

TYPE NL(WIC)

FEATURES

- Excellent solderability by reflow soldering, flow soldering or soldering iron.
- Excellent for automatic insertion in the higher density circuit design.
- Resistant to external shocks and pressure.
- Highly reliable in wide temperature and humidity ranges. Excellent Q characteristics.
- Inductance of 0.01 to 100 μH (NL1008), 0.01 to 220 μH (NL1210) and 1 to 1000 μH (NL1812).
- Ideal application for radio, auto, telecommunications, tuners, instrumental and hybrid ICs.

DIMENSIONS

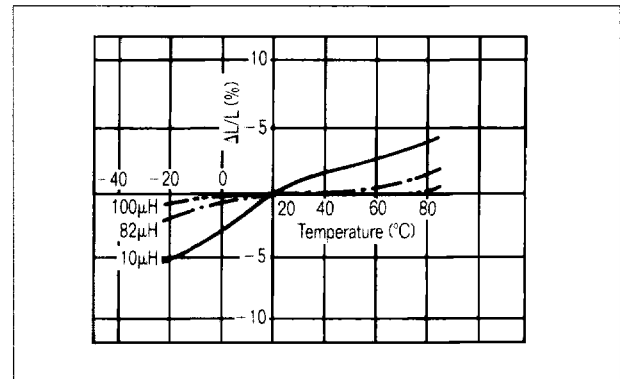
Unit : mm
(Dimensions in inches)

	Type	L	W	T	D	E	F
	NL252018 WIC1008	2.5 $\pm$ 0.2 (.100 $\pm$.008)	2.0 $\pm$ 0.2 (.080 $\pm$.008)	1.8 $\pm$ 0.2 (.072 $\pm$.008)	1.4 $\pm$ 0.1 (.056 $\pm$.004)	0.5 $\pm$ 0.005 (.02 $\pm$.002)	0.4 $\pm$ 0.005 (.016 $\pm$.002)
	NL322522 WIC1210	3.2 $\pm$ 0.2 (.126 $\pm$.008)	2.5 $\pm$ 0.2 (.098 $\pm$.008)	2.2 $\pm$ 0.2 (.087 $\pm$.008)	1.9 $\pm$ 0.1 (.075 $\pm$.004)	0.5 $\pm$ 0.005 (.02 $\pm$.002)	0.4 $\pm$ 0.005 (.016 $\pm$.002)
	NL453232 WIC1812	4.5 $\pm$ 0.3 (.177 $\pm$.008)	3.2 $\pm$ 0.2 (.126 $\pm$.008)	3.2 $\pm$ 0.2 (.126 $\pm$.008)	2.6 $\pm$ 0.1 (.102 $\pm$.004)	0.5 $\pm$ 0.005 (.02 $\pm$.002)	0.4 $\pm$ 0.005 (.016 $\pm$.002)

CHARACTERISTICS

Temperature rise	20°C max.
Ambient temperature	80°C
Storage temperature	-40°C to +100°C
Operating temperature	-20°C to +100°C
Terminal tensile strength	1 kg min. (0.5kg for the NL1210 & NL1008)
Current rating	Value obtained when current flows and when temperature has risen to 20°C or value obtained when LC current flows and when the initial value of inductance has fallen by 10%, whichever smaller.
Resistance to soldering heat	260°C 10 seconds
Resistance to solvent	Conforms to MIL-STD-202E

TEMPERATURE CHARACTERISTICS



ORDERING INFORMATION

NL322522 - 221	K	T
WIC1210 - 221	K	T
Type	Packing	
	B Bulk Pack	
	T Tape & Reel	
	Tolerance	
	J: $\pm$ 5%	
	K: $\pm$ 10%	
	M: $\pm$ 20%	
	Inductance Symbol (three digit)	

TAPE PACKAGING

Size	Qty/Reel
NL252018 (1008)	2,000
NL322522 (1210)	2,000
NL453232 (1812)	500

WOUND INDUCTOR CHIPS — TYPE NL (WIC)

