



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: SHENZHEN ELECTRON TECHNOLOGY CO.,LTD

Product Name: WIFI Antenna

Product Model: NW2195

Part Number: LJF02-22061610-R0A

Write By : Huxuwen

Issued Date: 2022-06-16

CUSTOMER

ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVAL
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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(2.4GHz)	≤2.19dB
Gain(5.8GHz)	≤2.25dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(White),LJWF51AA
Cable Type	Φ1.13mm,L355mm,Black
Connector Type	IPX1
Dimension	40.0*18.0mm
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 | |

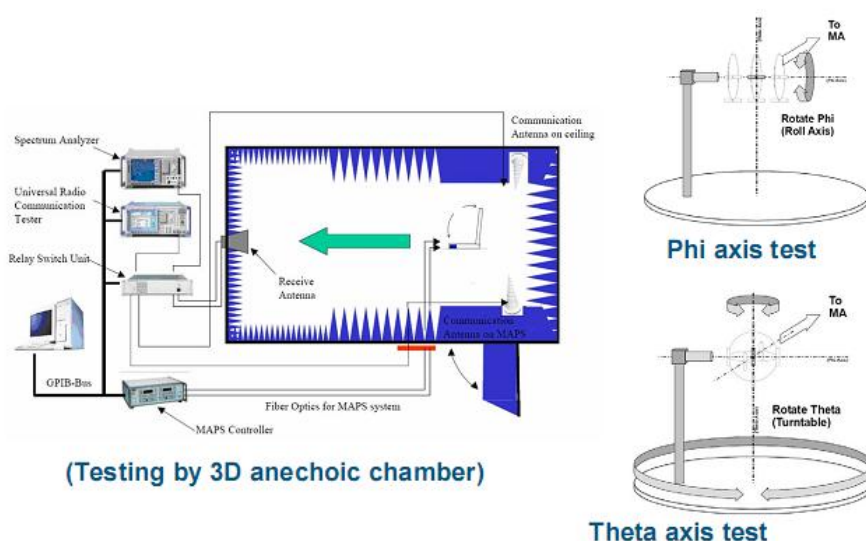


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

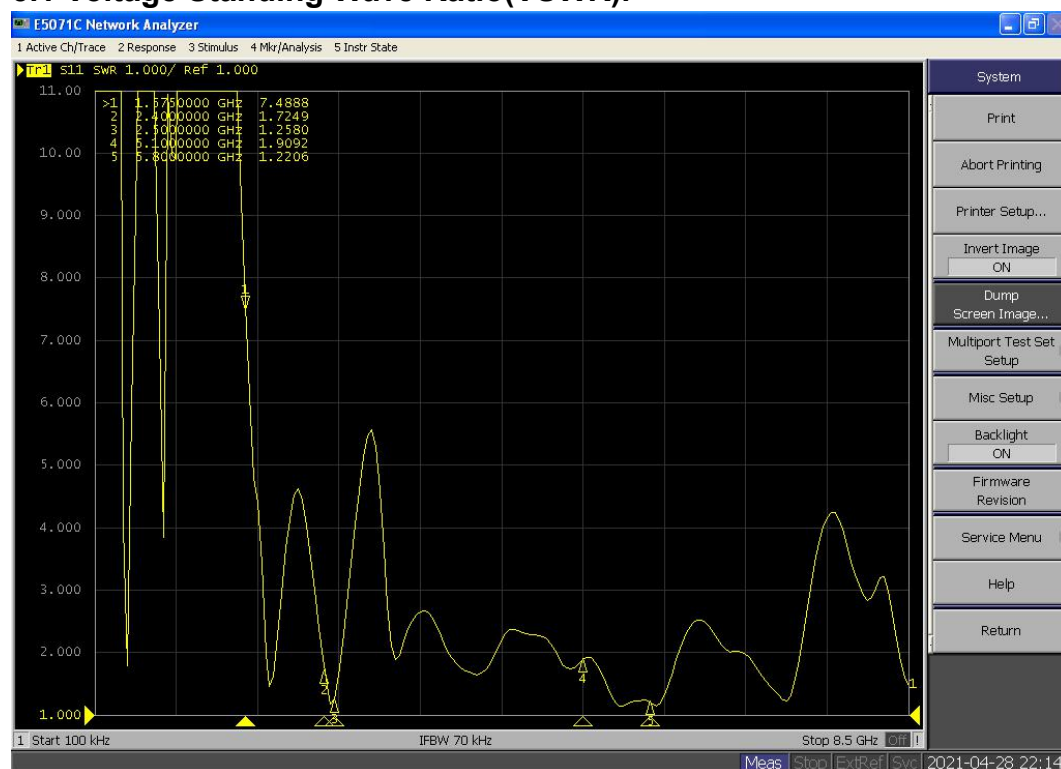


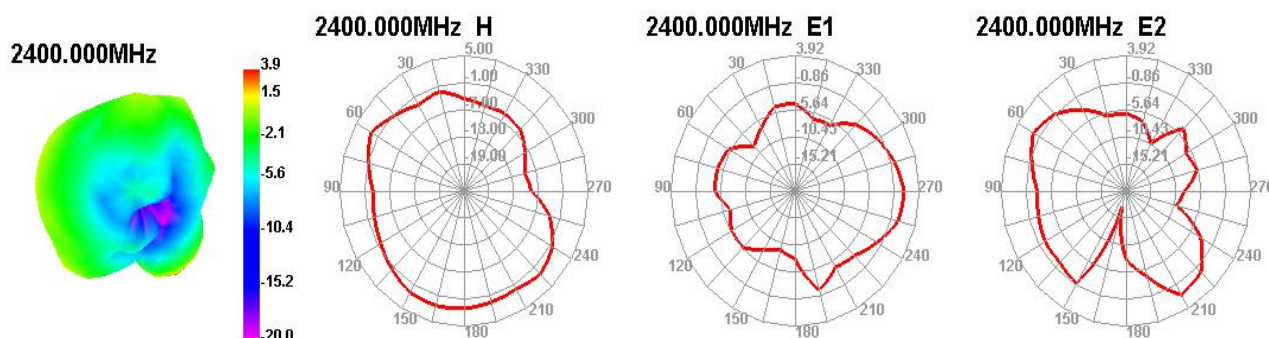
Chart 2 VSWR

5.2 Efficient and gain.

