



REPORT No.: SZ24010147E01

TEST REPORT

APPLICANT : Qingdao Magene Intelligence Technology Co., Ltd.

PRODUCT NAME : PCB Antenna

MODEL NAME : 8801209

TRADE NAME : DECATHLON

BRAND NAME : N/A

STANDARD(S) : IEEE Std 149-2021

RECEIPT DATE : 2024-01-17

TEST DATE : 2024-01-19

ISSUE DATE : 2024-01-22



Edited by:

Fang Jinshan

Fang Jinshan(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 EUT Photos	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
1.4 Test Software Utilized	13

Change History		
Version	Date	Reason for change
1.0	2024-01-22	First edition

1. Technical Information

Note: Provide by applicant.

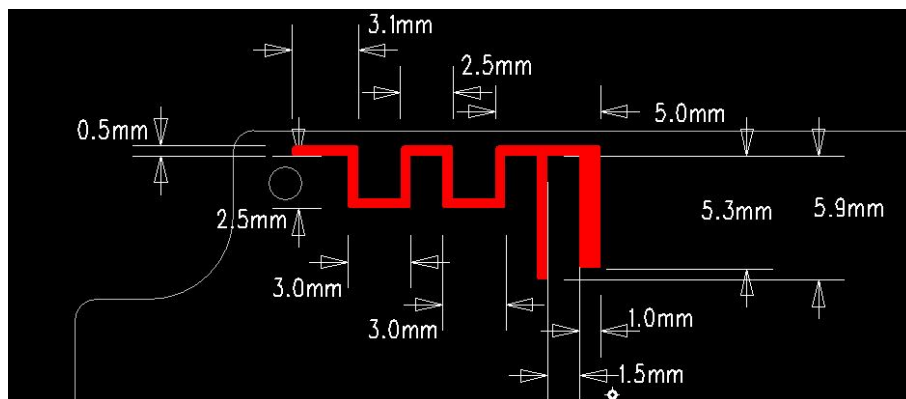
1.1. Applicant and Manufacturer Information

Applicant:	Qingdao Magene Intelligence Technology Co., Ltd.
Applicant Address:	Room 302, Building 3, No.328A Chengkang Road, Xiazhuang Subdistrict, Chengyang District, Qingdao, Shandong, China.
Manufacturer:	Qingdao Magene Intelligence Technology Co., Ltd.
Manufacturer Address:	Room 302, Building 3, No.328A Chengkang Road, Xiazhuang Subdistrict, Chengyang District, Qingdao, Shandong, China.

1.2. Equipment Under Test (EUT) Description

Wireless Type	N/A
Test frequency band	2400MHz-2500MHz
Brand name	N/A
Hardware Version	N/A
Software Version	N/A
IMEI	N/A
Sample number	1#

Dimensions:



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.

