



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: Shenzhen Suichen Technology Co.,Ltd

Product Name: WIFI Antenna2

Antenna type: FPC Antenna

Product Model: N/A

Part Number: LJF02-21051908C-R0A

Write By : Limingjin

Issued Date: 2021-05-19

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	2021/05/19	

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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz 5150MHz ~5850 MHz
VSWR	<2.0
Efficiency	≥40%
Impedance	50Ohm
Polarization	Linear
Gain(2.4G)	≤2.11dB
Gain(5G)	≤3.29dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC,black,,LJWF23F
Cable Type	Φ0.81mm,L60mm,Black
Connector Type	IPX3
Dimension	26.0mm*21.5mm
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 | |

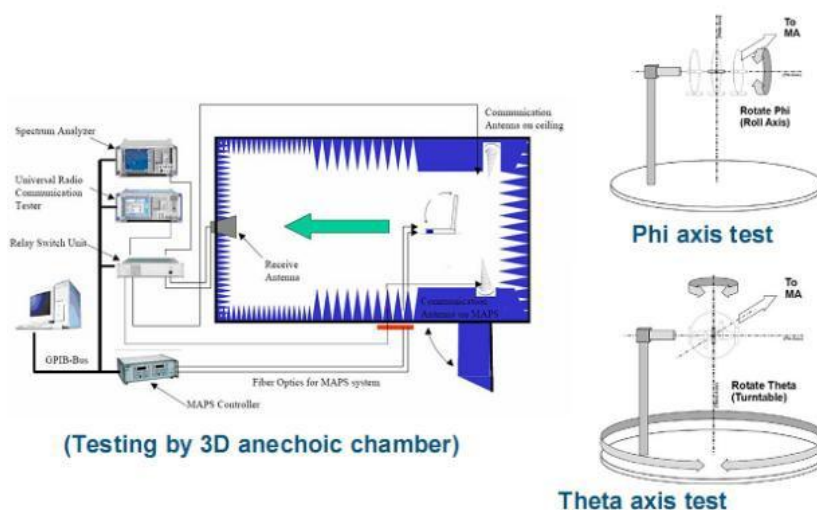


Chart 1 Test topology



5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

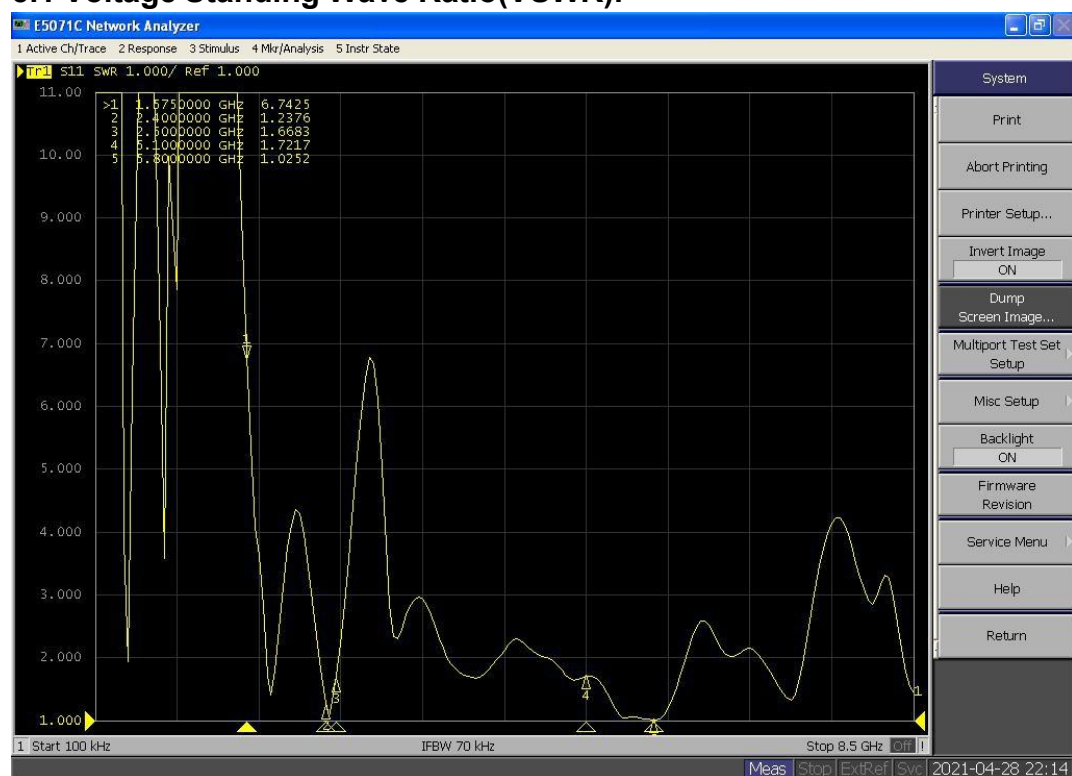


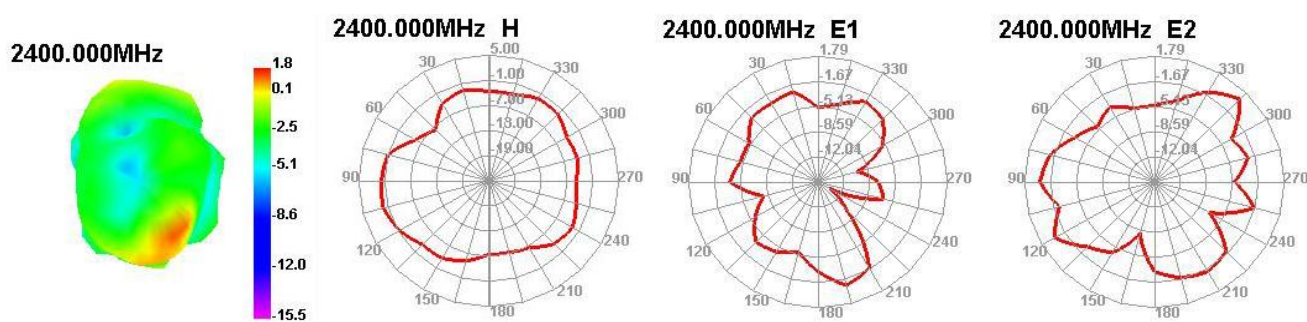
Chart 2 VSWR

5.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test For	Effi(%)	52.62	45.84	50.47	49.07	48.54	47.06	45.8	46.38	47.21	46.77	44.64
WIFI 2.4G	Gain(dBi)	2.11	1.92	1.94	1.93	1.83	1.88	1.91	2.07	1.79	1.67	1.28

Passive T	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
est For WI	Effi(%)	51.27	51.82	48.61	56.1	54.13	54.73	52.27	49.6	47.97	49.88	51.29	49.61	50.96	52.07	50.23
FI 5G	Gain(dBi)	2.7	2.81	2.63	3.29	3.23	2.93	2.86	2.51	2.34	1.92	2.13	2.04	2.14	2.05	1.92

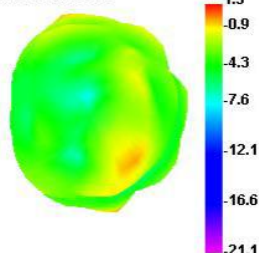
5.3 Radiation pattern.



