

# Inductors

## For General Applications SMD

## NL Series NL2016 Type

### FEATURES

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

### APPLICATIONS

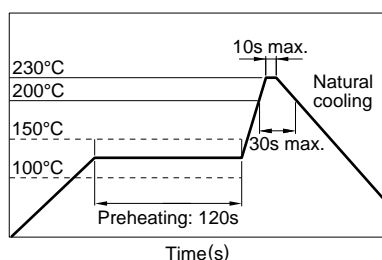
Personal computers, hard disk drives, and other electronic equipment.

### SPECIFICATIONS

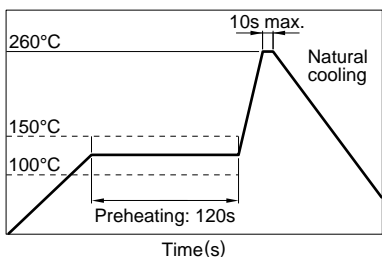
Operating temperature range	-20 to +85°C
Storage temperature range	-40 to +85°C [Unit of products]

### RECOMMENDED SOLDERING CONDITIONS

#### REFLOW SOLDERING



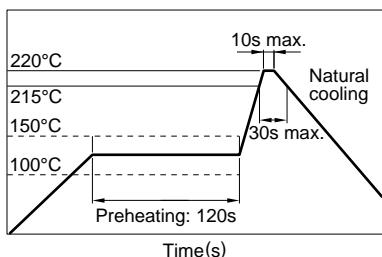
#### FLOW SOLDERING



#### 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)
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(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

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SMD

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### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



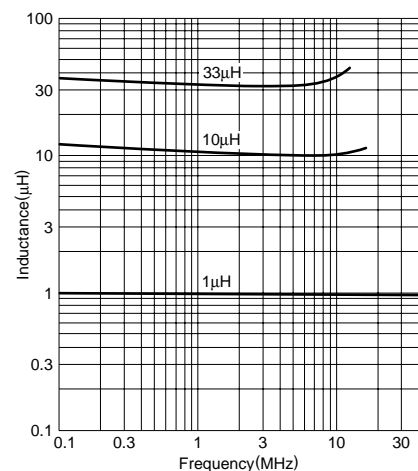
### ELECTRICAL CHARACTERISTICS

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	±5%	15	7.96	63	1.2	245	NL201614T-1R0J
1.5	±5%	15	7.96	60	1.45	225	NL201614T-1R5J
2.2	±5%	15	7.96	58	1.8	200	NL201614T-2R2J
3.3	±5%	15	7.96	50	2.3	175	NL201614T-3R3J
4.7	±5%	15	7.96	43	2.8	140	NL201614T-4R7J
6.8	±5%	15	7.96	36	3.4	115	NL201614T-6R8J
10	±5%	10	2.52	30	4.7	98	NL201614T-100J
15	±5%	10	2.52	23	6.5	80	NL201614T-150J
22	±5%	10	2.52	20	8	68	NL201614T-220J
33	±5%	10	2.52	17	10.7	60	NL201614T-330J

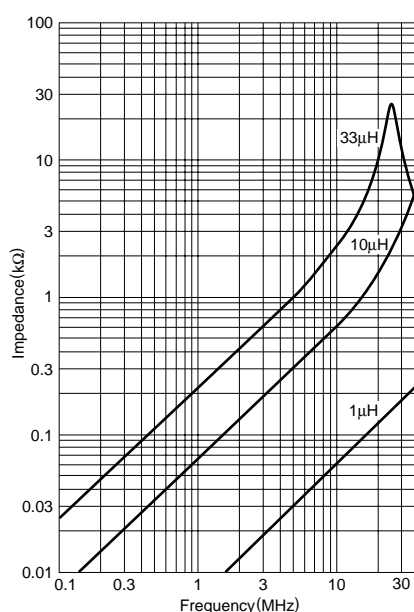
- Inductance tolerance is only standard.
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER (16085A+16093B+TDK TF-1)  
SRF: HP8753C NETWORK ANALYZER  
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

### TYPICAL ELECTRICAL CHARACTERISTICS

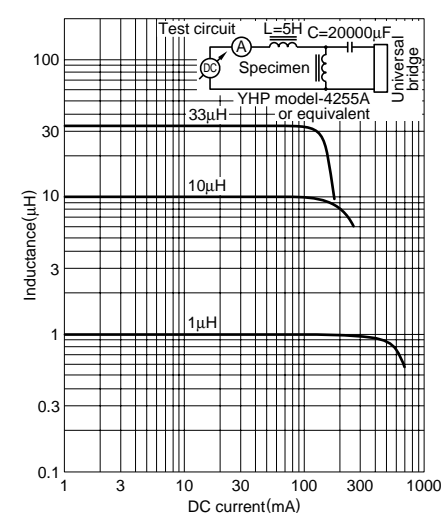
#### INDUCTANCE vs. FREQUENCY CHARACTERISTICS



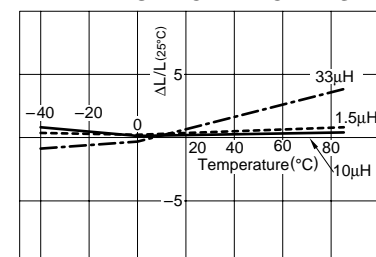
#### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS



#### INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



#### Q vs. FREQUENCY CHARACTERISTICS

