

SPECIFICATION FOR APPROVAL

CUST OMER: Shenzhen Ai-Thinker Technology Co., Ltd

CUS PART NO: ESP-12F

PART NAME: 2.4G WLAN Antenna

Edition: 1.0

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Product specification

1、Performance parameter

Name	<u>2.4G WLAN Antenna</u>
Model Type	PCB Print Antenna
ELECTRICAL SPECTFICATIONS	
Frenquency Range	2400-2500MHz
Band Width	100MHz
Impedance	50 Ω
VSWR	< 2.0
Max Gain	1.97dBi
Polarization	Vertical/Horizontal
Radiation	Omnidirectional
Power	50 W
MECHANICAL SPECTFICATIONS	
Connector	Welding type
Working Temperature	-40°C - + 85°C
Limit Temperature	-40°C - + 125°C

2、VSWR

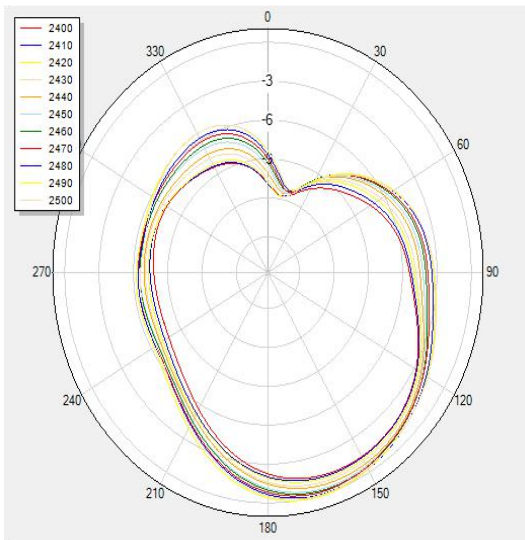


3、Passive test data:

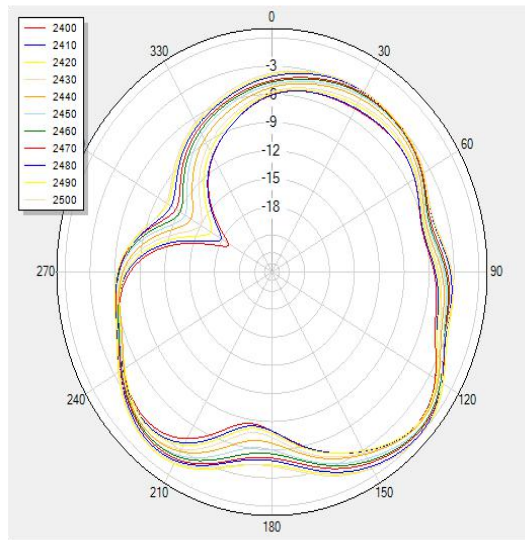
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	1.27	1.26	1.62	1.35	1.39	1.64	1.89	1.97	1.96	1.84	1.71
Efficiency (%)	48.62	48.84	51.31	49.07	49.85	53.47	54.63	55.12	55.21	55.09	53.65

4、Radiation pattern

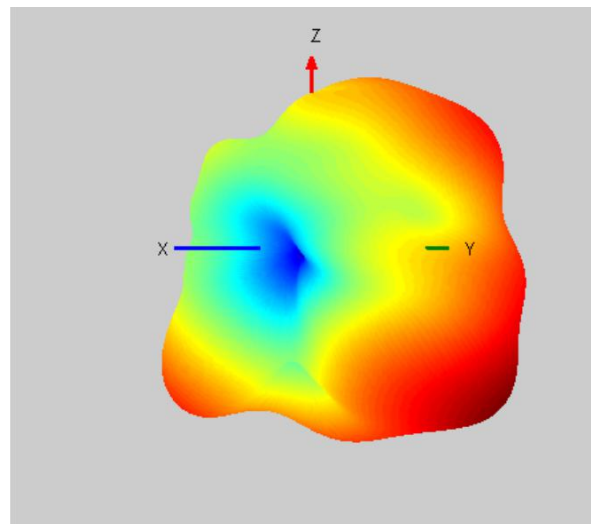
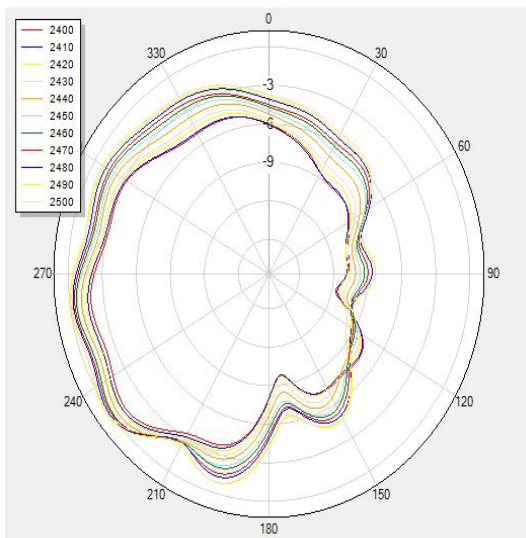
H Theta=90



