

Chip Inductors – 0805CS (2012)



- Exceptional Q values, even at high frequencies
- Tight tolerances – 2% for most; 1% for some values
- Wirewound construction provides the highest SRFs in 0805 size

Part number ¹	Inductance ² (nH)	Percent tolerance ³	Q min ⁴	SRF typ ⁵ (MHz)	DCR max ⁶ (Ohms)	Irms ⁷ (mA)	Color code
0805CS-020XJE_	2.8 @ 250 MHz	5	80 @ 1500 MHz	12200	0.06	800	Gray
0805CS-3N0XJE_	3.0 @ 250 MHz	5	65 @ 1500 MHz	12200	0.06	800	White
0805CS-030XJE_	3.3 @ 250 MHz	5	50 @ 1500 MHz	12200	0.08	600	Black
0805CS-050XJE_	5.6 @ 250 MHz	5	65 @ 1000 MHz	5900	0.08	600	Orange
0805CS-060XJE_	6.8 @ 250 MHz	5	50 @ 1000 MHz	5600	0.11	600	Brown
0805CS-070XJE_	7.5 @ 250 MHz	5	50 @ 1000 MHz	4800	0.14	600	Green
0805CS-080X_E	8.2 @ 250 MHz	5,2	50 @ 1000 MHz	4400	0.12	600	Red
0805CS-100X_E	10 @ 250 MHz	5,2	60 @ 500 MHz	4300	0.10	600	Blue
0805CS-120X_E	12 @ 250 MHz	5,2	50 @ 500 MHz	4000	0.15	600	Orange
0805CS-150X_E	15 @ 250 MHz	5,2	50 @ 500 MHz	3200	0.17	600	Yellow
0805CS-180X_E	18 @ 250 MHz	5,2	50 @ 500 MHz	3100	0.20	600	Green
0805CS-220X_E	22 @ 250 MHz	5,2	55 @ 500 MHz	2600	0.22	500	Blue
0805CS-240X_E	24 @ 250 MHz	5,2	50 @ 500 MHz	2400	0.22	500	Gray
0805CS-270X_E	27 @ 250 MHz	5,2	55 @ 500 MHz	2580	0.25	500	Violet
0805CS-330X_E	33 @ 250 MHz	5,2,1	60 @ 500 MHz	2150	0.27	500	Gray
0805CS-360X_E	36 @ 250 MHz	5,2,1	55 @ 500 MHz	1900	0.27	500	Orange
0805CS-390X_E	39 @ 250 MHz	5,2,1	60 @ 500 MHz	2000	0.29	500	White
0805CS-430X_E	43 @ 200 MHz	5,2,1	60 @ 500 MHz	1800	0.34	500	Yellow
0805CS-470X_E	47 @ 200 MHz	5,2,1	60 @ 500 MHz	1700	0.31	500	Black
0805CS-560X_E	56 @ 200 MHz	5,2,1	60 @ 500 MHz	1600	0.34	500	Brown
0805CS-680X_E	68 @ 200 MHz	5,2,1	60 @ 500 MHz	1500	0.38	500	Red
0805CS-820X_E	82 @ 150 MHz	5,2,1	65 @ 500 MHz	1330	0.42	400	Orange
0805CS-910X_E	91 @ 150 MHz	5,2,1	65 @ 500 MHz	1330	0.48	400	Black
0805CS-101X_E	100 @ 150 MHz	5,2,1	65 @ 500 MHz	1250	0.46	400	Yellow
0805CS-111X_E	110 @ 150 MHz	5,2	50 @ 250 MHz	1100	0.48	400	Brown
0805CS-121X_E	120 @ 150 MHz	5,2,1	50 @ 250 MHz	1100	0.51	400	Green
0805CS-151X_E	150 @ 100 MHz	5,2,1	50 @ 250 MHz	920	0.56	400	Blue
0805CS-181X_E	180 @ 100 MHz	5,2,1	50 @ 250 MHz	920	0.64	400	Violet
0805CS-221X_E	220 @ 100 MHz	5,2	50 @ 250 MHz	820	0.70	400	Gray
0805CS-241X_E	240 @ 100 MHz	5,2	44 @ 250 MHz	770	1.00	350	Red
0805CS-271X_E	270 @ 100 MHz	5,2	48 @ 250 MHz	730	1.00	350	White
0805CS-331X_E	330 @ 100 MHz	5,2	48 @ 250 MHz	650	1.40	310	Black
0805CS-391X_E	390 @ 100 MHz	5,2	48 @ 250 MHz	600	1.50	290	Brown
0805CS-471X_E	470 @ 50 MHz	5,2	33 @ 100 MHz	375	1.76	250	Violet
0805CS-561X_E	560 @ 25 MHz	5,2	23 @ 50 MHz	330	1.90	230	Orange
0805CS-681X_E	680 @ 25 MHz	5,2	23 @ 50 MHz	310	2.20	190	Green
0805CS-821X_E	820 @ 25 MHz	5,2	23 @ 50 MHz	310	2.35	180	Blue

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

0805CS-821XGEC

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 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 CCF858 test 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.



