



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: SHENZHEN ELECTRON TECHNOLOGY CO.,LTD

Product Name: WIFI Antenna

Product Model: WF2758

Part Number: LJF02-22061609-R0A

Write By : Huxuwen

Issued Date: 2022-06-16

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	2022/06/16	



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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	2.12dBi@2.4G 2.48dBi@5G
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Yellow),LJWF84A
Cable Type	Φ1.13mm,L250mm,Black
Connector Type	IPX1
Dimension	26.0*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 | |

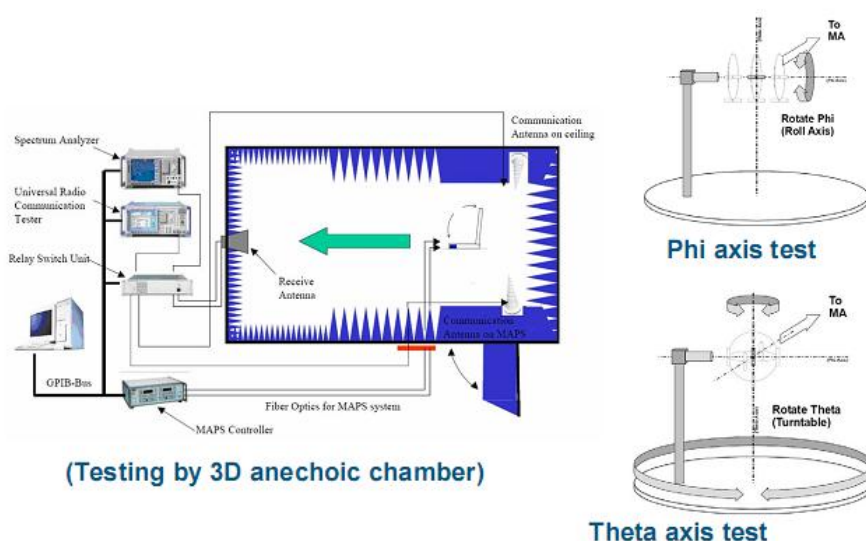


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

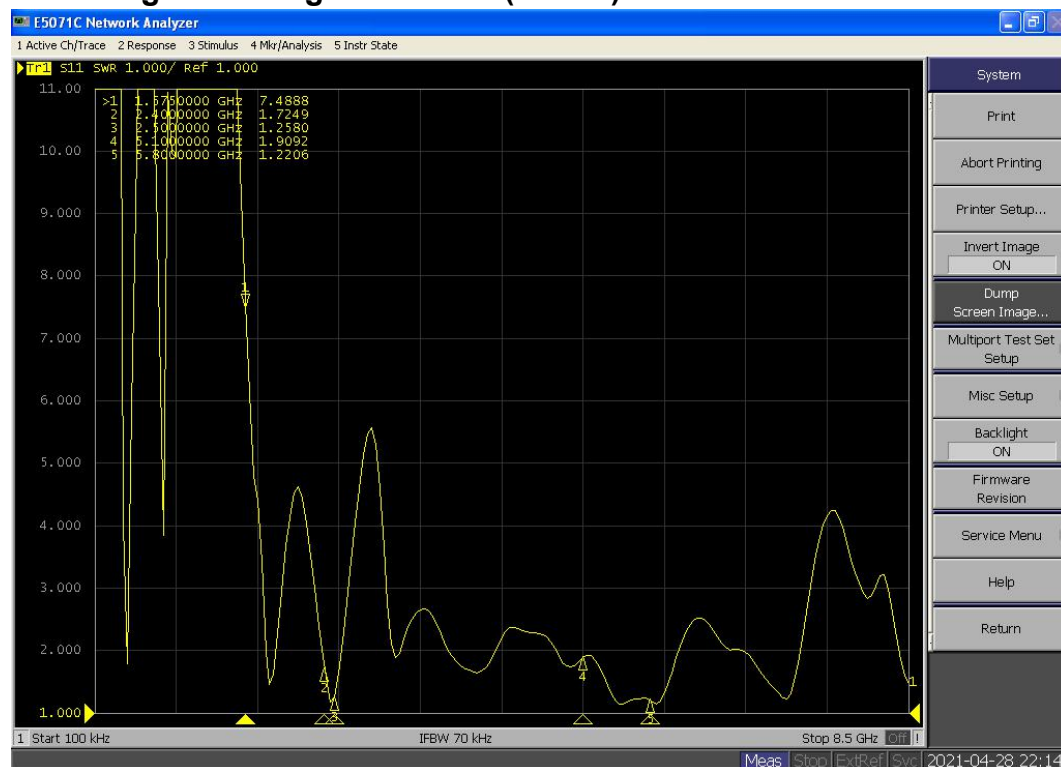


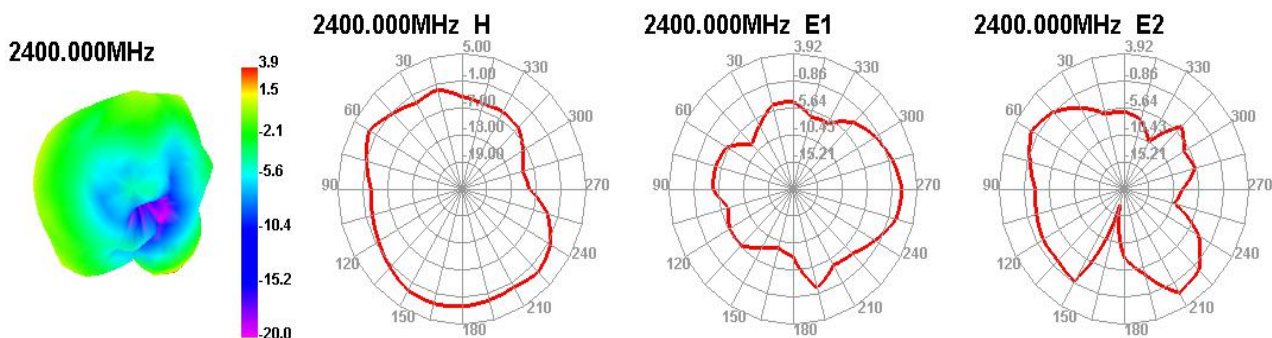
Chart 2 VSWR

5.2 Efficient and gain.

