



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

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

Product Name: WIFI/BT Antenna

Product Model: L014

Part Number: LJF02-25031008-R1A

Write By : FUQIANG

Issued Date: 2025-03-10

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	2025/03/10	

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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz 5150MHz ~5850 MHz
VSWR	<2.0
Efficiency	≥30%
Impedance	50Ohm
Polarization	Linear
Gain(2.4GHz)	≤2.48dBi
Gain(5.8GHz)	≤3.92dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(black),LJWF42A
Cable Type	Φ1.13mm,L70mm,Black
Connector Type	IPX1
Dimension	34.0mm*10.0mm
C. Environmental	
Operation Temperature	- 20 °C ~ + 70 °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 | |

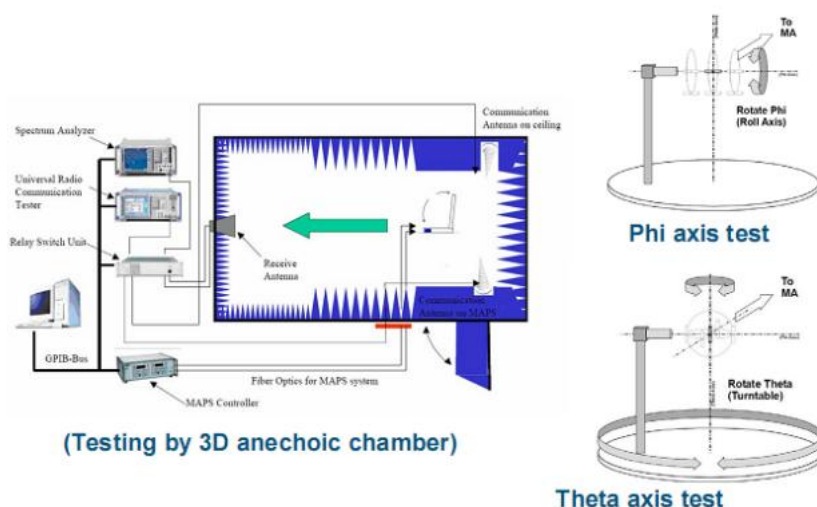


Chart 1 Test topology



5. Test Report (Testing is conducted in an open space chamber, may vary owing to environmental differences)

5.1 Voltage Standing Wave Ratio (VSWR).

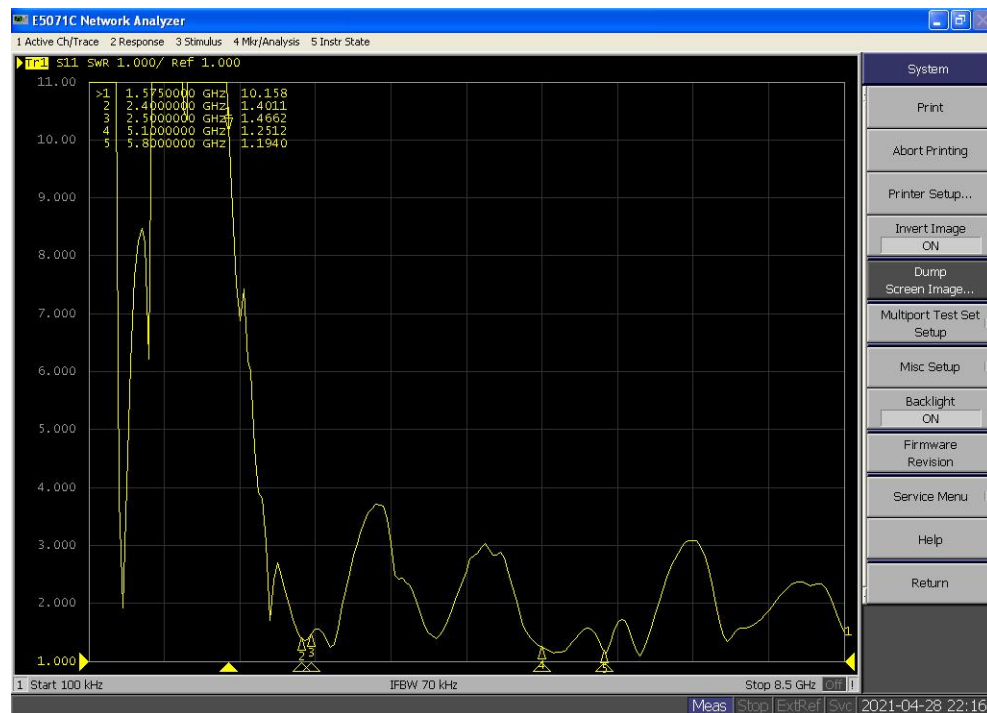


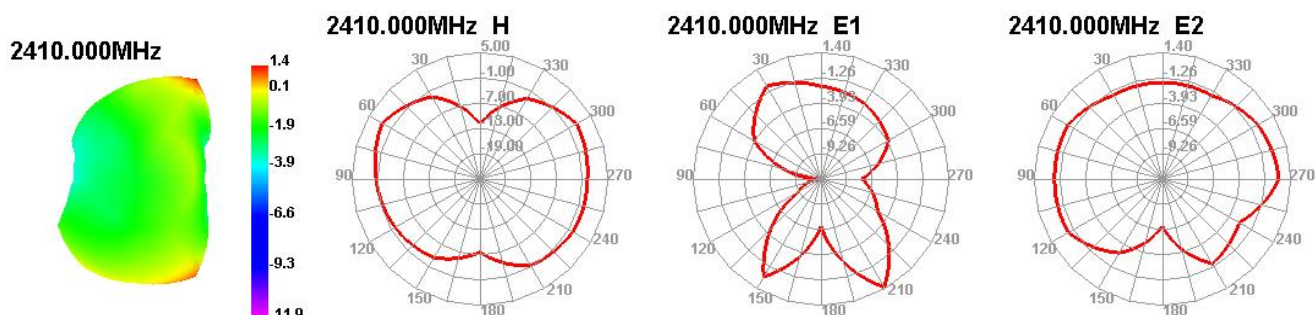
Chart 2 VSWR

5.2 Efficient and gain.

Passive Test	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
2.4GHz	Effi(%)	36.23	27.26	29.09	22.08	41.90	45.61	38.20	39.67	43.83	45.67	35.28
	Gain(dBi)	1.40	1.38	1.04	0.46	1.75	2.13	1.82	2.09	2.47	2.48	1.83

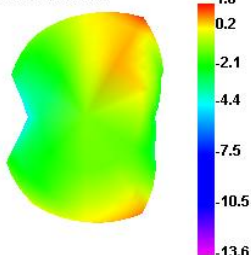
Passive Test	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850	5900	5950	6000
WIFI 5G	Effi(%)	34.10	42.72	37.03	30.55	46.31	52.69	48.92	54.08	45.34	55.57	53.23	45.72	51.04	53.42	54.68	58.21	37.54	47.26
	Gain(dBi)	3.70	3.92	3.20	2.44	3.07	3.34	3.36	3.60	3.46	3.43	3.50	3.28	3.78	3.27	3.59	3.81	2.36	3.35

5.3 Radiation pattern.

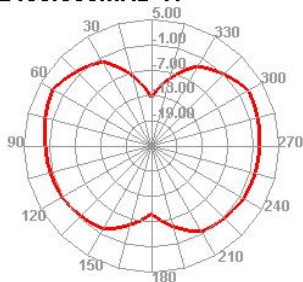




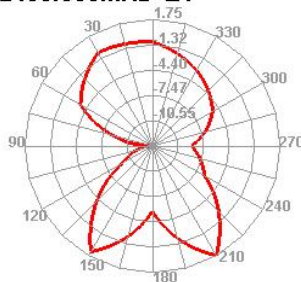
2450.000MHz



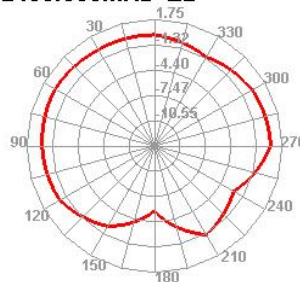
2450.000MHz H



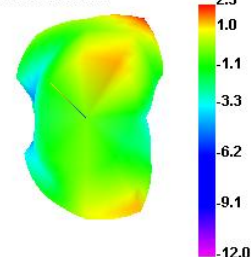
2450.000MHz E1



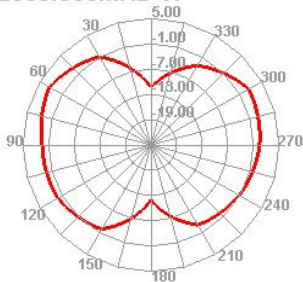
2450.000MHz E2



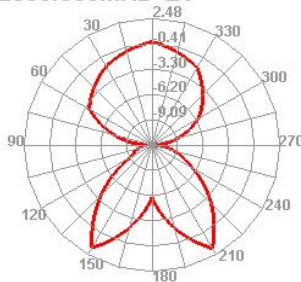
2500.000MHz



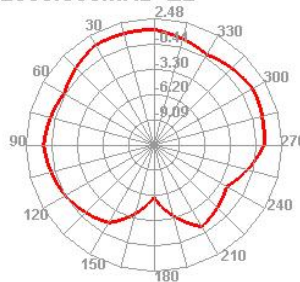
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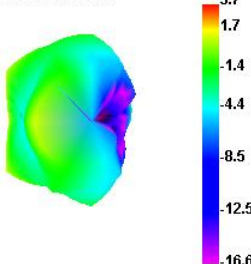
2500.000MHz E1



