

No.:  
WTSSZ2024-0760

# TEST REPORT

**NAME OF SAMPLE** : Aurora LED Strip Ctrl Board

**APPLICANT** : Qingdao Yeelink Information Technology  
Co., Ltd.

**CLASSIFICATION OF TEST** : N/A

**CVC Testing Technology (Shenzhen) Co., Ltd.**



<b>Applicant</b>		Name: Qingdao Yeelink Information Technology Co., Ltd. Address: 10F-B4, Building B, Qingdao International Innovation Park, No.1 Keyuan Weiyi Road, Laoshan District, Qingdao City, Shandong Province, P.R.China	
<b>Manufacturer</b>		Name: Qingdao Yeelink Information Technology Co., Ltd. Address: 10F-B4, Building B, Qingdao International Innovation Park, No.1 Keyuan Weiyi Road, Laoshan District, Qingdao City, Shandong Province, P.R.China	
<b>Equipment Under Test</b>		Product Name: Aurora LED Strip Ctrl Board Model/Type: Aurora_BlutoothANT_V01 Brand Name: N/A Serial NO.: N/A Sample NO.:1-1	
Date of Receipt.	2024.07.15	Date of Testing	2024.07.15 ~ 2024.07.19
<b>Test Specification</b>		<b>Test Result</b>	
IEEE Std 149-2021 IEEE Recommended Practice for Antenna Measurements		VSWR, Impedance, Antenna Gain, Antenna Efficiency and Radiation Pattern are tested. The test results is shown on page 10 to page 23.	
<b>Evaluation of Test Result</b>	N/A  Seal of CVC <b>Issue Date: 2024-07-24</b>		
Tested by:  <u>Cai Jianyu</u> Name                      Signature	Reviewed by:  <u>Mo Xianbiao</u> Name                      Signature	Approved by:  <u>Dong Sanbi</u> Name                      Signature	
<b>Other Aspects: NONE.</b>			
Abbreviations: OK,    Pass= passed                      Fail = failed                      N/A= not applicable                      EUT= equipment, sample(s) under tested			

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.



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**RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
WTSSZ2024-0760	Original release	2024-07-24



## 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

Test Description	VERDICT
VSWR	N/A
Impedance	N/A
Antenna Gain	N/A
Antenna Efficiency	N/A
Radiation Pattern	N/A



1.1 LIST OF TEST AND MEASUREMENT INSTRUMENTS

Test Equipment	Equipment No.	Serial No.	Manufacturer	Type/Mode	Cal.Due	Using
Shielded Room	CS0300038	20211221	SUN YIELD	6m*6m*6m	2024/12/20	√
Wideband Radio Communication Tester	CS0300068	102635	R&S	CMW270	2025/7/2	×
Vector Network Analyzer	CS0300067	101544	R&S	ZNB40	2025/5/25	√
Automatic switching unit	CS0300039	81612472	/	5G ACTIVE SWITCHING UNIT	/	√



## 1.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement uncertainty	
Gain	$\pm 0.3$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

## 1.3 TEST LOCATION

The tests and measurements refer to this report were performed by EMC testing Lab. of CVC Testing Technology (Shenzhen) Co., Ltd.

Lab Address: No. 1301-14&16, Guanguang Road, Xinlan Community, Guanlan Subdistrict, Longhua District, Shenzhen, Guangdong, China

Post Code: 518110 Tel: 0755-23763060-8805

Fax: 0755-23763060 E-mail: sz-kf@cvc.org.cn

<http://www.cvc.org.cn>



## 2 GENERAL INFORMATION

### 2.1 GENERAL PRODUCT INFORMATION

<b>PRODUCT</b>	Aurora LED Strip Ctrl Board
<b>BRAND</b>	N/A
<b>MODEL</b>	Aurora_BluetoothANT_V01
<b>ADDITIONAL MODEL</b>	N/A
<b>POWER SUPPLY</b>	N/A
<b>TECHNOLOGY CATEGORY</b>	N/A
<b>FREQUENCY</b>	2400MHz~2500MHz
<b>ANTENNA TYPE</b>	PCB Antenna
<b>TEST CONFIGURATION</b>	With cable soldered at the antenna feed point
<b>CABLE SUPPLIED</b>	N/A
<b>I/O PORTS</b>	Refer to user' s manual
<b>NOTE:</b> 1. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report. 3. Since the above data and/or information is provided, CVC is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.	

