



Antenna Specification

Specification For Approval

Customer Name: ShenZhen ZhongRuanYingKe
Technology Co., Ltd

Product Model: MINI

Customer P/N :

XINHENGYANG P/N: CP. 04. A0079000101
CP. 04. A0079000102

SPECIFICATIONS: WIFI 2.4G+5.8G

Production date: 2023.08.29

Sample Version: V1.0

Manufacturer: ShenZhen XINHENGYANG Technology Co., Ltd

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THREE. Change History

Number	Effective date	Change record
V1.0	2023.08.29	Initial release

FOUR. The Basic Parameters

A. Electrical Characteristics	
Frequency	2400MHZ~2500MHZ 5150MHZ~5850MHZ
VSWR	<2.00
Avg Efficiency	WIFI: 2.4G: >30% 5.8G: >30%
Impedance	50 ± 15 Ohm
Polarization	Linear
Peak Gain	WIFI: 2dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC black
Cable Type	Φ WIFI: 0.81MM 30MM WIFI-89: 0.81MM 145MM
Connector Type	Fourth Generation Terminal
Dimension	WIFI-25: 20.06MM*27.90MM WIFI-89: 20.06MM*27.90MM
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 30 °C ~ + 70 °C

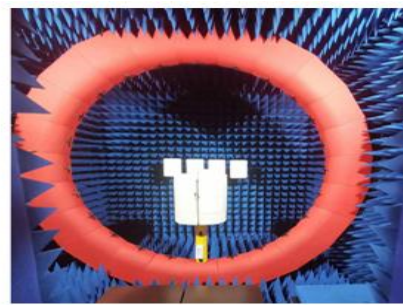
FIVE. Introduction:

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 :

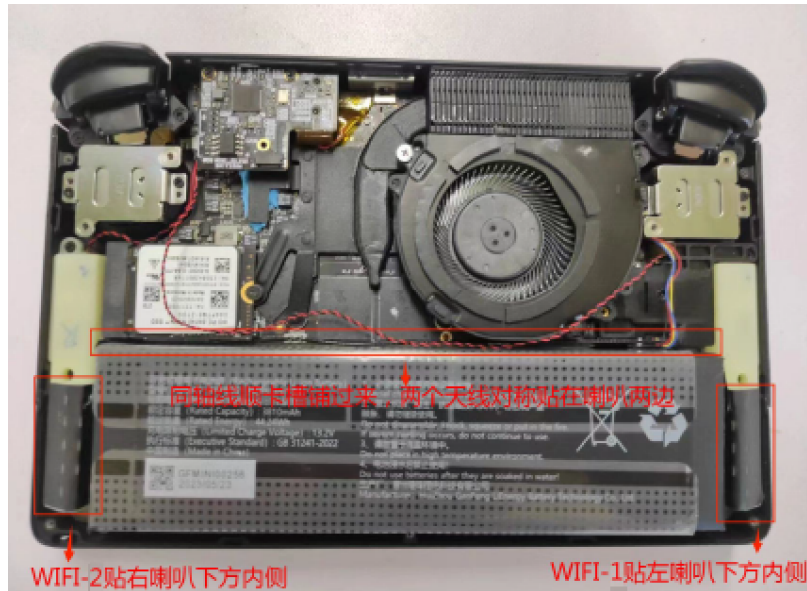
Frequency range:400MHz ~ 6GHz ceiling reflected wave loss materials: 400MHz ~ 6GHz is equal to or more than 15dB (microwave absorbing material by composite wave absorbing materials, namely tapered containing carbon sponge suction wave material paste in ferrite).



SIX. Test Report

Those specifications were specially defined for MINI model.

