

# Inductors

## For Power Line SMD

# NLFC Series NLFC2016 Type

### 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.
- This product conforms to the standards that are slated to be introduced under the RoHS Directive.

### APPLICATIONS

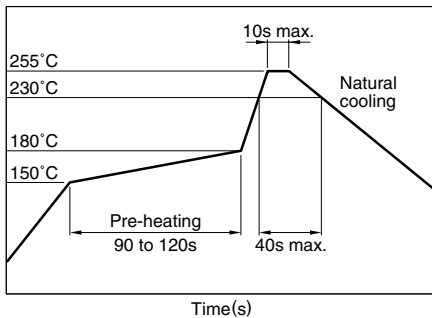
- Audio-visual equipment including TVs, VCRs and digital cameras.
- Electronic equipment used in communication infrastructures including xDSL and mobile base stations.
- Other electronic equipment including HDDs and ODDs.

### SPECIFICATIONS

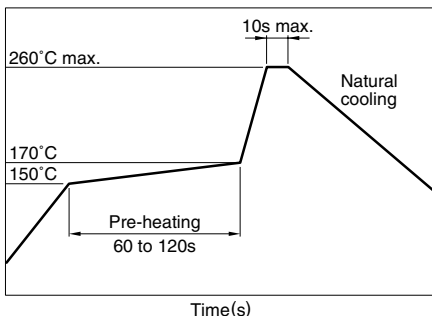
|                             |   |
|-----------------------------|---|
| Operating temperature range | -40 to +85°C<br>[Including self-temperature rise] |
| Storage temperature range   | -40 to +85°C                                      |

### 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 | 201614 | T-  | 2R2 | M   | -PF |
| (1)  | (2)    | (3) | (4) | (5) | (6) |

(1)Series name

(2)Dimensions

|        |                       |
|--------|-----------------------|
| 201614 | 2.1×1.6×1.4mm (L×W×T) |
|--------|-----------------------|

(3)Packaging style

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

(4)Inductance value

|     |      |
|-----|------|
| 1R0 | 1μH  |
| 220 | 22μH |

(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 |

• Regarding RoHS Directive conformity: This claim is based on the individual judgment made by TDK Corporation that this product conforms to EU Directive 2002/95/EC. This does not constitute a guarantee that the product conforms to all laws and regulations based on the RoHS Directive enacted in individual EU member states.

• All specifications are subject to change without notice.

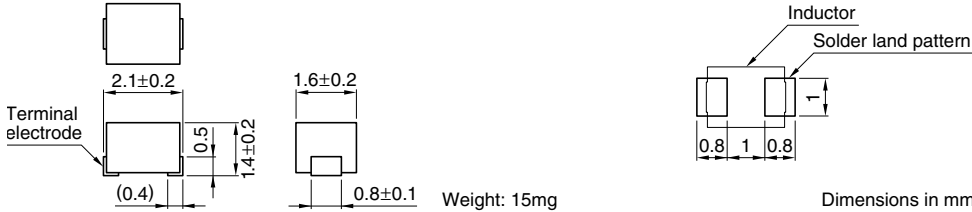
# Inductors

## For Power Line

### SMD

## NLFC Series NLFC2016 Type

### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



### ELECTRICAL CHARACTERISTICS

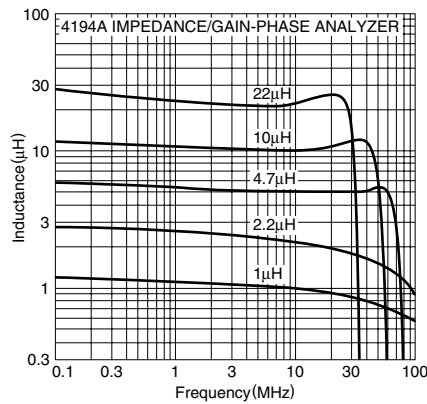
| Inductance ( $\mu\text{H}$ ) | Inductance tolerance | Q ref. | Test frequency L, Q (MHz) | Self-resonant frequency (MHz)min. | DC resistance ( $\Omega$ ) $\pm 30\%$ | Rated current* (mA)max. | Part No.            |
|------------------------------|----------------------|--------|---------------------------|-----------------------------------|---------------------------------------|-------------------------|---------------------|
| 1                            | $\pm 20\%$           | 5      | 7.96                      | 100                               | 0.16                                  | 300                     | NLFC201614T-1R0M-PF |
| 2.2                          | $\pm 20\%$           | 5      | 7.96                      | 80                                | 0.23                                  | 240                     | NLFC201614T-2R2M-PF |
| 4.7                          | $\pm 20\%$           | 5      | 7.96                      | 45                                | 0.4                                   | 150                     | NLFC201614T-4R7M-PF |
| 10                           | $\pm 10\%$           | 10     | 2.52                      | 32                                | 0.7                                   | 120                     | NLFC201614T-100K-PF |
| 22                           | $\pm 10\%$           | 10     | 2.52                      | 16                                | 1.7                                   | 75                      | NLFC201614T-220K-PF |

\* Rated current: Value obtained when current flows and the temperature has risen to  $20^\circ\text{C}$  or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

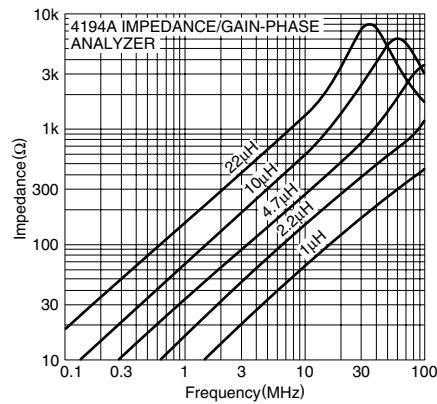
- Test equipment L, Q: YHP4194A IMPEDANCE ANALYZER+YHP16085A+YHP16093B+TF-1, or equivalent
- SRF: HP8753C NETWORK ANALYZER ( $Z_{in}=Z_{out}=50\Omega$ ), or equivalent
- Rdc: MATSUSHITA VP-2941A DIGITAL MILLIOHM METER, or equivalent

### TYPICAL ELECTRICAL CHARACTERISTICS

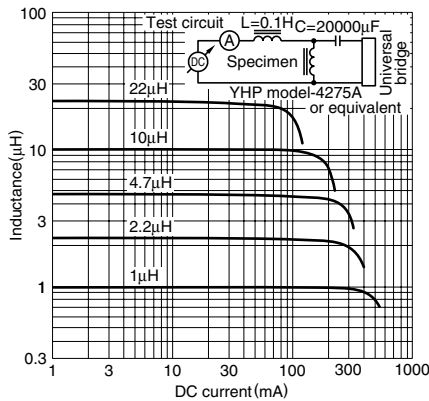
#### INDUCTANCE vs. FREQUENCY CHARACTERISTICS



#### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



#### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



#### Q vs. FREQUENCY CHARACTERISTICS

