

			No:
<i>Specifications</i>			
<i>Specification For Approval</i>			
Customer:	Hanvon		
Customer:	SHENZHEN GUANGYUANFA ELECTRONIC CO., LTD		
Customer:	55022105503	Supply No.	GYF-HWZN-01-WIFI-V3.0
Product Description :	FPC: 3M9471 150mm	Matching model :	VF1000X
Supplier Acknowledgement (Seal):		Customer Acknowledgement (Seal):	
Producer: Mr Guo		Structure:	
Examine :		Date: 2022.07.21	

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WIFI Antenna

1. Specifications

1.1 Electrical specifications

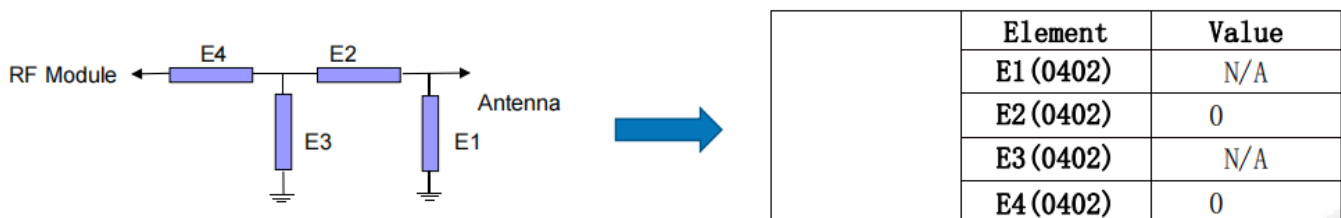
This report mainly provides the testing status of various electrical and structural performance parameters of WIFI antennas.

Specification	No.
WIFI Antenna	GYF-HWZN-01-WIFI-V3.0

1.2 Antenna frequency range

The following table shows the electrical performance indicators of Guangyuanfa's design and mass production antennas

2. Matching circuit diagram



3. structural style

3.1 Antenna composition

The antenna is mainly composed of soft circuit printed boards and coaxial lines.

4. Testing equipment

5. VSWR test connection

5.1 Test connection: The connection of VSWR test device in sequence is: R&S ZVL network analyzer → test line → test fixture

