

# 安特微智能通讯（深圳）有限公司

Ante intelligent Communications(shenzhen)CO.,Ltd

编号：ATW-GC-003 A/0

## Antenna Acknowledgement

**Customer Name:** 锦好医疗

**Material code:** ①ATWE-01-0319-010

②ATWE-01-0320-010

**Product name:** ①A61H-BT-L 天线

②A61H-BT-R 天线

**Date of issue:** 2022-10-27

**Manufacturer recognition column:**

Preparation	to examine	approval
韦素妮	杨华	陈佳佳

**Customer recognition column:**

confirm	to examine	approval

## catalogue

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## Preparation/revision of change resume

[illegible]

## 一、Purpose of Acknowledgment:

1.Through the description of product characteristics and inspection standards in this letter, we can better communicate with customers,

Reach an agreement to avoid product quality disputes caused by insufficient communication.

2.When our products need to be used in your outsourcing factory, please contact your outsourcing company with the contents of this letter of acknowledgment.

3.Precautions for use environment:

The FPC antenna is designed according to the general use environment (0~25 °C , 30%~70% normal pressure). Please note that the quality of the product will be reduced if it is used for a long time in the following situations:

3.1.Reducing gas (Cl<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, etc.)

3.2. Volatile/olefinic gas environment.

3.3.Places in direct contact with water or with high humidity and condensation.

3.4.Places for oil, liquid medicine and organic solution.

3.5. A place of vibration.

3.6.Places with direct sunlight.

## 4、Storage and use

In order to prevent discoloration, weldability degradation and abnormal foaming during assembly, the following storage conditions shall be observed.

4.1.High temperature and humidity environment will cause discoloration of products, so it is recommended to manage and keep them in a constant temperature and humidity environment.

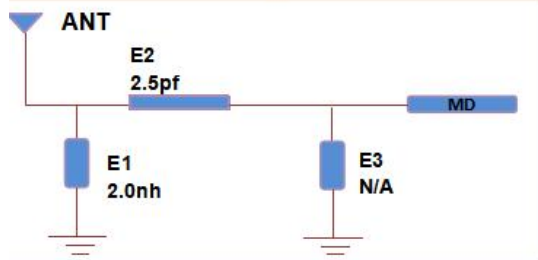

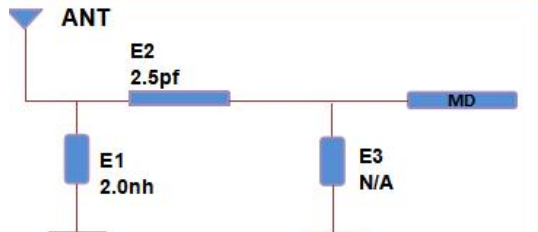
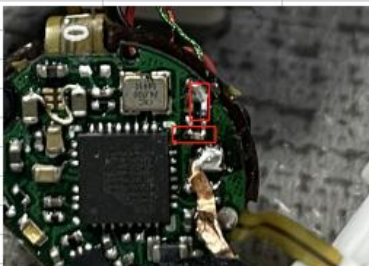
4.2. The PI film of FPC is very easy to absorb moisture. In the moisture absorption state, if the temperature changes sharply, foaming will occur,It is recommended to prepare and bake according to the conditions before assembly (SMT, etc.). Please try to use the baked products in 2HR.

## 二、Product materials:

FPC base material	Copper foil/18um base material/12.5um One-half
3M adhesive tape	3M9471
surface treatment	Silk screen matte black oil/dumb white characters

### 三、Antenna test data:

#### 3.1 Antenna matching circuit

<b>L</b> 			<b>Monopole</b> <b>L</b>	
			E1-(0201)	2nh
			E2-(0201)	2.5pf
			E3-(0201)	N/A
<b>R</b> 			<b>Monopole</b> <b>R</b>	
			E1-(0201)	2nh
			E2-(0201)	2.5pf
			E3-(0201)	N/A

