深圳市鑫恒阳科技有限公司

Shenzhen XINHENGYANG Technology Co., Ltd

承　认　书

SPECIFICATION FOR APPROVAL

客户名称 Customer Name：　深圳市鑫华邦科技有限公司

产品型号 Product Model：　V3

客户料号 Customer P/N ：

鑫恒阳料号 XINHENGYANG P/N：　XHY-V3.0054-WF2.4/5G-V1.0

XHY-V3.0054-WIFI/BT-V1.0

产品规格 SPECIFFCATIONS:　频段：　WIFI 2.4G+5.8G

制作日期 Production date:　2023.08.15

封样版本 Sample Version:　V1.0

鑫恒阳（XINHENGYANG）		
编制（FICTION）	品质（DQE）	研发（R&D）
客户（Customer）		
采　购（PUR）	品质（QC）	研发（R&D）

生产厂商：深圳市鑫恒阳科技有限公司

深圳地址：深圳市南山区西丽创盛路 1 号康和盛大厦 7A

电　　话：0755-83600916　邮箱：xinhengyang1116@163.com

网　　址：https://www.xhy-2008.com

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三、变更履历（Change history）

Number	Effective date	Change record
V1.0	2023.8.15	Initial release

四、基本参数（The basic parameters）

A. Electrical Characteristics	
Frequency	2400MHZ~2500MHZ 5150MHZ~5850MHZ
VSWR	<2.50
Avg Efficiency	2.4G>40%　5G>33%
Impedance	50 ± 15 Ohm
Polarization	Linear
B. Material & Mechanical Characteristics	
Material of Radiator	FPC　　black
Cable Type	Φ　WIFI1: 0.81MM*106MM±2MM Φ　WIFI2: 0.81MM*74MM±2MM
Connector Type	Four Generation
Dimension	WIFI1: 32MM*13.60MM±0.2MM WIFI2: 32MM*13.60MM±0.2MM
C. Environmental	
Operation Temperature Storage Temperature	- 20 ℃ ~ + 60 ℃ - 30 ℃ ~ + 70 ℃

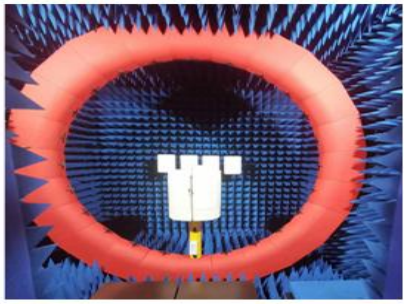
五、测试设备 Introduction:

Microwave darkroom and no reflection chamber, absorbing short wave darkroom dark room. Microwave darkroom by electromagnetic shielding room, filtering and isolation, grounding device, the ventilation duct, indoor distribution system, monitoring system, ceiling wave material part. It is based on the wave absorbing material as the lining of the shield room, it can absorb the most of the electromagnetic energy into the six wall is a better simulation of the free space conditions.

The main working principle of microwave anechoic chamber is according to the electromagnetic wave in the medium from the low magnetic guide magnetic direction of propagation rules, absorbing materials to guide the electromagnetic wave using high permeability, through resonance, a substantial absorption of electromagnetic wave radiation energy, by coupling the electromagnetic energy into heat energy.

