

SMD Inductors(Coils) For Power Line(Wound)

Conformity to RoHS Directive

NLCV Series NLCV32

FEATURES

- This is a renewed version of NLC322522.
- 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 electrical characteristics, reliability, shape and pad shape are the same as the previous NL series.
- The product uses metal terminals, which realize excellent connection reliability.
- Highly heat resistant thermoplastic resin is used to form the exterior package.
- From 0.15 μ H to 330 μ H, all of the products are available.
- This product conforms to the standards that are slated to be introduced under the RoHS Directive.

APPLICATIONS

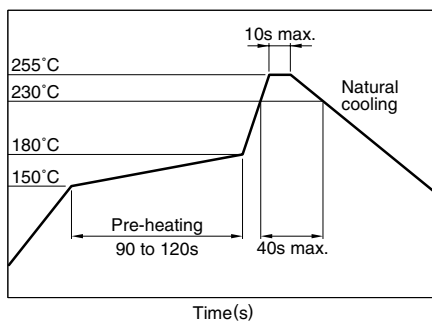
- Audio-visual equipment including TVs, VCRs and digital cameras.
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Electronic equipment used in onboard automobile equipment including car audio and ECU systems.
- Other electronic equipment including HDDs and ODDs.

SPECIFICATIONS

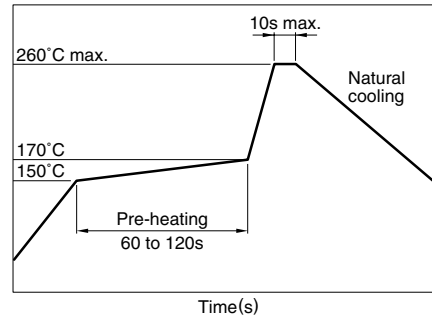
| | |
|-----------------------------|--|
| Operating temperature range | -40 to +105°C [Including self-temperature rise] |
| Storage temperature range | -40 to +105°C |

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: approx.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

| | | | | | | |
|------|-----|-----|-----|-----|-----|----|
| NLCV | 32 | T- | 2R2 | M | - | PF |
| (1) | (2) | (3) | (4) | (5) | (6) | |

(1) Series name

(2) Dimensions

| | |
|----|-----------------------|
| 32 | 3.2×2.5×2.2mm (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 |
|----|------------------------------|

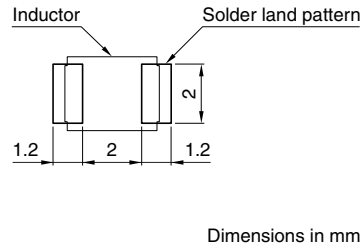
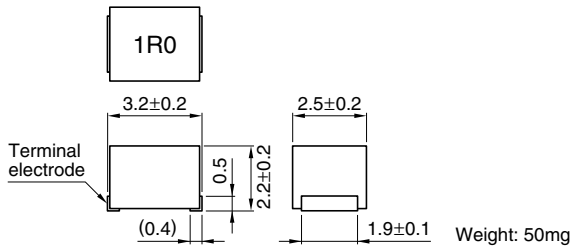
PACKAGING STYLE AND QUANTITIES

| | |
|-----------------|------------------|
| Packaging style | Quantity |
| Taping | 2000 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

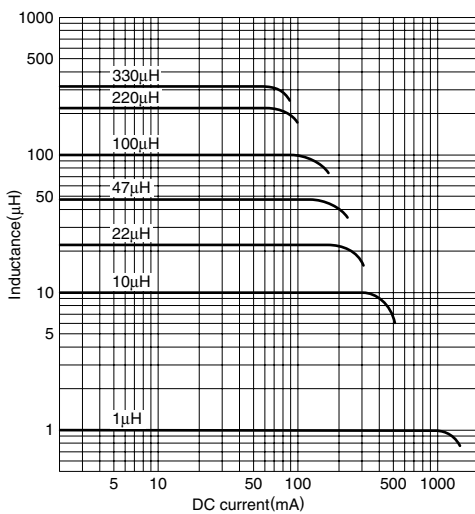
| Inductance (μH) | Inductance tolerance | Q typ. | Test frequency L,Q (MHz) | Self-resonant frequency (MHz)min. | DC resistance (Ω)±30% | Rated current* (mA)max. | Part No. |
|-----------------|----------------------|--------|--------------------------|-----------------------------------|-----------------------|-------------------------|-----------------|
| 0.15 | ±20% | 5 | 25.2 | 400 | 0.028 | 1450 | NLCV32T-R15M-PF |
| 0.22 | ±20% | 5 | 25.2 | 250 | 0.034 | 1250 | NLCV32T-R22M-PF |
| 0.47 | ±20% | 5 | 25.2 | 150 | 0.042 | 1100 | NLCV32T-R47M-PF |
| 1 | ±20% | 10 | 7.96 | 100 | 0.06 | 1000 | NLCV32T-1R0M-PF |
| 1.5 | ±20% | 10 | 7.96 | 80 | 0.11 | 830 | NLCV32T-1R5M-PF |
| 2.2 | ±20% | 10 | 7.96 | 68 | 0.13 | 770 | NLCV32T-2R2M-PF |
| 3.3 | ±20% | 10 | 7.96 | 54 | 0.16 | 690 | NLCV32T-3R3M-PF |
| 4.7 | ±20% | 15 | 7.96 | 46 | 0.2 | 620 | NLCV32T-4R7M-PF |
| 6.8 | ±20% | 15 | 7.96 | 38 | 0.27 | 530 | NLCV32T-6R8M-PF |
| 10 | ±10% | 15 | 2.52 | 30 | 0.36 | 450 | NLCV32T-100K-PF |
| 15 | ±10% | 15 | 2.52 | 26 | 0.56 | 370 | NLCV32T-150K-PF |
| 22 | ±10% | 15 | 2.52 | 21 | 0.77 | 300 | NLCV32T-220K-PF |
| 33 | ±10% | 15 | 2.52 | 17 | 1.1 | 240 | NLCV32T-330K-PF |
| 47 | ±10% | 15 | 2.52 | 14 | 1.64 | 180 | NLCV32T-470K-PF |
| 68 | ±10% | 15 | 2.52 | 12 | 2.8 | 140 | NLCV32T-680K-PF |
| 100 | ±10% | 15 | 0.796 | 10 | 3.7 | 120 | NLCV32T-101K-PF |
| 150 | ±10% | 20 | 0.796 | 8 | 6.1 | 100 | NLCV32T-151K-PF |
| 220 | ±10% | 20 | 0.796 | 7 | 8.4 | 80 | NLCV32T-221K-PF |
| 330 | ±10% | 20 | 0.796 | 6 | 12.3 | 70 | NLCV32T-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
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS

