



REPORT No.: SZ25010038E01

TEST REPORT

APPLICANT : Dongguan Newmen Electronics Technology Co Ltd

PRODUCT NAME : Mad Catz M.M.O.7+

MODEL NAME : MS-661,MS-661-D

TRADE NAME : N/A

BRAND NAME : N/A

STANDARD(S) : IEEE Std 149-2021

RECEIPT DATE : 2025-01-03

TEST DATE : 2025-01-03

ISSUE DATE : 2025-01-09



Edited by:

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Approved by:

Chi Shide

Chi Shide(Supervisor)

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MORLAB

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Change History		
Version	Date	Reason for change
1.0	2025-01-09	First edition

1. Technical Information

Note: Provide by applicant.

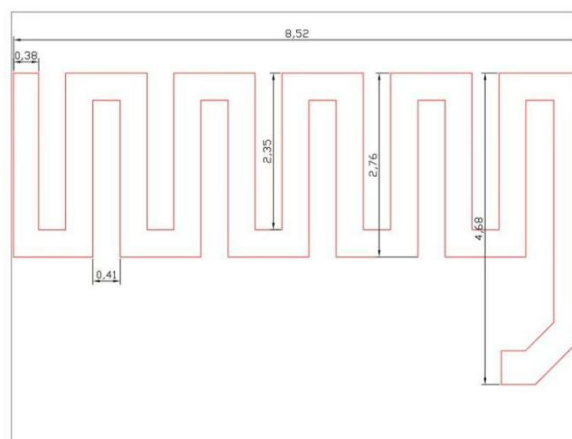
1.1. Applicant and Manufacturer Information

Applicant:	Dongguan Newmen Electronics Technology Co Ltd
Applicant Address:	No.5, Xifa Road, Lin Village, Tangxia Town, Dongguan City, Guangdong Province, China
Manufacturer:	Dongguan Jiayun Valley Electronic Technology Co., Ltd
Manufacturer Address:	Room 903,Building 1,Yixing Trade Plaza,No.3 Tangfu Road,Tangxia Town,Dongguan City,Guangdong Province

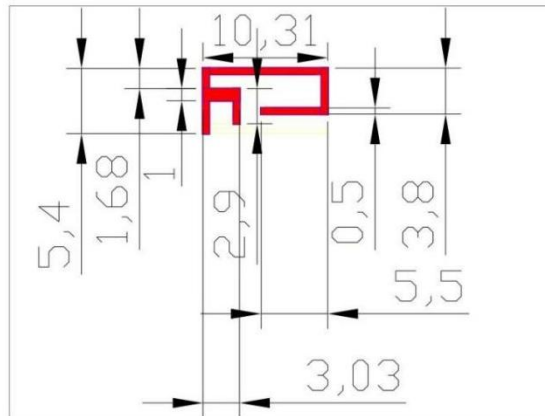
1.2. Equipment Under Test (EUT) Description

Wireless Type	N/A
Test frequency band	N/A
Brand name	N/A
Hardware Version	N/A
Software Version	N/A
IMEI	N/A
Sample number	1#&2#

Dimensions:



1#_MS-661-D



2#_MS-661



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 (MHz)	Gain(dBi)	
	1#_MS-661-D	2#_MS-661
2402	-12.41	-0.57
2410	-12.55	-0.96
2420	-12.95	-1.54
2430	-13.24	-2.07
2440	-13.13	-2.31
2450	-13.24	-2.43
2460	-13.24	-2.50
2470	-13.13	-2.69
2480	-13.26	-2.74

2.4.2. Efficiency

Frequency (MHz)	Efficiency(%)	
	1#_MS-661-D	2#_MS-661
2402	2.08	16.43
2410	2.05	15.75
2420	1.98	15.07
2430	1.93	14.72
2440	1.95	15.22
2450	1.96	16.04
2460	2.01	16.81
2470	2.00	16.87
2480	1.98	16.94

2.4.3.VSWR

Frequency (MHz)	VSWR	
	1#_MS-661-D	2#_MS-661
2402	16.84	5.34
2440	18.08	6.66
2480	18.82	7.33

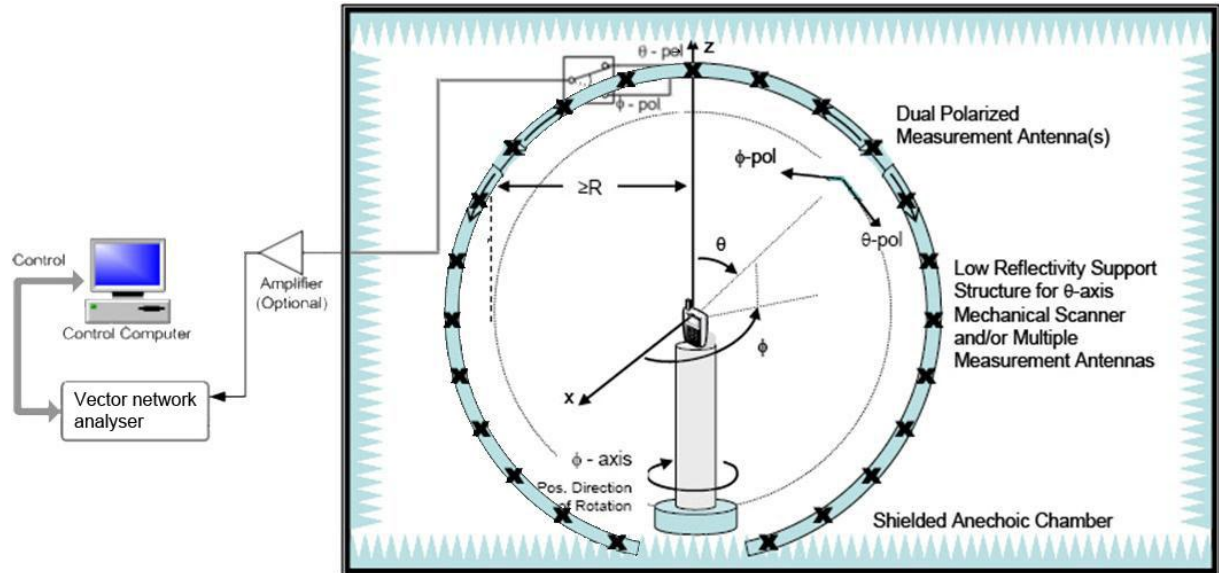
2.4.4.Return Loss

Frequency (MHz)	Return Loss(dB)	
	1#_MS-661-D	2#_MS-661
2402	-1.03	-3.28
2440	-0.96	-2.62
2480	-0.92	-2.38

2.4.5.Impedance

Frequency (MHz)	Impedance(Ω)	
	1#_MS-661-D	2#_MS-661
2402	20.87	18.44
2440	45.36	11.69
2480	205.31	8.74

