

## Data Sheet

Customer : \_\_\_\_\_

Product : Wire Wound Chip Inductor (Ferrite) – SCI Series

Size : 0402/0603/0805/1008/1210/1812/2220

Issued Date : 01-Jan.-2026

Edition : Ver. 1

### Record of change

Date	Ver.	Description	Page
01-Jan.-2025	1	All	1 ~ 13

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01-Jan.-2025	01-Jan.-2025	01-Jan.-2025	
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# WIRE WOUND CHIP INDUCTOR (FERRITE)

# SCI SERIES

## Features

- Very strong solderability by flow 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.
  - Super Q characteristics
- Moisture sensitivity level 1



## Applications

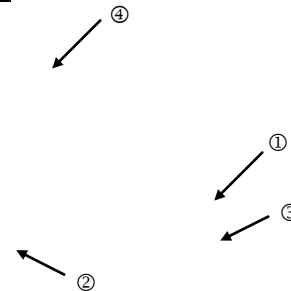
- Micro Televisions, Liquid Crystal Televisions, Video Cameras, Portable VCRs, Car Radios, Car Stereos, Thin Tape Radios, Television Tuners, Mobile Telephones, Radio and Other Electronic Devices



## Construction

### Molding Type

### Open Type



① Molded resin	③ Ferrite core
② Electrode (Tinned Copper Wire)	④ Magnet wire

① Ferrite core	③ Electrode (Ag/Pd+Ni+Sn)
② Magnet wire	④ UV Glue

## Part Numbering

SCI	1210	F	T	1R0	J	□□
SERIES	SIZE	TYPE	PACKAGE	INDUCTANCE	TOLERANCE	INTERNAL CODE
	0402	F= Standard	T= Tape&Reel	010= 0.01uH	J= ±5%	
	0603	H= High Current		R10= 0.1uH	K= ±10%	
	0805			1R0= 1.0uH	M= ±20%	
	1008			330= 33uH		
	1210			331= 330 uH		
	1812			102= 1000uH		
	2220					

# WIRE WOUND CHIP INDUCTOR (FERRITE)

# SCI SERIES

## Dimensions

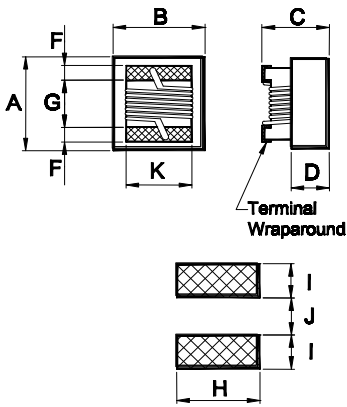


Figure 1

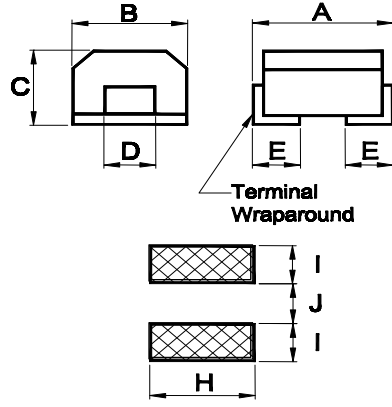


Figure 2

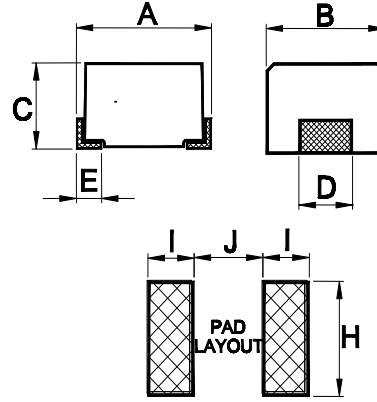


Figure 3

Unit: mm

Size (Inch)	Type	Figure	A	B	C	D	E	F	G	H	I	J	K	Weight (g) (1000pcs)
0402	F	1	1.02 ±0.1	0.56 ±0.1	0.56 ±0.1	0.25 ref	-	0.23 ref	0.54 ref	0.65	0.38	0.44	0.50 ref	1
0603	F	1	1.80 max	1.20 max	1.00 max	0.45 ref	-	0.33 ±0.1	0.85 ref	1.02	0.64	0.64	0.90 ref	9.6
0805	F	1	2.40 max	1.65 max	1.20 ±0.1	0.65 ref	-	0.44 ±0.1	1.07 ref	1.78	1.02	0.76	1.27 ref	14
1008	F	1	2.92 max	2.70 max	2.23 max	1.00 ref	-	0.50 ref	1.42 ref	2.54	1.02	1.27	2.0 ref	30
1210	F	2	3.20 ±0.4	2.50 ±0.2	2.20 ±0.2	1.00 ±0.2	0.6 -0/+0.3	-	-	1.40	1.00	1.80	-	40
1812	F	2	4.50 ±0.3	3.20 ±0.2	3.20 ±0.2	1.20 ref	1.0 -0/+0.3	-	-	1.60	1.50	2.20	-	160
2220	F	3	5.60 ±0.3	5.00 ±0.2	4.00 ±0.3	4.00 ±0.2	0.7 ±0.2	-	-	4.50	2.00	4.00	-	300
0603	H	1	1.80 max	1.20 max	1.00 max	0.45 ref	-	0.33 ±0.1	0.85 ref	1.02	0.64	0.64	0.90 ref	9.6
0805	H	1	2.40 max	1.65 max	1.20 ±0.1	0.65 ref	-	0.44 ±0.1	1.07 ref	1.78	1.02	0.76	1.27 ref	14
1210	H	2	3.20 ±0.4	2.50 ±0.2	2.20 ±0.2	1.00 ±0.2	0.6 -0/+0.3	-	-	1.40	1.00	1.80	-	40
1812	H	2	4.50 ±0.3	3.20 ±0.2	3.20 ±0.2	1.20 ref	1.0 -0/+0.3	-	-	1.60	1.50	2.20	-	160
2220	H	3	5.60 ±0.3	5.00 ±0.2	4.00 ±0.3	4.00 ±0.2	0.7 ±0.2	-	-	4.50	2.00	4.00	-	300