main performance ：

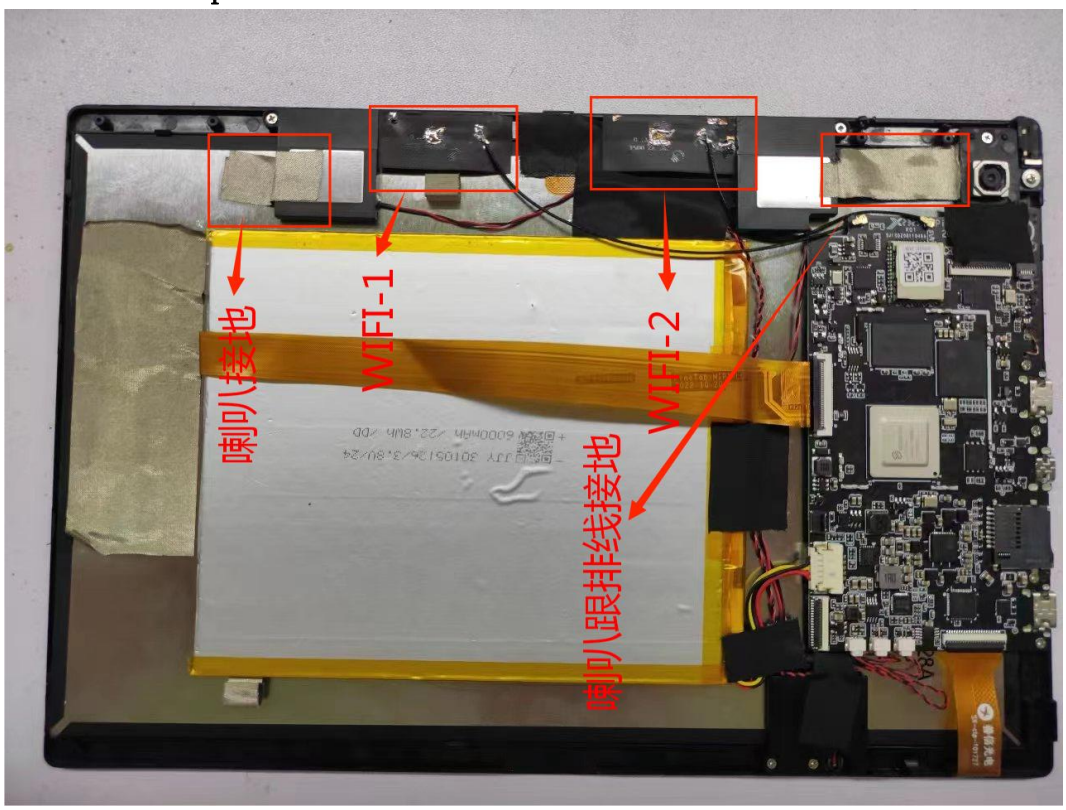
Frequency range:400MHz ~ 6GHz ceiling reflected wave loss materials: 400MHz ~ 6GHz is equal to or more than 15dB (microwave absorbing material by composite wave absorbing materials, namely tapered containing carbon sponge suction wave material paste in ferrite).

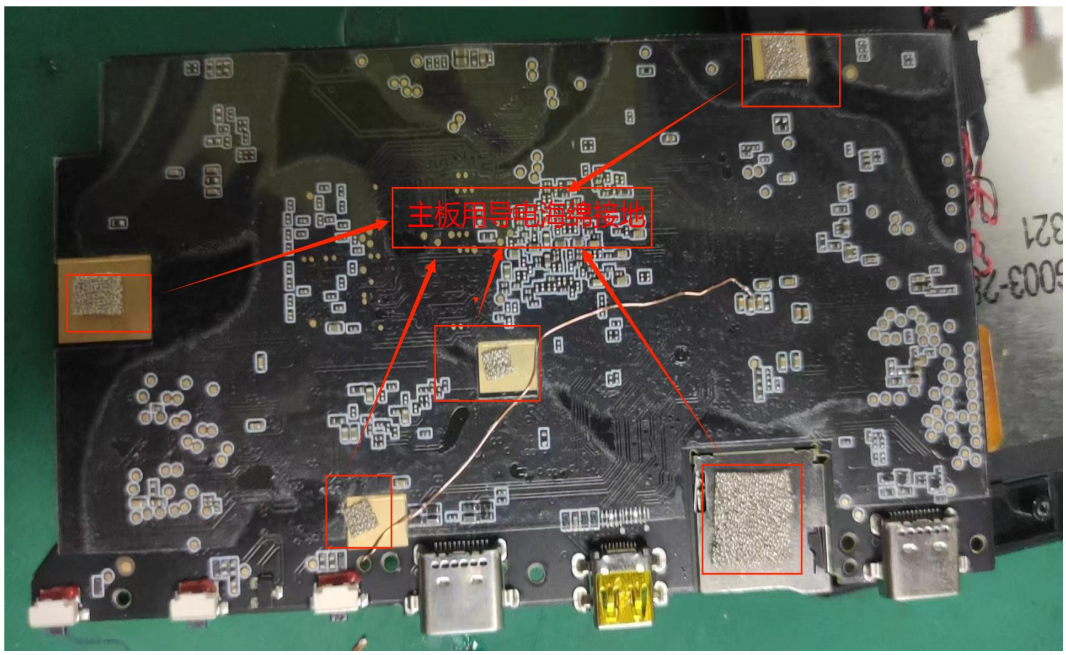



六、性能测试报告（Test Report）

Those specifications were specially defined for V3 model.