1. Antenna position:

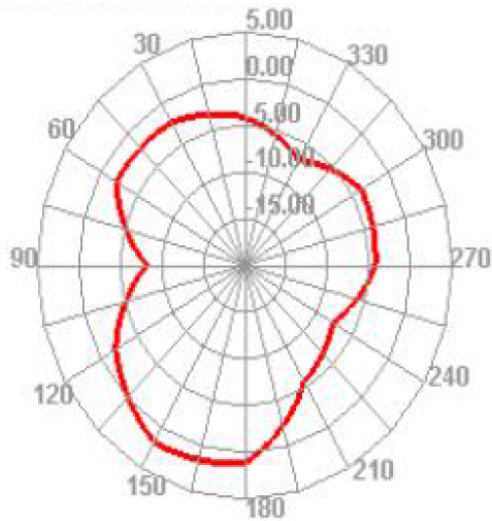


2. Antenna passive field pattern and passive efficiency gain

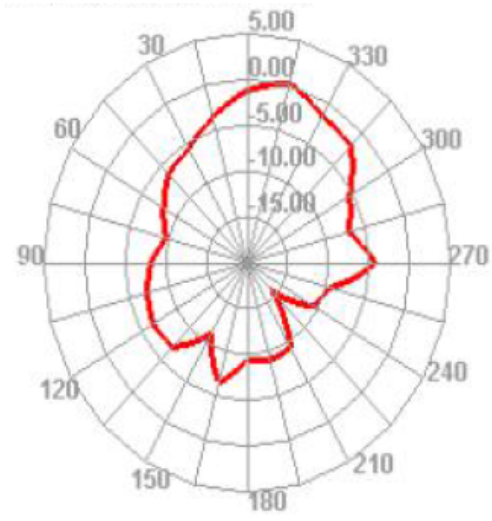
table:

WIFI-ANT2-2. 4G:

2440 MHz E1



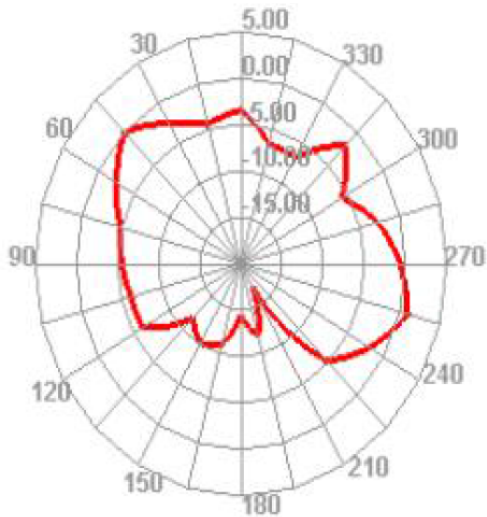
2440 MHz E2



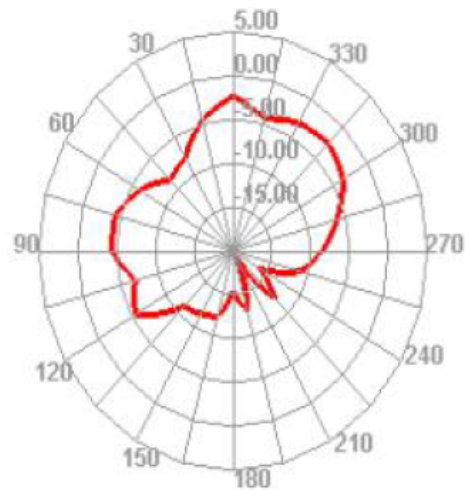
Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1	2400.0	0.91	33.79
2	2410.0	1.63	37.80
3	2420.0	2.12	41.95
4	2430.0	2.24	43.61
5	2440.0	2.35	44.89
6	2450.0	1.87	43.74
7	2460.0	1.31	42.16
8	2470.0	0.76	39.60
9	2480.0	0.25	35.97
10	2490.0	-0.12	33.71
11	2500.0	-0.58	30.48

WIFI-ANT2-5.8G:

5150MHz E1



5150MHz E2



Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1	5150.0	2.34	28.52
2	5170.0	2.13	27.54
3	5190.0	2.19	29.09
4	5210.0	2.29	32.22
5	5230.0	2.09	34.68
6	5250.0	1.61	36.42
7	5270.0	1.65	39.19
8	5290.0	1.45	38.96
9	5310.0	0.94	36.40
10	5330.0	0.49	34.86
11	5350.0	0.35	35.72
12	5370.0	0.74	38.76
13	5390.0	1.28	41.47



