THE DATASHEET OF

NL322522T-R39J

Inductors

For General Applications
SMD

NL Series NL3225 Type

FEATURES

- The NL series are available in 5 form factors ranging from 2016 to 5650.
- Utilizing a miniaturized winding structure, these products provide high Q characteristics.
- Inductance tolerance is ±5 percent.

APPLICATIONS

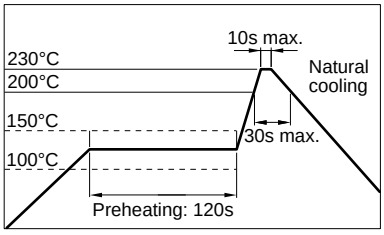
Personal computers, hard disk drives, and other electronic equipment.

SPECIFICATIONS

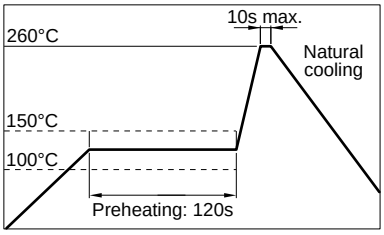
Operating temperature range	–20 to +85°C
Storage temperature range	–40 to +85°C [Unit of products]

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



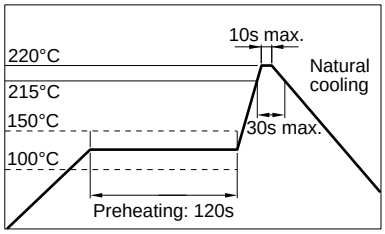
FLOW SOLDERING



IRON SOLDERING

Perform soldering at 250°C on 30W max. within 5 seconds.

VAPOR-PHASING



FLUX AND CLEANING

Rosin-based flux is recommended.

Cleaning Conditions

Solvent	Chlorine-based solvent (Do not use acid or alkali solvents.)
Time	2min max.

PRODUCT IDENTIFICATION

NL	201614	T-	2R2	J
(1)	(2)	(3)	(4)	(5)

(1)Series name

(2)Dimensions L×W×T

201614	2.1×1.6×1.4mm
252018	2.5×2.0×1.8mm
322522	3.2×2.5×2.2mm
453232	4.5×3.2×3.2mm
565050	5.6×5.0×5.0mm

(3)Packaging style

T	Taping (reel)

(4)Inductance value

1R0	1µH
330	33µH

(5)Inductance tolerance

J	±5%
K	±10%

PACKAGING STYLE AND QUANTITIES

Packaging style	Type	Quantity
Taping	NL201614T	2000 pieces/reel
	NL252018T	2000 pieces/reel
	NL322522T	2000 pieces/reel
	NL453232T	500 pieces/reel
	NL565050T	400 pieces/reel

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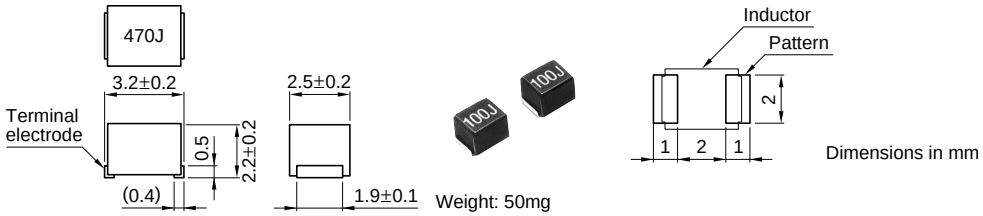
SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Weight: 50mg

ELECTRICAL CHARACTERISTICS

Inductance (µH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current (mA)max.	Part No.
0.01	±10, ±5%	15	100	2500	0.13	450	NL322522T-010X*
0.012	±10, ±5%	17	100	2300	0.14	450	NL322522T-012X
0.015	±10, ±5%	19	100	2100	0.16	450	NL322522T-015X
0.018	±10, ±5%	21	100	1900	0.18	450	NL322522T-018X
0.022	±10, ±5%	23	100	1700	0.2	450	NL322522T-022X
0.027	±10, ±5%	23	100	1500	0.22	450	NL322522T-027X
0.033	±10, ±5%	25	100	1400	0.24	450	NL322522T-033X
0.039	±10, ±5%	25	100	1300	0.27	450	NL322522T-039X
0.047	±10, ±5%	26	100	1200	0.3	450	NL322522T-047X
0.056	±10, ±5%	26	100	1100	0.33	450	NL322522T-056X
0.068	±10, ±5%	27	100	1000	0.36	450	NL322522T-068X
0.082	±10, ±5%	27	100	900	0.4	450	NL322522T-082X
0.1	±10, ±5%	28	100	700	0.44	450	NL322522T-R10X
0.12	±10, ±5%	30	25.2	500	0.22	450	NL322522T-R12X
0.15	±10, ±5%	30	25.2	450	0.25	450	NL322522T-R15X
0.18	±10, ±5%	30	25.2	400	0.28	450	NL322522T-R18X
0.22	±10, ±5%	30	25.2	350	0.32	450	NL322522T-R22X
0.27	±10, ±5%	30	25.2	320	0.36	450	NL322522T-R27X
0.33	±10, ±5%	30	25.2	300	0.4	450	NL322522T-R33X
0.39	±10, ±5%	30	25.2	250	0.45	450	NL322522T-R39X
0.47	±10, ±5%	30	25.2	220	0.5	450	NL322522T-R47X
0.56	±10, ±5%	30	25.2	180	0.55	450	NL322522T-R56X
0.68	±10, ±5%	30	25.2	160	0.6	450	NL322522T-R68X
0.82	±10, ±5%	30	25.2	140	0.65	450	NL322522T-R82X
1	±5%	30	7.96	120	0.7	400	NL322522T-1R0J
1.2	±5%	30	7.96	100	0.75	390	NL322522T-1R2J
1.5	±5%	30	7.96	85	0.85	370	NL322522T-1R5J
1.8	±5%	30	7.96	80	0.9	350	NL322522T-1R8J
2.2	±5%	30	7.96	75	1	320	NL322522T-2R2J
2.7	±5%	30	7.96	70	1.1	290	NL322522T-2R7J
3.3	±5%	30	7.96	60	1.2	260	NL322522T-3R3J
3.9	±5%	30	7.96	55	1.3	250	NL322522T-3R9J
4.7	±5%	30	7.96	50	1.5	220	NL322522T-4R7J
5.6	±5%	30	7.96	45	1.6	200	NL322522T-5R6J
6.8	±5%	30	7.96	40	1.8	180	NL322522T-6R8J
8.2	±5%	30	7.96	35	2	170	NL322522T-8R2J
10	±5%	30	2.52	30	2.1	150	NL322522T-100J
12	±5%	30	2.52	20	2.5	140	NL322522T-120J

* X: Please specify the inductance tolerance, K(±10%) or J(±5%)

• Inductance tolerance is only standard.

• Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER (16085A+16093B+TDK TF-1) [L ≧ 0.12µH]
SRF: HP8753C NETWORK ANALYZER
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

TDK

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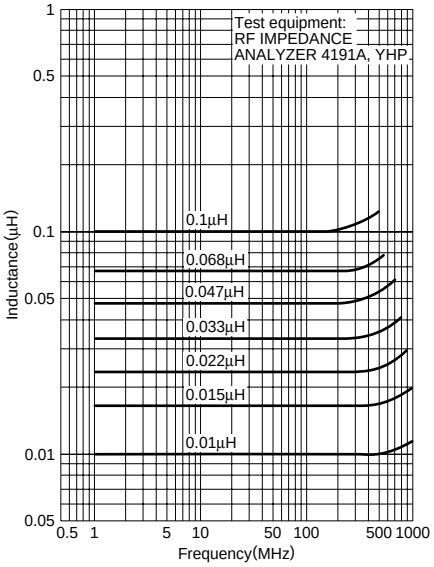
ELECTRICAL CHARACTERISTICS

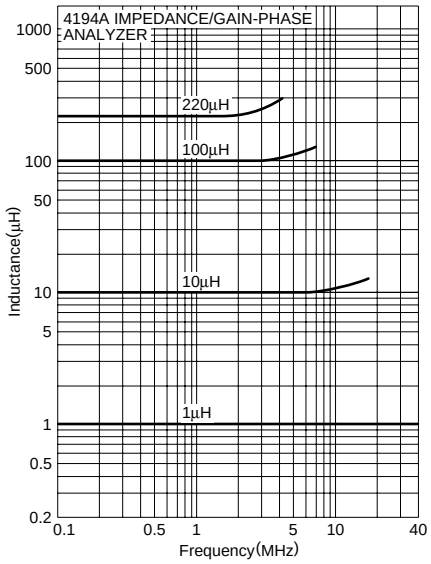
Inductance (μH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current (mA)max.	Part No.
15	±5%	30	2.52	20	2.8	130	NL322522T-150J
18	±5%	30	2.52	20	3.3	120	NL322522T-180J
22	±5%	30	2.52	20	3.7	110	NL322522T-220J
27	±5%	30	2.52	20	5	80	NL322522T-270J
33	±5%	30	2.52	17	5.6	70	NL322522T-330J
39	±5%	30	2.52	16	6.4	65	NL322522T-390J
47	±5%	30	2.52	15	7	60	NL322522T-470J
56	±5%	30	2.52	13	8	55	NL322522T-560J
68	±5%	30	2.52	12	9	50	NL322522T-680J
82	±5%	30	2.52	11	10	45	NL322522T-820J
100	±5%	20	0.796	10	10	40	NL322522T-101J
120	±5%	20	0.796	10	11	70	NL322522T-121J
150	±5%	20	0.796	8	15	65	NL322522T-151J
180	±5%	20	0.796	7	17	60	NL322522T-181J
220	±5%	20	0.796	7	21	50	NL322522T-221J
270	±5%	20	0.796	6	28	45	NL322522T-271J
330	±5%	20	0.796	5	34	40	NL322522T-331J
390	±5%	20	0.796	5	42	35	NL322522T-391J
470	±5%	20	0.796	4	40	25	NL322522T-471J