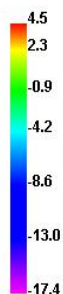
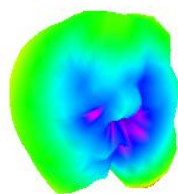
Passive Test For 2.4G	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	45.36	53.93	49.88	53.84	55.19	56.43	57.99	58.53	56.15	54.57	49.56
	Gain(dBi)	1.91	2.01	1.89	1.92	2.09	1.93	2.11	2.12	2.04	1.96	1.94

Passive Test For 5G	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
	Effi(%)	49.85	58.82	55.75	56.35	58.98	57.08	59.78	63.08	59.82	55.80	58.04	59.69	57.35	51.12	52.36
	Gain(dBi)	2.37	2.46	2.42	2.46	2.46	2.40	2.34	2.24	2.41	2.48	2.46	2.47	2.35	2.32	2.43

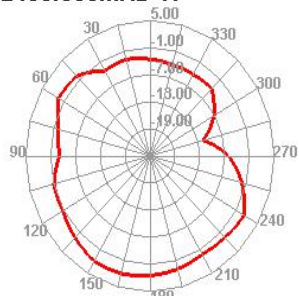
5.3 Radiation pattern.



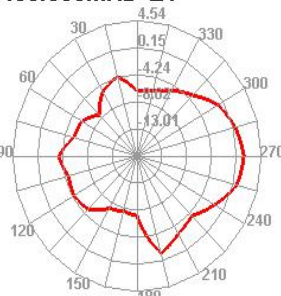
2450.000MHz



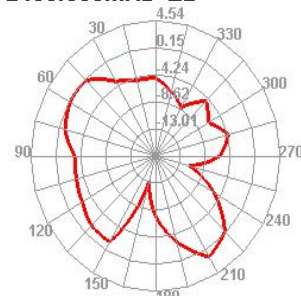
2450.000MHz H



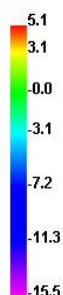
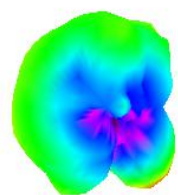
2450.000MHz E1



