Wound Chip Inductors

NL Series

PRODUCT IDENTIFICATION

NL □□□□□□□-□□□□-□

- Internal No.
- Tolerance
- Inductance
- Packaging Style (*)
- Dimensions (A, B, C)
- Product Symbol

*T : Tape and Reel ; B : Bulk

- Tolerance : J = ±5% ; K= ±10%
- YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. well be changed to "N" as identification.

  Ex. NL322522T-R10K-N

APPLICATIONS

Microtelevisions, liquid crystal televisions, video cameras, portable VCRs, car radios, car stereos, thin tape radios, television tuners, mobile telephones, radio and other electronic devices.

OUTLINE

These revolutionary, highly reliable wound chip inductors for automatic mounting have been developed in response to the trend toward high density in electronic equipment.

FEATURES

Very strong solderability by reflow soldering, soldering iron or wave soldering.

Highly accurate dimensions can be mounted automatically.

Terminals are highly resistant to pull forces.

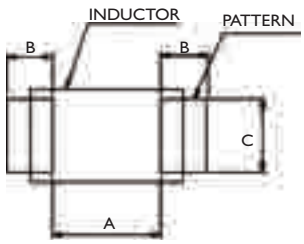
Highly resistant to mechanical shocks and pressure.

Highly reliable in environments of sudden temperature change and humidity.

Superior Q characteristics and the broadest L selections among peers

RECOMMENDED PATTERN

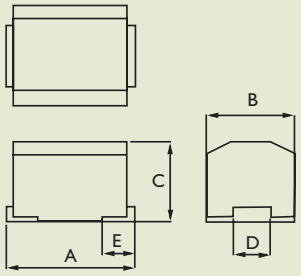
Dimensions : mm



TYPE	A	B	C
NL322522	1.6	1.2	2.0
NL453232	3.0	1.5	2.8
NL565050	4.0	2.0	4.5

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D	E
NL322522	3.2 ± 0.2	2.5 ± 0.2	2.2 ± 0.2	1.2 ± 0.4	0.6 ± 0.1
NL453232	4.5 ± 0.3	3.2 ± 0.3	3.2 ± 0.3	1.4 ± 0.4	0.9 ± 0.2
NL565050	5.6 ± 0.3	5.0 ± 0.3	5.0 ± 0.3	1.8 ± 0.3	1.3 ± 0.2

ELECTRICAL CHARACTERISTICS NL322522 SERIES

PART NO.	INDUCTANCE (µH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NL322522T-010K-S	0.010	10	15	100	2500	0.13	450
NL322522T-012K-S	0.012	10	17	100	2300	0.14	450
NL322522T-015K-S	0.015	10	19	100	2100	0.16	450
NL322522T-018K-S	0.018	10	21	100	1900	0.18	450
NL322522T-022K-S	0.022	10	23	100	1700	0.20	450
NL322522T-027K-S	0.027	10	23	100	1500	0.22	450
NL322522T-033K-S	0.033	10	25	100	1400	0.24	450
NL322522T-039K-S	0.039	10	25	100	1300	0.27	450
NL322522T-047K-S	0.047	10	26	100	1200	0.30	450
NL322522T-056K-S	0.056	10	26	100	1100	0.33	450
NL322522T-068K-S	0.068	10	27	100	1000	0.36	450
NL322522T-082K-S	0.082	10	27	100	900	0.40	450
NL322522T-R10K-S	0.10	10	28	100	700	0.44	450
NL322522T-R12K-S	0.12	10	30	25.20	500	0.22	450
NL322522T-R15K-S	0.15	10	30	25.20	450	0.25	450
NL322522T-R18K-S	0.18	10	30	25.20	400	0.28	450
NL322522T-R22K-S	0.22	10	30	25.20	350	0.32	450
NL322522T-R27K-S	0.27	10	30	25.20	320	0.36	450
NL322522T-R33K-S	0.33	10	30	25.20	300	0.40	450
NL322522T-R39K-S	0.39	10	30	25.20	250	0.45	450
NL322522T-R47K-S	0.47	10	30	25.20	220	0.50	450
NL322522T-R56K-S	0.56	10	30	25.20	180	0.55	450
NL322522T-R68K-S	0.68	10	30	25.20	160	0.60	450
NL322522T-R82K-S	0.82	10	30	25.20	140	0.65	450
NL322522T-1R0K-S	1.00	10	30	7.960	90	0.70	400
NL322522T-1R2K-S	1.20	10	30	7.960	85	0.75	390
NL322522T-1R5K-S	1.50	10	30	7.960	70	0.85	370
NL322522T-1R8K-S	1.80	10	30	7.960	60	0.90	350
NL322522T-2R2K-S	2.20	10	30	7.960	50	1.00	320
NL322522T-2R7K-S	2.70	10	30	7.960	45	1.10	290
NL322522T-3R3K-S	3.30	10	30	7.960	40	1.20	260
NL322522T-3R9K-S	3.90	10	30	7.960	37	1.30	250

ELECTRICAL CHARACTERISTICS NL322522 SERIES

PART NO.	INDUCTANCE (µH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NL322522T-4R7K-S	4.70	10	30	7.960	32	1.50	220
NL322522T-5R6K-S	5.60	10	30	7.960	30	1.60	200
NL322522T-6R8K-S	6.80	10	30	7.960	28	1.80	180
NL322522T-8R2K-S	8.20	10	30	7.960	25	2.00	170
NL322522T-100K-S	10	10	30	2.520	23	2.10	150
NL322522T-120K-S	12	10	30	2.520	20	2.50	140
NL322522T-150K-S	15	10	30	2.520	19	2.80	130
NL322522T-180K-S	18	10	30	2.520	17	3.30	120
NL322522T-220K-S	22	10	30	2.520	16	3.70	110
NL322522T-270K-S	27	10	30	2.520	14	5.00	80
NL322522T-330K-S	33	10	30	2.520	13	5.60	70
NL322522T-390K-S	39	10	30	2.520	12	6.40	65
NL322522T-470K-S	47	10	30	2.520	10	7.00	60
NL322522T-560K-S	56	10	30	2.520	9	8.00	55
NL322522T-680K-S	68	10	30	2.520	9	9.00	50
NL322522T-820K-S	82	10	30	2.520	8	10.0	45
NL322522T-101K-S	100	10	20	0.796	7	10.0	40
NL322522T-121K-S	120	10	20	0.796	7	11.0	70
NL322522T-151K-S	150	10	20	0.796	6	15.0	65
NL322522T-181K-S	180	10	20	0.796	6	17.0	60
NL322522T-221K-S	220	10	20	0.796	5	21.0	50
NL322522T-271K-S	270	10	20	0.796	6	22.0	45
NL322522T-331K-S	330	10	20	0.796	5	34.0	40

