

TEST REPORT

Reference No..... : WTX24X01022705W
Applicant : MimiQ, Inc.
Address..... : 555 Braynt St. #819, Palo Alto, CA 94301
Manufacturer : MimiQ, Inc.
Address..... : 555 Braynt St. #819, Palo Alto, CA 94301
Product Name : MimiQ Track XL BLE Antenna
Model No..... : MT-0716-XL BLE Antenna
Standards : ANSI/ IEEE 149-2021
Date of Receipt sample : 2024-01-31
Date of Test..... : 2024-01-31 to 2024-02-02
Date of Issue : 2024-02-18
Test Report Form No. : WTX_ IEEE 149
Test Result..... : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

Waltek Testing Group (Shenzhen) Co., Ltd.

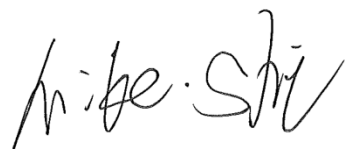
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,

Block 70 Bao'an District, Shenzhen, Guangdong, China

Tel.: +86-755-33663308 Fax.: +86-755-33663309 Email: sem@waltek.com.cn

Tested by:

Approved by:



Mike Shi



Silin Chen

TABLE OF CONTENTS

1.GENERAL INFORMATION.....4
 1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....4

2. SUMMARY OF TEST RESULTS5

3. ANTENNA TEST CONFIGURATIONS6
 3.1 TEST LOCATION6
 3.1 TEST ENVIRONMENTS.....6
 3.2 TEST EQUIPMENT LIST6
 3.3 MEASUREMENT UNCERTAINTY6
 3.4 TEST SETUP6

4. ANTENNA TEST RESULT7
 4.1 GAIN AND EFFICIENCY7
 4.2 RADIATION PATTERN 2D VIEW8
 4.3 RADIATION PATTERN 3D VIEW9

EXHIBIT 1 - EUT PHOTOGRAPHS.....10

EXHIBIT 2 - TEST SETUP PHOTOGRAPHS11

Report version

Version No.	Date of issue	Description
Rev.00	2024-02-18	Original
/	/	/

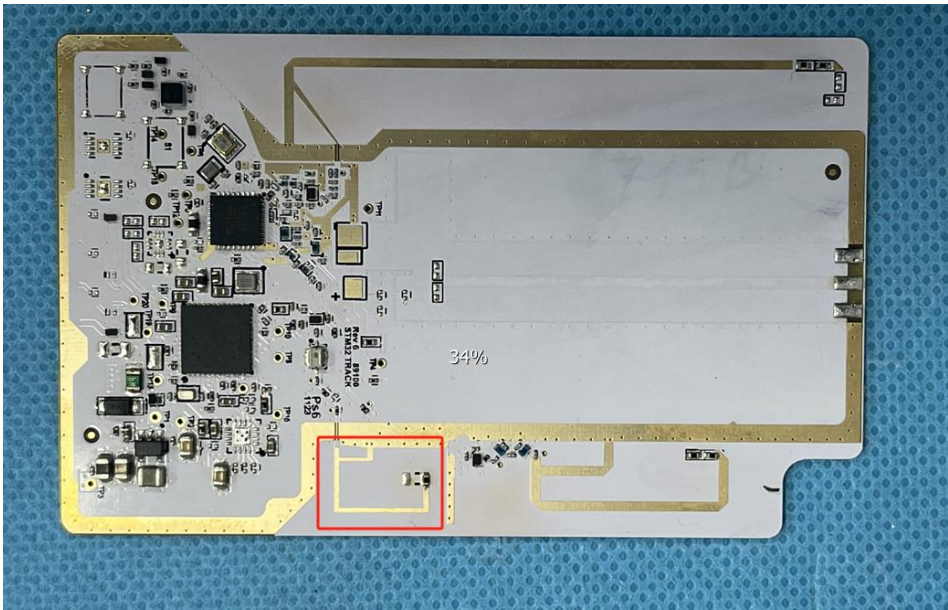
1.GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Mimiq Track XL BLE Antenna
Trade Name:	/
Model No.:	MT-0716-XL BLE Antenna
Adding Model(s):	/
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Frequency Range:	2400-2500MHz
Gain of Antenna:	2.11dBi (Max.)
Type of Antenna:	PCB Antenna
Size:	9.8*6.8mm

Dimension:



2. SUMMARY OF TEST RESULTS

Standards	Description of Test Item	Result
ANSI/ IEEE 149-2021	IEEE Recommended Practice for Antenna Measurements	Compliant

N/A: not applicable

3. Antenna Test Configurations

3.1 Test 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

3.1 Test Environments

Environments Parameter	Temperature	Voltage	Humidit
NTNV	25° C	--	50%

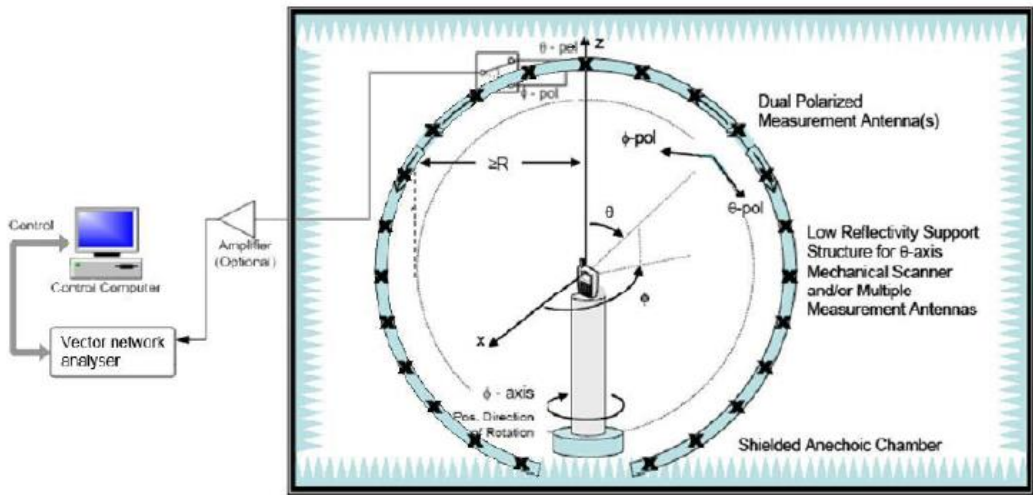
3.2 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Network Analyzer	Agilent	E5071C	MY46110140	2023-06-21	2024-06-20
OTA Chamber	ETS	AMS-8923-150	TJ2235-Q1793	2022-11-30	2025-11-29
Antenna Measurement System	ETS	EMQuest EMQ-100 V1.13 Build 21267	1685	N/A	N/A

3.3 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.

3.4 Test Setup



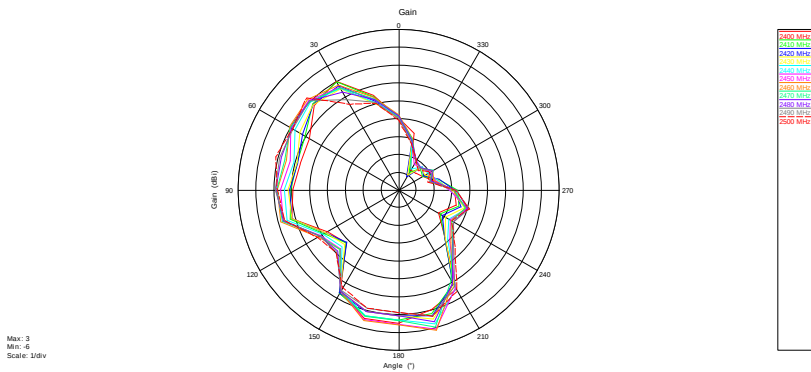
4. Antenna Test Result

4.1 Gain and Efficiency

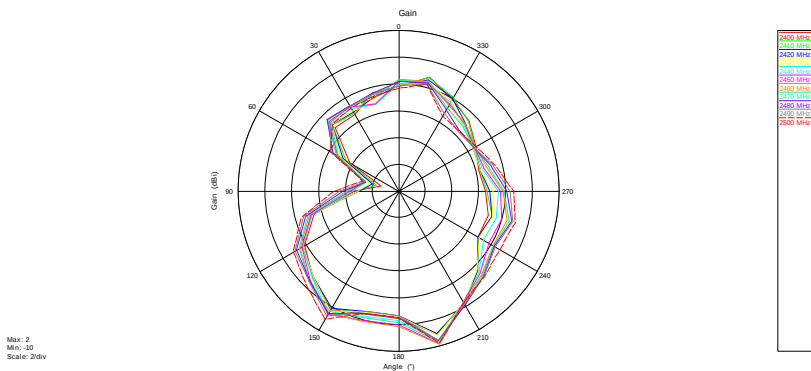
Frequency	E Total. dB(dBi)
2400	2.06
2410	1.88
2420	1.67
2430	1.63
2440	1.78
2450	2.06
2460	2.11
2470	1.92
2480	1.63
2490	1.51
2500	1.74

4.2 Radiation Pattern 2D View

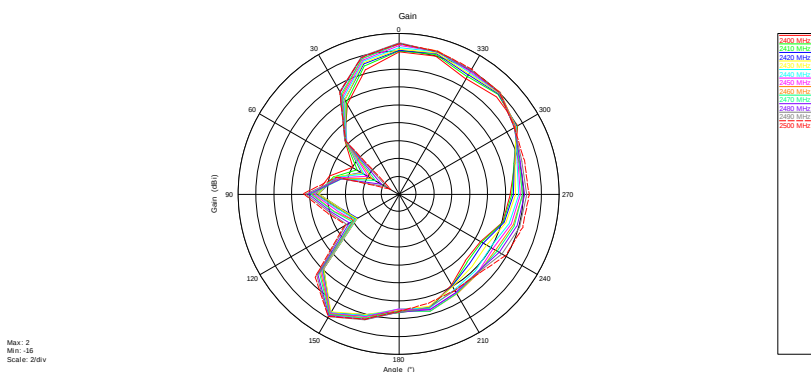
PHI=0



PHI=90



THETA=90



A 3D surface plot showing the Total Gain as a function of Acimuth and Elevation. The plot is a wireframe mesh colored according to the gain values. The color scale ranges from -4 (purple) to 4 (red), with 0 being green. The surface shows a complex, multi-lobed structure with a central peak and several side lobes. The axes are labeled x, y, and z.

Acimuth = -46.7
Elevation = -68.9
Roll = 132.9

Total Gain

Gain (dB)

A 3D surface plot titled "Total Gain" showing the gain distribution as a function of Azimuth and Elevation. The plot is a wireframe mesh colored according to the gain value. The axes are labeled X, Y, and Z. A color bar on the right indicates the gain in dB, ranging from -8 to 4. The plot shows a complex, multi-lobed structure with a central peak and several side lobes. The gain values are highest (yellow/green) in the central region and decrease (blue/purple) towards the edges.

Gain (dB)

4
2
0
-2
-4
-6
-8

3
2
1
0
-1
-2
-3
-4
-5
-6
-7
-8

Y

X

Z

Total Gain

Azimuth = -46.7
Elevation = 40.9
Roll = 132.9

A 3D surface plot showing the Total Gain as a function of Azimuth and Elevation. The surface is colored according to the gain value, with a color bar on the right ranging from -16 (blue) to 2 (red). The plot shows a complex, multi-lobed structure with a central peak and several side lobes. The axes are labeled x, y, and z.

