



Shenzhen XINHENG YANG Technology Co., Ltd

SPECIFICATION

Customer Name: Shenzhen Oni Electronics Co., LTD

Product Model: EC05407

Customer P/N :

XINHENG YANG P/N: CP. 21. 0000201

SPECIFICATIONS: WIFI-2400MHZ-2500MHZ/5150MHZ-5850MHZ

Production date: 2025-04-24

Sample Version: R2

XINHENG YANG		
FICTION	DQE	R&D
Customer		
PUR	QC	R&D

Manufacturer: Shenzhen Xinhengyang Technology Co., LTD

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Number	Effective date	Change record
R1	2025-02-13	Initial release
R2	2025-04-24	Replace the coaxial line



1、The basic parameters

A. Electrical Characteristics	
Frequency	2400MHZ-2500MHZ 5150MHZ-5850MHZ
VSWR	2400MHZ-2500MHZ: <2.0 5150MHZ-5850MHZ: <2.5
Avg Efficiency	2400MHZ-2500MHZ: >48% 5150MHZ-5850MHZ: >60%
Impedance	50 $\pm$ 25 Ohm
Polarization	Linear
Peak Gain	2400MHZ-2500MHZ: 3.83dBi 5150MHZ-5850MHZ: 4.44dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC black
Cable Type	1
Connector Type	Φ 1.13 L=80MM
Dimension	27.11*18.05MM $\pm$ 0.15MM
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 30 °C ~ + 70 °C

2、Electrical Specification

Those specifications were specially defined for EC05407 model.

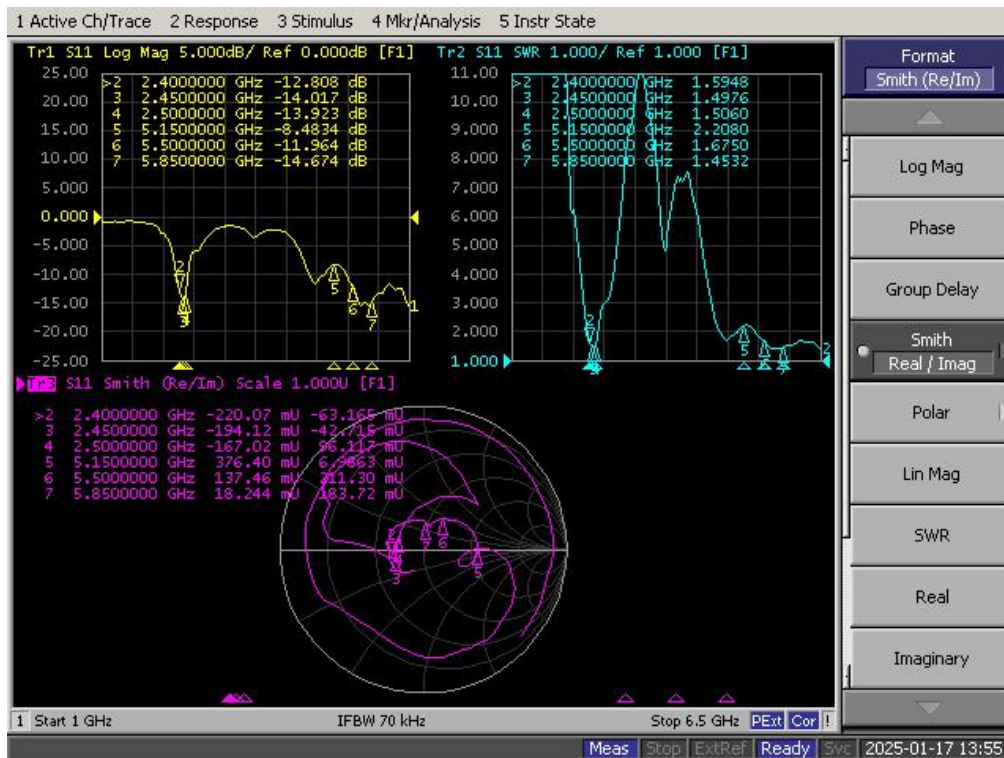
3、VSWR

1 Measuring Method

- 1.A 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR
- 2.Keeping this jig away from metal at least 20cm

