ISO9001 & ISO14001 & TS16949 **CHILISIN ELECTRONICS CORP.**

Lead-Free & RoHs Compliance!!

SPECIFICATION FOR APPROVAL

CUSTOMER：

CUSTOMER P/N：

OUR DWG No：

QUANTITY： **0** **Pcs.** **DATE：** **2013/04/01**

ITEM： **NLC252018T-100K-N**

SPECIFICATION ACCEPTED BY:	
COMPONENT ENGINEER	
ELECTRICAL ENGINEER	
MECHANICAL ENGINEER	
APPROVED	
REJECTED	

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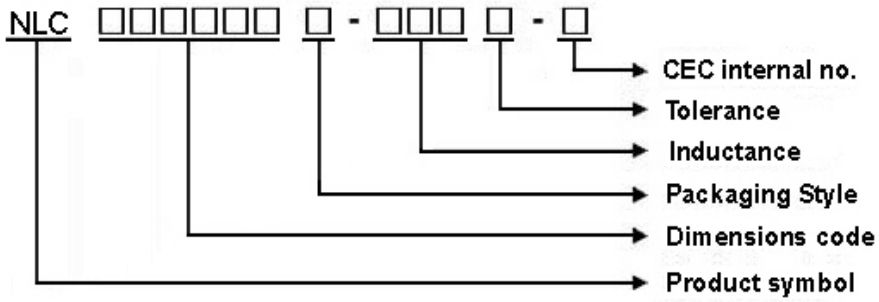
NLC252018T Series Specification

1 Scope: This specification applies to Wire Wound Ferrite Chip Inductors

2 Part Numbering: Product Identification

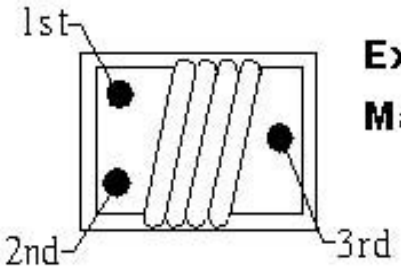


3 Rating:

Operating Temperature: －25℃～105℃**(Including self - temperature rise)**

Storage Temperature: Under 25℃ ,Humidity < 75% RH

4 Marking:



Ex:NLC252018T-100K-N

Marking: 1st→Brown

2nd→Black

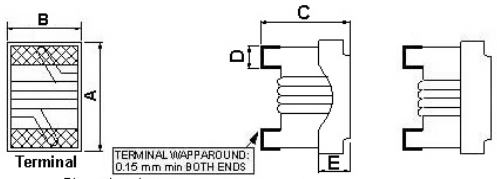
3rd→Orange

5 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35℃)	20±2℃
Humidity	Ordinary Humidity(25 to 85% RH)	60 to 70 % RH

NLC252018T Series Specification

6 Configuration and Dimensions:



Dimensions in mm

TYPE	A	B	C	D	E
NLC252018	2.92 +0	2.5 +0	2.2 +0	0.51	0.51

7 ELECTRICAL CHARACTERISTICS :

Part No.	Inductance (uH)	L,Q Test Freq. (MHZ)	Q Min.	SRF (MHZ)Min.	RDC (Ω)Max.	IDC (mA)	Tolerance (±%)	Color Code 1st	2nd	3rd
NLC252018T-1R0□-N	1	7.96	25	300	0.34	1500	5,10	BRN	BLK	RED
NLC252018T-1R2□-N	1.2	7.96	25	280	0.4	1400	5,10	BRN	RED	RED
NLC252018T-1R5□-N	1.5	7.96	25	270	0.42	1400	5,10	BRN	GRN	RED
NLC252018T-1R8□-N	1.8	7.96	25	150	0.45	1200	5,10	BRN	GRY	RED
NLC252018T-2R2□-N	2.2	7.96	25	140	0.5	1200	5,10	RED	RED	RED
NLC252018T-3R3□-N	3.3	7.96	25	95	0.65	1000	5,10	ORN	ORN	RED
NLC252018T-4R7□-N	4.7	7.96	25	90	0.8	800	5,10	YEL	VIO	RED
NLC252018T-6R8□-N	6.8	7.96	25	68	1	730	5,10	BLU	GRY	RED
NLC252018T-100□-N	10	2.52	20	45	1.5	700	5,10	BRN	BLK	ORN
NLC252018T-150□-N	15	2.52	20	40	2.2	500	5,10	BRN	GRN	ORN
NLC252018T-220□-N	22	2.52	20	25	2.7	470	5,10	RED	RED	ORN
NLC252018T-330□-N	33	2.52	20	25	4	400	5,10	ORN	ORN	ORN
NLC252018T-390□-N	39	2.52	16	20	7	320	5,10	ORN	WHT	ORN
NLC252018T-470□-N	47	2.52	16	20	8	300	5,10	YEL	VIO	ORN