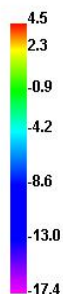
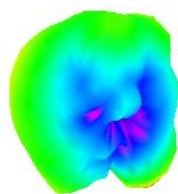
Passive Test For 2.4G	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	44.23	50.11	46.89	50.76	46.81	49.61	45.86	51.10	47.41	47.89	41.85
	Gain(dBi)	1.84	1.92	1.97	2.08	2.05	2.19	1.95	2.07	2.17	2.06	1.80

Passive Test For WIFI 5G	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
	Effi(%)	51.22	53.19	50.84	54.64	52.43	54.77	57.28	52.72	54.71	50.55	55.99	51.51	53.22	57.32	51.92
	Gain(dBi)	2.11	2.25	2.19	2.24	2.22	2.15	2.24	2.18	2.12	2.28	2.23	2.15	2.24	2.21	2.15

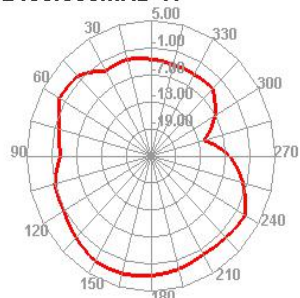
5.3 Radiation pattern.



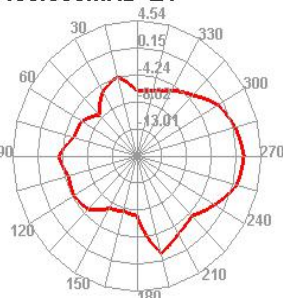
2450.000MHz



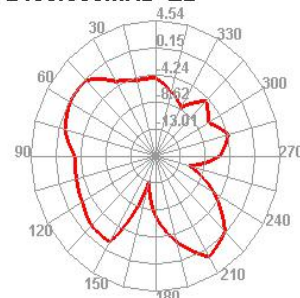
2450.000MHz H



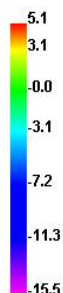
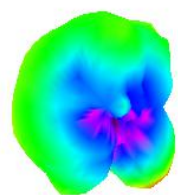
2450.000MHz E1



