

SPECIFICATION FOR APPROVAL

(Product Approval)

Product Name: WIFI antenna

Model (original model) : UB01C95F2D3610A

Customer's "Material Name" : WIFI antenna UB01C95F2D3610A

Customer's "Specifications" : Frequency: 2.4GHZ built-in FPC antenna Black coaxial line with terminal length L=95mm±3mm ROHS

Customer's "BOM" : 18600000009856

Change Content History:

Serial Number	Contents before the change	Content after the change	Date of change	Version	Page Numbers	Responsible person
0	First edition	First Edition	The 2023-1-11	A0	10	Eddy

Supplier name: Dongguan Youbi Electronics Co., LTD		
Supplier Address: Building 79, New Sun Industrial City, No. 9 Xinfu Road, Lincun, Tangxia Town, Dongguan City		
Tel: 0769-81777126	Fax: 0769-81777126	Email: zq@ub-rf.com
(Signed by Supplier)		
Responsible person/date	Audit/date	Approval/date

This admission includes the following: (One is indispensable)

- I. Cover
- Second, the parameter specification
- Third, structure size drawing
- Four, BOM table
- Five, packaging drawing
6. Production process flow table
- Seven, certification test status

Customer name: <u>Shenzhen Aoni Electronics Co., LTD</u>
Judgment result of Demander (customer) : <input type="checkbox"/> Passed <input type="checkbox"/> failed

The demander (customer) acknowledges (please bookmark the entire acknowledgement after confirmation)			
Development Design engineer/date	SQE Engineer/Date	Head of Purchasing Department/Date	Approval by Development Manager/date

2. Specification of parameters

1, electrical performance parameters (fill in instructions: the relevant parameters of electrical performance must be clear units, tolerances, conditions)

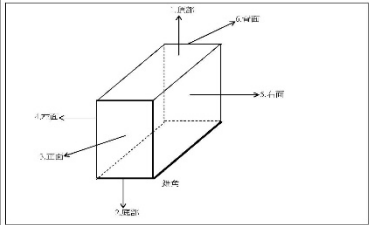
Serial number	Items	Parameter Specifications	Test conditions
1	Frequency (MHz)	2400-2500.	Microwave darkroom
2	Gain testing	$\geq 1\text{dBi}$, $\leq 3\text{dBi}$	Microwave darkroom
3	Efficiency Tests	$\geq 30\%$, $\leq 60\%$	Microwave darkroom
4	Center frequency characteristic impedance (Ω)	50	Network Analyzer

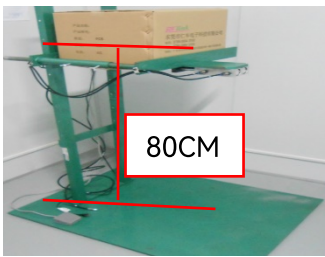
2, mechanical performance parameters (fill in instructions: the relevant parameters of mechanical physical properties must be clear units, tolerances, conditions)

Serial Number	Items	Parameter Specifications	Test conditions
1	Length of wire	95 ± 3 (mm)	Use a steel rule to measure, OK within the length dimension 95 ± 3 (mm) and NG otherwise.
2	FPC length	31.5 ± 0.3 (mm)	Use a digital caliper to measure the length of 31.5 ± 0.3 (mm) is OK, and vice versa is NG.
3	FPC width	10 ± 0.3 (mm)	Use a digital caliper to measure, OK within a width size of 10 ± 0.3 (mm), NG otherwise.