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

1.Operating temperature range －２５℃～１０５℃(Including self - temperature rise)

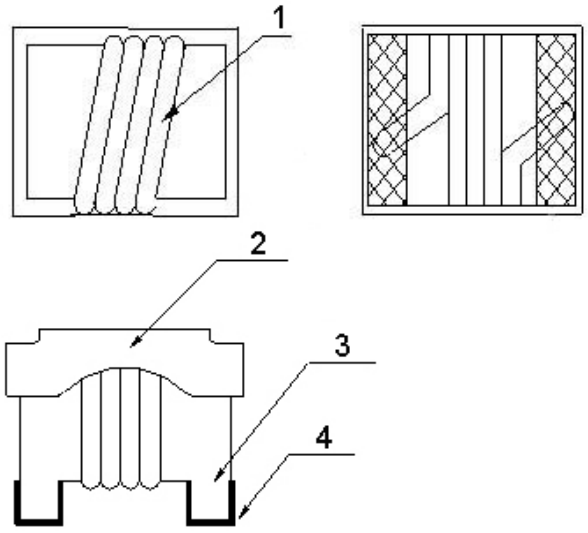
2.IDC:Applied the current to coils, the inductance shall be less than 10% initial value.

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

NLC252018T Series Specification

8 NLC252018T Series

8.1 Construction:



8.2 Material List:

ITEM	PART	DESCRIPTION	SUPPLIES
1	WIRE	Grade 180	ELEKTRISOLA
2	EPOXY	UV GLUE	PROVONCE
3	CORE	FERRITE	CHILISIN
4	TERMINAL	Ag/Ni/Sn	

