

Declaration

APPROVAL SHEET

CUSTOMER NAME: Anker

PRODUCT NAME: 2.4G FPC built-in antenna L=40mm 1.13 black
double tin wire 1st generation terminals

CUSTOMER P/N:

Youbi P/N: UB01C45F2D5057A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	 Lina	
APPROVED BY :	Jiatao. jiang	
DATE :	2025/06/19	



Modification History

Version	Content Revision	Issued by	Date
A	Original version	lina	2025-06-19

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1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	25.2*22.7 L45	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
VSWR	< 2	
Polarization	Linear Polarization	
AVG Gain	2.6	dBi
Efficiency	>70	%
Connector Type	RF 1	
Operating temperature	-20℃~+85℃	
Storage Temp	-20℃~+50℃	

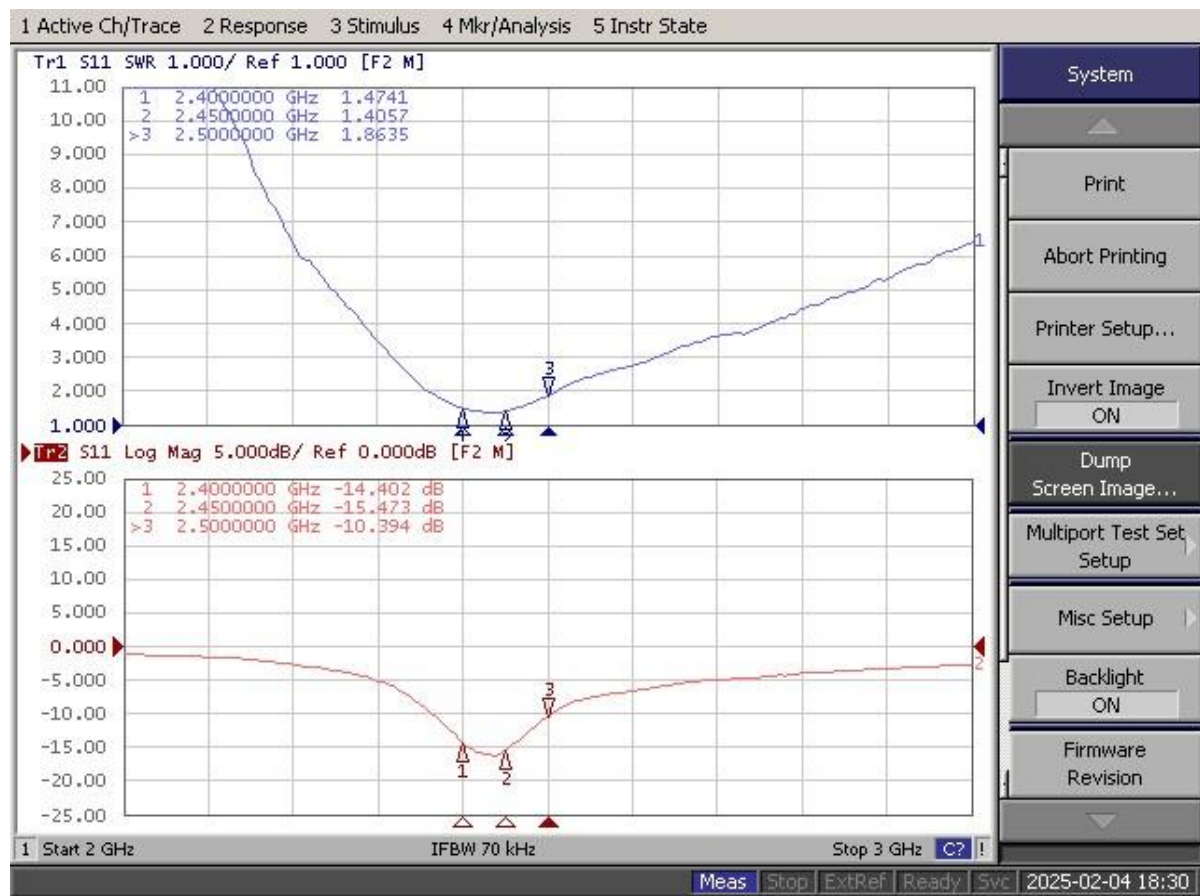
2. Test Items and Equipment

	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	-14.40	1.47
2450	-15.47	1.40
2500	-10.39	1.86

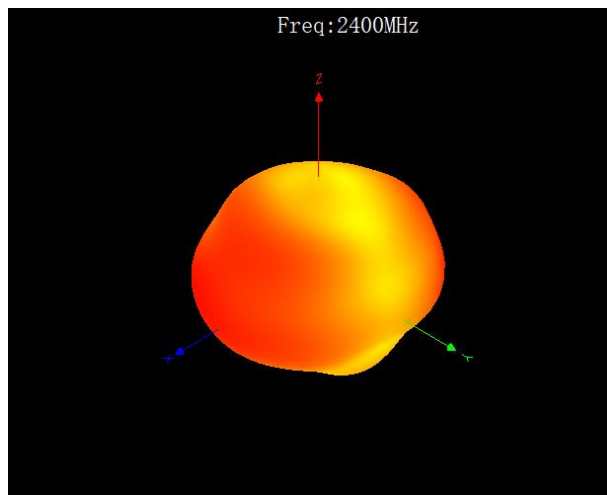


* Voltage Standing Wave Ratio(VSWR)
Return Loss(RL)
 $RL=20*\log_{10}[(VSWR+1)/(VSWR-1)]$

