



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: Shenzhen Creality 3D Technology Co.,LTD

Product Name: WIFI Antenna

Product Model: 星云屏

Part Number: LJF02-23022509-R0A

Write By : Huxuwen

Issued Date: 2023-02-27

CUSTOMER

ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVAL

LEJIN

R&D DEPT	ENGINEER DEPT	APPROVAL

REV	MODIFIED DESCRIPTION	DATE	REMARK
V1.0	Initial Draft Release	2023/02/27	



Index

1. Cover	1
2. Index	2
3. Product Specification	3
4. Test Equipment & Conditions	3
5. Test Report	4
6. Reliability Test	5
7. Assemble type	6
8. Product Drawing	8

3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	>40%
Impedance	50Ohm
Polarization	Linear
Gain	≤2.5dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF25A
Cable Type	Φ1.13mm,L50mm,Black
Connector Type	IPX1
Dimension	26.0*16.8mm
C. Environmental	
Operation Temperature	- 30 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C
Humidity	40%~95%

4.Test Equipment & Conditions

- | | |
|----------------------------------|---------------------|
| 1.Network Analyzers | Agilent 8753D/5071C |
| 2.HSPA and LTE protocol test set | R&S CMW500 -PT |
| 3.Communications Test Set | Agilent 8960 |
| 4.3D Chamber Test System | |

