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

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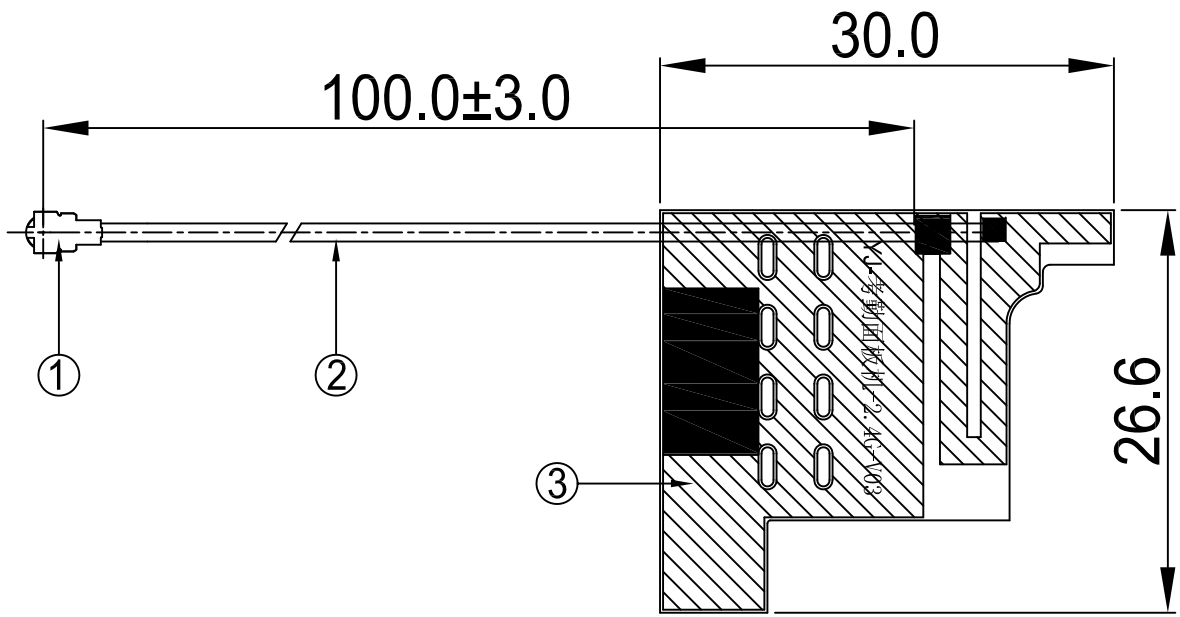
11	-	-	-
12	-	-	-
13	-	-	-

RoHS Compatible

CUSTOMER	
PART NO	

REV.	DESCRIPTION	DATE
A	Initial issue	2022-11-25



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

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	
YinTao	TanGguohao	LvSenhua	UNITS: mm SCALE: 1/1 REVISION: A