Annex A Test Setup Photos

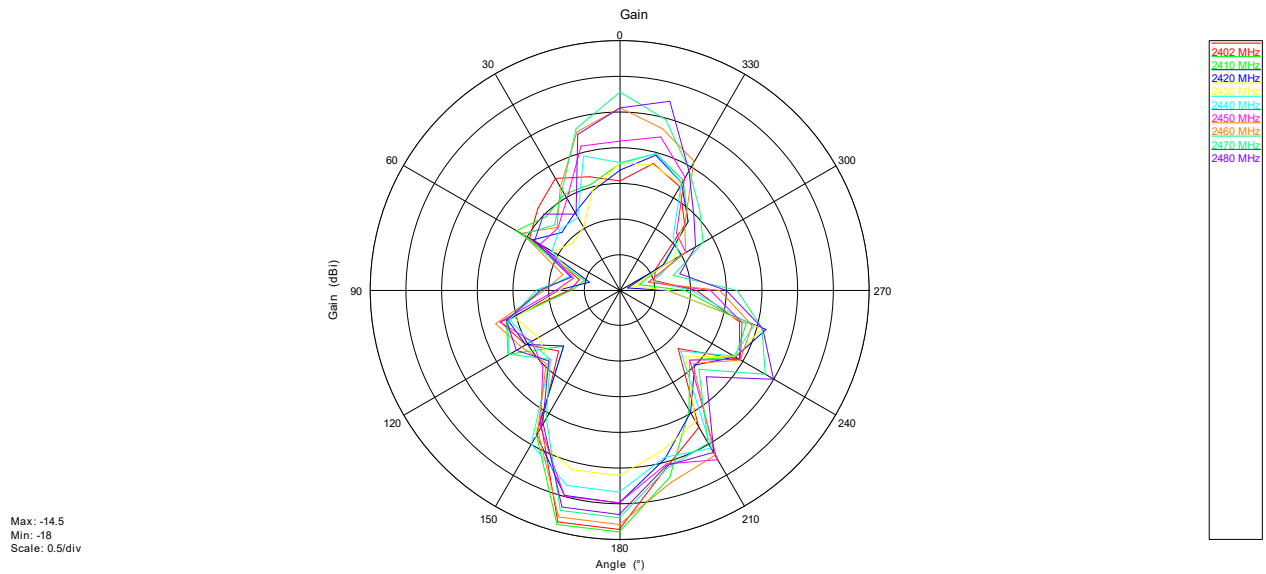




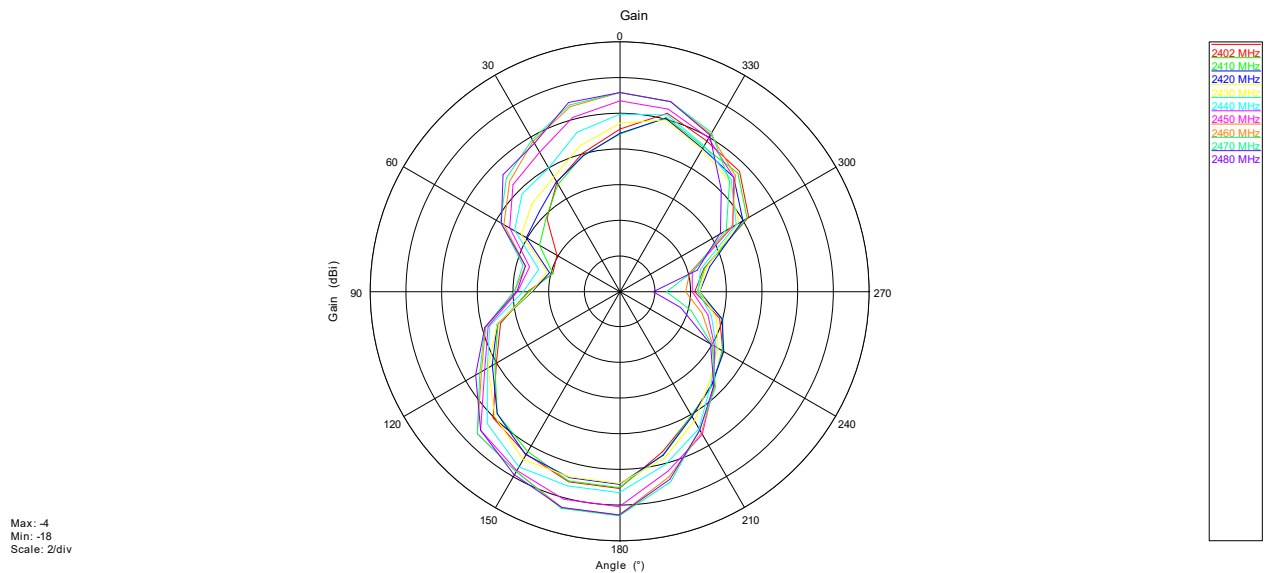
Annex B Figures

1. 2D Radiation Pattern

Phi=0°



1#_MS-661-D

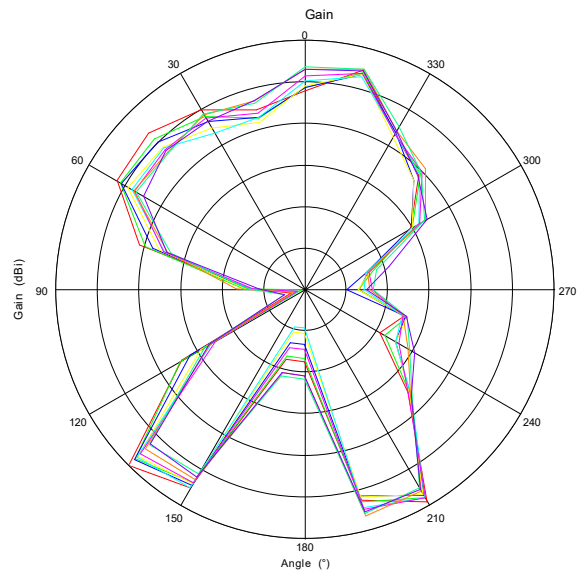


2#_MS-661

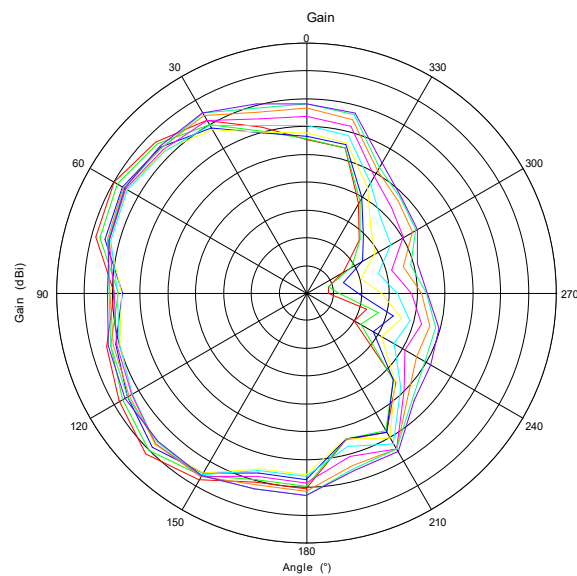


Phi=90°

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1#_MS-661-D



