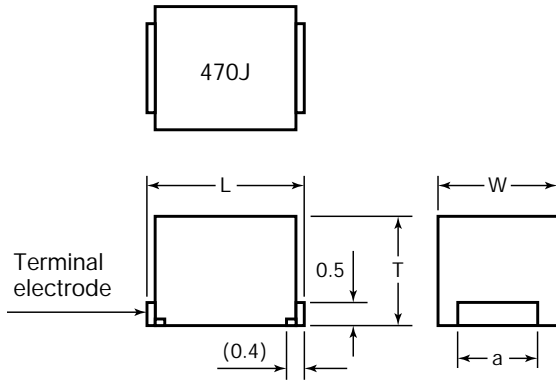




Wire Wound Chip Inductors

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)
NL565050 (2220)	5.6 ± 0.3 (0.220 ± .012)	5.0 ± 0.3 (0.200 ± .012)	5.0 ± 0.3 (0.200 ± .012)	4.0 ± 0.2 (0.160 ± .008)

Characteristics

Storage Temperature Range	-40 to + 100° C
Operating Temperature Range* (including Self-Temperature Rise)	-20 to 100° C
Temperature Rise (against Ambient Temperature)	20° C max.
Ambient Temperature	80° C max.
Terminal Tensile Strength	0.5kg min.
Current Rating	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.
Resistance to Soldering Heat	260° C, 10 seconds
Resistance to Solvent	Conforms to MIL-STD-202E
* Should be used at a stabilized operating temperature/ • Storage temperature range for taping product: 0 to 60° C	

How To Order

NL252018

Series

- 1R0

Inductance Value
1R0: 1µH
047: 47nH
R12: 0.12µH
820: 82µH

J

Tolerance
J: ± 5%
K: ± 10%
M: ± 20%

T

Packaging
B: Bulk
T: Tape

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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	±10, ±5%	15	100	2150	0.26	530	NL252018-010□□
0.012	±10, ±5%	15	100	2050	0.27	500	NL252018-012□□
0.015	±10, ±5%	15	100	2000	0.29	480	NL252018-015□□
0.018	±10, ±5%	15	100	1850	0.31	450	NL252018-018□□
0.022	±10, ±5%	15	100	1650	0.37	420	NL252018-022□□
0.027	±10, ±5%	15	100	1550	0.4	410	NL252018-027□□
0.033	±10, ±5%	20	100	1450	0.42	400	NL252018-033□□
0.039	±10, ±5%	20	100	1350	0.45	380	NL252018-039□□
0.047	±10, ±5%	20	100	1200	0.5	360	NL252018-047□□
0.056	±10, ±5%	20	100	1100	0.6	340	NL252018-056□□
0.068	±10, ±5%	20	100	1050	0.65	320	NL252018-068□□
0.082	±10, ±5%	20	100	900	0.75	300	NL252018-082□□
0.1	±10, ±5%	20	100	800	0.8	280	NL252018-R10□□
0.12	±10, ±5%	30	25.2	700	0.3	550	NL252018-R12□□
0.15	±10, ±5%	30	25.2	550	0.35	500	NL252018-R15□□
0.18	±10, ±5%	30	25.2	500	0.4	460	NL252018-R18□□
0.22	±10, ±5%	30	25.2	450	0.5	430	NL252018-R22□□
0.27	±10, ±5%	30	25.2	425	0.55	420	NL252018-R27□□
0.33	±10, ±5%	30	25.2	400	0.6	400	NL252018-R33□□
0.39	±10, ±5%	30	25.2	375	0.65	375	NL252018-R39□□
0.47	±10, ±5%	30	25.2	350	0.68	350	NL252018-R47□□
0.56	±10, ±5%	30	25.2	325	0.75	325	NL252018-R56□□
0.68	±10, ±5%	30	25.2	300	0.85	300	NL252018-R68□□
0.82	±10, ±5%	30	25.2	260	1	260	NL252018-R82□□
1	±5%	30	7.96	245	1.1	245	NL252018-1R0J□
1.2	±5%	30	7.96	230	1.2	230	NL252018-1R2J□
1.5	±5%	30	7.96	182	1.3	220	NL252018-1R5J□
1.8	±5%	30	7.96	135	1.45	210	NL252018-1R8J□
2.2	±5%	30	7.96	105	1.55	200	NL252018-2R2J□
2.7	±5%	30	7.96	70	1.7	195	NL252018-2R7J□
3.3	±5%	30	7.96	55	1.9	185	NL252018-3R3J□
3.9	±5%	30	7.96	48	2.1	180	NL252018-3R9J□
4.7	±5%	30	7.96	43	2.3	175	NL252018-4R7J□
5.6	±5%	25	7.96	2.5	2.5	170	NL252018-5R6J□
6.8	±5%	25	7.96	39	2.7	165	NL252018-6R8J□
8.2	±5%	25	7.96	36	3.05	160	NL252018-8R2J□
10	±5%	25	2.52	33	3.5	155	NL252018-100J□
12	±5%	25	2.52	30	3.8	150	NL252018-120J□
15	±5%	25	2.52	26	4.4	140	NL252018-150J□
18	±5%	25	2.52	24	4.8	130	NL252018-180J□
22	±5%	25	2.52	22	5.5	125	NL252018-220J□
27	±5%	25	2.52	21	6.3	115	NL252018-270J□
33	±5%	25	2.52	20	7.1	110	NL252018-330J□
39	±5%	20	2.52	18	9.5	90	NL252018-390J□
47	±5%	20	2.52	17	11.1	80	NL252018-470J□
56	±5%	25	2.52	26	12.1	75	NL252018-560J□
68	±5%	25	2.52	26	16.6	70	NL252018-680J□
82	±5%	25	2.52	26	19.0	65	NL252018-820J□
100	±5%	25	2.52	26	21.0	60	NL252018-101J□

