

## Wire Wound Ceramic Chip Inductors- NLC Series

NLC series For RF Signals

### Features

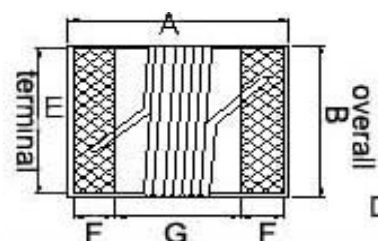
- 1.Ceramic body and wire wound construction provide highest SRFs.
- 2.These ultra - compact inductors provided exceptional Q values, even at high frequencies.
- 3.Their ceramic construction delivers the highest possible SRFs as well as excellent Q values.
- 4.The non-magnetic coil form also assures the utmost in thermal stability, predictability and batch consistency.



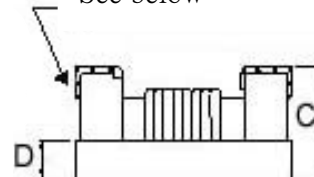
### Applications

RF products for cellular phone, GPS receiver, Base Station, Repeater, Wireless LAN/ Mouse/ Keyboard/ earphone, remote control, security system and other RF modules.

### Dimensions (mm)



See below



### Product Identification

NLC 0805 – 12N J -PF

NLC: SERIES NAME

0805:Dimensions CODE

12n: INDUCTANCE CODE.

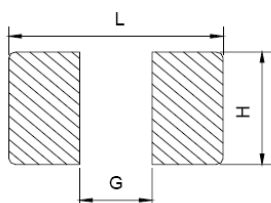
J: TOLERANCE, G=2% J=5%

K=10% M=20%.

PF:Pb-Free

PART NO.	A(Max)	B(Max)	C(Max)	D(Ref)	E(Ref)	F(Ref)	G(Ref)
NLC0402	1.19	0.7	0.66	0.25	0.56	0.23	0.51
NLC0603	1.8	1.25	1.02	0.38	0.86	0.33	0.76
NLC0805	2.4	1.72	1.52	0.7	1.02	0.44	1.27
NLC1008	2.92	2.79	2.2	0.7	1.52	0.51	2.03

### Recommended Pattern(mm)



PART NO.	L	G	H
NLC0402	1.46	0.46	0.66
NLC0603	1.92	0.64	1.02
NLC0805	2.80	0.76	1.78
NLC1008	3.30	1.30	2.54

## Electrical Characteristics

Part No.	Inductance (nH)	L/Q Test Freq. (MHZ)	Q Min.	SRF (MHZ)Min.	RDC ( $\Omega$ )Max.	IDC (mA)Max.	Tolerance ( $\pm$ %)
NLC0402-1N0□-PF	1.0	250/250	16	>6000	0.045	1360	10,5
NLC0402-2N0□-PF	2.0	250/250	16	>6000	0.070	1040	10,5
NLC0402-2N2□-PF	2.2	250/250	19	>6000	0.070	960	10,5
NLC0402-2N4□-PF	2.4	250/250	15	>6000	0.068	790	10,5
NLC0402-2N7□-PF	2.7	250/250	16	>6000	0.120	640	10,5
NLC0402-3N3□-PF	3.3	250/250	19	6000	0.066	840	10,5
NLC0402-3N6□-PF	3.6	250/250	19	6000	0.066	840	10,5
NLC0402-3N9□-PF	3.9	250/250	19	5800	0.066	840	10,5,2
NLC0402-4N3□-PF	4.3	250/250	18	6000	0.091	700	10,5,2
NLC0402-4N7□-PF	4.7	250/250	15	4775	0.130	640	10,5,2
NLC0402-5N1□-PF	5.1	250/250	20	4800	0.083	800	10,5,2
NLC0402-5N6□-PF	5.6	250/250	20	4800	0.083	760	10,5,2
NLC0402-6N2□-PF	6.2	250/250	20	4800	0.083	760	10,5,2
NLC0402-6N8□-PF	6.8	250/250	20	4800	0.083	760	10,5,2
NLC0402-7N5□-PF	7.5	250/250	22	4800	0.100	680	10,5,2
NLC0402-8N2□-PF	8.2	250/250	22	4400	0.100	680	10,5,2
NLC0402-9N0□-PF	9.0	250/250	22	4160	0.100	680	10,5,2
NLC0402-10N□-PF	10.0	250/250	21	3900	0.200	480	10,5,2
NLC0402-11N□-PF	11.0	250/250	24	3680	0.120	640	10,5,2
NLC0402-12N□-PF	12.0	250/250	24	3600	0.120	640	10,5,2
NLC0402-15N□-PF	15.0	250/250	24	3280	0.170	560	10,5,2
NLC0402-18N□-PF	18.0	250/250	25	3100	0.230	420	10,5,2
NLC0402-19N□-PF	19.0	250/250	24	3040	0.200	480	10,5,2
NLC0402-22N□-PF	22.0	250/250	25	2800	0.300	400	10,5,2
NLC0402-23N□-PF	33.0	250/250	22	2720	0.300	400	10,5,2
NLC0402-24N□-PF	24.0	250/250	25	2700	0.300	400	10,5,2
NLC0402-27N□-PF	27.0	250/250	24	2480	0.300	400	10,5,2
NLC0402-33N□-PF	33.0	250/250	24	2350	0.300	400	10,5,2
NLC0402-36N□-PF	36.0	250/250	24	2320	0.440	320	10,5,2
NLC0402-39N□-PF	39.0	250/250	25	2100	0.550	200	10,5,2
NLC0402-40N□-PF	40.0	250/250	24	2240	0.500	320	10,5,2
NLC0402-43N□-PF	43.0	250/250	25	2030	0.810	100	10,5,2
NLC0402-47N□-PF	47.0	250/250	20	2100	0.830	250	10,5,2
NLC0402-56N□-PF	56.0	250/250	22	2000	1.170	200	10,5,2
NLC0402-68N□-PF	68.0	250/250	22	1620	1.120	100	10,5,2

