

Antenna Gain Test Report

Test Lab	Xinyi Test Lab
Client Address:	230, Zhihui Creative Complex Building, No. 2, 99 Industrial City, Xihuan Road, Shajing Street, Baoan District, Shenzhen
Product Name:	M2B
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:	SamZhang
Test Standard:	ANSI/IEEE std 149-2021
Test Date:	2024.09.20

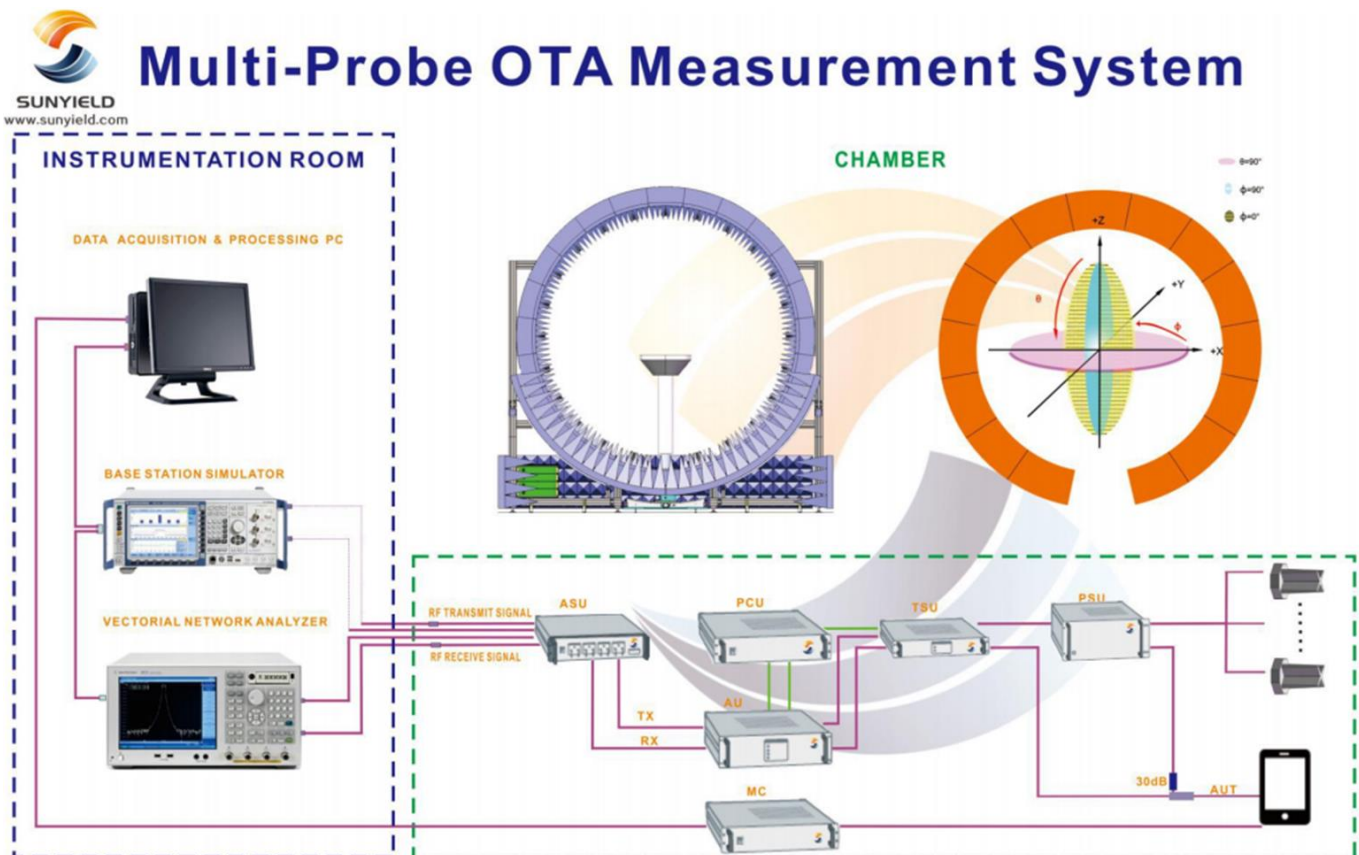
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1 Test Equipment Information

