHz	<b>5</b>	55 @ 500 MHz	2600	0.11	950
1008HT-27NT_L_	27 @ 250 MHz	<b>5,2</b>	55 @ 500 MHz	2400	0.13	850
1008HT-33NT_L_	33 @ 200 MHz	<b>5,2</b>	55 @ 350 MHz	2000	0.135	760
1008HT-39NT_L_	39 @ 200 MHz	<b>5,2</b>	55 @ 350 MHz	1900	0.17	700
1008HT-47NT_L_	47 @ 200 MHz	<b>5,2,1</b>	55 @ 350 MHz	1500	0.18	660
1008HT-56NT_L_	56 @ 150 MHz	<b>5,2,1</b>	50 @ 300 MHz	1500	0.18	620
1008HT-68NT_L_	68 @ 150 MHz	<b>5,2,1</b>	50 @ 300 MHz	1500	0.23	550
1008HT-82NT_L_	82 @ 150 MHz	<b>5,2,1</b>	40 @ 250 MHz	1300	0.35	500
1008HT-R10T_L_	100 @ 100 MHz	<b>5,2,1</b>	40 @ 250 MHz	1200	0.64	420
1008HT-R12T_L_	120 @ 100 MHz	<b>5,2,1</b>	40 @ 200 MHz	1090	0.55	350
1008HT-R14T_L_	140 @ 100 MHz	<b>5,2,1</b>	40 @ 200 MHz	1100	0.70	320
1008HT-R15T_L_	150 @ 100 MHz	<b>5,2,1</b>	40 @ 200 MHz	960	0.75	300
1008HT-R18T_L_	180 @ 50 MHz	<b>5,2,1</b>	40 @ 200 MHz	920	1.02	250
1008HT-R22T_L_	220 @ 50 MHz	<b>5,2,1</b>	34 @ 100 MHz	750	1.15	250
1008HT-R24T_L_	240 @ 50 MHz	<b>5,2</b>	32 @ 100 MHz	800	1.15	250
1008HT-R27T_L_	270 @ 50 MHz	<b>5,2</b>	32 @ 100 MHz	770	1.25	250
1008HT-R33T_L_	330 @ 25 MHz	<b>5,2</b>	32 @ 100 MHz	635	1.35	250
1008HT-R39T_L_	390 @ 25 MHz	<b>5,2</b>	32 @ 100 MHz	555	1.45	250
1008HT-R47T_L_	470 @ 25 MHz	<b>5,2</b>	32 @ 100 MHz	530	1.65	240
1008HT-R56T_L_	560 @ 25 MHz	<b>5,2</b>	32 @ 100 MHz	485	1.90	240

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

1008HT-R56TJLC

**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 (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 8720D 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.

See Color Coding section for part marking data.

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



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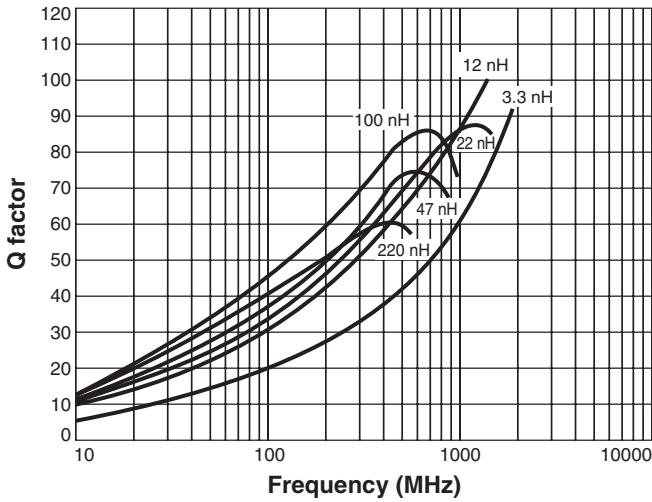
**COILCRAFT** ACCURATE  
**PRECISION** REPEATABLE  
MEASUREMENTS  
SEE WEB SITE **TEST FIXTURES**



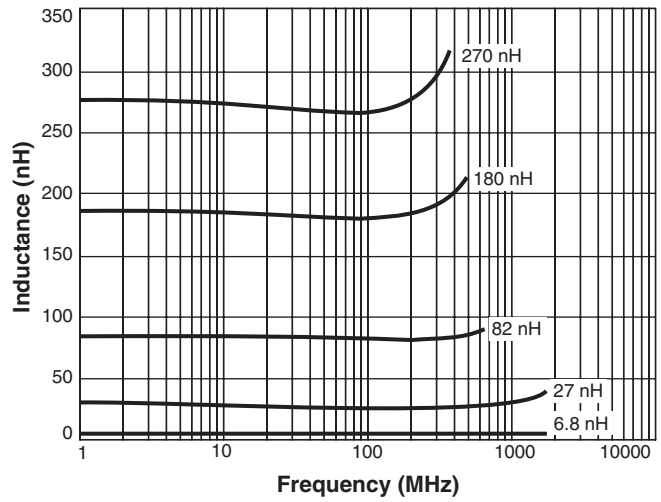
# Chip Inductor – 1008HT Series (2520)

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

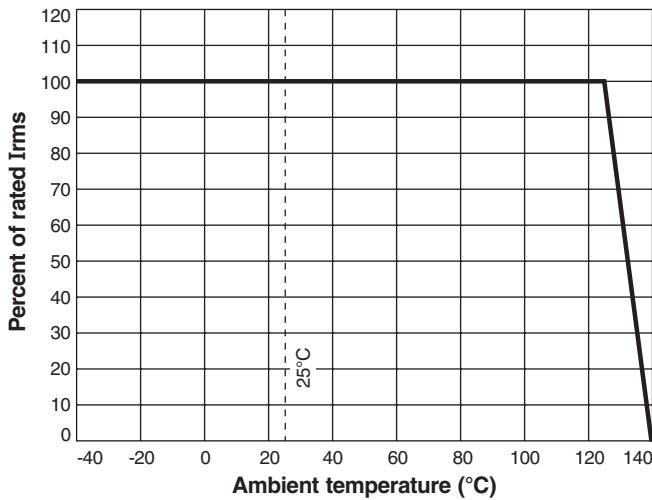
## Typical Q vs Frequency



## Typical L vs Frequency



## Irms Derating



**Core material** Ceramic

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

**Weight** 16.0– 17.6 mg

**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

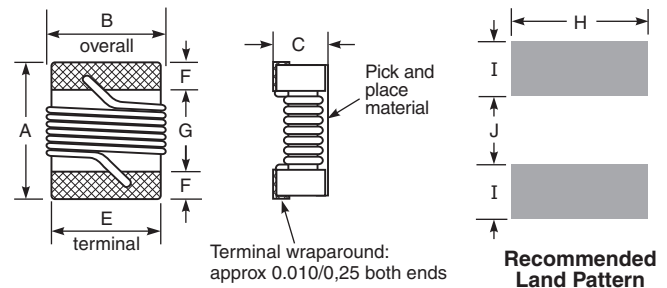
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**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 Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.14 mm pocket depth

**PCB washing** Only pure water or alcohol recommended



A	B	C	E	F	G	H	I	J	
max	max	max							inches
0.105	0.095	0.045	0.080	0.020	0.060	0.100	0.040	0.050	
2,67	2,41	1,14	2,03	0,51	1,52	2,54	1,02	1,27	mm

**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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