

TEST REPORT

Applicant: ShenZhen Rapoo Technology Co., Ltd.
Address: 22, Jinxiu Road East, Pingshan District, Shenzhen, China
Equipment Type: WiredWireless Gaming Mouse
Model Name: VT9PRO
Brand Name: RAPOO
Test Standard: IEEE Std 149-2021
Sample Arrival Date: Jul. 27, 2023
Test Date: Jul. 31, 2023
Date of Issue: Aug. 11, 2023

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Mai Jintian

Checked by: Xia Long

Approved by: Tolan Tu
(Testing Director)

Mai Jintian

Xia Long

Tolan Tu

Revision History		
Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Aug. 11, 2023</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	<input checked="" type="checkbox"/> Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	<input type="checkbox"/> 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	ShenZhen Rapoo Technology Co., Ltd.
Address	22, Jinxiu Road East, Pingshan District, Shenzhen, China
Contact Person	guirongtang
Telephone Number	13873962693
E-mail Address	tangguirong@rapoo.com

2.2 Manufacturer Information

Manufacturer	ShenZhen Rapoo Technology Co., Ltd.
Address	22, Jinxiu Road East, Pingshan District, Shenzhen, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	WiredWireless Gaming Mouse
Model Name Under Test	VT9PRO
Antenna Type	PCB Antenna
Dimensions	8*4 mm

2.4 Ancillary Equipment

Note: Not applicable.

2.5 Technical Information

Frequency Range	2402MHz ~ 2480MHz
Test Frequencies	2402MHz, 2412MHz, 2422MHz, 2432MHz, 2442MHz, 2452MHz, 2462MHz, 2472MHz, 2480MHz

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	IEEE Std 149-2021	IEEE Standard Test Procedures for Antennas

3.2 Test Verdict

Report Section	Description	Remark
ANNEX A.1	Gain and Efficiency	--
ANNEX B	Radiation Pattern	--

3.3 Test Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

Item	Uncertainty
Gain	$\pm 1.92\text{dB}$
VSWR(S11)	± 0.61

4 GENERAL TEST CONFIGURATIONS

4.1 Test Condition

Environment Parameter	Selected Values During Tests			
	Ambient Pressure(KPa)	Temperature(°C)	Voltage	Relative Humidity (%)
Normal Temperature, Normal Voltage (NTNV)	101	21.7	N/A	51

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
SG24 Multi-probe Antenna Measurement System	SATIMO	SG24-L	1101855-0001	2021.11.12	2024.11.11
Vector Network Analyzer	Agilent	E5071B	MY42404001	2023.03.26	2024.03.25
Description	Manufacturer	Name		Version	
Test Software	MVG	SPM		V 1.8	

4.3 Test Setup

4.3.1 Antenna gain, efficiency and radiation pattern test setup



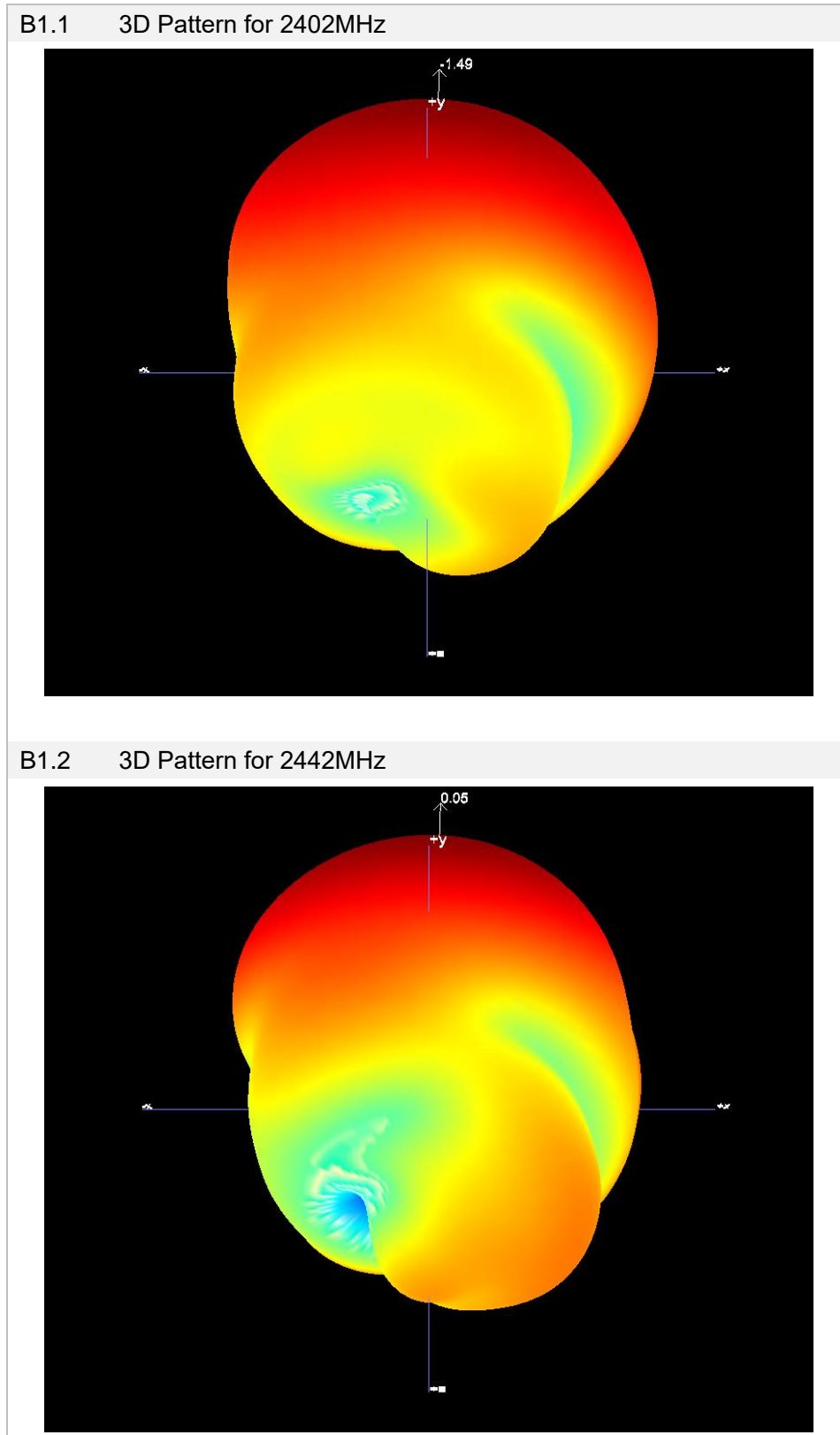
ANNEX A TEST RESULTS

A.1 Gain and Efficiency

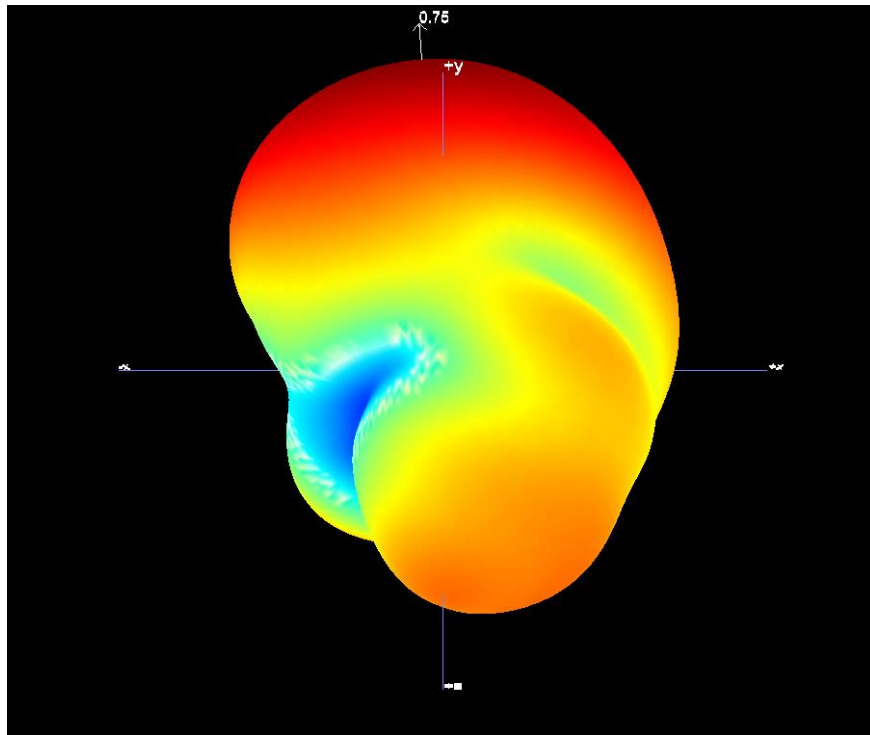
Frequency	Gain (dBi)	Efficiency (%)
2402MHz	-1.49	19
2412MHz	-1.10	21
2422MHz	-0.68	22
2432MHz	-0.26	23
2442MHz	0.05	25
2452MHz	0.68	27
2462MHz	0.80	29
2472MHz	0.71	30
2480MHz	0.75	31

ANNEX B RADIATION PATTERN

B.1 3D Pattern

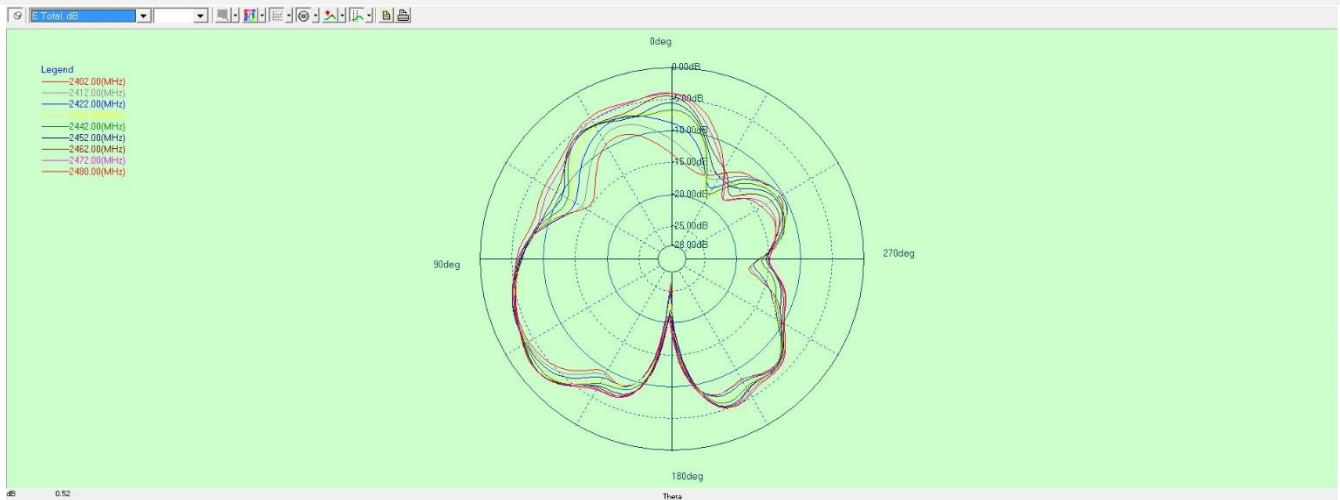


B1.3 3D Pattern for 2480MHz

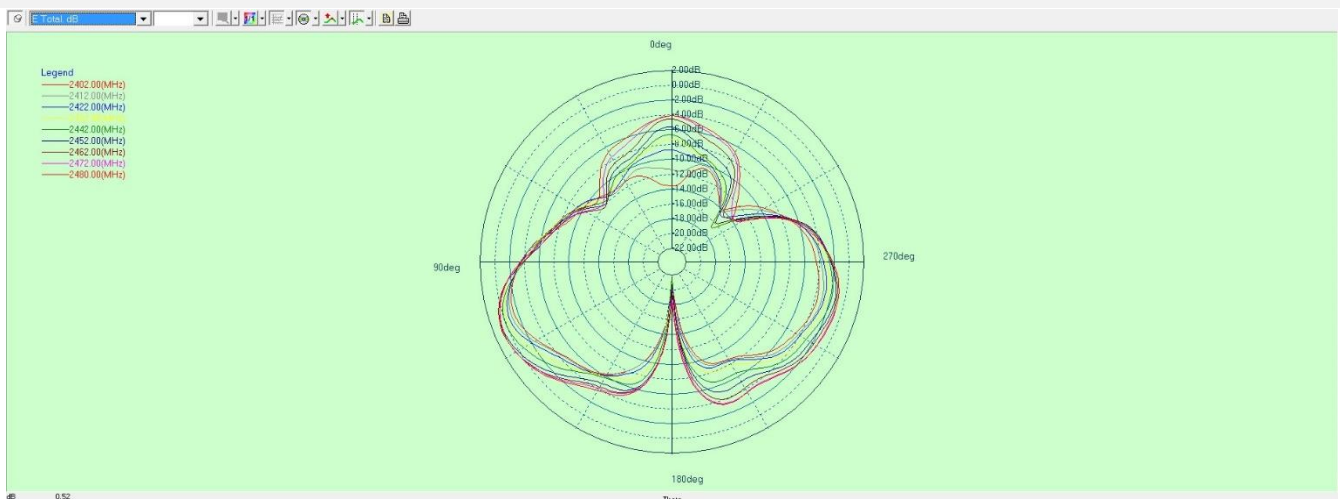


B.2 1D Radiation Pattern

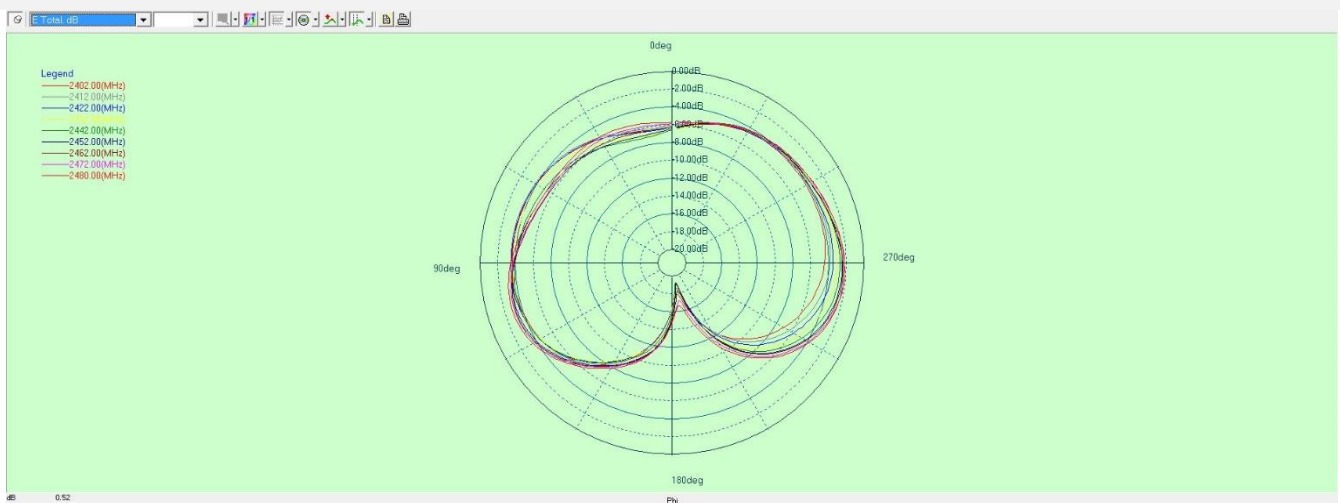
