



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

1.2 Test information

WireLess type:	GWB Antenna
Frequency:	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:

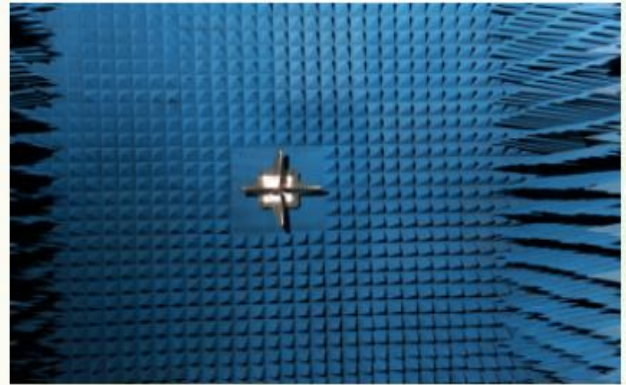
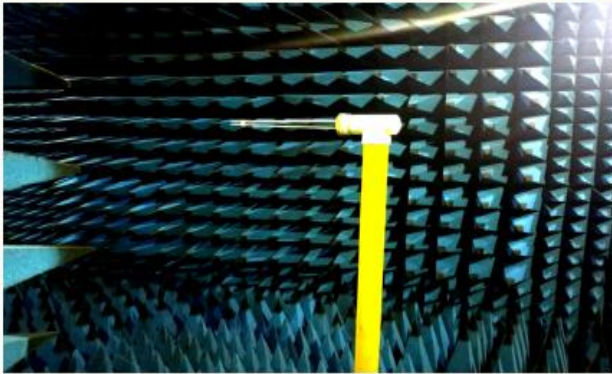
Test was conducted in free space condition (microwave unreflected chamber).

Satimo 3D Chamber 6×4×4(m)

