# TEST REPORT

| | | |
|---|---|---|
| **APPLICANT** | : | Zhong Wang Wireless Earphone Co., Limited |
| **PRODUCT NAME** | : | TWS Earbuds |
| **MODEL NAME** | : | Main model: 14656;<br>Series model: BB-T784;BB-T785;BB-T786;CY-6686; CY-8782;ZW-T14;ZW-T26;ZW-T30;ZW-T31 |
| **TRADE NAME** | : | AIRBUDS |
| **BRAND NAME** | : | N/A |
| **STANDARD(S)** | : | ANSI/IEEE Std 149-2021 |
| **RECEIPT DATE** | : | 2022-08-31 |
| **TEST DATE** | : | 2022-09-02 |
| **ISSUE DATE** | : | 2022-09-06 |

Edited by: Fang Jinshan(Rapporteur)

Approved by: Chi Shide(Supervisor)

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| Change History | | |
|---|---|---|
| Version | Date | Reason for change |
| 1.0 | 2022-09-06 | First edition |
| | | |

# 1.Technical Information

**Note:** Provide by manufacturer.

## 1.1. Applicant and Manufacturer Information

| | |
|---|---|
| **Applicant:** | Zhong Wang Wireless Earphone Co., Limited |
| **Applicant Address:** | A4 Building,Guixiang Garden,Qianjin Road,Huali village,Gurao Town,Chaoyang District,Shantou City,GuangDong Province. |
| **Manufacturer:** | Zhong Wang Wireless Earphone Co., Limited |
| **Manufacturer Address:** | A4 Building,Guixiang Garden,Qianjin Road,Huali village,Gurao Town,Chaoyang District,Shantou City,GuangDong Province. |

## 1.2. Equipment Under Test (EUT) Description

| | |
|---|---|
| Wireless Type | Bluetooth |
| Frequency | N/A |
| IMEI | N/A |
| Sample No. | 3# |

**Note:**
With regards to the application for Model:14656
According to the designer,Zhong Wang Wireless Earphone Co., Limited,we hereby declare that the models: BB-T784;BB-T785;BB-T786;CY-6686;CY-8782;ZW-T14;ZW-T26;ZW-T30;ZW-T31
The model is different, but everything else is the same.

# 2. Test Results

## 2.1. Applied Reference Documents

Leading reference documents for testing:

| No. | Identity | Document Title |
|---|---|---|
| 1 | ANSI/IEEE Std 149-2021 | IEEE Standard Test Procedures for Antennas |

## 2.2. Test Conditions

Test Environment Conditions：

| | |
|---|---|
| Relative Humidity: | 25 ... 75 % |
| Temperature: | +10 °C to +30 °C |

