



## Antenna Specification

**Manufacture:** Hongxin IoT

**Product Name:** HX-AP915-488-D5 antenna

**Product Code:** HX-AP915-488-D5

**Antenna Type:** Rod with glue cover

**Test Date:** 2023.08.28

**Tested by:** Long Wang

**Approved by:** Licco

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## 1 General Description

|                |                                                                                                            |
|----------------|------------------------------------------------------------------------------------------------------------|
| Manufacturer   | Shenzhen Hongxin IoT Technical Electronics, Ltd.                                                           |
| Address        | 2nd Floor, Building C10, Xin'an Second Industrial Zone, Gushu 2nd Road, Xixiang, Bao'an District, Shenzhen |
| Test Location  | Room 106, Building 3, Letong Science Park, No. 500, Qiuyi Road, Binjiang District, Hangzhou                |
| Product Name   | HX-AP915-488-D5 antenna                                                                                    |
| Product Code   | HX-AP915-488-D5                                                                                            |
| Antenna Type   | Rod with glue cover                                                                                        |
| Test Items     | Gain, Frequency, VSWR Chart                                                                                |
| Test Frequency | 800MHz ~ 930MHz                                                                                            |
| Test Standard  | ANSI/IEEE Std 149-1979                                                                                     |

## 2 Design Specifications

| Design Specifications | Typical                                                                                     | Units |
|-----------------------|---------------------------------------------------------------------------------------------|-------|
| Antenna Form          | Rod with glue cover                                                                         |       |
| Working Frequency     | 850 ~ 930                                                                                   | MHz   |
| Gain                  | 2.5                                                                                         | dBi   |
| Antenna efficiency    | 35-80                                                                                       | %     |
| VSWR                  | <1.8                                                                                        |       |
| Polarization          | Vertical Polarization                                                                       |       |
| Axial Ratio           | When the antenna is circularly polarized, the axial ratio in the working broadband is noted |       |
| Radiation pattern     | Omini                                                                                       |       |
| Impedance             | 50                                                                                          | Ohm   |
| Power handling        | 33                                                                                          | dBm   |
| Interface             | SMA Internal Hole                                                                           |       |
| Overall dimensions    | 48                                                                                          | mm    |
| Weight                | N/A                                                                                         |       |
| Operating Temperature | -30-70                                                                                      | °C    |
| Storing Temperature   | -30-70                                                                                      | °C    |



## 3 Test Configurations

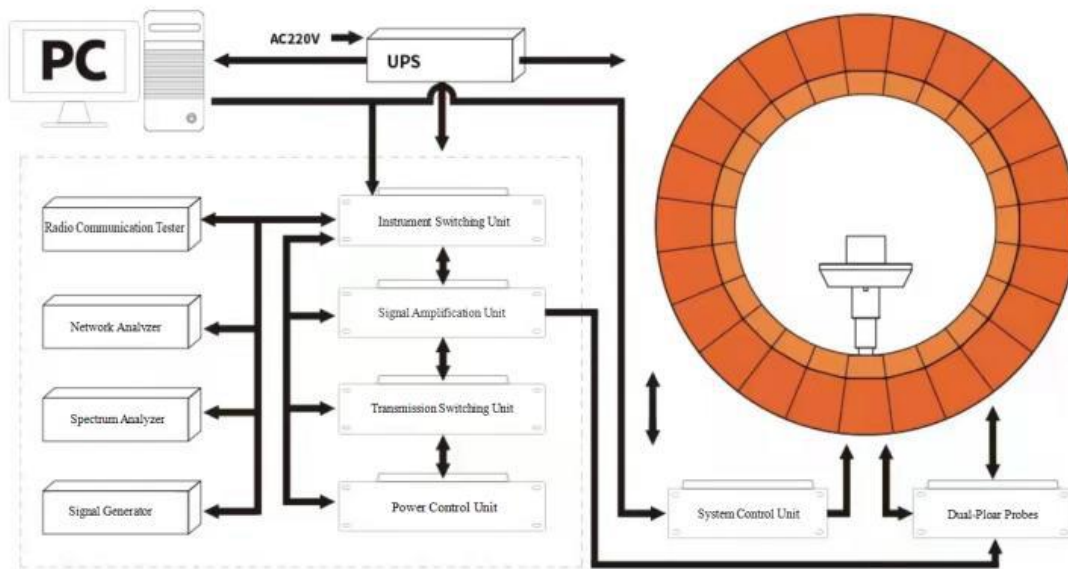
### 3.1 Test Environment

|                            |      |
|----------------------------|------|
| Temperature (°C)           | 25   |
| Humidity (%RH)             | 60   |
| Atmospheric Pressure (hPa) | 1005 |

### 3.2 Test Equipment

|                 |                                      |
|-----------------|--------------------------------------|
| Test System     | TEM 24 Multi-probe Microwave Chamber |
| Test Instrument | Agilent E5071B , Agilent N9938A      |

