



REPORT No. : SZ22120154E01

TEST REPORT

APPLICANT : Shenzhen C&D Electronics Co., Ltd.

PRODUCT NAME : 433M remote

MODEL NAME : RF485B

TRADE NAME : N/A

BRAND NAME : N/A

STANDARD(S) : IEEE Std 149-2021

RECEIPT DATE : 2022-12-19

TEST DATE : 2022-12-19

ISSUE DATE : 2022-12-20

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MORLAB

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DIRECTORY

- 1. Technical Information3
- 1.1. Applicant and Manufacturer Information3
- 1.2. Equipment Under Test (EUT) Description3
- 2. Test Results 4
- 2.1. Applied Reference Documents4
- 2.2. Test Conditions4
- 2.3. Measurement Uncertainty 4
- 2.4. Test Results lists5
- Annex A Test Setup Photos6
- Annex B Figures7
- 1. 2D Radiation Pattern 7
- 2. 3D Radiation Pattern 10
- Annex C EUT Photos 12
- Annex D General Information14
- 1.1 Identification of the Responsible Testing Laboratory14
- 1.2 Identification of the Responsible Testing Location14
- 1.3 Test Equipments Utilized 14

Change History		
Version	Date	Reason for change
1.0	2022-12-20	First edition



1. Technical Information

Note: Provide by manufacturer.

1.1. Applicant and Manufacturer Information

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

1.2. Equipment Under Test (EUT) Description

Wireless Type	N/A
Test frequency band	433.92MHz
IMEI	N/A
Sample No.	1#

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(dBi)

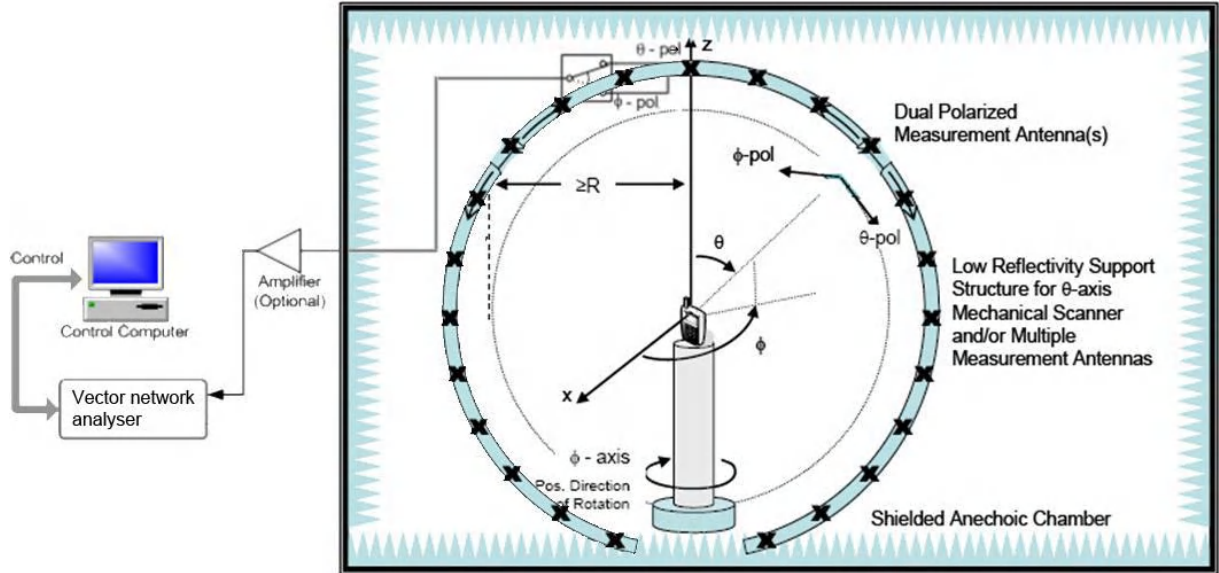
Frequency	Gain
433.87MHz	-21.75
433.92MHz	-21.73
433.97MHz	-21.75

