Shenzhen Sheng Ye-technology Co.Ltd

2.4G-Antenna Test Report

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Client Name		**Frequency Band**	2.4G
Product Name	2.4G Antenna	**Version**	V1.0
Customer's Part Number		**Part Number**	
RF Designer	Shun Wang	**RF Manager**	Shun Wang
Structural Designer	Hairuan Wu	**Date**	2023.06.08

Client confirmation:

Whether the product meets your requirements? □ OK □ NG

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1. Parameters

Test parameters			
Product Name	2.4G **Antenna**	**Model Name**	**WIFI-2.4G**
Electrical Specifications			
Frequency Range	2.4-2.48GHZ	**Polarization**	linear polarization
Input Impedance	50Ω	**Radiation direction**	Omnidirectional
VSWR	≦2.0	**Power Capacity**	10W
Gain	1.55 dBi	**Bandwidth**	80MHZ
Mechanical Specifications			
Dimensions		**Radome Color**	
Connector		**Cable Length**	
Radome Material	PCB+CU	**Storage Temperature**	-10℃-+70℃
Working Temperature	-30℃-+70℃	**Relative Humidity**	40~85%

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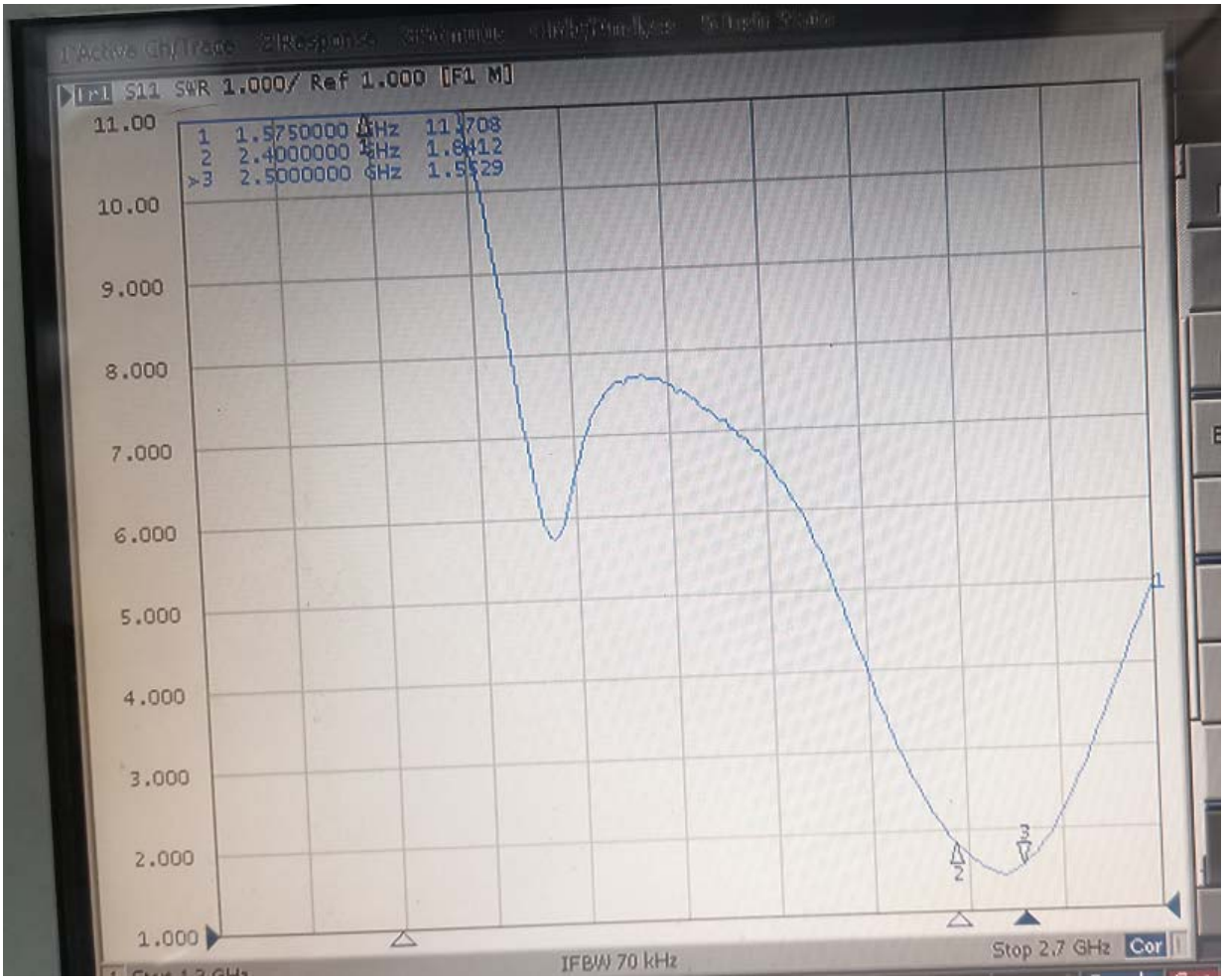
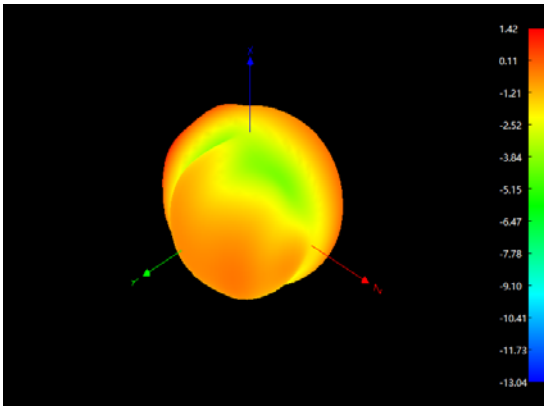
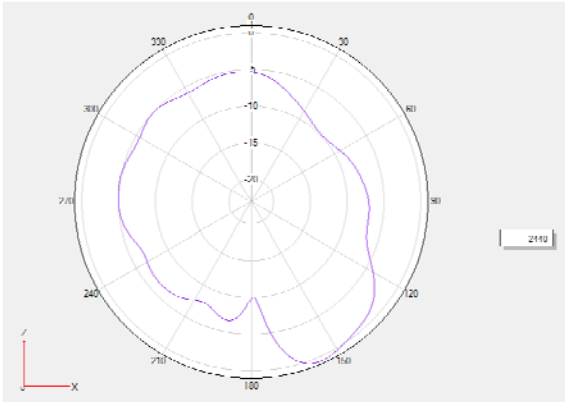
2. Network analyzer test report

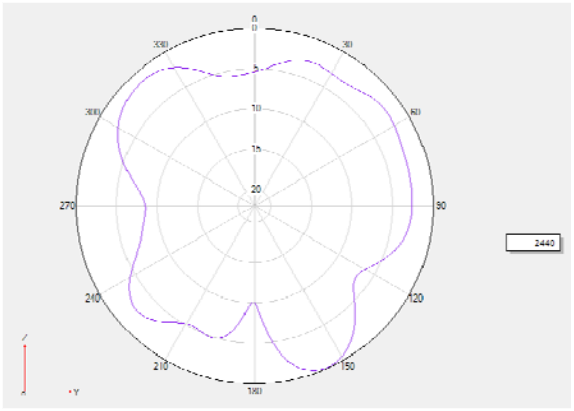
S11 DATA (VSWR, Return loss, Smith)

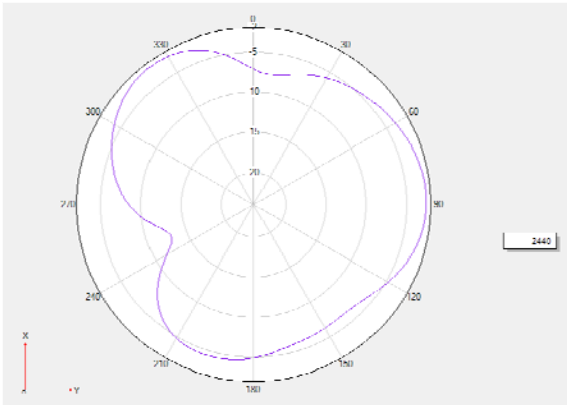


2D, 3D Radiation Pattern in Darkroom









Gain and efficiency

Frequency/Mhz	Efficiency / %	MaxGain/dBi
2400	35.48	0.76
2420	39.08	1.55
2440	40.93	1.42
2460	41.02	1.32
2480	40.74	1.27
2500	38.99	1.26

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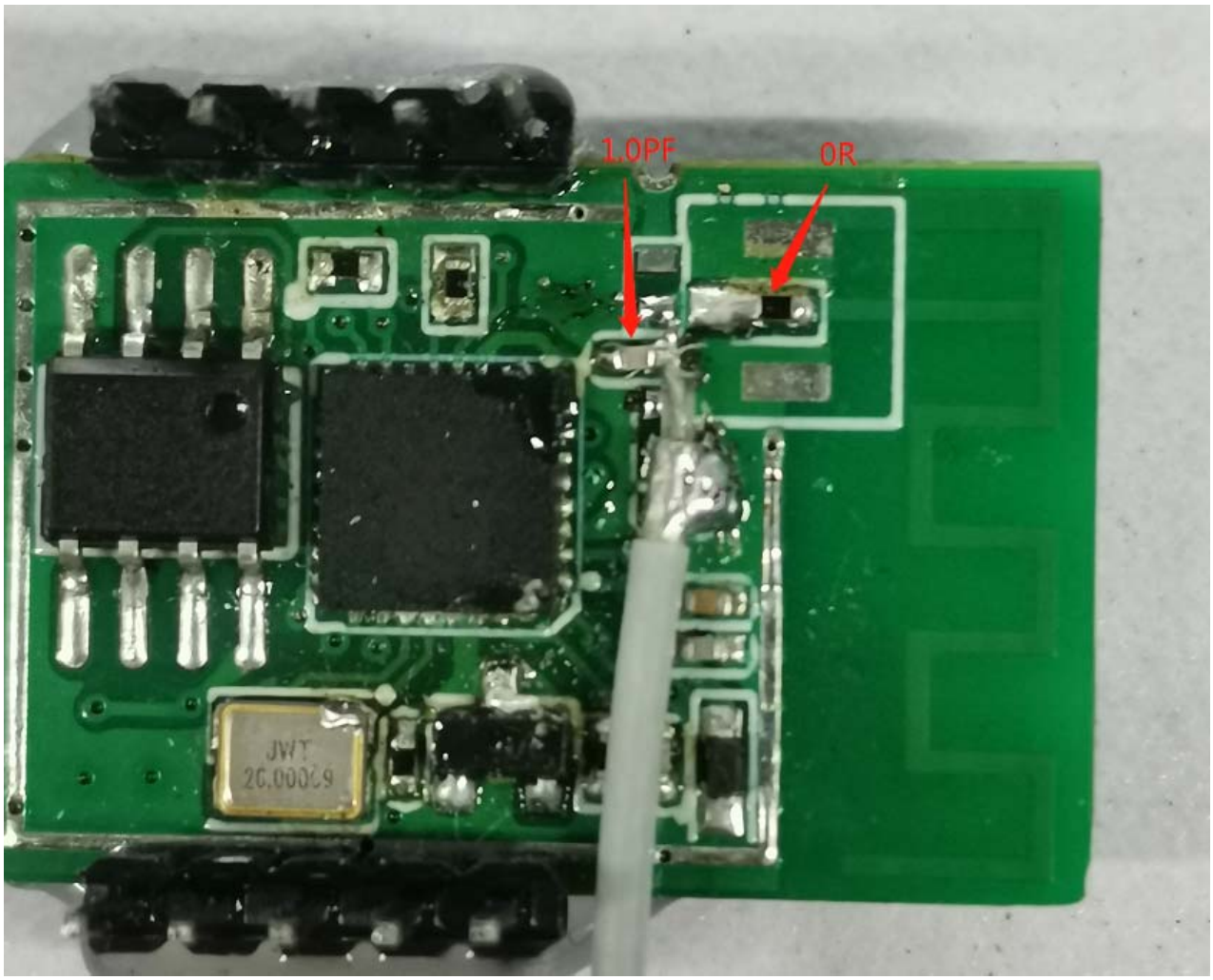
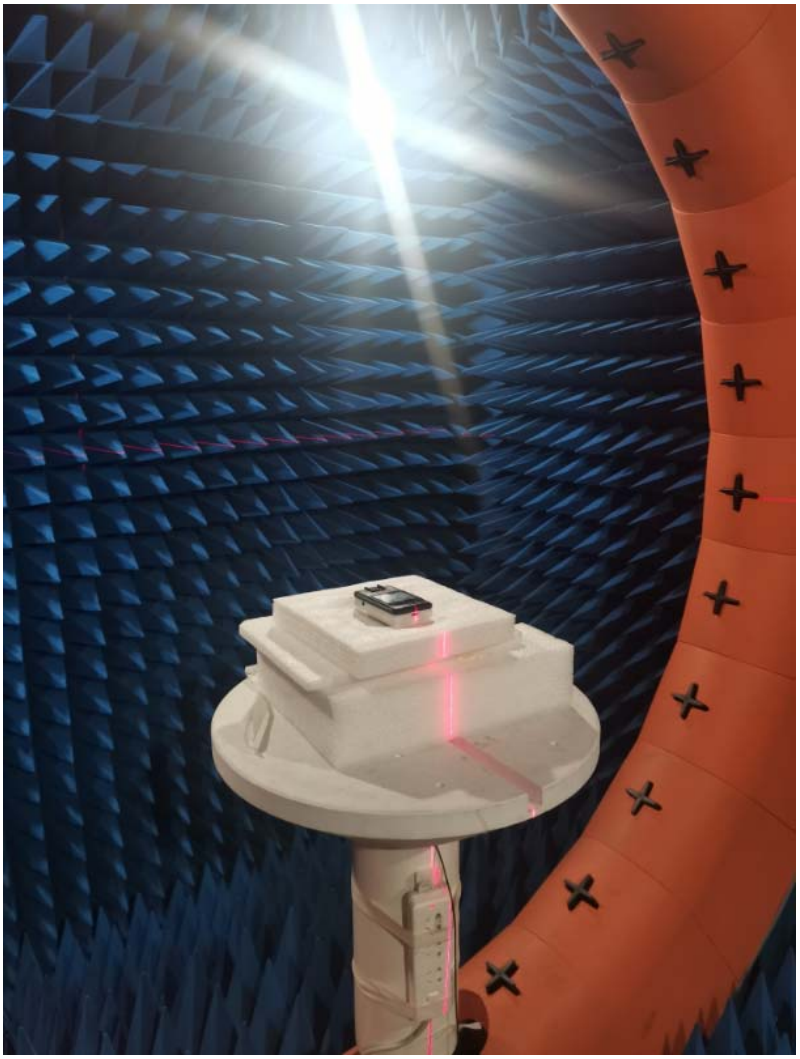
3. OTA Test Data

Band	Channel	TRP(dbm)	TIS(dbm)
802.11b : 11MBps	1	17.1	
	6	17.9	
	1	17.8	-88.8
802.11g : 54MBps	1	12.7	
	6	13.1	
	11	13.5	-75.6
802.11n : MCS7	1	12.5	
	6	13.3	
	11	13.3	-71.0

4.Match Circuit



5.Test Equipment



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 ℃ ~ + 80 ℃ 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 ℃ and 40 ℃, 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 ± 3%, Test temperature: 40 ℃. 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