Equipment	Manufacturer	Mode No.	Serial No.	Cal date	Cal Due
Chamber	SUNYIELD	191043155HW	SY-16	2024.01.20	2025.01.19
Antenna	SUNYIELD	Standard antenna	SH800-005	2024.01.20	2025.01.19
Test Software	SUNYIELD	PMSV2.8.7_240117-i-s	-	-	-
Network Analyzer	Agilent	E5071B	MY46105450	2024.06.19	2025.06.20

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3 Test Temperature and Humidity

Temperature: 23.5°C

Humidity: 56.1%

4 Test Step Flow

- 1) Maintain the test ambient temperature of 23 ± 2 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 Test Result

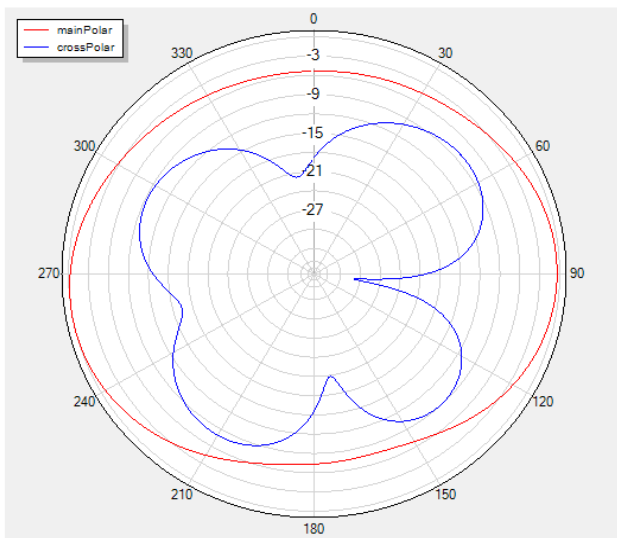
Frequency (MHz)	Efficiency (%)	Gain (dBi)
2400	75.49	1.18
2410	88.17	1.98
2420	79.25	1.64
2430	75.52	1.41
2440	80.87	1.83
2450	76.15	1.57
2460	75.13	1.47
2470	80.82	1.86
2480	79.55	1.95
2490	72.85	1.41
2500	79.7	1.73
5000	62.93	3.11
5050	67.13	3.16
5100	65.35	3.36
5150	71.93	3.57
5200	72.51	3.93
5250	81.68	4.15
5300	81.21	4.82
5350	83.3	4.72

5400	77.76	4.42
5450	82.61	4.41
5500	76.6	4.26
5550	73.71	4.14
5600	68.29	3.84
5650	74.2	4.13
5700	71.02	4.01
5750	63.4	3.66
5800	61.02	3.56
5850	55.55	3.14
5900	55.31	3.17

Polarization Pattern Photos

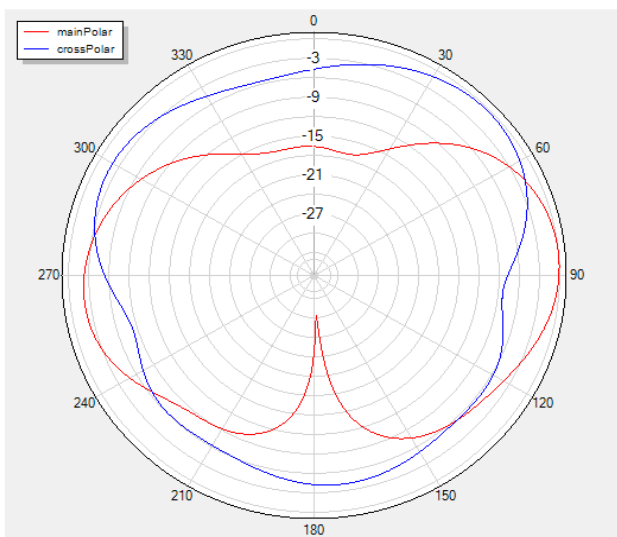
Theta Polarization 2440MHz(Theta Angle=90°)