## 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.

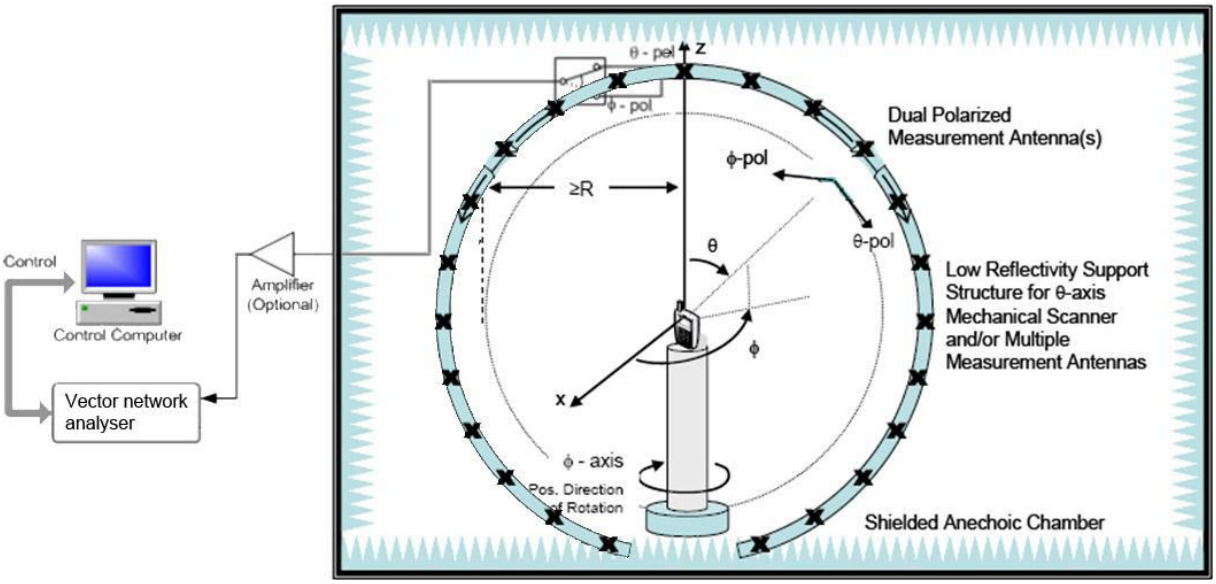
| Item | Measurement Uncertainty(dB) |
|---|---|
| Gain | ±0.5 |
| VSWR | ±0.2 |
| Measurement Uncertainty(95% Confidence Interval) K=2 | |

## 2.4. Test Results

| Frequency | Gain(dBi) |
|---|---|
| 2400 MHz | -0.73 |
| 2410 MHz | -0.86 |
| 2420 MHz | -1.12 |
| 2430 MHz | -1.31 |
| 2440 MHz | -1.36 |
| 2450 MHz | -1.59 |
| 2460 MHz | -1.93 |
| 2470 MHz | -2.37 |
| 2480 MHz | -2.61 |
| 2490 MHz | -2.76 |
| 2500MHz | -2.96 |

