Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: 深圳金亚太科技有限公司

Product Name: WIFI&BT Antenna

Product Model:

Part Number: LJF02-23072908-R0A

Write By : Huxuwen

Issued Date: 2023-07-29

CUSTOMER

ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVAL
黄群		

LEJIN

R&D DEPT	ENGINEER DEPT	APPROVAL

REV	MODIFIED DESCRIPTION	DATE	REMARK
V1.0	Initial Draft Release	2023/07/29	

Add：Rm 301B,A4 Bld,Junfeng Innovation Park,Fuyong, Baoan Dist,Shenzhen. Tel:0755-27780515 Email:phxcler@szljrf.com

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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(5.8GHz)	≤2.50dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(black),LJWF82A
Cable Type	Φ1.13mm,L88mm,Black
Connector Type	IPX1
Dimension	45.0*12.0mm
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

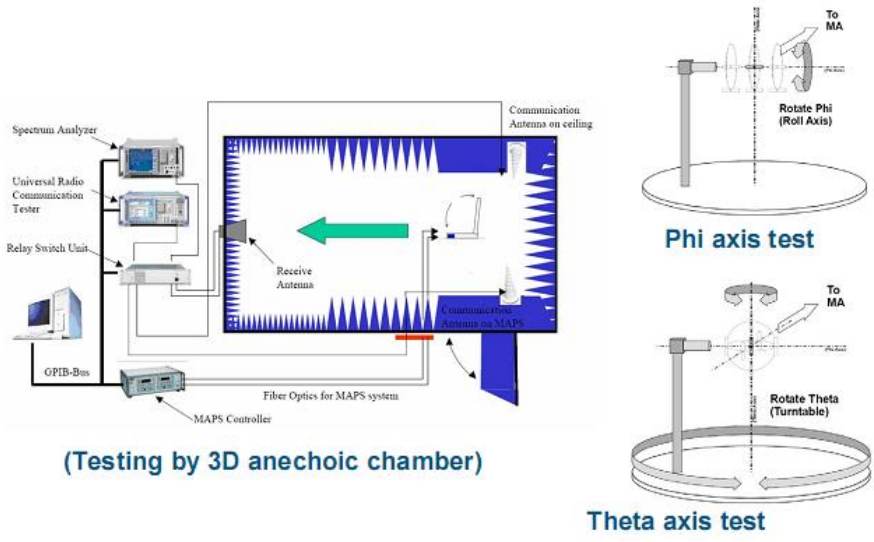


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

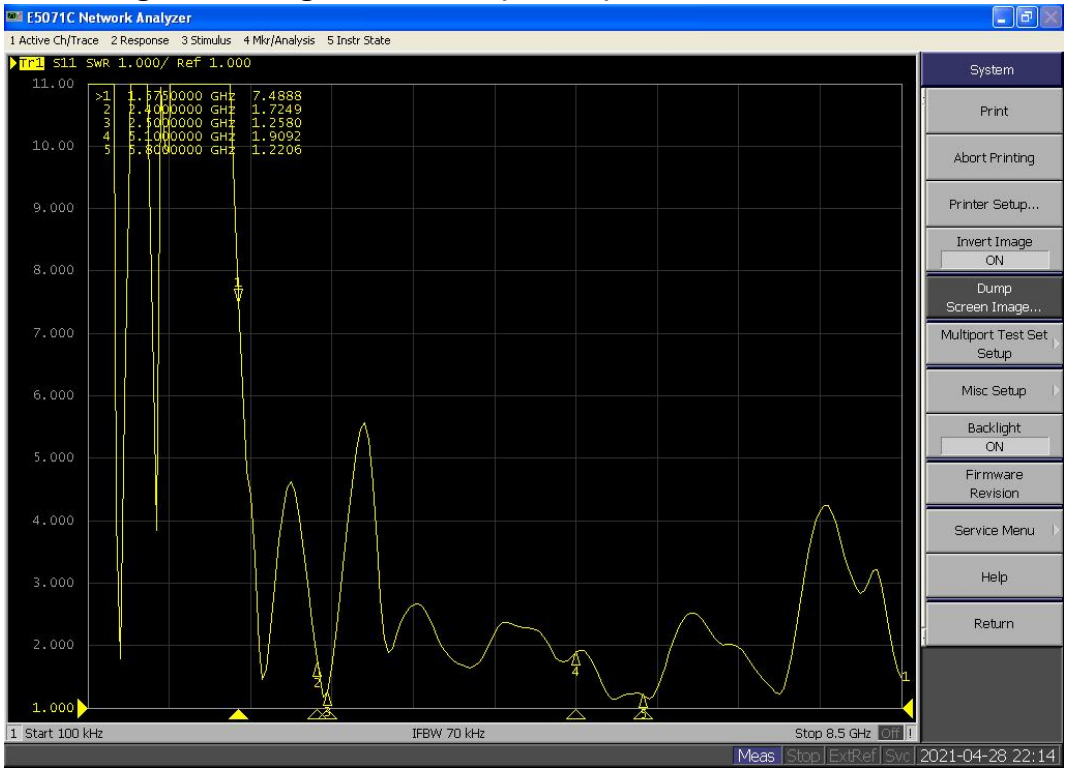


