

Acknowledgement

APPROVAL SHEET

CUSTOMER NAME:

PRODUCT NAME: 2.4/5.8G Built-in hardware antenna

CUSTOMER P/N:

Youbi P/N: UB01NJ2D1561A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:		
APPROVED BY:		
DATE:	2024/12/27	



Dongguan Youbi Electronics Co.,LTD

Modification History

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2024-12-27

Content

Item***Description***

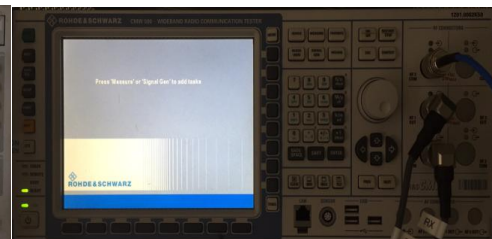
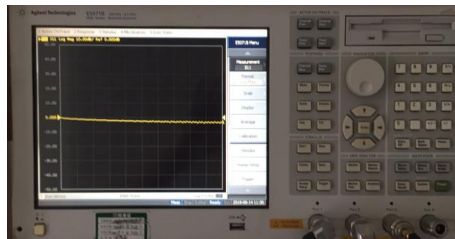
1.	-----Electrical Specification
2.	-----Test Items and Equipment
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4.	-----Efficiency and Gain
5.	-----Radiation Pattern
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1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	23.7x10x0.3	mm
Frequency	2400-2500 / 5150-5850	MHz
Impedance	50	Ω
VSWR	≤ 2	
Polarization	Linear Polarization	
Gain	3.58	dBi
Efficiency	> 50	%
Connector Type	MHF-2-Plug	
Operating temperature	-20°C~+85°C	
Storage Temp	-20°C~+50°C	

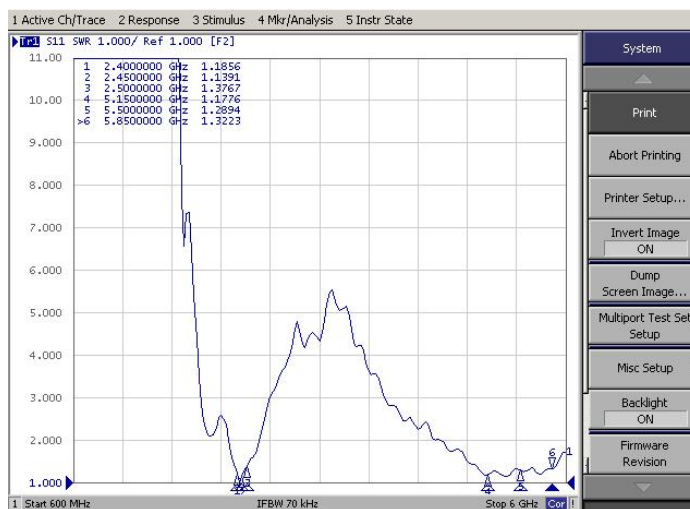
2. Test Items and Equipment

	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)	VSWR
2400	1.18
2450	1.13
2500	1.37
5150	1.17
5500	1.28
5850	1.32



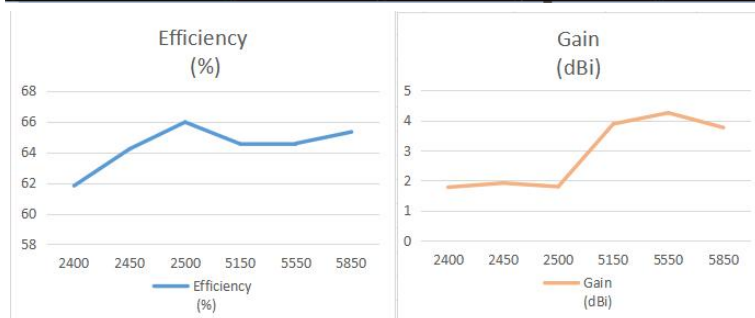
* Voltage Standing Wave Ratio(VSWR)

Return Loss(RL)