2 Measurement frequency points and VSWR value

WIFI-2400MHZ-5850MHZ



4、 Anechoic chamber

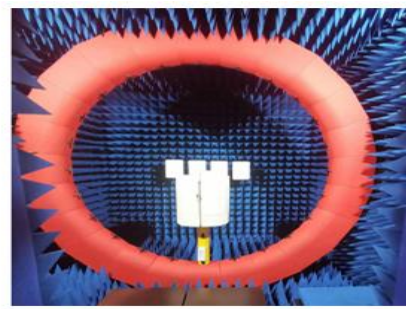
Introduction:

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.

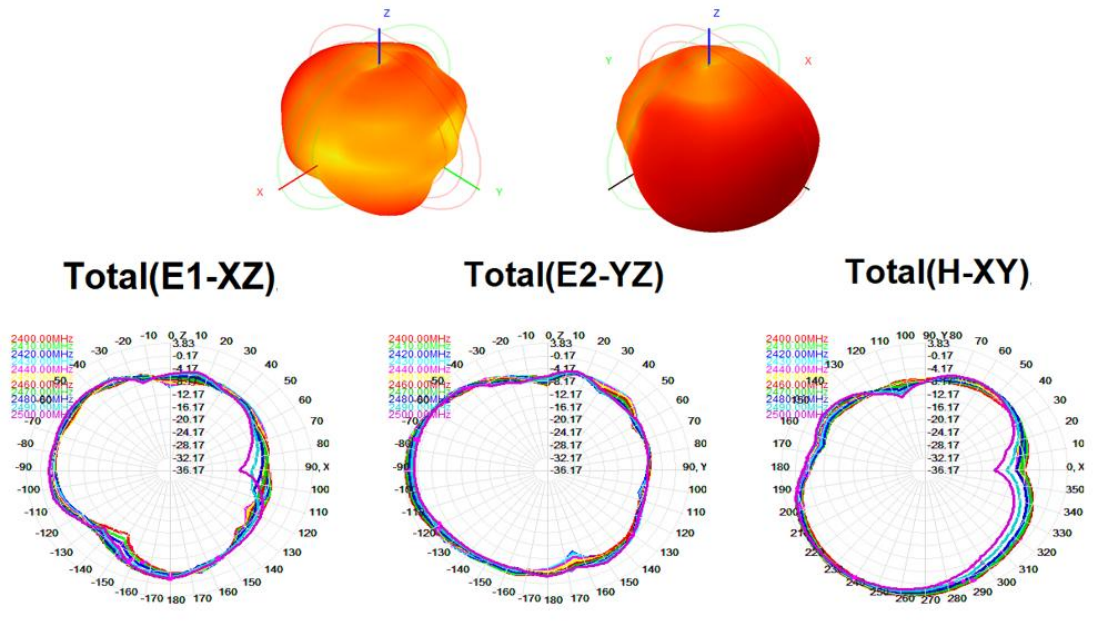
main performance :

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)

