

acknowledgem-ent

SPECIFICATION FOR APPROVAL

Customer Name: Expand the benefits

Product model: LP100

Customer part number Customer P/N:_____

Xin Hengyang material number XINHENGYANG P/N: CP.
21. 0000225 Product Specifications IFFCATIONS: WIFI/black __ FPC/1__13__
Gray coaxial cable __ L=120mm / 1st generation terminal

Production date: 2025. 06. 06 Sealed Sample Version: R1

Xinhengyang (XINHENGYANG)		
Production (FICT-ION)	Structure (S)	research and develop-ment (R&D)
Customer		
purchase (PUR)	character (QC)	research and develop-ment (R&D)

Manufacturer: Shenzhen Xinhengyang Technology Co., LTD

Address: Shenzhen Nanshan District Xili Street Langshan No.2 Road, Building B, Aerospace Micro Motor Building, 1st floor

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URL : <https://www.xhy-2008.com>

R & D, production and sales of professional wireless terminal antenna



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I. Basic Parameters

A. Electrical Characteristics	
Frequency	2400MHZ-2500MHZ 5150MHZ-5850MHZ
VSWR	<2.0
Avg Efficiency	2400MHZ-2500MHZ>50% 5150MHZ-5850MHZ>50%
Impedance	50 ± 25 Ohm Linear
Polarization	2400MHZ-2500MHZ: 4.22dBi
Peak Gain	5150MHZ-5850MHZ: 4.84dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC black
Cable Type	Φ 1.13 L=120MM±3MM Grey
Connector Type Dimension	Generation 31.50MM*14.40MM±0.15MM
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 20 °C ~ + 60 °C

2. Electrical Specifications

Those specifications were specially defined for LP100 model.

Three 、 VSWR

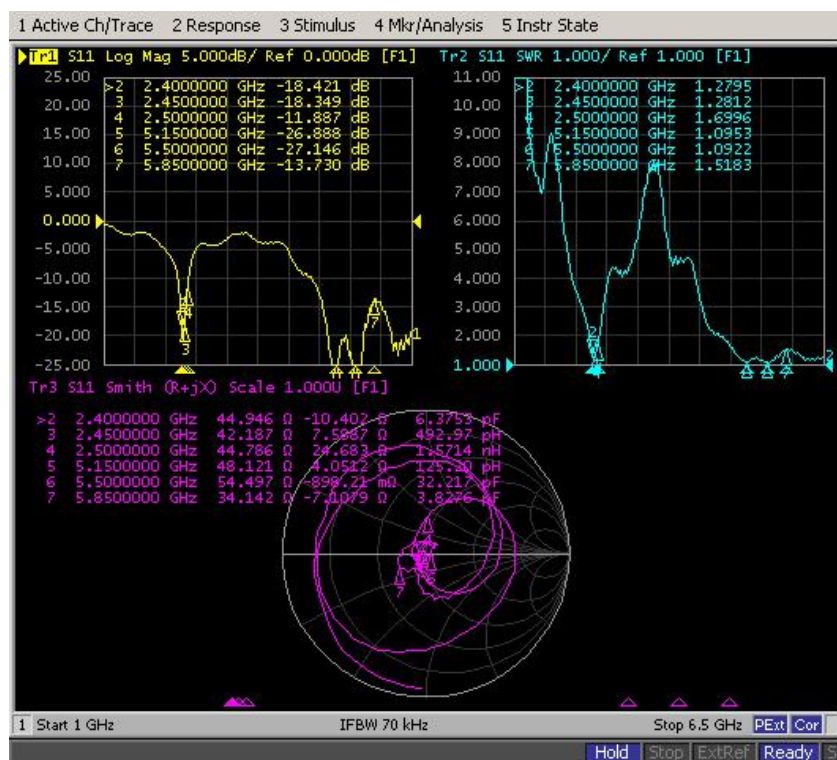
1 measuring method

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 Measure the frequency points and the standing wave ratio

WiFi antenna





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IV. Introduction to the Dark Room

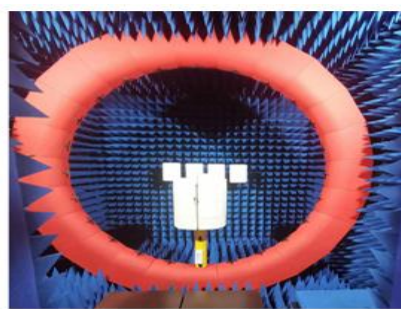
Introduction:

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.

