Chip Inductors - 0302CS (0805)

- 0302 size – 20% smaller than our 0402CS inductors
- 34 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 L typ	900 MHz Q typ[3]	1.7 GHz L typ	1.7 GHz Q typ[3]	2.4 GHz L typ	2.4 GHz Q typ[3]	SRF typ[4] (GHz)	DCR max[5] (Ohms)	Irms[6] (mA)
0302CS-N67XKL_	0.67	**10**	0.66	42	0.66	56	0.67	70	>26	0.021	1600
0302CS-1N7XJL_	1.7	**5**	1.7	57	1.7	78	1.7	95	16.14	0.038	1140
0302CS-1N9XJL_	1.9	**5**	1.9	42	1.9	65	1.9	83	16.06	0.065	910
0302CS-2N1XJL_	2.1	**5**	2.1	38	2.1	57	2.1	72	15.94	0.082	830
0302CS-3N0XJL_	3.0	**5**	3.0	56	3.0	92	3.0	131	15.10	0.060	950
0302CS-3N3XJL_	3.3	**5**	3.3	56	3.3	88	3.3	129	11.50	0.060	950
0302CS-3N5XJL_	3.5	**5**	3.5	60	3.5	84	3.5	110	11.53	0.070	870
0302CS-3N8XJL_	3.8	**5**	3.8	60	3.8	89	7.8	105	10.67	0.090	830
0302CS-4N0XJL_	4.0	**5**	4.0	52	4.0	80	4.1	98	11.21	0.100	760
0302CS-4N7XJL_	4.7	**5**	4.6	55	4.6	88	4.7	120	12.07	0.074	830
0302CS-5N1XJL_	5.1	**5**	5.1	62	5.1	92	5.2	118	9.65	0.074	830
0302CS-6N0XJL_	6.0	**5**	6.0	58	6.0	82	6.2	105	8.60	0.140	700
0302CS-6N3XJL_	6.3	**5**	6.3	56	6.3	80	6.5	100	9.34	0.155	620
0302CS-6N5XJL_	6.5	**5**	6.5	56	6.5	80	6.8	100	8.19	0.200	620
0302CS-7N0XJL_	7.0	**5**	7.0	62	7.1	84	7.2	112	8.50	0.103	760
0302CS-7N2XJL_	7.2	**5**	7.2	60	7.2	82	7.4	110	9.12	0.112	690
0302CS-7N4XJL_	7.4	**5**	7.3	60	7.4	82	7.6	110	7.98	0.112	690
0302CS-8N3XJL_	8.3	**5**	8.2	58	8.3	80	8.5	104	8.19	0.150	590
0302CS-9N2XJL_	9.2	**5**	8.9	58	9.0	83	9.2	120	7.92	0.115	690
0302CS-10NXJL_	10.0	**5**	10.0	58	10.1	91	10.2	119	7.45	0.140	620
0302CS-11NXJL_	11.0	**5**	11.0	57	11.2	83	11.6	105	6.85	0.210	590
0302CS-12NXJL_	12.0	**5**	12.0	59	12.6	88	12.7	110	6.86	0.170	560
0302CS-13NXJL_	13.0	**5**	13.0	53	13.3	83	13.8	104	6.94	0.230	480
0302CS-15NXJL_	15.0	**5**	15.0	55	15.4	84	15.9	106	6.20	0.174	560
0302CS-16NXJL_	16.0	**5**	16.0	54	16.4	85	17.0	102	6.13	0.210	480
0302CS-17NXJL_	17.0	**5**	16.9	52	17.4	82	18.2	118	6.26	0.280	440
0302CS-18NXJL_	18.0	**5**	17.9	55	18.5	80	19.3	111	6.03	0.350	390
0302CS-19NXJL_	19.0	**5**	18.9	53	19.6	85	20.5	104	5.79	0.260	480
0302CS-20NXJL_	20.0	**5**	19.9	56	20.2	88	20.8	112	5.68	0.300	430
0302CS-21NXJL_	21.0	**5**	20.9	53	22.0	82	24.1	95	5.16	0.370	370
0302CS-22NXJL_	22.0	**5**	22.0	52	23.1	79	25.2	94	4.95	0.420	340
0302CS-23NXJL_	23.5	**5**	23.5	54	24.6	84	27.4	92	5.18	0.400	430
0302CS-29NXJL_	29.0	**5**	29.0	51	30.5	75	33.0	90	4.83	0.470	330
0302CS-34NXJL_	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-34NXJLW

   Termination: L = RoHS compliant silver-platinum-glass frit.
   Special order: S = non-RoHS tin-lead (63/37).
   Packaging: W = 7″ machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel).
   U = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter W instead.
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.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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ACCURATE REPEATABLE MEASUREMENTS
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Coilcraft
www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

