

Antenna Gain Test Report

Test Lab	CVTE Test Lab
Client Address:	2No. 6, Yunpu 4th Road, Huangpu District, Guangzhou City
Product Name :	M2BU
Manufacture :	Hefei Shiyan Electronic Technology Co., Ltd.No.6621, Xiygy Road, Economic and Technological DevelopmentZone, Hefei, Anhui, PR.China
Antenna Type :	PCB Antenna
Project Engineer:	LinYiXiong
Test Standard :	ANSI/IEEE std 149-2021
Test Date :	2025.11.21

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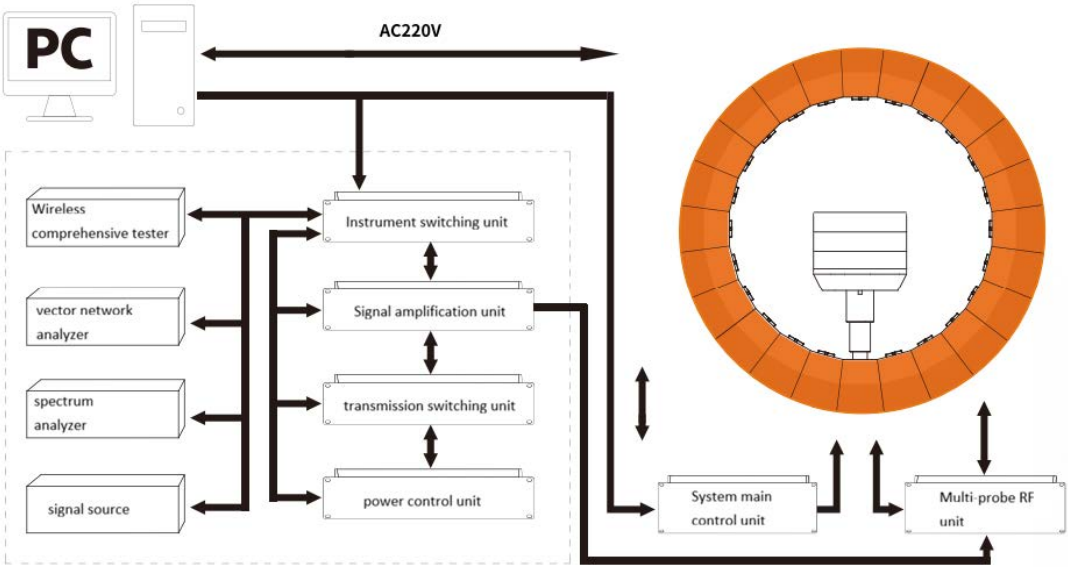
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1 Test Equipment Information

Equipment	Manufacturer	Mode No.	Serial No.	Cal date	Cal Due
Chamber	XH-IOE	ATS260	XH240406	2025.09.08	2026.09.08
Antenna	SUNYIELD	Standard antenna	SH800-005	2025.09.08	2026.09.08
Test Software	XH-IOE	XH-ACTIVE V3.9.0	-	2025.09.08	2026.09.08
Network Analyzer	Agilent	E5071B	MY46105450	2025.09.08	2026.09.08

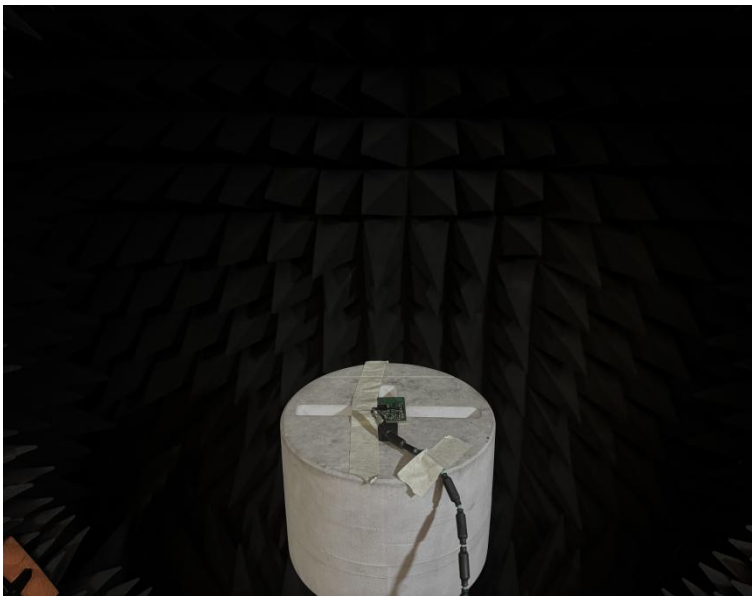
2 Setup block diagram



3 Test environment

Temperature: 25.5°C

Humidity: 56.1%



4 Test Step Flow and test standard

- 1) Maintain the test ambient temperature of $25\pm 2^{\circ}\text{C}$
- 2) Turn on the darkroom power supply, connect the test cable, and set up the sample according to the standard;
- 3) Outline sets the test content objectives and conducts calibration tests;
- 4) Run the software, when the test is completed, export the corresponding test diagram and test data, and save to the corresponding directory.
- 5) The following are the test standards.

