SMD Wire Wound Chip Inductor / NLSA TYPE

.Feature

1.Very strong solderability by reflow soldering and soldering iron or wave soldering.
2.High reliable in environments of sudden temperature change and humidity.
3.Highly resistant to mechanical shocks and presure.
4.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.

.Product Identification

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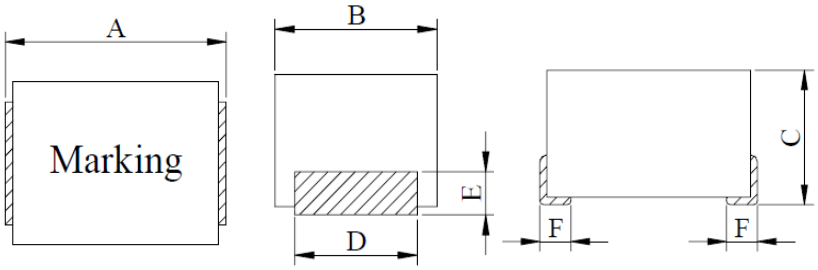
1 2

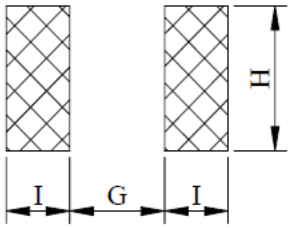
Series Name	Dimensions (L xW x H)		Internal Code
NLSA	252018	2.5 x 2.0 x 1.8 mm	T
	322522	3.2 x 2.5 x 2.2 mm	
	453032	4.5 x 3.0 x 3.2 mm	
	565030	5.6 x 5.0 x 3.0 mm	
	565050	5.6 x 5.0 x 4.0 mm	

Inductance		Internal Code	
10N	0.01uH	J	5%
1R0	1uH	K	10%
100	10uH	M	20%
102	1000uH		

.Shape and Dimension



.Recommended PCB Pattern



Dimensions(mm)

Part No.	A	B	C	D	E	F	G	H	I
NLSA252018T	2.5 ± 0.2	2.0 ± 0.1	1.8 ± 0.1	1.4 ± 0.1	0.5 Typ.	0.4 Typ.	1.5 ref.	1.5 ref.	1.0 ref.
NLSA322522T	3.2 ± 0.2	2.5 ± 0.2	2.2 ± 0.2	1.9 ± 0.1	0.5 Typ.	0.4 Typ.	2.0 ref.	2.0 ref.	1.2 ref.
NLSA453032T	4.5 ± 0.3	3.0 ± 0.2	3.2 ± 0.2	2.6 ± 0.1	0.8 Typ.	0.5 Typ.	3.0 ref.	2.8 ref.	1.5 ref.
NLSA565030T	5.6 ± 0.3	5.0 ± 0.2	3.0 ± 0.2	4.0 ± 0.1	1.1 Typ.	0.7 Typ.	4.0 ref.	4.5 ref.	2.0 ref.
NLSA565050T	5.6 ± 0.3	5.0 ± 0.2	4.0 ± 0.2	4.0 ± 0.1	1.1 Typ.	0.7 Typ.	4.0 ref.	4.5 ref.	2.0 ref.

.Equivalent Circuit Schematic

.Rating

1.Operating Temperature : 40℃ ~ +105℃
2.Storage conditions : Under 40℃, Humidity < 75%