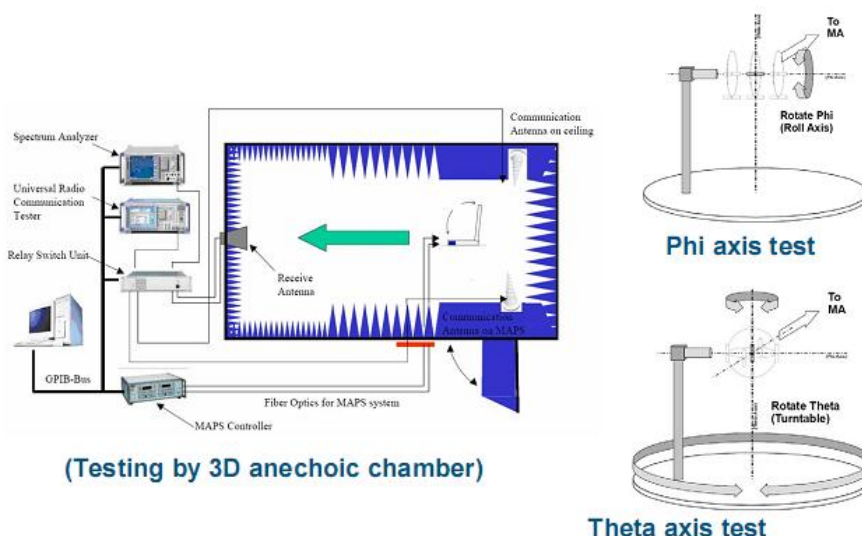


Chart1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

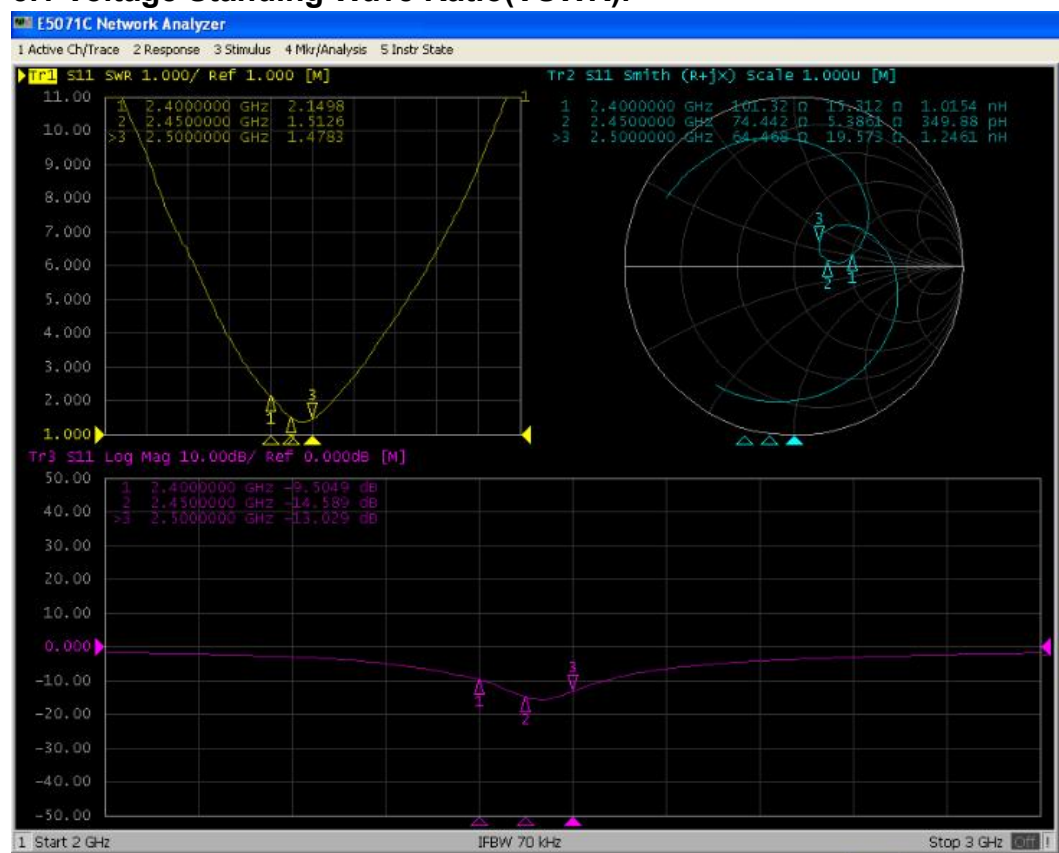
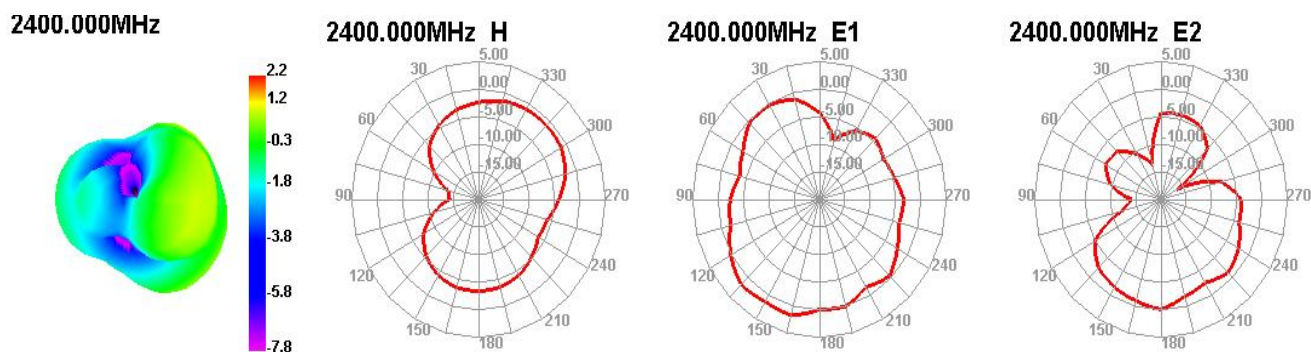


Chart2 VSWR

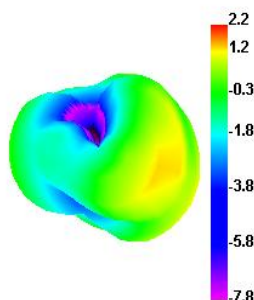
5.2 Efficient and gain(estimating conducted by Lejin in Jan,2021,using 3D drawing document that provided by Crealty.)

