

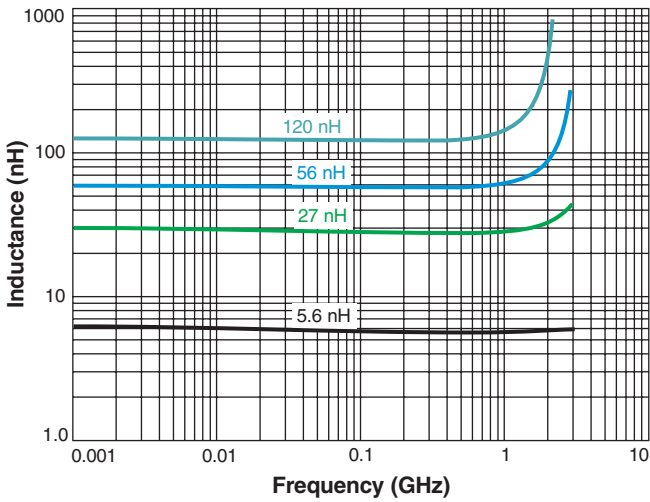
NEW!

Chip Inductors - 0402DC Series (1005)

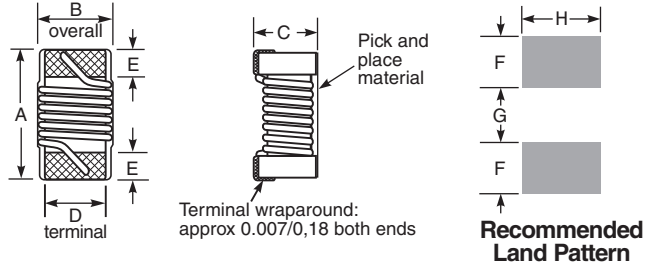
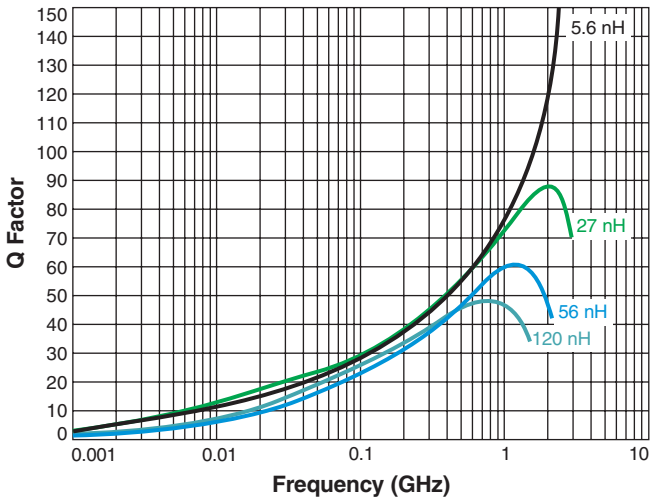


- 0402 ceramic wirewound chip inductor ranging from 3.0 to 120 nH
- Up to 40% higher Q factor and 45% lower DCR than other 0402 series
- Very high SRF – as high as 15.78 GHz

Typical L vs Frequency



Typical Q vs Frequency



A max	B max	C max	D	E	F	G	H	
0.044	0.026	0.026	0.0185	0.006	0.014	0.024	0.026	inches
1,11	0,66	0,65	0,47	0,15	0,36	0,61	0,66	mm

Designer's Kit C472 contains 20 of each stocked 5% part
Designer's Kit C472-2 contains 20 of each stocked 2% part
Core material Ceramic
Environmental RoHS compliant without exemption, halogen free
Terminations RoHS compliant matte tin over nickel over silver-platinum-glass frit.
Weight 0.7 – 1.0 mg
Ambient temperature -40°C to +125°C with Irms current
Maximum part temperature +140°C (ambient + temp rise).
Storage temperature Component: -40°C to +140°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)
Mean Time Between Failures (MTBF) 1 billion hours
Packaging 2000 or 10,000 per 7" reel Paper tape: 8 mm wide, 0.66 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](#).

NEW!

