

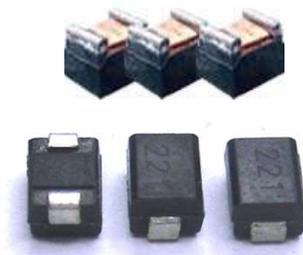


## Wire Wound Ferrite Chip Inductors- NL Series

### NL series Wire Wound Chip inductors

#### Features

- 1.Highly accurate dimensions can be mounted automaticlly.
- 2.Terminals are highly resistant to pull forces.
- 3.High reliable in environments of sudden temperature change and humidity.
- 4 .Highly resistant to mechanical shocks and presure.
- 5.Superior Q characteristics and broadest selections amount peers.

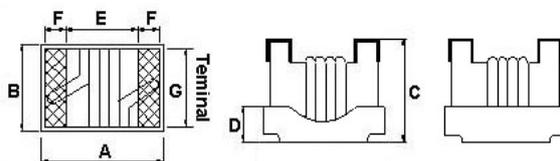


#### Applications

Micro TVs, liquid crystal TVs, video cameras, protable VCRs,  
car radios,car stereos, thin radios, television tuners,  
mobile phones, radio and other electronic devices.

#### Dimensions (mm)

##### Open Type:



#### Product Identification

### NL 453232 – 100 K -PF

NL: SERIES NAME

453232:Dimensions CODE

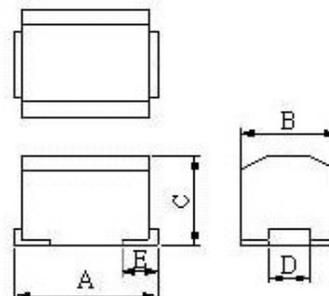
100: INDUCTANCE CODE.

k: TOLERANCE, G=2% J=5%

K=10% M=20%.

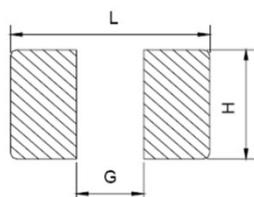
PF:Pb-Free

##### Molded Type:



PART NO.	A	B	C	D	E	F	G
NL201614	2.29max	1.73max	1.52max	0.50ref	1.02ref	0.50ref	1.27ref
NL252018	2.92max	2.79max	2.20max	0.50ref	1.52ref	0.51ref	2.03ref
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	1.0 ± 0.2		
NL565050	5.6 ± 0.3	5.0 ± 0.3	5.0 ± 0.3	1.8 ± 0.3	1.3 ± 0.2		

#### Recommended Pattern(mm)



PART NO.	L	G	H
NL201614	2.80	0.76	1.78
NL252018	3.30	1.30	2.54
NL322522	4.00	1.60	2.00
NL453232	6.00	3.00	2.80
NL565050	8.00	4.00	4.50



