

## Cautions and Warnings

Please be noted that this spec is only for reference if you have projects designed with the product number listed in. If you are looking for new project design-in, please find BWNL Series specification/datasheet on Chilisin website. Or you may find our sales contact for more information on old part number at your convenience. Appreciated your attention and understanding.

**Note:** Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.



# SMD Wire Wound Ferrite Chip Inductors – NL Series

## Electrical Characteristics

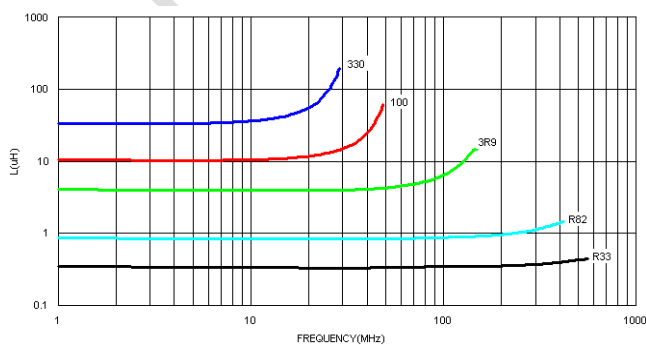
Part Number	Inductance (uH)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω) Max	IDC (mA)	Color
NL201614T-R12□-N	0.12	10 / 5	25	25.2	500	0.20	600	White
NL201614T-R15□-N	0.15	10 / 5	25	25.2	450	0.25	600	Black
NL201614T-R18□-N	0.18	10 / 5	25	25.2	410	0.30	570	Brown
NL201614T-R22□-N	0.22	10 / 5	25	25.2	350	0.35	550	Red
NL201614T-R27□-N	0.27	10 / 5	25	25.2	280	0.40	530	Orange
NL201614T-R33□-N	0.33	10 / 5	25	25.2	235	0.45	510	Yellow
NL201614T-R39□-N	0.39	10 / 5	25	25.2	210	0.50	490	Green
NL201614T-R47□-N	0.47	10 / 5	25	25.2	170	0.55	470	Blue
NL201614T-R56□-N	0.56	10 / 5	25	25.2	150	0.60	450	Violet
NL201614T-R68□-N	0.68	10 / 5	25	25.2	140	0.70	420	Gray
NL201614T-R82□-N	0.82	10 / 5	25	25.2	130	0.75	400	White
NL201614T-1R0□-N	1.00	10 / 5	15	7.96	115	0.80	350	Black
NL201614T-1R2□-N	1.20	10 / 5	15	7.96	95	0.90	325	Brown
NL201614T-1R5□-N	1.50	10 / 5	15	7.96	85	1.05	300	Red
NL201614T-1R8□-N	1.80	10 / 5	15	7.96	80	1.20	270	Orange
NL201614T-2R2□-N	2.20	10 / 5	15	7.96	75	1.40	250	Yellow
NL201614T-2R7□-N	2.70	10 / 5	15	7.96	70	1.60	230	Green
NL201614T-3R3□-N	3.30	10 / 5	15	7.96	60	1.80	210	Blue
NL201614T-3R9□-N	3.90	10 / 5	15	7.96	55	2.00	190	Violet
NL201614T-4R7□-N	4.70	10 / 5	15	7.96	45	2.40	170	Gray
NL201614T-5R6□-N	5.60	10 / 5	15	7.96	40	2.70	150	White
NL201614T-6R8□-N	6.80	10 / 5	15	7.96	36	3.20	140	Black
NL201614T-8R2□-N	8.20	10 / 5	15	7.96	33	3.60	120	Brown
NL201614T-100□-N	10.0	10 / 5	15	2.52	30	4.50	110	Red
NL201614T-120□-N	12.0	10 / 5	15	2.52	25	5.70	105	Orange
NL201614T-150□-N	15.0	10 / 5	15	2.52	23	6.50	90	Yellow
NL201614T-180□-N	18.0	10 / 5	15	2.52	21	7.00	85	Green
NL201614T-220□-N	22.0	10 / 5	15	2.52	20	8.00	78	Blue
NL201614T-270□-N	27.0	10 / 5	15	2.52	18	9.00	75	Violet
NL201614T-330□-N	33.0	10 / 5	15	2.52	17	10.0	70	Gray