## Color Coding

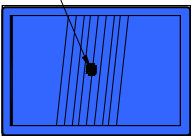
0603 / 0805 Type (except 0402)

Because of small sizes, these parts are marked with a single color dot.

The inductance value represented by the dot is shown on the data page for each type.

0603/0805

1st Code



Color Coding

# WIRE WOUND CHIP INDUCTOR (FERRITE)

# SCI SERIES

## Standard Electrical Specifications



Size 0402 Wire Wound Chip Inductors (Ferrite / Open Type) / Standard Type (□:Tolerance):

Part No	Inductance (μH)	Tolerance	Q typ.	Test Freq. (MHz)	SRF (MHz) typ.	DCR (Ω) max.	I <sub>rms</sub> (mA) max.
SCI0402FT018□□□	0.018	±5, ±10%	10	100	2600	0.055	1600
SCI0402FT020□□□	0.020	±5, ±10%	10	100	2600	0.050	1600
SCI0402FT022□□□	0.022	±10%	10	100	2500	0.072	1300
SCI0402FT033□□□	0.033	±5, ±10%	10	100	2300	0.060	1400
SCI0402FT036□□□	0.036	±5, ±10%	10	100	2300	0.092	1000
SCI0402FT039□□□	0.039	±5, ±10%	10	100	2200	0.150	830
SCI0402FT051□□□	0.051	±10%	10	100	1930	0.070	1100
SCI0402FT056□□□	0.056	±10%	10	100	1900	0.125	900
SCI0402FT072□□□	0.072	±5, ±10%	10	100	1650	0.100	900
SCI0402FT078□□□	0.078	±5, ±10%	10	100	1600	0.190	850
SCI0402FTR10□□□	0.10	±10%	9	100	1400	0.160	900
SCI0402FTR14□□□	0.14	±5, ±10%	11	50	1220	0.260	540
SCI0402FTR18□□□	0.18	±10%	11	50	1150	0.330	560
SCI0402FTR20□□□	0.20	±5, ±10%	11	50	1000	0.440	400
SCI0402FTR22□□□	0.22	±5, ±10%	11	50	1150	0.530	380
SCI0402FTR25□□□	0.25	±5, ±10%	11	25	900	0.360	520
SCI0402FTR27□□□	0.27	±10%	11	25	860	0.550	360
SCI0402FTR30□□□	0.30	±5, ±10%	11	25	860	0.410	420
SCI0402FTR33□□□	0.33	±5, ±10%	11	7.9	820	0.680	350
SCI0402FTR36□□□	0.36	±5, ±10%	11	7.9	810	0.575	360
SCI0402FTR39□□□	0.39	±5, ±10%	11	7.9	760	0.890	300
SCI0402FTR42□□□	0.42	±5, ±10%	11	7.9	700	1.100	340
SCI0402FTR47□□□	0.47	±10%	11	7.9	650	0.730	310
SCI0402FTR56□□□	0.56	±5, ±10%	11	7.9	600	1.100	200

Size 0603 Wire Wound Chip Inductors (Ferrite / Open Type) / Standard Type (□:Tolerance):



Part No	Inductance (μH)	Tolerance	Q typ.	Test Freq. (MHz)	SRF (MHz) typ.	DCR (Ω) ±30%	IDC (mA) max.	Color Code
SCI0603FT1R0□□□	1.0	±10, ±20%	16	7.9	390	0.32	860	Black
SCI0603FT1R5□□□	1.5	±10, ±20%	16	7.9	160	0.40	720	Brown
SCI0603FT1R8□□□	1.8	±10, ±20%	16	7.9	121	0.43	640	Red
SCI0603FT2R2□□□	2.2	±10, ±20%	16	7.9	103	0.56	600	Orange
SCI0603FT2R7□□□	2.7	±10, ±20%	16	7.9	72	0.62	540	Yellow
SCI0603FT3R3□□□	3.3	±10, ±20%	16	7.9	66	0.70	500	Green
SCI0603FT3R9□□□	3.9	±10, ±20%	16	7.9	61	0.83	460	Blue
SCI0603FT4R7□□□	4.7	±10, ±20%	16	7.9	51	0.97	400	Violet
SCI0603FT5R6□□□	5.6	±10, ±20%	16	7.9	47	1.10	380	Gray
SCI0603FT6R8□□□	6.8	±10, ±20%	16	7.9	43	1.50	340	White
SCI0603FT8R2□□□	8.2	±10, ±20%	16	7.9	40	1.68	300	Black
SCI0603FT100□□□	10	±10, ±20%	14	2.5	36	1.85	280	Brown
SCI0603FT120□□□	12	±10, ±20%	14	2.5	32	2.28	260	Red
SCI0603FT150□□□	15	±10, ±20%	14	2.5	29	2.60	240	Orange
SCI0603FT180□□□	18	±10, ±20%	14	2.5	28	2.90	220	Yellow
SCI0603FT220□□□	22	±10, ±20%	14	2.5	24	3.61	200	Green
SCI0603FT270□□□	27	±10, ±20%	14	2.5	20	5.20	140	Blue
SCI0603FT330□□□	33	±10, ±20%	14	2.5	15	6.60	120	Violet

# WIRE WOUND CHIP INDUCTOR (FERRITE)

# SCI SERIES



Size 0805 Wire Wound Chip Inductors (Ferrite / Open Type) / Standard Type (□:Tolerance):

Part No	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
SCI0805FTR10□□□	0.11	±10%	25	25	1200	0.05	2000	White
SCI0805FTR12□□□	0.12	±5, ±10%	25	25	1000	0.18	1500	Violet
SCI0805FTR15□□□	0.15	±5, ±10%	25	25	1000	0.18	1400	Gray
SCI0805FTR18□□□	0.18	±5, ±10%	30	25	1000	0.20	1400	Black
SCI0805FTR22□□□	0.22	±5, ±10%	30	25	830	0.25	1350	Brown
SCI0805FTR27□□□	0.27	±5, ±10%	30	25	800	0.38	1300	Red
SCI0805FTR33□□□	0.33	±5, ±10%	30	25	750	0.35	1200	Orange
SCI0805FTR39□□□	0.39	±5, ±10%	30	25	700	0.35	1160	Yellow
SCI0805FTR47□□□	0.47	±5, ±10%	30	25	690	0.40	1100	Green
SCI0805FTR56□□□	0.56	±5, ±10%	30	25	640	0.40	1040	Blue
SCI0805FTR62□□□	0.62	±5, ±10%	30	25	640	0.45	980	Brown
SCI0805FTR68□□□	0.68	±5, ±10%	30	25	510	0.50	900	Violet
SCI0805FTR82□□□	0.82	±5, ±10%	30	25	500	0.50	900	Gray
SCI0805FTR91□□□	0.91	±5, ±10%	30	25	500	0.55	900	Yellow
SCI0805FT1R0□□□	1.0	±5, ±10%	20	7.9	470	0.50	840	White
SCI0805FT1R2□□□	1.2	±5, ±10%	20	7.9	400	0.75	800	Black
SCI0805FT1R5□□□	1.5	±5, ±10%	25	7.9	400	1.00	720	Brown
SCI0805FT1R8□□□	1.8	±5, ±10%	25	7.9	230	1.00	660	Red
SCI0805FT2R2□□□	2.2	±5, ±10%	25	7.9	200	1.05	600	Orange
SCI0805FT2R7□□□	2.7	±5, ±10%	25	7.9	130	1.18	500	Yellow
SCI0805FT3R3□□□	3.3	±5, ±10%	25	7.9	160	1.26	480	Green
SCI0805FT3R9□□□	3.9	±5, ±10%	25	7.9	130	1.75	440	Blue
SCI0805FT4R7□□□	4.7	±5, ±10%	25	7.9	120	1.87	390	Violet
SCI0805FT5R6□□□	5.6	±5, ±10%	25	7.9	90	2.00	340	Gray
SCI0805FT6R8□□□	6.8	±5, ±10%	25	7.9	55	2.15	300	White
SCI0805FT8R2□□□	8.2	±5, ±10%	25	7.9	40	2.37	280	Black
SCI0805FT100□□□	10	±5, ±10%	16	2.5	40	2.55	260	Brown
SCI0805FT120□□□	12	±5, ±10%	16	2.5	37	2.80	220	Red
SCI0805FT100□□□	15	±5, ±10%	16	2.5	30	3.80	200	Orange
SCI0805FT180□□□	18	±5, ±10%	16	2.5	23	4.48	180	Yellow
SCI0805FT220□□□	22	±5, ±10%	16	2.5	20	6.30	160	Green
SCI0805FT270□□□	27	±5, ±10%	16	2.5	19	6.85	140	Blue
SCI0805FT330□□□	33	±5, ±10%	16	2.5	18	7.60	120	Violet
SCI0805FT390□□□	39	±5, ±10%	15	2.5	16	8.20	100	Gray