- S R F : HP4291A
- RDC : CH502BC / HP4338B
- IDC : HP4284A + HP42841A
- L/Q : HP4287A(0.10µ H MAX)
- L /Q : HP4285A + HP16034E (0.12µ H MIN)
- IDC: Δ L /L : -10%

ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μH)	TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (±%)
NL322522T-010 □ -N	0.01	100	15	2500	0.13	450	10
NL322522T-012 □ -N	0.012	100	17	2300	0.14	450	10
NL322522T-015 □ -N	0.015	100	19	2100	0.16	450	10
NL322522T-018 □ -N	0.018	100	21	1900	0.18	450	10
NL322522T-022 □ -N	0.022	100	23	1700	0.2	450	10
NL322522T-027 □ -N	0.027	100	23	1500	0.22	450	10
NL322522T-033 □ -N	0.033	100	25	1400	0.24	450	10
NL322522T-039 □ -N	0.039	100	25	1300	0.27	450	10
NL322522T-047 □ -N	0.047	100	26	1200	0.3	450	10
NL322522T-056 □ -N	0.056	100	26	1100	0.33	450	10
NL322522T-068 □ -N	0.068	100	27	1000	0.36	450	10
NL322522T-082 □ -N	0.082	100	27	900	0.4	450	10
NL322522T-R10 □ -N	0.1	100	28	700	0.44	450	5,10,20
NL322522T-R12 □ -N	0.12	25.2	30	500	0.22	450	5,10,20
NL322522T-R15 □ -N	0.15	25.2	30	450	0.25	450	5,10,20
NL322522T-R18 □ -N	0.18	25.2	30	400	0.28	450	5,10,20
NL322522T-R22 □ -N	0.22	25.2	30	350	0.32	450	5,10,20
NL322522T-R27 □ -N	0.27	25.2	30	320	0.36	450	5,10,20
NL322522T-R33 □ -N	0.33	25.2	30	300	0.4	450	5,10,20
NL322522T-R39 □ -N	0.39	25.2	30	250	0.45	450	5,10,20
NL322522T-R47 □ -N	0.47	25.2	30	220	0.5	450	5,10,20
NL322522T-R56 □ -N	0.56	25.2	30	180	0.55	450	5,10,20
NL322522T-R68 □ -N	0.68	25.2	30	160	0.6	450	5,10,20
NL322522T-R82 □ -N	0.82	25.2	30	140	0.65	450	5,10,20
NL322522T-1R0 □ -N	1	7.96	30	90	0.7	400	5,10
NL322522T-1R2 □ -N	1.2	7.96	30	85	0.75	390	5,10
NL322522T-1R5 □ -N	1.5	7.96	30	70	0.85	370	5,10
NL322522T-1R8 □ -N	1.8	7.96	30	60	0.9	350	5,10
NL322522T-2R2 □ -N	2.2	7.96	30	50	1	320	5,10
NL322522T-2R7 □ -N	2.7	7.96	30	45	1.1	290	5,10
NL322522T-3R3 □ -N	3.3	7.96	30	40	1.2	260	5,10
NL322522T-3R9 □ -N	3.9	7.96	30	37	1.3	250	5,10
NL322522T-4R7 □ -N	4.7	7.96	30	32	1.5	220	5,10
NL322522T-5R6 □ -N	5.6	7.96	30	30	1.6	200	5,10
NL322522T-6R8 □ -N	6.8	7.96	30	28	1.8	180	5,10
NL322522T-8R2 □ -N	8.2	7.96	30	25	2	170	5,10
NL322522T-100 □ -N	10	2.52	30	23	2.1	150	5,10
NL322522T-120 □ -N	12	2.52	30	20	2.5	140	5,10
NL322522T-150 □ -N	15	2.52	30	19	2.8	130	5,10
NL322522T-180 □ -N	18	2.52	30	17	3.3	120	5,10
NL322522T-220 □ -N	22	2.52	30	16	3.7	110	5,10
NL322522T-270 □ -N	27	2.52	30	14	5	80	5,10
NL322522T-330 □ -N	33	2.52	30	13	5.6	70	5,10
NL322522T-390 □ -N	39	2.52	30	12	6.4	65	5,10
NL322522T-470 □ -N	47	2.52	30	10	7	60	5,10
NL322522T-560 □ -N	56	2.52	30	9	8	55	5,10
NL322522T-680 □ -N	68	2.52	30	9	9	50	5,10
NL322522T-820 □ -N	82	2.52	30	8	10	45	5,10
NL322522T-101 □ -N	100	0.796	20	7	10	40	5,10
NL322522T-121 □ -N	120	0.796	20	7	11	70	5,10
NL322522T-151 □ -N	150	0.796	20	6	15	65	5,10
NL322522T-181 □ -N	180	0.796	20	6	17	60	5,10
NL322522T-221 □ -N	220	0.796	20	5	21	50	5,10
NL322522T-271 □ -N	270	0.796	20	6	22	45	5,10
NL322522T-331 □ -N	330	0.796	20	5	34	40	5,10