V Phi=90



V Phi=0



Shenzhen Yixinyi Technology Co., Ltd

Bluetooth FPC Antenna Specification

CUST OMER: Shenzhen Weidu Intelligent Technology Co., Ltd

Material code: 1490200005

PART NAME: Bluetooth FPC antenna

Edition: V1.0

The recipient confirms the type of sealed sample	☐ Temporary sealing sample ☒ Formally sealed sample
Standard attributes	☐ national standard ☒ enterprise standard ☐ other

Directory

1. Performance parameter
2. Passive test data
3. Direction diagram
4. Version Revision Record

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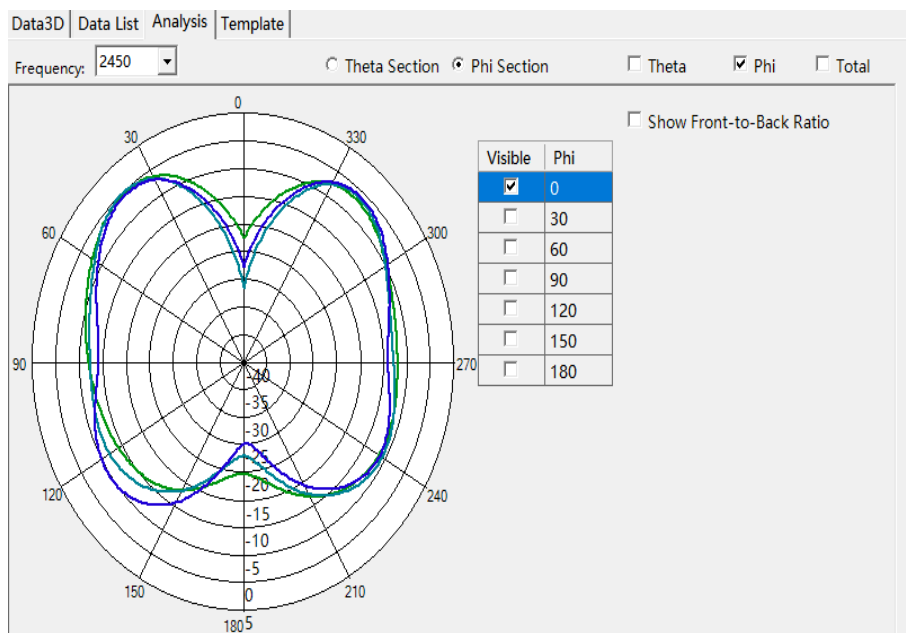
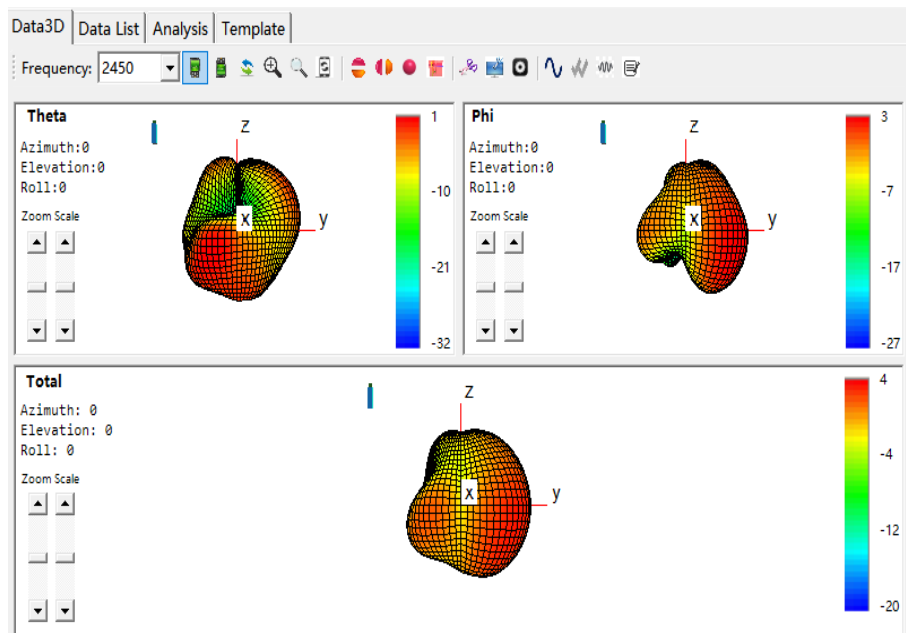
1. Performance parameter