3. Reliability test (Fill in instructions: the relevant requirements of reliability test must be clear about the

items, conditions and criteria)

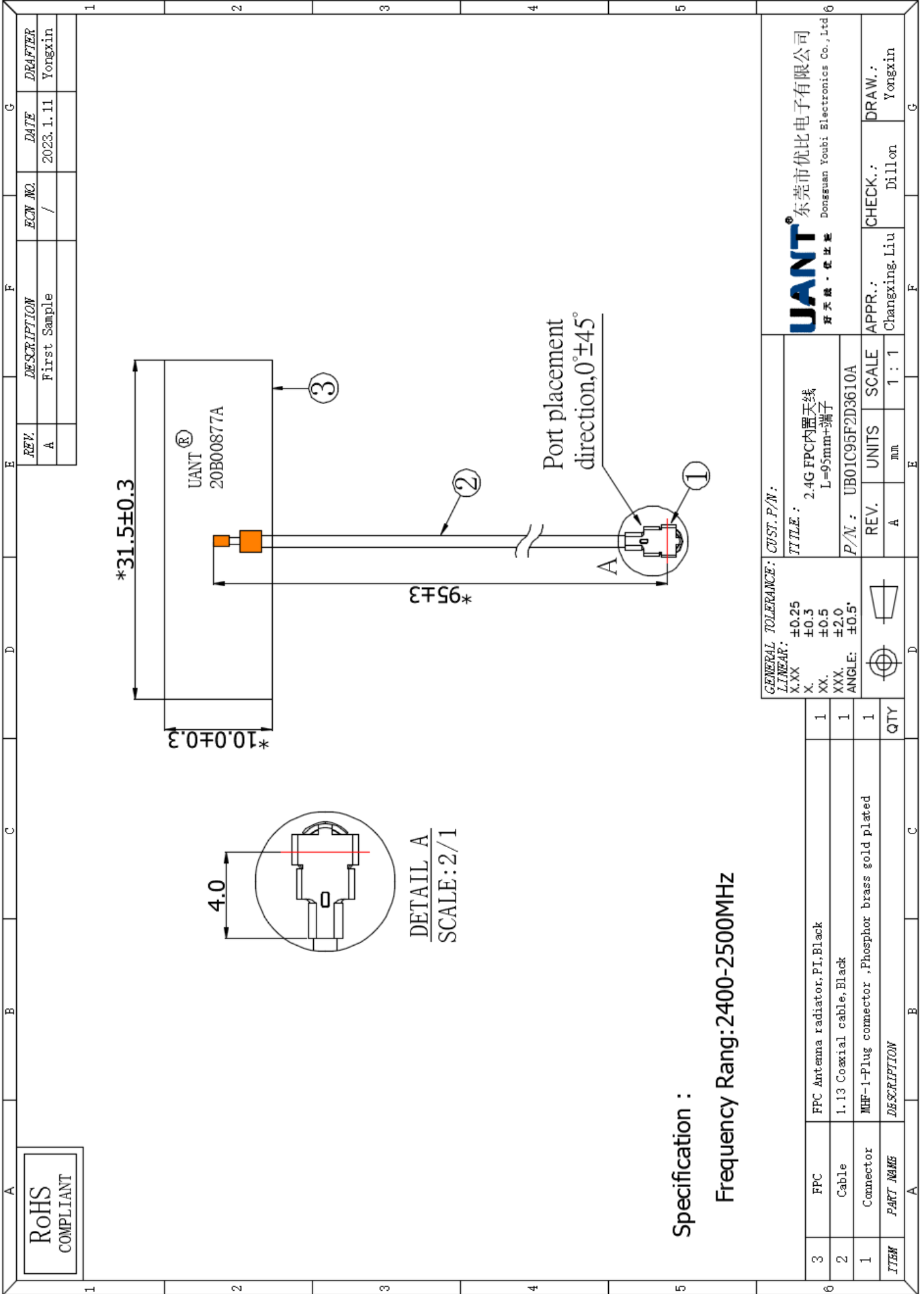
Serial Number	Items	Trial conditions	Standard Requirements
1	Salt Spray Testing	<p>Test specifications: test temperature :35°C, salt solution concentration :5% (the standard of PH value after salt solution cooling is between 6.5 and 7.2), the average amount of salt solution collected :1.0 ~ 2.0(ml/hr), test time :48 hours (terminal)/8H(wire)</p> <p>Experimental method: The prepared salt water is injected into the test liquid storage bucket, the tested object is placed on the test shelf, and then the test cover is closed, and the water is poured into the sealed tank until there is no gap. After 48H/8H of testing, if there is no oxidation on the surface of the product visually, it is OK, and vice versa, NG.</p>	<p>After 48H/8H, the surface of the product is not oxidized, and the electrical test is OK.</p>
2	Terminal tension test	<p>Test method: Adjust the height of the upper and lower crossarm to make the fixture spacing appropriate; Clamp the upper end of the specimen with the upper clamp, press the zero button to make the pointer zero; Press the tension meter pointer lock switch; Clamp the lower end of the specimen with the lower clamp; Rotate the handwheel to lower the cross arm to stretch the specimen;</p>	<p>Read the tension value from the tension meter $\geq 1\text{KG}$ to determine OK, vice versa NG.</p>
3	Terminal pull force test	<p>Test method: Buckle the terminal into the terminal block, shake the handwheel to pull the test fixture claw to the appropriate position; Open the claw to hook the back of the terminal. Return the pointer to zero and shake the handwheel to begin testing.</p>	<p>Read the tension value from the tension meter in the range of 0.8-1.5KG to determine OK, otherwise NG.</p>
4	Drop test	<p>Test conditions:</p> <ol style="list-style-type: none"> Drop the 6 faces of the carton (as shown in Figure 1)  <p style="text-align: center;">Picture 1</p> <ol style="list-style-type: none"> The product is 80 CM away from the floor steel plate (Figure 2) 	<ol style="list-style-type: none"> After testing, the packing box should not be obviously damaged. after the test of the product inspection, electrical & external inspection can not be