### 2.2 DESCRIPTION OF ACCESSORIES

N/A

### 2.3 TEST ENVIRONMENT

Test Environment	
Temperature(°C)	Humidity(%)
23.6	56.8





## 2.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

It must comply with the requirements of the following standards:

IEEE Std 149-2021 IEEE Recommended Practice for Antenna Measurements

Note: All test items have been performed and recorded as per the above standards

## 2.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support Equipment							
NO	Description	Brand	Model No.	Serial Number	Supplied by		
1	N/A	N/A	N/A	N/A	N/A		
Support Cable							
NO	Description	Quantity (Number)	Length (cm)	Detachable (Yes/ No)	Shielded (Yes/ No)	Cores (Number)	Supplied by
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



### 3 TEST ITEMS AND RESULTS

#### 3.1 VSWR

##### 3.1.1 Limits of VSWR

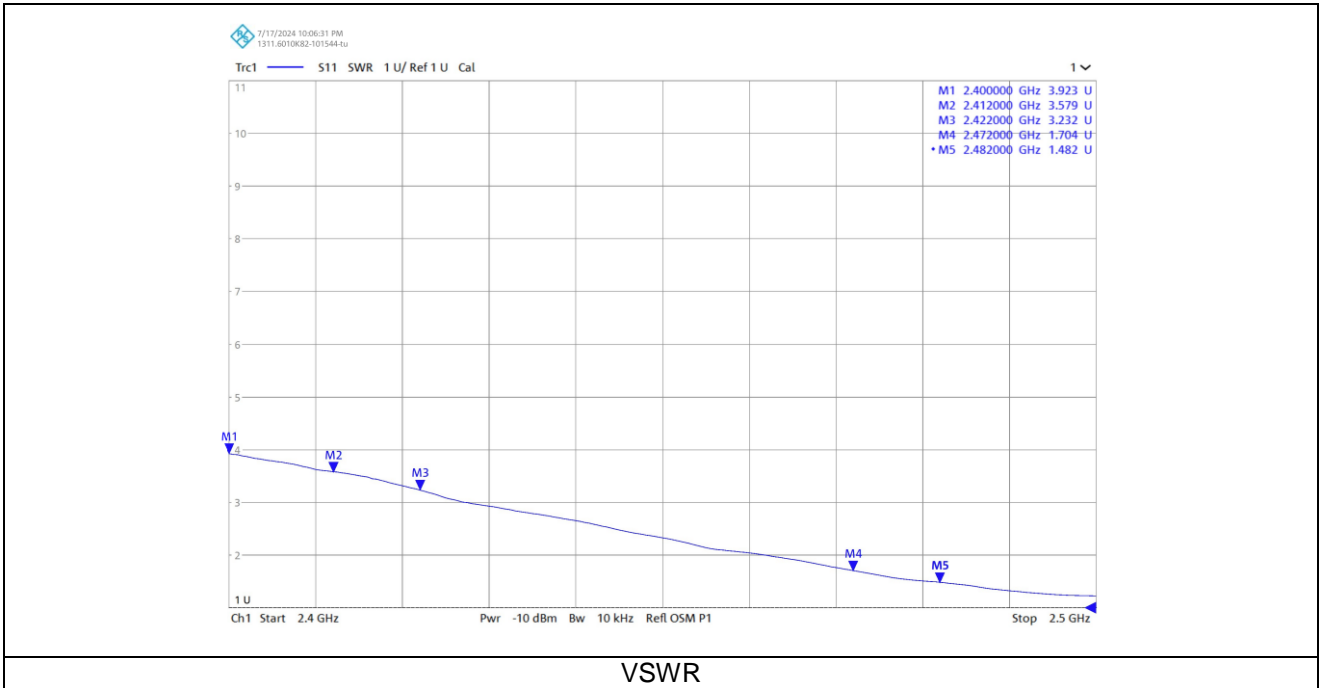
Test Items	Requirements
VSWR	N/A

##### 3.1.2 Test Results

Frequency(MHz)	VSWR(U)
2400	3.923
2412	3.579
2422	3.232
2472	1.704
2482	1.482



3.1.3 Test Graph





### 3.2 IMPEDANCE

#### 3.2.1 Limits of Impedance

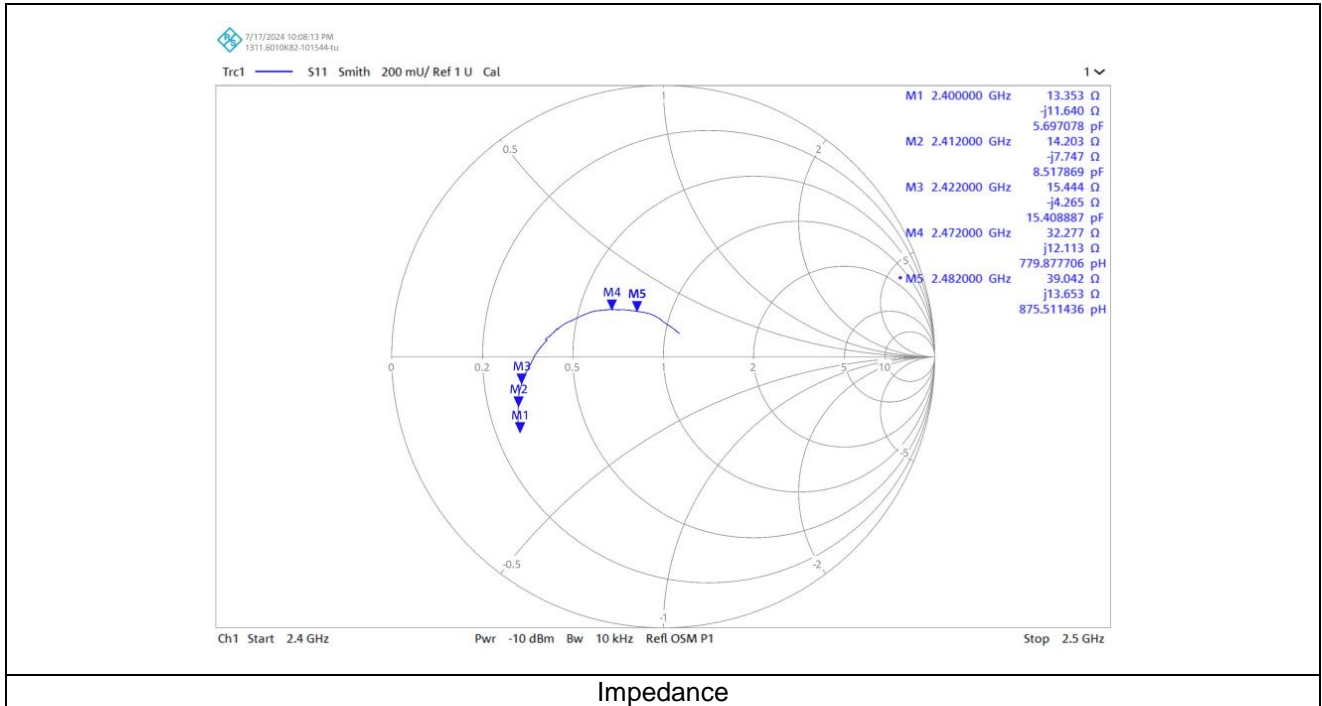
Test Items	Requirements
Impedance	N/A

#### 3.2.2 Test Results

Frequency(MHz)	Impedance( $\Omega$ )
2400	13.353
2412	14.203
2422	15.444
2472	32.277
2482	39.042



3.2.3 Test Graph





### 3.3 ANTENNA GAIN, EFFICIENCY AND RADIATION PATTERN

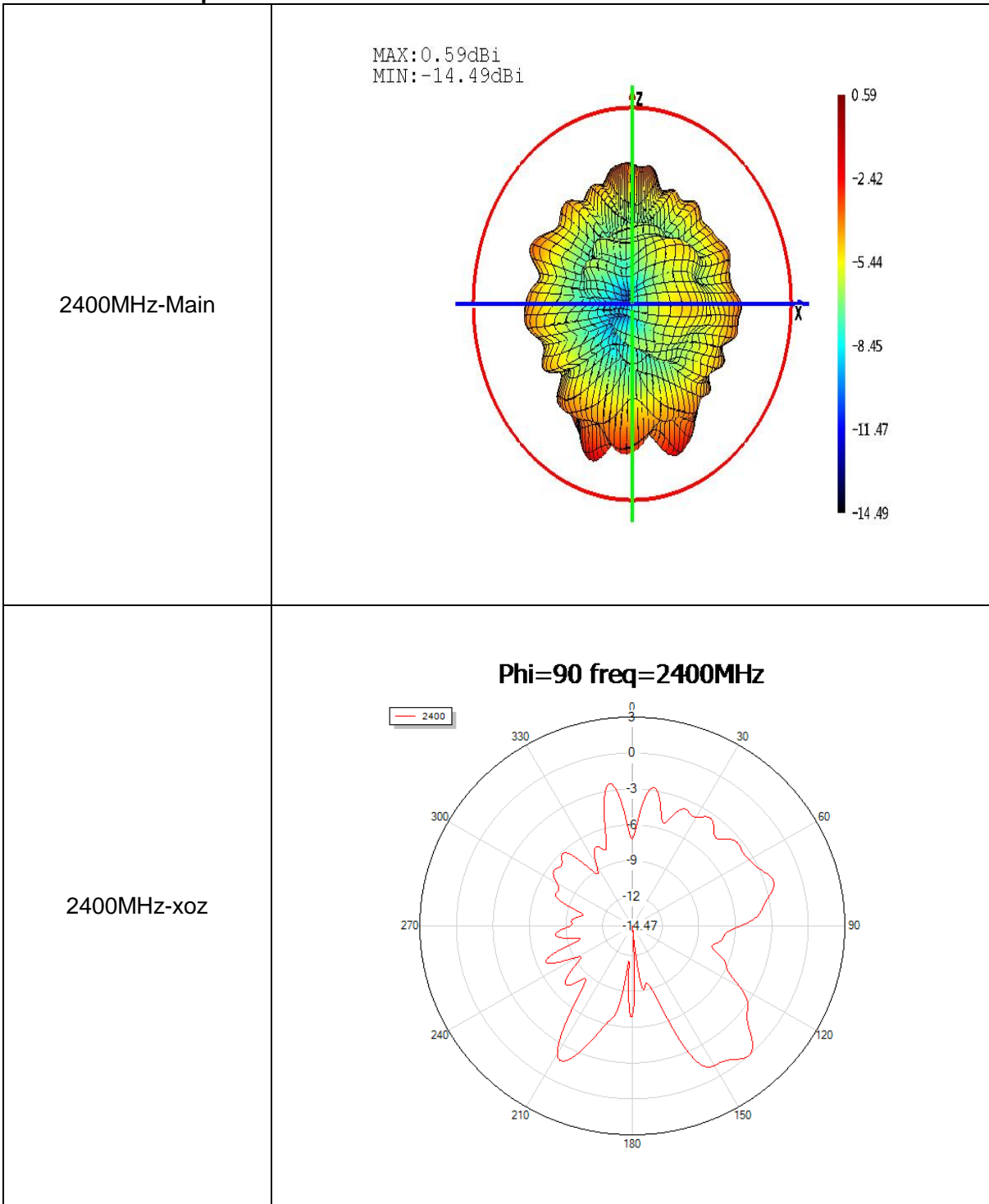
#### 3.3.1 Limits of Antenna Gain, Antenna Efficiency and Radiation Pattern