Frequency	Phi=0°(XZ Plane)_V		Phi=0°(XZ Plane)_H	
	Peak Gain	Average Gain	Peak Gain	Average Gain
433.87MHz	-34.31	-39.64	-22.24	-27.79
433.92MHz	-34.27	-39.66	-22.25	-27.80
433.97MHz	-34.22	-39.67	-22.23	-27.80

Frequency	Phi=90°(YZ Plane)_V		Phi=90°(YZ Plane)_H	
	Peak Gain	Average Gain	Peak Gain	Average Gain
433.87MHz	-29.23	-31.70	-22.53	-29.19
433.92MHz	-29.32	-31.72	-22.52	-29.19
433.97MHz	-29.32	-31.72	-22.52	-29.19

Frequency	Theta=90°(XY Plane)_V		Theta=90°(XY Plane)_H	
	Peak Gain	Average Gain	Peak Gain	Average Gain
433.87MHz	-30.97	-33.22	-26.68	-27.55
433.92MHz	-30.95	-33.24	-26.72	-27.56
433.97MHz	-31.01	-33.26	-26.69	-27.57

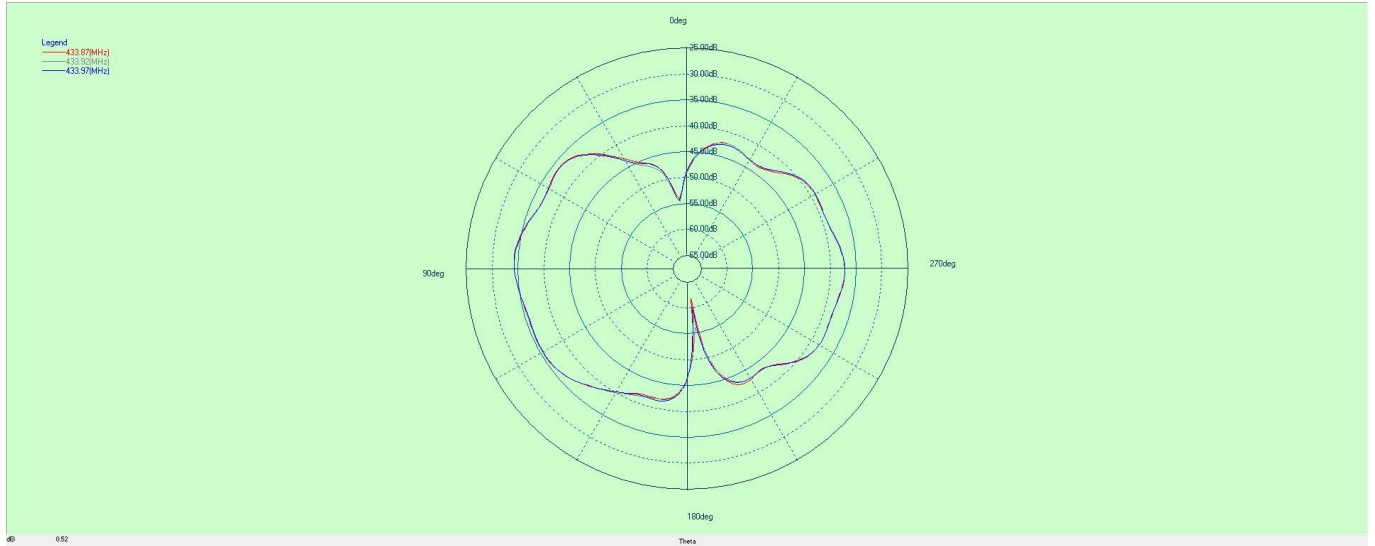
Annex A Test Setup Photos



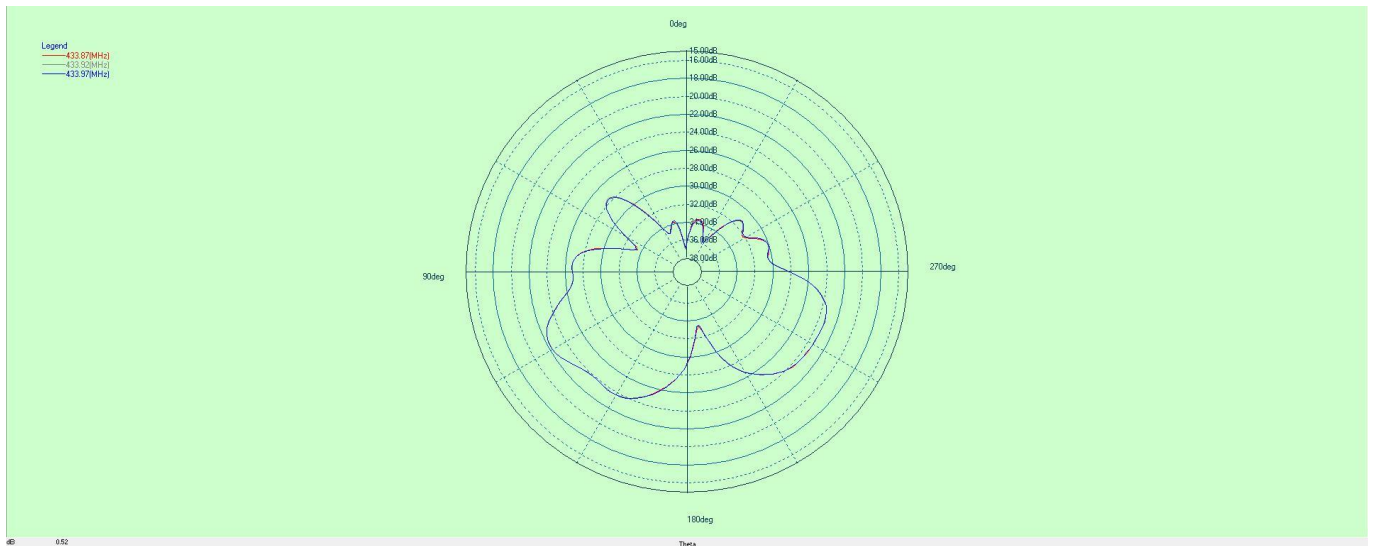
