

# Declaration

## APPROVAL SHEET

CUSTOMER NAME: Anker

---

PRODUCT NAME: On-board antenna

---

CUSTOMER P/N:

---

Youbi P/N: REV: A

---

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

**Modification History**

<b>Version</b>	<b>Content Revision</b>	<b>Issued by</b>	<b>Date</b>
A	Original version	lina	2025-06-19

# *Content*

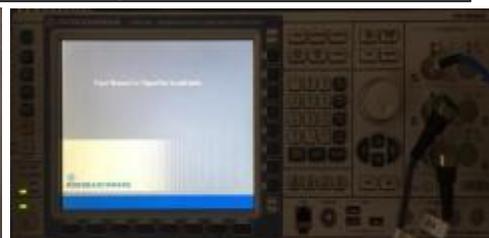
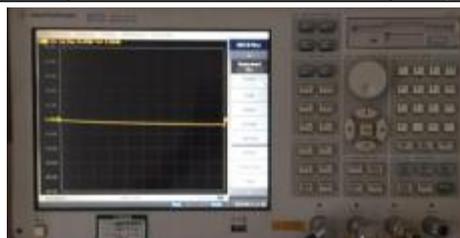
<i>Item</i>	<i>Description</i>
1.-----	Electrical Specification
2.-----	Test Items and Equipment
3.-----	S Parameter
4.-----	Efficiency and Gain
5. -----	Radiation Pattern
6. -----	Match changes
7.-----	Mechanical Specification

### 1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	/	mm
Frequency	2400-2500	MHz
Impedance	50	$\Omega$
VSWR	< 2	
Polarization	Linear Polarization	
AVG Gain	4.01	dBi
Efficiency	>60	%
Connector Type	/	
Operating temperature	-20°C~+85°C	
Storage Temp	-20°C~+50°C	

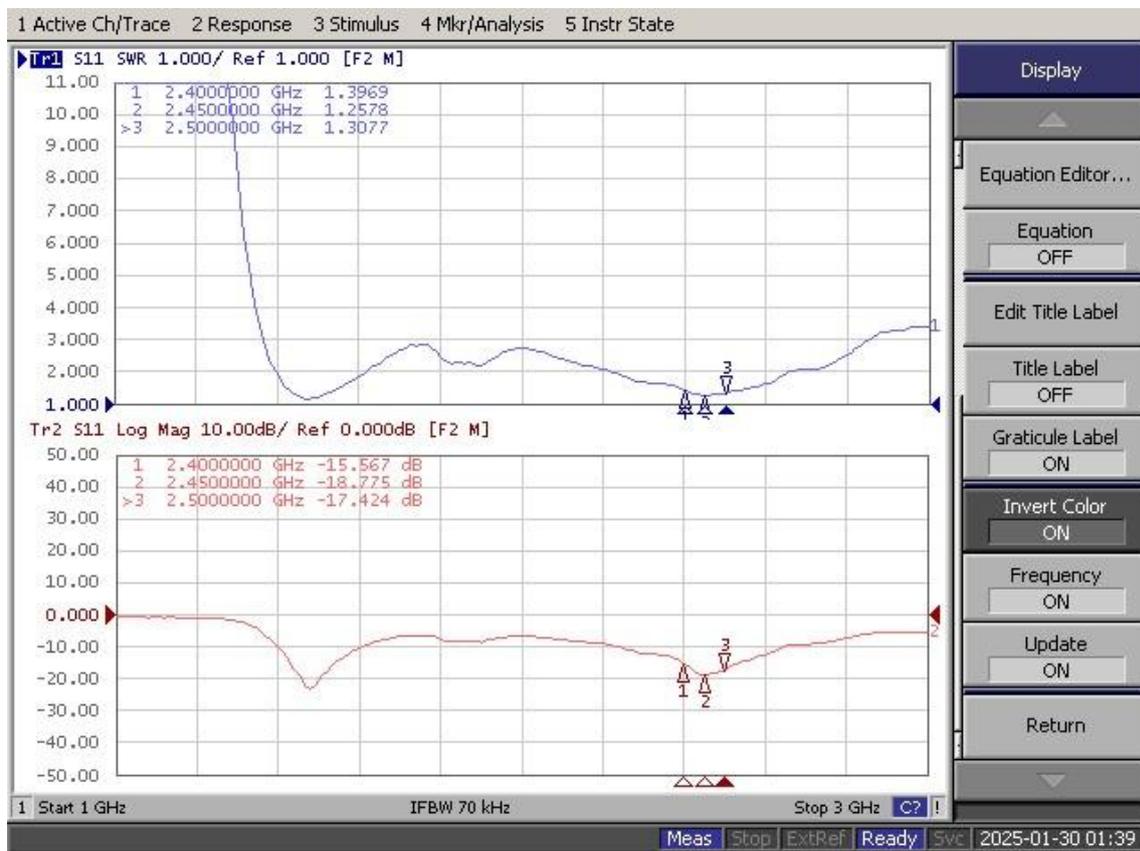
### 2. Test Items and Equipment

	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)	Return Loss (dB)	VSWR
2400	-15.56	1.39
2450	-18.77	1.25
2500	-17.42	1.30

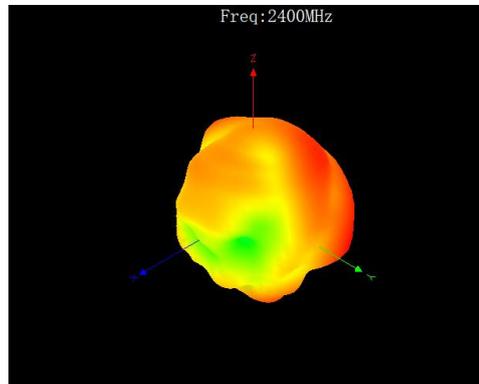


\* Voltage Standing Wave Ratio(VSWR)  
 Return Loss(RL)  
 $RL=20*\log_{10}[(VSWR+1)/(VSWR-1)]$

