



TEST REPORT

APPLICANT : Guangzhou Universal Electronics Service Co.,Ltd.

PRODUCT NAME : JPN Daikin CO2 Sensor

MODEL NAME : i

TRADE NAME : N/A

BRAND NAME : N/A

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

RECEIPT DATE : 2022-08-01

TEST DATE : 2022-08-03

ISSUE DATE : 2022-08-05

Edited by: Fang Jinshan
Fang Jinshan(Rapporteur)

Approved by: Chi Shide
Chi Shide(Supervisor)

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Change History		
Version	Date	Reason for change
1.0	2022-08-05	First edition



1. Technical Information

Note: Provide by manufacturer.

1.1. Applicant and Manufacturer Information

Applicant:	Guangzhou Universal Electronics Service Co.,Ltd.
Applicant Address:	18th Floor, Building No.1 of Tower 4, Hailunbao Creative Park, Yushan Road, Shatou Street, Panyu District, Guangzhou
Manufacturer:	N/A
Manufacturer Address:	N/A

1.2. Equipment Under Test (EUT) Description

Wireless Type	Bluetooth
Frequency	2402MHz-2480MHz
IMEI	N/A
Sample No.	1#&2#



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. 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	



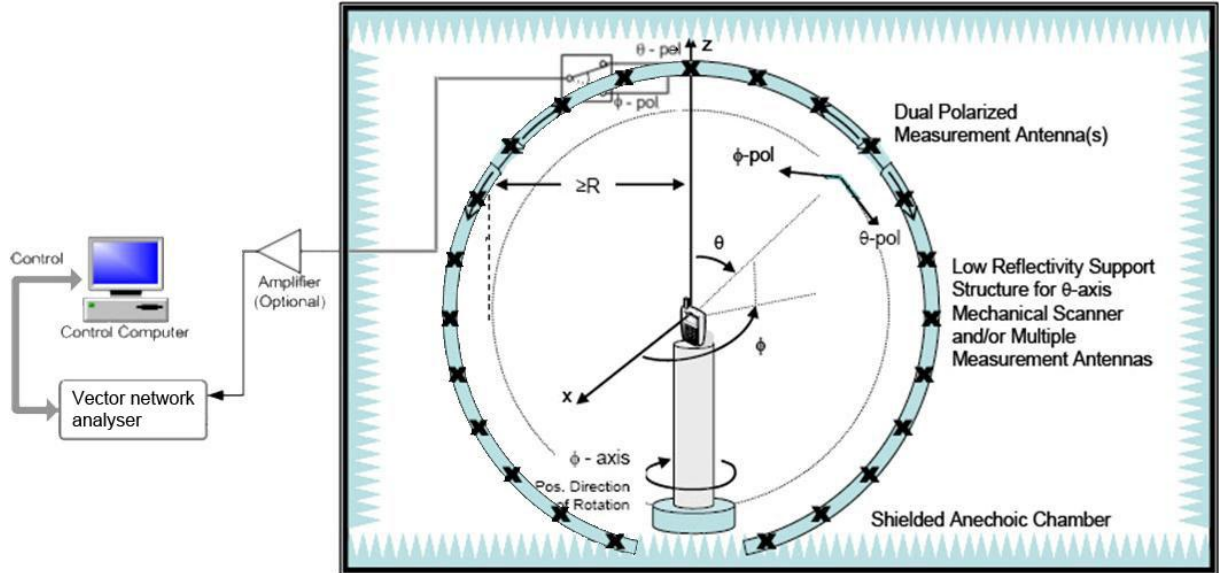
2.4. Test Results lists

2.4.1. Gain and Efficiency

Frequency(MHz)	Gain(dBi)		Efficiency(%)		Efficiency(dB)	
	1#	2#	1#	2#	1#	2#
2400	1.11	2.03	51.04	57.09	-2.92	-2.43
2402	1.17	2.13	51.53	57.59	-2.88	-2.40
2405	1.15	2.14	51.82	57.76	-2.86	-2.38
2410	1.07	2.02	51.33	56.79	-2.90	-2.46
2415	0.84	1.93	49.84	54.45	-3.02	-2.64
2420	0.68	1.75	50.35	53.94	-2.98	-2.68
2425	0.76	1.54	50.28	52.46	-2.99	-2.80
2430	0.84	1.33	50.71	51.56	-2.95	-2.88
2435	0.94	1.05	51.56	51.13	-2.88	-2.91
2440	1.19	0.86	53.22	51.90	-2.74	-2.85
2445	1.32	0.71	54.10	52.32	-2.67	-2.81
2450	1.57	0.87	55.33	53.46	-2.57	-2.72
2455	1.77	0.91	56.50	54.63	-2.48	-2.63
2460	1.97	1.01	57.38	55.66	-2.41	-2.54
2465	2.12	0.95	57.82	56.19	-2.38	-2.50
2470	2.25	1.01	58.11	56.34	-2.36	-2.49
2475	2.39	1.08	59.26	57.19	-2.27	-2.43
2480	2.41	1.19	59.72	57.26	-2.24	-2.42
2485	2.40	1.31	59.93	57.01	-2.22	-2.44
2490	2.45	1.48	61.41	58.02	-2.12	-2.36
2495	2.42	1.52	62.82	59.05	-2.02	-2.29
2500	2.46	1.61	64.54	60.57	-1.90	-2.18