## Wire Wound Ferrite Chip Inductors-NL Series

NL series Open Type Wire Wound Chip Inductors

### Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	Rdc Max (Ω)	Idc Max (mA)	Color
NL201614-R12□-PF	0.12	25.2	10/5	25	25.2	500	0.20	600	White
NL201614-R15□-PF	0.15	25.2	10/5	25	25.2	450	0.25	600	Black
NL201614-R18□-PF	0.18	25.2	10/5	25	25.2	410	0.30	570	Brown
NL201614-R22□-PF	0.22	25.2	10/5	25	25.2	350	0.35	550	Red
NL201614-R27□-PF	0.27	25.2	10/5	25	25.2	280	0.40	530	Orange
NL201614-R33□-PF	0.33	25.2	10/5	25	25.2	235	0.45	510	Yellow
NL201614-R39□-PF	0.39	25.2	10/5	25	25.2	210	0.5	490	Green
NL201614-R47□-PF	0.47	25.2	10/5	25	25.2	170	0.55	470	Blue
NL201614-R56□-PF	0.56	25.2	10/5	25	25.2	150	0.60	450	Violet
NL201614-R68□-PF	0.68	25.2	10/5	25	25.2	140	0.70	420	Gray
NL201614-R82□-PF	0.82	25.2	10/5	25	25.2	130	0.75	400	White
NL201614-1R0□-PF	1.00	7.96	10/5	15	7.96	115	0.80	350	Black
NL201614-1R2□-PF	1.20	7.96	10/5	15	7.96	95	0.90	325	Brown
NL201614-1R5□-PF	1.50	7.96	10/5	15	7.96	85	1.05	300	Red
NL201614-1R8□-PF	1.80	7.96	10/5	15	7.96	80	1.20	270	Orange
NL201614-2R2□-PF	2.20	7.96	10/5	15	7.96	75	1.40	250	Yellow
NL201614-2R7□-PF	2.70	7.96	10/5	15	7.96	70	1.60	230	Green
NL201614-3R3□-PF	3.30	7.96	10/5	15	7.96	60	1.80	210	Blue
NL201614-3R9□-PF	3.90	7.96	10/5	15	7.96	55	2.00	190	Violet
NL201614-4R7□-PF	4.70	7.96	10/5	15	7.96	45	2.40	170	Gray
NL201614-5R6□-PF	5.60	7.96	10/5	15	7.96	40	2.70	150	White
NL201614-6R8□-PF	6.80	7.96	10/5	15	7.96	36	3.20	140	Black
NL201614-8R2□-PF	8.20	7.96	10/5	15	7.96	33	3.60	120	Brown
NL201614-100□-PF	10.0	2.52	10/5	15	2.52	30	4.50	110	Red
NL201614-120□-PF	12.0	2.52	10/5	15	2.52	25	5.70	105	Orange
NL201614-150□-PF	15.0	2.52	10/5	15	2.52	23	6.50	90	Yellow
NL201614-180□-PF	18.0	2.52	10/5	15	2.52	21	7.00	85	Green
NL201614-220□-PF	22.0	2.52	10/5	15	2.52	20	8.00	78	Blue
NL201614-270□-PF	27.0	2.52	10/5	15	2.52	18	9.00	75	Violet
NL201614-330□-PF	33.0	2.52	10/5	15	2.52	17	10.0	70	Gray

**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.

## Wire Wound Ferrite Chip Inductors-NL-Series

### NL series Open Type Wire Wound Chip Inductors

#### Electrical Characteristics

Part Number	Inductance	Test Frequency	Tolerance	Q	Test Frequency	SRF Min	Rdc Max	Idc Max
	(uH)	(MHz)	(±%)	Min	(MHz)	(MHz)	(Ω)	(mA)
NL252018-5N0□-PF	0.005	100	10	10	100	3000	0.25	2000
NL252018-10N□-PF	0.010	100	10	10	100	2500	0.25	1800
NL252018-12N□-PF	0.012	100	10	15	100	2400	0.26	1700
NL252018-15N□-PF	0.015	100	10	15	100	2300	0.28	1600
NL252018-18N□-PF	0.018	100	10	15	100	2200	0.3	1550
NL252018-22N□-PF	0.022	100	10/5	20	100	2100	0.35	1500
NL252018-27N□-PF	0.027	100	10/5	20	100	2000	0.4	1450
NL252018-33N□-PF	0.033	100	10/5	30	100	1600	0.42	1400
NL252018-39N□-PF	0.039	100	10/5	35	100	1500	0.45	1350
NL252018-47N□-PF	0.047	100	10/5	35	100	1400	0.5	1300
NL252018-56N□-PF	0.056	100	10/5	35	100	1300	0.6	1250
NL252018-68N□-PF	0.068	100	10/5	35	100	1200	0.65	1240
NL252018-82N□-PF	0.082	100	10/5	35	100	1100	0.75	1230
NL252018-R10□-PF	0.10	100	10/5	35	100	800	0.80	1220
NL252018-R12□-PF	0.12	25.2	10/5	30	25.2	700	0.30	900
NL252018-R15□-PF	0.15	25.2	10/5	30	25.2	550	0.35	900
NL252018-R18□-PF	0.18	25.2	10/5	30	25.2	500	0.40	850
NL252018-R22□-PF	0.22	25.2	10/5	30	25.2	450	0.50	840
NL252018-R27□-PF	0.27	25.2	10/5	30	25.2	425	0.55	830
NL252018-R33□-PF	0.33	25.2	10/5	30	25.2	400	0.60	820
NL252018-R39□-PF	0.39	25.2	10/5	30	25.2	375	0.65	810
NL252018-R47□-PF	0.47	25.2	10/5	30	25.2	350	0.68	800
NL252018-R56□-PF	0.56	25.2	10/5	30	25.2	325	0.75	800
NL252018-R68□-PF	0.68	25.2	10/5	30	25.2	300	0.85	800
NL252018-R82□-PF	0.82	25.2	10/5	30	25.2	260	1.00	800
NL252018-1R0□-PF	1.0	7.96	10/5	25	7.96	245	1.10	800
NL252018-1R2□-PF	1.2	7.96	10/5	25	7.96	230	1.20	790
NL252018-1R5□-PF	1.5	7.96	10/5	25	7.96	182	1.30	750
NL252018-1R8□-PF	1.8	7.96	10/5	25	7.96	135	1.45	750

