



产品承认书

SPECIFICATION FOR APPROVAL

客户名称:

CUSTOMER

我司料号:

OUR PART NO.

XRFWHP1513A-4R7M

我司品名:

OUR PART NAME

Molding Power Inductors

送样日期:

DATE SAMPLES

数 量:

QUANTITY

制造确认 MANUFACTURER APPROVE

| 拟制 DRAWN | 审核 CHECKED | 确认 APPROVED |
|------------|------------|-------------|
| HuFangting | RaoPin | Zhongcuilan |

客户确认 CUSTOMER APPROVE

客户名称 CUSTOMER NAME:

客户料号 CUSTOMER P/N:

规格型号 DESCRIPTION: XRFWHP1513A 4.7uH ±20% 48A

检查結果: 合格 不合格

签名及盖章:

INSPECT RESULT ACCEPT REJECT SIGNATURE AND STAMP

说明 REMARK:

如对本承认书内容有异议请提出或标记发送至我司, 本承认书在未收到异议回复时于本承认书提供一周后生效。

If you have any objection to the contents of this acknowledgement, please put forward or mark it and send it to our company. This acknowledgement will take effect one week after it is provided if you do not receive an objection reply.

东莞市祥如电子有限公司

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产品承认书

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| 客户名称 CUSTOMER | | 日期 DATE | 2025/9/10 |
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| 我司物料编号 OUR PART NO | XRFWHP1513A-4R7M | 我司品名 OUR PART NAME | Molding Power Inductors |

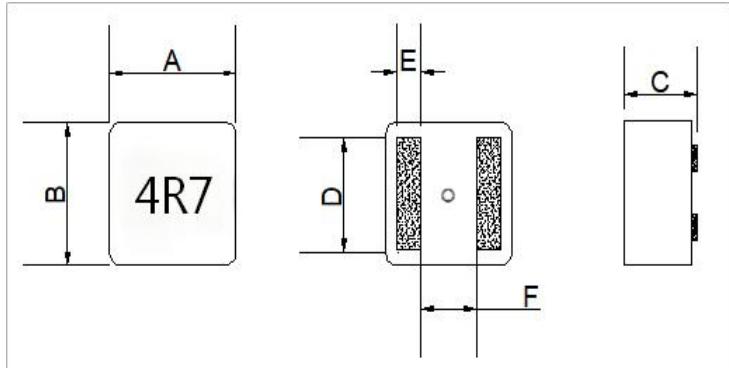
修订记录 Revision record

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外观尺寸 Appearance of size

单位 Unit: mm

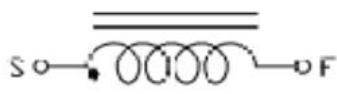


| | | | | | |
|------------------|----------|---|---------|---|--------|
| A | 16.6±0.3 | C | 13.0Max | E | 3.6Typ |
| B | 15.6±0.3 | D | 13.8Typ | F | 7.0Typ |
| 标识Identification | | | | | |

ELECTRICAL CHARACTERISTIC:

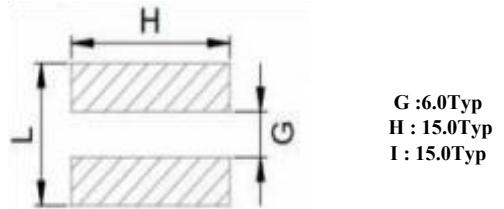
| Part No. | Inductance (uH)±20% | Test Freq. | DCR(mΩ) Typ(Max) | Isat(A) Typ | Irms(A) Typ | Marking |
|------------------|------------------------|-------------|---------------------|----------------|----------------|---------|
| XRFWHP1513A-4R7M | 4.7 | 100kHz/0.1V | 3.00(3.30) | 48.00 | 34.00 | 4R7 |
| | | | | | | |

SCHEMATIC DRAWING :



Equivalent Circuit

PCB PATTERN :



Standard Testing Condition:

| | | |
|-------------|----------------------------------|------------------|
| | Unless otherwise specified | In case of doubt |
| Temperature | Ordinary Temperature(15 to 35°C) | 25±5°C |
| Humidity | Ordinary Humidity(25 to 85% RH) | 50 to 80% RH |

NOTE: □-tolerance M=±20% / T=±30%

1.Operating temperature range -40°C~125°C (Including self - temperature rise)

2.Saturation Current (Isat) will cause L0 to drop approximately 30%. (Internal control standards at 40% max)

3.Irms for a 40°C temperature rise from 25°C ambient.