Test Items	Requirements
Antenna Gain	N/A
Antenna Efficiency	N/A
Radiation Pattern	N/A

#### 3.3.2 Test Results

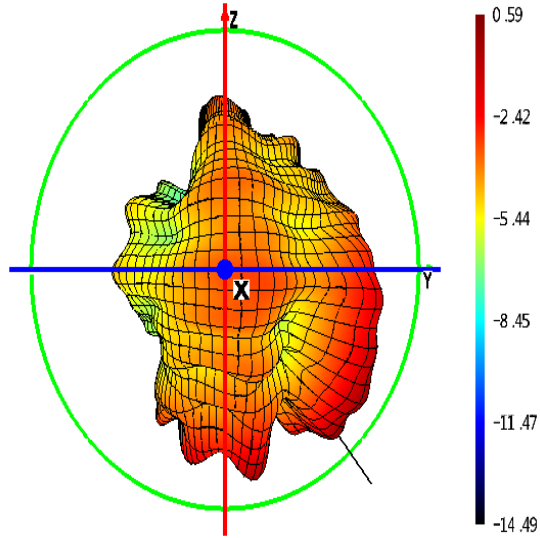
Frequency(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
2400	0.59	-4.20	37.98
2410	0.74	-3.69	42.78
2420	0.45	-3.89	40.84
2430	1.02	-3.66	43.02
2440	1.96	-3.44	45.34
2450	1.85	-3.00	50.09
2460	1.74	-2.91	51.18
2470	1.38	-2.73	53.37
2480	1.19	-2.67	54.08
2490	1.39	-2.61	54.86
<b>2500</b>	<b>1.98</b>	<b>-2.54</b>	<b>55.73</b>

3.3.3 Test Graph



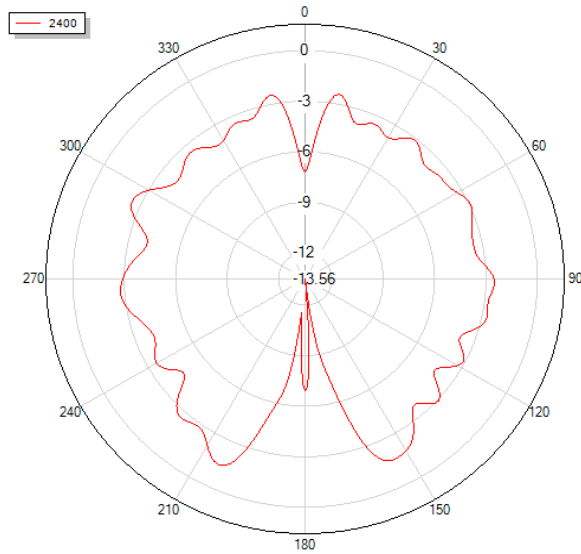
2400MHz-Side

MAX: 0.59dBi  
MIN: -14.49dBi



2400MHz-yoz

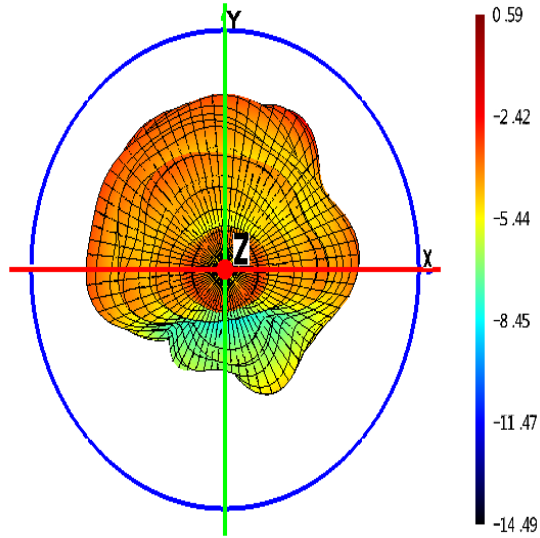
Phi=0 freq=2400MHz





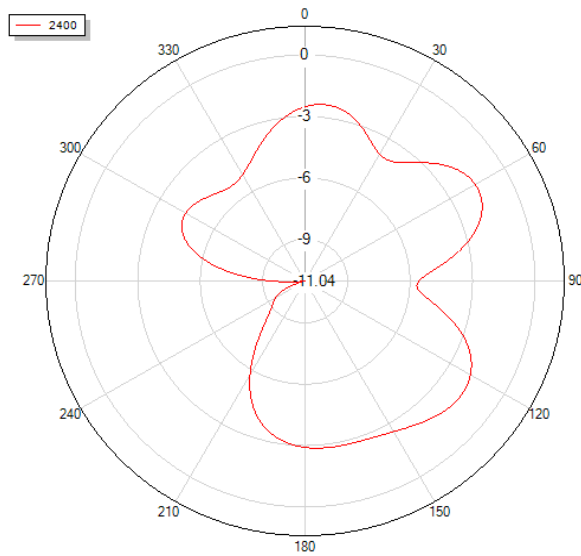
2400MHz-Top

MAX: 0.59dBi  
MIN: -14.49dBi



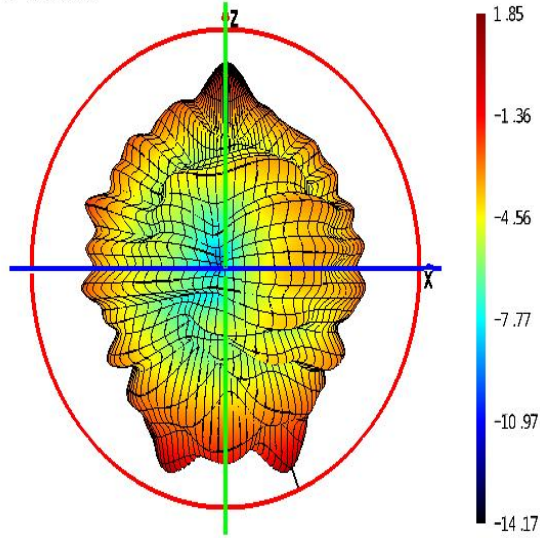
2400MHz-xoy

Theta=90 freq=2400MHz



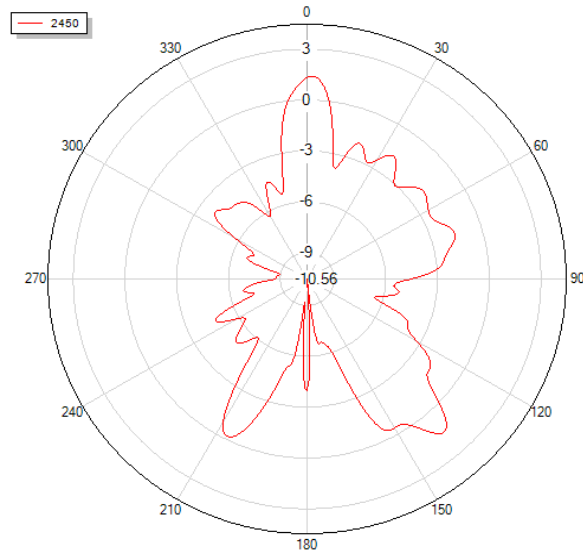
2450MHz-Main

MAX: 1.85dBi  
MIN: -14.17dBi



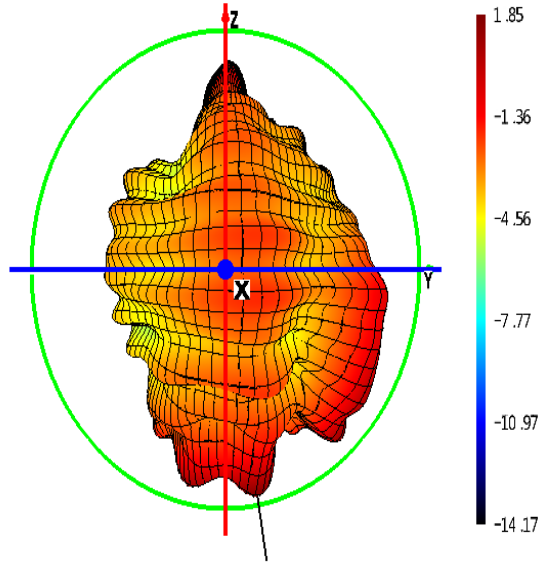
2450MHz-xoz

Phi=90 freq=2450MHz