**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.



## Wire Wound Ferrite Chip Inductors-NL-Series

### NL series Open Type Wire Wound Chip Inductors

#### Electrical Characteristics

Part Number	Inductance (uH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	Rdc Max (Ω)	I <sub>dc</sub> Max (mA)
NL252018-2R2□-PF	2.2	7.96	10/5	25	7.96	105	1.55	750
NL252018-2R7□-PF	2.7	7.96	10/5	25	7.96	70	1.70	740
NL252018-3R3□-PF	3.3	7.96	10/5	25	7.96	55	1.90	730
NL252018-3R9□-PF	3.9	7.96	10/5	25	7.96	48	2.10	700
NL252018-4R7□-PF	4.7	7.96	10/5	25	7.96	43	2.30	650
NL252018-5R6□-PF	5.6	7.96	10/5	20	7.96	42	2.50	640
NL252018-6R8□-PF	6.8	7.96	10/5	20	7.96	39	2.70	630
NL252018-8R2□-PF	8.2	7.96	10/5	20	7.96	36	3.05	600
NL252018-100□-PF	10	2.52	10/5	15	2.52	33	3.50	600
NL252018-120□-PF	12	2.52	10/5	15	2.52	30	3.80	550
NL252018-150□-PF	15	2.52	10/5	15	2.52	26	4.40	430
NL252018-180□-PF	18	2.52	10/5	15	2.52	24	4.80	400
NL252018-220□-PF	22	2.52	10/5	15	2.52	22	5.50	400
NL252018-270□-PF	27	2.52	10/5	15	2.52	21	6.30	360
NL252018-330□-PF	33	2.52	10/5	15	2.52	20	7.10	350
NL252018-390□-PF	39	2.52	10/5	10	2.52	18	9.50	330
NL252018-470□-PF	47	2.52	10/5	10	2.52	17	11.1	300
NL252018-560□-PF	56	2.52	10/5	10	2.52	16	12.1	270
NL252018-680□-PF	68	2.52	10/5	10	2.52	15	16.6	250
NL252018-820□-PF	82	2.52	10/5	10	2.52	13	19	200
NL252018-101□-PF	100	0.796	10/5	8	0.80	12	21	120

