

SPECIFICATION FOR APPROVAL

DESCRIBE: HY Innovations Co., LTD (T8171)

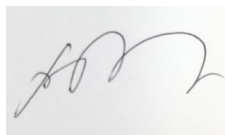
Customer NO:

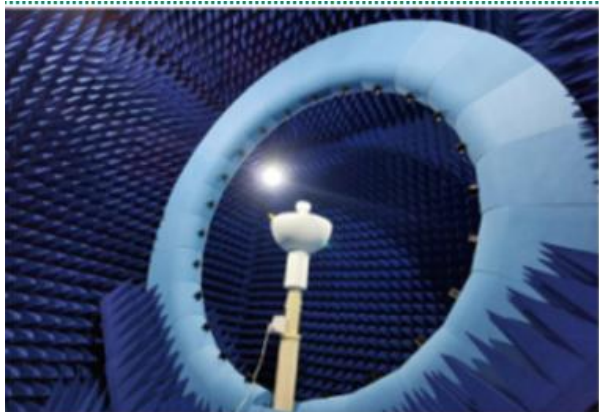
PART NO: ATC1447-HY078B04RA

Antenna type: 2.4G WIFI-Ant FPC (Black)

DATE: 2024.09.03

PROVIDER: AT&C Technology (Shenzhen) Co.
201, Building C, Chuangwei Innovation Valley, No.1 Tangtou Road,
Shiyan Street, Bao'an District, Shenzhen, China

Customer Admit	confirm	ID Department	Test department	Structure section	Quality department
Supplier Admit	confirm	confirm	Proofreading	To examine	Approval
		ziyehui	mo zhenwen	Xuliying	



We have RF equipments as below

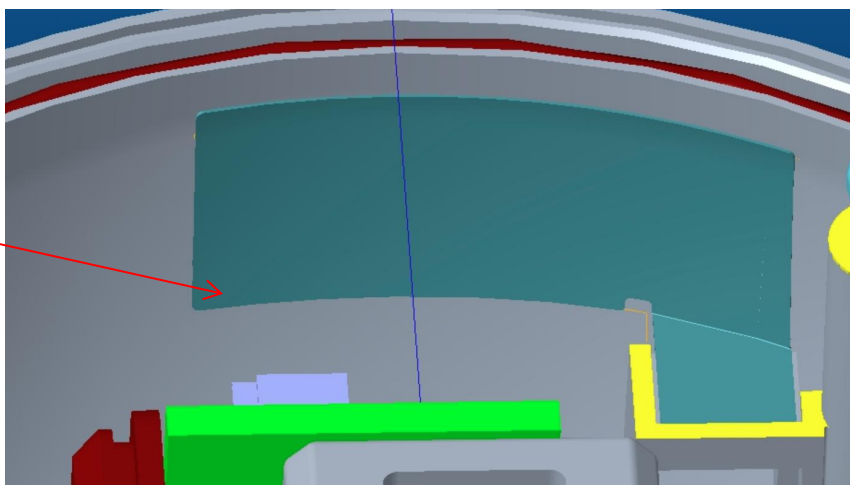
Anechoic Chambe

- Satimo 1ea
- SY24 1ea
- SAR 1ea
- KSS 2ea

Measurement

- 2G, 3G, 4G
- GPS
- Wifi
- Bluetooth(3.0) OTA
- NFC & WPC

WIFI ANT





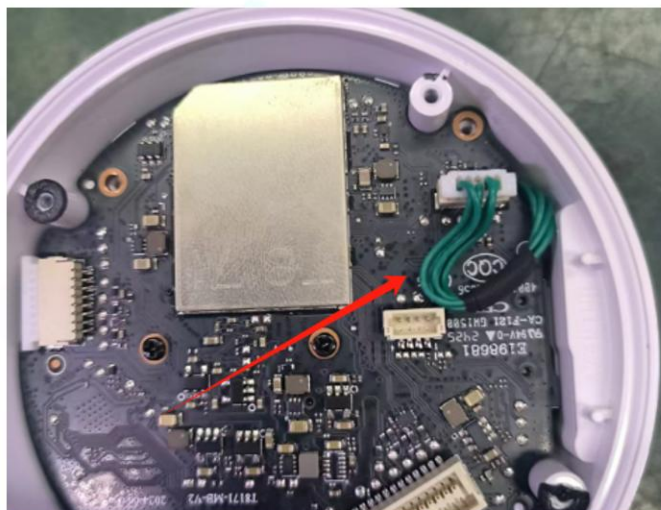
BOM

Customer	HY	Written By	ZYH	Orig. Date	2024.09.03
Part Number	ATC1447-HY078B04RA	Revised By	SHIN	Revised Date	2024.08.03
Description	2.4G WIFI ANT	Approved By	HJ	Approved Date	2024.09.03

