

NLC Series

For High Current Application

Wound Chip Inductors

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

With metal terminals and a body of heat resistant resin, these inductors offer many superior features.

APPLICATIONS

DC/DC converter such as DSC, LCD TV, game console, portable VCRs, conveyable telephone, and others.

FEATURES

Very strong solderability by reflow soldering and soldering iron

Highly accurate dimensions can be mounted automatically

Terminals are highly resistant to pull forces.

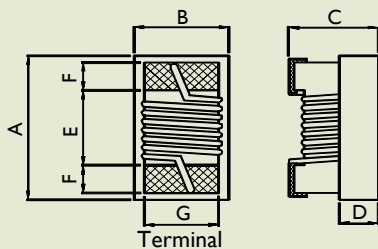
Highly resistant to mechanical shocks and pressure.

Highly reliable in environments of sudden temperature change and humidity.

Superior IDC for DC/DC converter.

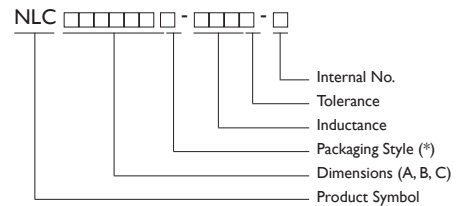
SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D	E	F	G
NLC252018	2.92 ⁺⁰	2.79 ⁺⁰	2.20 ⁺⁰	0.70Ref	1.52	0.51	2.03
NLC252018	3.70 ⁺⁰	2.90 ⁺⁰	2.60 ⁺⁰	0.90Ref	2.18	0.51	2.40

PRODUCT IDENTIFICATION



■ Packaging : T :Tape and Reel

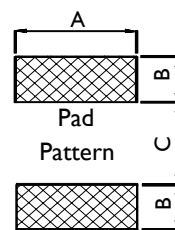
■ Tolerance : J=±5% ; K= ±10%

■ YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.

Ex. NLC252018T-IR0K-N

RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
NLC252018	2.54	1.02	1.27
NLC322522	2.70	1.00	2.00



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μH)	TOLERANCE ($\pm\%$)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.	COLOR CODING		
								1 ST	2 ND	3 RD
NLC252018T-1R0 □-S	1.0	10 / 5	25	7.96	300	0.34	1500	Brown	Black	Red
NLC252018T-1R5 □-S	1.5	10 / 5	25	7.96	270	0.42	1400	Brown	Green	Red
NLC252018T-2R2 □-S	2.2	10 / 5	25	7.96	140	0.50	1200	Red	Red	Red
NLC252018T-3R3 □-S	3.3	10 / 5	25	7.96	95	0.65	1000	Orange	Orange	Red
NLC252018T-4R7 □-S	4.7	10 / 5	25	7.96	90	0.80	800	Yellow	Violet	Red
NLC252018T-6R8 □-S	6.8	10 / 5	25	7.96	68	1.00	730	Blue	Gray	Red
NLC252018T-100 □-S	10	10 / 5	20	2.52	45	1.50	700	Brown	Black	Orange
NLC252018T-150 □-S	15	10 / 5	20	2.52	40	2.20	500	Brown	Green	Orange
NLC252018T-220 □-S	22	10 / 5	20	2.52	25	2.70	470	Red	Red	Orange
NLC252018T-330 □-S	33	10 / 5	20	2.52	25	4.00	400	Orange	Orange	Orange
NLC252018T-470 □-S	47	10 / 5	16	2.52	20	8.00	300	Yellow	Violet	Orange

• When ordering, please specify tolerance and packaging code.

Ex : NLC252018T-4R7J-S

• Tolerance : J = $\pm 5\%$; K = $\pm 10\%$

• Packaging : Clear Tape and Reel (Standard)

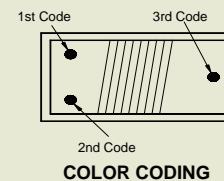
• L / Q : Agilent / HP4291 + Agilent / HP16193A

• SRF : Agilent / HP4291A

• RDC : Digital Multimeter CH502BC HP4338B

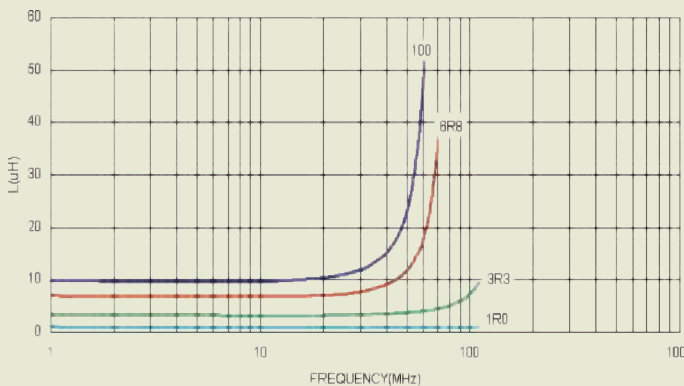
• Idc for inductance drop 10% from its value without current.