**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.



## Wire Wound Ferrite Chip Inductors-NL-Series

### NL series Molded Type Wire Wound Chip Inductors

#### Electrical Characteristics

Part Number	Inductance (uH)	Tolerance ±%	Q Min.	Test Frequency (MHz)	SRF (MHz)min	DC Resistance (Ω) Max	IDC (mA)Max
NL322522-010□-PF	0.010	10	15	100	2500	0.13	450
NL322522-012□-PF	0.012	10	17	100	2300	0.14	450
NL322522-015□-PF	0.015	10	19	100	2100	0.16	450
NL322522-018□-PF	0.018	10	21	100	1900	0.18	450
NL322522-022□-PF	0.022	10	23	100	1700	0.2	450
NL322522-027□-PF	0.027	10	23	100	1500	0.22	450
NL322522-033□-PF	0.033	10	25	100	1400	0.24	450
NL322522-039□-PF	0.039	10	25	100	1300	0.27	450
NL322522-047□-PF	0.047	10	26	100	1200	0.3	450
NL322522-056□-PF	0.056	10	26	100	1100	0.33	450
NL322522-068□-PF	0.068	10	27	100	1000	0.36	450
NL322522-082□-PF	0.082	10	27	100	900	0.4	450
NL322522-R10□-PF	0.10	10	28	100	700	0.44	450
NL322522-R12□-PF	0.12	10	30	25.2	500	0.22	450
NL322522-R15□-PF	0.15	10	30	25.2	450	0.25	450
NL322522-R18□-PF	0.18	10	30	25.2	400	0.28	450
NL322522-R22□-PF	0.22	10	30	25.2	350	0.32	450
NL322522-R27□-PF	0.27	10	30	25.2	320	0.36	450
NL322522-R33□-PF	0.33	10	30	25.2	300	0.40	450
NL322522-R39□-PF	0.39	10	30	25.2	250	0.45	450
NL322522-R47□-PF	0.47	10	30	25.2	220	0.50	450
NL322522-R56□-PF	0.56	10	30	25.2	180	0.55	450
NL322522-R68□-PF	0.68	10	30	25.2	160	0.60	450
NL322522-R82□-PF	0.82	10	30	25.2	140	0.65	450
NL322522-1R0□-PF	1.00	10	30	7.96	90	0.70	400
NL322522-1R2□-PF	1.20	10	30	7.96	85	0.75	390
NL322522-1R5□-PF	1.50	10	30	7.96	70	0.85	370
NL322522-1R8□-PF	1.80	10	30	7.96	60	0.90	350
NL322522-2R2□-PF	2.20	10	30	7.96	50	1.00	320
NL322522-2R7□-PF	2.70	10	30	7.96	45	1.10	290

**NOTE:**

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

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



## Wire Wound Ferrite Chip Inductors-NL-Series

### NL series Molded Type Wire Wound Chip Inductors

#### Electrical Characteristics

Part Number	Inductance (uH)	Tolerance ±%	Q Min.	Test Frequency (MHz)	SRF (MHz)min	DC Resistance (Ω) Max	IDC (mA)Max
NL322522-3R3□-PF	3.30	10	30	7.96	40	1.20	260
NL322522-3R9□-PF	3.90	10	30	7.96	37	1.30	250
NL322522-4R7□-PF	4.70	10	30	7.96	32	1.50	220
NL322522-5R6□-PF	5.60	10	30	7.96	30	1.60	200
NL322522-6R8□-PF	6.80	10	30	7.96	28	1.80	180
NL322522-8R2□-PF	8.20	10	30	7.96	25	2.00	170
NL322522-100□-PF	10	10	30	2.52	23	2.10	150
NL322522-120□-PF	12	10	30	2.52	20	2.50	140
NL322522-150□-PF	15	10	30	2.52	19	2.80	130
NL322522-180□-PF	18	10	30	2.52	17	3.30	120
NL322522-220□-PF	22	10	30	2.52	16	3.70	110
NL322522-270□-PF	27	10	30	2.52	14	5.00	80
NL322522-330□-PF	33	10	30	2.52	13	5.60	70
NL322522-390□-PF	39	10	30	2.52	12	6.40	65
NL322522-470□-PF	47	10	30	2.52	10	7	60
NL322522-560□-PF	56	10	30	2.52	9	8	55
NL322522-680□-PF	68	10	30	2.52	9	9	50
NL322522-820□-PF	82	10	30	2.52	8	10	45
NL322522-101□-PF	100	10	20	0.796	7	10	40
NL322522-121□-PF	120	10	20	0.796	7	11	70
NL322522-151□-PF	150	10	20	0.796	6	15	65
NL322522-181□-PF	180	10	20	0.796	6	17	60
NL322522-221□-PF	220	10	20	0.796	5	21	50
NL322522-271□-PF	270	10	20	0.796	6	22	45
NL322522-331□-PF	330	10	20	0.796	5	34	40

