





# TEST REPORT

**APPLICANT** : Shenzhen C&D Electronics Co., Ltd.  
**PRODUCT NAME** : Bluetooth remote  
**MODEL NAME** : RF510B  
**TRADE NAME** : N/A  
**BRAND NAME** : N/A  
**STANDARD(S)** : IEEE Std 149-2021  
**RECEIPT DATE** : 2023-03-01  
**TEST DATE** : 2023-03-01  
**ISSUE DATE** : 2023-03-06

Edited by:   
Fang Jinshan(Rapporteur)

Approved by:   
Chi Shide(Supervisor)

**NOTE:** This document is issued by Shenzhen Morlab Communications Technology Co., Ltd., the test report shall not be reproduced except in full without prior written permission of the company. The test results apply only to the particular sample(s) tested and to the specific tests carried out which is available on request for validation and information confirmed at our website.





# 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 Photographs ..... 6
- Annex B Figures .....7
- 1. 2D Radiation Pattern ..... 7
- 2. 3D Radiation Pattern ..... 8
- Annex C Photographs ..... 10
- Annex D General Information .....13
- 1.1 Identification of the Responsible Testing Laboratory .....13
- 1.2 Identification of the Responsible Testing Location .....13
- 1.3 Test Equipments Utilized ..... 13

Change History		
Version	Date	Reason for change
1.0	2023-03-06	First edition



# 1. Technical Information

**Note:** Provide by manufacturer.

## 1.1. Applicant and Manufacturer Information

<b>Applicant:</b>	Shenzhen C&D Electronics Co., Ltd.
<b>Applicant Address:</b>	9/F, Tower 9A, Baoneng Science&Technology Park, Qingxiang Road, Longhua New District, Shenzhen(518109) ,China
<b>Manufacturer:</b>	N/A
<b>Manufacturer Address:</b>	N/A

## 1.2. Equipment Under Test (EUT) Description

Wireless Type	Bluetooth
Test frequency band	2400MHz-2500MHz
IMEI	N/A
Sample No.	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:	+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.

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



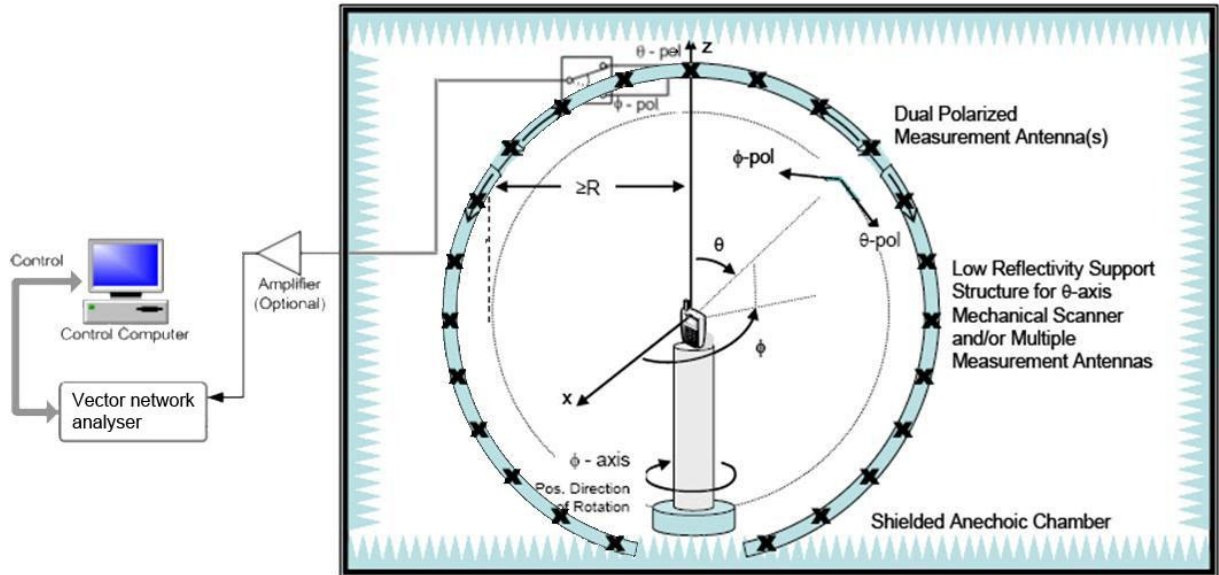
## 2.4. Test Results lists

### 2.4.1. Gain

Frequency	Gain(dBi)
2400MHz	2.44
2410MHz	2.59
2420MHz	2.65
2430MHz	2.66
2440MHz	2.61
2450MHz	2.84
2460MHz	2.77
2470MHz	2.54
2480MHz	2.40
2490MHz	2.42
2500MHz	2.41

## Annex A Photographs

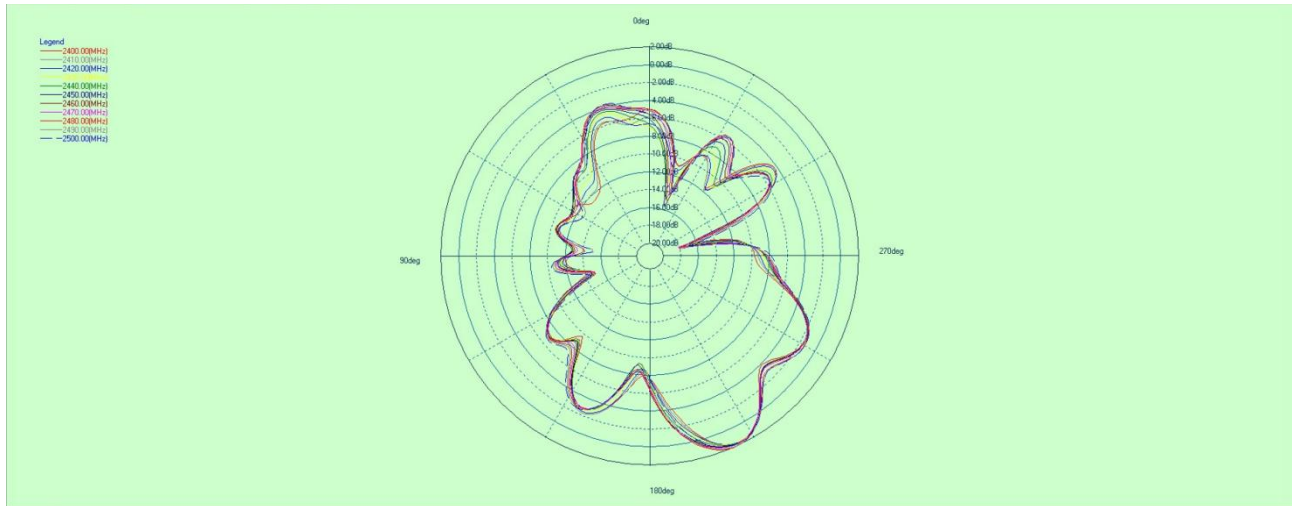
### 1. Test Setup



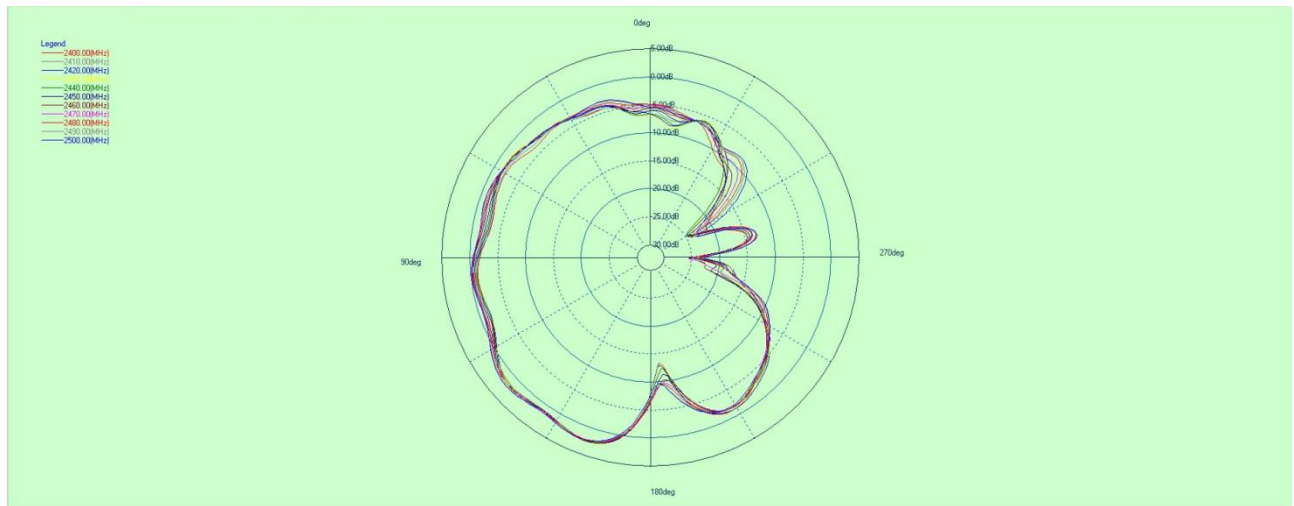
## Annex B Figures

### 1. 2D Radiation Pattern

Phi=0°

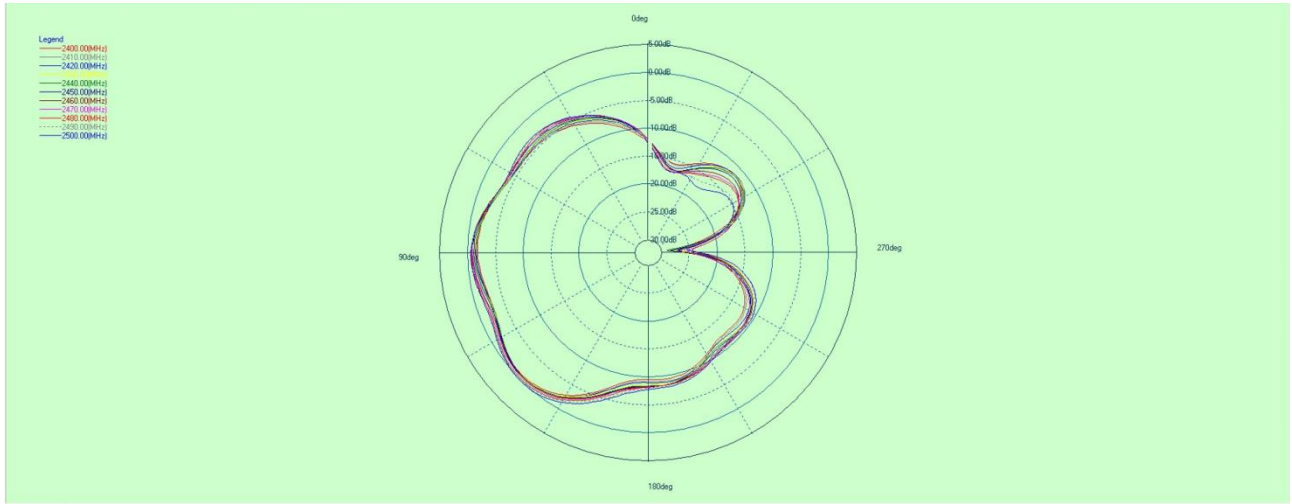


Phi=90°

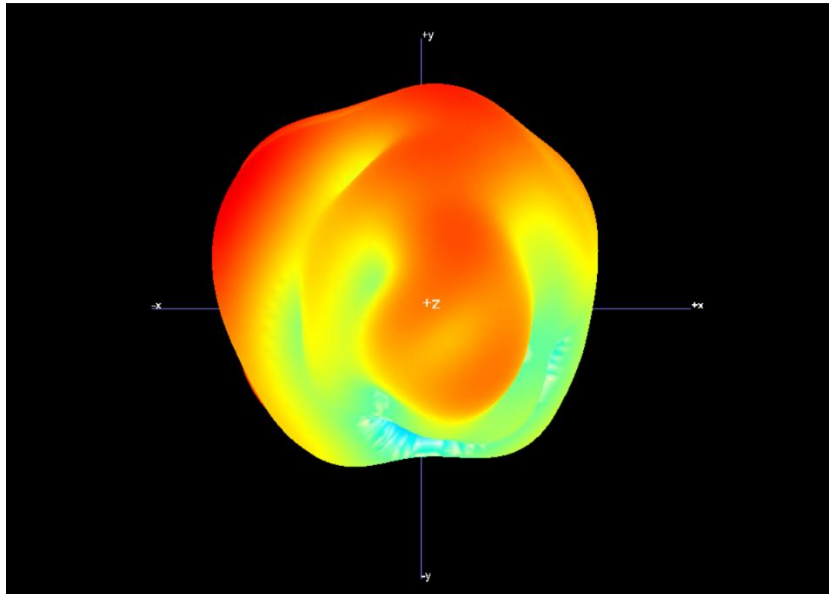




Theta=90°

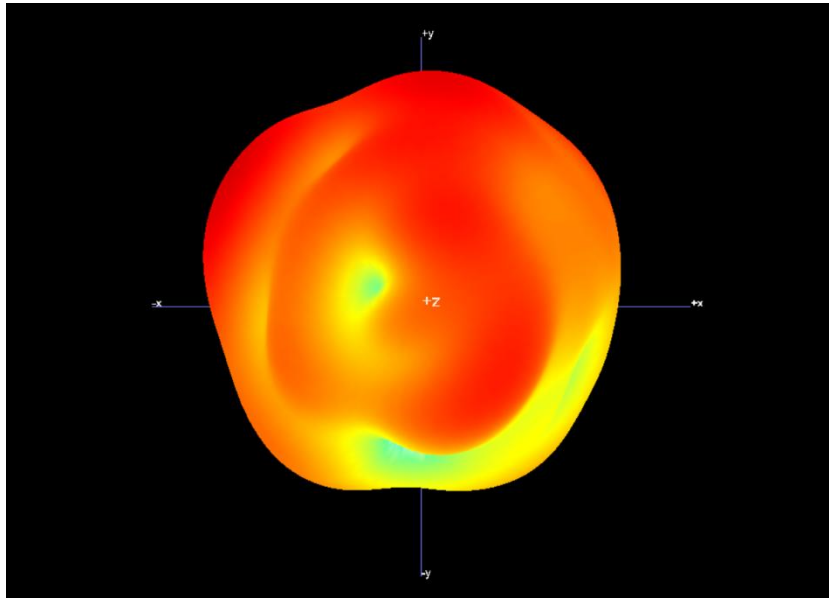


## 2. 3D Radiation Pattern

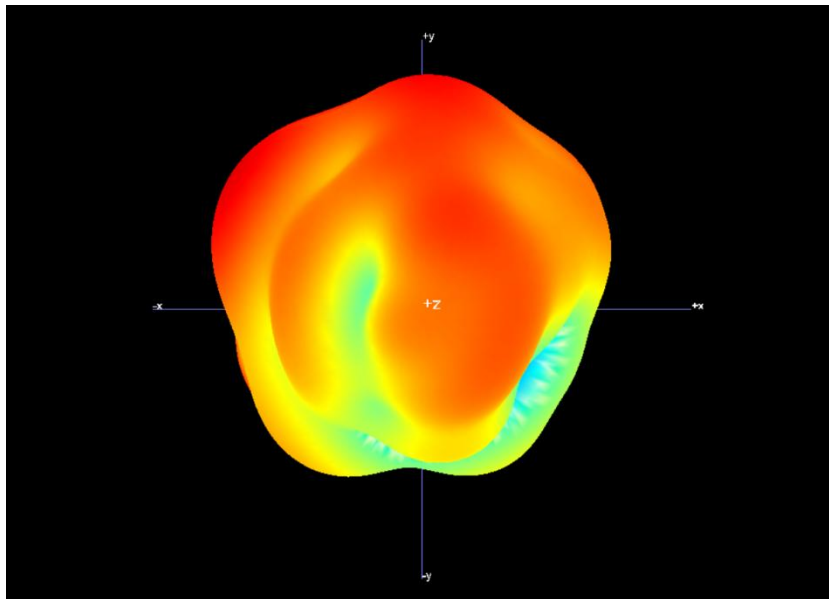


2400MHz





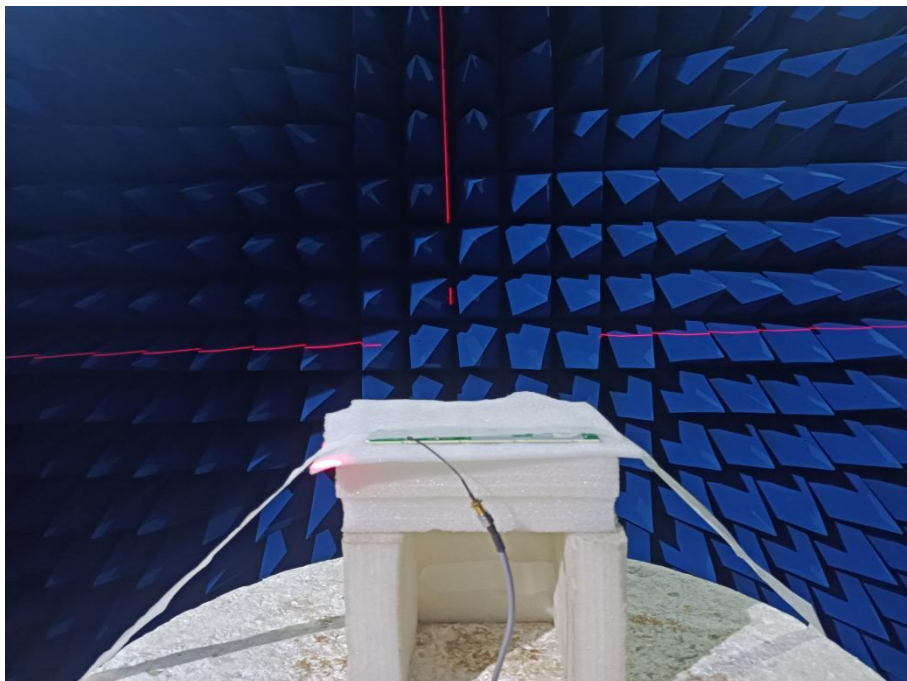
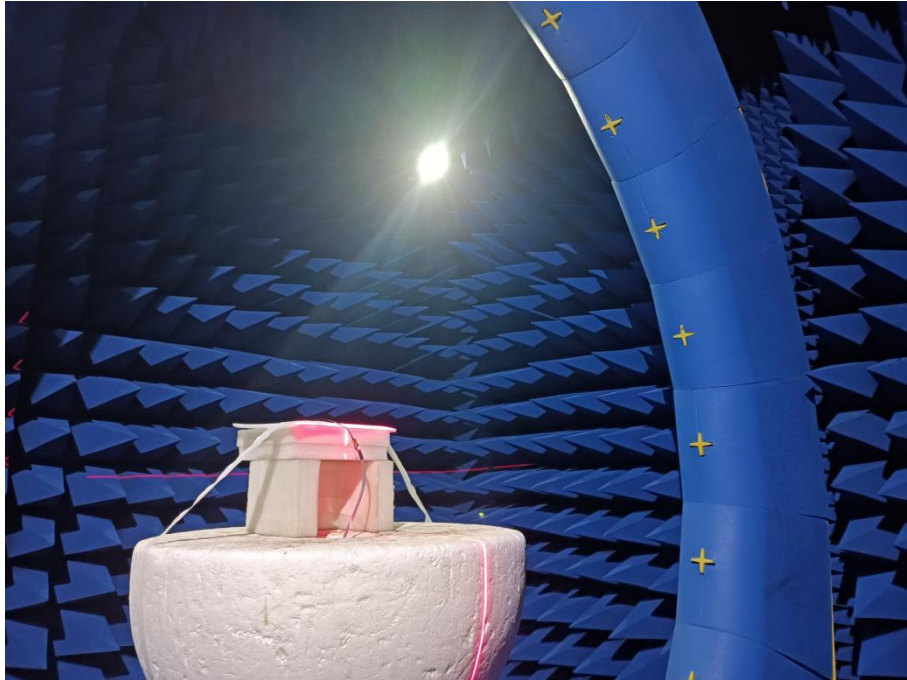
2440MHz



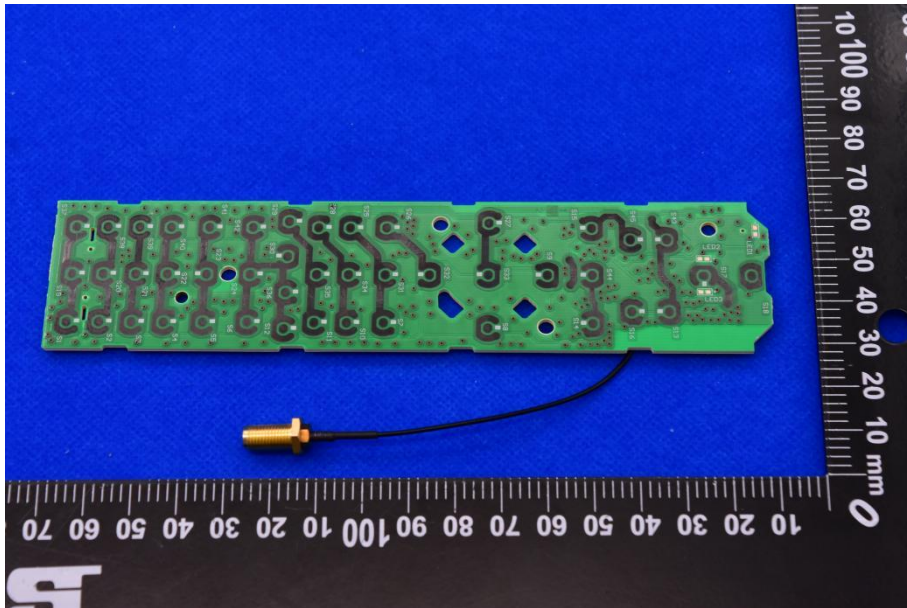
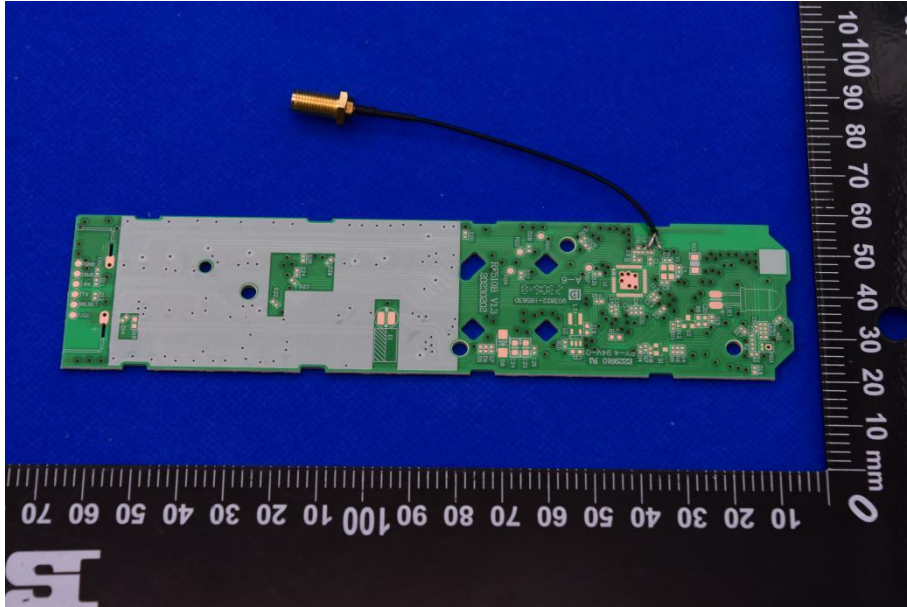
2480MHz

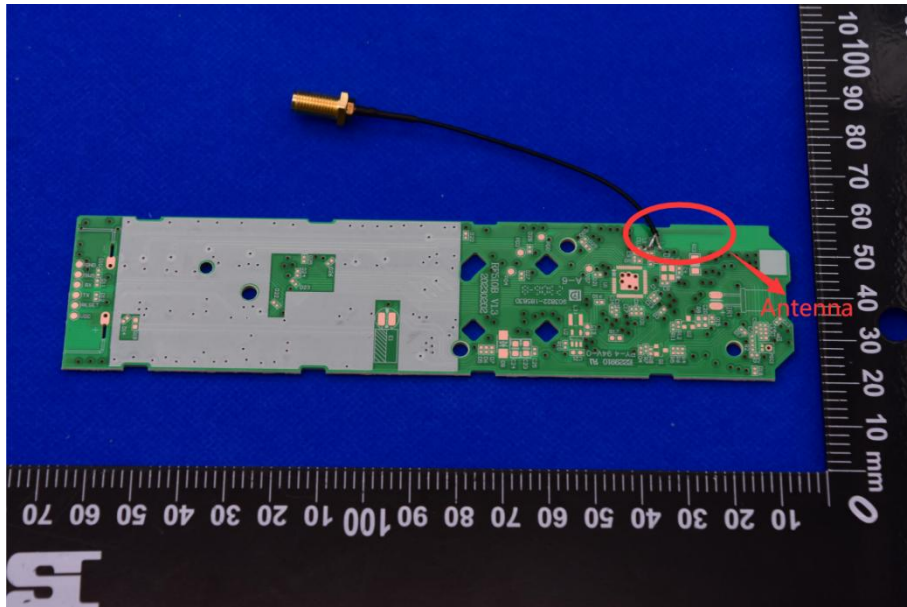
## Annex C Photographs

### 1. Test environment



2. EUT







## Annex D 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.	Equipment Name	Serial NO.	Type	Manufa cturer	Cal.Date	Cal.Due Date
1	Vector Network Analyzer	MY46214666	E5071C	Agilent	2023.02.09	2024.02.08
2	OTA Chamber	N/A	SG24	Satimo	2021.01.12	2024.01.11
3	SatEnv	N/A	2.0.1.5 build 12	Satimo	N/A	N/A
4	SPM	N/A	1.11	Satimo	N/A	N/A

————— END OF REPORT —————