



Lejin RF

Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

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

Product Name: WIFI Antenna

Product Model: F011

Part Number: LJF02-24073008-ROA

Write By : Huxuwen

Issued Date: 2024-07-30

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	2024/07/30	



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1.1 Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz 5150MHz ~5850 MHz
VSWR	<2.0
Efficiency	≥40%
Impedance	50Ω
Polarization	Linear
Gain(2.4G)	≤2.49dBi
Gain(2.4G)	≤3.13dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(black),LJWF42A
Cable Type	Φ1.13mm,L80mm,black
Connector Type	IPX1
Dimension	30.0*10.0mm
C. Environmental	
Operation Temperature	- 20 °C ~ + 70 °C
Storage Temperature	- 30 °C ~ + 85 °C
Humidity	40%~95%

1.2 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

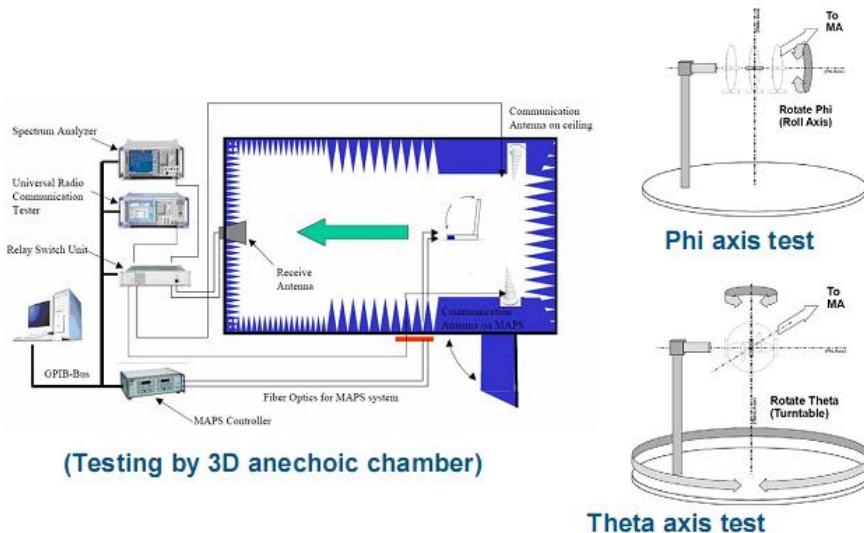


Chart 1 Test topology

1.3 Test Report

1.3.1 Voltage Standing Wave Ratio(VSWR).

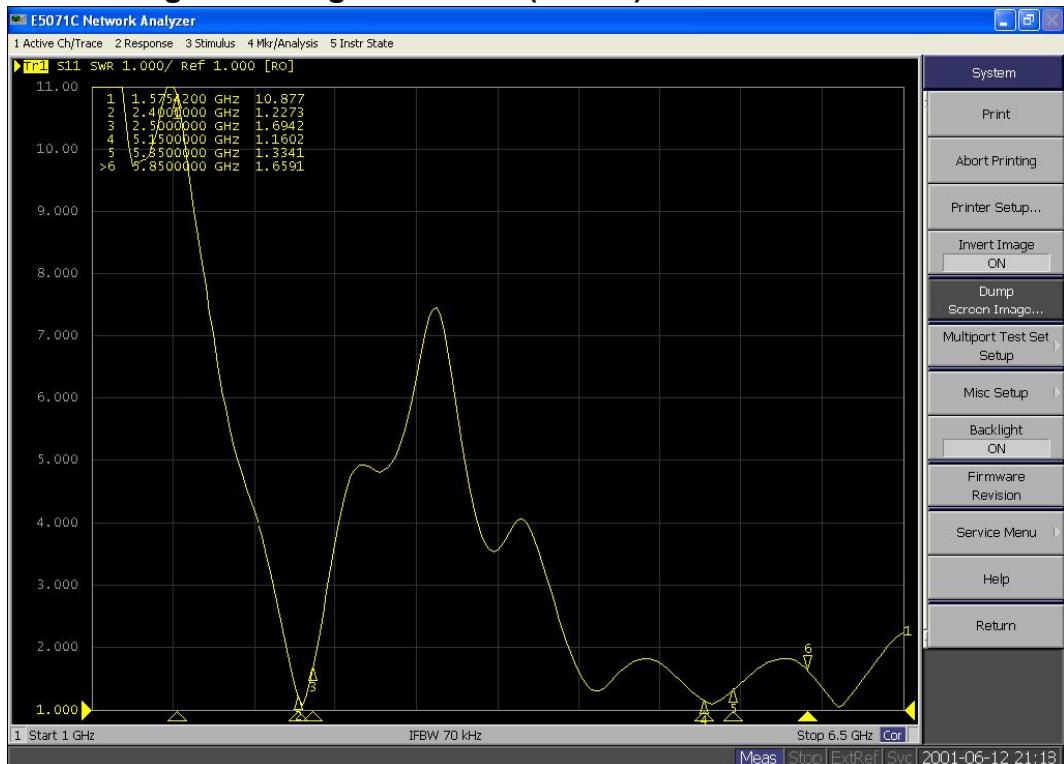


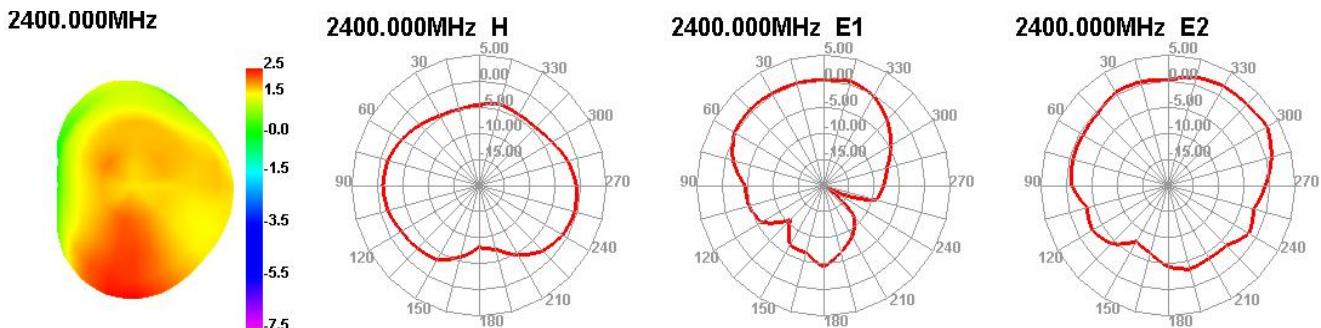
Chart 2 VSWR

1.3.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test	Effi(%)	49.39	49.73	50.03	50.61	50.92	51.24	51.70	52.35	53.59	52.61	51.66
2.4GHz	Gain(dBi)	2.48	2.49	2.48	2.45	2.42	2.33	2.24	2.14	2.06	2.04	2.07

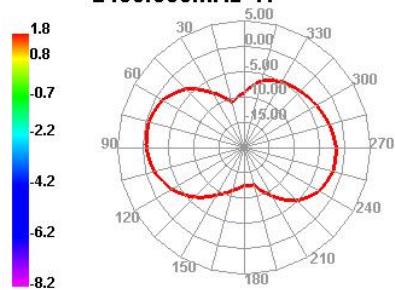
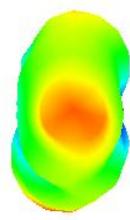
Passive	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850	5900	5950	6000
Test WiFi	Effi(%)	53.64	53.19	50.30	52.06	54.00	51.62	51.36	53.09	52.82	51.62	51.30	51.70	52.90	52.86	50.46	53.35	55.13	51.84
5G	Gain(dBi)	2.27	2.08	1.96	2.14	2.75	2.88	2.64	2.94	3.13	3.01	2.86	2.72	2.66	2.53	2.48	2.30	2.05	1.84

1.3.3 Radiation pattern.

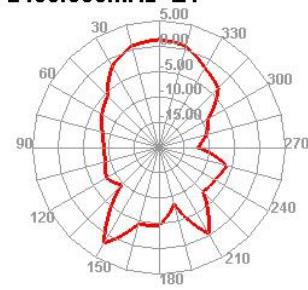




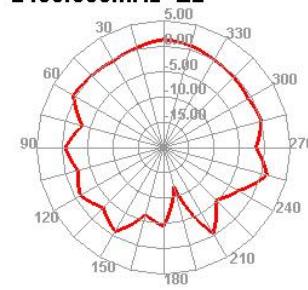
2450.000MHz



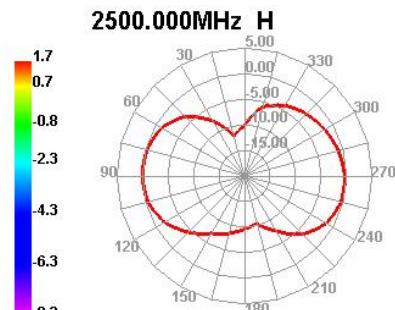
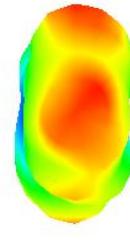
2450.000MHz E1



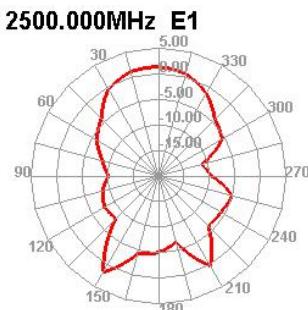
2450.000MHz E2



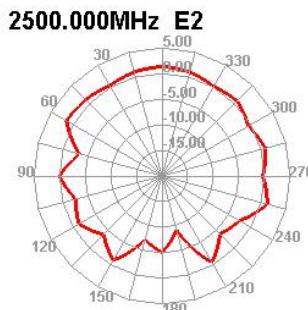
2500.000MHz



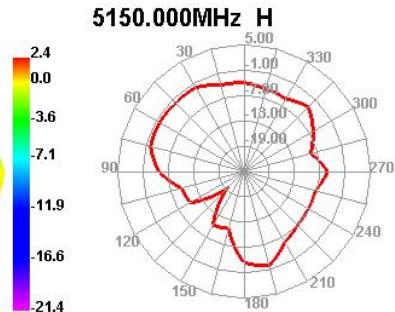
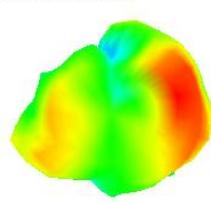
2500.000MHz E1



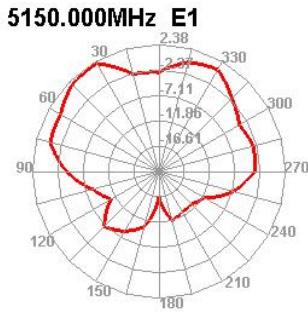
2500.000MHz E2



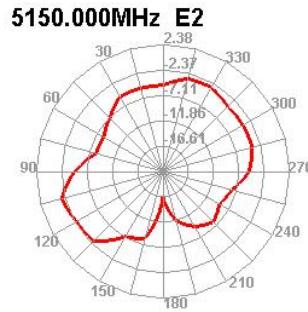
5150.000MHz



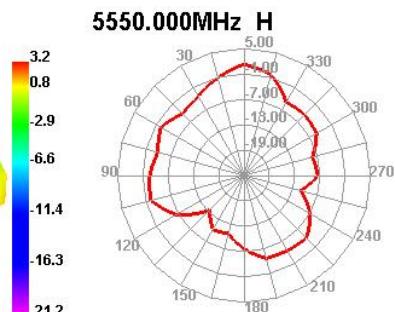
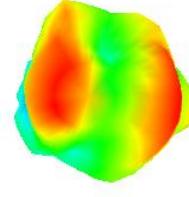
5150.000MHz E1