gilent 8960 8753ES CMW500

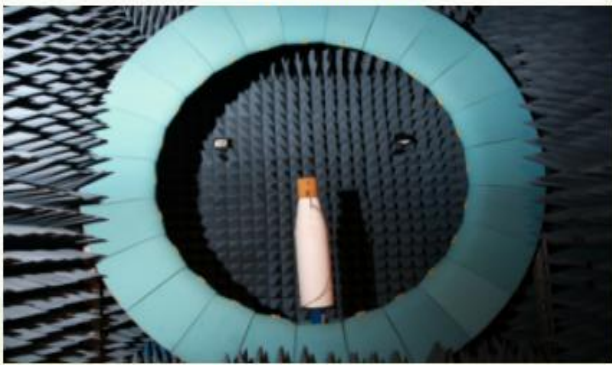
twork analyzer-R&S ZVL

ETS



SATIMO—24

罗德斯瓦茨屏蔽箱



测试系统

有缘测试

无源测试

SATIMO

支持2G/3G/4G

600MHZ——6G

ETS

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

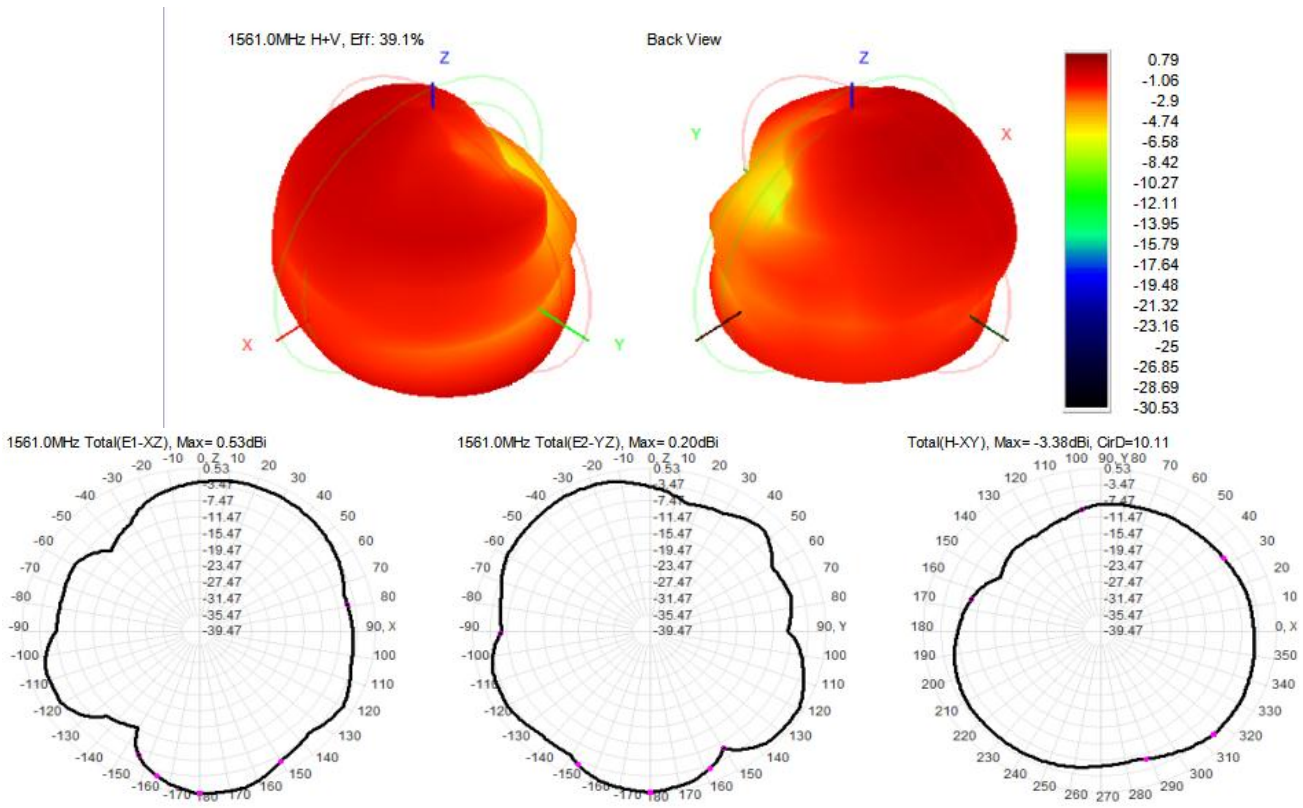
In microwave unreflected chamber, the power and sensitivity are listed below:

5.1、 Gain

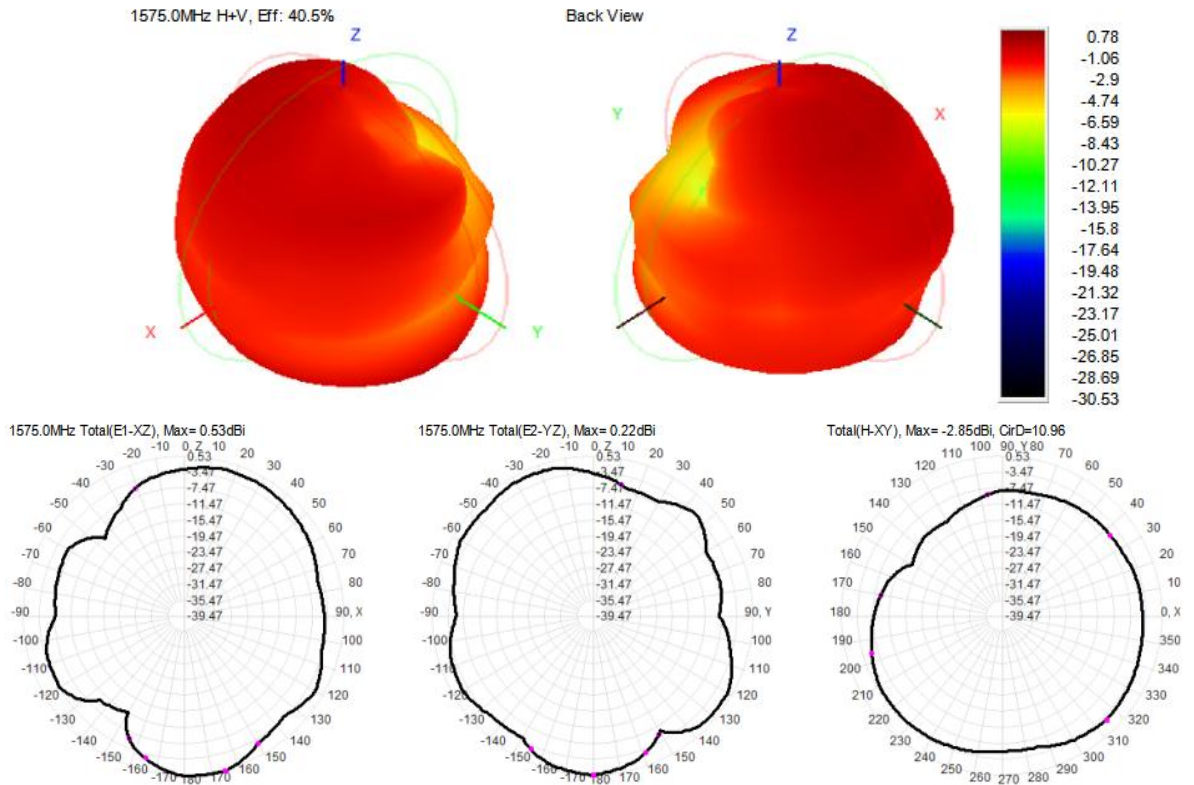
Frequency ID	1	2	3	4	5	6	7	8
Frequency (MHz)	1561.0	1575.0	2400.0	2420.0	2440.0	2460.0	2480.0	2500.0
Efficiency (dBi)	-4.08	-3.92	-4.66	-4.68	-4.69	-4.41	-4.38	-4.44
Gain (dBi)	0.79	0.78	1.58	1.56	1.50	1.61	1.62	1.55
Efficiency (%)	39.11	40.54	34.20	34.06	33.97	36.18	36.49	35.98
Directivity (dB)	4.86	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

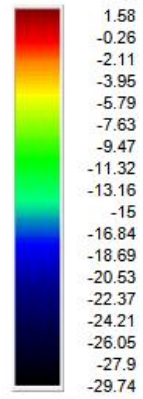
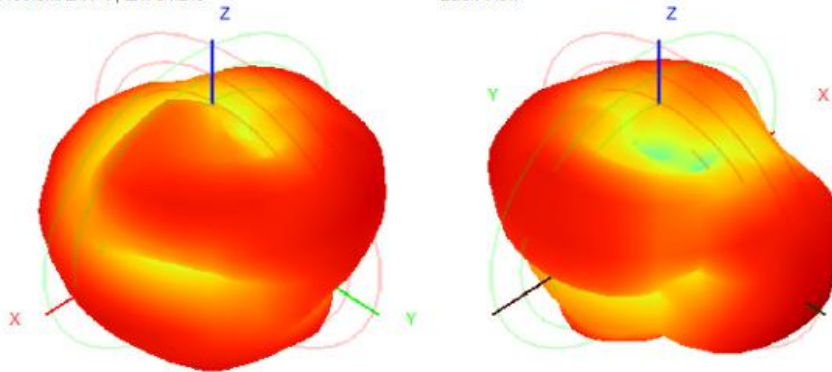


Confidential Information

2400MHz

2400.0MHz H+V, Eff: 34.2%

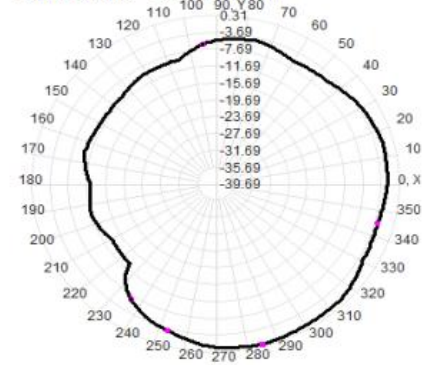
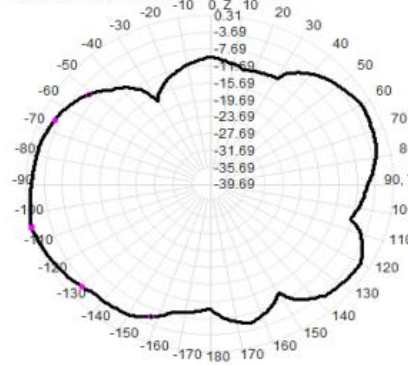
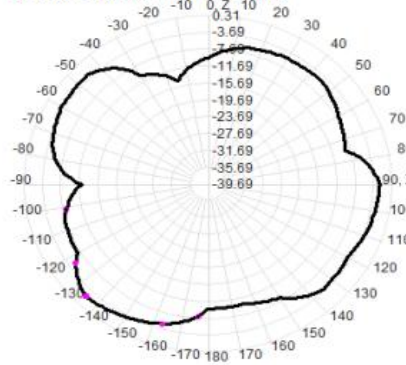
Back View



