

# WA-P-LA-01-107 Specification

## 1. Explanation of part number:

WA    -    P    -    LA    -    01    -    107  
(1)        (2)        (3)        (4)        (5)

(1) Product Type: PCB Antenna

(2) Material: PCB+ Cable

(3) Frequency:2400-2500MHz

(4) Coaxial Cable Type:01

(5) Suffix :107

(6) Gain (Peak) : 3.4dBi

(7) Company address: INPAQ TECHNOLOGY(SUZHOU) CO, LTD. No. 5, Chunqiu

Road, Huangdai Town, Xiangcheng District, Suzhou City, Jiangsu Province, China

## 2. Storage Condition:

Temperature                      -40 to +70 °C  
Humidity                         65±20 % RH

## 3. Operating Condition:

Temperature                      -40 to +70 °C  
Humidity                         65±20 % RH

## 4. Electrical Specification:

*Those specifications were specially defined for 迪芬尼 DH400 BT model, and all characteristics were measured under the model's handset testing.*

|                                                                                                                                                 |                   |                                                                                                                                                                                                       |                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| UNLESS OTHER SPECIFIED TOLERANCES ON :<br>X=±                      X.X=±                      X.XX=±<br>ANGLES=±                      HOLEDIA=± |                   |  佳邦科技股份有限公司<br>INPAQ TECHNOLOGY CO., LTD.                                                                          |                 |
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| DRAWN BY : 骆拓夫                                                                                                                                  | CHECKED BY : 赵付辉  |                                                                                                                                                                                                       |                 |
| DESIGNED BY : 陈光芒                                                                                                                               | APPROVED BY : 赵付辉 |                                                                                                                                                                                                       |                 |
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## 4-1. Frequency Band:

|                |              |
|----------------|--------------|
| Frequency Band | MHz          |
| BT             | 2400-2500MHz |

## 4-2. Impedance

50 ohm nominal

## 4-3. Matching circuit

None

## 4-4. Return Loss

### 4-4.1 Measuring Method

- 1.A 50 $\Omega$  coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the Return Loss
2. Keeping this jig away from metal at least 20cm

### 4-4.2 Measurement frequency points and Return Loss value

| Frequency (Unit MHz) |    | 2400   | 2450   | 2500   |
|----------------------|----|--------|--------|--------|
| Return Loss          | BT | -19.22 | -18.27 | -18.39 |

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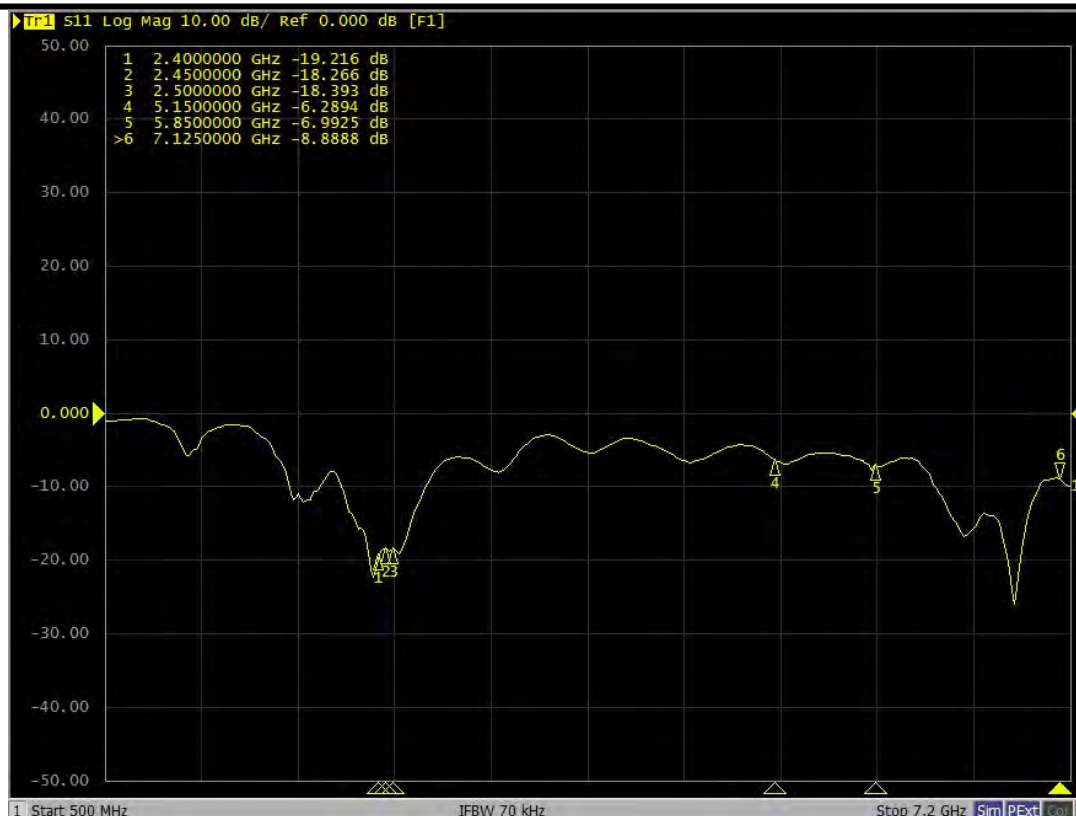
DESIGNED BY : 陈光芒      APPROVED BY : 赵付辉