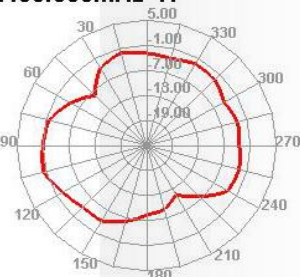


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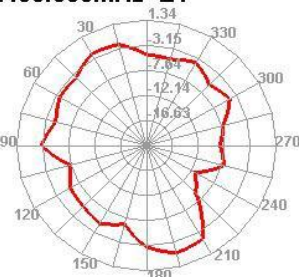
2450.000MHz



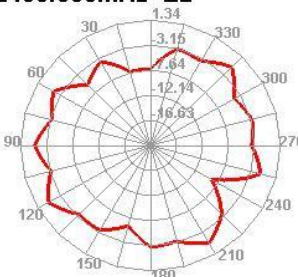
2450.000MHz H



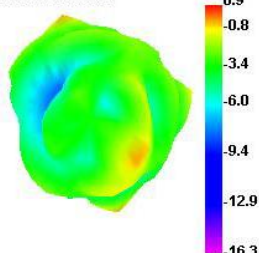
2450.000MHz E1



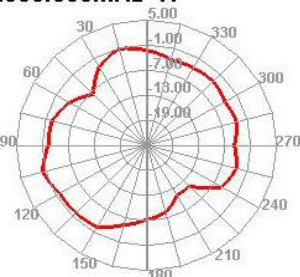
2450.000MHz E2



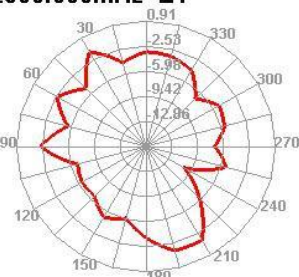
2500.000MHz



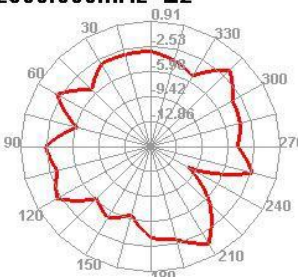
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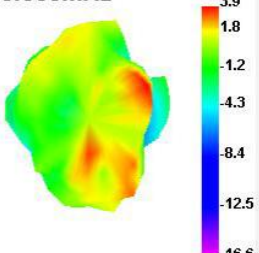
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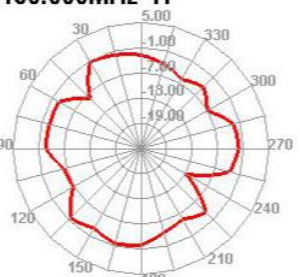
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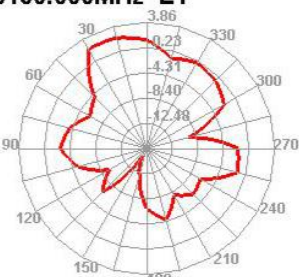
5150.000MHz



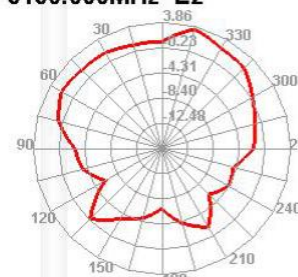
5150.000MHz H



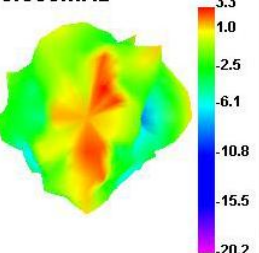
5150.000MHz E1



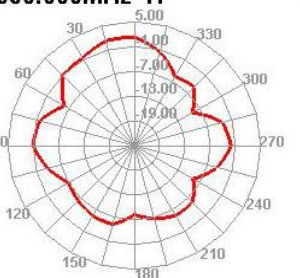
5150.000MHz E2



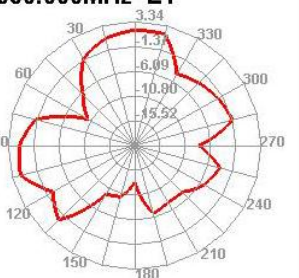
5550.000MHz



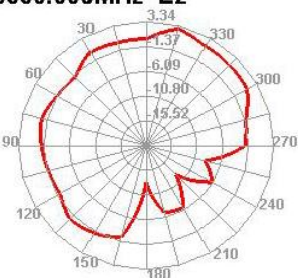
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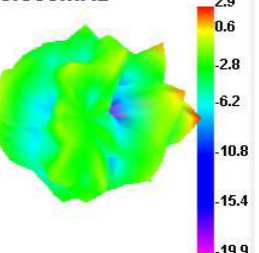
5550.000MHz E1