# Annex A Photographs

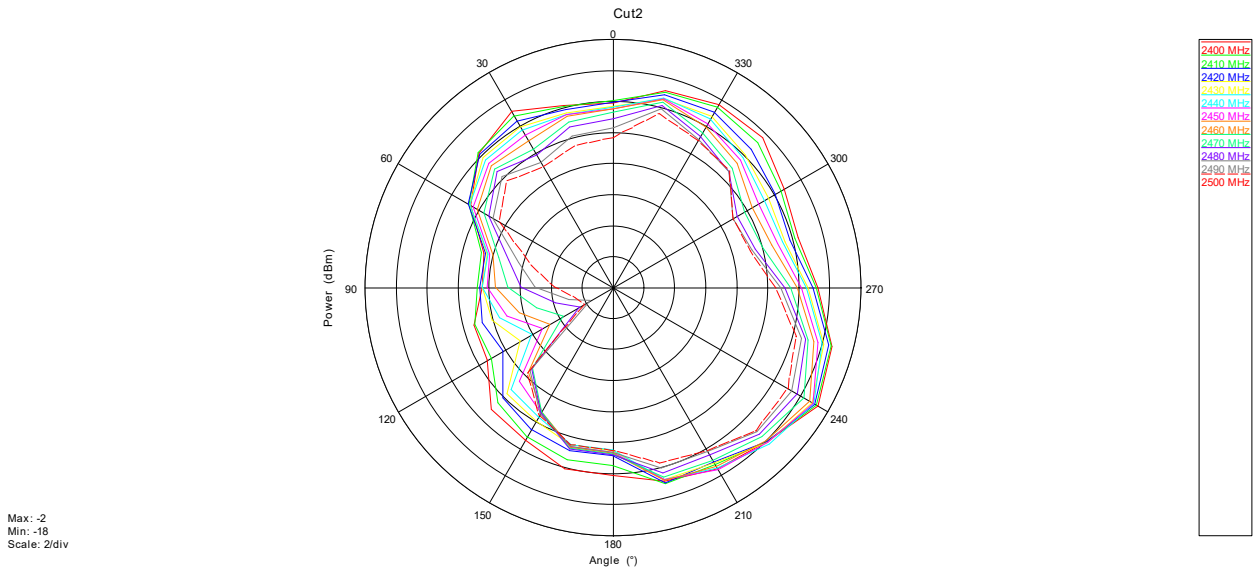
1. Test Setup



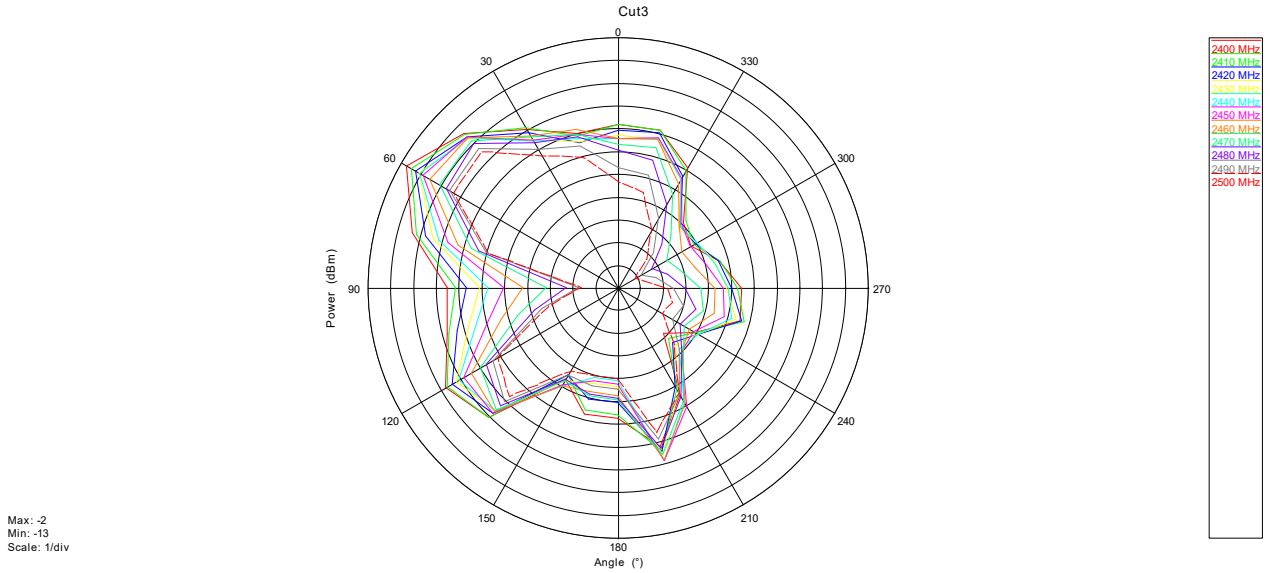
# Annex B Figures

## 1. 2D Radiation Pattern

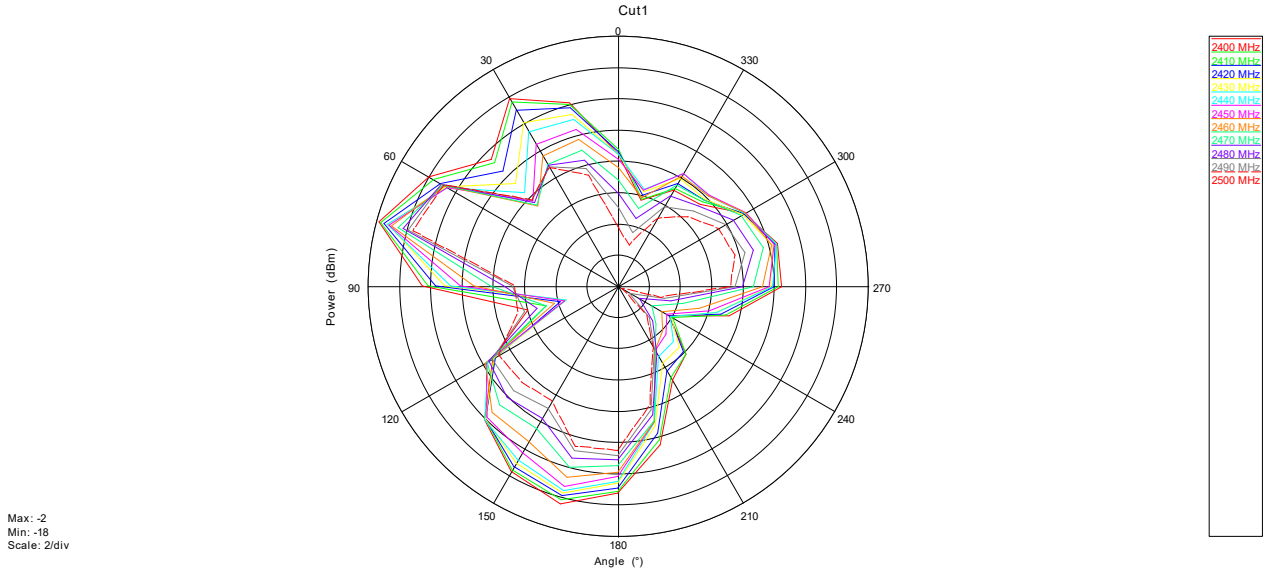
Phi=0°



