

# Inductors

## For Power Line

### Radial

## TSL Series TSL1315 Type

### FEATURES

- The TSL series feature low DC resistance and high current handling capacities, making them ideal for power supply line applications.
- These parts are manufactured to a high degree of dimensional accuracy using non-flammable material (UL94V-0).
- Available in tape packaging to support automated mounting machines.
- This product conforms to the standards that are slated to be introduced under the RoHS Directive.

### APPLICATIONS

Televisions, VCRs, personal computers, and other electronic equipments.

### SPECIFICATIONS

|                             |   |
|-----------------------------|---|
| Operating temperature range | -20 to +85°C<br>[Including self-temperature rise] |
| Storage temperature range   | -40 to +85°C[Unit of products]                    |
| Terminal tensile strength   | 9.8N min.   |
| Flow soldering condition    | 260°C /10 seconds                                 |

### PRODUCT IDENTIFICATION

|     |      |     |     |     |     |     |    |
|-----|------|-----|-----|-----|-----|-----|----|
| TSL | 1315 | RA- | 100 | K   | 5R1 | -   | PF |
| (1) | (2)  | (3) | (4) | (5) | (6) | (7) |    |

(1)Series name

(2)Dimensions

|      |                             |
|------|-----------------------------|
| 1315 | ø14×17mm (lead pitch 7.5mm) |
|------|-----------------------------|

(3)Packaging style

|    |                   |
|----|-------------------|
| RA | Taping(Ammo-pack) |
| S  | Bulk              |

(4)Inductance value

|     |        |
|-----|--------|
| 100 | 10μH   |
| 102 | 1000μH |

(5)Inductance tolerance

|   |      |
|---|------|
| J | ±5%  |
| K | ±10% |

(6)Rated current

|     |       |
|-----|-------|
| 5R1 | 5.1A  |
| R99 | 0.99A |

(7)Lead-free compatible product

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

### PACKAGING STYLE AND QUANTITIES

|                       |                |
|-----------------------|----------------|
| Packaging style       | Quantity       |
| Taping<br>(Ammo-pack) | 200 pieces/box |
| Bulk                  | 50 pieces/pack |

• 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.

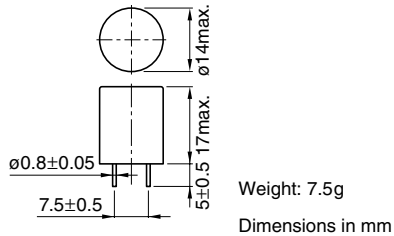
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### SHAPES AND DIMENSIONS



### ELECTRICAL CHARACTERISTICS

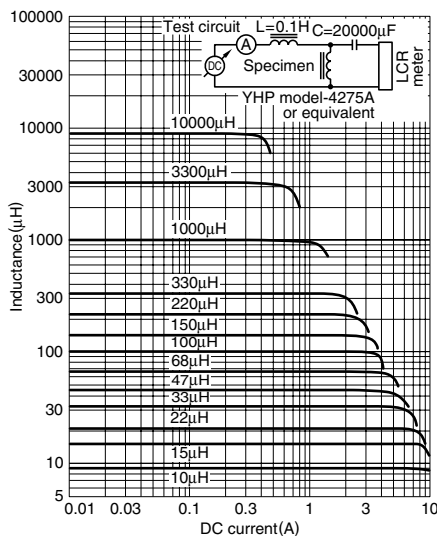
| Inductance (μH) | Inductance tolerance | Q min. | Test frequency L/Q (Hz) | Self-resonant frequency (MHz)min. | DC resistance (Ω)max. | Rated current (A)*1max.    |                           | Part No.              |
|-----------------|----------------------|--------|-------------------------|-----------------------------------|-----------------------|----------------------------|---------------------------|-----------------------|
|                 |                      |        |                         |                                   |                       | Based on inductance change | Based on temperature rise |                       |
| 10              | ±10%                 | 90     | 1k/2.52M                | 19                                | 0.023                 | 12                         | 5.1                       | TSL1315□*2-100K5R1-PF |
| 15              | ±10%                 | 90     | 1k/2.52M                | 12                                | 0.028                 | 9.5                        | 4.5                       | TSL1315□-150K4R5-PF   |
| 22              | ±10%                 | 80     | 1k/2.52M                | 7.6                               | 0.035                 | 8.2                        | 4.2                       | TSL1315□-220K4R2-PF   |
| 33              | ±10%                 | 70     | 1k/2.52M                | 6.9                               | 0.043                 | 6.8                        | 3.7                       | TSL1315□-330K3R7-PF   |
| 47              | ±10%                 | 50     | 1k/2.52M                | 5.6                               | 0.052                 | 5.7                        | 3.4                       | TSL1315□-470K3R4-PF   |
| 68              | ±10%                 | 40     | 1k/2.52M                | 4.4                               | 0.068                 | 4.8                        | 3                         | TSL1315□-680K3R0-PF   |
| 100             | ±10%                 | 50     | 1k/796k                 | 3.3                               | 0.097                 | 3.9                        | 2.5                       | TSL1315□-101K2R5-PF   |
| 150             | ±10%                 | 50     | 1k/796k                 | 2.6                               | 0.14                  | 3.2                        | 2.1                       | TSL1315□-151K2R1-PF   |
| 220             | ±10%                 | 40     | 1k/796k                 | 2.2                               | 0.2                   | 2.7                        | 1.7                       | TSL1315□-221K1R7-PF   |
| 330             | ±10%                 | 30     | 1k/796k                 | 1.8                               | 0.3                   | 2.1                        | 1.4                       | TSL1315□-331K1R4-PF   |
| 470             | ±10%                 | 30     | 1k/796k                 | 1.5                               | 0.43                  | 1.8                        | 1.1                       | TSL1315□-471K1R1-PF   |
| 680             | ±10%                 | 30     | 1k/796k                 | 1.2                               | 0.61                  | 1.5                        | 0.99                      | TSL1315□-681KR99-PF   |
| 1000            | ±5%                  | 30     | 1k/252k                 | 1                                 | 1                     | 1.2                        | 0.78                      | TSL1315□-102JR78-PF   |
| 1500            | ±5%                  | 40     | 1k/252k                 | 0.83                              | 1.3                   | 1                          | 0.68                      | TSL1315□-152JR68-PF   |
| 2200            | ±5%                  | 40     | 1k/252k                 | 0.7                               | 2                     | 0.83                       | 0.55                      | TSL1315□-222JR55-PF   |
| 3300            | ±5%                  | 40     | 1k/252k                 | 0.6                               | 3.1                   | 0.69                       | 0.44                      | TSL1315□-332JR44-PF   |
| 4700            | ±5%                  | 40     | 1k/252k                 | 0.43                              | 4.4                   | 0.58                       | 0.37                      | TSL1315□-472JR37-PF   |
| 6800            | ±5%                  | 30     | 1k/252k                 | 0.38                              | 6.5                   | 0.46                       | 0.3                       | TSL1315□-682JR30-PF   |
| 10000           | ±5%                  | 70     | 1k/79.6k                | 0.3                               | 10                    | 0.4                        | 0.24                      | TSL1315□-103JR24-PF   |

\*1 Rated current: Value obtained when current flows and the temperature has risen to 25°C or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller.

\*2 □: Please specify packaging style, S(Bulk) or RA(Taping).

### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



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