

SPECIFICATION

APPROVAL SHEET

CUSTOMER NAME:

PRODUCT NAME: 2.4G-BT PCB Antenna L=140mm 1.13 Low-loss Cable

CUSTOMER P/N:

Youbi P/N: UB01C125P2D4802A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	Eddy	
APPROVED BY:	 Huang	
DATE:	2025/1/14	



Modification History

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2025-1-14

Content

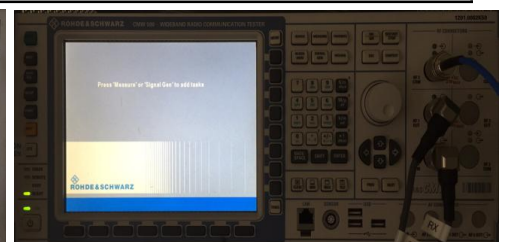
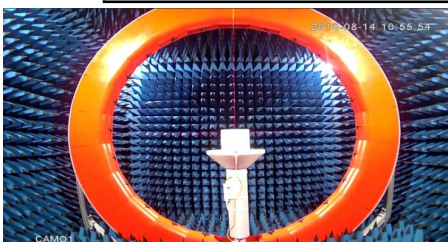
<i>Item</i>	<i>Description</i>
1.-----	Electrical Specification
2.-----	Test Items and Equipment
3.-----	S Parameter
4.-----	Efficiency and Gain
5.-----	Radiation Pattern
6.-----	Antenna installation diagram
7.-----	Mechanical Specification
8.-----	Packaging

1. Electrical Specification

Characteristics	Specifications	Unit
Outline Dimensions	55x15,L140	mm
Frequency	2400-2500	MHz
Impedance	50	Ω
VSWR	< 2	
Polarization	Linear Polarization	
Gain	2.42	dBi
Efficiency	>40	%
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	-15.31	1.41
2450	-17.32	1.31
2500	-10.17	1.88

* Voltage Standing Wave Ratio(VSWR)
Return Loss(RL)

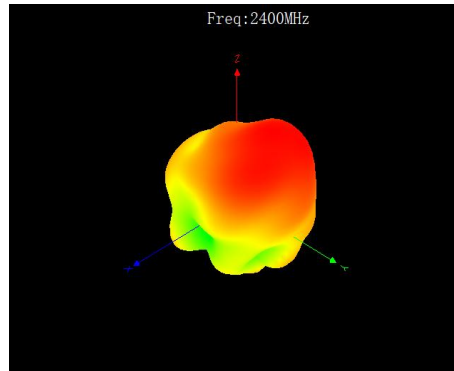
$$RL = 20 \cdot \log_{10}[(VSWR + 1)/(VSWR - 1)]$$



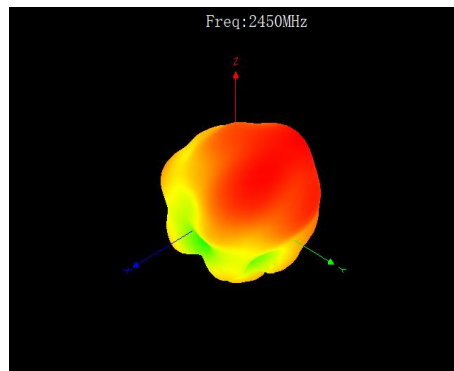
4. Efficiency and Gain

Frequency / MHz	Efficiency / %	Gain/ dBi
2400	43.02	2.32
2410	43.37	2.42
2420	45.09	2.27
2430	45.55	1.91
2440	46.21	1.82
2450	48.45	1.94
2460	45.27	1.72
2470	46.4	2.13
2480	44.17	1.95
2490	42.84	2.20
2500	43.55	2.09