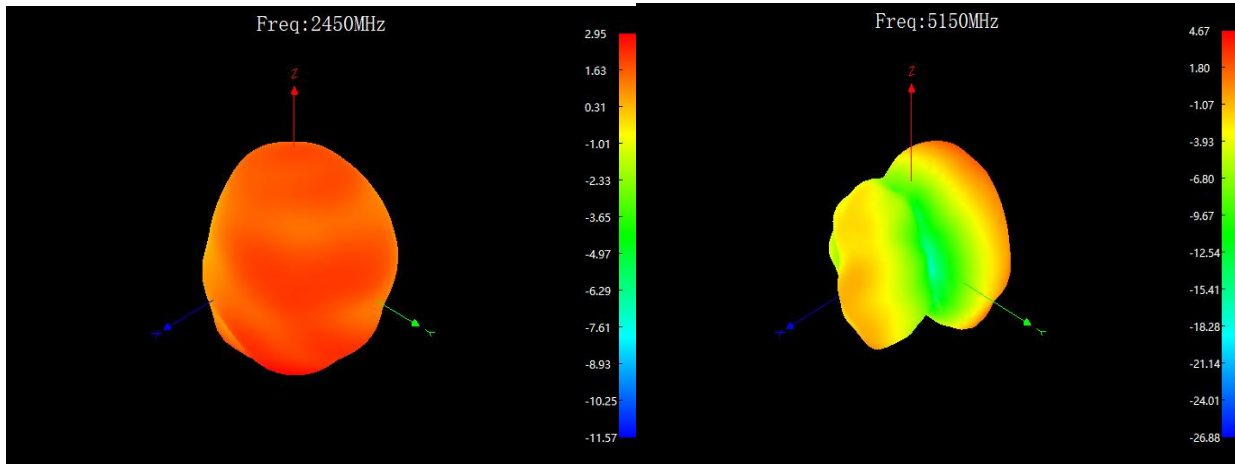
Name	Parameter	Method	Standard no.
Antenna performance	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149- 2021

5 Test Result

software version: symana-base-m2b_1.20.0-115-g26840644-red

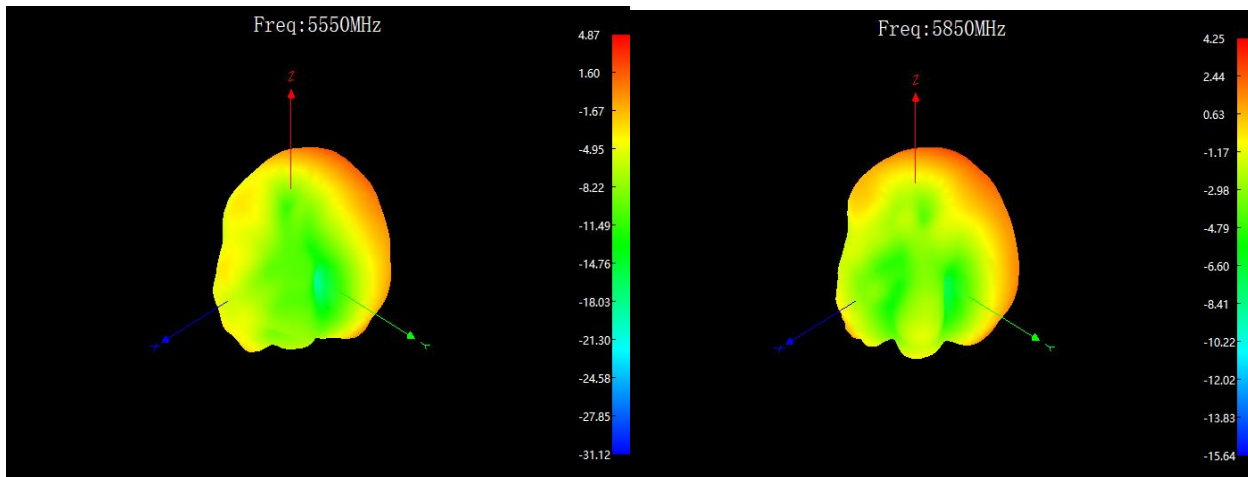
Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	75.16	2.58
2410	79.43	2.72
2420	78.52	2.98
2430	74.82	2.68
2440	74.99	2.71
2450	78.52	2.95
2460	74.99	2.63
2470	72.61	2.43
2480	75.86	2.83
2490	73.28	2.35
2500	73.28	2.56
AVG	75.59	2.67
5000	79.07	4.94
5050	70.79	4.54
5100	71.94	4.78
5150	66.37	4.67
5200	65.46	5.04
5250	59.84	4.79
5300	64.27	5.26
5350	60.95	5.06