**Note:** When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%

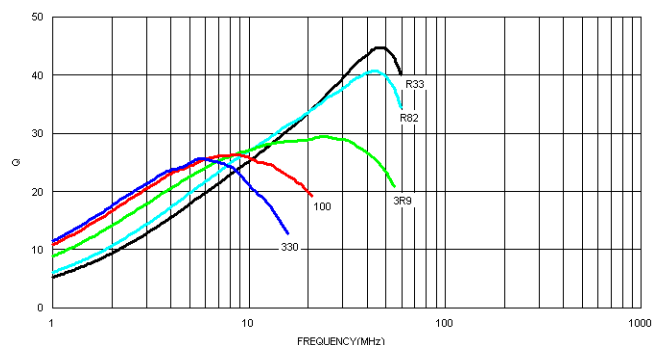
- Operating temperature range - 25°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value with current
- Measure Equipment :  
L & Q : Agilent E4991A+Agilent HP16197A  
SRF : Agilent E4991A  
RDC : HP4338B or Chroma 16502

**Test Instruments :** Agilent E4991A Material/Impedance Analyzer

### Typical L vs. Frequency



### Typical Q vs. Frequency



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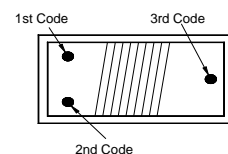
# SMD Wire Wound Ferrite Chip Inductors – NL Series