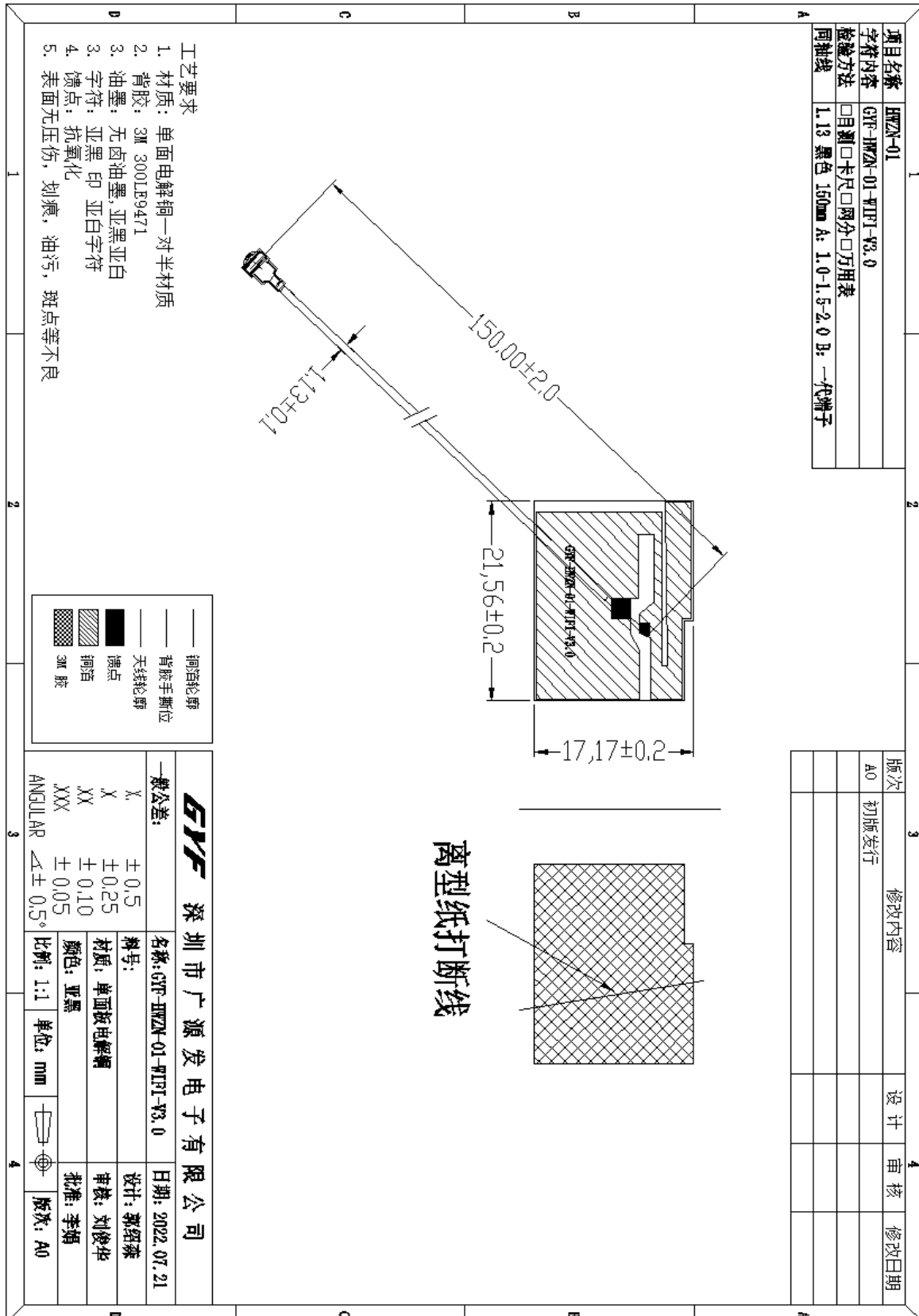
6. Testing

6.1 Test site: Guangyuan Microwave Anechoic Chamber. The testing frequency range is 400MHz-6GHz, the quiet zone range is 50cm circumference, and the reflectivity is less than -50 dB.

6.2 Testing instruments: Agilent5071B, CMW500, Agilent8960 E5515C, standard horn antenna, 24 probe OTA microwave darkroom testing system, printer, etc

7. Drawing specifications

7.1 Drawing



7.2 Sample Size

Name	VF1000X	Item No.	GYF-HWZN-01-WIFI-V3.0	Date	2022.07.21			
No.	Standard	Data						
		1	2	3	4	5		
1	21.56	21.58	21.52	21.59	21.62	21.53	OK	
2	17.17	17.19	17.14	17.21	17.12	17.24	OK	
3	1.13	1.12	1.11	1.13	1.12	1.10	OK	
4	150.00	150.2	150.39	150.12	150.45	150.57	OK	
5		6						
6								
7								
8								
9								
10								
11								
12								
13								
14								
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16								
17								
18								
19								
20								

21								
22								
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7.3 Bill of materials

Bill of materials

Name	VF1000X	Item No.	GYF-HWZN-01-WIFI-V3.0	Date	2022.07.21
	Type	Material	Size	No.	
1	Fpc Antenna	One and a half	21.56*17.17mm	1	
3	Coaxial line	Copper	1.13*150mm	1	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

8. Reliability testing

8.1 Reliability Test Report

Name	VF1000X	Item No.	GYF-HWZN-01-WIFI-V3.0	Date	2022.07.21
No.	15pcs	Start	July 18th 09:15	End	July 18th 11:25