Annex A Photographs

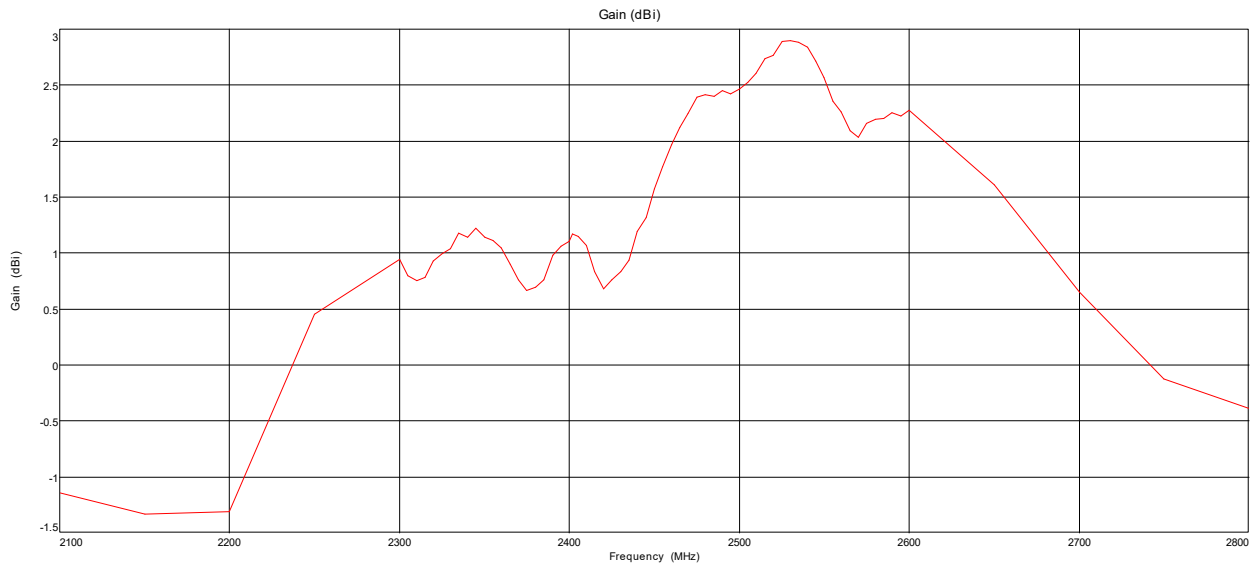
1. Test Setup



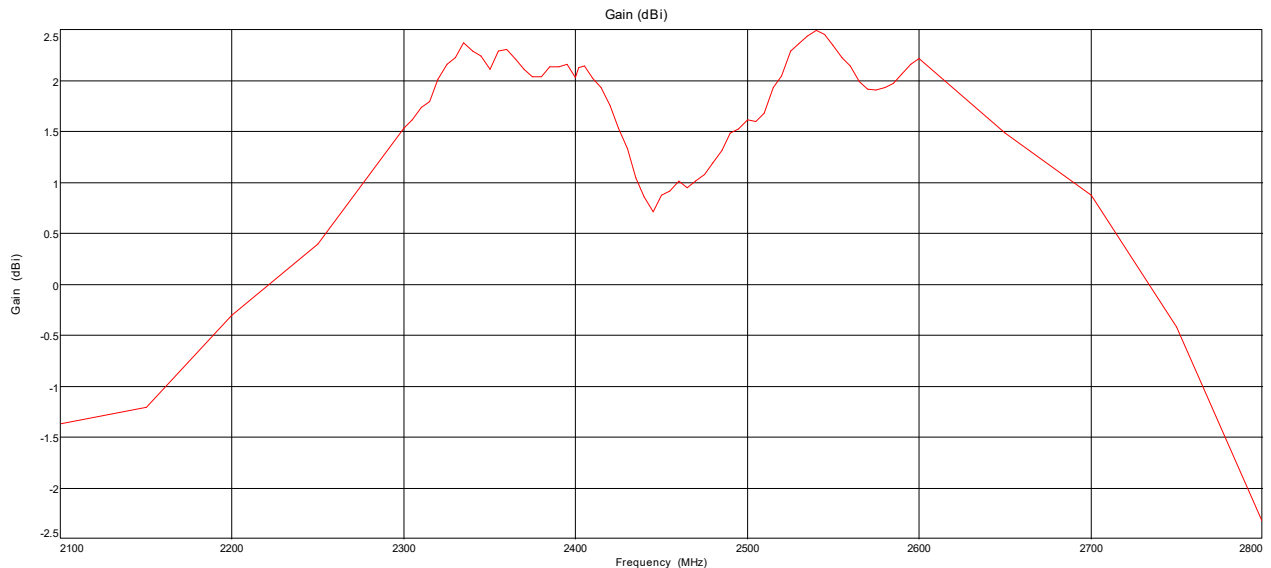
Annex B Figures

1. 2D Radiation Pattern

Gain



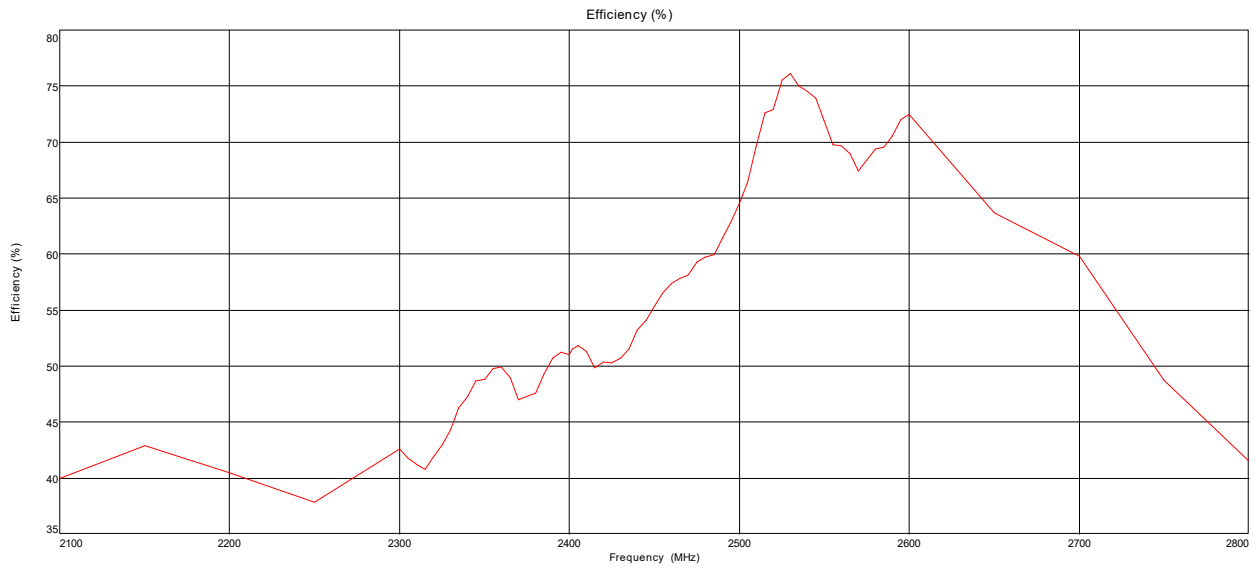
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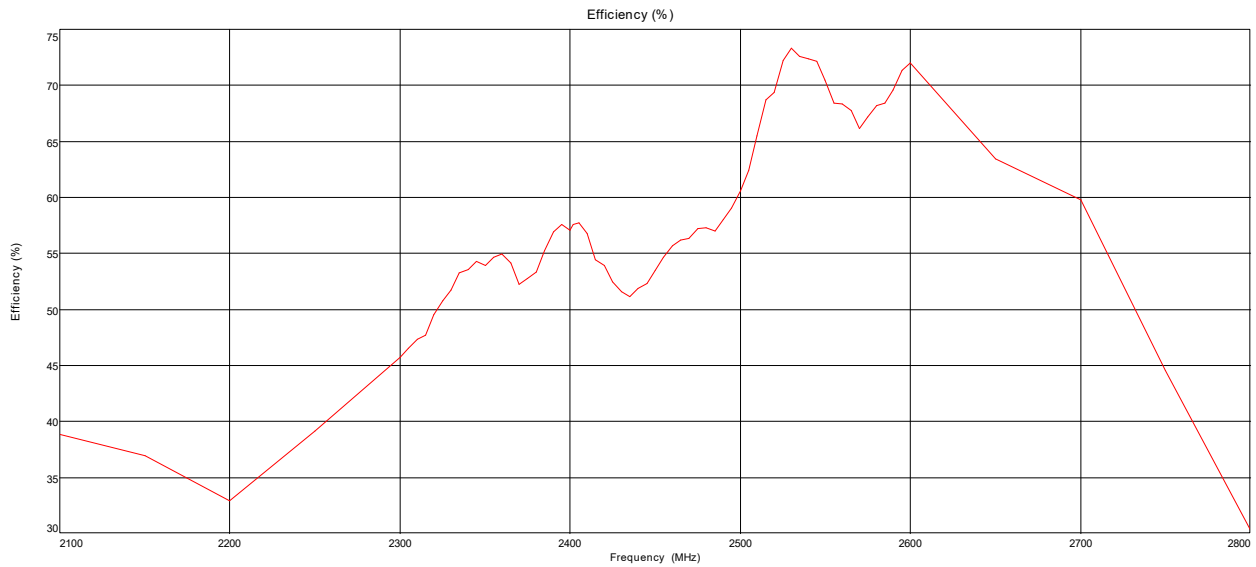
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Efficiency



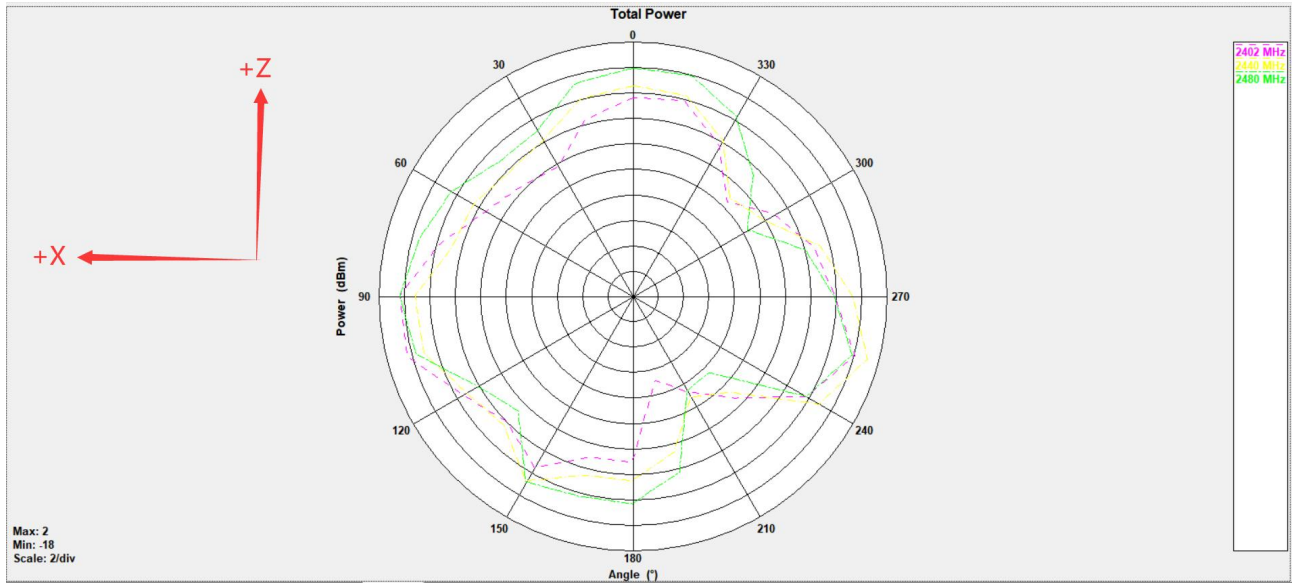
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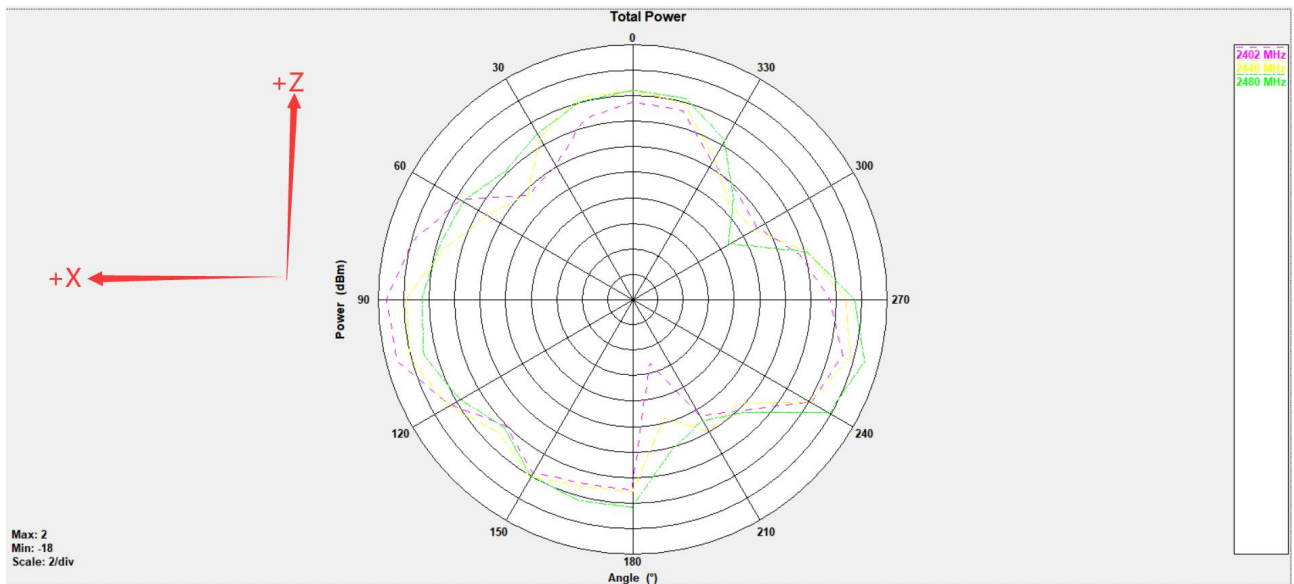
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Phi=0°