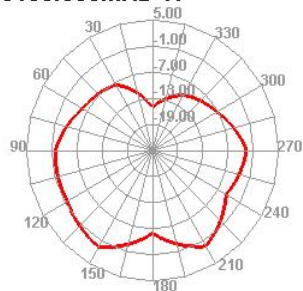
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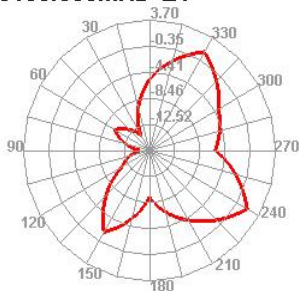
5150.000MHz



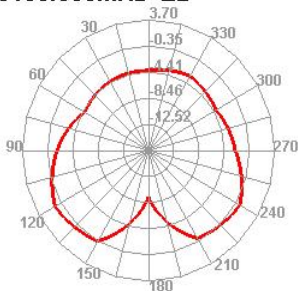
5150.000MHz H



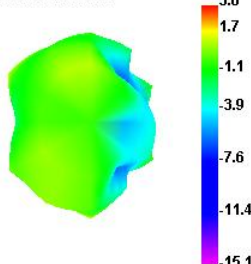
5150.000MHz E1



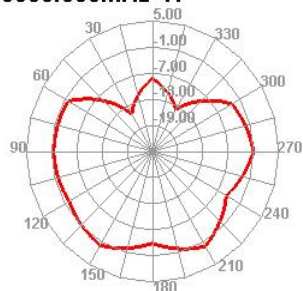
5150.000MHz E2



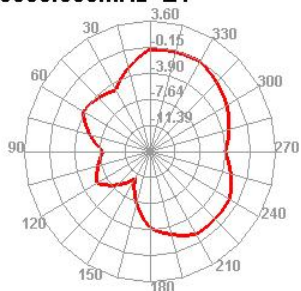
5500.000MHz



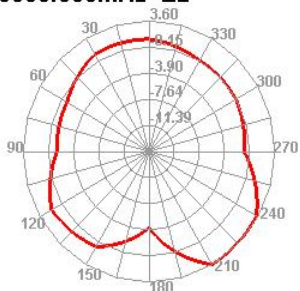
5500.000MHz H



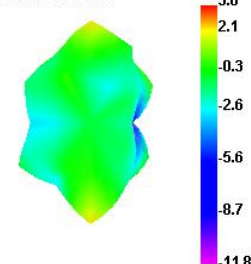
5500.000MHz E1



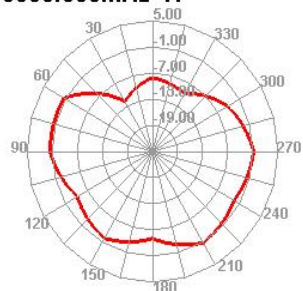
5500.000MHz E2



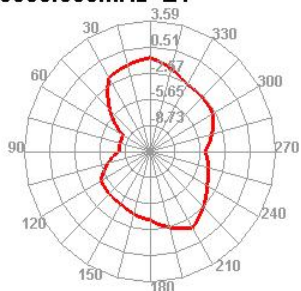
5850.000MHz



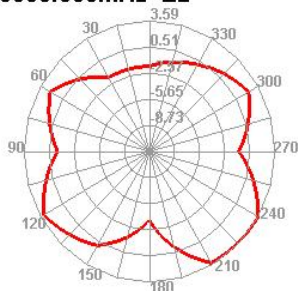
5850.000MHz H



5850.000MHz E1



5850.000MHz 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. & Humi. 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. & Humi. 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: $35 \pm 2^\circ\text{C}$ Humidity: 85% NaCl salt spray: $5 \pm 1\%$. PH value: 6.5~7.2 Testtime: 24 hours	Salt-Spray Tester	No color change No appearance rusting	PASS

7. Assemble type(omit)

8. Product Drawing