Item	Standard	No.	Results	
Salt spray corrosion test	<p>(1) Test temperature: Salt water test 35 °C± 2 °C; Pressure bucket 47 °C± 1 °C</p> <p>(2) Test conditions/methods: Salt water concentration above 5%, solution pH value: 6.5-7.2, air pressure: 1.0-1.2kg/c m², test time set according to product requirements</p> <p>(3) Test completed: After 2 hours, observe the surface oxidation and discoloration of the product, and observe the appearance of coating detachment</p>	5pcs	OK	48H
Low temperature testing	<p>(1) Temperature: -30 °C (-25 °C - pilot stage)</p> <p>(2) Test time: 20 hours/Packaging condition: Unpacked</p> <p>(3) The tested product is not turned on and placed in a high and low temperature test box. The temperature inside the box is adjusted to 25 °C and the humidity is 65%. After 1 hour of insulation, it is cooled to -30 °C</p>	5pcs	OK	20H

	within 1 hour. The humidity is turned off, and after 20 hours of insulation, it is heated for 1 hour to room temperature. After 2 hours, performance testing is conducted.			
High temperature testing	<p>(1) Temperature: +70 °C (+65 °C - pilot stage) Humidity 85% (80% - pilot stage)</p> <p>(2) Test time: 20 hours/Packaging condition: Unpacked</p> <p>(3) The tested product is not turned on and placed in a high and low temperature test box. The temperature inside the box is adjusted to 25 °C, and the humidity is 65%. After 1 hour of insulation, the temperature is raised to +70 °C within 1 hour, and the humidity is 85%. After 20 hours of insulation, the temperature is lowered for 1 hour to room temperature. After 2 hours, performance testing is conducted. Appearance and structure: The antenna surface should be free of defects, and there should be no deformation, warping, or damage to the antenna. The performance should be normal, and the standing wave ratio should not exceed 10% of the product standard</p>	5pcs	OK	

8.2 Product Storage Instructions

- 1. The exposed part of the gold finger conductor needs to undergo surface coating (rust prevention) treatment, such as gold plating/plating, OSP, tin plating, etc. The storage environment needs to avoid corrosive gases.**
- 2. The antenna temperature needs to be controlled at 21-38 °C, and the humidity needs to be controlled at 50-70%. Excessive temperature can cause the 3M adhesive to melt, leading to a decrease in antenna adhesion.**
- 3. It is recommended that if the initial bonding temperature is below 10 °C, it is not suitable for bonding, as the adhesive at this time is too hard to firmly adhere to the object; However, if it has already been bonded, the adhesion force at low temperatures is also satisfactory.**

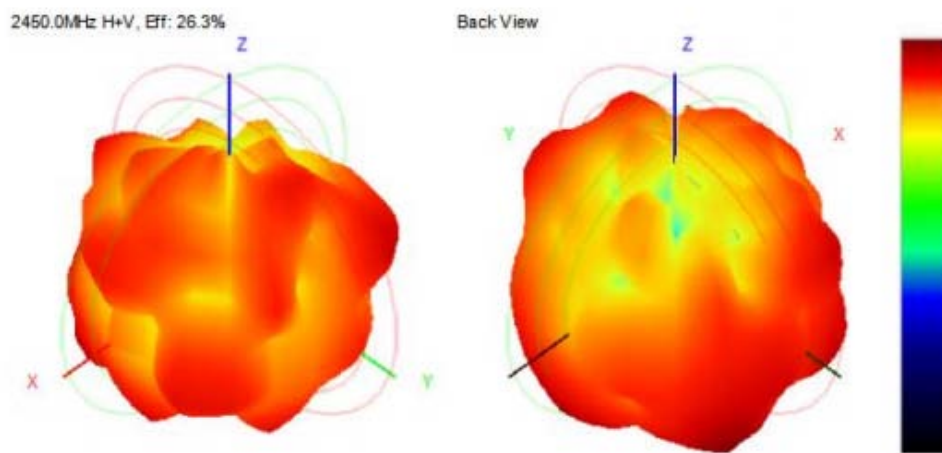
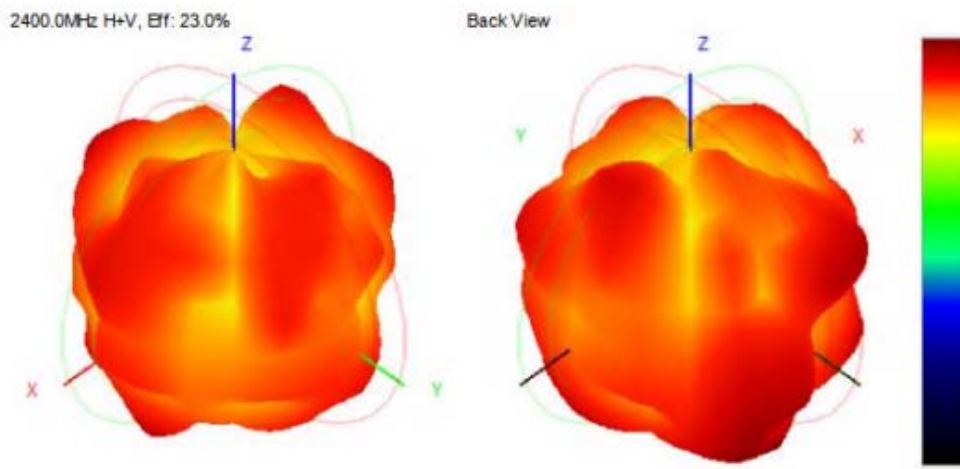
4. Under conditions of 21 °C and 50% relative humidity, the storage period in the original packaging state is 24 months from the date of production.

