

承 认 书

APPROVAL SHEET

客 户 名 称

CUSTOMER NAME: 熵基科技股份有限公司

产 品 名 称

PRODUCT NAME: 2.4/5.8G FPC 内置天线 L=45mm+端子

客 户 料 号

CUSTOMER P/N:

优比电子料号

Youbi P/N: UB01C45F2D4571A REV: A

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
CHECKED BY:	 Eddy	
APPROVED BY:	Changxing. Liu	
DATE:	2025/1/2	

Modification History

Version	Content Revision	Issued by	Date
A	Original version	Eddy	2024-5-13
B	丝印变更	Eddy	2024-1-2

Content

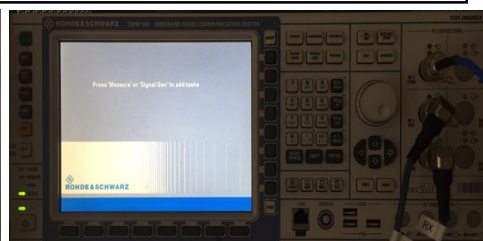
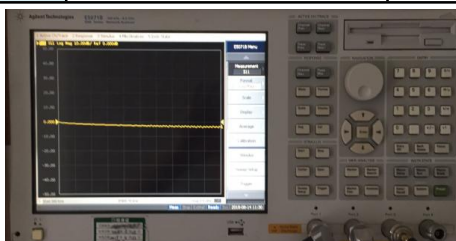
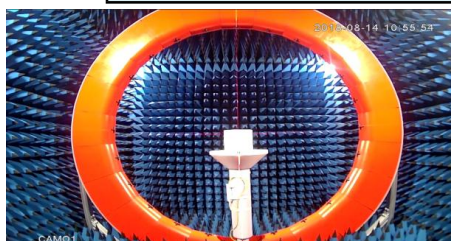
<i>Item</i>	<i>Description</i>
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1. Electrical Specification:

Characteristics	Specifications	Unit
Outline Dimensions	42.8x19.8,L45	mm
Frequency	2400-2500 / 5150-5850	MHz
Impedance	50	Ω
VSWR	< 2	
Polarization	Linear Polarization	
Gain	2.0 $\pm$ 0.8	dBi
Efficiency	>40	%
Connector Type	MHF-1-Plug	
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

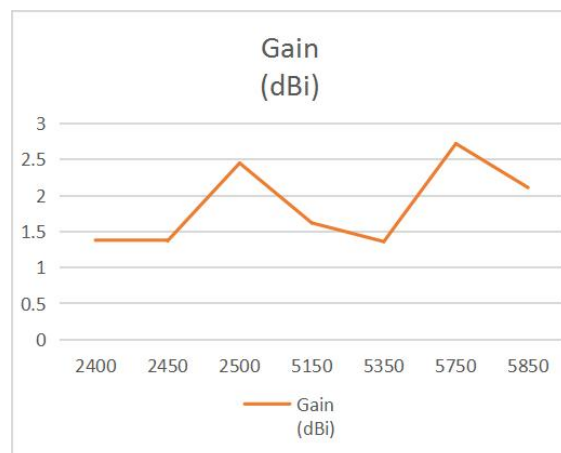
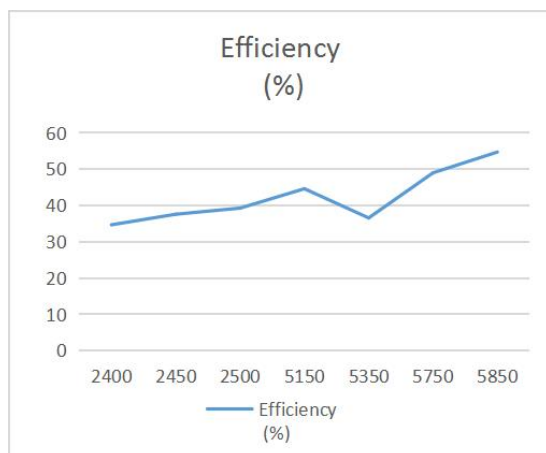
Frequency (MHz)	Return Loss (dB)	VSWR
2400	-19.92	1.22
2450	-21.32	1.19
2500	-13.81	1.51
5150	-20.74	1.20
5350	-18.01	1.28
5750	-34.32	1.03
5850	-18.08	1.28



