



Shenzhen XINHENG YANG Technology Co., Ltd

SPECIFICATION

Customer Name: LINGCHONG Technology Co., Ltd.

Product Model: Wali

Customer P/N :

XINHENG YANG P/N: CP. 21. 0000189

SPECIFICATIONS: 2. 4G+5. 8G, FPC, 31. 2*26. 3mm, L=90mm

Production date: 2025. 02. 14

Sample Version: R1. 0

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

Manufacturer: Shenzhen Xinhengyang Technology Co., Ltd.

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Index

Cover	1
Index	2
Change history	8
The basic parameters	4
TestEquipment & Conditions	5
Test Report	6—9
Product Drawing	10
RoHS/Bill of materials	11



Change history

Number	Effective date	Change record
R1.0	2025.02.14	Initial release



The basic parameters

A. Electrical Characteristics	
Frequency	2400MHZ~2500MHZ 5150MHZ~5850MHZ
VSWR	< 2
Avg Efficiency	>50%
Impedance	50 ± 15 Ohm
Polarization	Linear
Peak Gain	2.4G:3.54dBi 5G:5.26dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC black
Cable Type	Φ 1.13 LOW LOSS, 90mm
Connector Type	Generation
Dimension	31.20MM*26.30MM±0.2MM
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 30 °C ~ + 70 °C

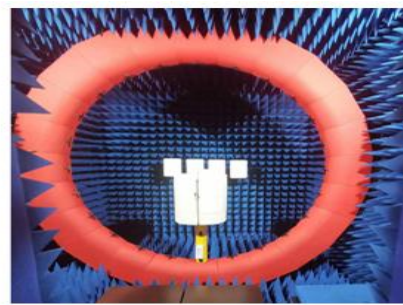
Introduction:

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)

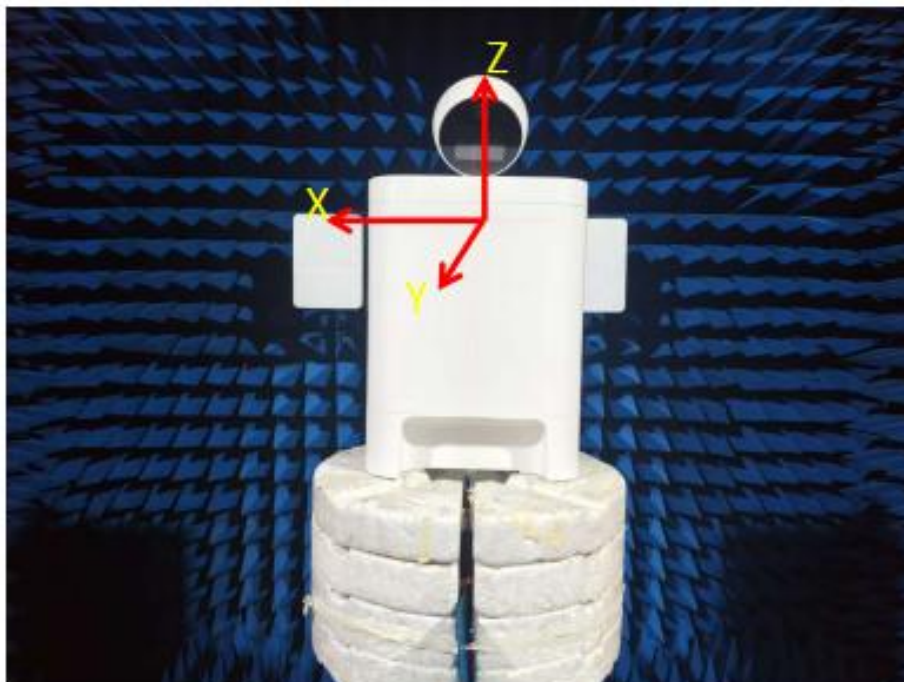


Test Report

Those specifications were specially defined for Wali model.

