



Shenzhen Yingjiachuang Electronic Technology Co., LTD

<http://www.szsyjc.com>

# APPROVAL SHEET

CUSTOMER NAME	A broad view of heaven and earth	
CUSTOMER P/N	28000021	
PART NAME	2.4G/5G black FPC built-in antenna 1.13 black wire L=70MM (Applicable model: 94F5W) Case 2	
P/ N	YJC-6N070-B121	
APPROVAL REV.	A0	
DELIVERY DATE	November 4, 2024	
PREPARED BY	Yin Feijie	
CHECKED BY	Fang Wenfeng	
APPROVED BY	Chauhan	
Customer Approved		
Prepared By	Checked By	Approved By

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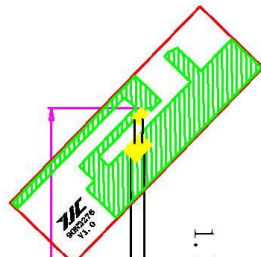
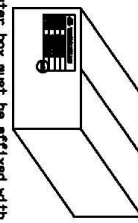



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Resume:

Version	Change content and reasons for the change	Date	Issue
A/0	First edition release	November 4, 2024	



A	B	C	D	E	F	G																						
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid green; padding: 2px; color: green; font-weight: bold;">RoHS</div> <div style="border: 1px solid black; padding: 5px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>NAME</th> </tr> </thead> <tbody> <tr> <td>A0</td> <td>2024-11-04</td> <td>New version release</td> <td>Yin Feijie</td> </tr> <tr> <td>A1</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> </div>							REV	DATE	DESCRIPTION	NAME	A0	2024-11-04	New version release	Yin Feijie	A1													
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<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p><b>1.13 Black double tin wire</b></p> <p>The first-generation line end The opening direction of the terminal is as shown in the figure</p>  </div> <div style="width: 50%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Frequency Range</td> <td>2400-2500/5150-5850MHz</td> </tr> <tr> <td>Gain</td> <td>3.0±1.0dB1</td> </tr> <tr> <td>VSWR</td> <td>&lt;1.92</td> </tr> <tr> <td>Polarization</td> <td>Linear, Vertical</td> </tr> <tr> <td>Max power rating</td> <td>50W</td> </tr> <tr> <td>Impedance</td> <td>50Ω</td> </tr> </table> </div> </div>							Frequency Range	2400-2500/5150-5850MHz	Gain	3.0±1.0dB1	VSWR	<1.92	Polarization	Linear, Vertical	Max power rating	50W	Impedance	50Ω										
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<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p><b>Requirement</b></p> <ol style="list-style-type: none"> <li>The finished product must be 100% tested for successful conduction</li> <li>The finished product must pass 100% full inspection.</li> <li>Adopting an environmentally friendly process. Finished product</li> <li>Comply with RoHS requirements.</li> <li>For unspecified tolerances, please refer to the general tolerance.</li> <li>Mark the dimensions with emphasis.</li> </ol> </div> <div style="width: 50%;">  <p>The outer box must be affixed with a material identification card One piece each of the RoHS label</p> </div> </div>																												
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## Antenna technical parameters and environmental testing:

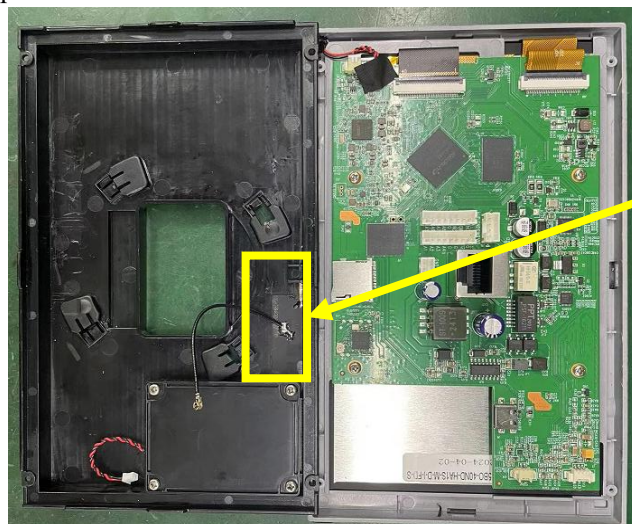
Electrical technical parameter			
Electrical Specifications		Mechanical Specifications	
Frequency Range	2400-2500/5150-5850M Hz	Wire Color	Black
VSWR	<1.92	Input connector	XD
Input Impedance	50 $\Omega$	Wire Length	70MM
Direction	All	Working Temperature	-20℃~+70℃
Gain	3.0±1dBi	Working Humidity	20%~80%

