

Shenzhen Yunding Communication Electronics Co., LTD

TEL: +86 0755-23073599

FAX: +86 0755-23097189

E-mail:wht0809@163.com

APPROVAL

AI KE SI

CUSTOMER:

V13-YST-2.4/5G-V1.0-1.13-L150MM-IPEX 1

DESCRIPTION:

PART NO.

CUS PART NO.:

2023.12.22

D A T E:

Yunding signature

ENGINEERING DEPARTMENT	Q C DEPARTMENT	SALES DEPARTMENT

Customer signature

ENGINEERING DEPARTMENT	Q C DEPARTMENT	PURCHASING DEPARTMENT

TEL: 0755 23073599

✂ Approval in duplicate, please signed by your company.

Address: 3015 Jinchi Center, Hang Air Road, Baoan District, Shenzhen

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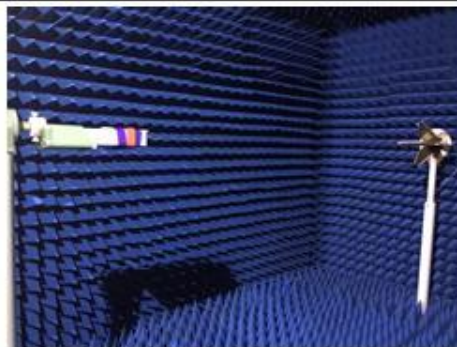
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1.Test items and equipment

	Test items	Equipment
1. S11-parameter	1. Return Loss 2. VSWR	network analyzer: Agilent E5071B HP 8753D
2.Active test	1. Transmitting power 2. Receiving sensitivity	1. Darkroom: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.general-purpose tester : Agilent 8960 E5515B ×2 StarPoint SP6011
3.Passive test	1.Gain 2.Efficiency	1. Darkroom: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. network analyzer: Agilent E5071B HP 8753D



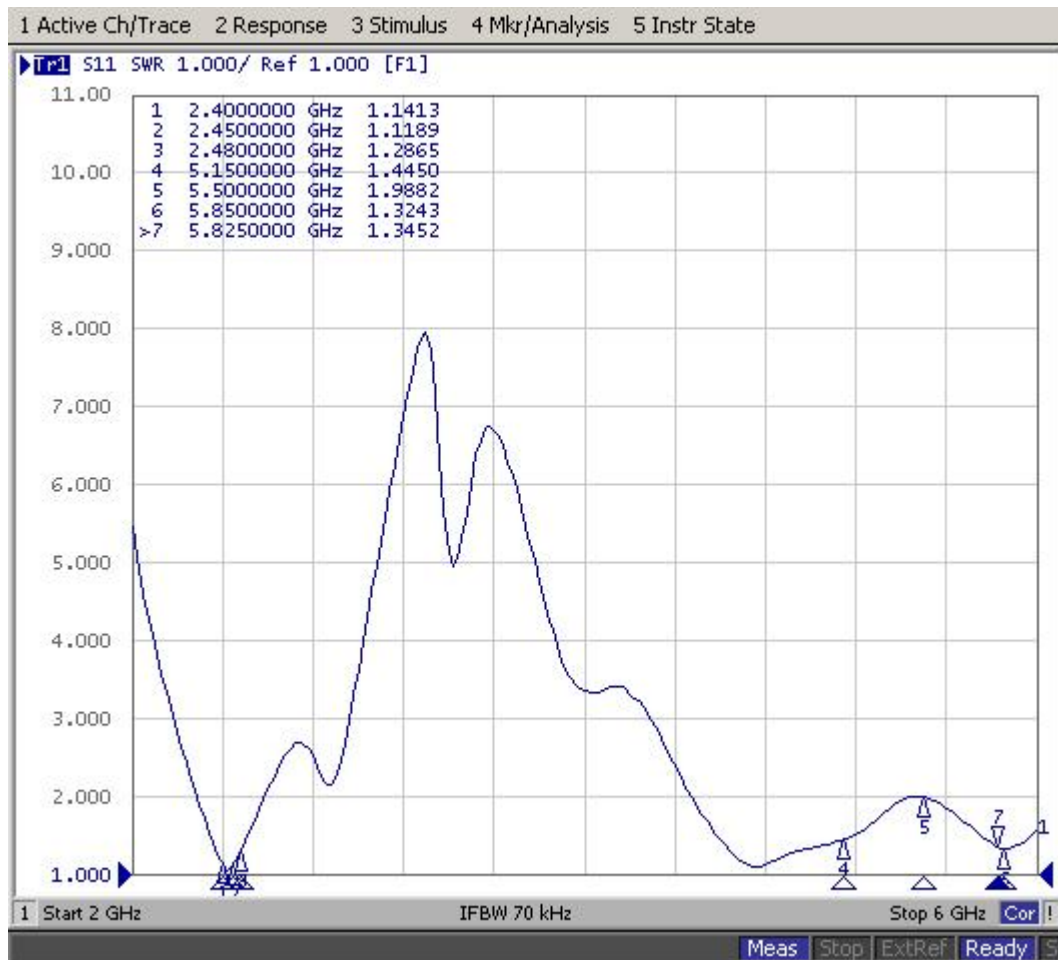
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2.antenna performance SWR



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3. Antenna OTA test data TRP/TIS

802.11b : 11Mbps			
Test Result	Wifi 2G TRP		
	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave (dBm)	15.47	15.07	16.14
Test Result	Wifi 2G TIS		
	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave (dBm)	-77.08	-78.62	-79.54
802.11a : 6Mbps			
Test Result	Wifi 5G TRP		
	36	64	161
Frequency (MHz)	5180	5320	5805
Txp Ave (dBm)	12.96	12.29	13.31
802.11a : 54Mbps			
Test Result	Wifi 5G TIS		
	36	64	161
Frequency (MHz)	5180	5320	5805
Sens Ave (dBm)	-70.82	-71.66	-72.68

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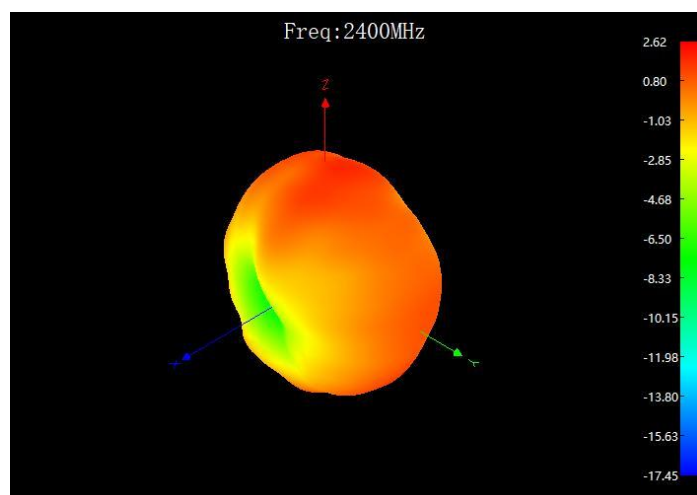
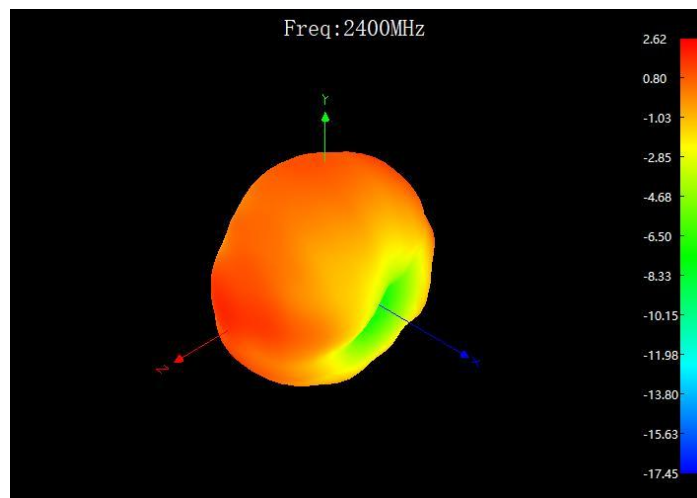
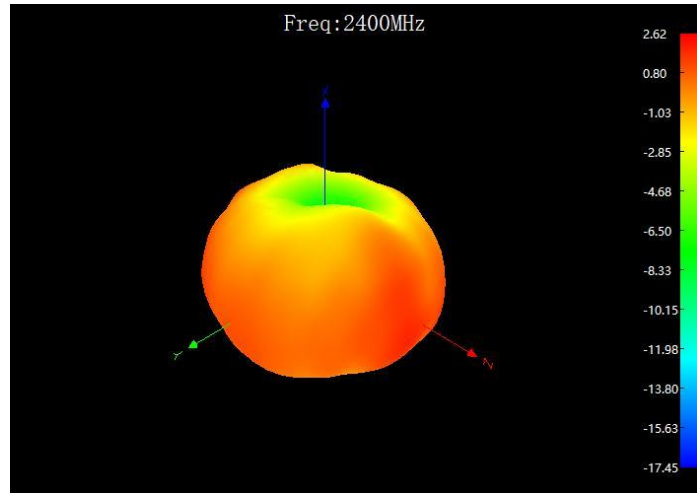
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4. Antenna efficiency and gain

Frequency	MaxGain/d	Efficiency / %
2400	2.62	72.61
2410	2.5	75.34
2420	2.55	75.34
2430	2.55	75.51
2440	2.17	74.3
2450	2.12	73.62
2460	2.2	72.61
2470	2.56	73.45
2480	2.55	72.28
2490	2.69	70.79
2500	2.66	69.34
5100	1.83	68.55
5150	1.84	67.92
5200	1.78	67.92
5250	1.84	66.83
5300	1.49	68.23
5350	1.8	68.55
5400	2.31	70.63
5450	1.48	66.37
5500	1.84	64.42
5550	1.43	64.42
5600	1.64	62.95
5650	1.93	66.37
5700	1.74	65.77
5750	2	66.22
5800	2.15	66.99
5850	2.12	66.75

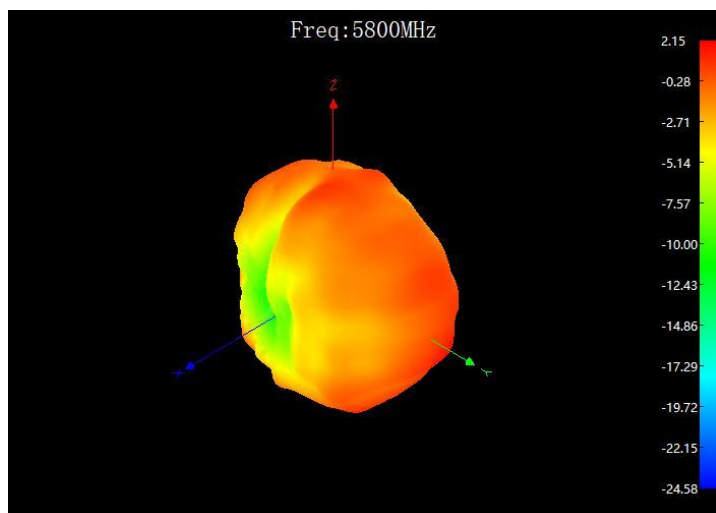
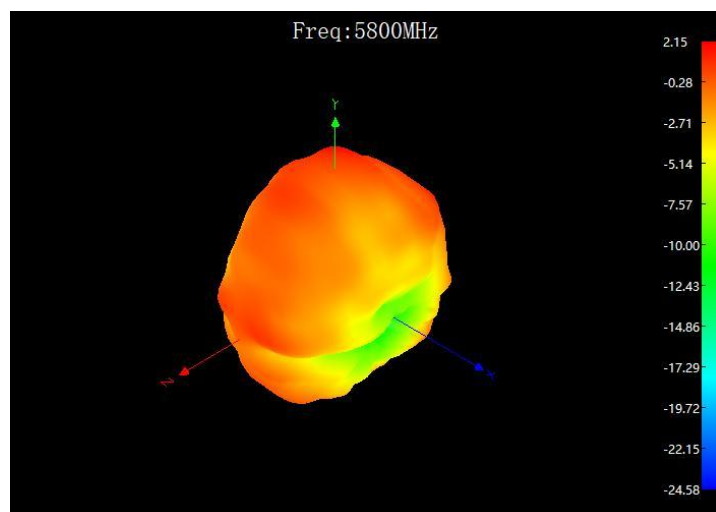
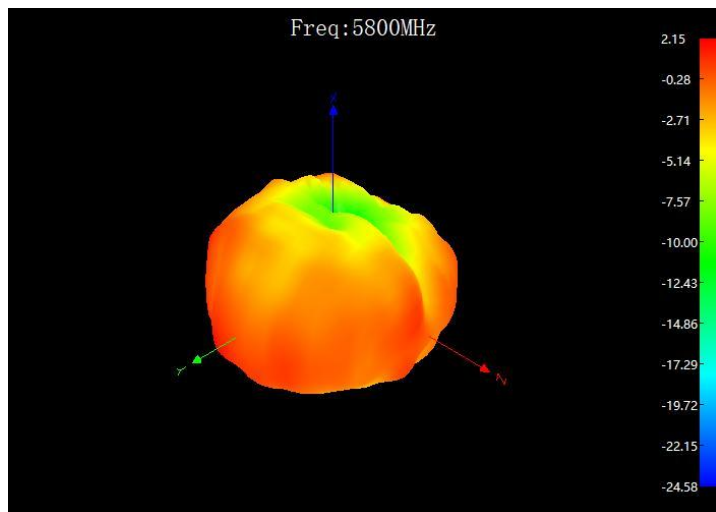


