



SPECIFICATION

Customer Name: HHO (Hangzhou) Digital Technology Co., Ltd.

Product Model: Small 0

Customer P/N : _____

XINHENGYANG P/N: ZJ.03.0270-X0

SPECIFICATIONS: 2.4G+5.8G, FPC, 31.2*26.3mm, L=280mm

Production date: 2023-02-15

Sample Version: V2.0

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



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Change history

Number	Effective date	Change record
V1.0	2023-01-02	Initial release
V2.0	2023-02-15	Replace the antenna cable



The basic parameters

A. Electrical Characteristics	
Frequency	2400MHZ~2500MHZ 5150MHZ~5850MHZ
VSWR	< 2
Avg Efficiency	>60%
Impedance	50 ± 15 Ohm
Polarization	Linear
Peak Gain	2.4G:3.72dBi 5G:4.62dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC black
Cable Type	Φ 1.13 LOW LOSS, 280mm
Connector Type	Generation
Dimension	31.2*26.3 ± 0.2mm
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 30 °C ~ + 70 °C

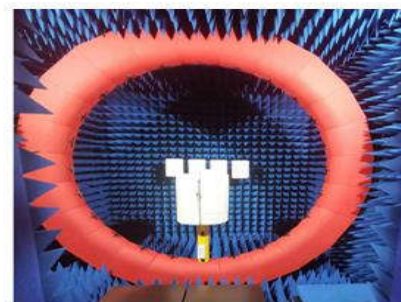
Introduction:

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 :

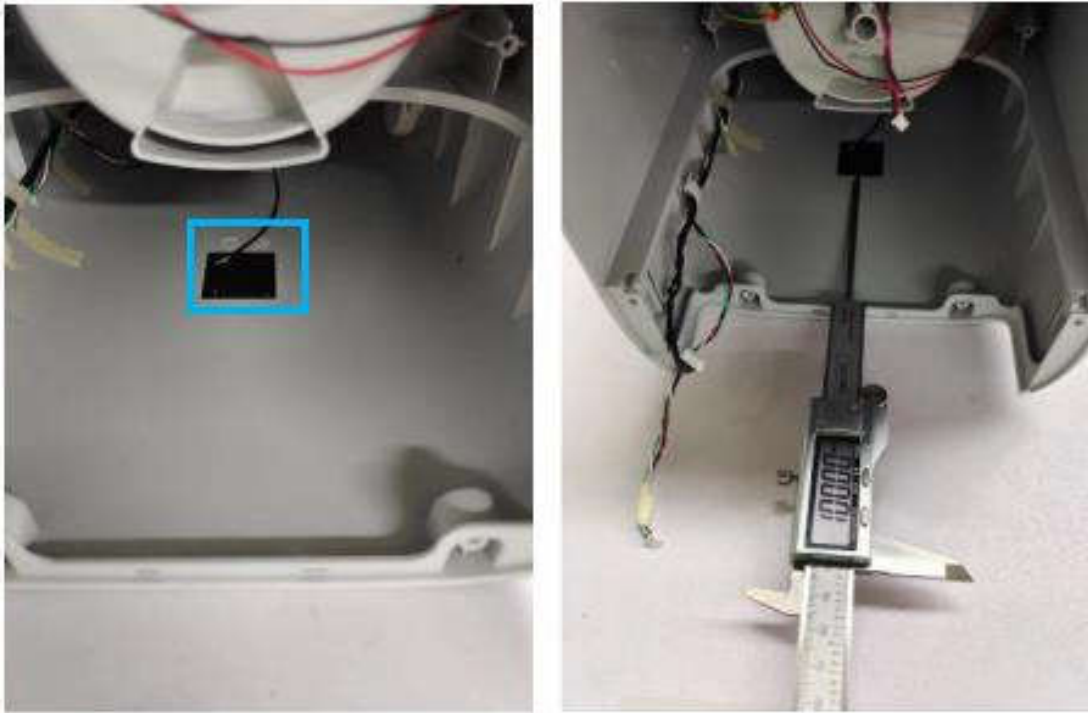
Frequency range:400MHz ~ 6GHz ceiling reflected wave loss materials: 400MHz ~ 6GHz is equal to or more than 15dB (microwave absorbing material by composite wave absorbing materials, namely tapered containing carbon sponge suction wave material paste in ferrite)



Test Report

Those specifications were specially defined for Small 0 model.

