Shenzhen Yesheng Communication Technology Co.,Ltd

Specification for built-in Antenna

上海慧银信息科技有限公司

Q3V GWB Antenna Product Confirmation

Client	上海慧银信息科技有限公司	**Freq-Band**	**GPS/WIFI/BT**
Product Name	**Q3B**	**Version**	YST-V1.0-A
Item Number	Q3B-GWB-ANT2	**Copies**	**3**
Sample type	**PIFAAntenna**	**Colour**	**Black**
Max Gain	**1.62dBi**	**Structural design**	
Department Manager		**Date**	**August 1，2023**
Client confirms：			

Producer: Ying Jia Bing

Address: Room 3010-3011, Building 34, Chentian Industrial Zone, Xixiang Street, Bao'an District, Shenzhen. Tel: 0755-22678821 fax: 0755-22678890

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1. Technical Information

1.1 Testing company

Testing company:	Shenzhen Yesheng Communication Technology Co.,Ltd
Test address:	Room 3010-3011, Building 34, Chentian Industrial Zone, Xixiang Street, Bao'an District, Shenzhen.
Test date:	**August 1，2023**

1.2Test information

WireLess type:	GWB Antenna
Frequncy:	1561MHz-1575MHz、 2400MHz-2500MHz、
Sample NO:	1#
Product Name	Q3B

2. Antenna

2.1 Picture of antenna and prototype

Q3B-GWB Antenna Machines Picture

2.2 Antenna specifications

1、Antenna Composition:

GWB Antenna:

FPC black, silk screen: YST Q3B-GWB-ANT1 and YST Q3B-GWB-ANT2,

welded coaxial line 0.81 mm * 59.5mm, wire black

2、Packing Method

GWB Antenna, diversity antenna, GWB antenna, packaged and shipped.

2.3 Test Conditions

1、Test Environment Conditions：

Darkroom humidity：	25...75%
Darkroom temperature	（18-25）°C

3. Antenna Test

3.1、Test Environment：

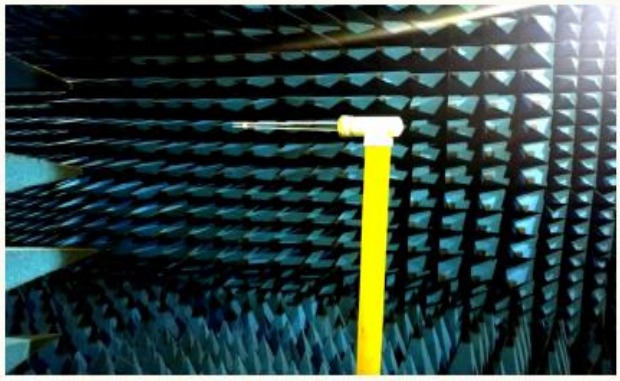
Test was conducted in free space condition (microwave unreflected chamber).

Satimo 3D Chamber 6×4×4(m)

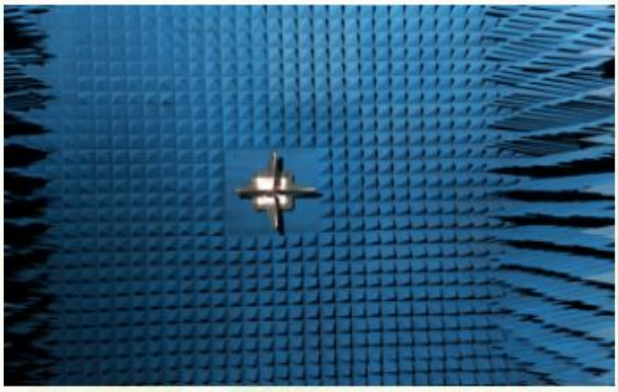
gilent 8960 8753ES CMW500

twork analyzer-R&S ZVL

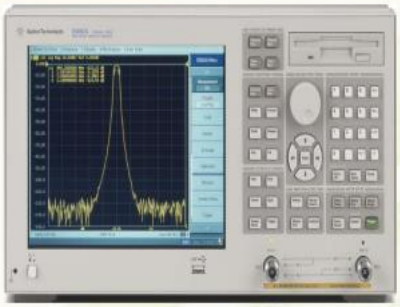
ETS



SATIMO--24



罗德斯瓦茨屏蔽箱



测试系统	有缘测试	无源测试
SATIMO ETS	支持2G/3G/4G	600MHZ-----6G

3.2、 The turn of VSWR test equipment connection is：

R&S ZVLwork analyzer→ test line→Test fixture→ actual measurement（See figure）。

3.3、Gain,efficiency,power（TRP）,sensitivity（TIS）：

microwave unreflected chamber：

test frequency range 400MHz—6GHz，Quiet zone range is 50cm around，reflectivity less than-50 dB

3.4、Test instrument

R&S ZVL work analyzer、Agilent8960 8753ES CWM500 Standard horn antenna etc。

4. Points to notea

This antenna is only suitable for debugging prototype, any change of motherboard version or RF MATERIAL, any change of mobile phone accessories (such as camera, screen, speaker, motor, chassis technology, etc.) , must be tested and verified by our company before use.