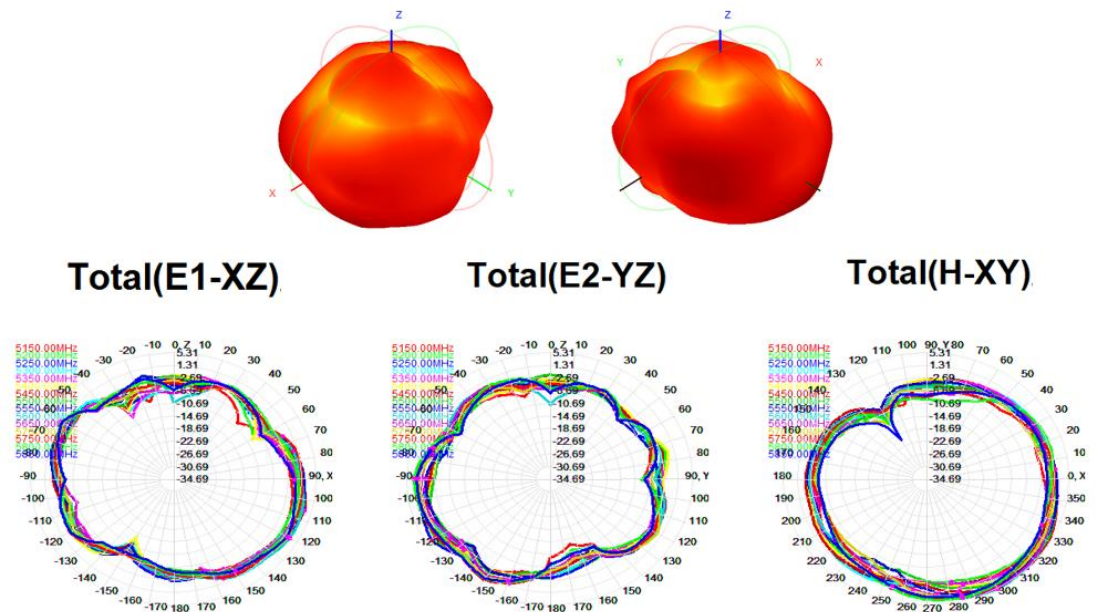


5、Gain table of Antenna

Passive field pattern: -WIFI-2400MHZ-2500MHZ



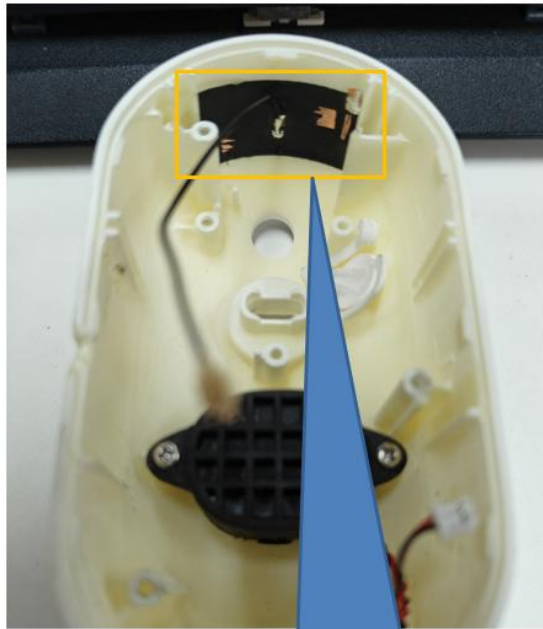
Passive field pattern-WIFI-5150MHZ-5850MHZ



Passive efficiency gain

2400MHZ-5850MHZ							
Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)	Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
2400	-3.08	2.72	49.25	5250	-1.37	3.41	72.87
2410	-2.84	3.08	51.94	5300	-1.57	3.59	69.70
2420	-2.72	3.34	53.44	5350	-1.94	2.55	63.95
2430	-2.60	3.69	55.00	5400	-1.27	3.54	74.71
2440	-2.62	3.82	54.68	5450	-0.99	4.01	79.69
2450	-2.64	3.83	54.42	5500	-1.57	4.03	69.72
2460	-2.62	3.77	54.70	5550	-1.84	4.23	65.51
2470	-2.70	3.56	53.73	5600	-1.26	4.31	74.77
2480	-2.87	3.20	51.63	5650	-1.98	3.97	63.40
2490	-3.04	2.88	49.69	5700	-2.09	3.59	61.80
2500	-3.15	2.63	48.47	5750	-1.74	4.44	67.02
5150	-2.17	2.51	60.67	5800	-1.91	4.05	64.43
5200	-2.21	2.41	60.15	5850	-2.14	3.61	61.07