Annex B Figures

1. 2D Radiation Pattern

Phi=0°



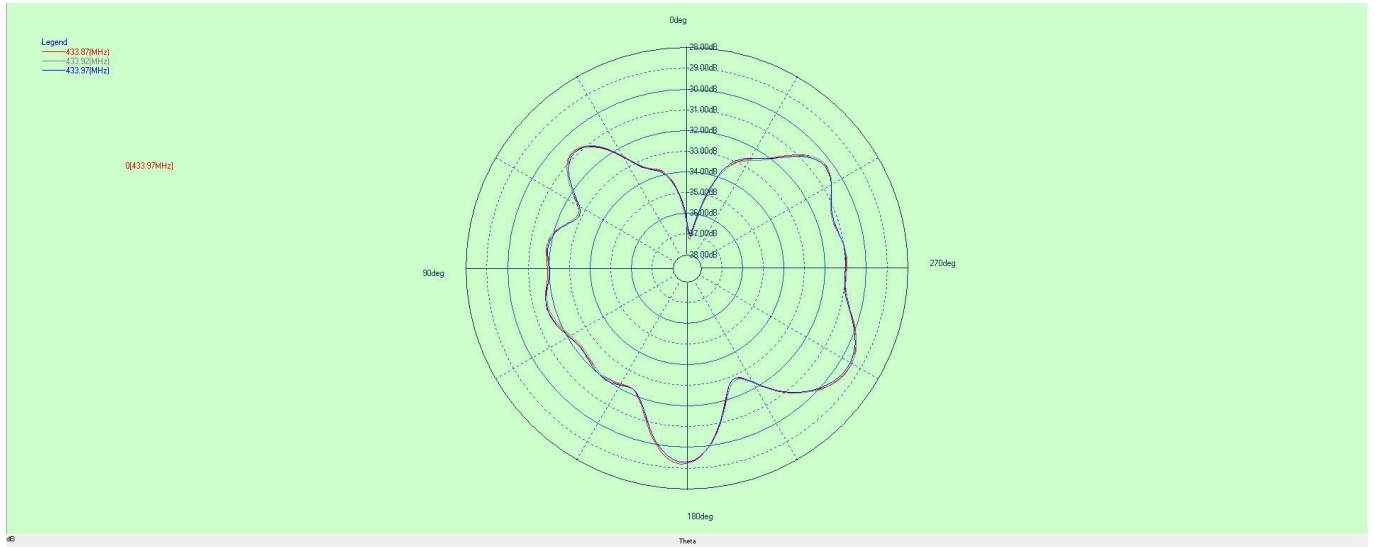
Phi=0°(XZ Plane)_V



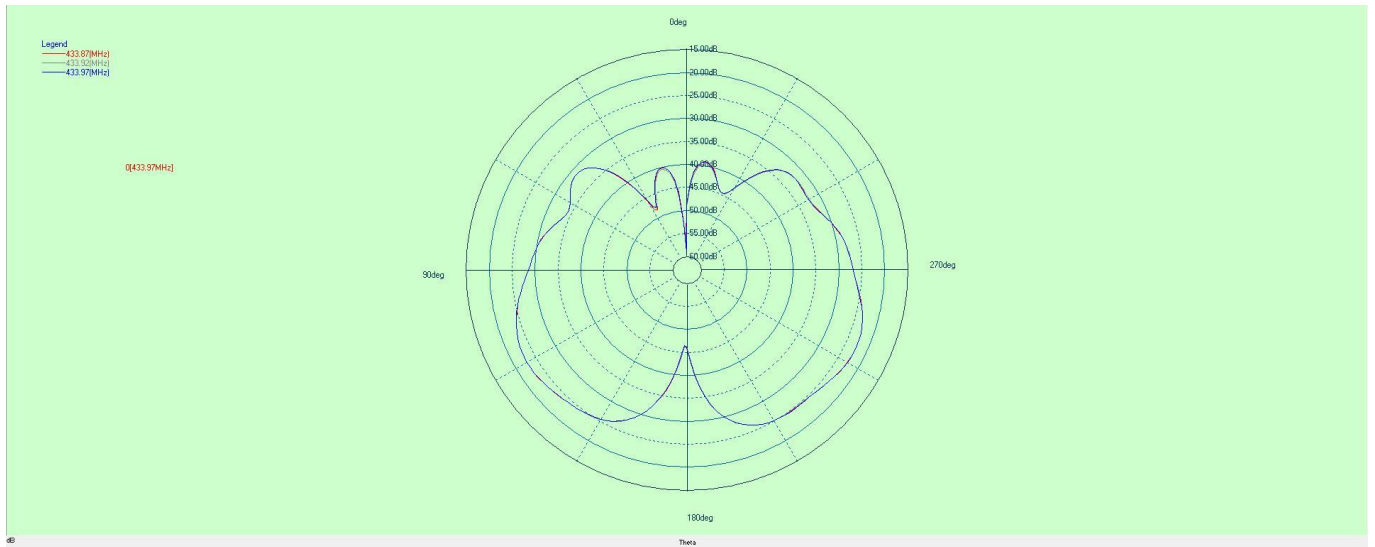
Phi=0°(XZ Plane)_H



Phi=90°



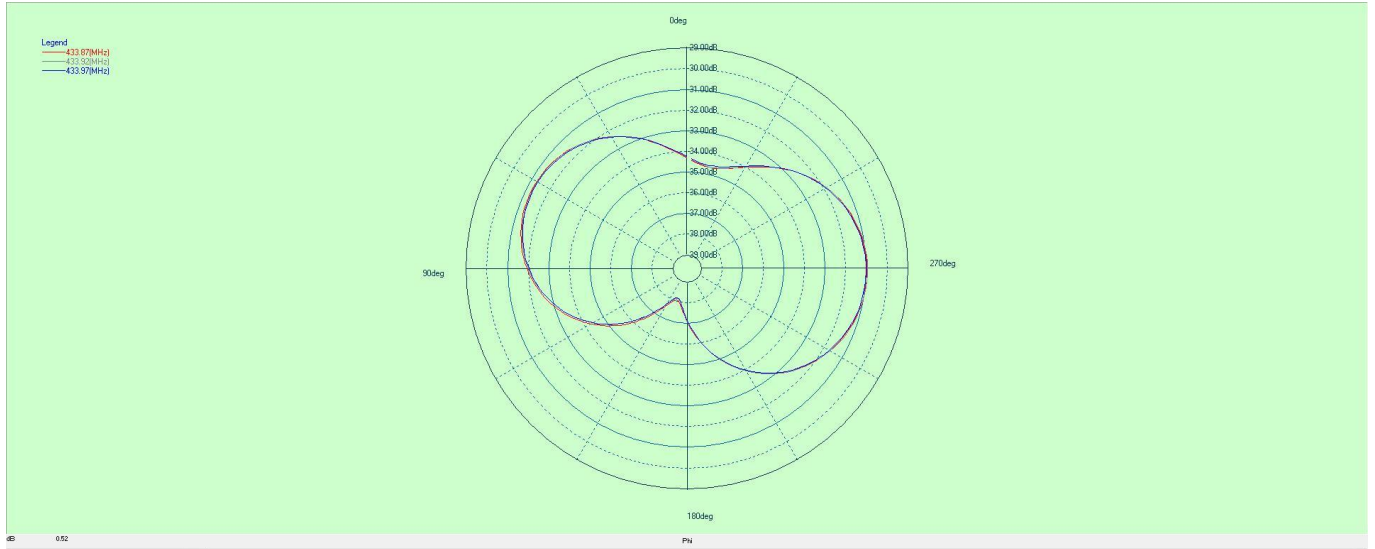
Phi=90°(YZ Plane)_V