5. Test Results lists

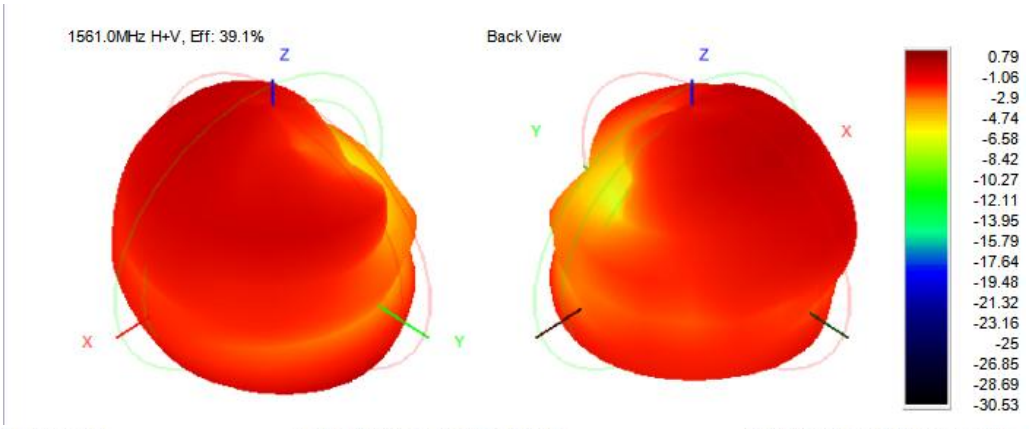
In microwave unreflected chamber，the power and sensitivity are listed below：

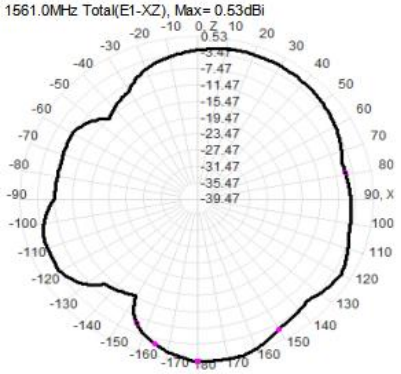
5.1、Gain

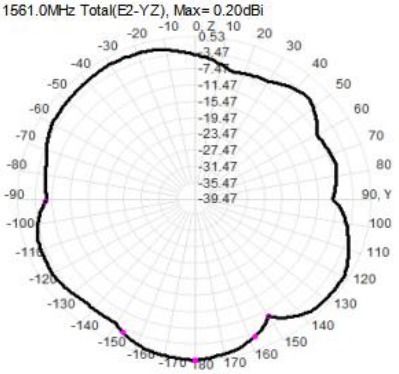
Frequency ID	1	2	3	4	5	6	7	8
Frequency (MHz)	1561.0	1575.0	2400.0	2420.0	2440.0	2460.0	2480.0	2500.0
Efficiency (dBi)	-4.08	-3.92	-4.66	-4.68	-4.69	-4.41	-4.38	-4.44
Gain (dBi)	0.79	0.78	1.58	1.56	1.50	1.61	1.62	1.55
Efficiency (%)	39.11	40.54	34.20	34.06	33.97	36.18	36.49	35.98
Directivity (dB)	4.86	4.70	6.24	6.24	6.19	6.02	6.00	5.99
Peak Gain Position (Theta)	165.00	165.00	105.00	105.00	105.00	105.00	105.00	105.00
Peak Gain Position (Phi)	345.00	345.00	285.00	285.00	285.00	285.00	285.00	285.00
Efficiency ThetaPol (%)	25.87	26.86	25.78	25.13	25.77	27.09	27.24	26.80
Efficiency PhiPol (%)	13.25	13.69	8.42	8.94	8.19	9.10	9.25	9.18
Upper Hem. Efficiency (%)	17.27	18.85	14.86	14.76	14.66	15.54	15.70	15.31
Lower Hem. Efficiency (%)	21.84	21.70	19.34	19.30	19.31	20.65	20.79	20.67

