



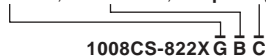
Chip Inductors – 1008CS Series (2520)

These chip inductors are designed for the needs of today's high frequency designer. Their ceramic construction delivers the highest possible SRFs and Q values. The non-magnetic coilform also ensures the utmost in thermal

stability, predictability and batch consistency. Coilcraft **Designer's Kit C100** contains samples of all 5% inductance tolerance parts. Kits with 2% tolerance are also available.

| Part number ¹ | Inductance ² (nH) | Percent tolerance ³ | Q min ⁴ | SRF min ⁵ (MHz) | DCR max ⁶ (Ohms) | Irms max ⁷ (mA) |
|--------------------------|---------------------------------|--------------------------------|--------------------|-------------------------------|--------------------------------|-------------------------------|
| 1008CS-100X_B_ | 10 @ 50 MHz | 20,10, 5,2 | 50 @ 500 MHz | 4100 | 0.08 | 1000 |
| 1008CS-120X_B_ | 12 @ 50 MHz | 20,10, 5,2 | 50 @ 500 MHz | 3300 | 0.09 | 1000 |
| 1008CS-150X_B_ | 15 @ 50 MHz | 20,10, 5,2 | 50 @ 500 MHz | 2500 | 0.10 | 1000 |
| 1008CS-180X_B_ | 18 @ 50 MHz | 20,10, 5,2 | 50 @ 350 MHz | 2500 | 0.11 | 1000 |
| 1008CS-220X_B_ | 22 @ 50 MHz | 20,10, 5,2,1 | 55 @ 350 MHz | 2400 | 0.12 | 1000 |
| 1008CS-270X_B_ | 27 @ 50 MHz | 20,10, 5,2 | 55 @ 350 MHz | 1600 | 0.13 | 1000 |
| 1008CS-330X_B_ | 33 @ 50 MHz | 20,10, 5,2 | 60 @ 350 MHz | 1600 | 0.14 | 1000 |
| 1008CS-390X_B_ | 39 @ 50 MHz | 20,10, 5,2 | 60 @ 350 MHz | 1500 | 0.15 | 1000 |
| 1008CS-470X_B_ | 47 @ 50 MHz | 20,10, 5,2,1 | 65 @ 350 MHz | 1500 | 0.16 | 1000 |
| 1008CS-560X_B_ | 56 @ 50 MHz | 10, 5,2,1 | 65 @ 350 MHz | 1300 | 0.18 | 1000 |
| 1008CS-680X_B_ | 68 @ 50 MHz | 10, 5,2,1 | 65 @ 350 MHz | 1300 | 0.20 | 1000 |
| 1008CS-820X_B_ | 82 @ 50 MHz | 10, 5,2,1 | 60 @ 350 MHz | 1000 | 0.22 | 1000 |
| 1008CS-101X_B_ | 100 @ 25 MHz | 10, 5,2,1 | 60 @ 350 MHz | 1000 | 0.56 | 650 |
| 1008CS-121X_B_ | 120 @ 25 MHz | 10, 5,2,1 | 60 @ 350 MHz | 950 | 0.63 | 650 |
| 1008CS-151X_B_ | 150 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 850 | 0.70 | 580 |
| 1008CS-181X_B_ | 180 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 750 | 0.77 | 620 |
| 1008CS-221X_B_ | 220 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 700 | 0.84 | 500 |
| 1008CS-271X_B_ | 270 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 600 | 0.91 | 500 |
| 1008CS-331X_B_ | 330 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 570 | 1.05 | 450 |
| 1008CS-391X_B_ | 390 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 500 | 1.12 | 470 |
| 1008CS-471X_B_ | 470 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 450 | 1.19 | 470 |
| 1008CS-561X_B_ | 560 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 415 | 1.33 | 400 |
| 1008CS-621X_B_ | 620 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 375 | 1.40 | 300 |
| 1008CS-681X_B_ | 680 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 375 | 1.47 | 400 |
| 1008CS-751X_B_ | 750 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 360 | 1.54 | 360 |
| 1008CS-821X_B_ | 820 @ 25 MHz | 10, 5,2,1 | 45 @ 100 MHz | 350 | 1.61 | 400 |
| 1008CS-911X_B_ | 910 @ 25 MHz | 10, 5,2,1 | 35 @ 50 MHz | 320 | 1.68 | 380 |
| 1008CS-102X_B_ | 1000 @ 25 MHz | 10, 5,2,1 | 35 @ 50 MHz | 290 | 1.75 | 370 |
| 1008CS-122X_B_ | 1200 @ 7.9 MHz | 10, 5,2 | 35 @ 50 MHz | 250 | 2.0 | 310 |
| 1008CS-152X_B_ | 1500 @ 7.9 MHz | 10, 5,2 | 28 @ 50 MHz | 200 | 2.3 | 330 |
| 1008CS-182X_B_ | 1800 @ 7.9 MHz | 10, 5,2 | 28 @ 50 MHz | 160 | 2.6 | 300 |
| 1008CS-222X_B_ | 2200 @ 7.9 MHz | 10, 5,2 | 28 @ 50 MHz | 160 | 2.8 | 280 |
| 1008CS-272X_B_ | 2700 @ 7.9 MHz | 10, 5,2 | 22 @ 25 MHz | 140 | 3.2 | 290 |
| 1008CS-332X_B_ | 3300 @ 7.9 MHz | 10, 5,2 | 22 @ 25 MHz | 110 | 3.4 | 290 |
| 1008CS-392X_B_ | 3900 @ 7.9 MHz | 10, 5,2 | 20 @ 25 MHz | 100 | 3.6 | 260 |
| 1008CS-472X_B_ | 4700 @ 7.9 MHz | 10, 5,2 | 20 @ 25 MHz | 90 | 4.0 | 260 |
| 1008CS-562X_B_ | 5600 @ 7.9 MHz | 10, 5 | 16 @ 7.9 MHz | 20 | 4.0 | 240 |
| 1008CS-682X_B_ | 6800 @ 7.9 MHz | 10, 5 | 18 @ 7.9 MHz | 40 | 4.9 | 200 |
| 1008CS-822X_B_ | 8200 @ 7.9 MHz | 10, 5 | 18 @ 7.9 MHz | 25 | 6.0 | 170 |