**NOTE:**

□-tolerance G= $\pm$ 2% / J= $\pm$ 5% / K= $\pm$ 10% /  $\pm$ 15% / M= $\pm$ 20% / N= $\pm$ 40% -20% / Y= $\pm$ 25%

1. Operating temperature range - 40°C ~ 125°C

2. Applied the current to coils, the inductance shall be less than 10% initial value.

## Electrical Characteristics

Part No.	Inductance (nH)	L/Q Test Freq. (MHZ)	Q Min.	SRF (MHZ)Min.	RDC ( $\Omega$ )Max.	IDC (mA)Max.	Tolerance ( $\pm\%$ )
NLC0603-1N6□-PF	1.6	250/250	24	12500	0.03	700	10,5
NLC0603-1N8□-PF	1.8	250/250	16	12500	0.045	700	10,5
NLC0603-2N2□-PF	2.2	250/250	13	12500	0.25	100	10,5
NLC0603-3N3□-PF	3.3	250/250	35	5900	0.045	700	10,5
NLC0603-3N6□-PF	3.6	250/250	22	5900	0.063	700	10,5
NLC0603-3N9□-PF	3.9	250/250	22	6900	0.08	700	10,5
NLC0603-4N3□-PF	4.3	250/250	22	5900	0.063	700	10,5
NLC0603-4N7□-PF	4.7	250/250	20	5800	0.116	700	10,5
NLC0603-5N1□-PF	5.1	250/250	20	5700	0.14	700	10,5
NLC0603-5N6□-PF	5.6	250/250	20	5800	0.17	700	10,5
NLC0603-6N3□-PF	6.3	250/250	20	5700	0.14	700	10,5
NLC0603-6N8□-PF	6.8	250/250	27	5800	0.11	700	10,5
NLC0603-7N5□-PF	7.5	250/250	28	4800	0.106	700	10,5
NLC0603-8N2□-PF	8.2	250/250	28	4700	0.109	700	10,5
NLC0603-8N7□-PF	8.7	250/250	28	4600	0.109	700	10,5
NLC0603-9N5□-PF	9.5	250/250	28	5400	0.135	700	10,5
NLC0603-10N□-PF	10	250/250	31	4800	0.13	700	10,5,2
NLC0603-11N□-PF	11	250/250	33	4000	0.086	700	10,5,2
NLC0603-12N□-PF	12	250/250	35	4000	0.13	700	10,5,2
NLC0603-15N□-PF	15	250/250	35	4000	0.17	700	10,5,2
NLC0603-16N□-PF	16	250/250	34	3300	0.104	700	10,5,2
NLC0603-18N□-PF	18	250/250	35	3100	0.17	700	10,5,2
NLC0603-22N□-PF	22	250/250	38	3000	0.19	700	10,5,2
NLC0603-24N□-PF	24	250/250	37	2650	0.135	700	10,5,2
NLC0603-27N□-PF	27	250/250	40	2800	0.22	600	10,5,2

