

## Specification Sheet for Approved

|                    |                  |
|--------------------|------------------|
| Customer Name:     |                  |
| Customer Part No.: |                  |
| Ceaiya Part No:    | CWCI0805F Series |
| Spec No:           | C-0805           |

### 【For Customer Approval Only】

|                               |
|-------------------------------|
| If you Approval, Please Stamp |
|-------------------------------|

### 【RoHS Compliant Parts】

| Approved By | Checked By | Prepared By |
|-------------|------------|-------------|
| 李庆辉         | 苏高峰        | 劳水花         |

深圳市柯爱亚电子有限公司

**Shenzhen Ceaiya Electronics Co., Ltd.**

深圳地址: 深圳市龙华区观湖街道鹭湖社区观盛二路 5 号捷顺科技中心 B706

东莞地址: 东莞清溪镇青滨东路 105 号力合紫荆智能制造中心 10 栋一单元

Http://www.szceaiya.com      Tel: 0769-89333213

**【Version of Changed Record】**

| Rev. | Effective Date | Changed Contents | Change Reasons | Approved By |
|------|----------------|------------------|----------------|-------------|
| A0   | 2024-11-15     | New release      | /              | Li qing hui |
|      |                |                  |                |             |

# Specification Sheet for SMD Chip Inductor

## 1. Scope

This specification applies to the CWCI0805F Series of wire wound SMD chip inductor.

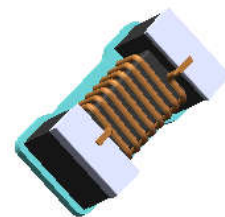
## 2. Product Description and Identification (Part Number)

### 1) Description:

CWCI0805F series of Wire wound SMD chip inductor.

### 2) Product Identification (Part Number)

CWCI 0805 F - 2R2 □ T □□  
① ② ③ ④ ⑤ ⑥ ⑦



| ①    | Type                     |
|------|--------------------------|
| CWCI | Wire Wound Chip Inductor |

| ②    | External Dimensions(L×W) 【inch】 |
|------|---------------------------------|
| 0805 | 2.0mm×1.2mm                     |

| ③ | Material type |
|---|---------------|
| F | Ferrite       |

| ④       | Nominal Inductance |
|---------|--------------------|
| Example | Nominal Value      |
| 1R0     | 1.0uH              |
| 100     | 10uH               |
| 101     | 100uH              |

| ⑤ | Inductance Tolerance |
|---|----------------------|
| J | ±5%                  |
| K | ±10%                 |
| M | ±20%                 |

| ⑦                           | Design Code |
|-----------------------------|-------------|
| □□                          | Design Code |
| * Standard product is blank |             |

| ⑥ | Packing              |
|---|----------------------|
| T | Tape Carrier Package |

## 3. Electrical Characteristics

Please refer to Item 5.

- Operating temperature range (individual chip without packing): -40℃ ~ +125℃ (Including Self-heating) .
- Storage temperature range (packaging conditions): -10℃ ~ +40℃ and RH 70% (Max.).

## 4. Shape and Dimensions (Unit:mm)

Dimensions and recommended PCB pattern for reflow soldering, please see Fig4-1 and Table4-1

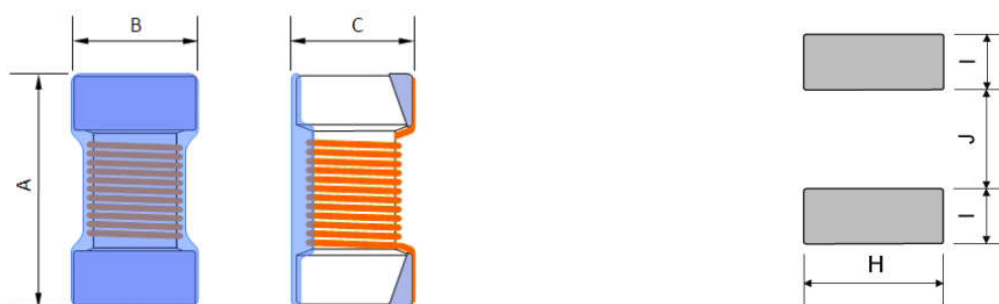


Fig4-1.