9. Working temperature

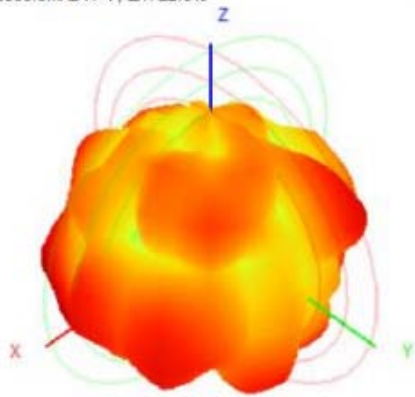
Part	Value
FPC	-50~280°C
3m Glue	-30-80°C

10. Antenna image

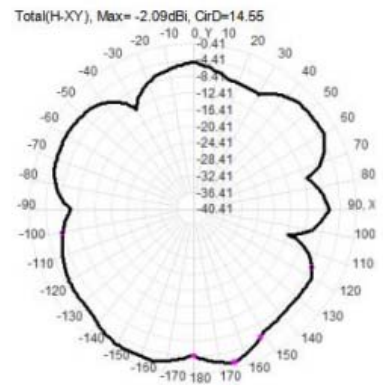
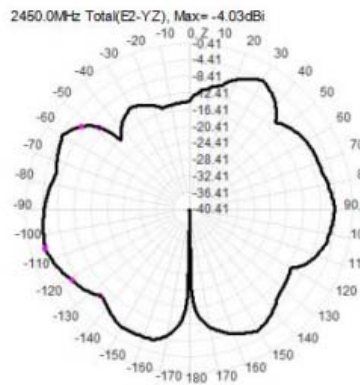
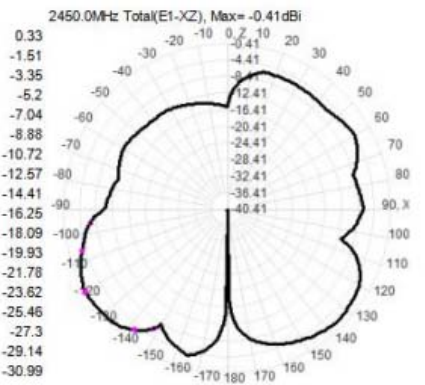
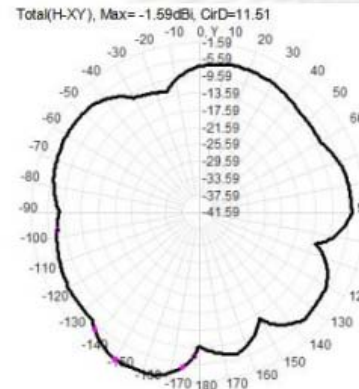
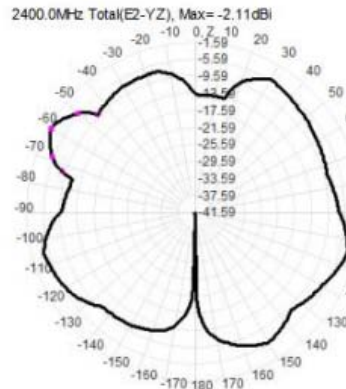
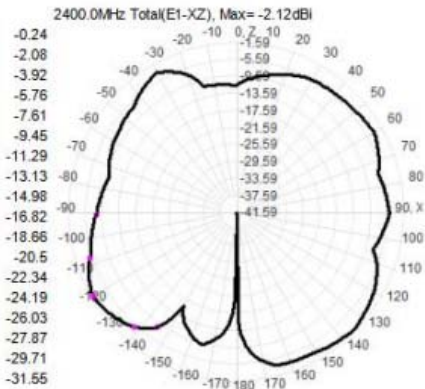
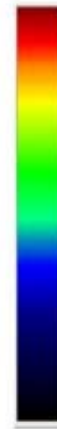
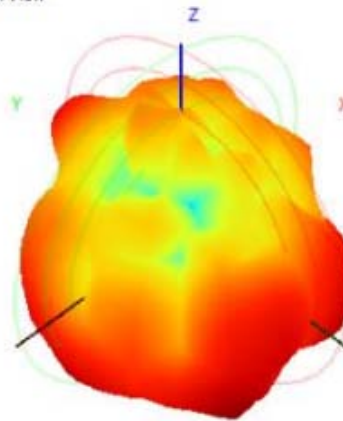
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-6.39	-6.48	-6.38	-6.13	-5.92	-5.80	-5.86	-6.02	-6.17	-6.36	-6.46
Gain (dBi)	-1.59	-0.60	-0.87	-0.48	0.04	-0.41	0.62	0.72	0.68	0.54	-1.11
Efficiency (%)	22.99	22.50	23.00	24.38	25.56	26.29	25.95	25.01	24.14	23.10	22.61