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

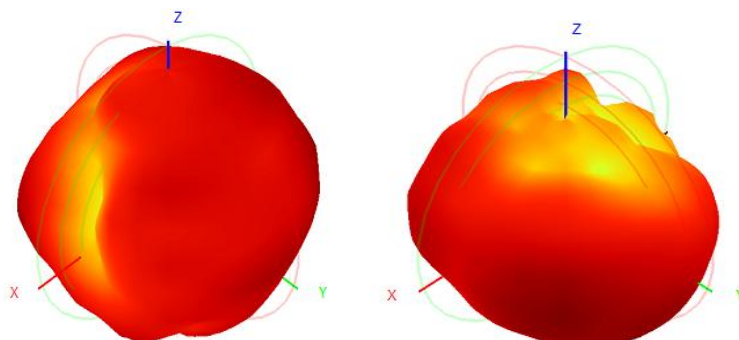
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500	5150	5550	5850
Efficiency (%)	61.82	64.22	65.97	64.54	64.58	65.33
Gain (dBi)	1.78	0.96	1.80	3.08	4.26	3.58



5. Radiation Pattern

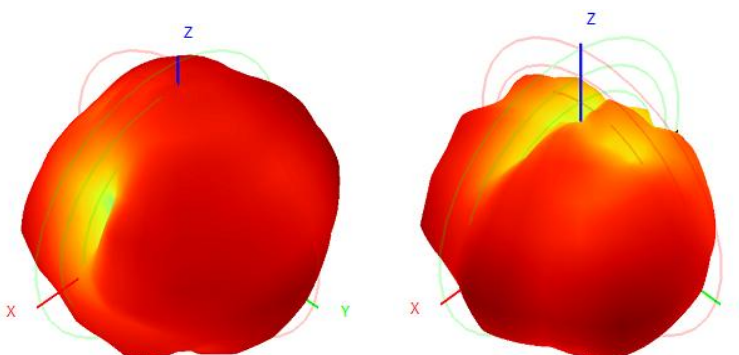
5-1 Antenna 3D Radiation Pattern



2400MHz

5150MHz

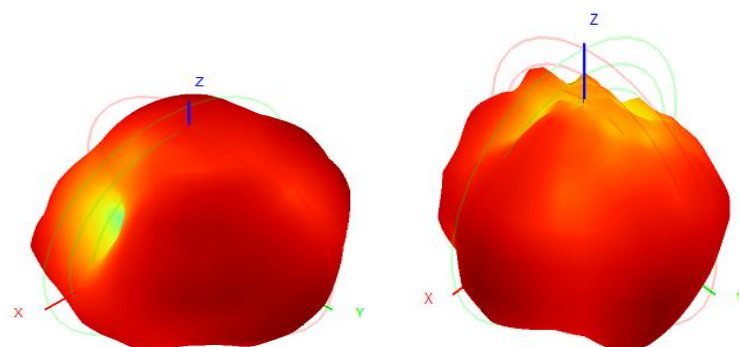
2400MHz



2450MHz

5550MHz

2450MHz