	 <p style="text-align: center;">Figure II</p> <p>Test method:</p> <ol style="list-style-type: none"> 1, the need to test the packing box fixed on the product bracket fixed clamp test sample, clamping force should be appropriate, so as not to hurt the test sample. 2, adjust the drop height 80CM. 3. First, turn on the main power switch and connect the gas pipe. 4, the work is finished, and then disconnect the gas pipe and power switch, take off the sample. 	bad.
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Coaxial line material Appendix

7	RG、细微射频同轴电缆	RF-1.13/50Ω	
结构图 Structure drawing			
结构特性 Structure characteristics			
结构 Structure	项目 Item	标准值 Standard value	
①内导体 Inner conductor	材料 Material	镀银铜线 Silverplated copper wire / 镀锡铜线 Tinned copper wire	
	(综合)标称外径(mm) (Intertwist)NOM.O.D.(mm)	0.24±0.02	
②绝缘层 Insulation	材料 Material	聚全氟乙丙烯 FEP / 聚乙烯 PE	
	标称外径(mm) NOM.O.D.(mm)	0.7±0.03	
③外导体 Outer conductor	材料 Material	镀银铜线 Silverplated copper wire / 镀锡铜线 Tinned copper wire	
	标称外径(mm) NOM.O.D.(mm)	0.92±0.05	
	覆盖率(%) Coverage ratio(%)	90±5	
④护套层 Jacket	材料 Material	聚全氟乙丙烯 FEP / 聚乙烯 PE	
	颜色 Color	黑 Black	
	标称外径(mm) NOM.O.D.(mm)	1.13±0.05	

3. Structure size drawing (CAD drawing file)

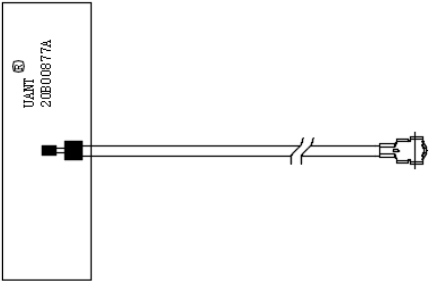





4. BOM Table (Bill of Materials)

Serial number	Subpart material name	Material	Specification/model	brand	Supplier name	Dosage
1	FPC	PI	31.5mm long x 10mm wide	\	QG	1PCS
2	Terminals	Phosphorous copper gold plating	1.13 generation terminals	\	CM	1PCS
3	Wire rod	FEP/silver-plated copper	The RF - 1.13	\	SY	1PCS
4	PE bag	PE	Choose suitable specifications	\	Pond Dragon	1/200PCS
5	Paper box	\	Select suitable specifications	\	Nine Lunda	/