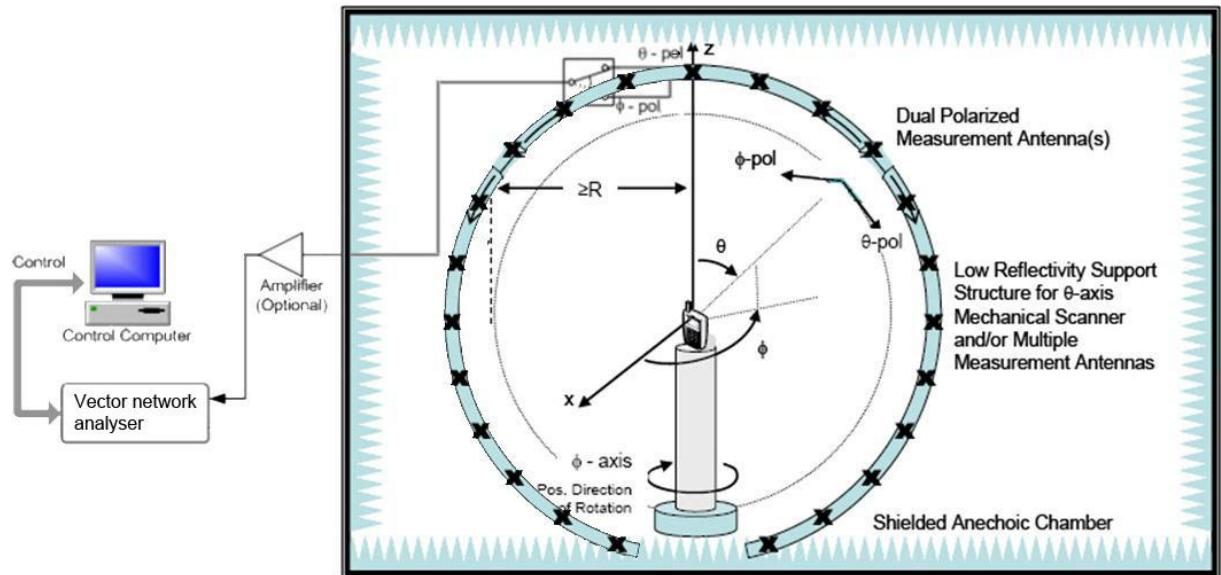


2.4. Test Results lists

2.4.1. Gain

Frequency	Gain(dBi)
2400MHz	-5.02
2410MHz	-4.91
2420MHz	-4.95
2430MHz	-5.16
2440MHz	-5.00
2450MHz	-4.37
2460MHz	-3.82
2470MHz	-3.36
2480MHz	-3.13
2490MHz	-2.65
2500MHz	-1.79