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

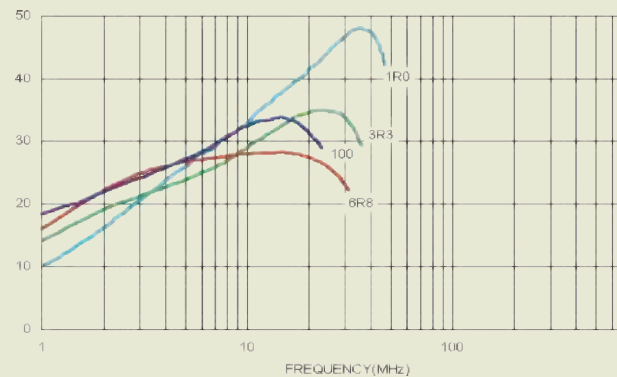


TEST INSTRUMENTS : HP4291A Impedance / Material Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency





ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHZ)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (\pm %)	Color Code		
								1 ST	2 ND	3 RD
NLC252018T-1R0 \square -N	1	7.96	25	300	0.34	1500	5,10	BRN	BLK	RED
NLC252018T-1R5 \square -N	1.5	7.96	25	270	0.42	1400	5,10	BRN	GRN	RED
NLC252018T-2R2 \square -N	2.2	7.96	25	140	0.5	1200	5,10	RED	RED	RED
NLC252018T-3R3 \square -N	3.3	7.96	25	95	0.65	1000	5,10	ORN	ORN	RED
NLC252018T-4R7 \square -N	4.7	7.96	25	90	0.8	800	5,10	YEL	VIO	RED
NLC252018T-6R8 \square -N	6.8	7.96	25	68	1	730	5,10	BLU	GRY	RED
NLC252018T-100 \square -N	10	2.52	20	45	1.5	700	5,10	BRN	BLK	ORN
NLC252018T-150 \square -N	15	2.52	20	40	2.2	500	5,10	BRN	GRN	ORN
NLC252018T-220 \square -N	22	2.52	20	25	2.7	470	5,10	RED	RED	ORN
NLC252018T-330 \square -N	33	2.52	20	25	4	400	5,10	ORN	ORN	ORN
NLC252018T-470 \square -N	47	2.52	16	20	8	300	5,10	YEL	VIO	ORN

NOTE: \square -tolerance J= \pm 5% / K= \pm 10% / M= \pm 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

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm\%$)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.	COLOR CODING		
								1 ST	2 ND	3 RD
NLC322522T-1R0 □-S	1.0	5, 10	20	7.96	100	0.08	1500	Brown	Black	Red
NLC322522T-1R5 □-S	1.5	5, 10	20	7.96	80	0.13	1125	Brown	Green	Red
NLC322522T-2R2 □-S	2.2	5, 10	20	7.96	68	0.13	970	Red	Red	Red
NLC322522T-3R3 □-S	3.3	5, 10	20	7.96	54	0.16	837	Orange	Orange	Red
NLC322522T-4R7 □-S	4.7	5, 10	20	7.96	43	0.20	675	Yellow	Violet	Red
NLC322522T-6R8 □-S	6.8	5, 10	20	7.96	33	0.27	600	Blue	Gray	Red
NLC322522T-100 □-S	10	5, 10	15	2.52	28	0.36	520	Brown	Black	Orange
NLC322522T-150 □-S	15	5, 10	15	2.52	19	0.56	480	Brown	Green	Orange
NLC322522T-220 □-S	22	5, 10	15	2.52	16	0.77	310	Red	Red	Orange
NLC322522T-330 □-S	33	5, 10	15	2.52	12	1.10	270	Orange	Orange	Orange
NLC322522T-470 □-S	47	5, 10	15	2.52	10	1.64	210	Yellow	Violet	Orange
NLC322522T-680 □-S	68	5, 10	15	2.52	9	2.80	189	Blue	Gray	Orange
NLC322522T-101 □-S	100	5, 10	15	0.796	6	3.70	145	Brown	Black	Yellow
NLC322522T-151 □-S	150	5, 10	15	0.796	5	6.10	120	Brown	Green	Yellow
NLC322522T-221 □-S	220	5, 10	15	0.796	4	8.40	100	Red	Red	Yellow
NLC322522T-331 □-S	330	5, 10	15	0.796	3.5	12.3	80	Orange	Orange	Yellow
NLC322522T-471 □-S	470	5, 10	15	0.796	2.8	22.0	75	Yellow	Violet	Yellow
NLC322522T-681 □-S	680	5, 10	15	0.796	2	28.0	65	Blue	Gray	Yellow

