



REPORT No.: SZ24010110E01

TEST REPORT

APPLICANT : Inspectron Inc.

PRODUCT NAME : WiTorch

MODEL NAME : WT1

TRADE NAME : 

BRAND NAME : N/A

STANDARD(S) : IEEE Std 149-2021

RECEIPT DATE : 2024-01-12

TEST DATE : 2024-01-15

ISSUE DATE : 2024-01-23



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MORLAB

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Change History		
Version	Date	Reason for change
1.0	2024-01-23	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Inspectron Inc.
Applicant Address:	29108 Lorie Lane Wixom, MI 48393 USA
Manufacturer:	Inspectron Inc.
Manufacturer Address:	29108 Lorie Lane Wixom, MI 48393 USA

1.2. Equipment Under Test (EUT) Description

Wireless Type	N/A
Frequency	2400MHz-2500MHz,5150MHz-5850MHz,
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(°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)
2400	-9.30
2410	-9.21
2420	-9.24
2430	-9.15
2440	-8.74
2450	-8.79
2460	-8.69
2470	-8.66
2480	-8.79
2490	-8.79
2500	-8.62
5150	-0.55
5200	-0.79
5250	-0.38
5300	-0.15
5350	0.59
5400	0.41
5450	0.37
5500	0.78
5550	0.72
5600	0.54
5650	0.46
5700	0.54
5750	0.85
5800	1.12
5850	1.43