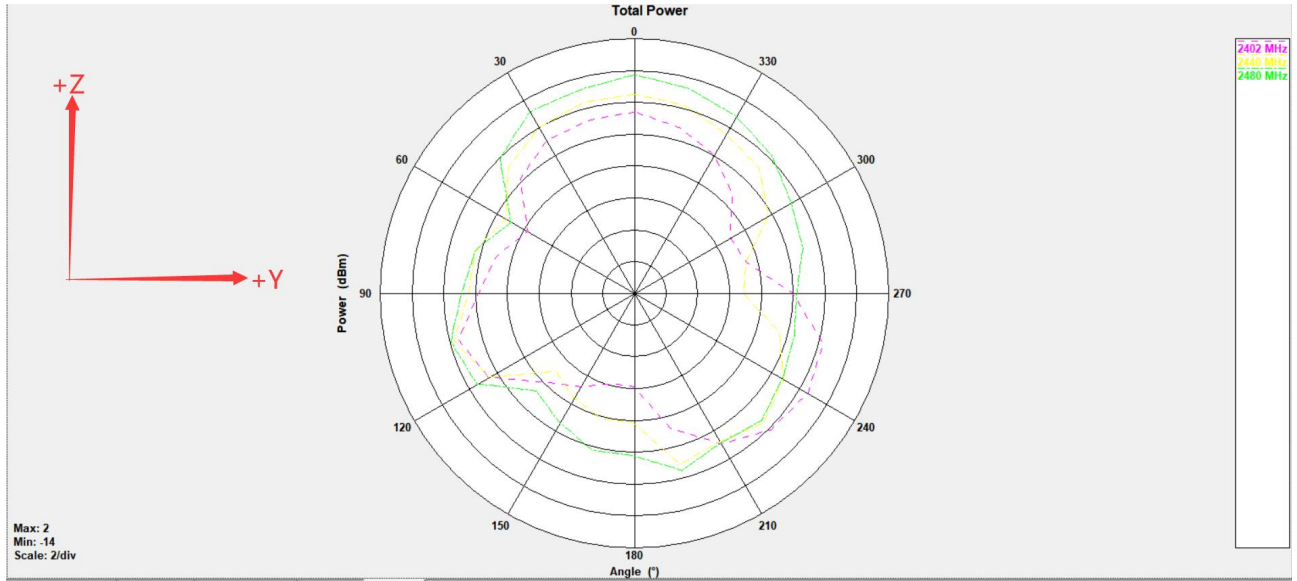


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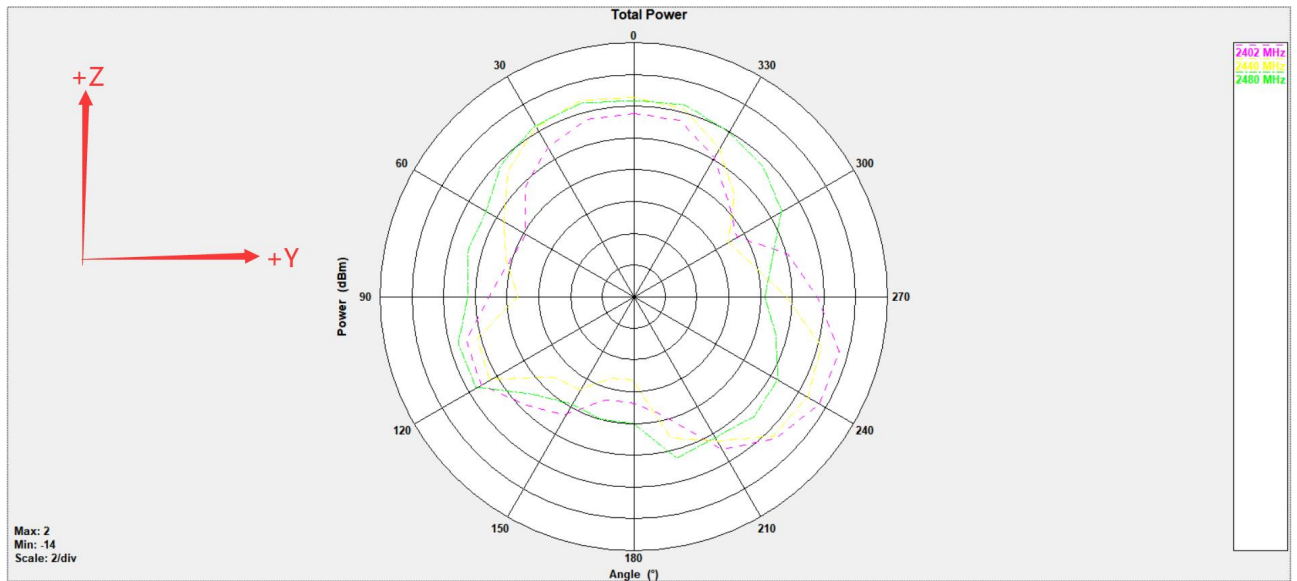


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Phi=90°

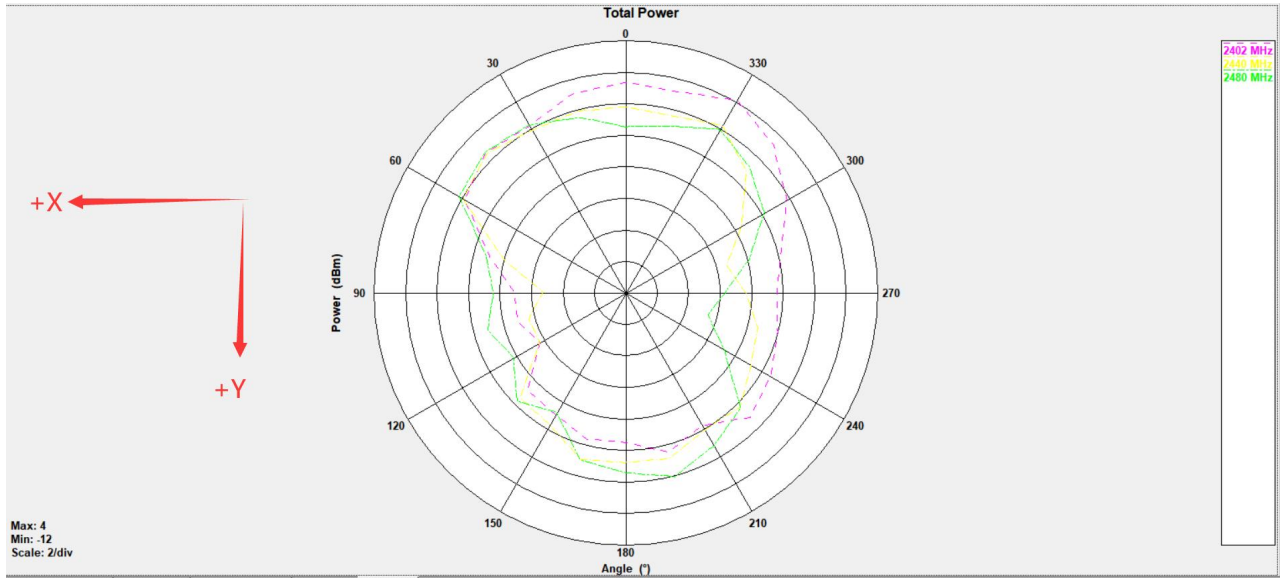
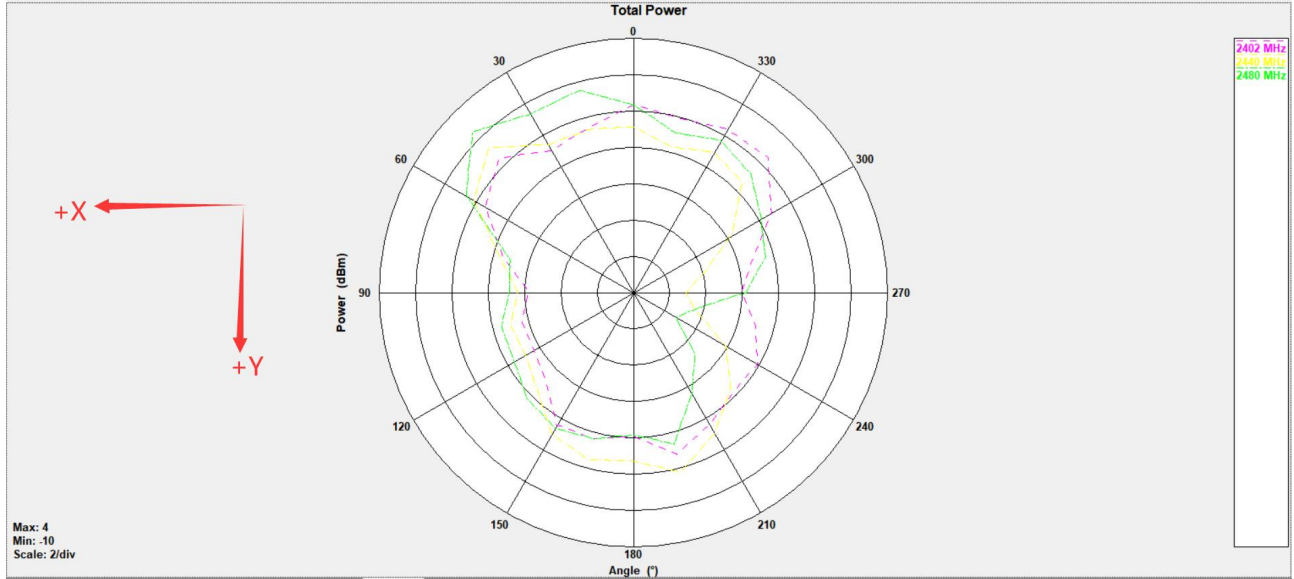


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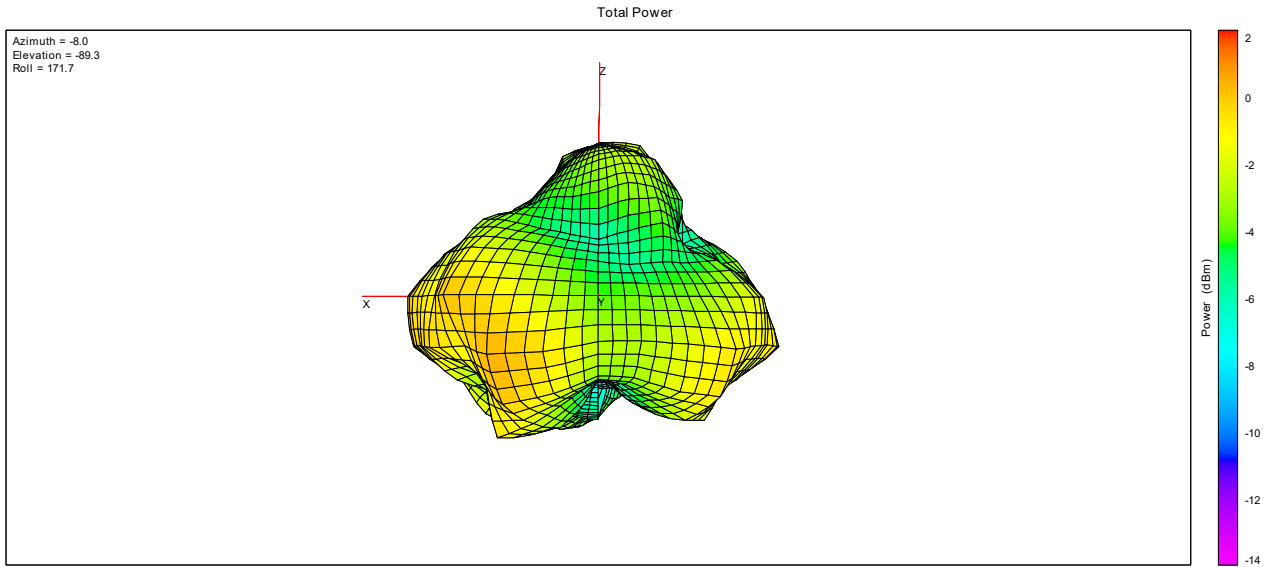


