RoHS COMPLIANT

Halogen Free

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 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-N67XKE_	0.67	**10**	0.66	42	0.66	56	0.67	70	>26	0.021	1600
0302CS-1N7XJE_	1.7	**5**	1.7	57	1.7	78	1.7	95	16.14	0.038	1140
0302CS-1N9XJE_	1.9	**5**	1.9	42	1.9	65	1.9	83	16.06	0.065	910
0302CS-2N1XJE_	2.1	**5**	2.1	38	2.1	57	2.1	72	15.94	0.082	830
0302CS-3N0XJE_	3.0	**5**	3.0	56	3.0	92	3.0	131	15.10	0.060	950
0302CS-3N3XJE_	3.3	**5**	3.3	56	3.3	88	3.3	129	11.50	0.060	950
0302CS-3N5XJE_	3.5	**5**	3.5	60	3.5	84	3.5	110	11.53	0.070	870
0302CS-3N8XJE_	3.8	**5**	3.8	60	3.8	89	3.8	105	10.67	0.090	830
0302CS-4N0XJE_	4.0	**5**	4.0	52	4.0	80	4.1	98	11.21	0.100	760
0302CS-4N7XJE_	4.7	**5**	4.6	55	4.6	88	4.7	120	12.07	0.074	830
0302CS-5N1XJE_	5.1	**5**	5.1	62	5.1	92	5.2	118	9.65	0.074	830
0302CS-5N6XJE_	5.6	**5**	5.5	50	5.5	71	5.6	108	6.40	0.120	730
0302CS-6N0XJE_	6.0	**5**	6.0	58	6.0	82	6.2	105	8.60	0.140	700
0302CS-6N3XJE_	6.3	**5**	6.3	56	6.3	80	6.5	100	9.34	0.155	620
0302CS-6N5XJE_	6.5	**5**	6.5	56	6.5	80	6.8	100	8.19	0.200	620
0302CS-7N0XJE_	7.0	**5**	7.0	62	7.1	84	7.2	112	8.50	0.103	760
0302CS-7N2XJE_	7.2	**5**	7.2	60	7.2	82	7.4	110	9.12	0.112	690
0302CS-7N4XJE_	7.4	**5**	7.3	60	7.4	82	7.6	110	7.98	0.112	690
0302CS-8N3XJE_	8.3	**5**	8.2	58	8.3	80	8.5	104	8.19	0.150	590
0302CS-9N2XJE_	9.2	**5**	8.9	58	9.0	83	9.2	120	7.92	0.115	690
0302CS-10NXJE_	10.0	**5**	10.0	58	10.1	91	10.2	119	7.45	0.140	620
0302CS-11NXJE_	11.0	**5**	11.0	57	11.2	83	11.6	105	6.85	0.210	590
0302CS-12NXJE_	12.0	**5**	12.0	59	12.6	88	12.7	110	6.86	0.170	560
0302CS-13NXJE_	13.0	**5**	13.0	53	13.3	83	13.8	104	6.94	0.230	480
0302CS-15NXJE_	15.0	**5**	15.0	55	15.4	84	15.9	106	6.20	0.174	560
0302CS-16NXJE_	16.0	**5**	16.0	54	16.4	85	17.0	102	6.13	0.210	480
0302CS-17NXJE_	17.0	**5**	16.9	52	17.4	82	18.2	118	6.26	0.280	440
0302CS-18NXJE_	18.0	**5**	17.9	55	18.5	80	19.3	111	6.03	0.350	390
0302CS-19NXJE_	19.0	**5**	18.9	53	19.6	85	20.5	104	5.79	0.260	480
0302CS-20NXJE_	20.0	**5**	19.9	56	20.2	88	20.8	112	5.68	0.300	430
0302CS-21NXJE_	21.0	**5**	20.9	53	22.0	82	24.1	95	5.16	0.370	370
0302CS-22NXJE_	22.0	**5**	22.0	52	23.1	79	25.2	94	4.95	0.420	340
0302CS-23NXJE_	23.5	**5**	23.5	54	24.6	84	27.4	92	5.18	0.400	430
0302CS-29NXJE_	29.0	**5**	29.0	51	30.5	75	33.0	90	4.83	0.470	330
0302CS-34NXJE_	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-34NXJEW

   Termination: E = Halogen free component. RoHS compliant silver-platinum-glass frit terminations.
   L = RoHS compliant, not halogen-free. Silver-platinum-glass frit terminations.

   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. 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 PRECISION ACCURATE REPEATABLE MEASUREMENTS SEE WEB SITE TEST FIXTURES

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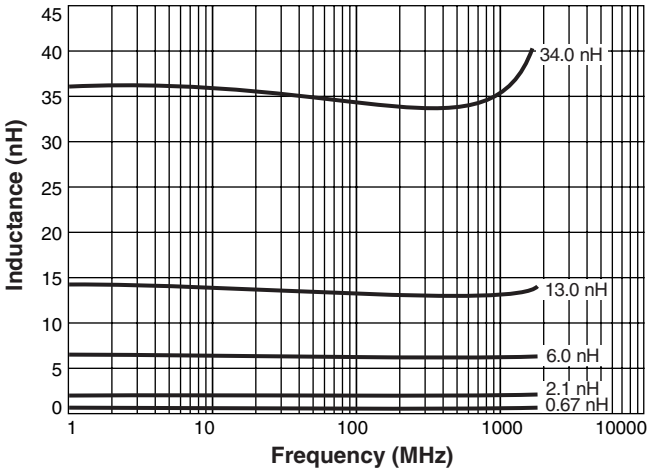
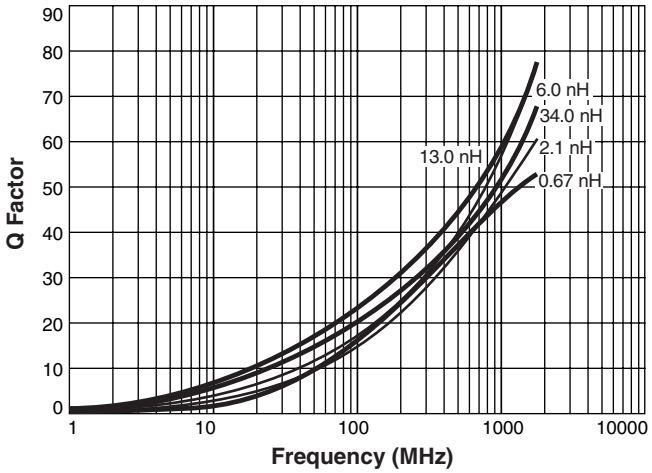
S-Parameter files
ON OUR WEB SITE
SPICE models
ON OUR WEB SITE

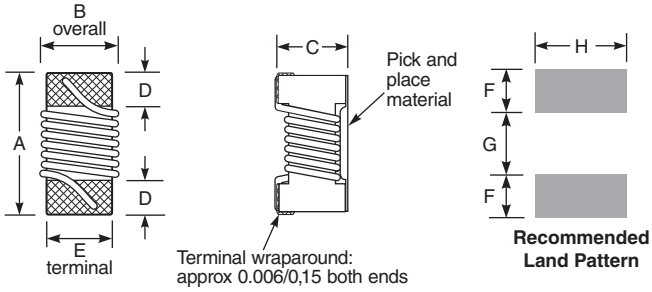
0302CS Series (0805)

Typical L vs Frequency



Typical Q vs Frequency





A max	B max	C max	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

Designer's Kit C370 contains 20 each of all values

Core material Ceramic

Environmental RoHS compliant, halogen free

Terminations Silver-platinum-glass frit.

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)
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 Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

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