



REPORT No.: SZ24110111E02

# TEST REPORT

**APPLICANT** : Linhai Yixin Photoelectric Technology Co.,Ltd

**PRODUCT NAME** : PCB antenna

**MODEL NAME** : B-ANT003

**TRADE NAME** : N/A

**BRAND NAME** : N/A

**STANDARD(S)** : IEEE Std 149-2021

**RECEIPT DATE** : 2024-11-13

**TEST DATE** : 2024-11-14

**ISSUE DATE** : 2024-11-15



Edited by:

*Guo Penghua*

Guo Penghua(Rapporteur)

Approved by:

*Chi Shide*

Chi Shide(Supervisor)

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**MORLAB**

Shenzhen Morlab Communications Technology Co., Ltd., FL.1-3, Building A,  
FeiYang Science Park, No.8 LongChang Road,Block67, BaoAn District,  
ShenZhen , GuangDong Province, P. R. China

Tel: 86-755-36698555

Http://www.morlab.cn

Fax: 86-755-36698525

E-mail: service@morlab.cn





# DIRECTORY

|                                                                |    |
|----------------------------------------------------------------|----|
| 1. Technical Information .....                                 | 3  |
| 1.1. Applicant and Manufacturer Information .....              | 3  |
| 1.2. Equipment Under Test (EUT) Description .....              | 3  |
| 2. Test Results .....                                          | 4  |
| 2.1. Applied Reference Documents .....                         | 4  |
| 2.2. Test Conditions .....                                     | 4  |
| 2.3. Measurement Uncertainty .....                             | 4  |
| 2.4. Test Results lists .....                                  | 5  |
| Annex A Test Setup Photos .....                                | 6  |
| Annex B Figures .....                                          | 7  |
| 1. 2D Radiation Pattern .....                                  | 7  |
| 2. 3D Radiation Pattern .....                                  | 8  |
| Annex C General Information .....                              | 10 |
| 1.1 Identification of the Responsible Testing Laboratory ..... | 10 |
| 1.2 Identification of the Responsible Testing Location .....   | 10 |
| 1.3 Test Equipments Utilized .....                             | 10 |
| 1.4 Test Software Utilized .....                               | 10 |
| Annex D EUT Photos                                             |    |

| Change History |            |                   |
|----------------|------------|-------------------|
| Version        | Date       | Reason for change |
| 1.0            | 2024-11-15 | First edition     |



# 1. Technical Information

**Note:** Provide by applicant.

## 1.1. Applicant and Manufacturer Information

|                              |                                                                                     |
|------------------------------|-------------------------------------------------------------------------------------|
| <b>Applicant:</b>            | Linhai Yixin Photoelectric Technology Co.,Ltd                                       |
| <b>Applicant Address:</b>    | No. 3-58, Datian Liu village, Datian district, Linhai City, Zhejiang Province China |
| <b>Manufacturer:</b>         | N/A                                                                                 |
| <b>Manufacturer Address:</b> | N/A                                                                                 |

## 1.2. Equipment Under Test (EUT) Description

|                           |                 |
|---------------------------|-----------------|
| <b>Wireless Type</b>      | Bluetooth       |
| <b>Frequency</b>          | 2400MHz-2500MHz |
| <b>Antenna Type</b>       | N/A             |
| <b>Product HW Version</b> | N/A             |
| <b>Product SW Version</b> | N/A             |
| <b>IMEI</b>               | N/A             |
| <b>Sample No.</b>         | 2#              |



## 2. Test Results

### 2.1. Applied Reference Documents

Leading reference documents for testing:

| No. | Identity          | Document Title                                     |
|-----|-------------------|----------------------------------------------------|
| 1   | IEEE Std 149-2021 | IEEE Recommended Practice for Antenna Measurements |

### 2.2. Test Conditions

Test Environment Conditions:

|                       |         |
|-----------------------|---------|
| Relative Humidity(%): | 25 - 75 |
| Temperature(°C):      | 10 - 30 |

### 2.3. Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in Measurement” (GUM) published by ISO. When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% Confidence intervals.