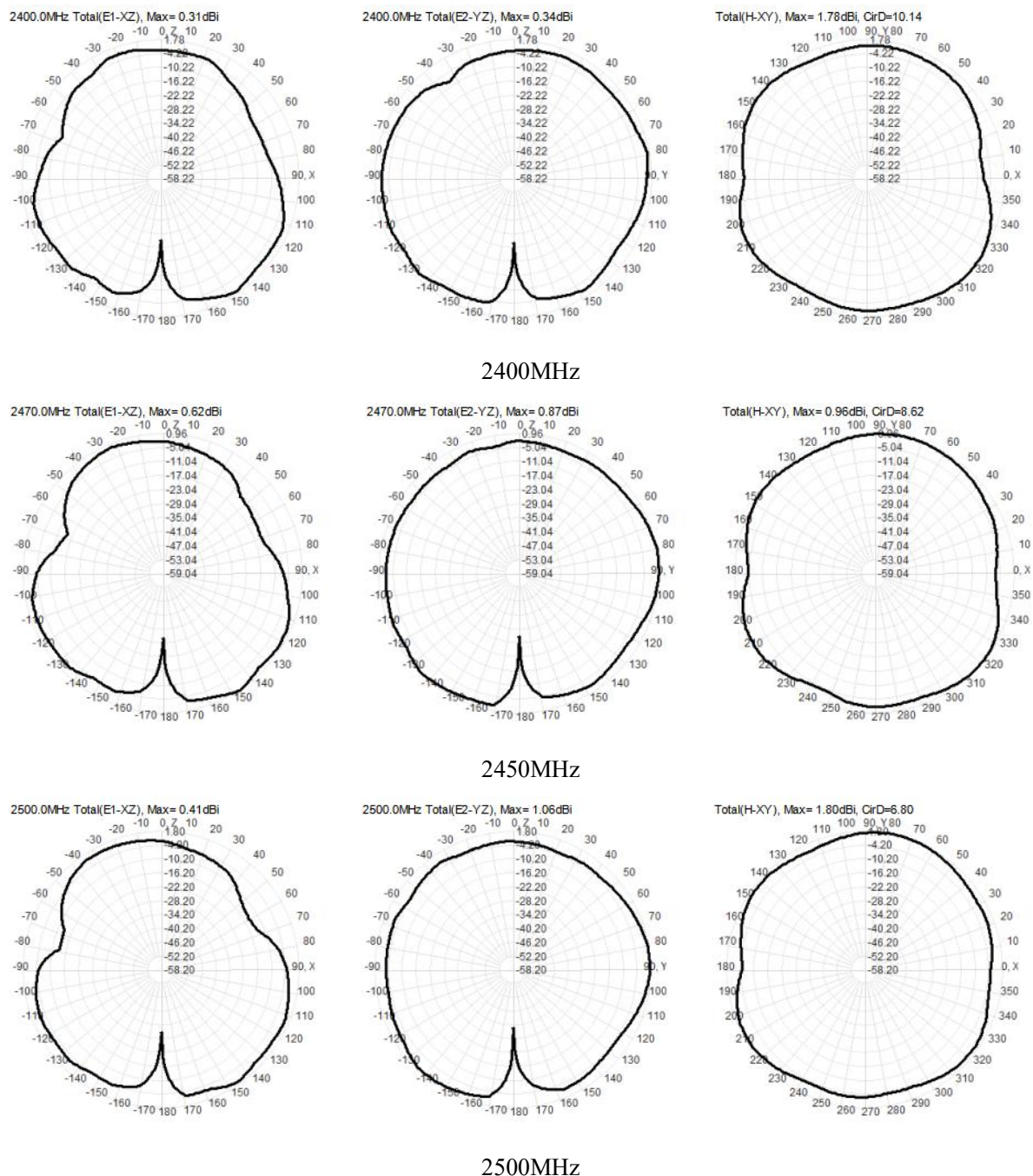


2500MHz

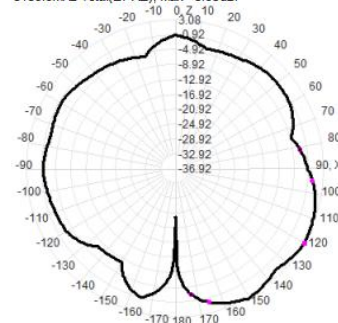
5850MHz

2500MHz

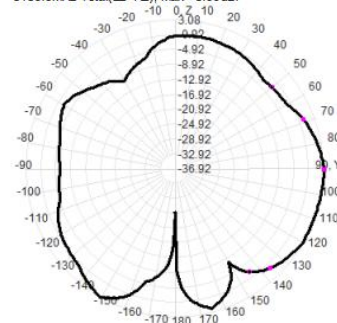
5-2 Antenna 2D Radiation Pattern



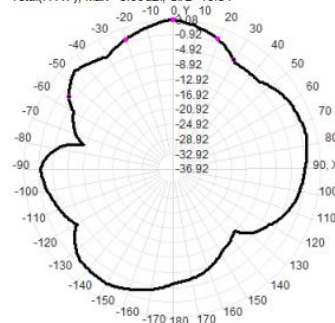
5150.0MHz Total(E1-XZ), Max= 3.05dBi



5150.0MHz Total(E2-YZ), Max= 3.08dBi

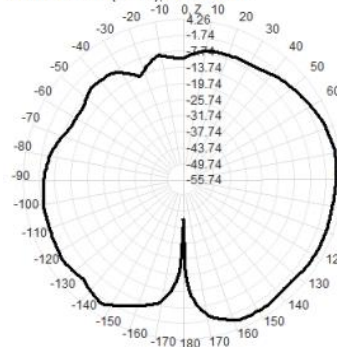


Total(H-XY), Max= 3.08dBi, CirD=16.54

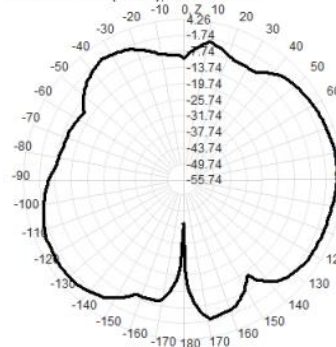


5150MHz

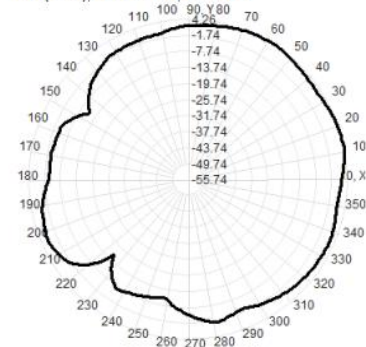
