

# SMD Inductors(Coils)

## For Power Line(Wound, Magnetic Shielded)

Conformity to RoHS Directive

### NLFC Series NLFC4532

#### FEATURES

- The NLFC series features magnetic shielding and is recommended 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 are available in the E-6 series.
- It is a product conforming to RoHS directive.

#### APPLICATIONS

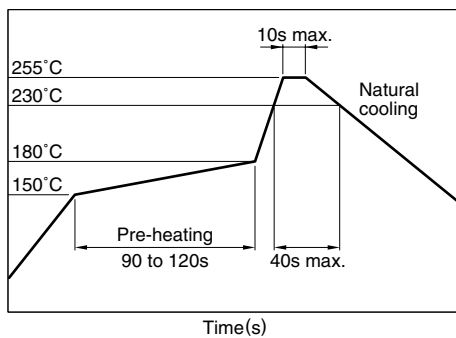
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Audio-visual equipment including TVs and VCRs.
- Other electronic equipment including HDDs and ODDs.

#### SPECIFICATIONS

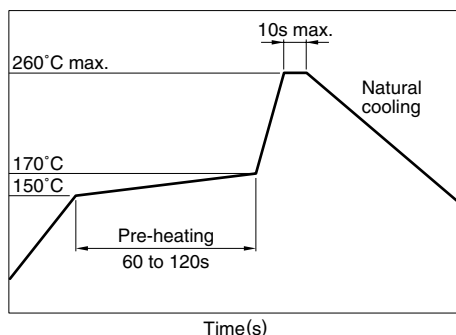
Operating temperature range	-40 to +105°C [Including self-temperature rise]
Storage temperature range	-40 to +105°C

#### 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

NLFC	453232	T-	2R2	M	-	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	±10%
M	±20%

(6) Lead-free compatible product

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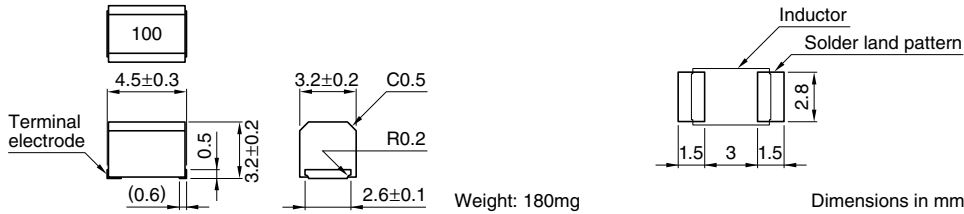
#### PACKAGING STYLE AND QUANTITIES

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



## ELECTRICAL CHARACTERISTICS

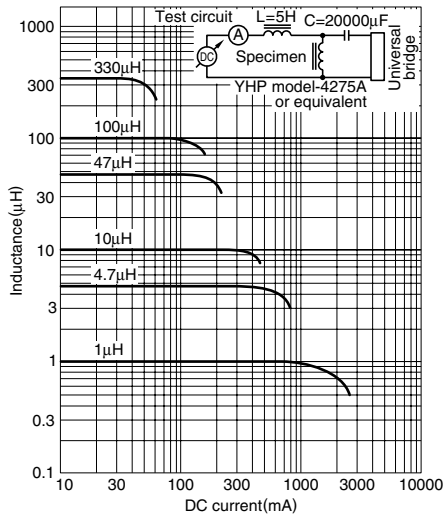
Inductance (μH)	Inductance tolerance	Q ref.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)±30%	Rated current* (mA)max.	Part No.
1	±20%	10	7.96	200	0.05	800	NLFC453232T-1R0M-PF
1.5	±20%	10	7.96	130	0.06	700	NLFC453232T-1R5M-PF
2.2	±20%	10	7.96	80	0.07	600	NLFC453232T-2R2M-PF
3.3	±20%	10	7.96	45	0.09	460	NLFC453232T-3R3M-PF
4.7	±20%	10	7.96	35	0.1	400	NLFC453232T-4R7M-PF
6.8	±20%	10	7.96	28	0.14	300	NLFC453232T-6R8M-PF
10	±10%	10	2.52	22	0.21	250	NLFC453232T-100K-PF
15	±10%	10	2.52	20	0.3	200	NLFC453232T-150K-PF
22	±10%	10	2.52	18	0.46	170	NLFC453232T-220K-PF
33	±10%	10	2.52	14	0.63	140	NLFC453232T-330K-PF
47	±10%	10	2.52	11.5	0.85	120	NLFC453232T-470K-PF
68	±10%	10	2.52	10	1.2	100	NLFC453232T-680K-PF
100	±10%	10	0.796	8	1.7	90	NLFC453232T-101K-PF
150	±10%	10	0.796	7	2.3	65	NLFC453232T-151K-PF
220	±10%	10	0.796	5.5	3.8	55	NLFC453232T-221K-PF
330	±10%	10	0.796	4	6	45	NLFC453232T-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