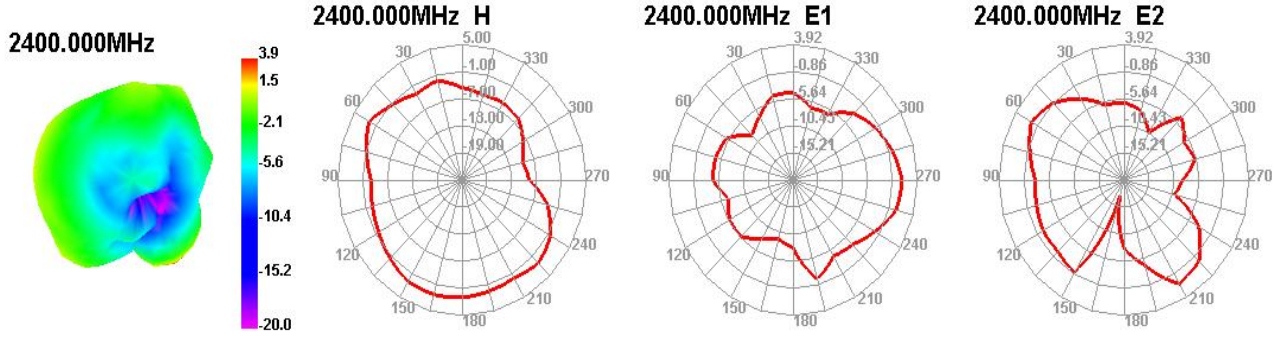
Chart 2 VSWR

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.



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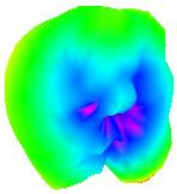
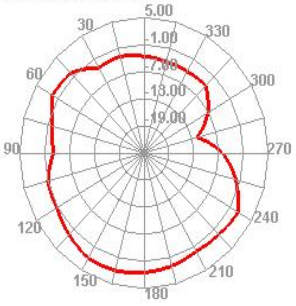
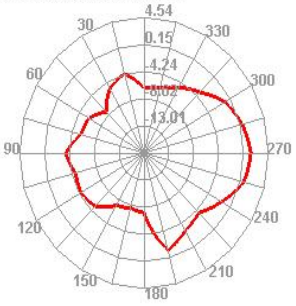
2450.000MHz



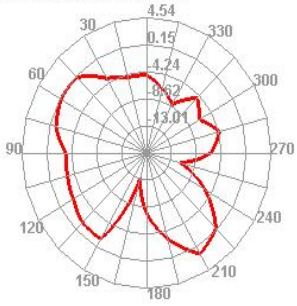
2450.000MHz H



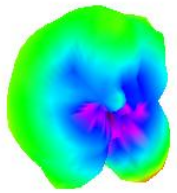
2450.000MHz E1



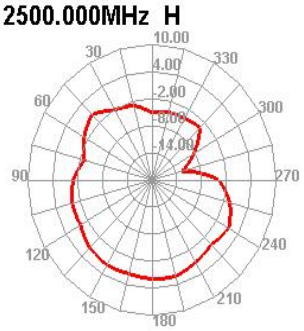
2450.000MHz E2



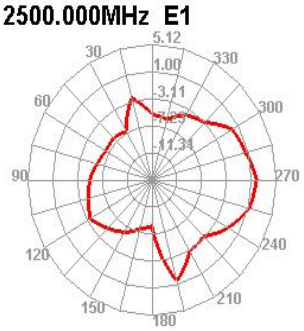
2500.000MHz



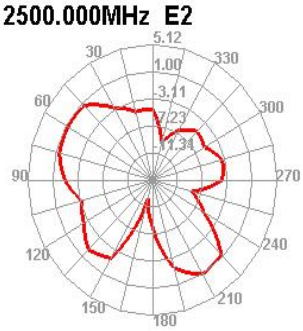
2500.000MHz H



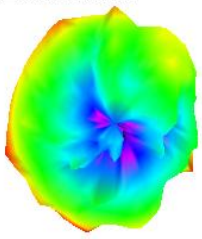
2500.000MHz E1



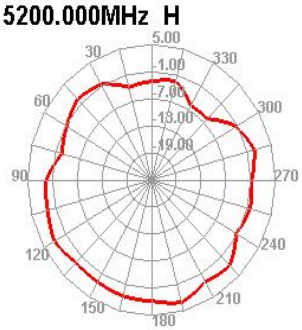
2500.000MHz E2



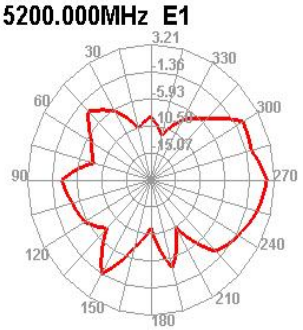
5200.000MHz



5200.000MHz H



5200.000MHz E1



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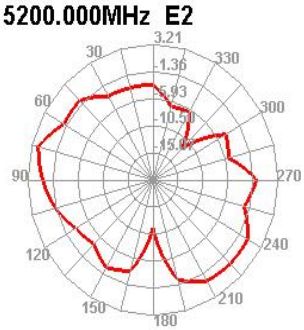
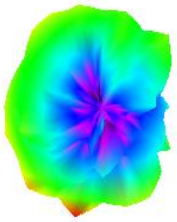