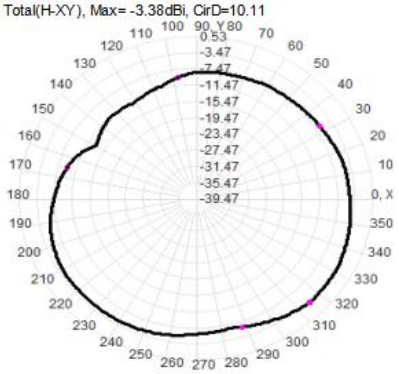
5.2、2D Radiation Pattern

1561MHz

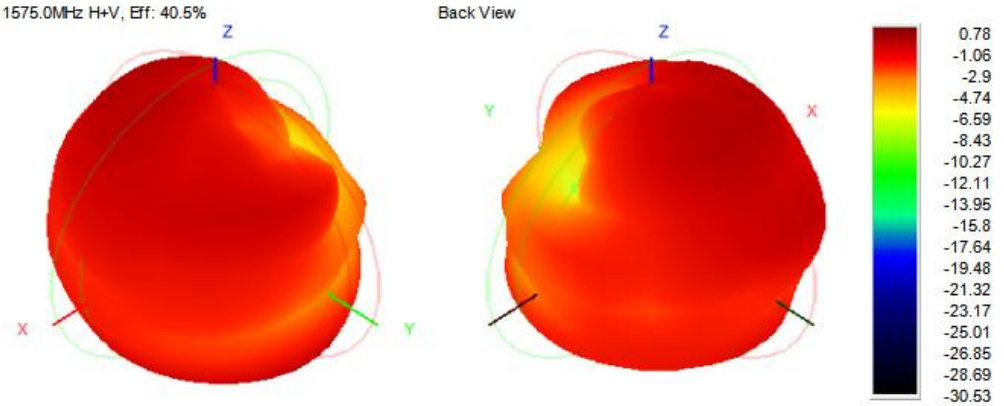


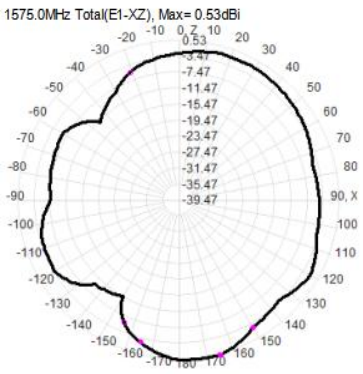


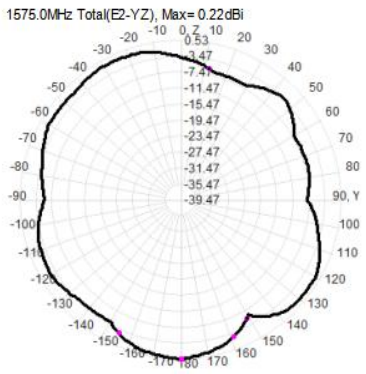


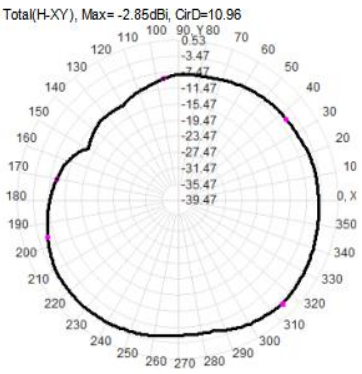


1575MHz









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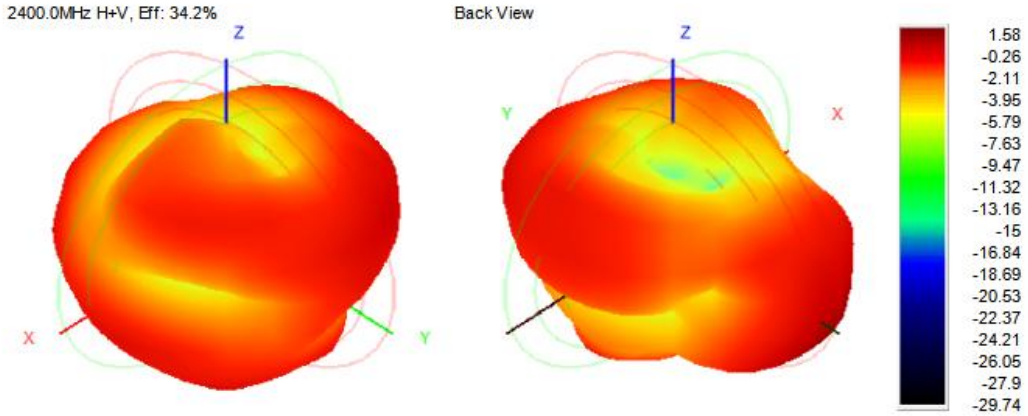
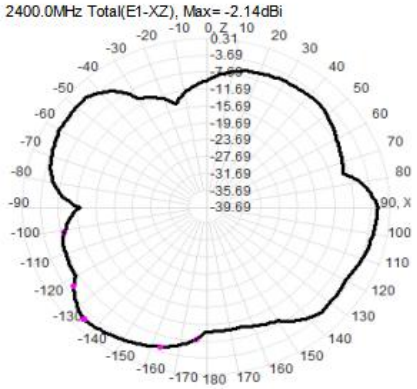
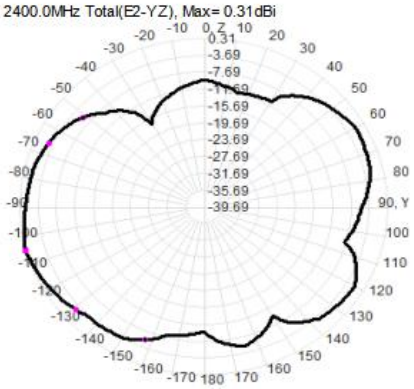
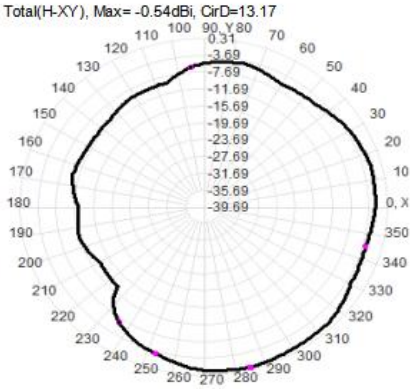
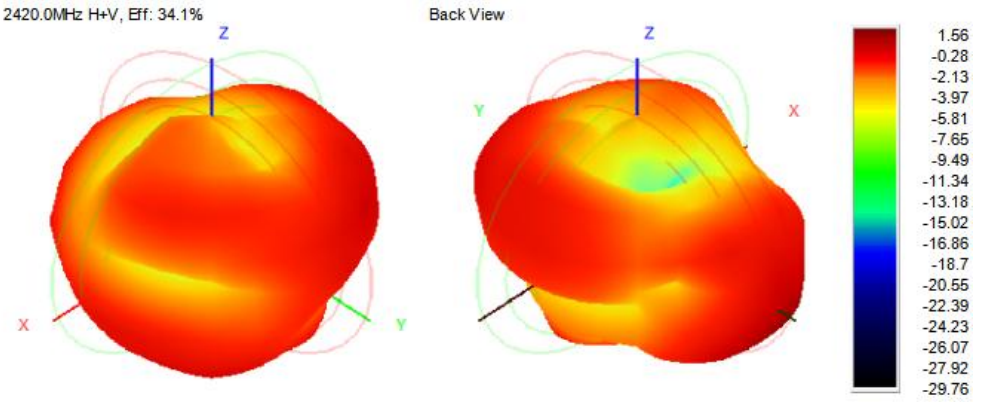


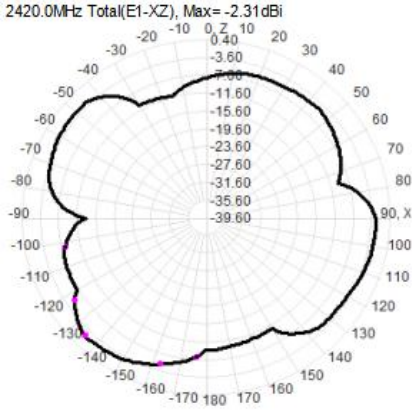


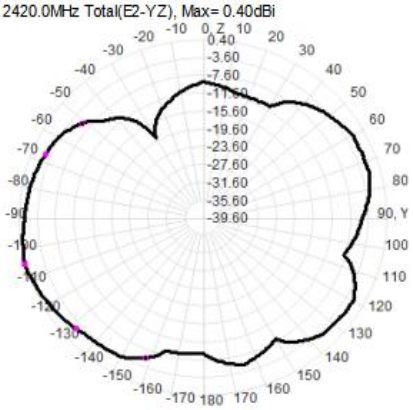


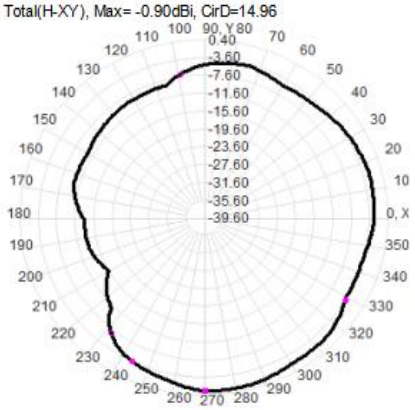


2420MHz

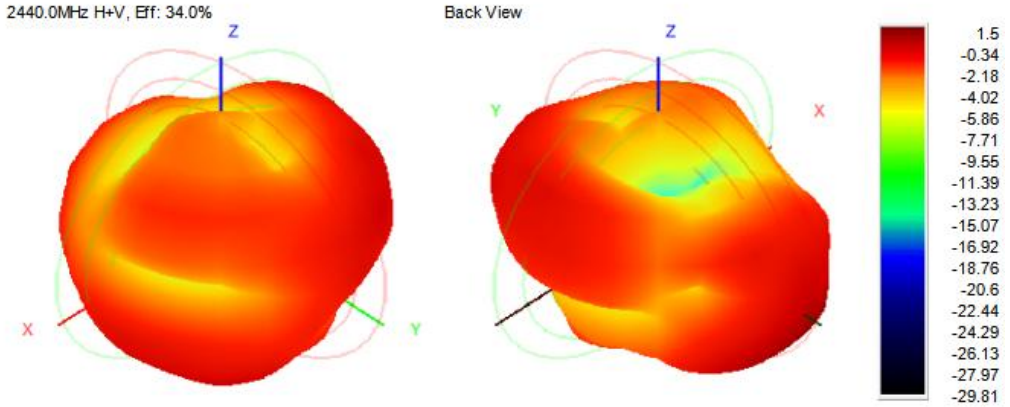


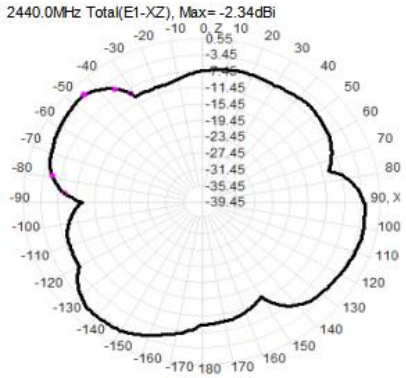


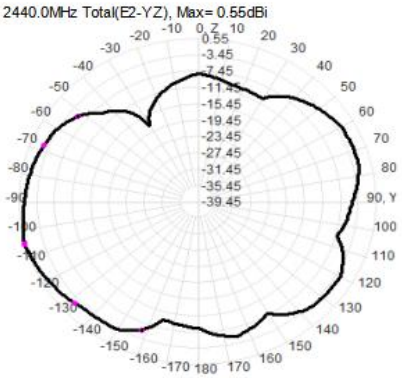


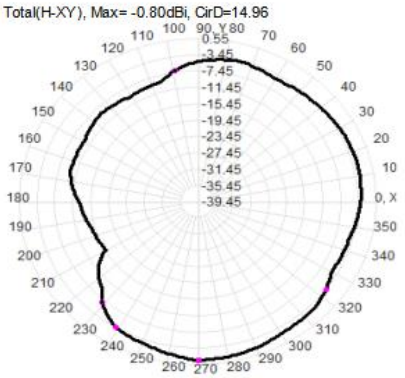


2440MHz

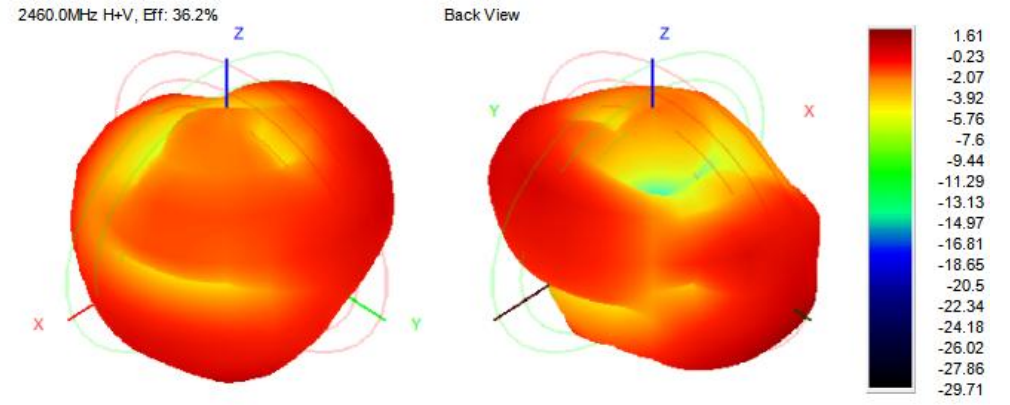


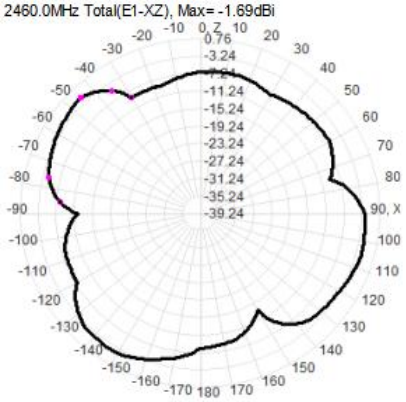


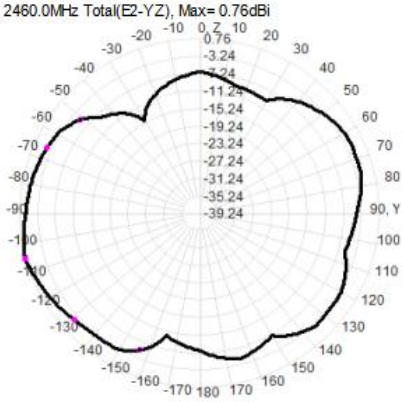


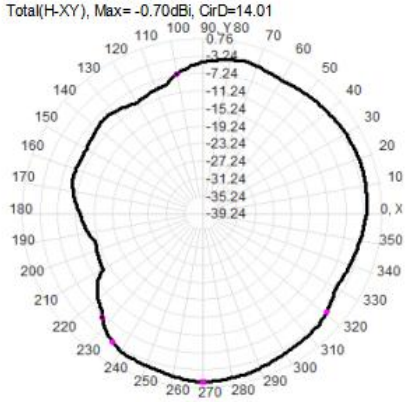


2460MHz

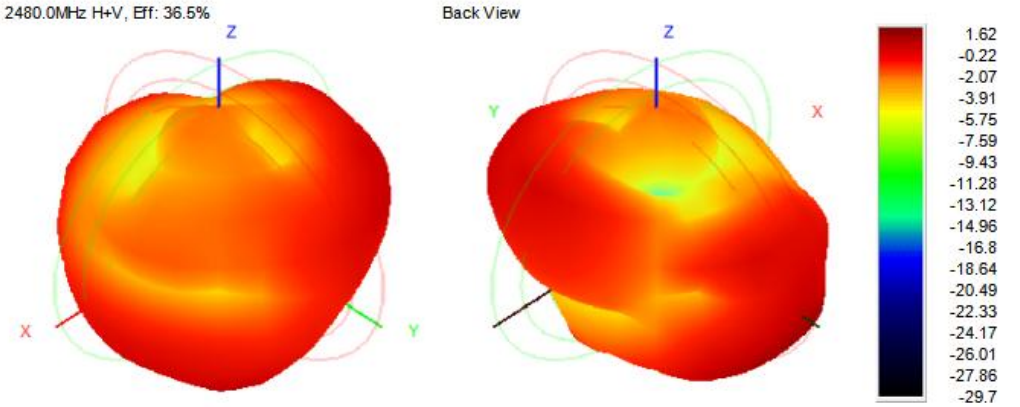


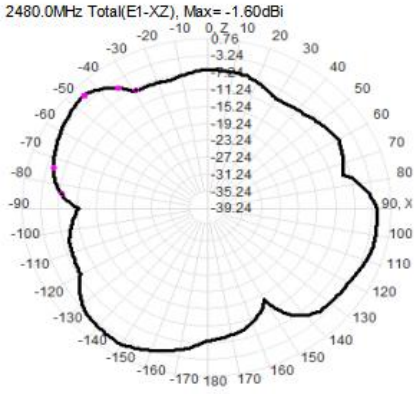


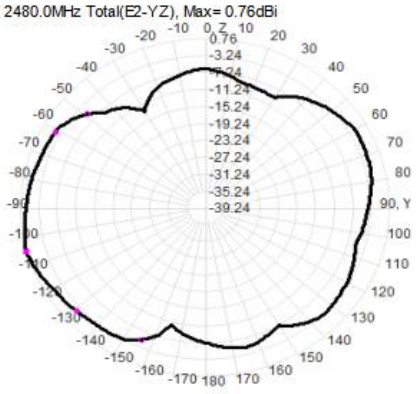


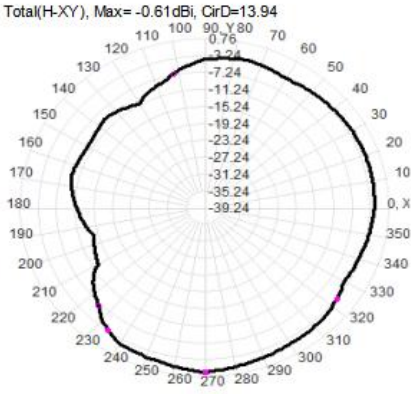


2480MHz

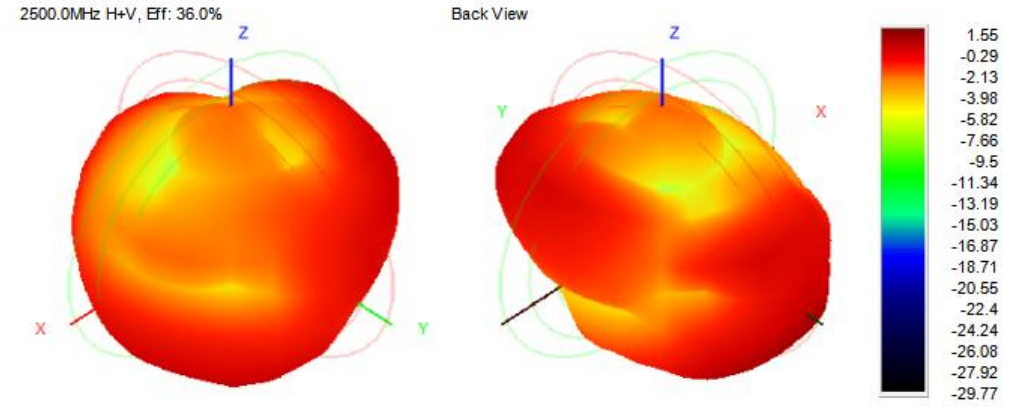


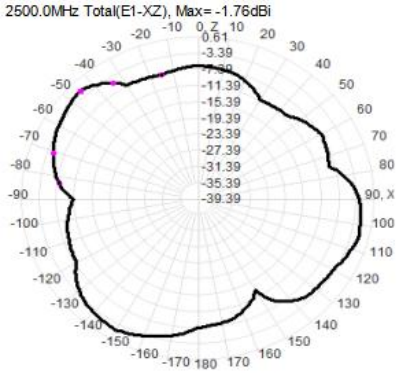


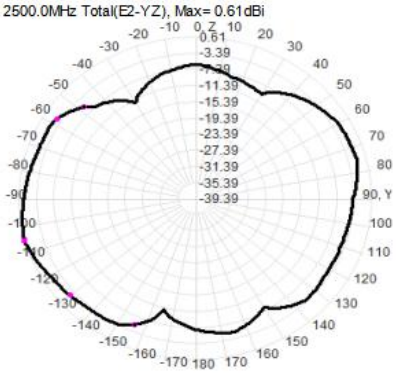


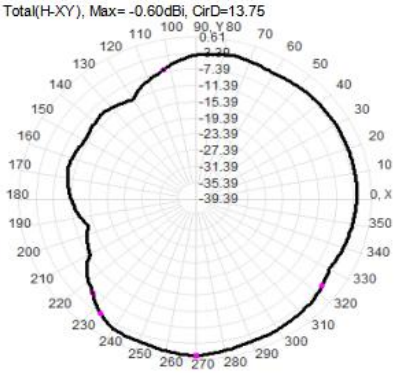


2500MHz