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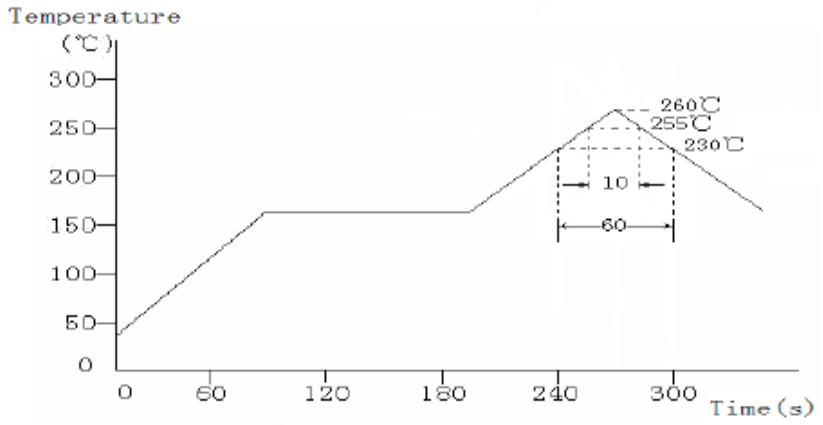
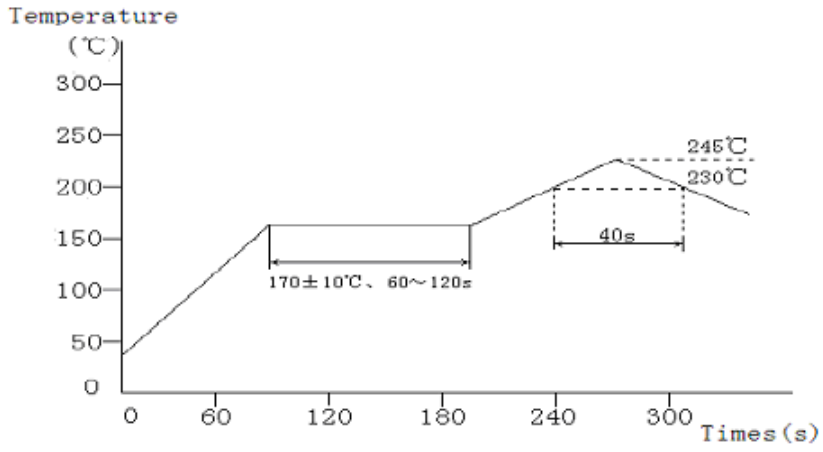
Reflow Soldering Heat Endurance



No mechanical and electrical defects are found after testing based on the above profile and keeping under the conditions of room temperature and humidity for 2 hours.
Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions.
The reflow test profile may vary with the testing instruments.

Recommended Reflow Conditions



The recommended reflow profile is based on the testing instruments used. Solder ability will depend on the testing equipments, reflow conditions, testing method, etc. So it is necessary to make a confirmation of them when the reflow conditions are set up.

However halogen lamp shall be used, side heat will be beyond range of resistance heat, so we can't recommend it.

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.Electrical Characteristics (NLSA252018 TYPE)

Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(MHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA252018T-10N□	0.010	100	15	2150	0.26	530	5%
NLSA252018T-12N□	0.012	100	15	2050	0.27	500	5%
NLSA252018T-15N□	0.015	100	15	2000	0.29	480	5%
NLSA252018T-18N□	0.018	100	15	1850	0.31	450	5%
NLSA252018T-22N□	0.022	100	15	1650	0.37	420	5%
NLSA252018T-27N□	0.027	100	15	1550	0.40	410	5%
NLSA252018T-33N□	0.033	100	20	1450	0.42	400	5%
NLSA252018T-39N□	0.039	100	20	1350	0.45	380	5%
NLSA252018T-47N□	0.047	100	20	1200	0.50	360	5%
NLSA252018T-56N□	0.056	100	20	1100	0.60	340	5%
NLSA252018T-68N□	0.068	100	20	1050	0.65	320	5%
NLSA252018T-82N□	0.082	100	20	900	0.75	300	5%
NLSA252018T-R10□	0.100	100	20	800	0.80	280	5%
NLSA252018T-R12□	0.120	25.2	30	700	0.30	550	5%
NLSA252018T-R15□	0.150	25.2	30	550	0.35	500	5%
NLSA252018T-R18□	0.180	25.2	30	500	0.40	475	5%
NLSA252018T-R22□	0.220	25.2	30	450	0.50	450	5%
NLSA252018T-R27□	0.270	25.2	30	425	0.55	425	5%
NLSA252018T-R33□	0.330	25.2	30	400	0.60	400	5%
NLSA252018T-R39□	0.390	25.2	30	375	0.65	375	5%
NLSA252018T-R47□	0.470	25.2	30	350	0.68	350	5%
NLSA252018T-R56□	0.560	25.2	30	325	0.75	325	5%
NLSA252018T-R68□	0.680	25.2	30	300	0.85	300	5%
NLSA252018T-R82□	0.820	25.2	30	260	1.00	260	5%
NLSA252018T-1R0□	1.000	7.96	30	245	1.10	245	5%
NLSA252018T-1R2□	1.200	7.96	30	230	1.20	230	5%
NLSA252018T-1R5□	1.500	7.96	30	182	1.30	220	5%
NLSA252018T-1R8□	1.800	7.96	30	135	1.45	210	5%
NLSA252018T-2R2□	2.200	7.96	30	105	1.55	200	5%
NLSA252018T-2R7□	2.700	7.96	30	70	1.70	195	5%
NLSA252018T-3R3□	3.300	7.96	30	55	1.90	185	5%
NLSA252018T-3R9□	3.900	7.96	30	48	2.1	180	5%
NLSA252018T-4R7□	4.700	7.96	30	43	2.30	175	5%
NLSA252018T-5R6□	5.600	7.96	25	42	2.50	170	5%
NLSA252018T-6R8□	6.800	7.96	25	39	2.70	165	5%
NLSA252018T-8R2□	8.200	7.96	25	36	3.05	160	5%
NLSA252018T-100□	10.00	2.52	25	33	3.50	155	5%
NLSA252018T-120□	12.00	2.52	25	30	3.80	150	5%
NLSA252018T-150□	15.00	2.52	25	26	4.40	140	5%
NLSA252018T-180□	18.00	2.52	25	24	4.80	130	5%
NLSA252018T-220□	22.00	2.52	25	22	5.50	125	5%
NLSA252018T-270□	27.00	2.52	25	21	6.30	115	5%

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Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(MHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA252018T-330□	33.00	2.52	25	20	7.10	110	5%
NLSA252018T-390□	39.00	2.52	20	18	9.50	90	5%
NLSA252018T-470□	47.00	2.52	20	17	11.10	80	5%
NLSA252018T-560□	56.00	2.52	20	16	12.10	75	5%
NLSA252018T-680□	68.00	2.52	20	15	16.60	70	5%
NLSA252018T-820□	82.00	2.52	20	13	19.00	66	5%
NLSA252018T-101□	100.00	0.796	15	12	21.00	60	5%

.Electrical Characteristics (NLSA322522 TYPE)

Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(MHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA322522T-10N□	0.010	100	15	2500	0.13	450	5%
NLSA322522T-12N□	0.012	100	17	2300	0.14	450	5%
NLSA322522T-15N□	0.015	100	19	2100	0.16	450	5%
NLSA322522T-18N□	0.018	100	21	1900	0.18	450	5%
NLSA322522T-22N□	0.022	100	23	1700	0.20	450	5%
NLSA322522T-27N□	0.027	100	23	1500	0.22	450	5%
NLSA322522T-33N□	0.033	100	25	1400	0.24	450	5%
NLSA322522T-39N□	0.039	100	25	1300	0.27	450	5%
NLSA322522T-47N□	0.047	100	26	1200	0.30	450	5%
NLSA322522T-56N□	0.056	100	26	1100	0.33	450	5%
NLSA322522T-68N□	0.068	100	27	1000	0.36	450	5%
NLSA322522T-82N□	0.082	100	27	900	0.40	450	5%
NLSA322522T-R10□	0.100	100	28	700	0.44	450	5%
NLSA322522T-R12□	0.120	25.2	30	500	0.22	450	5%
NLSA322522T-R15□	0.150	25.2	30	450	0.25	450	5%
NLSA322522T-R18□	0.180	25.2	30	400	0.28	450	5%
NLSA322522T-R22□	0.220	25.2	30	350	0.32	450	5%
NLSA322522T-R27□	0.270	25.2	30	320	0.60	450	5%
NLSA322522T-R33□	0.330	25.2	30	300	0.40	450	5%
NLSA322522T-R39□	0.390	25.2	30	250	0.45	450	5%
NLSA322522T-R47□	0.470	25.2	30	220	0.50	450	5%
NLSA322522T-R56□	0.560	25.2	30	180	0.55	450	5%
NLSA322522T-R68□	0.680	25.2	30	160	0.60	450	5%
NLSA322522T-R82□	0.820	25.2	30	140	0.65	450	5%
NLSA322522T-1R0□	1.000	7.96	30	120	0.70	400	5%
NLSA322522T-1R2□	1.200	7.96	30	100	0.75	390	5%
NLSA322522T-1R5□	1.500	7.96	30	85	0.85	370	5%
NLSA322522T-1R8□	1.800	7.96	30	80	0.90	350	5%
NLSA322522T-2R2□	2.200	7.96	30	75	1.00	320	5%
NLSA322522T-2R7□	2.700	7.96	30	70	1.10	290	5%
NLSA322522T-3R3□	3.300	7.96	30	60	1.20	260	5%
NLSA322522T-3R9□	3.900	7.96	30	55	1.30	250	5%

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Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(MHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA322522T-4R7□	4.700	7.96	30	50	1.50	220	5%
NLSA322522T-5R6□	5.600	7.96	30	45	1.60	200	5%
NLSA322522T-6R8□	6.800	7.96	30	40	1.80	180	5%
NLSA322522T-8R2□	8.200	7.96	30	35	2.00	170	5%
NLSA322522T-100□	10.00	2.52	30	30	2.10	150	5%
NLSA322522T-120□	12.00	2.52	30	20	2.50	140	5%
NLSA322522T-150□	15.00	2.52	30	20	2.80	130	5%
NLSA322522T-180□	18.00	2.52	30	20	3.30	120	5%
NLSA322522T-220□	22.00	2.52	30	20	3.70	110	5%
NLSA322522T-270□	27.00	2.52	30	20	5.00	80	5%
NLSA322522T-330□	33.00	2.52	30	17	5.60	70	5%
NLSA322522T-390□	39.00	2.52	30	16	6.40	65	5%
NLSA322522T-470□	47.00	2.52	30	15	7.00	60	5%
NLSA322522T-560□	56.00	2.52	30	13	8.00	55	5%
NLSA322522T-680□	68.00	2.52	30	12	9.00	50	5%
NLSA322522T-820□	82.00	2.52	30	11	10.00	45	5%
NLSA322522T-101□	100.00	0.796	20	10	10.00	40	5%
NLSA322522T-121□	120.00	0.796	20	10	11.00	70	5%
NLSA322522T-151□	150.00	0.796	20	8	15.00	65	5%
NLSA322522T-181□	180.00	0.796	20	7	17.00	60	5%
NLSA322522T-221□	220.00	0.796	20	7	21.00	50	5%
NLSA322522T-271□	270.00	0.796	20	6	28.00	45	5%
NLSA322522T-331□	330.00	0.796	20	5	34.00	40	5%
NLSA322522T-391□	390.00	0.796	20	5	38.00	35	5%
NLSA322522T-471□	470.00	0.796	20	4	40.00	25	5%

.Electrical Characteristics (NLSA453032 TYPE)

Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(MHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA453032T-R10□	0.100	25.2	35	300	0.18	800	10%,20%
NLSA453032T-R12□	0.120	25.2	35	280	0.20	770	10%,20%
NLSA453032T-R15□	0.150	25.2	35	250	0.22	730	10%,20%
NLSA453032T-R18□	0.180	25.2	35	220	0.24	700	10%,20%
NLSA453032T-R22□	0.220	25.2	40	200	0.25	665	10%,20%
NLSA453032T-R27□	0.270	25.2	40	180	0.26	635	10%,20%
NLSA453032T-R33□	0.330	25.2	40	165	0.28	605	10%,20%
NLSA453032T-R39□	0.390	25.2	40	150	0.30	575	10%,20%
NLSA453032T-R47□	0.470	25.2	40	145	0.32	545	10%,20%
NLSA453032T-R56□	0.560	25.2	40	140	0.36	520	10%,20%
NLSA453032T-R68□	0.680	25.2	40	135	0.40	500	10%,20%
NLSA453032T-R82□	0.820	25.2	40	130	0.45	475	10%,20%
NLSA453032T-1R0□	1.000	7.96	50	100	0.50	450	10%,20%
NLSA453032T-1R2□	1.200	7.96	50	80	0.55	430	10%,20%
NLSA453032T-1R5□	1.500	7.96	50	70	0.60	410	10%,20%
NLSA453032T-1R8□	1.800	7.96	50	60	0.65	390	10%,20%

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Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(MHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA453032T-2R2□	2.200	7.96	50	55	0.70	380	10%,20%
NLSA453032T-2R7□	2.700	7.96	50	50	0.75	370	10%,20%
NLSA453032T-3R3□	3.300	7.96	50	45	0.80	355	10%,20%
NLSA453032T-3R9□	3.900	7.96	50	40	0.90	330	10%,20%
NLSA453032T-4R7□	4.700	7.96	50	35	1.00	315	10%,20%
NLSA453032T-5R6□	5.600	7.96	50	33	1.10	300	10%,20%
NLSA453032T-6R8□	6.800	7.96	50	27	1.20	285	10%,20%
NLSA453032T-8R2□	8.200	7.96	50	23	1.40	270	10%,20%
NLSA453032T-100□	10.00	2.52	50	20	1.50	250	10%,20%
NLSA453032T-120□	12.00	2.52	50	18	2.00	225	10%,20%
NLSA453032T-150□	15.00	2.52	50	17	2.50	200	10%,20%
NLSA453032T-180□	18.00	2.52	50	15	2.80	190	10%,20%
NLSA453032T-220□	22.00	2.52	50	13	3.20	180	10%,20%
NLSA453032T-270□	27.00	2.52	50	12	3.60	170	10%,20%
NLSA453032T-330□	33.00	2.52	50	11	4.00	160	10%,20%
NLSA453032T-390□	39.00	2.52	50	10	4.50	150	10%,20%
NLSA453032T-470□	47.00	2.52	50	10	5.00	140	10%,20%
NLSA453032T-560□	56.00	2.52	50	9	5.50	135	10%,20%
NLSA453032T-680□	68.00	2.52	50	9	6.00	130	10%,20%
NLSA453032T-820□	82.00	2.52	50	8	7.00	120	10%,20%
NLSA453032T-101□	100.00	0.796	20	8	8.00	110	10%,20%
NLSA453032T-121□	120.00	0.796	20	6	8.00	110	10%,20%
NLSA453032T-151□	150.00	0.796	20	5	9.00	105	10%,20%
NLSA453032T-181□	180.00	0.796	20	5	9.50	105	10%,20%
NLSA453032T-221□	220.00	0.796	20	4	10.00	100	10%,20%
NLSA453032T-271□	270.00	0.796	20	4	12.00	92	10%,20%
NLSA453032T-331□	330.00	0.796	20	3.5	14.00	85	10%,20%
NLSA453032T-391□	390.00	0.796	20	3	16.00	80	10%,20%
NLSA453032T-471□	470.00	0.796	20	3	26.00	62	10%,20%
NLSA453032T-561□	560.00	0.796	20	3	30.00	50	10%,20%
NLSA453032T-681□	680.00	0.796	20	3	30.00	50	10%,20%
NLSA453032T-821□	820.00	0.796	20	2.5	35.00	30	10%,20%
NLSA453032T-102□	1000	0.252	20	2.5	40.00	30	10%,20%

.Electrical Characteristics (NLSA565030 TYPE)

Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(KHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA565030T-1R0□	1.00	100	10	130	0.05	2900	10%,20%
NLSA565030T-1R5□	1.50	100	10	115	0.05	2600	10%,20%
NLSA565030T-2R2□	2.20	100	10	90	0.07	2300	10%,20%
NLSA565030T-3R3□	3.30	100	10	70	0.08	2000	10%,20%
NLSA565030T-4R7□	4.70	100	10	50	0.09	1500	10%,20%
NLSA565030T-6R8□	6.80	100	10	45	0.13	1200	10%,20%
NLSA565030T-100□	10.00	100	10	35	0.16	1100	10%,20%
NLSA565030T-150□	15.00	100	10	30	0.23	900	10%,20%

SMD Wire Wound Chip Inductor / NLSA TYPE

Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(KHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA565030T-220□	22.00	100	10	20	0.37	700	10%,20%
NLSA565030T-330□	33.00	100	10	15	0.51	580	10%,20%
NLSA565030T-470□	47.00	100	10	14	0.64	500	10%,20%
NLSA565030T-680□	68.00	100	10	11	0.86	400	10%,20%
NLSA565030T-101□	100.00	100	10	9	1.27	300	10%,20%
NLSA565030T-151□	150.00	100	10	6	2.00	250	10%,20%
NLSA565030T-221□	220.00	100	10	5.5	3.11	200	10%,20%
NLSA565030T-331□	330.00	100	10	5	3.80	160	10%,20%
NLSA565030T-471□	470.00	100	10	4	6.20	150	10%,20%
NLSA565030T-681□	680.00	100	10	3	9.20	120	10%,20%
NLSA565030T-102□	1000	100	10	2	13.80	70	10%,20%

.Electrical Characteristics (NLSA565050 TYPE)

Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(MHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA565050T-1R0□	1.00	7.96	10	95.0	0.030	1800	10%,20%
NLSA565050T-1R2□	1.20	7.96	10	70.0	0.035	1700	10%,20%
NLSA565050T-1R5□	1.50	7.96	10	55.0	0.040	1600	10%,20%
NLSA565050T-1R8□	1.80	7.96	10	47.0	0.050	1400	10%,20%
NLSA565050T-2R2□	2.20	7.96	10	42.0	0.060	1300	10%,20%
NLSA565050T-2R7□	2.70	7.96	10	37.0	0.070	1200	10%,20%
NLSA565050T-3R3□	3.30	7.96	10	34.0	0.080	1120	10%,20%
NLSA565050T-3R9□	3.90	7.96	10	32.0	0.090	1050	10%,20%
NLSA565050T-4R7□	4.70	7.96	10	29.0	0.110	950	10%,20%
NLSA565050T-5R6□	5.60	7.96	10	26.0	0.130	880	10%,20%
NLSA565050T-6R8□	6.80	7.96	10	24.0	0.150	810	10%,20%
NLSA565050T-8R2□	8.20	7.96	10	22.0	0.180	750	10%,20%
NLSA565050T-100□	10.00	2.52	10	19.0	0.210	690	10%,20%
NLSA565050T-120□	12.00	2.52	10	17.0	0.250	630	10%,20%
NLSA565050T-150□	15.00	2.52	10	16.0	0.300	580	10%,20%
NLSA565050T-180□	18.00	2.52	10	14.0	0.360	530	10%,20%
NLSA565050T-220□	22.00	2.52	10	13.0	0.430	480	5%,10%
NLSA565050T-270□	27.00	2.52	10	11.5	0.520	440	5%,10%
NLSA565050T-330□	33.00	2.52	10	10.5	0.620	400	5%,10%
NLSA565050T-390□	39.00	2.52	10	9.5	0.720	370	5%,10%
NLSA565050T-470□	47.00	2.52	10	8.5	0.850	340	5%,10%
NLSA565050T-560□	56.00	2.52	10	7.8	1.000	310	5%,10%
NLSA565050T-680□	68.00	2.52	10	7.0	1.200	290	5%,10%
NLSA565050T-820□	82.00	2.52	10	6.4	1.400	270	5%,10%
NLSA565050T-101□	100.00	0.796	20	6.0	1.600	250	5%,10%
NLSA565050T-121□	120.00	0.796	20	5.4	1.900	230	5%,10%
NLSA565050T-151□	150.00	0.796	20	4.8	2.200	210	5%,10%
NLSA565050T-181□	180.00	0.796	20	4.4	2.800	190	5%,10%
NLSA565050T-221□	220.00	0.796	20	3.9	3.400	170	5%,10%
NLSA565050T-271□	270.00	0.796	20	3.6	4.200	155	5%,10%

