

APPROVAL SHEET

CUSTOMER NAME: Apical

PRODUCT NAME: FPC antenna

L=162mm+terminal

CUSTOMER P/N:

Youbi P/N: UB01NJ2D1156A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Eddy 	
APPROVED BY:	Changxing. Liu 	
DATE:	2022/09/14	

Modification History

Version	Content Revision	Issued by	Date
A	Original version	King	2022-09-14

Content

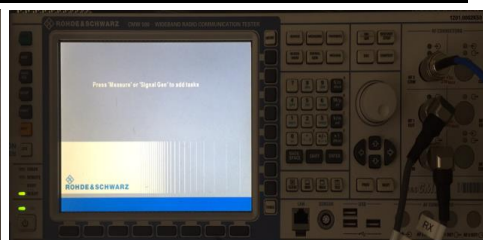
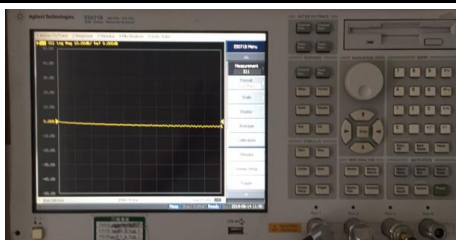
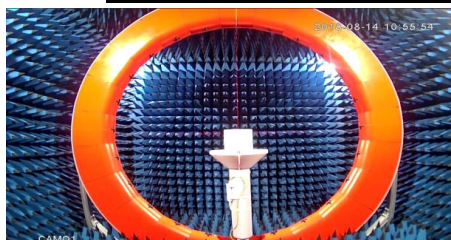
<i>Item</i>	<i>Description</i>
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1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	30.94x5.07x3.2,T0.4	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
VSWR	≤ 2	
Polarization	Linear Polarization	
Gain	3.11	dBi
Efficiency	> 60	%
Connector Type	DIP	
Operating temperature	-20℃~+85℃	
Storage Temp	-20℃~+50℃	

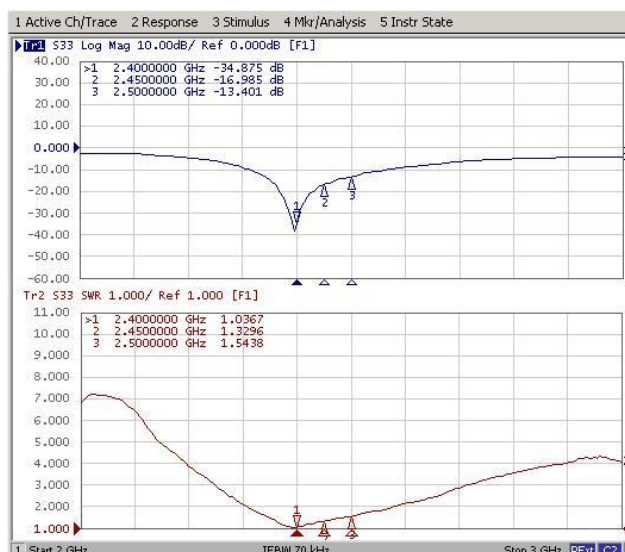
2. Test Items and Equipment

	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

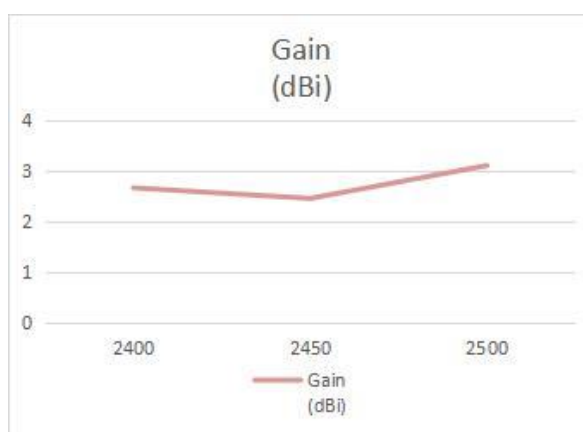
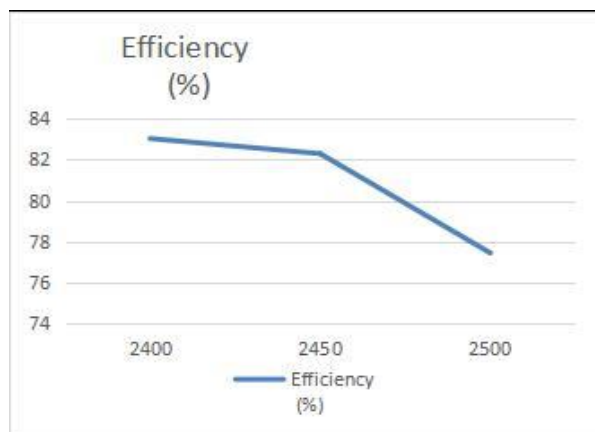
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-34.87	1.03
2450	-16.98	1.32
2500	-13.4	1.54