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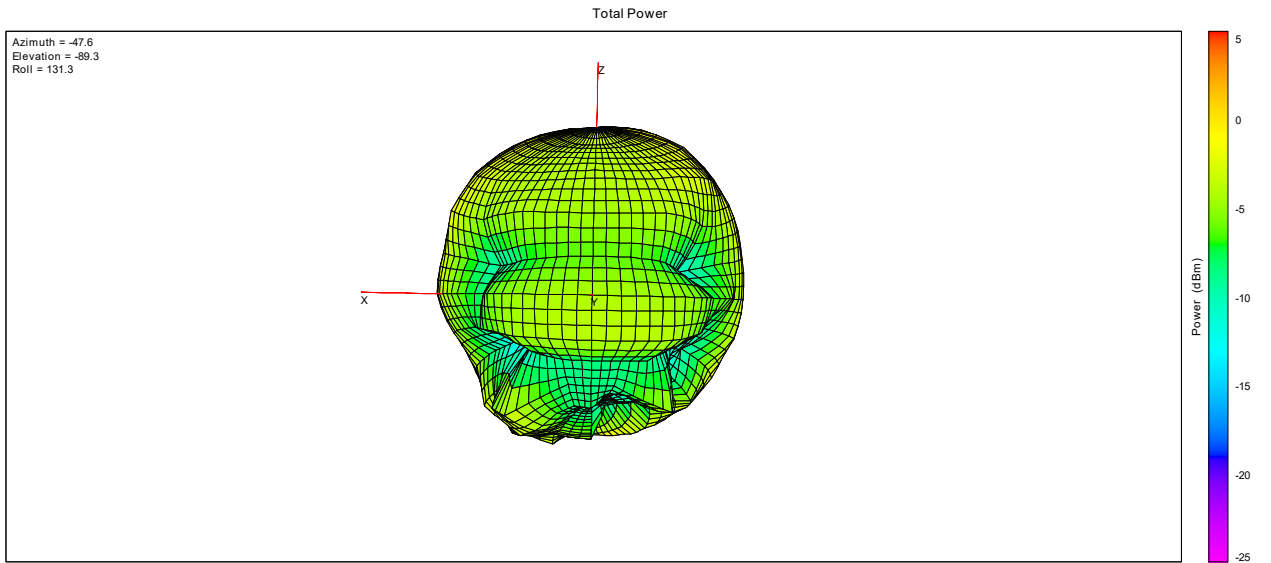
Theta=90°



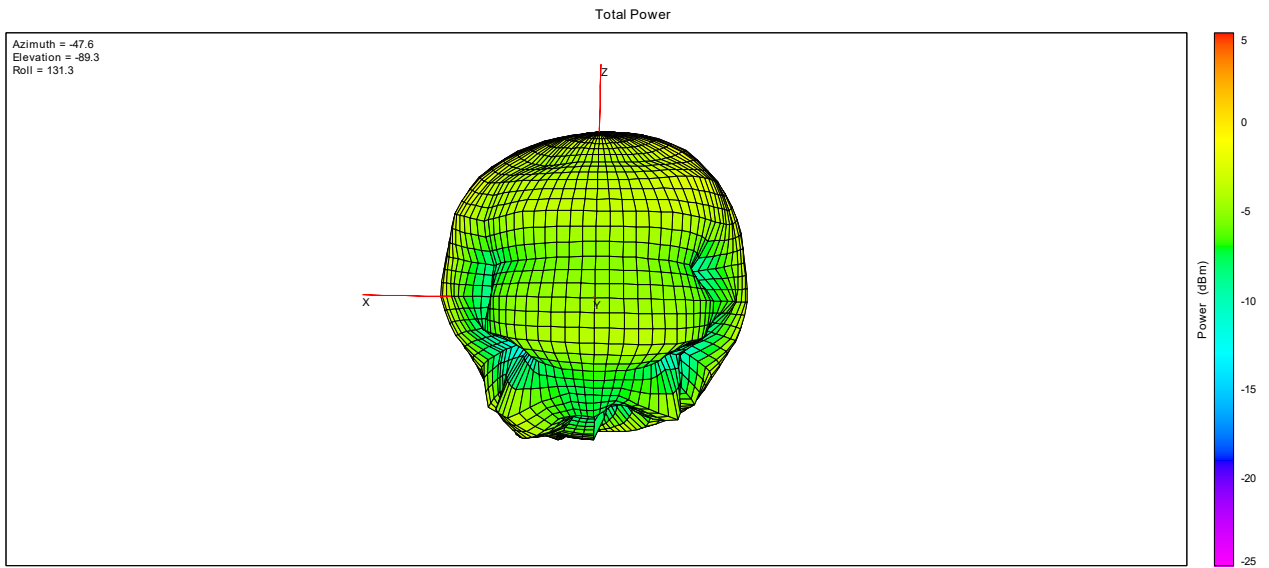
2. 3D Radiation Pattern



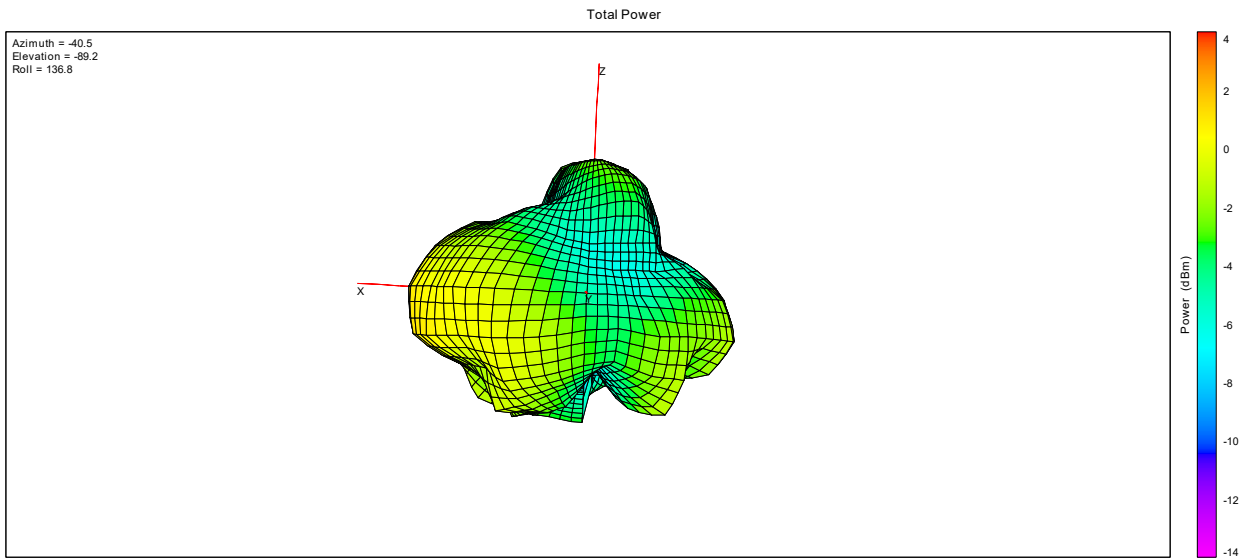
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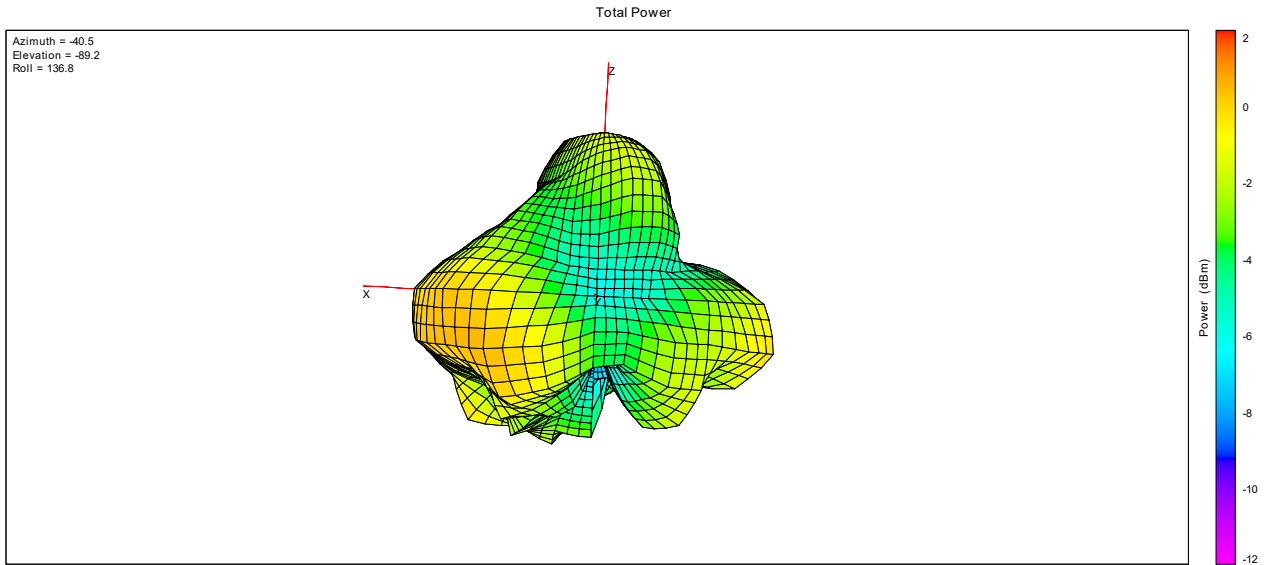
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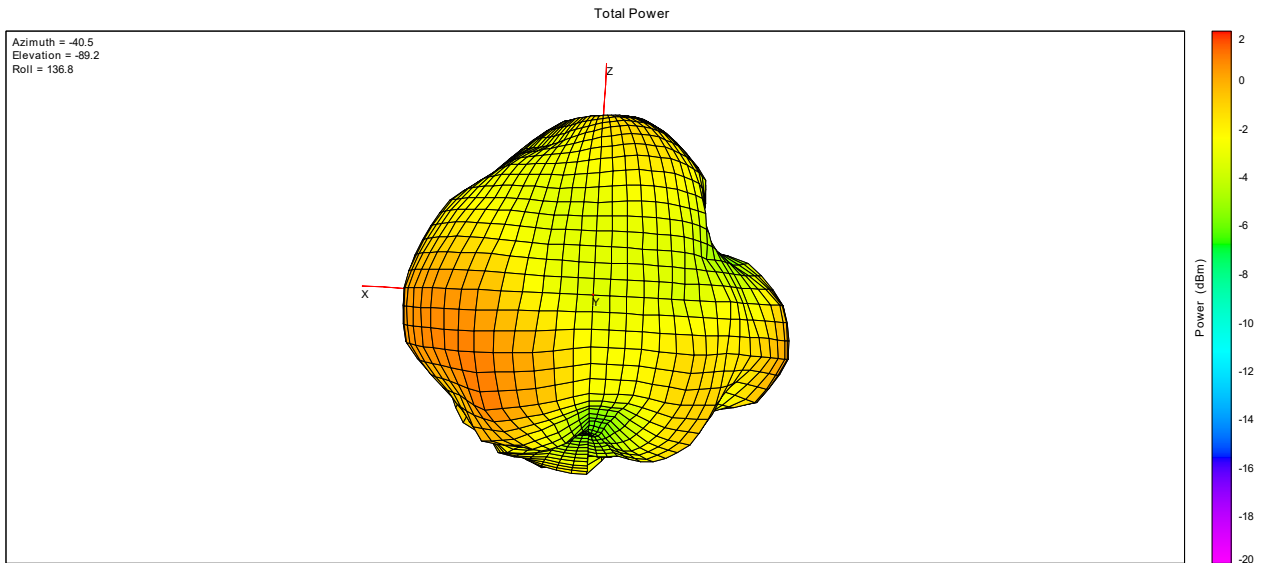
2480MHz_1#