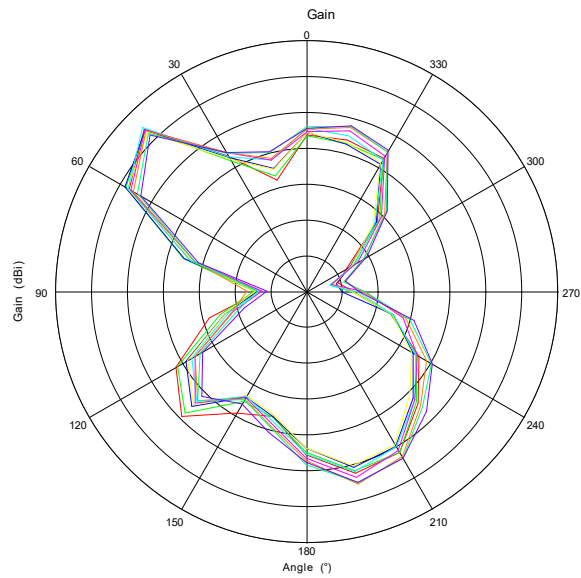
2#_MS-661



Theta=90°

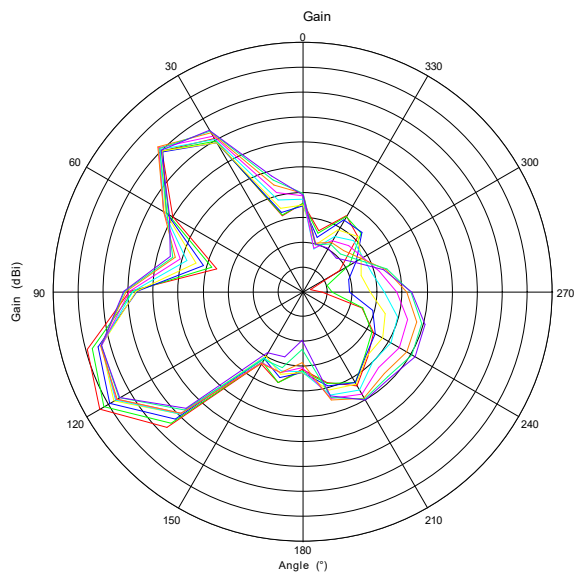
REPORT No.: SZ25010038E01

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Min: -26
Scale: 2/div



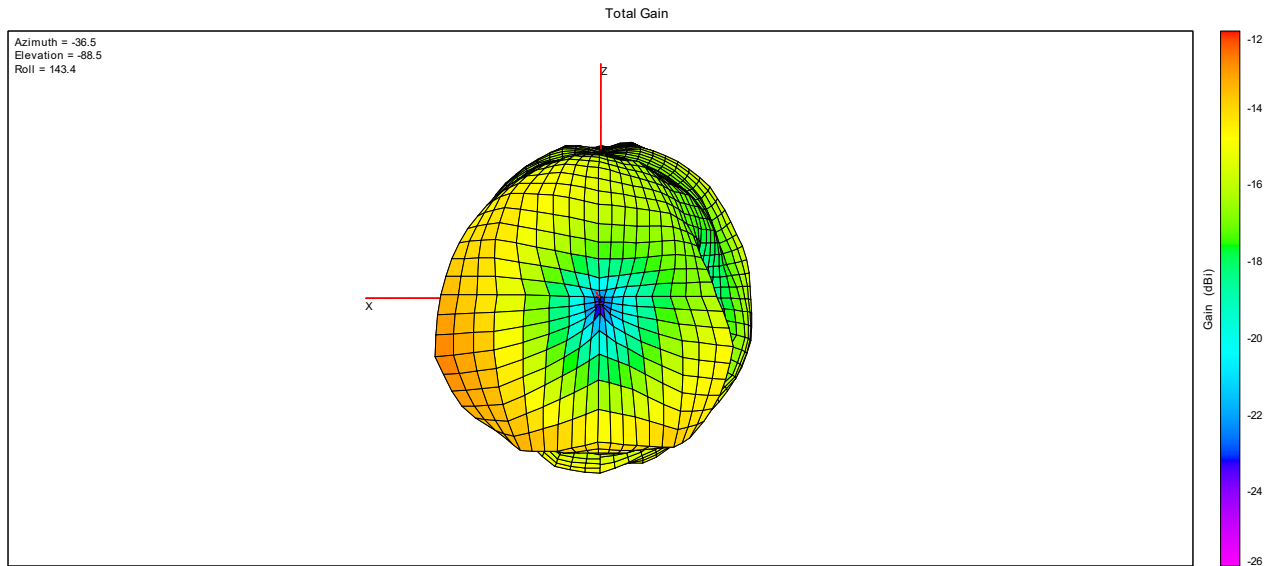
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Min: -20
Scale: 2/div