5400	64.71	5.23
5450	61.52	4.67
5500	66.53	5.13
5550	61.66	4.87
5600	67.14	4.96
5650	63.39	4.34
5700	67.61	4.59
5750	61.66	4.43
5800	65.61	4.6
5850	61.24	4.25
5900	65.01	4.51
AVG	65.51	4.77



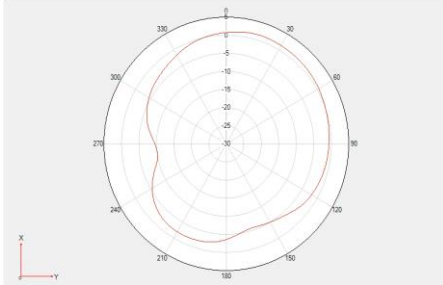
Total 3D Plot(Fre.2440MHz)

Total 3D Plot(Fre.5150MHz)

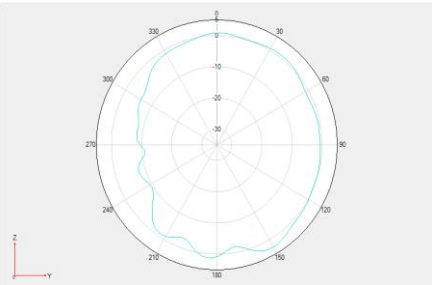


Total 3D Plot(Fre.5550MHz)

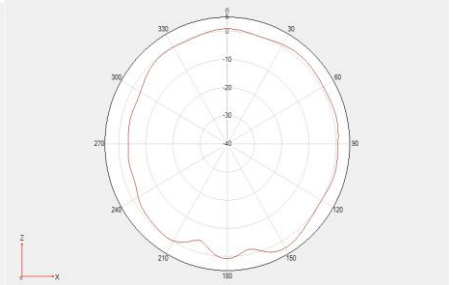
Total 3D Plot(Fre.5850MHz)