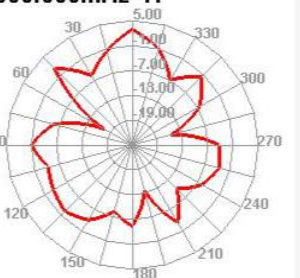
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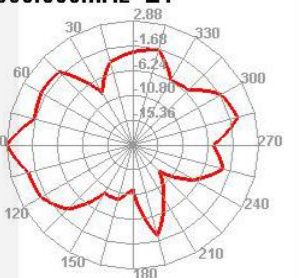
6000.000MHz



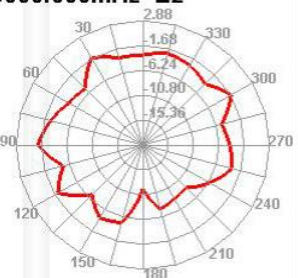
6000.000MHz H



6000.000MHz E1



6000.000MHz 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 appear rusting	PASS

7. Assemble type

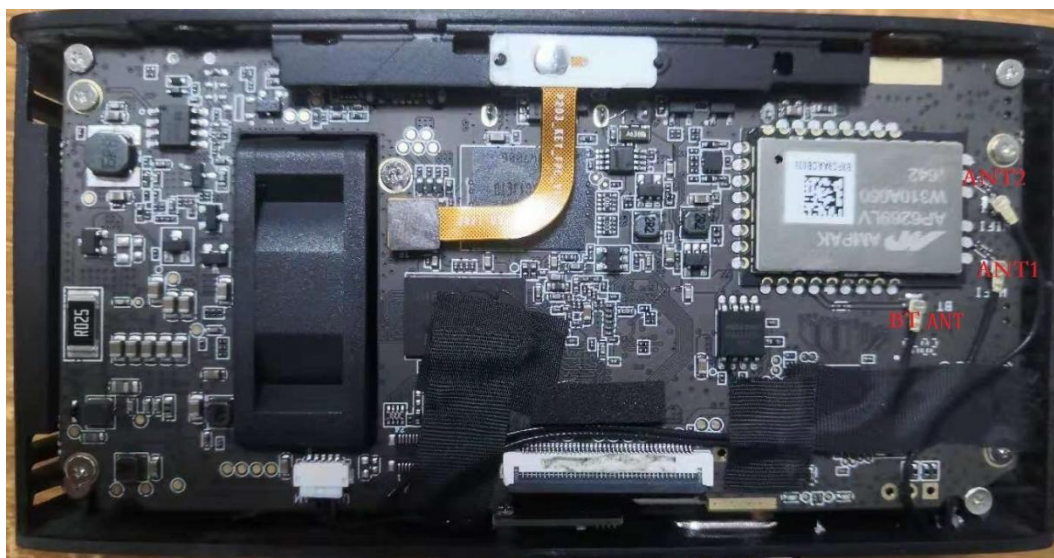


Chart 3 Assemble type(overall)



Chart 4 Assemble type

8.Product Drawing

1		2		3		Autodesk 教育版产品制作		6		7		8			
A		RoHS Compliant G P 25.98 21.53 LeJin RF LJWF23F 25.98 21.53 60.0±2.0mm 1.8-1.8-1.0 0.81 Black Wire, KCC3 Generation Terminal												D	
A		New drawing						Project		Date		2021-03-06			
Rev		Description		Date		Remark		Part Name		Designed by					
								Part No.		Checked by		MD			
								Material		RF					
								Treatment		Approved by					
								Location		Unit		mm			
								Scale		FIT		Rev			
								A							
1		2		3		Autodesk 教育版产品制作		6		7		8			