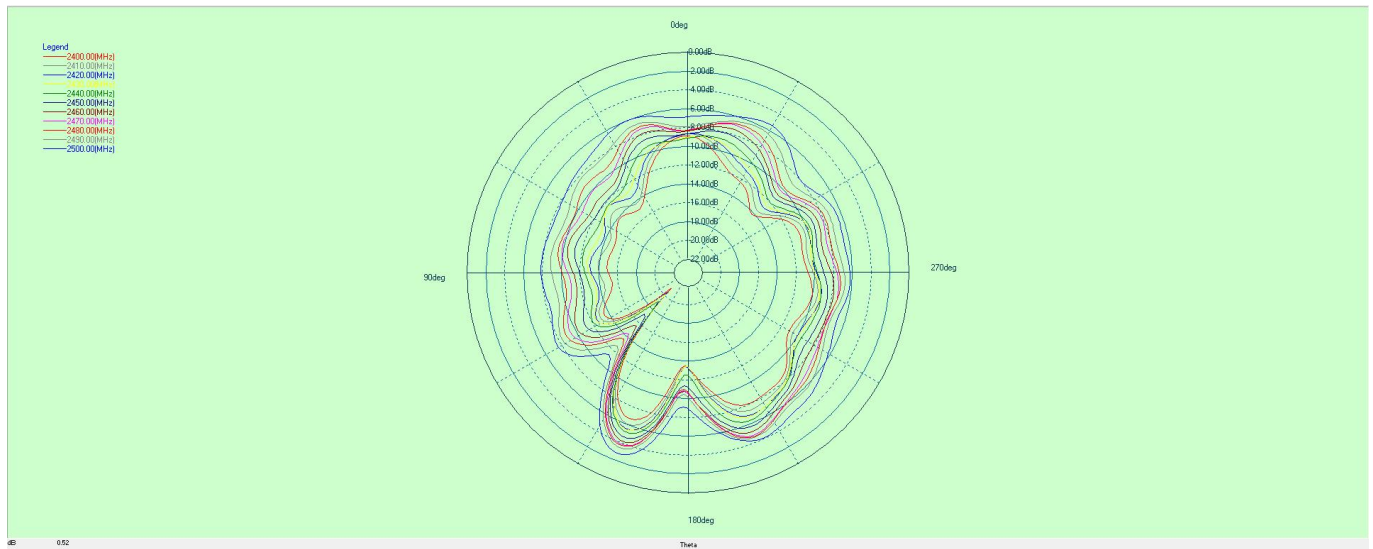
Annex A Test Setup Photos



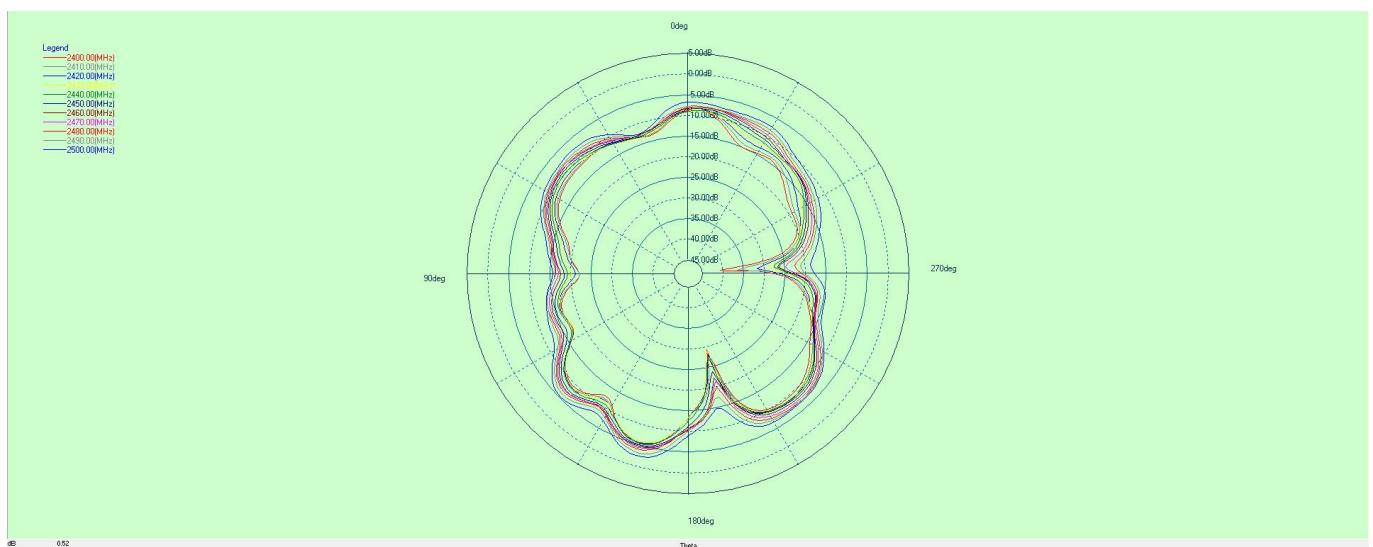
Annex B Figures

1. 2D Radiation Pattern

Phi=0°