NOTE: □-tolerance J= ±5% / K= ±10% / M=± 20%

1.Operating temperature range -25°C~85°C

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

3.L , Q (010~R10)Test OSC@502mV / L , Q(R10~331)Test OSC@1V

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

ELECTRICAL CHARACTERISTICS NL453232 SERIES

PART NO.	INDUCTANCE (µH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NL453232T-R10M-S	0.10	20	28	25.20	700	0.44	450
NL453232T-R12M-S	0.12	20	30	25.20	500	0.22	450
NL453232T-R15M-S	0.15	20	30	25.20	450	0.25	450
NL453232T-R18M-S	0.18	20	30	25.20	400	0.28	450
NL453232T-R22M-S	0.22	20	30	25.20	350	0.32	450
NL453232T-R27M-S	0.27	20	30	25.20	320	0.36	450
NL453232T-R33M-S	0.33	20	30	25.20	300	0.40	450
NL453232T-R39M-S	0.39	20	30	25.20	250	0.45	450
NL453232T-R47M-S	0.47	20	30	25.20	220	0.50	450
NL453232T-R56M-S	0.56	20	30	25.20	180	0.55	450
NL453232T-R68M-S	0.68	20	30	25.20	160	0.60	450
NL453232T-R82M-S	0.82	20	30	25.20	140	0.67	450
NL453232T-1R0K-S	1.00	10	50	7.960	100	0.50	450
NL453232T-1R2K-S	1.20	10	50	7.960	80	0.55	430
NL453232T-1R5K-S	1.50	10	50	7.960	70	0.60	410
NL453232T-1R8K-S	1.80	10	50	7.960	60	0.65	390
NL453232T-2R2K-S	2.20	10	50	7.960	55	0.70	380
NL453232T-2R7K-S	2.70	10	50	7.960	50	0.75	370
NL453232T-3R3K-S	3.30	10	50	7.960	45	0.80	355
NL453232T-3R9K-S	3.90	10	50	7.960	40	0.90	330
NL453232T-4R7K-S	4.70	10	50	7.960	35	1.00	315
NL453232T-5R6K-S	5.60	10	50	7.960	33	1.10	300
NL453232T-6R8K-S	6.80	10	50	7.960	27	1.20	285
NL453232T-8R2K-S	8.20	10	50	7.960	25	1.40	270
NL453232T-100K-S	10	10	50	2.520	20	1.60	250
NL453232T-120K-S	12	10	50	2.520	18	2.00	225
NL453232T-150K-S	15	10	50	2.520	17	2.50	200
NL453232T-180K-S	18	10	50	2.520	15	2.80	190
NL453232T-220K-S	22	10	50	2.520	13	3.20	180
NL453232T-270K-S	27	10	50	2.520	12	3.60	170
NL453232T-330K-S	33	10	50	2.520	11	4.00	160
NL453232T-390K-S	39	10	50	2.520	10	4.50	150
NL453232T-470K-S	47	10	50	2.520	10	5.00	140
NL453232T-560K-S	56	10	50	2.520	9	5.50	135
NL453232T-680K-S	68	10	50	2.520	9	6.00	130
NL453232T-820K-S	82	10	50	2.520	8	7.00	120
NL453232T-101K-S	100	10	40	0.796	8	8.00	110
NL453232T-121K-S	120	10	40	0.796	6	8.00	110
NL453232T-151K-S	150	10	40	0.796	5	9.00	105
NL453232T-181K-S	180	10	40	0.796	5	9.50	102
NL453232T-221K-S	220	10	40	0.796	4	12.00	100
NL453232T-271K-S	270	10	30	0.796	4	18.00	92
NL453232T-331K-S	330	10	30	0.796	3.5	20.00	85
NL453232T-391K-S	390	10	30	0.796	3	23.00	80
NL453232T-471K-S	470	10	30	0.796	3	26.00	62
NL453232T-561K-S	560	10	30	0.796	3	30.00	50
NL453232T-681K-S	680	10	30	0.796	3	40.00	50
NL453232T-821K-S	820	10	30	0.796	2.5	45.00	30
NL453232T-102K-S	1000	10	30	0.796	2.5	50.00	30

ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μH)	TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (±%)
NL453232T-R10 □ -N	0.1	25.2	28	700	0.44	450	5,10,20
NL453232T-R12 □ -N	0.12	25.2	30	500	0.22	450	5,10,20
NL453232T-R15 □ -N	0.15	25.2	30	450	0.25	450	5,10,20
NL453232T-R18 □ -N	0.18	25.2	30	400	0.28	450	5,10,20
NL453232T-R22 □ -N	0.22	25.2	30	350	0.32	450	5,10,20
NL453232T-R27 □ -N	0.27	25.2	30	320	0.36	450	5,10,20
NL453232T-R33 □ -N	0.33	25.2	30	300	0.4	450	5,10,20
NL453232T-R39 □ -N	0.39	25.2	30	250	0.45	450	5,10,20
NL453232T-R47 □ -N	0.47	25.2	30	220	0.5	450	5,10,20
NL453232T-R56 □ -N	0.56	25.2	30	180	0.55	450	5,10,20
NL453232T-R68 □ -N	0.68	25.2	30	160	0.6	450	5,10,20
NL453232T-R82 □ -N	0.82	25.2	30	140	0.67	450	5,10,20
NL453232T-1R0 □ -N	1	7.96	50	100	0.5	450	5,10
NL453232T-1R2 □ -N	1.2	7.96	50	80	0.55	430	5,10
NL453232T-1R5 □ -N	1.5	7.96	50	70	0.6	410	5,10
NL453232T-1R8 □ -N	1.8	7.96	50	60	0.65	390	5,10
NL453232T-2R2 □ -N	2.2	7.96	50	55	0.7	380	5,10
NL453232T-2R7 □ -N	2.7	7.96	50	50	0.75	370	5,10
NL453232T-3R3 □ -N	3.3	7.96	50	45	0.8	355	5,10
NL453232T-3R9 □ -N	3.9	7.96	50	40	0.9	330	5,10
NL453232T-4R7 □ -N	4.7	7.96	50	35	1	315	5,10
NL453232T-5R6 □ -N	5.6	7.96	50	33	1.1	300	5,10
NL453232T-6R8 □ -N	6.8	7.96	50	27	1.2	285	5,10
NL453232T-8R2 □ -N	8.2	7.96	50	25	1.4	270	5,10
NL453232T-100 □ -N	10	2.52	50	20	1.6	250	5,10
NL453232T-120 □ -N	12	2.52	50	18	2	225	5,10
NL453232T-150 □ -N	15	2.52	50	17	2.5	200	5,10
NL453232T-180 □ -N	18	2.52	50	15	2.8	190	5,10
NL453232T-220 □ -N	22	2.52	50	13	3.2	180	5,10
NL453232T-270 □ -N	27	2.52	50	12	3.6	170	5,10
NL453232T-330 □ -N	33	2.52	50	11	4	160	5,10
NL453232T-390 □ -N	39	2.52	50	10	4.5	150	5,10
NL453232T-470 □ -N	47	2.52	50	10	5	140	5,10
NL453232T-560 □ -N	56	2.52	50	9	5.5	135	5,10
NL453232T-680 □ -N	68	2.52	50	9	6	130	5,10
NL453232T-820 □ -N	82	2.52	50	8	7	120	5,10
NL453232T-101 □ -N	100	0.796	40	8	8	110	5,10
NL453232T-121 □ -N	120	0.796	40	6	8	110	5,10
NL453232T-151 □ -N	150	0.796	40	5	9	105	5,10
NL453232T-181 □ -N	180	0.796	40	5	9.5	102	5,10
NL453232T-221 □ -N	220	0.796	40	4	12	100	5,10
NL453232T-271 □ -N	270	0.796	30	4	18	92	5,10
NL453232T-331 □ -N	330	0.796	30	3.5	20	85	5,10
NL453232T-391 □ -N	390	0.796	30	3	23	80	5,10
NL453232T-471 □ -N	470	0.796	30	3	26	62	5,10
NL453232T-561 □ -N	560	0.796	30	3	30	50	5,10
NL453232T-681 □ -N	680	0.796	30	3	40	50	5,10
NL453232T-821 □ -N	820	0.796	30	2.5	45	30	5,10
NL453232T-102 □ -N	1000	0.796	30	2.5	50	30	5,10

