

# 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.

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

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

1206CS-122X J B C

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

(Table shows stock tolerances in bold.)

**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 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**

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.

Please check our website for latest information.

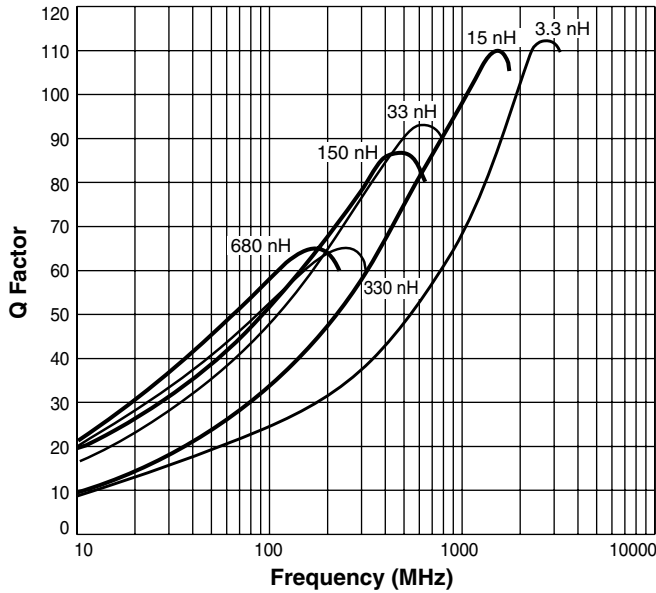
Document 104-1 Revised 02/09/05

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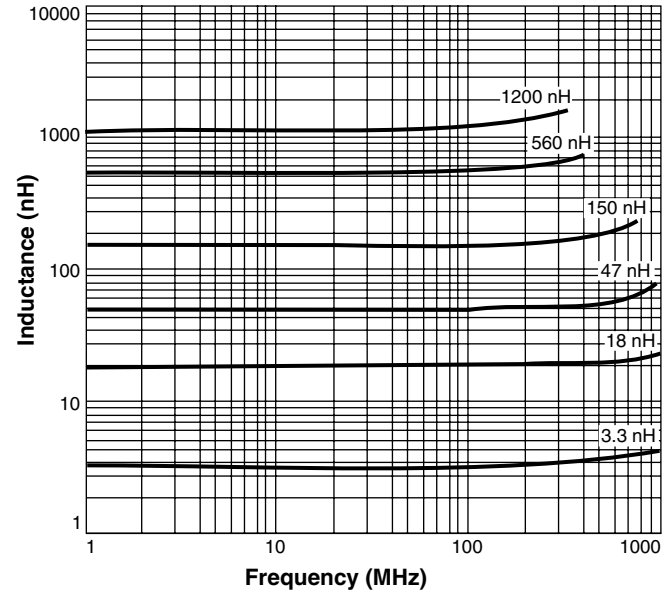
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# 1206CS Series (3216)

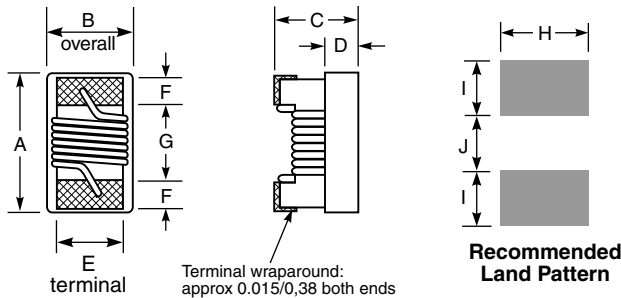
## Typical Q vs Frequency



## Typical L vs Frequency



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



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:** Silver-palladium-platinum  
**Tape and reel:** 2000/7" reel; 7500/13" reel 8 mm tape width  
 For packaging data see Tape and Reel Specifications section.



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 Please check our website for latest information. Document 104-2 Revised 12/28/04

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