

Inductors

For Power Line SMD

NLC Series NLC4532 Type

FEATURES

- The NLC series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- They are available in ranging from 2520 to 5650 types.

APPLICATIONS

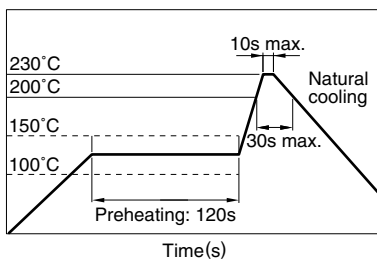
Portable telephones, personal computers, hard disk drives, and other electronic equipment.

SPECIFICATIONS

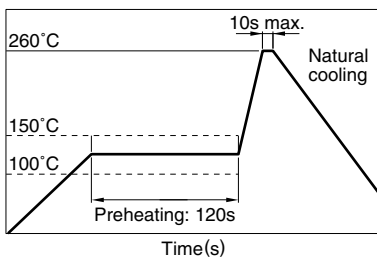
| | |
|-----------------------------|---------------------------------|
| Operating temperature range | -40 to +85°C |
| Storage temperature range | -40 to +85°C [Unit of products] |

RECOMMENDED SOLDERING CONDITIONS

REFLOW SOLDERING



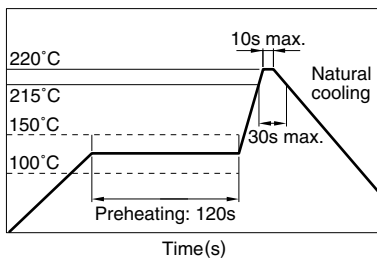
FLOW SOLDERING



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

| | | | | |
|-----|--------|-----|-----|-----|
| NLC | 453232 | T- | 2R2 | M |
| (1) | (2) | (3) | (4) | (5) |

(1) Series name

(2) Dimensions L×W×T

| | |
|--------|---------------|
| 453232 | 4.5×3.2×3.2mm |
|--------|---------------|

(3) Packaging style

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

(4) Inductance value

| | |
|-----|------|
| 1R0 | 1μH |
| 330 | 33μH |

(5) Inductance tolerance

| | |
|---|------|
| K | ±10% |
|---|------|

PACKAGING STYLE AND QUANTITIES

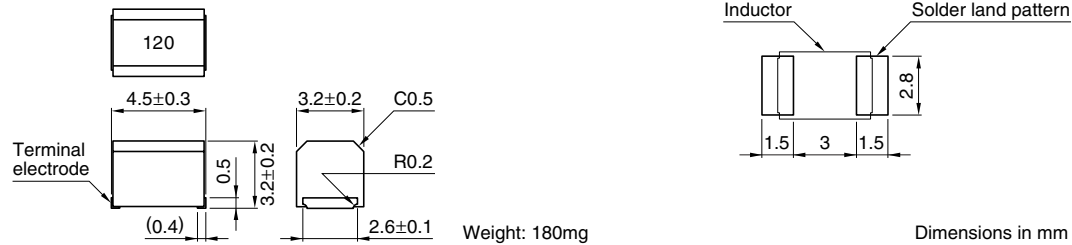
| | |
|-----------------|-----------------|
| Packaging style | Quantity |
| Taping | 500 pieces/reel |

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SMD

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

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

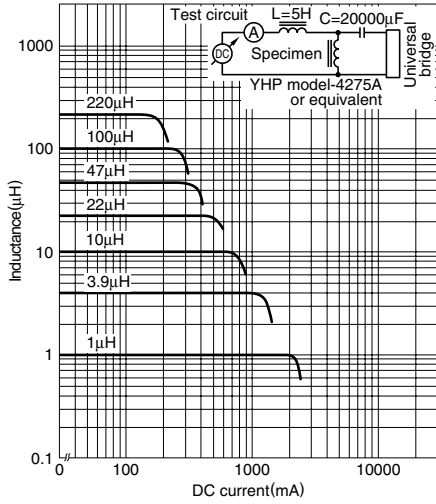
- Marking: Inductance tolerance is omitted to distinguish NL series.

Inductors

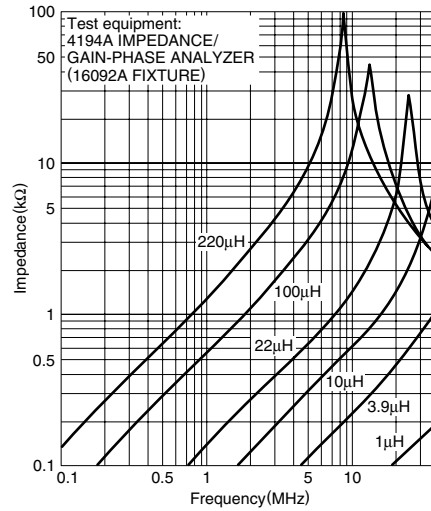
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NLC Series NLC4532 Type

TYPICAL ELECTRICAL CHARACTERISTICS INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



• All specifications are subject to change without notice.