



PECIFICATION

Shenzhen Xinghuarui Technology Co., Ltd. 深圳市兴华锐科技有限公司

ANTENNA CABLE Product Specification

Client Name	Jinyongyi	Frequency Band	WIFI-2.4G/5.8G
Wire Name	1.13	Version	V1.0
Customer's Part Number	12-09000000014N	Part Number	
RF Designer	Shun Wang	RF Manager	Shun Wang
Structural Designer	Hairuan Wu	Structural Design Manager	
Technical Director	Shun Wang	Date	2023.05.18

Client confirmation:

Whether the product meets your requirements? ☐ OK ☐ NG

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1. Photos

The information provided by us should be kept strictly confidential, and it is not allowed to disclose to anyone else or other companies, without prior written consent

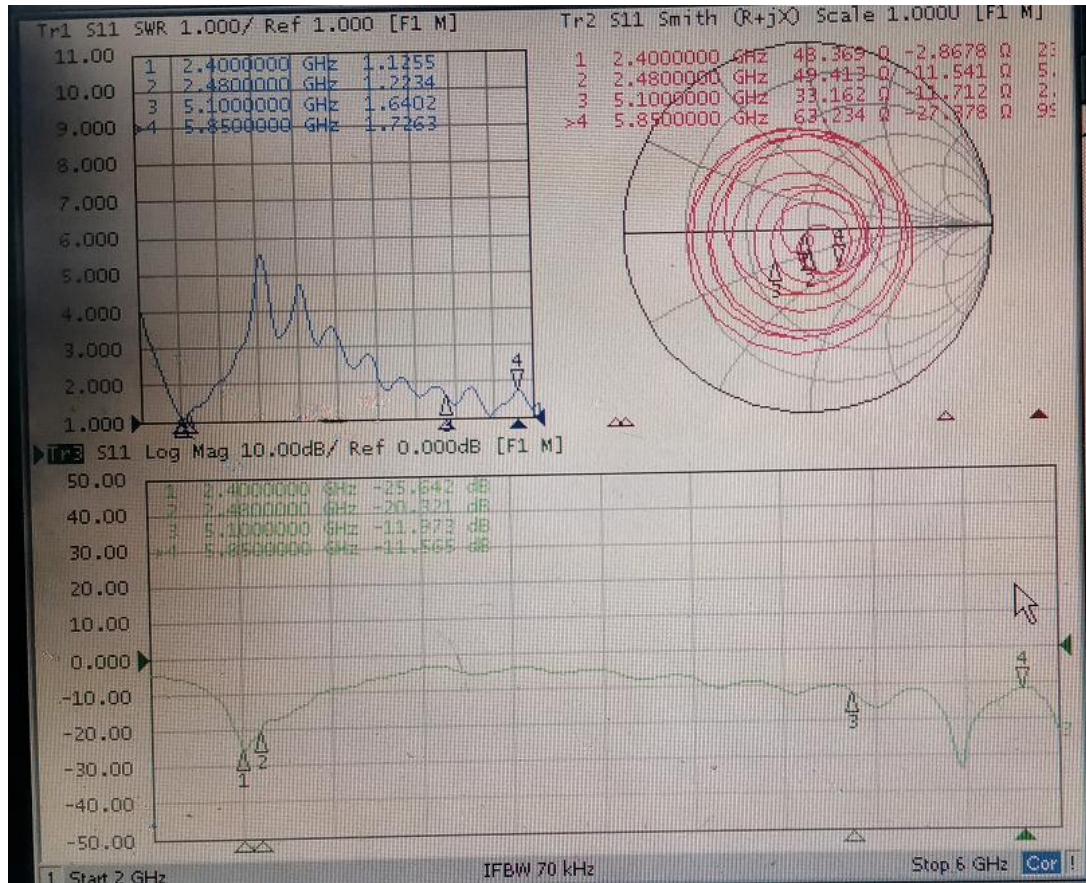


2. Parameters

Test parameters			
Product Name	PCB Antenna	Model Name	WIFI-2.4/5.8GHZ
Electrical Specifications			
Frequency Range	2.4-2.48/5.1-5.85GHZ	Polarization	linear polarization
Input Impedance	50Ω	Radiation direction	Omnidirectional
VSWR	≦2.0	Power Capacity	10W
Gain	3.0 dBi	Bandwidth	80/850MHZ
Mechanical Specifications			
Dimensions	33.0*8.2mm	Radome Color	Black
Connector	IPEX	Cable Length	250±5mm
Radome Material	FR-4	Storage Temperature	-10℃-+70℃
Working Temperature	-30℃-+70℃	Relative Humidity	40~85%