Customer P/N	Part P/N	Part Name	Part description
	ATC1447-HY078B04RA	WIFI Ant	24.95*15.01*0.15mm PI+ CU,Black

Customer	HY	Written By	ZYH	Orig. Date	2024.09.03
Part Number	ATC1447-HY078B04RA	Revised By	SHIN	Revised Date	2024.08.03
Description	2.4G WIFI ANT	Approved By	HJ	Approved Date	2024.09.03

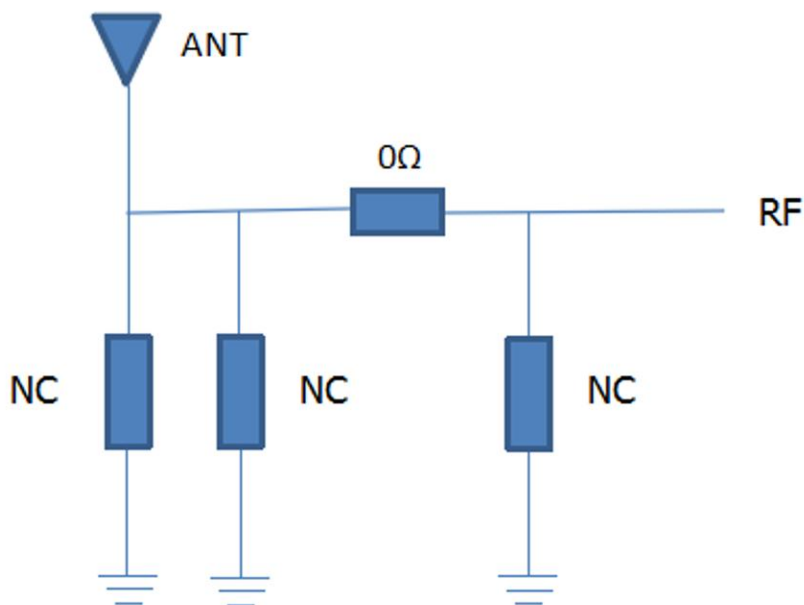
1. The light board cable and MIC cable need to be placed as shown in the left diagram, with the excess length facing away from the antenna.
2. The PIR cable is arranged as shown in the diagram on the right, and the excess length of the cable is pulled to the front of the motherboard.



Impedance Matching

Customer	HY	Written By	ZYH	Orig. Date	2024.09.03
Part Number	ATC1447-HY078B04RA	Revised By	SHIN	Revised Date	2024.08.03
Description	2.4G WIFI ANT	Approved By	HJ	Approved Date	2024.09.03

1. No changes made



Customer	HY	Written By	ZYH	Orig. Date	2024.09.03
Part Number	ATC1447-HY078B04RA	Revised By	SHIN	Revised Date	2024.08.03
Description	2.4G WIFI ANT	Approved By	HJ	Approved Date	2024.09.03





Antenna *Efficiency

Customer	HY	Written By	ZYH	Orig. Date	2024.09.03
Part Number	ATC1447-HY078B04RA	Revised By	SHIN	Revised Date	2024.08.03
Description	2.4G WIFI ANT	Approved By	HJ	Approved Date	2024.09.03

(2.4G) Passive Test Results

Frequency(MHz)	Efficiency(%)	Efficiency(dB)	Max Gain(dBi)
2400	63.58%	-1.97	2.06
2410	63.63%	-1.96	2.15
2420	63.90%	-1.95	2.24
2430	63.30%	-1.99	2.27
2440	61.95%	-2.08	2.27
2450	62.88%	-2.02	2.45
2460	63.58%	-1.97	2.61
2470	65.10%	-1.86	2.74
2480	66.35%	-1.78	2.81
2490	66.13%	-1.80	2.80
2500	65.18%	-1.86	2.78
AVG:	64.14%	-1.93	2.47

Customer	HY	Written By	ZYH	Orig. Date	2024.09.03
Part Number	ATC1447-HY078B04RA	Revised By	SHIN	Revised Date	2024.08.03
Description	2.4G WIFI ANT	Approved By	HJ	Approved Date	2024.09.03

