



# 0402CP Series – SMD WIRE WOUND CERAMIC CHIP INDUCTORS

Rev. A

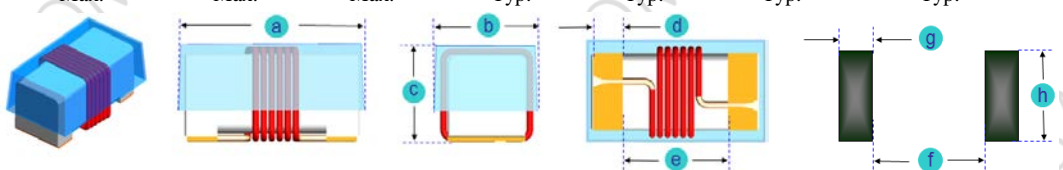
## A. Electrical Specifications:

P/N	L (nH)	Tol.	Q Typ. Min.	900 MHz		1.7 GHz		SRF Min. (GHz)	DCR Max. (Ω)	Rated Current Max.(mA)
				L	Q	L	Q			
0402CP-1N0_	1.0	K, J	16	1.02	77	1.02	69	12.70	0.045	1360
0402CP-1N2_	1.2	K, J	16	1.22	75	1.23	67	12.90	0.090	740
0402CP-1N8_	1.8	K, J	16	1.70	68	1.78	80	12.00	0.070	1040
0402CP-1N9_	1.9	K, J	16	1.72	68	1.74	82	11.30	0.070	1040
0402CP-2N0_	2.0	K, J, G	16	1.93	54	1.93	75	11.10	0.070	1040
0402CP-2N2_	2.2	K, J, G	19	2.19	59	2.23	100	10.80	0.070	960
0402CP-2N4_	2.4	K, J, G	15	2.24	51	2.27	68	10.50	0.068	790
0402CP-2N7_	2.7	K, J, G	16	2.23	42	2.25	61	10.40	0.120	640
0402CP-3N3_	3.3	K, J, G	19	3.10	65	3.12	87	7.00	0.066	840
0402CP-3N6_	3.6	K, J, G	19	3.56	45	3.62	71	6.80	0.066	840
0402CP-3N9_	3.9	K, J, G	19	3.89	50	4.00	75	6.00	0.066	840
0402CP-4N3_	4.3	K, J, G	18	4.19	47	4.30	71	6.00	0.091	700
0402CP-4N7_	4.7	K, J, G	15	4.55	48	4.68	68	4.70	0.130	640
0402CP-5N1_	5.1	K, J, G	20	5.15	56	5.25	82	4.80	0.083	800
0402CP-5N6_	5.6	K, J, G	20	5.16	54	5.28	81	4.80	0.083	760
0402CP-6N2_	6.2	K, J, G	20	6.16	52	6.37	76	4.80	0.083	760
0402CP-6N8_	6.8	K, J, G	20	6.56	63	6.93	78	4.80	0.083	680
0402CP-7N3_	7.3	K, J, G	20	7.32	60	7.41	75	4.80	0.260	680
0402CP-7N5_	7.5	K, J, G	22	7.91	60	8.22	88	4.80	0.100	680
0402CP-8N2_	8.2	K, J, G	22	8.50	57	8.85	84	4.40	0.100	680
0402CP-8N7_	8.7	K, J, G	18	8.78	54	9.21	73	4.10	0.200	480
0402CP-9N1_	9.1	K, J, G	22	9.05	50	9.16	70	4.16	0.100	680
0402CP-9N5_	9.5	K, J, G	18	9.42	54	9.98	69	4.00	0.200	480
0402CP-10N_	10	K, J, G	21	9.8	50	10.10	67	3.90	0.200	480
0402CP-11N_	11	K, J, G	24	10.7	52	11.20	78	3.68	0.120	640
0402CP-12N_	12	K, J, G	24	11.9	53	12.70	71	3.60	0.120	640
0402CP-13N_	13	K, J, G	24	13.4	51	14.60	57	3.45	0.210	440
0402CP-15N_	15	K, J, G	24	14.6	55	15.50	77	3.28	0.170	560
0402CP-16N_	16	K, J, G	24	16.6	46	18.80	47	3.10	0.220	560
0402CP-18N_	18	K, J, G	25	18.3	57	20.28	62	3.10	0.230	420
0402CP-19N_	19	K, J, G	24	19.1	50	21.10	67	3.04	0.200	480
0402CP-20N_	20	K, J, G	25	20.7	52	23.66	53	3.00	0.250	420
0402CP-22N_	22	K, J, G	25	23.2	53	26.75	53	2.80	0.300	400
0402CP-23N_	23	K, J, G	22	23.8	49	26.90	64	2.72	0.300	400
0402CP-24N_	24	K, J, G	25	25.1	51	29.50	50	2.70	0.300	400
0402CP-27N_	27	K, J, G	24	28.7	49	33.50	63	2.48	0.300	400
0402CP-30N_	30	K, J, G	25	31.1	46	38.50	39	2.35	0.300	400
0402CP-33N_	33	K, J, G	24	34.9	31	41.70	32	2.35	0.300	400
0402CP-36N_	36	K, J, G	24	39.5	44	48.40	53	2.32	0.440	320
0402CP-39N_	39	K, J, G	25	41.7	47	50.23	45	2.10	0.550	200
0402CP-40N_	40	K, J, G	24	39.0	44	47.40	33	2.24	0.440	320
0402CP-43N_	43	K, J, G	25	45.8	46	61.55	34	2.03	0.810	100
0402CP-47N_	47	K, J, G	20	50.0	38	55.8	37	2.10	0.830	150
0402CP-51N_	51	K, J, G	25	50.4	40	59.4	37	1.75	0.820	100
0402CP-56N_	56	K, J, G	22	57.4	42	72.4	40	1.76	0.970	100
0402CP-68N_	68	K, J, G	22	69.6	36	83.4	38	1.62	1.120	100
0402CP-82N_	82	K, J, G	20	--	--	--	--	1.26	1.550	50
0402CP-R10_	100	K, J, G	20	--	--	--	--	1.16	2.000	30
0402CP-R12_	120	K, J, G	--	--	--	--	--	1.10	2.200	30