NL08 Wire Wound Chip Inductors (Ferrite / Open Type) / Standard Type

Codes	Inductance (μH)	Tolerance	Q typ.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
R39	0.39	±10%,±20%	12	7.9	400	0.40	500
R47	0.47	±10%,±20%	12	25	600	0.27	700
R56	0.56	±10%,±20%	12	7.9	230	0.62	700
R68	0.68	±10%,±20%	12	7.9	230	0.62	700
R82	0.82	±10%,±20%	12	7.9	230	0.62	700
R90	0.90	±10%,±20%	20	7.9	300	0.35	1400
1R0	1.0	±5,±10%,±20%	18	7.9	230	0.62	700
1R2	1.2	±5,±10%,±20%	18	7.9	210	0.68	650
1R5	1.5	±5,±10%,±20%	18	7.9	190	0.76	630
1R8	1.8	±5,±10%,±20%	18	7.9	170	0.84	600
2R0	2.0	±5,±10%,±20%	18	7.9	160	1.10	550
2R2	2.2	±5,±10%,±20%	18	7.9	150	1.10	520
2R7	2.7	±5,±10%,±20%	18	7.9	135	1.28	490
3R3	3.3	±5,±10%,±20%	18	7.9	120	1.46	450
3R9	3.9	±5,±10%,±20%	18	7.9	105	2.30	300
4R7	4.7	±5,±10%,±20%	18	7.9	90	2.00	400
5R6	5.6	±5,±10%,±20%	15	7.9	80	1.80	380
6R8	6.8	±5,±10%,±20%	15	7.9	70	2.00	360
8R2	8.2	±5,±10%,±20%	15	7.9	65	2.65	330
100	10	±5,±10%,±20%	12	2.5	60	2.95	300
150	15	±5,±10%,±20%	12	2.5	30	3.70	280
180	18	±5,±10%,±20%	12	2.5	26	4.00	160
220	22	±5,±10%,±20%	12	2.5	22	6.14	270
330	33	±5,±10%,±20%	10	2.5	12	7.00	200
390	39	±5,±10%,±20%	10	2.5	16	10.00	180
470	47	±5,±10%,±20%	10	2.5	10	10.70	160
560	56	±5,±10%,±20%	10	2.5	8	12.00	170
680	68	±5,±10%,±20%	10	2.5	6	13.50	145
820	82	±5,±10%,±20%	8	2.5	6	20.00	100
101	100	±5,±10%,±20%	8	1	4	21.00	80

– Rating DC current: Inductance drop approximately 30% of L0 at Isat.

**Wire Wound Chip Inductor (Ferrite)**

NL10 Wire Wound Chip Inductors (Ferrite / Molding Type) / Standard Type



Codes	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) typ.	DCR (Ω) max.	IDC (mA) max.
R18	0.18	±20%	30	25.2	685	0.28	450
R22	0.22	±20%	30	25.2	560	0.32	450
R27	0.27	±20%	30	25.2	525	0.36	450
R33	0.33	±20%	30	25.2	520	0.40	450
R39	0.39	±20%	30	25.2	470	0.45	450
R47	0.47	±20%	30	25.2	430	0.50	450
R56	0.56	±20%	30	25.2	395	0.55	450
R68	0.68	±20%	30	25.2	370	0.60	450
R82	0.82	±20%	30	25.2	310	0.65	450
1R0	1.0	±5%,±10%	30	7.96	295	0.70	400
1R2	1.2	±5%,±10%	30	7.96	255	0.75	390
1R5	1.5	±5%,±10%	30	7.96	160	0.85	370
1R8	1.8	±5%,±10%	30	7.96	125	0.90	350
2R2	2.2	±5%,±10%	30	7.96	100	1.00	320
2R7	2.7	±5%,±10%	30	7.96	65	1.10	290
3R3	3.3	±5%,±10%	30	7.96	55	1.20	260
3R9	3.9	±5%,±10%	30	7.96	50	1.30	250
4R7	4.7	±5%,±10%	30	7.96	45	1.50	220
5R6	5.6	±5%,±10%	30	7.96	40	1.60	200
6R8	6.8	±5%,±10%	30	7.96	35	1.80	180
8R2	8.2	±5%,±10%	30	7.96	30	2.00	170
100	10	±5%,±10%	30	2.52	30	2.10	150
120	12	±5%,±10%	30	2.52	28	2.50	140
150	15	±5%,±10%	30	2.52	25	2.80	130
180	18	±5%,±10%	30	2.52	22	3.30	120
220	22	±5%,±10%	30	2.52	19	3.70	110
270	27	±5%,±10%	30	2.52	18	5.00	80
330	33	±5%,±10%	30	2.52	17	5.60	70
390	39	±5%,±10%	30	2.52	15	6.40	65
470	47	±5%,±10%	30	2.52	14	7.00	60
560	56	±5%,±10%	30	2.52	13	8.00	55
680	68	±5%,±10%	30	2.52	11	9.00	50
820	82	±5%,±10%	30	2.52	10	10.00	45
101	100	±5%,±10%	20	0.796	9	11.00	40
121	120	±5%,±10%	20	0.796	8	11.00	70
151	150	±5%,±10%	20	0.796	7	15.00	65



