



Shenzhen XINHENGYANG Technology Co., Ltd

XINHENGYANG

# SPECIFICATION

Customer Name: Safemo Pte. Ltd.

Product Model: CX124

Customer P/N :

XINHENGYANG P/N: TP.01.0211-CX124

SPECIFICATIONS: frequency band: 2400MHZ-2500MHZ

Production date: 2023.10.25

Sample Version: V2.0

XINHENGYANG		
FICTION	DQE	R&D
Customer		
PUR	QC	R&D

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Shenzhen XINHENGYANG Technology Co., Ltd

新恒陽  
XINHENGYANG



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## —、 The basic parameters

A. Electrical Characteristics		
<b>Frequency</b>	<b>2400MHZ-2500MHZ</b>	
<b>VSWR</b>	<b>&lt; 2.0</b>	
<b>Avg Efficiency</b>	<b>&gt;50%</b>	
<b>Impedance</b>	<b>50 ± 25 Ohm</b>	
<b>Polarization</b>	<b>Linear</b>	
<b>Peak Gain</b>	<b>2400MHZ:2.43dBi</b>	
B. Material & Mechanical Characteristics		
<b>Material of Radiator</b>	<b>Stainless steel</b>	<b>silver</b>
<b>Cable Type</b>	<b>/</b>	
<b>Connector Type</b>	<b>/</b>	
<b>Dimension</b>	<b>/</b>	
C. Environmental		
<b>Operation Temperature</b>	<b>- 20 °C ~ + 60 °C</b>	
<b>Storage Temperature</b>	<b>- 30 °C ~ + 70 °C</b>	

## 二、 Electrical Specification

Those specifications were specially defined for CX124 model.

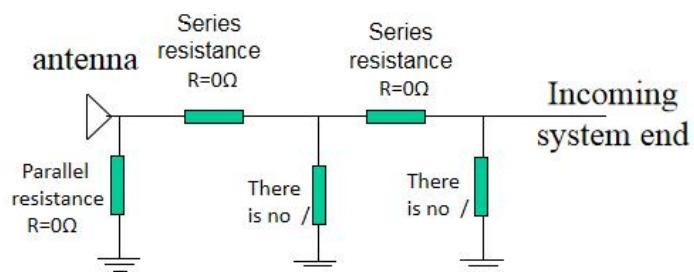
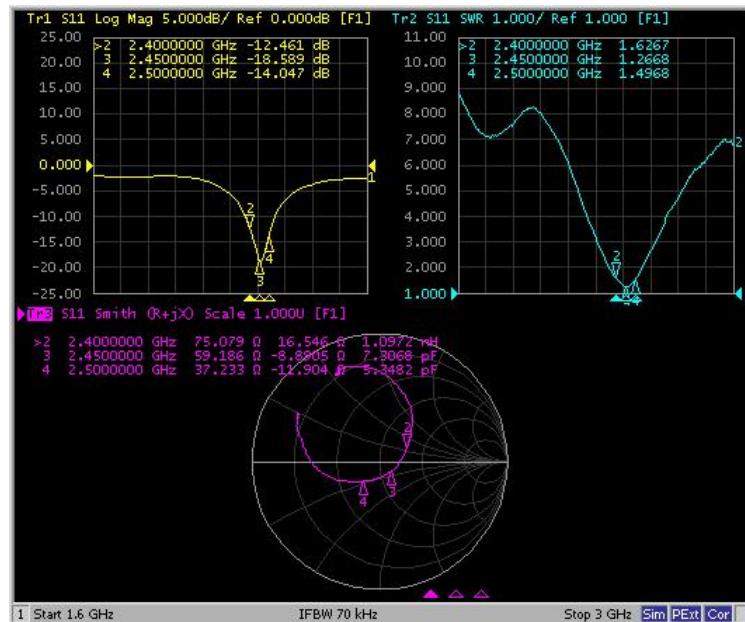
## 三、 VSWR

### 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



## 四、 Anechoic chamber

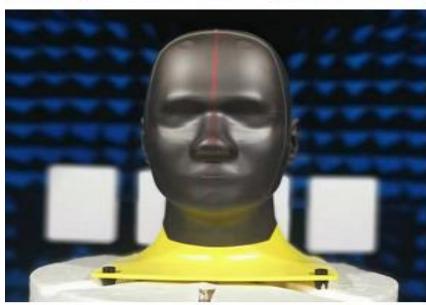
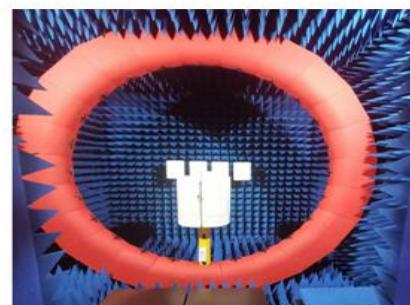
### Introduction:

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.