Table 4-1.

| A        | B        | C       | H        | I        | J        |
|----------|----------|---------|----------|----------|----------|
| 2.4 Max. | 1.45Max. | 1.4Max. | 1.78 Ref | 1.02 Ref | 0.76 Ref |

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## 5. Electrical Characteristics

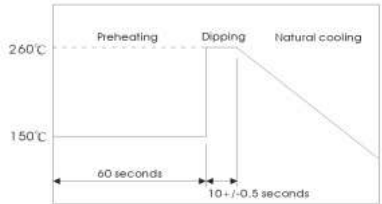
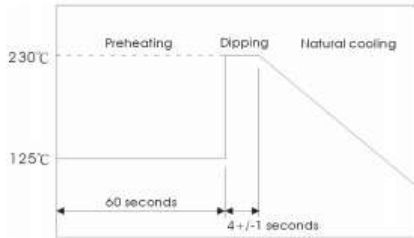
| Part Number     | Inductance<br>(uH)/MHz | Inductance<br>Tolerance | Q/MHz<br>Typ. | S.R.F Typ.<br>(MHz) | RDCMax<br>(Ω) | Irms Max.<br>(mA) |
|-----------------|------------------------|-------------------------|---------------|---------------------|---------------|-------------------|
| CWCI0805F-R47□T | 0.47/7.96              | J,K,M                   | 14/7.96       | 850                 | 0.12          | 1400              |
| CWCI0805F-R51□T | 0.51/7.96              | K,M                     | 14/7.96       | 800                 | 0.15          | 1200              |
| CWCI0805F-R56□T | 0.56/7.96              | K,M                     | 14/7.96       | 700                 | 0.15          | 1200              |
| CWCI0805F-R68□T | 0.68/7.96              | J,K,M                   | 14/7.96       | 400                 | 0.15          | 1200              |
| CWCI0805F-R82□T | 0.82/7.96              | J,K                     | 14/7.96       | 300                 | 0.16          | 1150              |
| CWCI0805F-1R0□T | 1.0/7.96               | J,K                     | 14/7.96       | 208                 | 0.17          | 1100              |
| CWCI0805F-1R2□T | 1.2/7.96               | J,K                     | 14/7.96       | 180                 | 0.20          | 960               |
| CWCI0805F-1R5□T | 1.5/7.96               | J,K                     | 14/7.96       | 159                 | 0.22          | 920               |
| CWCI0805F-1R8□T | 1.8/7.96               | K,M                     | 14/7.96       | 112                 | 0.26          | 860               |
| CWCI0805F-2R2□T | 2.2/7.96               | J,K                     | 14/7.96       | 80                  | 0.31          | 740               |
| CWCI0805F-2R7□T | 2.7/7.96               | J,K                     | 13/7.96       | 72                  | 0.33          | 680               |
| CWCI0805F-3R3□T | 3.3/7.96               | J,K                     | 12/7.96       | 70                  | 0.36          | 620               |
| CWCI0805F-3R9□T | 3.9/7.96               | K,M                     | 13/7.96       | 61                  | 0.49          | 580               |
| CWCI0805F-4R7□T | 4.7/7.96               | J,K                     | 14/7.96       | 51                  | 0.56          | 520               |
| CWCI0805F-5R6□T | 5.6/7.96               | J,K                     | 12/7.96       | 42                  | 0.65          | 480               |
| CWCI0805F-6R8□T | 6.8/7.96               | J,K,M                   | 14/7.96       | 35                  | 0.88          | 420               |
| CWCI0805F-8R2□T | 8.2/7.96               | J,K,M                   | 13/7.96       | 33                  | 1.00          | 400               |
| CWCI0805F-100□T | 10/2.5                 | K,M                     | 14/2.5        | 25                  | 1.17          | 300               |
| CWCI0805F-120□T | 12/2.5                 | K,M                     | 14/2.5        | 25                  | 1.70          | 290               |
| CWCI0805F-150□T | 15/2.5                 | K,M                     | 12/2.5        | 28                  | 2.60          | 260               |
| CWCI0805F-180□T | 18/2.5                 | K,M                     | 12/2.5        | 25                  | 3.10          | 250               |
| CWCI0805F-220□T | 22/2.5                 | K,M                     | 15/2.5        | 20                  | 3.50          | 240               |
| CWCI0805F-470□T | 47/2.5                 | K,M                     | 16/2.5        | 13                  | 6.60          | 100               |

Note:

- When ordering, please specify tolerance and packaging codes. Ex:CWCI0805F-100KT  
Tolerance: J=±5%,K=±10%,M=±20%, N=±30%  
Packaging: Clear tape and reel {standard}
- L, Q, SRF : Agilent /HP 4287A + Agilent / HP 8722ES or Equivalent
- Rdc: Digital Milliohm Meter Chroma 16502, or equivalent.
- Idc for Inductance drop 20% from its value without current.
- Irms for a 15°C rise above 25°C ambient.