2400.0MHz Total(E1-XZ), Max=-2.14dBi

2400.0MHz Total(E2-YZ), Max=0.31dBi

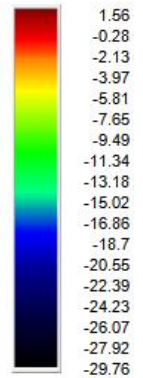
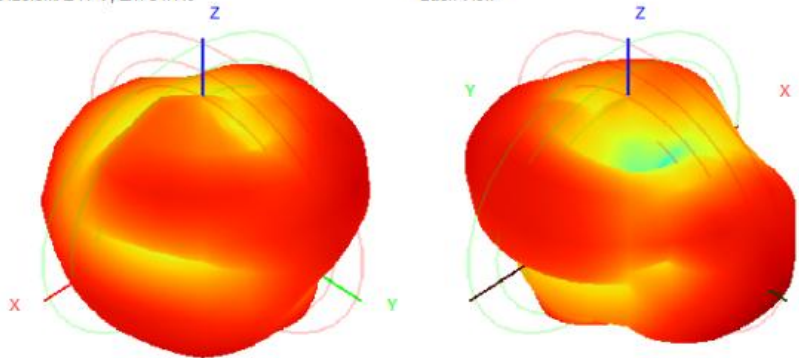
Total(H-XY), Max=-0.54dBi, CirD=13.17



2420MHz

2420.0MHz H+V, Eff: 34.1%

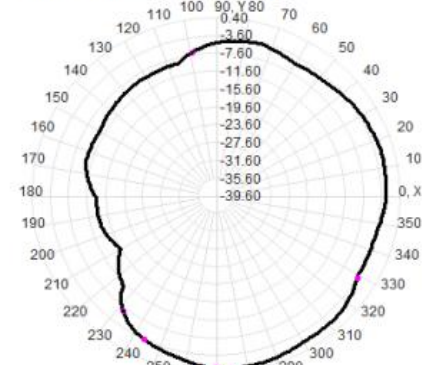
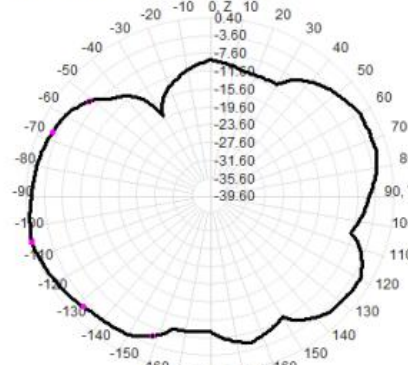
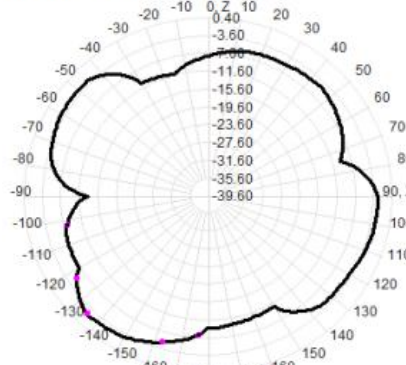
Back View



2420.0MHz Total(E1-XZ), Max=-2.31dBi

2420.0MHz Total(E2-YZ), Max=0.40dBi

Total(H-XY), Max=-0.90dBi, CirD=14.96

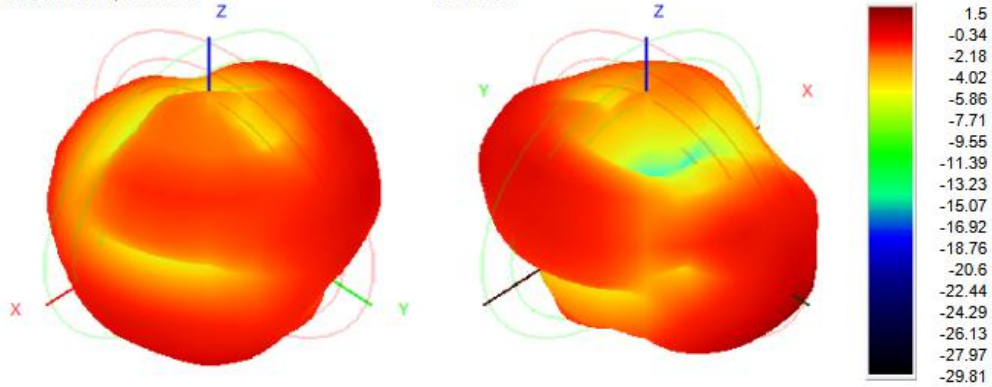


Confidential Information

2440MHz

2440.0MHz H+V, Eff: 34.0%

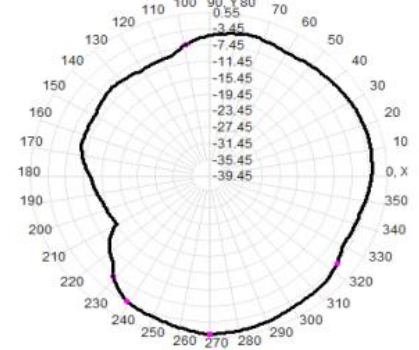
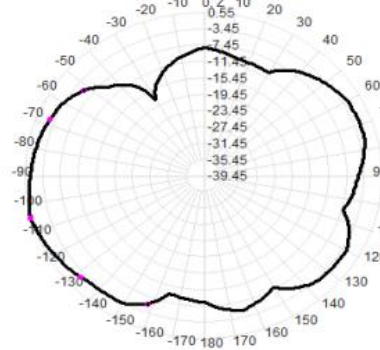
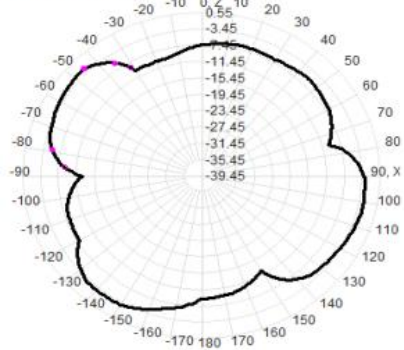
Back View



2440.0MHz Total(E1-XZ), Max=-2.34dBi

2440.0MHz Total(E2-YZ), Max=0.55dBi

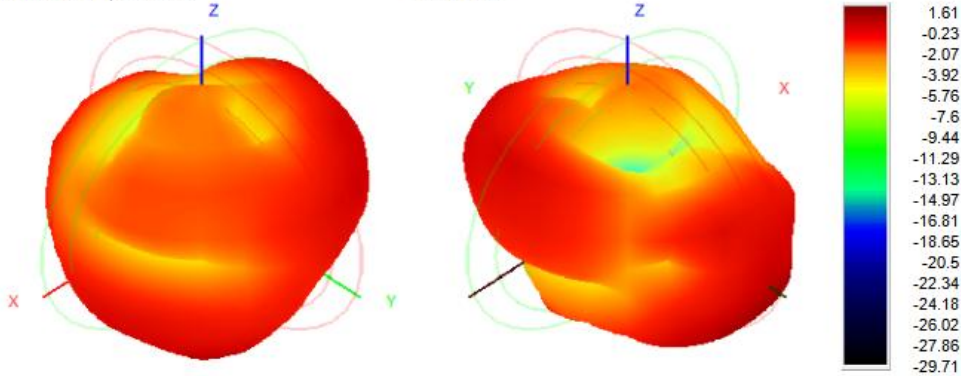
Total(H-XY), Max=-0.80dBi, CirD=14.96



2460MHz

2460.0MHz H+V, Eff: 36.2%

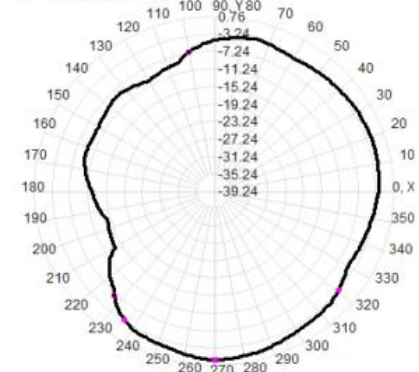
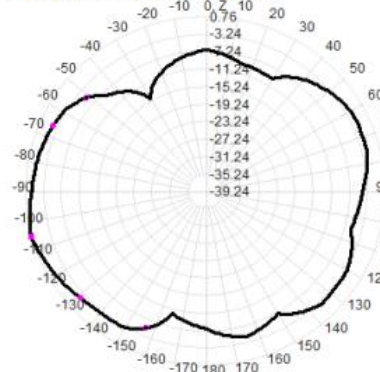
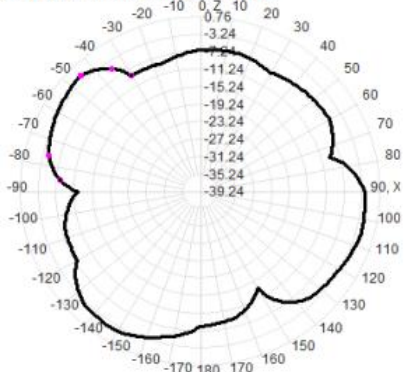
Back View



2460.0MHz Total(E1-XZ), Max=-1.69dBi

2460.0MHz Total(E2-YZ), Max=0.76dBi

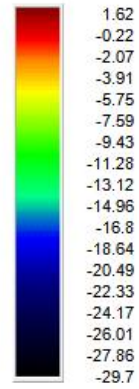
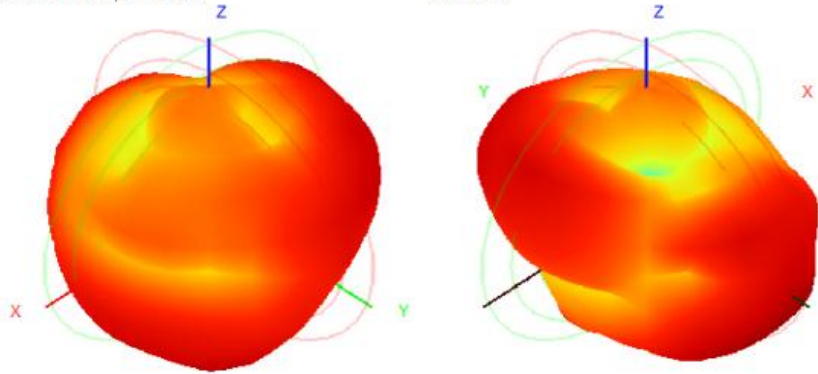
Total(H-XY), Max=-0.70dBi, CirD=14.01



2480MHz

2480.0MHz H+V, Eff: 36.5%

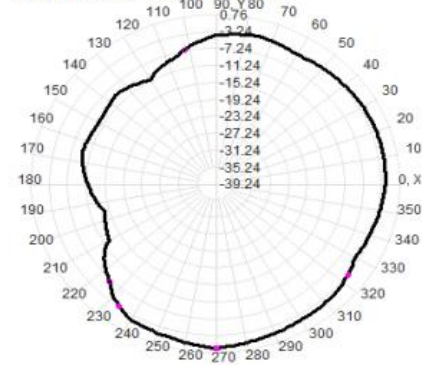
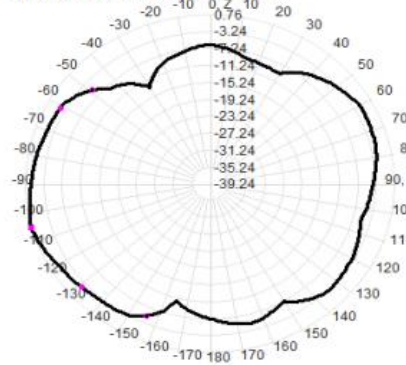
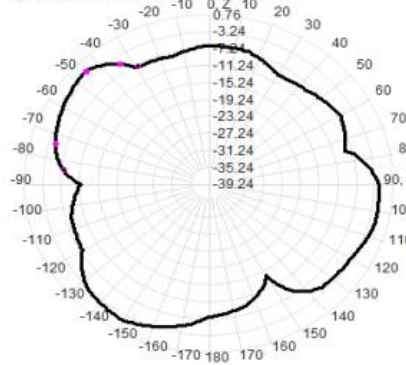
Back View



2480.0MHz Total(E1-XZ), Max=-1.60dBi

2480.0MHz Total(E2-YZ), Max=0.76dBi

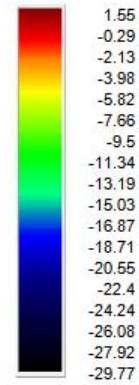
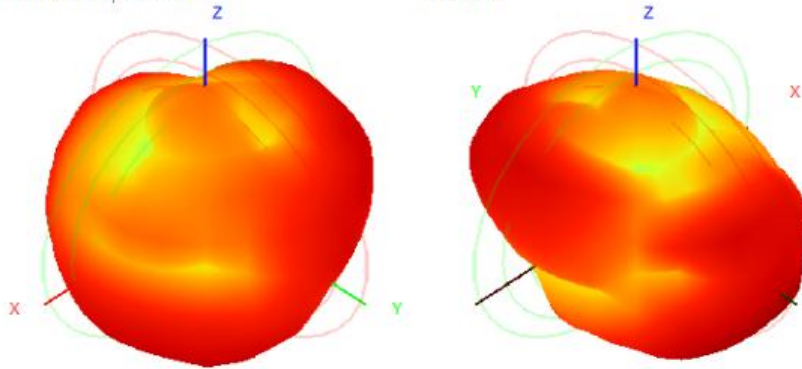
Total(H-XY), Max=-0.61dBi, CirD=13.94



2500MHz

2500.0MHz H+V, Eff: 36.0%

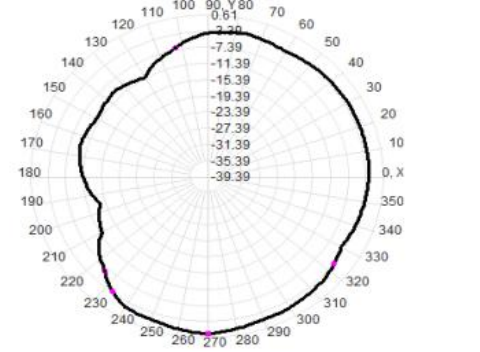
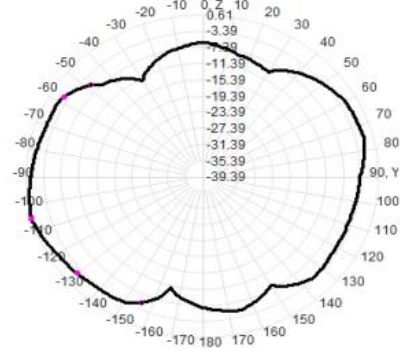
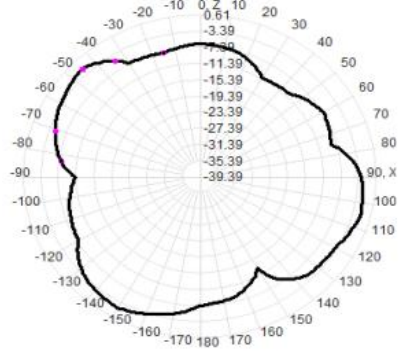
Back View



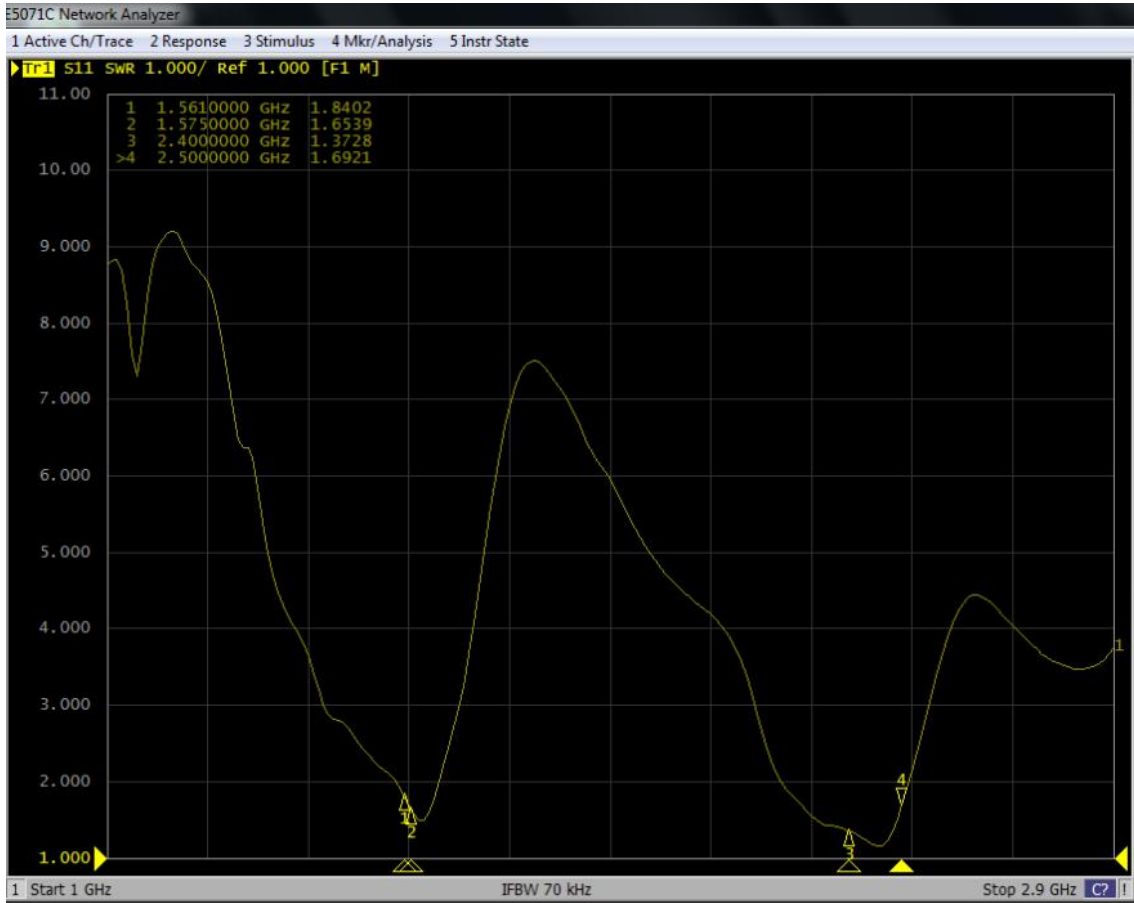
2500.0MHz Total(E1-XZ), Max=-1.76dBi

2500.0MHz Total(E2-YZ), Max=0.61dBi

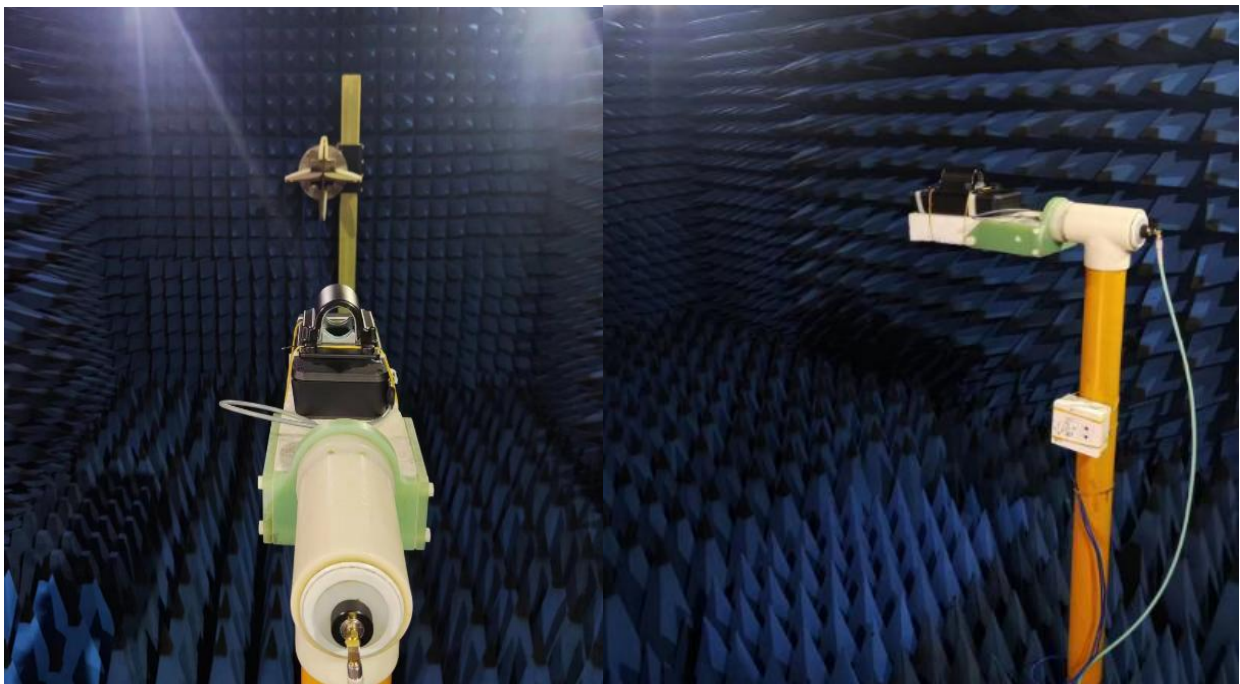
Total(H-XY), Max=-0.60dBi, CirD=13.75



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