- Inductance tolerance is only standard.
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER (16085A+16093B+TDK TF-1) [L ≧ 0.12μH]
  SRF: HP8753C NETWORK ANALYZER
  Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

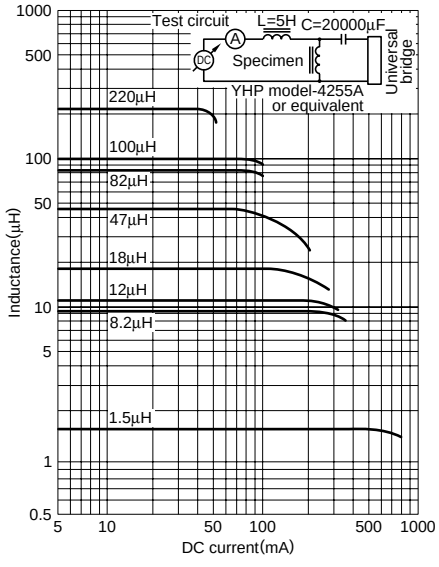
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. FREQUENCY CHARACTERISTICS





INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



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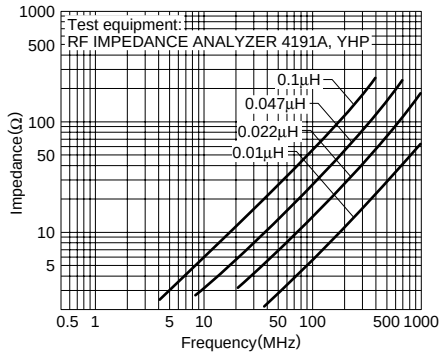
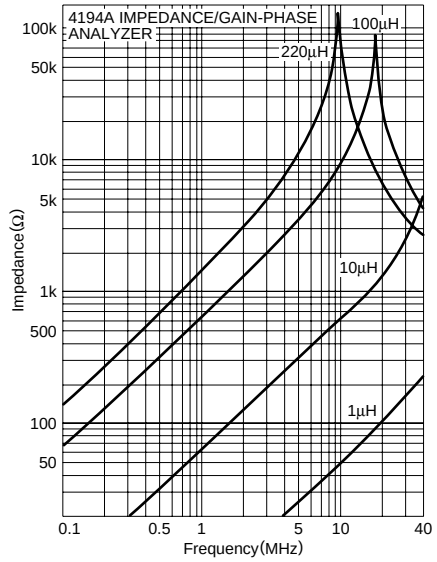
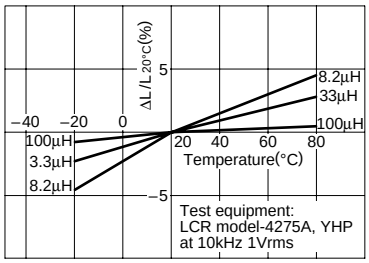
TYPICAL ELECTRICAL CHARACTERISTICS

IMPEDANCE vs. FREQUENCY CHARACTERISTICS

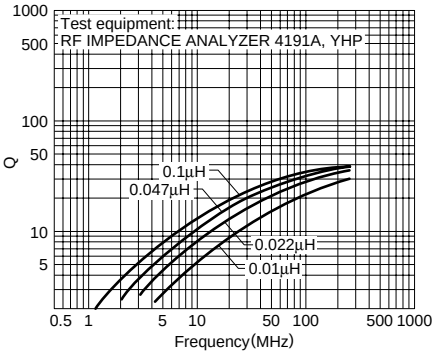


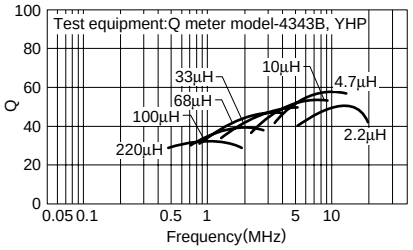


INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS





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