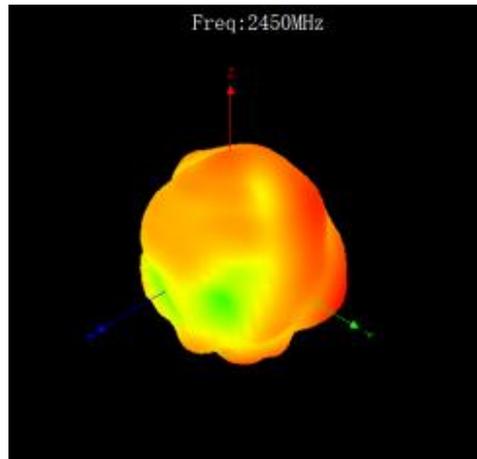
## 4. Efficiency and Gain

Frequency / MHz	Efficiency / %	Gain/ dBi
2400	70.47	3.83
2410	69.5	3.89
2420	71.45	3.91
2430	72.44	3.46
2440	73.11	3.55
2450	72.61	4.21
2460	70.79	3.7
2470	73.79	4.68
2480	73.28	4.32
2490	71.78	4.17
2500	73.11	4.4

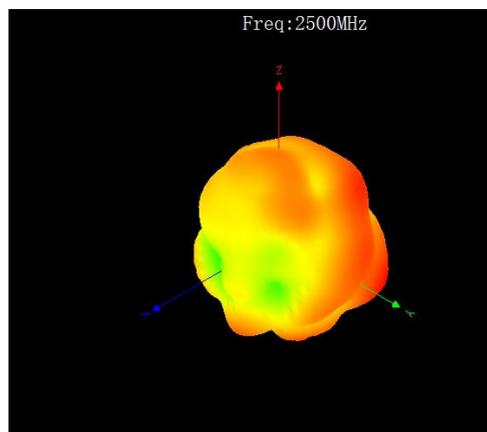
5. Radiation Pattern



2400MHz

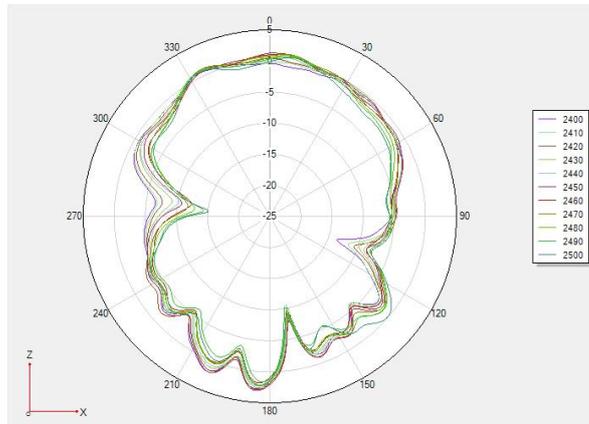


2450MHz

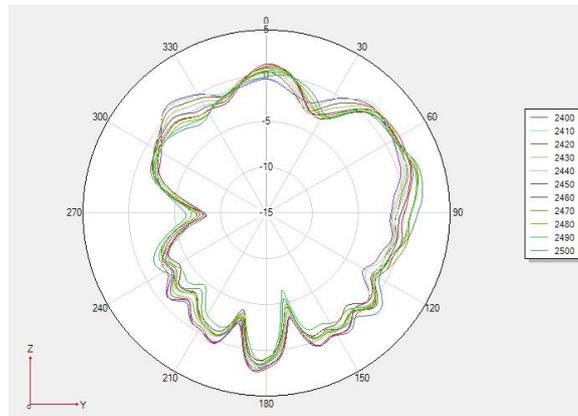


2500MHz

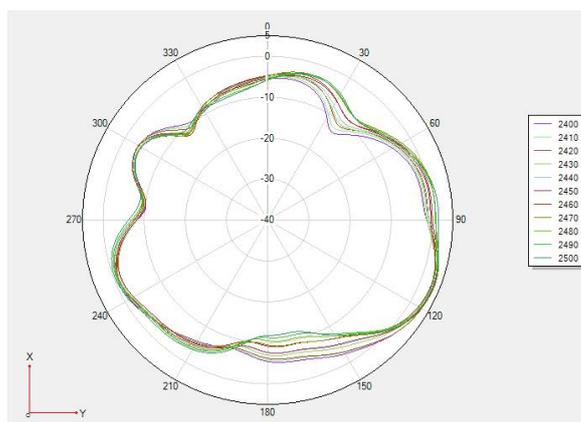
5-2 Antenna 2D Radiation Pattern



Phi 0 2D

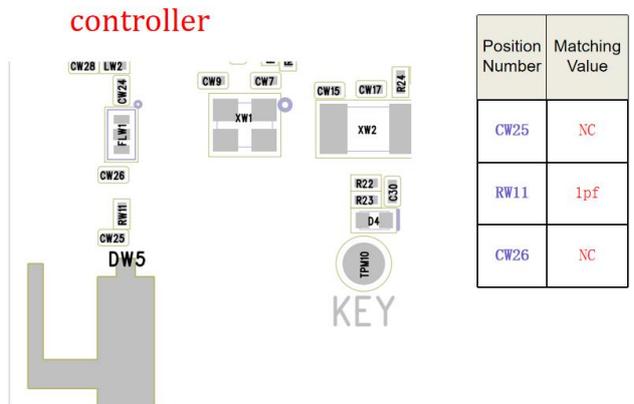


Phi 90 2D



Theta 90

6. Match changes



7.Mechanical Specification