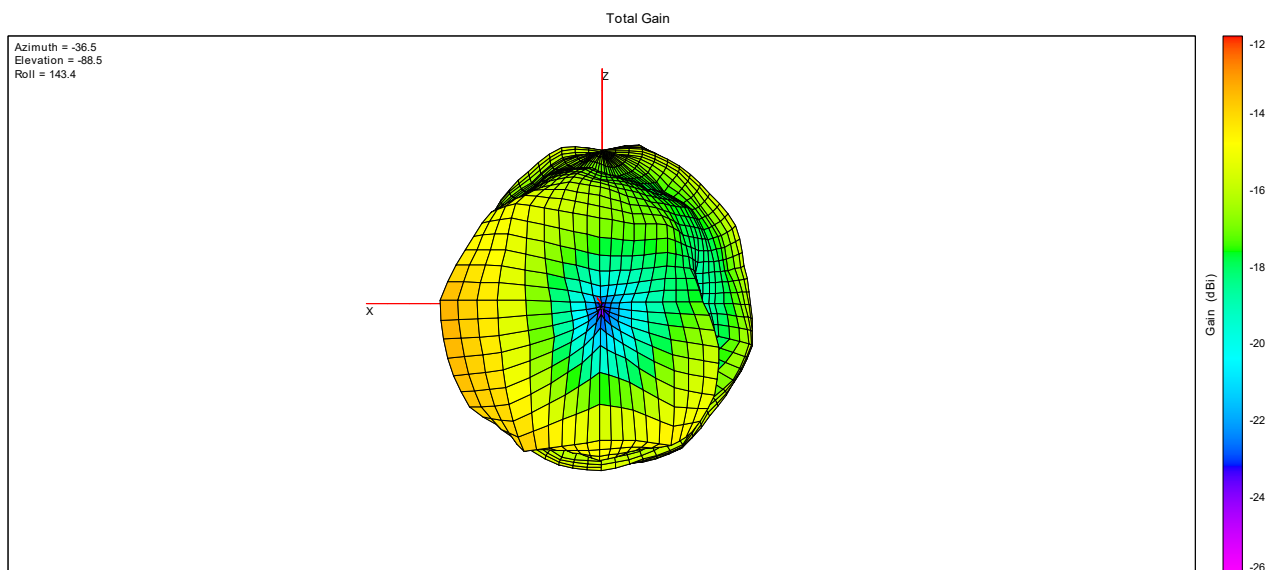


2#_MS-661

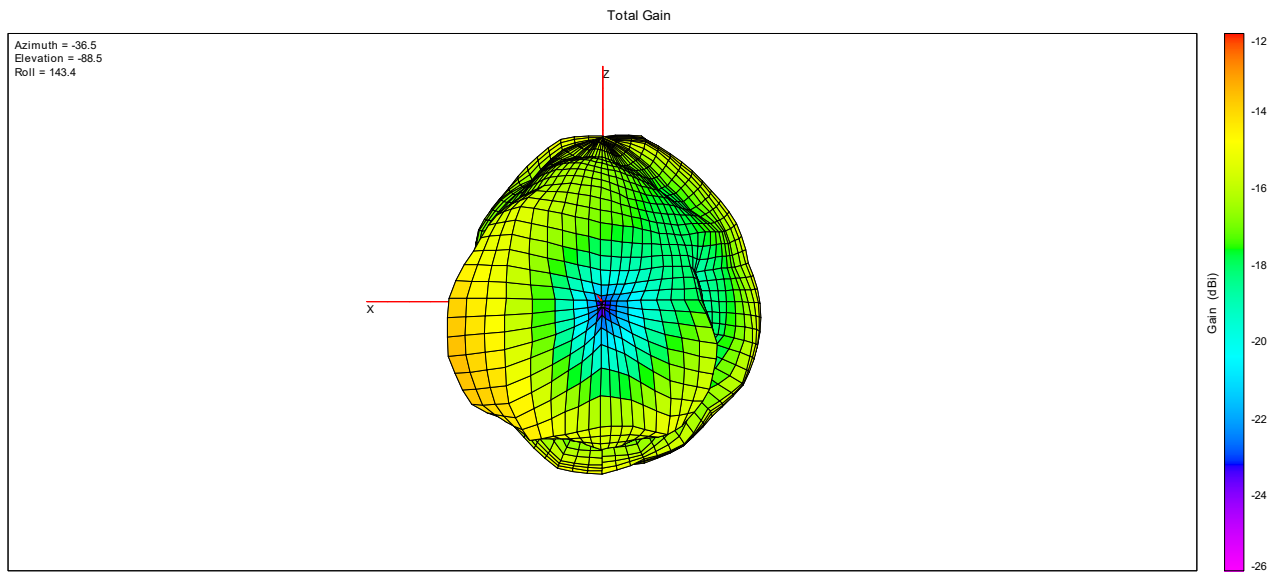
2. 3D Radiation Pattern



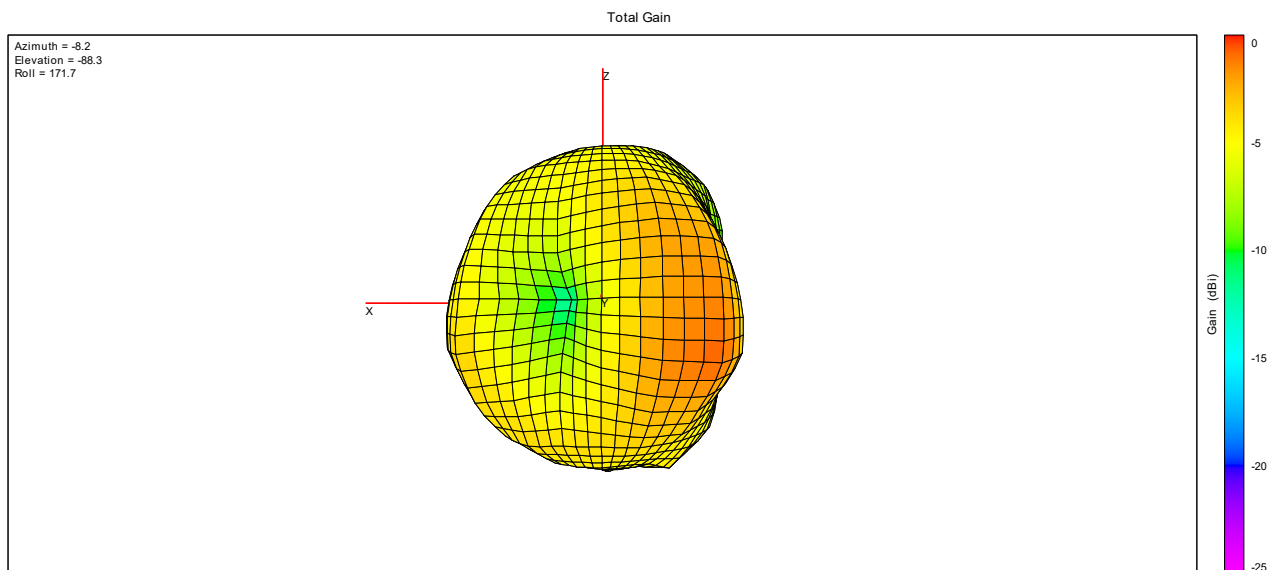
2402MHz_1#_MS-661-D



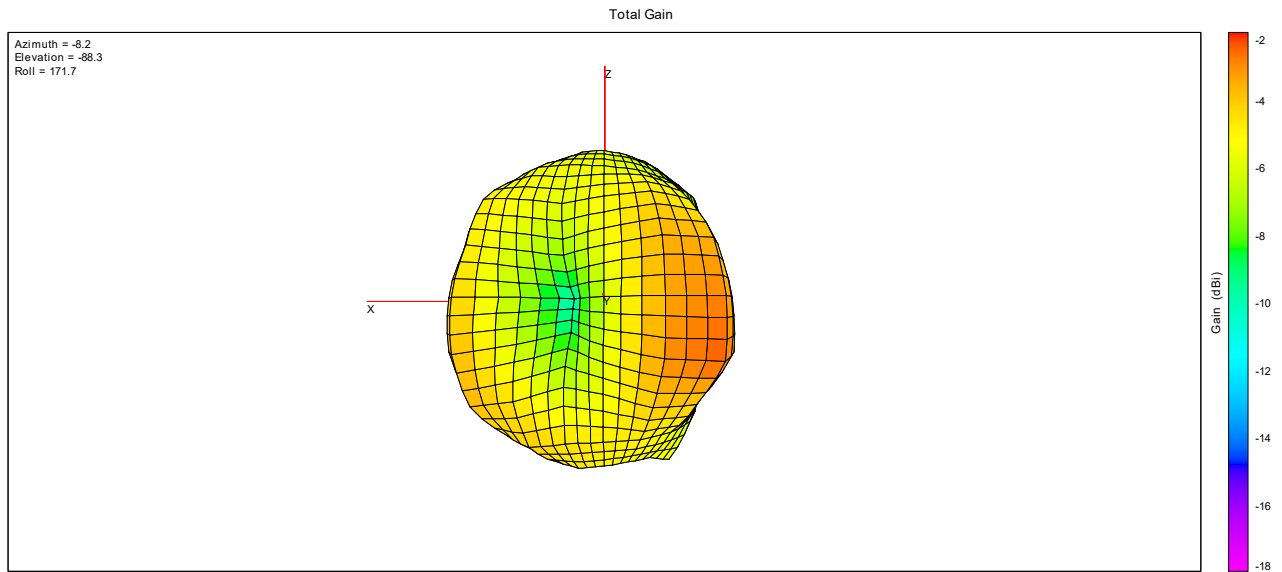