2402MHz_2#



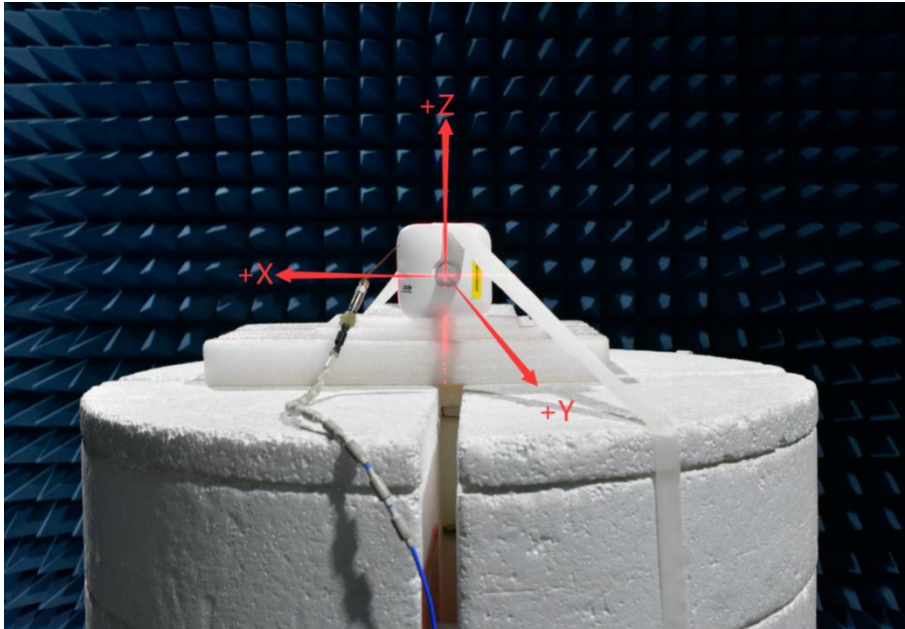
2440MHz_2#



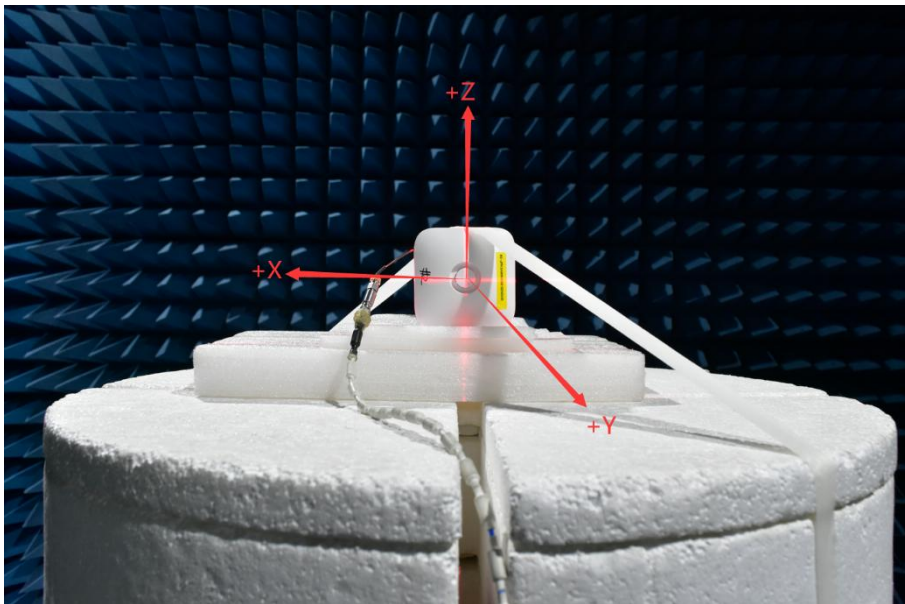
2480MHz_2#

Annex C Photographs

1. Test environment

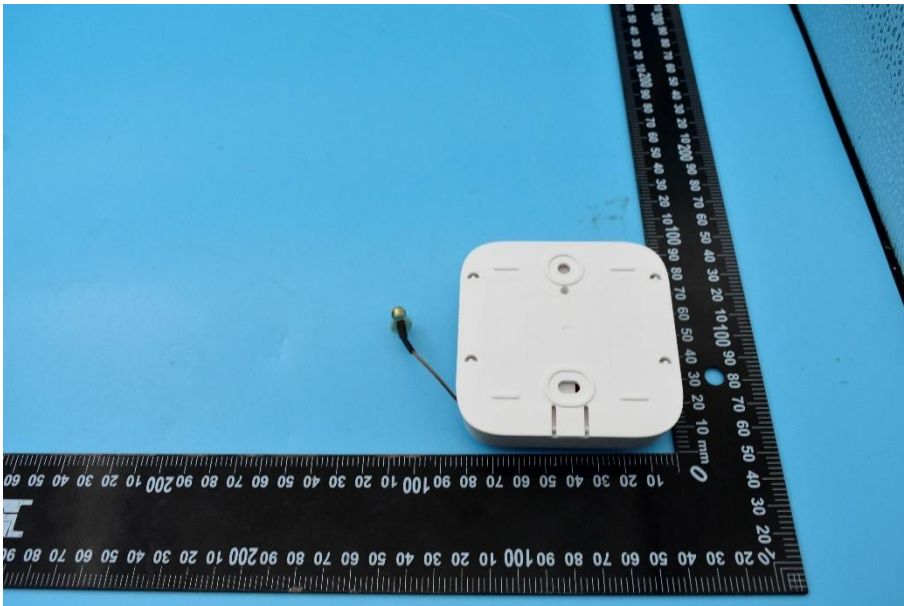
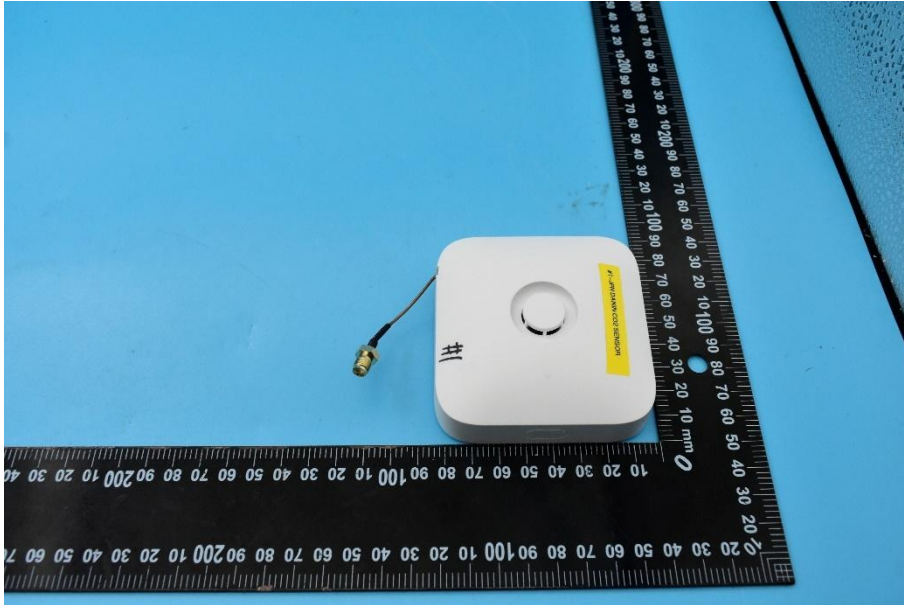


