



Dongguan YiJia Electronics Communication Technology Co.,Ltd.

SPECIFICATION FOR APPROVAL

Date 2023/04/21
File No 23042101
Revision 1.0

CUSTOMER: Shenzhen Suanzi Technology Co., Ltd

CUSTOMER NO: 8"Intelligent All-In-One Machine

PART NAME: 2.4G Antenna

SUPPLIER NO: YJQ01.212.003.301A

Date: Q "TY:

CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR

SUPPLIER SIGNATURE		
APPROVAL	CHECK	DESIGN
 ChenGuoqiang	XieLi	ChenXingyi

YJ-RD-F04-A



Spec Item

NO .	Contents	Number of Page	Page Code
1	Spec Cover	1	1
2	Spec Item	1	2
3	Drawing	1	3
4	Antenna Specification	1	4
5	S Parameter	1	5
6	Passive Test	2	6 ~ 7
7	Radiation Pattern	3	8 ~ 10
8	Active Test	1	11
9	Antenna Profile	4	12 ~ 15
10	N/A	N/A	N/A
11	-	-	-
12	-	-	-
13	-	-	-

RoHS

Compatible

CUSTOMER

PART NO

REV.

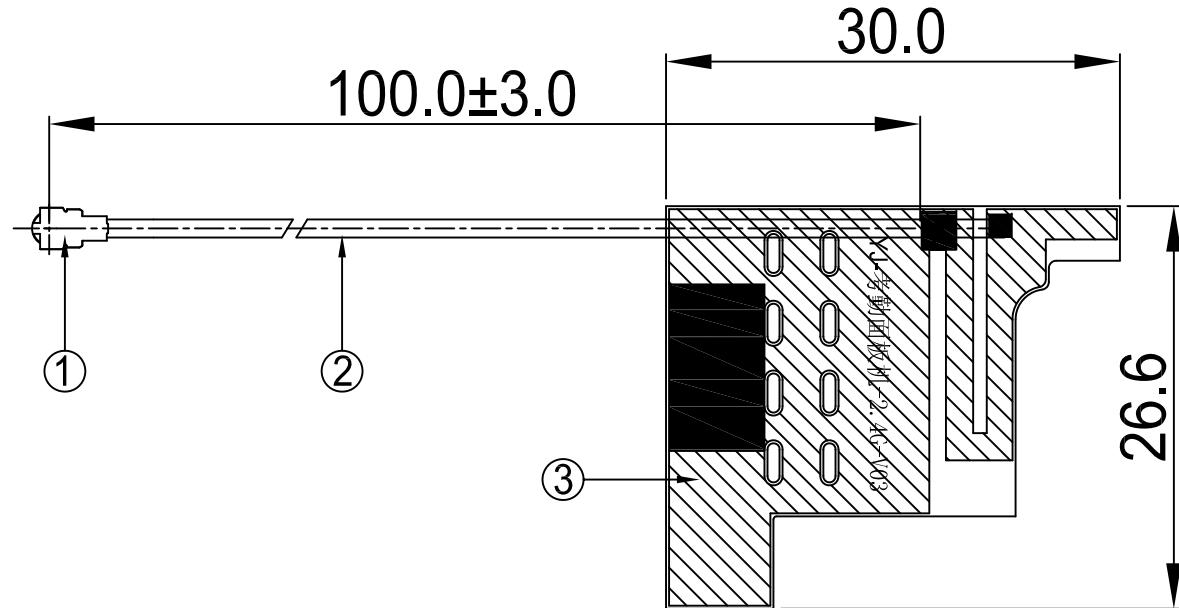
A

DESCRIPTION

Initial issue

DATE

2022-11-25



Dongguan YiJia Electronics Communication Technology Co.,Ltd. Tel:0769-82586086
Fax:0769-82586086