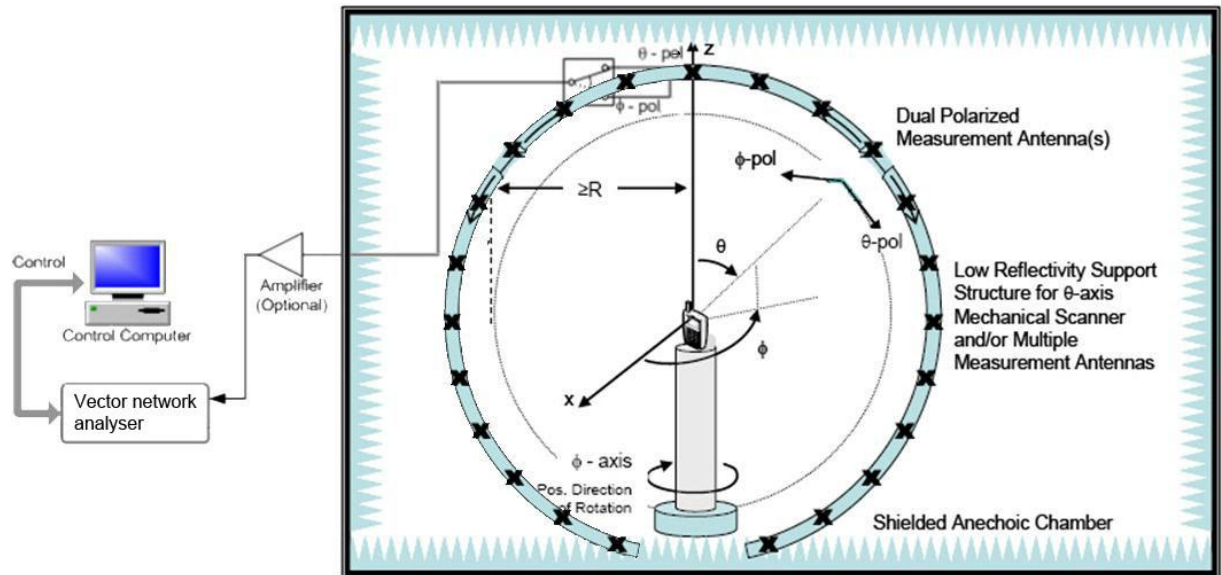
2.4.2.VSWR

Frequency (MHz)	VSWR
2400-2500	12.58
5150-5850	4.42

2.4.3.Return Loss

Frequency (MHz)	Return Loss (dB)
2400-2500	-1.38
5150-5850	-3.99

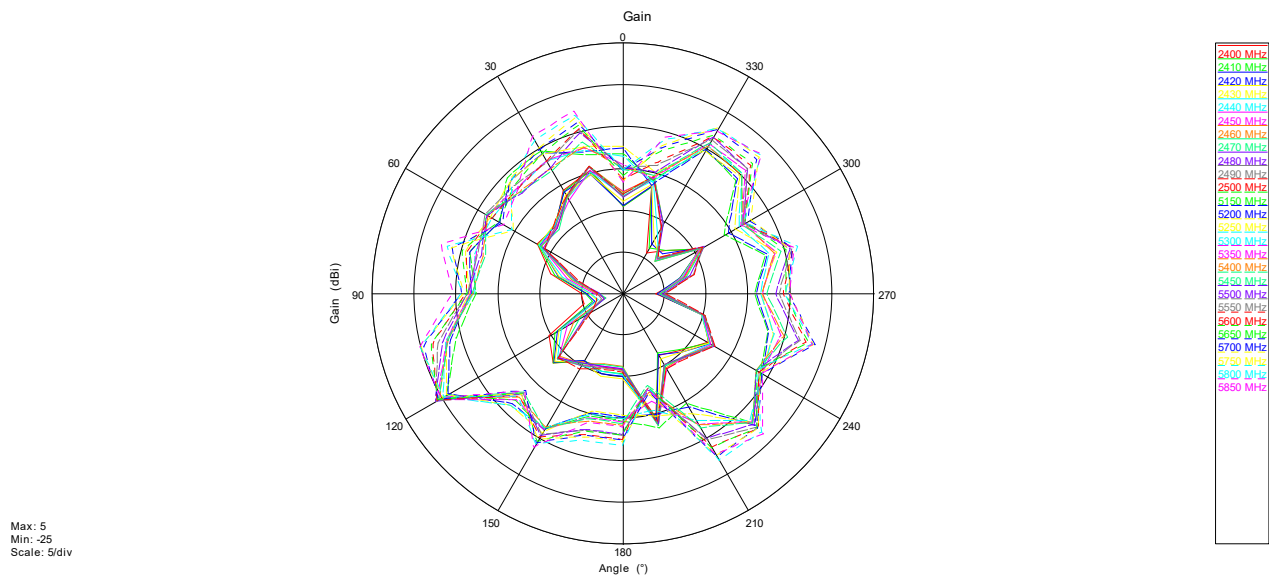
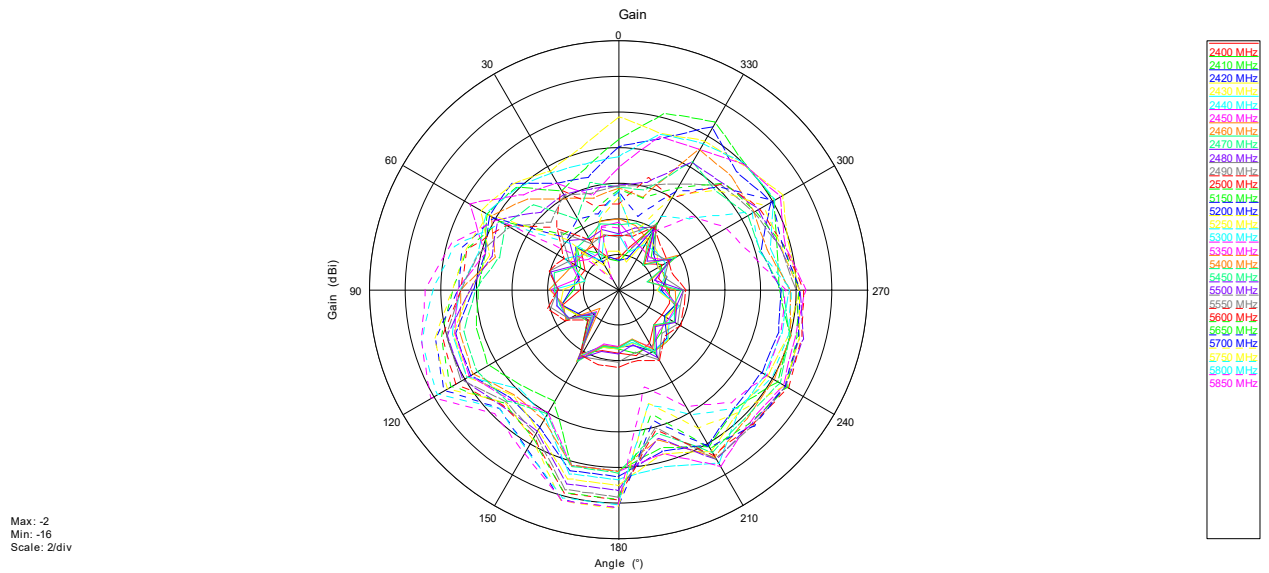
Annex A Test Setup Photos