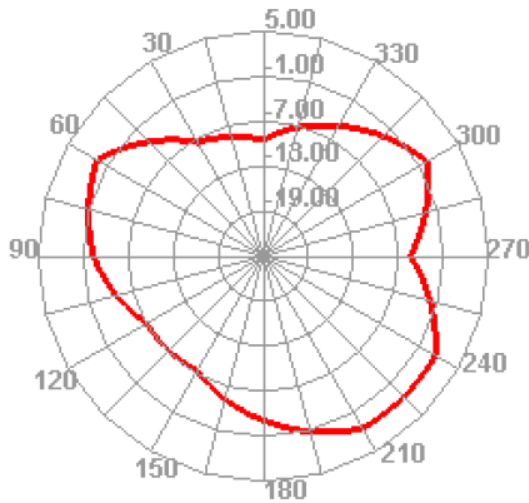
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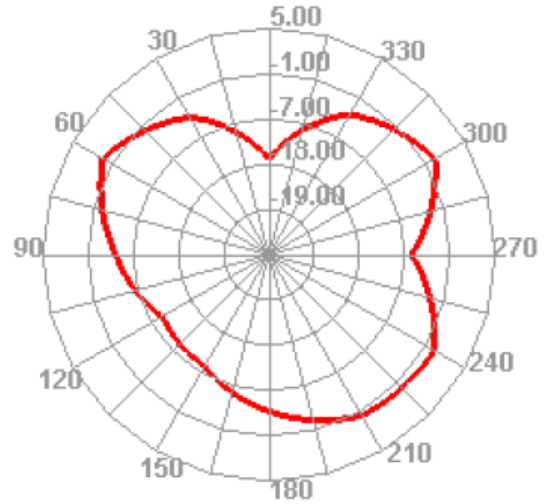
14	5410.0	1.58	42.80
15	5430.0	2.07	45.92
16	5450.0	2.20	45.76
17	5470.0	2.01	42.98
18	5490.0	1.82	40.84
19	5510.0	1.50	40.10
20	5530.0	1.34	40.77
21	5550.0	1.45	42.66
22	5570.0	1.66	44.31
23	5590.0	1.68	45.57
24	5610.0	1.83	46.44
25	5630.0	2.08	46.05
26	5650.0	2.04	44.52
27	5670.0	1.80	42.83
28	5690.0	1.81	42.30
29	5710.0	1.87	41.51
30	5730.0	1.96	40.85
31	5750.0	1.92	39.43
32	5770.0	1.91	39.31
33	5790.0	1.85	36.78
34	5810.0	1.93	34.60
35	5830.0	2.08	34.00
36	5850.0	2.01	33.46

WIFI-ANT1-2.4G:

2440 MHz E1



2440 MHz E2

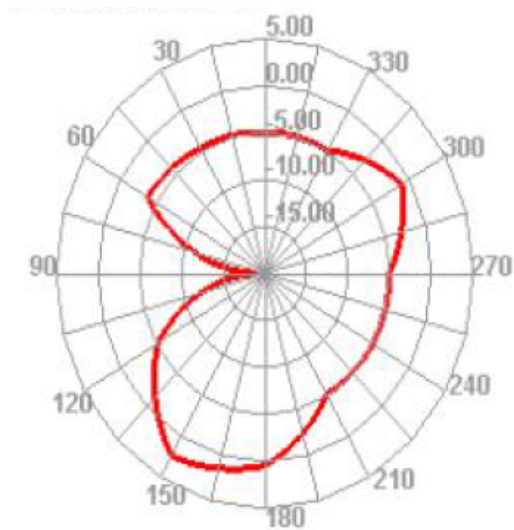


Frequency ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1	2400.0	2.15	36.17
2	2410.0	2.23	37.73
3	2420.0	2.31	39.34
4	2430.0	2.34	39.09
5	2440.0	2.48	38.49
6	2450.0	2.35	36.57
7	2460.0	2.23	34.89
8	2470.0	2.04	32.70
9	2480.0	1.79	30.50