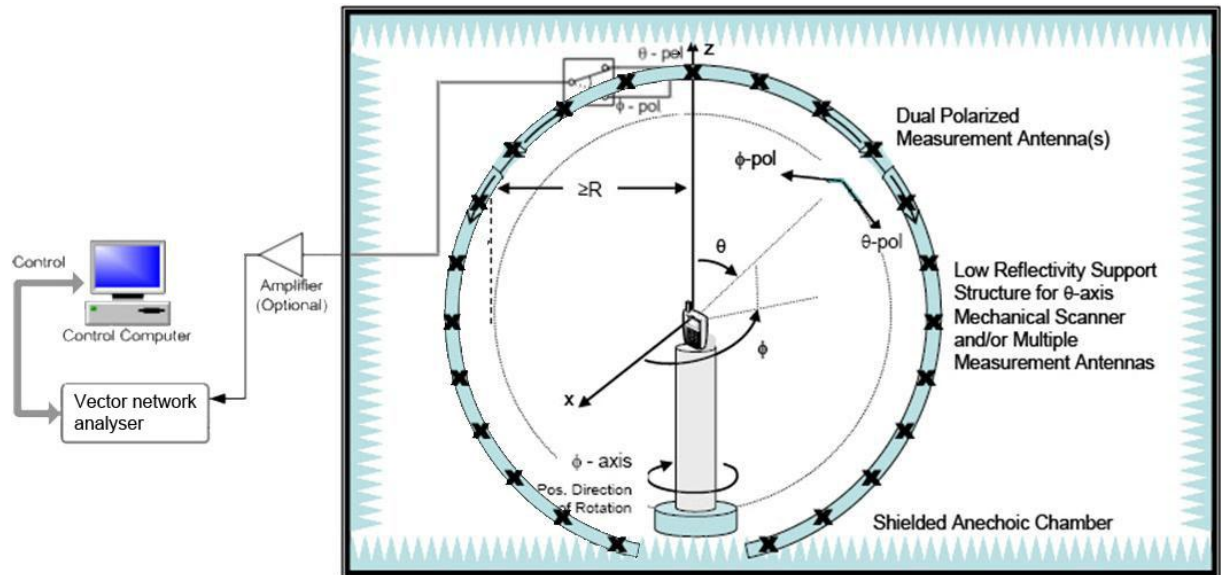


## 2.4. Test Results lists

### 2.4.1. Gain

| Frequency<br>(MHz) | Gain(dBi) |
|--------------------|-----------|
| 2400               | -7.66     |
| 2410               | -7.46     |
| 2420               | -7.43     |
| 2430               | -7.47     |
| 2440               | -7.40     |
| 2450               | -7.27     |
| 2460               | -7.15     |
| 2470               | -7.25     |
| 2480               | -7.44     |
| 2490               | -7.53     |
| 2500               | -7.61     |