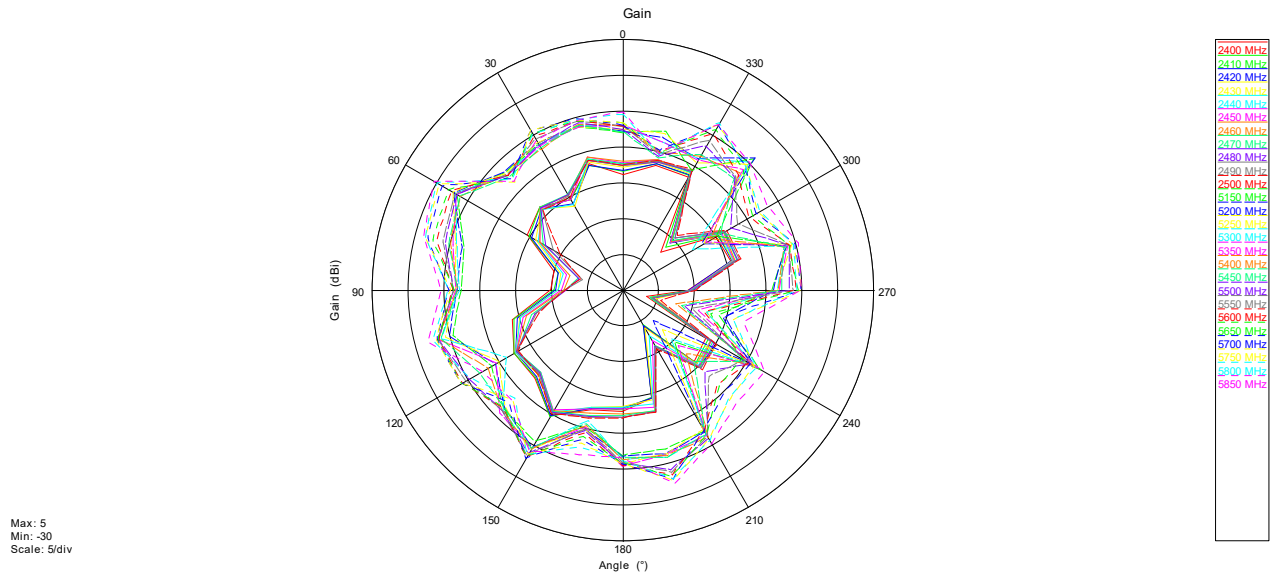




Annex B Figures

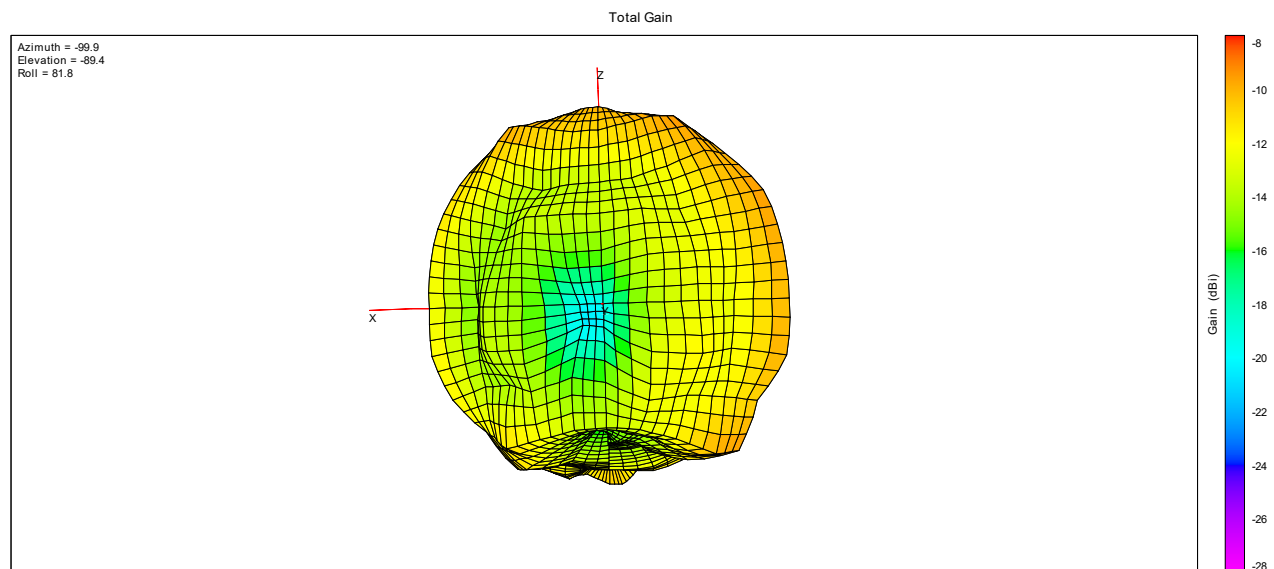
1. 2D Radiation Pattern



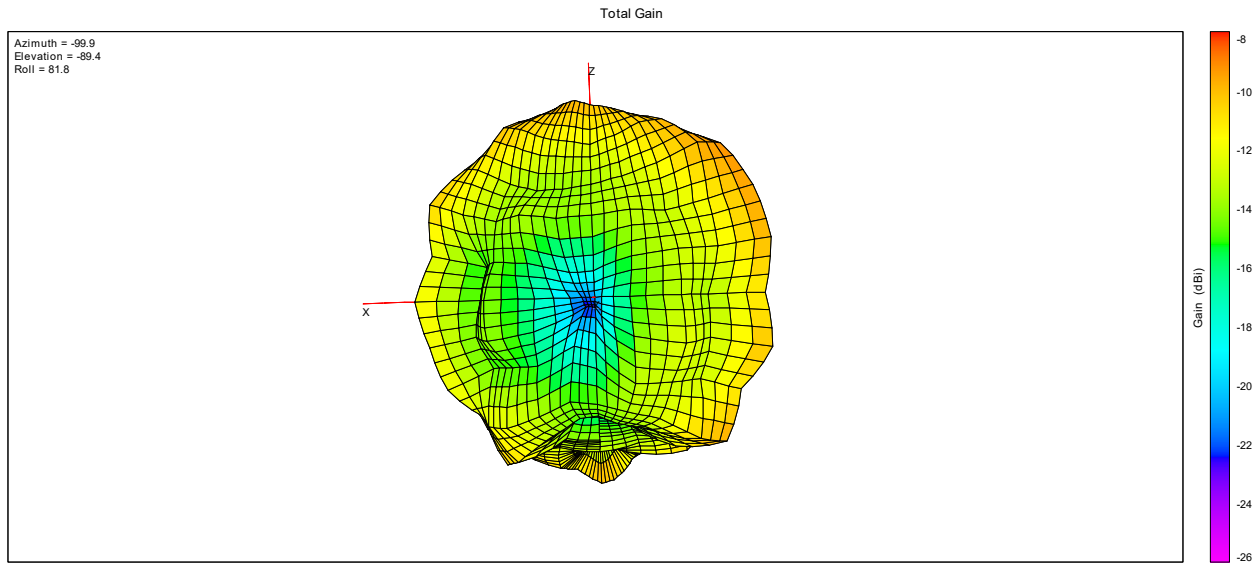


Theta=90°