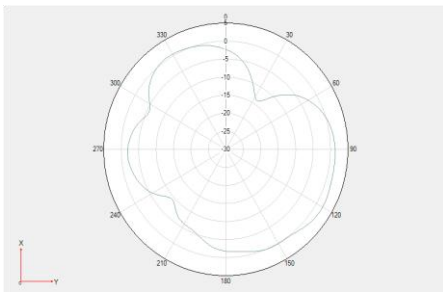
2440 2D theta90°



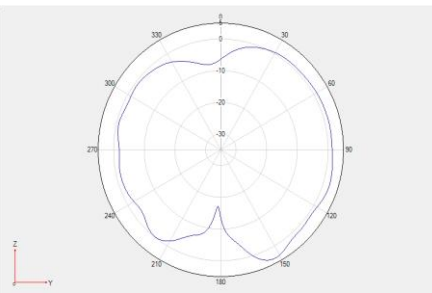
2440 2D phi90°



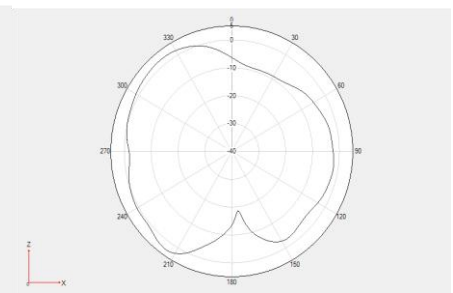
2440 2D phi0°



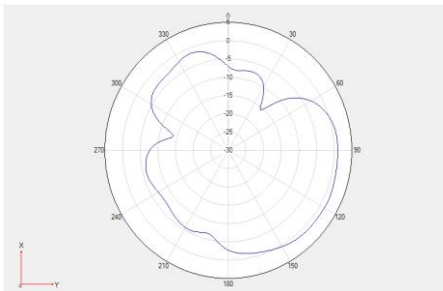
5150 2D theta90°



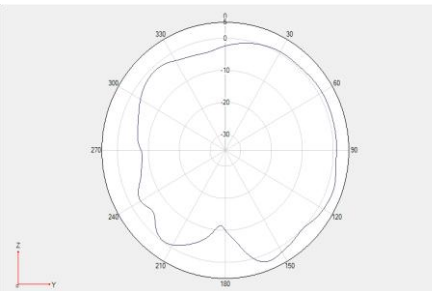
5150 2D phi90°



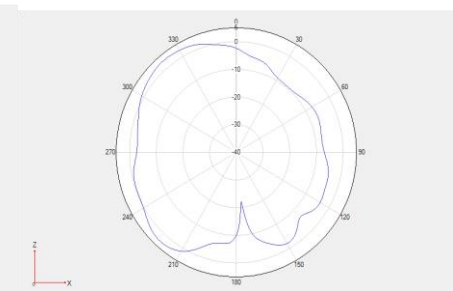
5150 2D phi0°



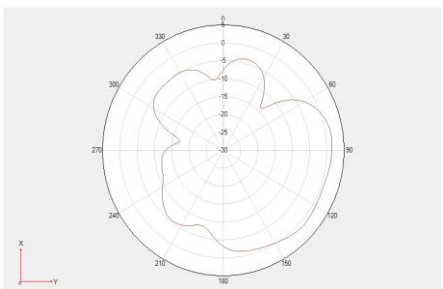
5550 2D theta90°



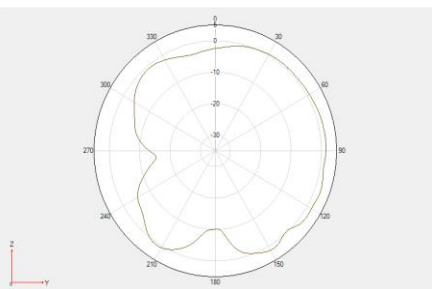
5550 2D phi90°



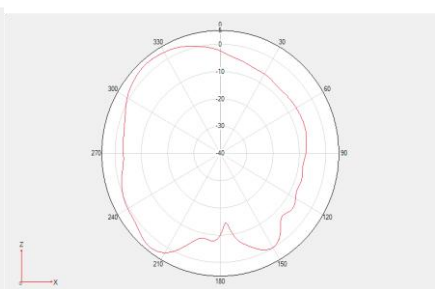
5550 2D phi0°



5850 2D theta90°

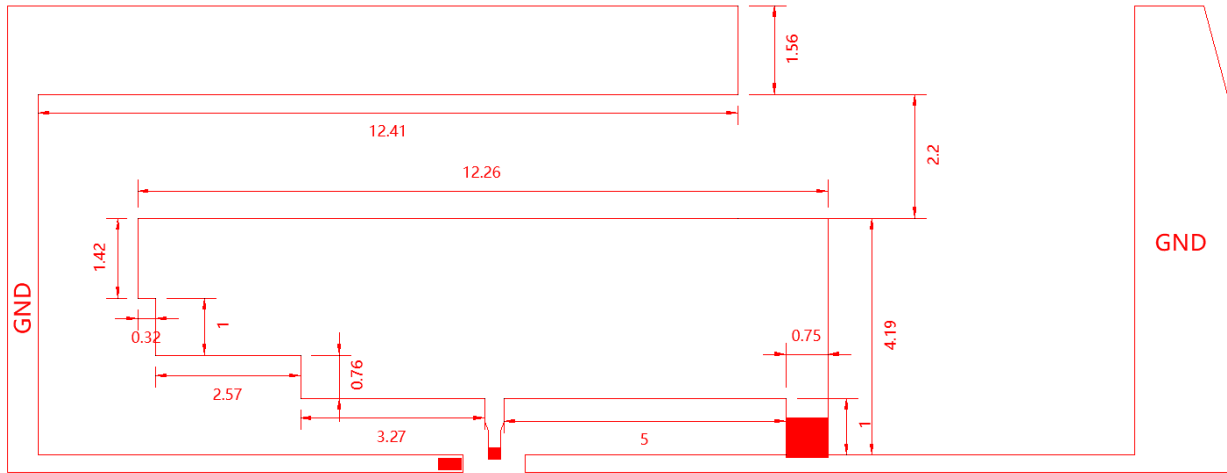


5850 2D phi90°



5850 2D phi0°

6 Antenna Dimensio



7 Photo



Please refer to Antenna setup photo.

END OF REPORT