



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: SHENZHEN ELECTRON TECHNOLOGY CO.,LTD

Product Name: WIFI Antenna

Product Model: WH1012T/WH1018T

Part Number: LJF01-20071707A-R0A

Write By : Huxuwen

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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)	≤2.0dB
Gain(5GHz)	≤2.5dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF28A
Cable Type	Φ1.13mm,L120mm,Black
Connector Type	IPX1
Dimension	25.0*13.0mm
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 | |

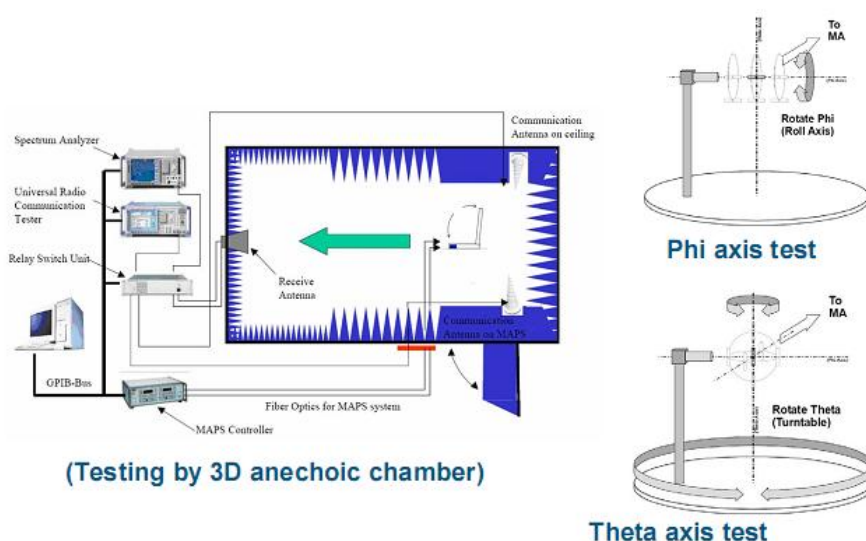


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

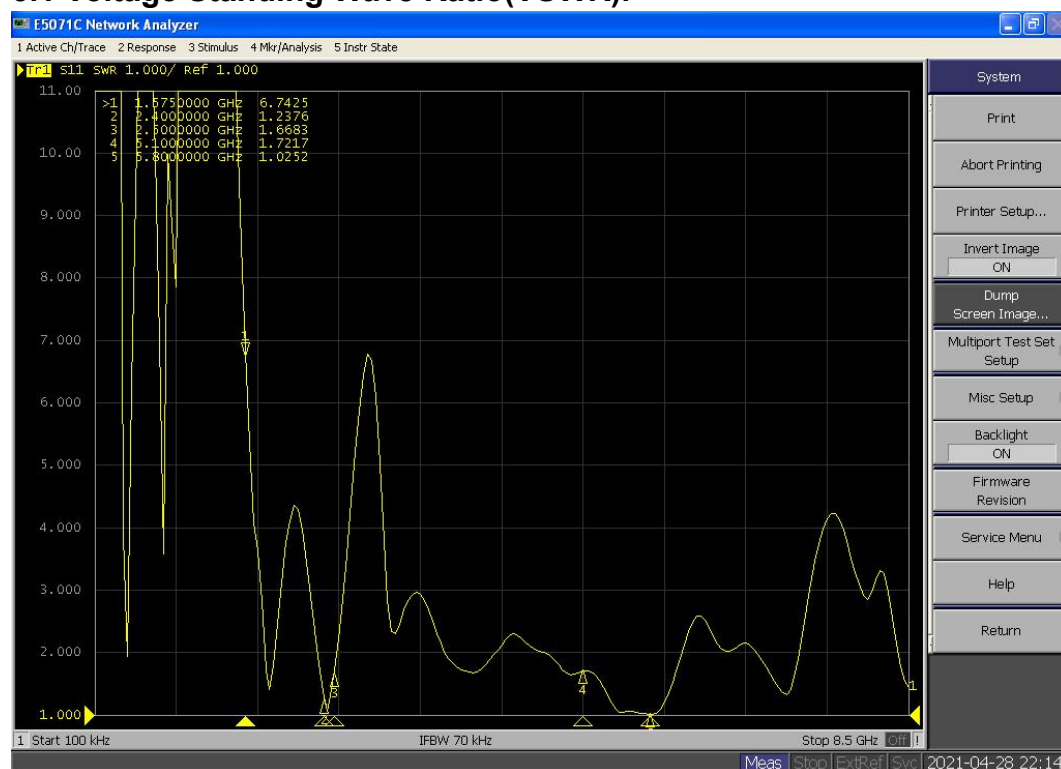


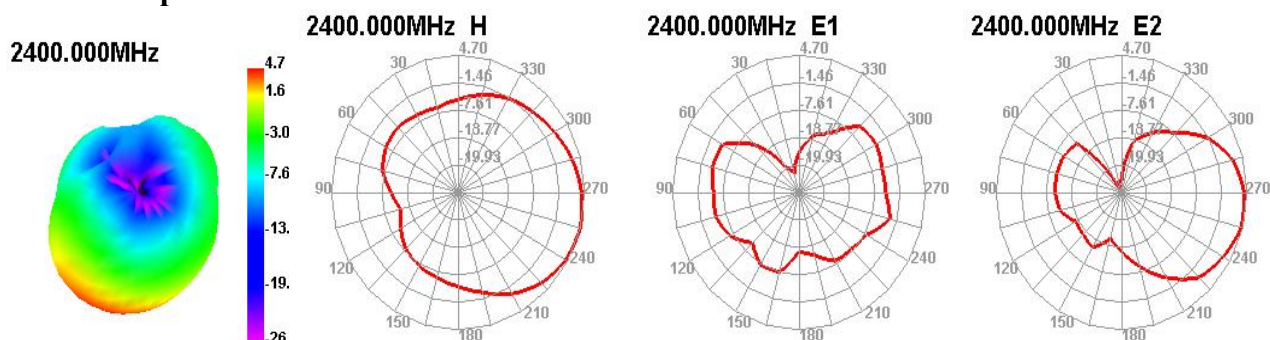
Chart 2 VSWR

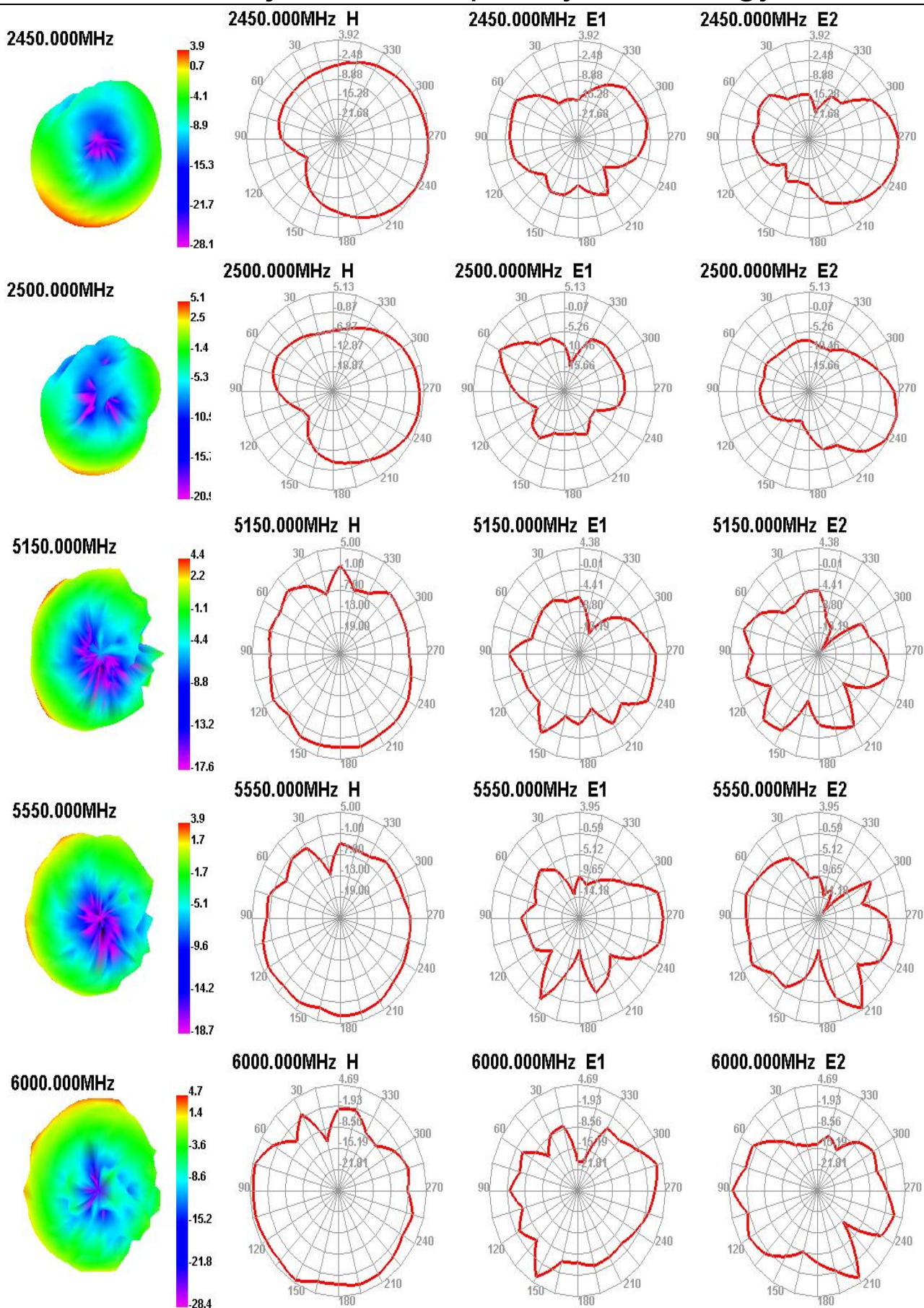
5.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test For 2.4G	Effi(%)	45.81	49.26	50.82	57.20	53.84	57.12	53.80	60.33	58.06	62.25	63.04
	Gain(dBi)	1.89	1.91	1.96	1.95	1.89	1.83	1.95	1.88	1.91	1.84	1.71

Passive	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Test For WIFI 5G	Effi(%)	50.24	55.24	53.29	52.97	59.70	56.72	60.57	56.66	52.24	56.34	55.62	53.11	54.97	55.56	56.86
	Gain(dBi)	2.20	2.42	2.36	2.38	2.41	2.40	2.44	2.31	2.37	2.41	2.32	2.25	2.43	2.47	2.48

5.3 Radiation pattern.





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

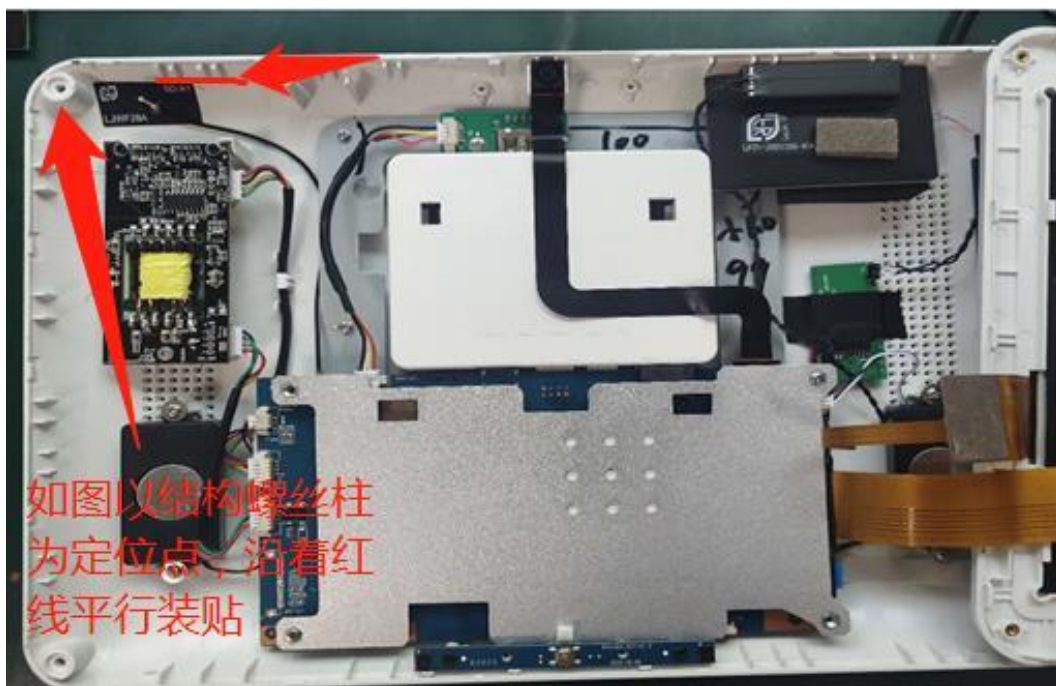
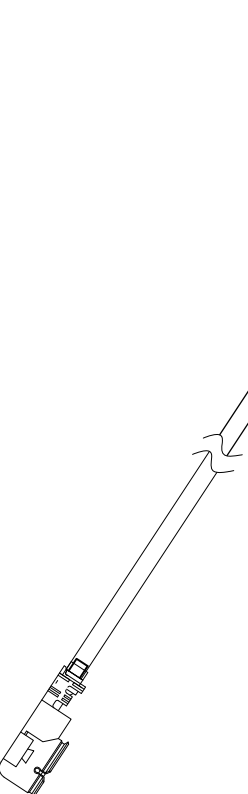
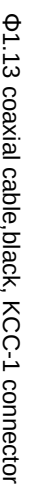


Chart 3 WH1012T/WH1016T/WH1018T assemble type

8. Product Drawing



120.0 ± 2.0mm



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),<1000ppm; Cd,<100ppm.

SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

Revise
record

Third Angle

Part Name	Designed by
WIFI ANT	

Material	checked by	RF
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Unit	mm	Scale	Rev	FTT	Unit
mm	mm	mm	mm	mm	mm