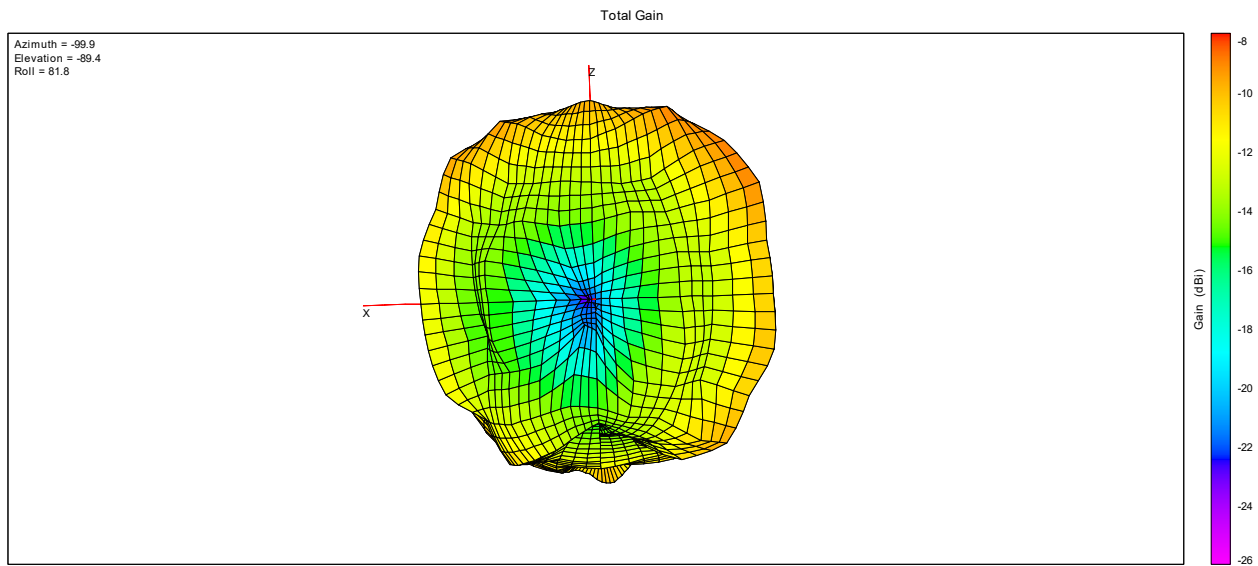
2. 3D Radiation Pattern



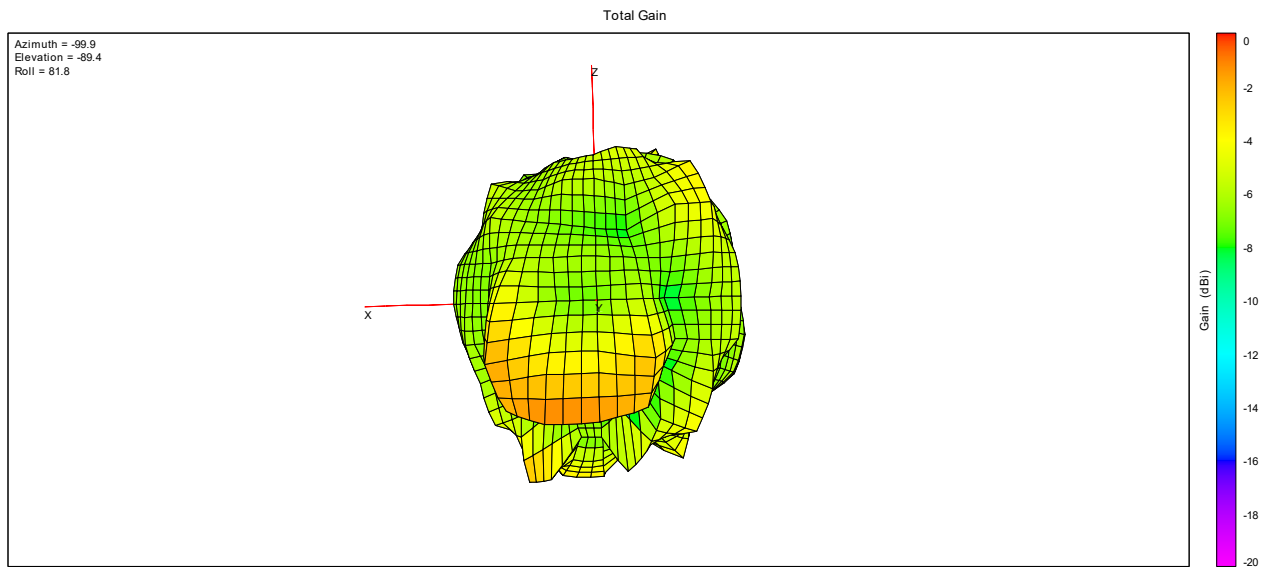
2400MHz



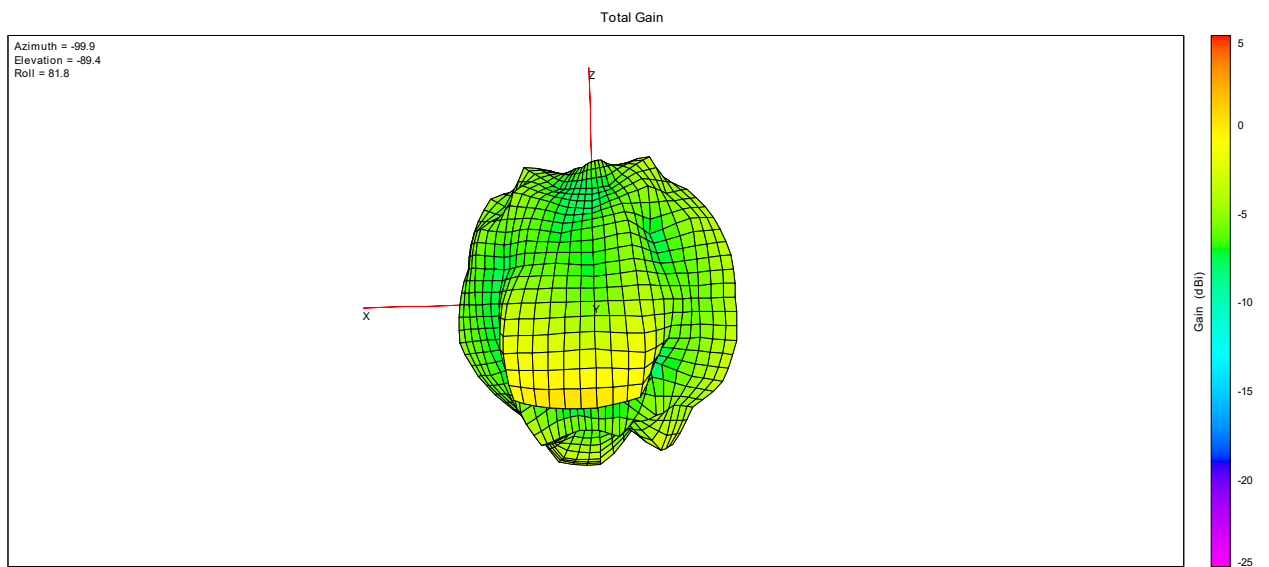
2450MHz



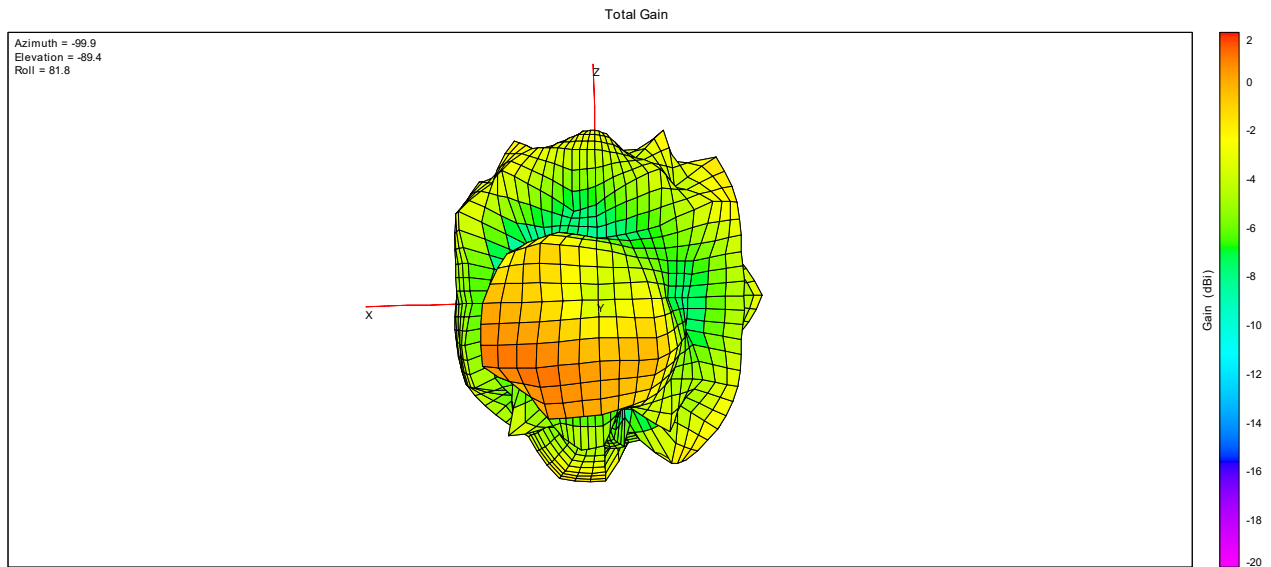