Tolerance
X.X ±0.50
X.XX±0.15
X° ±3°

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

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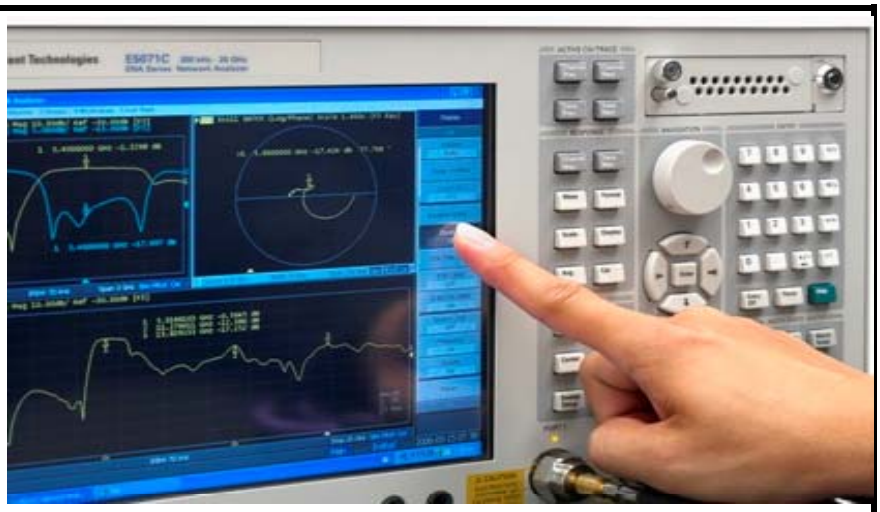
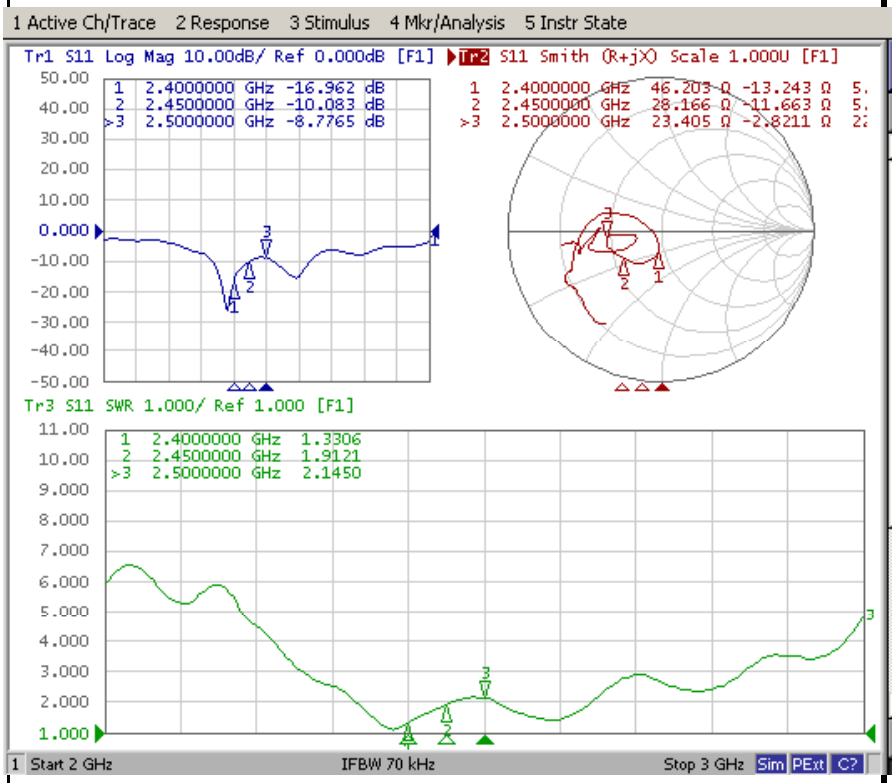
Antenna Performance Test

