

# Chip Inductors - 0805CS Series (2012)

These ultra-compact inductors provide exceptional Q values, even at high frequencies. They have a ceramic body and wirewound construction to provide the highest SRFs available in 0805 size.

Coilcraft **Designer's Kit C103** contains samples of all the standard parts shown. Kits with 5% and 2% inductance tolerance are also available.

Part Number	Inductance <sup>1</sup> (nH)	Percent Tolerance <sup>2</sup>	Q Min <sup>3</sup>	SRF Min <sup>4</sup> (MHz)	R <sub>DC</sub> Max <sup>5</sup> (Ohms)	I <sub>DC</sub> Max <sup>6</sup> (mA)	Color Code
0805CS-030XMBC	3.3 @ 250 MHz	<b>20</b> ,10,5	50 @ 1500 MHz	6000	.08	600	Black
0805CS-060XMBC	6.8 @ 250 MHz	<b>20</b> ,10,5	50 @ 1000 MHz	5500	.11	600	Brown
0805CS-080XMBC	8.2 @ 250 MHz	<b>20</b> ,10,5	50 @ 1000 MHz	4700	.12	600	Red
0805CS-120XMBC	12 @ 250 MHz	<b>20</b> ,10,5	50 @ 500 MHz	4000	.15	600	Orange
0805CS-150XMBC	15 @ 250 MHz	<b>20</b> ,10,5	50 @ 500 MHz	3400	.17	600	Yellow
0805CS-180XMBC	18 @ 250 MHz	<b>20</b> ,10,5	50 @ 500 MHz	3300	.20	600	Green
0805CS-220XMBC	22 @ 250 MHz	<b>20</b> ,10,5,2	55 @ 500 MHz	2600	.22	500	Blue
0805CS-270XMBC	27 @ 250 MHz	<b>20</b> ,10,5,2	55 @ 500 MHz	2500	.25	500	Violet
0805CS-330XMBC	33 @ 250 MHz	<b>20</b> ,10,5,2	60 @ 500 MHz	2050	.27	500	Gray
0805CS-390XMBC	39 @ 250 MHz	<b>20</b> ,10,5,2	60 @ 500 MHz	2000	.29	500	White
0805CS-470XMBC	47 @ 200 MHz	<b>20</b> ,10,5,2	60 @ 500 MHz	1650	.31	500	Black
0805CS-560XKBC	56 @ 200 MHz	<b>10</b> ,5,2,1	60 @ 500 MHz	1550	.34	500	Brown
0805CS-680XKBC	68 @ 200 MHz	<b>10</b> ,5,2,1	60 @ 500 MHz	1450	.38	500	Red
0805CS-820XKBC	82 @ 150 MHz	<b>10</b> ,5,2,1	65 @ 500 MHz	1300	.42	400	Orange
0805CS-101XKBC	100 @ 150 MHz	<b>10</b> ,5,2,1	65 @ 500 MHz	1200	.46	400	Yellow
0805CS-121XKBC	120 @ 150 MHz	<b>10</b> ,5,2,1	50 @ 250 MHz	1100	.51	400	Green
0805CS-151XKBC	150 @ 100 MHz	<b>10</b> ,5,2,1	50 @ 250 MHz	920	.56	400	Blue
0805CS-181XKBC	180 @ 100 MHz	<b>10</b> ,5,2,1	50 @ 250 MHz	870	.64	400	Violet
0805CS-221XKBC	220 @ 100 MHz	<b>10</b> ,5,2	50 @ 250 MHz	850	.70	400	Gray
0805CS-271XKBC	270 @ 100 MHz	<b>10</b> ,5,2	48 @ 250 MHz	650	1.0	350	White
0805CS-331XKBC	330 @ 100 MHz	<b>10</b> ,5,2	48 @ 250 MHz	600	1.4	310	Black
0805CS-391XKBC	390 @ 100 MHz	<b>10</b> ,5,2	48 @ 250 MHz	560	1.5	290	Brown

For help ordering non-standard parts, see "Part Numbering" (Document 120).

For environmental data see "Product Specifications" (Document 121).

For part marking data see "Color Coding" (Document 174).

- Inductance measured using Coilcraft SMD-A fixture in HP4191A impedance analyzer with Coilcraft-provided correlation pieces. For recommended test procedures, contact Coilcraft.
- Bold number indicates standard tolerance. When ordering other tolerances, replace the third to the last letter in the part number with the proper tolerance code: F=1%, G=2%, J=5%, K=10%, M=20%. (e.g. 0805CS-030XJBC for a 5% tolerance part.