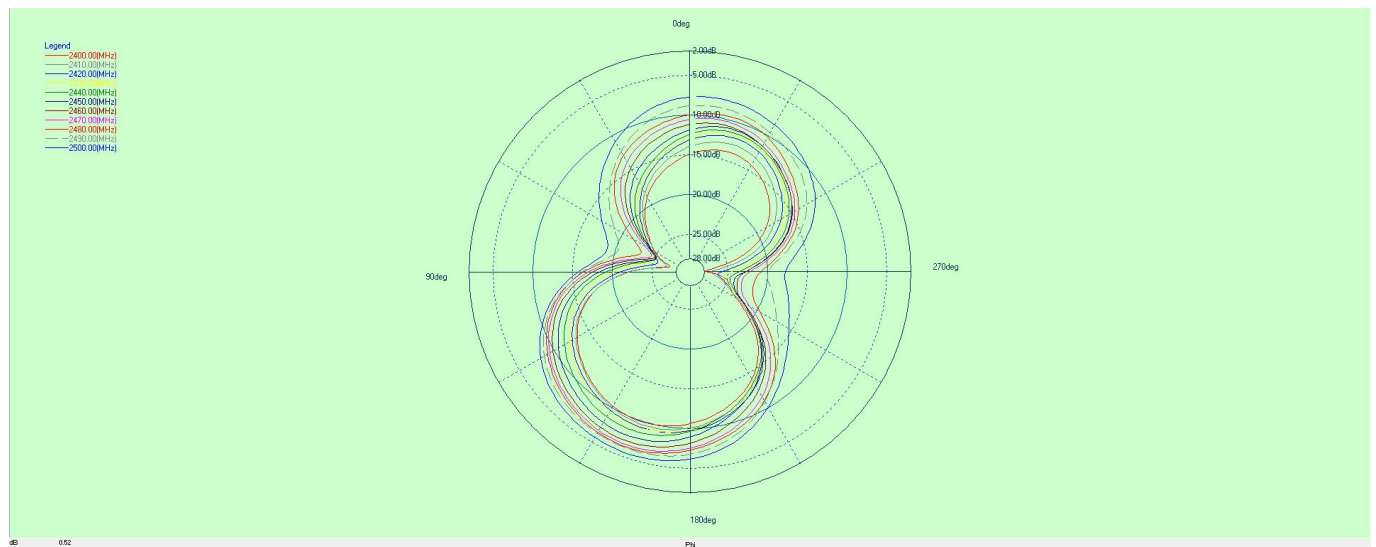


Phi=90°

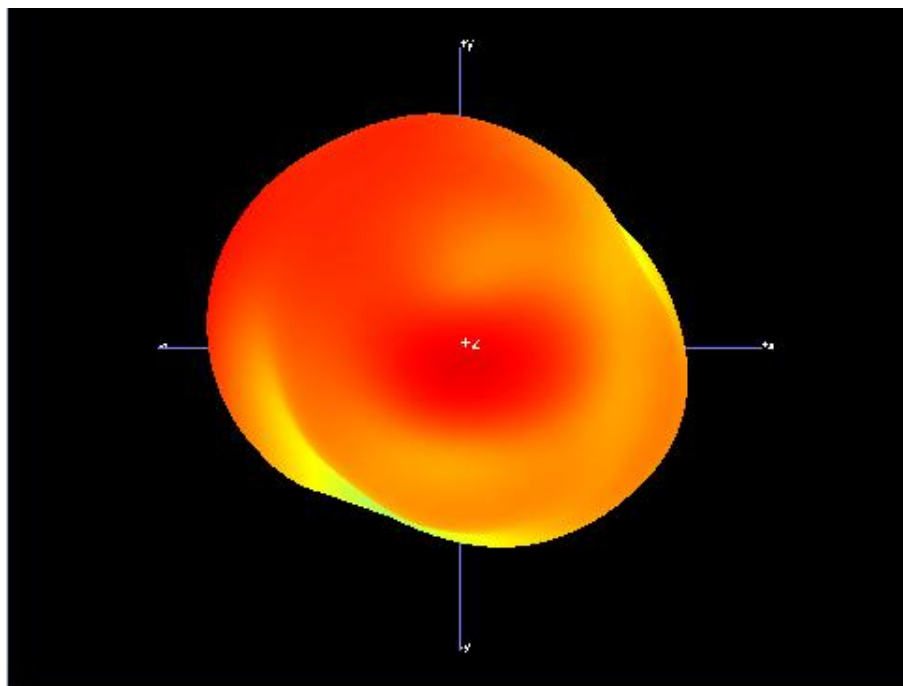




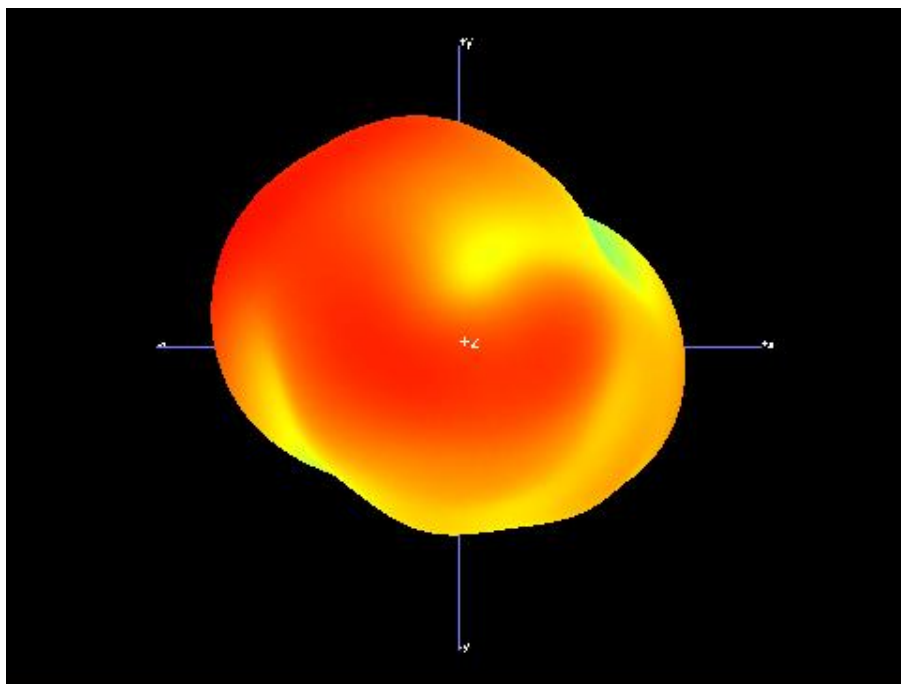
Theta=90°