**NOTE:**

□-tolerance J=±5% / K=±10% / M=±20%

1.Operating temperature range - 25℃~85℃

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



## Wire Wound Ferrite Chip Inductors-NL-Series

### NL series Molded Type Wire Wound Chip Inductors

#### Electrical Characteristics

Part Number	Inductance (uH)	Tolerance ±%	Q Min.	Test Frequency (MHz)	SRF (MHz)min	DC Resistance (Ω) Max	IDC (mA)Max
NL453232-R10□-PF	0.10	20	28	25.2	700	0.44	450
NL453232-R12□-PF	0.12	20	30	25.2	500	0.22	450
NL453232-R15□-PF	0.15	20	30	25.2	450	0.25	450
NL453232-R18□-PF	0.18	20	30	25.2	400	0.28	450
NL453232-R22□-PF	0.22	20	30	25.2	350	0.32	450
NL453232-R27□-PF	0.27	20	30	25.2	320	0.36	450
NL453232-R33□-PF	0.33	20	30	25.2	300	0.4	450
NL453232-R39□-PF	0.39	20	30	25.2	250	0.45	450
NL453232-R47□-PF	0.47	20	30	25.2	220	0.5	450
NL453232-R56□-PF	0.56	20	30	25.2	180	0.55	450
NL453232-R68□-PF	0.68	20	30	25.2	160	0.6	450
NL453232-R82□-PF	0.82	20	30	25.2	140	0.67	450
NL453232-1R0□-PF	1.00	10	50	7.96	100	0.50	450
NL453232-1R2□-PF	1.20	10	50	7.96	80	0.55	430
NL453232-1R5□-PF	1.50	10	50	7.96	70	0.60	410
NL453232-1R8□-PF	1.80	10	50	7.96	60	0.65	390
NL453232-2R2□-PF	2.20	10	50	7.96	55	0.70	380
NL453232-2R7□-PF	2.70	10	50	7.96	50	0.75	370
NL453232-3R3□-PF	3.30	10	50	7.96	45	0.80	355
NL453232-3R4□-PF	3.90	10	50	7.96	40	0.90	330
NL453232-4R7□-PF	4.70	10	50	7.96	35	1.00	315
NL453232-5R6□-PF	5.60	10	50	7.96	33	1.10	300
NL453232-6R8□-PF	6.80	10	50	7.96	27	1.20	285
NL453232-8R2□-PF	8.20	10	50	7.96	25	1.40	270

**NOTE:**

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

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



## Wire Wound Ferrite Chip Inductors-NL-Series

### NL series Molded Type Wire Wound Chip Inductors

#### Electrical Characteristics

Part Number	Inductance (uH)	Tolerance ±%	Q Min.	Test Frequency (MHz)	SRF (MHz)min	DC Resistance (Ω) Max	IDC (mA)Max
NL453232-100□-PF	10	10	50	2.52	20	1.60	250
NL453232-120□-PF	12	10	50	2.52	18	2.00	225
NL453232-150□-PF	15	10	50	2.52	17	2.50	200
NL453232-180□-PF	18	10	50	2.52	15	2.80	190
NL453232-220□-PF	22	10	50	2.52	13	3.20	180
NL453232-270□-PF	27	10	50	2.52	12	3.60	170
NL453232-330□-PF	33	10	50	2.52	11	4.00	160
NL453232-390□-PF	39	10	50	2.52	10	4.50	150
NL453232-470□-PF	47	10	50	2.52	10	5.00	140
NL453232-560□-PF	56	10	50	2.52	9	5.50	135
NL453232-680□-PF	68	10	50	2.52	9	6.00	130
NL453232-820□-PF	82	10	50	2.52	8	7.00	120
NL453232-101□-PF	100	10	40	0.796	8	8.00	110
NL453232-121□-PF	120	10	40	0.796	6	8.00	110
NL453232-151□-PF	150	10	40	0.796	5	9.00	105
NL453232-181□-PF	180	10	40	0.796	5	9.50	102
NL453232-221□-PF	220	10	40	0.796	4	12	100
NL453232-271□-PF	270	10	30	0.796	4	18	92
NL453232-331□-PF	330	10	30	0.796	3.5	20	85
NL453232-391□-PF	390	10	30	0.796	3	23	80
NL453232-471□-PF	470	10	30	0.796	3	26	62
NL453232-561□-PF	560	10	30	0.796	3	30	50
NL453232-681□-PF	680	10	30	0.796	3	40	50
NL453232-821□-PF	820	10	30	0.796	2.5	45	30
NL453232-102□-PF	1000	10	30	0.796	2.5	50	30