5, packaging drawing (fill in instructions: inserted picture must be clearly visible)

1. Packing photo (picture) :

<p>1. Photos or pictures of the packaging of individual materials</p>	<p>2. Photos or pictures of single layer of inner packaging</p>
 <p>Remarks:</p>	 <p>Notes:</p>
<p>3. Photos or pictures of the outer package</p>	<p>4, supplier material packaging anti-counterfeiting mark</p>
 <p>Remarks:</p>	 <p>Notes:</p>

【 Supplier Material Code Rules 】 :

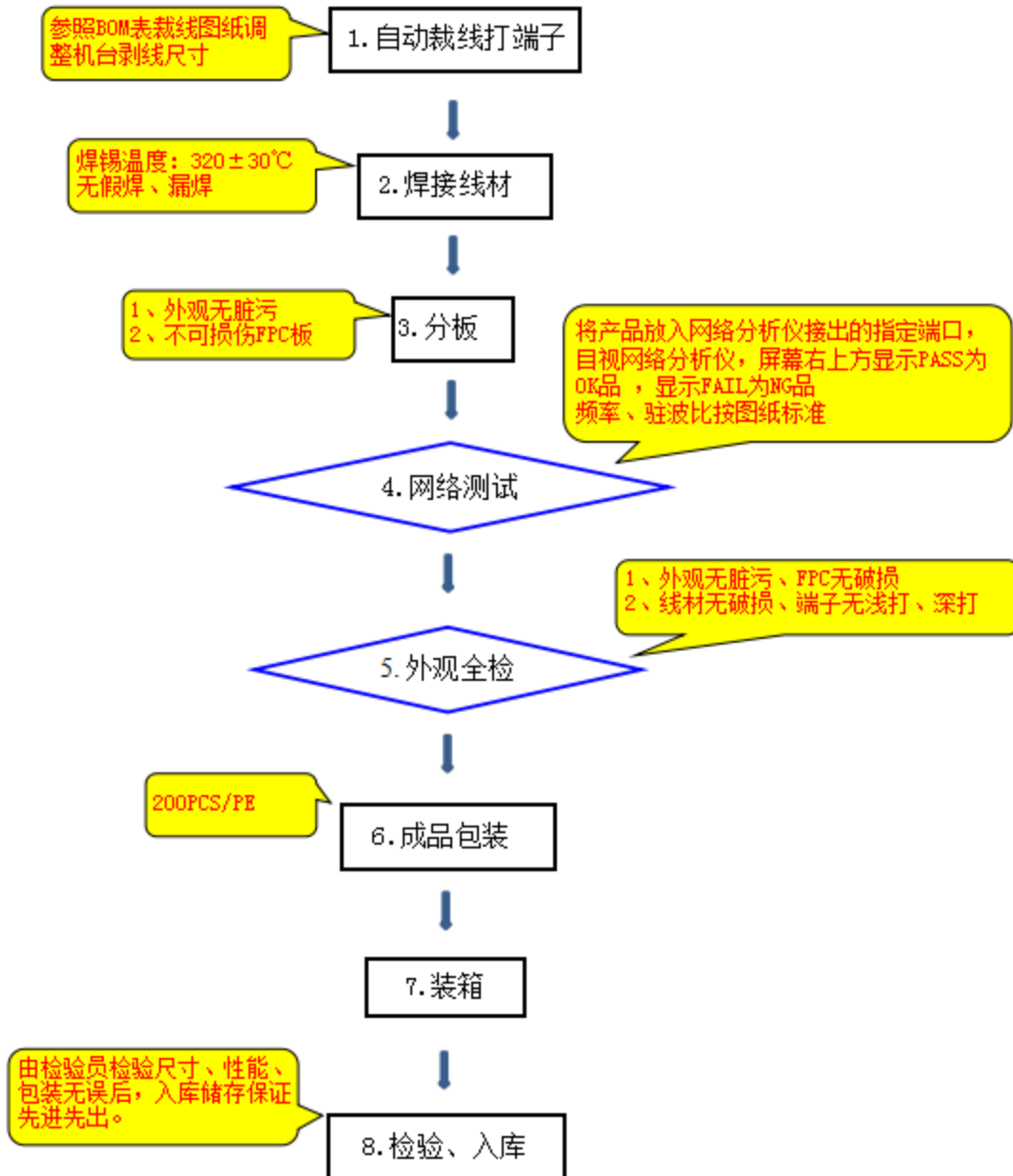
General process product coding rules:

UB + 01 + C + 95 + F + 2D + 3610 + A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- 1. UB stands for antenna products;
- 2. Classification of finished products: 01 for the terminal built-in class;
- 3. Connection code: C for outgoing wire connection;
- 4.95 represents the length of the wire
- 5. Material and color description: F stands for FPC;
- 6. Gain description: Gain number +D (DBi);
- 7. Serial number :1 to 99999999;
- 8. Version number: Version A code is A.

6, the production process table (fill in instructions: must indicate the whole process of production procedures, please specify the key station)



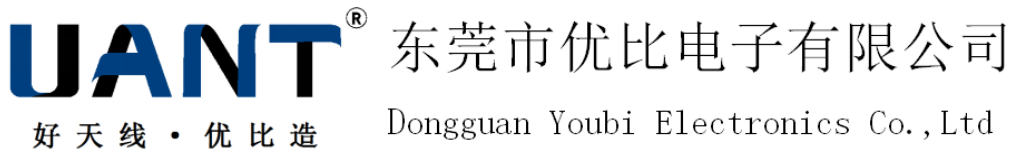
7, certification test status (Filling in instructions: if there is a relevant test certification, please tick in brackets and indicate the corresponding certification or report number)

() UL certification or report number: _____

() VDE certification or Report Number: _____

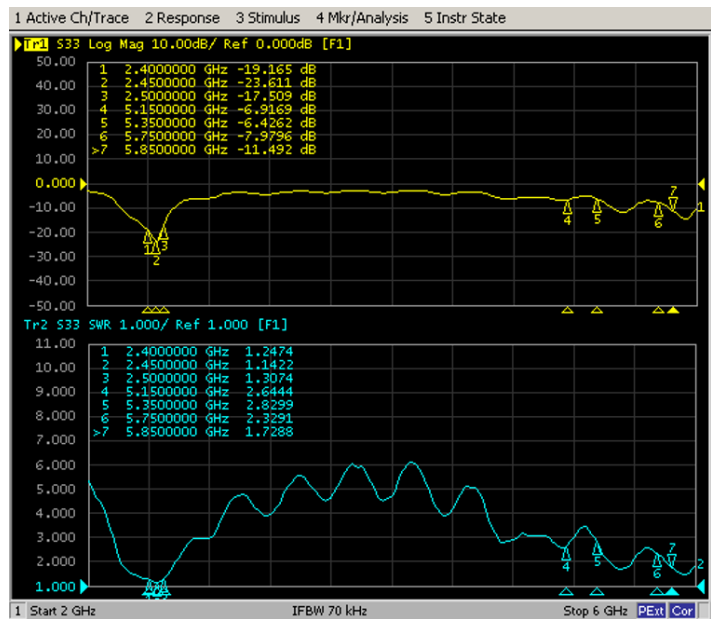
() CE certification or report number: _____

- FCC certification or report number: _____
- ROHS certification or report number: A2220006213101E
- REACH certification or report number: _____
- EMC certification or report number: _____
- CCC certification or report number: _____
- SRRC certification or report number: _____
- Other certification or report number: _____
- No product certification



1.S Parameter

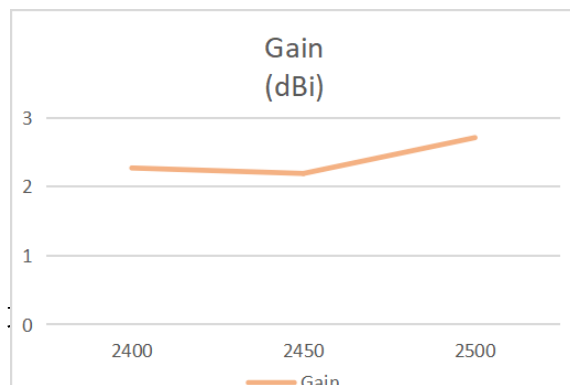
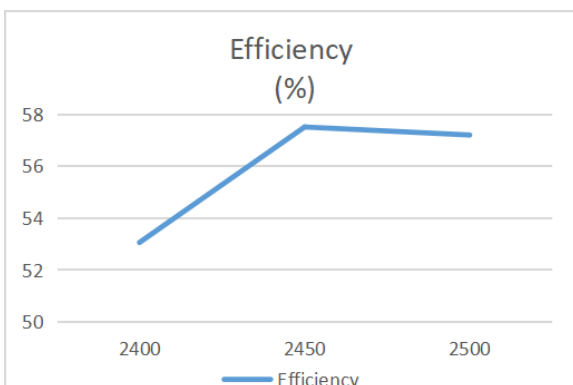
Frequency(MHz)	Return Loss(dB)	VSWR
2400	19.16	1.24
2450	23.61	1.14
2500	17.50	1.30



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

2. Efficiency and Gain

Frequency (MHz)	2400	2450	2500
Efficiency (%)	53.06	57.51	57.2
Gain (dBi)	2.27	2.19	2.71



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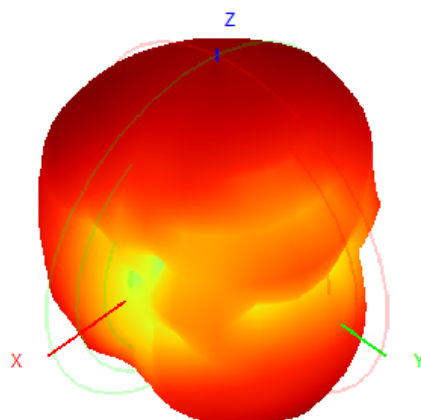
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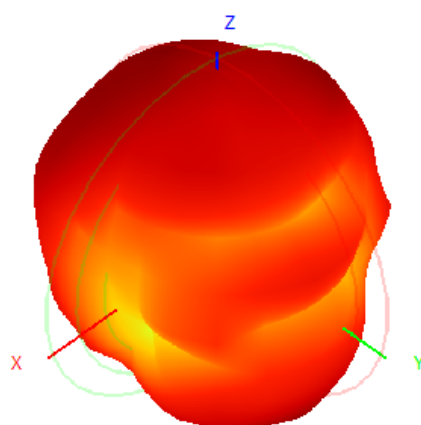
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3. Radiation Pattern

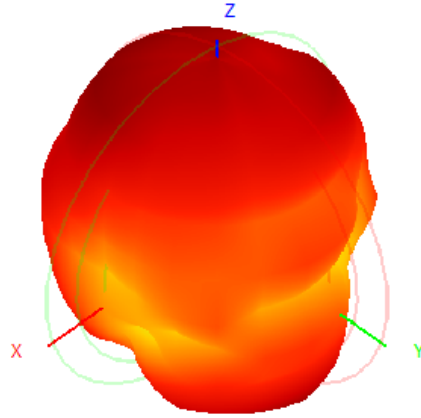
3-1 Antenna 3D Radiation Pattern



2400MHz



2450MHz



2500MHz

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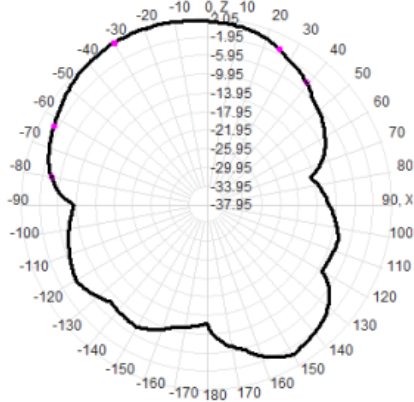
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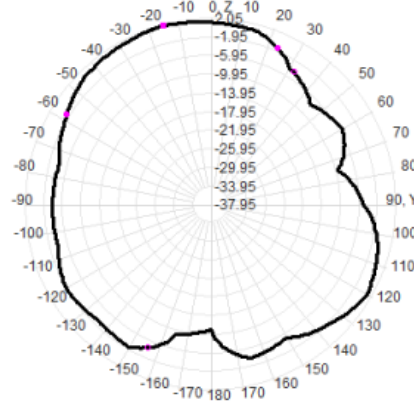
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3-2 Antenna 2D Radiation Pattern