**NOTE:**

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Part No.	Inductance (nH)	L/Q Test Freq. (MHZ)	Q Min.	SRF (MHZ)Min.	RDC ( $\Omega$ )Max.	IDC (mA)Max.	Tolerance ( $\pm\%$ )
NLC0603-30N□-PF	30	250/250	37	2250	0.144	600	10,5,2
NLC0603-33N□-PF	33	250/250	40	2300	0.22	600	10,5,2
NLC0603-36N□-PF	36	250/250	38	2080	0.25	600	10,5,2
NLC0603-39N□-PF	39	250/250	40	2200	0.25	600	10,5,2
NLC0603-43N□-PF	43	250/250	39	2000	0.28	600	10,5,2
NLC0603-47N□-PF	47	200/200	38	2000	0.28	600	10,5,2
NLC0603-51N□-PF	51	200/200	38	1900	0.31	600	10,5,2
NLC0603-56N□-PF	56	200/200	38	1900	0.31	600	10,5,2
NLC0603-68N□-PF	68	200/200	37	1700	0.34	600	10,5,2
NLC0603-72N□-PF	72	150/150	34	1700	0.49	400	10,5,2
NLC0603-82N□-PF	82	150/150	34	1700	0.54	400	10,5,2
NLC0603-91N□-PF	91	150/150	34	1400	0.58	400	10,5,2
NLC0603-R10□-PF	100	150/150	34	1400	0.58	400	10,5,2
NLC0603-R11□-PF	110	150/150	32	1350	0.61	300	10,5,2
NLC0603-R12□-PF	120	150/150	32	1300	0.75	300	10,5,2
NLC0603-R15□-PF	150	150/150	28	990	0.92	280	10,5,2
NLC0603-R16□-PF	160	100/100	25	990	1.25	240	10,5,2
NLC0603-R18□-PF	180	100/100	25	990	1.25	240	10,5,2
NLC0603-R22□-PF	220	100/100	25	900	2.1	200	10,5,2
NLC0603-R27□-PF	270	100/100	24	900	2.8	170	10,5,2
NLC0603-R33□-PF	330	100/100	25	900	3.89	100	10,5,2
NLC0603-R39□-PF	390	100/100	25	700	4.35	100	10,5,2
NLC0603-R47□-PF	470	100/100	25	500	4.5	100	10,5,2

**NOTE:**

□-tolerance G= $\pm 2\%$  / J= $\pm 5\%$  / K= $\pm 10\%$  / = $\pm 15\%$  / M= $\pm 20\%$  / N= $+40\%$  -20% / Y= $\pm 25\%$

1. Operating temperature range - 40 °C ~ 125 °C

2. Applied the current to coils, the inductance shall be less than 10% initial value.

## Electrical Characteristics

Part No.	Inductance (nH)	L/Q Test Freq. (MHZ)	Q Min.	SRF (MHZ)Min.	RDC ( $\Omega$ )Max.	IDC (mA)Max.	Tolerance ( $\pm$ %)
NLC0805-2N8□-PF	2.8	250/1500	80	7900	0.06	800	10,5
NLC0805-3N0□-PF	3	250/1500	65	7900	0.06	800	10,5
NLC0805-3N3□-PF	3.3	250/1500	50	7900	0.08	600	10,5
NLC0805-5N6□-PF	5.6	250/1000	65	5500	0.08	600	10,5
NLC0805-6N8□-PF	6.8	250/1000	50	5500	0.11	600	10,5
NLC0805-7N5□-PF	7.5	250/1000	50	4500	0.14	600	10,5
NLC0805-8N2□-PF	8.2	250/1000	50	4700	0.12	600	10,5
NLC0805-10N□-PF	10	250/500	60	4200	0.1	600	10,5,2
NLC0805-12N□-PF	12	250/500	50	4000	0.15	600	10,5,2
NLC0805-15N□-PF	15	250/500	50	3400	0.17	600	10,5,2
NLC0805-18N□-PF	18	250/500	50	3300	0.2	600	10,5,2
NLC0805-22N□-PF	22	250/500	55	2600	0.22	500	10,5,2
NLC0805-24N□-PF	24	250/500	50	2000	0.22	500	10,5,2
NLC0805-27N□-PF	27	250/500	55	2500	0.25	500	10,5,2
NLC0805-33N□-PF	33	250/500	60	2050	0.27	500	10,5,2
NLC0805-36N□-PF	36	250/500	55	1700	0.27	500	10,5,2
NLC0805-39N□-PF	39	250/500	60	2000	0.29	500	10,5,2
NLC0805-43N□-PF	43	200/500	60	1650	0.34	500	10,5,2
NLC0805-47N□-PF	47	200/500	60	1650	0.31	500	10,5,2
NLC0805-56N□-PF	56	200/500	60	1550	0.34	500	10,5,2
NLC0805-68N□-PF	68	200/500	60	1450	0.38	500	10,5,2