Agilent E5071B	
S Parameter Test // WiFi Antenna	

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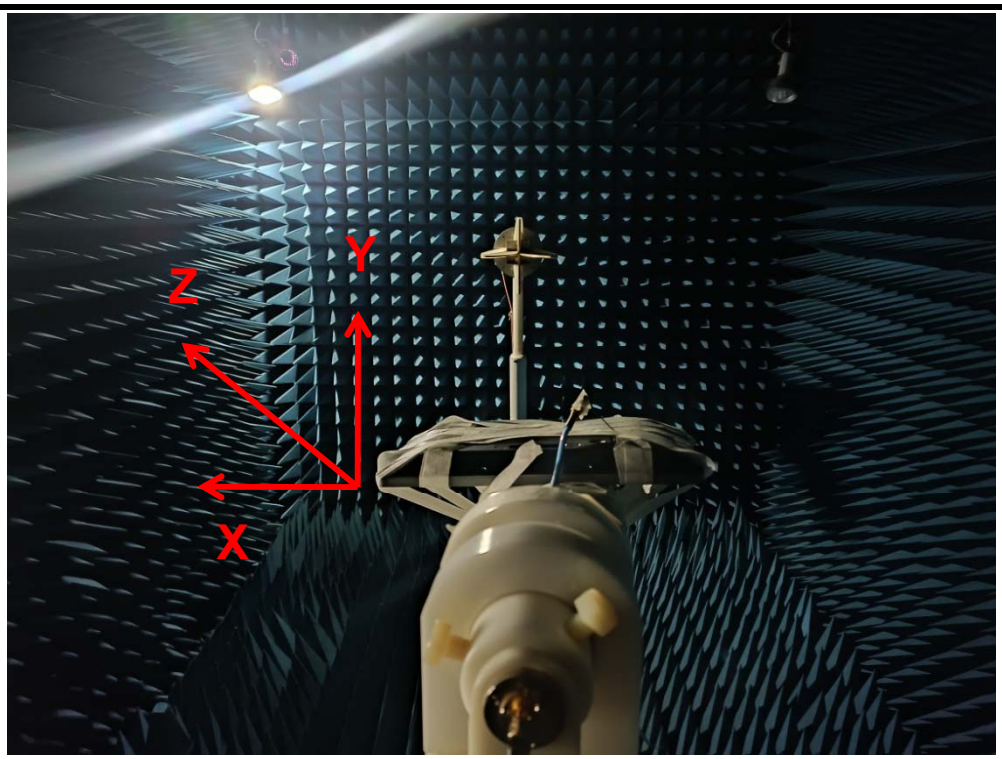