2440MHz_1#_MS-661-D



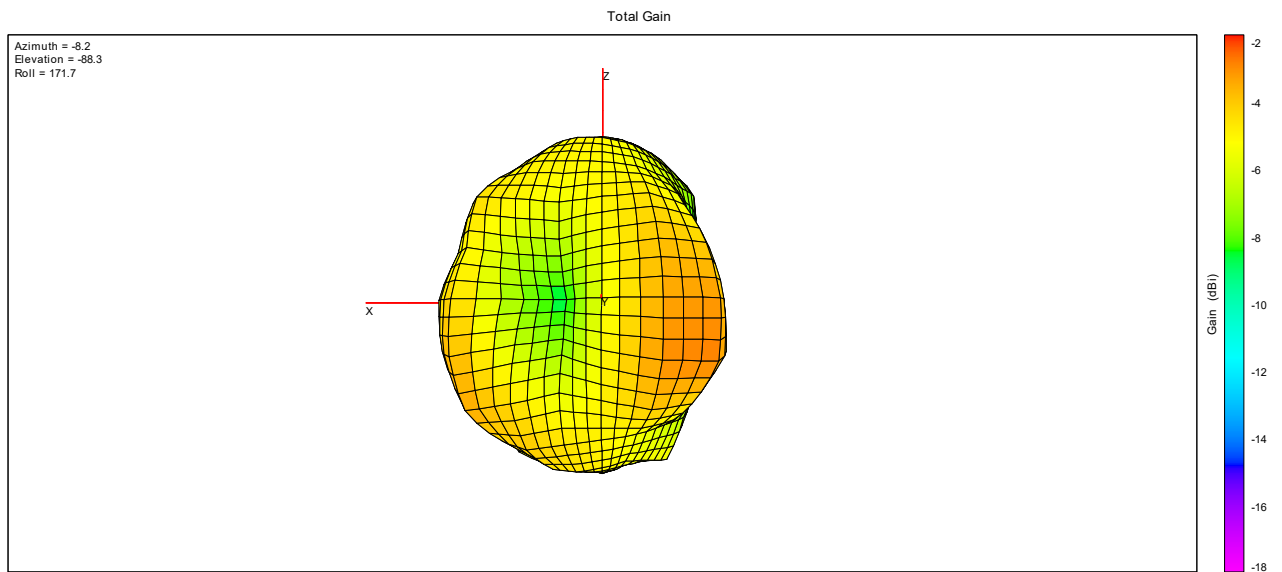
2480MHz_1#_MS-661-D



2402MHz_2#_MS-661



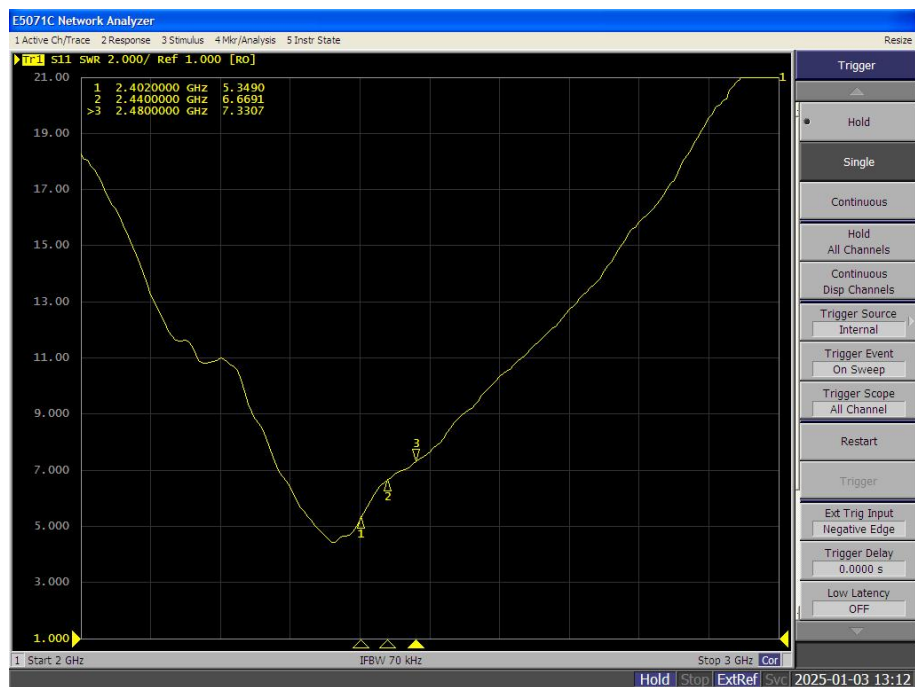
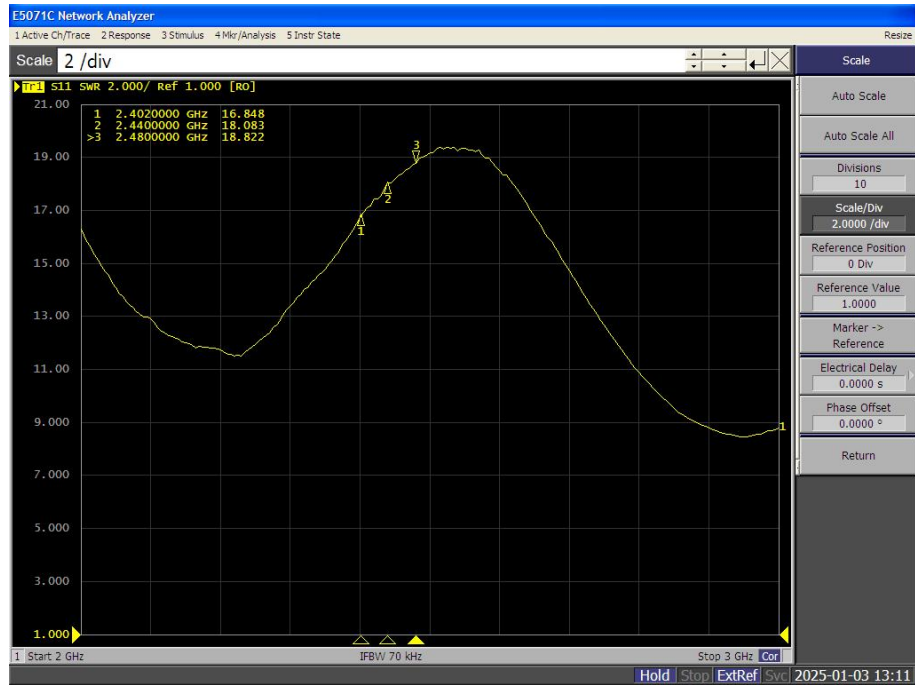
2440MHz_2#_MS-661



