



Dongguan Youbi Electronics Co.,Ltd

APPROVAL SHEET

CUSTOMER NAME:

PRODUCT NAME: 2.4/5.8G FPC ANT L=50mm

CUSTOMER P/N:

Youbi P/N: UB01C50F2D4522A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Eddy	
APPROVED BY:	Changxing. Liu	
DATE:	2024/2/27	



Modification History

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2024-2-27



Dongguan Youbi Electronics Co., Ltd

Content

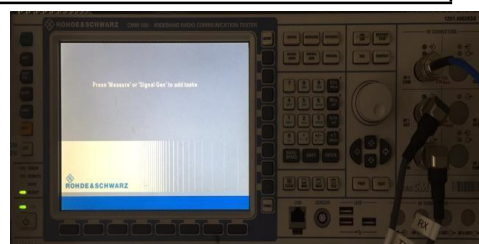
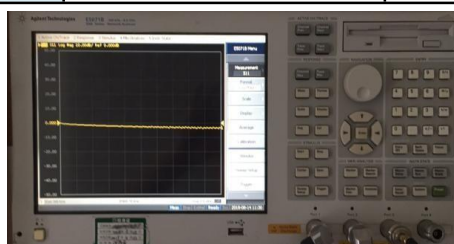
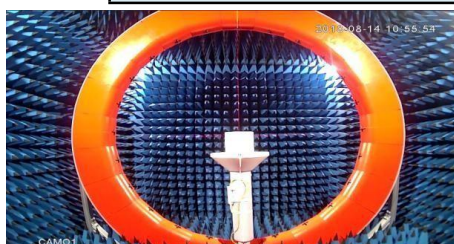
<i>Item</i>	<i>Description</i>
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1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	35.2x8.0,L50	mm
Frequency	2400-2500;5150-5850	MHz
Impedance	50	Ω
VSWR	< 2	
Polarization	Linear Polarization	
Gain	4 REF	dBi
Efficiency	>60	%
Connector Type	RF 1	
Operating temperature	-20℃~+85℃	
Storage Temp	-20℃~+50℃	

2. Test Items and Equipment

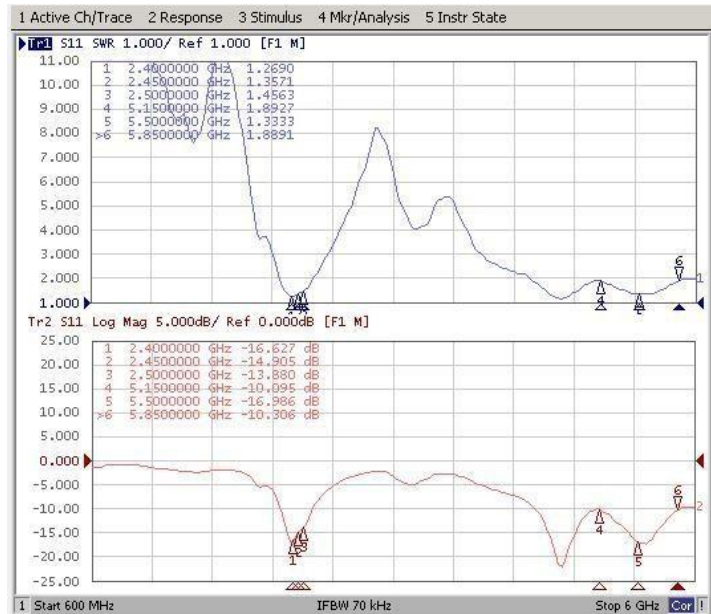
	Test items	Test equipment
S Parameter	1.Return Loss 2.VSWR	Network analyzer (Agilent E5071B)
The whole machine of Passive parameters	1.Frequency 2.Gain 3.Radiation Pattern	1.3D microwave darkroom (5m*5m*5m) 2.Network analyzer (Agilent E5071B)
The whole machine of Active parameters	1.TRP 2.TIS	1.3D microwave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



3. S Parameter

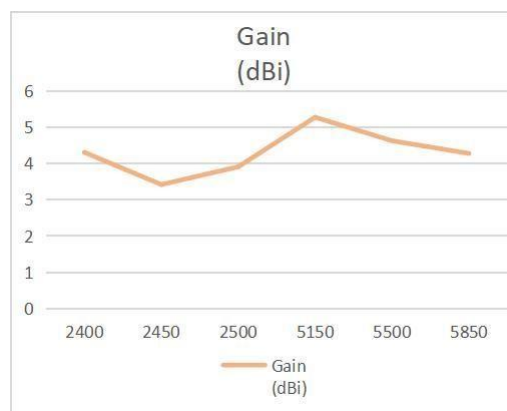
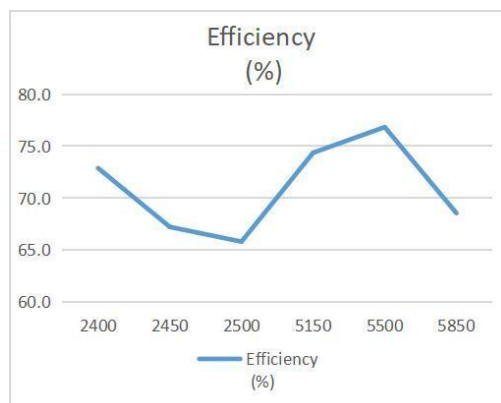
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-16.62	1.26
2450	-14.90	1.35
2500	-13.88	1.45
5150	-10.09	1.89
5500	-16.98	1.33
5850	-10.30	1.88

* Voltage Standing Wave Ratio(VSWR)
Return Loss(RL)
 $RL = 20 * \log_{10}[(VSWR + 1) / (VSWR - 1)]$



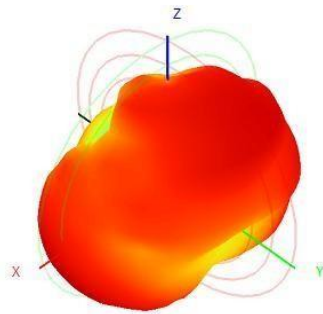
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500	5150	5500	5850
Efficiency (%)	72.88	67.22	65.80	74.36	76.83	68.55
Gain (dBi)	4.31	3.42	3.91	5.28	4.63	4.28

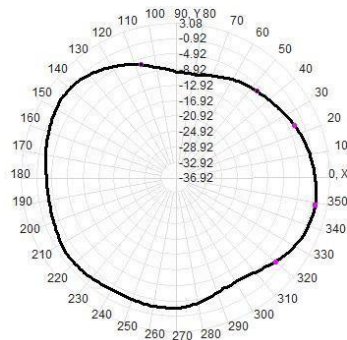


5. Radiation Pattern

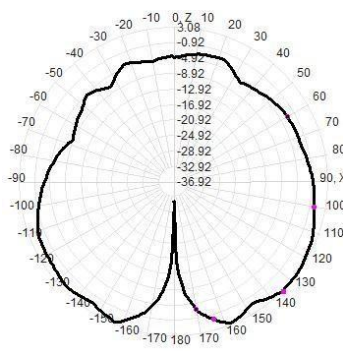
5-1 Antenna 3D Radiation Pattern



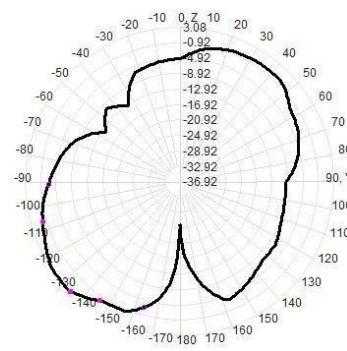
2450MHz



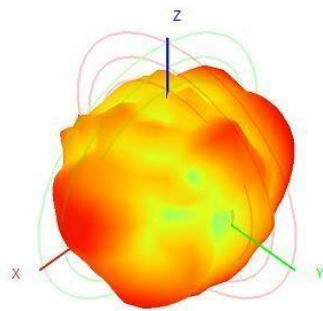
H-XY



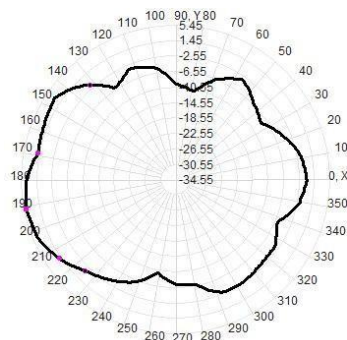
E1-XZ



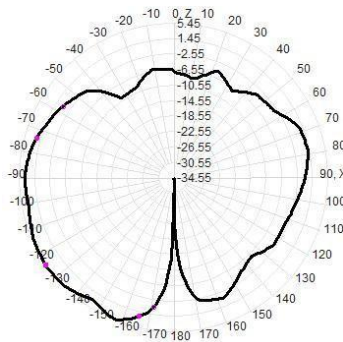
E2-YZ



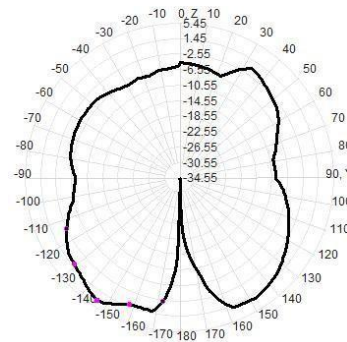
5850MHz



H-XY



E1-XZ



E2-YZ

6. Active test data

2.4G				
Mode	Test Case	Channel	Date Rate (Mbps)	Test Results (dBm)
IEEE 802.11b	TRP	1	11	17.36
		6		16.24
		11		16.39
	TIS	1	11	-88.71
		6		-86.43
		11		-86.83

5.8G				
Mode	Test Case	Channel	Date Rate (Mbps)	Test Results (dBm)
IEEE 802.11a	TRP	36	54	14.49
		149		15.13
		165		15.54
	TIS	36	54	-72.18
		149		-71.40
		165		-71.75

7. Antenna installation diagram



The antenna is attached to the middle of the lower part of the housing

8. Mechanical Specification