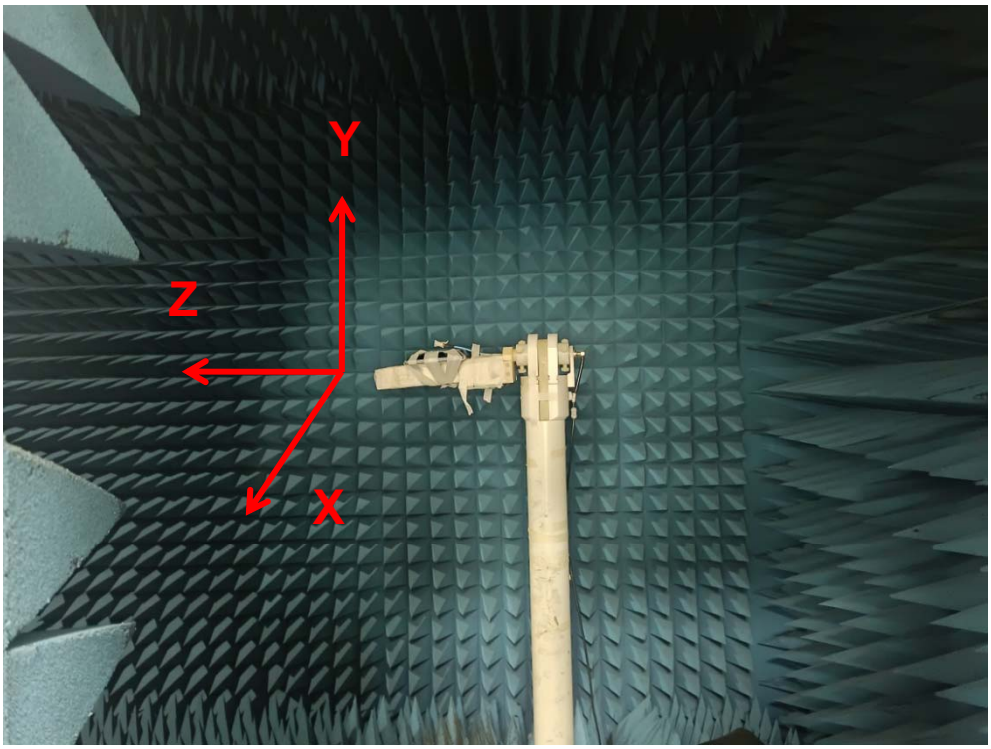
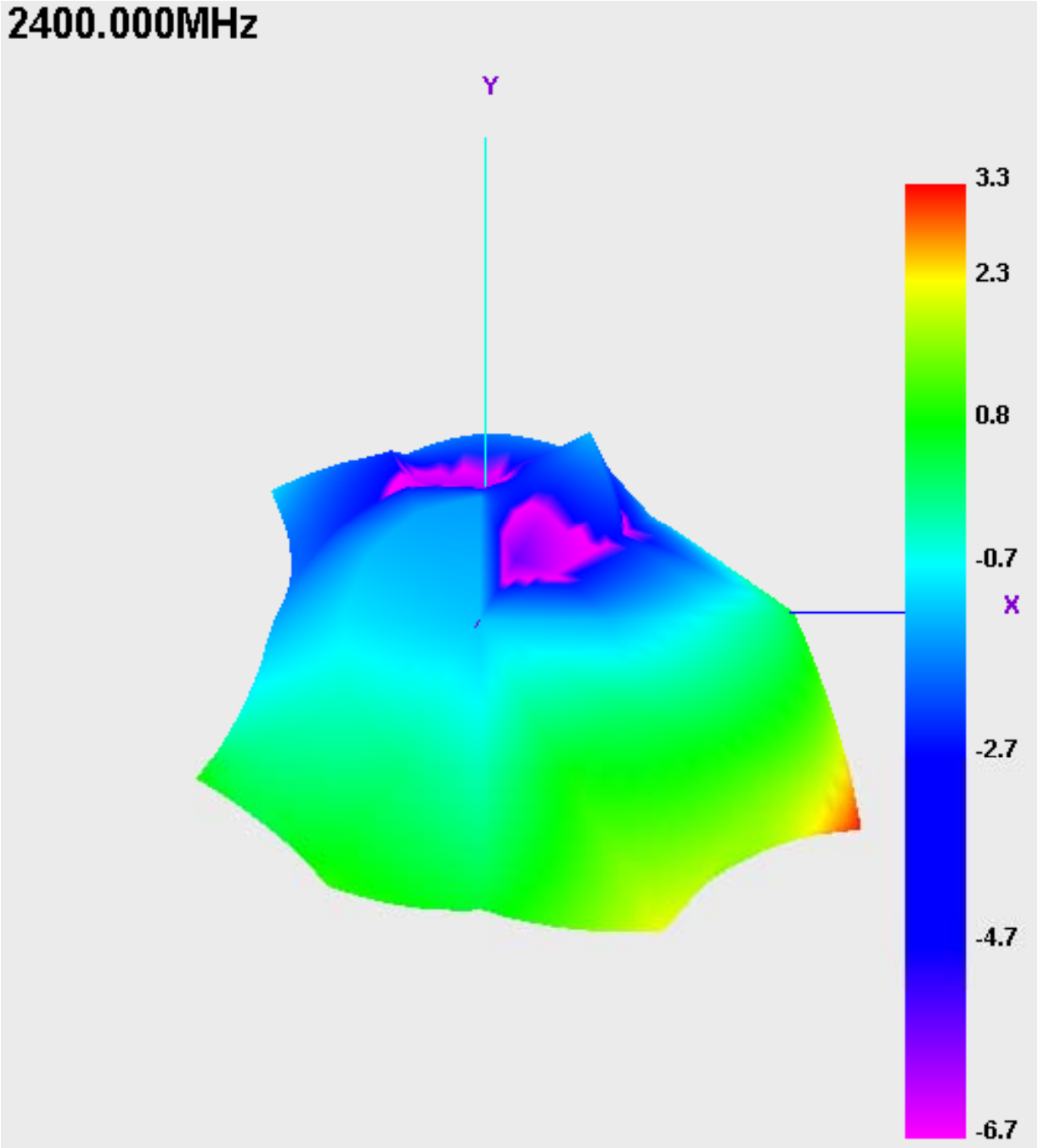
Antenna Passive Test