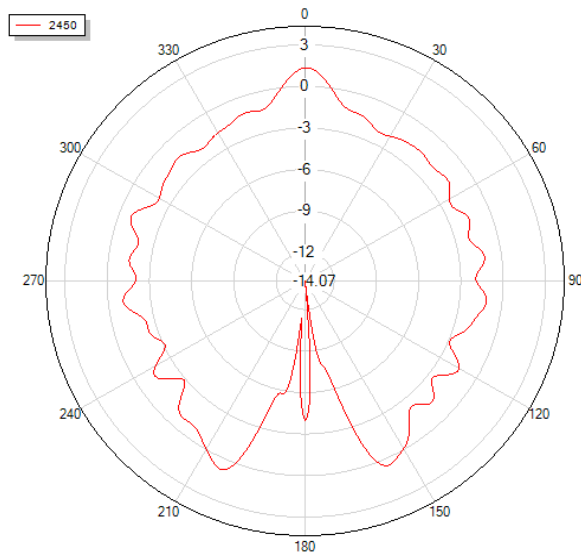
2450MHz-Side

MAX: 1.85dBi  
MIN: -14.17dBi



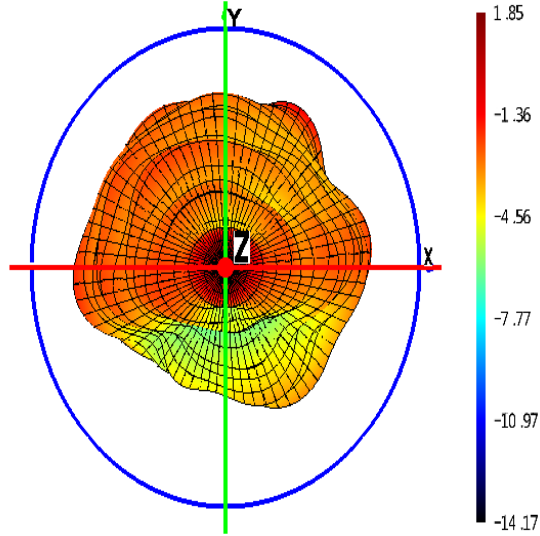
2450MHz-yoz

Phi=0 freq=2450MHz



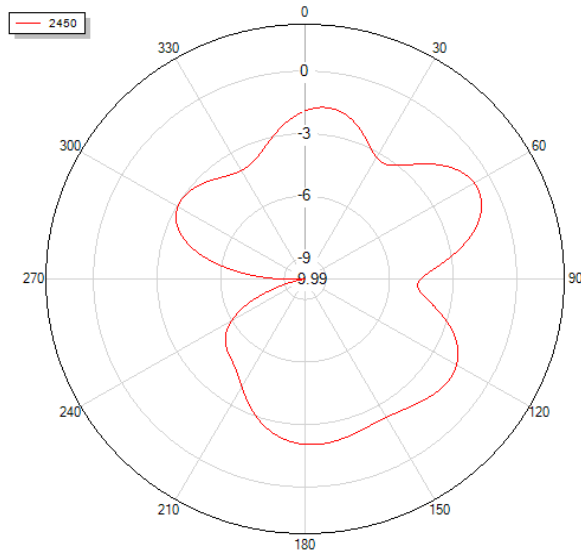
2450MHz-Top

MAX: 1.85dBi  
MIN: -14.17dBi



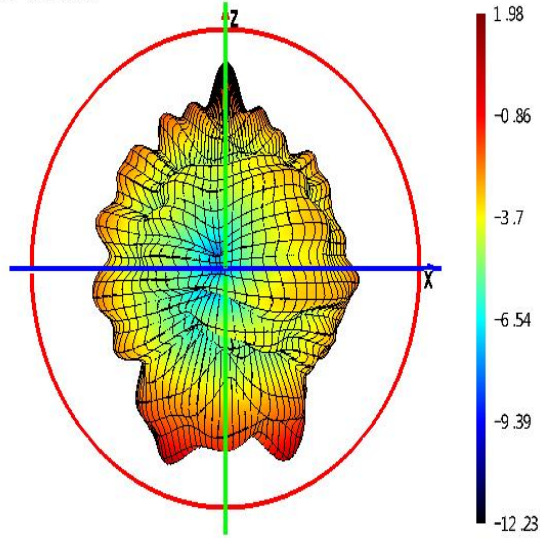
2450MHz-xoy

Theta=90 freq=2450MHz



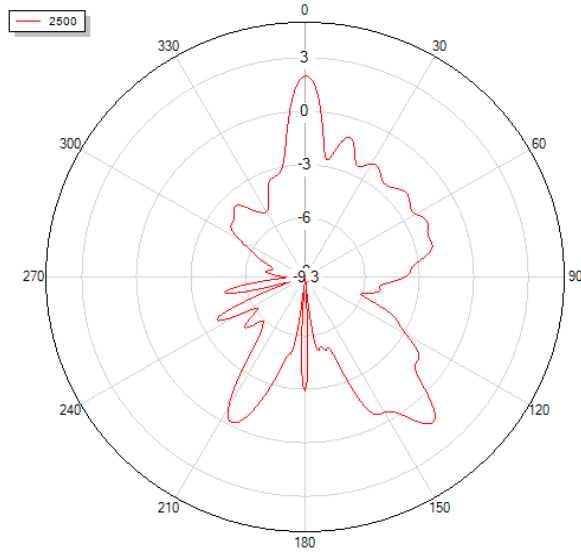
2500MHz-Main

MAX: 1.98dBi  
MIN: -12.23dBi



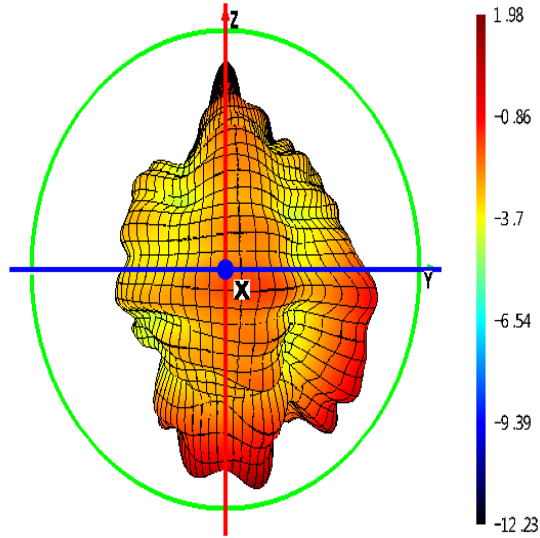
2500MHz-xoz

Phi=90 freq=2500MHz



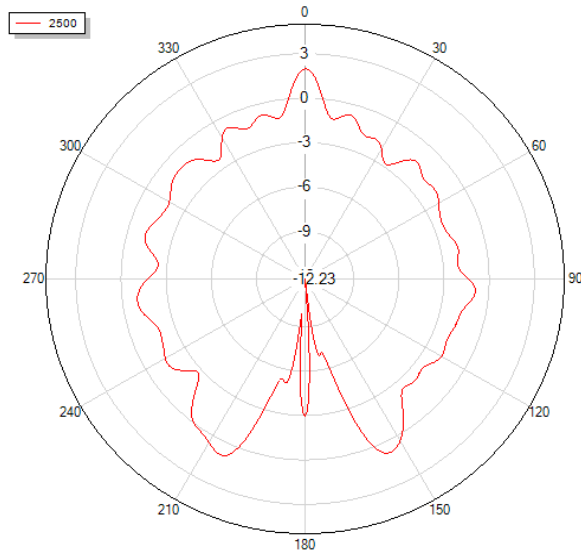
2500MHz-Side