PART NAME: 2.4G Antenna

PART NO.: YJQ01.212.003.301A

DATE: 2022-11-25

APPROVED BY

CHECKED BY

DESIGNED BY

Tolerance
X.X ± 0.50

YinTao

TanGguohao

LvSenhua

UNITS: mm

SCALE: 1/1
X.XX ± 0.15REVISION: A
X° ± 3°

NO	PART NAME	DESCRIPTION	Material	Part Number	Q.TY
3	FPCB	30.0*26.6MM	FPCB	FPC1000XA.P01	1
2	Coaxial Cable	O.D.1.13 Black	O.D.1.13	COA1000XA.P01	1
1	Mini Connector	Au Plated Generation 1	Cu	TER1000XA.P01	1

1

2

3

4

5

6

7

8



Antenna Specification

Electrical Properties

Frequency	2.4-2.5GHz
Impedance	50 Ohm Nominal
V.S.W.R	2.5 Max
Gain	3.6 dBi
Radiation	Omni-directional
Polarization	Linear

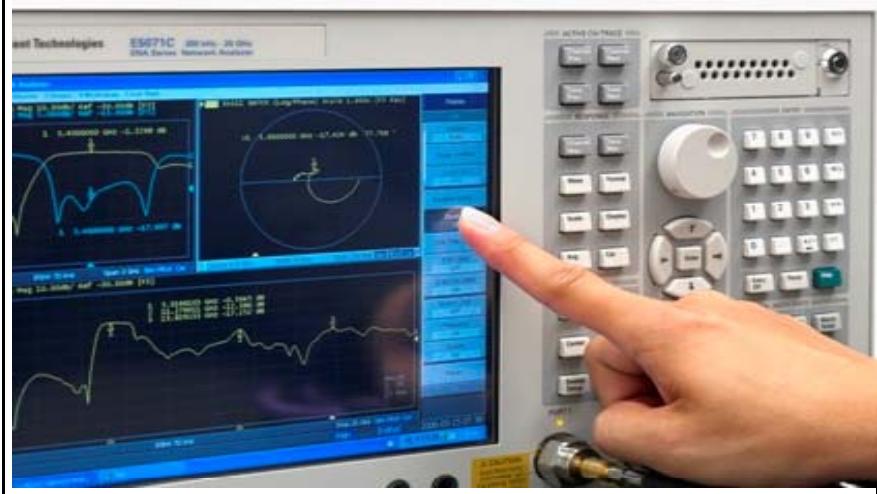
Physical Properties

Connector	1-IPPEX
Cable Type	O.D.1.13mm
Cable Length	100mm
Cable Color	Black
Operating Temp.	-40 ~ +85 °C
Storage Temp / Humidity	25±5°C / <70%