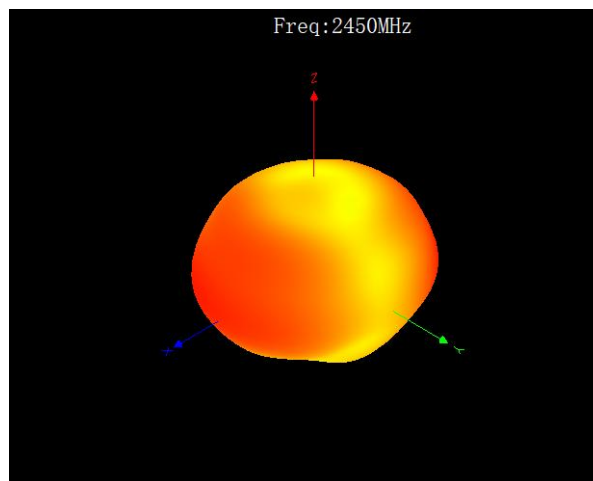
4. Efficiency and Gain

Frequency / MHz	Efficiency / %	Gain/ dBi
2400	72.79	2.4
2410	72.47	2.56
2420	74.44	2.68
2430	75.96	2.41
2440	76.56	2.57
2450	74.82	2.98
2460	72.78	2.35
2470	74.3	3.02
2480	71.61	2.54
2490	70.63	2.42
2500	71.61	2.69

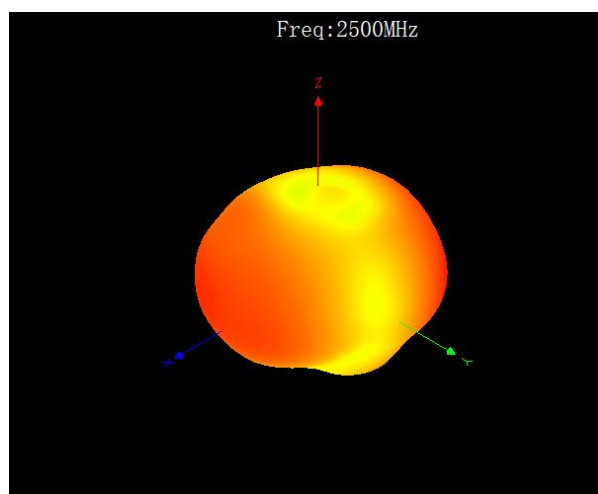
5. Radiation Pattern



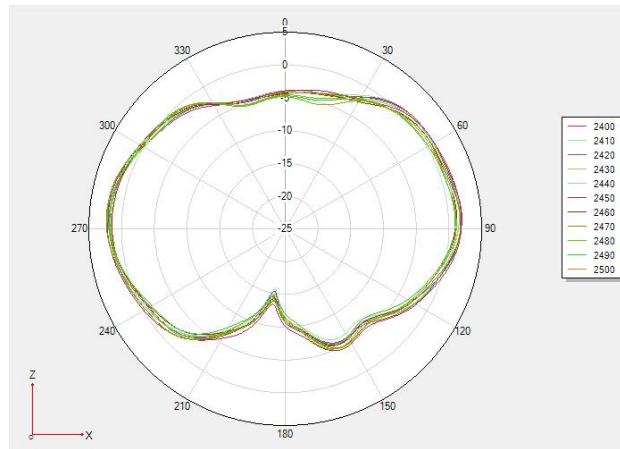
2400MHz



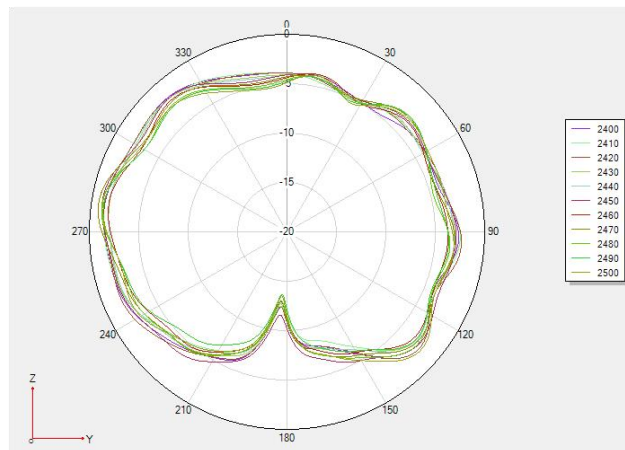
2450MHz



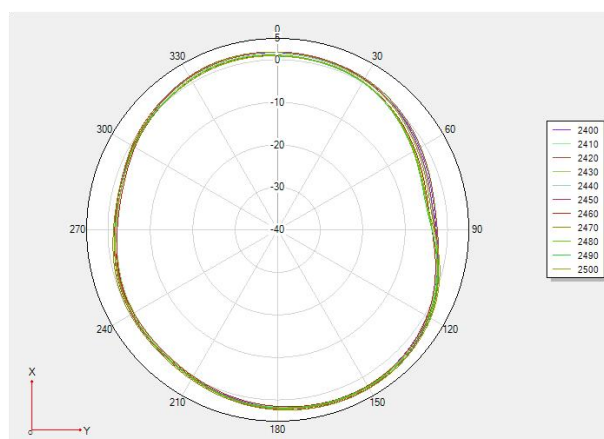
5-2 Antenna 2D Radiation Pattern



Phi 0 2D



Phi 90 2D



Theta 90 2D

6.Match changes

controller

The diagram shows a PCB layout with various components. On the left, there is a vertical stack of components: CW28, LW2, CW24, FLW1, CW26, RW11, CW25, and DW5. In the center, there are two square components labeled XW1 and XW2. To the right of XW1 are CW9 and CW7. To the right of XW2 are CW15, CW17, and R24. Below XW2 are R22, R23, C30, and D4. At the bottom center is a circular component labeled TPM10 and a large rectangular component labeled KEY.

Position Number	Matching Value
CW25	NC
RW11	1pf
CW26	NC

7. Mechanical Specification