### 3.3 Test Principle



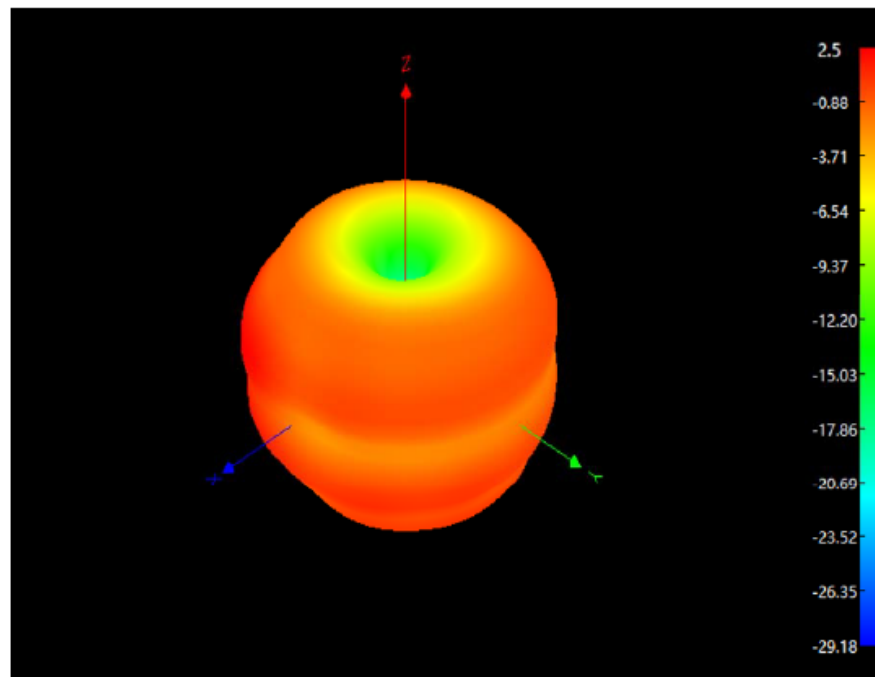


## 4 Test Results

### 4.1 Gain and Frequency

| Passive Test For 850-950MHz |          |           |            |
|-----------------------------|----------|-----------|------------|
| Freq (MHz)                  | Effi (%) | Effi (dB) | Gain (dBi) |
| 850                         | 58.8     | -2.3      | 2.1        |
| 860                         | 61.7     | -2.1      | 2.2        |
| 870                         | 64.9     | -1.9      | 2.2        |
| 880                         | 64.4     | -1.9      | 2.2        |
| 890                         | 67.5     | -1.7      | 2.5        |
| 900                         | 70.5     | -1.5      | 2.5        |
| 910                         | 75.5     | -1.2      | 2.4        |
| 920                         | 78.7     | -1.0      | 2.3        |
| 930                         | 77.5     | -1.1      | 2.4        |
| 940                         | 74.3     | -1.3      | 2.3        |
| 950                         | 74.5     | -1.3      | 2.3        |

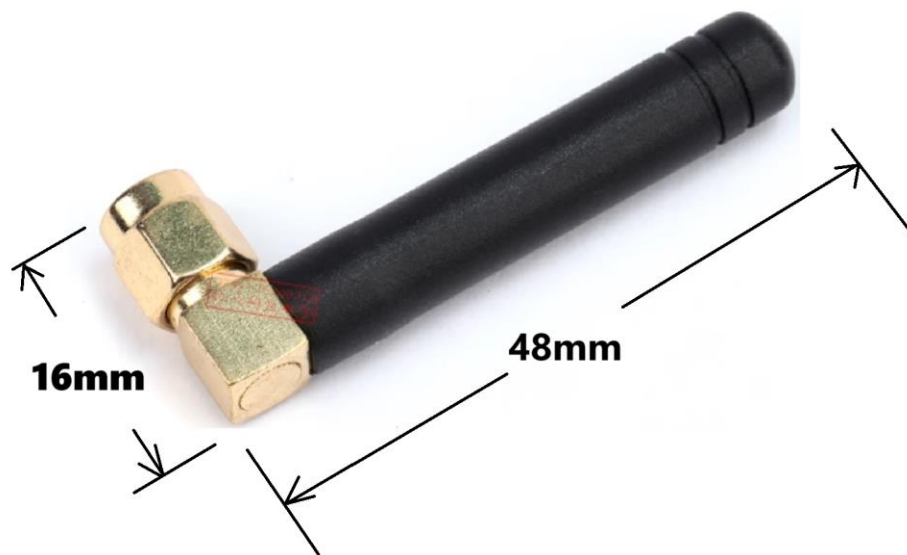
### 4.2 Radiation Pattern 900MHz





## 5 Antenna Dimensions and Interface

### 5.1 Antenna Photo and Dimensions



### 5.2 Antenna Interface





## 6 Test Setup Photo