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

Radiation Pattern For WiFi Antenna



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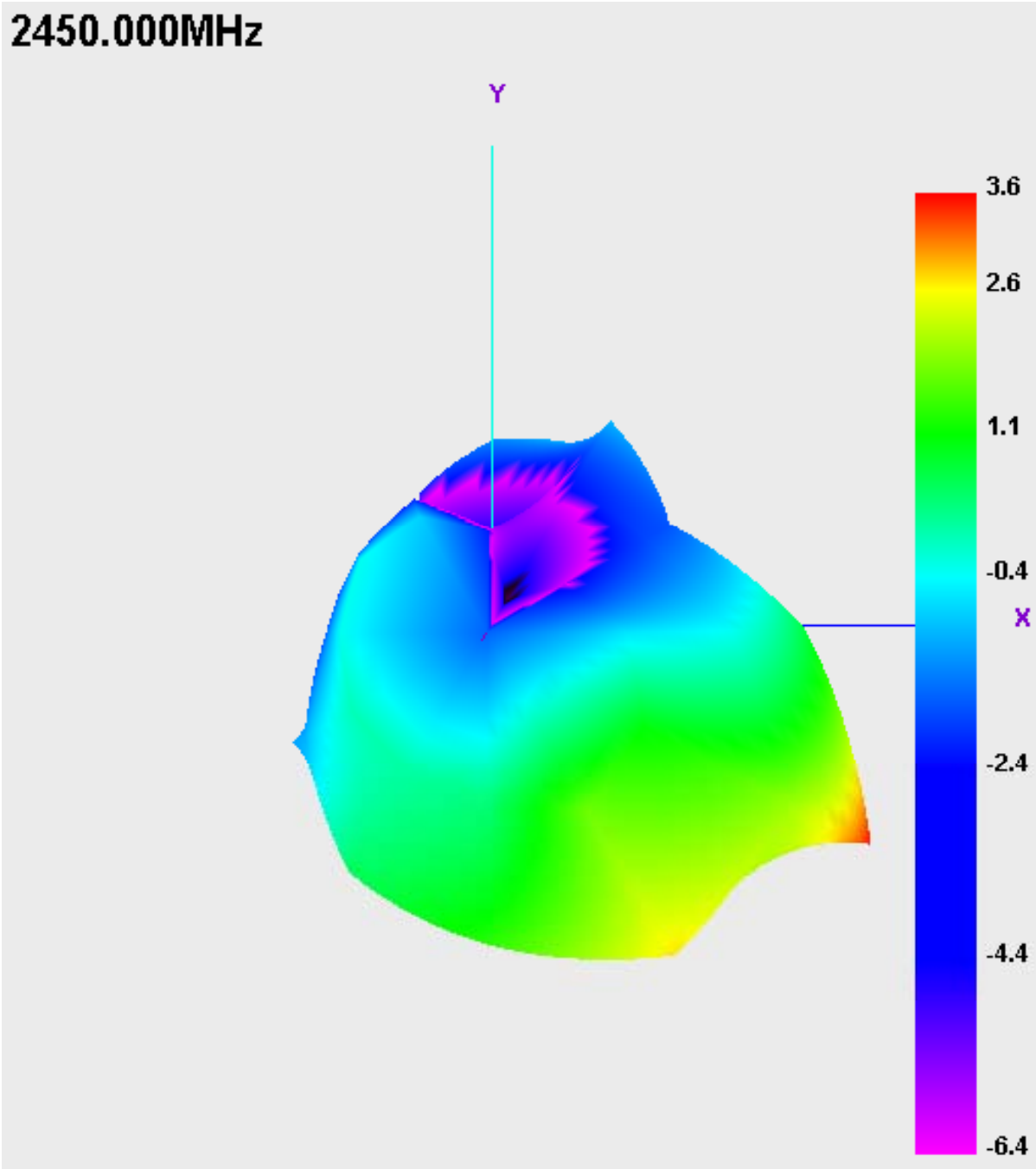
Radiation Pattern For WiFi Antenna



