



# Chip Inductors – 1008CT Series (2520)

The 0.055" profile makes these parts ideal for low clearance applications. Their simple construction ensures high reliability and stability, and they feature much

higher SRF values than ferrite alternatives. For free evaluation samples, visit [www.coilcraft.com](http://www.coilcraft.com) or contact Coilcraft.

Part number <sup>1</sup>	Inductance <sup>2</sup> (nH)	Percent <sup>3</sup> tolerance	Q min <sup>4</sup>	SRF min <sup>5</sup> (MHz)	DCR max <sup>6</sup> (Ohms)	Irms <sup>7</sup> (mA)
1008CT-040X_L_	4.7 @ 50 MHz	<b>5</b>	28 @ 500 MHz	7500	0.15	600
1008CT-080X_L_	8.2 @ 50 MHz	<b>5,2</b>	40 @ 500 MHz	5000	0.22	600
1008CT-100X_L_	10 @ 50 MHz	<b>5</b>	40 @ 500 MHz	2700	0.25	600
1008CT-150X_L_	15 @ 50 MHz	<b>5,2</b>	40 @ 500 MHz	3000	0.22	600
1008CT-200X_L_	20 @ 50 MHz	<b>5,2</b>	50 @ 500 MHz	2400	0.33	600
1008CT-300X_L_	30 @ 50 MHz	<b>5,2</b>	50 @ 500 MHz	2400	0.38	600
1008CT-400X_L_	40 @ 50 MHz	<b>5,2</b>	60 @ 500 MHz	2000	0.43	600
1008CT-500X_L_	50 @ 50 MHz	<b>5,2</b>	60 @ 500 MHz	1900	0.48	600
1008CT-600X_L_	60 @ 50 MHz	<b>5,2,1</b>	60 @ 500 MHz	1800	0.52	600
1008CT-700X_L_	70 @ 50 MHz	<b>5,2,1</b>	60 @ 500 MHz	1700	0.55	510
1008CT-800X_L_	80 @ 50 MHz	<b>5,2,1</b>	60 @ 500 MHz	1400	0.56	510
1008CT-900X_L_	90 @ 50 MHz	<b>5,2</b>	65 @ 500 MHz	1400	0.61	500
1008CT-101X_L_	100 @ 50 MHz	<b>5,2</b>	60 @ 500 MHz	1000	0.63	480

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

1008CT-101XJL 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 (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 at 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.

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** 17.8 – 17.8 mg

**Ambient temperature** –40°C to +125°C with I<sub>rms</sub> current, +125°C to +140°C with derated current

**Storage temperature** Component: –40°C to +140°C.  
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, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

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

**Coilcraft**<sup>®</sup>

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

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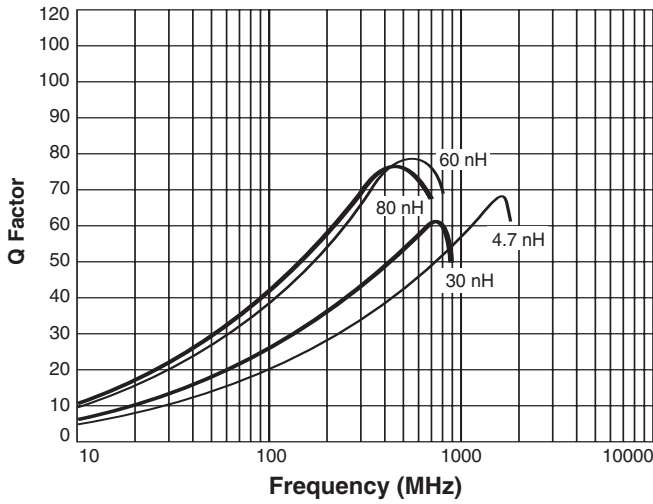
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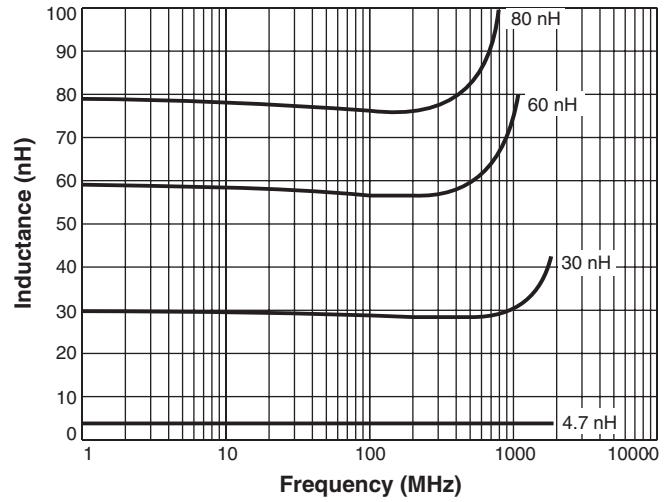
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## Typical Q vs Frequency

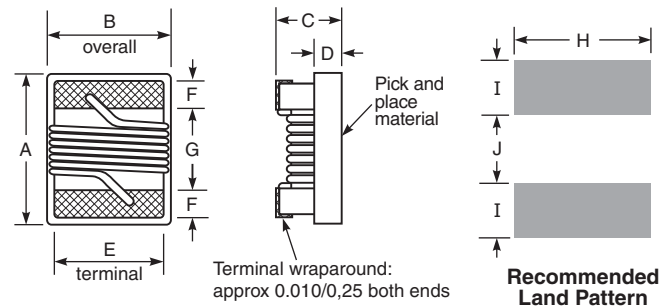
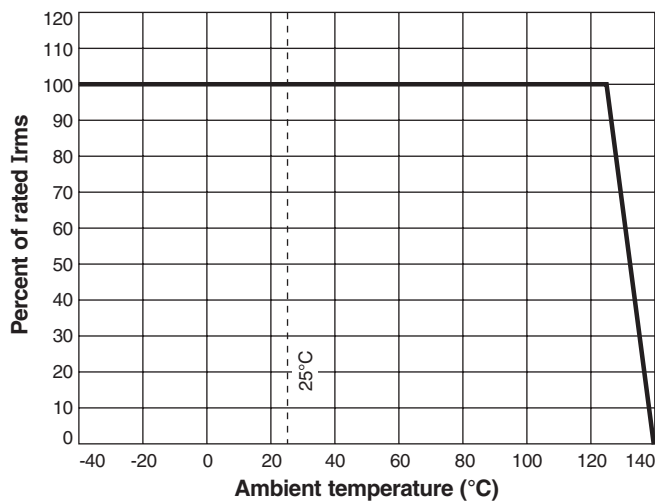


**S-Parameter files**  
ON OUR WEB SITE OR CD  
**SPICE models**  
ON OUR WEB SITE OR CD

## Typical L vs Frequency



## Irms Derating



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.115	0.110	0.050	0.020	0.080	0.020	0.060	0.100	0.040	0.050
2,92	2,79	1,27	0,51	2,03	0,51	1,52	2,54	1,02	1,27



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