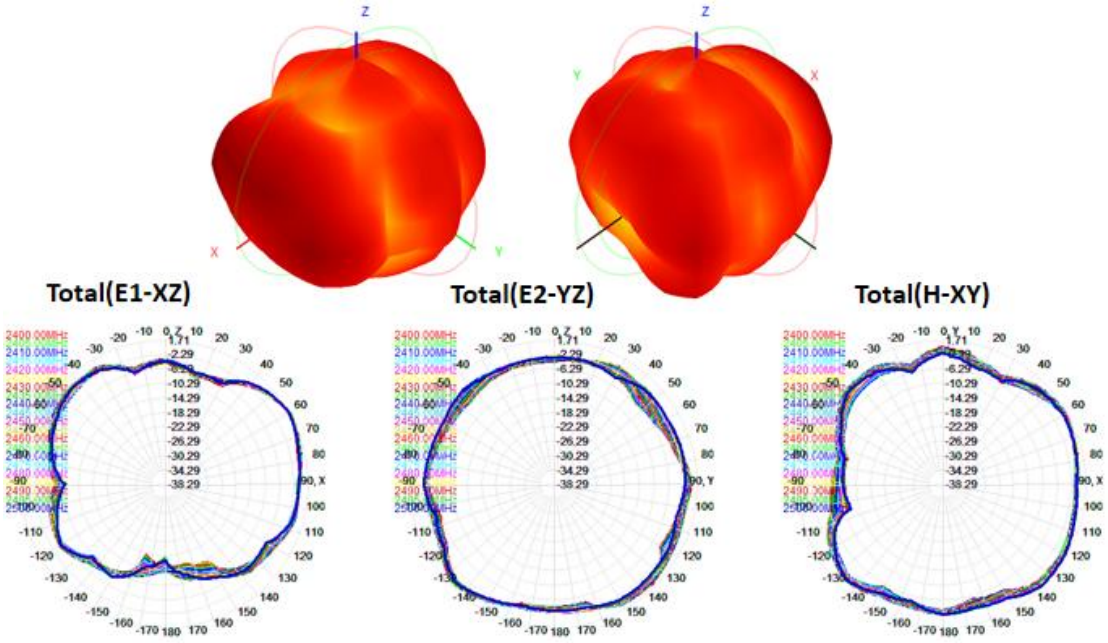
1. Antenna position:





2. Antenna passive field pattern and passive efficiency gain table:

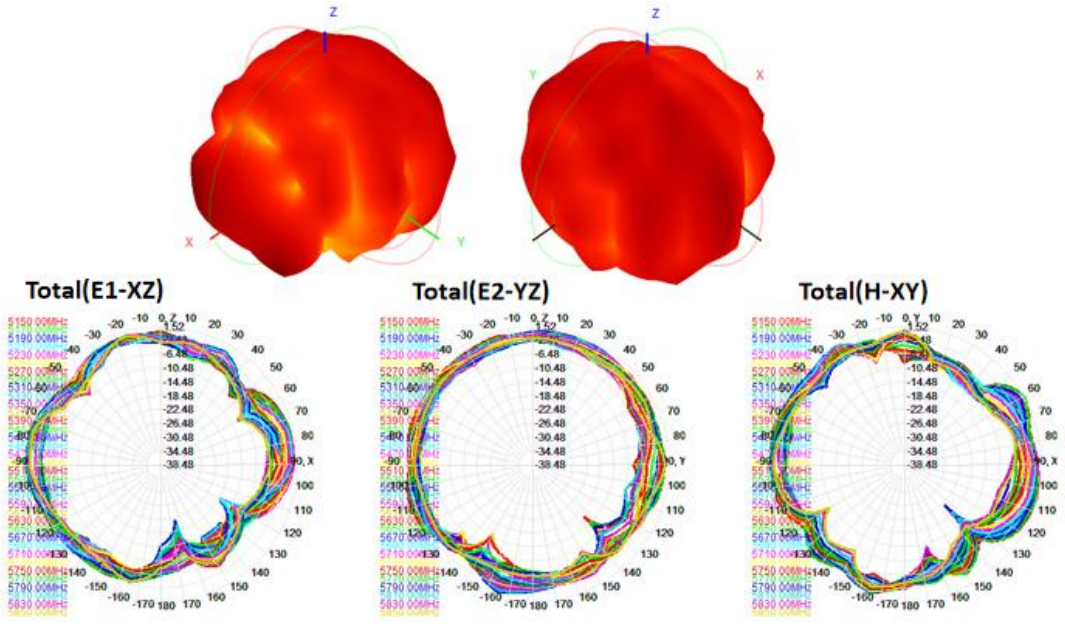
WIFI-1-2.4G:



Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1	2400.0	1.59	48.49
2	2405.0	1.64	49.00
3	2410.0	1.69	49.00
4	2415.0	1.71	49.65
5	2420.0	1.68	50.84
6	2425.0	1.57	51.54
7	2430.0	1.59	51.83
8	2435.0	1.60	52.28
9	2440.0	1.72	53.54
10	2445.0	1.82	54.06
11	2450.0	1.86	54.04

12	2455.0	2.01	54.67
13	2460.0	2.04	54.91
14	2465.0	2.11	55.20
15	2470.0	2.15	55.35
16	2475.0	2.08	55.22
17	2480.0	1.98	54.80
18	2485.0	1.91	54.60
19	2490.0	2.09	55.31
20	2495.0	2.15	55.19
21	2500.0	2.17	54.17

WIFI-1-5G:

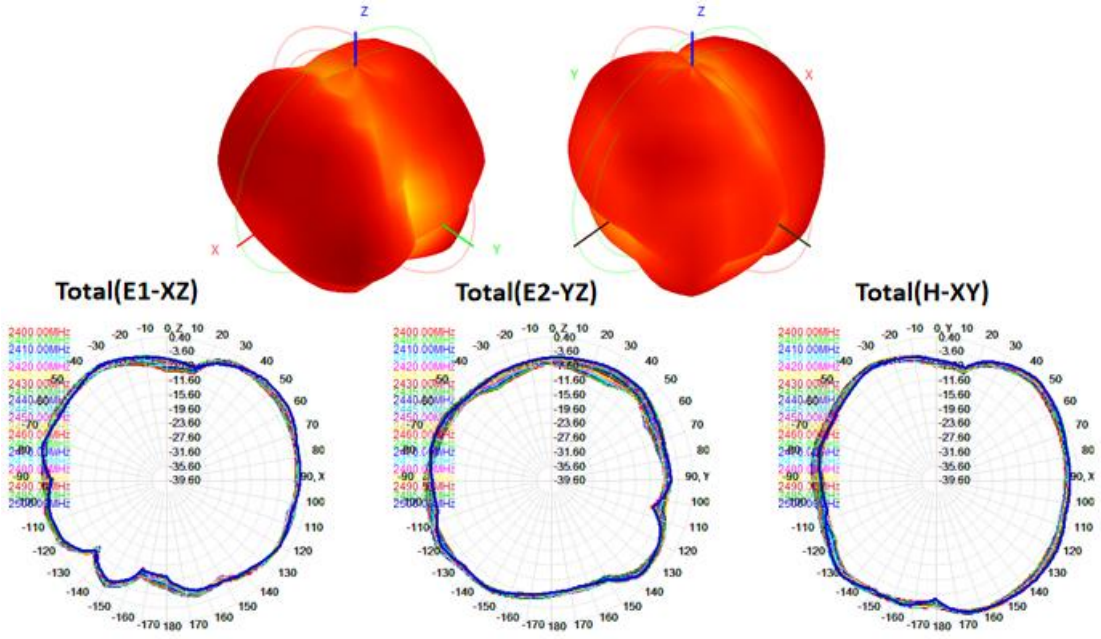


Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1	5150.0	0.23	40.59
2	5170.0	0.30	38.36
3	5190.0	0.57	38.71

