

Radial Lead Inductors(Coils) For Power Line

Conformity to RoHS Directive

TSL Series TSL0709

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.
- It is a product conforming to RoHS directive.

APPLICATIONS

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

SPECIFICATIONS

| | |
|-----------------------------|---|
| Operating temperature range | -40 to +85°C [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 | 0709 | RA- | 1R0 | M | 5R0 | - | PF |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | |

(1)Series name

(2)Dimensions

| | |
|------|-----------------------------|
| 0709 | ø7.7×9.5mm (lead pitch 5mm) |
|------|-----------------------------|

(3)Packaging style

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

(4)Inductance value

| | |
|-----|------|
| 1R0 | 1μH |
| 100 | 10μH |

(5)Inductance tolerance

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

(6)Rated current

| | |
|-----|-------|
| 5R0 | 5A |
| R66 | 0.66A |

(7)Lead-free compatible product

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

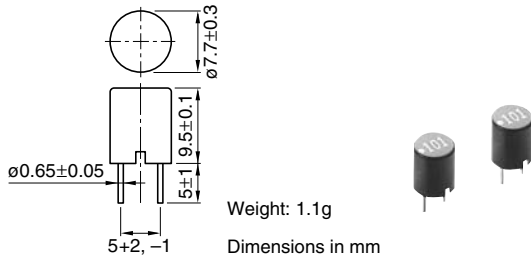
PACKAGING STYLE AND QUANTITIES

| Packaging style | Quantity |
|-----------------------|-------------------|
| Taping (Ammo-pack) | 1000 pieces/box |
| Bulk | 500 pieces/10tray |

• 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



ELECTRICAL CHARACTERISTICS

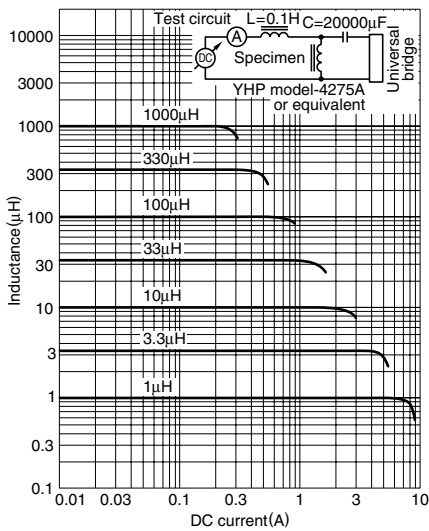
| Inductance (μ H) | Inductance tolerance | Q min. | Test frequency L/Q (Hz) | Self-resonant frequency (MHz)min. | DC resistance (Ω)max. | Rated current(A)*1max. | | Part No. |
|-----------------------|----------------------|--------|-------------------------|-----------------------------------|--------------------------------|----------------------------|---------------------------|-----------------------|
| | | | | | | Based on inductance change | Based on temperature rise | |
| 1 | $\pm 20\%$ | 10 | 1k/7.96M | 70 | 0.006 | 6.6 | 5 | TSL0709□*2-1R0M5R0-PF |
| 1.5 | $\pm 20\%$ | 10 | 1k/7.96M | 56 | 0.008 | 5.4 | 4.3 | TSL0709□-1R5M4R3-PF |
| 2.2 | $\pm 20\%$ | 10 | 1k/7.96M | 45 | 0.011 | 4 | 3.7 | TSL0709□-2R2M3R7-PF |
| 3.3 | $\pm 20\%$ | 10 | 1k/7.96M | 36 | 0.018 | 3.6 | 2.9 | TSL0709□-3R3M2R9-PF |
| 4.7 | $\pm 20\%$ | 10 | 1k/7.96M | 29 | 0.022 | 3.1 | 2.6 | TSL0709□-4R7M2R6-PF |
| 6.8 | $\pm 20\%$ | 10 | 1k/7.96M | 24 | 0.028 | 2.5 | 2.3 | TSL0709□-6R8M2R3-PF |
| 10 | $\pm 10\%$ | 20 | 1k/2.52M | 19 | 0.043 | 2.1 | 1.9 | TSL0709□-100K1R9-PF |
| 15 | $\pm 10\%$ | 20 | 1k/2.52M | 15 | 0.056 | 1.7 | 1.6 | TSL0709□-150K1R6-PF |
| 22 | $\pm 10\%$ | 20 | 1k/2.52M | 12 | 0.086 | 1.4 | 1.3 | TSL0709□-220K1R3-PF |
| 33 | $\pm 10\%$ | 20 | 1k/2.52M | 9.4 | 0.14 | 1.1 | 1 | TSL0709□-330K1R0-PF |
| 47 | $\pm 10\%$ | 20 | 1k/2.52M | 7.6 | 0.17 | 0.96 | 0.94 | TSL0709□-470KR94-PF |
| 68 | $\pm 10\%$ | 20 | 1k/2.52M | 6.2 | 0.28 | 0.79 | 0.73 | TSL0709□-680KR73-PF |
| 100 | $\pm 10\%$ | 20 | 1k/796k | 5 | 0.33 | 0.66 | 0.67 | TSL0709□-101KR66-PF |
| 150 | $\pm 10\%$ | 20 | 1k/796k | 4 | 0.56 | 0.53 | 0.52 | TSL0709□-151KR52-PF |
| 220 | $\pm 10\%$ | 20 | 1k/796k | 3.2 | 0.72 | 0.44 | 0.46 | TSL0709□-221KR44-PF |
| 330 | $\pm 10\%$ | 20 | 1k/796k | 2.5 | 1.1 | 0.36 | 0.37 | TSL0709□-331KR36-PF |
| 470 | $\pm 10\%$ | 20 | 1k/796k | 2 | 1.7 | 0.3 | 0.3 | TSL0709□-471KR30-PF |
| 680 | $\pm 10\%$ | 20 | 1k/796k | 1.7 | 2.3 | 0.25 | 0.26 | TSL0709□-681KR25-PF |
| 1000 | $\pm 10\%$ | 70 | 1k/252k | 1.3 | 4.3 | 0.2 | 0.19 | TSL0709□-102KR19-PF |
| 1500 | $\pm 10\%$ | 50 | 1k/252k | 1.3 | 5 | 0.17 | 0.16 | TSL0709□-152KR16-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 20%, 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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