NOTE: □ -tolerance J= ±5% /K= ±10% / M=± 20%

1.Operating temperature range -25°C~85°C

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

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

ELECTRICAL CHARACTERISTICS

Dimensions : mm

PART NO.	INDUCTANCE (mH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NL565050T-122J-S	1.2	5, 10	30	0.252	1.5	17	75
NL565050T-152J-S	1.5	5, 10	30	0.252	1.4	20	70
NL565050T-182J-S	1.8	5, 10	30	0.252	1.3	30	60
NL565050T-222J-S	2.2	5, 10	30	0.252	1.2	35	55
NL565050T-272J-S	2.7	5, 10	30	0.252	1.1	55	45
NL565050T-332J-S	3.3	5, 10	30	0.252	1	60	40
NL565050T-392J-S	3.9	5, 10	30	0.252	1	70	38
NL565050T-472J-S	4.7	5, 10	30	0.252	0.9	78	36
NL565050T-562J-S	5.6	5, 10	30	0.252	0.8	85	33
NL565050T-682J-S	6.8	5, 10	30	0.252	0.7	110	30
NL565050T-822J-S	8.2	5, 10	30	0.252	0.6	125	28
NL565050T-103J-S	10	5, 10	20	0.0796	0.5	150	25

- L/Q : HP4285A+HP16034E
- S R F : HP4291A
- RDC : CH502BC / HP4338B
- IDC : HP4284A + HP42841A
- IDC : ΔL/L : -10%

ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μH)	TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (±%)
NL565050T-122 □ -N	1200	0.252	30	1.5	17	75	5,10
NL565050T-152 □ -N	1500	0.252	30	1.4	20	70	5,10
NL565050T-182 □ -N	1800	0.252	30	1.3	30	60	5,10
NL565050T-222 □ -N	2200	0.252	30	1.2	35	55	5,10
NL565050T-272 □ -N	2700	0.252	30	1.1	55	45	5,10
NL565050T-332 □ -N	3300	0.252	30	1	60	40	5,10
NL565050T-392 □ -N	3900	0.252	30	1	70	38	5,10
NL565050T-472 □ -N	4700	0.252	30	0.9	78	36	5,10
NL565050T-562 □ -N	5600	0.252	30	0.8	85	33	5,10
NL565050T-682 □ -N	6800	0.252	30	0.7	110	30	5,10
NL565050T-822 □ -N	8200	0.252	30	0.6	125	28	5,10
NL565050T-103 □ -N	10000	0.0796	20	0.5	150	25	5,10

NOTE: □-tolerance J= ±5% / K= ±10% / M=± 20%

1.Operating temperature range -25°C~85°C

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

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μH)	TEST FREQ (MHZ)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (±%)	Color Code IST
NL201614T-R12 □ -N	0.12	25.2	25	500	0.2	600	5,10	WHT
NL201614T-R15 □ -N	0.15	25.2	25	450	0.25	600	5,10	BLK
NL201614T-R18 □ -N	0.18	25.2	25	410	0.3	570	5,10	BRN
NL201614T-R22 □ -N	0.22	25.2	25	350	0.35	550	5,10	RED
NL201614T-R27 □ -N	0.27	25.2	25	280	0.4	530	5,10	ORN
NL201614T-R33 □ -N	0.33	25.2	25	235	0.45	510	5,10	YEL
NL201614T-R39 □ -N	0.39	25.2	25	210	0.5	490	5,10	GRN
NL201614T-R47 □ -N	0.47	25.2	25	170	0.55	470	5,10	BLU
NL201614T-R56 □ -N	0.56	25.2	25	150	0.6	450	5,10	VIO
NL201614T-R68 □ -N	0.68	25.2	25	140	0.7	420	5,10	GRY
NL201614T-R82 □ -N	0.82	25.2	25	130	0.75	400	5,10	WHT
NL201614T-1R0 □ -N	1	7.96	15	115	0.8	350	5,10	BLK
NL201614T-1R2 □ -N	1.2	7.96	15	95	0.9	325	5,10	BRN
NL201614T-1R5 □ -N	1.5	7.96	15	85	1.05	300	5,10	RED
NL201614T-1R8 □ -N	1.8	7.96	15	80	1.2	270	5,10	ORN
NL201614T-2R2 □ -N	2.2	7.96	15	75	1.4	250	5,10	YEL
NL201614T-2R7 □ -N	2.7	7.96	15	70	1.6	230	5,10	GRN
NL201614T-3R3 □ -N	3.3	7.96	15	60	1.8	210	5,10	BLU
NL201614T-3R9 □ -N	3.9	7.96	15	55	2	190	5,10	VIO
NL201614T-4R7 □ -N	4.7	7.96	15	45	2.4	170	5,10	GRY
NL201614T-5R6 □ -N	5.6	7.96	15	40	2.7	150	5,10	WHT
NL201614T-6R8 □ -N	6.8	7.96	15	36	3.2	140	5,10	BLK
NL201614T-8R2 □ -N	8.2	7.96	15	33	3.6	120	5,10	BRN
NL201614T-100 □ -N	10	2.52	15	30	4.5	110	5,10	RED
NL201614T-120 □ -N	12	2.52	15	25	5.7	105	5,10	ORN
NL201614T-150 □ -N	15	2.52	15	23	6.5	90	5,10	YEL
NL201614T-180 □ -N	18	2.52	15	21	7	85	5,10	GRN
NL201614T-220 □ -N	22	2.52	15	20	8	78	5,10	BLU
NL201614T-270 □ -N	27	2.52	15	18	9	75	5,10	VIO
NL201614T-330 □ -N	33	2.52	15	17	10	70	5,10	GRY

NOTE: □-tolerance J= ±5% /K= ±10% / M=± 20%

1.Operating temperature range -25°C~85°C

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

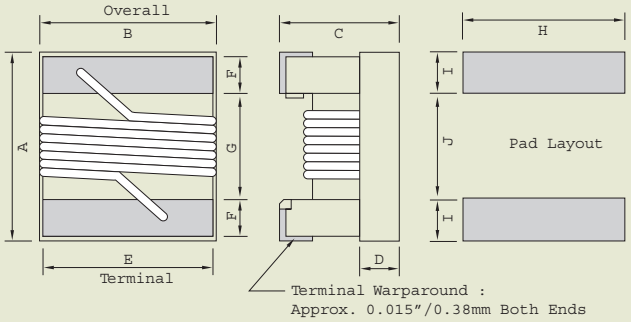
3.L/Q Test OSC@200mV

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

SHAPES AND DIMENSIONS NL201614 SERIES

Dimensions : mm

Ferrite body and wire wound construction provide highest current.



UNIT	A	B	C	D	E	F	G	H	I	J
	Max.	Max.	Max.	Ref.						
in	0.09	0.068	0.06	0.02	0.05	0.02	0.04	0.07	0.04	0.03
mm	2.29	1.73	1.52	0.51	1.27	0.51	1.02	1.78	1.02	0.76

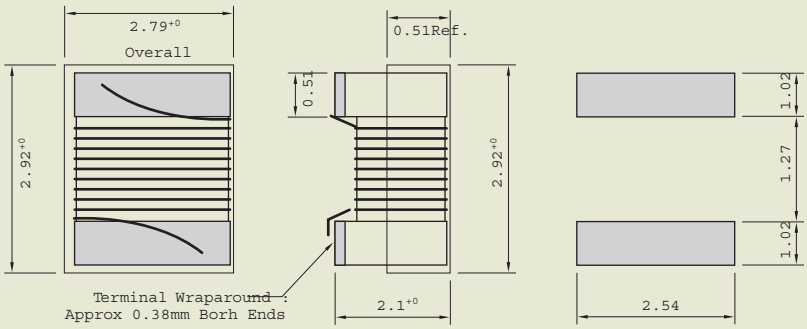
ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (µH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	COLOR CODING
NL201614T-R12 ☐ -S	0.12	10/5	25	25.2	500	0.20	600	White
NL201614T-R15 ☐ -S	0.15	10/5	25	25.2	450	0.25	600	Black
NL201614T-R18 ☐ -S	0.18	10/5	25	25.2	410	0.30	570	Brown
NL201614T-R22 ☐ -S	0.22	10/5	25	25.2	350	0.35	550	Red
NL201614T-R27 ☐ -S	0.27	10/5	25	25.2	280	0.40	530	Orang
NL201614T-R33 ☐ -S	0.33	10/5	25	25.2	235	0.45	510	Yellow
NL201614T-R39 ☐ -S	0.39	10/5	25	25.2	210	0.50	490	Green
NL201614T-R47 ☐ -S	0.47	10/5	25	25.2	170	0.55	470	Blue
NL201614T-R56 ☐ -S	0.56	10/5	25	25.2	150	0.60	450	Violet
NL201614T-R68 ☐ -S	0.68	10/5	25	25.2	140	0.70	420	Gray
NL201614T-R82 ☐ -S	0.82	10/5	25	25.2	130	0.75	400	White
NL201614T-1R0 ☐ -S	1.00	10/5	15	7.96	115	0.80	350	Black
NL201614T-1R2 ☐ -S	1.20	10/5	15	7.96	95	0.90	325	Brown
NL201614T-1R5 ☐ -S	1.50	10/5	15	7.96	85	1.05	300	Red
NL201614T-1R8 ☐ -S	1.80	10/5	15	7.96	80	1.20	270	Orang
NL201614T-2R2 ☐ -S	2.20	10/5	15	7.96	75	1.40	250	Yellow
NL201614T-2R7 ☐ -S	2.70	10/5	15	7.96	70	160	230	Green
NL201614T-3R3 ☐ -S	3.30	10/5	15	7.96	60	1.80	210	Blue
NL201614T-3R9 ☐ -S	3.90	10/5	15	7.96	55	2.00	190	Violet
NL201614T-4R7 ☐ -S	4.70	10/5	15	7.96	45	2.40	170	Gray
NL201614T-5R6 ☐ -S	5.60	10/5	15	7.96	40	2.70	150	White
NL201614T-6R8 ☐ -S	6.80	10/5	15	7.96	36	3.20	140	Black
NL201614T-8R2 ☐ -S	8.20	10/5	15	7.96	33	3.60	120	Brown
NL201614T-100 ☐ -S	10.0	10/5	15	2.52	30	4.50	110	Red
NL201614T-120 ☐ -S	12.0	10/5	15	2.52	25	5.70	105	Orang
NL201614T-150 ☐ -S	15.0	10/5	15	2.52	23	6.50	90	Yellow
NL201614T-180 ☐ -S	18.0	10/5	15	2.52	21	7.00	85	Green
NL201614T-220 ☐ -S	22.0	10/5	15	2.52	20	8.00	78	Blue
NL201614T-270 ☐ -S	27.0	10/5	15	2.52	18	9.00	75	Violet
NL201614T-330 ☐ -S	33.0	10/5	15	2.52	17	10.0	70	Gray

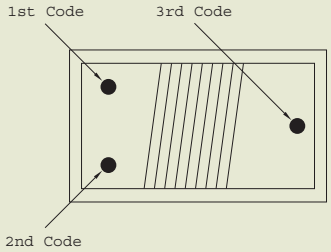
- When ordering, please specify tolerance and packaging codes. Ex : NL201614T-R12J-S
- Tolerance : J = ±5% , K=±10%
- Packaging : Clear Tape and Reel (Standard)
- L/Q : Agilent/HP4291A+ Agilent/HP16193A
- SRF : Agilent/HP4291A
- RDC : Digital Multimeter SC-7401
- Idc for inductance drop 10% from its value without current.
- Operating Temperature Range : -25°C to 85°C

SHAPES AND DIMENSIONS NL252018 SERIES

Dimensions : mm



Color Coding



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE μH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.	COLOR CODING 1st	2nd	3rd
NL252018T-5N0 □ -S	0.005	10	10	100	3000	0.25	2000	Black	Green	Black
NL252018T-10N □ -S	0.010	10	10	100	2500	0.25	1800	Brown	Black	Black
NL252018T-12N □ -S	0.012	10	15	100	2400	0.26	1700	Brown	Red	Black
NL252018T-15N □ -S	0.015	10	15	100	2300	0.28	1600	Brown	Green	Black
NL252018T-18N □ -S	0.018	10	15	100	2200	0.30	1550	Brown	Gray	Black
NL252018T-22N □ -S	0.022	5, 10	20	100	2100	0.35	1500	Red	Red	Black
NL252018T-27N □ -S	0.027	5, 10	20	100	2000	0.40	1450	Red	Violet	Black
NL252018T-33N □ -S	0.033	5, 10	30	100	1600	0.42	1400	Orange	Orange	Black
NL252018T-39N □ -S	0.039	5, 10	35	100	1500	0.45	1350	Orange	White	Black
NL252018T-47N □ -S	0.047	5, 10	35	100	1400	0.50	1300	Yellow	Violet	Black
NL252018T-56N □ -S	0.056	5, 10	35	100	1300	0.60	1250	Green	Blue	Black
NL252018T-68N □ -S	0.068	5, 10	35	100	1200	0.65	1240	Blue	Gray	Black
NL252018T-82N □ -S	0.082	5, 10	35	100	1100	0.75	1230	Gray	Red	Black
NL252018T-R10 □ -S	0.10	5, 10	35	100	800	0.80	1220	Brown	Black	Brown
NL252018T-R12 □ -S	0.12	5, 10	30	25.2	700	0.30	900	Brown	Red	Brown
NL252018T-R15 □ -S	0.15	5, 10	30	25.2	550	0.35	900	Brown	Green	Brown
NL252018T-R18 □ -S	0.18	5, 10	30	25.2	500	0.40	850	Brown	Gray	Brown
NL252018T-R22 □ -S	0.22	5, 10	30	25.2	450	0.50	840	Red	Red	Brown
NL252018T-R27 □ -S	0.27	5, 10	30	25.2	425	0.55	830	Red	Violet	Brown
NL252018T-R33 □ -S	0.33	5, 10	30	25.2	400	0.60	820	Orange	Orange	Brown
NL252018T-R39 □ -S	0.39	5, 10	30	25.2	375	0.65	810	Orange	White	Brown
NL252018T-R47 □ -S	0.47	5, 10	30	25.2	350	0.68	800	Yellow	Violet	Brown

ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.	COLOR CODING 1ST	2ND	3RD
NL252018T-R56 □-S	0.560	5, 10	30	25.2	325	0.75	800	Green	Blue	Brown
NL252018T-R68 □-S	0.680	5, 10	30	25.2	300	0.85	800	Blue	Gray	Brown
NL252018T-R82 □-S	0.820	5, 10	30	25.2	260	1.0	800	Gray	Red	Brown
NL252018T-1R0 □-S	1.000	5, 10	25	7.96	245	1.1	800	Brown	Black	Red
NL252018T-1R2 □-S	1.200	5, 10	25	7.96	230	1.2	790	Brown	Red	Red
NL252018T-1R5 □-S	1.500	5, 10	25	7.96	182	1.3	750	Brown	Green	Red
NL252018T-1R8 □-S	1.800	5, 10	25	7.96	135	1.45	750	Brown	Gray	Red
NL252018T-2R2 □-S	2.200	5, 10	25	7.96	105	1.55	750	Red	Red	Red
NL252018T-2R7 □-S	2.700	5, 10	25	7.96	70	1.7	740	Red	Violet	Red
NL252018T-3R3 □-S	3.300	5, 10	25	7.96	55	1.9	730	Orange	Orange	Red
NL252018T-3R9 □-S	3.900	5, 10	25	7.96	48	2.1	700	Orange	White	Red
NL252018T-4R7 □-S	4.7	5, 10	25	7.96	43	2.3	650	Yellow	Violet	Red
NL252018T-5R6 □-S	5.6	5, 10	20	7.96	42	2.5	640	Green	Blue	Red
NL252018T-6R8 □-S	6.8	5, 10	20	7.96	39	2.7	630	Blue	Gray	Red
NL252018T-8R2 □-S	8.2	5, 10	20	7.96	36	3.05	600	Gray	Red	Red
NL252018T-100 □-S	10	5, 10	15	2.52	33	3.5	600	Brown	Black	Orange
NL252018T-120 □-S	12	5, 10	15	2.52	30	3.8	550	Brown	Red	Orange
NL252018T-150 □-S	15	5, 10	15	2.52	26	4.4	430	Brown	Green	Orange
NL252018T-180 □-S	18	5, 10	15	2.52	24	4.8	400	Brown	Gray	Orange
NL252018T-220 □-S	22	5, 10	15	2.52	22	5.5	400	Red	Red	Orange
NL252018T-270 □-S	27	5, 10	15	2.52	21	6.3	360	Red	Violet	Orange
NL252018T-330 □-S	33	5, 10	15	2.52	20	7.1	350	Orange	Orange	Orange
NL252018T-390 □-S	39	5, 10	10	2.52	18	9.5	330	Orange	White	Orange
NL252018T-470 □-S	47	5, 10	10	2.52	17	11.1	300	Yellow	Violet	Orange
NL252018T-560 □-S	56	5, 10	10	2.52	16	12.1	270	Green	Blue	Orange
NL252018T-680 □-S	68	5, 10	10	2.52	15	16.6	250	Blue	Gray	Orange
NL252018T-820 □-S	82	5, 10	10	2.52	13	19	200	Gray	Red	Orange
NL252018T-101 □-S	100	5, 10	8	0.796	12	21	120	Brown	Black	Yellow

* UV Color : Blue / Core Color : Black

When ordering, please specify tolerance and packaging code. Ex : NL252018T-101J-S

Tolerance : □ J = 5% □ K = 10%

Packaging : Clear Tape and Reel (Standard)