NL12 Wire Wound Chip Inductors (Ferrite / Molding Type) / Standard Type

Codes	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) typ.	DCR (Ω) max.	IDC (mA) max.
R18	0.18	±20%	35	25.2	570.0	0.24	700
R22	0.22	±20%	40	25.2	505.0	0.25	665
R27	0.27	±20%	40	25.2	450.0	0.26	635
R33	0.33	±20%	40	25.2	425.0	0.28	605
R39	0.39	±20%	40	25.2	390.0	0.30	575
R47	0.47	±20%	40	25.2	350.0	0.32	545
R56	0.56	±20%	40	25.2	325.0	0.36	520
R68	0.68	±20%	40	25.2	300.0	0.40	500
R82	0.82	±20%	40	25.2	275.0	0.45	475
1R0	1.0	±5%,±10%	50	7.96	250.0	0.50	450
1R2	1.2	±5%,±10%	50	7.96	240.0	0.55	430
1R5	1.5	±5%,±10%	50	7.96	210.0	0.60	410
1R8	1.8	±5%,±10%	50	7.96	190.0	0.65	390
2R2	2.2	±5%,±10%	50	7.96	160.0	0.70	380
2R7	2.7	±5%,±10%	50	7.96	150.0	0.75	370
3R3	3.3	±5%,±10%	50	7.96	110.0	0.80	355
3R9	3.9	±5%,±10%	50	7.96	100.0	0.90	330
4R7	4.7	±5%,±10%	50	7.96	80.0	1.00	315
5R6	5.6	±5%,±10%	50	7.96	50.0	1.10	300
6R8	6.8	±5%,±10%	50	7.96	35.0	1.20	285
8R2	8.2	±5%,±10%	50	7.96	28.0	1.40	270
100	10	±5%,±10%	50	2.52	22.0	1.60	250
120	12	±5%,±10%	50	2.52	20.0	2.00	225
150	15	±5%,±10%	50	2.52	18.0	2.50	200
180	18	±5%,±10%	50	2.52	16.0	2.80	190
220	22	±5%,±10%	50	2.52	14.0	3.20	180
270	27	±5%,±10%	50	2.52	13.0	3.60	170
330	33	±5%,±10%	50	2.52	12.0	4.00	160
390	39	±5%,±10%	50	2.52	11.0	4.50	150
470	47	±5%,±10%	50	2.52	10.5	5.00	140
560	56	±5%,±10%	50	2.52	10.0	5.50	135
680	68	±5%,±10%	50	2.52	9.5	6.00	130
820	82	±5%,±10%	50	2.52	8.5	7.00	120
101	100	±5%,±10%	40	0.796	8.0	8.00	110
121	120	±5%,±10%	40	0.796	7.0	8.00	110
151	150	±5%,±10%	40	0.796	6.0	9.00	105
181	180	±5%,±10%	40	0.796	5.5	9.50	102
221	220	±5%,±10%	40	0.796	5.0	10.0	100
271	270	±5%,±10%	40	0.796	4.5	12.0	92
331	330	±5%,±10%	40	0.796	4.0	14.0	85
391	390	±5%,±10%	40	0.796	3.5	18.0	80
471	470	±5%,±10%	40	0.796	3.5	26.0	62
561	560	±5%,±10%	30	0.796	3.0	30.0	50
681	680	±5%,±10%	30	0.796	3.0	30.0	50
821	820	±5%,±10%	30	0.796	2.5	35.0	30
102	1000	±5%,±10%	20	0.252	2.5	40.0	30

**Wire Wound Chip Inductor (Ferrite)**

NL20 Wire Wound Chip Inductors (Ferrite / Molding Type) / Standard Type

Codes	Inductance (mH)	Tolerance	Test Freq. (MHz)	Q min.	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
122	1.2	±5, ±10%	0.252	20	1.5	17	75
152	1.5	±5, ±10%	0.252	20	1.4	20	70
182	1.8	±5, ±10%	0.252	20	1.3	30	60
222	2.2	±5, ±10%	0.252	20	1.2	35	55
272	2.7	±5, ±10%	0.252	20	1.1	55	45
332	3.3	±5, ±10%	0.252	20	1.0	60	40
392	3.9	±5, ±10%	0.252	20	1.0	70	38
472	4.7	±5, ±10%	0.252	20	0.9	78	36
562	5.6	±5, ±10%	0.252	20	0.8	85	33
682	6.8	±5, ±10%	0.252	20	0.7	110	30
822	8.2	±5, ±10%	0.252	20	0.6	125	28
103	10	±5, ±10%	0.0796	15	0.5	150	25