Note: 1. Inductance & Q-value measured at 250 MHz.  
 2. 0402CP-series does not have color dot.

## B. Dimensions: mm (Inch):

Series	a	b	c	d	e	f	g	h
0402CP	1.19 (0.047)	0.64 (0.025)	0.66 (0.026)	0.23 (0.009)	0.56 (0.022)	0.46 (0.018)	0.36 (0.014)	0.66 (0.026)
Tol.	Max.	Max.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.



## C. General Information:

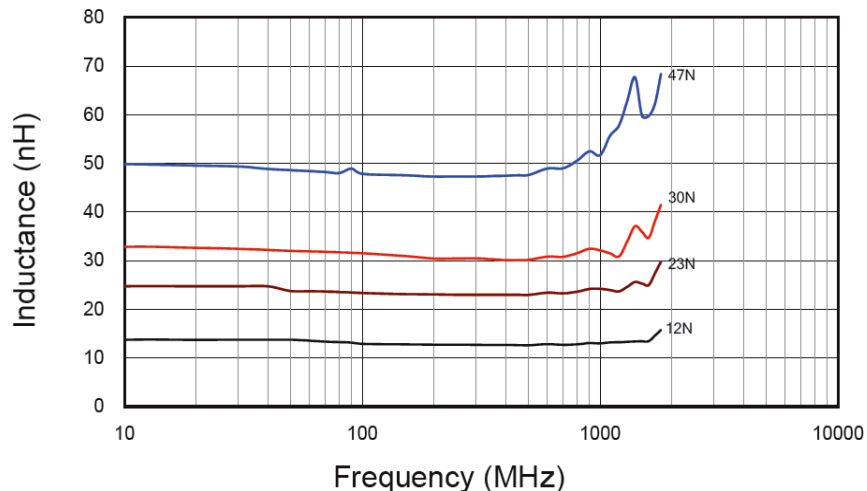
- i. P/N: 0402CP-xxx\_, "0402" = Size Type, "CP" = Tinned pad, "xxx" = Inductance, "\_" = Tolerance.
- ii. Tolerance "\_": K:  $\pm 10\%$ , J:  $\pm 5\%$ , G:  $\pm 2\%$
- iii. Product material: Ceramic.
- iv. Excellent solder ability and high heat resistance for either flow or reflow soldering.
- v. Monolithic structures for highly reliable surface mount applications.
- vi. Superior Q characteristics guaranteed over the wide frequency and allow high frequency application.
- vii. The completely monolithic structure gives high reliability and allows high SRF.
- viii. Both flow and IR re-flow application are possible.
- ix. Operating temperature:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- x. Maximum Temperature Rise:  $15^{\circ}\text{C}$  (when measured at  $25^{\circ}\text{C}$  ambient).
- xi. Unspecified values available on request.
- xii. Inductance and Current range:  
From 1.0 nH (1360 mA) to 120nH (30 mA)
- xiii. SRF:  
From 100MHz to 12,900 MHz
- xiv. MSL: Level 1.

## D. Applications:

1. Game Consoles
2. Set Top Boxes
3. Cables Modems
4. Computers
5. Mobile Communication Devices (Cell Phones, Radios, etc.)
6. RF Filters

## E. Characteristics Curve:

Inductance vs. Frequency





**0402CP Series – SMD WIRE WOUND CERAMIC CHIP INDUCTORS**  
Rev. A

Typical Q vs. Frequency

