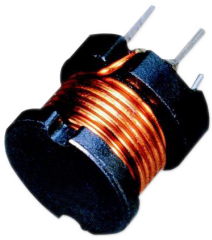


# Inductor

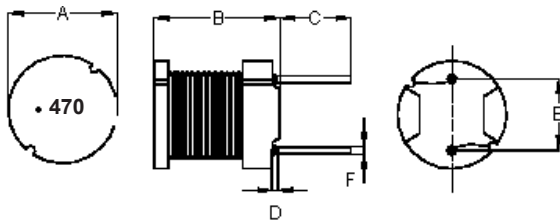
## Radial Leaded

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RoHS  
Compliant



### Configurations and Dimensions

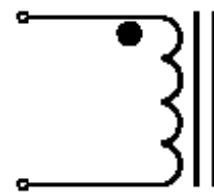


Top View      Front View      Bottom View

Note : The dot of marking indicates the start terminal of winding

|   |               |
|---|---------------|
| A | 7.8mm ±0.5mm  |
| B | 9.5mm ±0.5mm  |
| C | 5mm ±1mm      |
| D | 3mm (Max.)    |
| E | 5mm ±0.5mm    |
| F | Ø0.6mm (Ref.) |

### Schematic Diagram



Note:

1. Wire UEFN/U (155°C) Ø0.4mm
2. 38.5TS (Reference) C.W

### Test Data for Mechanical

| Test Item      | A mm        | B mm        | C mm        | D mm       | E mm        | F mm        |
|----------------|-------------|-------------|-------------|------------|-------------|-------------|
| Specification  | 7.8 ±0.5    | 9.5 ±0.5    | 5 ±1        | 3 (Max.)   | 5 ±0.5      | Ø0.6 (Ref.) |
| 1              | 7.81        | 9.49        | 5.16        | 1.33       | 4.99        | 0.69        |
| 2              | 7.80        | 9.43        | 5.18        | 1.38       | 5.12        | 0.71        |
| 3              | 7.84        | 9.45        | 5.43        | 1.36       | 4.90        | 0.69        |
| 4              | 7.80        | 9.44        | 5.15        | 1.45       | 5.14        | 0.7         |
| 5              | 7.83        | 9.58        | 5.24        | 1.47       | 5.14        | 0.7         |
| <b>Average</b> | <b>7.82</b> | <b>9.48</b> | <b>5.23</b> | <b>1.4</b> | <b>5.06</b> | <b>0.7</b>  |

### Electrical Characteristics

| Test Condition                      |     |                              |
|-------------------------------------|-----|------------------------------|
| 1kHz 0.25V                          | L   | 47µH ±20%                    |
| T <sub>A</sub> = 25°C               | DCR | 120mΩ (Max.)                 |
| 1kHz 0.25 V I <sub>rms</sub> = 1.3A | ΔT  | Temperature rise 40°C (Max.) |

Operating temperature : -55°C to +130°C

### Material List

| No. | Item               | Material Description                 |
|-----|--------------------|--------------------------------------|
| 1   | Core               | F6D DR2W7.8*9.5(SW)RCH B3.75 F5.6 P5 |
| 2   | Wire               | Ø0.4mm UEFN/U (155°C)                |
| 3   | Solder (Lead-free) | Sn99.3% / Cu0.7%                     |

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# Inductor

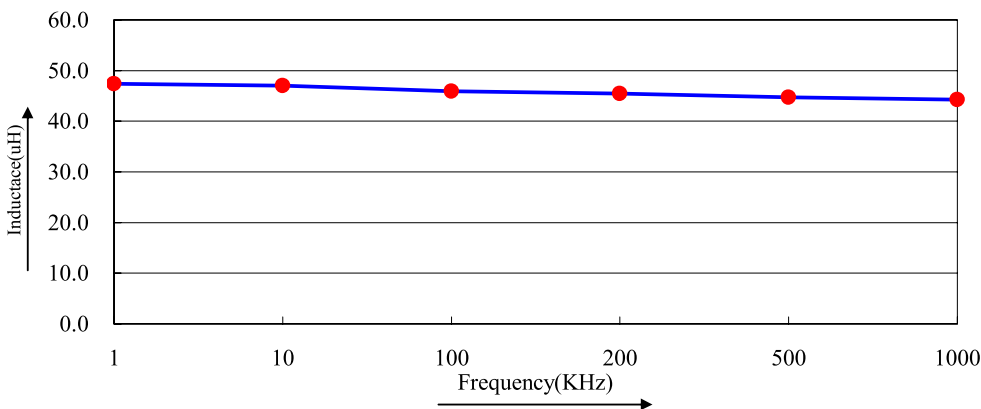
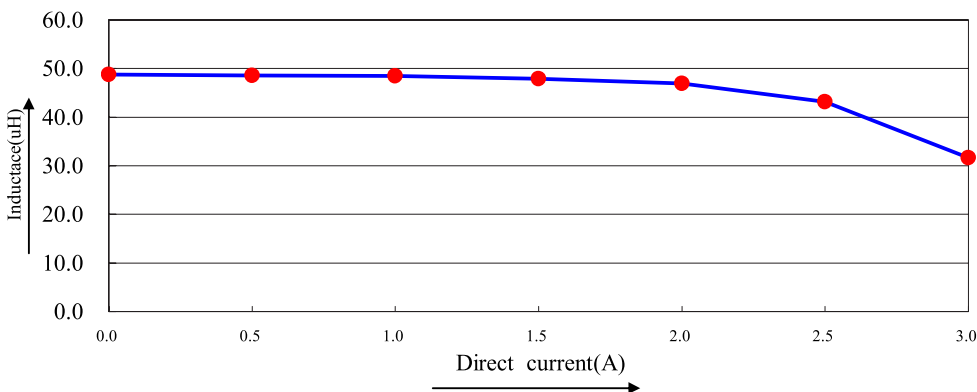
## Radial Leaded

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### Reliability Test

| Test Item                   | Specifications   | Test Method and Remarks  |
|-----------------------------|--|--|
| Operating temperature range | -55°C to +130°C  | Including temperature rise due to self-generated heat.   |
| Storage condition           | Ambient temperature : 0°C to 40°C<br>Humidity : Below 70% RH   | To maintain the solderability of terminal electrodes, care must be taken to control temperature and humidity in the storage area.  |
| Moisture sensitivity        | Appearance : No abnormality<br>No damage<br>DCR change : Within ±5%<br>Inductance change : Within ±5%  | According to J-STD-020B level 3<br>Test condition : 60°C 60% RH<br>Test duration : 40 hrs<br>Recovery : 1 to 2 hours of recovery under the standard condition after the removal from the test chamber. |
| Solderability               | All termination shall exhibit a continuous solder coating free from defects for a minimum of 95% of the surface area of any individual lead. | According to J-STD-002B<br>Steam aging category : 97°C 98% RH<br>Steam aging duration : 8 hrs<br>Solder : Lead-free solder<br>Solder temperature : 260 ±5°C<br>Dip time : 5 +0 / -0.5s                 |

### Electric Characteristics



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### Test Data for Electrical

| Test Item      | L<br>μH       | DCR<br>Ω     | ΔT                                    |
|----------------|---------------|--------------|---------------------------------------|
| Condition      | 1kHz<br>0.25V | at 25°C      | 1kHz 0.25V<br>I <sub>rms</sub> = 1.3A |
| Specification  | 47 ±20%       | 120 (Max.)   | Temperature rise 40°C (Max.)          |
| 1              | 49.46         | 98.56        | OK                                    |
| 2              | 49.52         | 99.26        |                                       |
| 3              | 49.24         | 99.21        |                                       |
| 4              | 49.16         | 98.87        |                                       |
| 5              | 49.30         | 98.88        |                                       |
| <b>Average</b> | <b>49.34</b>  | <b>98.96</b> | <b>OK</b>                             |

### Part Number Table

| Description                     | Part Number    |
|---------------------------------|----------------|
| Inductor, 47μH, 1.3A, 120mΩ DCR | MCSCH895-470KU |

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