Passive Test For 2.4GHz	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	52.41	60.31	56.13	57.45	53.05	54.04	52.66	55.24	61.07	60.08	50.58
	Gain(dBi)	2.24	2.34	2.22	2.43	2.17	2.24	2.10	2.18	2.43	2.28	1.60

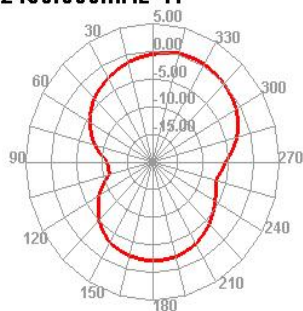
5.3 Radiation pattern.



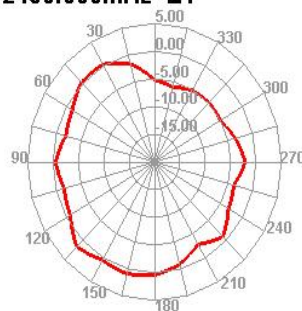
2450.000MHz



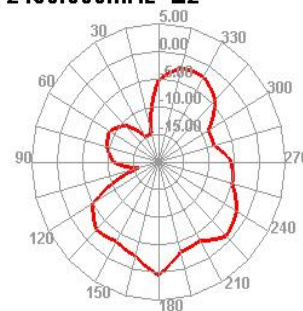
2450.000MHz H



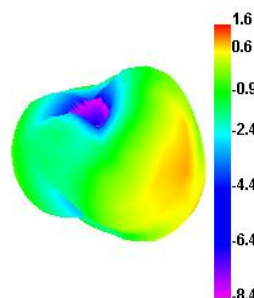
2450.000MHz E1



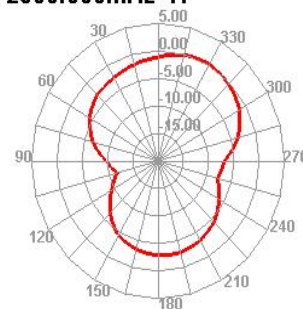
2450.000MHz E2



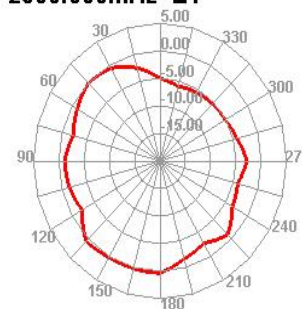
2500.000MHz



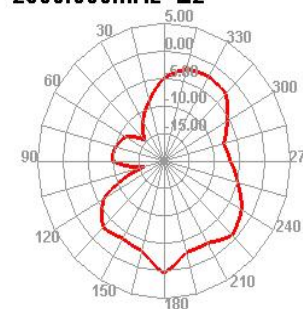
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



6. Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃ , Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃, test antenna after 2 hours.	Temp.&Hum. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃ , test antenna after 2 hours.	Temp.&Hum. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: 35±2℃ Humidity: 85% NaCl salt spray :5±1%.PH value :6.5~7.2 Testtime:24hours	Salt-Spray Tester	No color change No appear rusting	PASS