L, Q, RDC : HP4287A

SRF : HP8753D / HP4291A RDC : Digital Muiltimeter SC-7401

Operating Temperature Range : -25°C to +85°C

ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μH)	TEST FREQ (MHZ)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (±%)	Color Code 1ST	2ND	3RD
NL252018T-5N0 ☐ -N	0.005	100	10	3000	0.25	2000	10	BLK	GRN	BLK
NL252018T-10N ☐ -N	0.01	100	10	2500	0.25	1800	10	BRN	BLK	BLK
NL252018T-12N ☐ -N	0.012	100	15	2400	0.26	1700	10	BRN	RED	BLK
NL252018T-15N ☐ -N	0.015	100	15	2300	0.28	1600	10	BRN	GRN	BLK
NL252018T-18N ☐ -N	0.018	100	15	2200	0.3	1550	10	BRN	GRY	BLK
NL252018T-22N ☐ -N	0.022	100	20	2100	0.35	1500	5,10	RED	RED	BLK
NL252018T-27N ☐ -N	0.027	100	20	2000	0.4	1450	5,10	RED	VIO	BLK
NL252018T-33N ☐ -N	0.033	100	30	1600	0.42	1400	5,10	ORN	ORN	BLK
NL252018T-39N ☐ -N	0.039	100	35	1500	0.45	1350	5,10	ORN	WHT	BLK
NL252018T-47N ☐ -N	0.047	100	35	1400	0.5	1300	5,10	YEL	VIO	BLK
NL252018T-56N ☐ -N	0.056	100	35	1300	0.6	1250	5,10	GRN	BLU	BLK
NL252018T-68N ☐ -N	0.068	100	35	1200	0.65	1240	5,10	BLU	GRY	BLK
NL252018T-82N ☐ -N	0.082	100	35	1100	0.75	1230	5,10	GRY	RED	BLK
NL252018T-R10 ☐ -N	0.1	100	35	800	0.8	1220	5,10	BRN	BLK	BRN
NL252018T-R12 ☐ -N	0.12	25.2	30	700	0.3	900	5,10	BRN	RED	BRN
NL252018T-R15 ☐ -N	0.15	25.2	30	550	0.35	900	5,10	BRN	GRN	BRN
NL252018T-R18 ☐ -N	0.18	25.2	30	500	0.4	850	5,10	BRN	GRY	BRN
NL252018T-R22 ☐ -N	0.22	25.2	30	450	0.5	840	5,10	RED	RED	BRN
NL252018T-R27 ☐ -N	0.27	25.2	30	425	0.55	830	5,10	RED	VIO	BRN
NL252018T-R33 ☐ -N	0.33	25.2	30	400	0.6	820	5,10	ORN	ORN	BRN
NL252018T-R39 ☐ -N	0.39	25.2	30	375	0.65	810	5,10	ORN	WHT	BRN
NL252018T-R47 ☐ -N	0.47	25.2	30	350	0.68	800	5,10	YEL	VIO	BRN
NL252018T-R56 ☐ -N	0.56	25.2	30	325	0.75	800	5,10	GRN	BLU	BRN
NL252018T-R68 ☐ -N	0.68	25.2	30	300	0.85	800	5,10	BLU	GRY	BRN
NL252018T-R82 ☐ -N	0.82	25.2	30	260	1	800	5,10	GRY	RED	BRN
NL252018T-1R0 ☐ -N	1	7.96	25	245	1.1	800	5,10	BRN	BLK	RED
NL252018T-1R2 ☐ -N	1.2	7.96	25	230	1.2	790	5,10	BRN	RED	RED
NL252018T-1R5 ☐ -N	1.5	7.96	25	182	1.3	750	5,10	BRN	GRN	RED
NL252018T-1R8 ☐ -N	1.8	7.96	25	135	1.45	750	5,10	BRN	GRY	RED
NL252018T-2R2 ☐ -N	2.2	7.96	25	105	1.55	750	5,10	RED	RED	RED
NL252018T-2R7 ☐ -N	2.7	7.96	25	70	1.7	740	5,10	RED	VIO	RED
NL252018T-3R3 ☐ -N	3.3	7.96	25	55	1.9	730	5,10	ORN	ORN	RED
NL252018T-3R9 ☐ -N	3.9	7.96	25	48	2.1	700	5,10	ORN	WHY	RED
NL252018T-4R7 ☐ -N	4.7	7.96	25	43	2.3	650	5,10	YEL	VIO	RED
NL252018T-5R6 ☐ -N	5.6	7.96	20	42	2.5	640	5,10	GRN	BLU	RED
NL252018T-6R8 ☐ -N	6,8	7.96	20	39	2.7	630	5,10	BLU	GRY	RED
NL252018T-8R2 ☐ -N	8.2	7.96	20	36	3.05	600	5,10	GRY	RED	RED
NL252018T-100 ☐ -N	10	2.52	15	33	3.5	600	5,10	BRN	BLK	ORN
NL252018T-120 ☐ -N	12	2.52	15	30	3.8	550	5,10	BRN	RED	ORN
NL252018T-150 ☐ -N	15	2.52	15	26	4.4	430	5,10	BRN	GRN	ORN
NL252018T-180 ☐ -N	18	2.52	15	24	4.8	400	5,10	BRN	GRY	ORN
NL252018T-220 ☐ -N	22	2.52	15	22	5.5	400	5,10	RED	RED	ORN
NL252018T-270 ☐ -N	27	2.52	15	21	6.3	360	5,10	RED	VIO	ORN
NL252018T-330 ☐ -N	33	2.52	15	20	7.1	350	5,10	ORN	ORN	ORN
NL252018T-390 ☐ -N	39	2.52	10	18	9.5	330	5,10	ORN	WHT	ORN
NL252018T-470 ☐ -N	47	2.52	10	17	11.1	300	5,10	YEL	VIO	ORN
NL252018T-560 ☐ -N	56	2.52	10	16	12.1	270	5,10	GRN	BLU	ORN
NL252018T-680 ☐ -N	68	2.52	10	15	16.6	250	5,10	BLU	GRY	ORN
NL252018T-820 ☐ -N	82	2.52	10	13	19	200	5,10	GRY	RED	ORN
NL252018T-101 ☐ -N	100	0.796	8	12	21	120	5,10	BRN	BLK	YEL

NOTE: ☐ -tolerance J= ±5%K= ±10% / M=± 20%

1.Operating temperature range -25°C~85°C

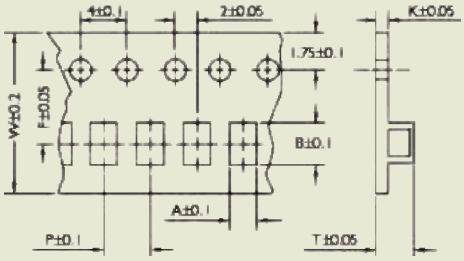
2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

3.L/Q Test OSC@200mV

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

TAPE DIMENSIONS

Dimensions : mm

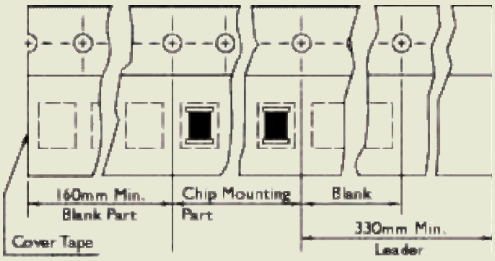


TYPE	A	B	T	W	P	F	K
NL201614	1.85	2.45	0.23	8	4	3.5	1.45
NL252018	2.7	2.95	2.25	8	4	3.5	0.25
NL322522	2.94	3.64	2.52	8	4	3.5	0.2
NL453232	3.64	5.14	3.6	12	8	5.5	0.3
NL565050	4.9	5.65	5.3	16.15	12.2	5.5	0.5

TAPE MATERIAL

Carrier Tape : Polystyrene

Cover Type : Polyethylene



REEL DIMENSIONS

Dimensions : mm

Figure 1

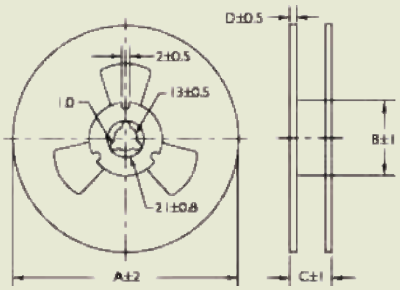
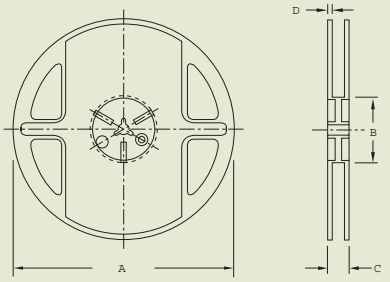


