



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 C320** 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_L_	3.3 @ 100 MHz	5	30 @ 300 MHz	6200	0.050	1000
1206CS-060X_L_	6.8 @ 100 MHz	5	30 @ 300 MHz	5500	0.070	1000
1206CS-100X_L_	10 @ 100 MHz	5	40 @ 300 MHz	4000	0.080	1000
1206CS-120X_L_	12 @ 100 MHz	5,2	40 @ 300 MHz	3200	0.080	1000
1206CS-150X_L_	15 @ 100 MHz	5,2	40 @ 300 MHz	3200	0.100	1000
1206CS-180X_L_	18 @ 100 MHz	5,2	50 @ 300 MHz	2800	0.100	1000
1206CS-220X_L_	22 @ 100 MHz	5,2	50 @ 300 MHz	2200	0.100	1000
1206CS-270X_L_	27 @ 100 MHz	5,2	50 @ 300 MHz	1800	0.110	1000
1206CS-330X_L_	33 @ 100 MHz	5,2	55 @ 300 MHz	1800	0.110	1000
1206CS-390X_L_	39 @ 100 MHz	5,2	55 @ 300 MHz	1800	0.120	1000
1206CS-470X_L_	47 @ 100 MHz	5,2	55 @ 300 MHz	1500	0.130	1000
1206CS-560X_L_	56 @ 100 MHz	5,2,1	55 @ 300 MHz	1450	0.140	1000
1206CS-680X_L_	68 @ 100 MHz	5,2,1	55 @ 300 MHz	1200	0.260	900
1206CS-820X_L_	82 @ 100 MHz	5,2,1	55 @ 300 MHz	1200	0.210	900
1206CS-101X_L_	100 @ 100 MHz	5,2,1	55 @ 300 MHz	1100	0.260	850
1206CS-121X_L_	120 @ 100 MHz	5,2,1	60 @ 300 MHz	1100	0.260	800
1206CS-151X_L_	150 @ 100 MHz	5,2,1	60 @ 300 MHz	950	0.310	750
1206CS-181X_L_	180 @ 50 MHz	5,2,1	60 @ 300 MHz	900	0.430	700
1206CS-221X_L_	220 @ 50 MHz	5,2,1	60 @ 300 MHz	760	0.500	670
1206CS-271X_L_	270 @ 50 MHz	5,2,1	55 @ 300 MHz	730	0.560	630
1206CS-331X_L_	330 @ 50 MHz	5,2,1	45 @ 150 MHz	650	0.620	590
1206CS-391X_L_	390 @ 50 MHz	5,2,1	45 @ 150 MHz	600	0.750	530
1206CS-471X_L_	470 @ 50 MHz	5,2,1	45 @ 150 MHz	550	1.30	490
1206CS-561X_L_	560 @ 35 MHz	5,2,1	45 @ 150 MHz	470	1.34	460
1206CS-621X_L_	620 @ 35 MHz	5,2,1	45 @ 150 MHz	470	1.58	460
1206CS-681X_L_	680 @ 35 MHz	5,2,1	45 @ 150 MHz	450	1.58	430
1206CS-751X_L_	750 @ 35 MHz	5,2,1	45 @ 150 MHz	440	2.25	320
1206CS-821X_L_	820 @ 35 MHz	5,2,1	45 @ 150 MHz	420	1.82	400
1206CS-911X_L_	910 @ 35 MHz	5,2,1	45 @ 150 MHz	410	2.95	310
1206CS-102X_L_	1000 @ 35 MHz	5,2,1	45 @ 150 MHz	400	2.80	320
1206CS-122X_L_	1200 @ 35 MHz	5,2,1	45 @ 150 MHz	380	3.20	300

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

1206CS-122X J L 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. 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. Current that causes a 15°C temperature rise from 25°C ambient.

8. **Ambient temperature range:** -40°C to +125°C with Irms current
+125°C to +140°C with derated current

9. **Storage temperature range:** Component: -55°C to +125°C
Packaging: -55°C to +80°C

10. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds
(+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room
temperature between.

11. Electrical specifications at 25°C.

12. Temperature coefficient of inductance: +25 to +125 ppm/°C.

See Qualification Standards section for environmental and test data.

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

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Specifications subject to change without notice.

Please check our website for latest information.