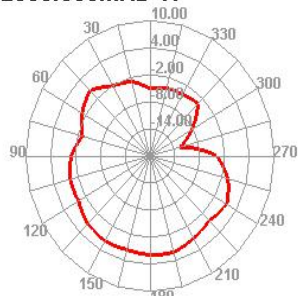
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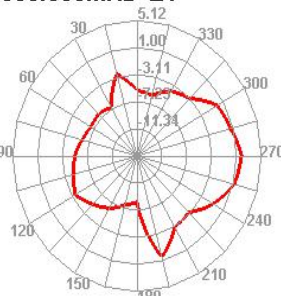
2500.000MHz



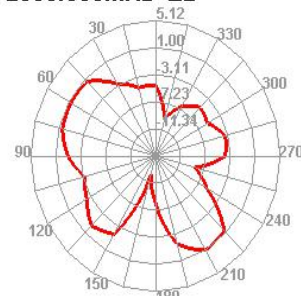
2500.000MHz H



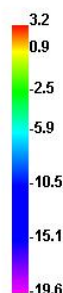
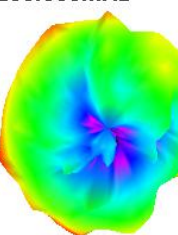
2500.000MHz E1



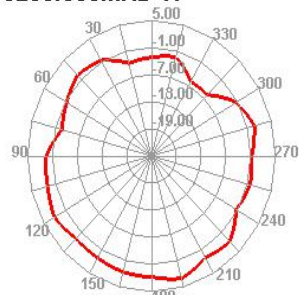
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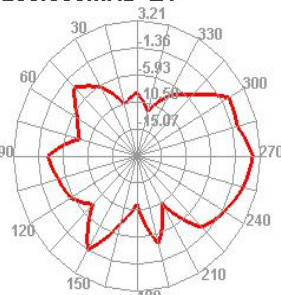
5200.000MHz



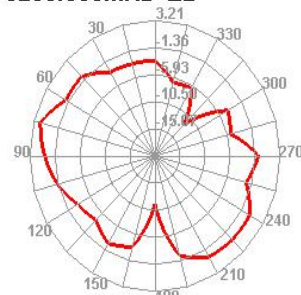
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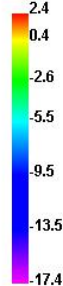
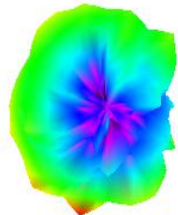
5200.000MHz E1



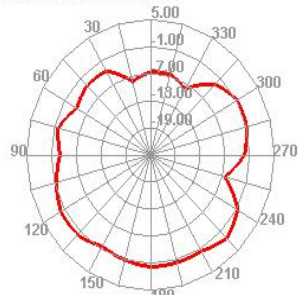
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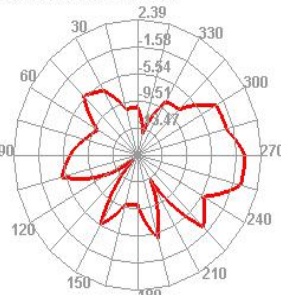
5550.000MHz



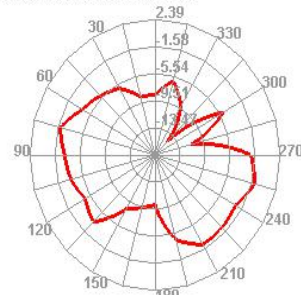
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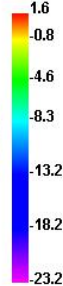
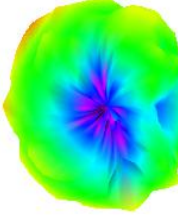
5550.000MHz E1



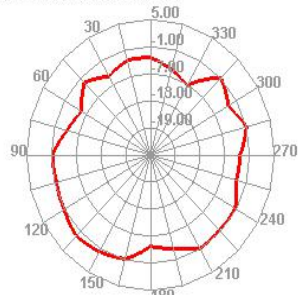
5550.000MHz E2



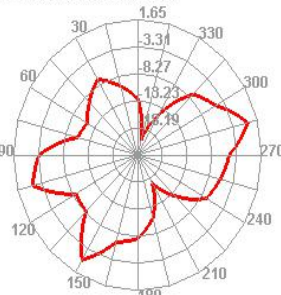
6000.000MHz



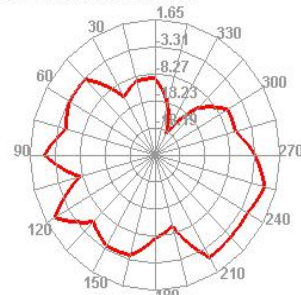
6000.000MHz H



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.&Humidity 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.&Humidity Tester	No material deformation is allowed. Electronic Performance is ok.	PASS
3 Salt-Spray 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

