SPECIFICATIONS FOR APPROVAL

Customer Name: Shenzhen Weichenshi Technology Co., Ltd

Product Name: WIFI/BT Antenna

Product Model:

Part Number: LJF02-25011409-R0A

Write By : FUQIANG

Issued Date: 2025-04-02

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	2025/04/02	

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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz 5150MHz ~5850 MHz
VSWR	<2.0
Efficiency	⩾30%
Impedance	50Ohm
Type	Dipole
Polarization	Linear
Gain(2.4G)	⩽2.32dBi
Gain(5G)	⩽2.07dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Green),70B
Cable Type	Φ1.13mm,L100mm,Black
Connector Type	IPX1
Dimension	48.0*8.0mm
C. Environmental	
Operation Temperature	- 30 ˚C ~ + 80 ˚C
Storage Temperature	- 30 ˚C ~ + 85 ˚C
Humidity	40%~95%

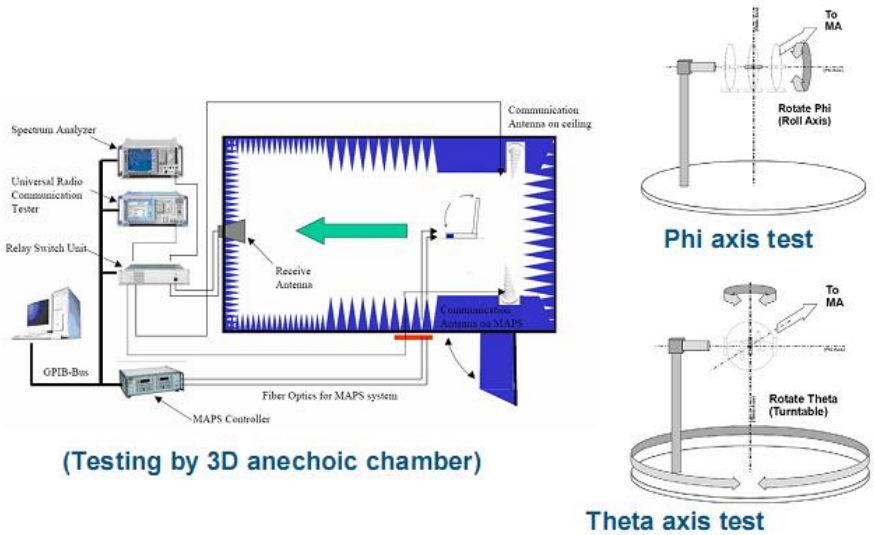
4.Test Equipment & Conditions

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



(Testing by 3D anechoic chamber)

Chart 1 Test topology

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5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

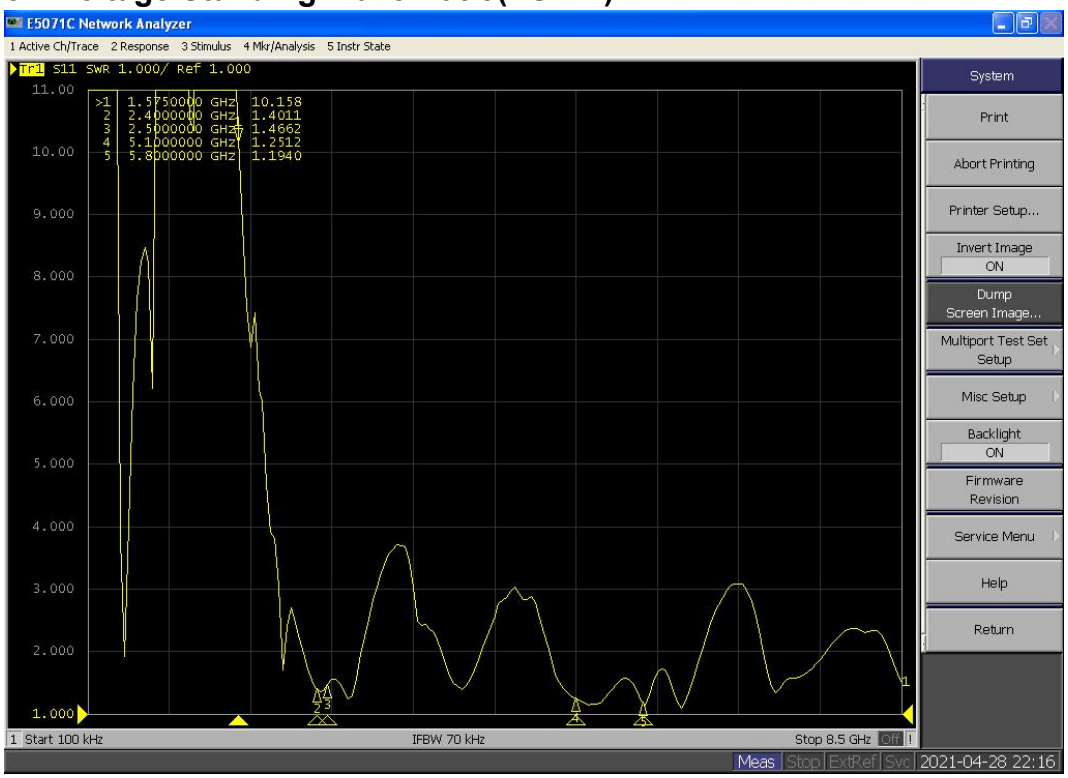


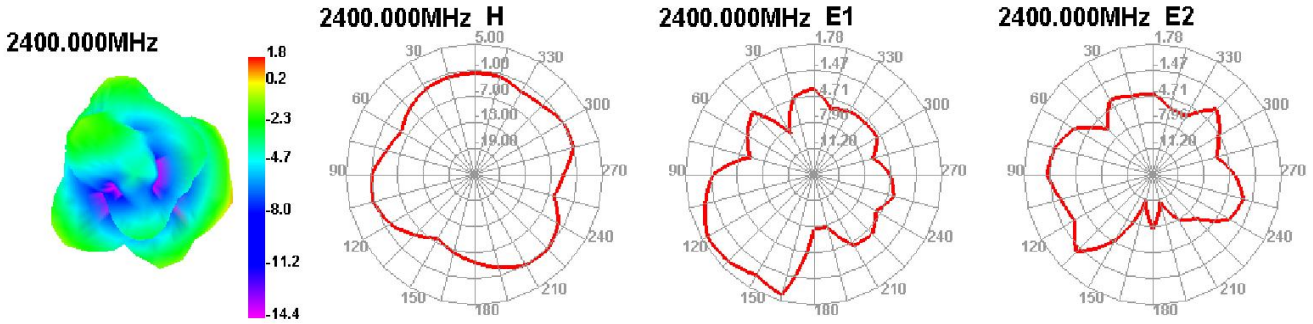
Chart 2 VSWR

5.2 Efficient and gain.

Passive Test 2.4GHz	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	45.81	44.26	47.82	47.20	53.84	47.12	46.80	50.33	48.06	62.25	53.04
	Gain(dBi)	1.78	1.71	1.66	2.32	1.93	1.89	1.55	2.08	2.10	2.41	2.37

Passive Test For WIFI 5G	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850	5900	5950	6000
	Effi(%)	39.19	37.05	42.91	39.76	42.53	43.98	42.88	42.47	39.24	42.22	40.94	42.80	40.43	41.64	46.47	34.40	32.54	45.08
	Gain(dBi)	2.07	1.83	1.71	1.54	1.31	1.26	0.80	0.79	0.59	0.85	0.73	0.77	1.07	0.99	0.82	0.79	0.93	0.76

5.3 Radiation pattern.



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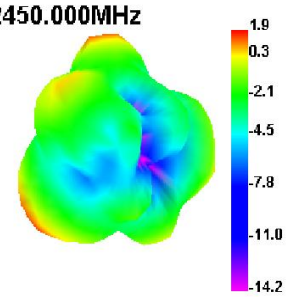
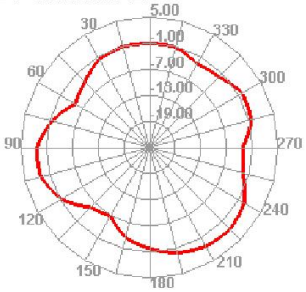
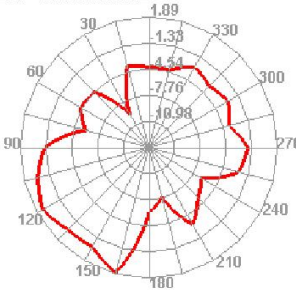
2450.000MHz



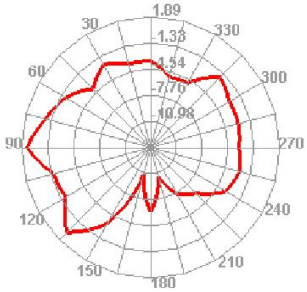
2450.000MHz H



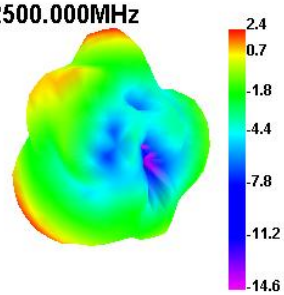
2450.000MHz E1



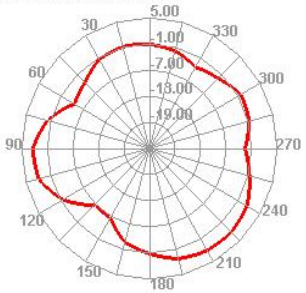
2450.000MHz E2



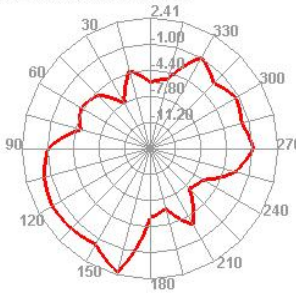
2500.000MHz



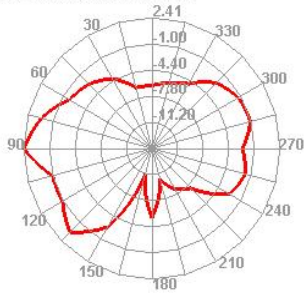
2500.000MHz H



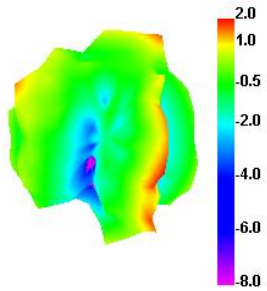
2500.000MHz E1



2500.000MHz E2



5150.000MHz



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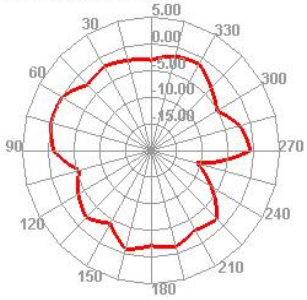
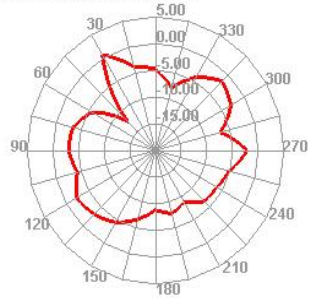
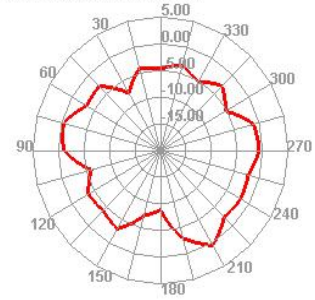


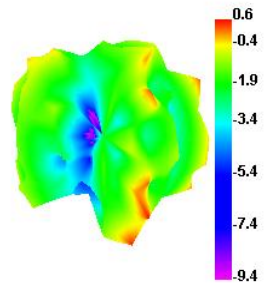
5150.000MHz E1



5150.000MHz E2



5550.000MHz



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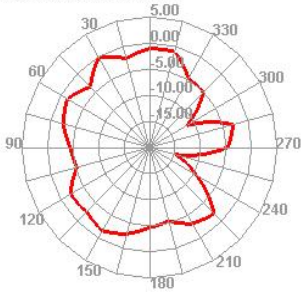
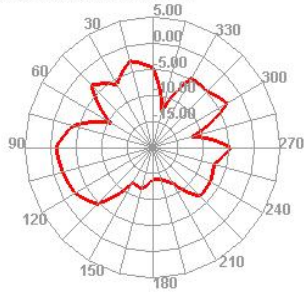
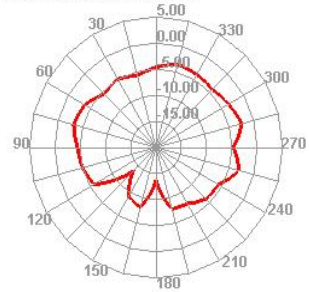


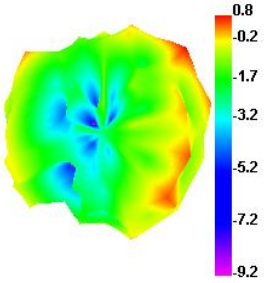
5550.000MHz E1



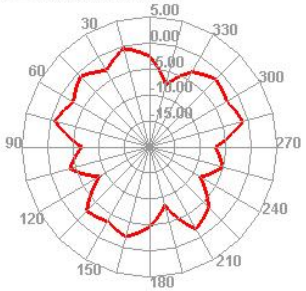
5550.000MHz E2



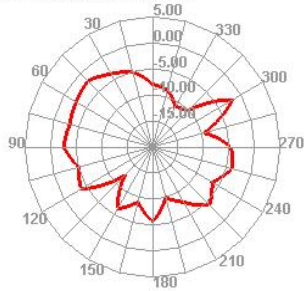
6000.000MHz



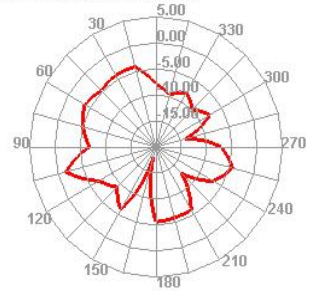
6000.000MHz H



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

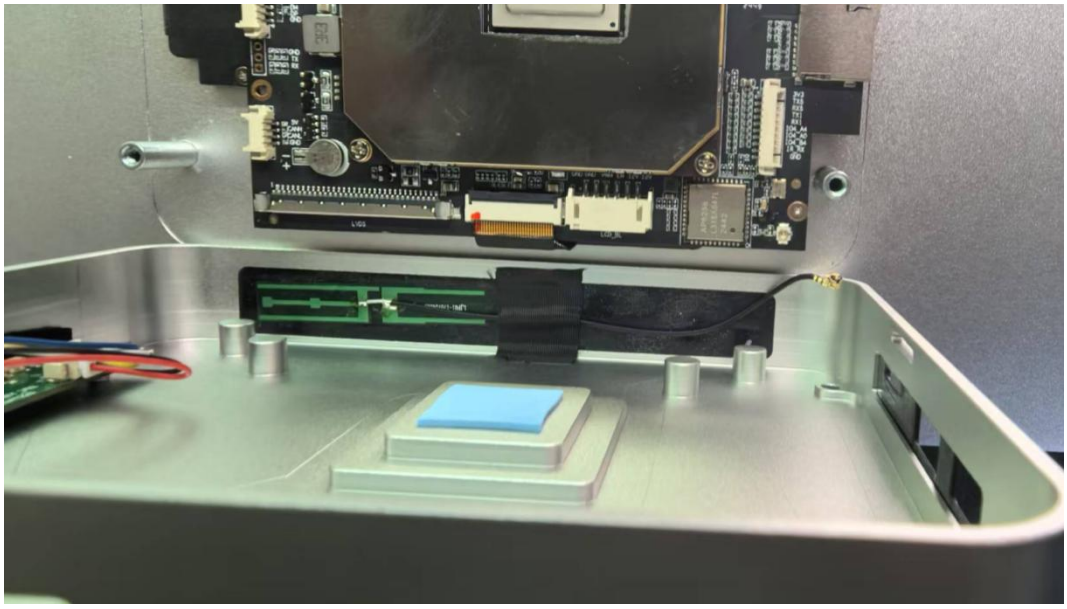

Chart 3 Assemble type

8.Product Drawing

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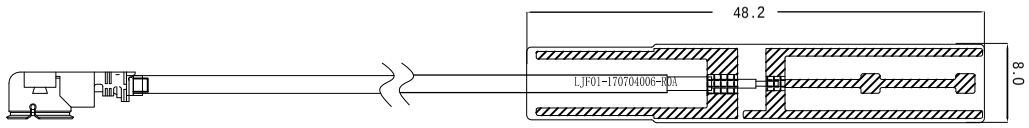
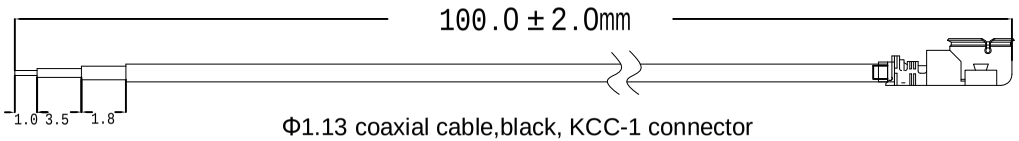
RoHS
Compliant
G P





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.

Revise record				
	1			
	2			
	3			

Rev	Description	Date	Remark
A	New drawing		

SHEN ZHEN LEJIN RADIO FREQUENCY CO.,LTD

Third Angle				Project	维辰思	Date	2025-04-02		
0～10	±0.05	○	0.02	Part Name	WIFI/BT ANT	Designed by			
10～18	±0.10	◎	∅0.03	Part No.		Checked by	MD		
18～30	±0.12	⊥	0.02	Material			RF		
30～40	±0.15	▱	0.04			Approved by			
40～	±0.20	Angle	±0.5°	Treatment	LJF02-25011409-R0A	Unit	mm	Scale	FIT	Rev	A
Location									