

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

Conformity to RoHS Directive

NLFC Series NLFC3225

FEATURES

- 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 NLFC series features magnetic shielding and is recommended for power supply line applications.
- It is a product conforming to RoHS directive.

APPLICATIONS

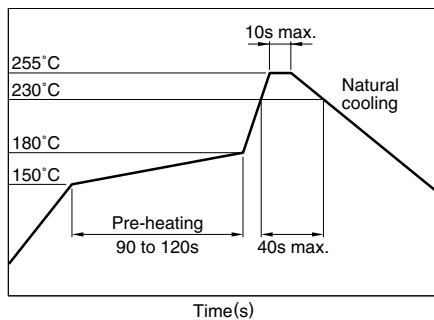
- Audio-visual equipment including TVs, VCRs and digital cameras.
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Other electronic equipment including HDDs and ODDs.

SPECIFICATIONS

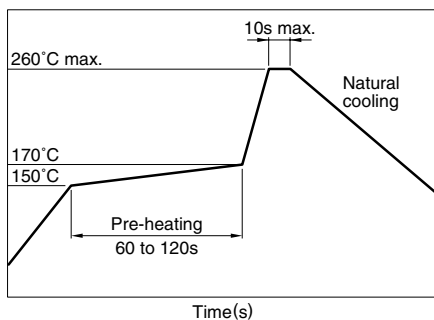
| | |
|-----------------------------|--|
| Operating temperature range | −40 to +105°C [Including self-temperature rise] |
| Storage temperature range | −40 to +105°C |

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 | 322522 | T | 2R2 | M | -PF |
|------|--------|-----|-----|-----|-----|
| (1) | (2) | (3) | (4) | (5) | (6) |

(1)Series name

(2)Dimensions

| | |
|--------|-----------------------|
| 322522 | 3.2×2.5×2.2mm (L×W×T) |
|--------|-----------------------|

(3)Packaging style

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

(4)Inductance value

| | |
|-----|--------|
| 1R0 | 1μH |
| 100 | 10μH |
| 101 | 100μH |
| 102 | 1000μH |

(5)Inductance tolerance

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

(6) Lead-free compatible product

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

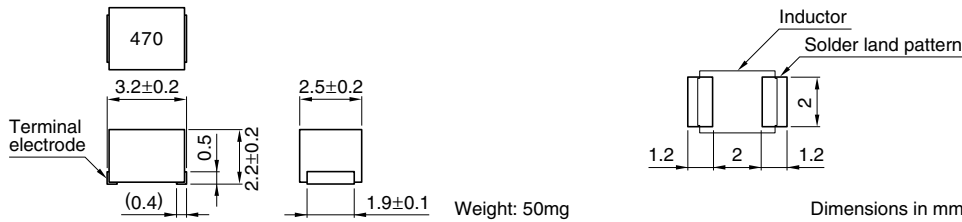
PACKAGING STYLE AND QUANTITIES

| 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

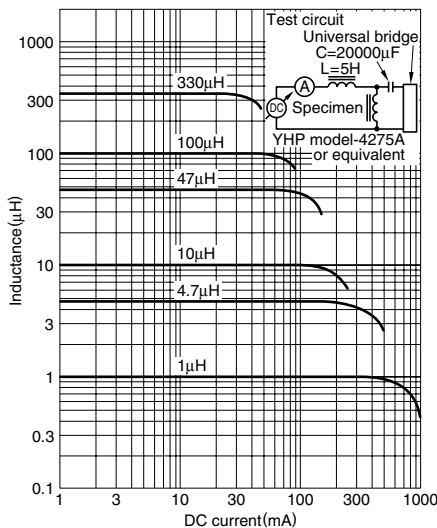
| Inductance (μH) | Inductance tolerance | Q ref. | Test frequency L, Q (MHz) | Self-resonant frequency (MHz)min. | DC resistance (Ω)±30% | Rated current* (mA)max. | Part No. |
|-----------------|----------------------|--------|---------------------------|-----------------------------------|-----------------------|-------------------------|---------------------|
| 1 | ±20% | 5 | 7.96 | 100 | 0.06 | 500 | NLFC322522T-1R0M-PF |
| 1.5 | ±20% | 5 | 7.96 | 80 | 0.08 | 400 | NLFC322522T-1R5M-PF |
| 2.2 | ±20% | 5 | 7.96 | 68 | 0.09 | 340 | NLFC322522T-2R2M-PF |
| 3.3 | ±20% | 5 | 7.96 | 54 | 0.11 | 270 | NLFC322522T-3R3M-PF |
| 4.7 | ±20% | 5 | 7.96 | 46 | 0.13 | 240 | NLFC322522T-4R7M-PF |
| 6.8 | ±20% | 5 | 7.96 | 38 | 0.17 | 195 | NLFC322522T-6R8M-PF |
| 10 | ±10% | 10 | 2.52 | 30 | 0.26 | 165 | NLFC322522T-100K-PF |
| 15 | ±10% | 10 | 2.52 | 26 | 0.32 | 145 | NLFC322522T-150K-PF |
| 22 | ±10% | 10 | 2.52 | 21 | 0.5 | 115 | NLFC322522T-220K-PF |
| 33 | ±10% | 10 | 2.52 | 17 | 0.75 | 95 | NLFC322522T-330K-PF |
| 47 | ±10% | 10 | 2.52 | 14 | 0.95 | 85 | NLFC322522T-470K-PF |
| 68 | ±10% | 10 | 2.52 | 12 | 1.5 | 70 | NLFC322522T-680K-PF |
| 100 | ±10% | 10 | 0.796 | 10 | 2.5 | 55 | NLFC322522T-101K-PF |
| 150 | ±10% | 10 | 0.796 | 8 | 3.2 | 45 | NLFC322522T-151K-PF |
| 220 | ±10% | 10 | 0.796 | 7 | 5.4 | 35 | NLFC322522T-221K-PF |
| 330 | ±10% | 10 | 0.796 | 5 | 7 | 30 | NLFC322522T-331K-PF |
| 470 | ±10% | 10 | 0.796 | 4 | 16 | 25 | NLFC322522T-471K-PF |
| 680 | ±10% | 10 | 0.796 | 3 | 20 | 20 | NLFC322522T-681K-PF |
| 1000 | ±10% | 10 | 0.252 | 2.4 | 24 | 15 | NLFC322522T-102K-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.

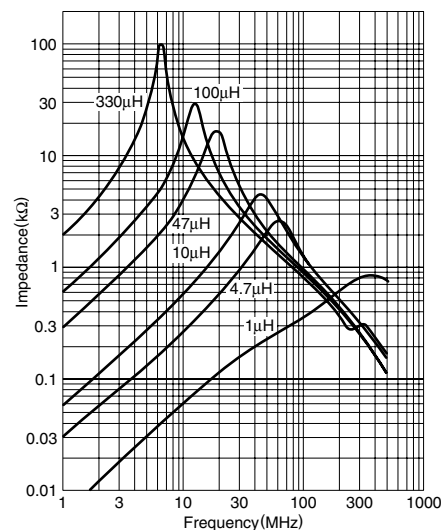
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER+YHP16085A+YHP16093B+TF-1, or equivalent
SRF: HP8753C NETWORK ANALYZER ($Z_{in}=Z_{out}=50\Omega$), or equivalent
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



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