NLC252018T Series Specification

9 Reliability Of Ferrite Wire Wound Chip Inductor/FERRITE SERIES

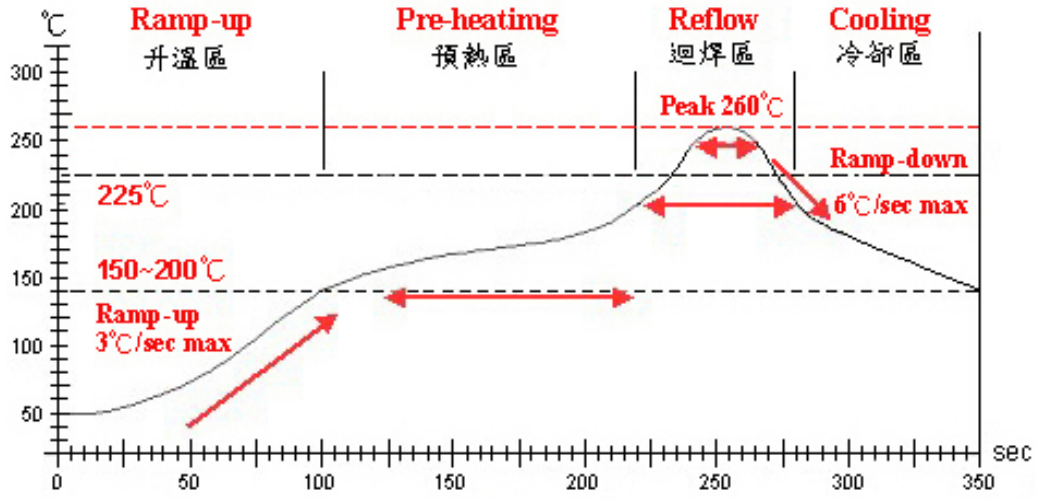
1-1.Environmental Performance

No	Item	Specification	Test Method
1-1-1	Temperature Cycle	Appearance: No Damage Inductance:within±10% of initial value Q change:within±30% of initial value	One cycle: Step / Temperature (℃) / Time (min) 1 / -25±3 / 30 2 / 25±2 / 3 3 / 105±3 / 30 4 / 25±2 / 3 Total: 5 cycles Measured After Exposure in The Room Condition For 1hrs
1-1-2	Humidity Resistance		Temperature: 40±2℃ Relative Humidity: 90 ~ 95% Time: 100hrs Measured After Exposure In The Room Condition For 1hrs
1-1-3	High Temperature Resistance		Temperature: 85±3℃ Time: 50Hrs Measured After Exposure In The Room Condition For 1Hrs
1-1-4	Low Temperature Resistance		Temperature: -25±3℃ Time: 50Hrs Measured After Exposure In The Room Condition For 1Hrs
1-1-5	High Temperature Load Life	There should be no evidence of short or open circle	Temperature: 85±3℃ Load: Allowed DC Current Time: 1000Hrs
1-1-6	Humidity Load Life		Temperature: 40±2℃ Relative Humidity: 90~95% Load: Allowed DC Current Time: 1000Hrs

1-2.Mechanical Performance

No	Item	Specification	Test Method
1-2-1	Resistance TO Soldering Heat	Appearance: No Damage	1. The device should be reflow soldered on PCB (peak 260℃±5℃ for 10 seconds) 2. Solder Composition: Sn/Ag3.0/Cu0.5 3. Test time: 6 minutes
1-2-2	Solder ability	The electrodes shall be at least 95% covered with new solder coating	1. Pre-Heating: 150℃,1min. 2. Solder Composition: Sn/Ag3.0/Cu0.5 3. Solder Temperature: 245±5℃. 4. Immersion Time: 4±1 sec.
1-2-3	Component Adhesion (Push Test)	2 Lbs. For NLC252018 4 Lbs. For NLC322522	The device should be reflow soldered (245±5℃ For 10 seconds) to a tinned copper substrate. A force gauge should be applied to the side of the component. The device must withstand a minimum force of 1or2or4 pounds without a failure of the termination attached to component

NLC252018T Series Specification



Reflow profile

Lead-Free(LF) 標準溫度分析範圍 Refer to J-STD-020C

管制項目 Item.	升溫區 Ramp-up	預熱區 Pre-heatimg	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp.scope	R.T.~150℃	150℃~200℃	225℃	260±5℃	Peak Temp.~150℃
實際時間 Time result	—	60~180 sec	20~60sec	5~10 sec	—

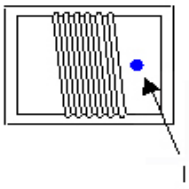
NOTE :

1. Re-flow possible times : within 2 times
2. Nitrogen adopted is recommended while in re-flow

NLC252018T Series Specification

0603/0805/201614 Series

Because of their small size, these parts are marked with a single color dot. The inductance value represented by the dot is shown on the data page for each series.

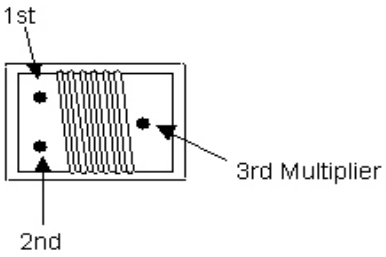


1008/1206/252018/322522 Series

These parts are marked with 3 color dots. The table at right side shows the significance of each color.

Dots 1 and 2 indicate the inductance in nanoHenries.

Dot 3 indicates the number of zeroes to be added.