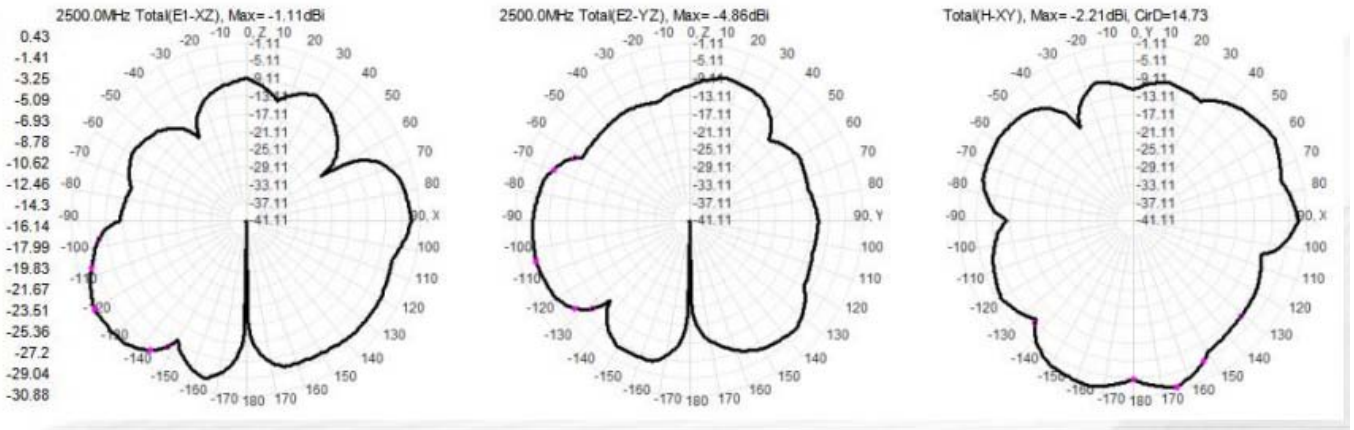


2500.0MHz H+V, Eff: 22.6%



Back View





Position.