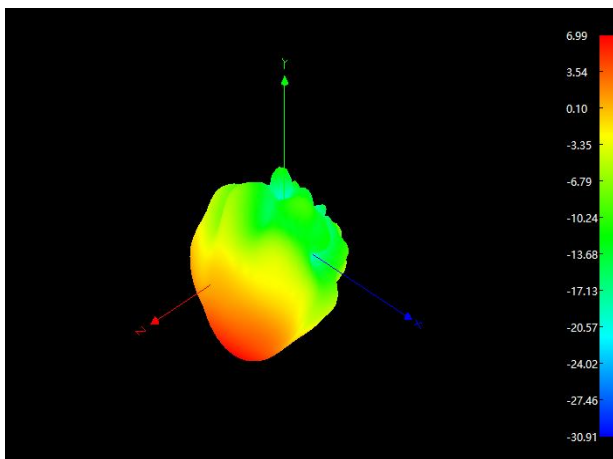
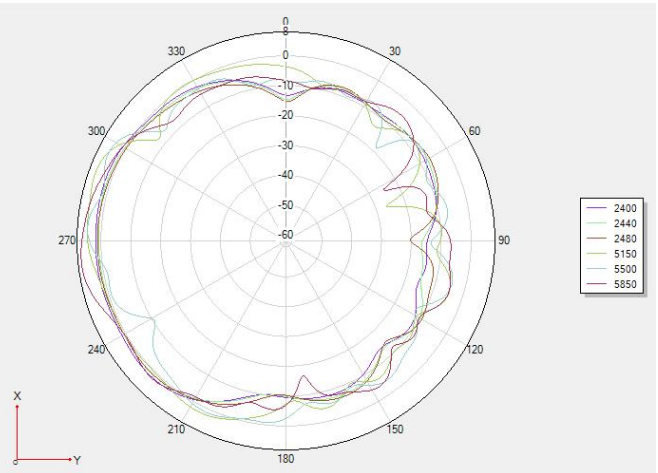
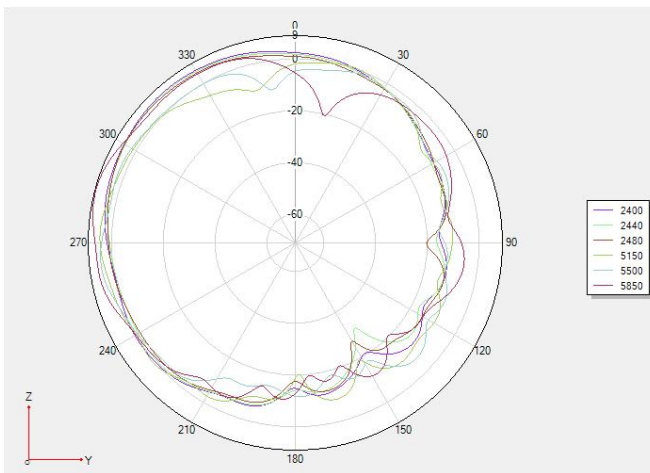
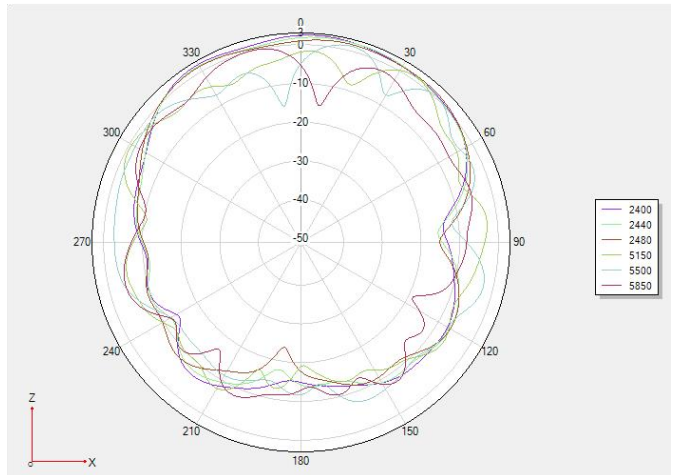
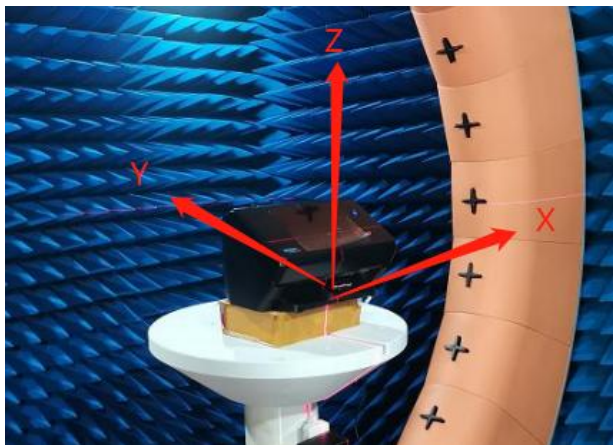
3. S11 DATA (VSWR, Return loss, Smith)

