

Inductors

For General Applications
SMD

NL Series NL4532 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

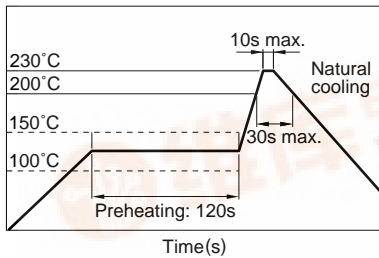
Personal computers, hard disk drives, and other electronic equipment.

SPECIFICATIONS

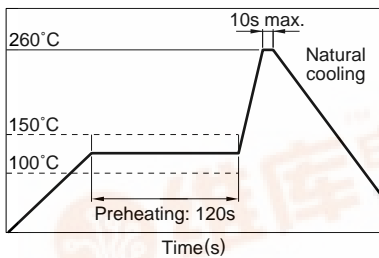
Operating temperature range	-20 to +85°C
Storage temperature range	-40 to +85°C [Unit of products]

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



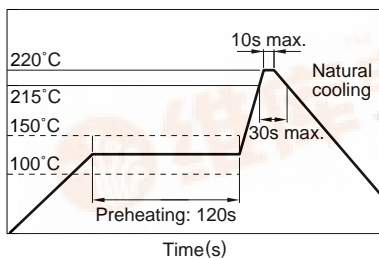
FLOW SOLDERING



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	$\pm 5\%$
K	$\pm 10\%$

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



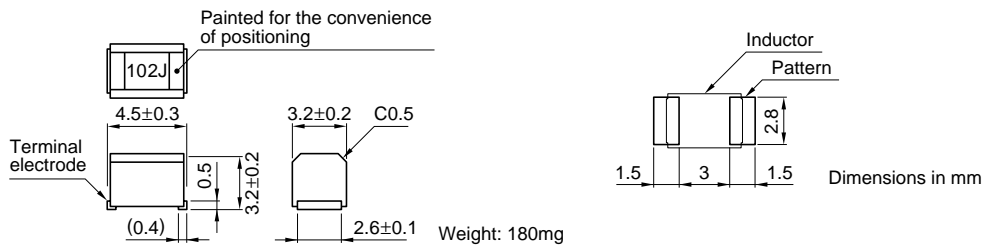
Inductors

For General Applications

SMD

NL Series NL4532 Type

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Weight: 180mg

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.
1.0	±5%	50	7.96	100.0	0.50	450	NL453232T-1R0J
1.2	±5%	50	7.96	80.0	0.55	430	NL453232T-1R2J
1.5	±5%	50	7.96	70.0	0.60	410	NL453232T-1R5J
1.8	±5%	50	7.96	60.0	0.65	390	NL453232T-1R8J
2.2	±5%	50	7.96	55.0	0.70	380	NL453232T-2R2J
2.7	±5%	50	7.96	50.0	0.75	370	NL453232T-2R7J
3.3	±5%	50	7.96	45.0	0.80	355	NL453232T-3R3J
3.9	±5%	50	7.96	40.0	0.90	330	NL453232T-3R9J
4.7	±5%	50	7.96	35.0	1.00	315	NL453232T-4R7J
5.6	±5%	50	7.96	33.0	1.10	300	NL453232T-5R6J
6.8	±5%	50	7.96	27.0	1.20	285	NL453232T-6R8J
8.2	±5%	50	7.96	25.0	1.40	270	NL453232T-8R2
10.0	±5%	50	2.52	20.0	1.60	250	NL453232T-100J
12.0	±5%	50	2.52	18.0	2.00	225	NL453232T-120J
15.0	±5%	50	2.52	17.0	2.50	200	NL453232T-150J
18.0	±5%	50	2.52	15.0	2.80	190	NL453232T-180J
22.0	±5%	50	2.52	13.0	3.20	180	NL453232T-220J
27.0	±5%	50	2.52	12.0	3.60	170	NL453232T-270J
33.0	±5%	50	2.52	11.0	4.00	160	NL453232T-330J
39.0	±5%	50	2.52	10.0	4.50	150	NL453232T-390J
47.0	±5%	50	2.52	10.0	5.00	140	NL453232T-470J
56.0	±5%	50	2.52	9.0	5.50	135	NL453232T-560J
68.0	±5%	50	2.52	9.0	6.00	130	NL453232T-680J
82.0	±5%	50	2.52	8.0	7.00	120	NL453232T-820J
100.0	±5%	40	0.796	8.0	8.00	110	NL453232T-101J
120.0	±5%	40	0.796	6.0	8.00	110	NL453232T-121J
150.0	±5%	40	0.796	5.0	9.00	105	NL453232T-151J
180.0	±5%	40	0.796	5.0	9.50	102	NL453232T-181J
220.0	±5%	40	0.796	4.0	10.00	100	NL453232T-221J
270.0	±5%	40	0.796	4.0	12.00	92	NL453232T-271J
330.0	±5%	40	0.796	3.5	14.00	85	NL453232T-331J
390.0	±5%	40	0.796	3.0	16.00	80	NL453232T-391J
470.0	±5%	40	0.796	3.0	26.00	62	NL453232T-471J
560.0	±5%	30	0.796	3.0	30.00	50	NL453232T-561J
680.0	±5%	30	0.796	3.0	30.00	50	NL453232T-681J
820.0	±5%	30	0.796	2.5	35.00	30	NL453232T-821J
1000.0	±5%	30	0.252	2.5	40.00	30	NL453232T-102J