4	5210.0	0.16	41.05
5	5230.0	0.33	43.27
6	5250.0	0.31	44.88
7	5270.0	0.52	46.85
8	5290.0	0.50	44.48
9	5310.0	0.39	38.94
10	5330.0	0.23	35.30
11	5350.0	0.22	34.82
12	5370.0	0.52	37.46
13	5390.0	0.67	40.53
14	5410.0	0.21	42.70
15	5430.0	0.40	45.71
16	5450.0	0.63	45.33
17	5470.0	0.65	41.63
18	5490.0	0.86	38.44
19	5510.0	0.77	37.68
20	5530.0	0.86	38.02
21	5550.0	0.66	38.81
22	5570.0	0.42	40.22
23	5590.0	0.53	41.27
24	5610.0	0.63	41.65
25	5630.0	0.59	40.55
26	5650.0	0.52	39.21
27	5670.0	0.29	38.45
28	5690.0	0.03	38.04
29	5710.0	0.04	38.14
30	5730.0	0.17	38.88
31	5750.0	0.14	39.03

32	5770.0	0.26	38.95
33	5790.0	0.49	37.11
34	5810.0	0.67	35.62
35	5830.0	0.68	33.80
36	5850.0	0.44	33.97

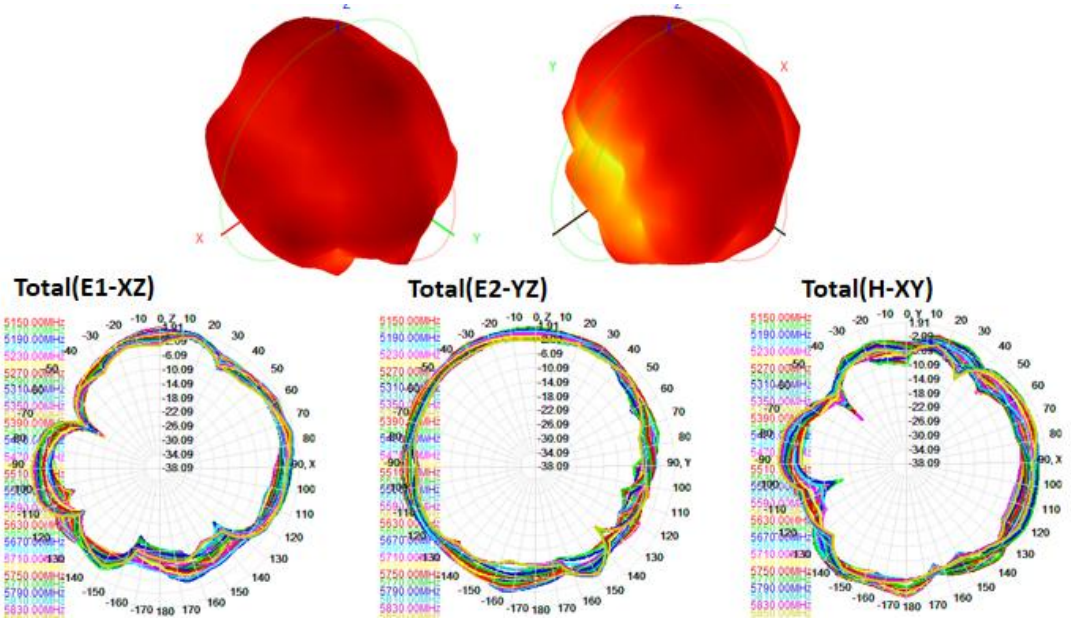
WIFI-2-2.4G:



Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1	2400.0	-0.20	41.20
2	2405.0	-0.13	42.06
3	2410.0	-0.20	42.44
4	2415.0	-0.26	43.07
5	2420.0	-0.08	44.15
6	2425.0	0.06	44.73
7	2430.0	0.06	44.63
8	2435.0	0.04	44.92

9	2440.0	0.13	45.88
10	2445.0	0.38	46.20
11	2450.0	0.51	46.09
12	2455.0	0.68	46.36
13	2460.0	0.82	46.59
14	2465.0	0.85	46.82
15	2470.0	0.92	47.08
16	2475.0	0.98	47.47
17	2480.0	1.04	47.50
18	2485.0	1.13	47.96
19	2490.0	1.25	48.98
20	2495.0	1.32	49.18
21	2500.0	1.24	48.72

WIFI-2-5G:



Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1	5150.0	0.50	39.51

2	5170.0	0.33	38.32
3	5190.0	0.25	39.45
4	5210.0	0.34	42.71
5	5230.0	0.54	45.88
6	5250.0	0.60	48.81
7	5270.0	0.75	51.58
8	5290.0	0.20	47.89
9	5310.0	0.52	41.78
10	5330.0	0.51	37.87
11	5350.0	0.73	36.72
12	5370.0	0.69	39.13
13	5390.0	0.58	42.23
14	5410.0	0.41	43.26
15	5430.0	0.94	44.85
16	5450.0	0.68	42.76
17	5470.0	0.60	38.28
18	5490.0	0.24	36.08
19	5510.0	0.28	35.79
20	5530.0	0.24	36.80
21	5550.0	0.11	39.12
22	5570.0	0.22	41.79
23	5590.0	0.33	43.11
24	5610.0	0.54	43.01
25	5630.0	0.52	41.71
26	5650.0	0.60	40.18
27	5670.0	0.68	39.36
28	5690.0	0.51	38.77
29	5710.0	0.54	38.56

30	5730.0	0.55	38.79
31	5750.0	0.35	38.98
32	5770.0	0.29	39.46
33	5790.0	0.36	37.23
34	5810.0	0.33	35.16
35	5830.0	0.21	33.11
36	5850.0	0.01	34.00