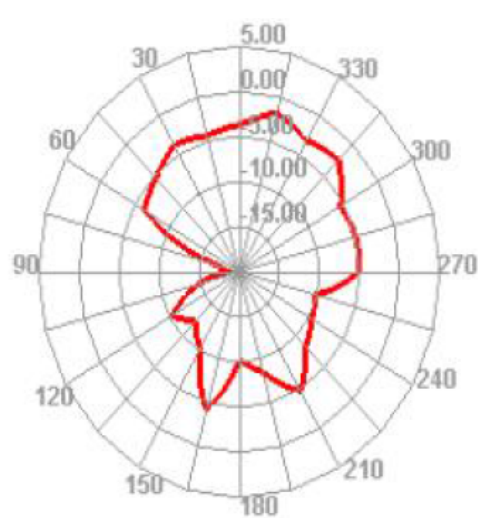
10	2490.0	1.73	29.88
11	2500.0	1.61	28.76

WIFI-ANT1-5.8G:

5630MHz E1



5630MHz E2



Frequency	ID	Frequency (MHz)	Gain (dBi)	Efficiency (%)
1		5150.0	1.07	27.50
2		5170.0	1.02	25.52
3		5190.0	1.19	26.56
4		5210.0	1.83	29.85
5		5230.0	2.47	32.89
6		5250.0	2.89	35.68
7		5270.0	3.32	39.63
8		5290.0	3.09	38.27
9		5310.0	2.78	33.32