1. Machine pictures and antenna assembly





WIFI天线位置如图所示

VSWR

2.Measuring Method

1.A 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR

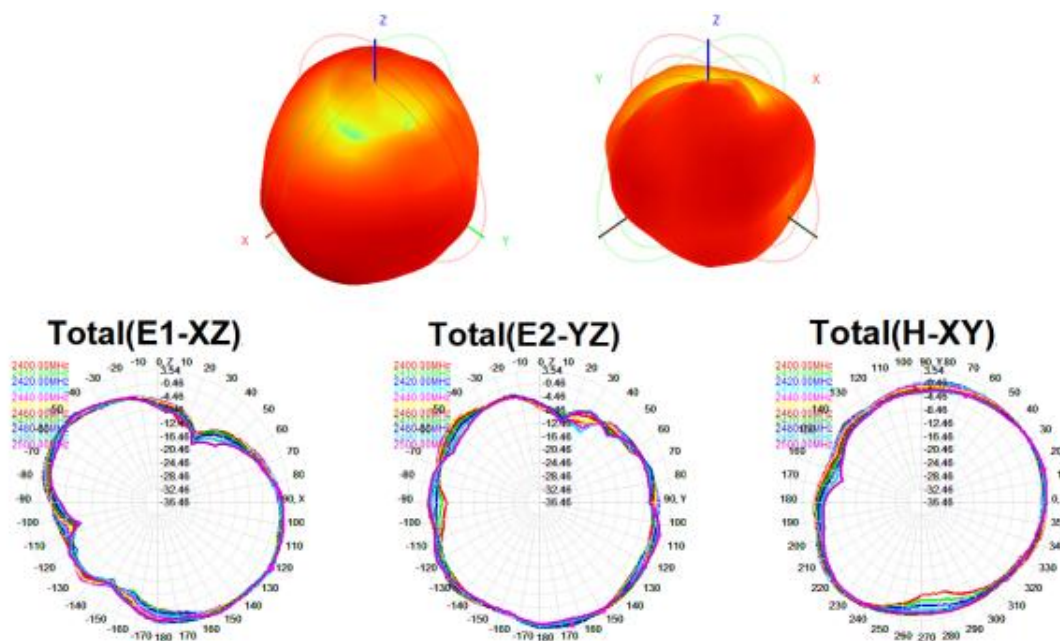
2.Keeping this jig away from metal at least 20cm

3.Measurement frequency points and VSWR value



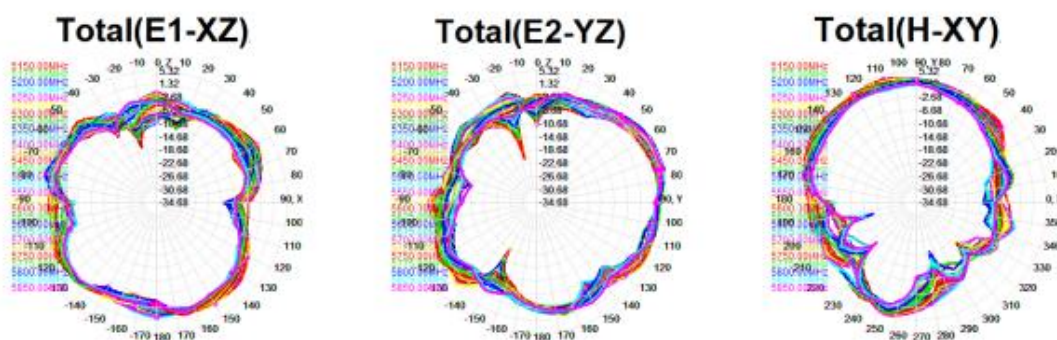
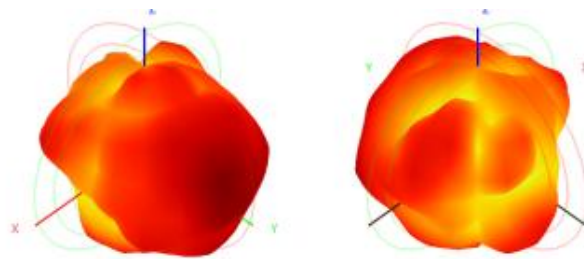
4. Gain table of Antenna:

2400-2500MHz



Freq (MHz)	Gain (dBi)	Effi (%)	Effi (dBi)
2400	3.30	64.89	-1.88
2410	3.54	66.59	-1.77
2420	3.54	68.31	-1.66
2430	3.43	68.98	-1.61
2440	3.18	68.74	-1.63
2450	2.88	67.20	-1.73
2460	2.66	65.79	-1.82
2470	2.58	64.25	-1.92
2480	2.72	63.75	-1.96
2490	2.84	63.00	-2.01
2500	2.97	64.30	-1.92