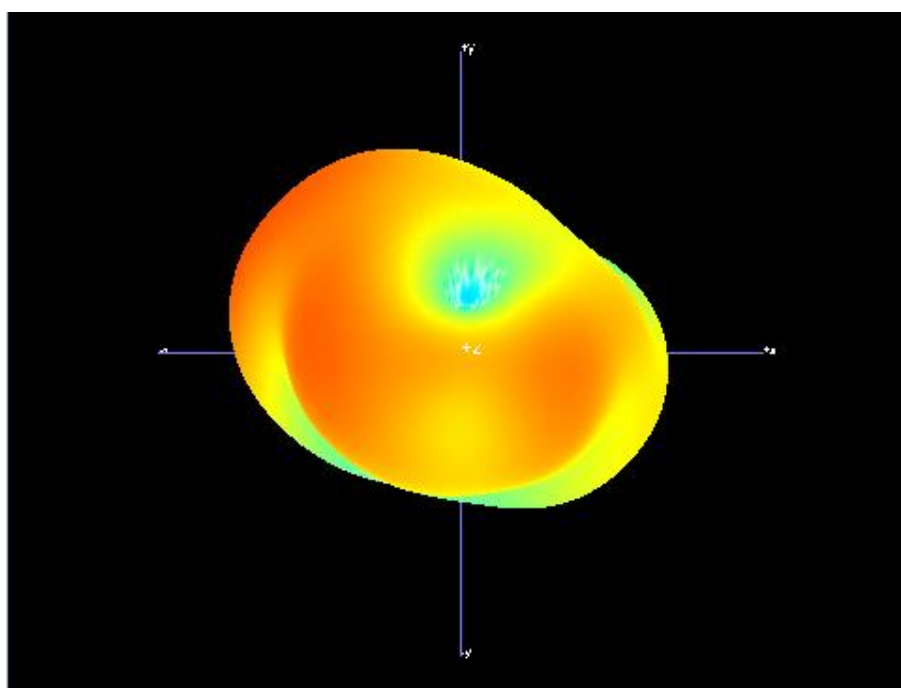
2. 3D Radiation Pattern



2400MHz



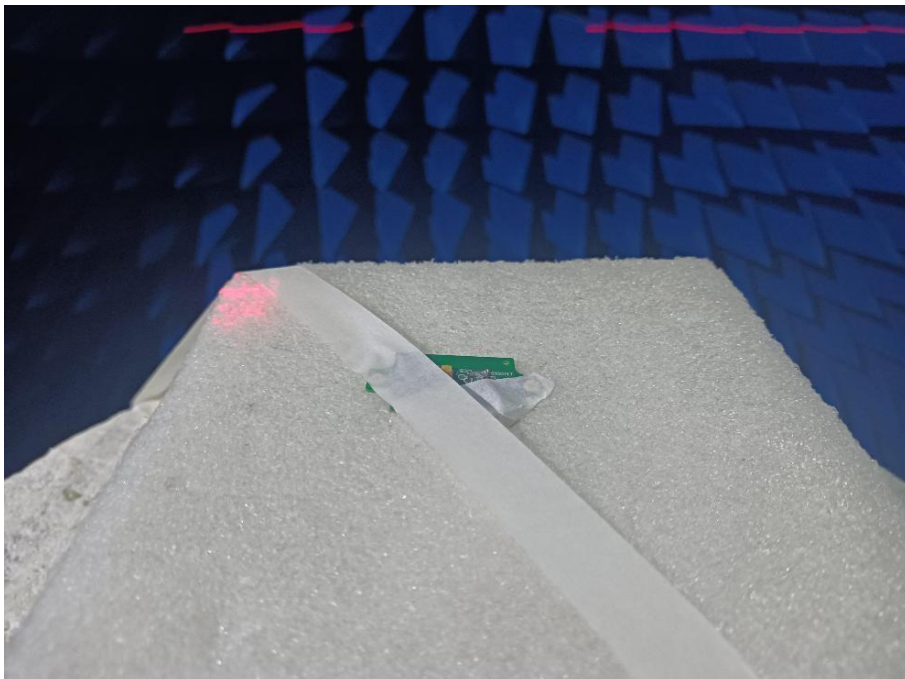
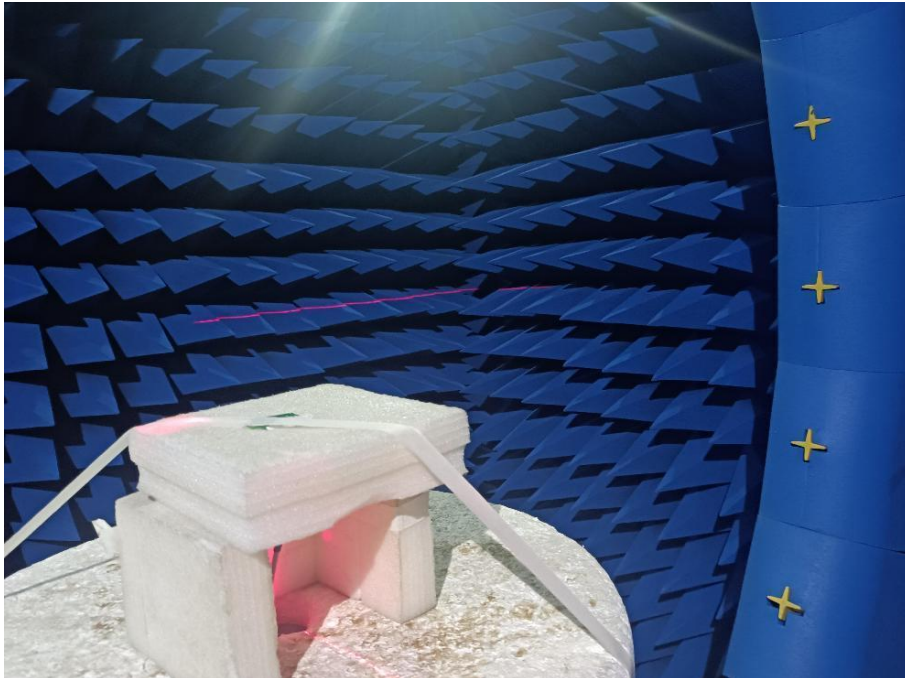
2450MHz



