# **SPECIFICATION**

Product Model:	SS121					
Customer P/N: XINHENGYANG P/N:						
SPECIFFCATIONS:	BT-2402MHZ-2480MHZ					
Production date:	2024-12-05					
Sample Version:	R1					
XINHENGYANG						
FICTION	DQE	R&D				
Customer						
PUR	QC	R&D				

Manufacturer: Shenzhen Xinhengyang Technology Co., LTD

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Tel: 0755-83600916 Email: gc@xhy-2008.com

Network address: <a href="https://www.xhy-2008.com">https://www.xhy-2008.com</a>

Customer Name:



Number	Effective date	Change record
R1	2024-12-05	Initial release

# 1. The basic parameters

A. Electrical Characteristics				
Frequency	2402MHZ-2480MHZ			
VSWR	2402MHZ-2480MHZ: <4.5			
Avg Efficiency	2402MHZ-2480MHZ: >15%50 ±			
Impedance Polarization	25 Ohm			
	Linear			
Peak Gain	2402MHZ-2480MHZ: -4.5dBi			
B. Material & Mechanical Characteristics				
Material of Radiator	PCB			
Cable Type				
Connector Type				
Dimension				
C. Environmental	20.00			
Operation Temperature	- 20 °C ~ + 60 °C			
Storage Temperature	- 30 °C ~ + 70 °C			

## 2. Electrical Specification

Those specifications were specially defined for SS121 model.

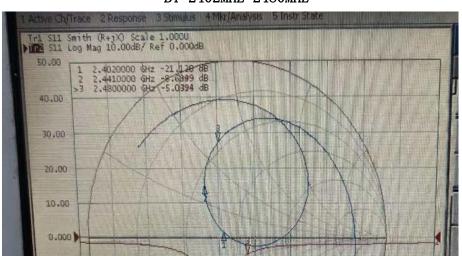
## 3、VSWR

-20-00

### 1 Measuring Method

- $1.A~50~\Omega$  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



#### BT-2402MHZ-2480MHZ



### 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  $\sim$  6GHz ceiling reflected wave loss materials: 400MHz  $\sim$  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)





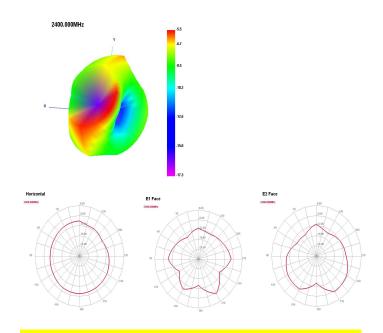




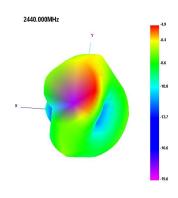


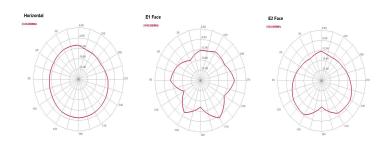
## 5. Gain table of Antenna

Passive field pattern-BT-2402MHZ



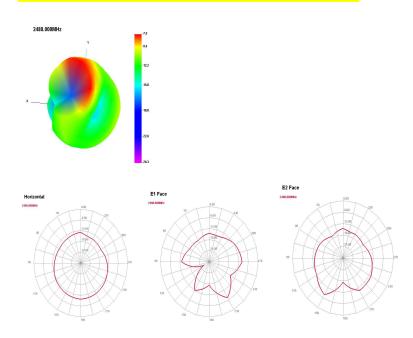
Passive field pattern-BT-2440MHZ







## Passive field pattern-BT-2480MHZ

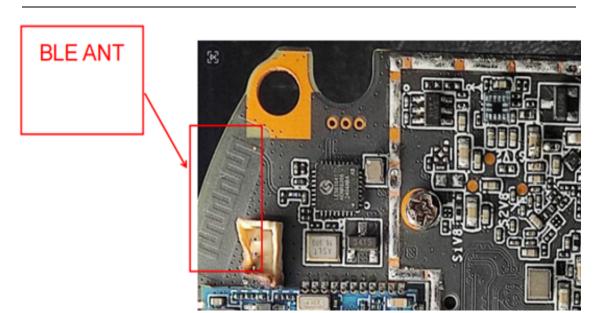


### Passive efficiency gain

无源效率					
Freq	Effi	Effi	Gain		
(MHz)	(%)	(dB)	(dBi)		
2400	10.05	-9.98	-5.52		
2410	11.34	-9.45	-4.97		
2420	11.24	-9.49	-4.81		
2430	11.08	-9.55	-4.5		
2440	9.27	-10.33	-4.89		
2450	7.75	-11.11	-5.56		
2460	5.76	-12.4	-6.83		
2470	4.9	-13.09	-7.57		
2480	5.18	-12.86	-7.5		
2490	5.3	-12.75	-7.26		
2500	5.49	-12.61	-7.14		

# 6. Antenna picture





# 9. Antenna drawing size