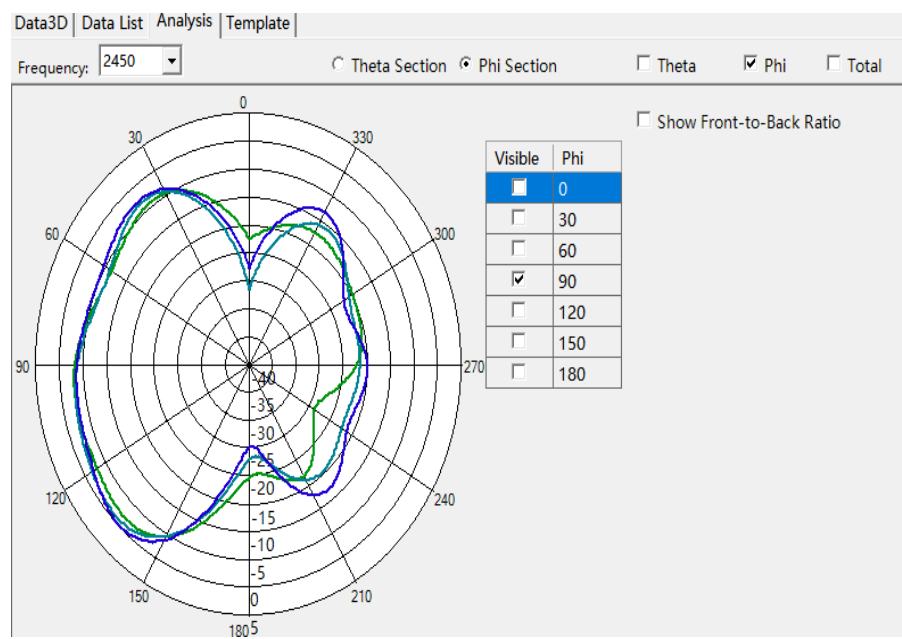
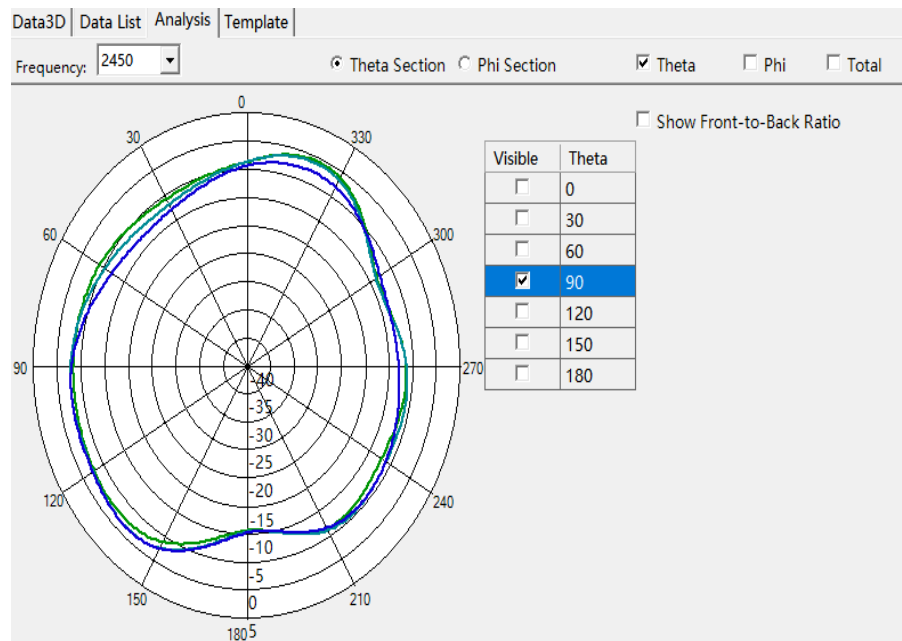
Name	Bluetooth FPC Antenna
Model Type	FPC Antenna
Electrical performance	
Frenquency Range	2400–2500MHz
Band Width	100MHz
Impedance	50 Ω
VSWR	< 2.0
Max Gain	3.45dBi
Polarization	Vertical/Horizontal
Radiation	Omnidirectional
Power	50 W
Connector Type	IPEX MHF1
Work environment	
Operating Temperature (°C)	-40 °C ~ + 85 °C
Storage Temperature(°C)	-40 °C ~ + 85 °C

2. Passive test data

frequency (MHz)	efficiency (dBi)	efficiency (%)	gain (dBi)
2400	-1.65	68.36	3.06
2410	-1.53	70.24	3.45
2420	-1.44	71.72	3.35
2430	-1.50	70.74	3.07
2440	-1.46	71.41	3.03
2450	-1.50	70.86	3.05
2460	-1.50	70.76	3.02
2470	-1.64	68.60	2.80
2480	-1.76	66.63	2.66
2490	-1.74	66.97	2.65
2500	-1.53	70.37	2.81

3. Direction diagram





4. Version Revision Record

Revision	Revised by	date	Revision record
V1.0	Chen zhongyu	May 12th, 2025	Initial Datasheet Release