5150-5850MHz

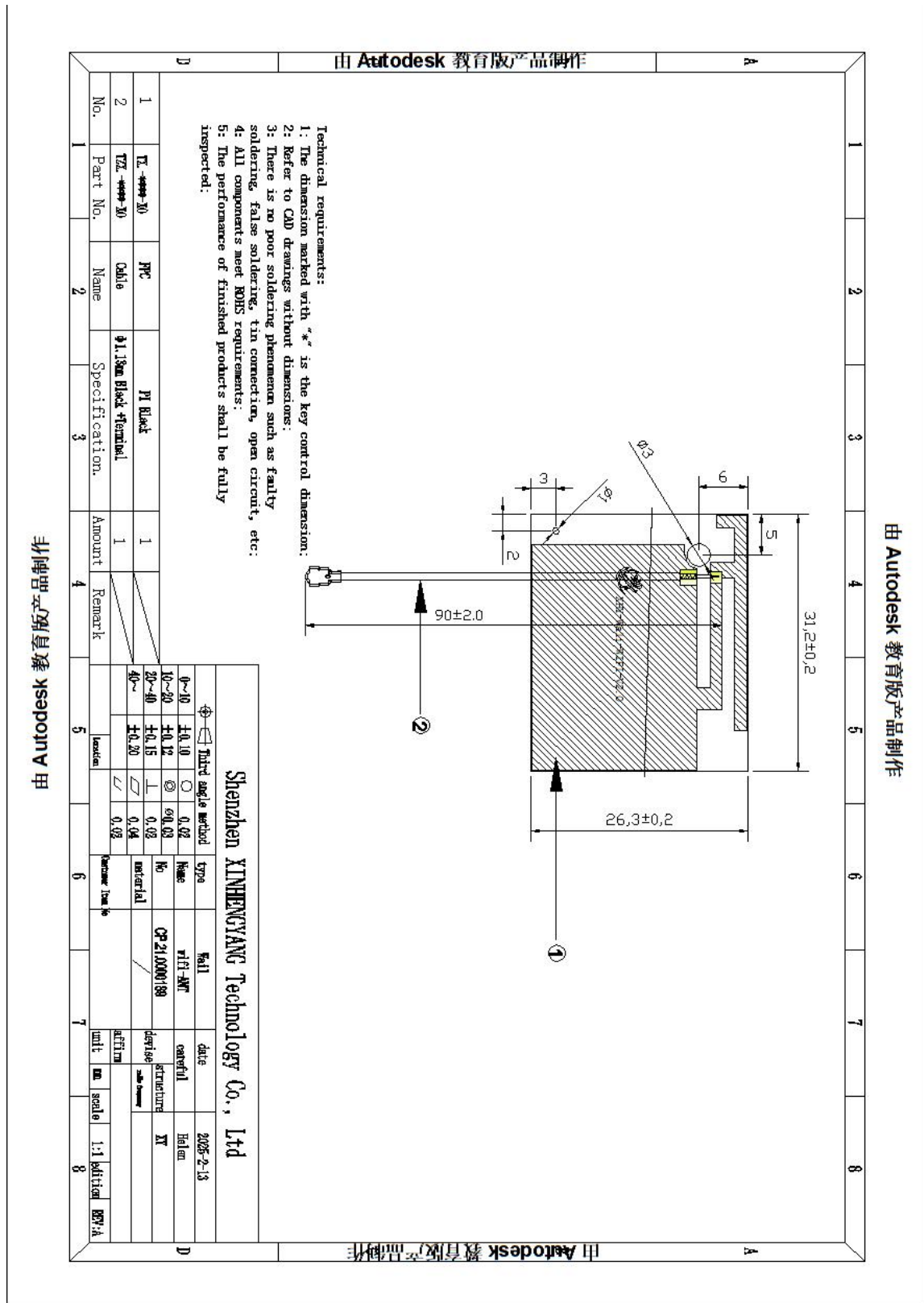


Freq (MHz)	Gain (dBi)	Effi (%)	Effi (dBi)
5150.0	3.99	58.90	-2.30
5200.0	3.51	57.05	-2.44
5250.0	3.41	63.90	-1.95
5300.0	3.31	58.74	-2.31
5350.0	3.47	56.53	-2.48
5400.0	3.52	62.34	-2.05
5450.0	4.24	63.16	-2.00
5500.0	4.62	59.12	-2.28
5550.0	4.42	61.00	-2.15
5600.0	5.11	63.38	-1.98
5650.0	5.26	55.83	-2.53
5700.0	5.07	56.15	-2.51
5750.0	5.25	59.82	-2.23
5800.0	5.18	56.90	-2.45
5850.0	4.64	53.32	-2.73

5.OTA:

Test Condition		传导数据		OTA数据	
band	Channel	MAX (dBm)	MIN (dBm)	TRP (dBm)	TIS (dBm)
802.11B.11M	1	21.07	-87	18.12	-84.79
	6	21.13	-90	17.66	-84.57
	11	20.93	-90	18.40	-86.39
802.11G.54M	1	20.30	-73	19.17	-72.92
	6	20.28	-78	18.80	-73.52
	11	20.02	-78	19.59	-74.68
802.11N.MCS7	1	19.21	-68	18.65	-70.59
	6	19.12	-74	17.98	-72.19
	11	18.96	-73	18.19	-72.64
802.11A.54M	36	18.41	-80	17.55	-77.52
	100			14.75	-75.88
	149	18.91	-79	15.79	-75.02
	157	19.21	-79	16.23	-76.36
	165	18.89	-79	16.39	-75.99

Product Drawing





ROHS

Antenna CP.21.0000189 meets ROHS requirements See electronic file for details.

Product packaging instructions

A. packing should meet the moisture-proof, 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*****