Theta=90 freq=2440MHz



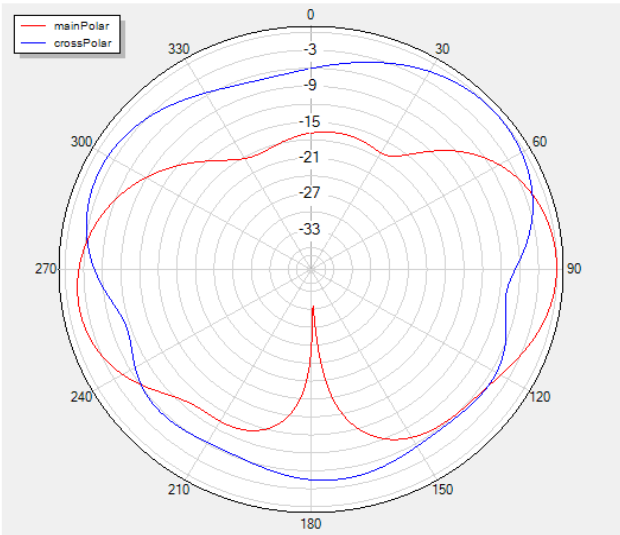
Theta Polarization 5150MHz(Theta Angle=90°)

Theta=90 freq=5150MHz



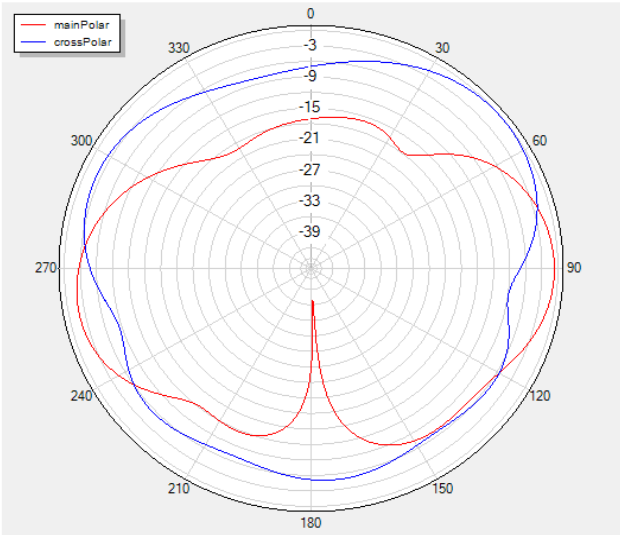
Theta Polarization 5350MHz(Theta Angle=90°)

Theta=90 freq=5350MHz



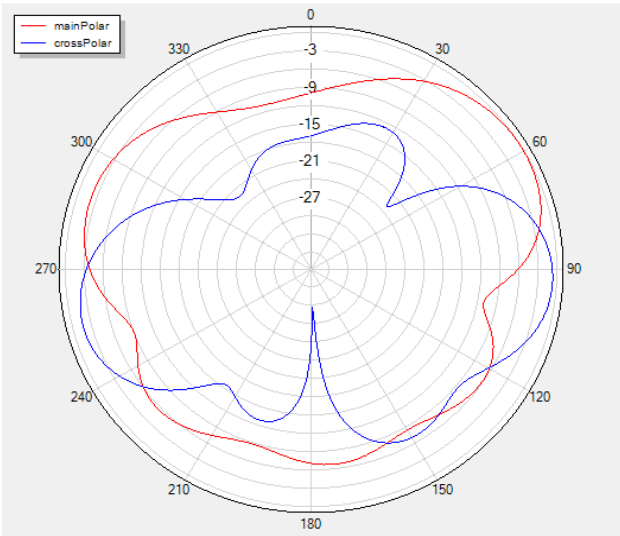
Theta Polarization 5550MHz(Theta Angle=90°)

Theta=90 freq=5500MHz



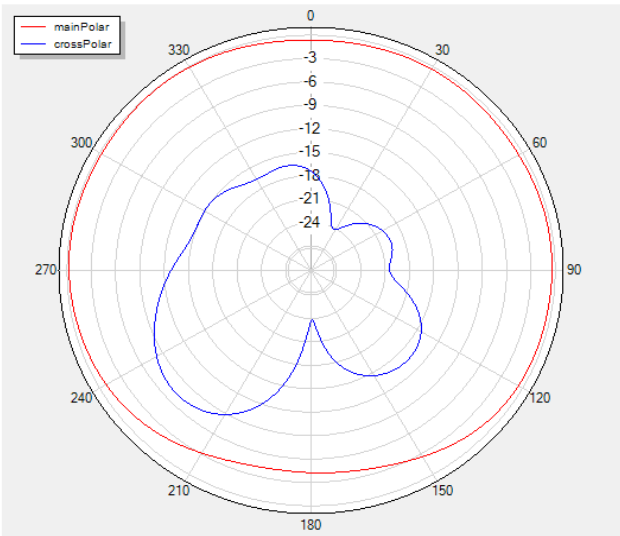
Theta Polarization 5850MHz(Theta Angle=90°)