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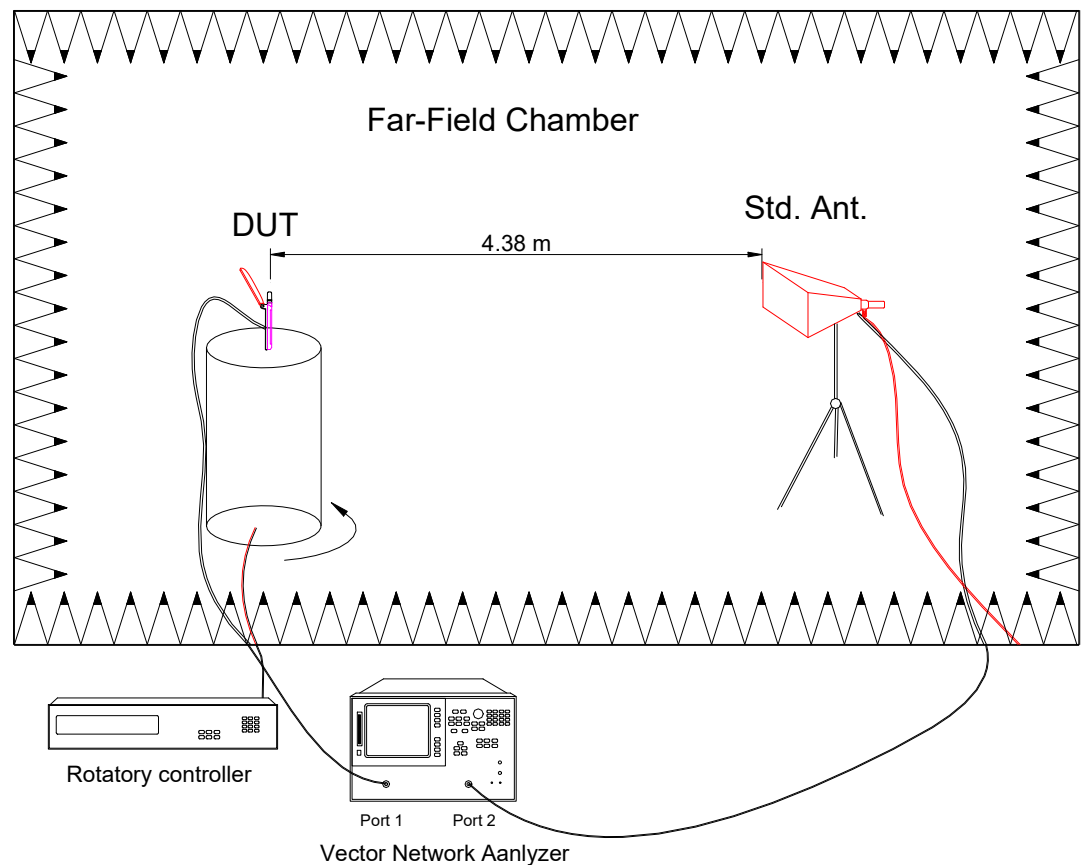
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4-5. Efficiency and Gain

4-5.1 Measure method

- 1. Using a low loss coaxial cable to link a standard handset
- 2. Fixed this handset jig on chamber's rotator plane
- 3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
- 4. Using another standard gain horn antenna to calibrated those data