**NOTE:**

□-tolerance J=±5% / K=±10% / M=±20%

1.Operating temperature range - 25℃ ~ 85℃

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



## Wire Wound Ferrite Chip Inductors-NL-Series

### NL series Molded Type Wire Wound Chip Inductors

#### Electrical Characteristics

Part Number	Inductance (uH)	Tolerance ±%	Q Min.	Test Frequency (MHz)	SRF (MHz)min	DC Resistance (Ω) Max	IDC (mA)Max
NL565050-122□-PF	1.2	0.5	30	0.252	1.5	17	75
NL565050-152□-PF	1.5	0.5	30	0.252	1.4	20	70
NL565050-182□-PF	1.8	0.5	30	0.252	1.3	30	60
NL565050-222□-PF	2.2	0.5	30	0.252	1.2	35	55
NL565050-272□-PF	2.7	0.5	30	0.252	1.1	55	45
NL565050-332□-PF	3.3	0.5	30	0.252	1	60	40
NL565050-392□-PF	3.9	0.5	30	0.252	1	70	38
NL565050-472□-PF	4.7	0.5	30	0.252	0.9	78	36
NL565050-562□-PF	5.6	0.5	30	0.252	0.8	85	33
NL565050-682□-PF	6.8	0.5	30	0.252	0.7	110	30
NL565050-822□-PF	8.2	0.5	30	0.252	0.6	125	28
NL565050-103□-PF	10	0.5	20	0.0796	0.5	150	25

#### NOTE:

□-tolerance J=±5% / K=±10% / M=±20%

1.Operating temperature range - 25℃ ~ 85℃

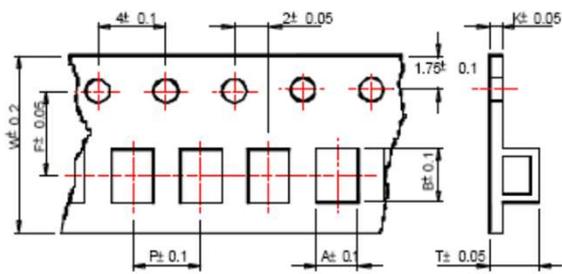
2.IDC:Applied the current to coils, the inductance shall be less than 10% initial value.



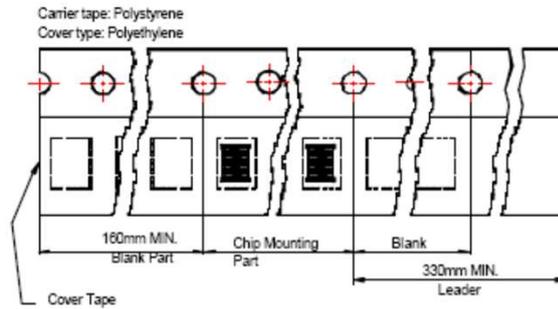
## Wire Wound Ferrite Chip Inductors-NL-Series

### PACKAGING

Tape Dimensions



Tape Material



Reel Dimensions

Figure 1

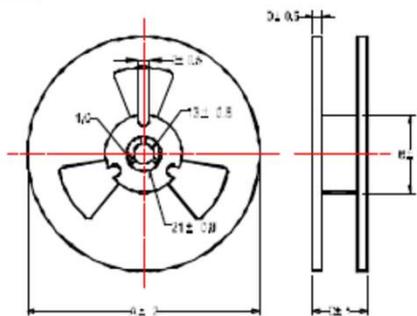
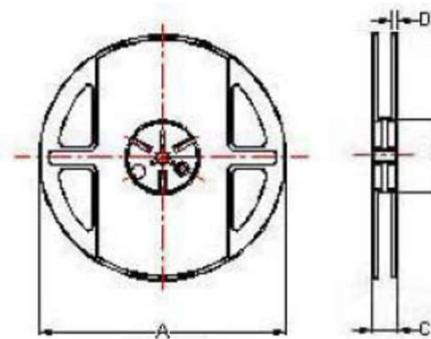


Figure 2



TYPE	Tape Dimensions							Fig	Reel Dimensions				Quantity/Reel
	A	B	T	W	P	F	K		A	B	C	D	
NL201614	1.85	2.45	0.23	8	4	3.5	1.45	2	178	60	12	1.5	2000
NL252018	2.7	2.95	0.23	8	4	3.5	2.25	2	178	60	12	1.5	2000
NL322522	2.96	3.6	2.4	8	4	3.5	0.23	2	178	60	12	1.5	2000
NL453232	3.30	5.0	3.5	12	8	5.5	0.30	2	178	60	16	1.4	500
NL565050	5.35	6.1	5.5	16	12	7.5	0.35	1	330	100	22	2.3	1000