Figure 2

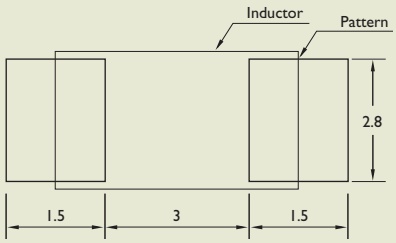


TYPE	FIGURE	A	B	C	D
NL201614	2	178	60	13	9
NL252018	2	178	60	12	1.5
NL322522	1	178	60	10	1.5
NL453232	1	250	80	14	1.5
NL565050	2	330	80	20	2

RECOMMENDED PATTERN

Dimensions : mm

NL45



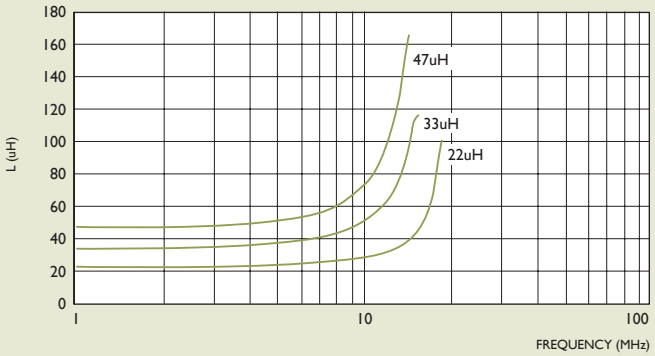
PACKAGING QUANTITY

TYPE	BULK	QUANTITY/REEL
NL201614	√	2000
NL252018	√	2000
NL322522	√	2000
NL453232	√	500
NL565050	√	1000

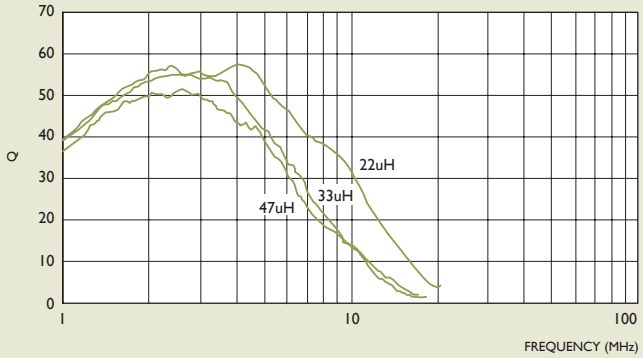
TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer

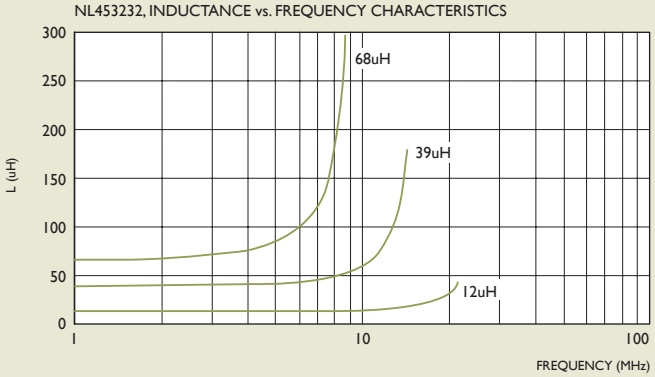
NL322522, INDUCTANCE vs. FREQUENCY CHARACTERISTICS



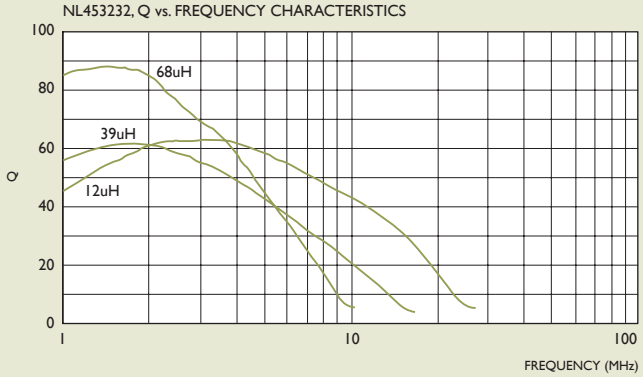
NL322522, Q vs. FREQUENCY CHARACTERISTICS



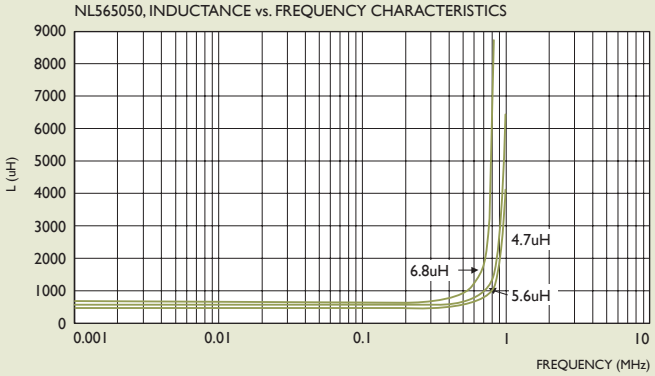
NL453232, INDUCTANCE vs. FREQUENCY CHARACTERISTICS



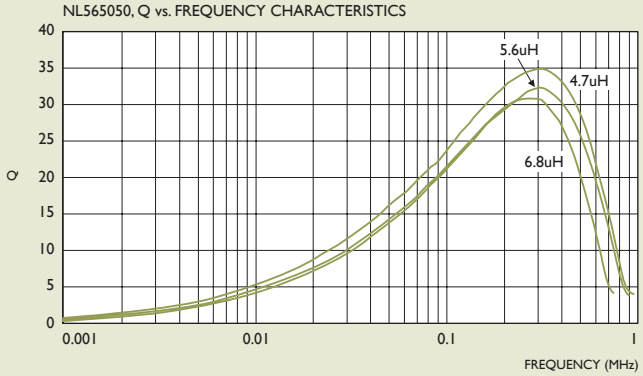
NL453232, Q vs. FREQUENCY CHARACTERISTICS



NL565050, INDUCTANCE vs. FREQUENCY CHARACTERISTICS



NL565050, Q vs. FREQUENCY CHARACTERISTICS



RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS