



REPORT No.: SZ21070262E01

TEST REPORT

APPLICANT : CHANG YOW TECHNOLOGIES INTERNATIONAL CO., LTD.

PRODUCT NAME : Bluetooth Module

MODEL NAME : BLE006

TRADE NAME : N/A

BRAND NAME : N/A

STANDARD(S) : ANSI/IEEE Std 149-2008

RECEIPT DATE : 2021-07-23

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Edited by:

ke zhi qing
Ke Zhiqing(Rapporteur)

Approved by:

Chi Shide
Chi Shide(Supervisor)

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MORLAB

Shenzhen Morlab Communications Technology Co., Ltd., FL1-3, 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 Photographs.....	6
Annex B Figures.....	7
1. 2D Radiation Pattern.....	7
2. 3D Radiation Pattern.....	8
3. Return Loss.....	10
Annex C Photographs.....	11
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	2021-07-29	First edition



1. Technical Information

Note: Provide by manufacturer.

1.1. Applicant and Manufacturer Information

Applicant:	CHANG YOW TECHNOLOGIES INTERNATIONAL CO., LTD.
Applicant Address:	No.88, Shuren 6th St., Wufeng Dist., Taichung City 413, Taiwan (R.O.C.)
Manufacturer:	CHANG YOW TECHNOLOGIES INTERNATIONAL CO., LTD.
Manufacturer Address:	No.88, Shuren 6th St., Wufeng Dist., Taichung City 413, Taiwan (R.O.C.)

1.2. Equipment Under Test (EUT) Description

Wireless Type	Bluetooth
Test frequency band	2400MHz-2500MHz
Brand name	N/A
Antenna model	BLE006
Antenna type	PCB Antenna
Hardware Version	N/A
Software Version	N/A
IMEI	N/A
Sample number	1#

2. Test Results

2.1. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	ANSI/IEEE Std 149-2008	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.

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

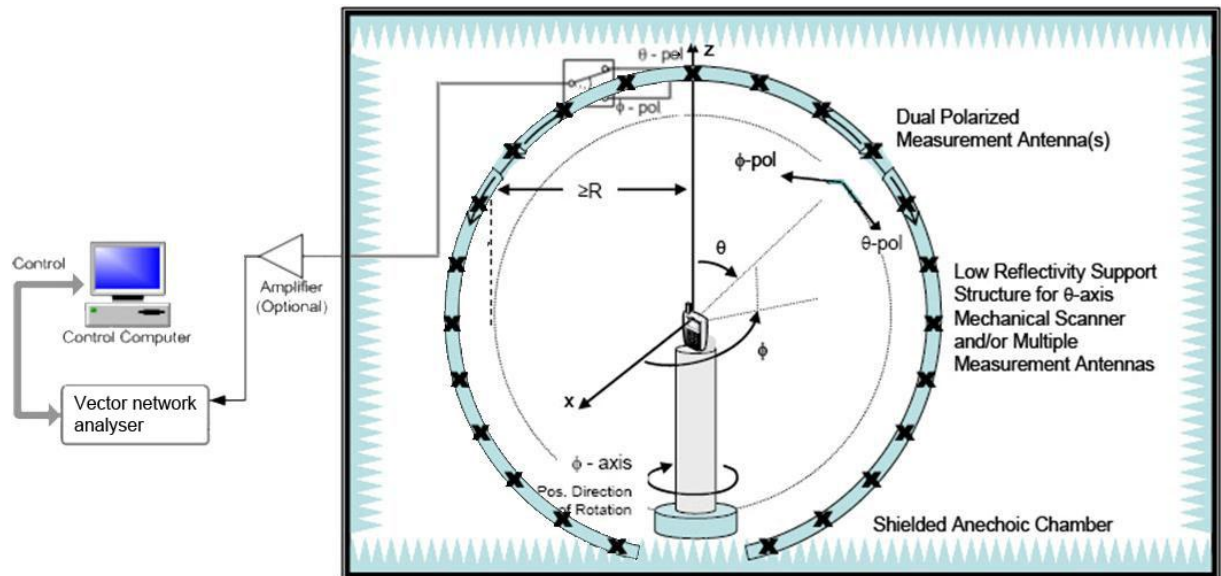
Frequency	Gain(dBi)
2402MHz	-5.47
2442MHz	-4.26
2484MHz	-4.79

2.4.2. Return Loss

Frequency	Return Loss(dB)
2402MHz	-4.69
2442MHz	-5.47
2484MHz	-6.53

Annex A Photographs

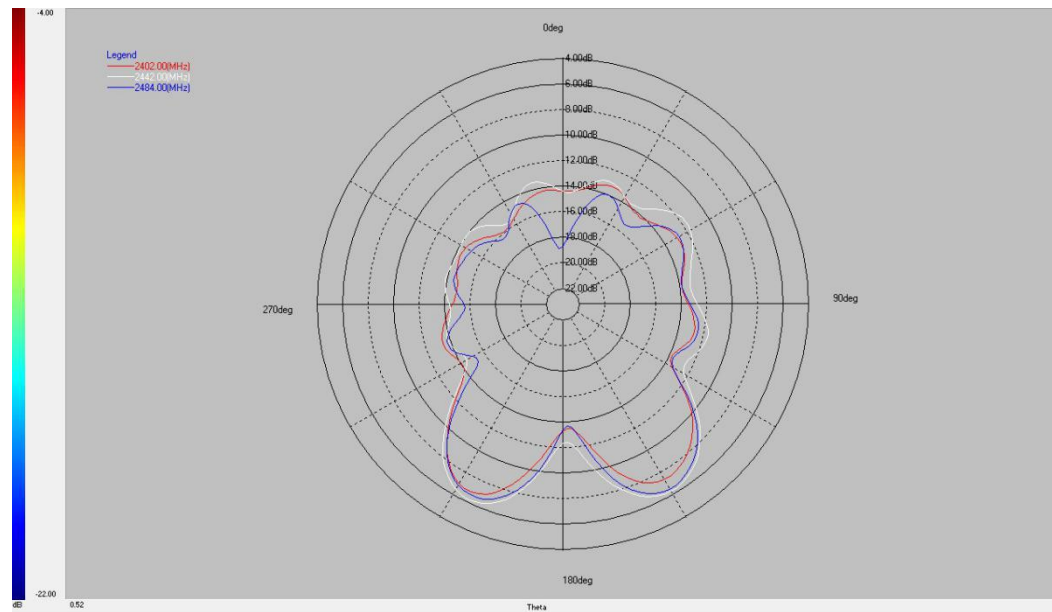
1. Test Setup



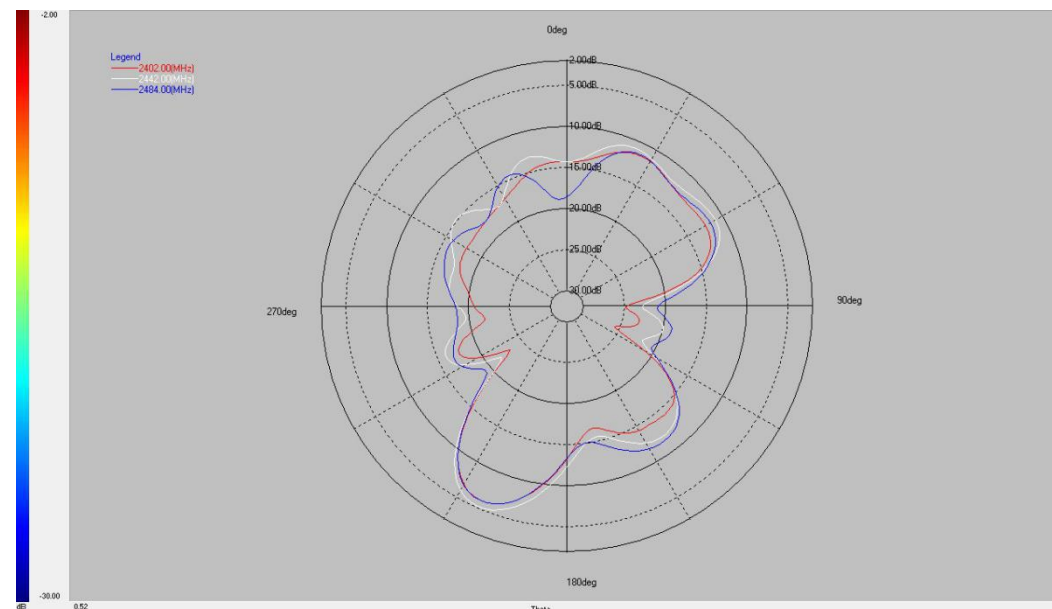
Annex B Figures

1. 2D Radiation Pattern

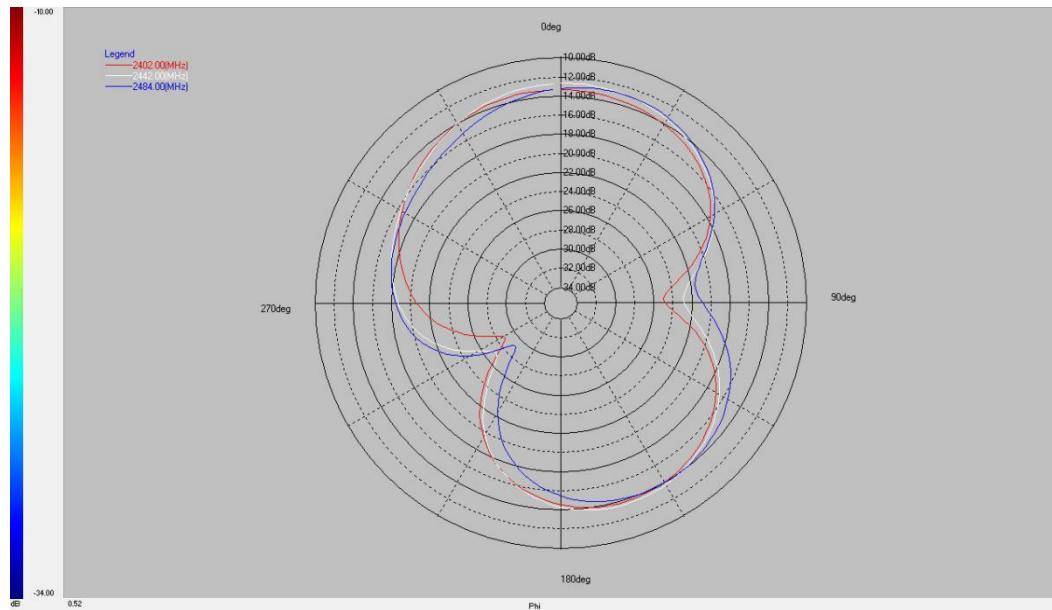
Phi=0°



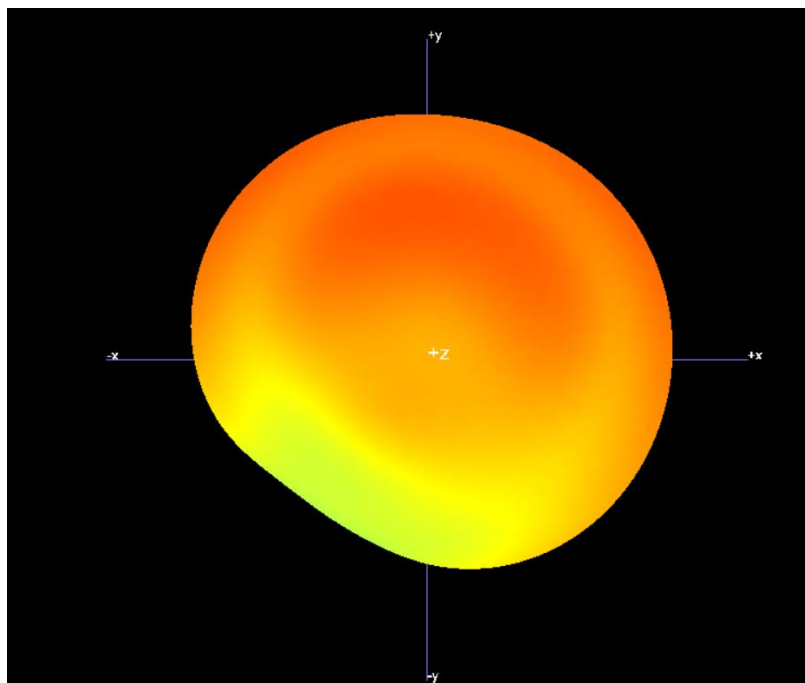
Phi=90°



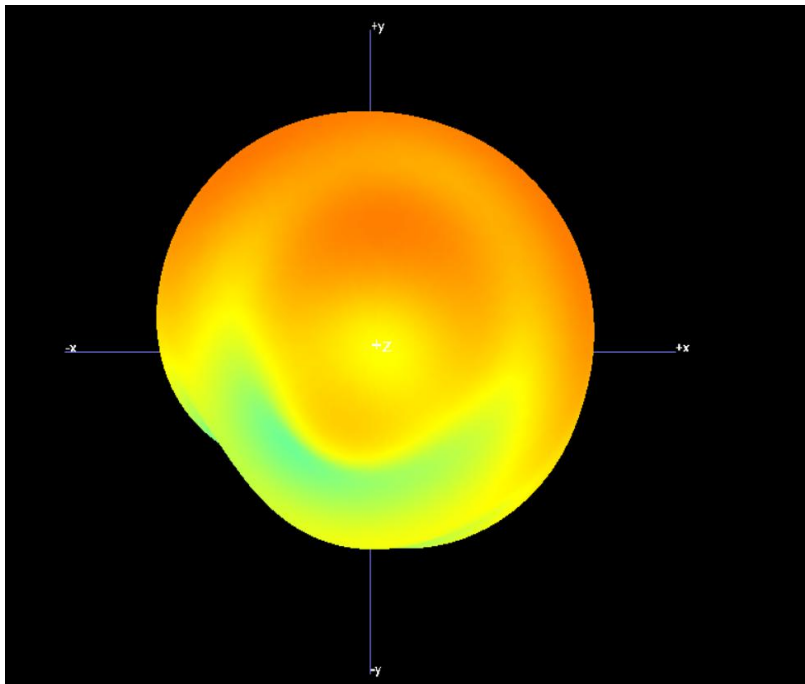
Theta=90°



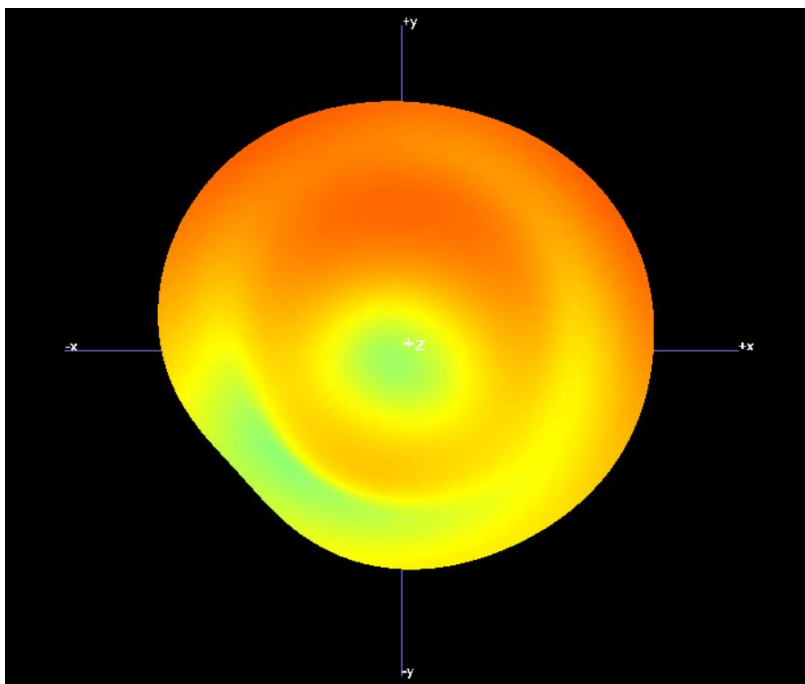
2. 3D Radiation Pattern



2402MHz



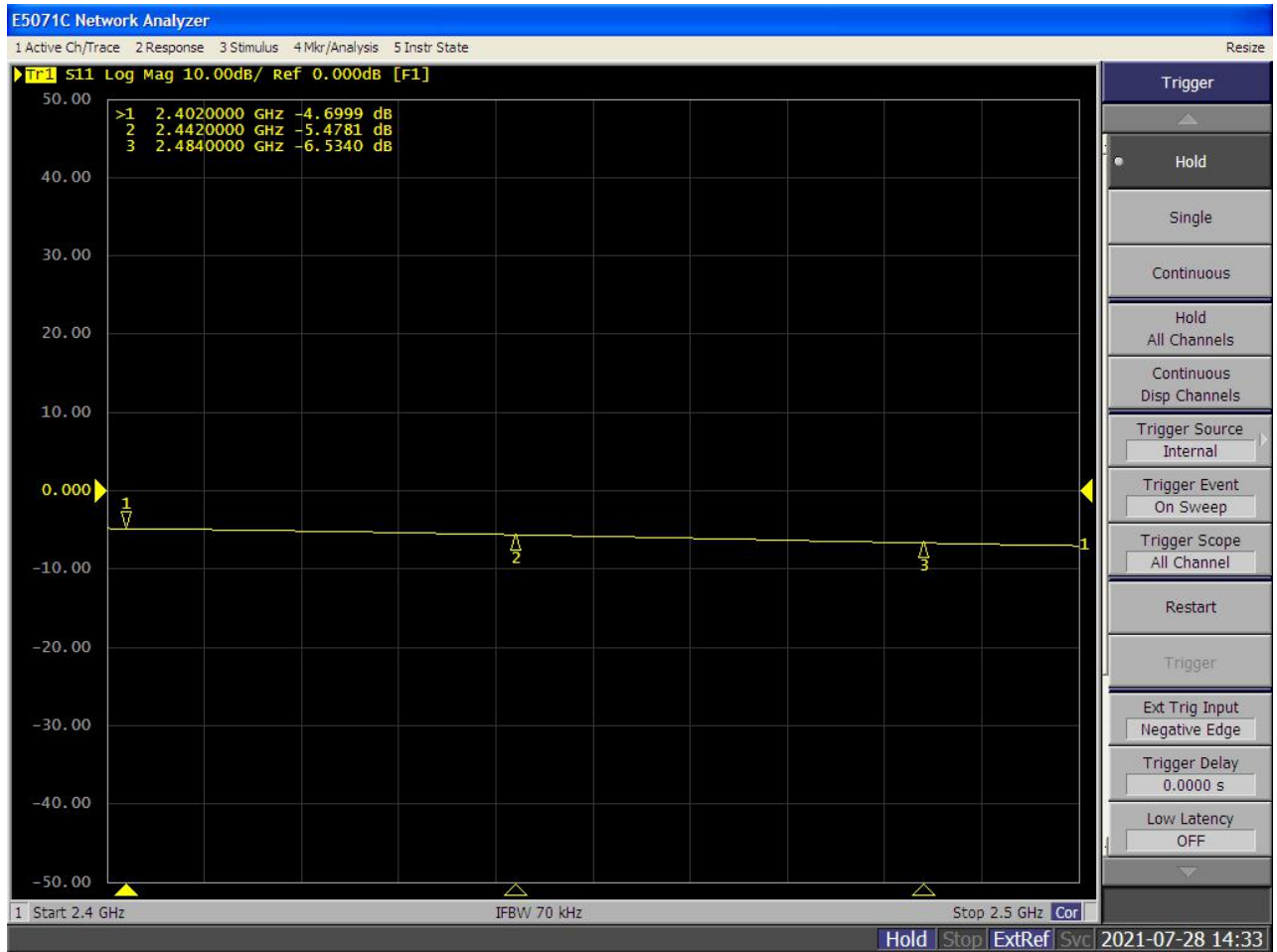
2442MHz



2484MHz

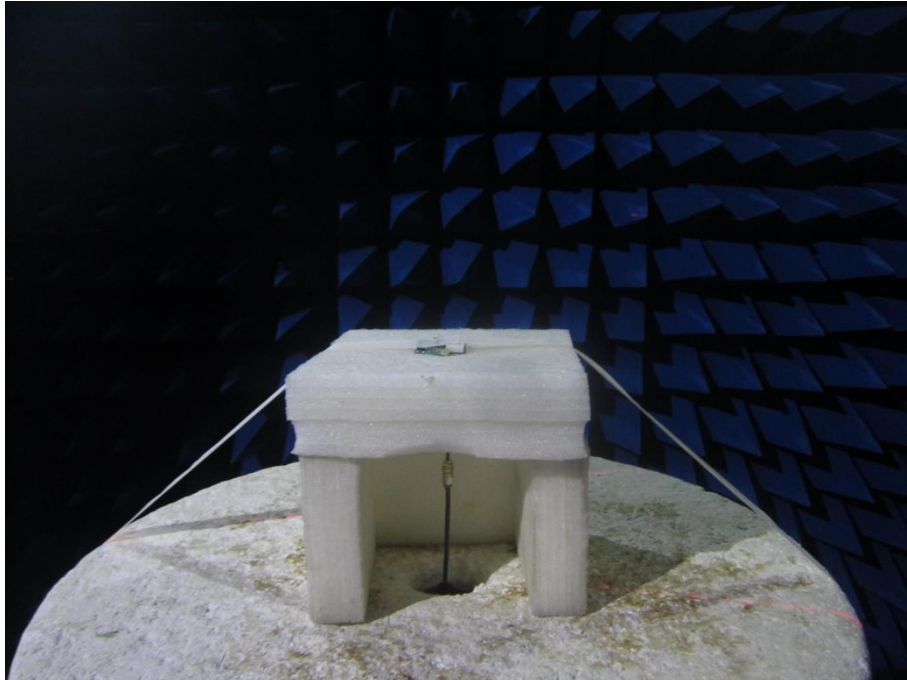


3. Return Loss

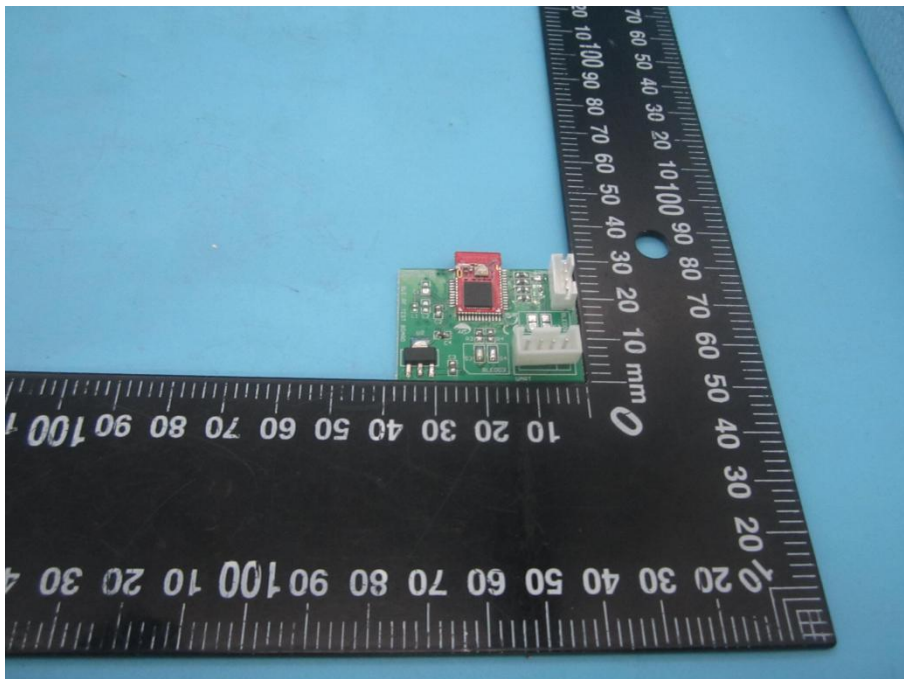


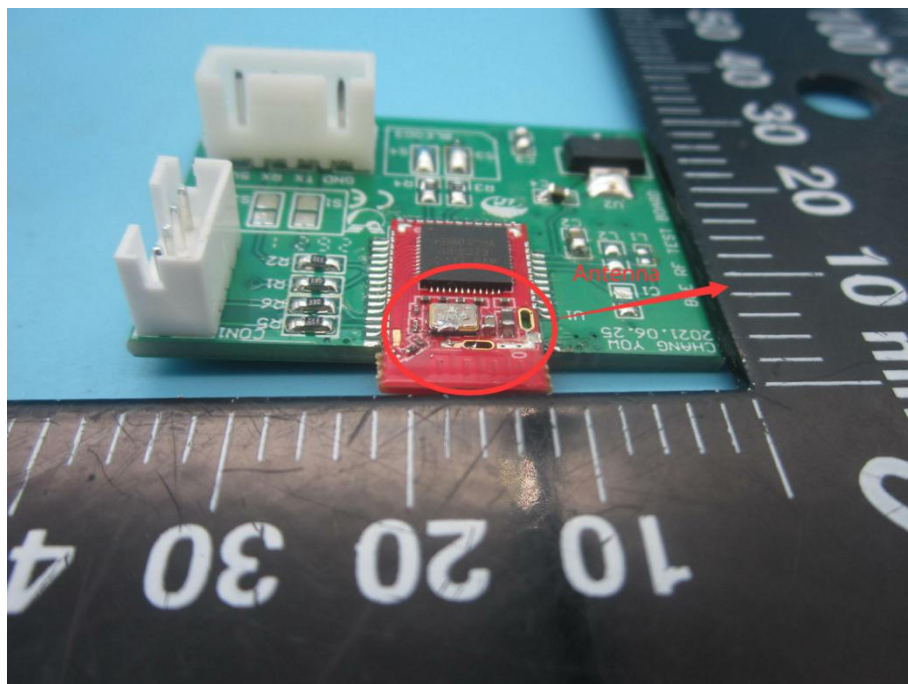
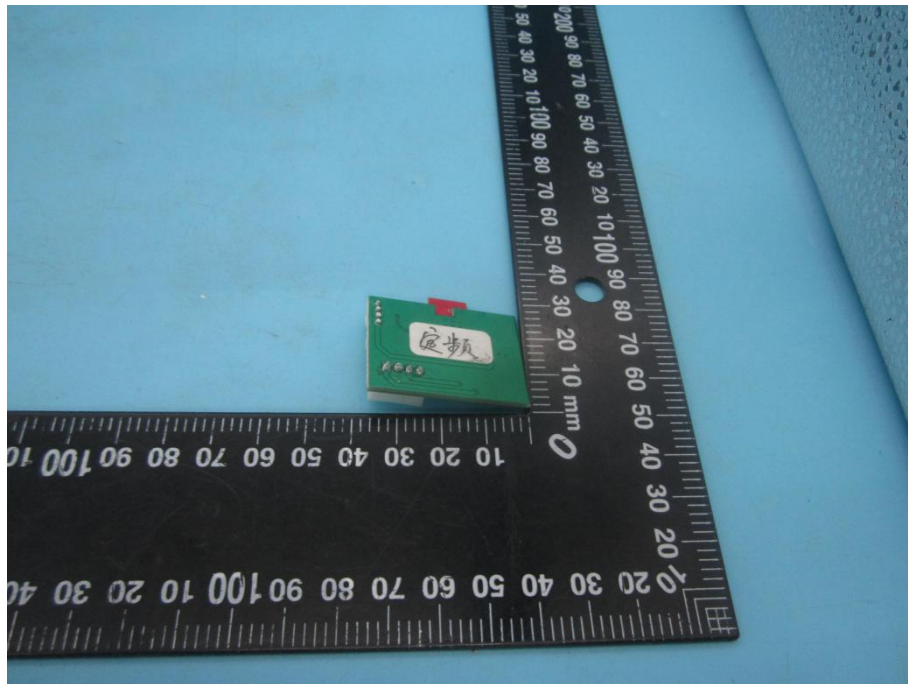
Annex C Photographs

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:	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

1.3.1 List of Test Equipment

NO.	Equipment Name	Serial NO.	Type	Manufa cturer	Cal.Date	Cal.Due Date
1	Vector Network Analyzer	MY46214666	E5071C	Agilent	2021.03.17	2022.03.16
2	OTA Chamber	N/A	SG24	Satimo	2021.01.12	2024.01.11
3	Antenna Measurement System	N/A	Satenv V1.4.1.14 build1	Satimo	N/A	N/A

————— END OF REPORT —————