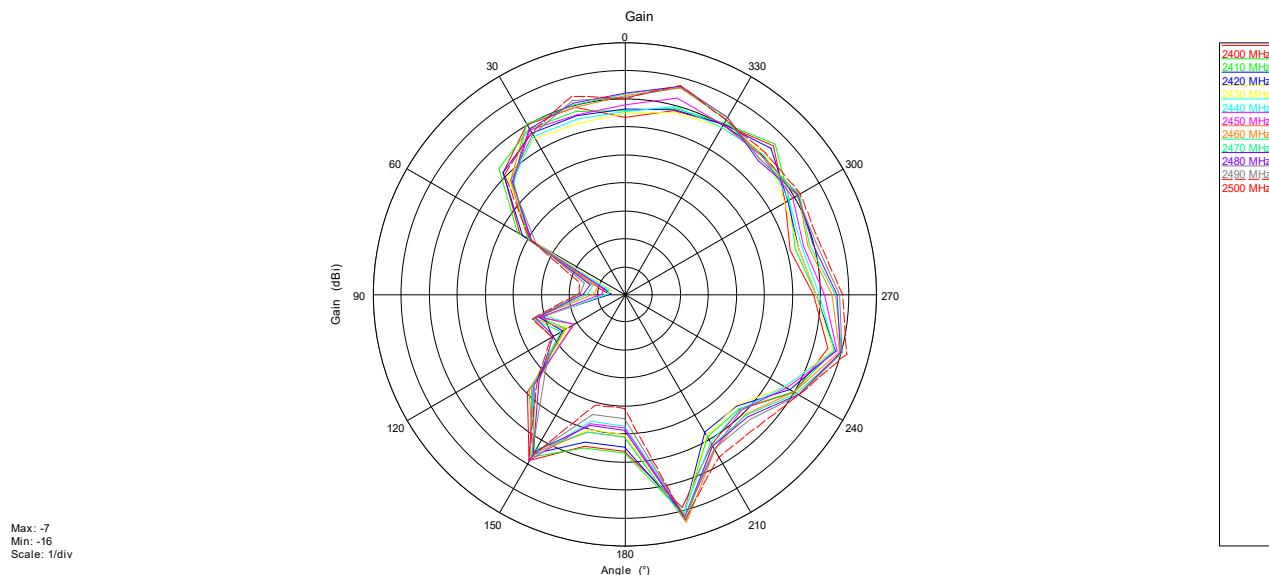
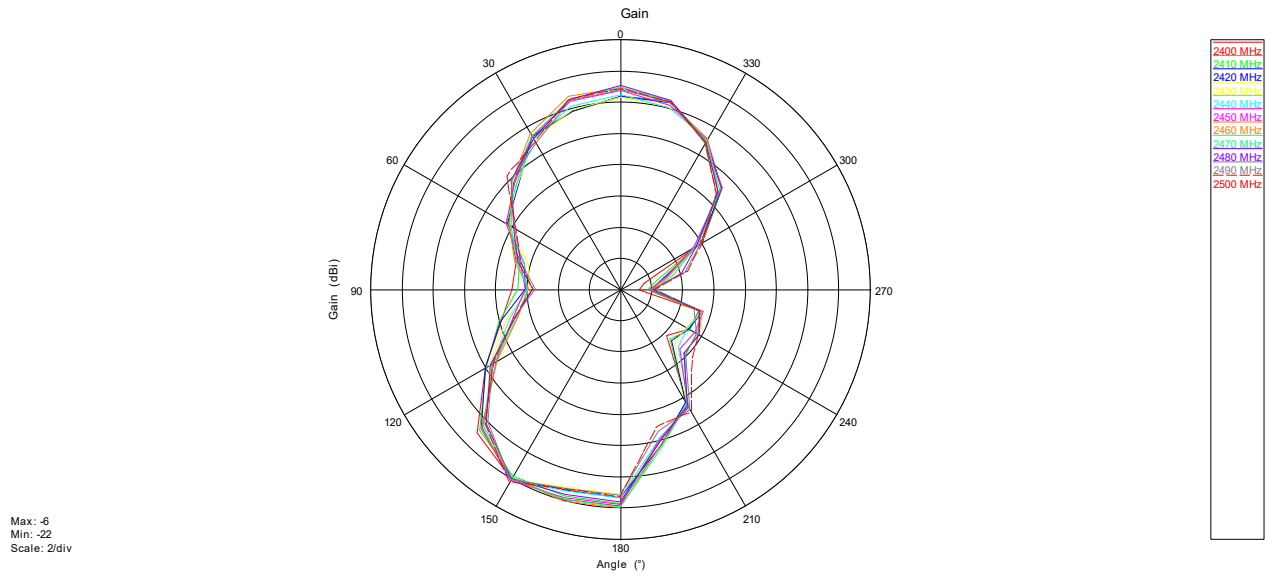
## Annex A Test Setup Photos