Network analyzer test report

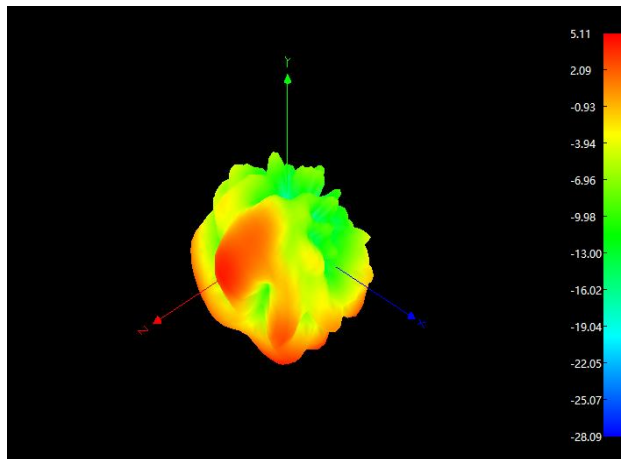


2D, 3D Radiation Pattern in Darkroom

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2440MHZ

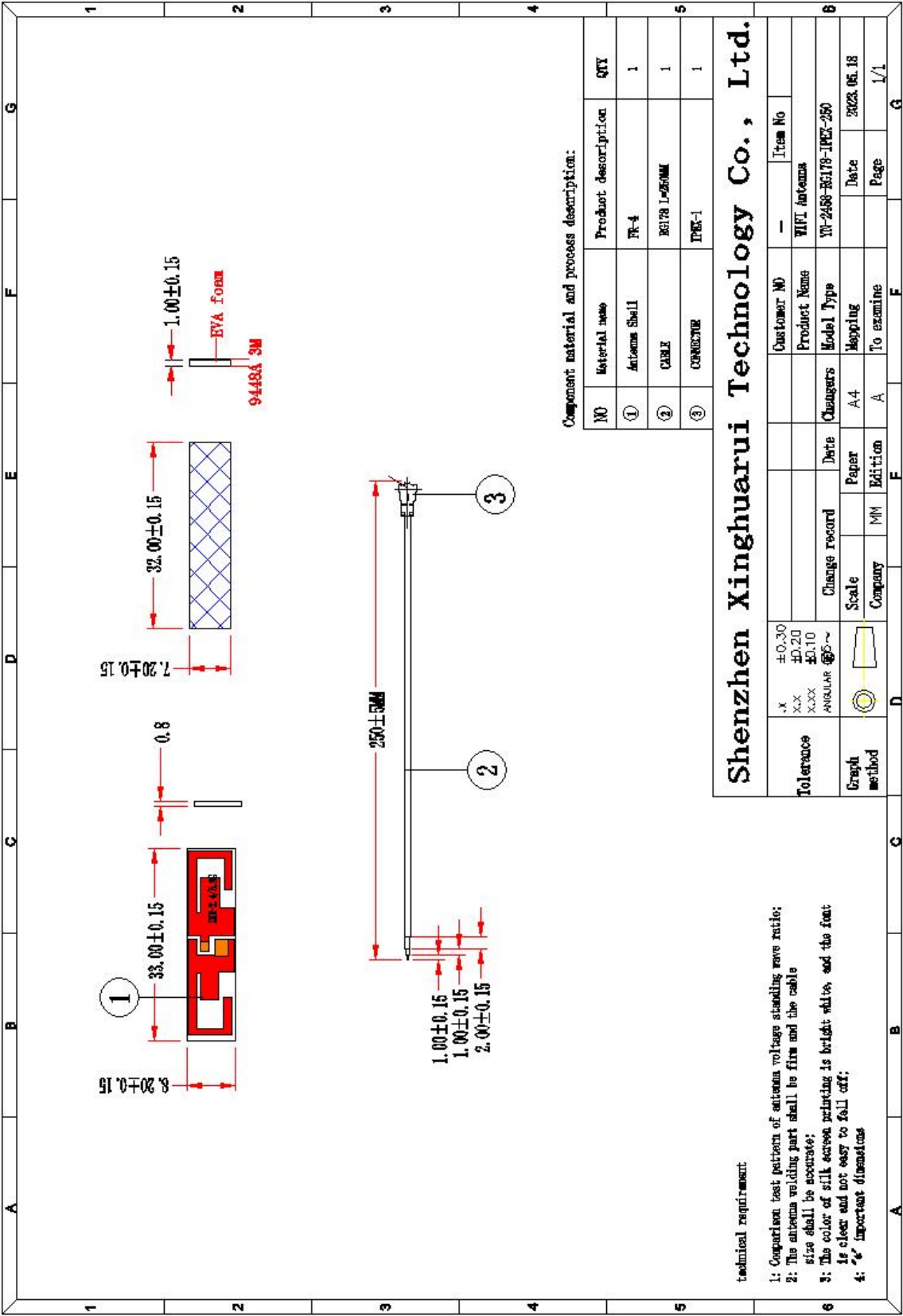


5500MHZ

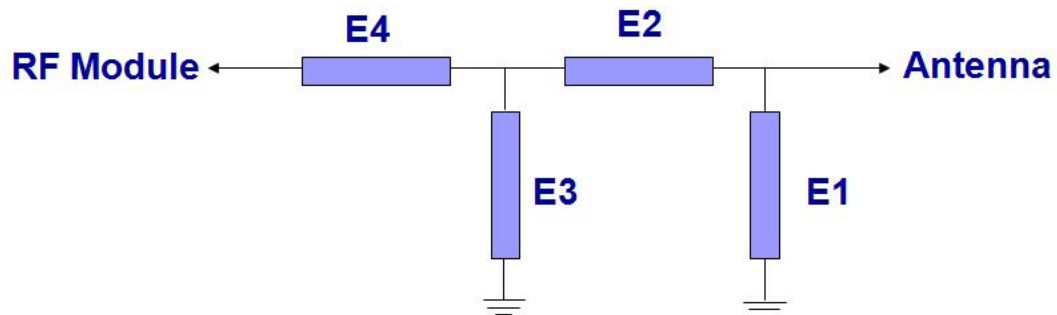
Gain and efficiency

Frequency/Mhz	Efficiency / %	MaxGain/dBi
2400	68.39	3.84
2410	66.07	3.84
2420	66.99	3.93
2430	65.31	3.89
2440	66.83	3.99
2450	66.07	3.93
2460	64.86	3.84
2470	65.31	3.77
2480	64.42	3.6
5150	55.46	2.96
5200	56.1	3.01
5250	53.33	2.43
5300	51.17	1.93
5350	52.72	1.69
5400	54.2	1.92
5450	53.46	1.99
5500	52.24	2.11
5550	54.45	2.62
5600	56.49	3.17
5650	55.98	3.5
5700	58.34	4.09
5750	61.24	4.91
5800	61.38	5.49
5850	61.24	5.86

4. Structure Diagram



5. Application & Design Guidance



Note: The antenna design process needs to combine the product shape and structure, the position of the RF module signal input and output interface, and the position of the interference source inside the product to determine the position, angle, distance from the floor, and height from the PCB substrate.

Please reserve a π -type network to match the antenna. When debugging the antenna, be sure to provide a complete product shell and internal PCBA function board, calculate the external interference source and parasitic capacitance into the matching, so that the antenna can achieve the best performance indicators and work efficiency.