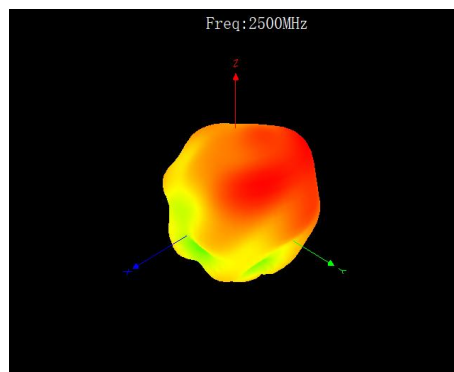
5. Radiation Pattern



2400MHz

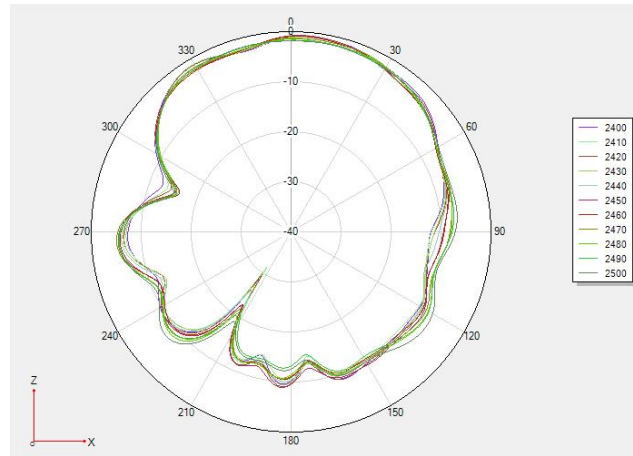


2450MHz

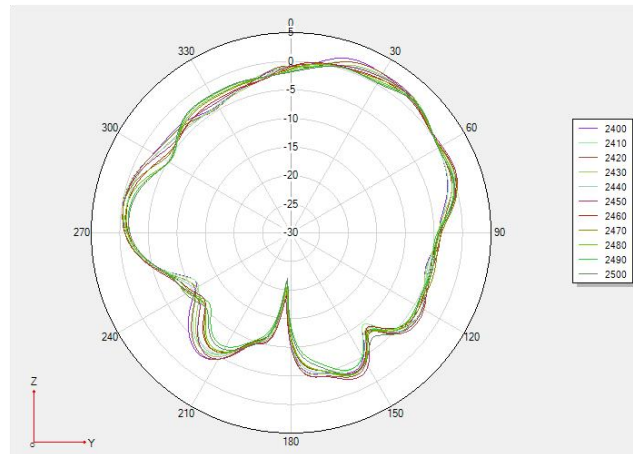


2500MHz

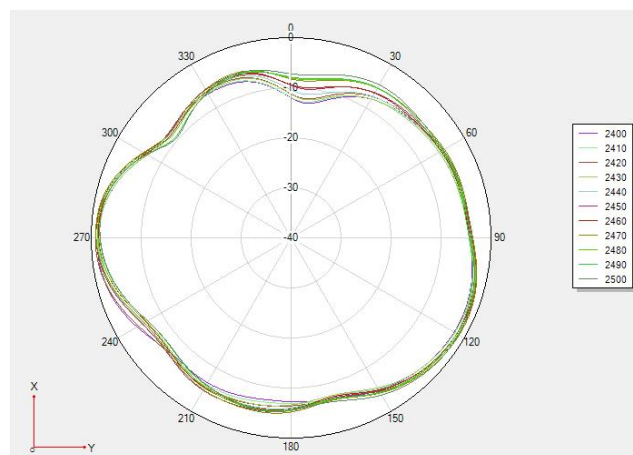
5-2 Antenna 2D Radiation Pattern



Phi 0 2D

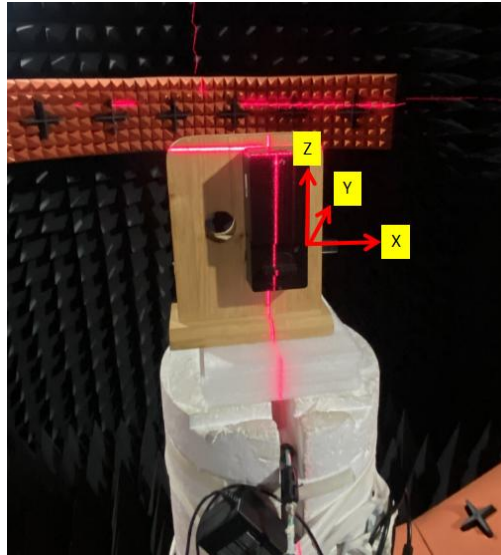


Phi 90 2D

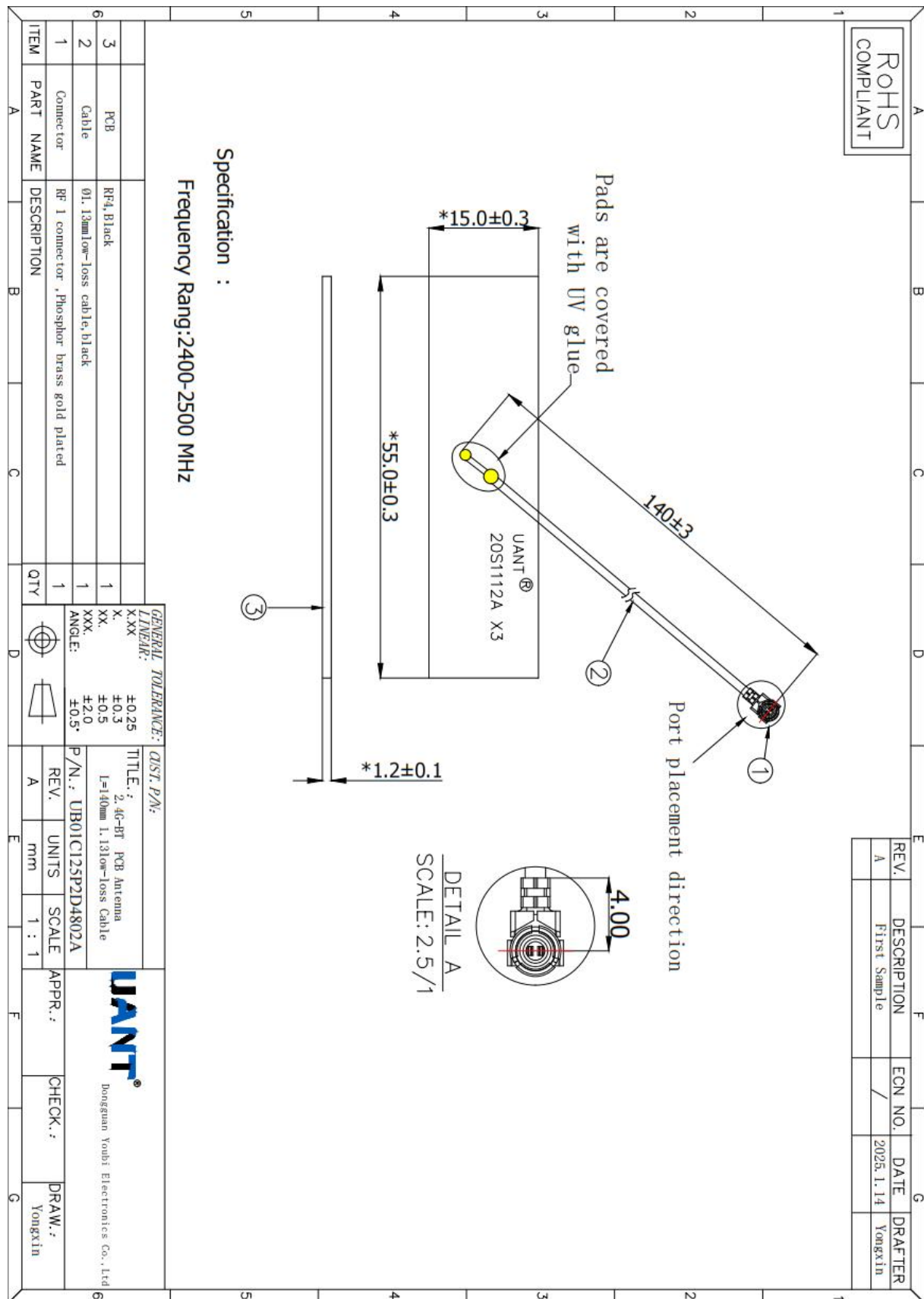


Theta 90 2D

6. Antenna installation diagram



7. Mechanical Specification



8. Packaging