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

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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	±10, ±5%	15	100	2500	0.13	450	NL322522-010□□
0.012	±10, ±5%	17	100	2300	0.14	450	NL322522-012□□
0.015	±10, ±5%	19	100	2100	0.16	450	NL322522-015□□
0.018	±10, ±5%	21	100	1900	0.18	450	NL322522-018□□
0.022	±10, ±5%	23	100	1700	0.2	450	NL322522-022□□
0.027	±10, ±5%	23	100	1500	0.22	450	NL322522-027□□
0.033	±10, ±5%	25	100	1400	0.24	450	NL322522-033□□
0.039	±10, ±5%	25	100	1300	0.27	450	NL322522-039□□
0.047	±10, ±5%	26	100	1200	0.3	450	NL322522-047□□
0.056	±10, ±5%	26	100	1100	0.33	450	NL322522-056□□
0.068	±10, ±5%	27	100	1000	0.36	450	NL322522-068□□
0.082	±10, ±5%	27	100	900	0.4	450	NL322522-082□□
0.1	±10, ±5%	28	100	700	0.44	450	NL322522-R10□□
0.12	±10, ±5%	30	25.2	500	0.22	450	NL322522-R12□□
0.15	±10, ±5%	30	25.2	450	0.25	450	NL322522-R15□□
0.18	±10, ±5%	30	25.2	400	0.28	450	NL322522-R18□□
0.22	±10, ±5%	30	25.2	350	0.32	450	NL322522-R22□□
0.27	±10, ±5%	30	25.2	320	0.36	450	NL322522-R27□□
0.33	±10, ±5%	30	25.2	300	0.4	450	NL322522-R33□□
0.39	±10, ±5%	30	25.2	250	0.45	450	NL322522-R39□□
0.47	±10, ±5%	30	25.2	220	0.5	450	NL322522-R47□□
0.56	±10, ±5%	30	25.2	180	0.55	450	NL322522-R56□□
0.68	±10, ±5%	30	25.2	160	0.6	450	NL322522-R68□□
0.82	±10, ±5%	30	25.2	140	0.65	450	NL322522-R82□□
1	±5%	30	7.96	120	0.7	400	NL322522-1R0J□
1.2	±5%	30	7.96	100	0.75	390	NL322522-1R2J□
1.5	±5%	30	7.96	85	0.85	370	NL322522-1R5J□
1.8	±5%	30	7.96	80	0.9	350	NL322522-1R8J□
2.2	±5%	30	7.96	75	1	320	NL322522-2R2J□
2.7	±5%	30	7.96	70	1.1	290	NL322522-2R7J□
3.3	±5%	30	7.96	60	1.2	260	NL322522-3R3J□
3.9	±5%	30	7.96	55	1.3	250	NL322522-3R9J□
4.7	±5%	30	7.96	50	1.5	220	NL322522-4R7J□
5.6	±5%	30	7.96	45	1.6	200	NL322522-5R6J□
6.8	±5%	30	7.96	40	1.8	180	NL322522-6R8J□
8.2	±5%	30	7.96	35	2	170	NL322522-8R2J□
10	±5%	30	2.52	30	2.1	150	NL322522-100J□
12	±5%	30	2.52	20	2.5	140	NL322522-120J□
15	±5%	30	2.52	20	2.8	130	NL322522-150J□
18	±5%	30	2.52	20	3.3	120	NL322522-180J□
22	±5%	30	2.52	20	3.7	110	NL322522-220J□
27	±5%	30	2.52	20	5	80	NL322522-270J□
33	±5%	30	2.52	17	5.6	70	NL322522-330J□
39	±5%	30	2.52	16	6.4	65	NL322522-390J□
47	±5%	30	2.52	15	7	60	NL322522-470J□
56	±5%	30	2.52	13	8	55	NL322522-560J□
68	±5%	30	2.52	12	9	50	NL322522-680J□
82	±5%	30	2.52	11	10	45	NL322522-820J□
100	±5%	20	0.796	10	10	40	NL322522-101J□
120	±5%	20	0.796	10	11	70	NL322522-121J□
150	±5%	20	0.796	8	15	65	NL322522-151J□
180	±5%	20	0.796	7	17	60	NL322522-181J□
220	±5%	20	0.796	7	21	50	NL322522-221J□
270	±5%	20	0.796	6	28	45	NL322522-271J□
330	±5%	20	0.796	5	34	40	NL322522-331J□
390	±5%	20	0.796	5	42	35	NL322522-391J□
470	±5%	20	0.796	4	40	25	NL322522-471J□

