



REPORT No.: SZ24070056E01

TEST REPORT

APPLICANT : Dongguan Olight E-Commerce Technology Co.,Ltd

PRODUCT NAME : 2.4GHz Sphere ANT

MODEL NAME : ANT-Sphere

TRADE NAME : OLIGHT

BRAND NAME : N/A

STANDARD(S) : IEEE Std 149-2021

RECEIPT DATE : 2024-07-04

TEST DATE : 2024-07-05

ISSUE DATE : 2024-07-11



Edited by:

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MORLAB

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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 General Information	10
1.1 Identification of the Responsible Testing Laboratory	10
1.2 Identification of the Responsible Testing Location	10
1.3 Test Equipments Utilized	10
1.4 Test Software Utilized	10
Annex D EUT Photos	

Change History		
Version	Date	Reason for change
1.0	2024-07-11	First edition

1. Technical Information

Note: Provide by applicant.

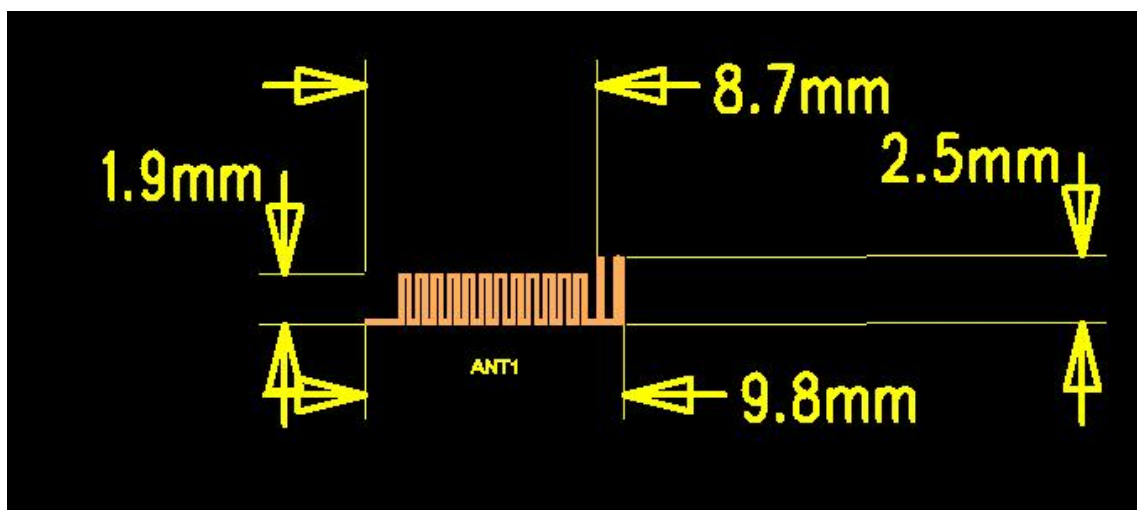
1.1. Applicant and Manufacturer Information

Applicant:	Dongguan Olight E-Commerce Technology Co.,Ltd
Applicant Address:	4th Floor, Building 4, Kegu Industrial Park, No.6 Zhongnan Road, Changan Town, Dongguan City,Guangdong, China
Manufacturer:	N/A
Manufacturer Address:	N/A
Factory:	N/A
Factory Address:	N/A

1.2. Equipment Under Test (EUT) Description

Wireless Type	Bluetooth
Frequency	2400MHz-2500MHz
Antenna Type	PCB Antenna
Product HW Version	N/A
Product SW Version	N/A
IMEI	N/A
Sample No.	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.