0402DC Series (1005)



Part number ¹	Inductance ² (nH)	Percent tolerance ³	900 MHz		1.7 GHz		2.4 GHz		SRF typ ⁵ (GHz)	DCR max ⁶ (mOhms)	Irms ⁷ (mA)
			L typ	Q typ ⁴	L typ	Q typ ⁴	L typ	Q typ ⁴			
0402DC-3N0X_R_	3.0	5,3,2	2.97	61	2.98	92	3.00	142	15.78	37.0	1800
0402DC-3N3X_R_	3.3	5,3,2	3.26	68	3.28	116	3.31	160	14.24	37.0	1800
0402DC-3N6X_R_	3.6	5,3,2	3.55	68	3.59	112	6.61	157	13.50	46.0	1600
0402DC-3N9X_R_	3.9	5,3,2	3.86	69	3.90	114	3.96	158	12.65	46.0	1600
0402DC-4N3X_R_	4.3	5,3,2	4.25	62	4.29	100	4.34	136	13.80	48.0	1500
0402DC-4N7X_R_	4.7	5,3,2	4.65	67	4.71	108	4.80	146	12.70	48.0	1500
0402DC-5N6X_R_	5.6	5,3,2	5.56	69	5.66	112	5.80	146	11.00	57.0	1500
0402DC-6N2X_R_	6.2	5,3,2	6.18	71	6.32	112	6.52	146	9.20	57.0	1500
0402DC-6N8X_R_	6.8	5,3,2	6.75	69	6.88	110	7.07	138	10.15	63.0	1500
0402DC-8N2X_R_	8.2	5,3,2	8.18	72	8.42	113	8.77	138	8.33	70.0	1500
0402DC-12NX_R_	12	5,3,2	12.1	69	12.6	98	13.4	100	6.59	81.3	1200
0402DC-15NX_R_	15	5,3,2	15.1	70	15.9	100	17.1	110	6.20	115.0	1000
0402DC-18NX_R_	18	5,3,2	18.1	68	19.3	95	21.1	98	5.59	137.9	930
0402DC-22NX_R_	22	5,3,2	22.3	67	24.0	88	26.8	83	4.95	190.0	800
0402DC-27NX_R_	27	5,3,2	27.5	65	30.2	83	—	71	4.52	192.9	700
0402DC-30NX_R_	30	5,3,2	30.8	62	34.6	76	—	62	4.15	245	780
0402DC-33NX_R_	33	5,3,2	33.8	62	37.8	76	—	—	4.18	288	700
0402DC-39NX_R_	39	5,3,2	40.3	60	46.4	68	—	—	3.86	375	500
0402DC-47NX_R_	47	5,3,2	49.3	55	—	54	—	—	3.36	427	500
0402DC-51NX_R_	51	5,3,2	53.7	55	—	54	—	—	3.35	432	500
0402DC-68NX_R_	68	5,3,2	73.4	54	—	—	—	—	2.80	943	350
0402DC-72NX_R_	72	5,3,2	77.9	54	—	—	—	—	2.83	787	440
0402DC-82NX_R_	82	5,3,2	89.9	51	—	—	—	—	2.86	1057	390
0402DC-91NX_R_	91	5,3,2	101	48	—	—	—	—	2.82	1119	370
0402DC-R10X_R_	100	5,3,2	111	51	—	—	—	—	2.38	1507	280
0402DC-R12X_R_	120	5,3,2	138	46	—	—	—	—	2.20	1600	310

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

0402DC-82NXJRW

Tolerance: G = 2% H = 3% J = 5%

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.

Y = 7" machine-ready reel, EIA-481 punched paper tape (10,000 parts per full reel).

- Inductance measured at 250 MHz using a Coilcraft SMD-F fixture in an Agilent/HP 4287 impedance analyzer with Coilcraft-provided correlation pieces.
 - Tolerances in bold are stocked for immediate shipment.
 - Q measured using an Agilent/HP 4991A with an Agilent/HP 16197 test fixture.
 - SRF measured using an Agilent/HP 8722ES network analyzer and a Coilcraft SMD-D test fixture.
 - DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.
 - Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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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