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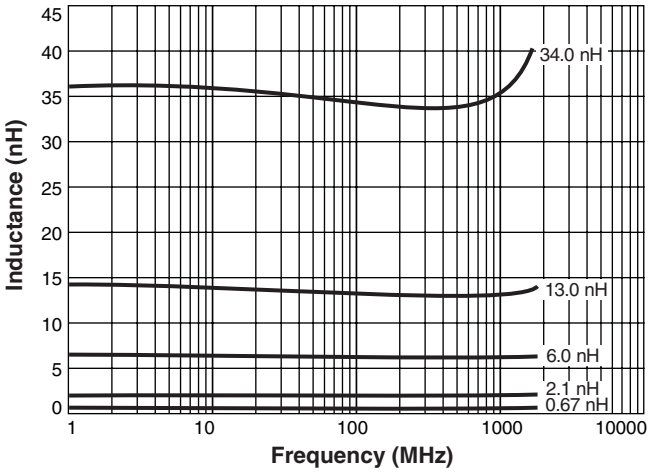
Specification subject to change without notice.
Please check out web site for latest information.

0302CS Series (0805)

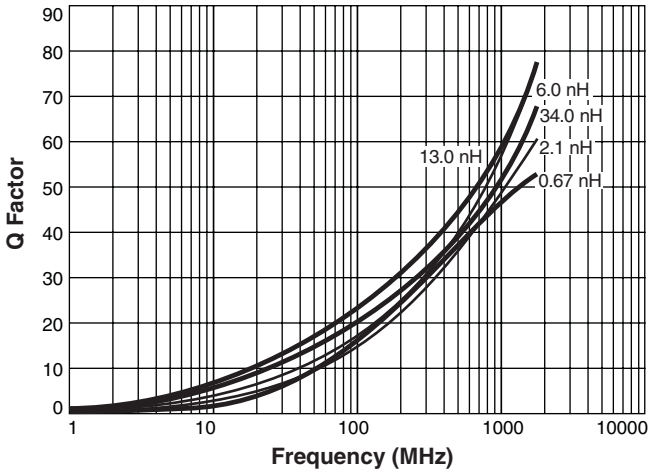
S-Parameter files
ON OUR WEB SITE

SPICE models
ON OUR WEB SITE

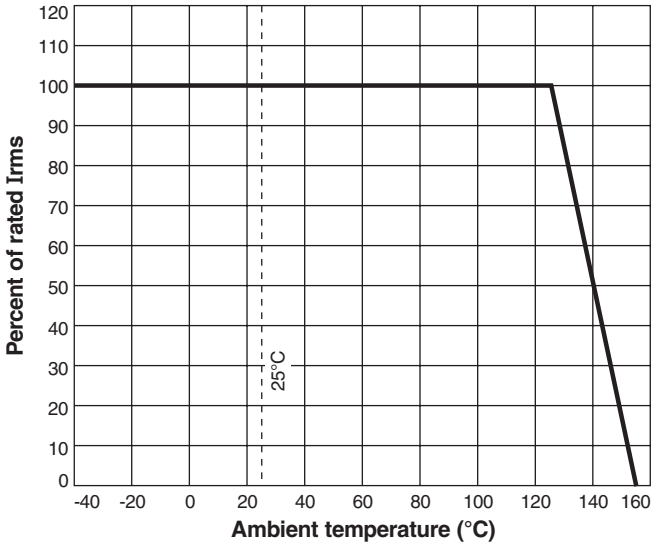
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



Designer's Kit C370 contains 20 each of all stocked values

Core material Ceramic

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

Weight 0.4 – 0.5 mg

Ambient temperature –40°C to +125°C with Irms current, +125°C to +155°C with derated current

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

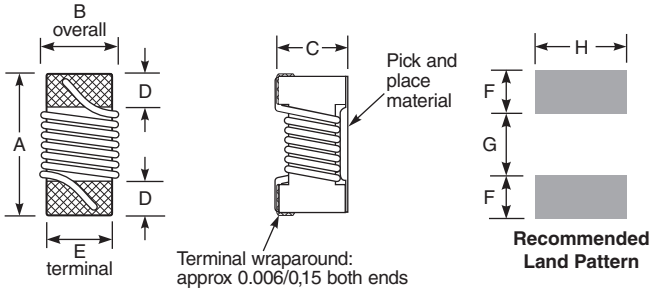
Temperature Coefficient of Inductance (TCL) +25 to +125 ppm/°C

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

Failures in Time (FIT) / Mean Time Between Failures (MTBF)
One per billion hours / one billion 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 Only pure water or alcohol recommended



Amax	Bmax	Cmax	D	E	F	G	H	
0.034	0.021	0.018	0.006	0.015	0.010	0.014	0.021	inches
0,86	0,53	0,45	0,20	0,38	0,25	0,36	0,53	mm

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

Coilcraft
www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

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