MAX: 1.98dBi  
MIN: -12.23dBi



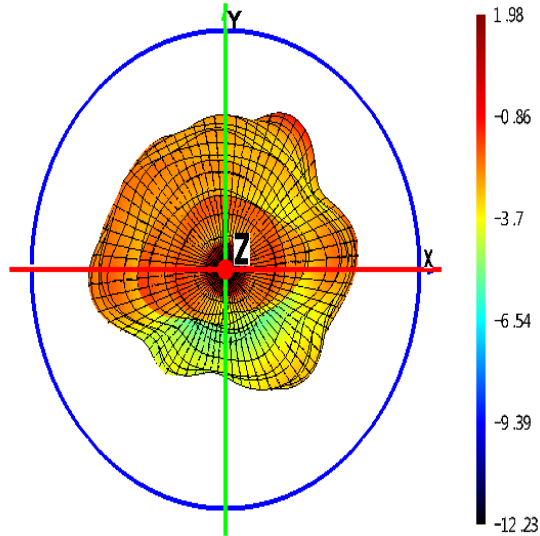
2500MHz-yoz

Phi=0 freq=2500MHz



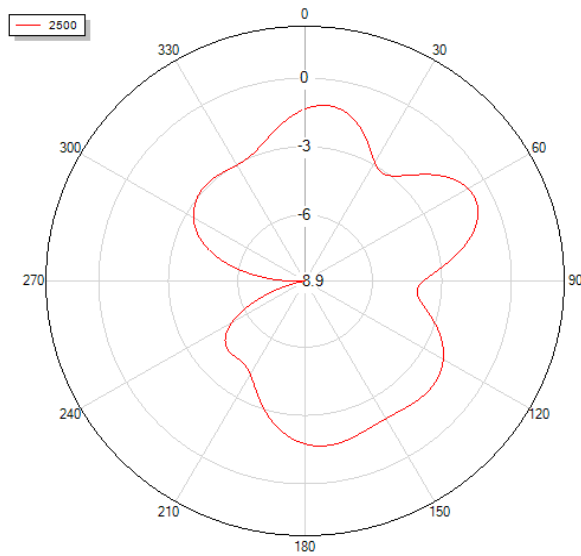
2500MHz-Top

MAX: 1.98dBi  
MIN: -12.23dBi

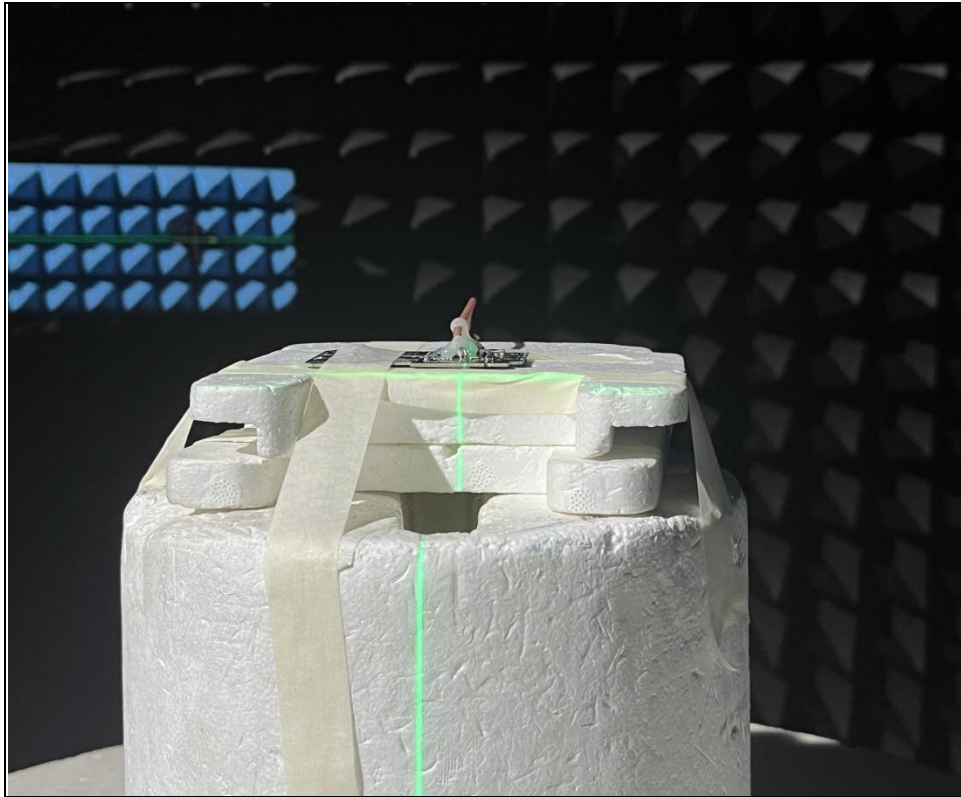


2500MHz-xoy

Theta=90 freq=2500MHz



#### 4 PHOTOGRAPHS OF TEST SETUP

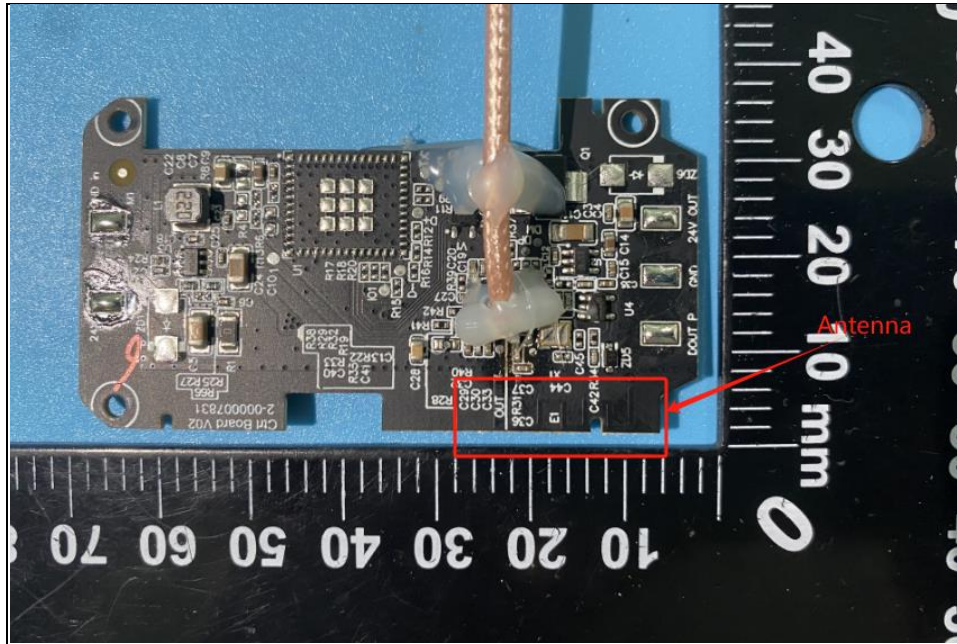


Antenna Test





## 5 PHOTOGRAPHS OF EUT



----- End of the Report -----



## Important

- (1) The test report is invalid without the official stamp of CVC;
- (2) Any part photocopies of the test report are forbidden without the written permission from CVC;
- (3) The test report is invalid without the signatures of Approval and Reviewer;
- (4) The test report is invalid if altered;
- (5) Objections to the test report must be submitted to CVC within 15 days.
- (6) Generally, commission test is responsible for the tested samples only.
- (7) As for the test result “-” or “N/A” means “not applicable”, “/” means “not test”, “P” means “pass” and “F” means “fail”

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