3. Q measured using HP4291A with HP16193 test fixture and on HP8753B with Coilcraft SMD-E test fixture.

4. SRF measured using HP8753B network analyzer and Coilcraft SMD-D test fixture.

5. R<sub>DC</sub> measured on Cambridge Technology micro-ohmmeter and Coilcraft CCF858 test fixture.

6. For 15°C rise.

7. Operating temperature range -40° to +125°C.

**COILCRAFT** ACCURATE  
REPEATABLE  
**PRECISION** MEASUREMENTS  
PAGE 126 **TEST FIXTURES**

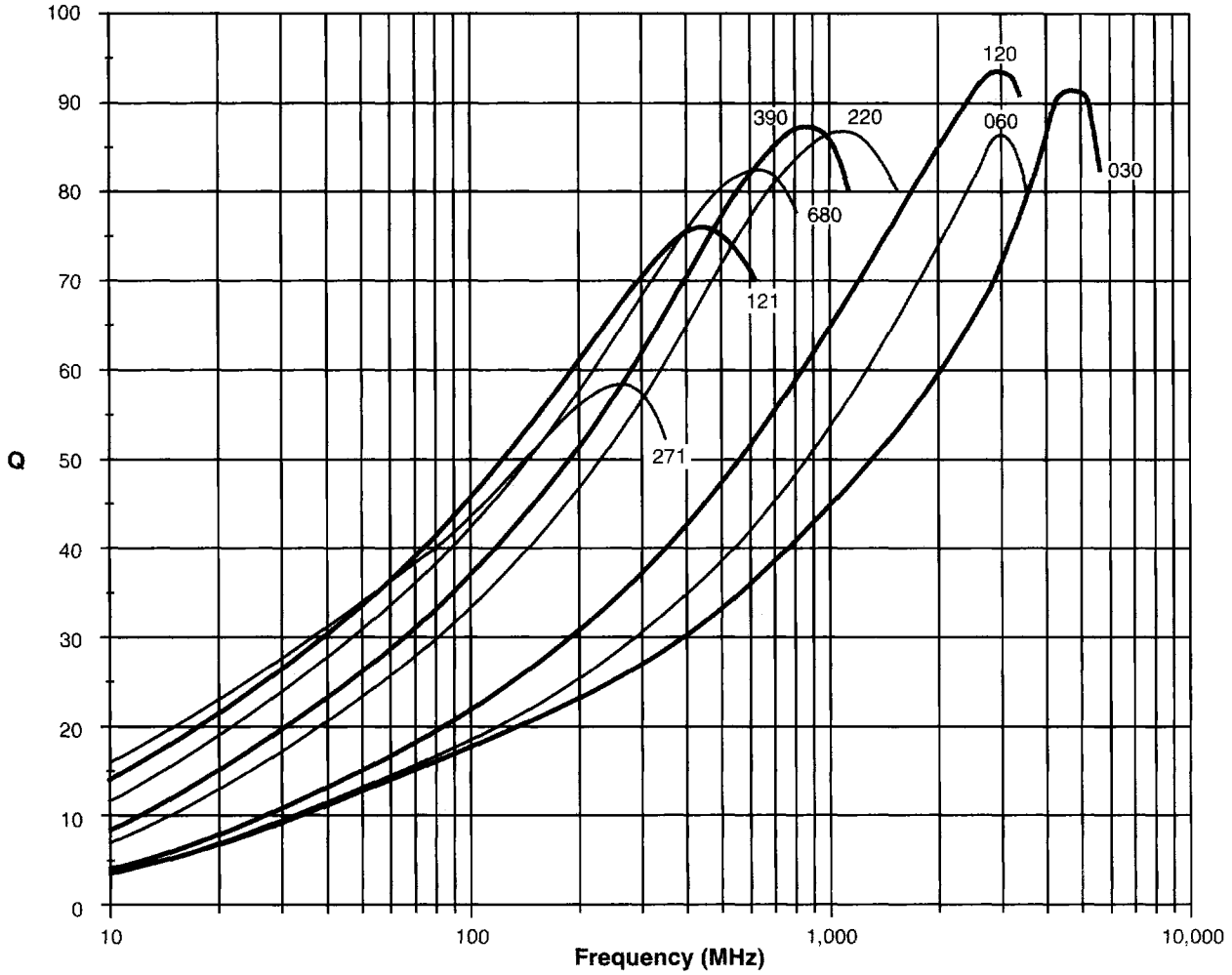
*Coilcraft*

Document 100-1 Revised 6/24/97

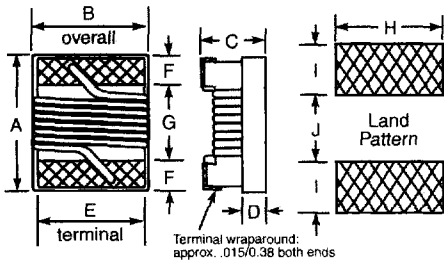
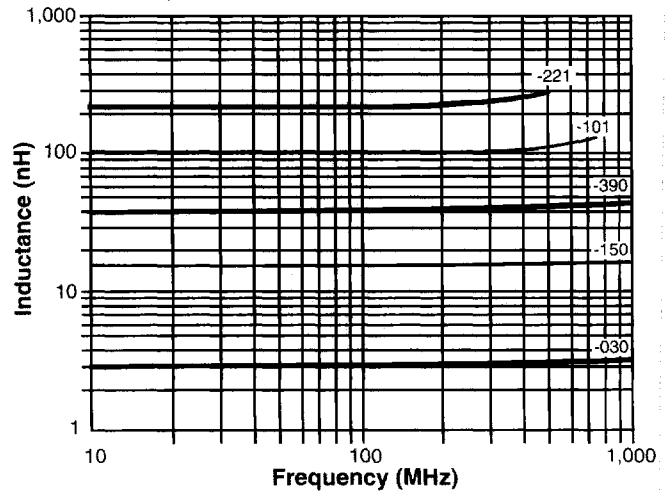
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# 0805CS Series (2012)

## TYPICAL Q vs FREQUENCY



## L vs FREQUENCY



A	B	C	D	E	F	G	H	I	J
Max.	Max.	Max.	Ref.						
.090	.068	.060	.020	.050	.020	.040	.070	.040	.030
2.29	1.73	1.52	0.51	1.27	0.51	1.02	1.78	1.02	0.76

Parts/reel: 7" 2,000; 13" 7,500 Tape width: 8mm  
 For packaging data see "Tape and Reel Specifications" (Document 173)