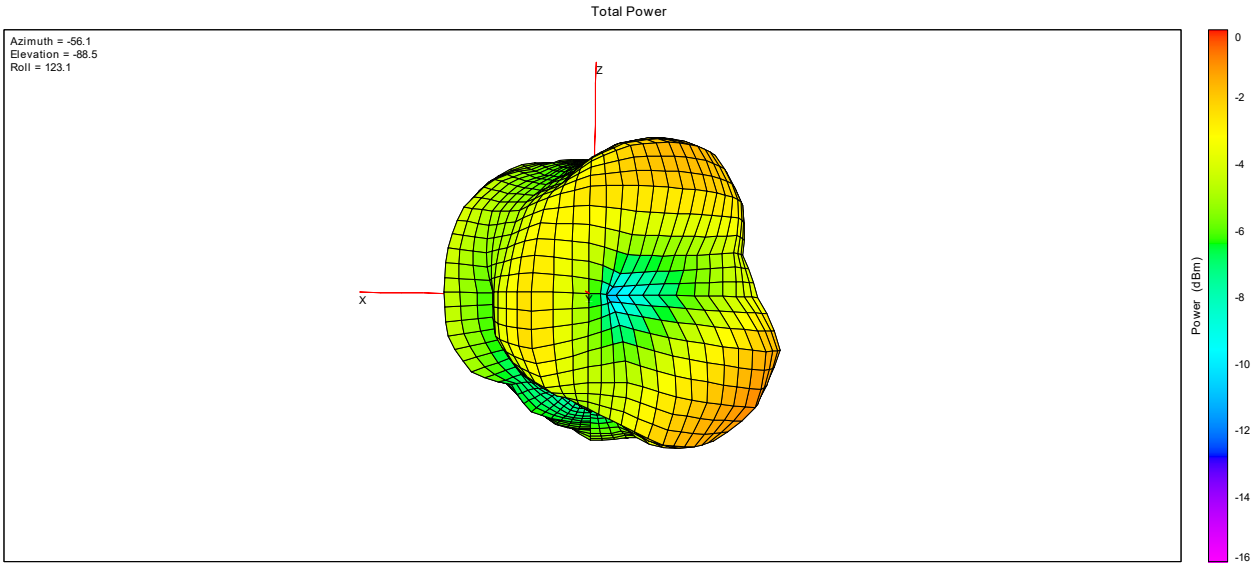

Phi=90°



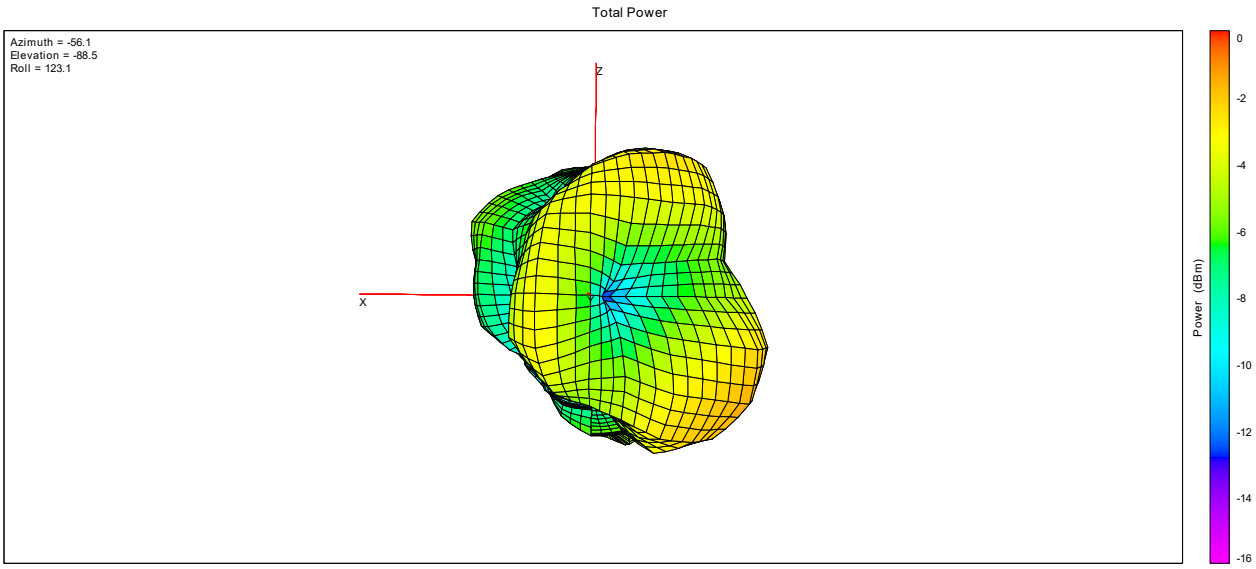
Theta=90°



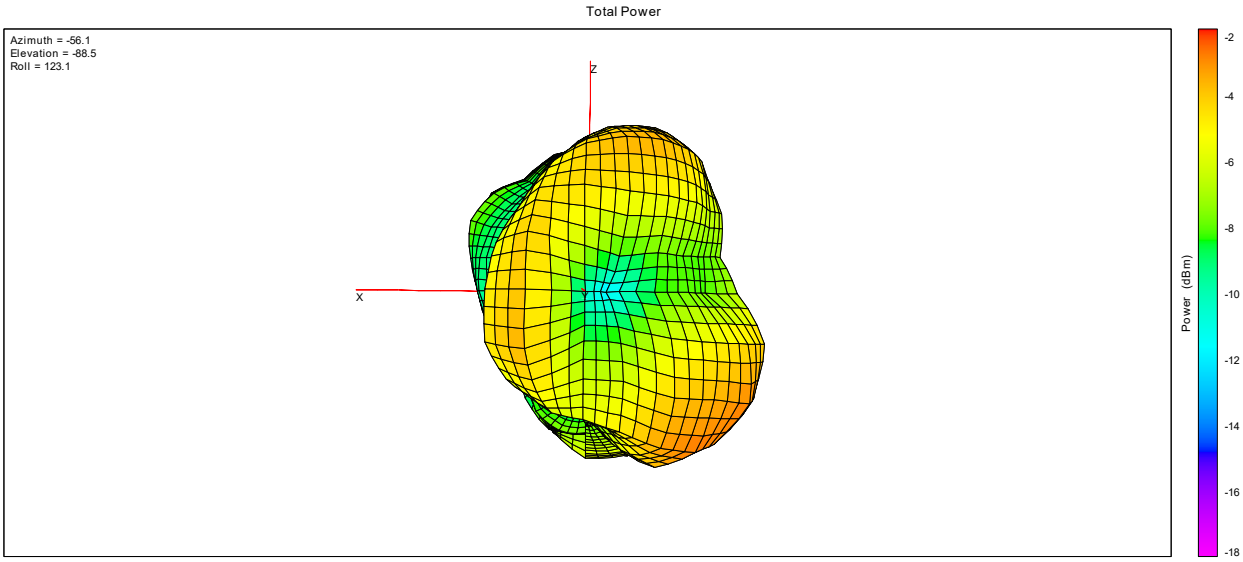

## 2. 3D Radiation Pattern




2400MHz



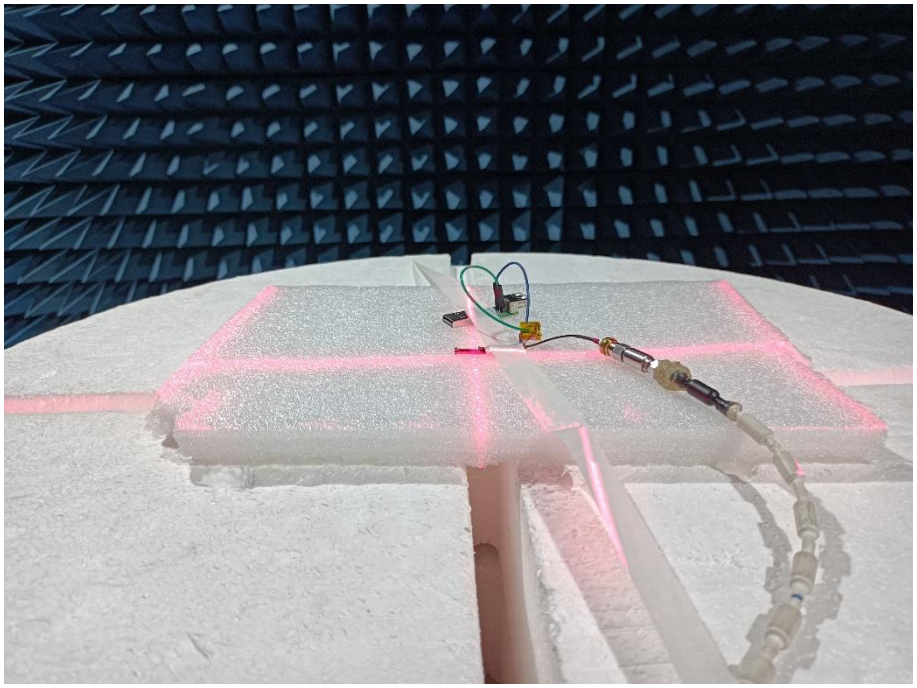

2440MHz



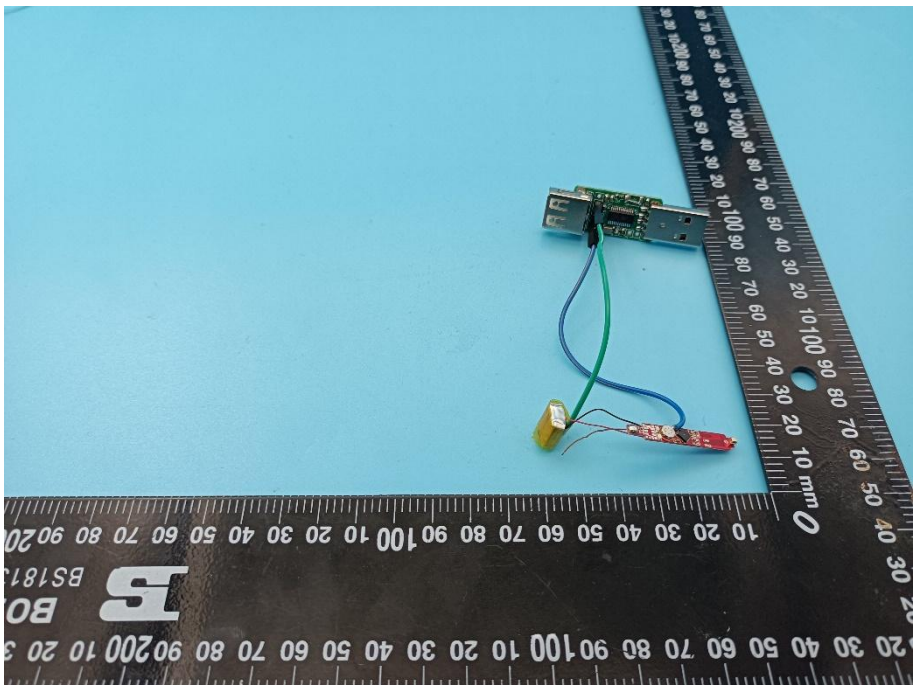

2480MHz

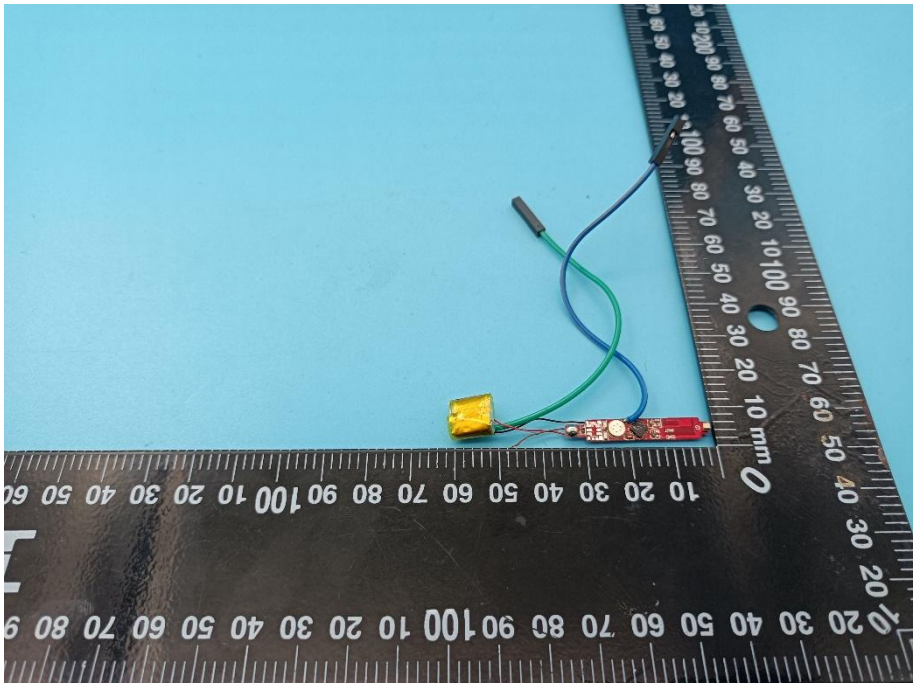
# Annex C Photographs

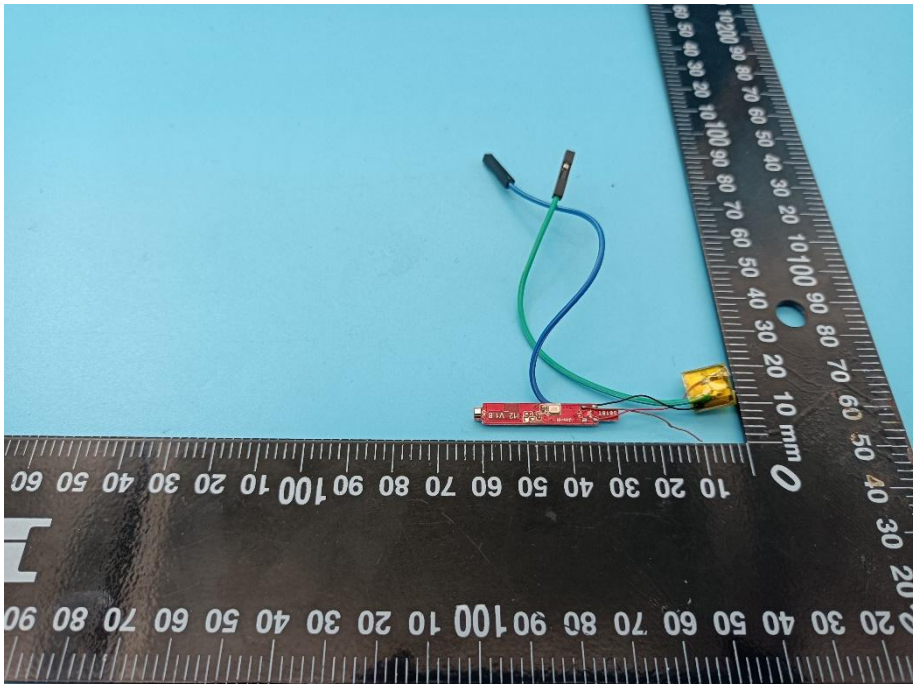
1. Test environment

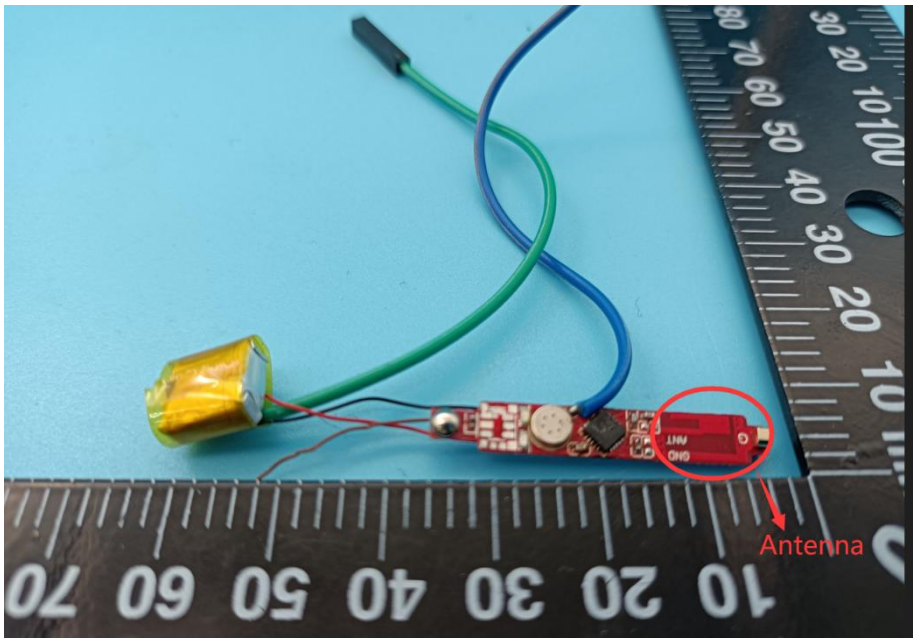


2. EUT








Antenna

# Annex D General Information

## 1.1 Identification of the Responsible Testing Laboratory

| | |
|---|---|
| Laboratory Name: | Shenzhen Morlab Communications Technology Co., Ltd. |
| Laboratory Address: | FL1-3, 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: | FL1-3, 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 | MY46110140 | E5071C | Agilent | 2022.07.04 | 2023.07.03 |
| 2 | OTA Chamber | TJ2235-Q1793 | AMS-8923-150 | ETS | 2020.01.06 | 2023.01.05 |
| 3 | Antenna Measurement System | 1685 | EMQuest EMQ-100 V 1.13 Build 21267 | ETS | N/A | N/A |

END OF REPORT