#### 3.2 Antenna OTA test data

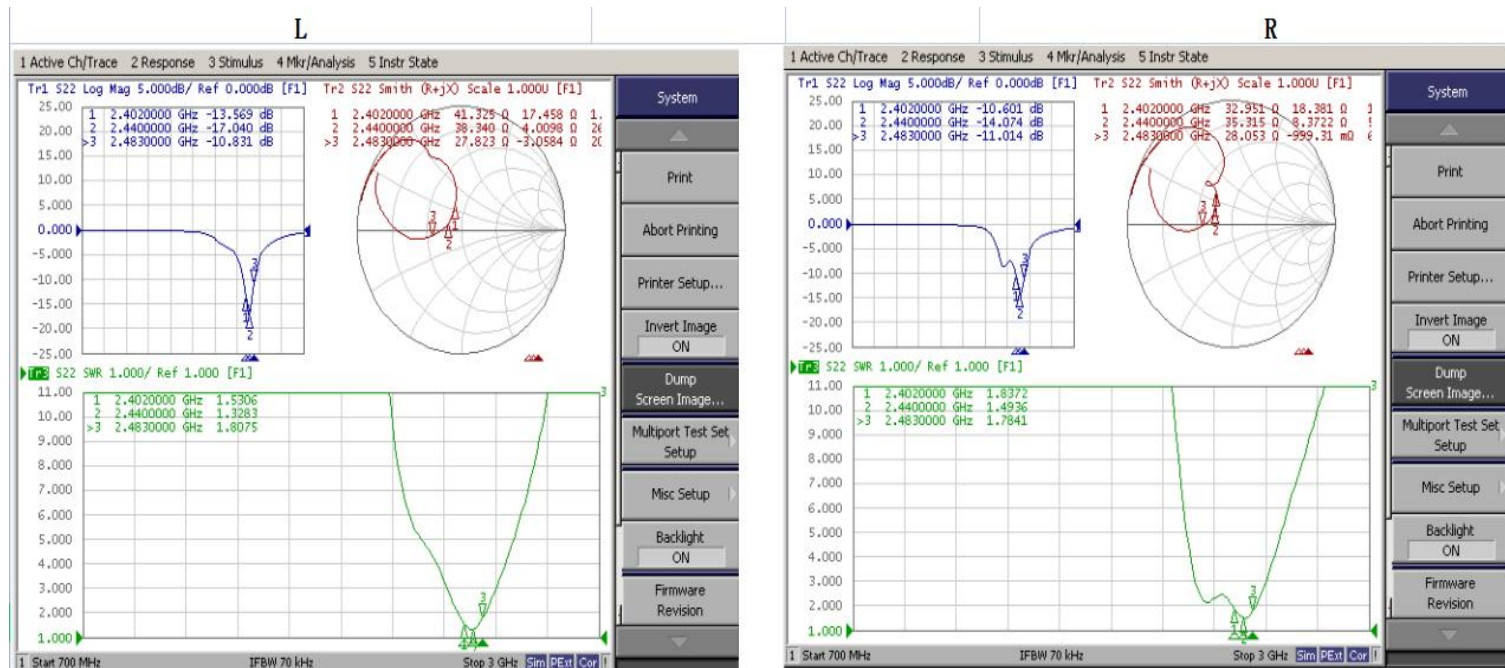
Original mainboard data						
<b>2.4G</b>	<b>L</b>			<b>R</b>		
CHAN	0	39	78	0	39	78
TRP (dBm)	-0.36	-0.55	0.08	0.19	0.94	-1
TIS (dBm)	-76.06	-77.29	-76.02	-77.28	-76.58	-76.8
Replace magnetic bead data						
<b>2.4G</b>	<b>L</b>			<b>R</b>		
CHAN	0	39	78	0	39	78
TRP (dBm)	-0.89	-0.73	0.23	-0.85	-0.64	0.28
TIS (dBm)	-79.34	-79.43	-80.16	-79.85	-79.05	-79.92