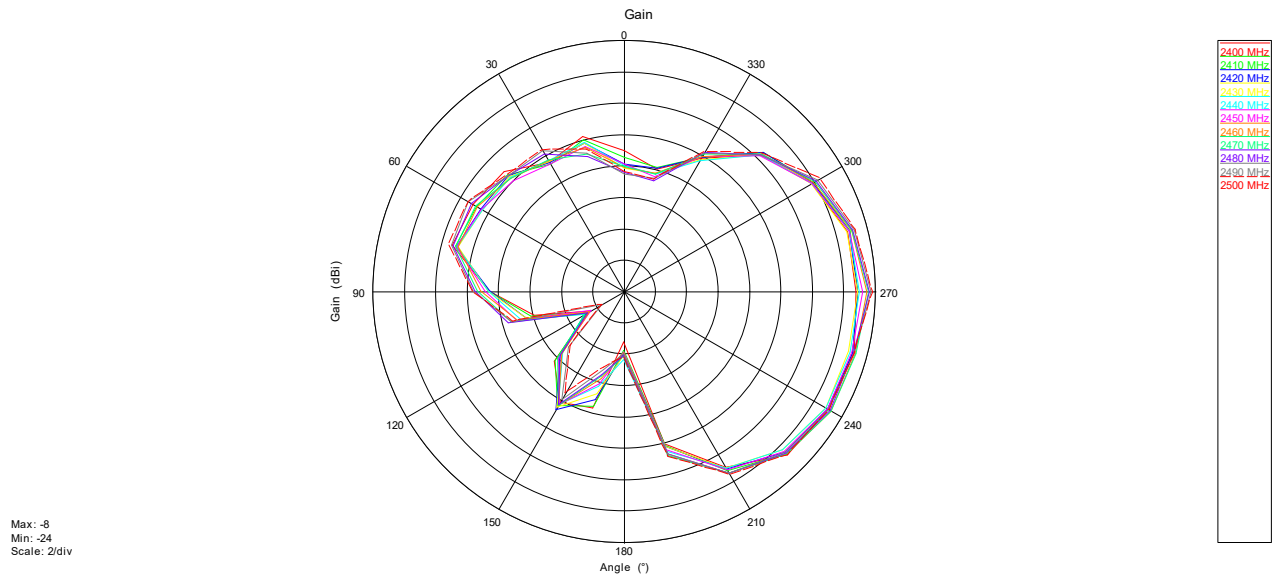




## Annex B Figures

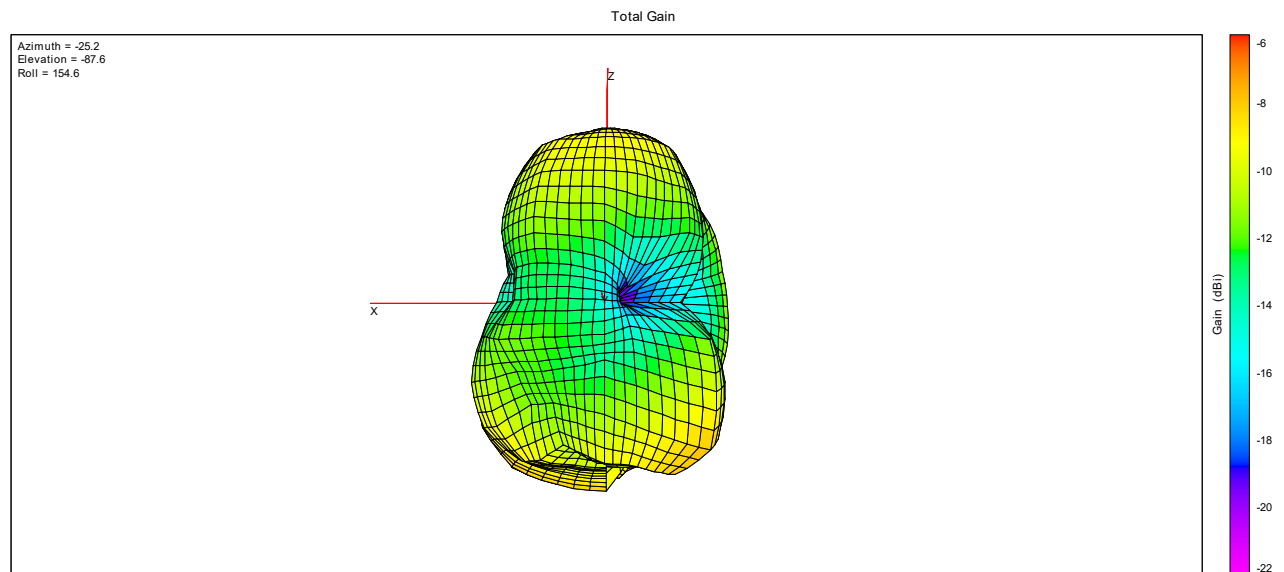
### 1. 2D Radiation Pattern



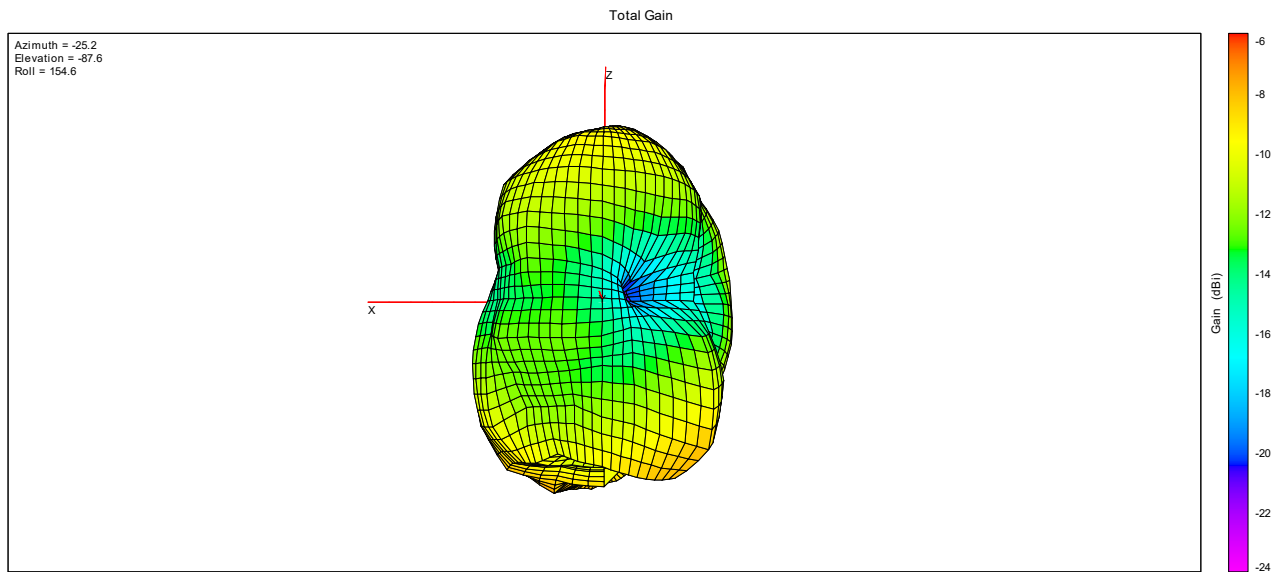


Theta=90°

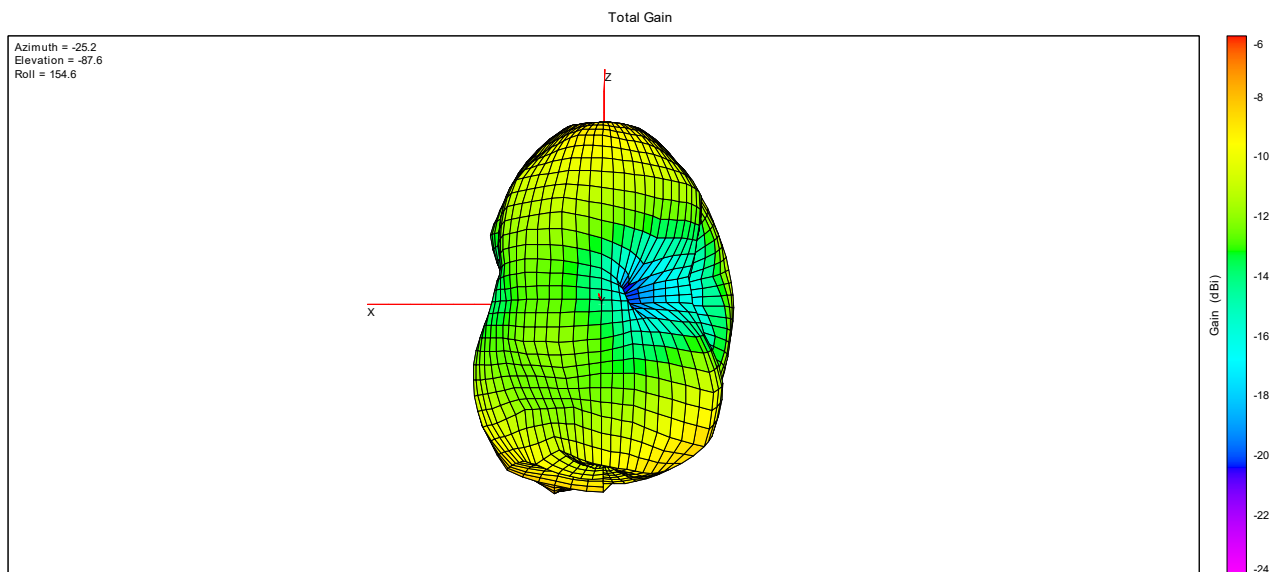
## 2. 3D Radiation Pattern



2400MHz



2440MHz



2480MHz



## Annex C General Information

### 1.1 Identification of the Responsible Testing Laboratory

|                     |                                                                                                                                    |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Laboratory Name:    | Shenzhen Morlab Communications Technology Co., Ltd.                                                                                |
| Laboratory Address: | FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen , Guangdong Province, P. R. China |