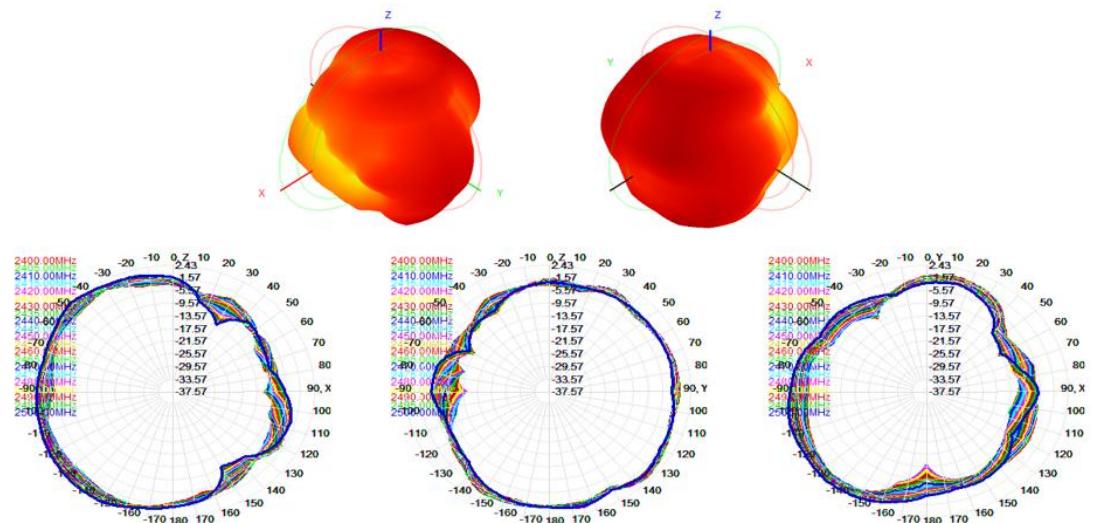
### main performance :

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)



## 五、Gain table of Antenna

Passive field pattern: 2400MHZ-2500MHZ



Passive efficiency gain:

2400MHZ-2500MHZ					
Freq (MHz)	Effi (%)	Gain(dBi)	Freq (MHz)	Effi (%)	Gain(dBi)
2400	53.37	2.07	2455	57.37	2.31
2405	55.24	2.03	2460	57.42	2.33
2410	52.53	2.10	2465	55.65	2.42
2415	52.58	1.98	2470	56.37	2.39
2420	53.59	1.95	2475	55.42	2.37
2425	51.64	2.13	2480	56.29	2.29
2430	52.37	2.15	2485	58.43	2.27
2435	52.94	2.24	2490	57.37	2.30
2440	53.42	2.26	2495	58.45	2.35
2445	55.76	2.37	2500	56.29	2.43
2450	56.73	2.39			



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OTA active

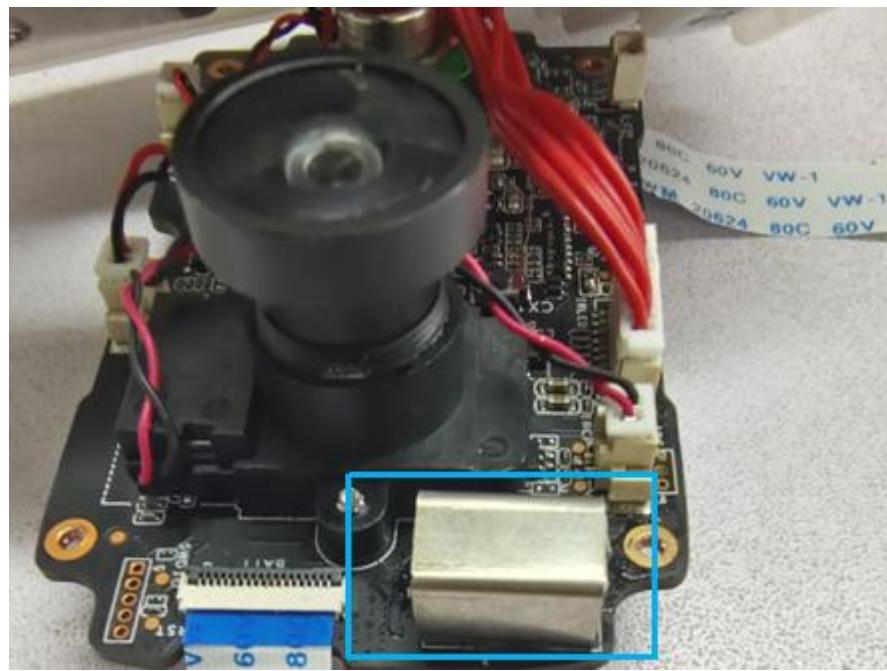
2.4G WiFi						
BAND	B模		G模		N模	
	TRP	TIS	TRP	TIS	TRP	TIS
1	13.45	-84.23	12.97	-73.64	12.56	-71.86
6	14.18	-84.84	13.46	-73.07	12.5	-73.27
11	13.93	-84.25	12.34	-73.75	11.96	-71.48