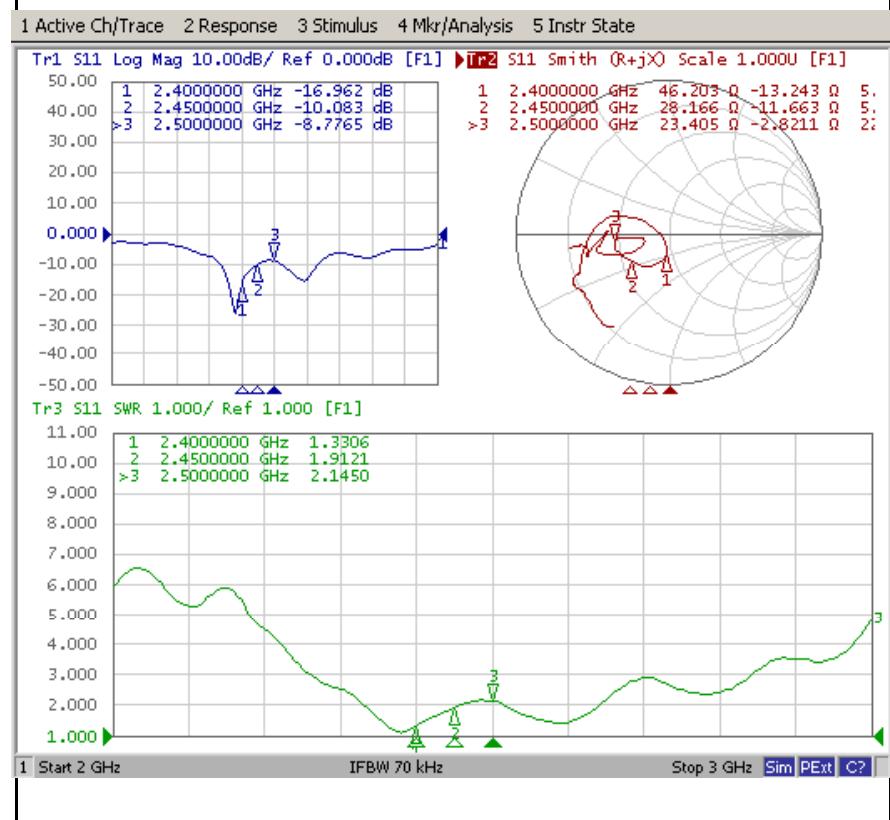


Antenna Performance Test

*Agilent
E5071B*

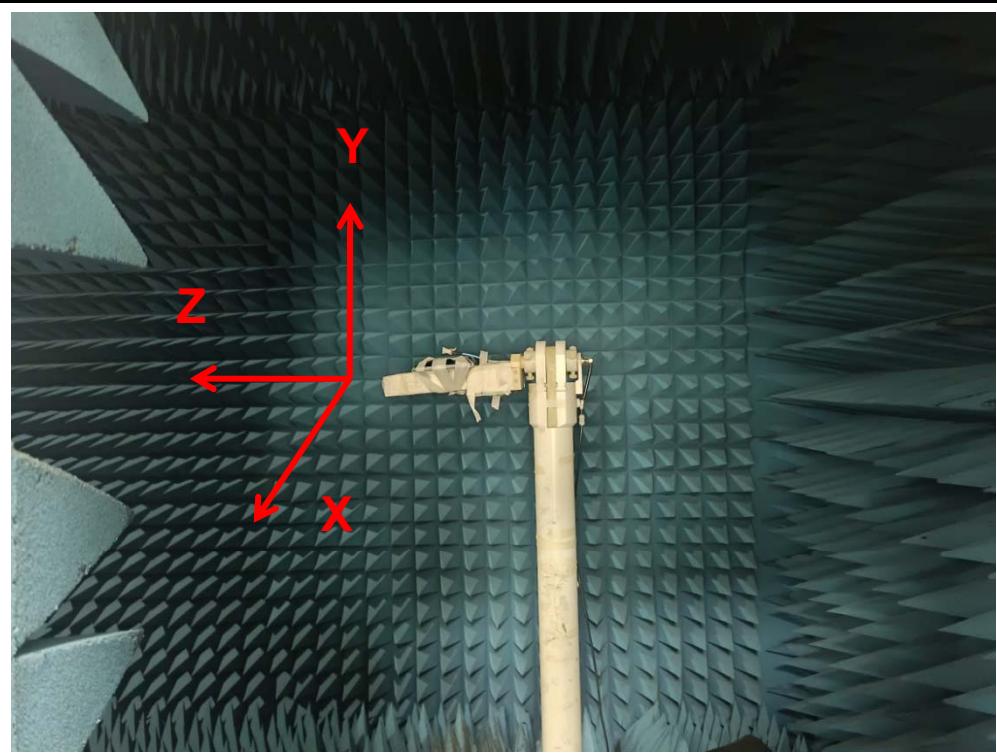


*S
Parameter
Test //
WiFi
Antenna*





Antenna Passive Test





Passive Test For WiFi Antenna

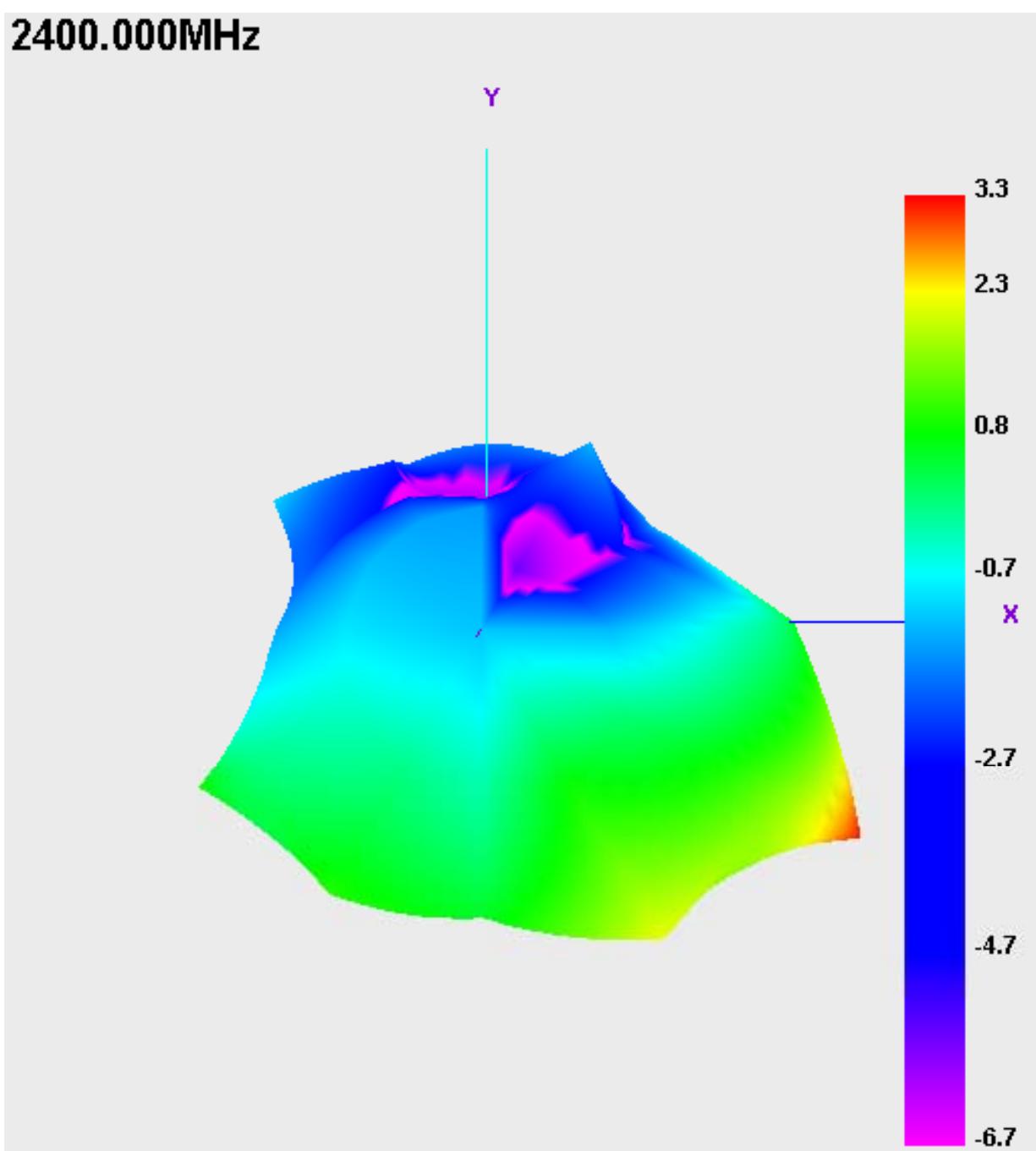
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	33.8	-4.7	3.3
2410	35.0	-4.6	3.5
2420	35.7	-4.5	3.5
2430	36.1	-4.4	3.5
2440	36.0	-4.4	3.4
2450	38.3	-4.2	3.6
2460	38.0	-4.2	3.4
2470	39.1	-4.1	3.5
2480	38.1	-4.2	3.2
2490	38.0	-4.2	3.2
2500	38.5	-4.1	3.4

add: Yuanfu Industrial Park, No.59, Muyu Road, Shatou Community, Chang'an Town, Dongguan, Guangdong