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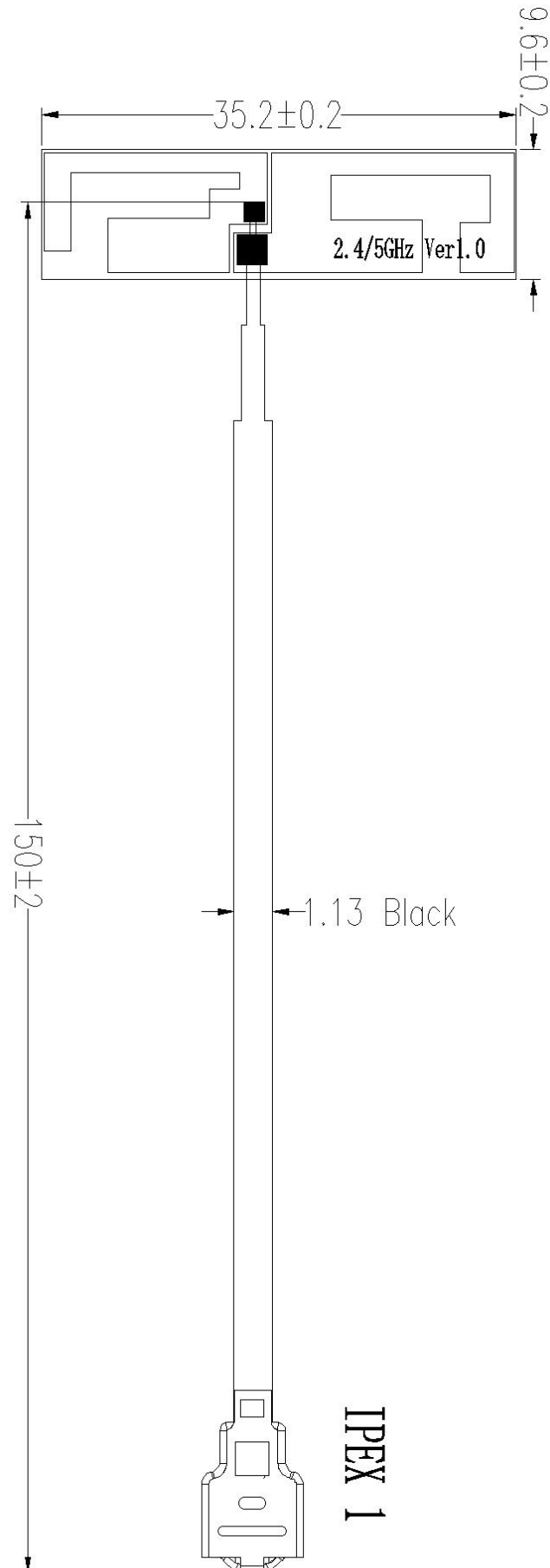
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5. Antenna structure diagram:



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6. Antenna position assembly diagram:



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Technical parameters of electrical apparatus

Electrical Specifications

Frequency Range	2400~2500/5100~5850MHz
VSWR	≤ 2.0
Input Impedance	50 Ω
Gain	3DBI

Mechanical Specifications

Antenna Color	Black
Input connector	IPEX 1
Cable length	150mm
Working Temperature	-40°C~+85°C
Working Humidity	20~80%

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Environment performance test:

Project	Test condition	Test results
Storage environment	Test temperature, humidity, pressure without stated condition as follwings :1.Temperature: -30 °C ~ +80 °C ;2.Relative humidity: 45%-85%;3,Pressure: 86kpa-106kpa	Electrical and mechanical performance normal
High and low temperature test	Having 5 times cycle between -40°C to 70°C,Then in common condition 1-2 hours test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
Resistance constant hot and humid test	Relative humidity:95±3%,Test temperature: 40°C,last 2 hours ,put it after 5 min test the electrical function . Test products during common condition 1-2 hours ,Then test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
Vibration test	Vibrate Frequency:10-55HZ; Distance :0.35mm;Acceleration :50.0m/s;Sweep frequency cycle:30 times	Electrical and mechanical performance normal
Fall test	From 1 mheight fall down 3 times freely (vertical direction)	Electrical and mechanical performance normal