2480MHz_2#_MS-661



3. VSWR

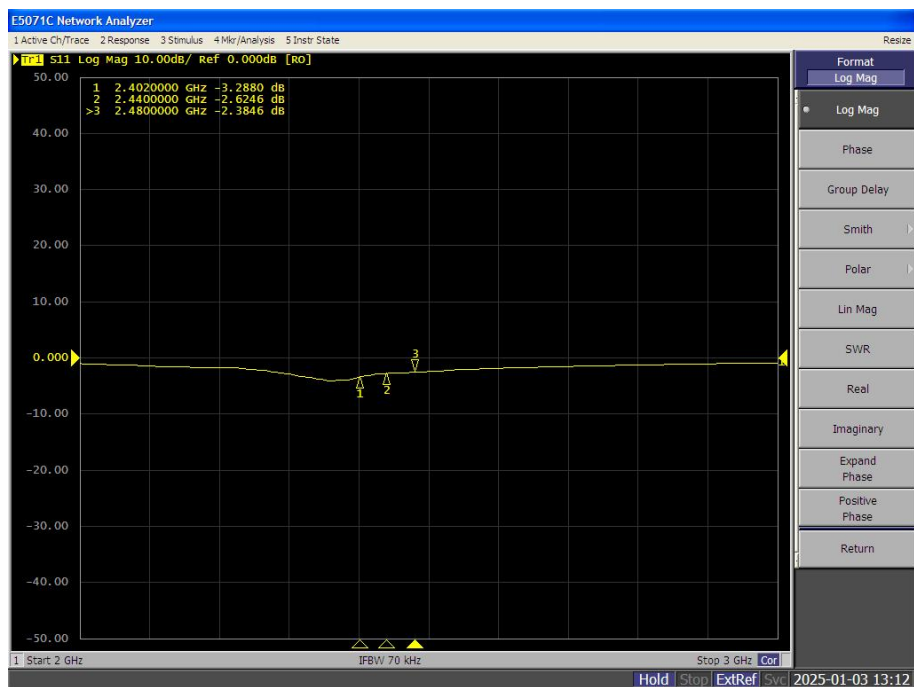




4. Return Loss



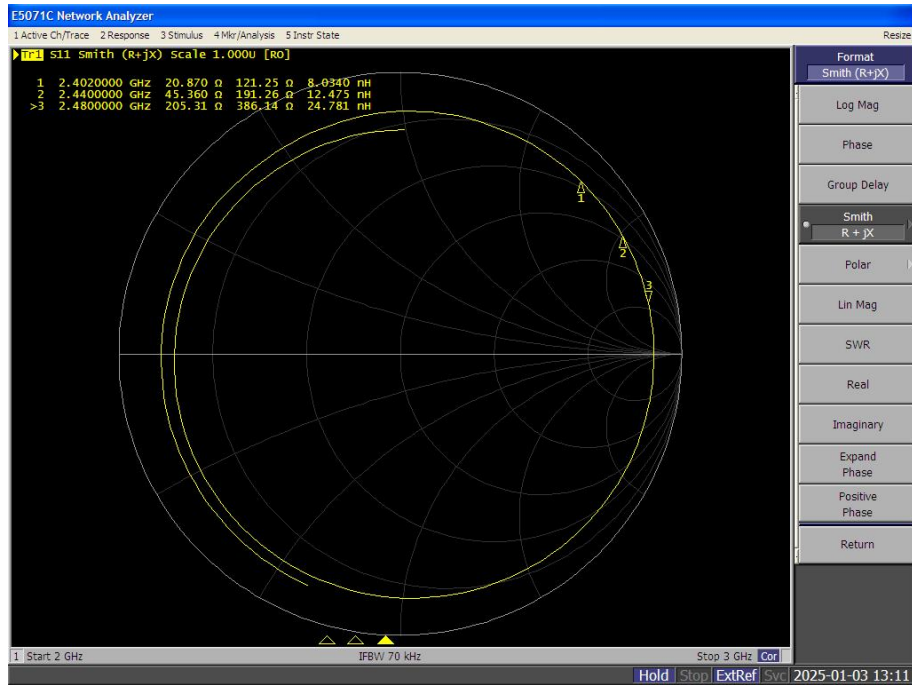
1#_MS-661-D



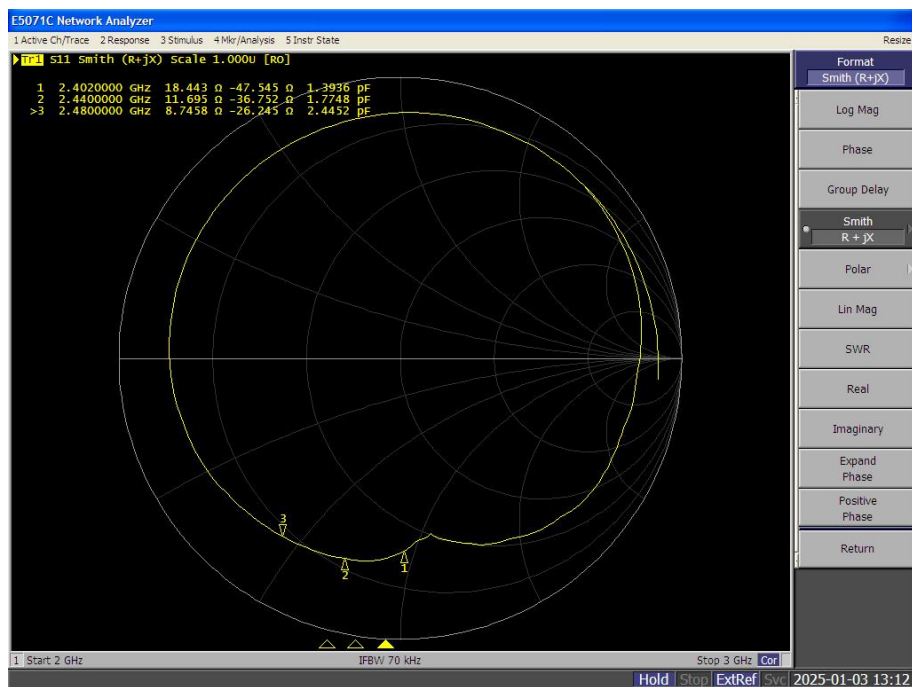
2#_MS-661



