

# SMD Inductors(Coils) For Signal Line(Wound)

Conformity to RoHS Directive

## NL Series NL565050

### 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 product uses metal terminals, which realize excellent connection reliability.
- It is a product conforming to RoHS directive.

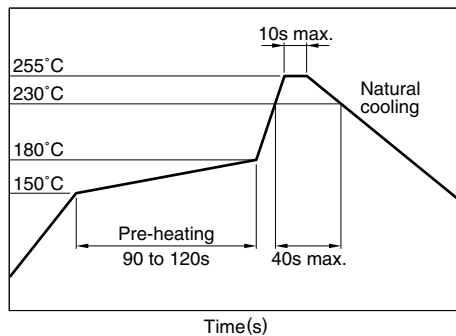
### APPLICATIONS

- 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.

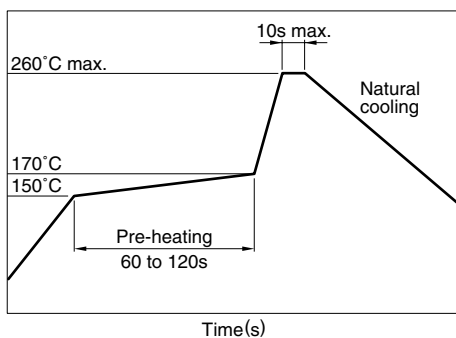
### SPECIFICATIONS

|                             |                                                    |
|-----------------------------|----------------------------------------------------|
| Operating temperature range | −40 to +105°C<br>[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

|     |        |     |     |     |     |    |
|-----|--------|-----|-----|-----|-----|----|
| NL  | 565050 | T-  | 122 | J   | -   | PF |
| (1) | (2)    | (3) | (4) | (5) | (6) |    |

(1)Series name

(2)Dimensions

|        |                       |
|--------|-----------------------|
| 565050 | 5.6×5.0×5.0mm (L×W×T) |
|--------|-----------------------|

(3)Packaging style

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

(4)Inductance value

|     |       |
|-----|-------|
| 122 | 1.2mH |
| 103 | 10mH  |

(5)Inductance tolerance

|   |     |
|---|-----|
| J | ±5% |
|---|-----|

(6) Lead-free compatible product

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

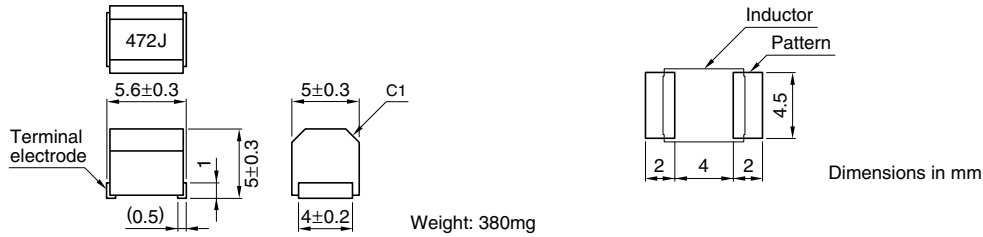
### PACKAGING STYLE AND QUANTITIES

|                 |                 |
|-----------------|-----------------|
| Packaging style | Quantity        |
| Taping          | 400 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

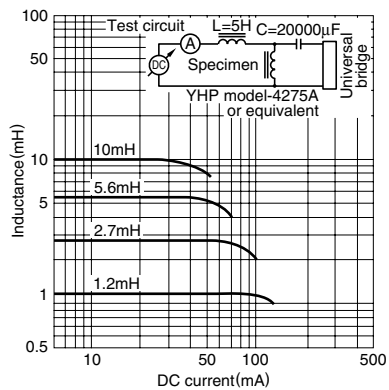
| Inductance (mH) | Inductance tolerance | Q min. | Test frequency L, Q (MHz) | Self-resonant frequency (MHz)min. | DC resistance (Ω)max. | Rated current* (mA)max. | Part No.          |
|-----------------|----------------------|--------|---------------------------|-----------------------------------|-----------------------|-------------------------|-------------------|
| 1.2             | ±5%                  | 30     | 0.252                     | 1.5                               | 17                    | 75                      | NL565050T-122J-PF |
| 1.5             | ±5%                  | 30     | 0.252                     | 1.4                               | 20                    | 70                      | NL565050T-152J-PF |
| 1.8             | ±5%                  | 30     | 0.252                     | 1.3                               | 30                    | 60                      | NL565050T-182J-PF |
| 2.2             | ±5%                  | 30     | 0.252                     | 1.2                               | 35                    | 55                      | NL565050T-222J-PF |
| 2.7             | ±5%                  | 30     | 0.252                     | 1.1                               | 55                    | 45                      | NL565050T-272J-PF |
| 3.3             | ±5%                  | 30     | 0.252                     | 1                                 | 60                    | 40                      | NL565050T-332J-PF |
| 3.9             | ±5%                  | 30     | 0.252                     | 1                                 | 70                    | 38                      | NL565050T-392J-PF |
| 4.7             | ±5%                  | 30     | 0.252                     | 0.9                               | 78                    | 36                      | NL565050T-472J-PF |
| 5.6             | ±5%                  | 30     | 0.252                     | 0.8                               | 85                    | 33                      | NL565050T-562J-PF |
| 6.8             | ±5%                  | 30     | 0.252                     | 0.7                               | 110                   | 30                      | NL565050T-682J-PF |
| 8.2             | ±5%                  | 30     | 0.252                     | 0.6                               | 125                   | 28                      | NL565050T-822J-PF |
| 10              | ±5%                  | 20     | 0.0796                    | 0.5                               | 150                   | 25                      | NL565050T-103J-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.

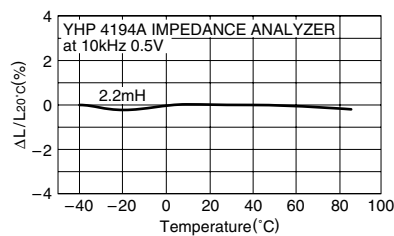
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER (16085A+16093B+TDK TF-1)  
SRF: HP8753C NETWORK ANALYZER (Zin=Zout=50Ω)  
Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER

## TYPICAL ELECTRICAL CHARACTERISTICS

### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



### INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



### Q vs. FREQUENCY CHARACTERISTICS