NL252018(1008) ELECTRICAL SPECIFICATIONS

Part No.	Inductance (μ H)	Inductance Symbol	Q min.	L,Q test frequency (MHz)	Self resonant frequency (MHz) min.	DC resistance (Ω) max.	I _{dc} (mA) max.
NL252018-10NJT	0.010	10N	15	100	2150	0.26	530
NL252018-12NJT	0.012	12N	15	100	2050	0.27	500
NL252018-15NJT	0.015	15N	15	100	1850	0.29	480
NL252018-18NJT	0.018	18N	15	100	1650	0.31	450
NL252018-22NJT	0.022	22N	15	100	1550	0.37	420
NL252018-27NJT	0.027	27N	15	100	1400	0.40	410
NL252018-33NJT	0.033	33N	20	100	1250	0.42	400
NL252018-39NJT	0.039	39N	20	100	1100	0.45	380
NL252018-47NJT	0.047	47N	20	100	1050	0.50	360
NL252018-56NJT	0.056	56N	20	100	950	0.60	340
NL252018-68NJT	0.068	68N	20	100	900	0.65	320
NL252018-82NJT	0.082	82N	20	100	850	0.75	300
NL252018-R10JT	0.10	R10	20	100	750	0.80	280
NL252018-R12JT	0.12	R12	30	25.2	700	0.30	550
NL252018-R15JT	0.15	R15	30	25.2	550	0.35	500
NL252018-R18JT	0.18	R18	30	25.2	500	0.40	460
NL252018-R22JT	0.22	R22	30	25.2	450	0.50	430
NL252018-R27JT	0.27	R27	30	25.2	425	0.55	420
NL252018-R33JT	0.33	R33	30	25.2	400	0.60	400
NL252018-R39JT	0.39	R39	30	25.2	375	0.65	375
NL252018-R47JT	0.47	R47	30	25.2	350	0.68	350
NL252018-R56JT	0.56	R56	30	25.2	325	0.75	325
NL252018-R68JT	0.68	R68	30	25.2	300	0.85	300
NL252018-R82JT	0.82	R82	30	25.2	260	1.00	260
NL252018-1R0JT	1.0	1R0	30	7.96	245	1.10	245
NL252018-1R2JT	1.2	1R2	30	7.96	230	1.20	230
NL252018-1R5JT	1.5	1R5	30	7.96	182	1.30	220
NL252018-1R8JT	1.8	1R8	30	7.96	135	1.45	210
NL252018-2R2JT	2.2	2R2	30	7.96	105	1.55	200
NL252018-2R7JT	2.7	2R7	30	7.96	70	1.70	195
NL252018-3R3JT	3.3	3R3	30	7.96	55	1.90	185
NL252018-3R9JT	3.9	3R9	30	7.96	48	2.10	180
NL252018-4R7JT	4.7	4R7	30	7.96	43	2.30	175
NL252018-5R6JT	5.6	5R6	25	7.96	42	2.50	175
NL252018-6R8JT	6.8	6R8	25	7.96	39	2.70	165
NL252018-8R2JT	8.2	8R2	25	7.96	36	3.05	160
NL252018-100JT	10	100	25	2.52	33	3.50	155
NL252018-120JT	12	120	25	2.52	30	3.80	150
NL252018-150JT	15	150	25	2.52	26	4.40	140
NL252018-180JT	18	180	25	2.52	24	4.80	130
NL252018-220JT	22	220	25	2.52	22	5.50	125
NL252018-270JT	27	270	25	2.52	21	6.30	115
NL252018-330JT	33	330	25	2.52	20	7.10	110
NL252018-390JT	39	390	20	2.52	18	9.50	90
NL252018-470JT	47	470	20	2.52	17	11.10	80
NL252018-560JT	56	560	20	2.52	16	12.10	75
NL252018-680JT	68	680	20	2.52	15	16.60	70
NL252018-820JT	82	820	20	2.52	13	19.00	65
NL252018-101JT	100	101	15	0.796	12	21.00	60

Inductance and Q are measured with a Q-meter.