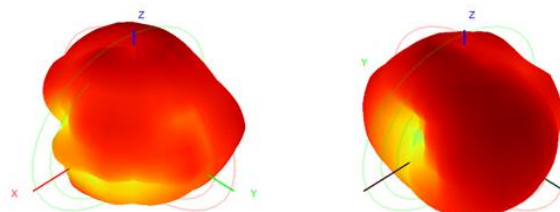
main performance :

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)



V. Antenna Performance

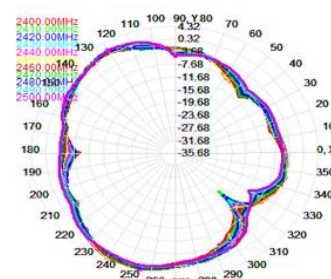
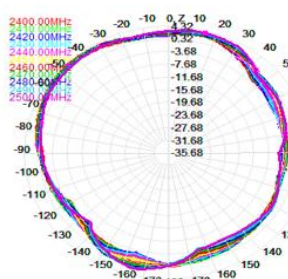
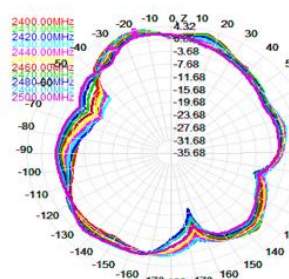
Field type diagram-WiFi-2400MHZ-2500MHZ



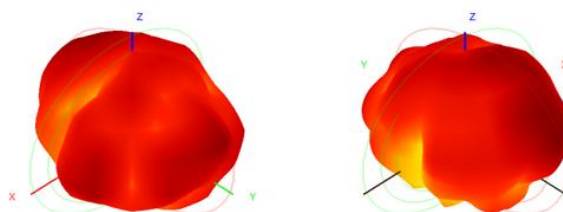
Total(E1-XZ)

Total(E2-YZ)

Total(H-XY)



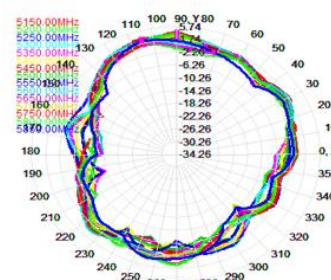
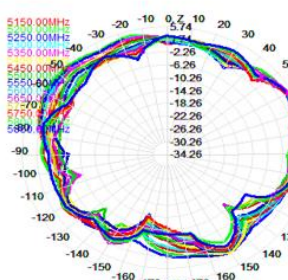
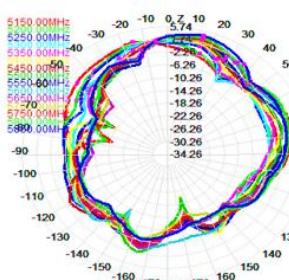
Field type diagram-WiFi-5150MHZ-5850MHZ



Total(E1-XZ)

Total(E2-YZ)

Total(H-XY)





