



Chilisin Electronics Singapore Pte Ltd

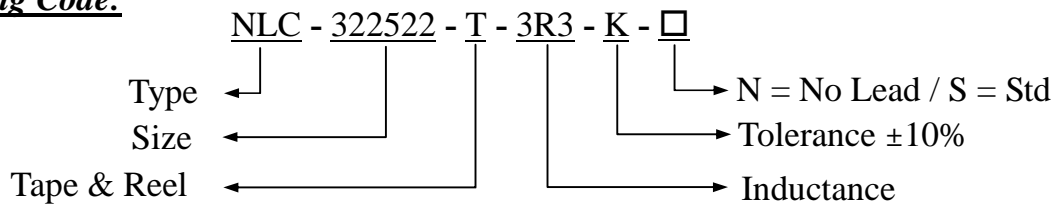
SMD Wire Wound Inductors, NLC Series



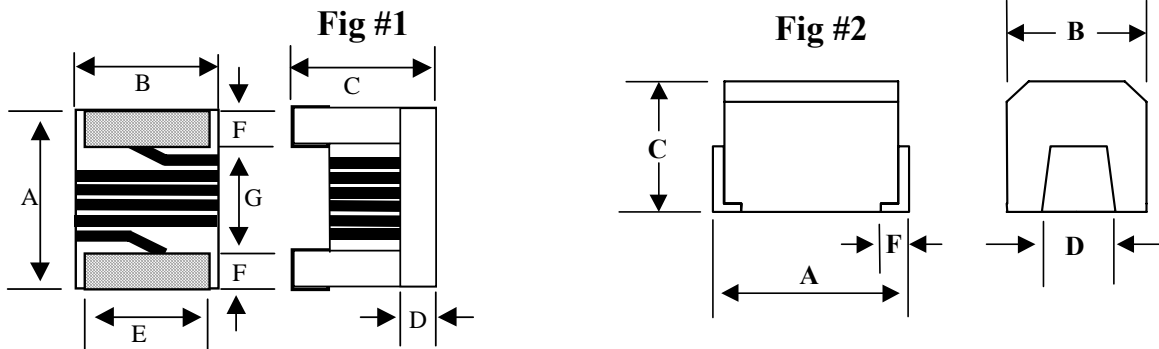
Feature:

- # Excellent Solderability
- # Suitable for Pick and Place machine
- # Low RDC and Large Current type
- # Suitable for power line
- # Various sizes to choose

Ordering Code:



Dimension in mm:



Type	A	B	C	D	F	Fig
NL-252018 - T - □□□ - □	2.29 max	2.79 max	2.20 max	0.70 ref.	0.51 ref.	1
NL-322522 - T - □□□ - □	3.70 max	2.90 max	2.60 max	0.90 ref.	0.51 ref.	1
NL-453232 - T - □□□ - □	4.5±0.3	3.2±0.3	3.2±0.2	1.4±0.5	0.9±0.3	2
NL-565050 - T - □□□ - □	5.6±0.3	5.0±0.3	5.0±0.2	1.8±0.4	1.3±0.3	2

Electrical:

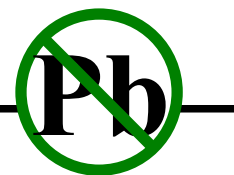
Part Number	Inductance	Current
NLC-252018 - Series	1.0μH to 33.0μH	1500mA to 400mA
NLC-322522 - Series	1.0μH to 680μH	1500mA to 65mA
NLC-453232 - Series	1.0μH to 330μH	1050mA to 90mA
NLC-565050 - Series	1.0μH to 1000μH	1800mA to 85mA

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NLC-252018 Series

Part Number	L uH	Q min	Tol ± %	Test Freq MHz	SRF MHz min	DCR Ω max	IDC mA max
NLC-252018-T-1R0-□-N	1.0	25	10/5	7.96	300	0.34	1500
NLC-252018-T-1R5-□-N	1.5	25	10/5	7.96	270	0.42	1400
NLC-252018-T-2R2-□-N	2.2	25	10/5	7.96	140	0.50	1200
NLC-252018-T-3R3-□-N	3.3	25	10/5	7.96	95	0.65	1000
NLC-252018-T-4R7-□-N	4.7	25	10/5	7.96	90	0.80	800
NLC-252018-T-6R8-□-N	6.8	25	10/5	7.96	68	1.00	730
NLC-252018-T-100-□-N	10.0	20	10/5	2.52	45	1.50	700
NLC-252018-T-150-□-N	15.0	20	10/5	2.52	40	2.20	500
NLC-252018-T-220-□-N	22.0	20	10/5	2.52	25	2.70	470
NLC-252018-T-330-□-N	33.0	20	10/5	2.52	25	4.00	400

NLC-322522 Series

Part Number	L uH	Q min	Tol. ± %	Test Freq MHz	SRF MHz min	DCR Ω max	IDC mA max
NLC-322522-T-1R0-□-N	1.0	20	10 / 5	7.960	100	0.08	1500
NLC-322522-T-1R2-□-N	1.2	20	10 / 5	7.960	90	0.08	1400
NLC-322522-T-1R5-□-N	1.5	20	10 / 5	7.960	80	0.13	1125
NLC-322522-T-2R2-□-N	2.2	20	10 / 5	7.960	68	0.13	970
NLC-322522-T-3R3-□-N	3.3	20	10 / 5	7.960	54	0.16	837
NLC-322522-T-4R7-□-N	4.7	20	10 / 5	7.960	43	0.20	675
NLC-322522-T-6R8-□-N	6.8	20	10 / 5	7.960	33	0.27	600
NLC-322522-T-8R2-□-N	8.2	20	10 / 5	7.960	30	0.32	580
NLC-322522-T-100-□-N	10.0	15	10 / 5	2.52	28	0.36	520
NLC-322522-T-150-□-N	15.0	15	10 / 5	2.52	19	0.56	480
NLC-322522-T-220-□-N	22.0	15	10 / 5	2.52	16	0.77	310
NLC-322522-T-330-□-N	33.0	15	10 / 5	2.52	12	1.10	270
NLC-322522-T-470-□-N	47.0	15	10 / 5	2.52	10	1.64	210
NLC-322522-T-680-□-N	68.0	15	10 / 5	2.52	9	2.80	189
NLC-322522-T-101-□-N	100.0	15	10 / 5	0.796	6	3.70	145
NLC-322522-T-151-□-N	150.0	15	10 / 5	0.796	5	6.10	120
NLC-322522-T-221-□-N	220.0	15	10 / 5	0.796	4	8.40	100
NLC-322522-T-331-□-N	330.0	15	10 / 5	0.796	3.5	12.3	80
NLC-322522-T-471-□-N	470.0	15	10 / 5	0.796	2.8	22.0	75
NLC-322522-T-680-□-N	680.0	15	10 / 5	0.796	2	28.0	65

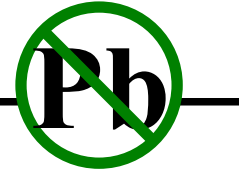
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SMD Wire Wound Inductors, NLC Series



NLC-453232 Series

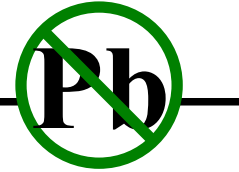
Part Number	L uH	Tol. ± %	Q min	Test Freq. MHz	SRF MHz min	DCR Ω max	IDC mA max
NLC-453232-T-1R0-K-N	1.0	10	10	7.960	200	0.11	1050
NLC-453232-T-1R2-K-N	1.2	10	10	7.960	155	0.12	1000
NLC-453232-T-1R5-K-N	1.5	10	10	7.960	130	0.15	950
NLC-453232-T-1R8-K-N	1.8	10	10	7.960	100	0.16	900
NLC-453232-T-2R2-K-N	2.2	10	10	7.960	80	0.18	850
NLC-453232-T-2R7-K-N	2.7	10	10	7.960	55	0.20	800
NLC-453232-T-3R3-K-N	3.3	10	10	7.960	45	0.22	750
NLC-453232-T-3R9-K-N	3.9	10	10	7.960	40	0.24	700
NLC-453232-T-4R7-K-N	4.7	10	10	7.960	35	0.27	650
NLC-453232-T-5R6-K-N	5.6	10	10	7.960	30	0.30	650
NLC-453232-T-6R8-K-N	6.8	10	10	7.960	28	0.35	600
NLC-453232-T-8R2-K-N	8.2	10	10	7.960	25	0.40	600
NLC-453232-T-10 0-K-N	10	10	10	2.52	22	0.50	550
NLC-453232-T-120-K-N	12	10	10	2.52	21	0.60	500
NLC-453232-T-150-K-N	15	10	10	2.52	20	0.70	450
NLC-453232-T-180-K-N	18	10	10	2.52	18	0.80	400
NLC-453232-T-220-K-N	22	10	10	2.52	17	0.90	370
NLC-453232-T-270-K-N	27	10	10	2.52	15	1.20	330
NLC-453232-T-330-K-N	33	10	10	2.52	14	1.40	300
NLC-453232-T-390-K-N	39	10	10	2.52	12	1.40	280
NLC-453232-T-470-K-N	47	10	10	2.52	11.5	1.60	260
NLC-453232-T-560-K-N	56	10	10	2.52	10.5	2.20	240
NLC-453232-T-680-K-N	68	10	10	2.52	9.0	2.60	220
NLC-453232-T-820-K-N	82	10	10	2.52	8.5	3.50	200
NLC-453232-T-101-K-N	100	10	20	0.796	7.0	4.00	180
NLC-453232-T-121-K-N	120	10	20	0.796	6.5	4.50	160
NLC-453232-T-151-K-N	150	10	20	0.796	6.0	6.50	140
NLC-453232-T-181-K-N	180	10	20	0.796	5.5	7.50	120
NLC-453232-T-221-K-N	220	10	20	0.796	5.0	9.00	120
NLC-453232-T-271-K-N	270	10	20	0.796	4.5	11.0	100
NLC-453232-T-331-K-N	330	10	20	0.796	4.0	13.0	90

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NLC-565050 Series

Part Number	L uH	Tol. ±%	Q min	Test Freq. MHz	SRF MHz min	DCR Ω max	IDC mA max
NLC-565050-T-1R0-K-N	1.0	10	10	7.96	95	0.03	1800
NLC-565050-T-1R2-K-N	1.2	10	10	7.96	70	0.035	1700
NLC-565050-T-1R5-K-N	1.5	10	10	7.96	55	0.04	1600
NLC-565050-T-1R8-K-N	1.8	10	10	7.96	47	0.05	1400
NLC-565050-T-2R2-K-N	2.2	10	10	7.96	42	0.06	1300
NLC-565050-T-2R7-K-N	2.7	10	10	7.96	37	0.07	1200
NLC-565050-T-3R3-K-N	3.3	10	10	7.96	34	0.08	1120
NLC-565050-T-3R9-K-N	3.9	10	10	7.96	32	0.09	1050
NLC-565050-T-4R7-K-N	4.7	10	10	7.96	29	0.11	950
NLC-565050-T-5R6-K-N	5.6	10	10	7.96	26	0.13	880
NLC-565050-T-6R8-K-N	6.8	10	10	7.96	24	0.15	810
NLC-565050-T-8R2-K-N	8.2	10	10	7.96	22	0.15	750
NLC-565050-T-100-K-N	10.0	10	10	2.52	19	0.18	690
NLC-565050-T-120-K-N	12.0	10	10	2.52	17	0.21	630
NLC-565050-T-150-K-N	15.0	10	10	2.52	16	0.25	580
NLC-565050-T-180-K-N	18.0	10	10	2.52	14	0.30	530
NLC-565050-T-220-K-N	22.0	10	10	2.52	13	0.36	480
NLC-565050-T-270-K-N	27.0	10	10	2.52	11.5	0.52	440
NLC-565050-T-330-K-N	33.0	10	10	2.52	10.5	0.62	400
NLC-565050-T-390-K-N	39.0	10	10	2.52	9.5	0.72	370
NLC-565050-T-470-K-N	47.0	10	10	2.52	8.5	0.85	340
NLC-565050-T-560-K-N	56.0	10	10	2.52	7.8	1.0	310
NLC-565050-T-680-K-N	68.0	10	10	2.52	7.0	1.2	290
NLC-565050-T-820-K-N	82.0	10	10	2.52	6.4	1.4	270
NLC-565050-T-101-K-N	100.0	10	20	0.796	6.0	1.6	250
NLC-565050-T-121-K-N	120.0	10	20	0.796	5.4	1.9	230
NLC-565050-T-151-K-N	150.0	10	20	0.796	4.8	2.2	210
NLC-565050-T-181-K-N	180.0	10	20	0.796	4.4	2.8	190
NLC-565050-T-221-K-N	220.0	10	20	0.796	3.9	3.4	170
NLC-565050-T-271-K-N	270.0	10	20	0.796	3.6	4.2	155
NLC-565050-T-331-K-N	330.0	10	20	0.796	3.2	4.9	140
NLC-565050-T-391-K-N	390.0	10	20	0.796	2.9	5.8	130
NLC-565050-T-471-K-N	470.0	10	20	0.796	2.6	7.0	120
NLC-565050-T-561-K-N	560.0	10	20	0.796	2.4	8.5	110
NLC-565050-T-681-K-N	680.0	10	20	0.796	2.2	10	100
NLC-565050-T-821-K-N	820.0	10	20	0.796	2.0	13	90
NLC-565050-T-102-K-N	1000.0	10	20	0.252	1.8	15	85

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General Component Specification for SMD Wire Wound Inductor

Reliability Test

No.	Item	Specification	Test Condition
1.	Insulation Resistance (Test)	1000M Ohm min	Measure at 100V Dc between component terminals and centre of unit under test (UUT)
2.	Withstanding Voltages Test	After Test, Inductor shall be no evidence of Electrical and mechanical damage	AC voltage of 500Vac applied between inductor terminals and centre of "UUT" for 60 ± 5 seconds
3.	Temperature Coefficient of inductance (TCL)	+25 to +125 PPM /°C	Ceramic Core: 30°C to +80°C at frequency Specified in product table
		+100 to +350 PPM /°C	Ferrite Core: -30°C to +125°C at frequency Specified in product table
4.	Terminal Strength	Component must withstand minimum force of 5N (0.51 kg F) Terminal should not have any damage	After soldering "UUT" on to PCB. Force gauge shall applied to any side of the "UUT"
5.	Drop Test		"UUT" shall be drop for 3 times on to wooden floor from 75cm
6.	Thermal Shock Test	Change in Inductance should be within ± 5% of initial value	Each cycle shall consist 30 minutes at -25°C followed by 30 minutes at + 85°C with 20 second maximum transition time between temperature extremes. Test duration = 10 cycles Testing after 2 hour at room temperature
		Change in "Q" Factor should be within ± 20% of initial value	

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General Component Specification for SMD Wire Wound Inductor

Reliability Test

No.	Item	Specification	Test Condition
7.	Solder ability	More than 90% of the terminal electrode shall be covered with fresh solder	Pre heat: 100°C to 150°C Pre heat Time: 1 minute Solder: H63A (Eutectic Solder) Solder Temperature: 230 ± 5°C Flux: Rosin Dip Time: 3 ± 1 seconds
8.	Resistance to Soldering Heat (Test)		Pre heat: 100°C to 150°C Pre heat Time: 1 minute Solder: H63A (Eutectic Solder) Solder Temperature: 260 ± 5°C Flux: Rosin Dip Time: 5 ± 1 seconds
9.	Vibration (Random)	Change of Inductance "L" should be within ± 20% of initial value	Amplitude : 1.5mm Frequency : 10~55~10 Hz/min Direction : X,Y,Z Duration : 2 hours Per X,Y,Z
10.	Cold temperature Storage	No change in appearance	"UUT" shall be stored at -40°C for 1000 ± 48Hrs or 96 ± 4 hrs. "UUT" is leave under normal room Temperature for 2 hours before testing
11.	Moisture Resistance (Humidity)		Temperature : +45°C ± 2°C RH : 90% ~ 95% Time: 240 ± 4 Hours or Time: 96 ± 4 Hours "UUT" is leave under normal room temperature for 2 hours before testing. Load : Allowed DC Current

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