



Chip Inductors – 1206CS Series (3216)

The 1206CS features high SRF and excellent Q values. Their ceramic cores make 1% tolerances practical and economical and ensure the utmost in thermal stability, predictability and consistency. These parts can be ordered with terminations that make them compliant with

RoHS standards. Coilcraft **Designer's Kit C120** contains samples of all 5% inductance tolerance parts. To order, contact Coilcraft or visit <http://order.coilcraft.com> to purchase on-line.

| Part number ¹ | Inductance ² (nH) | Percent tolerance ³ | Q min ⁴ | SRF min ⁵ (MHz) | DCR max ⁶ (Ohms) | Irms ⁷ (mA) |
|--------------------------|---------------------------------|--------------------------------|--------------------|-------------------------------|--------------------------------|---------------------------|
| 1206CS-030X_B_ | 3.3 @ 100 MHz | 20,10, 5 | 30 @ 300 MHz | 6200 | 0.050 | 1000 |
| 1206CS-060X_B_ | 6.8 @ 100 MHz | 20,10, 5 | 30 @ 300 MHz | 5500 | 0.070 | 1000 |
| 1206CS-100X_B_ | 10 @ 100 MHz | 20,10, 5 | 40 @ 300 MHz | 4000 | 0.080 | 1000 |
| 1206CS-120X_B_ | 12 @ 100 MHz | 20,10, 5,2 | 40 @ 300 MHz | 3200 | 0.080 | 1000 |
| 1206CS-150X_B_ | 15 @ 100 MHz | 20,10, 5,2 | 40 @ 300 MHz | 3200 | 0.100 | 1000 |
| 1206CS-180X_B_ | 18 @ 100 MHz | 20,10, 5,2 | 50 @ 300 MHz | 2800 | 0.100 | 1000 |
| 1206CS-220X_B_ | 22 @ 100 MHz | 20,10, 5,2 | 50 @ 300 MHz | 2200 | 0.100 | 1000 |
| 1206CS-270X_B_ | 27 @ 100 MHz | 20,10, 5,2 | 50 @ 300 MHz | 1800 | 0.110 | 1000 |
| 1206CS-330X_B_ | 33 @ 100 MHz | 20,10, 5,2 | 55 @ 300 MHz | 1800 | 0.110 | 1000 |
| 1206CS-390X_B_ | 39 @ 100 MHz | 20,10, 5,2 | 55 @ 300 MHz | 1800 | 0.120 | 1000 |
| 1206CS-470X_B_ | 47 @ 100 MHz | 20,10, 5,2 | 55 @ 300 MHz | 1500 | 0.130 | 1000 |
| 1206CS-560X_B_ | 56 @ 100 MHz | 20,10, 5,2,1 | 55 @ 300 MHz | 1450 | 0.140 | 1000 |
| 1206CS-680X_B_ | 68 @ 100 MHz | 20,10, 5,2,1 | 55 @ 300 MHz | 1200 | 0.260 | 900 |
| 1206CS-820X_B_ | 82 @ 100 MHz | 20,10, 5,2,1 | 55 @ 300 MHz | 1200 | 0.210 | 900 |
| 1206CS-101X_B_ | 100 @ 100 MHz | 20,10, 5,2,1 | 55 @ 300 MHz | 1100 | 0.260 | 850 |
| 1206CS-121X_B_ | 120 @ 100 MHz | 20,10, 5,2,1 | 60 @ 300 MHz | 1100 | 0.260 | 800 |
| 1206CS-151X_B_ | 150 @ 100 MHz | 20,10, 5,2,1 | 60 @ 300 MHz | 950 | 0.310 | 750 |
| 1206CS-181X_B_ | 180 @ 100 MHz | 20,10, 5,2,1 | 60 @ 300 MHz | 900 | 0.430 | 700 |
| 1206CS-221X_B_ | 220 @ 50 MHz | 20,10, 5,2,1 | 60 @ 300 MHz | 760 | 0.500 | 670 |
| 1206CS-271X_B_ | 270 @ 50 MHz | 20,10, 5,2,1 | 55 @ 300 MHz | 730 | 0.560 | 630 |
| 1206CS-331X_B_ | 330 @ 50 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 650 | 0.620 | 590 |
| 1206CS-391X_B_ | 390 @ 50 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 600 | 0.750 | 530 |
| 1206CS-471X_B_ | 470 @ 50 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 550 | 1.30 | 490 |
| 1206CS-561X_B_ | 560 @ 35 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 470 | 1.34 | 460 |
| 1206CS-621X_B_ | 620 @ 35 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 470 | 1.58 | 460 |
| 1206CS-681X_B_ | 680 @ 35 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 450 | 1.58 | 430 |
| 1206CS-751X_B_ | 750 @ 35 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 440 | 2.25 | 320 |
| 1206CS-821X_B_ | 820 @ 35 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 420 | 1.82 | 400 |
| 1206CS-911X_B_ | 910 @ 35 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 410 | 2.95 | 310 |
| 1206CS-102X_B_ | 1000 @ 35 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 400 | 2.80 | 320 |
| 1206CS-122X_B_ | 1200 @ 35 MHz | 20,10, 5,2,1 | 45 @ 150 MHz | 380 | 3.20 | 300 |

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

1206CS-122X J B C

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

Termination: B = Standard Ag/Pd/Pt L = RoHS compliant Ag/Pd/Pt

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 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 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.