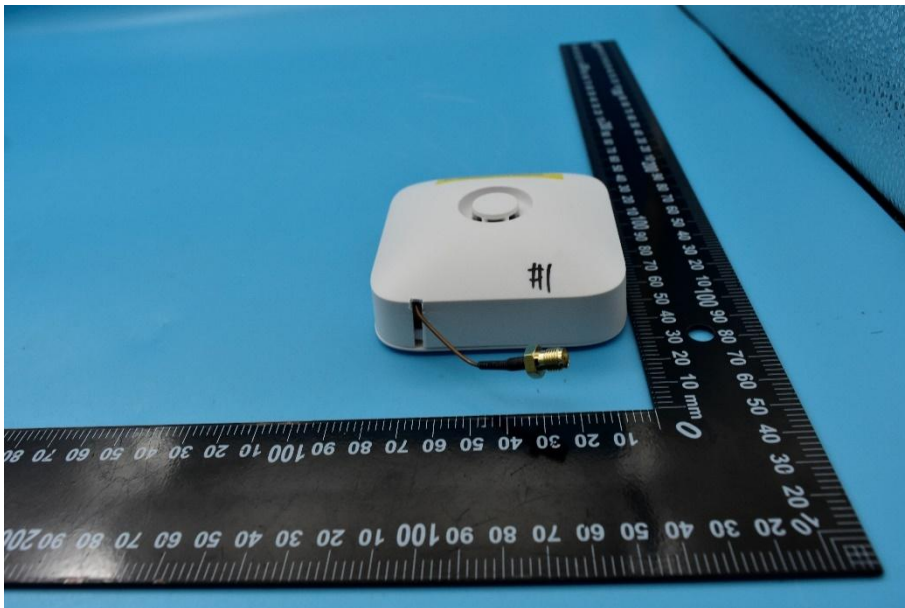
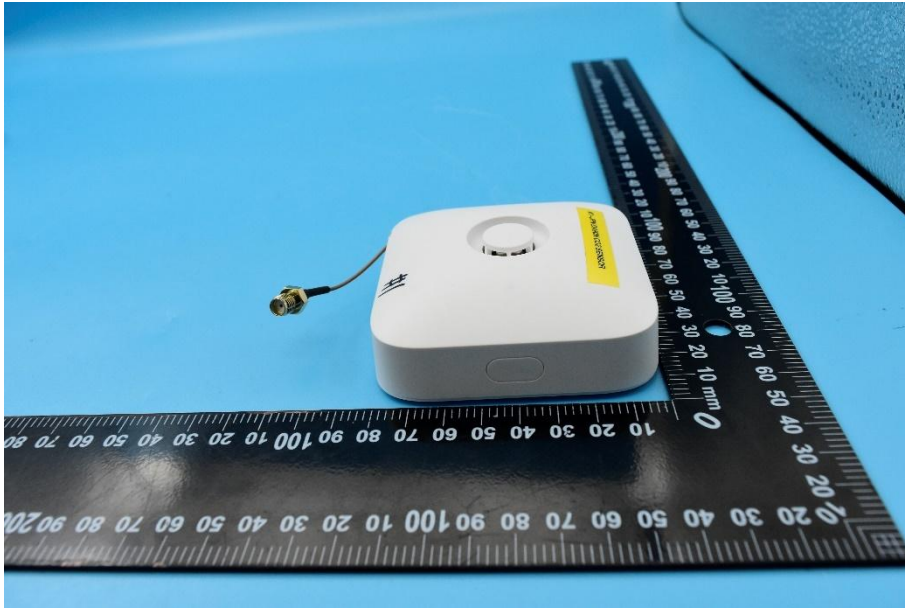
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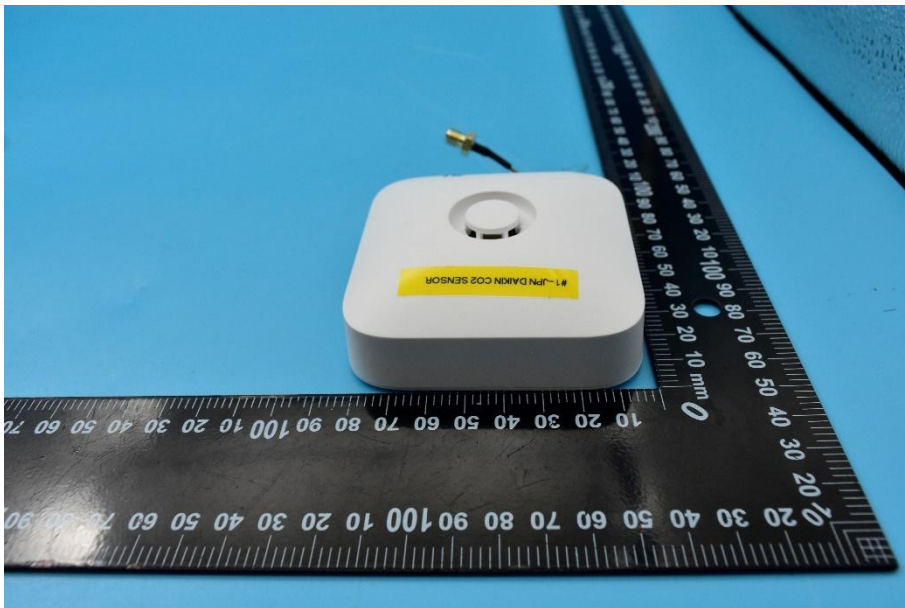
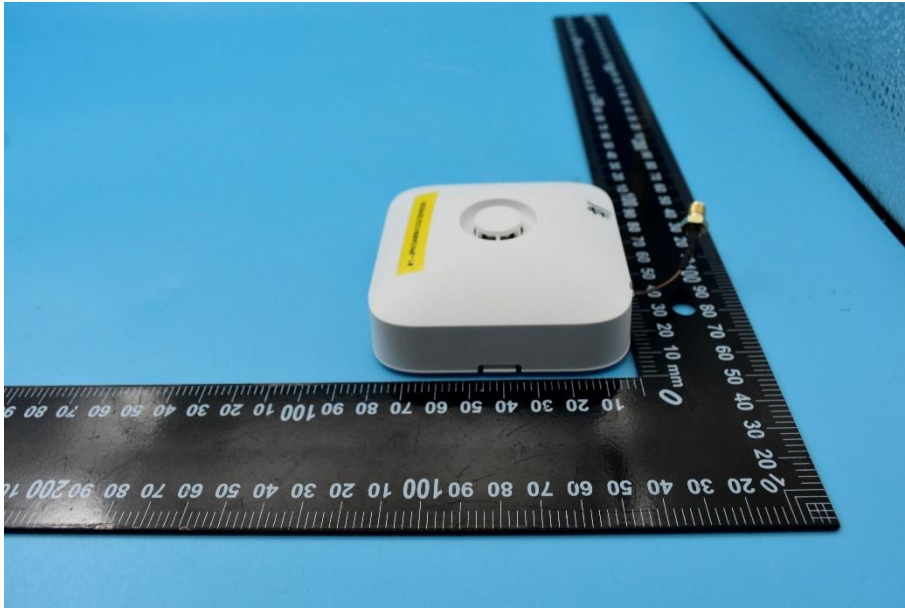