**Large Current Electrical Specifications**



NL03 Wound Chip Inductors (Ferrite / Open Type) / **Large Current Type**

Codes	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.	Color Code
R10	0.10	±5, ±10%, ±20%	12	7.9	1150	0.13	1700	Black
R12	0.12	±5, ±10%, ±20%	12	7.9	1100	0.15	1700	Orange
R15	0.15	±5, ±10%, ±20%	15	7.9	1050	0.15	1600	Brown
R18	0.18	±5, ±10%, ±20%	15	7.9	950	0.15	1500	Green
R22	0.22	±5, ±10%, ±20%	15	7.9	900	0.30	1200	Red
R24	0.24	±5, ±10%, ±20%	15	7.9	850	0.16	1460	Green
R27	0.27	±5, ±10%, ±20%	15	7.9	835	0.30	1460	Yellow
R33	0.33	±5, ±10%, ±20%	15	7.9	725	0.40	1420	Orange
R39	0.39	±5, ±10%, ±20%	15	7.9	680	0.41	1400	Blue
R47	0.47	±5, ±10%, ±20%	15	7.9	640	0.43	1400	Black
R56	0.56	±5, ±10%, ±20%	15	7.9	630	0.44	1400	Brown
R68	0.68	±5, ±10%, ±20%	15	7.9	510	0.52	1340	Red
R78	0.78	±5, ±10%, ±20%	15	7.9	465	0.63	1300	Orange
R82	0.82	±5, ±10%, ±20%	15	7.9	460	0.69	1200	Yellow
1R0	1.0	±5, ±10%, ±20%	15	7.9	320	0.81	1100	Green
1R2	1.2	±5, ±10%, ±20%	15	7.9	270	0.87	1000	Blue
1R5	1.5	±5, ±10%, ±20%	15	7.9	230	0.96	920	Violet
1R8	1.8	±5, ±10%, ±20%	15	7.9	210	1.10	900	Gray
2R2	2.2	±5, ±10%, ±20%	15	7.9	115	1.20	740	White
2R7	2.7	±5, ±10%, ±20%	15	7.9	100	1.38	700	Black
3R3	3.3	±5, ±10%, ±20%	15	7.9	84	1.50	680	Brown
3R9	3.9	±5, ±10%, ±20%	15	7.9	75	1.50	600	Red
4R7	4.7	±5, ±10%, ±20%	15	7.9	67	2.10	580	Orange
5R6	5.6	±5, ±10%, ±20%	15	7.9	55	2.37	540	Yellow
6R8	6.8	±5, ±10%, ±20%	15	7.9	48	3.10	500	Green
7R8	7.8	±5, ±10%, ±20%	15	7.9	40	3.35	460	Blue
8R2	8.2	±5, ±10%, ±20%	15	7.9	38	3.50	440	Violet
100	10	±5, ±10%, ±20%	15	7.9	32	4.46	400	Gray

NL05 Wire Wound Chip Inductors (Ferrite / Open Type) / **Large Current Type**

Codes	Inductance (μH)	Tolerance	Q typ.	Test Freq. (MHz)	SRF (MHz) typ.	DCR (Ω)±30%	IDC (mA) typ.	Color Code
R47	0.47	±5, ±10, ±20%	14	7.9	850	0.12	1400	Blue
R68	0.68	±5, ±10, ±20%	14	7.9	765	0.15	1200	Gray
1R0	1.00	±5, ±10, ±20%	14	7.9	208	0.13	1100	Black
1R2	1.20	±5, ±10, ±20%	14	7.9	159	0.16	960	Red
1R5	1.50	±5, ±10, ±20%	14	7.9	159	0.17	920	Brown
1R8	1.80	±5, ±10, ±20%	14	7.9	112	0.20	860	Orange
2R2	2.20	±5, ±10, ±20%	13	7.9	87	0.22	740	Red
2R7	2.70	±5, ±10, ±20%	13	7.9	72	0.25	680	Yellow
3R3	3.30	±5, ±10, ±20%	12	7.9	70	0.28	620	Orange
3R9	3.90	±5, ±10, ±20%	14	7.9	61	0.38	580	Green
4R7	4.70	±5, ±10, ±20%	14	7.9	51	0.43	520	Yellow
5R6	5.60	±5, ±10, ±20%	12	7.9	47	0.50	480	Blue
6R8	6.80	±5, ±10, ±20%	14	7.9	46	0.68	420	Green
8R2	8.20	±5, ±10, ±20%	13	7.9	33	0.73	400	Violet
100	10	±5, ±10, ±20%	14	2.5	31	0.85	360	Blue
120	12	±5, ±10, ±20%	14	2.5	30	0.90	340	Gray
150	15	±5, ±10, ±20%	15	2.5	28	1.40	300	Violet
180	18	±5, ±10, ±20%	15	2.5	27	1.55	280	White
220	22	±5, ±10, ±20%	15	2.5	20	1.76	240	Gray
270	27	±5, ±10, ±20%	15	2.5	17	2.00	220	Black
330	33	±5, ±10, ±20%	15	2.5	17	2.35	200	White
470	47	±5, ±10, ±20%	14	2.5	15	3.40	160	Black
560	56	±5, ±10, ±20%	14	2.5	10	4.42	150	Yellow
680	68	±5, ±10, ±20%	14	2.5	10	4.45	140	Brown
820	82	±5, ±10, ±20%	14	2.5	10	7.50	100	Orange
101	100	±5, ±10, ±20%	10	1	9	7.50	100	Red

NL10 Wire Wound Chip Inductors (Ferrite / Molding Type) / **Large Current Type**



Codes	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) typ.	DCR (Ω) max.	IDC (mA) max.
1R0	1.0	±5%,±20%	10	7.96	145	0.156	770
1R5	1.5	±5%,±20%	10	7.96	100	0.195	580
2R2	2.2	±5%,±20%	10	7.96	80	0.260	480
3R3	3.3	±5%,±20%	10	7.96	60	0.325	400
4R7	4.7	±5%,±20%	10	7.96	50	0.520	320
6R8	6.8	±5%,±20%	10	7.96	40	0.650	280
100	10	±5%,±10%	15	2.52	30	1.105	220
150	15	±5%,±10%	15	2.52	27	1.690	180
220	22	±5%,±10%	15	2.52	22	2.600	145
270	27	±5%,±10%	15	2.52	19	3.000	125
330	33	±5%,±10%	15	2.52	17	3.640	115
470	47	±5%,±10%	20	2.52	15	5.460	105
680	68	±5%,±10%	20	2.52	11	8.450	85
820	82	±5%,±10%	20	2.52	10	8.710	80
101	100	±5%,±10%	20	0.796	9	10.140	75



