

# Chip Inductors – 1008CT (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 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)
1008CT-040XJE_	4.7 @ 50 MHz	<b>5</b>	28 @ 500 MHz	7500	0.15	600
1008CT-080X_E_	8.2 @ 50 MHz	<b>5,2</b>	40 @ 500 MHz	5000	0.22	600
1008CT-100XJE_	10 @ 50 MHz	<b>5</b>	40 @ 500 MHz	2700	0.25	600
1008CT-150X_E_	15 @ 50 MHz	<b>5,2</b>	40 @ 500 MHz	3000	0.22	600
1008CT-200X_E_	20 @ 50 MHz	<b>5,2</b>	50 @ 500 MHz	2400	0.33	600
1008CT-300X_E_	30 @ 50 MHz	<b>5,2</b>	50 @ 500 MHz	2400	0.38	600
1008CT-400X_E_	40 @ 50 MHz	<b>5,2</b>	60 @ 500 MHz	2000	0.43	600
1008CT-500X_E_	50 @ 50 MHz	<b>5,2</b>	60 @ 500 MHz	1900	0.48	600
1008CT-600X_E_	60 @ 50 MHz	<b>5,2,1</b>	60 @ 500 MHz	1800	0.52	600
1008CT-700X_E_	70 @ 50 MHz	<b>5,2,1</b>	60 @ 500 MHz	1700	0.55	510
1008CT-800X_E_	80 @ 50 MHz	<b>5,2,1</b>	60 @ 500 MHz	1400	0.56	510
1008CT-900X_E_	90 @ 50 MHz	<b>5,2</b>	65 @ 500 MHz	1400	0.61	500
1008CT-101X_E_	100 @ 50 MHz	<b>5,2</b>	60 @ 500 MHz	1000	0.63	480

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

1008CT-101XJEC

**Tolerance:** F = 1% G = 2% J = 5%

(Table shows stock tolerances in bold.)

**Termination:** E = Halogen free component. RoHS compliant silver-palladium-platinum-glass frit terminations.

L = RoHS compliant, not halogen-free. Silver-palladium-platinum-glass frit terminations.

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). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

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. This information is for reference only and does not represent absolute maximum ratings.

8. Electrical specifications at 25°C.

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

**Core material** Ceramic

**Environmental** RoHS compliant, halogen free

**Terminations** Silver-palladium-platinum-glass frit. Other terminations available at additional cost.

**Weight** 17.1 – 17.8 mg

**Ambient temperature** –40°C to +125°C with Irms current

**Maximum part temperature** +140°C (ambient + temp rise).

**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

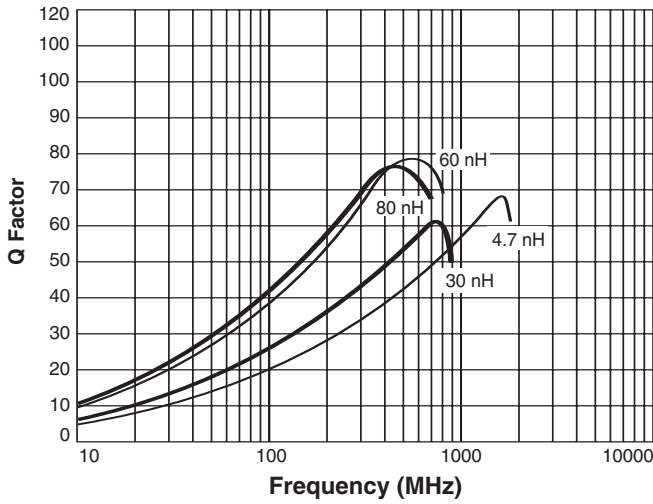
**Packaging** 2000/7" reel; 7500/13" reel Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

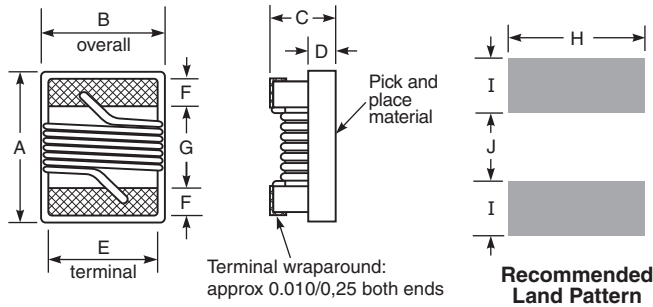
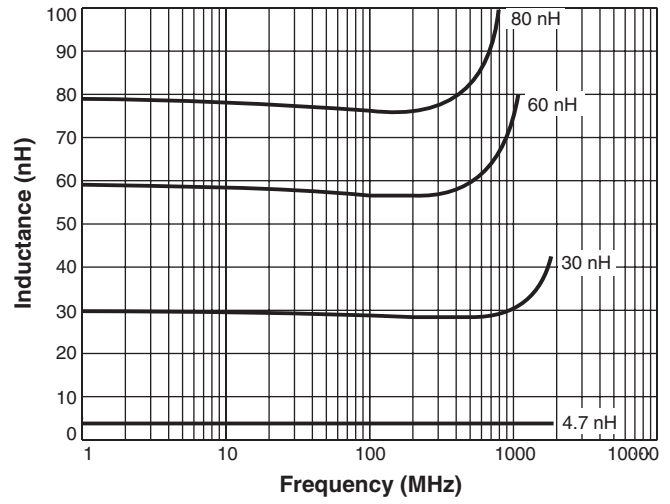


# 1008CT Series (2520)

## Typical Q vs Frequency



## Typical L vs Frequency



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

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

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



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