



Chip Inductors - 0302CS (0805)

- 0302 size – 20% smaller than our 0402CS inductors
- 35 inductance values from 0.67 to 34 nH
- High Q values – up to 131 at 2.4 GHz!

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

Part number ¹	Inductance ² (nH)	Percent tolerance	900 MHz		1.7 GHz		2.4 GHz		SRF typ ⁴ (GHz)	DCR max ⁵ (Ohms)	Irms ⁶ (mA)
			L typ	Q typ ³	L typ	Q typ ³	L typ	Q typ ³			
0302CS-N67XKR	0.67	10	0.66	42	0.66	56	0.67	70	>26	0.021	1600
0302CS-1N7XJR	1.7	5	1.7	57	1.7	78	1.7	95	16.14	0.038	1140
0302CS-1N9XJR	1.9	5	1.9	42	1.9	65	1.9	83	16.06	0.065	910
0302CS-2N1XJR	2.1	5	2.1	38	2.1	57	2.1	72	15.94	0.082	830
0302CS-3N0XJR	3.0	5	3.0	56	3.0	92	3.0	131	15.10	0.060	950
0302CS-3N3XJR	3.3	5	3.3	56	3.3	88	3.3	129	11.50	0.060	950
0302CS-3N5XJR	3.5	5	3.5	60	3.5	84	3.5	110	11.53	0.070	870
0302CS-3N8XJR	3.8	5	3.8	60	3.8	89	3.8	105	10.67	0.090	830
0302CS-4N0XJR	4.0	5	4.0	52	4.0	80	4.1	98	11.21	0.100	760
0302CS-4N7XJR	4.7	5	4.6	55	4.6	88	4.7	120	12.07	0.074	830
0302CS-5N1XJR	5.1	5	5.1	62	5.1	92	5.2	118	9.65	0.074	830
0302CS-5N6XJR	5.6	5	5.5	50	5.5	71	5.6	108	6.40	0.120	730
0302CS-6N0XJR	6.0	5	6.0	58	6.0	82	6.2	105	8.60	0.140	700
0302CS-6N3XJR	6.3	5	6.3	56	6.3	80	6.5	100	9.34	0.155	620
0302CS-6N5XJR	6.5	5	6.5	56	6.5	80	6.8	100	8.19	0.200	620
0302CS-7N0XJR	7.0	5	7.0	62	7.1	84	7.2	112	8.50	0.103	760
0302CS-7N2XJR	7.2	5	7.2	60	7.2	82	7.4	110	9.12	0.112	690
0302CS-7N4XJR	7.4	5	7.3	60	7.4	82	7.6	110	7.98	0.112	690
0302CS-8N3XJR	8.3	5	8.2	58	8.3	80	8.5	104	8.19	0.150	590
0302CS-9N2XJR	9.2	5	8.9	58	9.0	83	9.2	120	7.92	0.115	690
0302CS-10NXJR	10.0	5	10.0	58	10.1	91	10.2	119	7.45	0.140	620
0302CS-11NXJR	11.0	5	11.0	57	11.2	83	11.6	105	6.85	0.210	590
0302CS-12NXJR	12.0	5	12.0	59	12.6	88	12.7	110	6.86	0.170	560
0302CS-13NXJR	13.0	5	13.0	53	13.3	83	13.8	104	6.94	0.230	480
0302CS-15NXJR	15.0	5	15.0	55	15.4	84	15.9	106	6.20	0.174	560
0302CS-16NXJR	16.0	5	16.0	54	16.4	85	17.0	102	6.13	0.210	480
0302CS-17NXJR	17.0	5	16.9	52	17.4	82	18.2	118	6.26	0.280	440
0302CS-18NXJR	18.0	5	17.9	55	18.5	80	19.3	111	6.03	0.350	390
0302CS-19NXJR	19.0	5	18.9	53	19.6	85	20.5	104	5.79	0.260	480
0302CS-20NXJR	20.0	5	19.9	56	20.2	88	20.8	112	5.68	0.300	430
0302CS-21NXJR	21.0	5	20.9	53	22.0	82	24.1	95	5.16	0.370	370
0302CS-22NXJR	22.0	5	22.0	52	23.1	79	25.2	94	4.95	0.420	340
0302CS-23NXJR	23.5	5	23.5	54	24.6	84	27.4	92	5.18	0.400	430
0302CS-29NXJR	29.0	5	29.0	51	30.5	75	33.0	90	4.83	0.470	330
0302CS-34NXJR	34.0	5	34.0	55	35.5	78	38.1	94	4.45	0.530	310

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

0302CS-34NXJRW

Termination: R = RoHS matte Sn over Ni over Ag-Pt-glass frit.