0=Black	5=Green
1=Brown	6=Blue
2=Red	7=Violet
3=Orange	8=Gray
4=Yellow	9=White

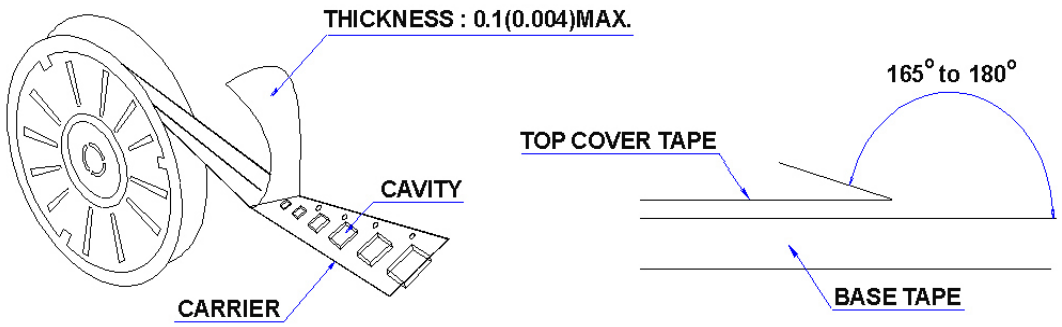
Examples：

Blue, Gray, Red = 6800 nH
Red, Red, Brown = 220 nH
Yellow, Violet, Black = 47 nH

11 PACKAGING

11.1 Packaging -Cover tape

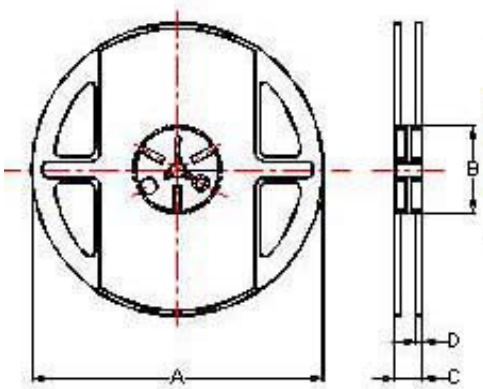
The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
NLC252018	✓	2000
NLC322522	✓	2000

11.3 Reel Dimensions



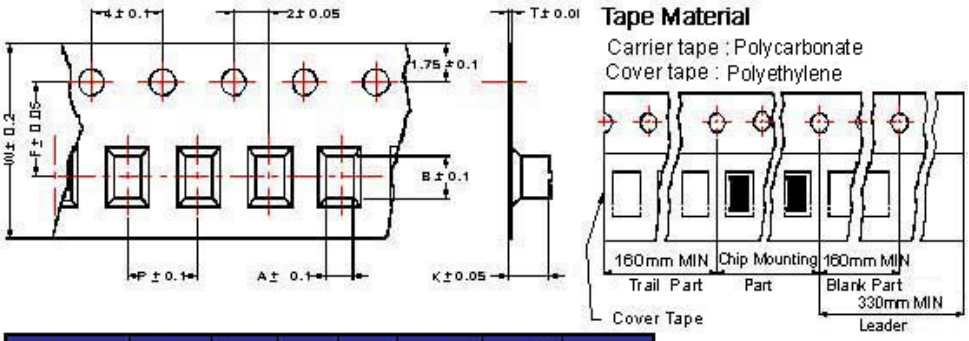
Reel Dimensions : m/m

TYPE	A	B	C	D
NLC252018	178	60	12	1.5
NLC322522	178	60	16	1.4

NLC252018T Series Specification

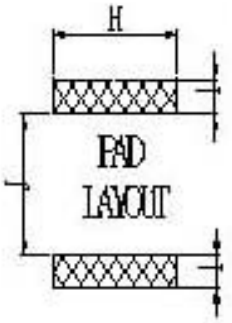
11 PACKAGING

11.4 Tape Dimensions in mm



TYPE	A	B	T	W	P	F	K
NLC252018	2.40	2.93	0.26	8	4	3.5	2.25
NLC322522	2.85	3.58	0.25	12	4	5.5	2.85

12 Recommended Pattern



Dimensions in mm

TYPE	I(in/mm)	J(in/mm)	H(in/mm)
NL201614	0.04/1.02	0.03/0.76	0.07/1.78
NL252018	0.04/1.02	0.05/1.27	0.1/2.54
NLC252018	0.04/1.02	0.05/1.27	0.1/2.54
NLC322522	0.039/1.0	0.079/2.0	0.106/2.7

13 Note:

1. Please make sure that your product is has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock nor drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose,under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)

NLC252018T Series Specification

14 Curve: