

TEST REPORT

Applicant: HyVibe
Address: 51 Rue de Maubeuge, 75009 Paris, France
Equipment Type: HyVibe System 2
Model Name: H2
Brand Name: N/A
Test Standard: IEEE Std 149-2021
Sample Arrival Date: Oct. 10, 2023
Test Date: Oct. 10, 2023
Date of Issue: Oct. 17, 2023

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Mai Jintian

Checked by: Zou Liu

Approved by: Tolan Tu
(Testing Director)

Mai Jintian

Zou Liu

Tolan Tu

Revision History		
Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Oct. 17, 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

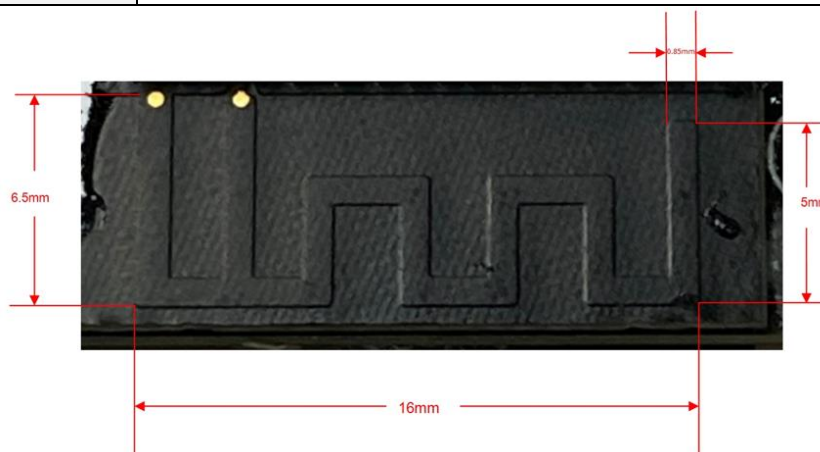
Applicant	HyVibe
Address	51 Rue de Maubeuge, 75009 Paris, France

2.2 Manufacturer Information

Manufacturer	Shenzhen Sunchip Technology Co., Ltd
Address	2nd -3rd Floor, Building 4, Fuan Industry Area Phase 2, Dayang Development Zone, Fuyong, Baoan, Shenzhen, China.

2.3 General Description for Equipment under Test (EUT)

EUT Name	HyVibe System 2
Model Name Under Test	H2
Antenna Type	PCB Antenna
Dimensions	16*6.5mm



2.4 Ancillary Equipment

Note: Not applicable.

2.5 Technical Information

Test Frequencies	2400MHz, 2410MHz, 2420MHz, 2430MHz, 2440MHz, 2450MHz, 2460MHz, 2470MHz, 2480MHz, 2490MHz, 2500MHz.
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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 A.2	VSWR	--
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
VSWR(S11)	± 0.61
Gain	$\pm 1.92\text{dB}$

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	21.6	N/A	51

4.2 Test Equipment List

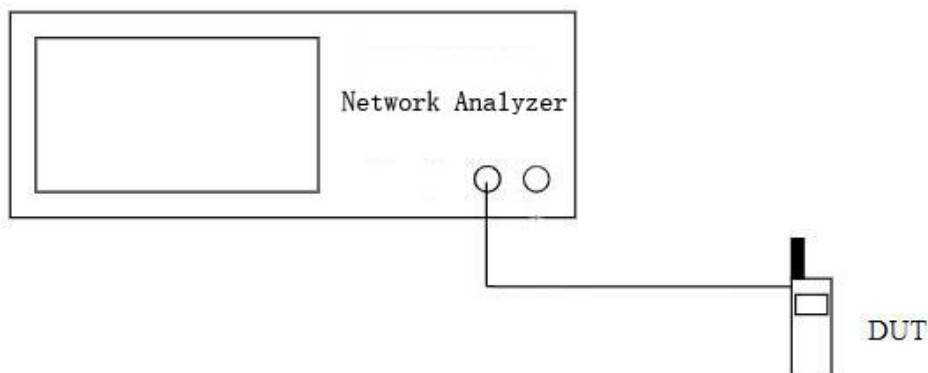
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
SG24 Multi-probe Antenna Measurement System	SATIMO	SG24-L	1101855-0001	2021.11.12	2024.11.11
Vector Network Analyzer	Agilent	E5071B	MY42404001	2023.03.26	2024.03.25
Description	Manufacturer	Name		Version	
Test Software	MVG	SPM		V 1.8	

4.3 Test Setup

4.3.1 Antenna gain, efficiency and radiation pattern test setup



4.3.2 S11 parameter test setup



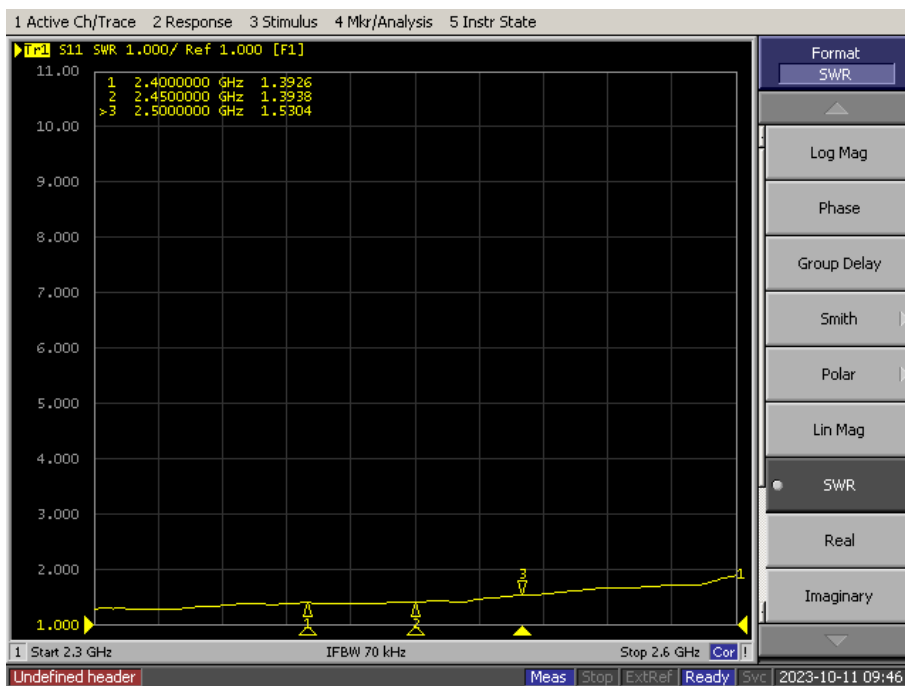
ANNEX A TEST RESULTS

A.1 Gain and Efficiency

Frequency	Gain (dBi)	Efficiency (%)
2400MHz	0.90	43
2410MHz	1.23	43
2420MHz	1.40	43
2430MHz	1.37	43
2440MHz	1.17	42
2450MHz	1.15	42
2460MHz	1.17	42
2470MHz	1.29	42
2480MHz	1.45	42
2490MHz	1.33	40
2500MHz	1.00	39

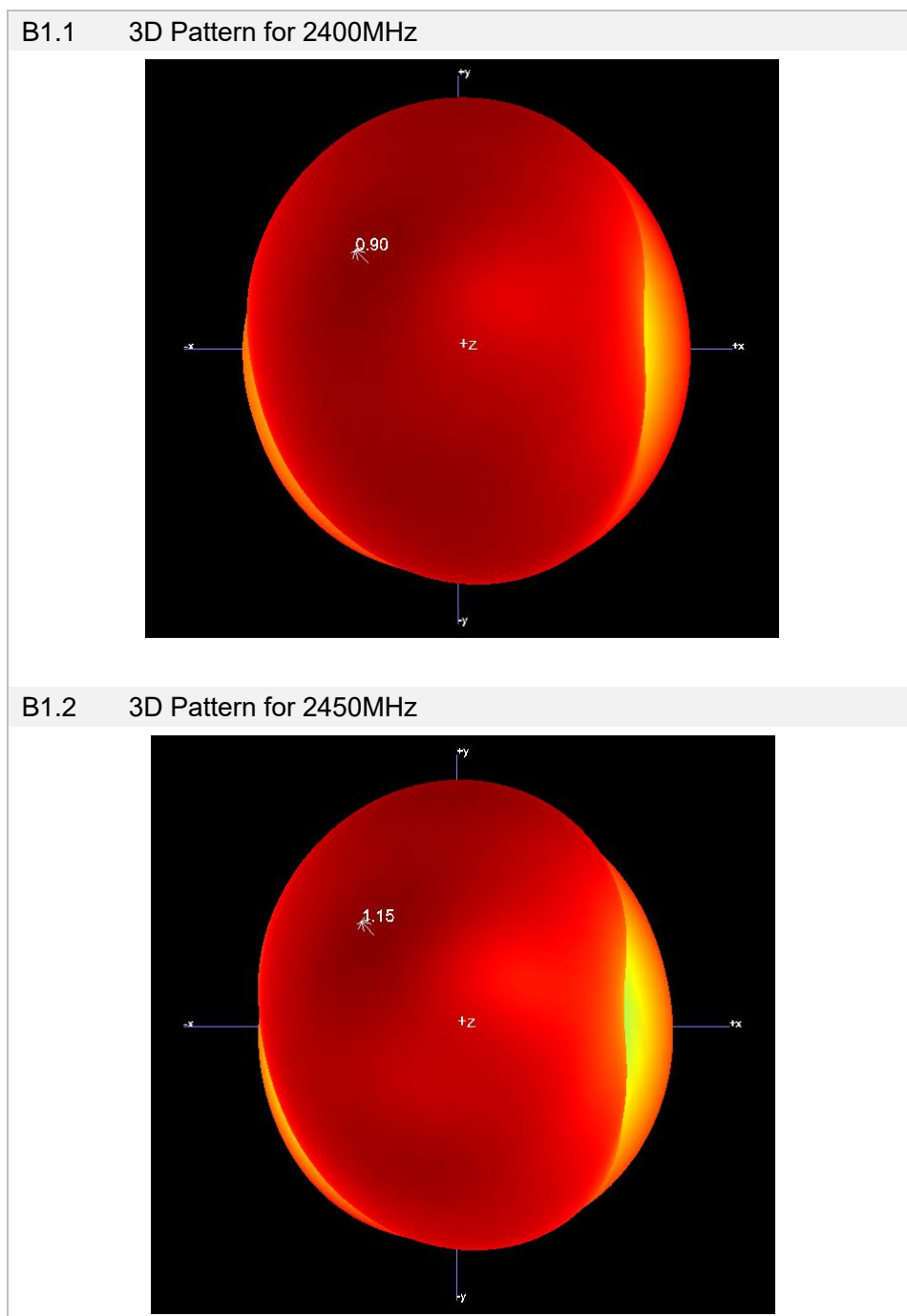
A.2 VSWR

Frequency	VSWR
2400MHz	1.39
2450MHz	1.39
2500MHz	1.53

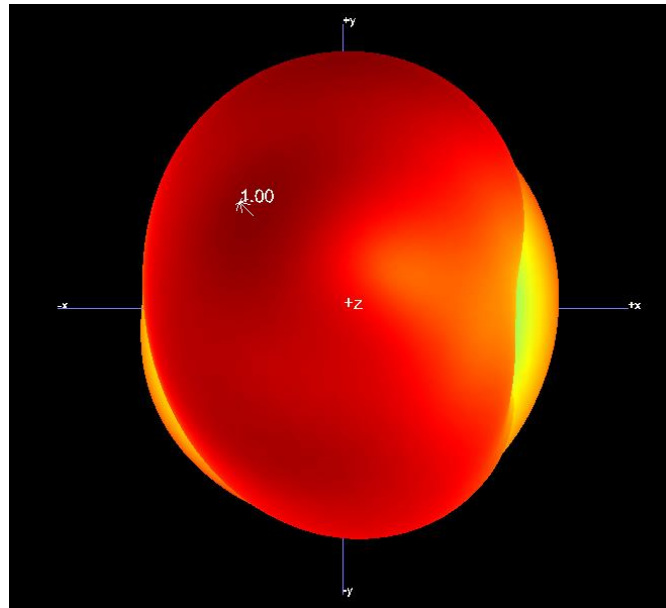


ANNEX B RADIATION PATTERN

B.1 3D Pattern

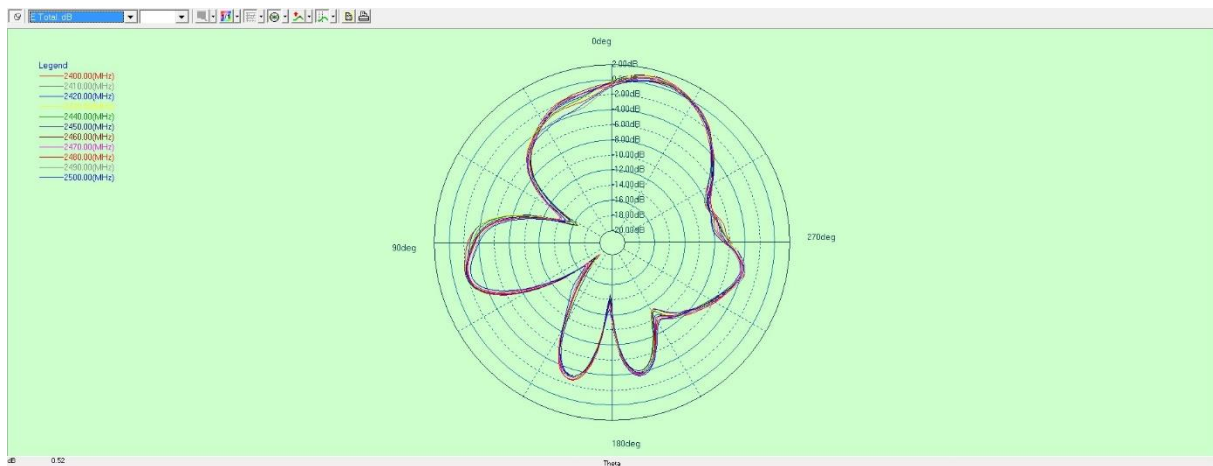


B1.3 3D Pattern for 2500MHz

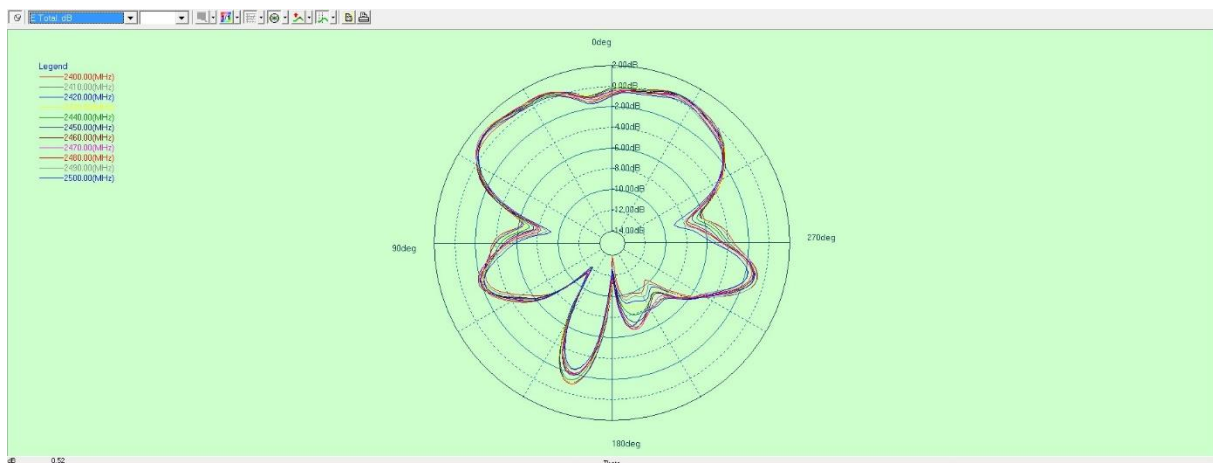


B.2 1D Radiation Pattern