**NOTE:**

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Part No.	Inductance (nH)	L/Q Test Freq. (MHZ)	Q Min.	SRF (MHZ)Min.	RDC ( $\Omega$ )Max.	IDC (mA)Max.	Tolerance ( $\pm\%$ )
NLC0805-82N□-PF	82	150/500	65	1300	0.42	400	10,5,2
NLC0805-91N□-PF	91	150/500	65	1200	0.48	400	10,5,2
NLC0805-R10□-PF	100	150/500	65	1200	0.46	400	10,5,2
NLC0805-R11□-PF	110	150/250	50	1000	0.48	400	10,5,2
NLC0805-R12□-PF	120	150/250	50	1100	0.51	400	10,5,2
NLC0805-R15□-PF	150	100/250	50	920	0.56	400	10,5,2
NLC0805-R18□-PF	180	100/250	50	870	0.64	400	10,5,2
NLC0805-R20□-PF	200	100/250	50	860	0.68	400	10,5,2
NLC0805-R22□-PF	220	100/250	50	850	0.7	400	10,5,2
NLC0805-R24□-PF	240	100/250	44	690	1	350	10,5,2
NLC0805-R25□-PF	250	100/250	45	660	1.2	350	10,5,2
NLC0805-R27□-PF	270	100/250	48	650	1	350	10,5,2
NLC0805-R33□-PF	330	100/250	48	600	1.4	310	10,5,2
NLC0805-R39□-PF	390	100/250	48	560	1.5	290	10,5,2
NLC0805-R47□-PF	470	50/100	33	375	1.76	250	10,5,2
NLC0805-R56□-PF	560	25/50	23	340	1.9	230	10,5,2
NLC0805-R62□-PF	620	25/50	23	220	2.2	210	10,5,2
NLC0805-R68□-PF	680	25/50	23	188	2.2	190	10,5,2
NLC0805-R82□-PF	820	25/50	23	215	2.35	180	10,5,2
NLC0805-1R0□-PF	1000	25/50	20	100	2.5	170	10,5,2

**NOTE:**

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1. Operating temperature range - 4 0 °C ~ 1 2 5 °C

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## Electrical Characteristics

Part No.	Inductance (nH)	L/Q Test Freq. (MHZ)	Q Min.	SRF (MHZ)Min.	RDC ( $\Omega$ )Max.	IDC (mA)Max.	Tolerance ( $\pm$ %)
NLC1008-10N□-PF	10	50/500	50	4100	0.08	1000	10,5,2
NLC1008-12N□-PF	12	50/500	50	3300	0.09	1000	10,5,2
NLC1008-15N□-PF	15	50/500	50	2500	0.1	1000	10,5,2
NLC1008-18N□-PF	18	50/350	50	2500	0.11	1000	10,5,2
NLC1008-22N□-PF	22	50/350	55	2400	0.12	1000	10,5,2
NLC1008-27N□S	27	50/350	55	1600	0.13	1000	10,5,2
NLC1008-33N□-PF	33	50/350	60	1600	0.14	1000	10,5,2
NLC1008-39N□-PF	39	50/350	60	1500	0.15	1000	10,5,2
NLC1008-47N□-PF	47	50/350	65	1500	0.16	1000	10,5,2
NLC1008-56N□-PF	56	50/350	65	1300	0.18	1000	10,5,2
NLC1008-68N□-PF	68	50/350	65	1300	0.2	1000	10,5,2
NLC1008-82N□-PF	82	50/350	60	1000	0.22	1000	10,5,2
NLC1008-R10□-PF	100	25/350	60	1000	0.56	650	10,5,2
NLC1008-R12□-PF	120	25/350	60	950	0.63	650	10,5,2
NLC1008-R15□-PF	150	25/100	45	850	0.7	580	10,5,2
NLC1008-R18□-PF	180	25/100	45	750	0.77	620	10,5,2
NLC1008-R22□-PF	220	25/100	45	700	0.84	500	10,5,2
NLC1008-R27□-PF	270	25/100	45	600	0.91	500	10,5,2
NLC1008-R33□-PF	330	25/100	45	570	1.05	450	10,5,2
NLC1008-R39□-PF	390	25/100	45	500	1.12	470	10,5,2
NLC1008-R47□-PF	470	25/100	45	450	1.19	470	10,5,2

**NOTE:**

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1. Operating temperature range - 40 °C ~ 125 °C