Radiation Pattern For WiFi Antenna

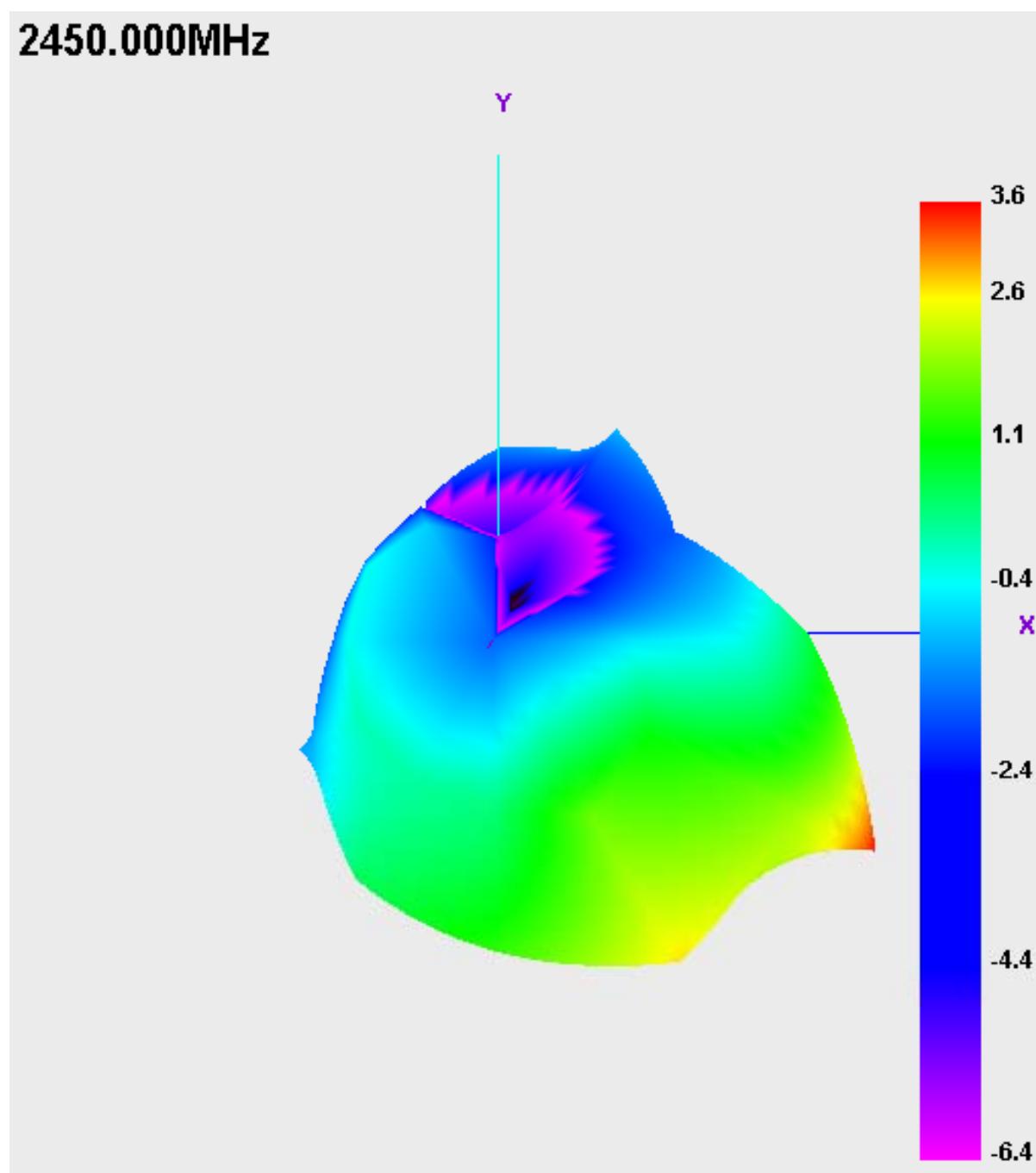
2400.000MHz





Radiation Pattern For WiFi Antenna

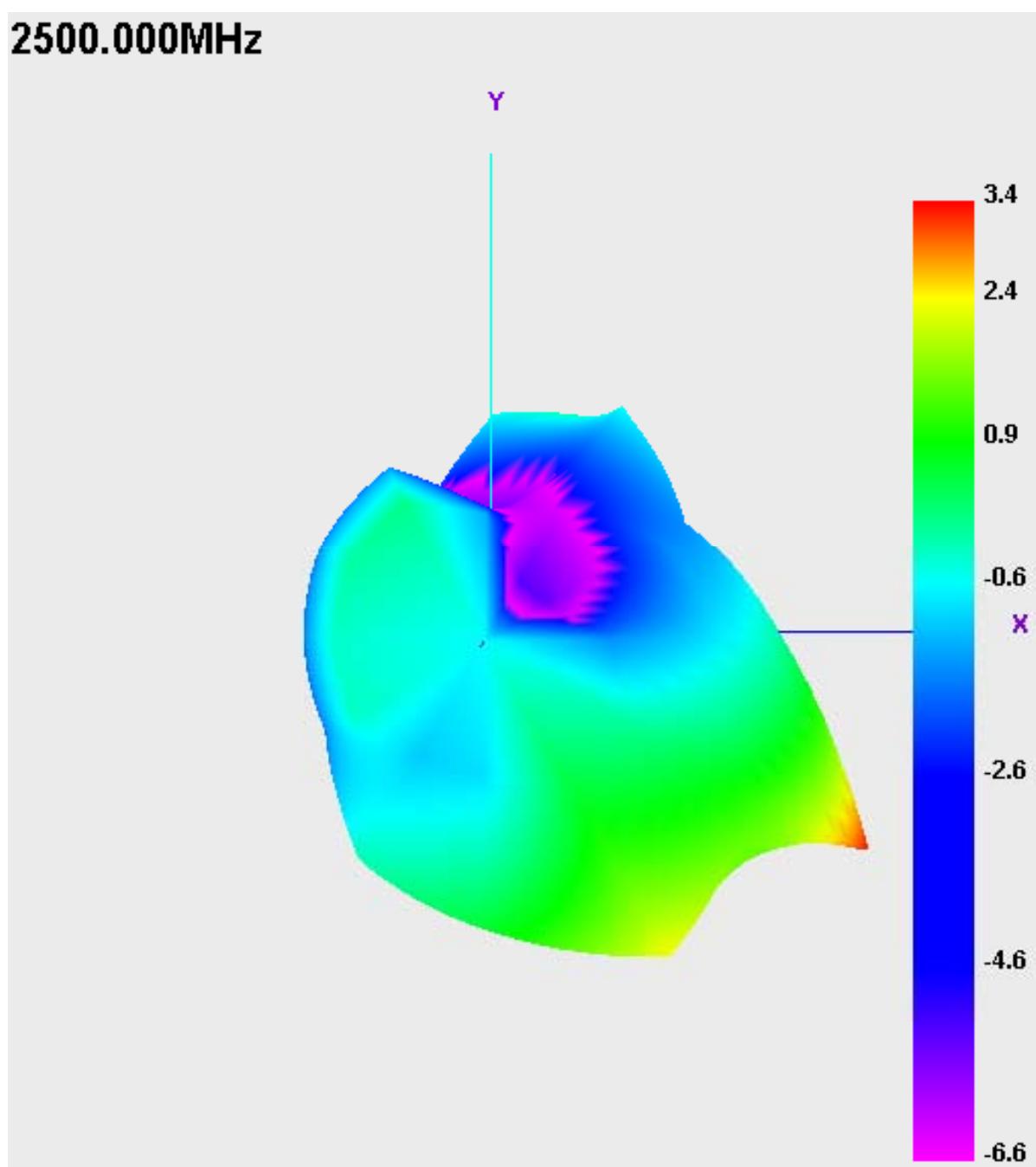
2450.000MHz





Radiation Pattern For WiFi Antenna

2500.000MHz





Active Test For WIFI

Band	Channel	Data Rate	TRP	EIRP	Data Rate	TIS	EIS
WIFI 2.4G 802.11b	1	11Mbps	6.7	14.9	11Mbps	-72.3	-80.5
	7		7.1	15.4		-71.6	-80.0
	13		6.9	15.6		-66.5	-75.2