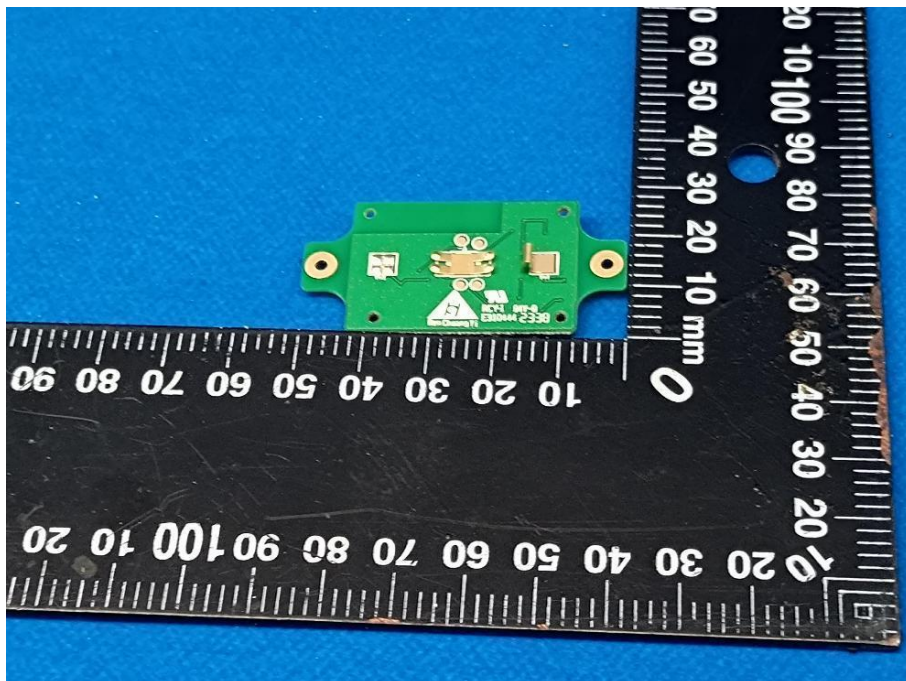
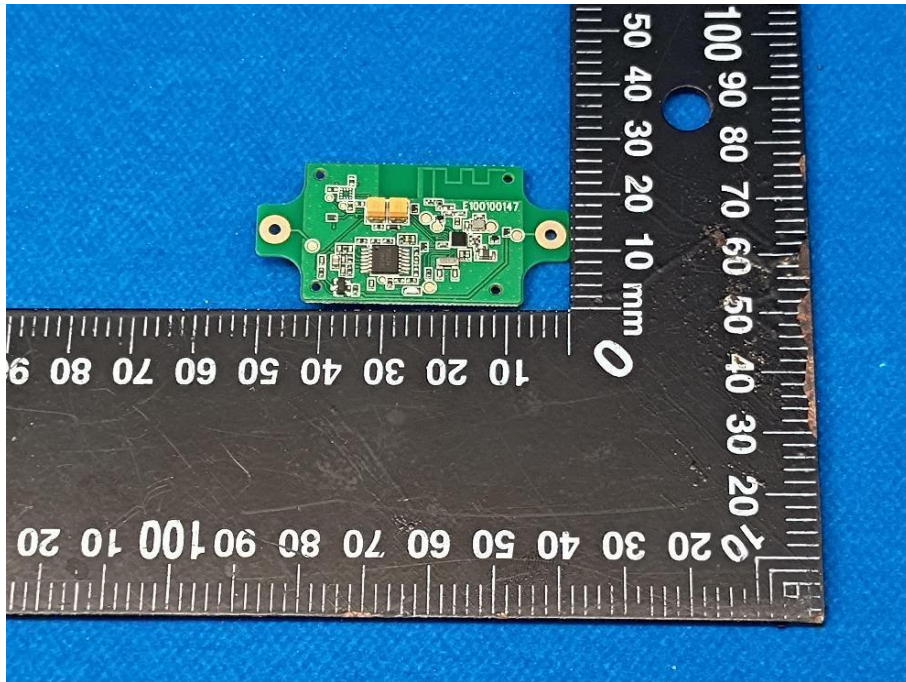
2500MHz