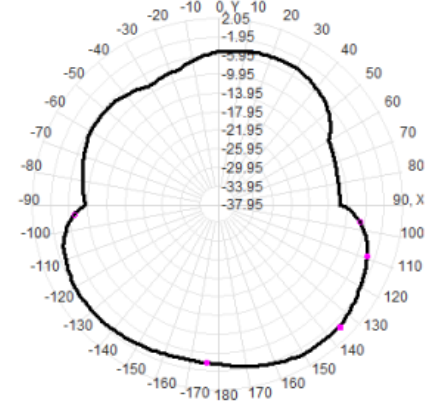
2400.0MHz Total(E1-XZ), Max= 2.05dBi



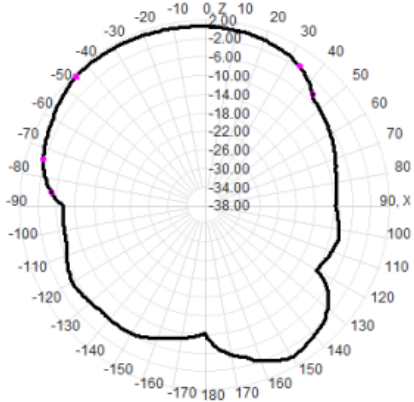
2400.0MHz Total(E2-YZ), Max= 1.72dBi



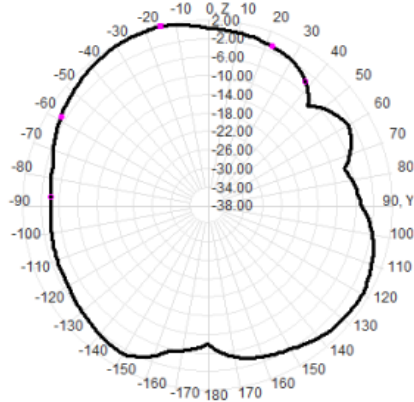
Total(H-XY), Max= -0.95dBi, CirD=10.87



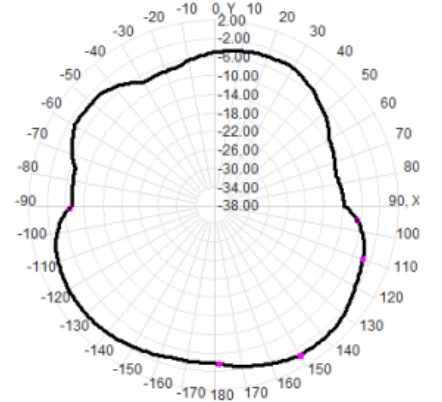
2450.0MHz Total(E1-XZ), Max= 1.33dBi

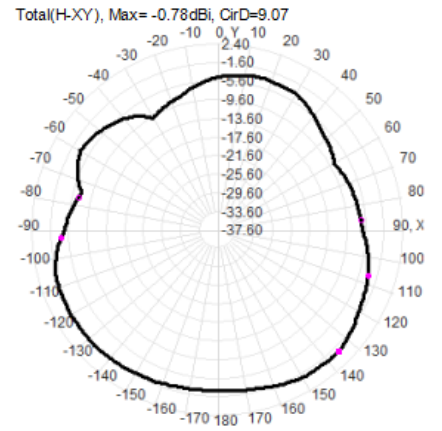
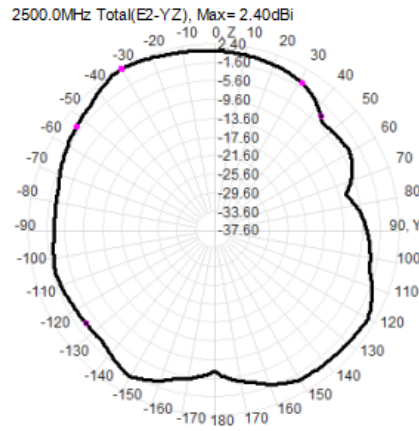
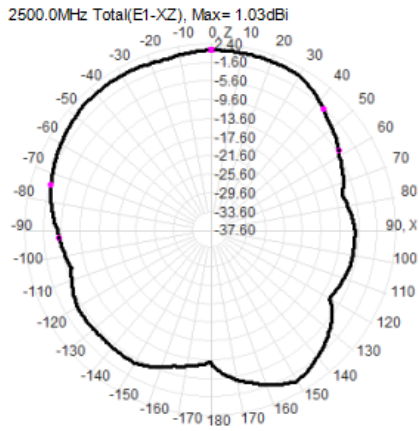


2450.0MHz Total(E2-YZ), Max= 2.00dBi



Total(H-XY), Max= -0.80dBi, CirD=10.16





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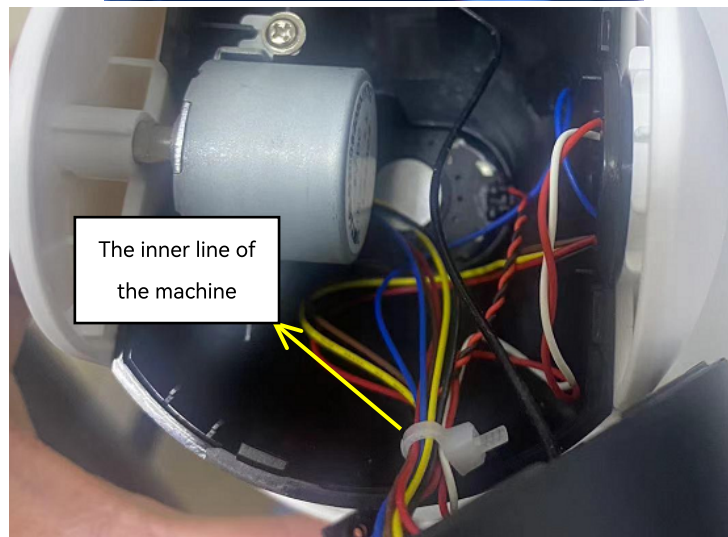
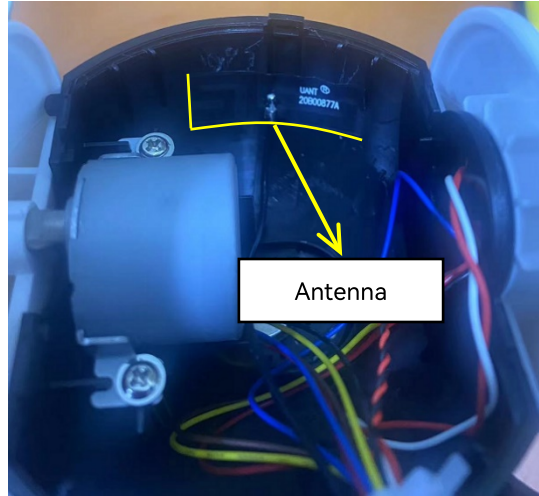
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4.Active test data

Item	Measurement	Total
1	TRP	17.52
6	TRP	18.01
11	TRP	17.22
1	TIS	91.31
6	TIS	90.88
11	TIS	92.24

5.Antenna installation diagram



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