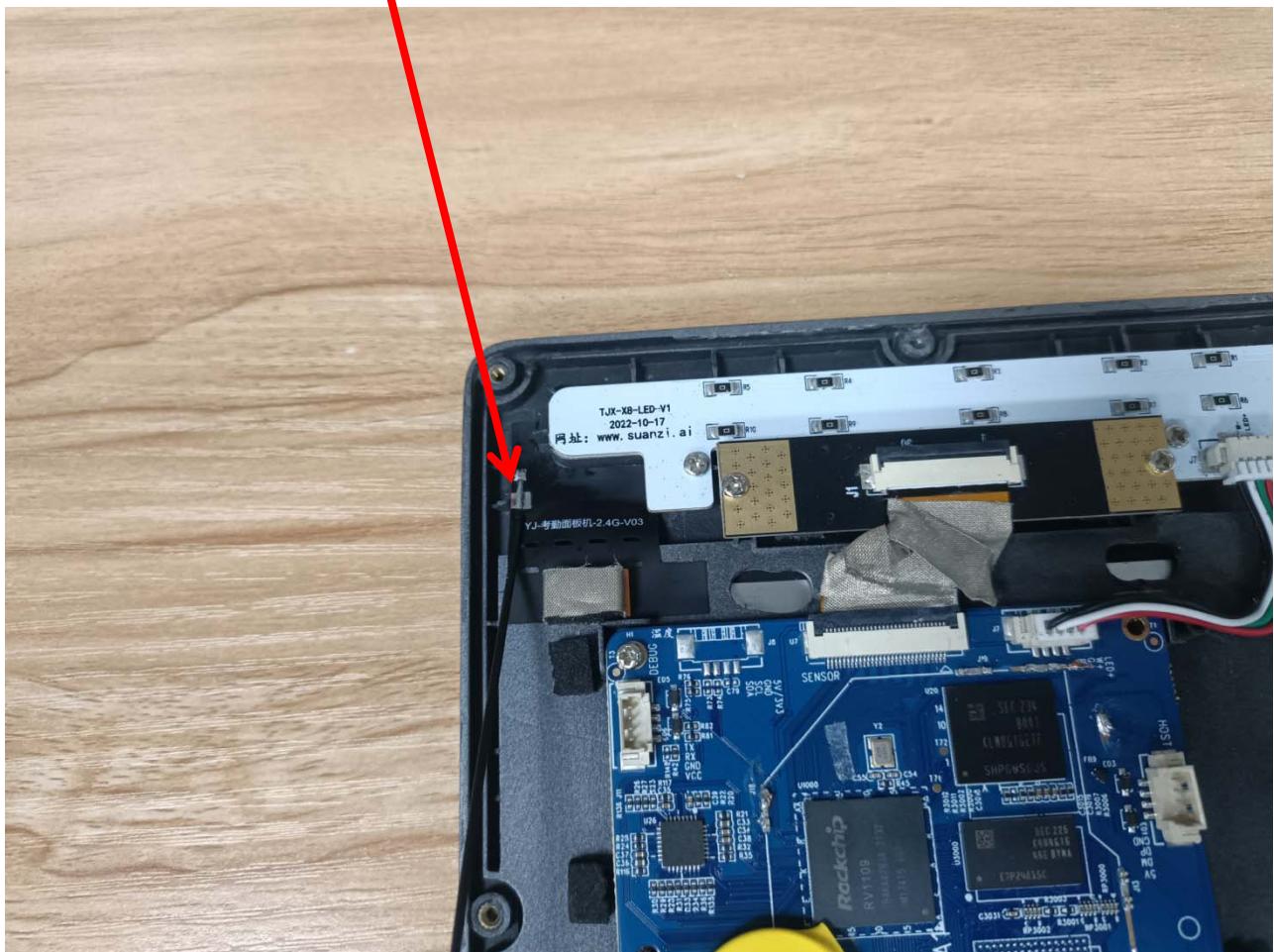


WiFi Antenna





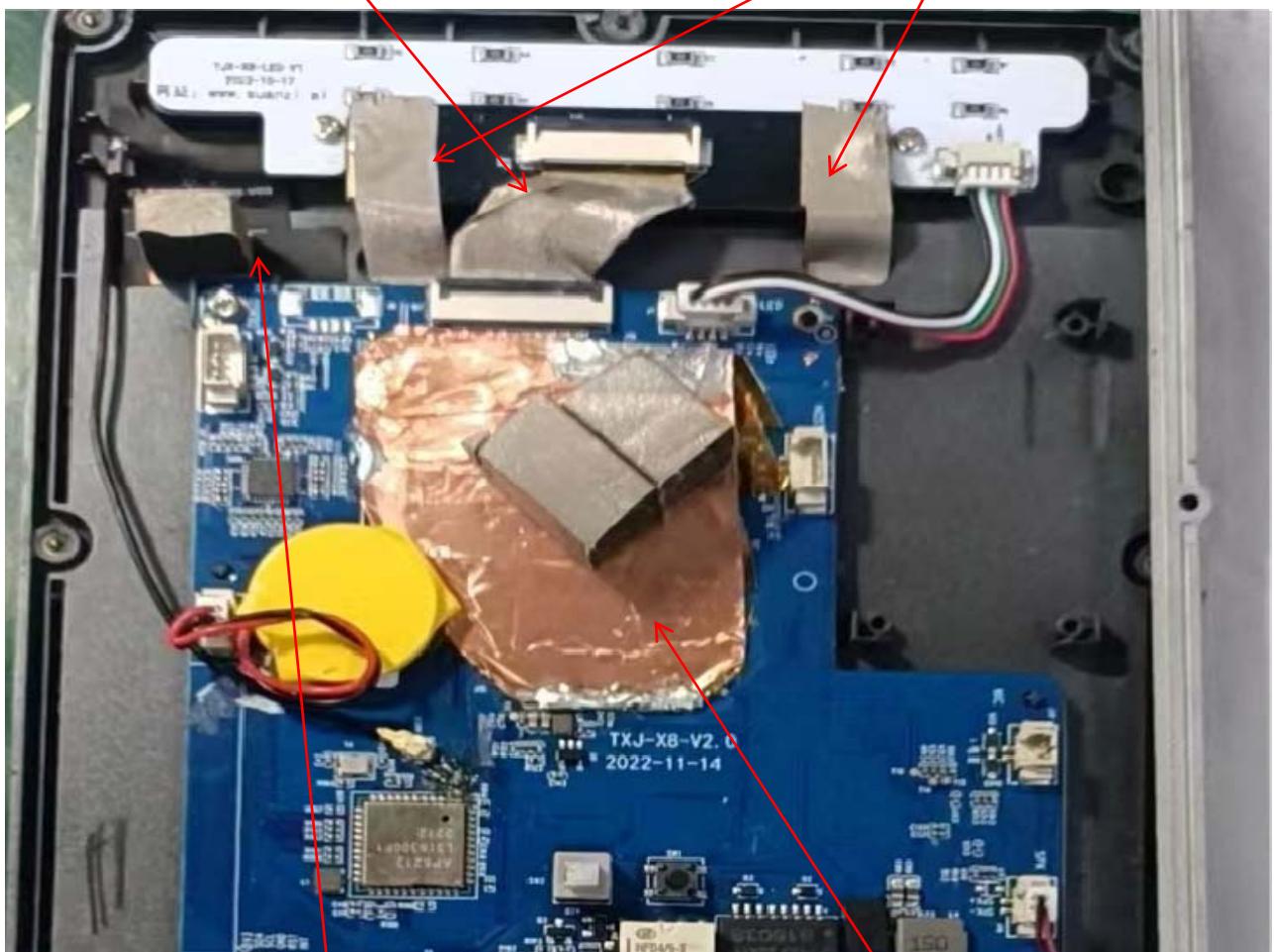
WiFi Antenna





Camera cable shielding

Both sides of the camera board are grounded with conductive cloth and screen



The antenna is grounded to the back shell

The DDR is shielded and grounded to the rear shell



The screen cable is covered with conductive cloth shielding, and the conductive foam and back shell grounding are added to reduce the bright screen interference