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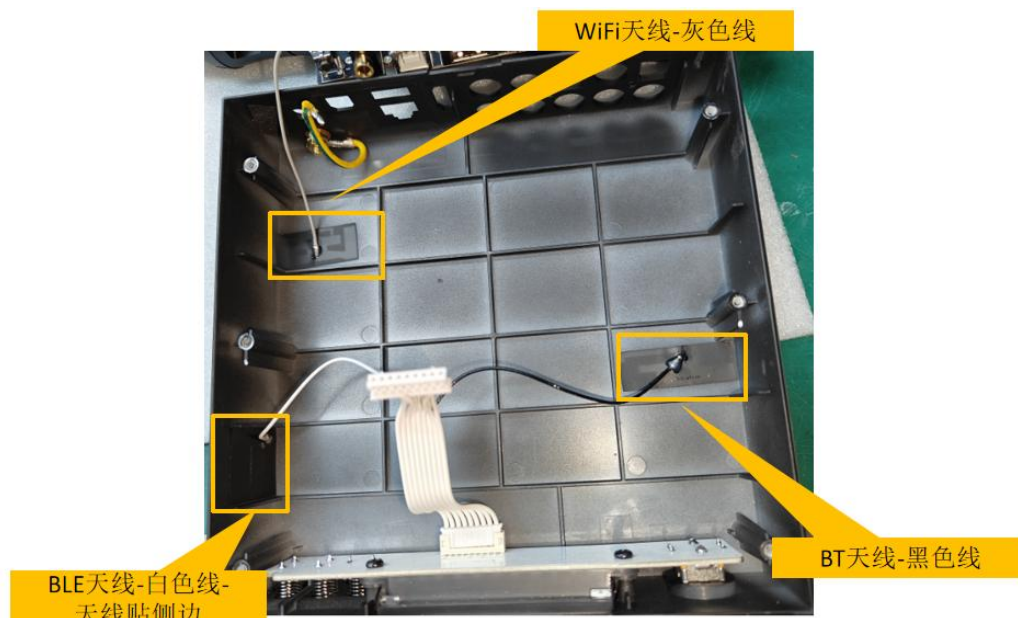
No-source efficiency gain

WIFI (2400MHZ-5850MHZ)							
Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)	Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
2400	-2.14	3.61	61.14	5250	-1.60	2.97	59.14
2410	-2.02	3.85	62.84	5300	-1.82	3.08	55.79
2420	-2.10	3.83	61.70	5350	-1.75	3.39	56.90
2430	-1.95	3.91	63.79	5400	-1.65	3.52	58.36
2440	-2.02	3.69	62.76	5450	-1.50	3.82	60.79
2450	-1.99	3.96	63.26	5500	-1.91	3.60	54.41
2460	-2.01	4.22	63.02	5550	-1.74	4.84	57.05
2470	-2.04	3.89	62.48	5600	-1.65	4.31	58.38
2480	-2.10	3.51	61.65	5650	-2.11	3.84	51.53
2490	-2.11	3.48	61.55	5700	-2.15	4.30	50.98
2500	-2.08	3.36	62.00	5750	-2.04	4.38	52.49
5150	-1.70	3.58	57.56	5800	-2.07	4.24	52.03
5200	-1.71	3.66	57.41	5850	-2.30	4.63	58.93

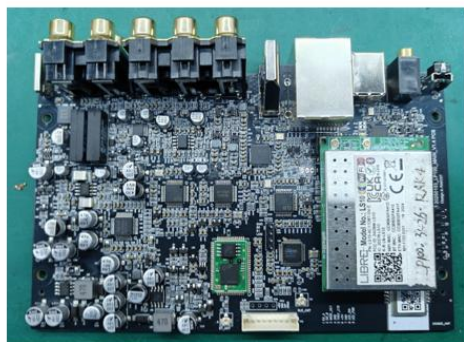
OTA active

OTA有源			
Test Condition		OTA	
band	Channel	TRP (dBm)	TIS (dBm)
802.11B.11M	1	13.71	-71.65
	6	13.63	-78.68
	11	13.71	-72.88
802.11G.54M	1	13.30	-56.53
	6	13.05	-63.40
	11	13.74	-56.66
802.11N.MCS7	1	12.20	-54.43
	6	11.92	-61.87
	11	11.74	-54.90
802.11A.54M	149	10.42	-67.58
	157	11.31	-69.29
	165	11.12	-67.55

VI. Antenna Assembly Drawing



VII. Whole Machine & Machine Motherboard Pictures





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Eight 、 ROHS

Antenna CP.21.0000225 meets RoHS requirements.

9. 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*****