Azimuth = -46.7
 Elevation = 85.5
 Roll = 132.9

EXHIBIT 1 - EUT PHOTOGRAPHS

EUT View 1

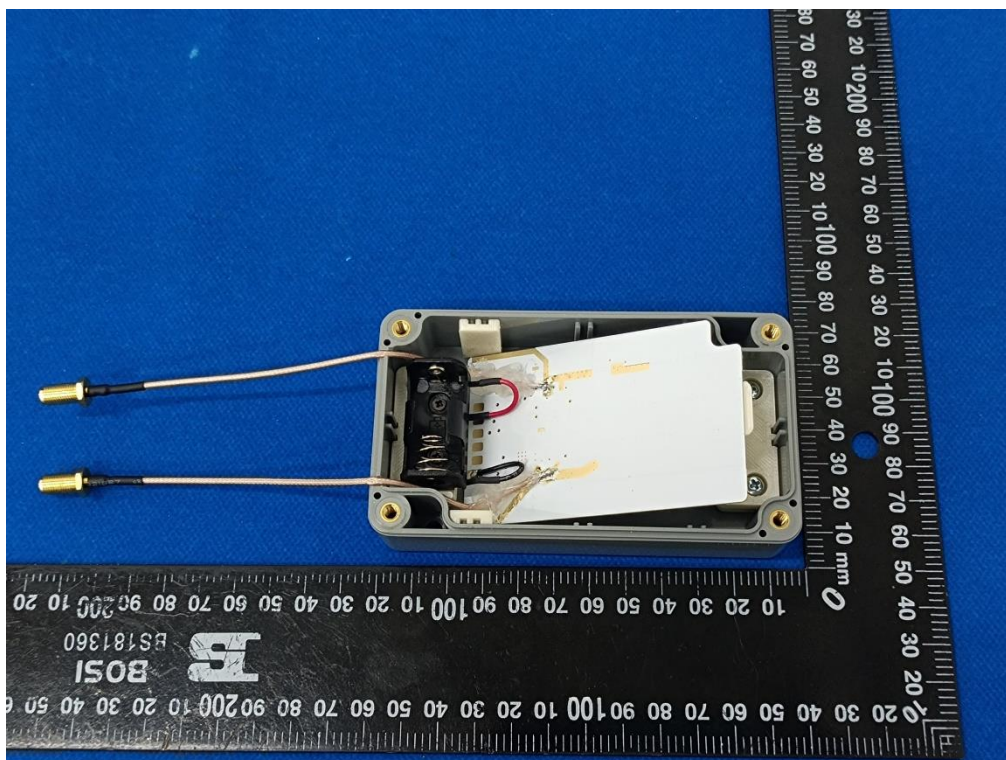
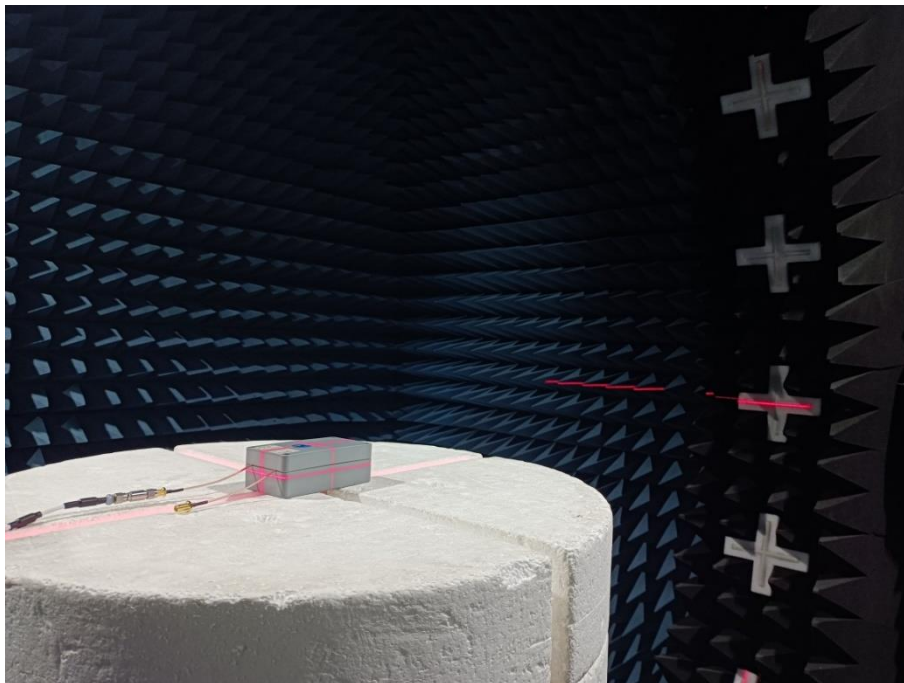
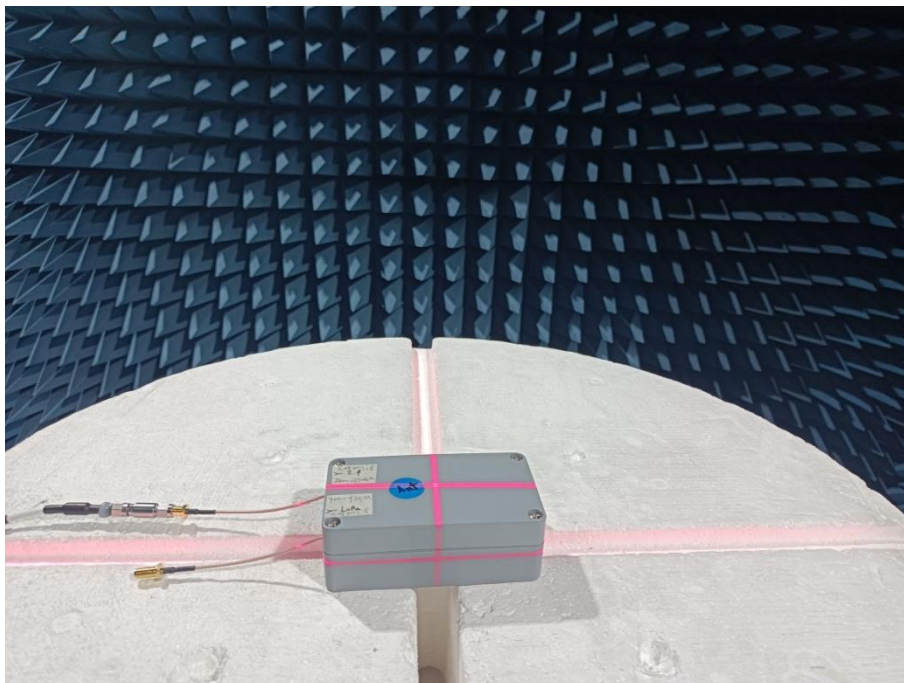


EXHIBIT 2 - TEST SETUP PHOTOGRAPHS

OTA Test View 1:



OTA Test View 2:



***** END OF REPORT *****