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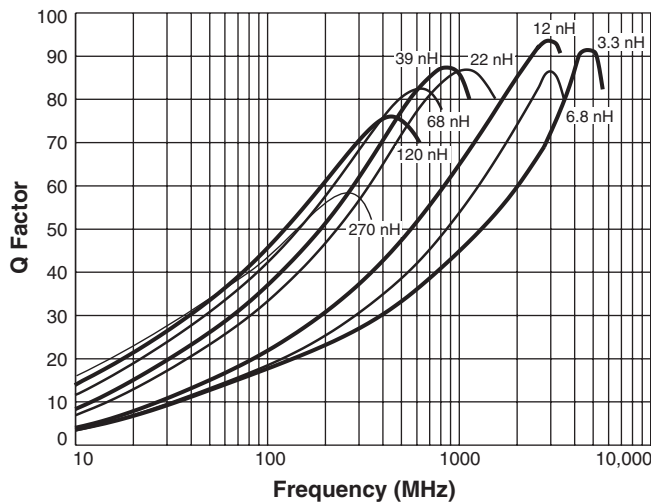
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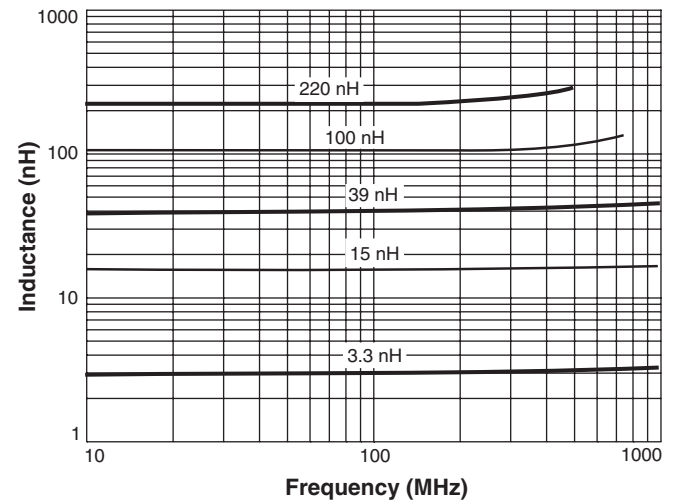
This product may not be used in medical or high risk applications without prior Coilcraft approval.
Specification subject to change without notice.
Please check web site for latest information.

0805CS Series (2012)

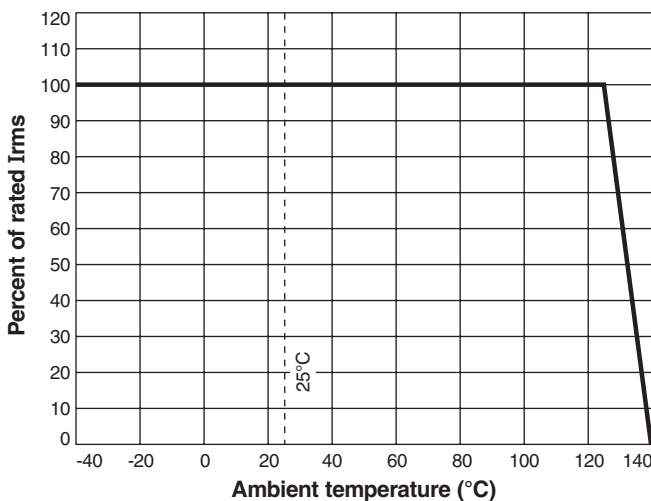
Typical Q vs Frequency



Typical L vs Frequency



Irms Derating



Designer's Kit C303 contains 10 of each 5% part
Designer's Kit C303-2 contains 10 of each 2% part

Core material Ceramic

Environmental RoHS compliant, halogen free

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

Weight 10.2 – 11.6 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 reelpackaging: -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) +100 to +250 ppm/°C

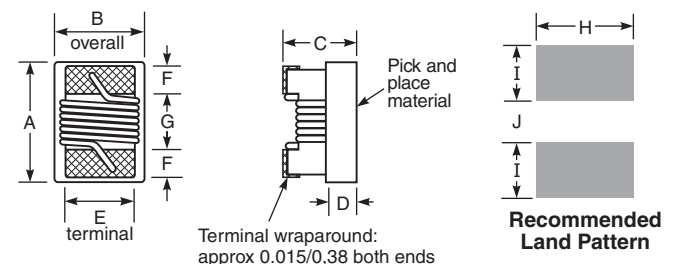
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

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, 0.23 mm thick, 4 mm pocket spacing, 1.65 mm pocket depth

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



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.090	0.068	0.060	0.020	0.050	0.020	0.040	0.070	0.040	0.030
2,29	1,73	1,52	0,51	1,27	0,51	1,02	1,78	1,02	0,76

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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