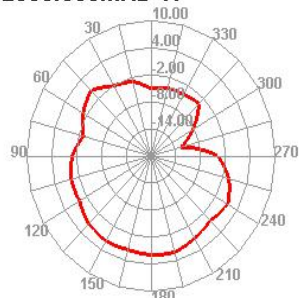
2450.000MHz E2



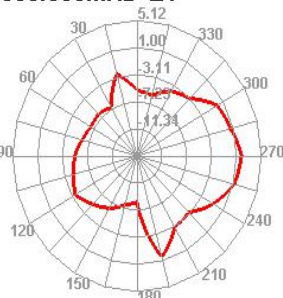
2500.000MHz



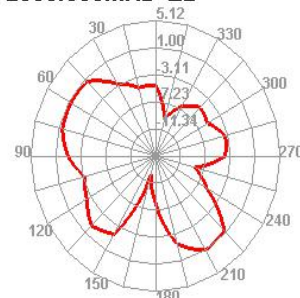
2500.000MHz H



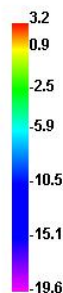
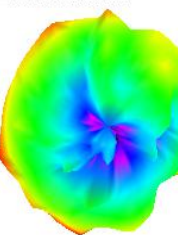
2500.000MHz E1



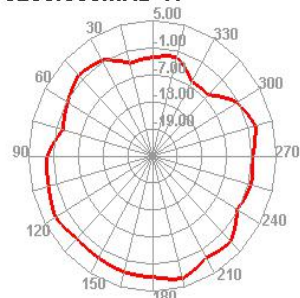
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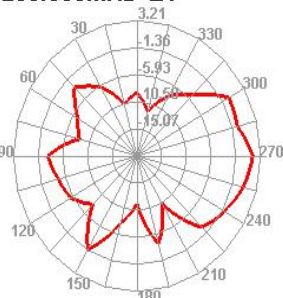
5200.000MHz



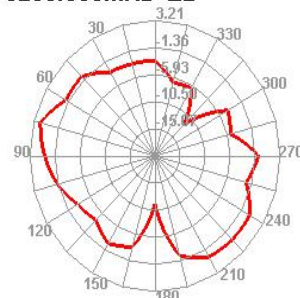
5200.000MHz H



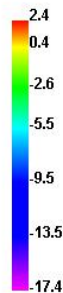
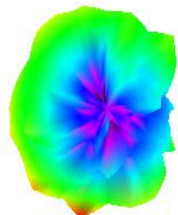
5200.000MHz E1



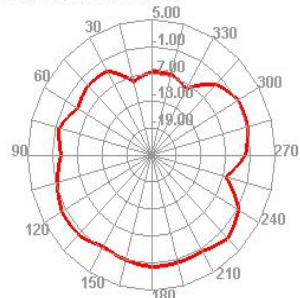
5200.000MHz E2



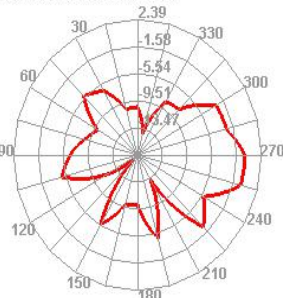
5550.000MHz



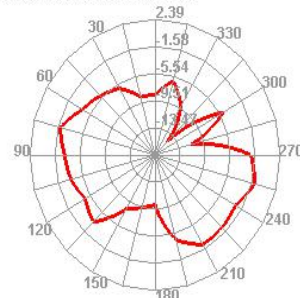
5550.000MHz H



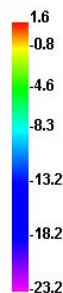
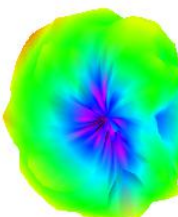
5550.000MHz E1



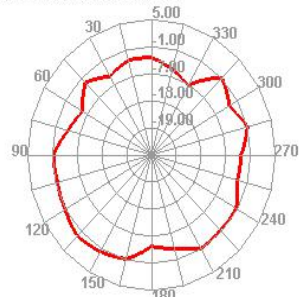
5550.000MHz E2



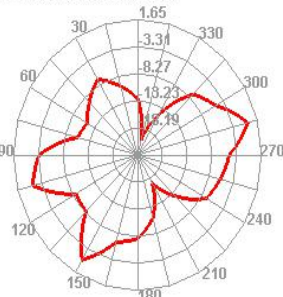
6000.000MHz



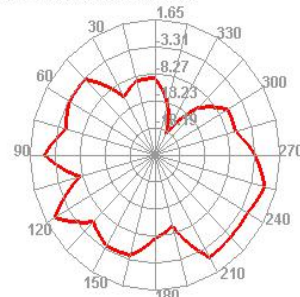
6000.000MHz H



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 Test time: 24 hours	Salt-Spray Tester	No color change No appearance rusting	PASS