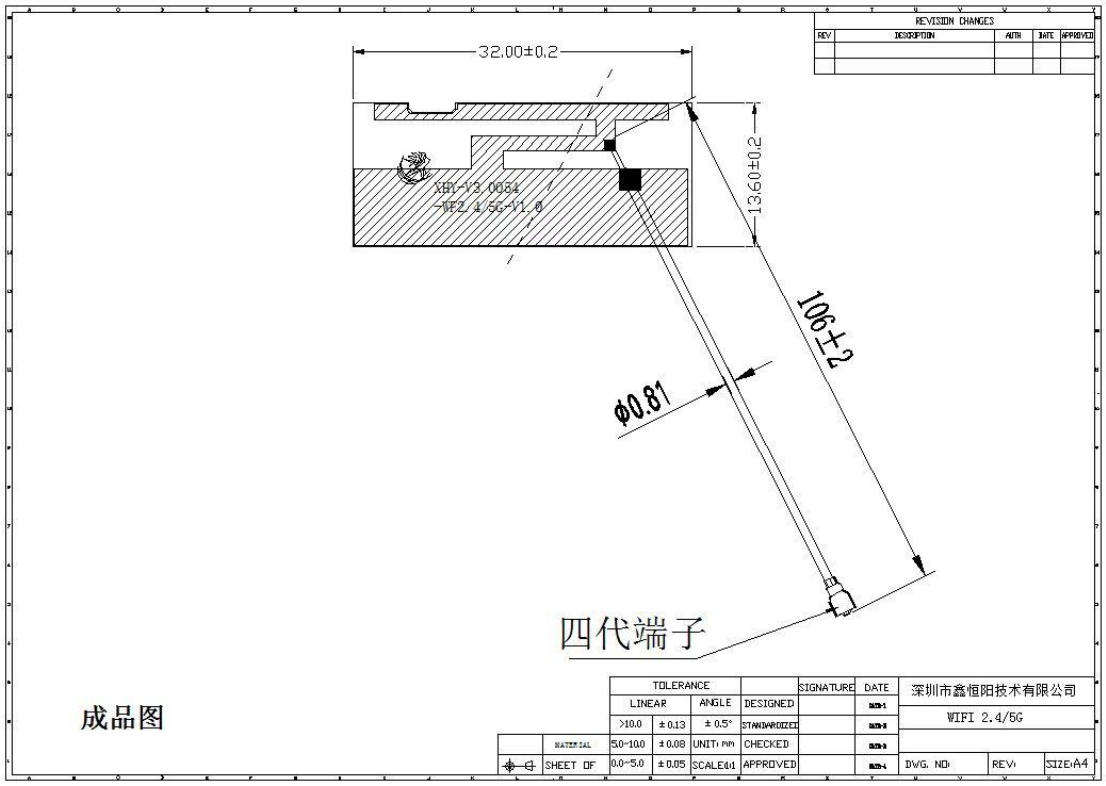
3. OTA：

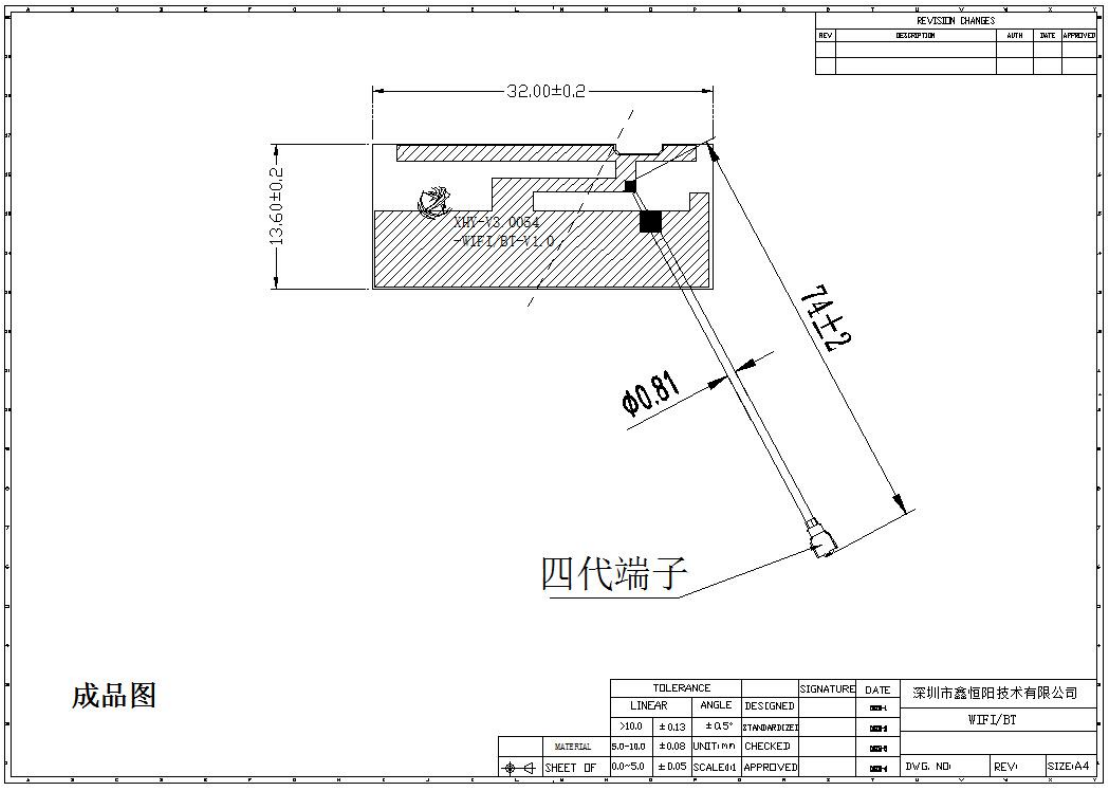
WIFI2.4G+5.8G:

Test Condition		Free Space	
band	Channel	TRP (dBm)	TIS (dBm)
802.11A 54Mbps	149	传导没校准	
	157		
	165		
802.11B 11Mbps	1	17.35	-86.51
	6	17.66	-88.62
	11	17.25	-85.87
802.11G 54Mbps	1	17.28	-74.96
	6	17.55	-74.78
	11	16.77	-73.03
802.11N MCS7	1	16.77	-66.12
	6	16.85	-71.11
	11	16.58	-69.66

802.11A 54Mbps 传导功率为-3.59dBm，
802.11AC VHT40MHz MCS9 传导功率为-4.04dBm，
802.11AX VHT80MHz MCS11 传导功率为-3.31dBm。

七、 工程图纸（Product Drawing）





八、 ROHS

Antenna XHY-V3.0054-WF2.4/5G-V1.0 and XHY-V3.0054-WIFI/BT-V1.0 meets ROHS requirements.

九、Product packaging instructions

A. packing should meet the moistureproof, vibration, pressure and mildew proof, etc.

B. the smallest packing unit logo must have the manufacturer trademarks, product model, name, code and quantity.

C. in the attached packing list, certificate of approval, and the factory inspection report.

**********END**********