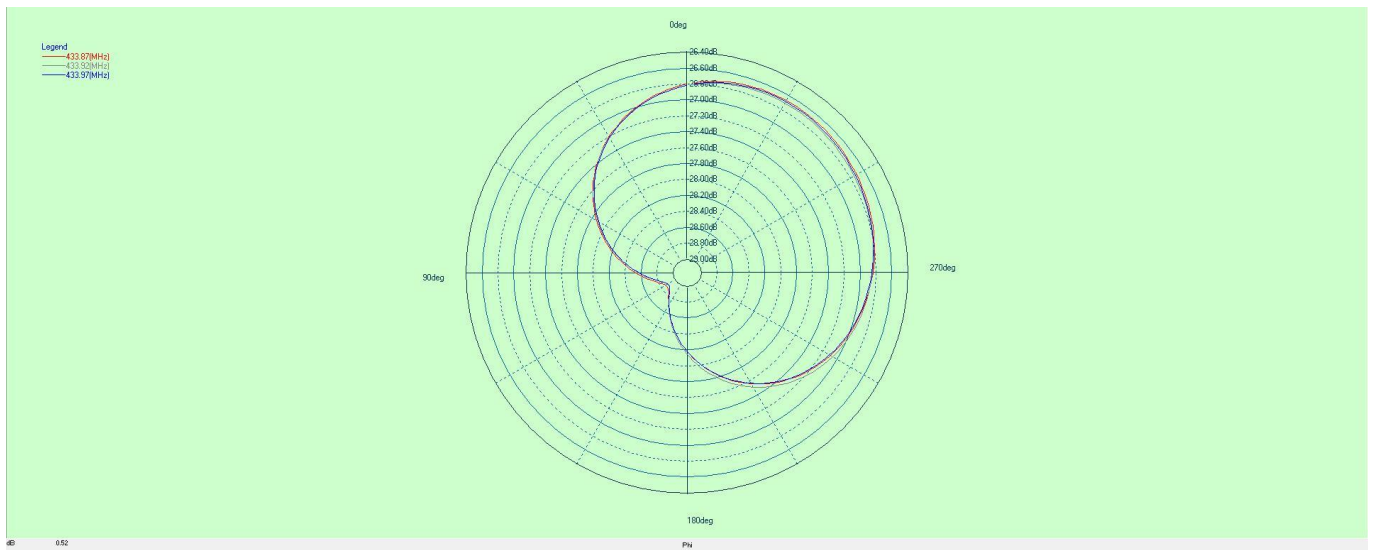
Phi=90°(YZ Plane)_H



Theta=90°

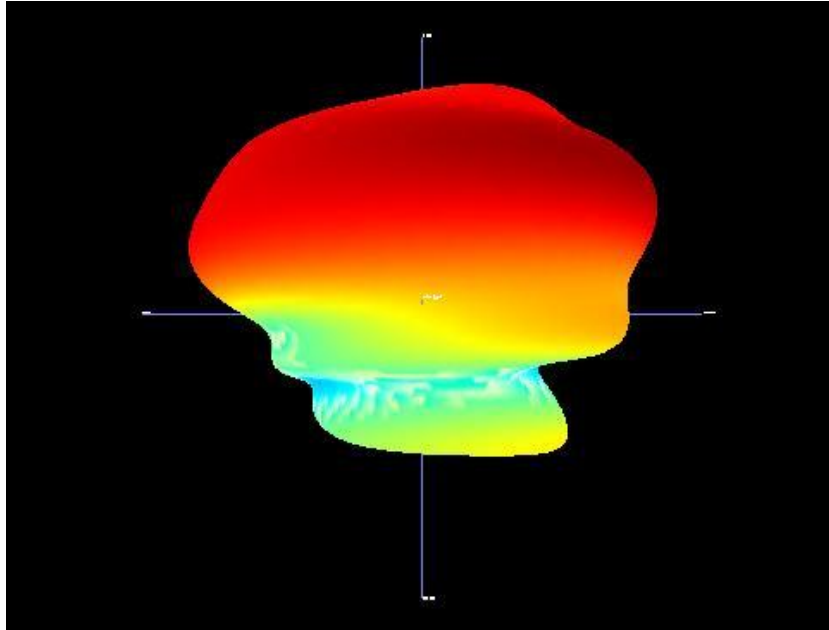


Theta=90°(XY Plane)_V

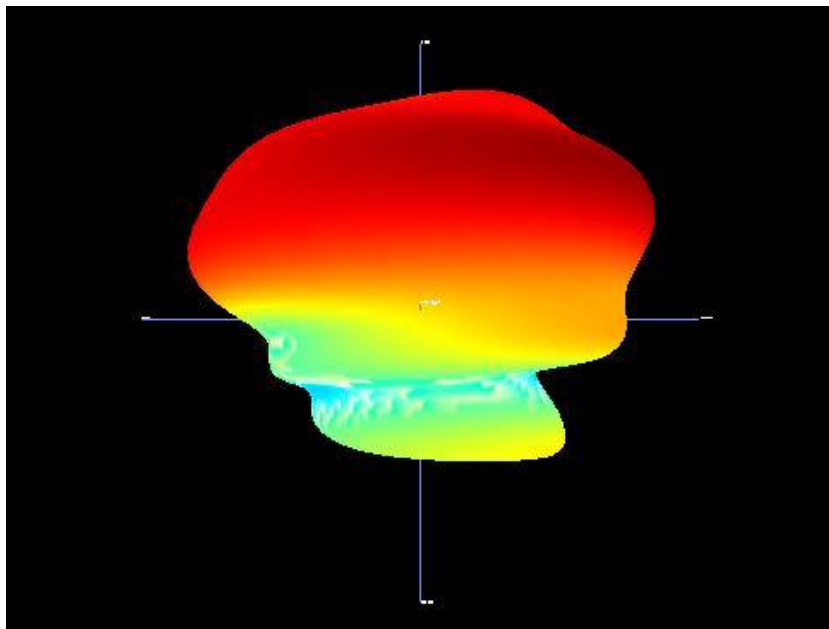


Theta=90°(XY Plane)_H

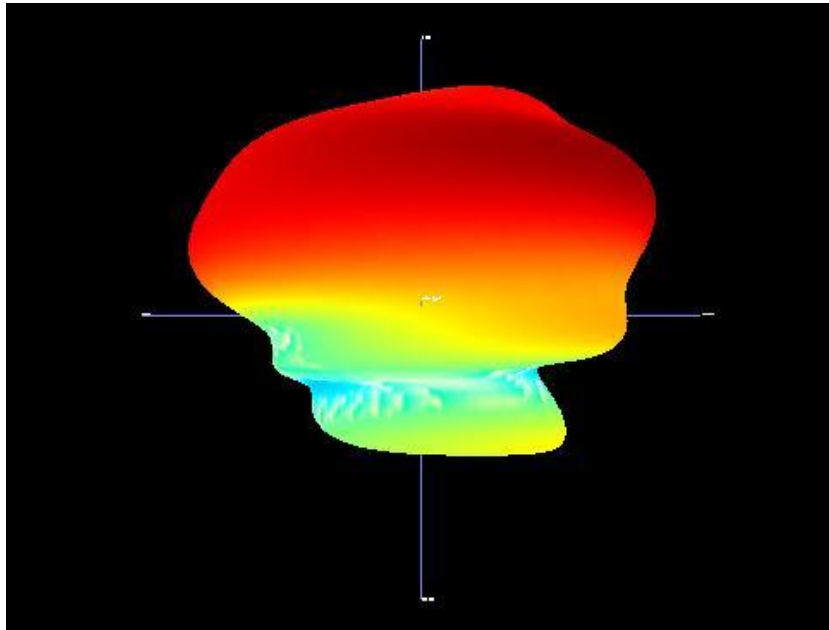