7. Assemble type

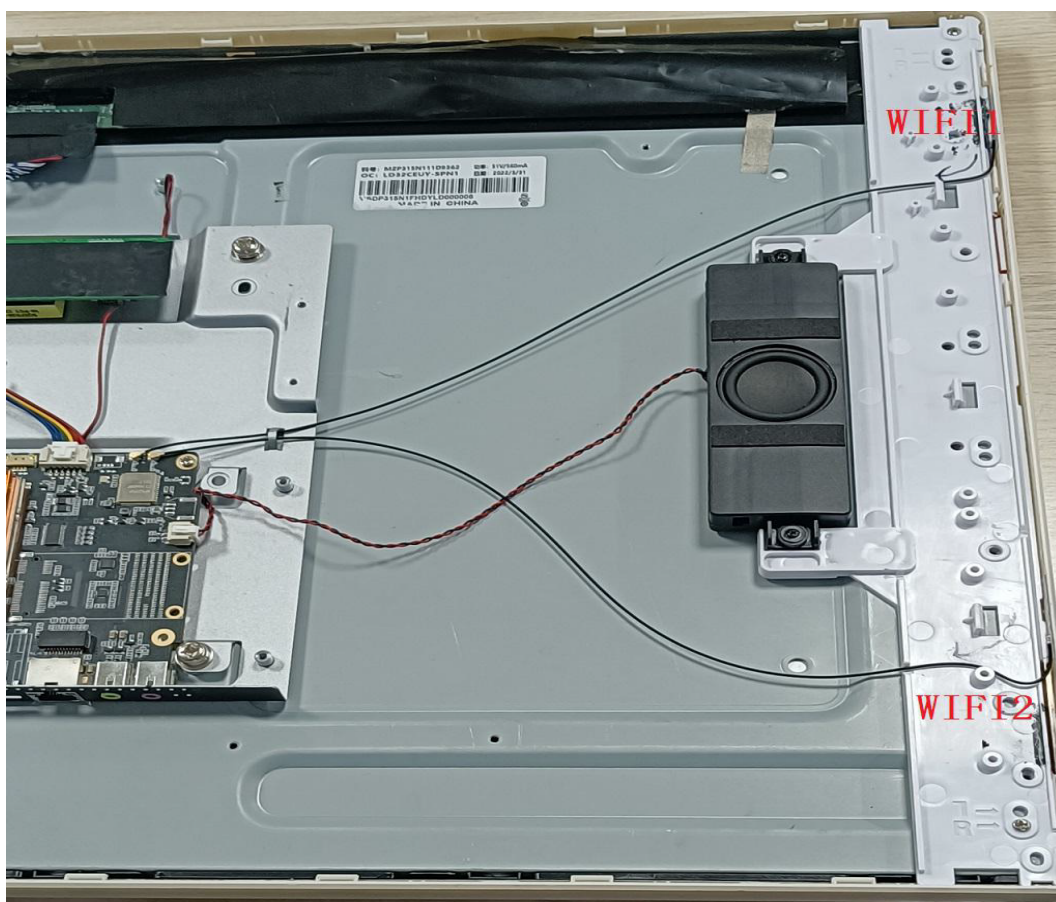


Chart 3 NW2195 assemble type



Chart 4 NW2195 WIFI1 assemble type

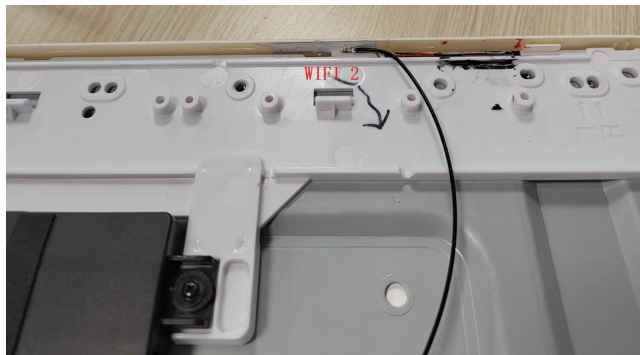
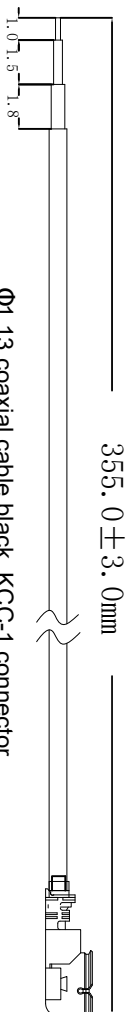


Chart 5 NW2195 WIFI2 assemble type

8.Product Drawing



$\Phi 1.13$ coaxial cable, black, KCC-1 connector

 $355.0 \pm 3.0 \text{ mm}$

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.

SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD