

承 认 书

APPROVAL SHEET

客 户 名 称

CUSTOMER NAME:

产 品 名 称

PRODUCT NAME: 2.4/5.8G WIFI-1 钢片内置天线

客 户 料 号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB01NJ1D1408A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Eddy 	
APPROVED BY:	工程专用章 Changxing.Liu	
DATE:	2023/10/11	

Modification History

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2023-10-11

Content

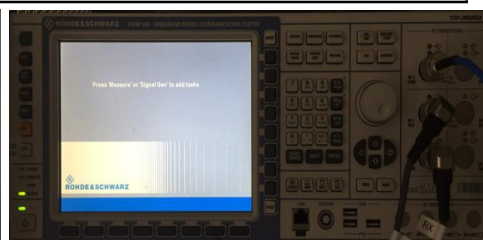
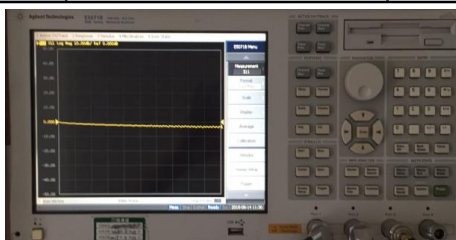
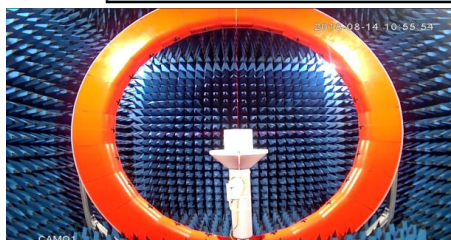
<i>Item</i>	<i>Description</i>
1.-----	Electrical Specification
2.-----	Test Items and Equipment
3.-----	S Parameter
4.-----	Efficiency and Gain
5.-----	Radiation Pattern
6.-----	Active test data
7.-----	Mechanical Specification

1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	18.7x18.3x6.4,T0.4	mm
Frequency	2400-2500 / 5150-5850	MHz
Impedance	50	Ω
VSWR	≤ 2	
Polarization	Linear Polarization	
Gain	2.54 (Max)	dBi
Efficiency	> 40	%
Connector Type	DIP	
Operating temperature	-20℃~+85℃	
Storage Temp	-20℃~+50℃	

2. Test Items and Equipment

	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave darkroom (5m*5m*5m) 2.Comprehensive test instrument (CMW500)



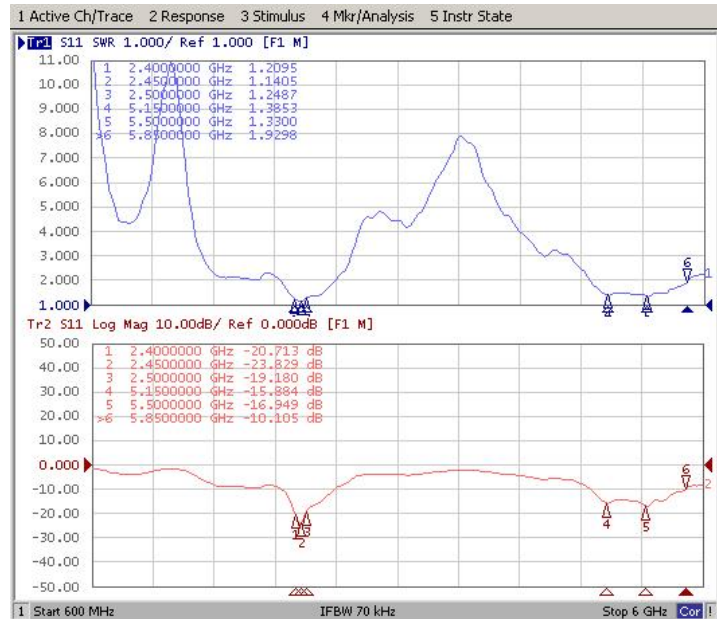
3. S Parameter

Frequency (MHz)	Return Loss (dB)	VSWR
2400	-20.71	1.20
2450	-23.82	1.14
2500	-19.18	1.24
5150	-15.88	1.38
5500	-16.94	1.33
5850	-10.10	1.92

* Voltage Standing Wave Ratio(VSWR)

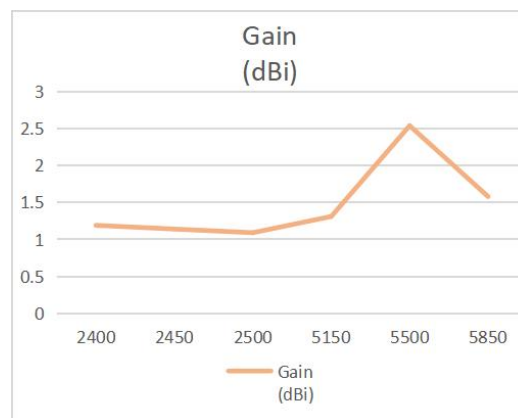
Return Loss(RL)

$$RL = 20 * \log_{10}[(VSWR + 1) / (VSWR - 1)]$$



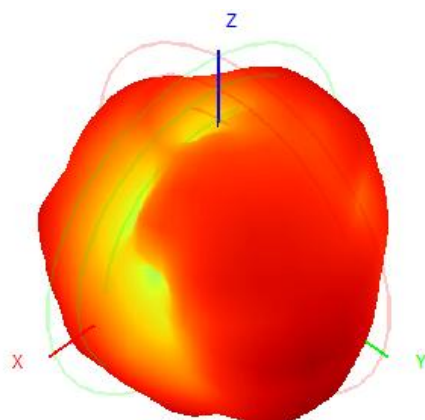
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500	5150	5500	5850
Efficiency (%)	46.25	47.87	47.14	50.23	52.46	50.21
Gain (dBi)	1.19	1.14	1.09	1.31	2.54	1.58

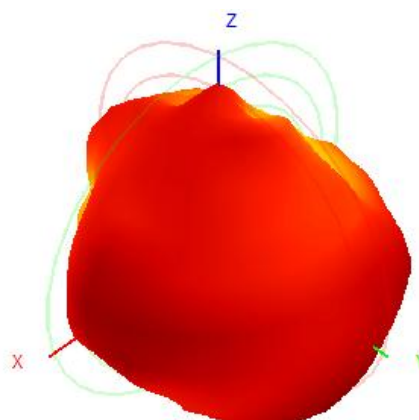


5. Radiation Pattern

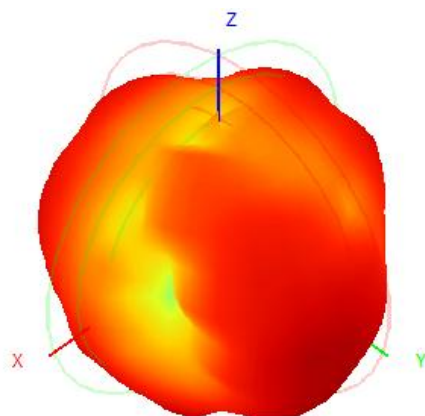
5-1 Antenna 3D Radiation Pattern



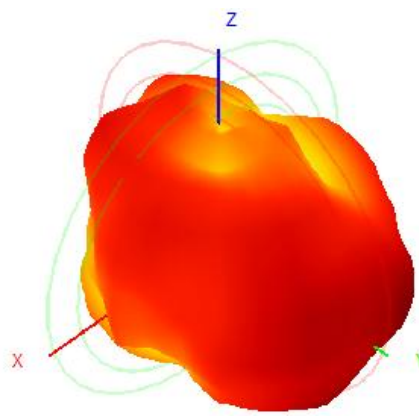
2400MHz



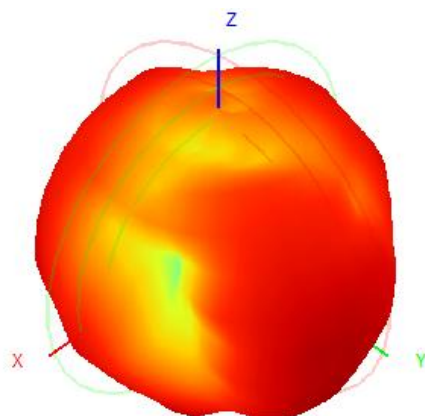
5150MHz



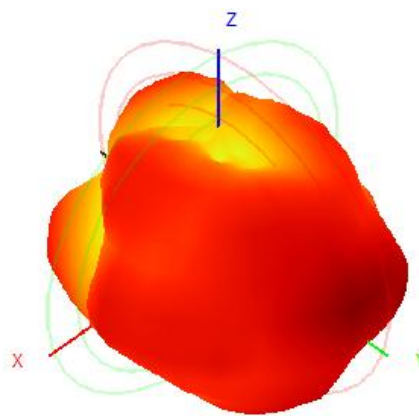
2450MHz



5500MHz

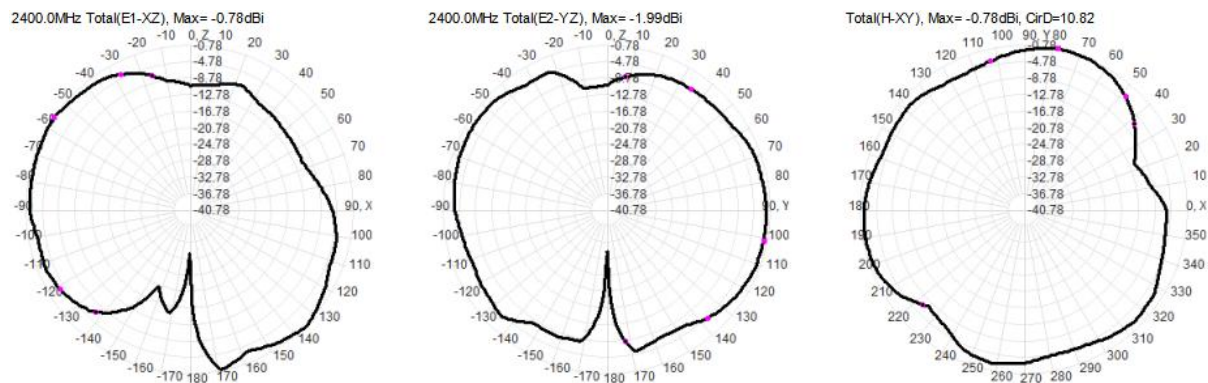


2500MHz

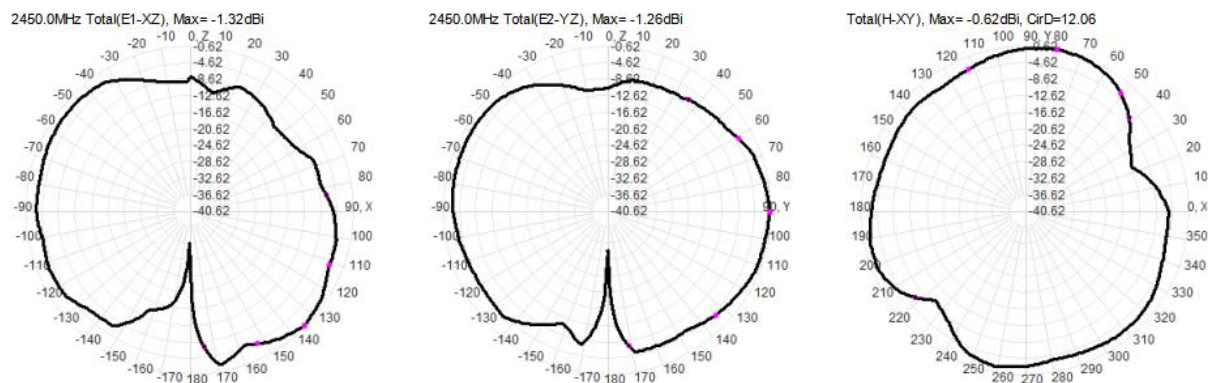


5850MHz

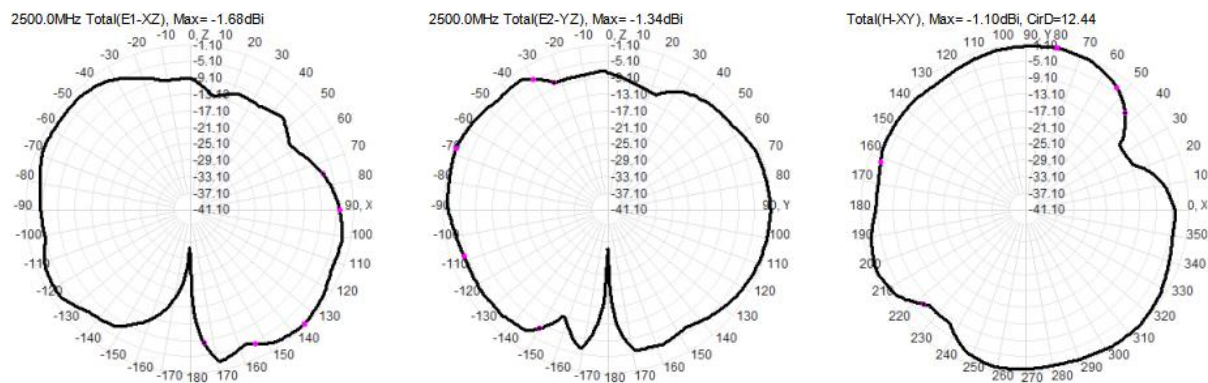
5-2 Antenna 2D Radiation Pattern



2400MHz

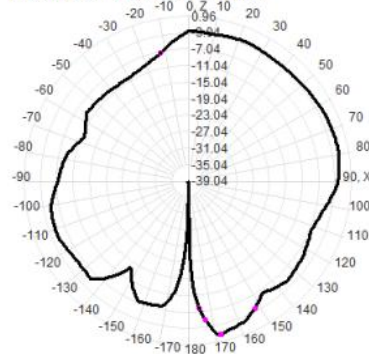


2450MHz

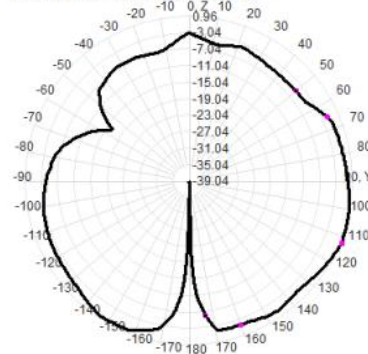


2500MHz

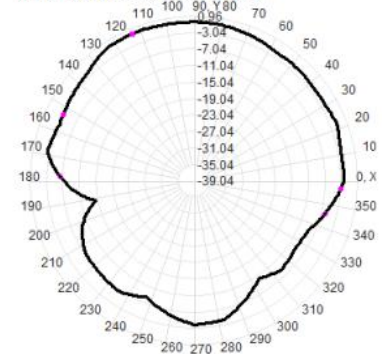
5150.0MHz Total(E1-XZ), Max=-1.16dBi



5150.0MHz Total(E2-YZ), Max=0.96dBi

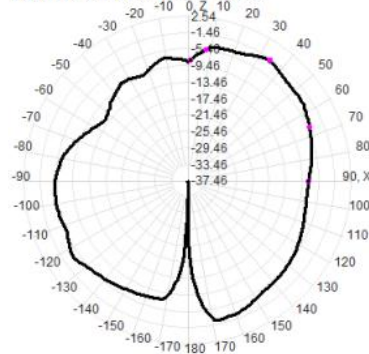


Total(H-XY), Max=-0.27dBi, CirD=14.28