7. Assemble type

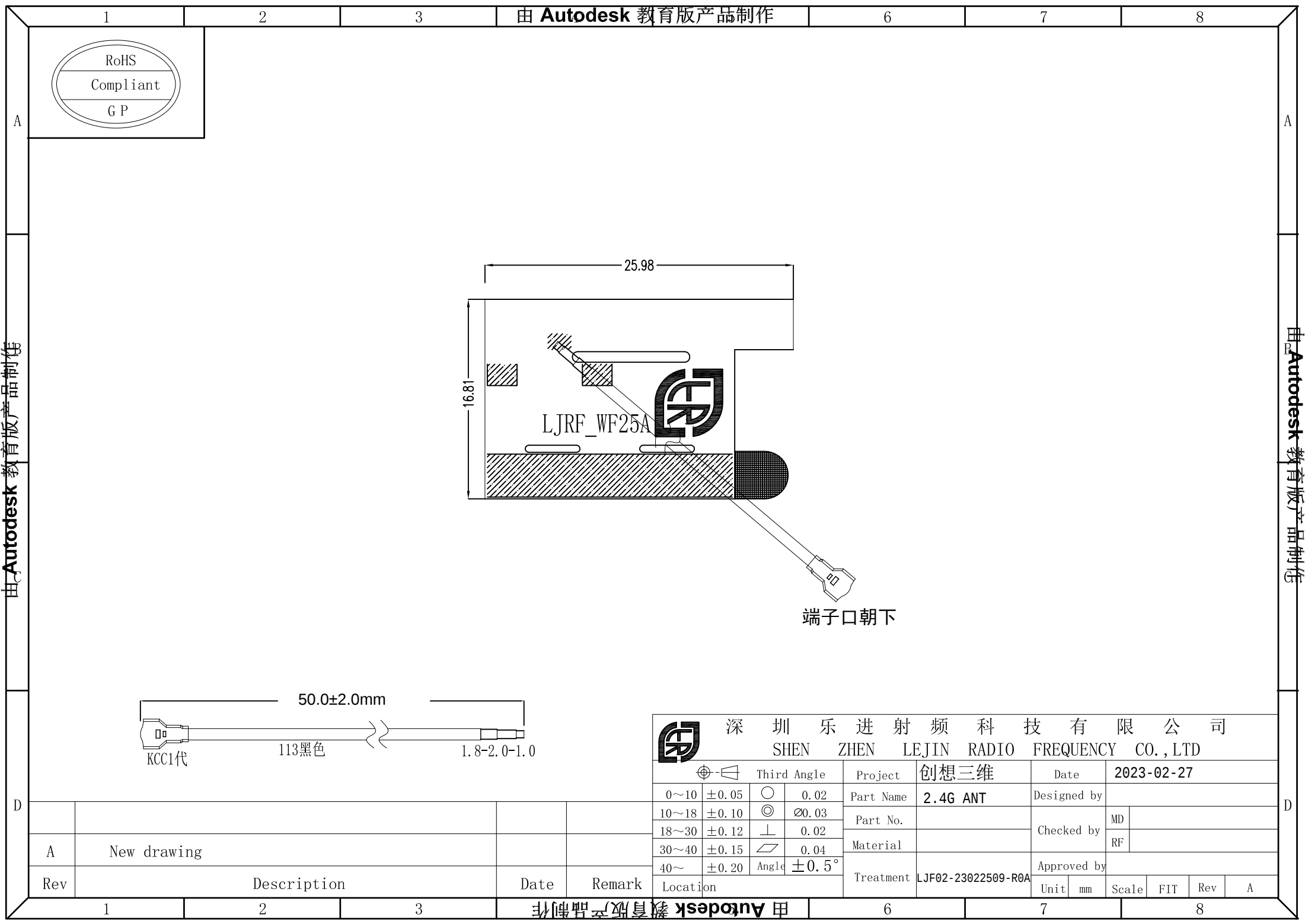


Chart 3 Add conductive foam to connect with PCB



Chart 4 Assemble type

8.Product Drawing



由Autodesk教育版产品制作

由Autodesk教育版产品制作

D

D

A	New drawing				
	Rev	Description	Date	Remark	

 深 圳 乐 进 射 频 科 技 有 限 公 司 SHEN ZHEN LEJIN RADIO FREQUENCY CO.,LTD											
 Third Angle				Project	创想三维	Date		2023-02-27			
0~10	±0.05		0.02	Part Name	2.4G ANT	Designed by					
10~18	±0.10		∅0.03	Part No.		Checked by	MD				
18~30	±0.12		0.02				RF				
30~40	±0.15		0.04	Material			Approved by				
40~	±0.20	Angle	±0.5°	Treatment	LJF02-23022509-R0A						
Location						Unit	mm	Scale	FIT	Rev	A