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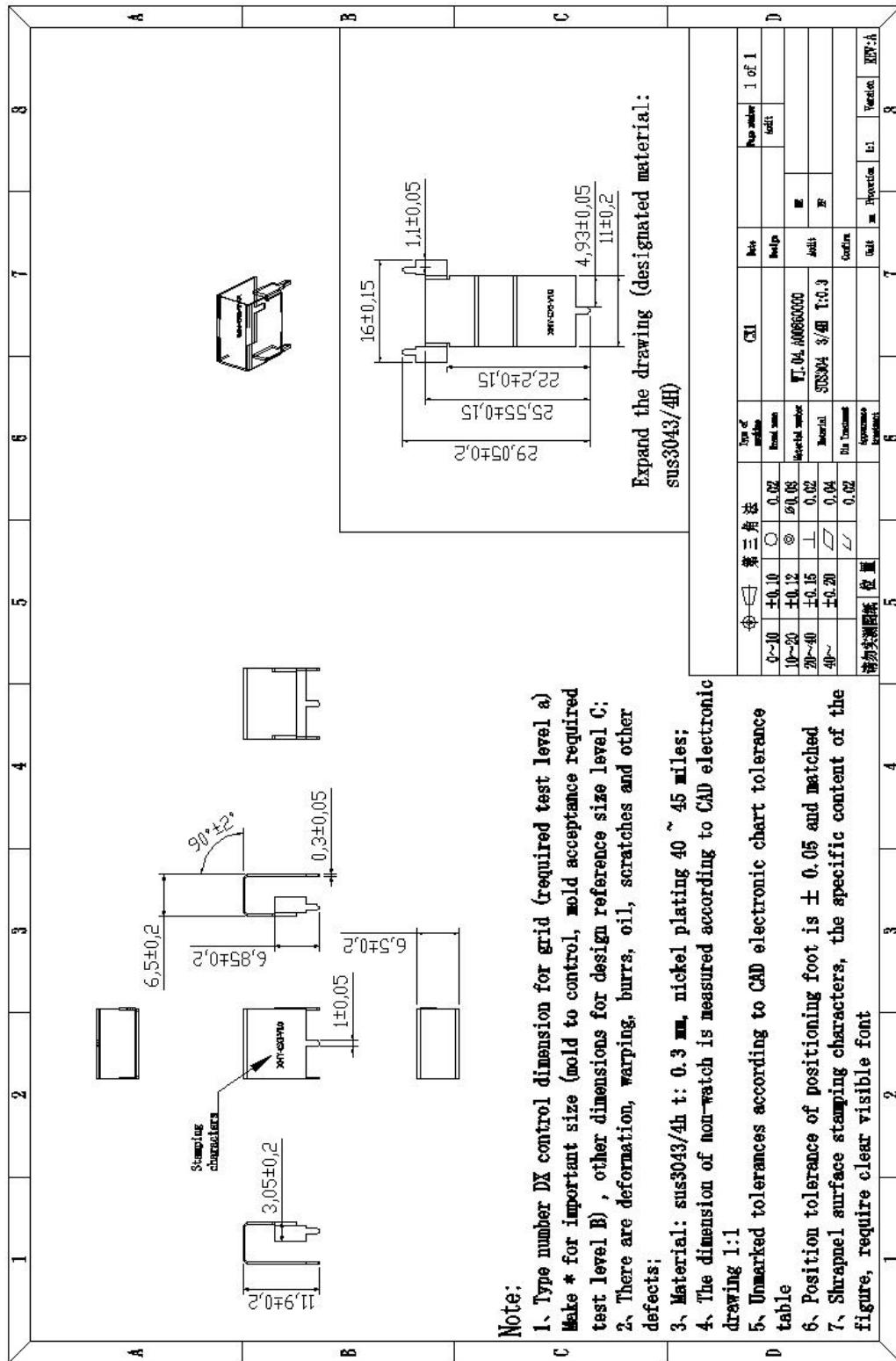
## 六、 Machine Picture



## 七、 Antenna position



## 八、Antenna Dimensions





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## 九、 ROHS

Antenna TP. 01. 0211-CX124 meets RoHS requirements.

## 十、 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.

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