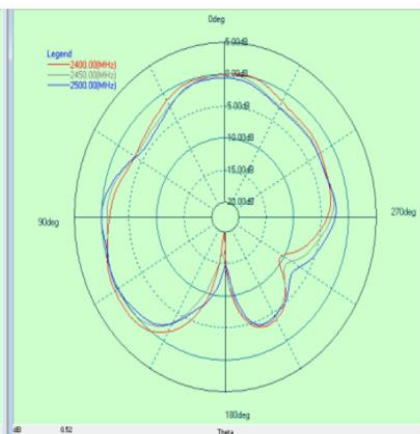
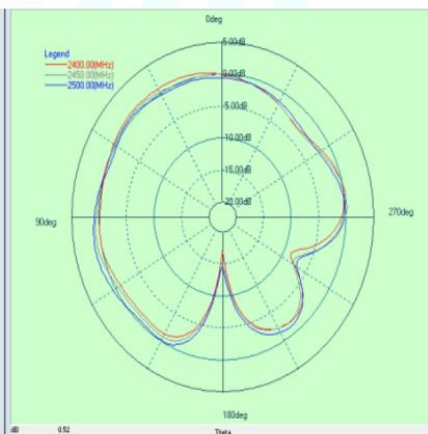
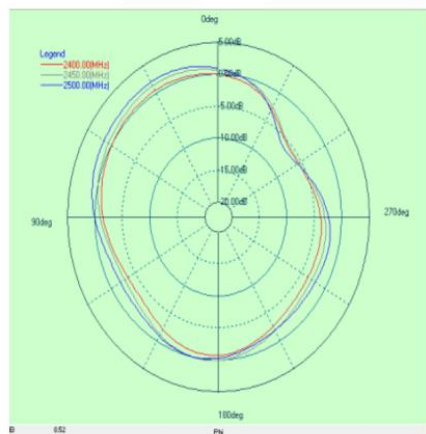
1. Azimuth Pattern H-Plane : “H”, X-Y plane
2. Elevation Pattern E1, E2-Plane : “E1”, “E2”, X-Z plane(E1), Y-Z plane(E2)
3. It is a structure that supplements the distortion of the horizontal plane in
4. the vertical plane and has a gentle sphere shape in three dimensions.



H

E1

E2

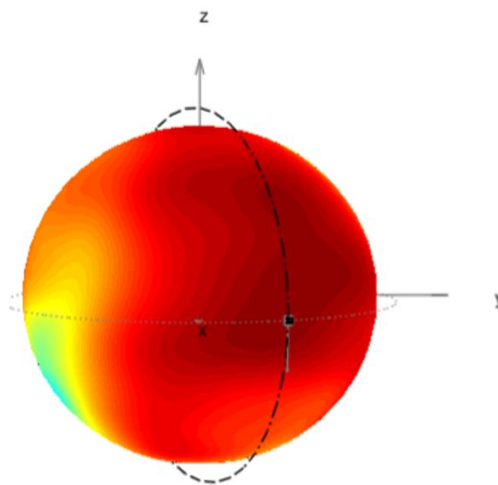


Customer	HY	Written By	ZYH	Orig. Date	2024.09.03
Part Number	ATC1447-HY078B04RA	Revised By	SHIN	Revised Date	2024.08.03
Description	2.4G WIFI ANT	Approved By	HJ	Approved Date	2024.09.03

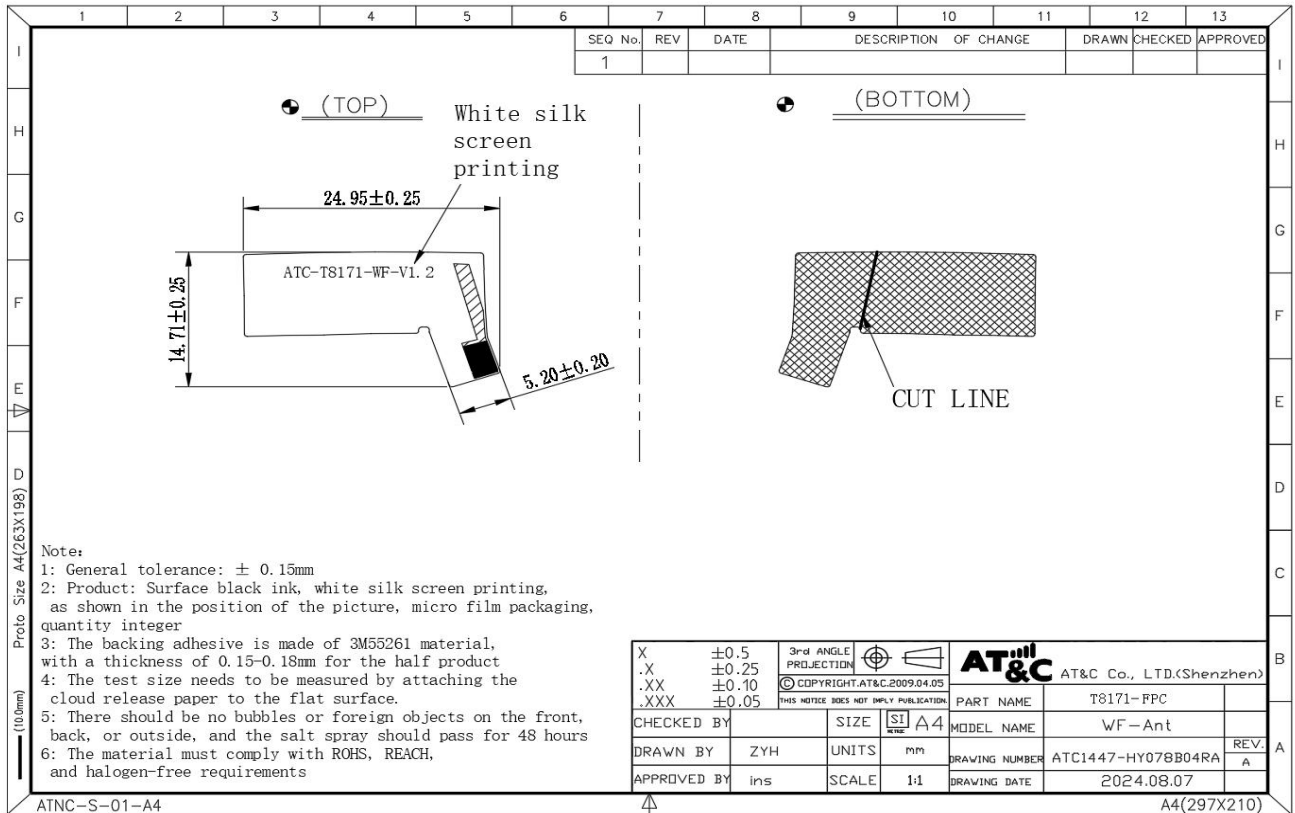
1. This 3D Radiation Pattern shows the response of each angle antenna gain on the sphere.
2. The objects corresponding to the X-Y-Z axes are shown in the left picture.