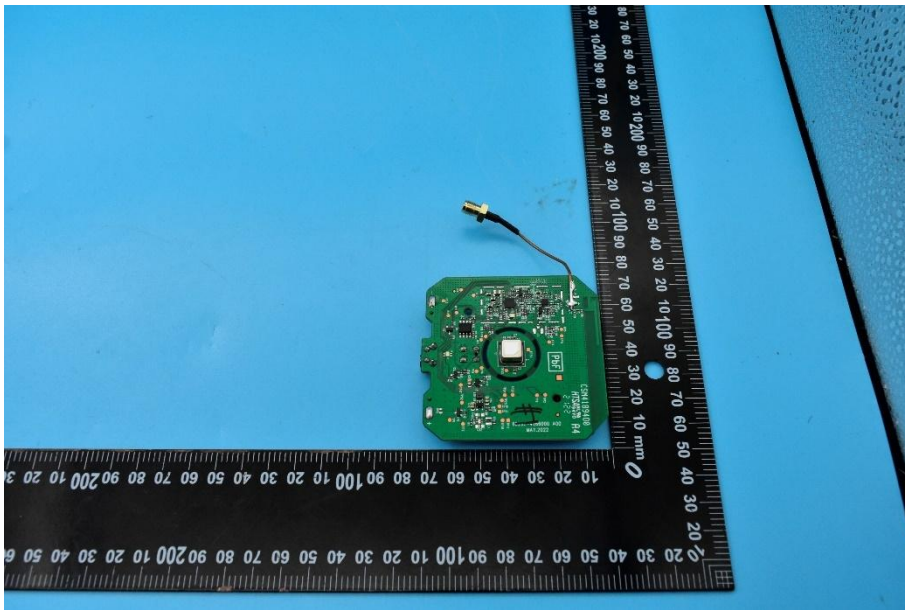
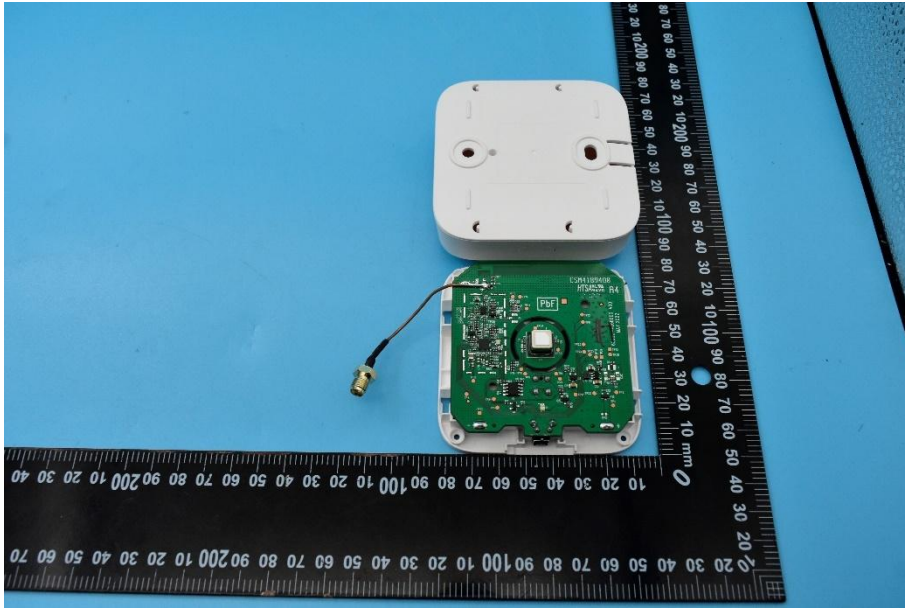
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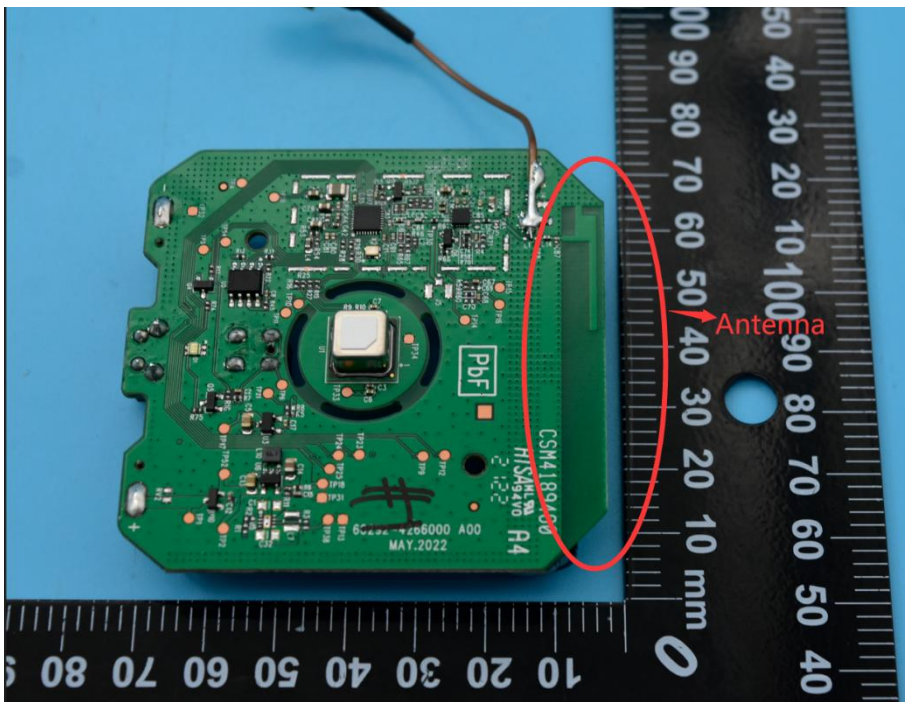
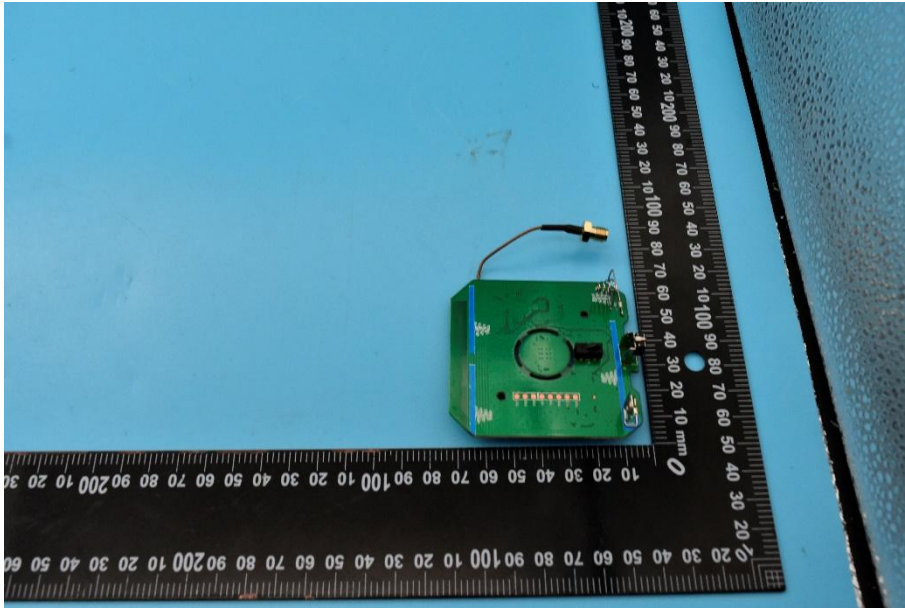
2. EUT



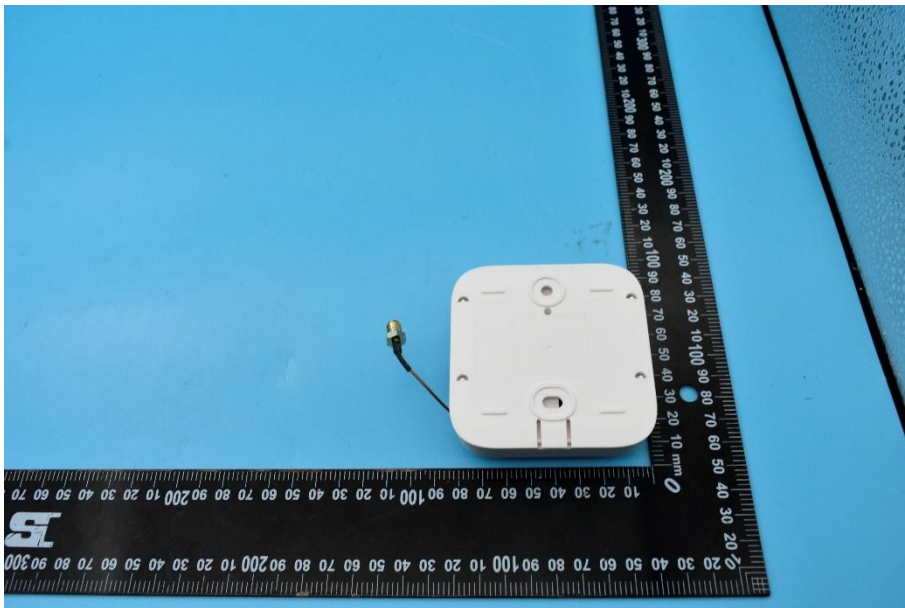
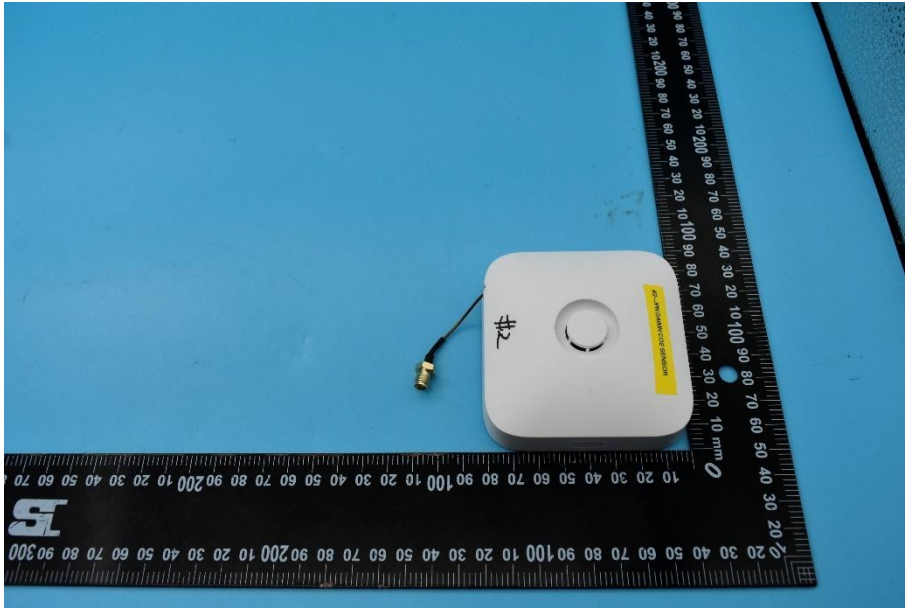


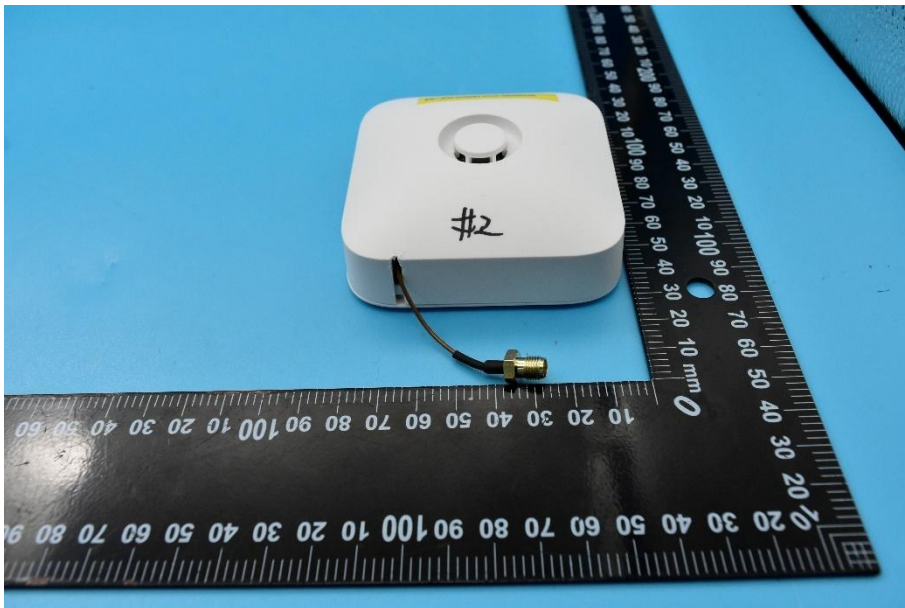
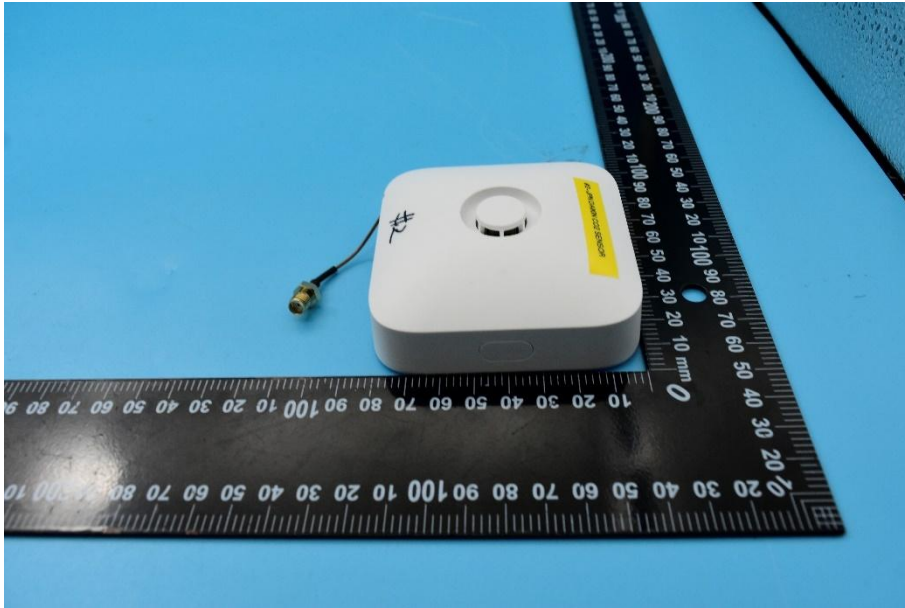