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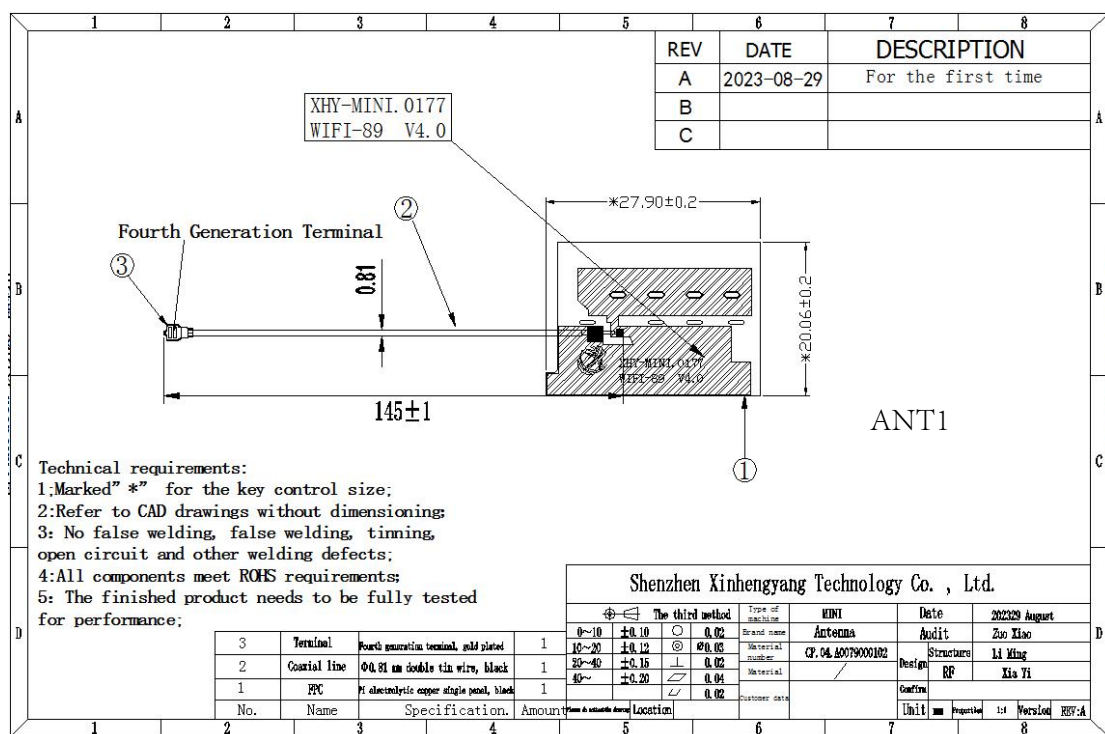
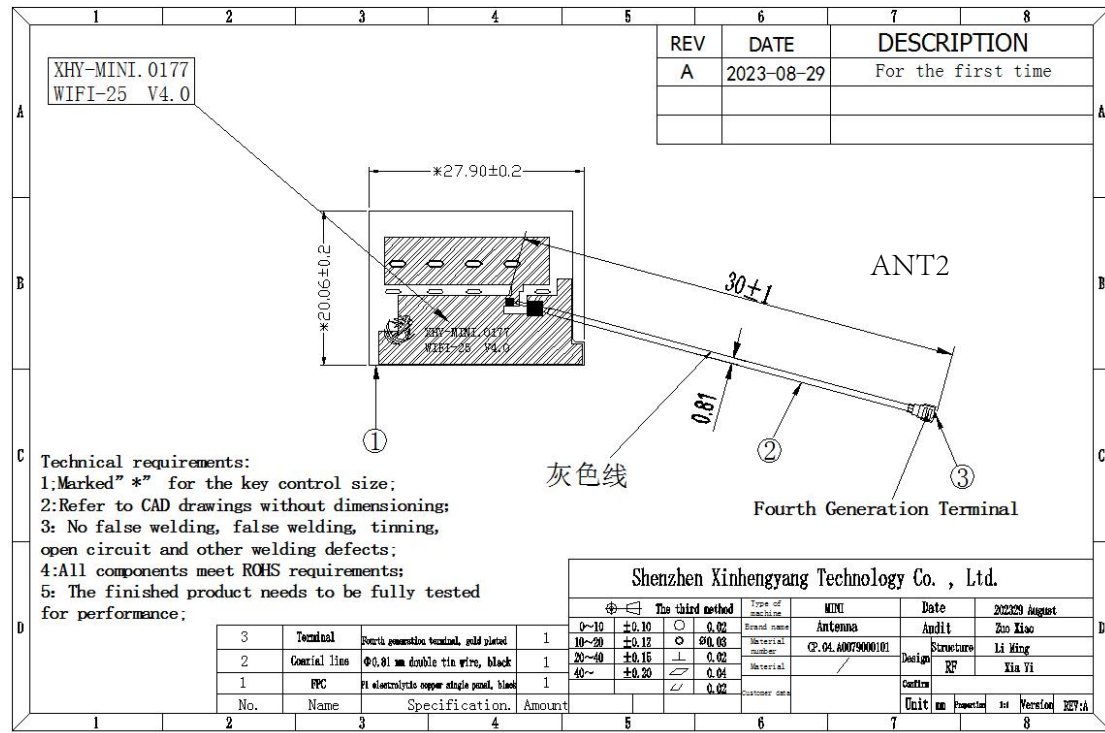
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10	5330.0	2.44	29.78
11	5350.0	2.33	28.68
12	5370.0	2.43	29.28
13	5390.0	2.49	30.08
14	5410.0	2.32	29.73
15	5430.0	2.17	30.06
16	5450.0	2.23	28.46
17	5470.0	2.01	25.74
18	5490.0	1.87	24.05
19	5510.0	1.81	23.43
20	5530.0	1.73	23.61
21	5550.0	1.85	25.01
22	5570.0	2.07	26.91
23	5590.0	2.56	29.15
24	5610.0	3.24	31.19
25	5630.0	3.53	31.60
26	5650.0	3.40	31.04
27	5670.0	3.19	30.44
28	5690.0	3.02	30.43
29	5710.0	2.63	30.65
30	5730.0	2.84	31.38
31	5750.0	2.98	32.09
32	5770.0	3.03	33.43
33	5790.0	2.98	32.84
34	5810.0	3.01	32.32
35	5830.0	2.83	31.60
36	5850.0	2.76	31.19

3. OTA:

Test Condition		Free Space	
band	Channel	TRP (dBm)	TIS (dBm)
802.11A 54Mbps	149	10.92	-69.35
	157	12.14	-70.62
	165	12.00	-72.84
802.11B 11Mbps	1	8.00	-73.47
	6	8.21	-77.05
	11	8.86	-79.15
802.11G 54Mbps	1	6.76	-63.14
	6	6.39	-64.93
	11	7.10	-66.96
802.11N MCS7	1	5.32	-66.20
	6	5.61	-63.08
	11	6.93	-66.10

SEVEN. Product Drawing





EIGHT. ROHS

Antenna XHY-MINI.0177 WIFI-25 V4.0 and XHY-MINI.0117
WIFI-89 V4.0 meets ROHS requirements.

NINE. 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*****