#### 3.3Antenna efficiency test (free space)

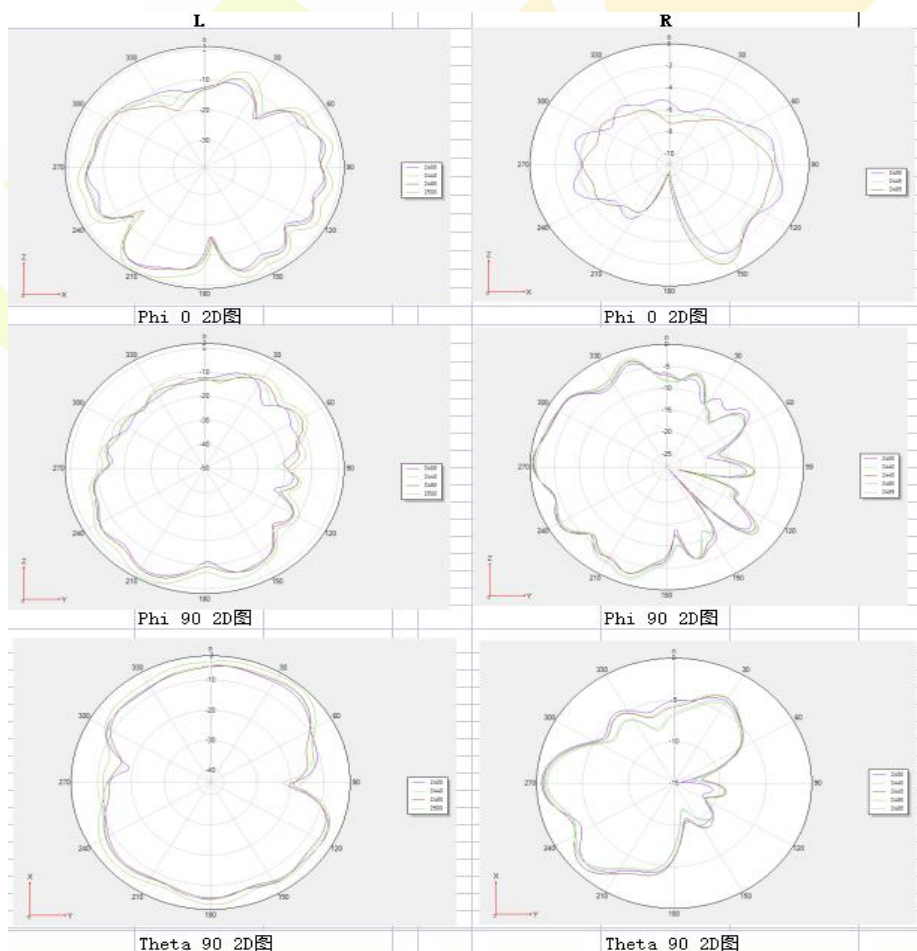
Antenna efficiency test (free space)							
<b>L</b>				<b>R</b>			
BT				BT			
Frequency / MHz	Efficiency / dB	Efficiency / %	Gain(dBi)	Frequency / MHz	Efficiency / dB	Efficiency / %	Gain(dBi)
2400	-6.93	20.28	0.31	2400	-6.21	23.93	0.17
2410	-6.79	20.94	0.19	2410	-6.28	23.55	0.3
2430	-6.54	22.18	0.15	2430	-6.4	22.91	0.28
2450	-6.57	22.03	0.21	2450	-6.38	23.01	0.51
2460	-6.27	23.6	0.45	2460	-6.35	23.17	0.17
2470	-6.51	22.34	0.21	2470	-6.37	23.07	0.31
2480	-6.47	22.54	0.21	2480	-6.27	23.6	0.17
2490	-6.35	23.17	0.16	2490	-6.22	23.88	0.32