2450MHz



Customer	HY	Written By	ZYH	Orig. Date	2024.09.03
Part Number	ATC1447-HY078B04RA	Revised By	SHIN	Revised Date	2024.08.03
Description	2.4G WIFI ANT	Approved By	HJ	Approved Date	2024.09.03



Size information					Measuring sample			% Tolerance		Handling opinions			
number	Dimension property	Dimension	Lower tolerance	Upper tolerance	1	2	3	Upper	Lower	determine	Supplier review comments	Customer review comments	Measuring tool
1	key point	24.95	-0.25	0.25	25.02	25.01	24.98			PASS			PJ
2	key point	14.71	-0.25	0.25	14.75	14.68	14.77			PASS			PJ
3	key point	5.20	-0.2	0.2	5.18	5.20	5.23			PASS			PJ



Salt spray test report

Customer Name	HY (T8171)	Specification and	ATC1447-HY078B04RA
Sample situation	Sample quantity: 3PCS		
	Substrate: PI		Coating: Au
Test start and end time	48 hours from 10:00 on July 9, 2024 to 10:00 on July 11, 2024		
Test type	<input checked="" type="checkbox"/> NSS	<input type="checkbox"/> ASS	<input type="checkbox"/> CASS
Test conditions	Salt solution ratio: 5% ± 1%		PH:6.5~7.2
	Temperature inside the box: 35 ° C		Relative humidity: 85% ± 2%
	Spray mode: <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent		Compressed air pressure: 1kg/cm ²
	Spray volume: 1.0 ~ 2.0ML/80CM2/H		Test object placement angle: 30 degrees+/-10 degrees
	Test cycle: __ cycles		Spray time: 48 h
			Placement time: 2 hours
Judgment criteria	Appearance: intact and undamaged, with no significant changes. Coating: No oxidation, rust, discoloration, or corrosion spots. Screen printing: No shedding or bubbles.		
Test results	Appearance after test: The appearance is intact and undamaged, with no significant changes. Coating: No peeling or rusting Surface spraying and screen printing: no peeling or bubbles.		
Explanation: 1. The salt spray test operation standard shall be executed in accordance with the national standard GB/T2423.1 7-2008 of the People's Republic of China 2. The criteria for determining test specimen results shall be in accordance with the national standard GB/T6461-02 of the People's Republic of China			
Tester: Zhang Luo		Reviewed by: Liang Houbo	

Packaging method

PE bag packaging, product emission neat, uniform quantity



Picture: Outer box "I" seal, QC PASS seal on the left side of the outer box, sealed without exposure.



PART LIST

The packing drawing is schematic diagram, which does not mean that the picture is the actual product and the actual shipment is the standard.

NO	DESCRIPTION	Q'TY	MATERIAL	REMARKS	REV.
1	ANTENNA	1/1000		N/A	A
2	PAD OUT	1/4	SW A골 5T	N/A	A
4	CARTOON BOX	-	SW A골 5T	N/A	A
5	PACKING TAPE	-	PP	N/A	A