



Chip Inductors – 1206CS Series (3216)

- High SRF and excellent Q values
- Tight tolerances, many values at 1%
- 31 inductance values from 3.3 to 1200 nH

Request free evaluation samples by contacting Coilcraft or visiting www.coilcraft.com.

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-122XJLC

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

(Table shows stock tolerances in bold.)

Termination: L = RoHS compliant silver-palladium-platinum-glass frit.

E = Halogen free component. RoHS compliant 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).

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. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering. Refer to Doc 174 "Color Coding" for the explanation of color dots.

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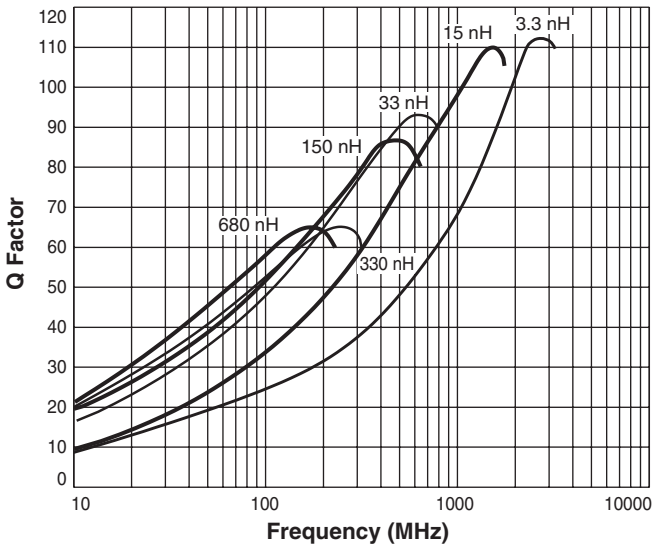
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



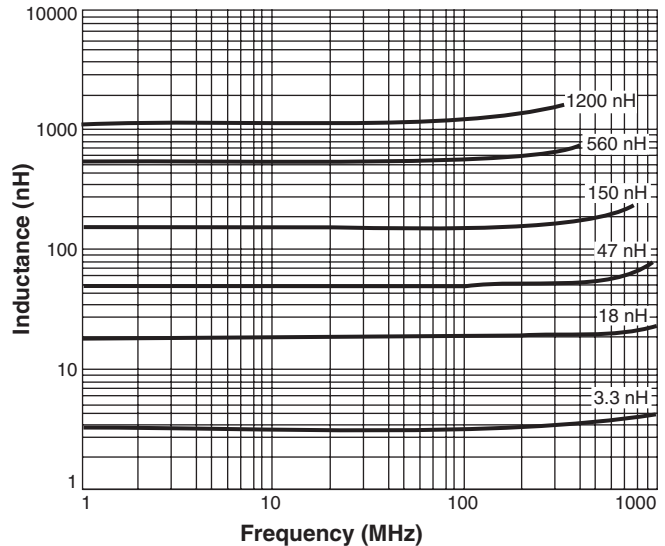
1206CS Series (3216)

Typical Q vs Frequency

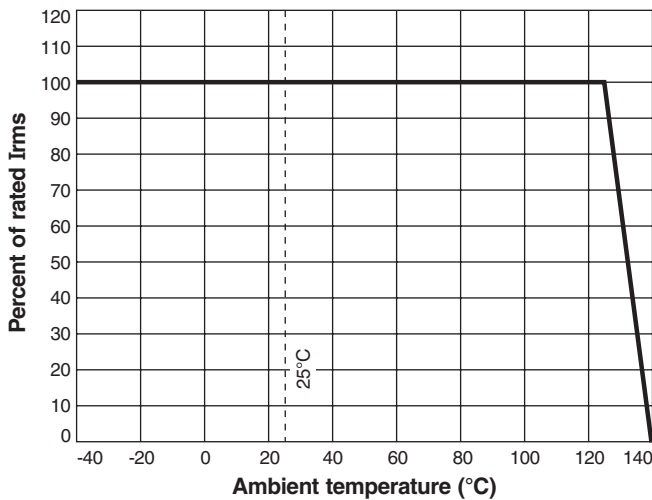


S-Parameter files
ON OUR WEB SITE
SPICE models
ON OUR WEB SITE

Typical L vs Frequency



Irms Derating



Designer's Kit C320 contains 10 each of all 5% values

Core material Ceramic

Environmental RoHS compliant, halogen free optional

Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Weight 19.5 – 23.0 mg

Ambient temperature -40°C to +125°C with Irms current, +125°C to +140°C with derated current

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

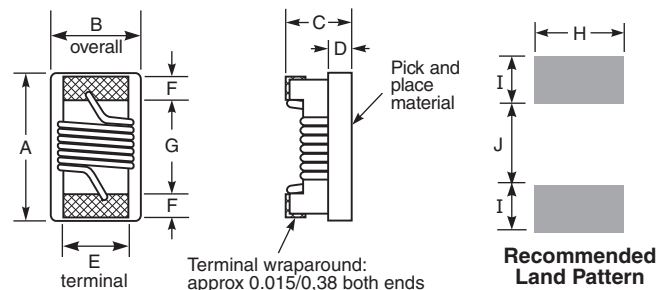
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

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 with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf



Amax	Bmax	Cmax	Dref	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

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



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