SMD Wire Wound Chip Inductor / NLSA TYPE

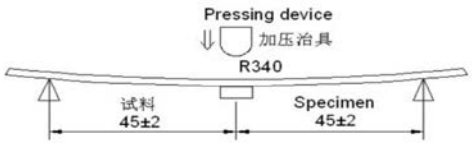
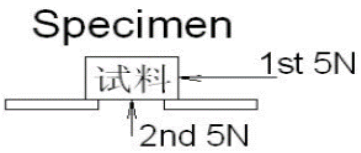
Part No.	Inductance	Test Freq.	Q	SRF	DCR	IDC	Tolerance
	(μH)	(MHZ)	Min.	(MHZ)Min.	(Ω)Max.	(mA)Max.	(±%)
NLSA565050T-331□	330.00	0.796	20	3.2	4.900	140	5%,10%
NLSA565050T-391□	390.00	0.796	20	2.9	5.800	130	5%,10%
NLSA565050T-471□	470.00	0.796	20	2.6	7.000	120	5%,10%
NLSA565050T-561□	560.00	0.796	20	2.4	8.500	110	5%,10%
NLSA565050T-681□	680.00	0.796	20	2.2	10.000	100	5%,10%
NLSA565050T-821□	820.00	0.796	20	2.0	13.000	90	5%,10%
NLSA565050T-102□	1000	0.252	20	1.8	15.000	85	5%,10%
NLSA565050T-122□	1200	0.252	20	1.5	17.000	75	5%,10%
NLSA565050T-152□	1500	0.252	20	1.4	20.000	70	5%,10%
NLSA565050T-182□	1800	0.252	20	1.3	30.000	60	5%,10%
NLSA565050T-222□	2200	0.252	20	1.2	35.000	55	5%,10%
NLSA565050T-272□	2700	0.252	20	1.1	55.000	45	5%,10%
NLSA565050T-332□	3300	0.252	20	1.0	60.000	40	5%,10%
NLSA565050T-392□	3900	0.252	20	1.0	70.000	38	5%,10%
NLSA565050T-472□	4700	0.252	20	0.9	78.000	36	5%,10%
NLSA565050T-562□	5600	0.252	20	0.8	85.000	33	5%,10%
NLSA565050T-682□	6800	0.252	20	0.7	110.000	30	5%,10%
NLSA565050T-822□	8200	0.252	20	0.6	125.000	28	5%,10%
NLSA565050T-103□	10000	0.252	15	0.5	150.000	25	5%,10%

Note:

