



**THE DATASHEET OF
NLFC453232T-6R8M-PF**



SMD Inductors(Coils) For Power Line(Wound, Magnetic Shielded)

Conformity to RoHS Directive

NLFC Series NLFC453232

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 μ H to 330 μ H, all of the products are available in the E-6 series.
- It is a product conforming to RoHS directive.

APPLICATIONS

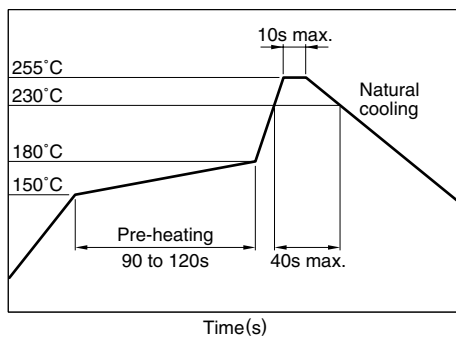
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Audio-visual equipment including TVs and VCRs.
- Other electronic equipment including HDDs and ODDs.

SPECIFICATIONS

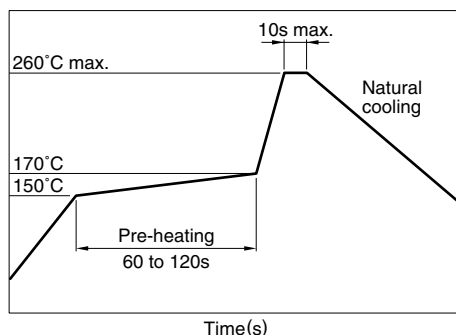
| | |
|-----------------------------|--|
| Operating temperature range | -40 to +105°C [Including self-temperature rise] |
| Storage temperature range | -40 to +105°C |

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) |
|--------|-----------------------|

(3)Packaging style

| | |
|---|---------------|
| T | Taping (reel) |
|---|---------------|

(4)Inductance value

| | |
|-----|-------------|
| 1R0 | 1 μ H |
| 100 | 10 μ H |
| 101 | 100 μ H |

(5)Inductance tolerance

| | |
|---|------|
| K | ±10% |
| M | ±20% |

(6) Lead-free compatible product

| | |
|----|------------------------------|
| PF | Lead-free compatible product |
|----|------------------------------|

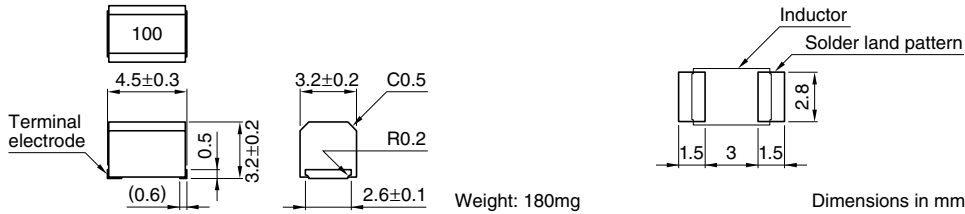
PACKAGING STYLE AND QUANTITIES

| | |
|-----------------|-----------------|
| 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

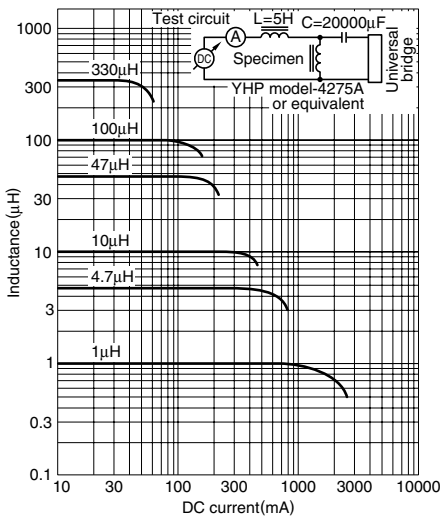
| Inductance (μH) | Inductance tolerance | Q ref. | Test frequency L, Q (MHz) | Self-resonant frequency (MHz)min. | DC resistance (Ω)±30% | Rated current* (mA)max. | Part No. |
|-----------------|----------------------|--------|---------------------------|-----------------------------------|-----------------------|-------------------------|---------------------|
| 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.

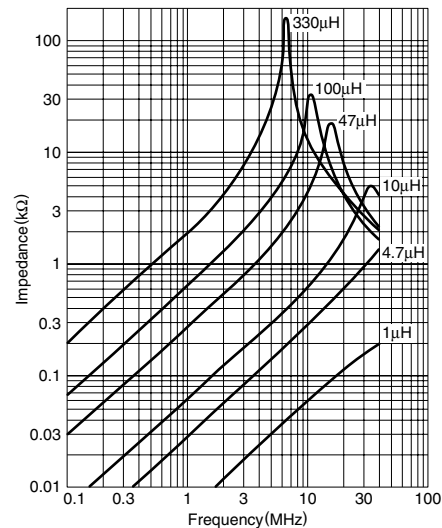
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER+YHP16085A+YHP16093B+TF-1, or equivalent
SRF: HP8753C NETWORK ANALYZER (Z_{in}=Z_{out}=50Ω), or equivalent
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



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- ⊖ [TDK Corporation Information](#)

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- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management