| Telephone:          | +86 755 36698555                                                                                                                   |
| Facsimile:          | +86 755 36698525                                                                                                                   |

### 1.2 Identification of the Responsible Testing Location

|          |                                                                                                                                    |
|----------|------------------------------------------------------------------------------------------------------------------------------------|
| Name:    | Shenzhen Morlab Communications Technology Co., Ltd.                                                                                |
| Address: | FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen , Guangdong Province, P. R. China |

### 1.3 Test Equipments Utilized

| No. | Equipement Name  | Serial No.       | Type             | Manufacturer | Cal.Date   | Cal.Due Date |
|-----|------------------|------------------|------------------|--------------|------------|--------------|
| 1   | Network Analyzer | MY4611014<br>0   | E5071C           | Agilent      | 2024.05.30 | 2025.05.29   |
| 2   | OTA Chamber      | TJ2235-Q17<br>93 | AMS-89<br>23-150 | ETS          | 2022.11.30 | 2025.11.29   |

### 1.4 Test Software Utilized

| No. | Software Name              | Serial No. | Version                               | Manufacturer |
|-----|----------------------------|------------|---------------------------------------|--------------|
| 1   | Antenna Measurement System | 1685       | EMQuest EMQ-100<br>V 1.13 Build 21267 | ETS          |

**Note:**The Main report is end here and the other Annex D will be submitted separately.

————— END OF MIAN REPORT —————