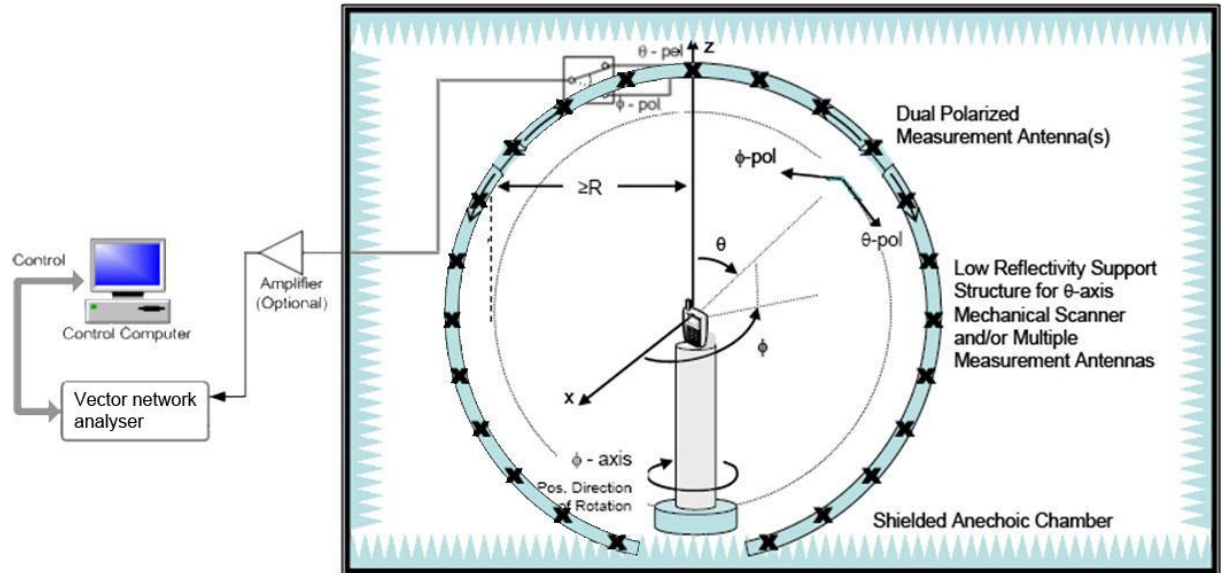


2.4. Test Results lists

2.4.1. Gain

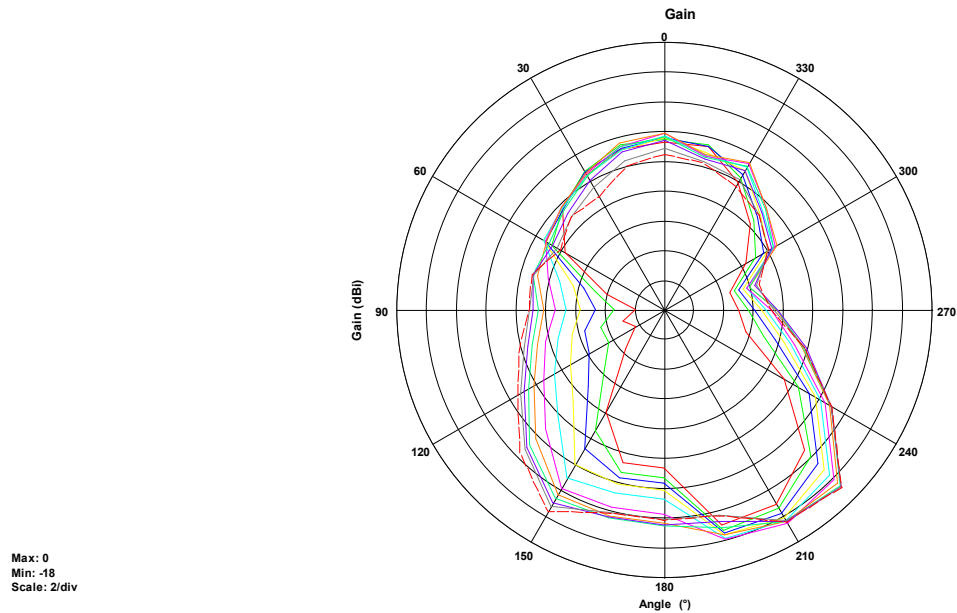
Frequency (MHz)	Gain(dBi)
2400	-2.90
2410	-2.53
2420	-2.28
2430	-1.89
2440	-1.56
2450	-1.05
2460	-0.68
2470	-0.49
2480	-0.18
2490	-0.04
2500	0.22