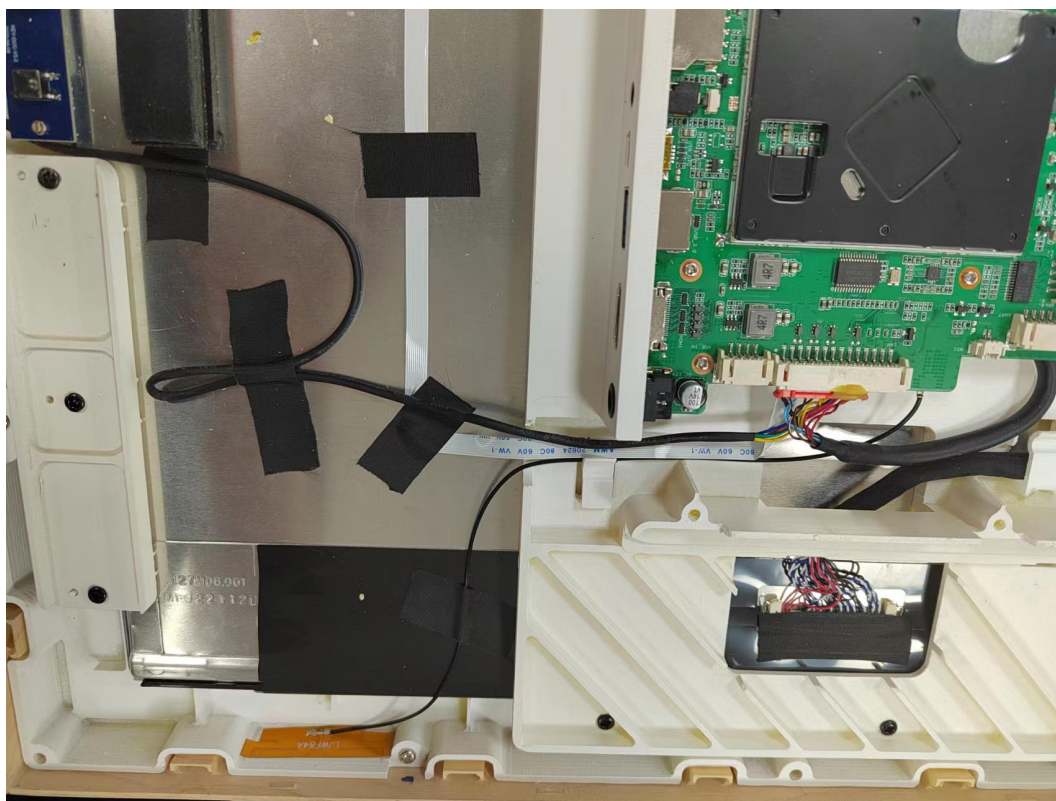
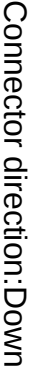


Chart 3 WF2758 assemble type

8. Product Drawing

 $250.0 \pm 2.0 \text{ mm}$

Φ1.13 coaxial cable, black, KCC-1 connector

Remark:

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

SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD



Third Angle

Project	ELC	Date	2022-06-16
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	0~10	± 0.05	$\odot$	0.02	Part Name	WIFI ANT	Designed by
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Checked by	MD
Part No.	WF2758
$10 \sim 18$ ± 0.10 $\ominus$ $18 \sim 30$ $+0.12$	$\emptyset 0.03$ 0.02

A	New drawing	Material	Rf	
			0.04	0.15
	10~30	≡	○	○
	±0.15	≡	○	○
	30~40	≡	○	○

Rev	Description	Date	Remark	Location	Treatment	Approved by			
				40~	±0.20	Angle	±0.5°	Unit	mm
						LJF02-22061609-R0A			

1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8