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

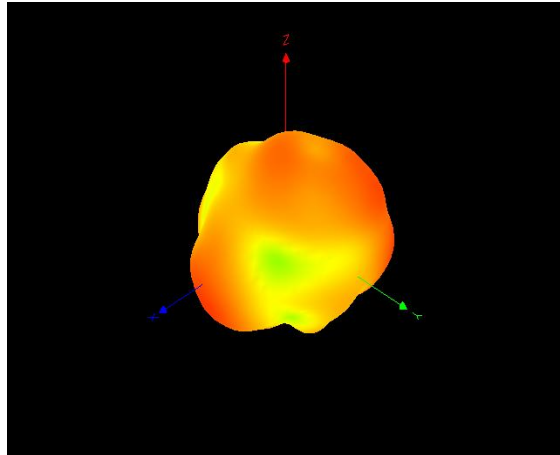
4. Efficiency and Gain

Frequency (MHz)	2400	2450	2500	5150	5350	5750	5850
Efficiency (%)	34.67	37.58	39.26	44.6	36.56	48.98	54.7
Gain (dBi)	1.38	1.37	2.45	1.62	1.36	2.72	2.11

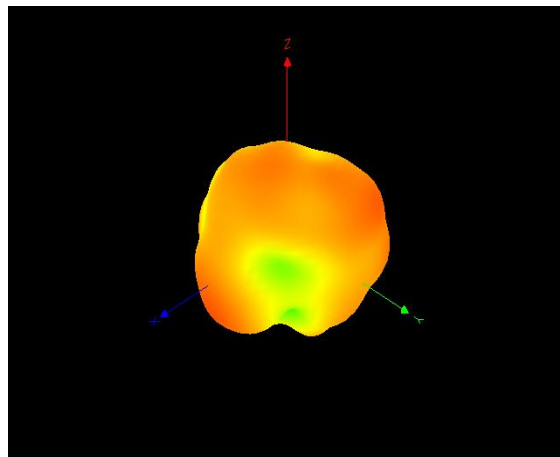


5. Radiation Pattern

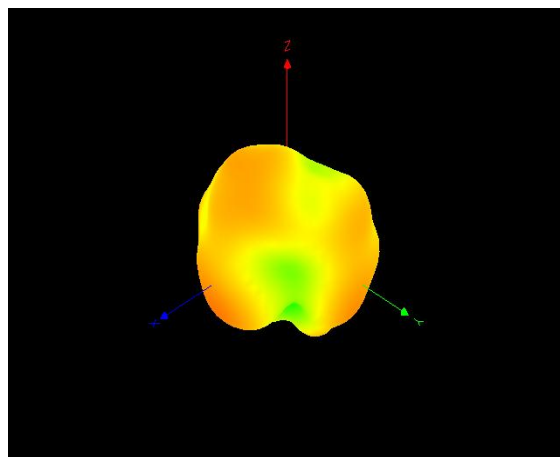
5-1 Antenna 3D Radiation Pattern