• When ordering, please specify tolerance and packaging code.

Ex : NLC322522T-4R7J-S

• Tolerance : J = $\pm 5\%$; K = $\pm 10\%$

• Packaging : Clear Tape and Reel (Standard)

• L / Q : Agilent / HP4291A + Agilent / HP16193A(over 1MHz)

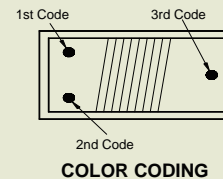
Agilent / HP4285A + Agilent / HP16193A(under 1MHz)

• SRF : Agilent / HP4291A

• RDC : Digital Multimeter HP4338B CH502BC

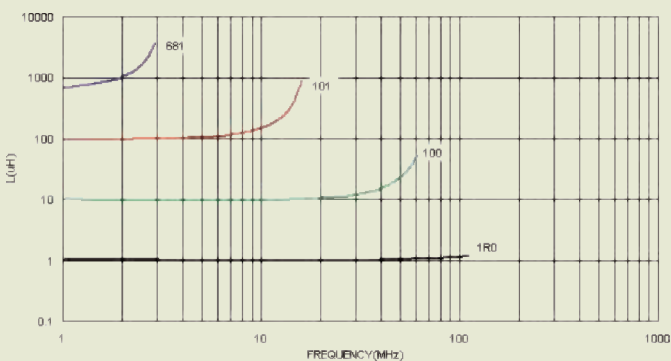
• Idc for inductance drop 10% from its value without current.

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

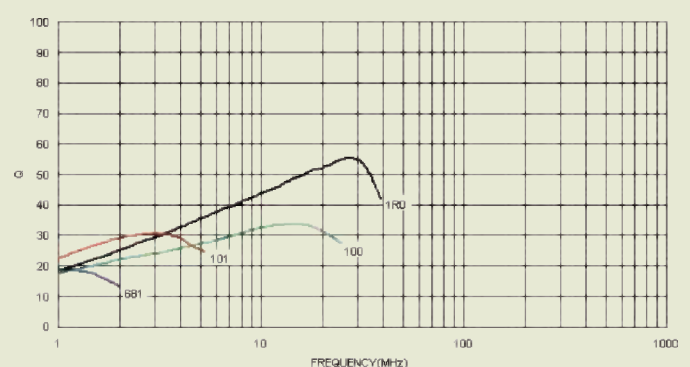


TEST INSTRUMENTS : HP4291A Impedance / Material Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency





ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHZ)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (\pm %)	Color Code		
								1 ST	2 ND	3 RD
NLC322522T-R47 □ -N	0.47	25.2	40	450	0.07	1800	5,10	YEL	VIO	BRN
NLC322522T-1R0 □ -N	1	7.96	20	100	0.08	1500	5,10	BRN	BLK	RED
NLC322522T-1R2 □ -N	1.2	7.96	20	90	0.08	1400	5,10	BRN	RED	RED
NLC322522T-1R5 □ -N	1.5	7.96	20	80	0.13	1125	5,10	BRN	GRN	RED
NLC322522T-1R8 □ -N	1.8	7.96	20	70	0.13	970	5,10	BRN	GRY	RED
NLC322522T-2R2 □ -N	2.2	7.96	20	68	0.13	970	5,10	RED	RED	RED
NLC322522T-2R7 □ -N	2.7	7.96	20	62	0.15	900	5,10	RED	VIO	RED
NLC322522T-3R3 □ -N	3.3	7.96	20	54	0.16	837	5,10	ORN	ORN	RED
NLC322522T-4R7 □ -N	4.7	7.96	20	43	0.23	675	5,10	YEL	VIO	RED
NLC322522T-5R6 □ -N	5.6	7.96	20	36	0.26	620	5,10	GRN	BLU	RED
NLC322522T-6R8 □ -N	6.8	7.96	20	33	0.27	600	5,10	BLU	GRY	RED
NLC322522T-8R2 □ -N	8.2	7.96	20	30	0.32	580	5,10	GRY	RED	RED
NLC322522T-100 □ -N	10	2.52	15	28	0.36	520	5,10	BRN	BLK	ORN
NLC322522T-150 □ -N	15	2.52	15	19	0.56	480	5,10	BRN	GRN	ORN
NLC322522T-180 □ -N	18	2.52	15	17	0.67	330	5,10	BRN	GRY	ORN
NLC322522T-220 □ -N	22	2.52	15	16	0.77	310	5,10	RED	RED	ORN
NLC322522T-270 □ -N	27	2.52	15	13	1	280	5,10	RED	VIO	ORN
NLC322522T-330 □ -N	33	2.52	15	12	1.1	270	5,10	ORN	ORN	ORN
NLC322522T-470 □ -N	47	2.52	15	10	1.64	210	5,10	YEL	VIO	ORN
NLC322522T-680 □ -N	68	2.52	15	9	2.8	189	5,10	BLU	GRY	ORN
NLC322522T-101 □ -N	100	0.796	15	6	3.7	145	5,10	BRN	BLK	YEL
NLC322522T-151 □ -N	150	0.796	15	5	6.1	120	5,10	BRN	GRN	YEL
NLC322522T-181 □ -N	180	0.796	15	4	8	105	5,10	BRN	GRY	YEL
NLC322522T-221 □ -N	220	0.796	15	4	8.4	100	5,10	RED	RED	YEL
NLC322522T-331 □ -N	330	0.796	15	3.5	12.3	80	5,10	ORN	ORN	YEL
NLC322522T-391 □ -N	390	0.796	15	2.8	17.6	75	5,10	YEL	VIO	YEL
NLC322522T-471 □ -N	470	0.796	15	2.8	22	75	5,10	YEL	VIO	YEL
NLC322522T-561 □ -N	560	0.796	15	2.5	23	65	5,10	GRN	BLU	YEL
NLC322522T-681 □ -N	680	0.796	15	2	28	65	5,10	BLU	GRY	YEL

NOTE: □ -tolerance J= \pm 5% /K= \pm 10% / M= \pm 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.

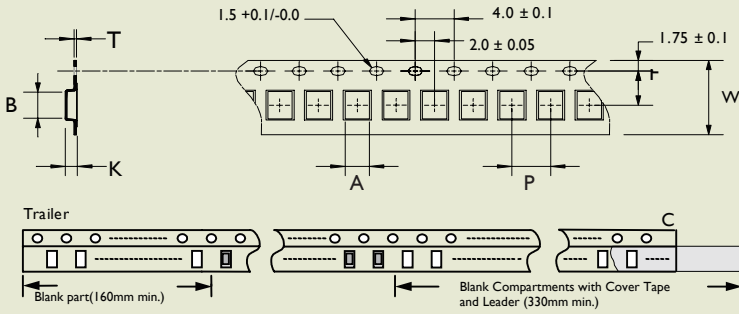
"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



PACKAGING SPECIFICATIONS

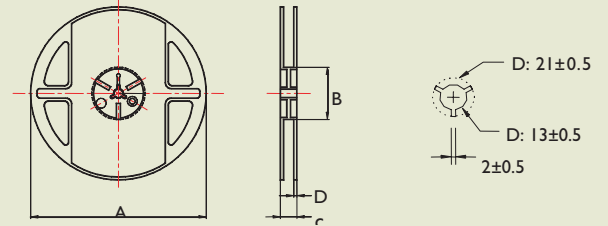
Dimensions : mm

TAPE DIMENSIONS



Dimensions : mm

Reel Dimensions



Dimensions : mm

TYPE	TAPE DIMENSIONS							REEL DIMENSIONS				Q'TY/REEL
	A	B	T	W	P	F	K	A	B	C	D	
NLC252018	2.70	2.95	0.23	8	4	3.5	2.25	178	60	12	1.5	2000
NLC322522	2.95	3.85	0.25	12	4	3.5	2.45	178	60	16	1.4	2000

RECOMMEND SOLDERING CONDITIONS

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

