

# Inductors

## For General Applications

### SMD

## NL Series NL4532 Type

### FEATURES

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

### APPLICATIONS

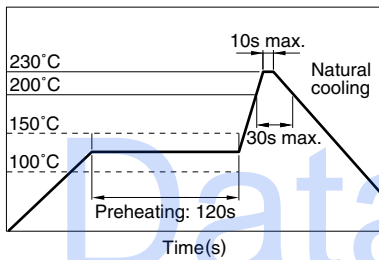
Personal computers, hard disk drives, and other electronic equipment.

### SPECIFICATIONS

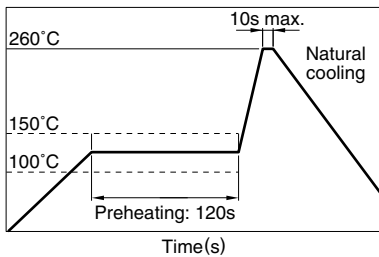
Operating temperature range	-40 to +85°C
Storage temperature range	-40 to +85°C [Unit of products]

### RECOMMENDED SOLDERING CONDITIONS

#### REFLOW SOLDERING



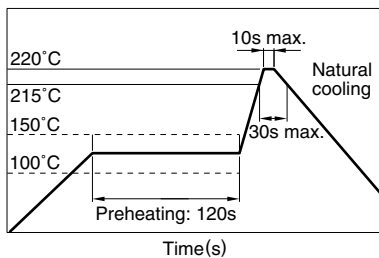
#### FLOW SOLDERING



#### 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	Please select the solvent of this product avoiding a strong acid and a strong alkali, and considering the environments.
Time	2min max.

### PRODUCT IDENTIFICATION

NL	453232	T-	2R2	J
(1)	(2)	(3)	(4)	(5)

(1)Series name

(2)Dimensions L×W×T

453232	4.5×3.2×3.2mm
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(3)Packaging style

T	Taping (reel)
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(4)Inductance value

1R0	1μH
330	33μH

(5)Inductance tolerance

J	$\pm 5\%$
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### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	500 pieces/reel

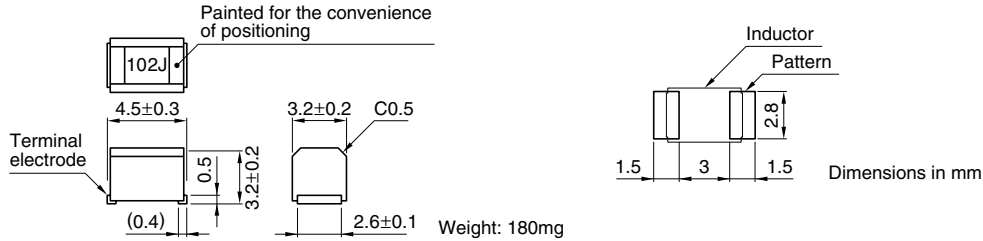
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### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



### 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%	50	7.96	100	0.5	450	NL453232T-1R0J
1.2	±5%	50	7.96	80	0.55	430	NL453232T-1R2J
1.5	±5%	50	7.96	70	0.6	410	NL453232T-1R5J
1.8	±5%	50	7.96	60	0.65	390	NL453232T-1R8J
2.2	±5%	50	7.96	55	0.7	380	NL453232T-2R2J
2.7	±5%	50	7.96	50	0.75	370	NL453232T-2R7J
3.3	±5%	50	7.96	45	0.8	355	NL453232T-3R3J
3.9	±5%	50	7.96	40	0.9	330	NL453232T-3R9J
4.7	±5%	50	7.96	35	1	315	NL453232T-4R7J
5.6	±5%	50	7.96	33	1.1	300	NL453232T-5R6J
6.8	±5%	50	7.96	27	1.2	285	NL453232T-6R8J
8.2	±5%	50	7.96	25	1.4	270	NL453232T-8R2
10	±5%	50	2.52	20	1.6	250	NL453232T-100J
12	±5%	50	2.52	18	2	225	NL453232T-120J
15	±5%	50	2.52	17	2.5	200	NL453232T-150J
18	±5%	50	2.52	15	2.8	190	NL453232T-180J
22	±5%	50	2.52	13	3.2	180	NL453232T-220J
27	±5%	50	2.52	12	3.6	170	NL453232T-270J
33	±5%	50	2.52	11	4	160	NL453232T-330J
39	±5%	50	2.52	10	4.5	150	NL453232T-390J
47	±5%	50	2.52	10	5	140	NL453232T-470J
56	±5%	50	2.52	9	5.5	135	NL453232T-560J
68	±5%	50	2.52	9	6	130	NL453232T-680J
82	±5%	50	2.52	8	7	120	NL453232T-820J
100	±5%	40	0.796	8	8	110	NL453232T-101J
120	±5%	40	0.796	6	8	110	NL453232T-121J
150	±5%	40	0.796	5	9	105	NL453232T-151J
180	±5%	40	0.796	5	9.5	102	NL453232T-181J
220	±5%	40	0.796	4	10	100	NL453232T-221J
270	±5%	40	0.796	4	12	92	NL453232T-271J
330	±5%	40	0.796	3.5	14	85	NL453232T-331J
390	±5%	40	0.796	3	16	80	NL453232T-391J
470	±5%	40	0.796	3	26	62	NL453232T-471J
560	±5%	30	0.796	3	30	50	NL453232T-561J
680	±5%	30	0.796	3	30	50	NL453232T-681J
820	±5%	30	0.796	2.5	35	30	NL453232T-821J
1000	±5%	30	0.252	2.5	40	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<sub>in</sub>=Z<sub>out</sub>=50Ω)  
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