6、Antenna assembly drawing



天线尽量往下装配，远离主板

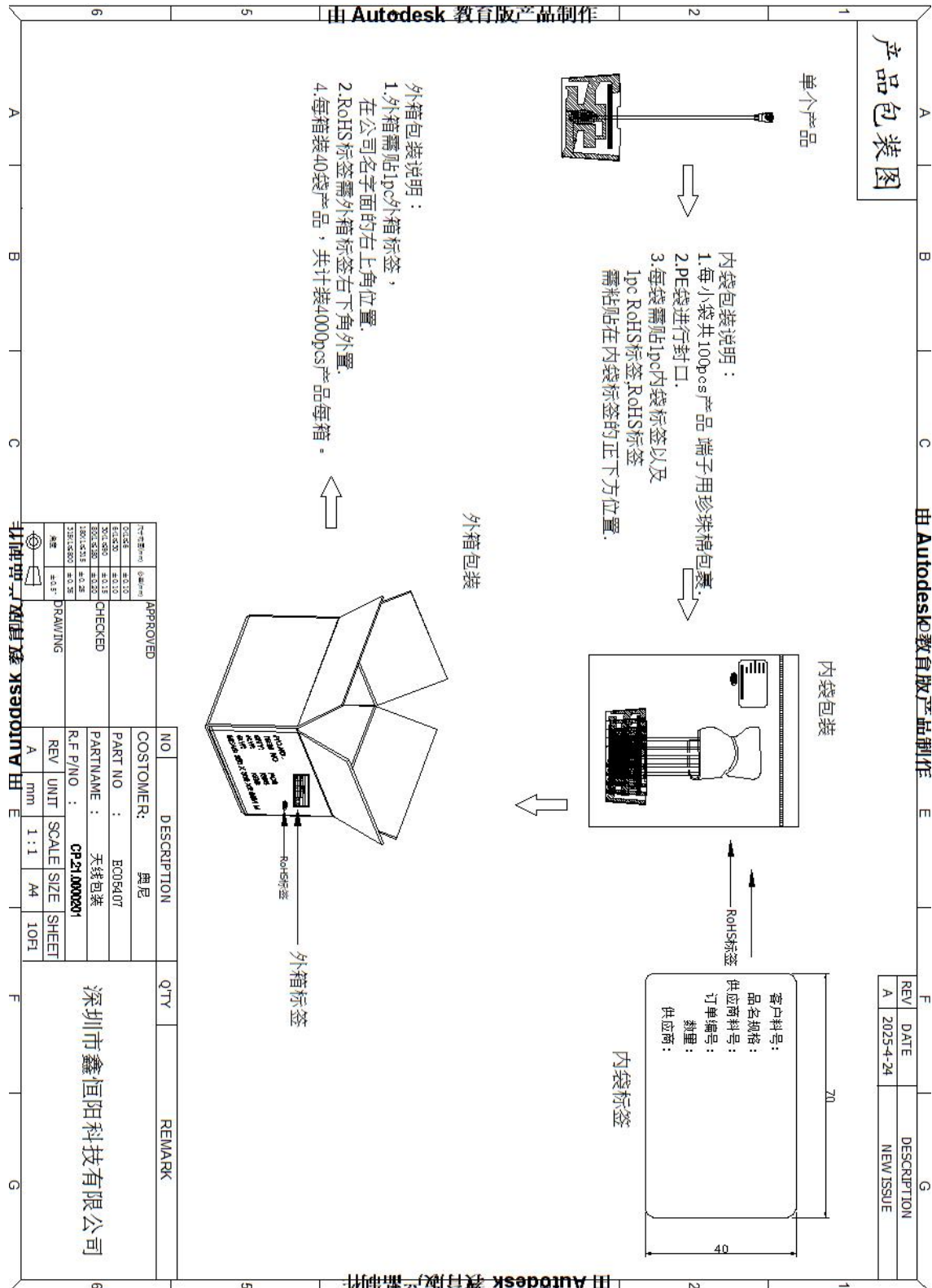
7、Machine picture



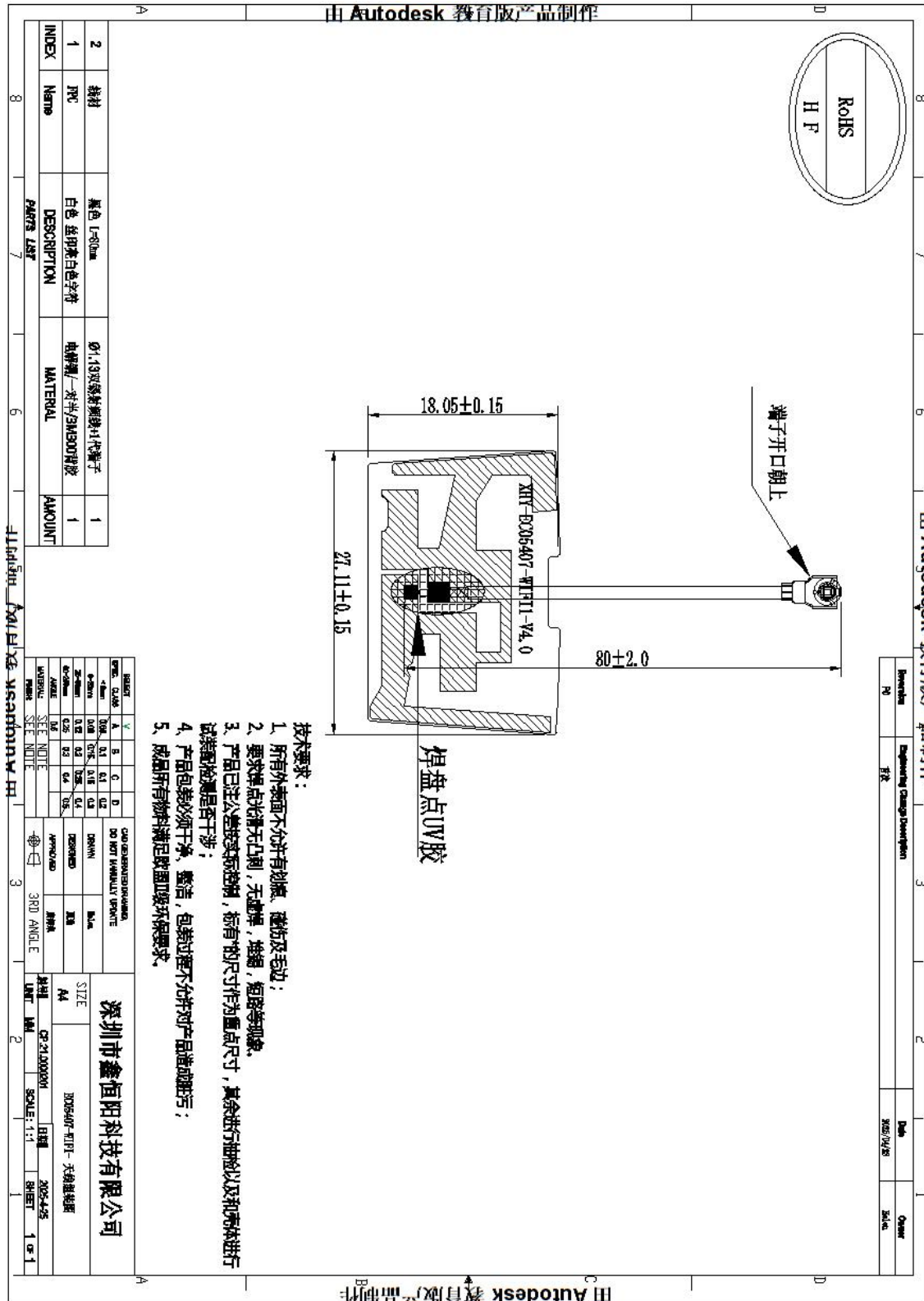
8, Picture of the machine motherboard



9、Antenna packaging drawing



10、Antenna drawing dimensions





11、ROHS

Antenna CP. 21. 0000201 meets RoHS requirements.

12、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*****