Annex A Test Setup Photos

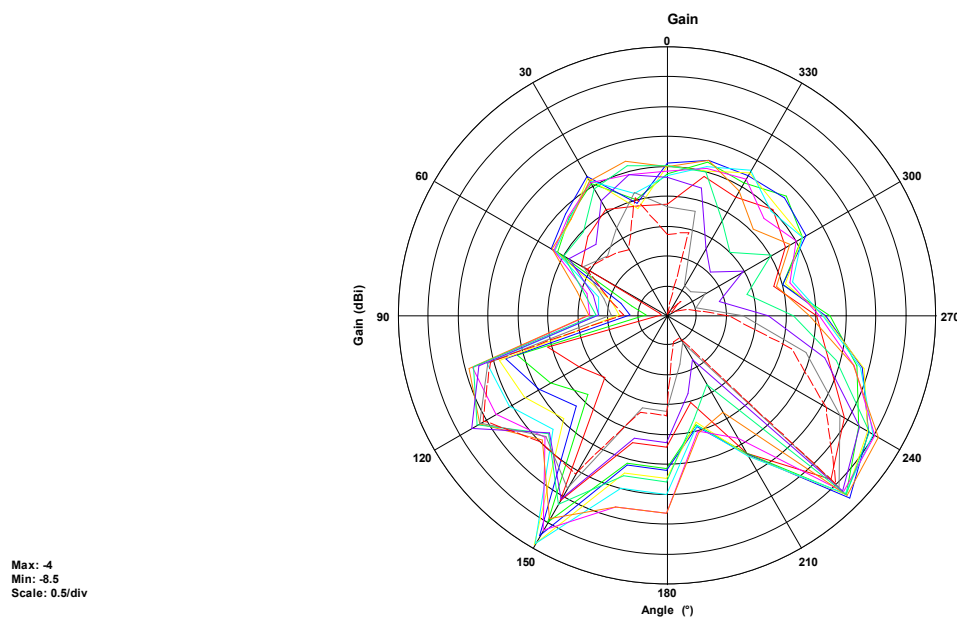


Annex B Figures

1. 2D Radiation Pattern



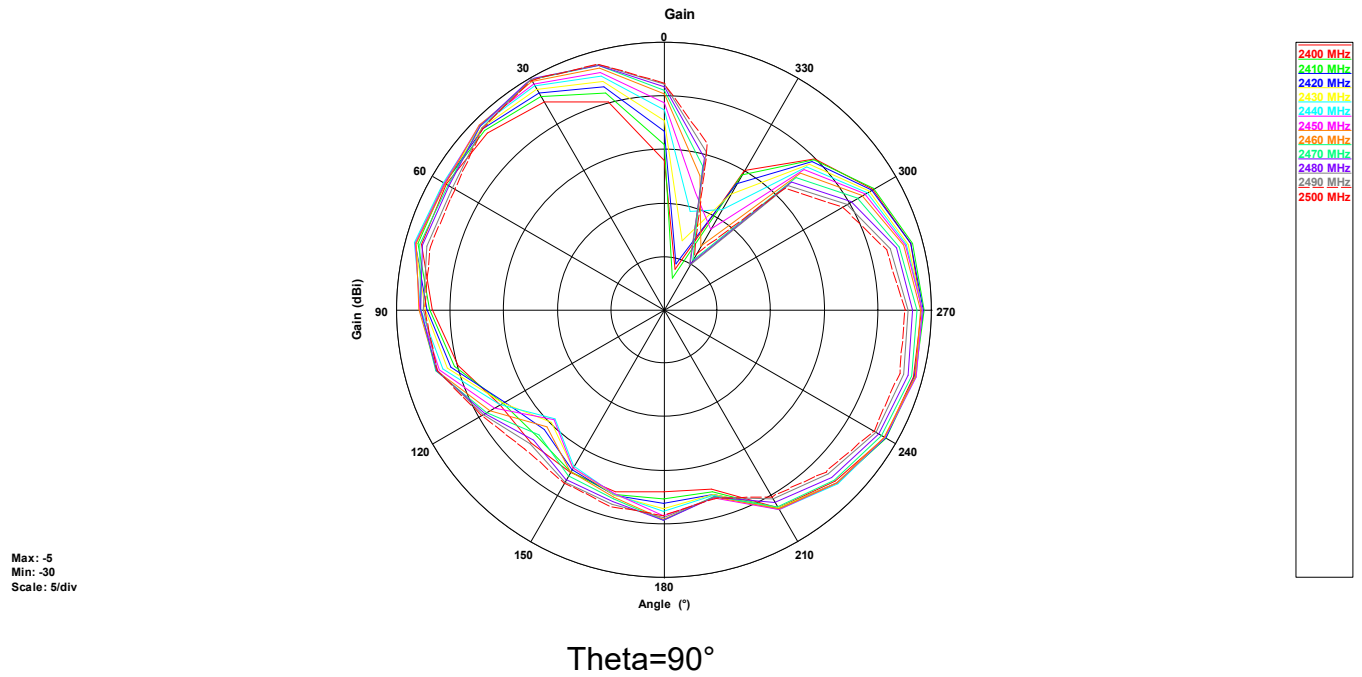
Phi=0°



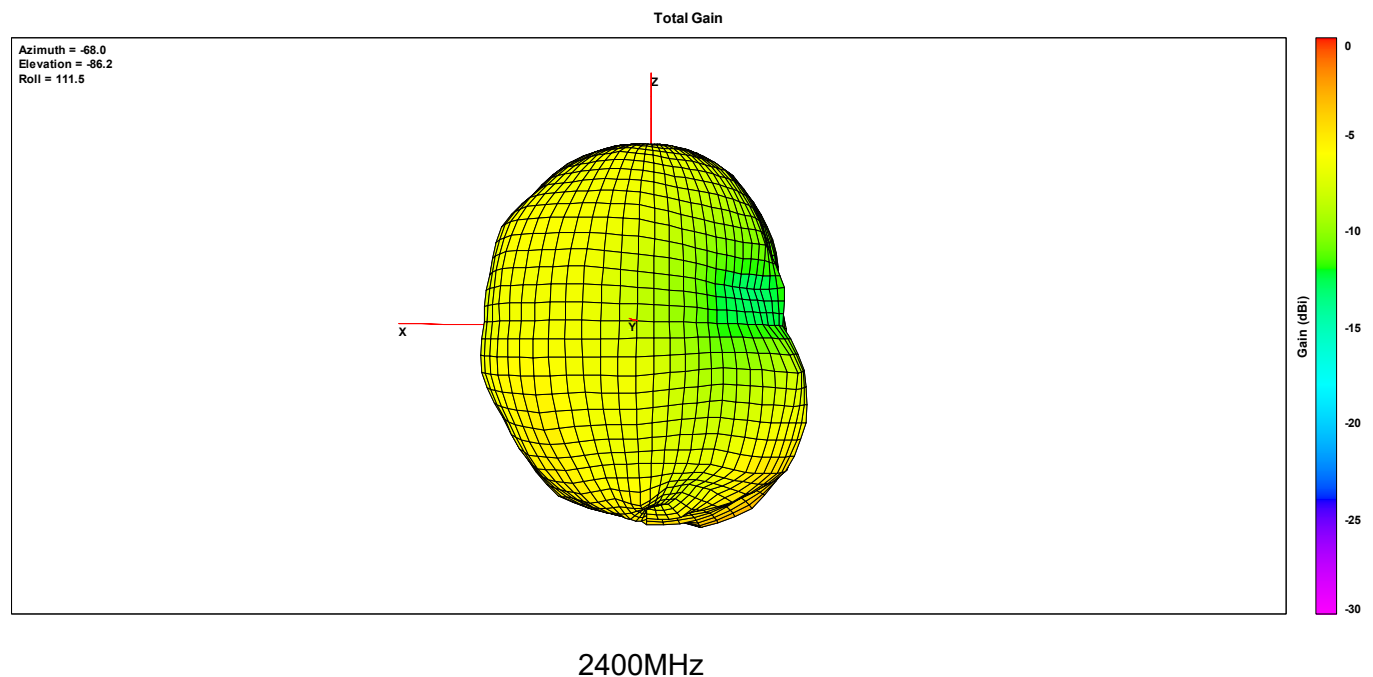
Phi=90°

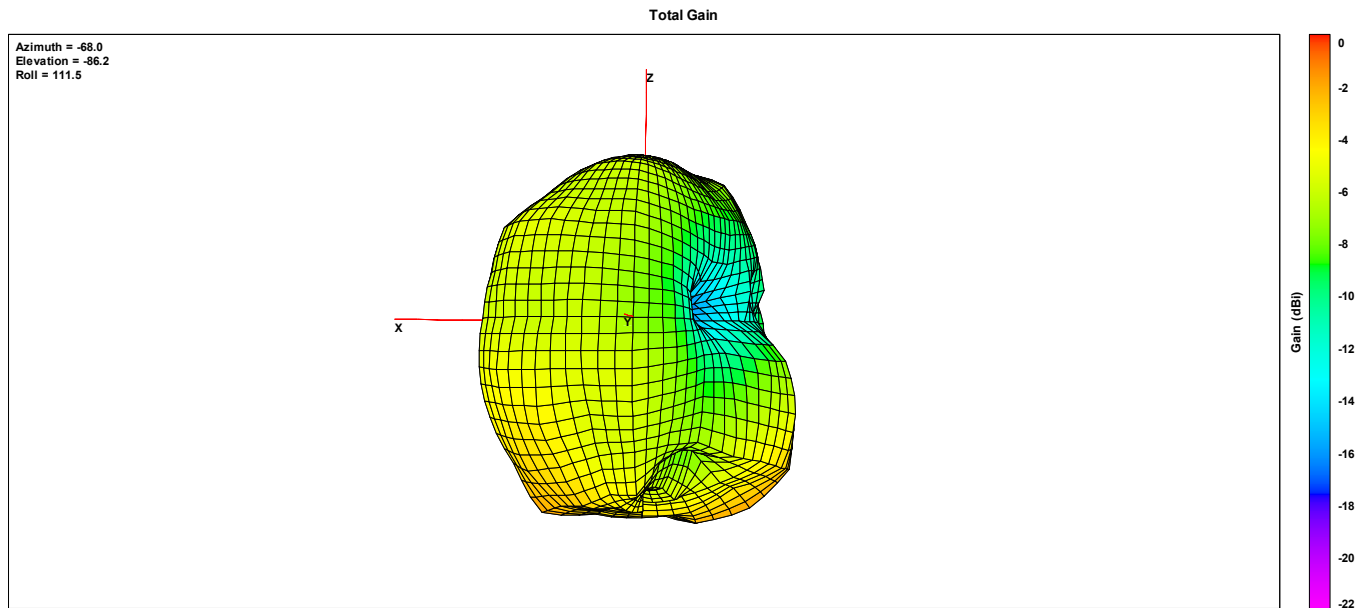