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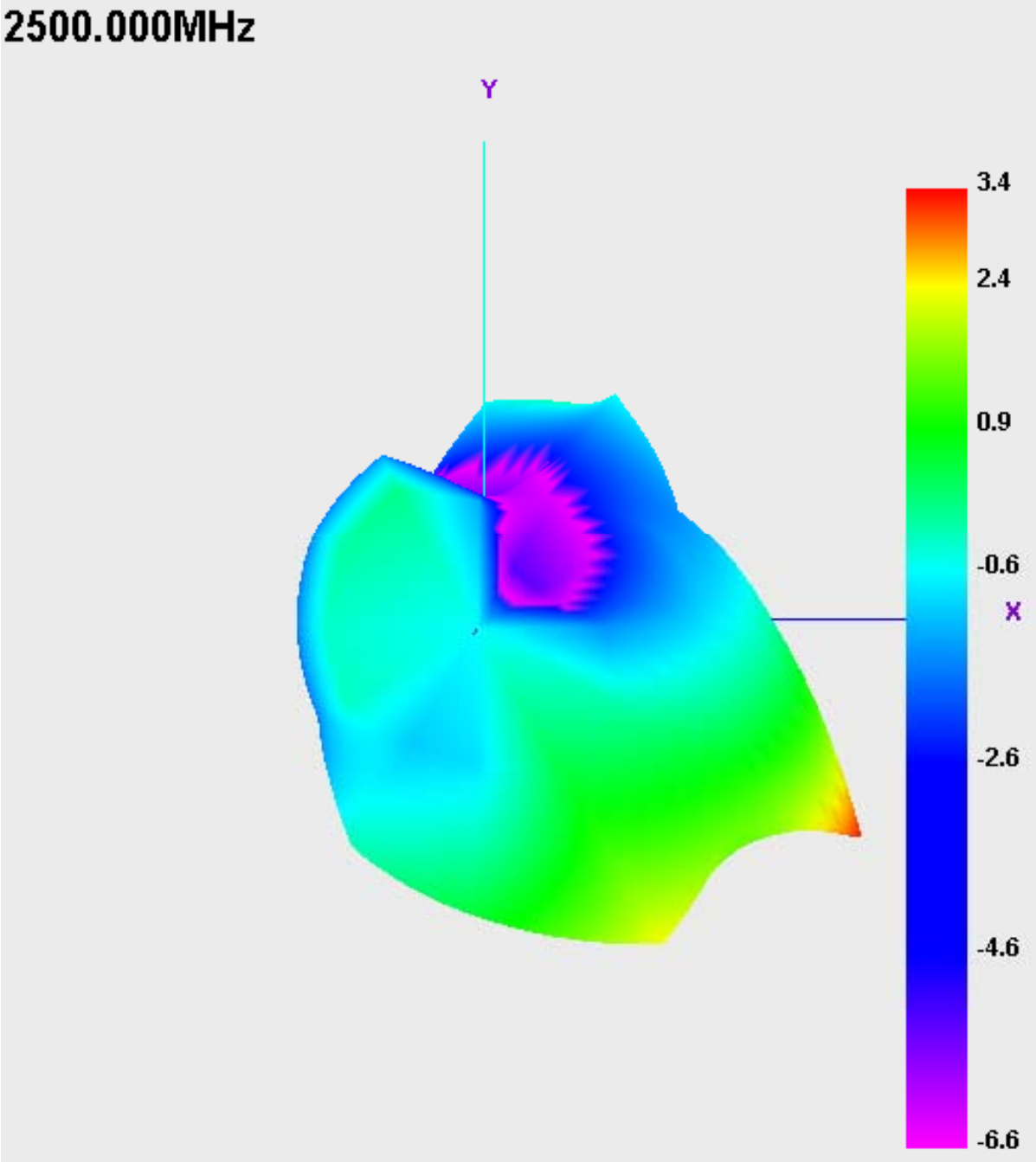
Radiation Pattern For WiFi Antenna



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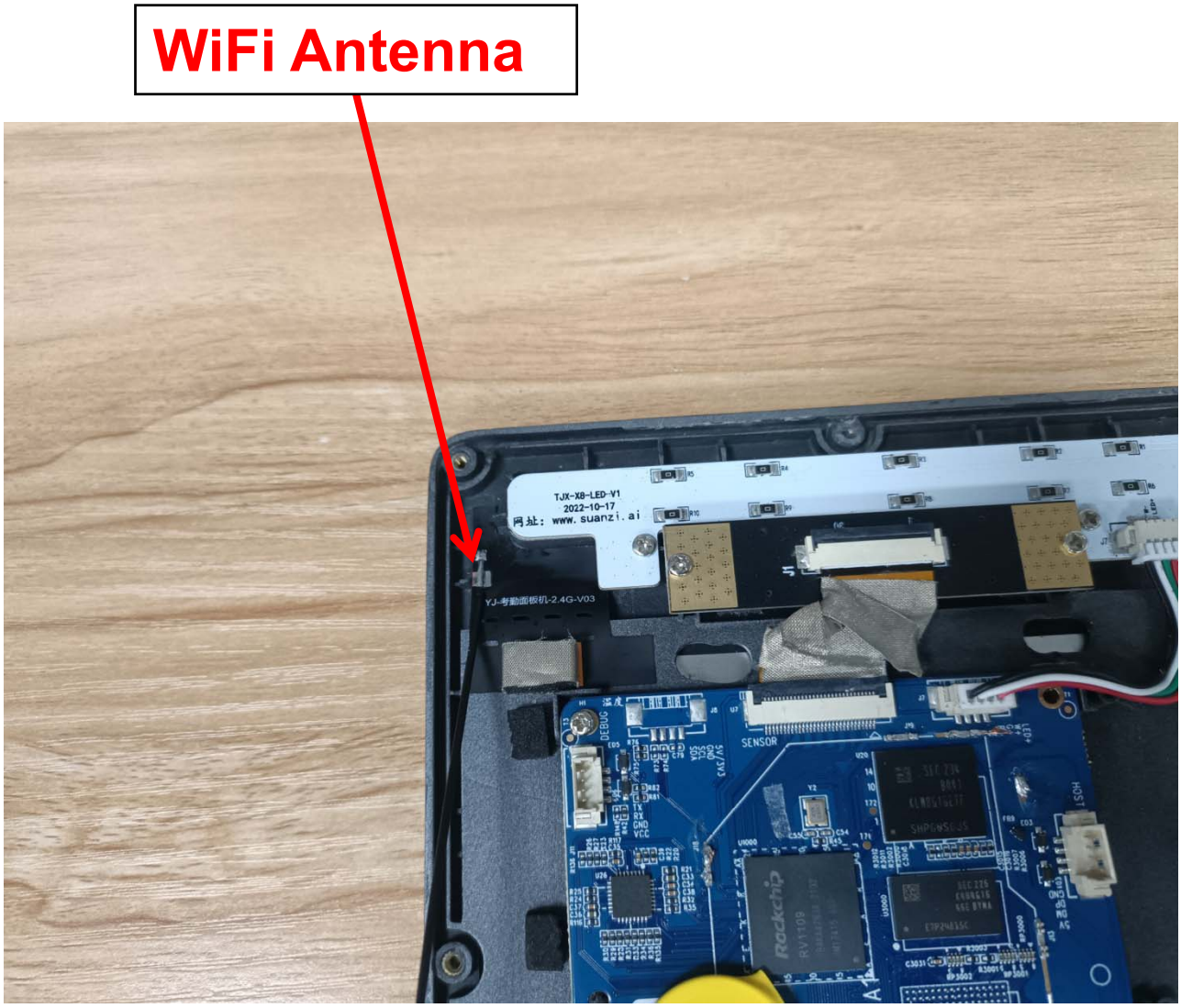
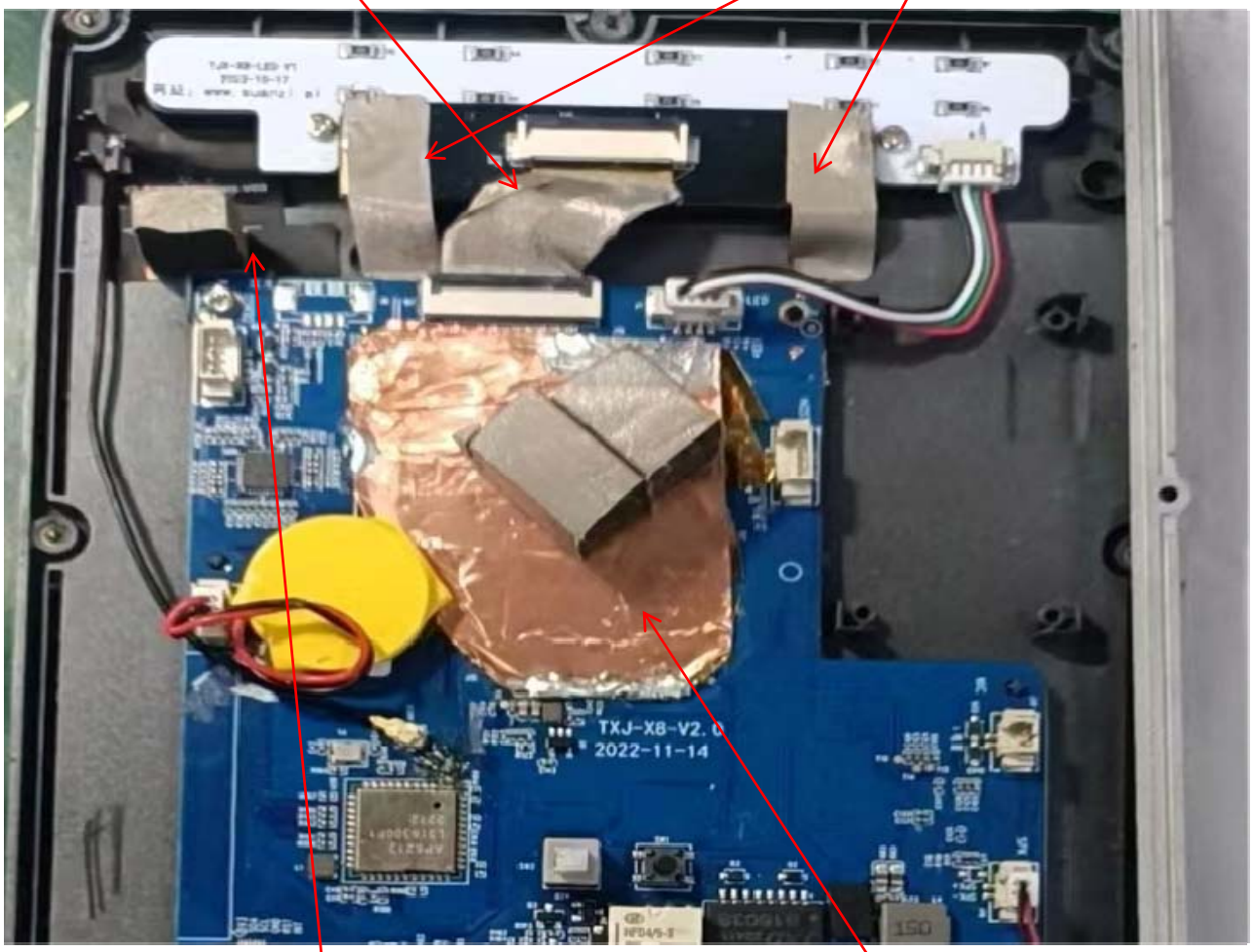
Active Test For WIFI							
Band	**Channel**	**Data Rate**	**TRP**	**EIRP**	**Data Rate**	**TIS**	**EIS**
WIFI 2.4G 802.11b	1	11Mbps	6.7	14.9	11Mbps	-72.3	-80.5
	7		7.1	15.4		-71.6	-80.0
	13		6.9	15.6		-66.5	-75.2

WiFi Antenna	

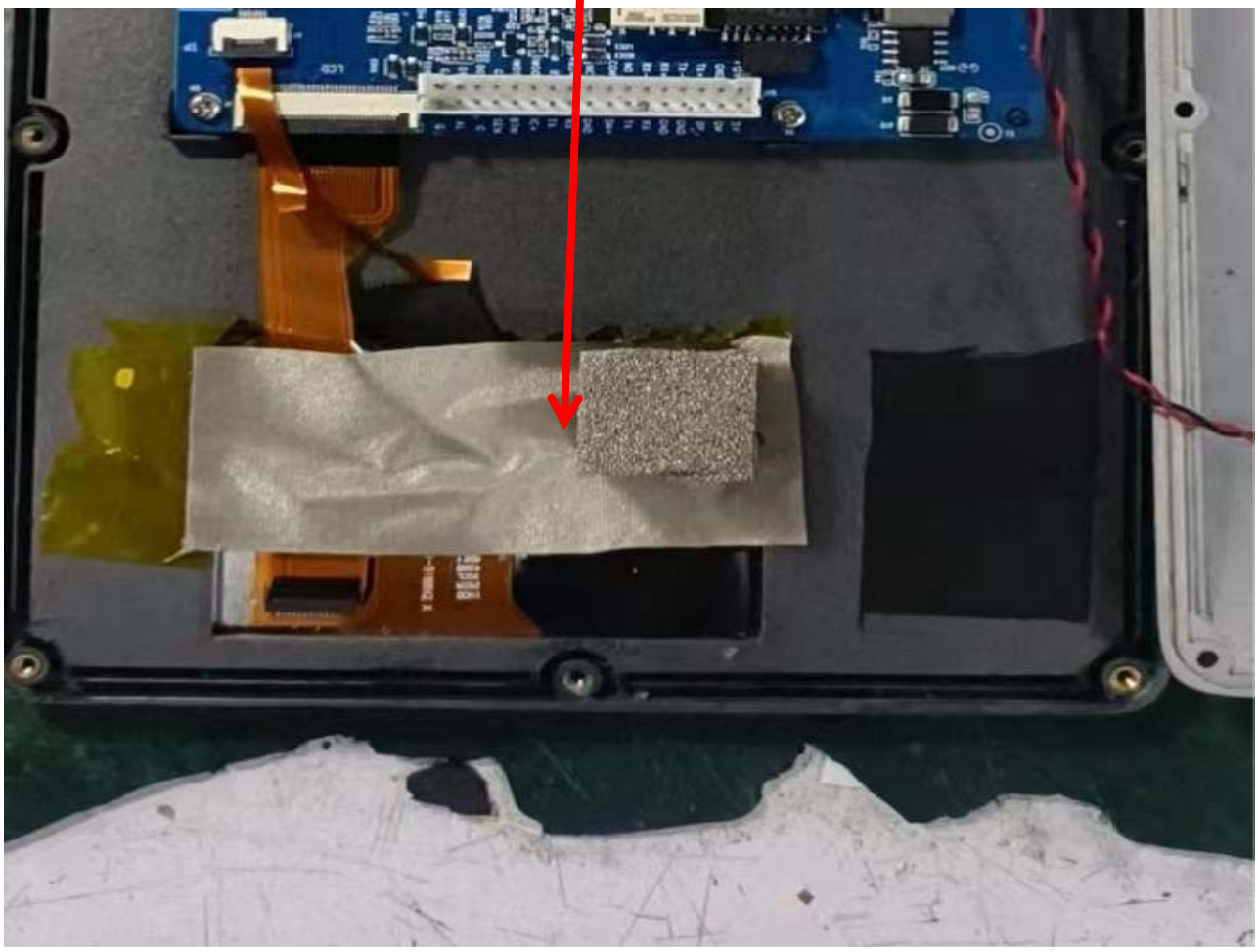

WiFi Antenna
TJX-X8-LED-V1
2022-10-17
网址：www.suanzi.ai
YJ-考勤面板机-2.4G-V03
SENSOR
DEBUG
HOST
Rockchip

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

Camera cable shielding



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