1. Tolerance: J = ±5% / K= ±10% / M= ±20%
2. IDC base on △L / L0A=25% or Temp. rise 20℃, whichever is smaller.

SMD Wire Wound Chip Inductor / NLSA TYPE

.Reliability and Test Conditions

ITEM	Conditions	Specification
Temperature Drift	To be measured in the range of -25℃ to 85℃.	Inductance temperature coefficient 2000 ppm/℃ or less
Storage Temperature	With taping.	- 40℃ ~ +105℃
Operating Temperature	Including self temperature rise.	- 40℃ ~ +105℃
Bending Test	Apply pressure gradually in the direction of the arrow at a rate of about 0.5mm/s until bent depth reaches 3mm and hold for 30±5s.  Board : 40 X 100 mm Thickness : 1.0mm	Change from an initial value L : within±10%
Adhesion Strength	A static load using a R0.5 pressing tool shall be applied the arrow and to the body of the specimen in the direction of the arrow and shall be hold for 60±5s. Measure after removing pressure.  	Change from an initial value L : within±10%
Vibration	The specimen shall be subjected to a vibration of 1.5mm amplitude, sweep frequency 10~55Hz (10Hz to 55Hz to 10Hz in a period of one minute) for 1 h in each of 3(X,Y,Z) axes.	Change from an initial value L : within±10%
Mechanical Shock	Peak acceleration: 981 m/S2 Duration of pulse : 6ms 3 times in each of 3(X,Y,Z)axes. The specimen must be fixed on test board. Three successive shock shall be applied in the perpendicular direction of each surface of the specimen.	Change from an initial value L : within±10%

SMD Wire Wound Chip Inductor / NLSA TYPE

.Reliability and Test Conditions

ITEM	Conditions	Specification
Free fall Test	The specimen must be fixed on test board. It must be equipped with instruments of which weight is 500g. Then it shall be fallen freely from 1m height to rigid wood 3 times in each of three axes.	Change from an initial value L : within±10%
Solderability	Terminals shall be immersed for 5 to 10 seconds in flux at room temperature. Dip sample into solder bath containing molten solder at 245±5℃ for 3±0.5 seconds.	New solder shall cover 90% minimum of the surface immersed.
Dielectric Strength	100V DC shall be applied for 60s between the terminal and the core.	Without damage.
Resistance to soldering heat	Test method : Reflow soldering method Preheat 150~180℃ 90±30s Peak temp 260(+ 5,-0)℃ (230℃min ,30±10s) The specimen shall be subjected to the reflow process under the above condition 2 times. Test board shall be 0.8mm thick. Base material shall be glass epoxy resin. Measurement The specimen shall be stored at standard atmospheric conditions for 1h in prior to the measurement.	Change from an initial value L : within±10%
Insulation resistance	100V DC shall be applied between the terminal and the core.	100mΩ or more.
Low temperature	The specimen shall be stored at a temperature of -40±3℃ for 500 ±12h. Then it shall be stabilized under standard atmospheric conditions for 1h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%

SMD Wire Wound Chip Inductor / NLSA TYPE

.Reliability and Test Conditions

ITEM	Conditions	Specification
Dry heat	The specimen shall be stored at a temperature of 85 ± 2℃ for 500± 12h. Then it shall be stabilized under standard atmospheric conditions for 1h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%
Dump heat	The specimen shall be stored at a temperature of 60±2℃ with relative humidity of 90 ~ 95% for 500 ± 2h. Then it shall be stabilized under standard atmospheric conditions for 1h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%
Temperature cycle	The specimen shall be subjected to 100 continuous cycles of temperature change of -40℃ for 30 min and 85℃ for 30 min with the transit period of 2min or less. Then it shall be stabilized under standard atmospheric conditions for 1h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%

.Standard atmospheric conditions

UNLSAess otherwise specified, the standard range of atmospheric conditions in making measurements and test as follows.

1. Ambient temperature : 5℃ to 35℃
2. Relative humidity : 45% to 85%
3. Air pressure : 86kPa to 106kPa

If more strict measurement is required, measurement shall be made within following limits.

1. Ambient temperature : 20±2℃
2. Relative humidity: 65±5%
3. Air pressure: 86kPa to 106kPa

.Standard atmospheric conditions

We confirm that our products and our production process accord with "rule of RoHS".

All mater used in this product are registered material under the law concerning the examination and Regulation of Manufacture of Chemical Substances.