RoHS compliance expiring. Last order June 2021:

E = Ag/Pd/Pt-glass frit. Not for new designs.

L = Not halogen-free. Ag/Pd/Pt-glass frit. Not for new designs.

Packaging: W = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

U = 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 U to W.

2. Inductance measured at 250 MHz using a Coilcraft SMD-F fixture in an Agilent/HP 4286 impedance analyzer with Coilcraft-provided correlation pieces.

3. Q measured using an Agilent/HP 4287A with an Agilent/HP 16193 test fixture.

4. SRF measured using an Agilent/HP 8722ES network analyzer and a test fixture with a 0.017" air gap.

5. DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.

6. Current that causes a 30°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

7. Electrical specifications at 25°C.

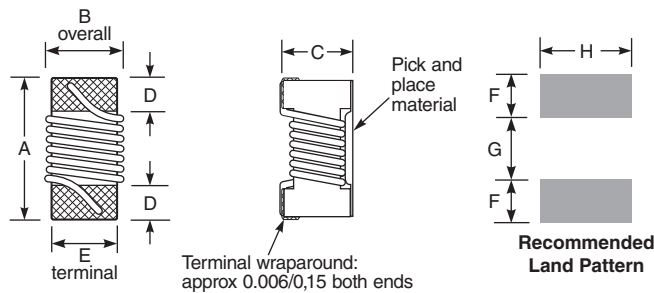
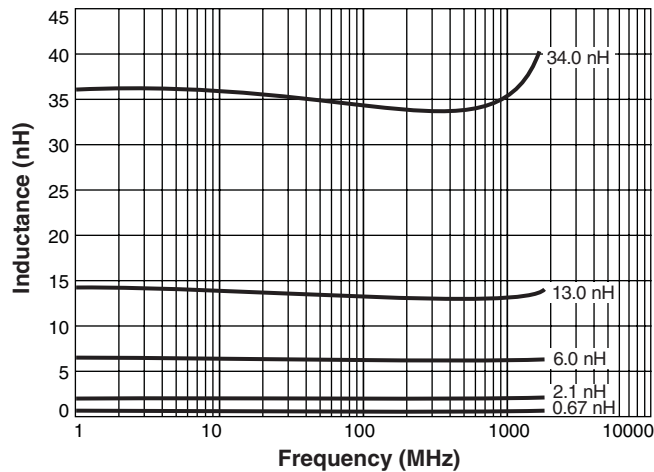
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

COILCRAFT ACCURATE
PRECISION REPEATABLE
MEASUREMENTS
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0302CS Series (0805)

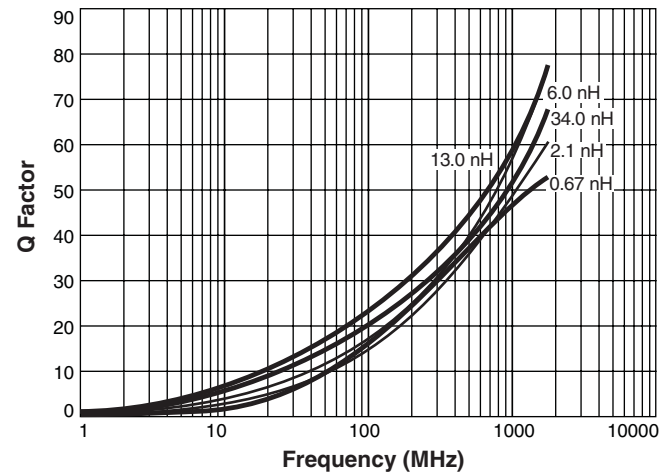
Typical L vs Frequency



Amax	Bmax	Cmax	D	E	F	G	H
0.034	0.021	0.018	0.006	0.015	0.010	0.014	0.021
0,86	0,53	0,45	0,16	0,38	0,25	0,36	0,53

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

Typical Q vs Frequency



Designer's Kit C370 contains 20 each of all values

Core material Ceramic

Environmental RoHS compliant, halogen free

Terminations RoHS matte Sn over Ni over Ag-Pt-glass frit. Other terminations available at additional cost.

Weight 0.4 – 0.5 mg

Ambient temperature –40°C to +125°C with Irms current

Maximum part temperature +155°C (ambient + temp rise).

Storage temperature Component: –40°C to +155°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)
0.22 per billion hours / 4.55E+09 hours, calculated per Telcordia SR-332

Packaging 2000 per 7" reel. Paper tape: 8 mm wide, 0.5 mm thick, 2 mm pocket spacing

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).