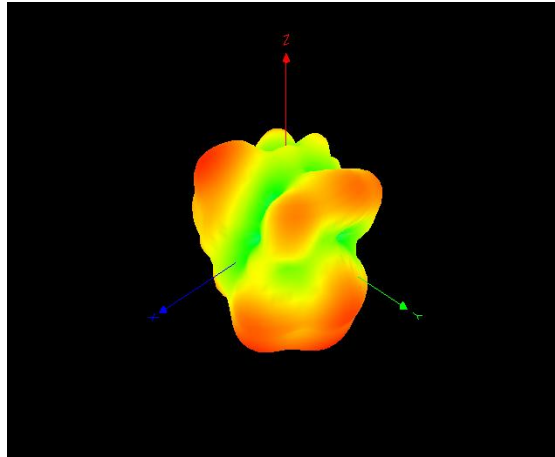
2400MHz



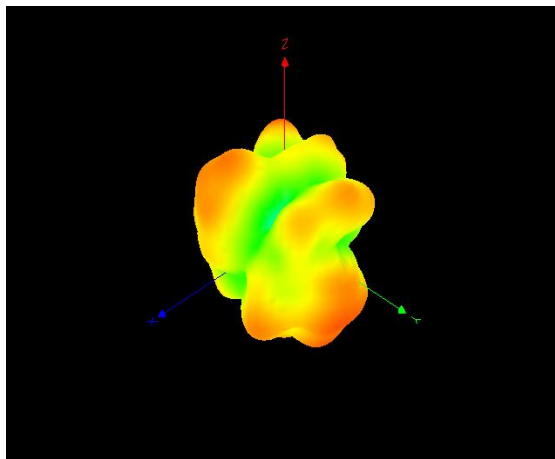
2450MHz



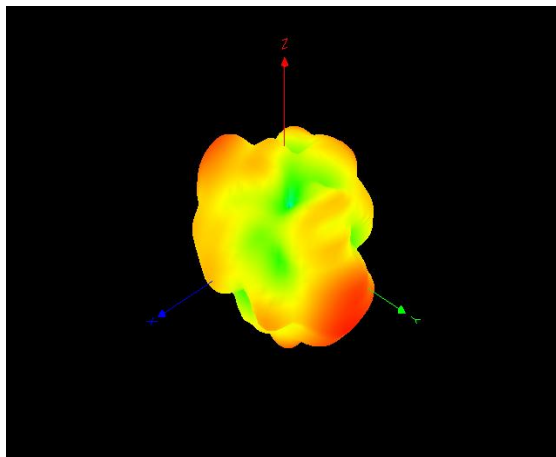
2500MHz



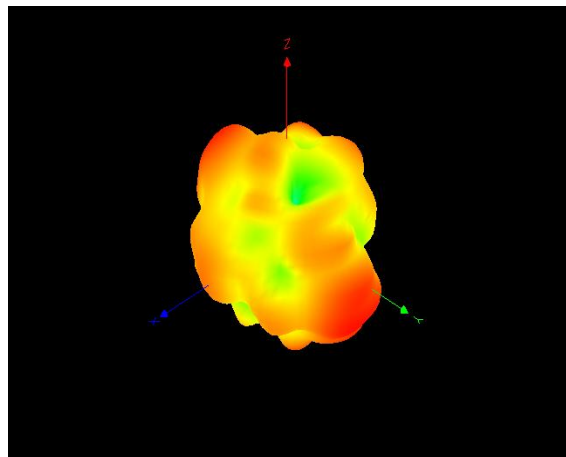
5150MHz



5350MHz

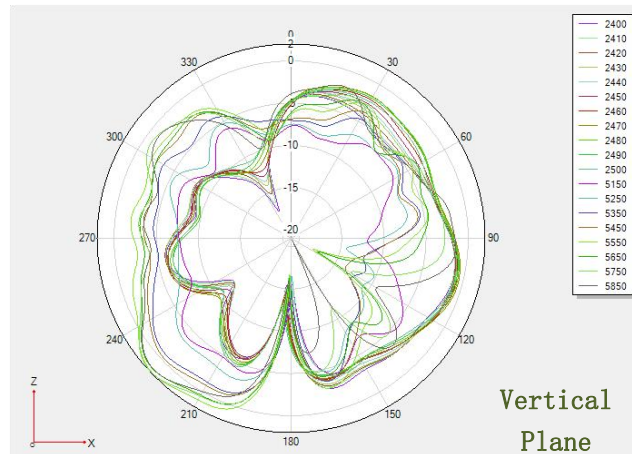


5750MHz

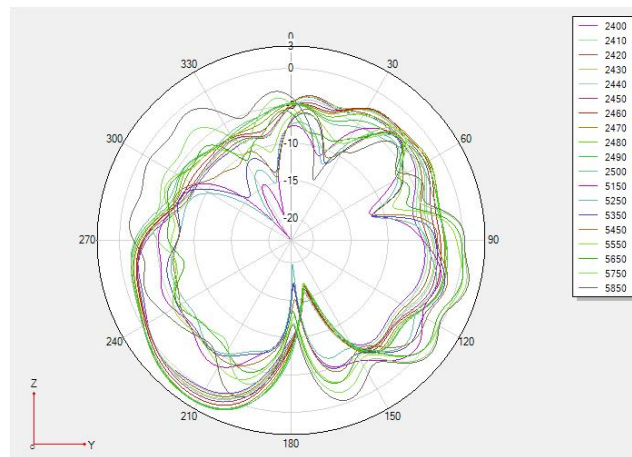


5850MHz

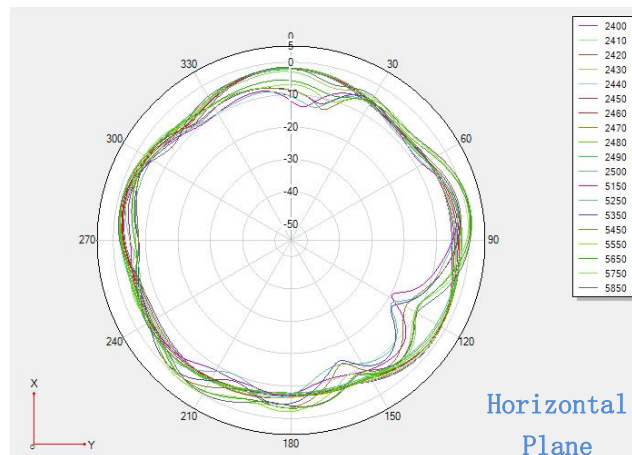
5-2 Antenna 2D Radiation Pattern



Phi 0 2D

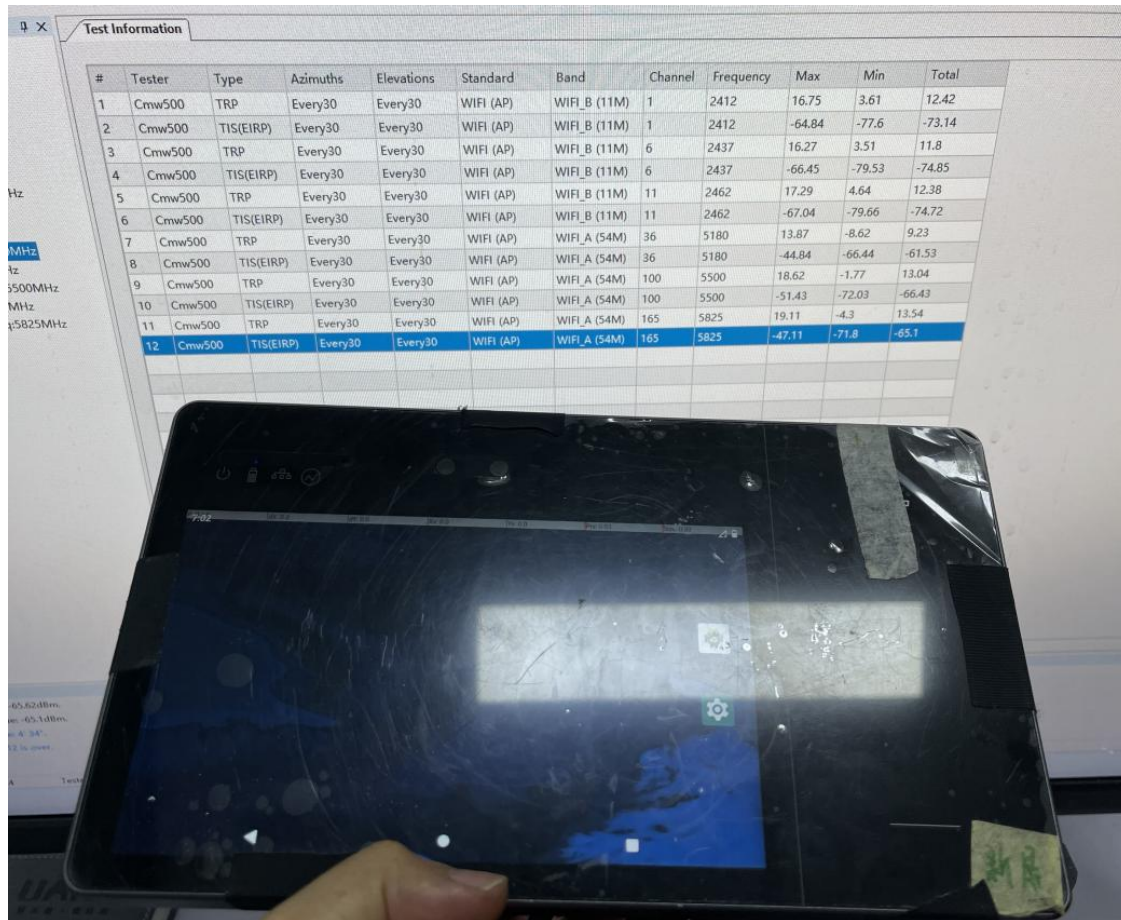


Phi 90 2D



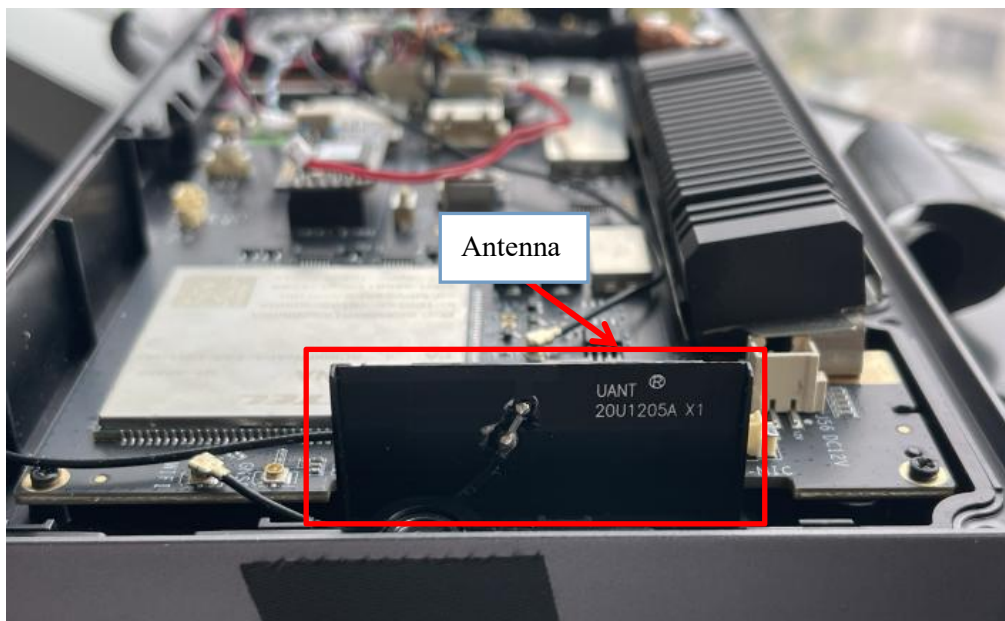
Theta 90 2D

6.Active test data

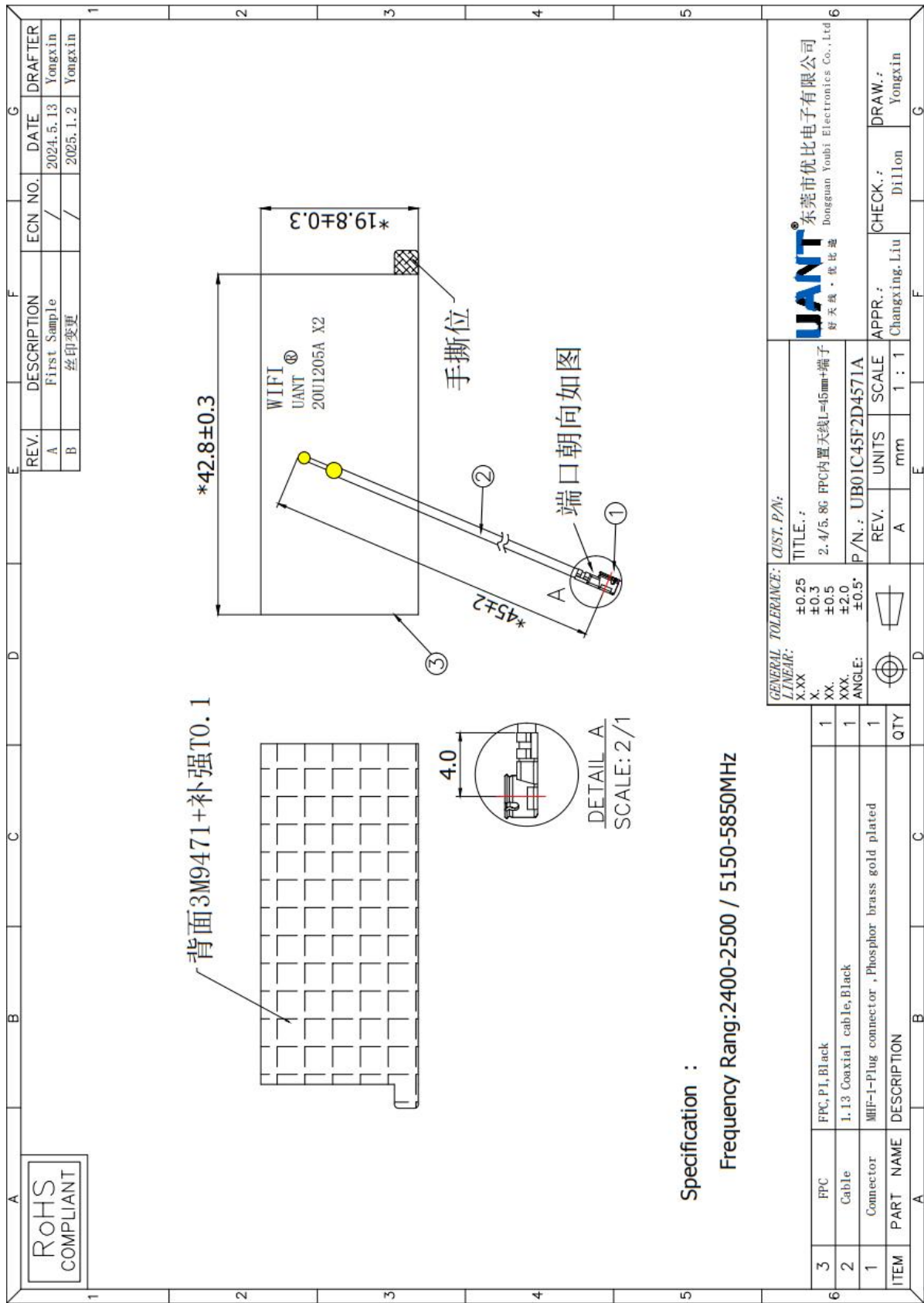


#	Tester	Type	Azimuths	Elevations	Standard	Band	Channel	Frequency	Max	Min	Total
1	Cmw500	TRP	Every30	Every30	WIFI (AP)	WIFI_B (11M)	1	2412	16.75	3.61	12.42
2	Cmw500	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_B (11M)	1	2412	-64.84	-77.6	-73.14
3	Cmw500	TRP	Every30	Every30	WIFI (AP)	WIFI_B (11M)	6	2437	16.27	3.51	11.8
4	Cmw500	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_B (11M)	6	2437	-66.45	-79.53	-74.85
5	Cmw500	TRP	Every30	Every30	WIFI (AP)	WIFI_B (11M)	11	2462	17.29	4.64	12.38
6	Cmw500	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_B (11M)	11	2462	-67.04	-79.66	-74.72
7	Cmw500	TRP	Every30	Every30	WIFI (AP)	WIFI_A (54M)	36	5180	13.87	-8.62	9.23
8	Cmw500	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_A (54M)	36	5180	-44.84	-66.44	-61.53
9	Cmw500	TRP	Every30	Every30	WIFI (AP)	WIFI_A (54M)	100	5500	18.62	-1.77	13.04
10	Cmw500	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_A (54M)	100	5500	-51.43	-72.03	-66.43
11	Cmw500	TRP	Every30	Every30	WIFI (AP)	WIFI_A (54M)	165	5825	19.11	-4.3	13.54
12	Cmw500	TIS(EIRP)	Every30	Every30	WIFI (AP)	WIFI_A (54M)	165	5825	-47.11	-71.8	-65.1

7.Antenna installation diagram

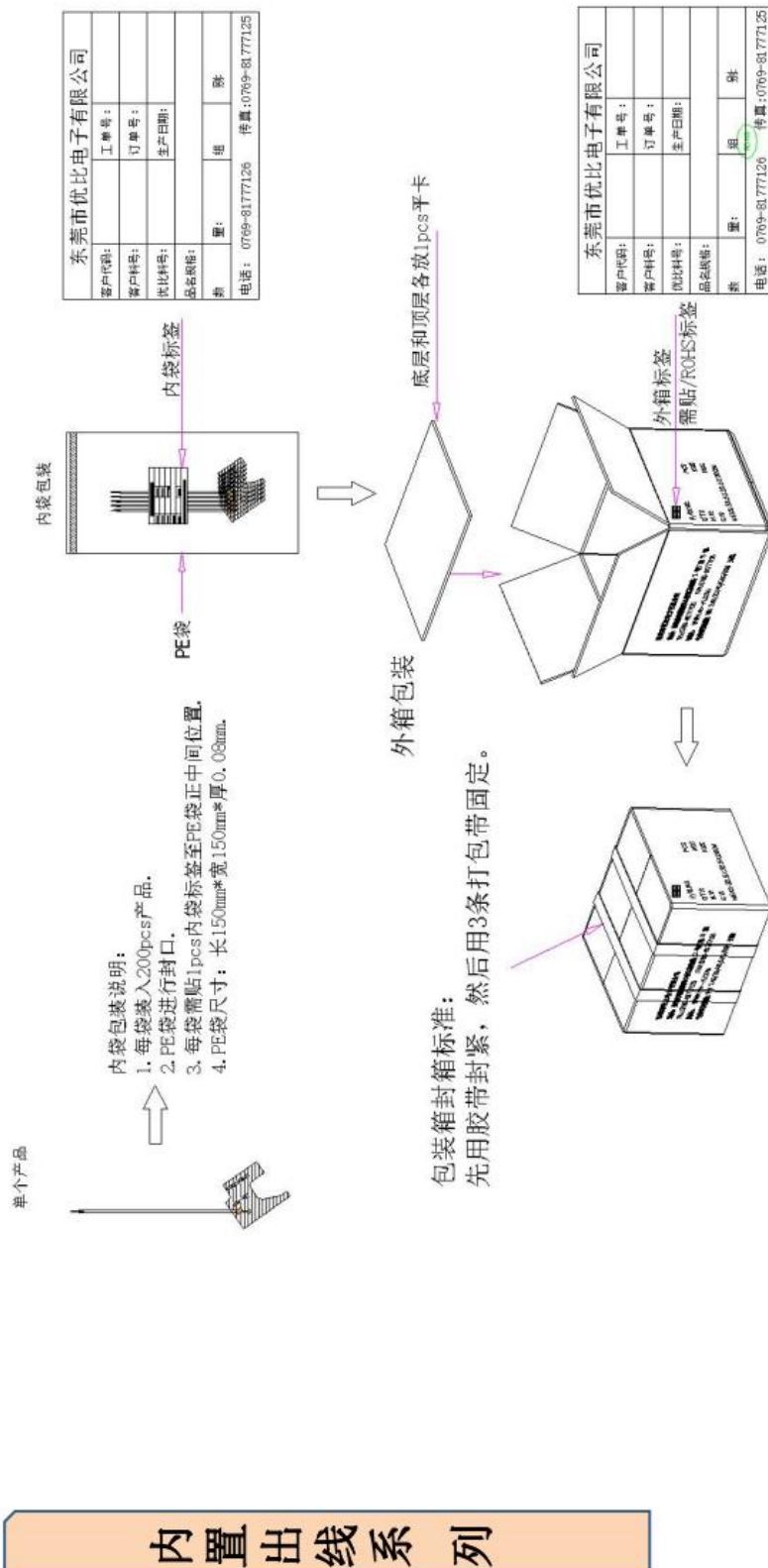


8. Mechanical Specification



9. Packaging

产品包装规范



注: 此份包装规范适用于FPC, PCB天线类的线材总长<90mm带ipex和不带ipex产品, 属于通用类型.

1. 中号纸箱装10000pcs产品每箱.

内置出线系列

未使用特定化合物声明

兹有我司东莞市优比电子有限公司，应熵基科技股份有限公司要求，
我司所交货物料符合 ROHS 2.0 标准，特此声明我司所交物料符合 ROHS 2.0
标准，如有不符合项我司愿意承担一切责任：

欧盟 ROHS 2.0 法规及其豁免条列

铅 (Pb)	1000PPM
镉 (Cd)	100PPM
汞 (Hg)	1000PPM
六价铬 (Cr6+)	1000PPM
多溴联苯 (PBBs)	1000PPM
多溴联苯醚 (PBDEs)	1000PPM
邻苯二甲酸二 (2-乙基己基) 酯 (DEHP)	1000PPM
邻苯二甲酸甲苯基丁酯 (BBP)	1000PPM
邻苯二甲酸二丁基酯 (DBP)	1000PPM
邻苯二甲酸二异丁酯 (DIBP)	1000PPM

公司总经理签字及公司盖章：

日 期：