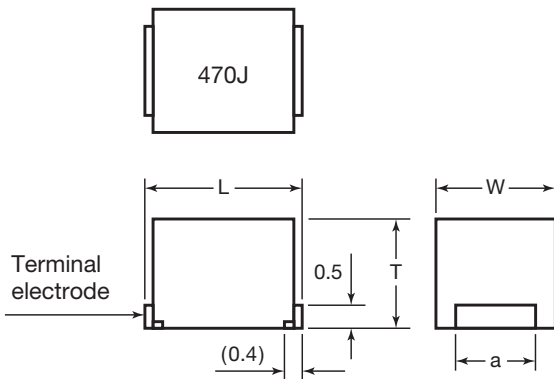


# Wire Wound Chip Inductors

## Features

- Moulded, heat resistant, resin package
- Unified automatic chip mounting shape with no directionality
- Excellent solderability for either flow or reflow soldering



## Dimensions

Dimensions (unit = mm)

SERIES	L	W	T	a
NL252018 (1008)	2.5 ± 0.2 (0.100 ± .008)	2.0 ± 0.2 (0.08 ± .008)	1.8 ± 0.2 (0.072 ± .008)	1.4 ± 0.1 (0.056 ± .004)
NL322522 (1210)	3.2 ± 0.2 (0.128 ± .008)	2.5 ± 0.2 (0.100 ± .008)	2.2 ± 0.2 (0.088 ± .008)	1.9 ± 0.1 (0.076 ± .004)
NL453232 (1812)	4.5 ± 0.3 (0.180 ± .012)	3.2 ± 0.2 (0.128 ± .008)	3.2 ± 0.2 (0.128 ± .008)	2.6 ± 0.1 (0.104 ± .004)

## Characteristics

<b>Storage Temperature Range</b>	-40 to 100° C
<b>Operating Temperature Range*</b> (including Self-Temperature Rise)	-20 to 100° C
<b>Temperature Rise</b> (against Ambient Temperature)	20° C max.
<b>Ambient Temperature</b>	80° C max.
<b>Terminal Tensile Strength</b>	0.5kg min.
<b>Current Rating</b>	Value obtained when current flows and the temperature has risen to 20° C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.
<b>Resistance to Soldering Heat</b>	260° C, 10 seconds
<b>Resistance to Solvent</b>	Conforms to MIL-STD-202E
* Should be used at a stabilized operating temperature Note: Storage temperature range for taping product: 0 to 60° C	

## How To Order

**NL252018**

Series

**- 1R0**

Inductance  
Value  
047: .047µH  
R12: 0.12µH  
1R0: 1µH  
820: 82µH

**J**

Tolerance  
J: ± 5%  
K: ± 10%  
M: ± 20%

**T**

Packaging  
T: Tape

NOTE: All NL series have Ferrite core.

Standard termination finish for this product is 100% matte Tin (Sn)

All components in this section are RoHS compliant per the EU directives and definitions.

5900 Shepherd Mountain Cove • Austin, TX 78730  
Phone: 512 / 794-0081 • Fax: 512 / 794-0087 • Toll Free: 800 / 950-8365  
e-mail: sales@venkel.com • www.venkel.com



VENKEL LTD.

## NL252018 SERIES (1008) - Electrical Characteristics

Inductance (μH)	Inductance Tolerance	Q min.	Test Frequency L, Q (MHz)	Self-resonant Frequency (MHz) min.	DC Resistance (Ω) max.	Rated Current (mA) max.	Part No.*
0.01	J, K, M	15	100	2150	0.26	530	NL252018-010□T
0.012	J, K, M	15	100	2050	0.27	500	NL252018-012□T
0.015	J, K, M	15	100	2000	0.29	480	NL252018-015□T
0.018	J, K, M	15	100	1850	0.31	450	NL252018-018□T
0.022	J, K, M	15	100	1650	0.37	420	NL252018-022□T
0.027	J, K, M	15	100	1550	0.4	410	NL252018-027□T
0.033	J, K, M	20	100	1450	0.42	400	NL252018-033□T
0.039	J, K, M	20	100	1350	0.45	380	NL252018-039□T
0.047	J, K, M	20	100	1200	0.5	360	NL252018-047□T
0.056	J, K, M	20	100	1100	0.6	340	NL252018-056□T
0.068	J, K, M	20	100	1050	0.65	320	NL252018-068□T
0.082	J, K, M	20	100	900	0.75	300	NL252018-082□T
0.1	J, K, M	20	100	800	0.8	280	NL252018-R10□T
0.12	J, K, M	30	25.2	700	0.3	550	NL252018-R12□T
0.15	J, K, M	30	25.2	550	0.35	500	NL252018-R15□T
0.18	J, K, M	30	25.2	500	0.4	460	NL252018-R18□T
0.22	J, K, M	30	25.2	450	0.5	430	NL252018-R22□T
0.27	J, K, M	30	25.2	425	0.55	420	NL252018-R27□T
0.33	J, K, M	30	25.2	400	0.6	400	NL252018-R33□T
0.39	J, K, M	30	25.2	375	0.65	375	NL252018-R39□T
0.47	J, K, M	30	25.2	350	0.68	350	NL252018-R47□T
0.56	J, K, M	30	25.2	325	0.75	325	NL252018-R56□T
0.68	J, K, M	30	25.2	300	0.85	300	NL252018-R68□T
0.82	J, K, M	30	25.2	260	1	260	NL252018-R82□T
1	J, K, M	30	7.96	245	1.1	245	NL252018-1R0□T
1.2	J, K, M	30	7.96	230	1.2	230	NL252018-1R2□T
1.5	J, K, M	30	7.96	182	1.3	220	NL252018-1R5□T
1.8	J, K, M	30	7.96	135	1.45	210	NL252018-1R8□T
2.2	J, K, M	30	7.96	105	1.55	200	NL252018-2R2□T
2.7	J, K, M	30	7.96	70	1.7	195	NL252018-2R7□T
3.3	J, K, M	30	7.96	55	1.9	185	NL252018-3R3□T
3.9	J, K, M	30	7.96	48	2.1	180	NL252018-3R9□T
4.7	J, K, M	30	7.96	43	2.3	175	NL252018-4R7□T
5.6	J, K, M	25	7.96	41	2.5	170	NL252018-5R6□T
6.8	J, K, M	25	7.96	39	2.7	165	NL252018-6R8□T
8.2	J, K, M	25	7.96	36	3.05	160	NL252018-8R2□T
10	J, K, M	25	2.52	33	3.5	155	NL252018-100□T
12	J, K, M	25	2.52	30	3.8	150	NL252018-120□T
15	J, K, M	25	2.52	26	4.4	140	NL252018-150□T
18	J, K, M	25	2.52	24	4.8	130	NL252018-180□T
22	J, K, M	25	2.52	22	5.5	125	NL252018-220□T
27	J, K, M	25	2.52	21	6.3	115	NL252018-270□T
33	J, K, M	25	2.52	20	7.1	110	NL252018-330□T
39	J, K, M	20	2.52	18	9.5	90	NL252018-390□T
47	J, K, M	20	2.52	17	11.1	80	NL252018-470□T
56	J, K, M	25	2.52	26	12.1	75	NL252018-560□T
68	J, K, M	25	2.52	26	16.6	70	NL252018-680□T
82	J, K, M	25	2.52	26	19.0	65	NL252018-820□T
100	J, K, M	25	2.52	26	21.0	60	NL252018-101□T

\*NOTE — Part No. can be written as NL1008.

# Wire Wound Chip Inductors

## NL322522 SERIES (1210) - Electrical Characteristics

Inductance (µH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz) min.	DC resistance (Ω) max.	Rated current (mA) max.	Part No.*
0.01	J, K, M	15	100	2500	0.13	450	NL322522-010□T
0.012	J, K, M	17	100	2300	0.14	450	NL322522-012□T
0.015	J, K, M	19	100	2100	0.16	450	NL322522-015□T
0.018	J, K, M	21	100	1900	0.18	450	NL322522-018□T
0.022	J, K, M	23	100	1700	0.2	450	NL322522-022□T
0.027	J, K, M	23	100	1500	0.22	450	NL322522-027□T
0.033	J, K, M	25	100	1400	0.24	450	NL322522-033□T
0.039	J, K, M	25	100	1300	0.27	450	NL322522-039□T
0.047	J, K, M	26	100	1200	0.3	450	NL322522-047□T
0.056	J, K, M	26	100	1100	0.33	450	NL322522-056□T
0.068	J, K, M	27	100	1000	0.36	450	NL322522-068□T
0.082	J, K, M	27	100	900	0.4	450	NL322522-082□T
0.1	J, K, M	28	100	700	0.44	450	NL322522-R10□T
0.12	J, K, M	30	25.2	500	0.22	450	NL322522-R12□T
0.15	J, K, M	30	25.2	450	0.25	450	NL322522-R15□T
0.18	J, K, M	30	25.2	400	0.28	450	NL322522-R18□T
0.22	J, K, M	30	25.2	350	0.32	450	NL322522-R22□T
0.27	J, K, M	30	25.2	320	0.36	450	NL322522-R27□T
0.33	J, K, M	30	25.2	300	0.4	450	NL322522-R33□T
0.39	J, K, M	30	25.2	250	0.45	450	NL322522-R39□T
0.47	J, K, M	30	25.2	220	0.5	450	NL322522-R47□T
0.56	J, K, M	30	25.2	180	0.55	450	NL322522-R56□T
0.68	J, K, M	30	25.2	160	0.6	450	NL322522-R68□T
0.82	J, K, M	30	25.2	140	0.65	450	NL322522-R82□T
1	J, K, M	30	7.96	120	0.7	400	NL322522-1R0□T
1.2	J, K, M	30	7.96	100	0.75	390	NL322522-1R2□T
1.5	J, K, M	30	7.96	85	0.85	370	NL322522-1R5□T
1.8	J, K, M	30	7.96	80	0.9	350	NL322522-1R8□T
2.2	J, K, M	30	7.96	75	1	320	NL322522-2R2□T
2.7	J, K, M	30	7.96	70	1.1	290	NL322522-2R7□T
3.3	J, K, M	30	7.96	60	1.2	260	NL322522-3R3□T
3.9	J, K, M	30	7.96	55	1.3	250	NL322522-3R9□T
4.7	J, K, M	30	7.96	50	1.5	220	NL322522-4R7□T
5.6	J, K, M	30	7.96	45	1.6	200	NL322522-5R6□T
6.8	J, K, M	30	7.96	40	1.8	180	NL322522-6R8□T
8.2	J, K, M	30	7.96	35	2	170	NL322522-8R2□T
10	J, K, M	30	2.52	30	2.1	150	NL322522-100□T
12	J, K, M	30	2.52	20	2.5	140	NL322522-120□T
15	J, K, M	30	2.52	20	2.8	130	NL322522-150□T
18	J, K, M	30	2.52	20	3.3	120	NL322522-180□T
22	J, K, M	30	2.52	20	3.7	110	NL322522-220□T
27	J, K, M	30	2.52	20	5	80	NL322522-270□T
33	J, K, M	30	2.52	17	5.6	70	NL322522-330□T
39	J, K, M	30	2.52	16	6.4	65	NL322522-390□T
47	J, K, M	30	2.52	15	7	60	NL322522-470□T
56	J, K, M	30	2.52	13	8	55	NL322522-560□T
68	J, K, M	30	2.52	12	9	50	NL322522-680□T
82	J, K, M	30	2.52	11	10	45	NL322522-820□T
100	J, K, M	20	0.796	10	10	40	NL322522-101□T
120	J, K, M	20	0.796	10	11	70	NL322522-121□T
150	J, K, M	20	0.796	8	15	65	NL322522-151□T
180	J, K, M	20	0.796	7	17	60	NL322522-181□T
220	J, K, M	20	0.796	7	21	50	NL322522-221□T
270	J, K, M	20	0.796	6	28	45	NL322522-271□T
330	J, K, M	20	0.796	5	34	40	NL322522-331□T
390	J, K, M	20	0.796	5	42	35	NL322522-391□T
470	J, K, M	20	0.796	4	40	25	NL322522-471□T

\*NOTE — Part No. can be written as NL1210.

5900 Shepherd Mountain Cove • Austin, TX 78730  
 Phone: 512 / 794-0081 • Fax: 512 / 794-0087 • Toll Free: 800 / 950-8365  
 e-mail: sales@venkel.com • www.venkel.com



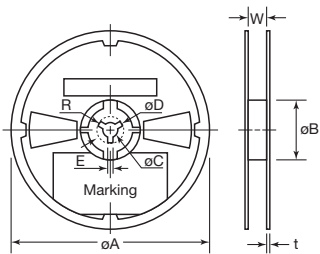
VENKEL LTD.

# NL453232 SERIES (1812) - Electrical Characteristics

Inductance (μH)	Inductance Tolerance	Q min.	Test Frequency L. Q (MHz)	Self-resonant Frequency (MHz) min.	DC Resistance (Ω) max.	Rated Current (mA) max.	Part No.*
270	J, K, M	40	0.796	4	12	92	NL453232-271□T
330	J, K, M	40	0.796	3.5	14	85	NL453232-331□T
390	J, K, M	40	0.796	3	16	80	NL453232-391□T
470	J, K, M	40	0.796	3	26	62	NL453232-471□T
560	J, K, M	30	0.796	3	30	50	NL453232-561□T
680	J, K, M	30	0.796	3	30	50	NL453232-681□T
820	J, K, M	30	0.796	2.5	35	30	NL453232-821□T
1000	J, K, M	30	0.252	2.5	40	30	NL453232-102□T

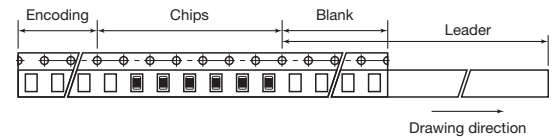
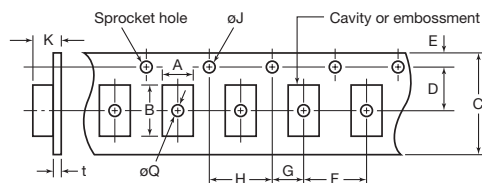
\*NOTE — Part No. can be written as NL1812.

## Reel Dimensions



Series	Product's Thickness (mm)	Quantities (pieces) Taping (/reel)	Reel Dimensions (mm)				
			øA	øB	øC	W	t
NL252018	1.8 ± 0.2	2000	178 ± 2	50 min.	13 ± 0.5	10 ± 1.5	2 ± 0.5
NL322522	2.2 ± 0.2	2000					
NL453232	3.2 ± 0.2	500	178 ± 2	50 min.	13 ± 0.5	14 ± 1.5	2 ± 0.5

## Taping Dimensions



Tape Dimensions (unit = mm)

Series	Tape Dimensions (mm)												Tape Material	Taping Dimensions (mm)		
	A	B	C	D	E	F	G	H	øJ	K	t	øQ		Leader	Blank	Ending
NL252018	2.3	2.8	8	3.5	1.75	4	2	4	1.5	2.3	0.3	1.5	Plastic	160 to 200	80 to 100	40 to 60
NL322522	2.9	3.6	8	3.5	1.75	4	2	4	1.5	2.5	0.3	1.5				
NL453232	3.6	4.9	12	5.5	1.75	8	2	4	1.5	3.8	0.3	1.5				

All components in this section are RoHS compliant per the EU directives and definitions.

5900 Shepherd Mountain Cove • Austin, TX 78730  
 Phone: 512 / 794-0081 • Fax: 512 / 794-0087 • Toll Free: 800 / 950-8365  
 e-mail: sales@venkel.com • www.venkel.com



VENKEL LTD.