## Electrical Characteristics

Part Number	Inductance ( $\mu$ H)	Tolerance ( $\pm$ %)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	RDC ( $\Omega$ ) Max	IDC (mA)	Color Coding		
								1 <sup>ST</sup>	2 <sup>ND</sup>	3 <sup>RD</sup>
NL252018T-5N0□-N	0.005	10	10	100	3000	0.25	2000	Black	Green	Black
NL252018T-10N□-N	0.010	10	10	100	2500	0.25	1800	Brown	Black	Black
NL252018T-12N□-N	0.012	10	15	100	2400	0.26	1700	Brown	Red	Black
NL252018T-15N□-N	0.015	10	15	100	2300	0.28	1600	Brown	Green	Black
NL252018T-18N□-N	0.018	10	15	100	2200	0.30	1550	Brown	Gray	Black
NL252018T-22N□-N	0.022	10 / 5	20	100	2100	0.35	1500	Red	Red	Black
NL252018T-27N□-N	0.027	10 / 5	20	100	2000	0.40	1450	Red	Violet	Black
NL252018T-33N□-N	0.033	10 / 5	30	100	1600	0.42	1400	Orange	Orange	Black
NL252018T-39N□-N	0.039	10 / 5	35	100	1500	0.45	1350	Orange	White	Black
NL252018T-47N□-N	0.047	10 / 5	35	100	1400	0.50	1300	Yellow	Violet	Black
NL252018T-56N□-N	0.056	10 / 5	35	100	1300	0.60	1250	Green	Blue	Black
NL252018T-68N□-N	0.068	10 / 5	35	100	1200	0.65	1240	Blue	Gray	Black
NL252018T-82N□-N	0.082	10 / 5	35	100	1100	0.75	1230	Gray	Red	Black
NL252018T-R10□-N	0.10	10 / 5	35	100	800	0.80	1220	Brown	Black	Brown
NL252018T-R12□-N	0.12	10 / 5	30	25.2	700	0.30	900	Brown	Red	Brown
NL252018T-R15□-N	0.15	10 / 5	30	25.2	550	0.35	900	Brown	Green	Brown
NL252018T-R18□-N	0.18	10 / 5	30	25.2	500	0.40	850	Brown	Gray	Brown
NL252018T-R22□-N	0.22	10 / 5	30	25.2	450	0.50	840	Red	Red	Brown
NL252018T-R27□-N	0.27	10 / 5	30	25.2	425	0.55	830	Red	Violet	Brown
NL252018T-R33□-N	0.33	10 / 5	30	25.2	400	0.60	820	Orange	Orange	Brown
NL252018T-R39□-N	0.39	10 / 5	30	25.2	375	0.65	810	Orange	White	Brown
NL252018T-R47□-N	0.47	10 / 5	30	25.2	350	0.68	800	Yellow	Violet	Brown
NL252018T-R56□-N	0.56	10 / 5	30	25.2	325	0.75	800	Green	Blue	Brown
NL252018T-R68□-N	0.68	10 / 5	30	25.2	300	0.85	800	Blue	Gray	Brown
NL252018T-R82□-N	0.82	10 / 5	30	25.2	260	1.0	800	Gray	Red	Brown
NL252018T-1R0□-N	1.0	10 / 5	25	7.96	245	1.1	800	Brown	Black	Red
NL252018T-1R2□-N	1.2	10 / 5	25	7.96	230	1.2	790	Brown	Red	Red
NL252018T-1R5□-N	1.5	10 / 5	25	7.96	182	1.3	750	Brown	Green	Red
NL252018T-1R8□-N	1.8	10 / 5	25	7.96	135	1.45	750	Brown	Gray	Red
NL252018T-2R2□-N	2.2	10 / 5	25	7.96	105	1.55	750	Red	Red	Red
NL252018T-2R7□-N	2.7	10 / 5	25	7.96	70	1.7	740	Red	Violet	Red
NL252018T-3R3□-N	3.3	10 / 5	25	7.96	55	1.9	730	Orange	Orange	Red
NL252018T-3R9□-N	3.9	10 / 5	25	7.96	48	2.1	700	Orange	White	Red
NL252018T-4R7□-N	4.7	10 / 5	25	7.96	43	2.3	650	Yellow	Violet	Red
NL252018T-5R6□-N	5.6	10 / 5	20	7.96	42	2.5	640	Green	Blue	Red
NL252018T-6R8□-N	6.8	10 / 5	20	7.96	39	2.7	630	Blue	Gray	Red
NL252018T-8R2□-N	8.2	10 / 5	20	7.96	36	3.05	600	Gray	Red	Red
NL252018T-100□-N	10	10 / 5	15	2.52	33	3.5	600	Brown	Black	Orange
NL252018T-120□-N	12	10 / 5	15	2.52	30	3.8	550	Brown	Red	Orange
NL252018T-150□-N	15	10 / 5	15	2.52	26	4.4	430	Brown	Green	Orange
NL252018T-180□-N	18	10 / 5	15	2.52	24	4.8	400	Brown	Gray	Orange
NL252018T-220□-N	22	10 / 5	15	2.52	22	5.5	400	Red	Red	Orange
NL252018T-270□-N	27	10 / 5	15	2.52	21	6.3	360	Red	Violet	Orange
NL252018T-330□-N	33	10 / 5	15	2.52	20	7.1	350	Orange	Orange	Orange
NL252018T-390□-N	39	10 / 5	10	2.52	18	9.5	330	Orange	White	Orange
NL252018T-470□-N	47	10 / 5	10	2.52	17	11.1	300	Yellow	Violet	Orange
NL252018T-560□-N	56	10 / 5	10	2.52	16	12.1	270	Green	Blue	Orange
NL252018T-680□-N	68	10 / 5	10	2.52	15	16.6	250	Blue	Gray	Orange
NL252018T-820□-N	82	10 / 5	10	2.52	13	19	200	Gray	Red	Orange
NL252018T-101□-N	100	10 / 5	8	0.796	12	21	120	Brown	Black	Yellow

**Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%**

- Operating temperature range - 25°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value with current
- Measure Equipment :  
L & Q : HP4291A/HP4285A  
SRF : HP4291A/HP8753D  
RDC : HP4338B or Chroma 16502



