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

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

1206CS-122XJEC

Tolerance: **F** = 1% **G** = 2% **J** = 5%
(Table shows stock tolerances in bold.)

Termination: **E** = Halogen free component. RoHS compliant silver-palladium-platinum-glass frit terminations.
L = RoHS compliant, not halogen-free. Silver-palladium-platinum-glass frit terminations.
R = RoHS compliant matte tin over nickel over silver-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). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
D = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).
B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

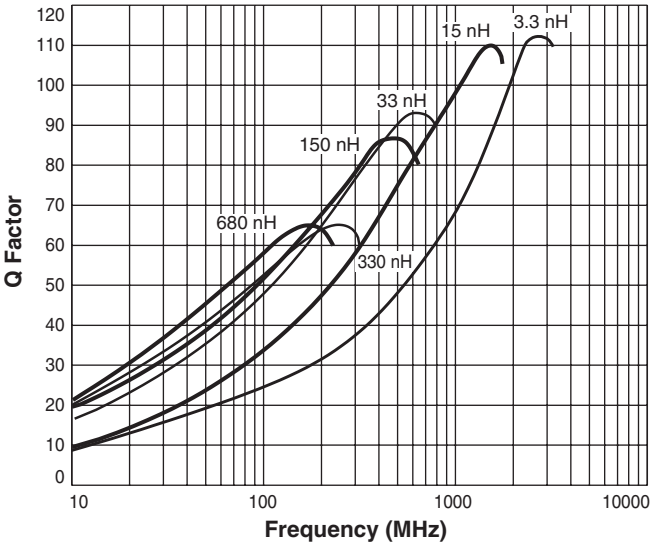
2. Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
3. Tolerances in bold are stocked for immediate shipment.
4. Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
5. SRF measured using an 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. This information is for reference only and does not represent absolute maximum ratings.
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.

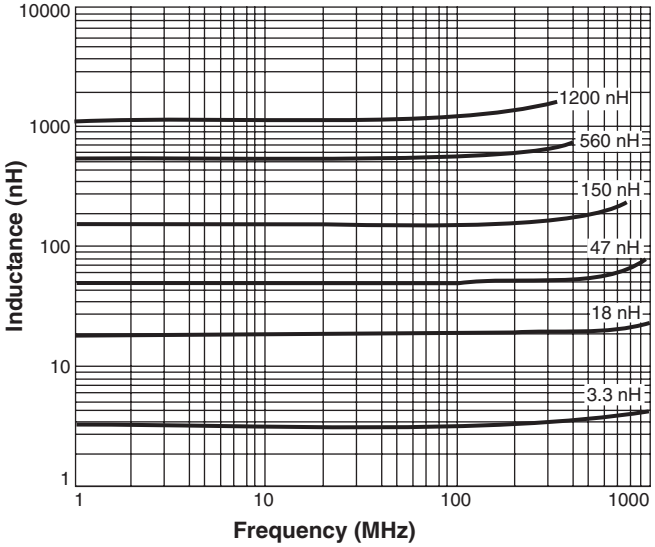
S-Parameter files
ON OUR WEB SITE
SPICE models
ON OUR WEB SITE

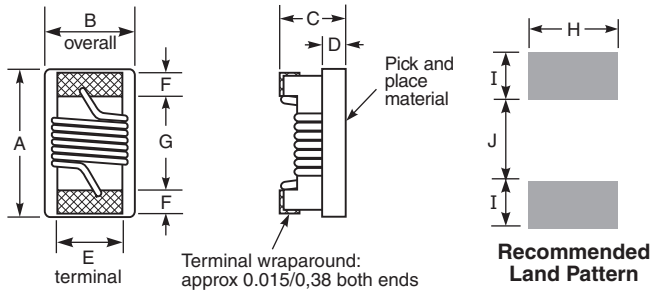
1206CS Series (3216)

Typical Q vs Frequency



Typical L vs Frequency





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.

Designer's Kit C320 contains 10 each of all 5% values
Core material Ceramic
Environmental RoHS compliant, halogen free
Terminations 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
Maximum part temperature +140°C (ambient + temp rise).
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)
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 to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.