The PCB trace of the matching network refers to the 0.5mm line width, and the grounding on both sides of the network refers to the 0.35mm spacing to maintain good impedance characteristics.

If you have any questions, please send PCB documents to this e-mail support@dreamlnk.com

6. Environmental reliability experiment report

Item	Test condition	Specification
Storage environment	Tested temperature, humidity and air pressure as following without specifying: 1. The temperature is -30 °C ~ + 80 °C 2. Relative humidity is 45% -85% 3. The air pressure is 86kpa-106kpa	The electrical mechanical performance is normal
High and low temperature test	Perform 5 cycles between 70 °C and 40 °C, then check the appearance quality, under normal conditions 1-2H	The size should meet the requirements for mechanical and electrical performance
Resistant to constant heat and humidity	Test Relative humidity: $95 \pm 3\%$, Test temperature: 40 °C. After continuous 2H running, take out the sample, and measure its electrical properties within 5 minutes, put the sample in a normal condition for another 1-2H, check the appearance quality	The size should meet the standard, and meet for mechanical and electrical performance
Vibration test	Vibration frequency range 10-55HZ, displacement amplitude: 0.35MM, acceleration amplitude: 50.0M / S, frequency of sweeping cycle: 30 times	Normal electrical and mechanical performance
Drop test	1M high-altitude free fall 3 times, in the direction of mutually perpendicular axes	Normal electrical and mechanical performance