5550.0MHz Total(E1-XZ), Max= 2.10dBi



5550.0MHz Total(E2-YZ), Max= 2.01dBi

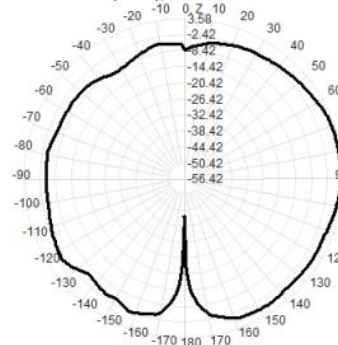


Total(H-XY), Max= 4.26dBi, CirD=20.27

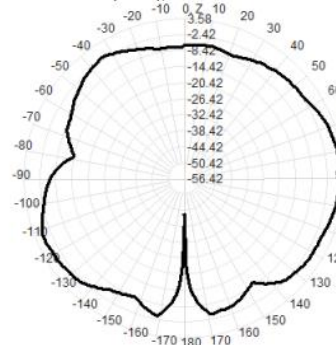


5550MHz

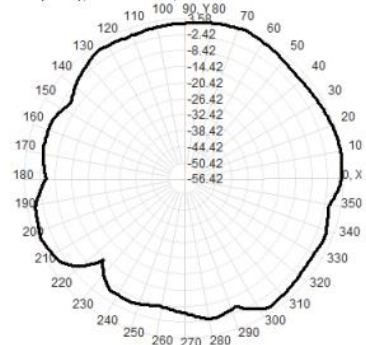
5850.0MHz Total(E1-XZ), Max= 2.42dBi



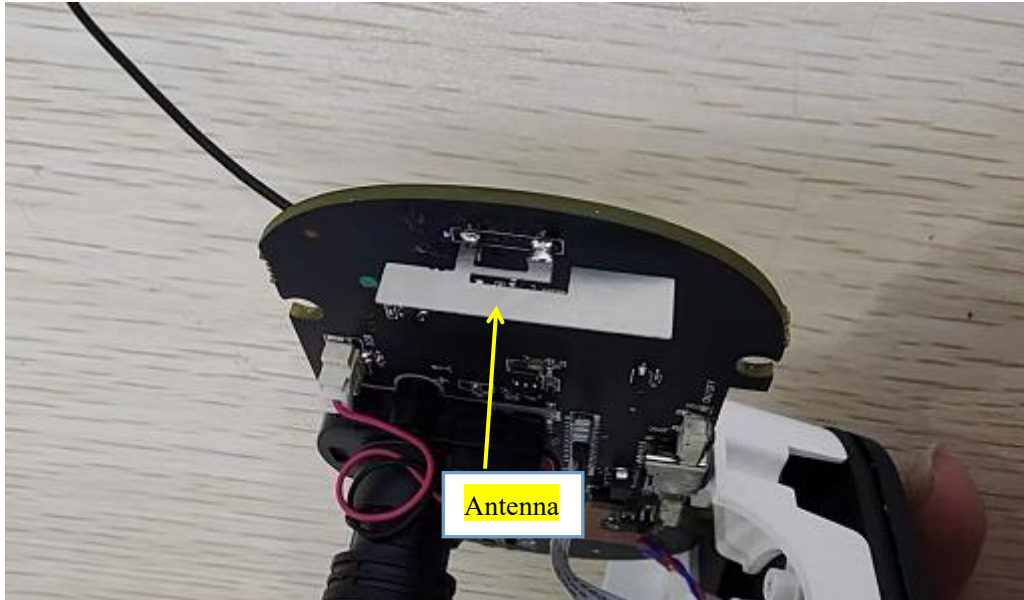
5850.0MHz Total(E2-YZ), Max= 1.87dBi



Total(H-XY), Max= 3.58dBi, CirD=17.06



5850MHz

6.Antenna installation diagram

7.Mechanical Specification