2400 MHz
2410 MHz
2420 MHz
2430 MHz
2440 MHz
2450 MHz
2460 MHz
2470 MHz
2480 MHz
2490 MHz
2500 MHz

2400 MHz
2410 MHz
2420 MHz
2430 MHz
2440 MHz
2450 MHz
2460 MHz
2470 MHz
2480 MHz
2490 MHz
2500 MHz

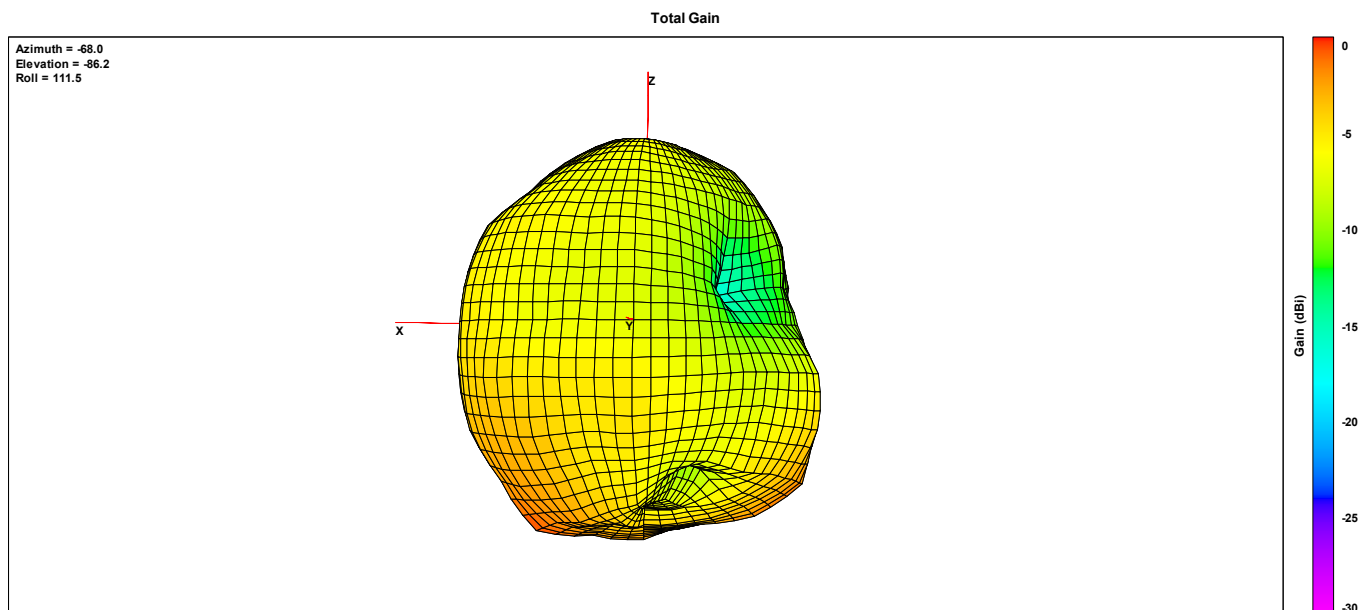


2. 3D Radiation Pattern





2440MHz



2480MHz



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	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

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

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