Theta=90 freq=5850MHz



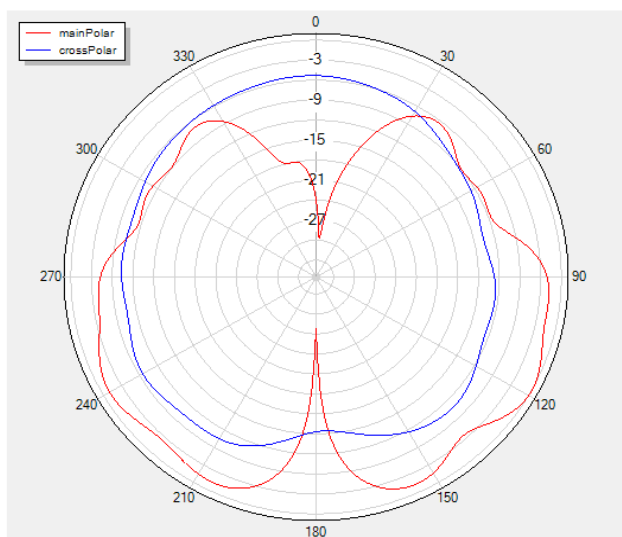
Phi Polarization 2440MHz(Phi Angle=90°)

Phi=90 freq=2440MHz



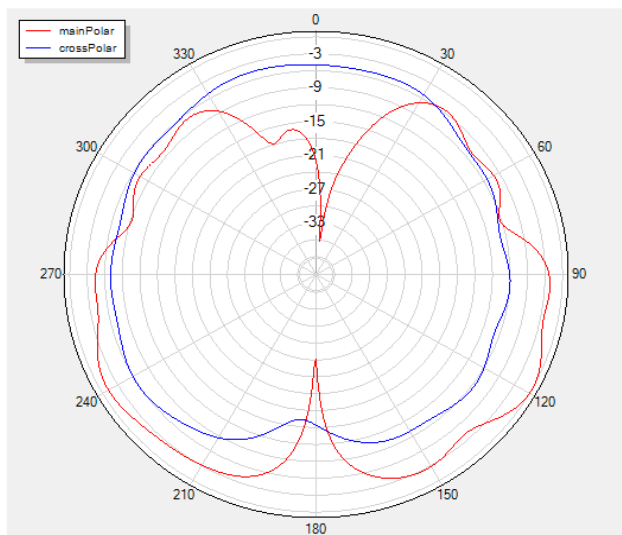
Phi Polarization 5150MHz(Phi Angle=90°)

Phi=90 freq=5150MHz



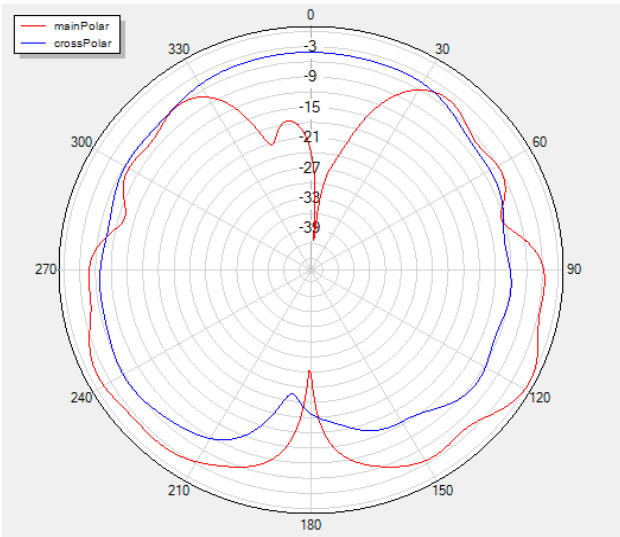
Phi Polarization 5350MHz(Phi Angle=90°)

Phi=90 freq=5350MHz



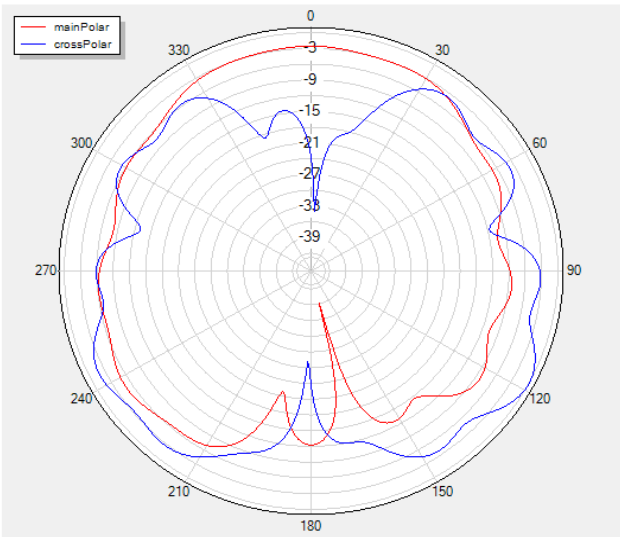
Phi Polarization 5500MHz(Phi Angle=90°)

Phi=90 freq=5500MHz

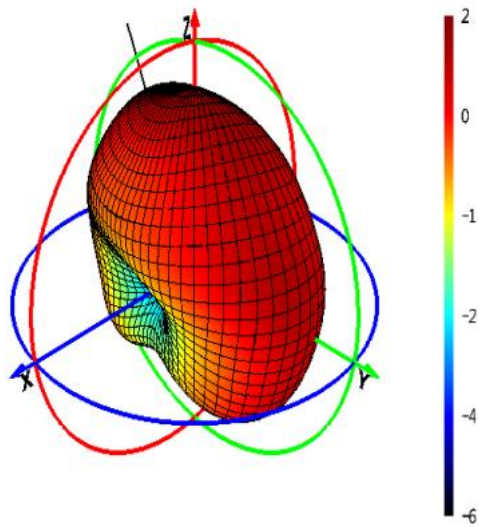


Phi Polarization 5850MHz(Phi Angle=90°)

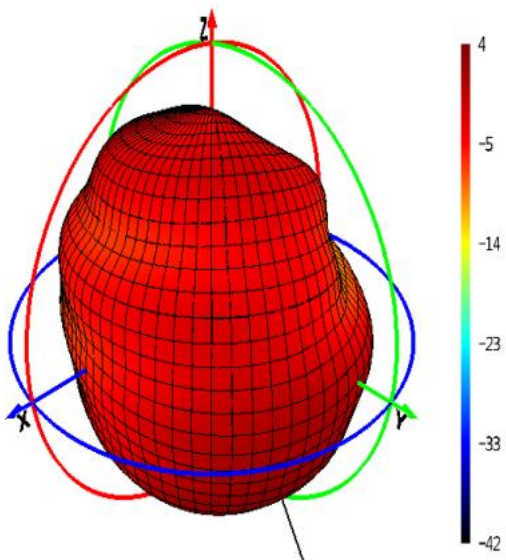
Phi=90 freq=5850MHz



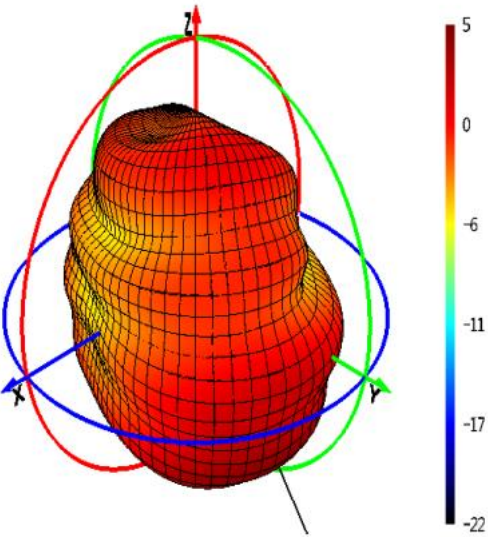
Total 3D Plot(Fre.2440MHz)



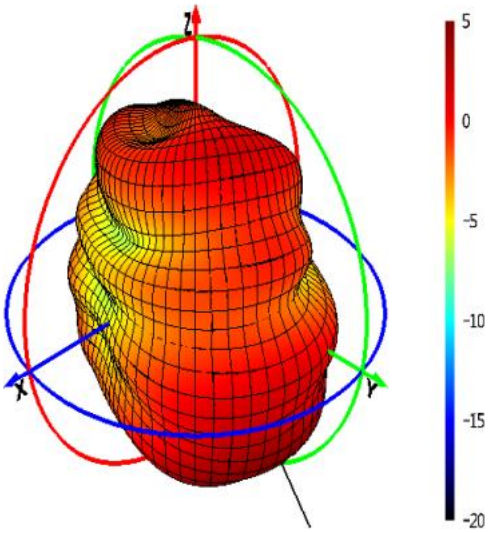
Total 3D Plot(Fre.5150MHz)



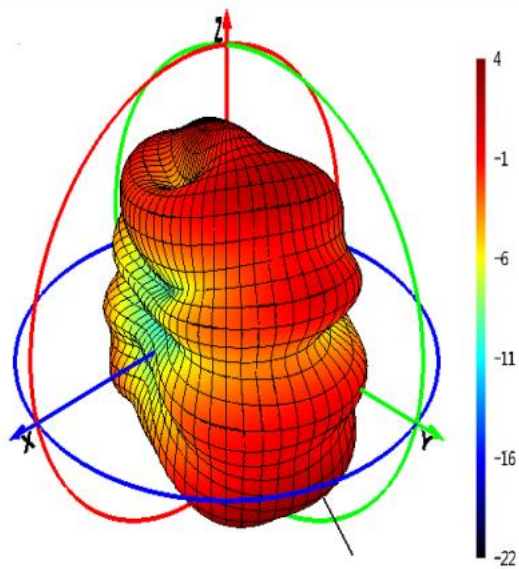
Total 3D Plot(Fre.5350MHz)



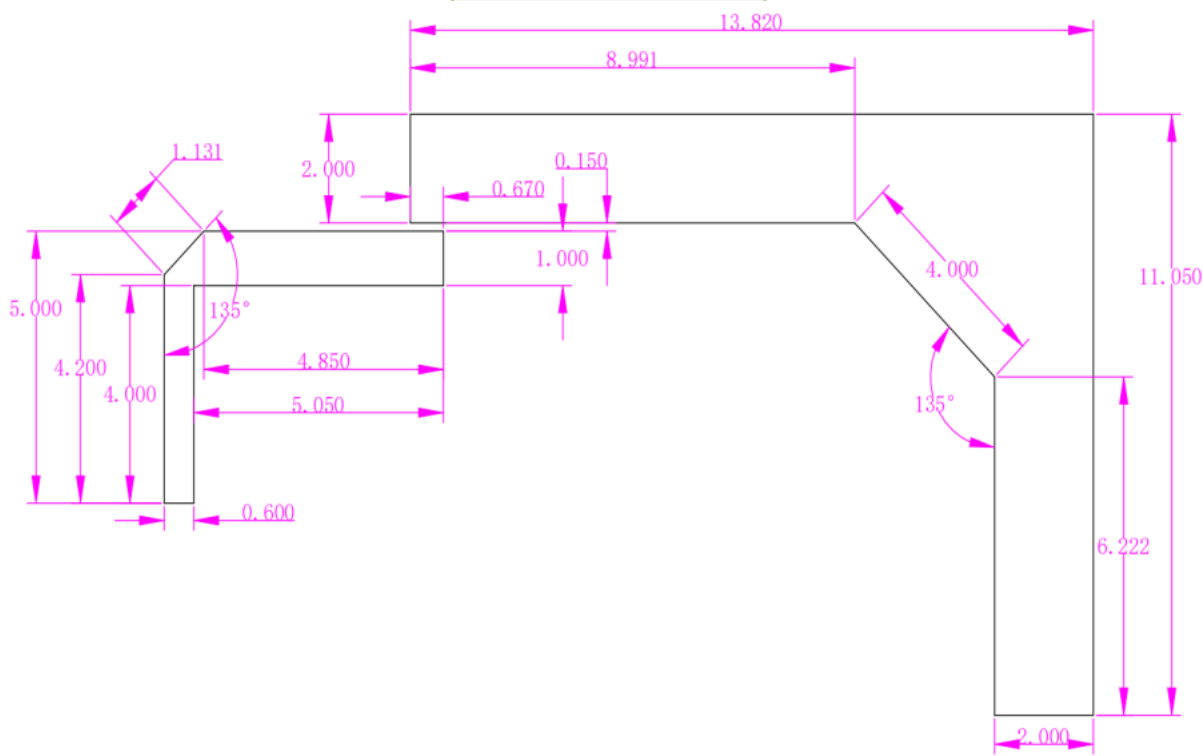
Total 3D Plot(Fre.5500MHz)



Total 3D Plot(Fre.5500MHz)



6 Antenna Dimension



7 Photo

Please refer to Antenna setup photo.

END OF REPORT