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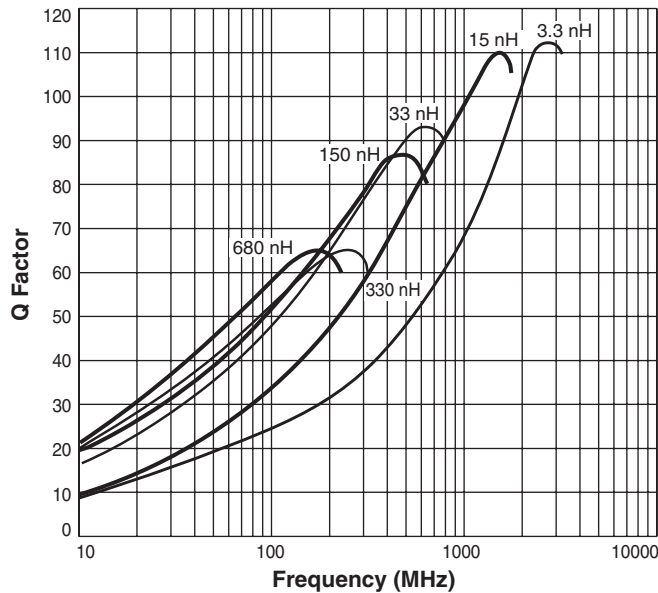
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1206CS Series (3216)

Typical Q vs Frequency



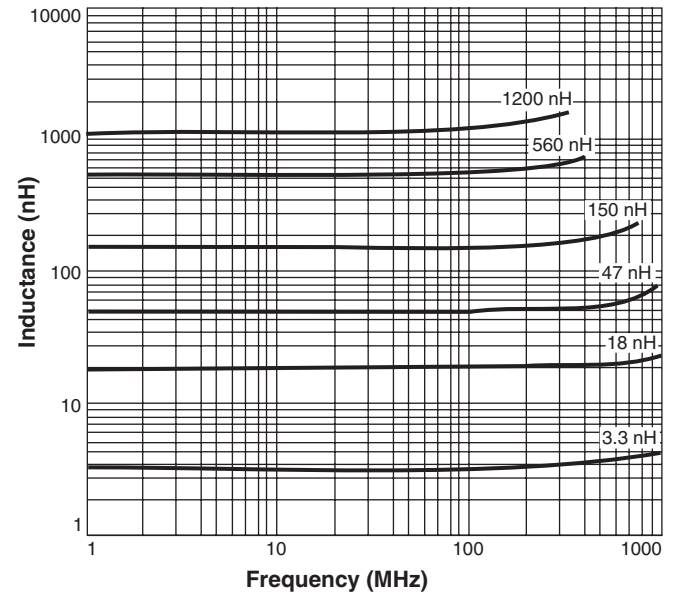
S-Parameter files

ON OUR WEB SITE OR CD

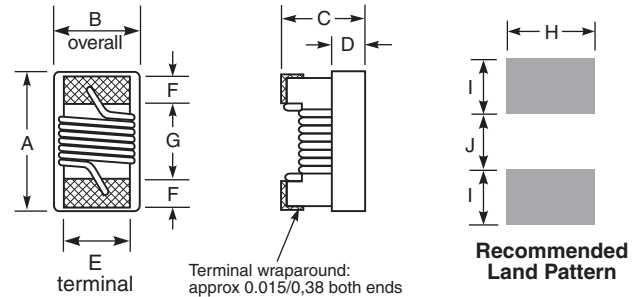
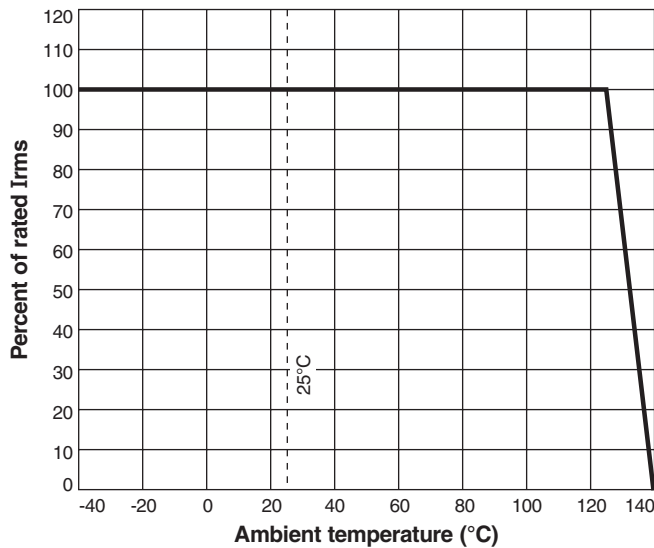
SPICE models

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Typical L vs Frequency



Irms Derating



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

Tape and reel: 2000/7" reel; 7500/13" reel 8 mm tape width

For packaging data see Tape and Reel Specifications section.

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

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