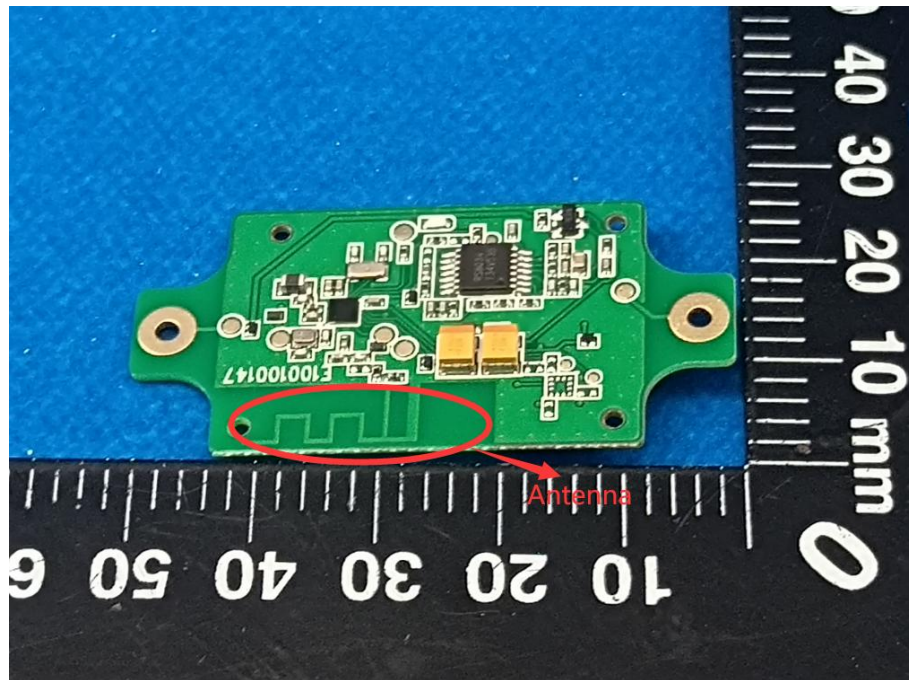
Annex C EUT Photos

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:	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	Manufacturer	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	2022.01.17	2025.01.16

1.4 Test Software Utilized

NO.	Software Name	Serial NO.	Version	Manufacturer
1	SatEnv	N/A	2.0.1.5 build 12	Satimo
2	SPM	N/A	1.11	Satimo

————— END OF REPORT —————