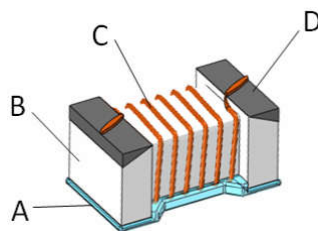
# Specification Sheet for SMD Chip Inductor

## 6. Reliability Test

| Items                                                | Performance                                                                                                                                                  | Test Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------|-----------|---|-----------------------------|------------|---|------------|----|---|-----------------------------|------------|---|------------|----|
| 6.1<br>Solder Heat<br>Resistance<br>耐焊锡热             | Appearance: No significant abnormality.<br>Inductance change: Within $\pm 20\%$<br>外观：无明显异常<br>电感值：变化值在初始值 20% 以内                                            | Preheat: $150^{\circ}\text{C}$ , 60sec.<br>Solder: H63A<br>Solder temperature: $260 \pm 5^{\circ}\text{C}$<br>Flux for lead free: rosin<br>Dip time: $10 \pm 0.5\text{sec}$ .<br>预热： $150^{\circ}\text{C}$ ，60 sec<br>锡炉温度： $260 \pm 5^{\circ}\text{C}$<br>助焊剂：rosin.<br>时间： $10 \pm 0.5\text{sec}$<br>                                                                                                                                                                                                                                                                                                                                                                                    |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 6.2<br>Solderability Test<br>端面焊锡性                   | More than 90% of the terminal electrode should be covered with solder.<br>端电极之锡覆盖面达 90% 以上                                                                   | Preheat: $125 \pm 25^{\circ}\text{C}$ , 60sec.<br>Solder: H63A<br>Solder temperature: $230 \pm 5^{\circ}\text{C}$<br>Flux for lead free: rosin<br>Dip time: $4 \pm 1\text{sec}$<br>预热： $125^{\circ}\text{C}$ ，60 sec<br>锡炉温度： $230 \pm 5^{\circ}\text{C}$<br>助焊剂：rosin.<br>时间： $4 \pm 1\text{sec}$<br>                                                                                                                                                                                                                                                                                                                                                                                     |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 6.3<br>High Temperature<br>Resistance Test<br>高温放置测试 | Appearance: no damage.<br>Inductance: within $\pm 20\%$ of initial value.<br>No disconnection or short circuit.<br>外观不能破损<br>电感值：变化值在初始值 20% 以内<br>电性无短路或断线。 | Temperature: $85 \pm 2^{\circ}\text{C}$ .<br>Applied current: rated current.<br>Duration: 500 hrs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 6.4<br>Humidity<br>Resistance Test<br>高湿放置测试         | Appearance: no damage.<br>Inductance: within $\pm 20\%$ of initial value.<br>No disconnection or short circuit.<br>外观不能破损<br>电感值：变化值在初始值 20% 以内<br>电性无短路或断线。 | Temperature: $40 \pm 2^{\circ}\text{C}$ .<br>Applied current: rated current.<br>Duration: 500 hrs<br>Humidity: 90~95%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 6.5<br>Thermal shock<br>热冲击试验                        | Appearance: no damage.<br>Inductance: within $\pm 20\%$ of initial value.<br>No disconnection or short circuit.<br>外观不能破损<br>电感值：变化值在初始值 20% 以内<br>电性无短路或断线。 | Condition for 1 cycle<br>Step1: $-25 \pm 2^{\circ}\text{C}$ , $30 \pm 3\text{ min}$ .<br>Step2: Room temperature within 15 min.<br>Step3: $+85 \pm 5^{\circ}\text{C}$ , $30 \pm 3\text{ min}$ .<br>Step4: Room temperature within 15 min.<br>Number of cycles: 50PCS<br><table border="1" data-bbox="1134 1458 1485 1666"> <thead> <tr> <th>Phase</th><th>Temperature(<math>^{\circ}\text{C}</math>)</th><th>Time(min)</th></tr> </thead> <tbody> <tr> <td>1</td><td><math>-25 \pm 2^{\circ}\text{C}</math></td><td><math>30 \pm 3</math></td></tr> <tr> <td>2</td><td>Room Temp.</td><td>15</td></tr> <tr> <td>3</td><td><math>+85 \pm 2^{\circ}\text{C}</math></td><td><math>30 \pm 3</math></td></tr> <tr> <td>4</td><td>Room Temp.</td><td>15</td></tr> </tbody> </table> | Phase | Temperature( $^{\circ}\text{C}$ ) | Time(min) | 1 | $-25 \pm 2^{\circ}\text{C}$ | $30 \pm 3$ | 2 | Room Temp. | 15 | 3 | $+85 \pm 2^{\circ}\text{C}$ | $30 \pm 3$ | 4 | Room Temp. | 15 |
| Phase                                                | Temperature( $^{\circ}\text{C}$ )                                                                                                                            | Time(min)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 1                                                    | $-25 \pm 2^{\circ}\text{C}$                                                                                                                                  | $30 \pm 3$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 2                                                    | Room Temp.                                                                                                                                                   | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 3                                                    | $+85 \pm 2^{\circ}\text{C}$                                                                                                                                  | $30 \pm 3$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 4                                                    | Room Temp.                                                                                                                                                   | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |
| 6.6<br>Humidity<br>Resistance<br>高湿测试                | Appearance: no damage.<br>Inductance: within $\pm 20\%$ of initial value.<br>No disconnection or short circuit.<br>外观不能破损<br>电感值：变化值在初始值 20% 以内<br>电性无短路或断线。 | Humidity: 90~95%RH.<br>Temperature: $40 \pm 5^{\circ}\text{C}$ .<br>Applied current: rated current.<br>Duration: $500 \pm 12\text{hrs}$ .<br>Measured at room temperature after placing for 2 to 3hrs.<br>湿度：90~95%RH.<br>温度： $40 \pm 5^{\circ}\text{C}$ .<br>须加电流：额定电流。<br>放置时间： $500 \pm 12\text{hrs}$ .                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |                                   |           |   |                             |            |   |            |    |   |                             |            |   |            |    |

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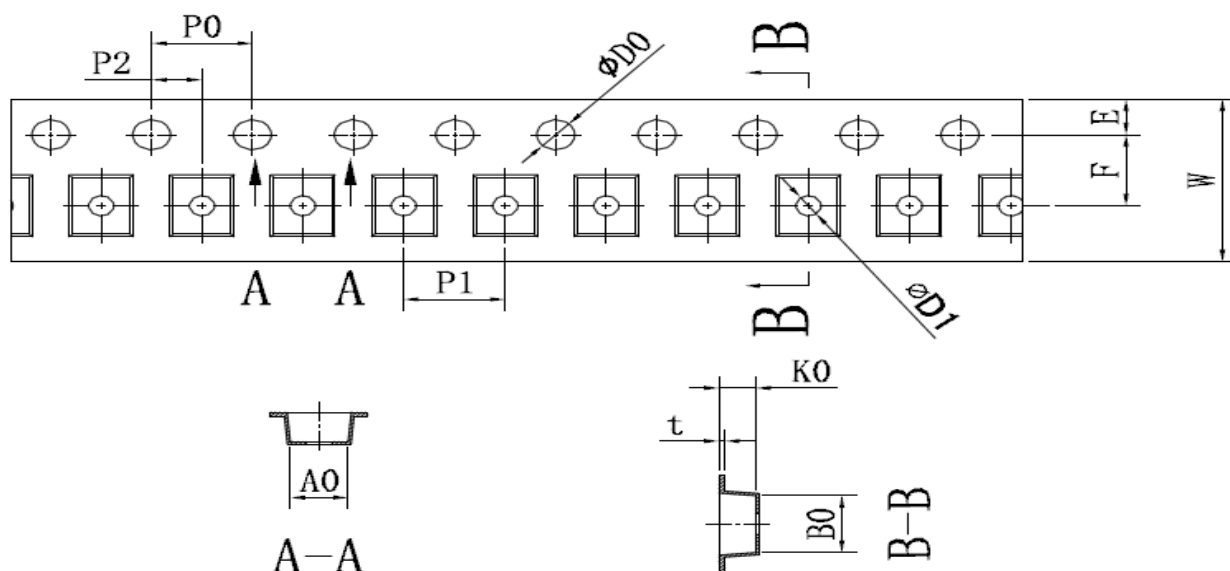
## 7. Structure: See the following.