NL12 Wire Wound Chip Inductors (Ferrite / Molding Type) / **Large Current Type**

Codes	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) typ.	DCR (Ω) max.	IDC (mA) max.
1R0	1.0	±5%,±10%	10	7.96	265	0.11	1050
1R2	1.2	±5%,±10%	10	7.96	180	0.12	1000
1R5	1.5	±5%,±10%	10	7.96	170	0.15	950
1R8	1.8	±5%,±10%	10	7.96	105	0.16	900
2R2	2.2	±5%,±10%	10	7.96	80	0.18	850
2R7	2.7	±5%,±10%	10	7.96	60	0.20	800
3R3	3.3	±5%,±10%	10	7.96	55	0.22	750
3R9	3.9	±5%,±10%	10	7.96	45	0.24	700
4R7	4.7	±5%,±10%	10	7.96	43	0.27	650
5R6	5.6	±5%,±10%	10	7.96	40	0.30	650
6R8	6.8	±5%,±10%	10	7.96	35	0.35	600
8R2	8.2	±5%,±10%	10	7.96	30	0.40	600
100	10	±5%,±10%	10	2.52	27	0.50	550
120	12	±5%,±10%	10	2.52	25	0.60	500
150	15	±5%,±10%	10	2.52	20	0.70	450
180	18	±5%,±10%	10	2.52	19	0.80	400
220	22	±5%,±10%	10	2.52	18	0.90	370
270	27	±5%,±10%	10	2.52	16	1.20	330
330	33	±5%,±10%	10	2.52	15	1.40	300
390	39	±5%,±10%	10	2.52	13	1.60	280
470	47	±5%,±10%	10	2.52	12	1.90	260
560	56	±5%,±10%	10	2.52	10	2.20	240
680	68	±5%,±10%	10	2.52	9.5	2.60	220
820	82	±5%,±10%	10	2.52	8.5	3.50	200
101	100	±5%,±10%	20	0.796	8.0	4.00	180
121	120	±5%,±10%	20	0.796	7.0	4.50	160
151	150	±5%,±10%	20	0.796	6.5	6.50	140
181	180	±5%,±10%	20	0.796	6.0	7.50	120
221	220	±5%,±10%	20	0.796	5.5	9.00	120
271	270	±5%,±10%	20	0.796	5.0	11.0	100
331	330	±5%,±10%	20	0.796	4.5	13.0	90
391	390	±5%,±10%	20	0.796	4.0	14.0	85
471	470	±5%,±10%	20	0.796	3.5	16.0	75
561	560	±5%,±10%	20	0.796	3.0	21.0	70
681	680	±5%,±10%	20	0.796	2.5	24.0	65
821	820	±5%,±10%	20	0.796	2.5	45.0	60



NL20 Wire Wound Chip Inductors (Ferrite / Molding Type) / **Large Current Type**

Codes	Inductance (μH)	Tolerance	Q min.	Test Freq. (MHz)	SRF (MHz) min.	DCR (Ω) max.	IDC (mA) max.
1R0	1.0	±10, ±20%	10	7.96	95	0.03	1800
1R2	1.2	±10, ±20%	10	7.96	70	0.035	1700
1R5	1.5	±10, ±20%	10	7.96	55	0.04	1600
1R8	1.8	±10, ±20%	10	7.96	47	0.05	1400
2R2	2.2	±10, ±20%	10	7.96	42	0.06	1300
2R7	2.7	±10, ±20%	10	7.96	37	0.07	1200
3R3	3.3	±10, ±20%	10	7.96	34	0.08	1120
3R9	3.9	±10, ±20%	10	7.96	32	0.09	1050
4R7	4.7	±10, ±20%	10	7.96	29	0.11	950
5R6	5.6	±10, ±20%	10	7.96	26	0.13	880
6R8	6.8	±10, ±20%	10	7.96	24	0.15	810
8R2	8.2	±10, ±20%	10	7.96	22	0.18	750
100	10	±10, ±20%	10	2.52	19	0.21	690
120	12	±10, ±20%	10	2.52	17	0.25	630
150	15	±10, ±20%	10	2.52	16	0.30	580
180	18	±10, ±20%	10	2.52	14	0.36	530
220	22	±5, ±10%	10	2.52	13	0.43	480
270	27	±5, ±10%	10	2.52	11.5	0.52	440
330	33	±5, ±10%	10	2.52	10.5	0.62	400
390	39	±5, ±10%	10	2.52	9.5	0.72	370
470	47	±5, ±10%	10	2.52	8.5	0.85	340
560	56	±5, ±10%	10	2.52	7.8	1.00	310
680	68	±5, ±10%	10	2.52	7.0	1.2	290
820	82	±5, ±10%	10	2.52	6.4	1.4	270
101	100	±5, ±10%	20	0.796	6.0	1.6	250
121	120	±5, ±10%	20	0.796	5.4	1.9	230
151	150	±5, ±10%	20	0.796	4.8	2.2	210
181	180	±5, ±10%	20	0.796	4.4	2.8	190
221	220	±5, ±10%	20	0.796	3.9	3.4	170
271	270	±5, ±10%	20	0.796	3.6	4.2	155
331	330	±5, ±10%	20	0.796	3.2	4.9	140
391	390	±5, ±10%	20	0.796	2.9	5.8	130
471	470	±5, ±10%	20	0.796	2.6	7.0	120
561	560	±5, ±10%	20	0.796	2.4	8.5	110
681	680	±5, ±10%	20	0.796	2.2	10	100
821	820	±5, ±10%	20	0.796	2.0	13	90
102	1000	±5, ±10%	20	0.252	1.8	15	85

**Environmental Characteristics**

Electrical Performance Test

Item	Requirement	Test Method
Inductance	Refer to standard electrical characteristic spec.	HP4291 or HP4284
Q		HP4291 or HP4284
SRF		HP4291
DC Resistance DCR		Agilent 34401A
Rated Current IDC		Applied the current to coils, The inductance change should be less than 10% to initial value

Mechanical Performance Test

Item	Requirement	Test Method
Solderability	The electrodes shall be at least 90% covered with new solder coating	Lead-free inductor: after fluxing(alpha 100 or equiv), inductor shall be dipped in a melted solder bath at 245±5°C, 5±0.5 seconds
Resistance to Soldering Heat	Appearance: No damage	Pre-heating: 150°C, 1min. Solder Temperature: 260±5°C Immersion Time: 10±1 seconds
Vibration	Appearance: No damage L change: within±10% Q change: within±30% DCR: within specification	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1 min. Amplitude: 1.5 mm Time: 2 hrs for each axis (X, Y&Z), total 6 hrs

Climatic Test

Item	Requirement	Test Method															
Temperature Cycle	Appearance: No damage L change: within±10% Q change: within±30% DCR: within specification	One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25±2</td> <td>3</td> </tr> <tr> <td>3</td> <td>85±3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25±2</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature (°C)	Time (min.)	1	-25±3	30	2	25±2	3	3	85±3	30	4	25±2	3
Step		Temperature (°C)	Time (min.)														
1		-25±3	30														
2		25±2	3														
3		85±3	30														
4	25±2	3															
Damp Heat with Load	Total: 100 cycles Measured after exposure in the room condition for 24 hrs																
High Temperature Storage	Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000 hrs Measured after exposure in the room condition for 24 hrs																
Low Temperature Storage	Temperature: 85±3°C Applied Current: Rated Current Time: 1000 hrs Measured after exposure in the room condition for 24 hrs																
	Temperature: -25±3°C Time: 1000 hrs Measured after exposure in the room condition for 24 hrs																

■Storage Temperature: 23±15°C; Humidity < 80%RH

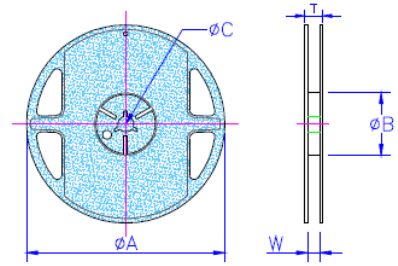
■Shelf life: 6 months Max

■Operating Temperature Range: -40~+85°C

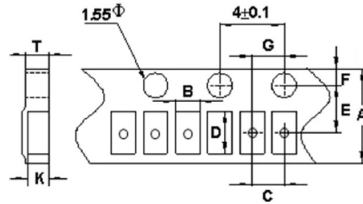
**■Packaging**

Packaging Quantity & Reel Specifications

Type	ΦA	ΦB	ΦC	W	T	Quantity (EA)
NL02	178±2.0	60±0.5	13±0.3	9±0.3	12±1.0	4000
NL03	178±2.0	60±0.5	13±0.3	9±0.3	12±1.0	4000
NL05	178±2.0	60±0.5	13±0.3	9±0.3	12±1.0	2000
NL08	178±2.0	60±0.5	13±0.3	9±0.3	12±1.0	2000
NL10	178±2.0	60±0.5	13±0.3	9±0.3	12±1.0	2000
NL12	178±2.0	80±0.5	13±0.3	13.2±0.3	16±1.0	500
NL20	330±2.0	100±0.5	13±0.3	17.4±0.3	22±1.0	1000

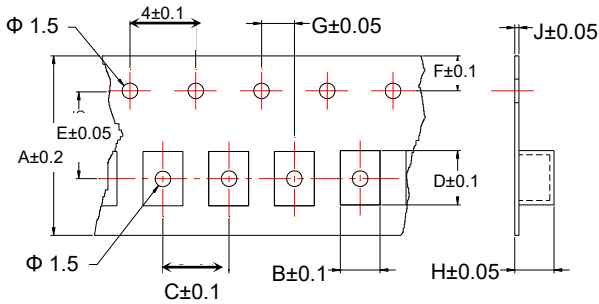


Paper Tape specifications



Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	T (mm)	K (mm)
NL02	8.0	0.67	2	1.20	3.5	1.75	2	0.75	0.59

Embossed Plastic Tape Specifications



Type	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm
NL03	8	1.25	4	1.90	3.5	1.75	2	1.00	0.23
NL05	8	1.85	4	2.55	3.5	1.75	2	1.45	0.23
NL08	8	2.80	4	2.95	3.5	1.75	2	2.22	0.23
NL10	8	2.96	4	3.60	3.5	1.75	2	2.40	0.23
NL12	12	3.30	8	5.00	5.5	1.75	2	3.50	0.30
NL20	16	5.35	12	6.10	7.5	1.75	2	5.50	0.35