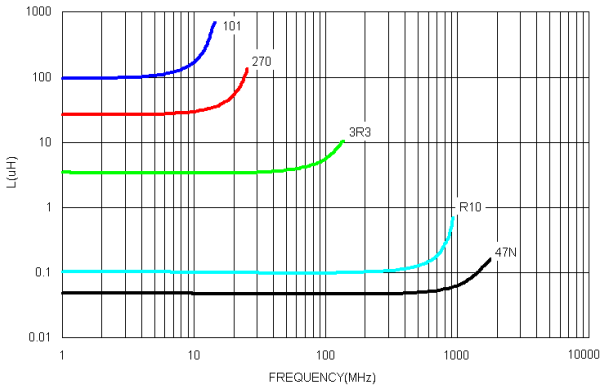
**COLOR CODING**

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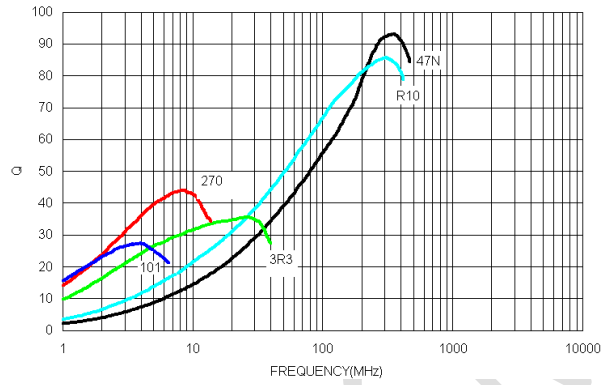
# SMD Wire Wound Ferrite Chip Inductors – NL Series

Test Instruments : Agilent E4991A Material/Impedance Analyzer

Typical **L** vs. **Frequency**



Typical **Q** vs. **Frequency**

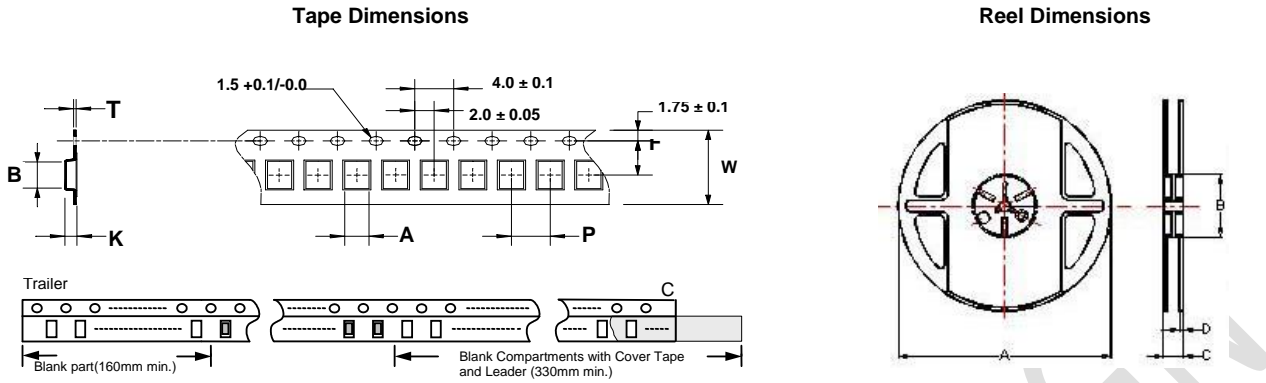


NOT FOR NEW DESIGN

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# SMD Wire Wound Ferrite Chip Inductors - NL Series

## Packaging Specifications



### Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity
	A	B	T	W	P	F	K	A	B	C	D	PCS / Reel
NL201614	1.85	2.45	0.23	8	4	3.5	1.45	178	60	12	1.5	2000
NL252018(5N0~R10)	2.80	2.95	0.23	8	4	3.5	2.20	178	60	12	1.5	2000
NL252018(R12~101)	2.40	2.93	0.26	8	4	3.5	2.25	178	60	12	1.5	2000