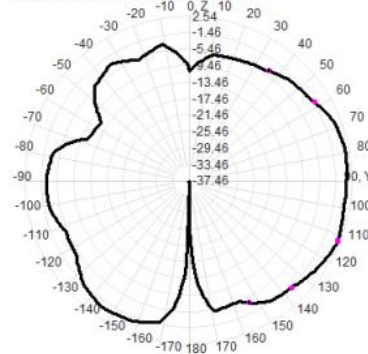


5150MHz

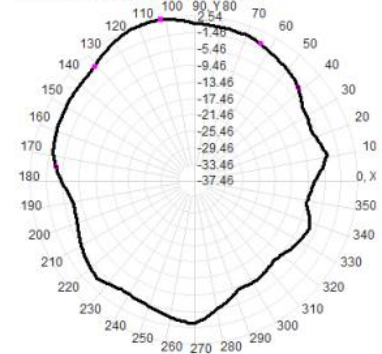
5500.0MHz Total(E1-XZ), Max=-2.08dBi



5500.0MHz Total(E2-YZ), Max=1.63dBi

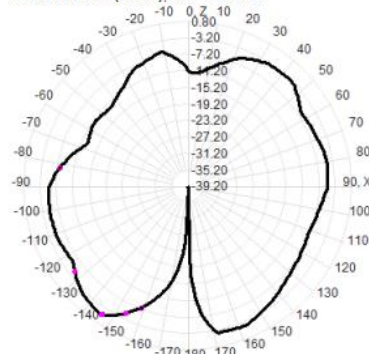


Total(H-XY), Max=2.54dBi, CirD=12.64

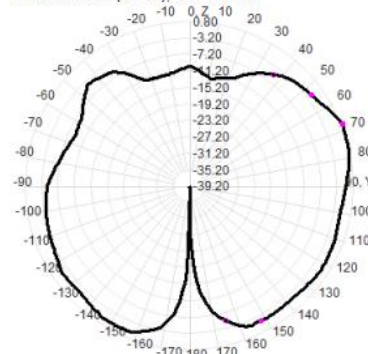


5500MHz

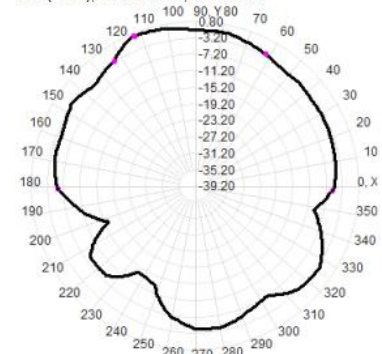
5850.0MHz Total(E1-XZ), Max=-1.62dBi



5850.0MHz Total(E2-YZ), Max=0.80dBi



Total(H-XY), Max=0.16dBi, CirD=16.59



5850MHz

6. Active test data

802.11b:11MBps		
channel	Measurement	Total
1	TRP	18.08
6	TRP	17.34
11	TRP	18.2
1	TIS(EIRP)	-80.09
6	TIS(EIRP)	-78.7
11	TIS(EIRP)	-78.94

802.11a:54MBps		
channel	Measurement	Total
36	TRP	15.44
149	TRP	20.11
165	TRP	20.23
36	TIS(EIRP)	-75.32
149	TIS(EIRP)	-75.02
165	TIS(EIRP)	-71.31

7. Mechanical Specification