5. Impedance



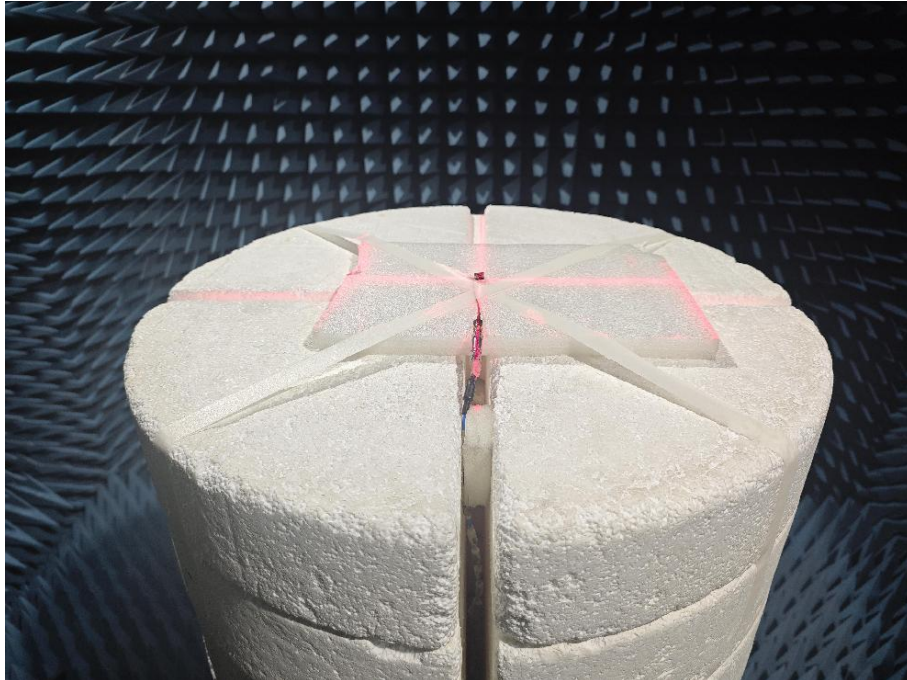
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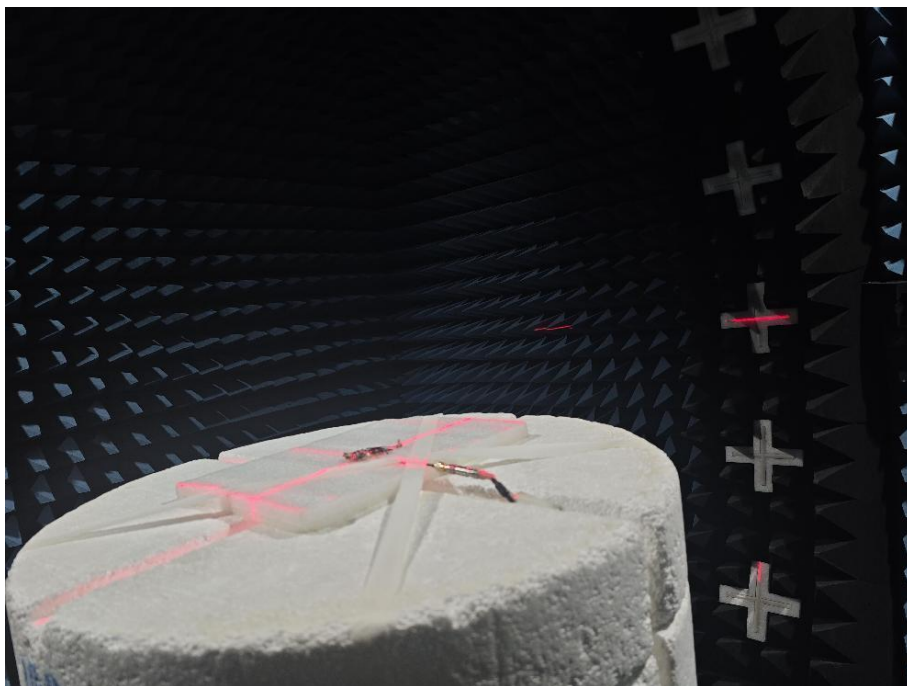
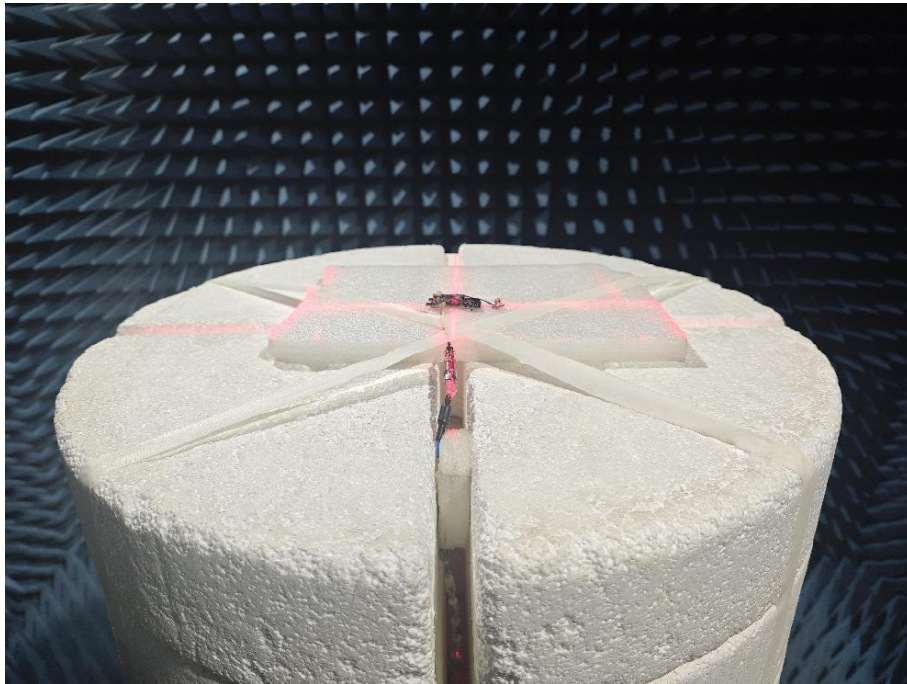
2#_MS-661

Annex C EUT Photos

1. Test environment

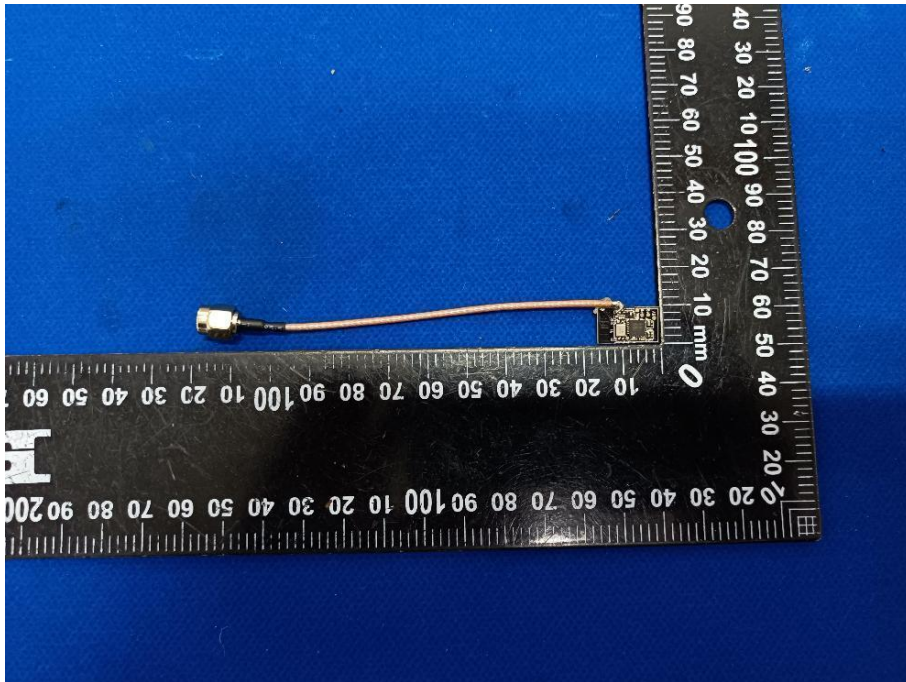


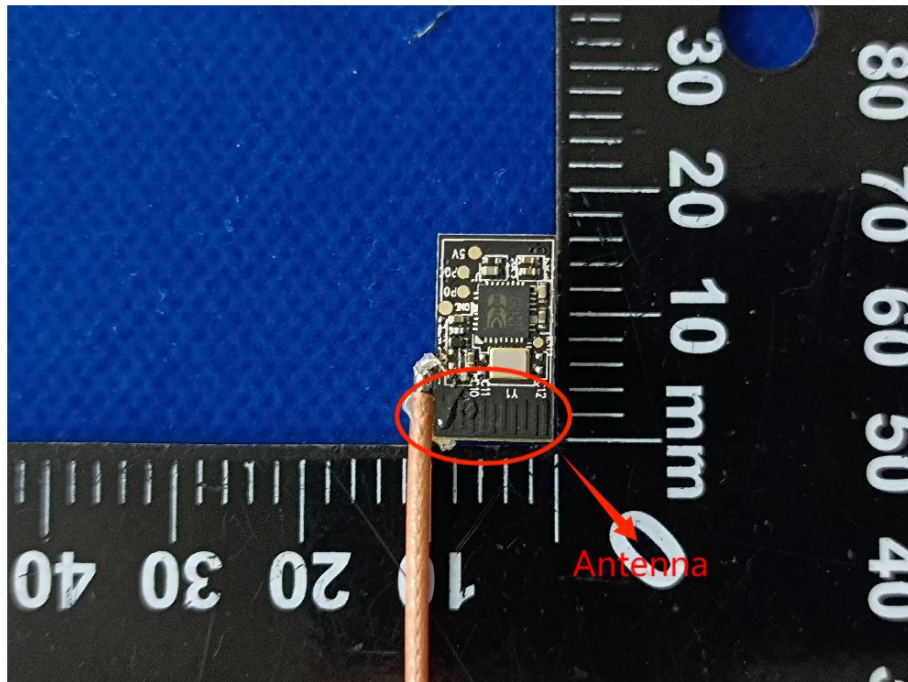
1#_MS-661-D



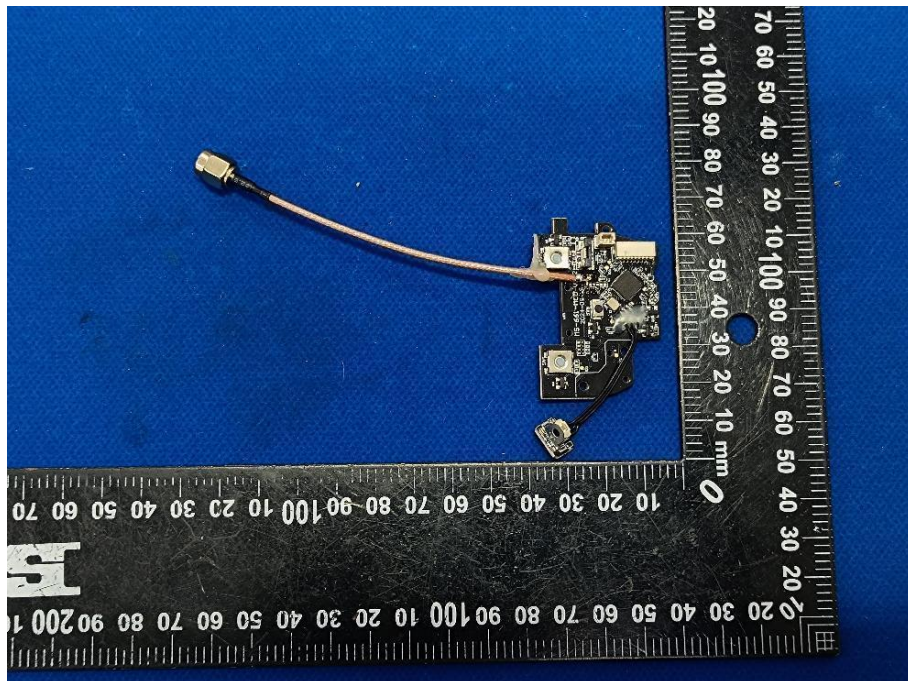
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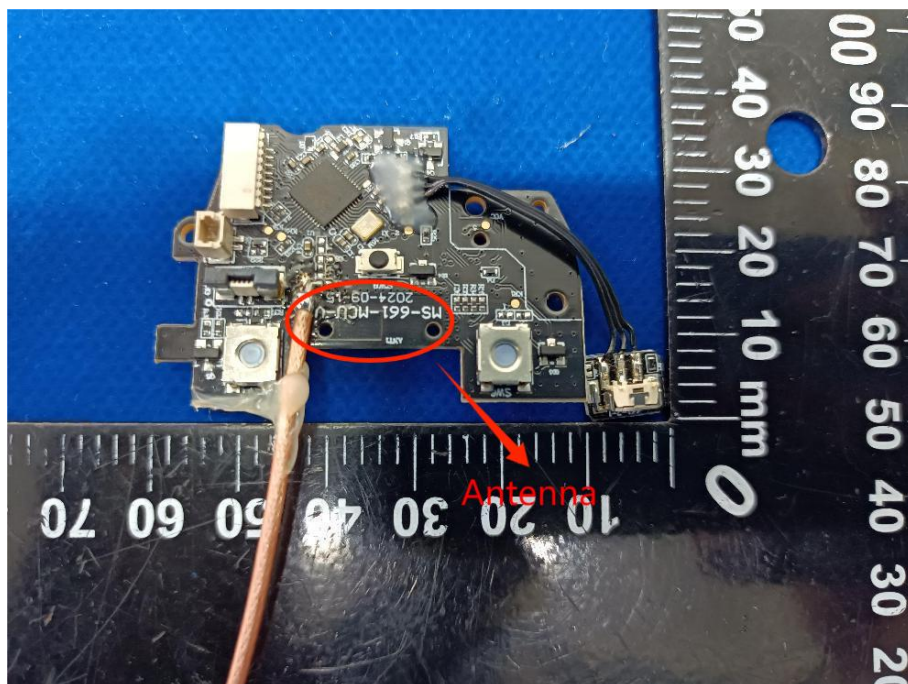
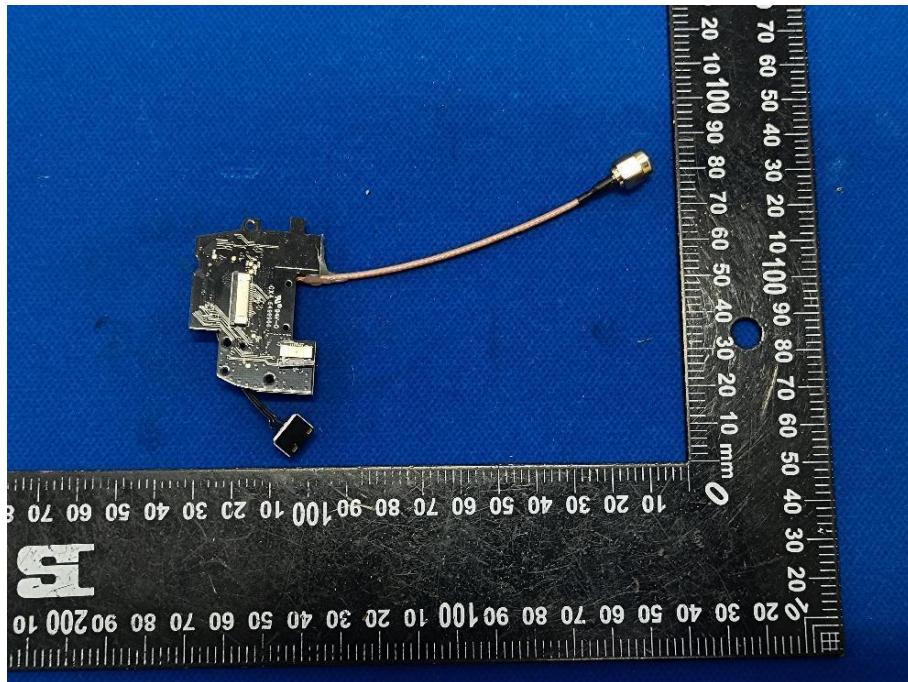
2. EUT





1#_MS-661-D





2#_MS-661



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	Network Analyzer	MY46110140	E5071C	Agilent	2024.05.30	2025.05.29
2	OTA Chamber	TJ2235-Q1793	AMS-8923-150	ETS	2022.11.30	2025.11.29

1.4 Test Software Utilized

NO.	Software Name	Serial NO.	Version	Manufacturer
1	Antenna Measurement System	1685	EMQuest EMQ-100 V 1.13 Build 21267	ETS

————— END OF REPORT —————