## Environmental performance test:

Project	Test condition	Standard
Storage Conditions	In the absence of specified test temperature, humidity, air pressure is as follows:: 1. Temperature is - 30 ℃ ~ + 80 ℃ 2. Relative humidity of 45% to 45% 3. Air pressure is 86 kpa to 106 kpa	Electrical and mechanical performace is normal
High and low temperature test	Between 70 ℃ and -20 ℃ for 5 loops, then 1-2 h under normal conditions, check the appearance quality.	Size should meet the requirements and meet the performance of mechnery and electric.
Constant damp and hot resistance test	95 + / - 3% relative humidity, temperature test: 40 ℃. Lasts 2 h after, try to take out the determination of electrical properties, within 5 min after try 1-2 h under article normal thing, check the appearance quality	Size should meet the requirements and meet the performance of mechnery and electric.
vibration test	10-55 hz, vibration frequency range of displacement amplitude: 0.35 MM, acceleration amplitude: 50.0 M/S, sweep cycles: 30 times	Electrical and mechanical performace is normal
Fall down test	1 m high altitude in accordance with the perpendicular axis free drop 3 times	Electrical and mechanical performace is normal



Physical antenna picture and attachment position picture:



Antenna attachment position

Antenna performance test diagram:



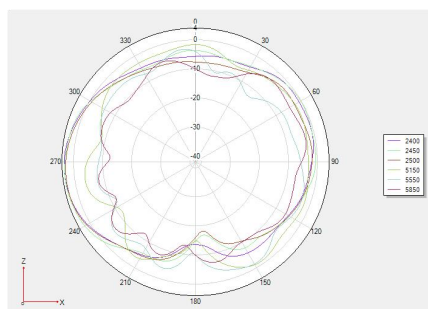




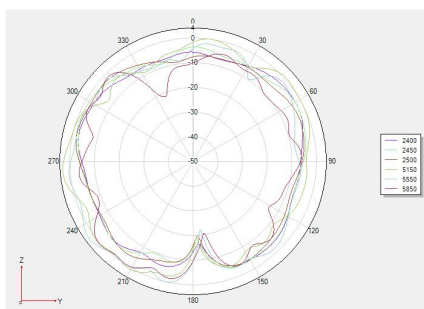
## 2D and 3D test data (2.4G/5G):

Frequency	Efficiency (%)	Gain. (dBi)
2400MHz	55.55	3.41
2410MHz	52.55	3.09
2420MHz	53.82	3.11
2430MHz	53.52	3.22
2440MHz	54.55	3.31
2450MHz	55.22	3.38
2460MHz	54.3	3.22
2470MHz	52.92	3.27
2480MHz	52.61	3.08
2490MHz	50.07	2.91
2500MHz	52.95	3.01
5150MHz	59.11	3.17
5250MHz	55.4	3.25
5350MHz	54.28	3.31
5450MHz	56.11	3.36
5550MHz	60.98	3.47
5650MHz	56.36	3.26
5750MHz	55.88	3.18
5850MHz	54.51	3.05

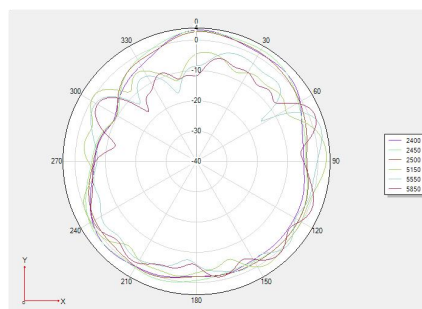
Phi 0 2D:



Phi 90 2D

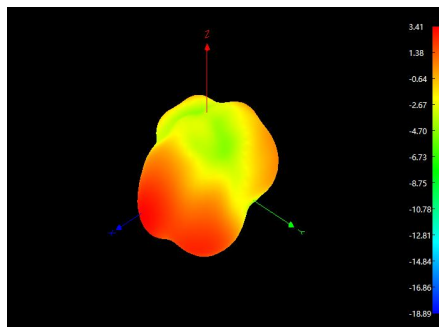
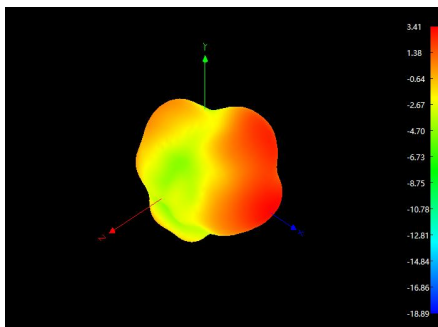
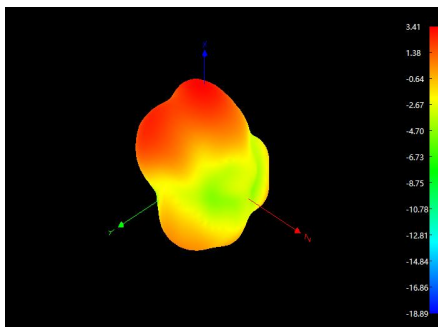


Theta 90 2D

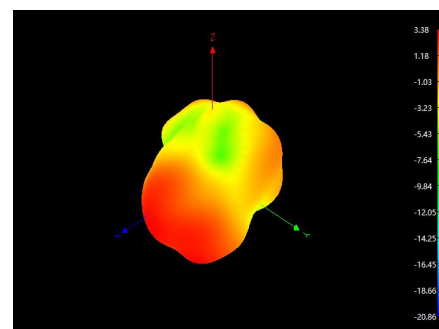
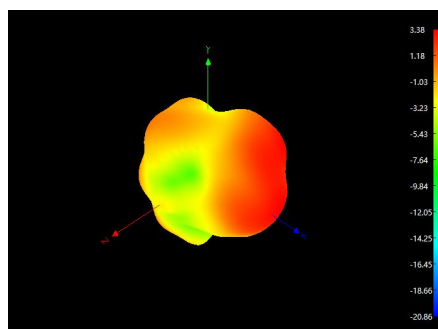
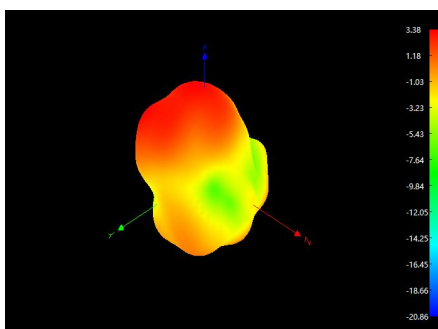




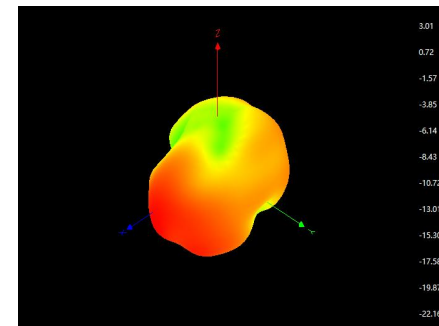
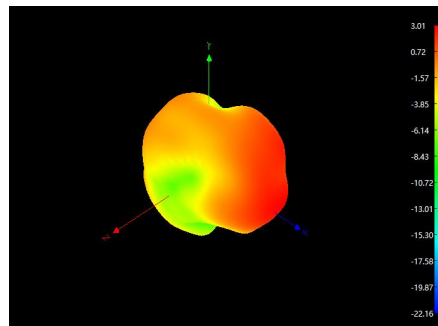
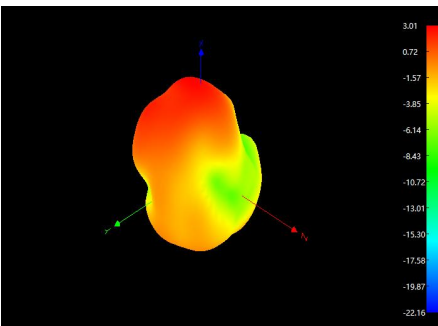
3D 2400:



3D 2450:



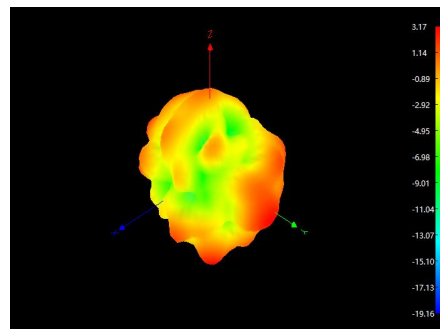
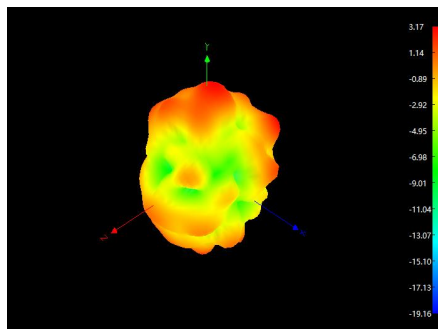
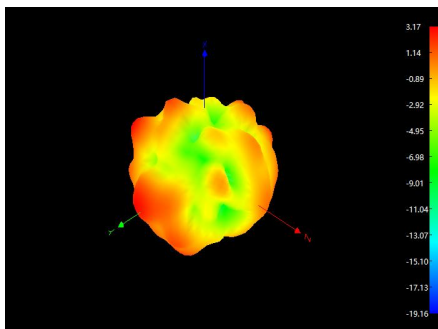
3D 2500:



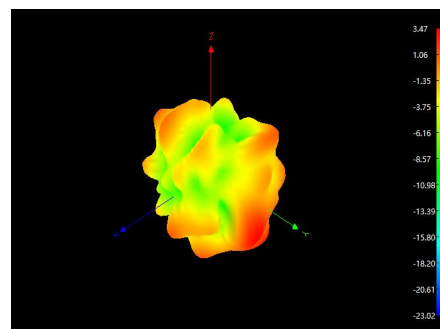
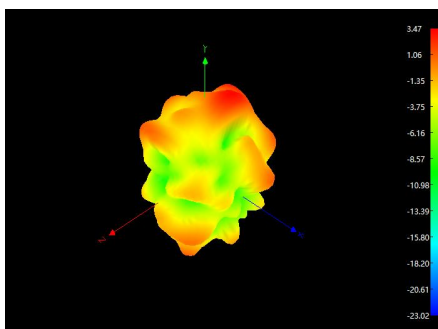
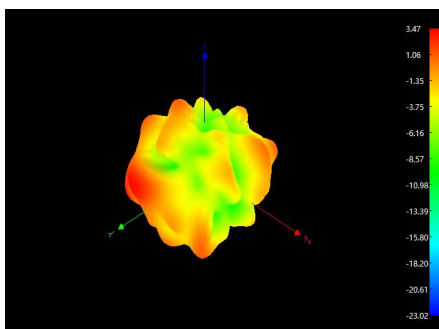




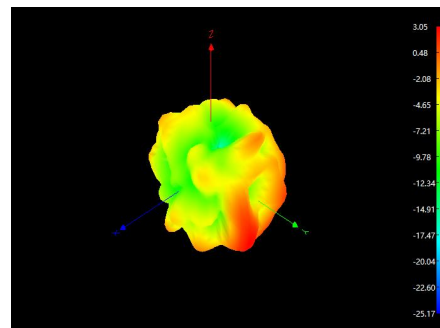
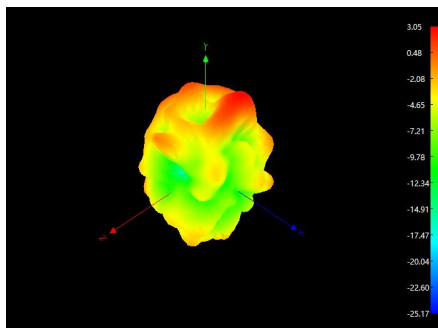
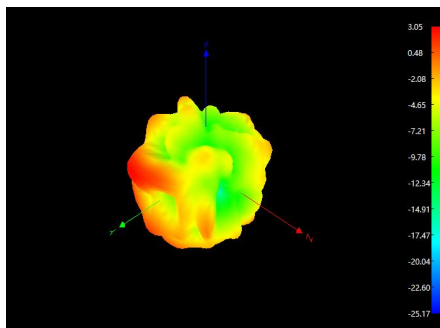
3D 5150:



3D 5550:



3D 5850:





OTA active test data statistics:

Item	Measurement	Band	Channel	Frequency	Total
1	TRP	WIFI_B (11M)	1	2412	13.74
2	TRP	WIFI_B (11M)	6	2437	14.54
3	TRP	WIFI_B (11M)	11	2462	15.06
4	TIS(EIRP)	WIFI_B (11M)	1	2412	-80.28
5	TIS(EIRP)	WIFI_B (11M)	6	2437	-80.41
6	TIS(EIRP)	WIFI_B (11M)	11	2462	-81.26
7	TRP	WIFI_G (54M)	1	2412	10.23
8	TRP	WIFI_G (54M)	6	2437	10.57
9	TRP	WIFI_G (54M)	11	2462	10.81
10	TIS(EIRP)	WIFI_G (54M)	1	2412	-66.02
11	TIS(EIRP)	WIFI_G (54M)	6	2437	-67.02
12	TIS(EIRP)	WIFI_G (54M)	11	2462	-66.47
13	TRP	WIFI_N_ISM (65M)	1	2412	10.05
14	TRP	WIFI_N_ISM (65M)	6	2437	10.38
15	TRP	WIFI_N_ISM (65M)	11	2462	11.87
16	TIS(EIRP)	WIFI_N_ISM (65M)	1	2412	-65.98
17	TIS(EIRP)	WIFI_N_ISM (65M)	6	2437	-63.79
18	TIS(EIRP)	WIFI_N_ISM (65M)	11	2462	-64.41
19	TRP	WIFI_A (54M)	36	5180	11.02
20	TRP	WIFI_A (54M)	149	5745	12.18
21	TRP	WIFI_A (54M)	165	5825	12.47
22	TIS(EIRP)	WIFI_A (54M)	36	5180	-67.59
23	TIS(EIRP)	WIFI_A (54M)	149	5745	-68.19
24	TIS(EIRP)	WIFI_A (54M)	165	5825	-67.53



Material RoHS conformity declaration form											
This is to certify that the delivery to your company's components, raw materials, auxiliary materials used and the additives in the production engineering are accord with RoHS environmental requirements of the restrictions on the use of hazardous substances directive (RoHS directive 2011/65 / EU)											
About components used raw materials, packaging materials, auxiliary materials and additives used in the production process such as composition of the report is as follows:											
Component /Part Name	Material Composition	ICP report #	Test Org.	Test Date	Content of harmful substances (ppm)						PASS?
					Cd	Pb	Hg	Cr <sup>6+</sup>	PBB	PBDE	PASS
Wire	Coaxial cable	CANEC24002746203	SGS	24/02/22	ND	ND	ND	ND	ND	ND	PASS
Environmentally friendly tin wire	Environmentally friendly tin wire	SHAEC24006459102	SGS	24/04/10	ND	78	ND	ND	ND	ND	PASS
Terminal	Phosphor bronze	CANEC24000977302	SGS	24/01/22	ND	6	ND	ND	ND	ND	PASS
	Gold plating layer	A2240410234101001E	CTI	24/07/16	ND	ND	ND	ND	ND	ND	PASS
	Rubber core	A2240126395101003E	CTI	24/03/16	ND	ND	ND	ND	ND	ND	PASS
FPC	Ink	ETR24902229M01	SGS	24/09/23	ND	ND	ND	ND	ND	ND	PASS
	3M9471LE	SHAEC23021627701	SGS	23/12/27	ND	ND	ND	ND	ND	ND	PASS
	Copper foil substrate	A2240082746101006E	CTI	24/03/01	ND	ND	ND	ND	ND	ND	PASS