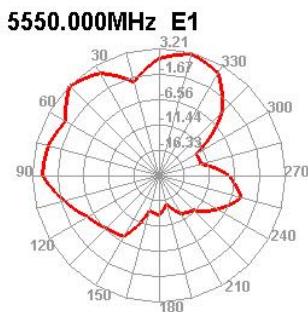
5150.000MHz E2



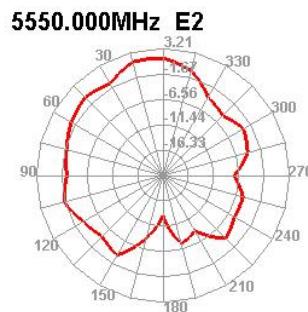
5550.000MHz



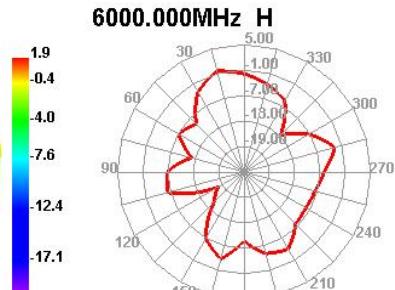
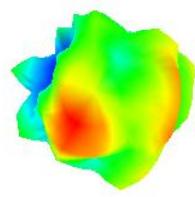
5550.000MHz E1



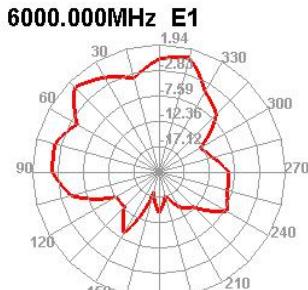
5550.000MHz E2



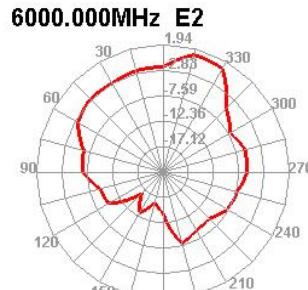
6000.000MHz



6000.000MHz E1



6000.000MHz E2





5. Reliability Test

Test Item	Test condition	Equipment	Specification	Result
1 Low Temp. Storage Test	Temperature: -30°C , Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25 °C and humidity is 65% for one hour, then step-down the temp. to -30 °C in one hour, store antenna for44 hours; step-up temp to 25 °C ,test antenna after 2 hours.	Temp.&Hum i. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2 High Temp./High Humid Storage Test	Temperature: 85°C Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25 °C and humidity is 65% for one hour, then step-up the temp. to 80 °C and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25°C,test antenna after 2 hours.	Temp.&Hum i. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3 Salt-Spray spray Test	6 Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: 35±2°C 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

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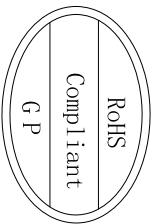
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背胶手撕位

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34.0mm

34.0mm

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Technical drawing of the LJWF42A device, showing front view, side view, and rear view with dimensions and part numbers.

Front View: Shows the front panel with a diameter of 3.1.

Side View: Shows the side profile with a height of 2.7, a top width of 2.1, and a bottom width of 1.35. The total width is 4.1.

Rear View: Shows the rear panel with a total height of 100 ± 2.0. The bottom part has a height of 2.0 and a width of 1.1.

Part Number: LJWF42A

LeJin RF Logo:

Dimensions:

- Front View: 3.1
- Side View: 2.7, 2.1, 1.35, 4.1
- Rear View: 100 ± 2.0, 2.0, 1.1

1

Remark:

- 1.FPC material:Electrolytic copper.
- 2.Backing in behind:3M300LSE.
- 3.Tolerance: Cutting die: ± 0.1 mm;Circuit on FPC: ± 0.05 mm; others are ± 0.05 mm.
- 4.ROHS:(Pb,Hg,Cr+6,PBBS,PBDEs),<1000ppm; Cd,<100ppm.

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Rev	Description
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