2500MHz



5150MHz

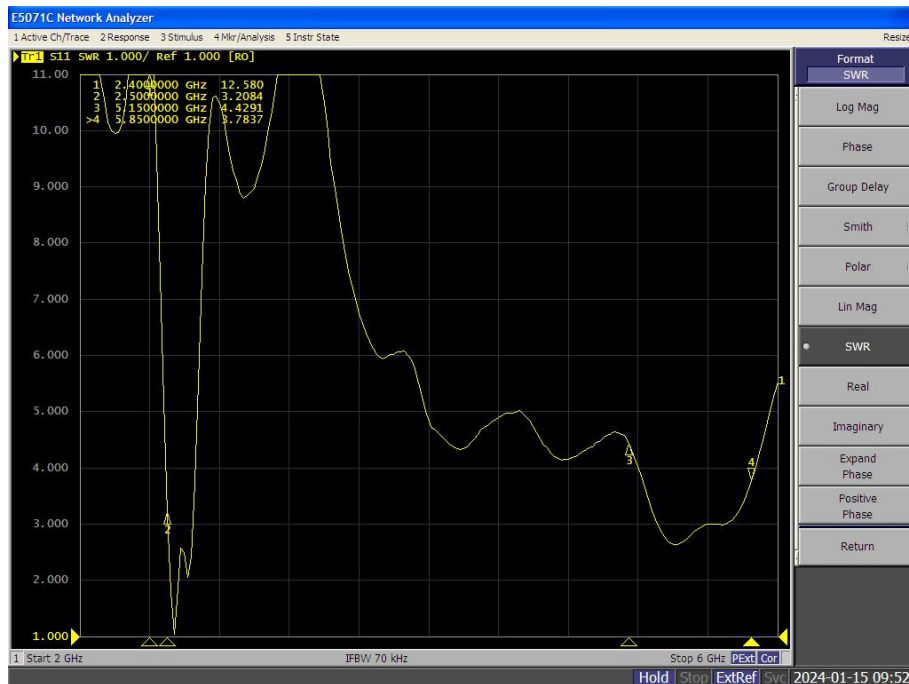


5500MHz



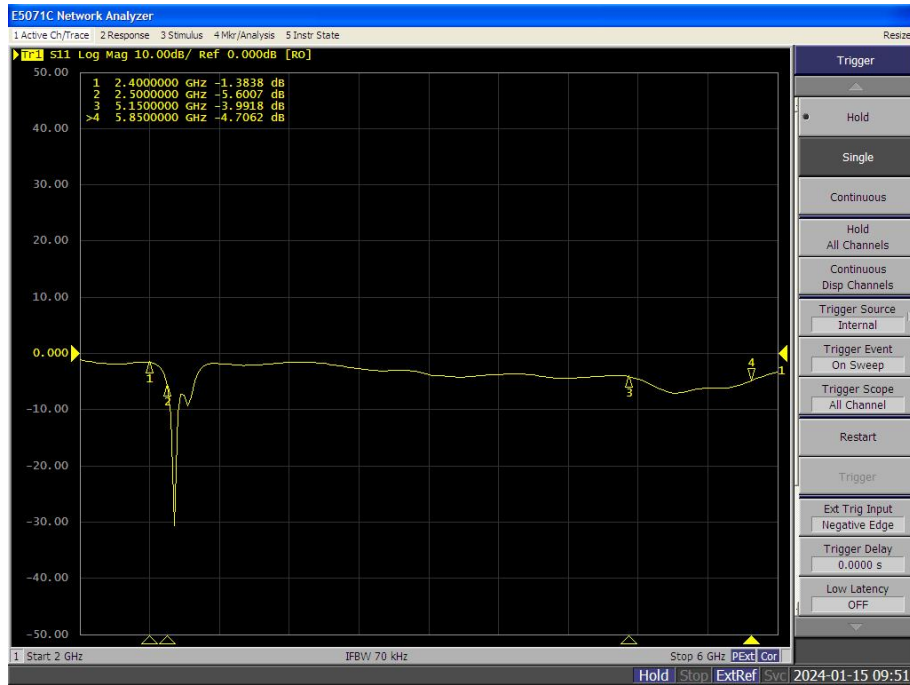
5850MHz

3. VSWR





4. Return Loss





Annex C 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.	