### 3.4 Antenna passive test data (free space)      Return Loss

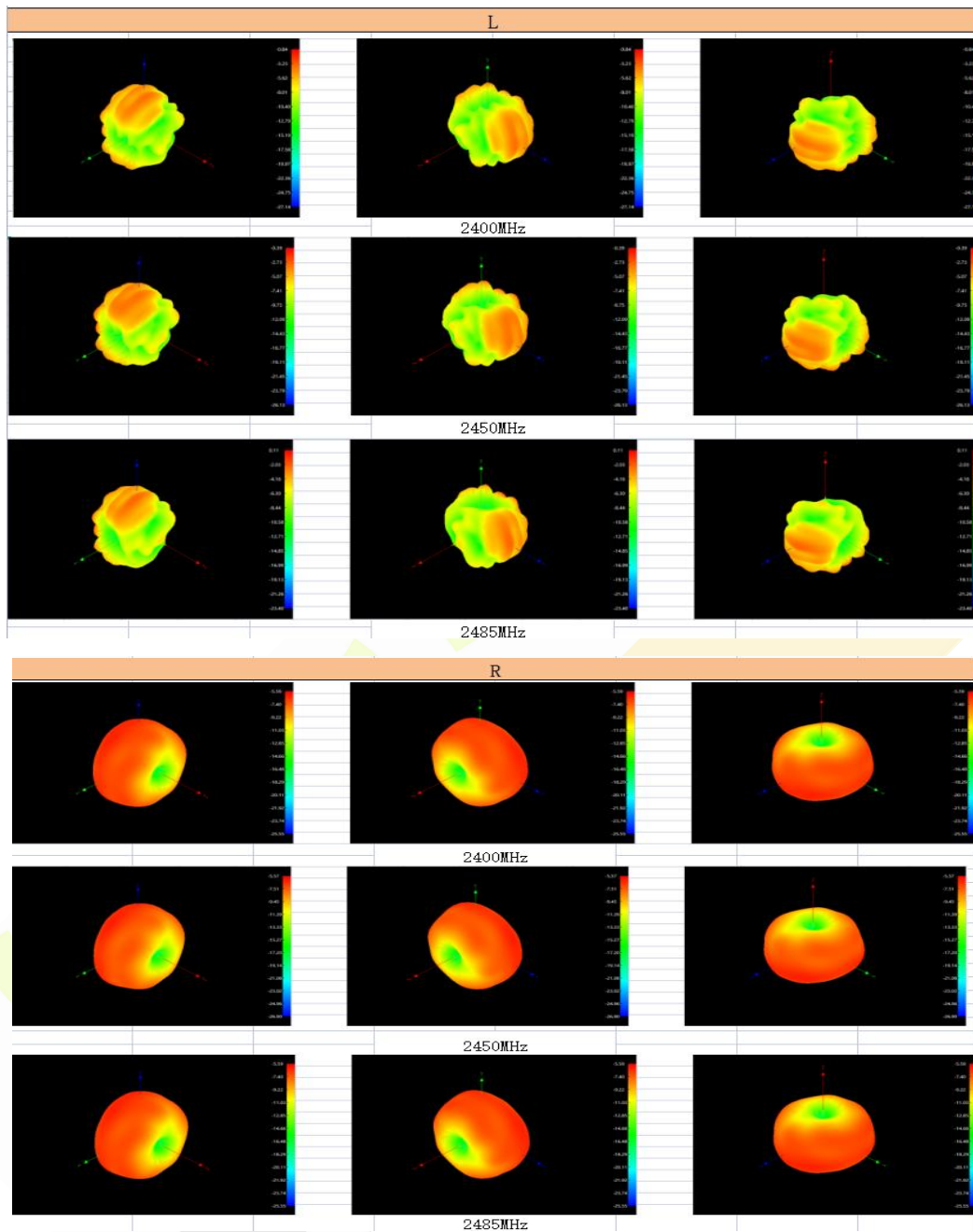


### 3.5 2D Pattern

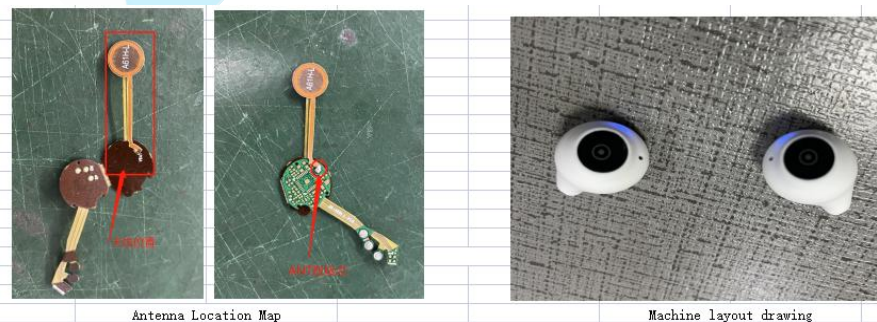


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### 3.6 3D Pattern



### 四、Antenna installation mode



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## 五、Reliability test report