5550.000MHz



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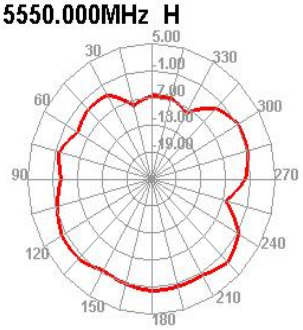
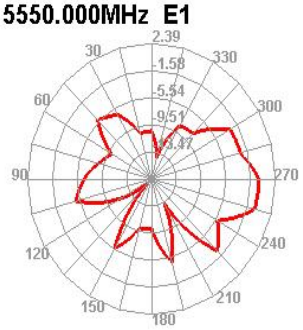
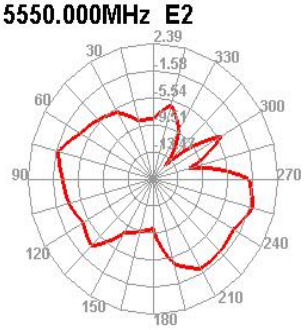


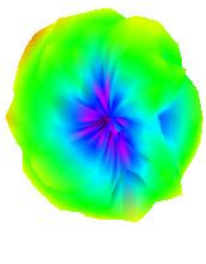
5550.000MHz E1



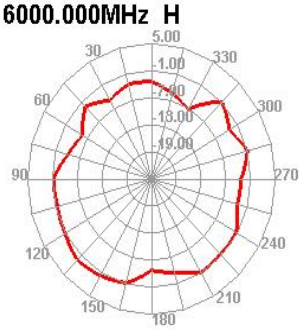
5550.000MHz E2



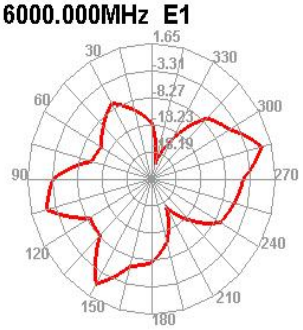
6000.000MHz



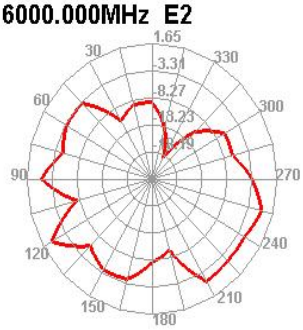
6000.000MHz H



6000.000MHz E1



6000.000MHz E2



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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 for44 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 tempto 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±2℃ 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

7.Assemble type(omit)

8.Product Drawing

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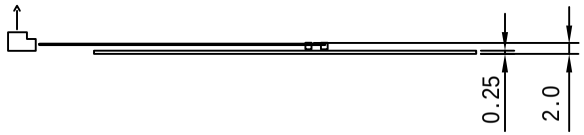
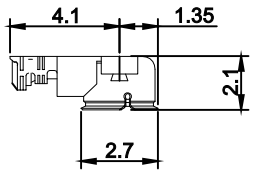
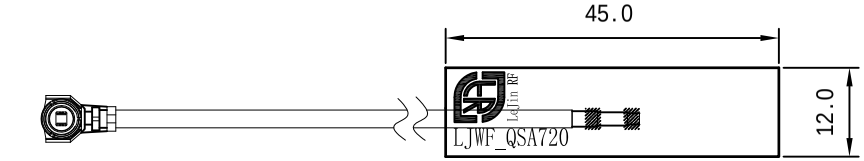
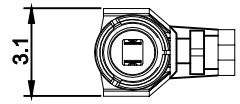
RoHS
Compliant
G P

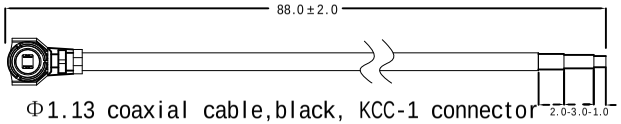






Connector direction:Up





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

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

Rev	Description	Date	Remark
A	New drawing		

深 圳 乐 进 射 频 科 技 有 限 公 司
SHEN ZHEN LEJIN RADIO FREQUENCY CO.,LTD

Third Angle				Project	Geniatech	Date	2023-07-29
0～10	±0.05	○	0.02	Part Name	WIFI ANT	Designed by	
10～18	±0.10	◎	∅0.03	Part No.		Checked by	MD RD
18～30	±0.12	⊥	0.02	Material			
30～40	±0.15	▱	0.04	Treatment	LJF02-23072908-R0A	Approved by	
40～	±0.20	Angle	±0.5°			Unit mm	Scale FIT Rev A
Location							

Remark:
1.FPC material:Electrolytic copper.
2.Backing in behind:3M300LSE.
3.Tolerance