NL322522(1210) ELECTRICAL SPECIFICATIONS

Part No.	Inductance (μ H)	Inductance Symbol	Q min.	L,Q test frequency (MHz)	Self resonant frequency (MHz) min.	DC resistance (Ω) max.	I _{dc} (mA) max.
NL322522-10NJT	0.010	10N	15	100	2500	0.13	450
NL322522-12NJT	0.012	12N	17	100	2300	0.14	450
NL322522-15NJT	0.015	15N	19	100	2100	0.16	450
NL322522-18NJT	0.018	18N	21	100	1900	0.18	450
NL322522-22NJT	0.022	22N	23	100	1700	0.20	450
NL322522-27NJT	0.027	27N	23	100	1500	0.22	450
NL322522-33NJT	0.033	33N	25	100	1400	0.24	450
NL322522-39NJT	0.039	39N	25	100	1300	0.27	450
NL322522-47NJT	0.047	47N	26	100	1200	0.30	450
NL322522-56NJT	0.056	56N	26	100	1100	0.33	450
NL322522-68NJT	0.068	68N	27	100	1000	0.36	450
NL322522-82NJT	0.082	82N	27	100	900	0.40	450
NL322522-R10JT	0.10	R10	28	100	700	0.44	450
NL322522-R12JT	0.12	R12	30	25.2	500	0.22	450
NL322522-R15JT	0.15	R15	30	25.2	450	0.25	450
NL322522-R18JT	0.18	R18	30	25.2	400	0.28	450
NL322522-R22JT	0.22	R22	30	25.2	350	0.32	450
NL322522-R27JT	0.27	R27	30	25.2	320	0.36	450
NL322522-R33JT	0.33	R33	30	25.2	300	0.40	450
NL322522-R39JT	0.39	R39	30	25.2	350	0.45	450
NL322522-R47JT	0.47	R47	30	25.2	220	0.50	450
NL322522-R56JT	0.56	R56	30	25.2	180	0.55	450
NL322522-R68JT	0.68	R68	30	25.2	160	0.60	450
NL322522-R82JT	0.82	R82	30	25.2	140	0.67	450
NL322522-1R0JT	1.0	1R0	30	7.96	120	0.70	400
NL322522-1R2JT	1.2	1R2	30	7.96	100	0.75	390
NL322522-1R5JT	1.5	1R5	30	7.96	85	0.85	370
NL322522-1R8JT	1.8	1R8	30	7.96	80	0.90	350
NL322522-2R2JT	2.2	2R2	30	7.96	75	1.0	320
NL322522-2R7JT	2.7	2R7	30	7.96	70	1.1	290
NL322522-3R3JT	3.3	3R3	30	7.96	60	1.2	260
NL322522-3R9JT	3.9	3R9	30	7.96	55	1.3	250
NL322522-4R7JT	4.7	4R7	30	7.96	50	1.5	220
NL322522-5R6JT	5.6	5R6	30	7.96	47	1.6	200
NL322522-6R8JT	6.8	6R8	30	7.96	43	1.8	180
NL322522-8R2JT	8.2	8R2	30	7.96	40	2.0	170
NL322522-100JT	10	100	30	2.52	36	2.1	150
NL322522-120JT	12	120	30	2.52	33	2.5	140
NL322522-150JT	15	150	30	2.52	30	2.8	130
NL322522-180JT	18	180	30	2.52	27	3.3	120
NL322522-220JT	22	220	30	2.52	25	3.7	110
NL322522-270JT	27	270	30	2.52	20	5.0	80
NL322522-330JT	33	330	30	2.52	17	5.6	70
NL322522-390JT	39	390	30	2.52	16	6.4	65
NL322522-470JT	47	470	30	2.52	15	7.0	60
NL322522-560JT	56	560	30	2.52	13	8.0	55
NL322522-680JT	68	680	30	2.52	12	9.0	50
NL322522-820JT	82	820	30	2.52	11	10.0	45
NL322522-101JT	100	101	20	0.796	10	10.0	40
NL322522-121JT	120	121	20	0.796	10	11.0	70
NL322522-151JT	150	151	20	0.796	8	15.0	65
NL322522-181JT	180	181	20	0.796	7	17.0	60
NL322522-221JT	220	221	20	0.796	7	21.0	50

Inductance and Q are measured with a Q-meter.

WOUND INDUCTOR CHIPS — TYPE NL (WIC)

NL453232(1812)

ELECTRICAL SPECIFICATIONS

Part No.	Inductance (μ H)	Inductance Symbol	Q min.	L,Q test frequency (MHz)	Self resonant frequency (MHz) min.	DC resistance (Ω) max.	I _{dc} (mA) max.
NL453232-1R0JT	1.0	1R0	50	7.96	100	0.50	450
NL453232-1R2JT	1.2	1R2	50	7.96	80	0.55	430
NL453232-1R5JT	1.5	1R5	50	7.96	70	0.60	410
NL453232-1R8JT	1.8	1R8	50	7.96	60	0.65	390
NL453232-2R2JT	2.2	2R2	50	7.96	55	0.70	380
NL453232-2R7JT	2.7	2R7	50	7.96	50	0.75	370
NL453232-3R3JT	3.3	3R3	50	7.96	45	0.80	355
NL453232-3R9JT	3.9	3R9	50	7.96	40	0.90	330
NL453232-4R7JT	4.7	4R7	50	7.96	35	1.00	315
NL453232-5R6JT	5.6	5R6	50	7.96	33	1.10	300
NL453232-6R8JT	6.8	6R8	50	7.96	27	1.20	285
NL453232-8R2JT	8.2	8R2	50	7.96	25	1.40	270
NL453232-100JT	10.0	100	50	2.52	20	1.60	250
NL453232-120JT	12.0	120	50	2.52	18	2.00	225
NL453232-150JT	15.0	150	50	2.52	17	2.50	200
NL453232-180JT	18.0	180	50	2.52	15	2.80	190
NL453232-220JT	22.0	220	50	2.52	13	3.20	180
NL453232-270JT	27.0	270	50	2.52	12	3.60	170
NL453232-330JT	33.0	330	50	2.52	11	4.00	160
NL453232-390JT	39.0	390	50	2.52	10	4.50	150
NL453232-470JT	47.0	470	50	2.52	10	5.00	140
NL453232-560JT	56.0	560	50	2.52	9.0	5.50	135
NL453232-680JT	68.0	680	50	2.52	9.0	6.00	130
NL453232-820JT	82.0	820	50	2.52	8.0	7.00	120
NL453232-101JT	100	101	40	0.796	8.0	8.00	110
NL453232-121JT	120	121	40	0.796	6.0	8.00	110
NL453232-151JT	150	151	40	0.796	5.0	9.00	105
NL453232-181JT	180	181	40	0.796	5.0	9.50	102
NL453232-221JT	220	221	40	0.796	4.0	10.0	100
NL453232-271JT	270	271	40	0.796	4.0	12.0	92
NL453232-331JT	330	331	40	0.796	3.5	14.0	85
NL453232-391JT	390	391	40	0.796	3.0	16.0	80
NL453232-471JT	470	471	40	0.796	3.0	26.0	62
NL453232-561JT	560	561	30	0.796	3.0	30.0	50
NL453232-681JT	680	681	30	0.796	3.0	30.0	50
NL453232-821JT	820	821	30	0.796	2.5	35.0	30
NL453232-102JT	1000	102	30	0.252	2.5	40.0	30

Inductance and Q are measured with a Q-meter.