1. Antenna position

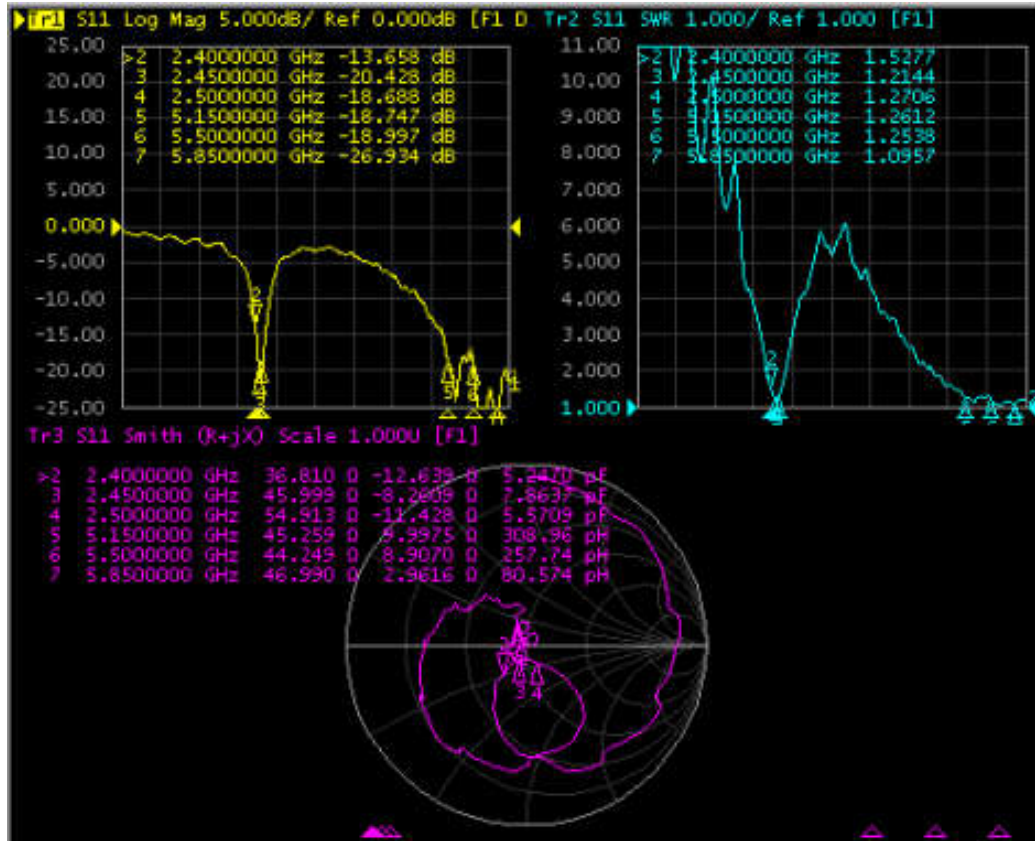


VSWR

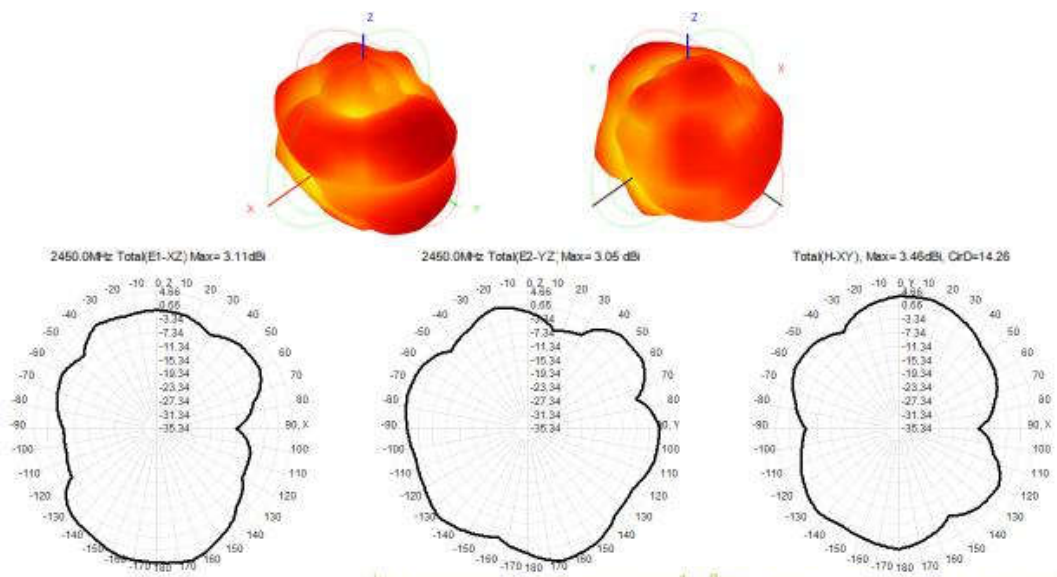
2. Measuring Method

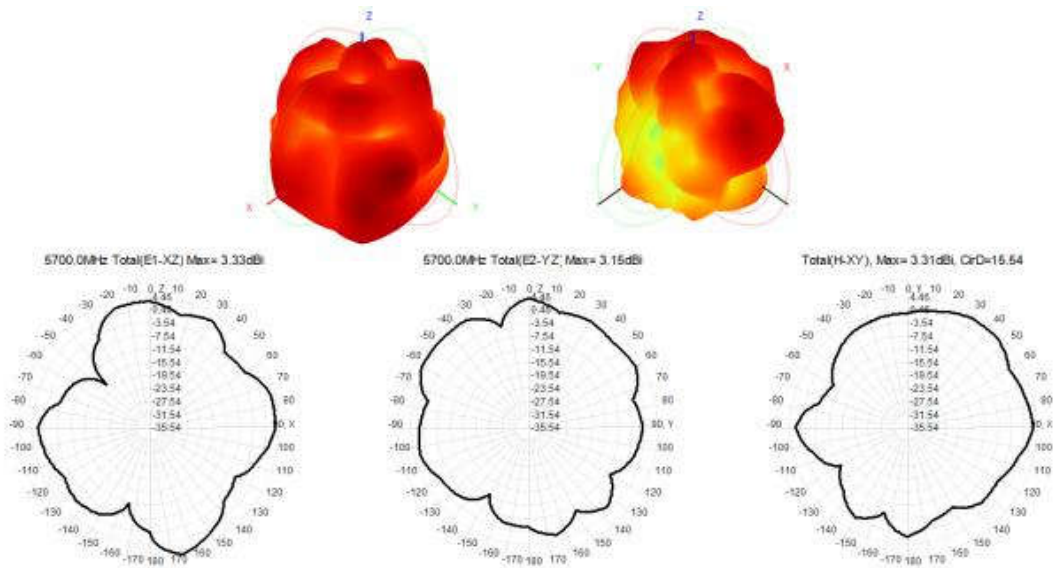
1. A 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR
2. Keeping this jig away from metal at least 20cm

3.Measurement frequency points and VSWR value



4.Gain table of Antenna:





Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	60.44	3.1	5200	61.29	3.91
2410	63.63	3.42	5250	62.55	3.97
2420	61.37	3.65	5300	67.26	4.36
2430	62.13	3.57	5350	64.77	4.02
2440	65.26	3.33	5400	67.53	4.62
2450	67.42	3.11	5450	67.57	4.52
2460	66.13	3.21	5500	71.23	4.2
2470	65.29	3.48	5550	68.85	3.97
2480	68.59	3.72	5600	68.49	3.74
2490	66.51	3.71	5650	67.42	3.55
2500	63.29	3.50	5700	65.47	3.33
5100	64.21	4.21	5750	66.42	3.82
5150	61.55	3.97	5800	64.29	3.41

5.OTA:

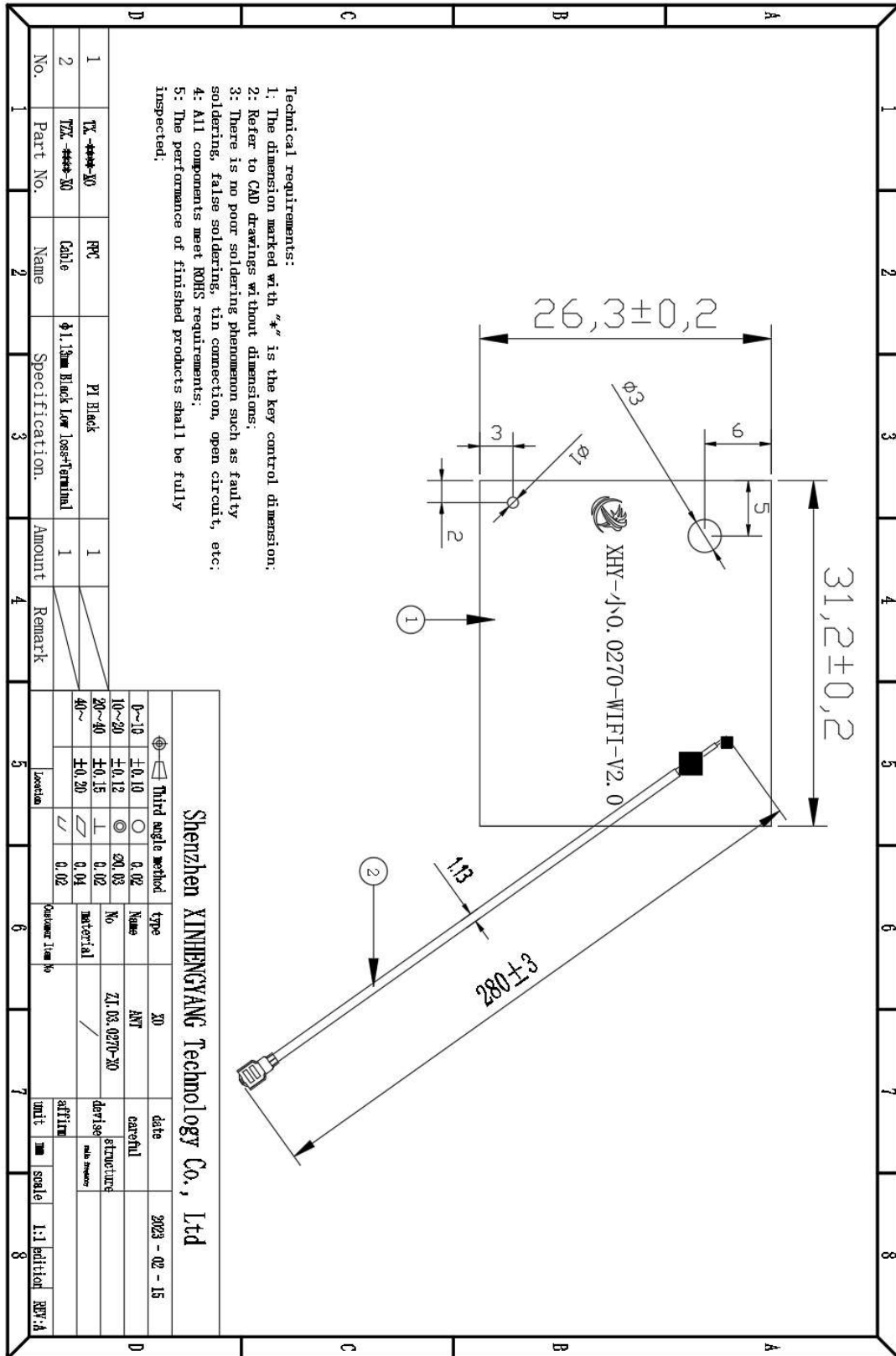
BAND	802.11B 11Mbps	
	TRP (dBm)	TIS (dBm)
1	16.49	-86.59
6	17.59	-87.39
11	17.27	-87.69

BAND	802.11G 54Mbps	
	TRP (dBm)	TIS (dBm)
1	16.13	-74.68
6	16.98	-74.96
11	16.70	-75.23

BAND	802.11N MCS7	
	TRP (dBm)	TIS (dBm)
1	17.16	-70.73
6	16.80	-70.55
11	16.68	-71.63

BAND	802.11A 54Mbps	
	TRP (dBm)	TIS (dBm)
36	12.87	-75.07
100	14.79	-74.9
149	14.22	-75.09
157	14.63	-75.61
165	14.48	-75.47

Product Drawing





RoHS/Bill of materials

1.RoHS

Antenna ZJ. 03. 0270-X0 meets RoHS requirements See electronic file for details.

*****END*****