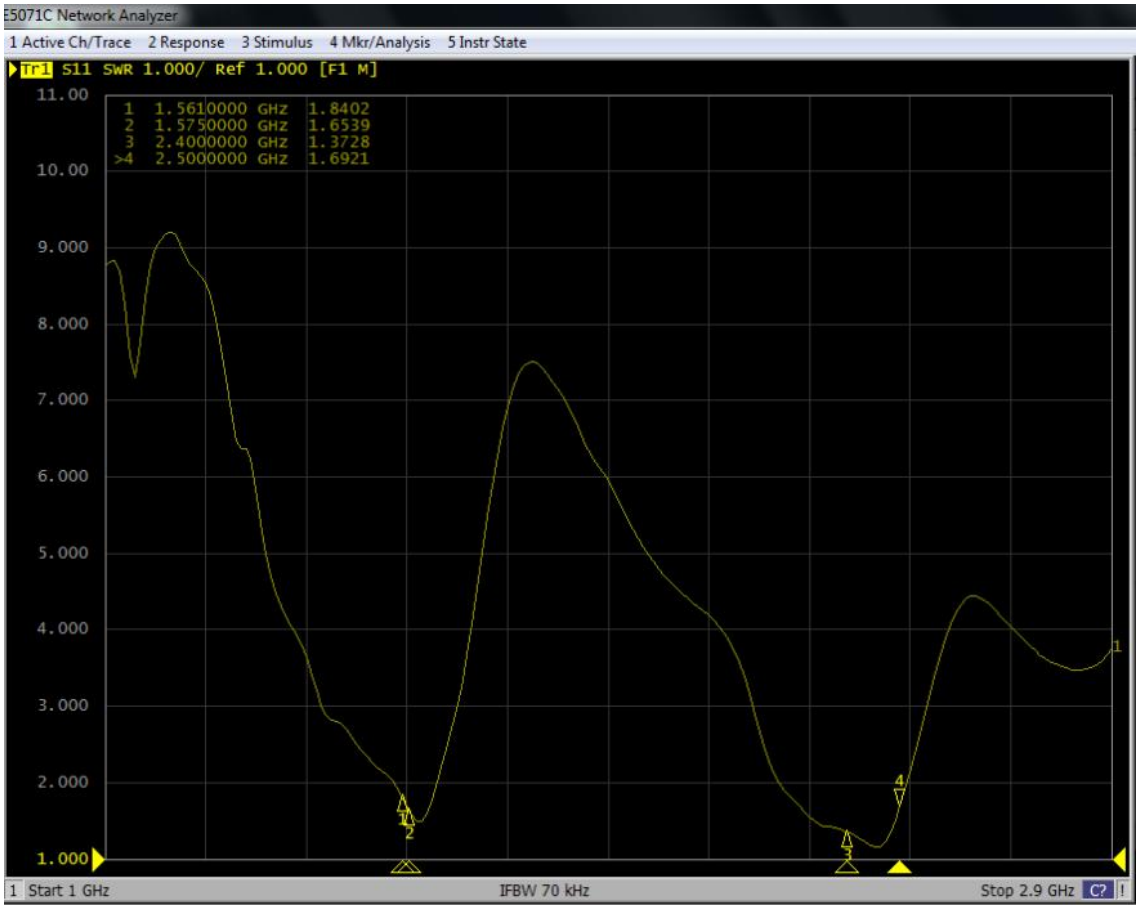




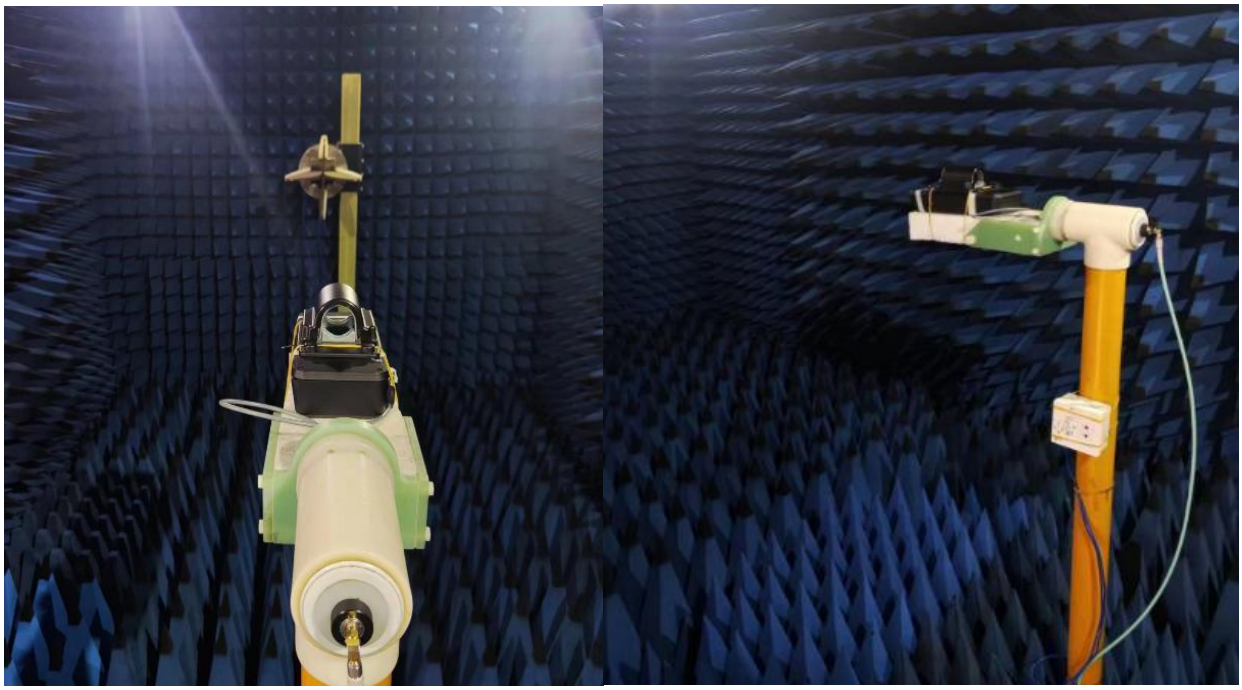




5.3、WSR



6.Test Photographs



6.1、Conclusion

This antenna is designed on the basis of the prototype supplied by the customer. Please confirm that the electrical performance parameters and structure have reached the customer's technology.

7. General Informaion

Testing company:	Shenzhen Yesheng Communication Technology Co.,Ltd
Test address:	3010-3011, Building 34, Chentian Industrial Zone, Xixiang Street, Bao'an District, Shenzhen.
Telephone:	0755-22678821
Facsimile:	0755-22678890

8.Test Equipments Utilized

N0:	Equipement Name	YSTCoding	Models	Brand	Country
1	Network Analyzer	YST001	8753es	Agilent	China
2	Integrated Tester	YST002	8960	Agilent	China
3	Comprehensive Measuring Instrument	YST003	CMW500	R&S	China
4	Test Software	YST004	TES	Fito	China

9.Engineering drawing