4-5.2 Chamber definition

- 1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
- 2. The quite room region is 40cmx40cmx40cm at the center of rotator
- 3. The distance between DUT and standard antenna is 4.38 m
- 4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

4-5.3 Efficiency and Gain

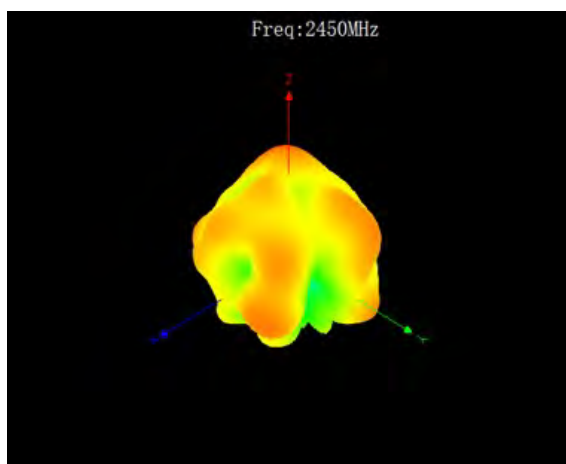
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Antenna gain is marked (dBi) and is based on STANDARD HORN antenna. The data shows Peak Gain and Average Gain.

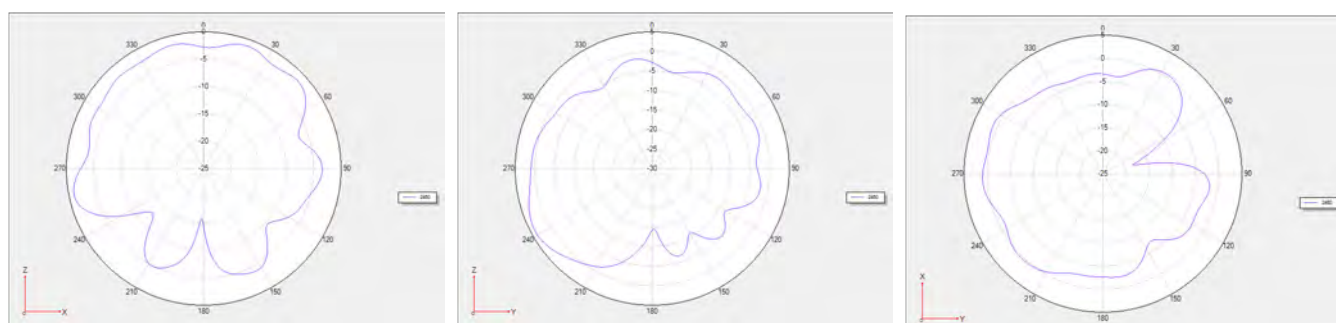
| Antenna type    | PCB       |       |       |
|-----------------|-----------|-------|-------|
| Frequency (MHz) | 2400      | 2450  | 2500  |
| Efficiency (%)  | 64.12     | 61.94 | 59.57 |
| Peak Gain (dBi) | 3.4       | 3.05  | 1.82  |
| Frequency (MHz) | 2400~2500 |       |       |
| Peak Gain (Max) | 3.4dBi    |       |       |

## 4-6. 3D/2D Radiation Pattern Results

### ➤ 3D Radiation Pattern Results



### ➤ 2D Radiation Pattern Results



### ➤ Physical coordinate Image

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ANGLES=±      HOLEDIA=±

SCALE :