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Part No.	Inductance (nH)	L/Q Test Freq. (MHZ)	Q Min.	SRF (MHZ)Min.	RDC ( $\Omega$ )Max.	IDC (mA)Max.	Tolerance ( $\pm$ %)
NLC1008-R56□-PF	560	25/100	45	415	1.33	400	10,5,2
NLC1008-R62□-PF	620	25/100	45	375	1.4	300	10,5,2
NLC1008-R68□-PF	680	25/100	45	375	1.47	400	10,5,2
NLC1008-R75□-PF	750	25/100	45	360	1.54	360	10,5,2
NLC1008-R82□-PF	820	25/100	45	350	1.61	400	10,5,2
NLC1008-R91□-PF	910	25/50	35	320	1.68	380	10,5,2
NLC1008-1R0□-PF	1000	25/50	35	290	1.75	370	10,5,2
NLC1008-1R2□-PF	1200	7.9/50	35	250	2	310	10,5,2
NLC1008-1R5□-PF	1500	7.9/50	28	200	2.3	330	10,5,2
NLC1008-1R8□-PF	1800	7.9/50	28	160	2.6	300	10,5,2
NLC1008-2R2□-PF	2200	7.9/50	28	160	2.8	280	10,5,2
NLC1008-2R7□-PF	2700	7.9/25	22	140	3.2	290	10,5,2
NLC1008-3R3□-PF	3300	7.9/25	22	110	3.4	290	10,5,2
NLC1008-3R9□-PF	3900	7.9/25	20	100	3.6	260	10,5,2
NLC1008-4R7□-PF	4700	7.9/25	20	90	4	260	10,5,2
NLC1008-5R6□-PF	5600	7.9/7.9	18	45	4	240	10,5,2
NLC1008-6R8□-PF	6800	7.9/7.9	18	40	4.9	200	10,5,2
NLC1008-8R2□-PF	8200	7.9/7.9	18	25	6	170	10,5,2
NLC1008-100□-PF	10000	2.52/7.9	18	25	8	150	10,5,2

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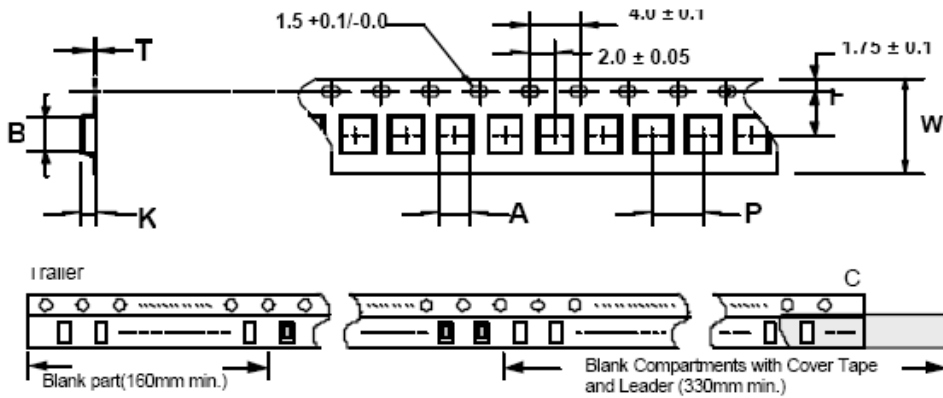
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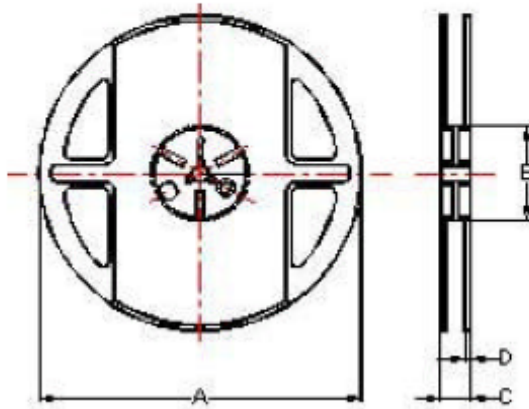
# Wire Wound Ferrite Chip Inductors-NLC-Series

## PACKAGING

### Tape Dimensions



### Reel Dimensions



TYPE	Tape Dimensions							FIG	F(Ref)				Quantity/Reel
	A	B	T	W	P	F	K		A	B	C	D	
NLC0603	1.15	1.83	0.26	8	4	3.5	0.95	2	178	60	12	1.5	4000
NLC0603	1.15	1.83	0.26	8	4	3.5	0.95	2	178	60	12	1.5	4000
NLC0805	1.60	2.42	0.22	8	4	3.5	1.45	2	178	60	12	1.5	2000
NLC1008	2.61	2.93	0.26	8	4	3.5	2.25	2	178	60	12	1.5	2000