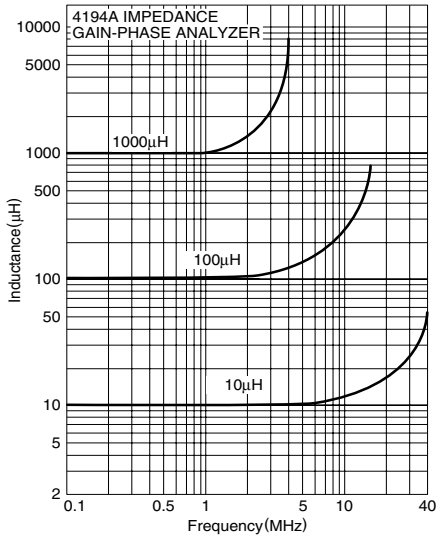
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# NL Series NL4532 Type

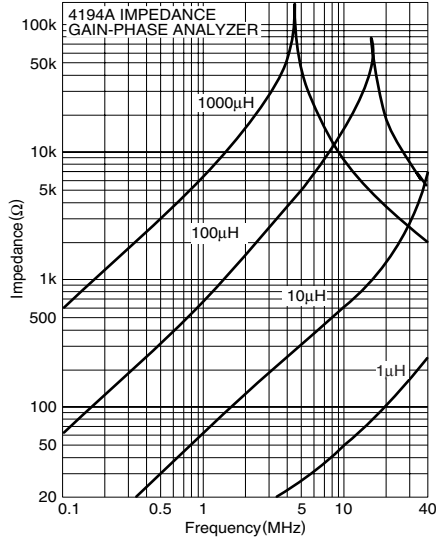
For General Applications  
SMD

## TYPICAL ELECTRICAL CHARACTERISTICS

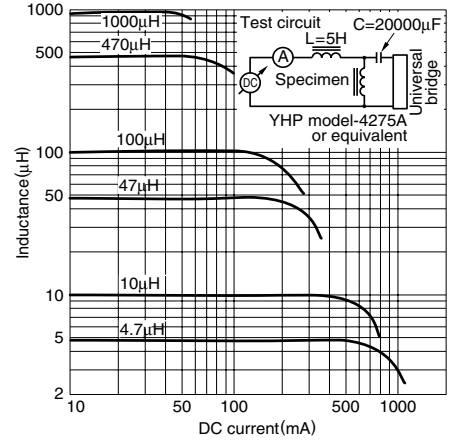
### INDUCTANCE vs. FREQUENCY CHARACTERISTICS



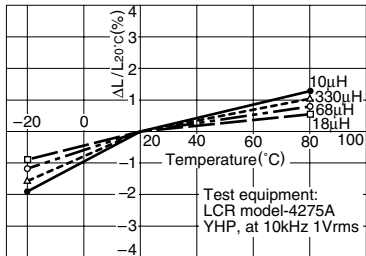
### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



### INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



### Q vs. FREQUENCY CHARACTERISTICS