DCR test method:



Irms testing was performed on 20mm wide × 6mm thick copper traces in still air. Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions



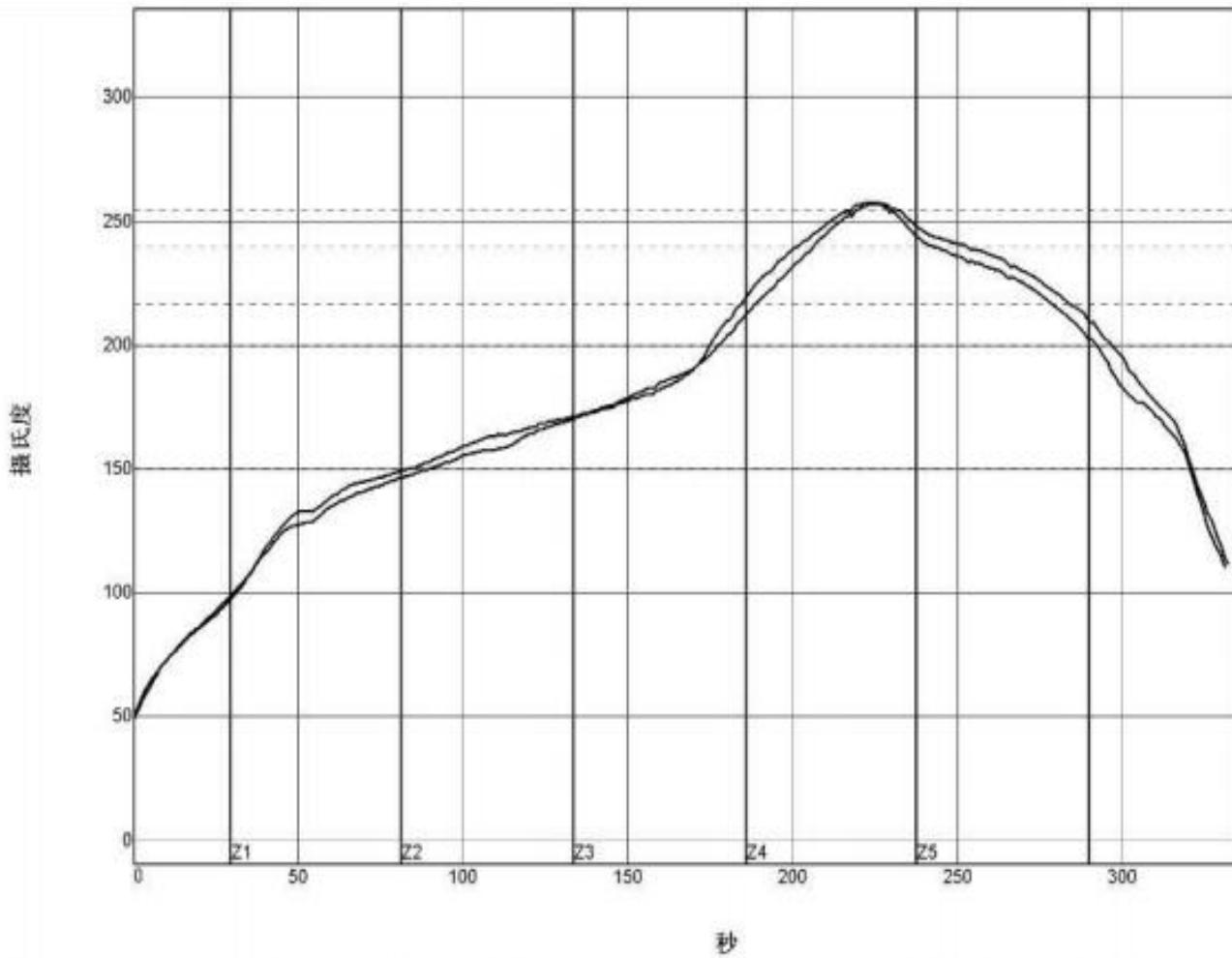
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| 我司物料编号 OUR PART NO | XRFWHP1513A-4R7M | | 我司品名 OUR PART NAME | Molding Power Inductors | | | | | | | | | |
| Construction: | | | | | | | | | | | | | |
| | | Material List: | | | | | | | | | | | |
| NO. | Part Name | Material Name | | | | | | | | | | | |
| ①-1 | Core | Magnetic powder | | | | | | | | | | | |
| ①-2 | Core | Magnetic powder | | | | | | | | | | | |
| ② | Wire | Enamelled copper wire | | | | | | | | | | | |
| ③ | Electrode | Cu / Sn | | | | | | | | | | | |
| ④ | Coating | Epoxy | | | | | | | | | | | |
| PACKAGING: | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Dimensions in mm | | | | | | | | | | | | | |
| TYPE | Tape Dimensions | | | | | | | | | | | | |
| | W | P | A0 | B0 | K0 | E | P0 | P2 | | | | | |
| XRFWHP1513A | 32.0 | 21.0 | 17.0 | 16.0 | 13.6 | 1.75 | 4.0 | 2.0 | | | | | |
| Packaging Quantity | | | | | | | | | | | | | |
| TYPE | Chip/Reel | | | Inner Box | | | Outer Box | | | | | | |
| XRFWHP1513A | 100 | | | 200 | | | 400 | | | | | | |
| ※Storage Conditions | | | | | | | | | | | | | |
| 1. Temperature and humidity conditions: -10~+40°C and 70% RH Max. | | | | | | | | | | | | | |
| 2. Recommended products should be used within 12 months from the time of delivery. | | | | | | | | | | | | | |
| 3. The packaging material should be kept where no chlorine or sulfur exists in the air. | | | | | | | | | | | | | |