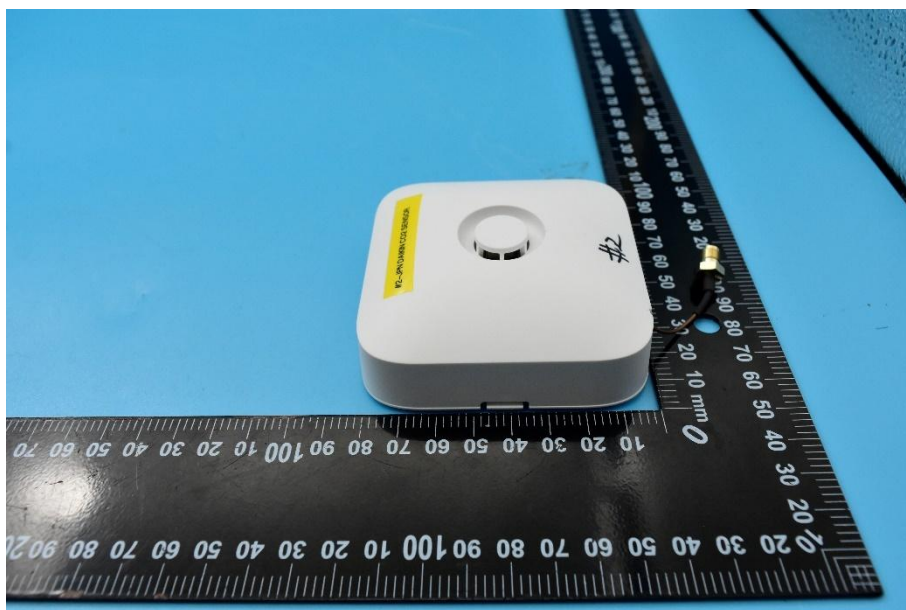


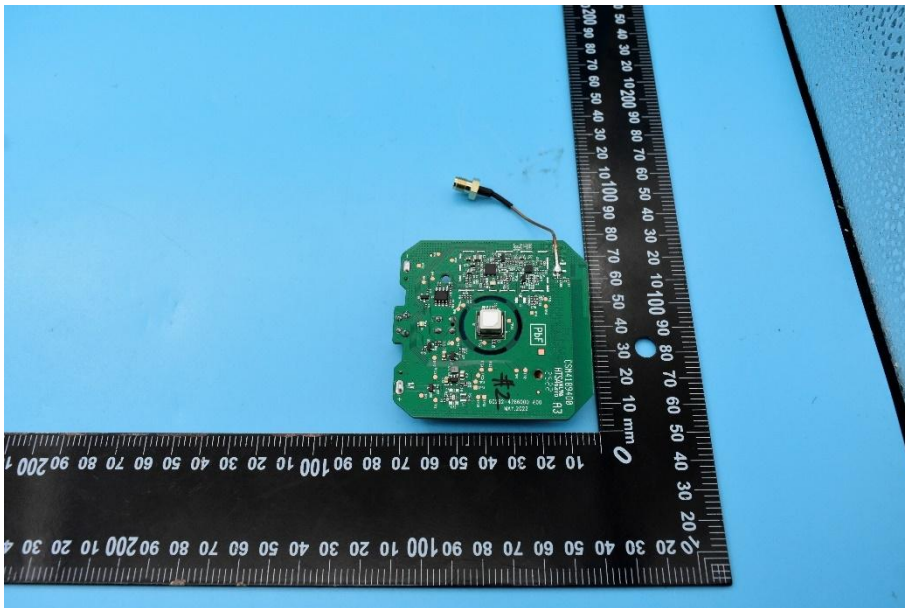
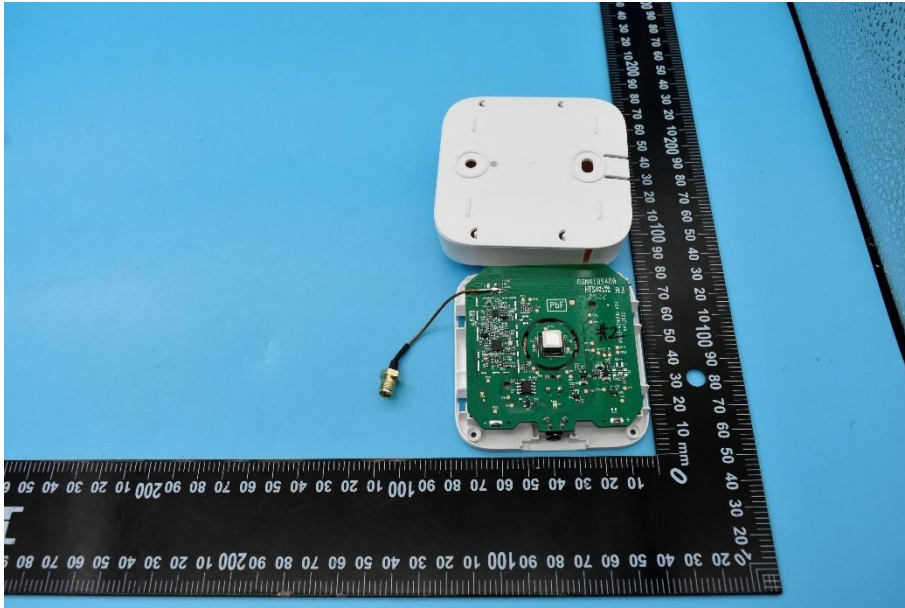


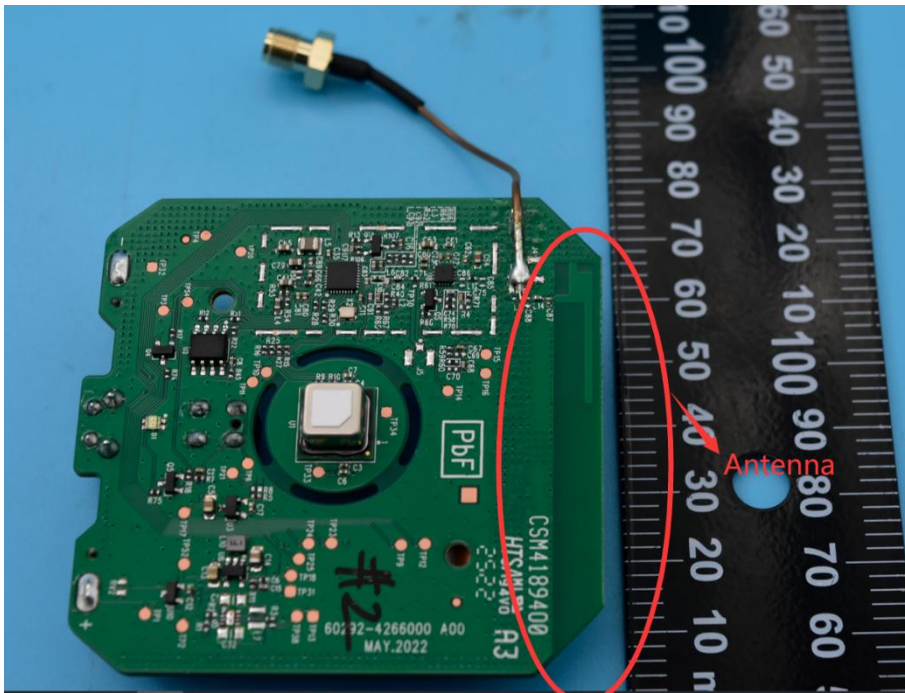
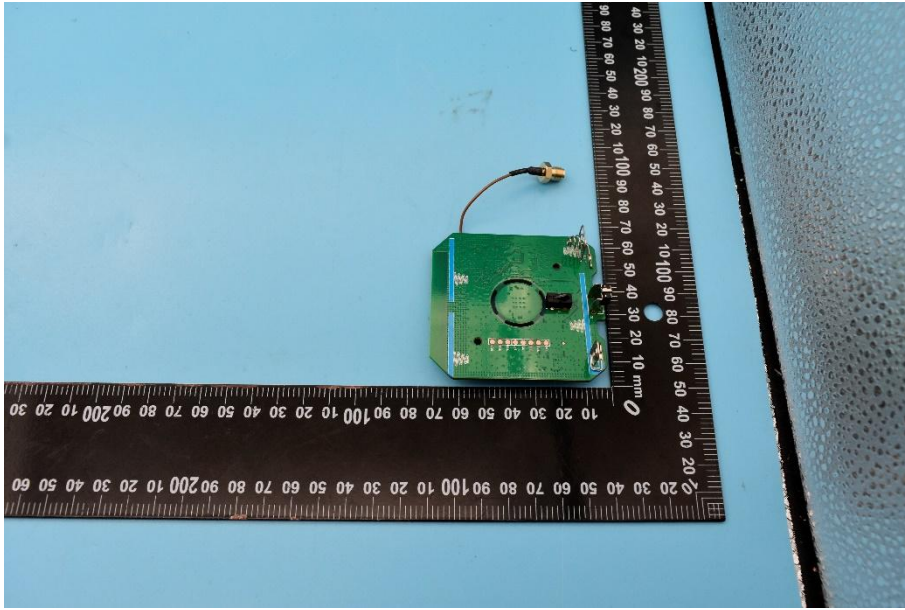
1#











2#



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	Manufa cturer	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

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