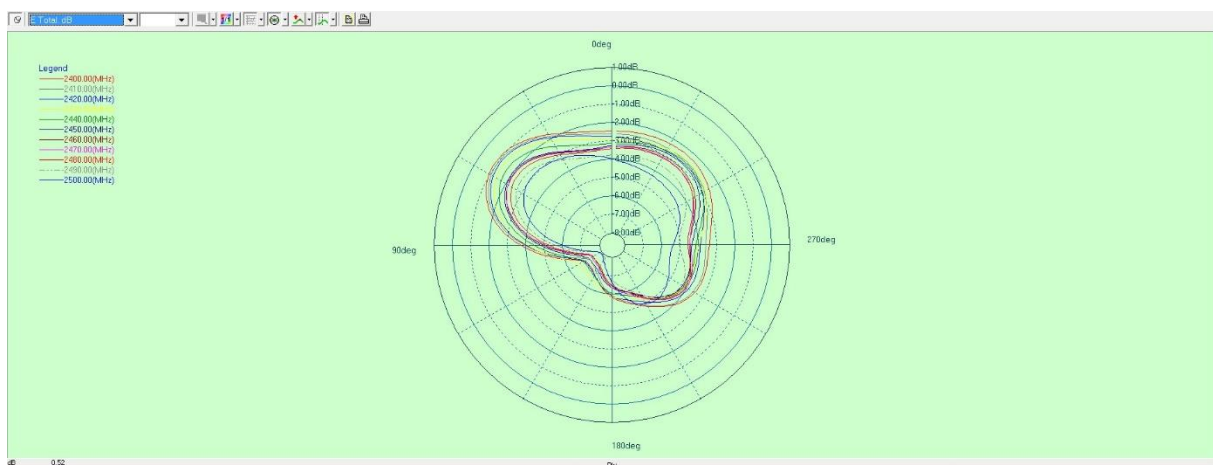
B.2.1 PHI=0



B.2.2 PHI=90



B.2.3 THETA=90



ANNEX C TEST SETUP PHOTOS

Please refer the document “BL-SZ23A0289-AO.PDF”.

ANNEX D EUT PHOTO

Please refer the document “BL-SZ23A0289-AA.PDF”.

Statement

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--END OF REPORT--