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

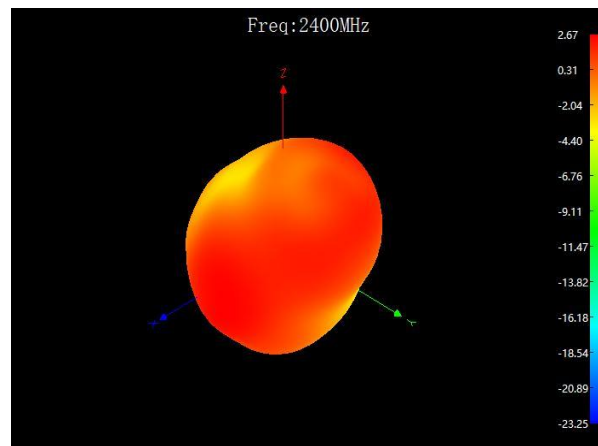
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	83.04	82.3	77.45
Gain (dBi)	2.67	2.46	3.11

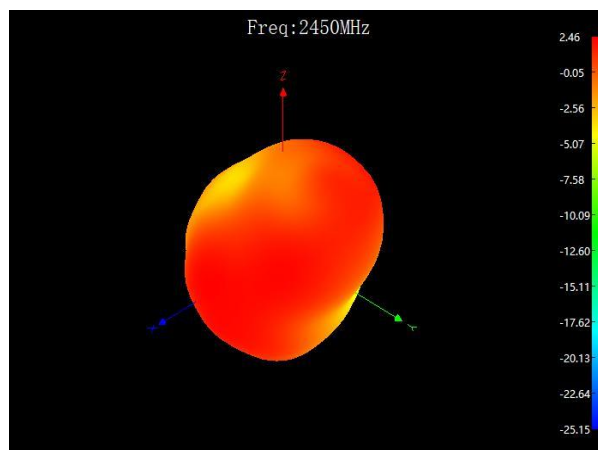


5. Radiation Pattern

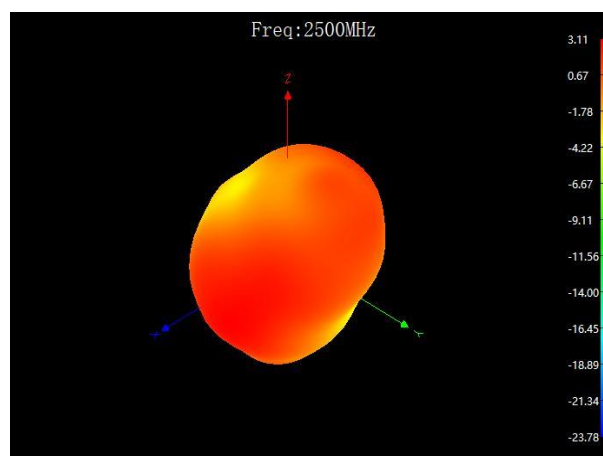
5-1 Antenna 3D Radiation Pattern



2400MHz

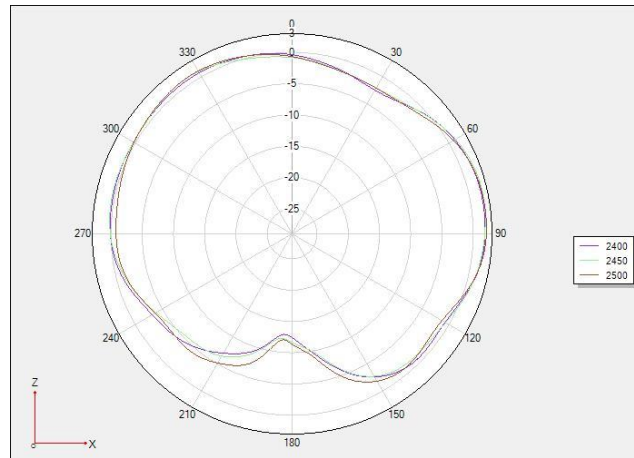


2450MHz

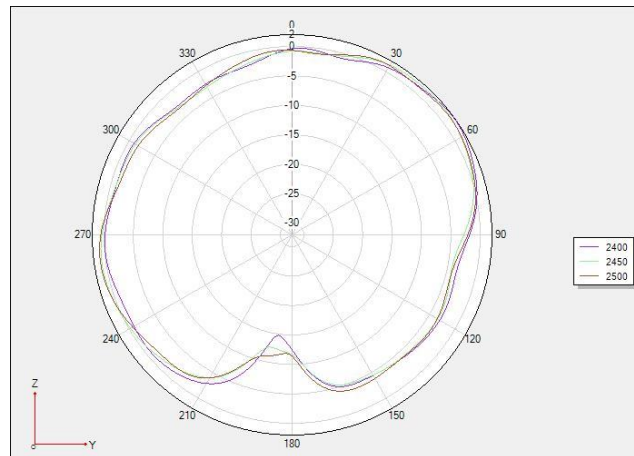


2500MHz

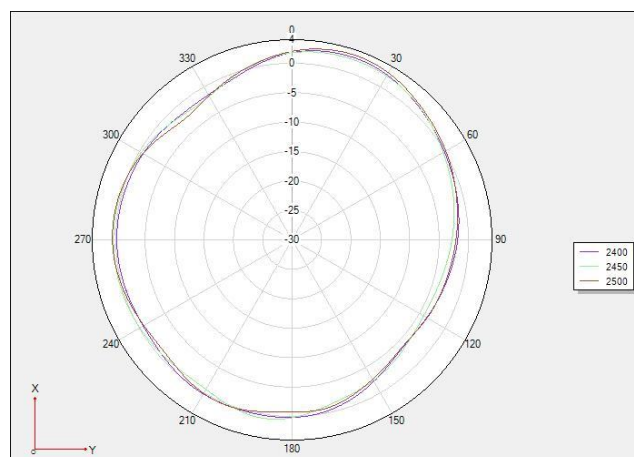
5-2 Antenna 2D Radiation Pattern



Phi 0 2D



Phi90 2D

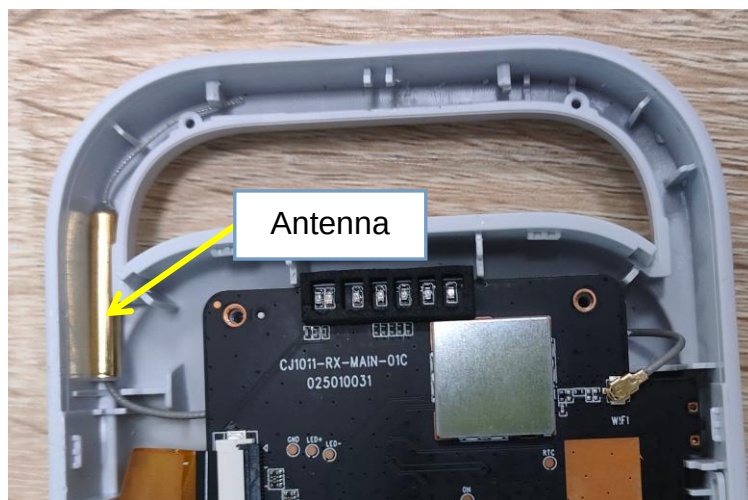


Theta 90 2D

6. Active test data

802.11b : 11MBps			
Channel	1	6	11
TRP	17.41	17.01	16.73
TIS	-82.87	-83.57	-83.26

7. Antenna installation diagram



8.Mechanical Specification