• Inductance tolerance is only standard.

• Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER (16085A+16093B+TDK TF-1)
 SRF: HP8753C NETWORK ANALYZER (Z_{in}=Z_{out}=50Ω)
 Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

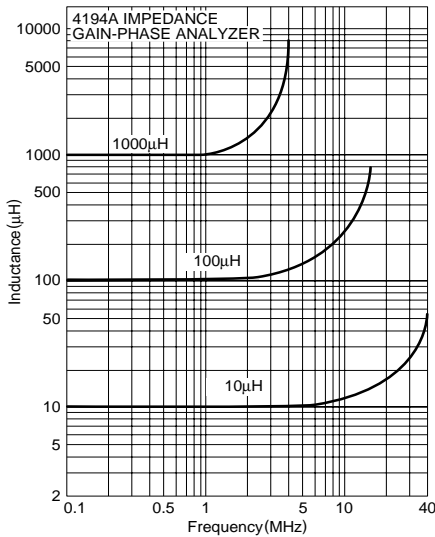
Inductors

NL Series NL4532 Type

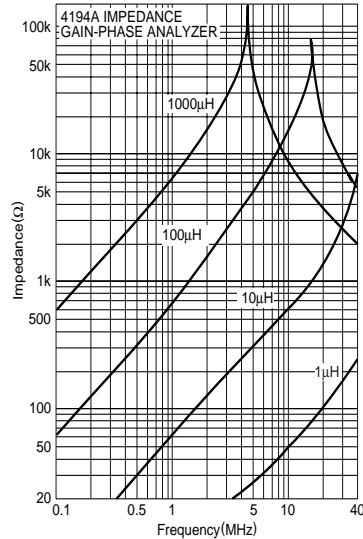
For General Applications
SMD

TYPICAL ELECTRICAL CHARACTERISTICS

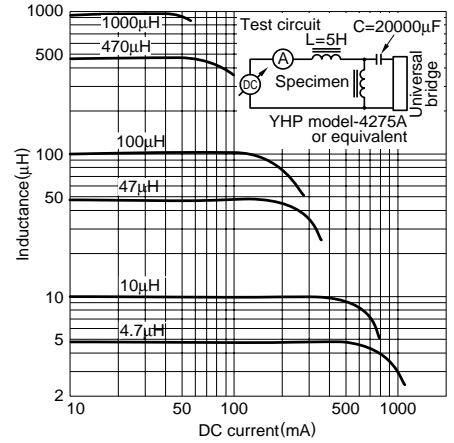
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS

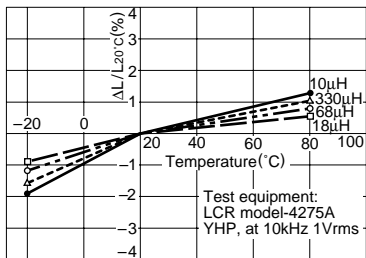


INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

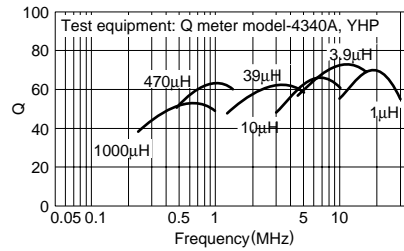


TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS



T