Equipement Name	Serial No.	Type	Manufacturer	Cal.Date	Cal.Due Date
1	Network Analyzer	MY46110140	E5071C	Agilent	2023.06.21	2024.06.20
2	OTA Chamber	TJ2235-Q1793	AMS-8923-150	ETS	2022.11.30	2025.11.29

1.4 Test Software Utilized

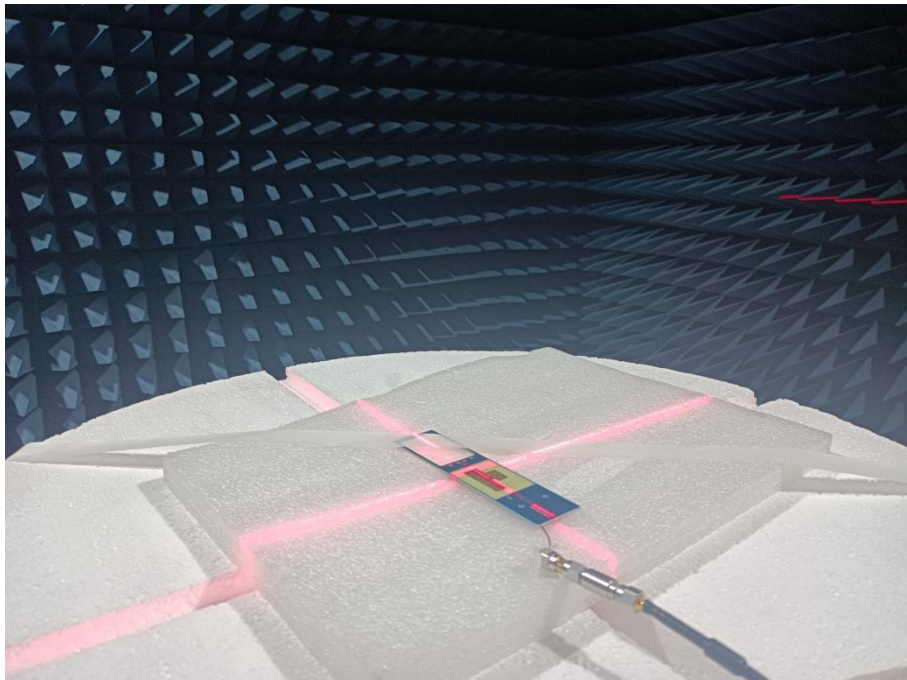
No.	Software Name	Serial No.	Version	Manufacturer
1	Antenna Measurement System	1685	EMQuest EMQ-100 V 1.13 Build 21267	ETS

Note:The Main report is end here and the other Annex D will be submitted separately.

————— END OF MIAN REPORT —————

Annex D EUT Photos

1. Test environment



2. EUT