1. Specify **tolerance, termination, and packaging** codes:



Tolerance: F = 1% G = 2% J = 5% K = 10% M = 20%
(Table shows stock tolerances in bold.)

Termination: B = Ag/Pd/Pt/Pb L = Lead free Ag/Pd/Pt

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 per full reel).

B = Less than full reel. On 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 per full reel).

2. Inductance measured using Coilcraft SMD-A fixture in Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces. For recommended test procedures, contact Coilcraft.

3. Tolerances in bold are stocked for immediate shipment.

4. Q measured using Agilent/HP 4291A with Agilent/HP 16193 test fixture and on Agilent/HP 8753D with Coilcraft SMD-D test fixture.

5. SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.

6. DCR measured on Cambridge Technology micro-ohmmeter and Coilcraft CCF840 test fixture.

7. Average current for a 15°C rise above 25°C ambient.

8. Operating temperature range -40°C to +125°C.

9. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

For part marking data see Color Coding section.

Coilcraft®

Specifications subject to change without notice. Document 101-1 Revised 11/20/02

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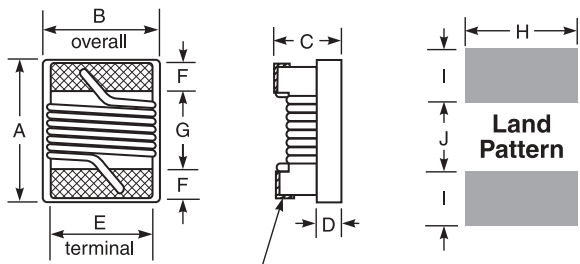
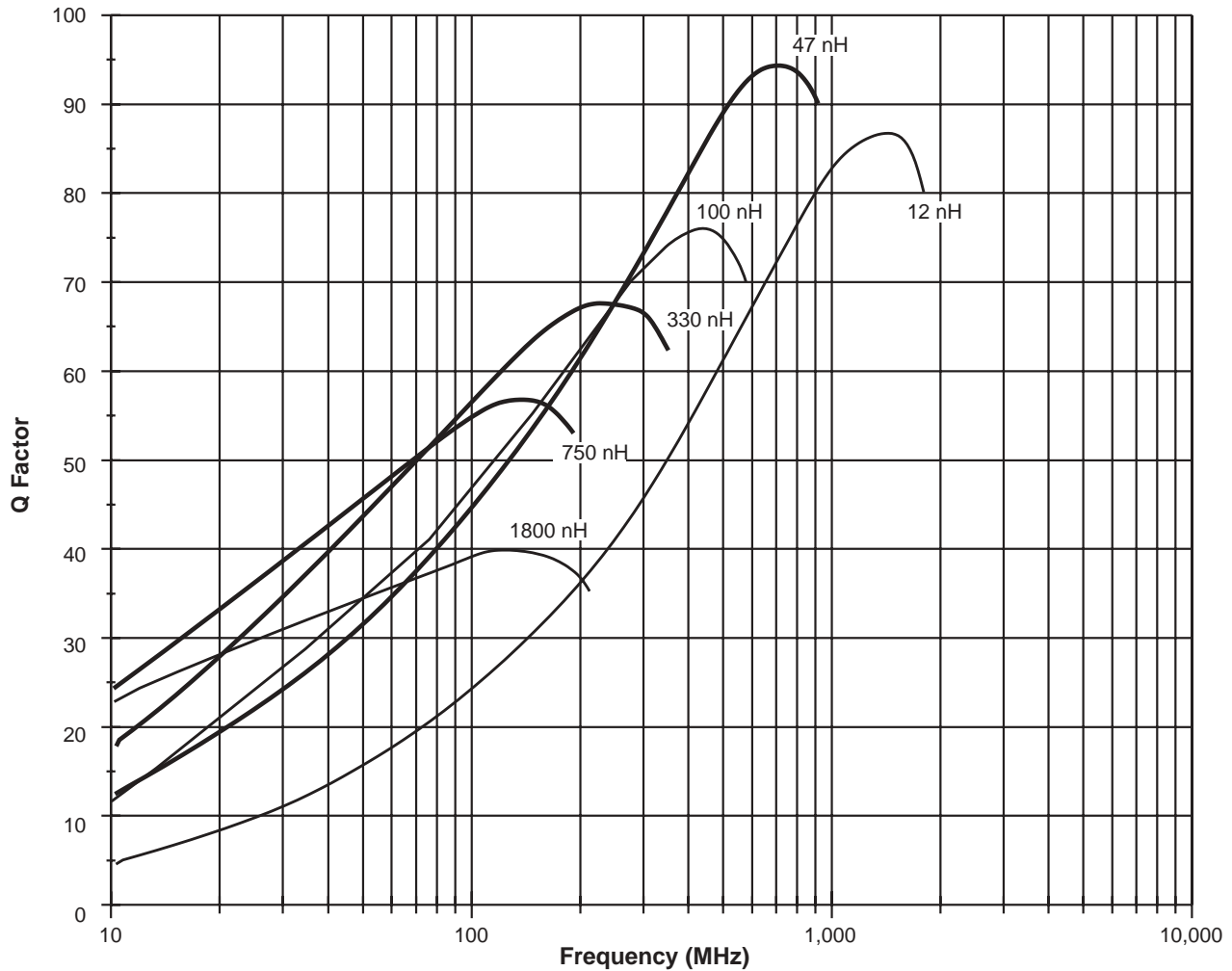
E-mail info@coilcraft.com Web http://www.coilcraft.com



1008CS Series (2520)

Typical Q vs Frequency

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

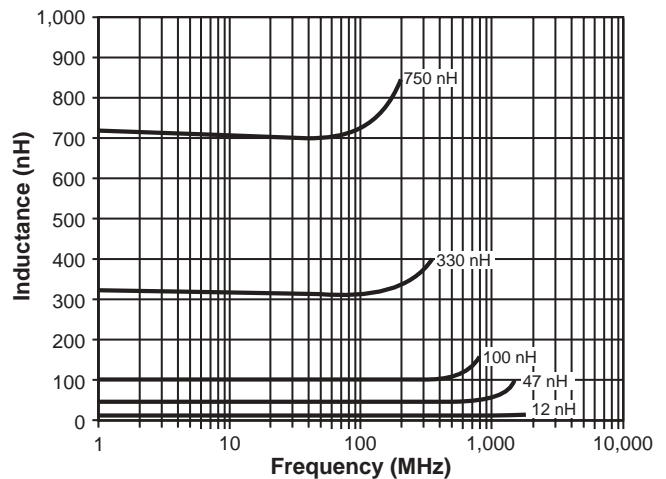


Terminal wraparound:
approx 0.015/0.38 both ends

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

Parts/reel: 7" 2,000; 13" 7,500 Tape width: 8 mm
For packaging data see Tape and Reel Specifications section.

Typical L vs Frequency



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