UNIT : mm

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DESIGNED BY : 陈光芒

APPROVED BY : 赵付辉



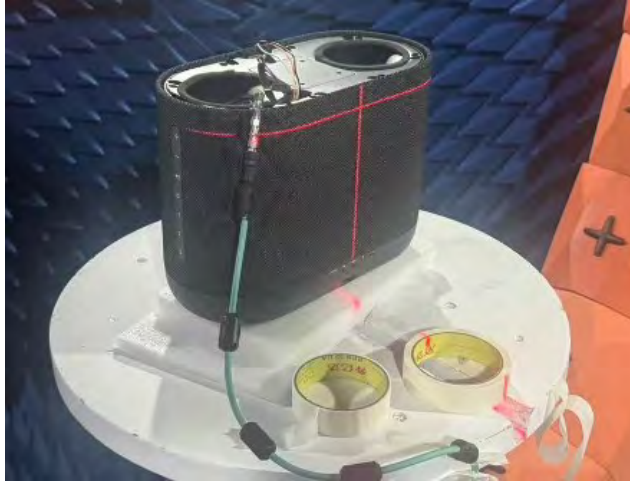
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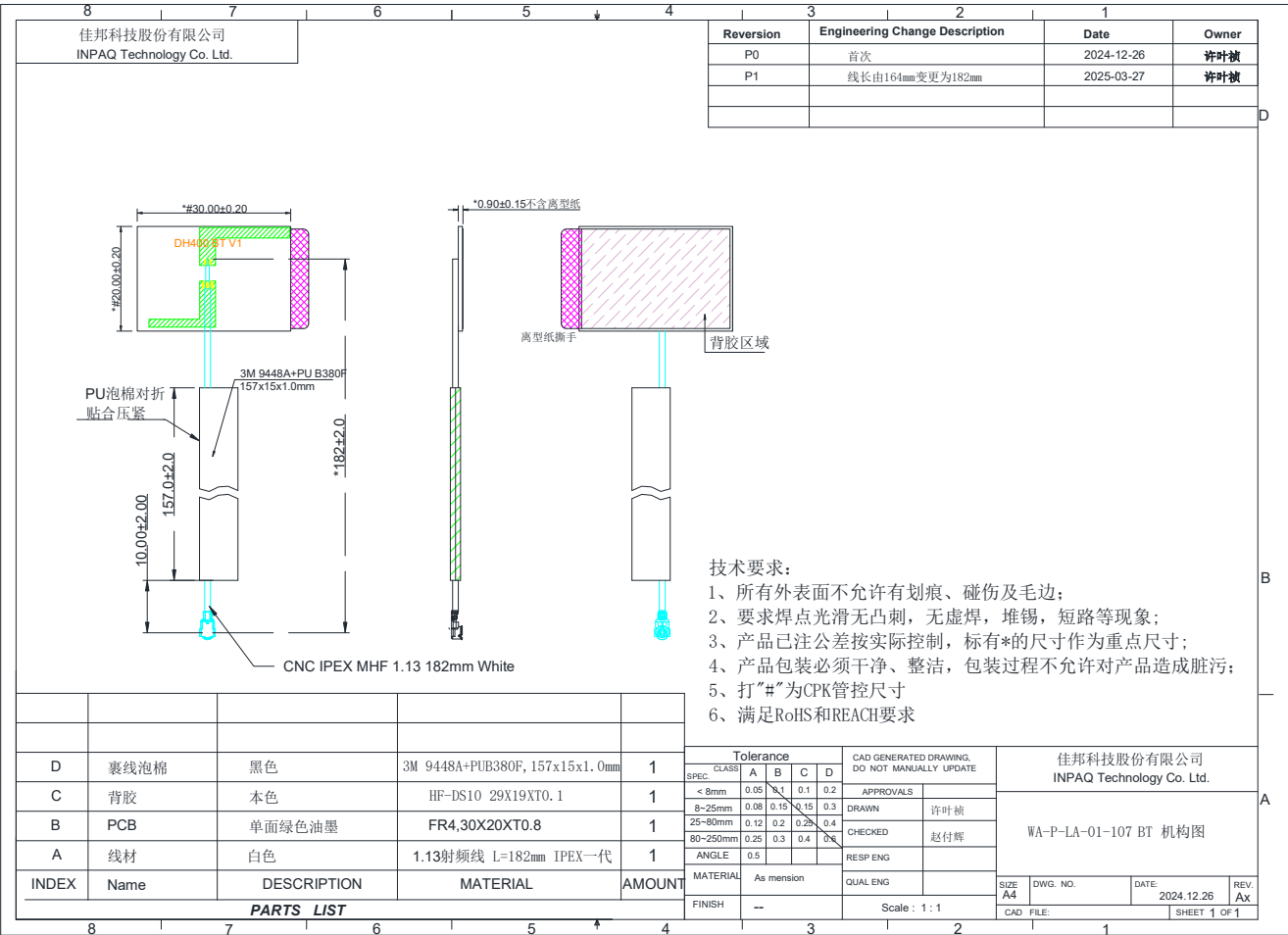


## Mechanical Specification:

|                                        |                   |                                                                                                                                                                                                       |
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5-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure 5-1-1



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