| No. | Components | Material                                 |
|-----|------------|------------------------------------------|
| A   | Coating    | Ultraviolet epoxy resin                  |
| B   | Core       | Ferrite                                  |
| C   | Wire       | Polyurethane system enameled copper wire |
| D   | Electrodes | Ag/Ag-Pd with Ni and Sn plating          |

## 8. Packaging and Storage

### (1) Taping Dimensions (Unit: mm)



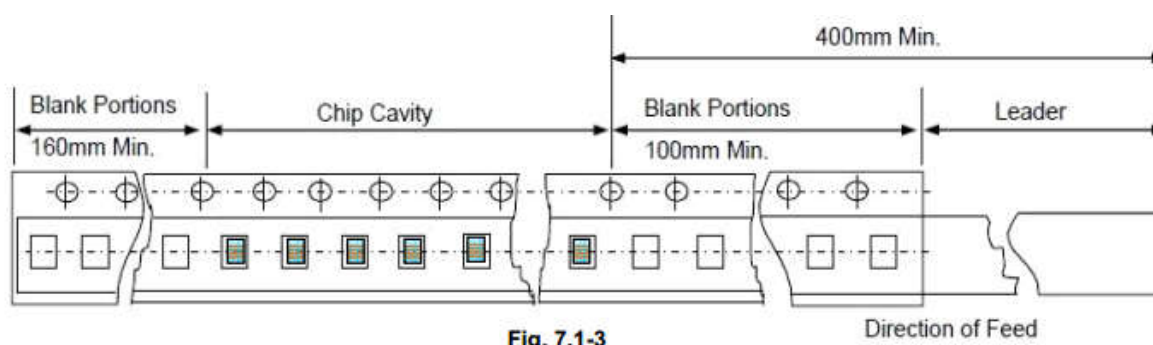
| TEM  | W    | A0   | B0   | K0    | P0   | F     | E    | D0   | D1   | P1   | P2    | T     |
|------|------|------|------|-------|------|-------|------|------|------|------|-------|-------|
| DIM  | 8.00 | 1.45 | 2.25 | 1.42  | 4.00 | 3.50  | 1.75 | 1.55 | 1.0  | 4.00 | 2.00  | 0.22  |
| TOLE | ±0.3 | ±0.1 | ±0.1 | ±0.05 | ±0.1 | ±0.05 | ±0.1 | +0.1 | +0.1 | ±0.1 | ±0.05 | ±0.05 |

## 包装数量(PACKAGING QUANTITY)

|          |      |
|----------|------|
| 规格       | 0805 |
| 数量 (PCS) | 2000 |

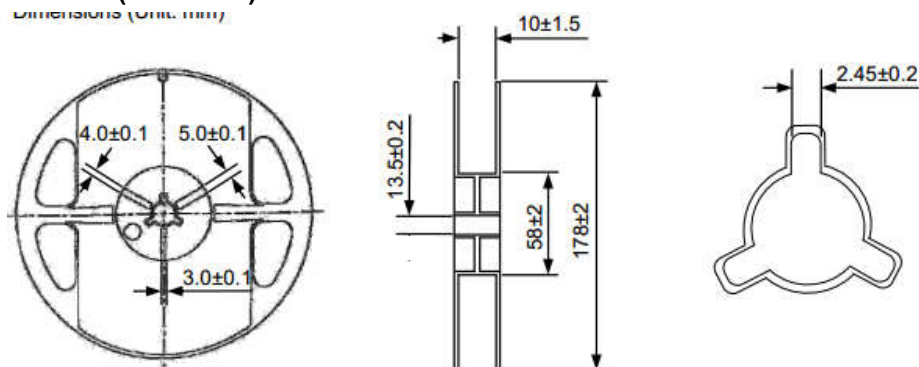
# Specification Sheet for SMD Chip Inductor

## (2) Leader and blank portion



## (3) Reel Dimensions (Unit: mm)

Dimensions (Unit: mm)



## (4) Peeling off force: 10gf to 70gf in the direction show below.