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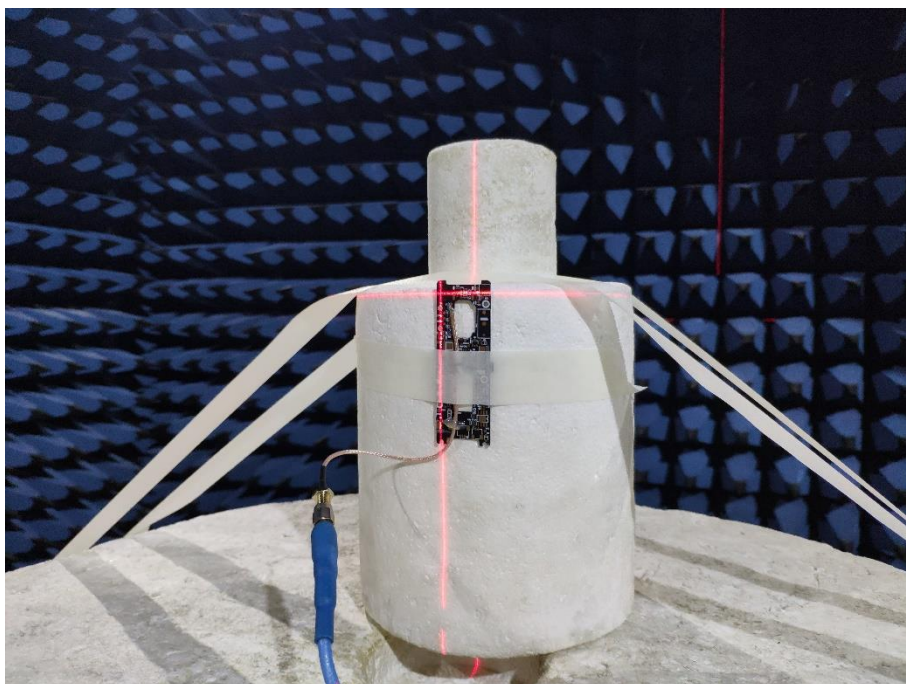
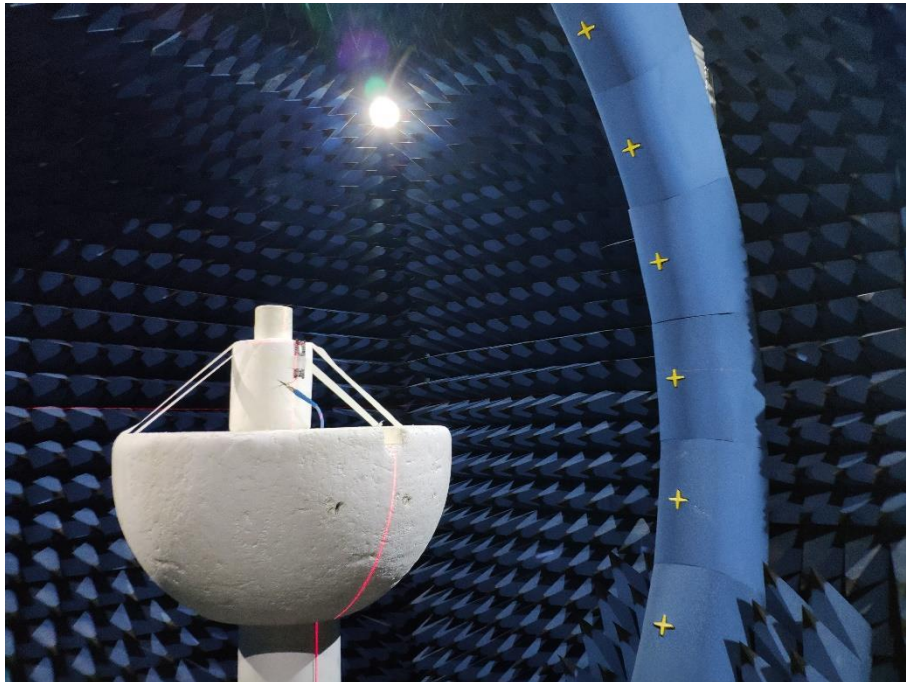
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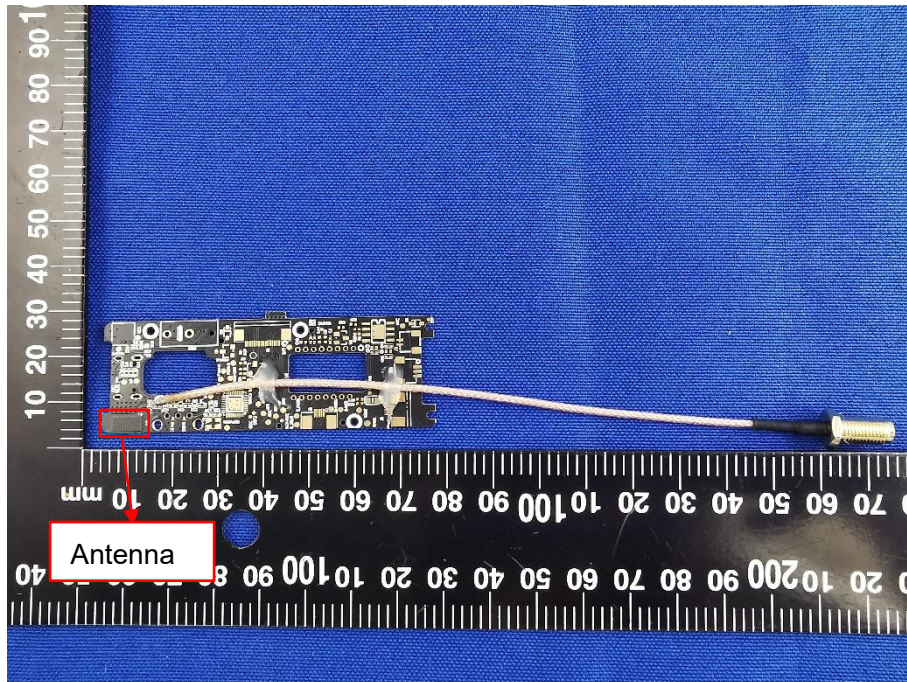
B2.3 THETA=90



ANNEX C TEST SETUP PHOTO



ANNEX D EUT PHOTO



Statement

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7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--