

# Winding Type Chip Inductor

SWF2012RIV-SERIES

## 1. Features

1. Ferrite core wire wound construction.
2. High Reliability due to wire wound type construction.
3. Small footprint as well as low profile.
4. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
5. Operating temperature -55~+125°C (Including self - temperature rise)
6. These products provide low DC resistance and high current.
7. Precision inductance tolerance is available.
8. High reliability -Reliability comply with AEC-Q200
9. Application for DC power line.

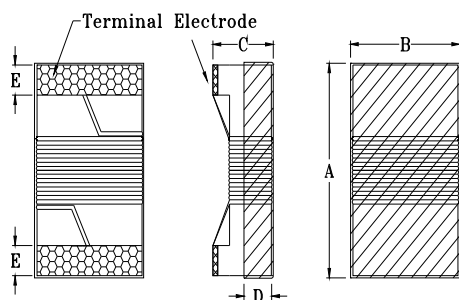


Digital camera and other electronic equipment

Personal computers, Hard disk drives

Mobile Device / Handheld Device / LowProfile Device / Panel

## 2. Dimensions



| Size    | A         | B         | C         | D        | E         |
|---------|-----------|-----------|-----------|----------|-----------|
| SWF2012 | 2.20±0.20 | 1.40±0.20 | 1.30±0.10 | 0.65ref. | 0.50±0.10 |

Unit:mm

## 3. Part Numbering

|            |             |          |          |          |          |            |          |
|------------|-------------|----------|----------|----------|----------|------------|----------|
| <b>SWF</b> | <b>2012</b> | <b>R</b> | <b>I</b> | <b>V</b> | <b>-</b> | <b>2R2</b> | <b>K</b> |
| A          | B           | C        | D        | E        |          | F          | G        |

A: Series

B: Dimension

L x W

C: Control S/N

D: Material

I3C

E: Category Code

V=Vehicle

F: Inductance

2R2=2.20uH

G: Inductance Tolerance

K=±10%, M=±20%

## 4. Specification

| TAI-TECH<br>Part Number | Inductance<br>(uH) | Tolerance | Test Frequency<br>(Hz) | Q/MHz<br>Typ. | SRF<br>(MHz) Typ. | DCR<br>(Ω) ±30%. | IDC<br>(mA) Typ. | Irms<br>(mA) Typ. |
|-------------------------|--------------------|-----------|------------------------|---------------|-------------------|------------------|------------------|-------------------|
| SWF2012RIV-R10□         | 0.10               | K,M       | 0.5V/7.9M              | 10/7.9        | 1600              | 0.06             | 1900             | 2000              |
| SWF2012RIV-R22□         | 0.22               | K,M       | 0.5V/7.9M              | 13/7.9        | 1550              | 0.08             | 1600             | 1700              |
| SWF2012RIV-R33□         | 0.33               | K,M       | 0.5V/7.9M              | 13/7.9        | 1150              | 0.09             | 1400             | 1500              |
| SWF2012RIV-R47□         | 0.47               | K,M       | 0.5V/7.9M              | 13/7.9        | 800               | 0.10             | 1300             | 1400              |

| TAI-TECH<br>Part Number | Inductance<br>( $\mu$ H) | Tolerance | Test Frequency<br>(Hz) | Q/MHz<br>Typ. | SRF<br>(MHz) Typ. | DCR<br>( $\Omega$ ) $\pm 30\%$ . | IDC<br>(mA) Typ. | I <sub>rms</sub><br>(mA) Typ. |
|-------------------------|--------------------------|-----------|------------------------|---------------|-------------------|----------------------------------|------------------|-------------------------------|
| SWF2012RIV-R56□         | 0.56                     | K,M       | 0.5V/7.9M              | 13/7.9        | 750               | 0.13                             | 1200             | 1300                          |
| SWF2012RIV-R68□         | 0.68                     | K,M       | 0.5V/7.9M              | 13/7.9        | 700               | 0.14                             | 1100             | 1200                          |
| SWF2012RIV-R82□         | 0.82                     | K,M       | 0.5V/7.9M              | 13/7.9        | 350               | 0.15                             | 1000             | 1100                          |
| SWF2012RIV-1R0□         | 1.00                     | K,M       | 0.5V/7.9M              | 14/7.9        | 208               | 0.13                             | 1100             | 1300                          |
| SWF2012RIV-2R2□         | 2.20                     | K,M       | 0.5V/7.9M              | 13/7.9        | 87                | 0.22                             | 740              | 1040                          |
| SWF2012RIV-3R3□         | 3.30                     | K,M       | 0.5V/7.9M              | 12/7.9        | 70                | 0.30                             | 620              | 800                           |
| SWF2012RIV-4R7□         | 4.70                     | K,M       | 0.5V/7.9M              | 14/7.9        | 51                | 0.43                             | 520              | 840                           |
| SWF2012RIV-6R8□         | 6.80                     | K,M       | 0.5V/7.9M              | 14/7.9        | 46                | 0.68                             | 420              | 700                           |
| SWF2012RIV-8R2□         | 8.20                     | K,M       | 0.5V/7.9M              | 14/7.9        | 33                | 0.73                             | 400              | 680                           |
| SWF2012RIV-100□         | 10.0                     | K,M       | 0.5V/2.5M              | 14/2.5        | 31                | 0.85                             | 360              | 560                           |
| SWF2012RIV-150□         | 15.0                     | K,M       | 0.5V/2.5M              | 15/2.5        | 28                | 1.40                             | 300              | 380                           |
| SWF2012RIV-220□         | 22.0                     | K,M       | 0.5V/2.5M              | 15/2.5        | 20                | 1.76                             | 240              | 340                           |

Note:

Measurement board data

Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

Pattern dimensions: 45 X 30 mm (Double side board)

Pattern thickness : 50  $\mu$ m

## 5. Recommended PC Board Pattern

| Chip size |      |                |                |                |           |                | Land Patterns For<br>Reflow Soldering |       |       |
|-----------|------|----------------|----------------|----------------|-----------|----------------|---------------------------------------|-------|-------|
| Series    | Type | A(mm)          | B(mm)          | C(mm)          | D(mm)     | E(mm)          | L(mm)                                 | G(mm) | H(mm) |
| SWF       | 2012 | 2.20 $\pm$ 0.2 | 1.40 $\pm$ 0.2 | 1.30 $\pm$ 0.1 | 0.65 ref. | 0.50 $\pm$ 0.1 | 2.80                                  | 0.96  | 1.78  |