See Color Coding section for part marking data.

COILCRAFT ACCURATE
PRECISION REPEATABLE
MEASUREMENTS
SEE INDEX **TEST FIXTURES**

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Specifications subject to change without notice.

Please check our website for latest information.

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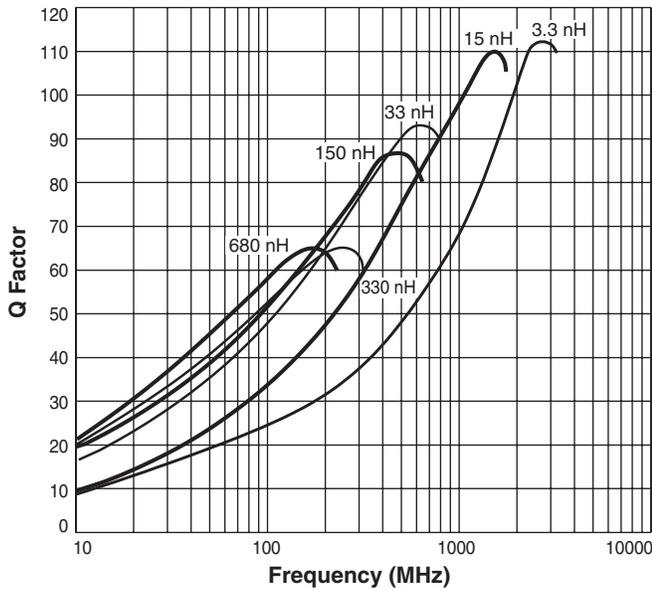
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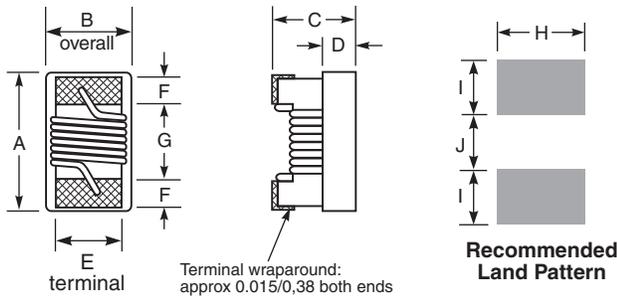
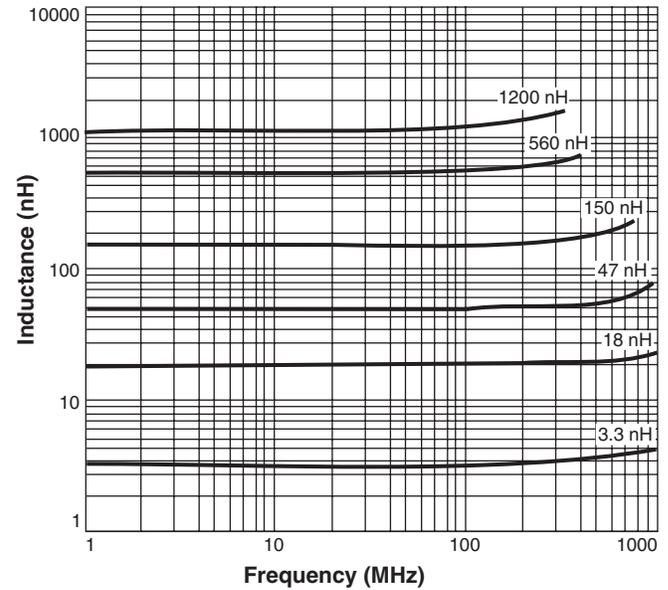
1206CS Series (3216)

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



| A max | B max | C max | D ref | E | F | G | H | I | J |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.140 | 0.085 | 0.060 | 0.020 | 0.056 | 0.020 | 0.080 | 0.076 | 0.040 | 0.070 |
| 3,56 | 2,16 | 1,52 | 0,51 | 1,42 | 0,51 | 2,03 | 1,93 | 1,02 | 1,78 |

Weight: 19.5 – 23.0 mg
Terminations: Platinum/palladium/silver
Tape and reel: 2000/7" reel; 7500/13" reel 8 mm tape width
 For packaging data see Tape and Reel Specifications section.

Specifications subject to change without notice.
 Please check our website for latest information. Document 104-2 Revised 12/28/04