2. 3D Radiation Pattern



433.87MHz



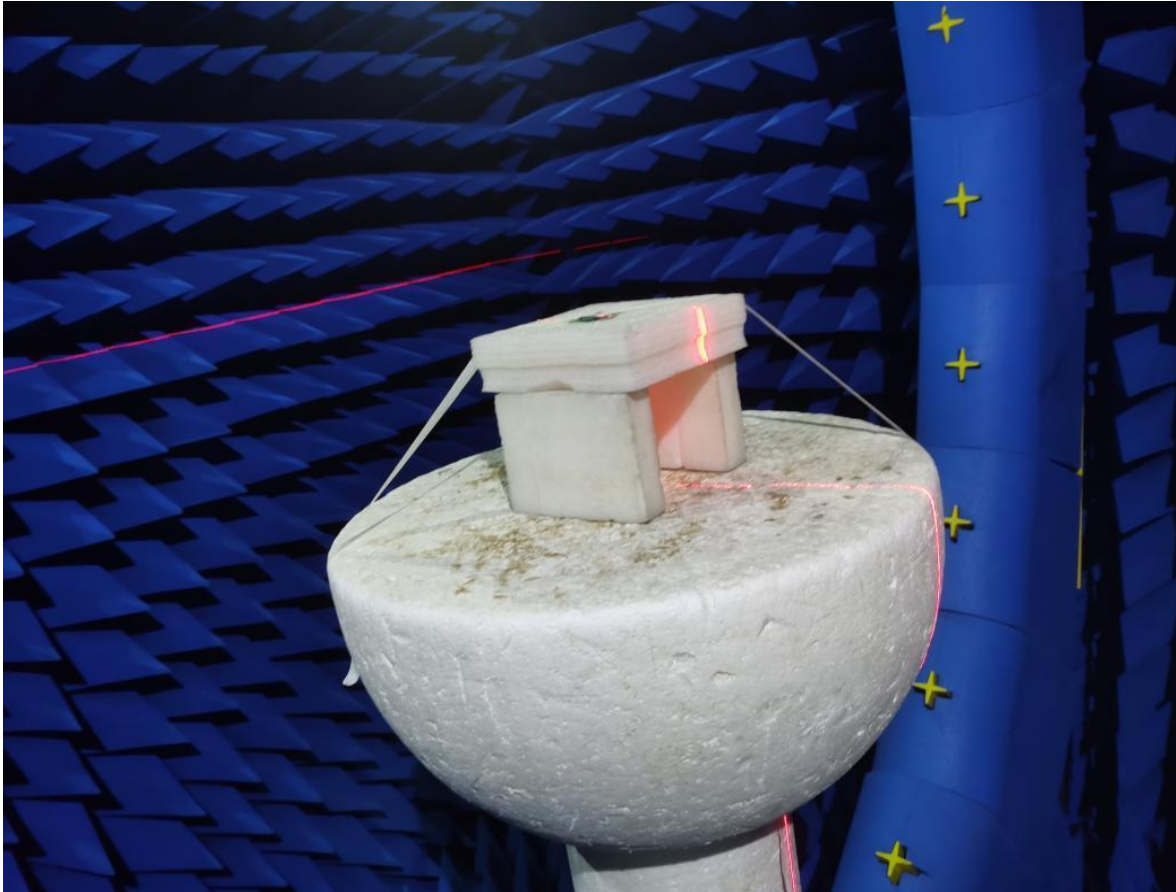
433.92MHz



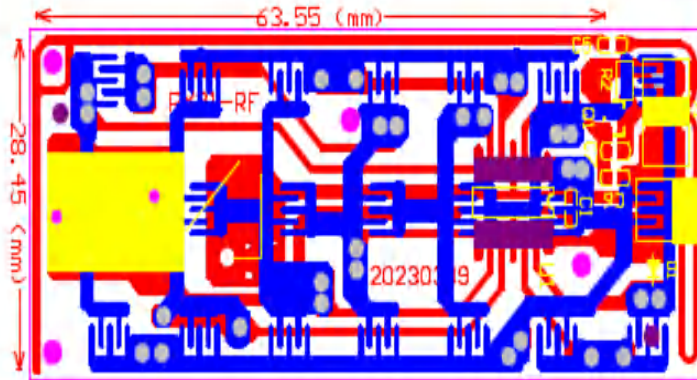
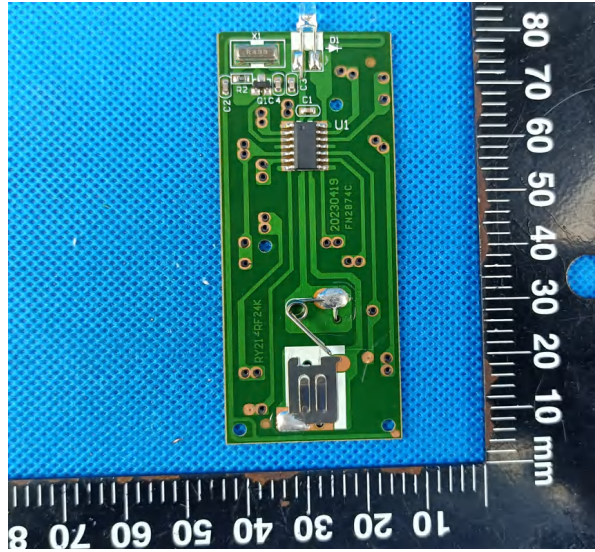
433.97MHz

Annex C EUT Photos

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

NO.	Equipment Name	Serial NO.	Type	Manufacturer	Cal.Date	Cal.Due Date
1	Vector Network Analyzer	MY46214666	E5071C	Agilent	2022.03.01	2023.02.28
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

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