

# SMD Inductors(Coils) For Power Line(Wound)

Conformity to RoHS Directive

## NLC Series NLC453232

### FEATURES

- The NLC series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- The product has good heat durability that withstands lead-free compatible reflow soldering conditions.
- Lead-free material is used for the plating on the terminal.
- The product uses metal terminals, which realize excellent connection reliability.
- From 1 $\mu$ H to 330 $\mu$ H, all of the products in the E-12 series are K( $\pm$ 10%) tolerance products.
- It is a product conforming to RoHS directive.

### APPLICATIONS

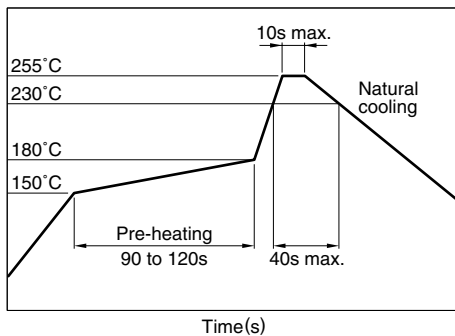
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Audio-visual equipment including TVs and VCRs.
- Other electronic equipment including HDDs and ODDs.

### SPECIFICATIONS

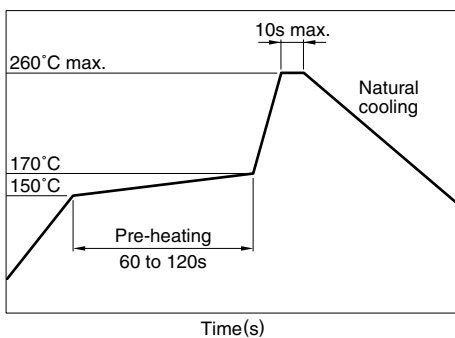
Operating temperature range	-40 to +105°C [Including self-temperature rise]
Storage temperature range	-40 to +105°C

### RECOMMENDED SOLDERING CONDITIONS

#### REFLOW SOLDERING



#### FLOW SOLDERING



### IRON SOLDERING

Tip temperature	300 to 350°C
Heating time	3 seconds/soldering
Soldering rod specifications	Output: 30W Tip diameter: 1mm

- Based on the above conditions, use a maximum product temperature of 260°C and a maximum accumulated heating time of 10 seconds as a guideline.
- Please contact us for details.

### PRODUCT IDENTIFICATION

NLC	453232	T	2R2	K	-	PF
(1)	(2)	(3)	(4)	(5)	(6)	

(1) Series name

(2) Dimensions

453232	4.5×3.2×3.2mm (L×W×T)
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(3) Packaging style

T	Taping (reel)
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(4) Inductance value

1R0	1 $\mu$ H
100	10 $\mu$ H
101	100 $\mu$ H

(5) Inductance tolerance

K	$\pm$ 10%
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(6) Lead-free compatible product

PF	Lead-free compatible product
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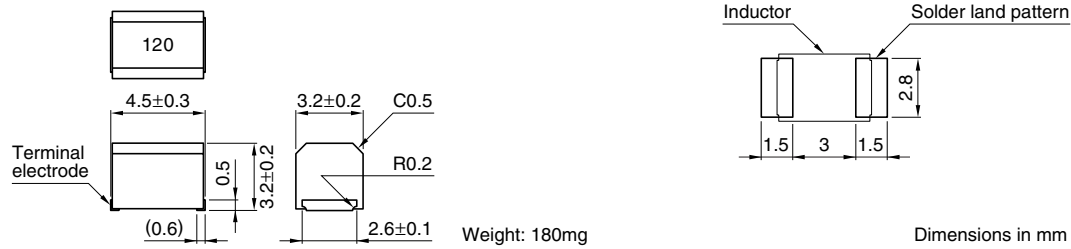
### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	500 pieces/reel

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

## SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Dimensions in mm

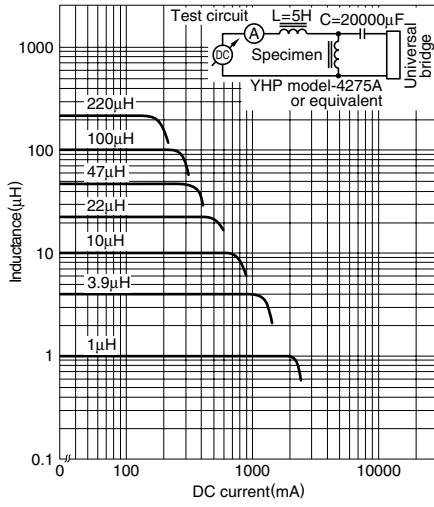
## ELECTRICAL CHARACTERISTICS

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	±10%	10	7.96	200	0.11	1050	NLC453232T-1R0K-PF
1.2	±10%	10	7.96	160	0.12	1000	NLC453232T-1R2K-PF
1.5	±10%	10	7.96	130	0.15	950	NLC453232T-1R5K-PF
1.8	±10%	10	7.96	100	0.16	900	NLC453232T-1R8K-PF
2.2	±10%	10	7.96	80	0.18	850	NLC453232T-2R2K-PF
2.7	±10%	10	7.96	60	0.2	800	NLC453232T-2R7K-PF
3.3	±10%	10	7.96	45	0.22	750	NLC453232T-3R3K-PF
3.9	±10%	10	7.96	40	0.24	700	NLC453232T-3R9K-PF
4.7	±10%	10	7.96	35	0.27	650	NLC453232T-4R7K-PF
5.6	±10%	10	7.96	30	0.3	650	NLC453232T-5R6K-PF
6.8	±10%	10	7.96	28	0.35	600	NLC453232T-6R8K-PF
8.2	±10%	10	7.96	25	0.4	600	NLC453232T-8R2K-PF
10	±10%	10	2.52	22	0.5	550	NLC453232T-100K-PF
12	±10%	10	2.52	21	0.6	500	NLC453232T-120K-PF
15	±10%	10	2.52	20	0.7	450	NLC453232T-150K-PF
18	±10%	10	2.52	19	0.8	400	NLC453232T-180K-PF
22	±10%	10	2.52	18	0.9	370	NLC453232T-220K-PF
27	±10%	10	2.52	16	1.2	330	NLC453232T-270K-PF
33	±10%	10	2.52	14	1.4	300	NLC453232T-330K-PF
39	±10%	10	2.52	12	1.6	280	NLC453232T-390K-PF
47	±10%	10	2.52	11.5	1.9	260	NLC453232T-470K-PF
56	±10%	10	2.52	11	2.2	240	NLC453232T-560K-PF
68	±10%	10	2.52	10	2.6	220	NLC453232T-680K-PF
82	±10%	10	2.52	9	3.5	200	NLC453232T-820K-PF
100	±10%	20	0.796	8	4	180	NLC453232T-101K-PF
120	±10%	20	0.796	7.5	4.5	160	NLC453232T-121K-PF
150	±10%	20	0.796	7	6.5	140	NLC453232T-151K-PF
180	±10%	20	0.796	6.5	7.5	120	NLC453232T-181K-PF
220	±10%	20	0.796	5.5	9	120	NLC453232T-221K-PF
270	±10%	20	0.796	5	11	100	NLC453232T-271K-PF
330	±10%	20	0.796	4	13	90	NLC453232T-331K-PF

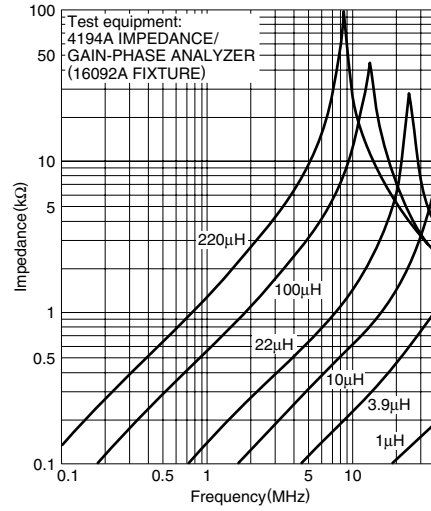
\* Rated current: Value obtained when current flows and the temperature has risen to 20°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER+YHP16085A+YHP16093B+TF-1, or equivalent  
SRF: HP8753C NETWORK ANALYZER (Z<sub>in</sub>=Z<sub>out</sub>=50Ω), or equivalent  
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

### TYPICAL ELECTRICAL CHARACTERISTICS INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



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