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

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NL453232 SERIES (1812) - Electrical Characteristics

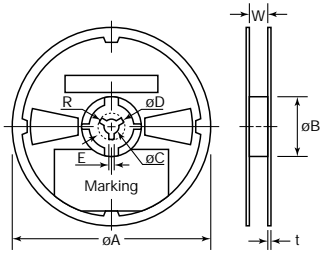
Inductance (μH)	Inductance Tolerance	Q min.	Test Frequency L, Q (MHz)	Self-resonant Frequency (MHz) min.	DC Resistance (Ω) max.	Rated Current (mA) max.	Part No.*
270	±5%	40	0.796	4	12	92	NL453232-271J □
330	±5%	40	0.796	3.5	14	85	NL453232-331J □
390	±5%	40	0.796	3	16	80	NL453232-391J □
470	±5%	40	0.796	3	26	62	NL453232-471J □
560	±5%	30	0.796	3	30	50	NL453232-561J □
680	±5%	30	0.796	3	30	50	NL453232-681J □
820	±5%	30	0.796	2.5	35	30	NL453232-821J □
1000	±5%	30	0.252	2.5	40	30	NL453232-102J □

NL565050 SERIES (2220) - Electrical Characteristics

Inductance (mH)	Inductance Tolerance	Q min.	Test Frequency L, Q (MHz)	Self-resonant Frequency (MHz) min.	DC Resistance (Ω) max.	Rated Current (mA) max.	Part No.*
1.2	±5%	30	0.252	1.5	17	75	NL565050-122J □
1.5	±5%	30	0.252	1.4	20	70	NL565050-152J □
1.8	±5%	30	0.252	1.3	30	60	NL565050-182J □
2.2	±5%	30	0.252	1.2	35	55	NL565050-222J □
2.7	±5%	30	0.252	1.1	55	45	NL565050-272J □
3.3	±5%	30	0.252	1	60	40	NL565050-332J □
3.9	±5%	30	0.252	1	70	38	NL565050-392J □
4.7	±5%	30	0.252	0.9	78	36	NL565050-472J □
5.6	±5%	30	0.252	0.8	85	33	NL565050-562J □
6.8	±5%	30	0.252	0.7	110	30	NL565050-682J □
8.2	±5%	30	0.252	0.6	125	28	NL565050-822J □
10	±5%	20	0.0796	0.5	150	25	NL565050-103J □

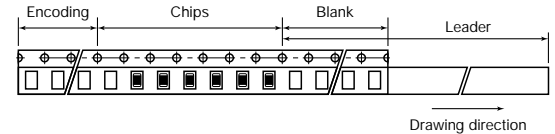
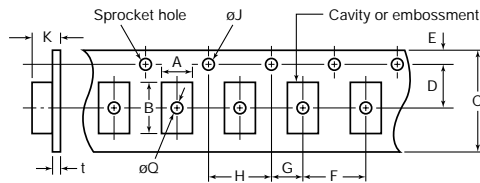
*NOTE — Part No. can be written as NL1812 and NL2220.

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
NL565050	5 ± 0.3	400					

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				
NL565050	5.4	6	12	5.5	1.75	8	2	4	1.5	5.5	0.3	1.5				

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