Test items	A61H-BT-L-FPC/A61H-BT-R-FPC		
	test method	Criteria	determine
Coating adhesion test	3M600 tape test coating	No shedding OK, otherwise NG	OK
Thermal stress test	Prebake at 120 ℃ , raise the temperature to 280 ℃ , take it out for drying	Stratification, bubble NG	OK
	40X body mirror observation	Through hole copper layer fracture and delamination NG	OK
Solderability test	Put the product into solder resistance flux for pre dipping, and put it into 235 ℃ ± 5 ℃ tin furnace for tin dipping for 10 seconds	Discoloration, delamination and bubble NG of conductor	OK
	40X body mirror observation	More than 95% of the upper solder pad is OK, otherwise NG	OK
Welding resistance test	Put the product into solder resistance flux for pre dipping, and put it into 235 ℃ ± 5 ℃ tin furnace for tin dipping for 10 seconds	Tin on the bonding pad is OK, otherwise NG	OK
Test with 3M tape	Test with 3M tape	The thermosetting adhesive (reinforcing plate) shall not fall off or delaminate when tested with 3M adhesive tape.	OK
		When tested with 3M adhesive tape, the pressure sensitive adhesive (reinforcing plate) has no peeling and delamination.	OK
		The base material shall be free of peeling and delamination when tested with 3M adhesive tape.	OK
		The protective film shall not fall off or delaminate when tested with 3M adhesive tape.	OK
Bending test	Take 5PCS from the product, hold one end of the sample, make it bend 180 degrees 15 times in one direction around a 1mm needle gauge, with the bending area of the sample as the axis	The surface is seriously wrinkled, and the electrical performance is not affected. OK	OK
	40X body mirror observation	No fracture on copper surface, OK	OK
test: 武铮		to examine: 岑宏均	
Result determination: qualified			



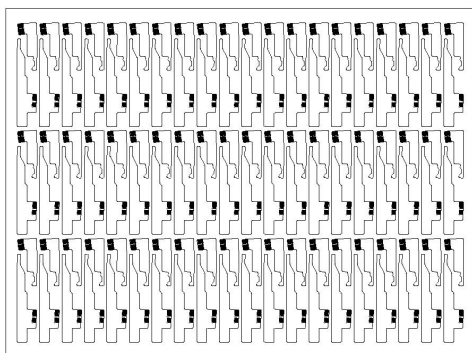
## 六、Packaging method

### ATWE Product packaging specification

Product name: A61H-BT-L#R天线

edition: V0

一、Micro mucosa full page shipment。



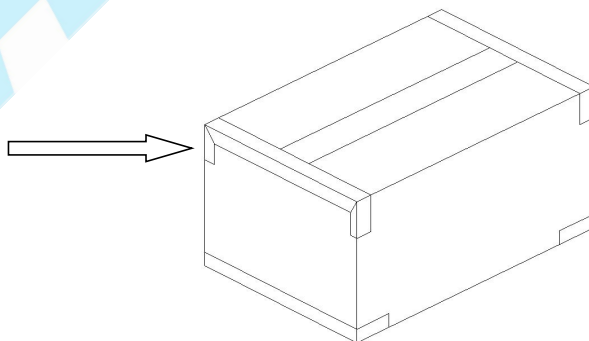
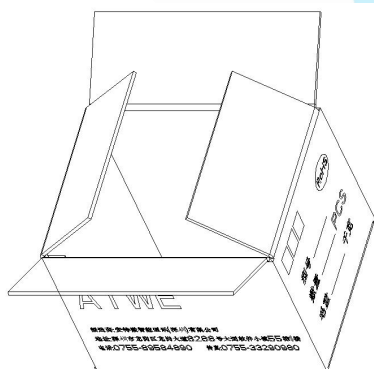
(Layout Diagram)

二、The whole micro mucosa is put into PE sealed pocket for packaging  
--- the quantity is subject to the actual order.



( Refer to the illustration )

三、Load the trunk. (The quantity shall be subject to the actual order and packaging quantity. 4. Seal the box and stick our production label and ROHS label on the outer box



**Note: Since the project has not been formally opened, the above packaging methods are for reference only, and the specific packaging is subject to the formal mass production!**

七、Structural drawings