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For Lead-Free Application
Figure . Re-flow Soldering



制程界限:

| 统计数名称 | 最低界限 | 最高界限 | 单位 |
|-----------------|------|------|-------|
| 预热时间150-200摄氏度 | 60 | 180 | 秒 |
| 回流以上时间 - 217摄氏度 | 60 | 150 | 秒 |
| 最高温度 | 255 | 265 | 度 摄氏度 |
| 在240摄氏度以上时间 | 40 | 60 | 秒 |
| 在255摄氏度以上时间(-2) | 5 | 20 | 秒 |



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SHC Series Specification :

Mechanical Performance

| No | Item | Specification | Test Method |
|--------|------------------------------|--|---|
| 8-1--1 | Vibration | Appearance: No damage Inductance:within±10% of initial value | Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs |
| 8-1--2 | Resistance to Soldering Heat | Appearance: No damage | Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5Solder Temperature: 260±5°C Immersion Time: 10±1sec |
| 8-1--3 | Solder ability | The electrodes shall be at least 95% covered with new solder coating | Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5Solder Temperature: 245±3°C Immersion Time: ≤3sec |
| 8-1--4 | Resistance to solvent | There must be no change in appearance or obliteration of marking. | Inductors must withstand 6 minutes of alcohol or water. |

Environmental Performance

| No | Item | Specification | Test Method | | | | | | | | | | | | | | | |
|---------|-----------------------------|---|--|------|------------------|------------|---|-------|----|---|------|---|---|-------|----|---|------|---|
| 8--2--1 | Temperature Cycle | Appearance: No damage Inductance:within±10% of initial value | One cycle: <table border="1"><thead><tr><th>Step</th><th>Temperature (°C)</th><th>Time (min)</th></tr></thead><tbody><tr><td>1</td><td>-40±3</td><td>30</td></tr><tr><td>2</td><td>25±2</td><td>3</td></tr><tr><td>3</td><td>125±3</td><td>30</td></tr><tr><td>4</td><td>25±2</td><td>3</td></tr></tbody></table> Total: 100cycles Measured after exposure in the room condition for 24hrs | Step | Temperature (°C) | Time (min) | 1 | -40±3 | 30 | 2 | 25±2 | 3 | 3 | 125±3 | 30 | 4 | 25±2 | 3 |
| Step | Temperature (°C) | Time (min) | | | | | | | | | | | | | | | | |
| 1 | -40±3 | 30 | | | | | | | | | | | | | | | | |
| 2 | 25±2 | 3 | | | | | | | | | | | | | | | | |
| 3 | 125±3 | 30 | | | | | | | | | | | | | | | | |
| 4 | 25±2 | 3 | | | | | | | | | | | | | | | | |
| 8--2--2 | Humidity Resistance | Appearance: No damage Inductance:within±10% of initial value | Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | |
| 8--2--3 | High Temperature Resistance | Appearance: No damage Inductance:within±10% of initial value | Temperature: 125±3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | |
| 8--2--4 | Low Temperature Resistance | Appearance: No damage Inductance:within±10% of initial value | Temperature: -40±3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs | | | | | | | | | | | | | | | |