



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: SHENZHEN ELECTRON TECHNOLOGY CO.,LTD

Product Name: WIFI Antenna

Product Model: WL1303T/WL1503T/WL1703T/WL1312T/WL1316T/WL1318T

Part Number: LJW01-19112002-R0A

Write By : Huxuwen

Issued Date: 2019-11-20

CUSTOMER

REV	MODIFIED DESCRIPTION	DATE	REMARK
V1.0	Initial Draft Release	2019/11/20	
V1.1	Support new model WL1316T/WL1318T	2022/10/20	



Index

1. Cover	1
2. Index	2
3. Product Specification	3
4. Test Equipment & Conditions	3
5. Test Report	4
6. Reliability Test	5
7. Assemble type	6
8. Product Drawing	7



3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	≥40%
Impedance	50Ohm
Polarization	Linear
Gain(2.4GHz)	≤2.02dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF20M
Cable Type	Φ1.13mm,L60mm,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

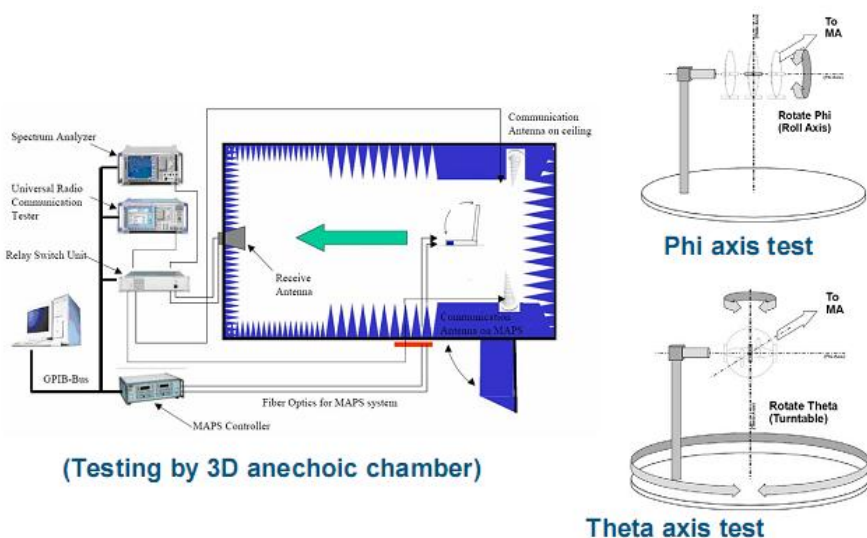


Chart 1 Test topology



5. Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

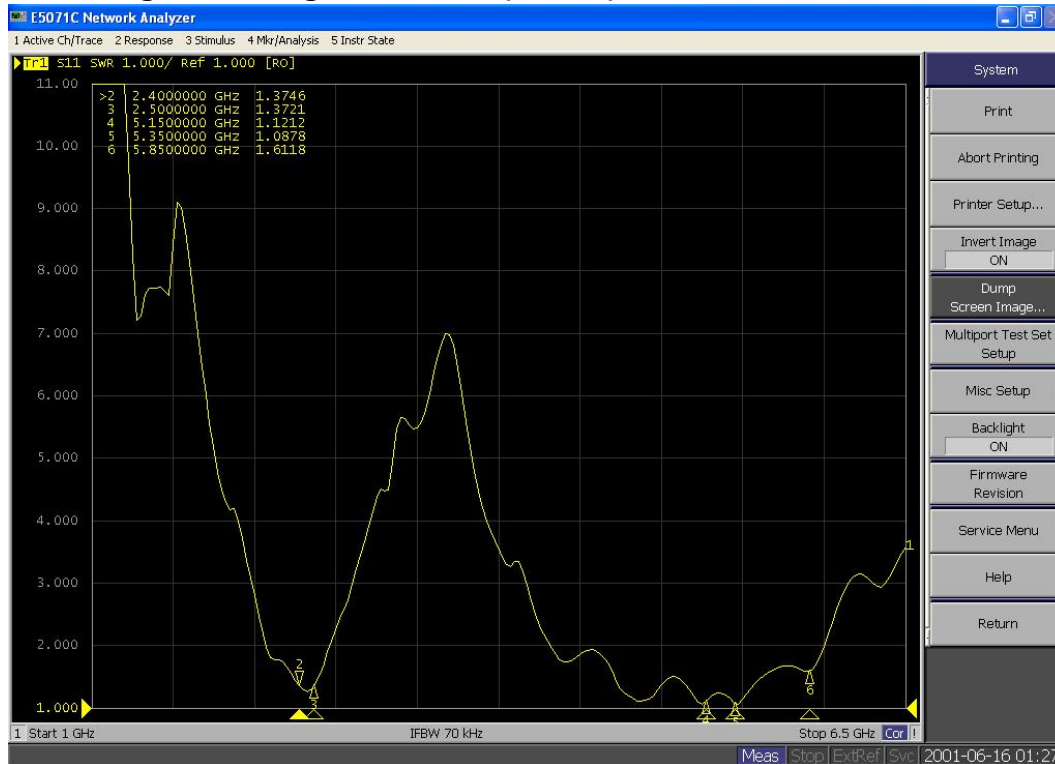
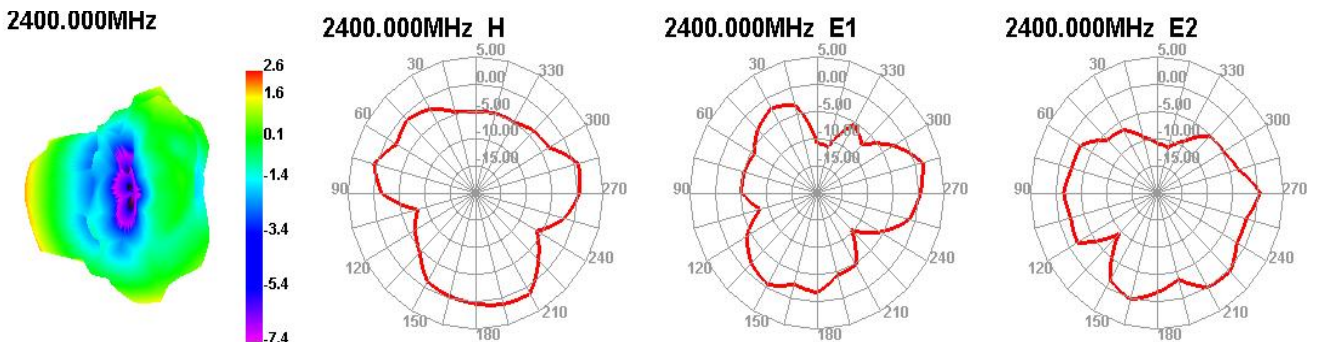


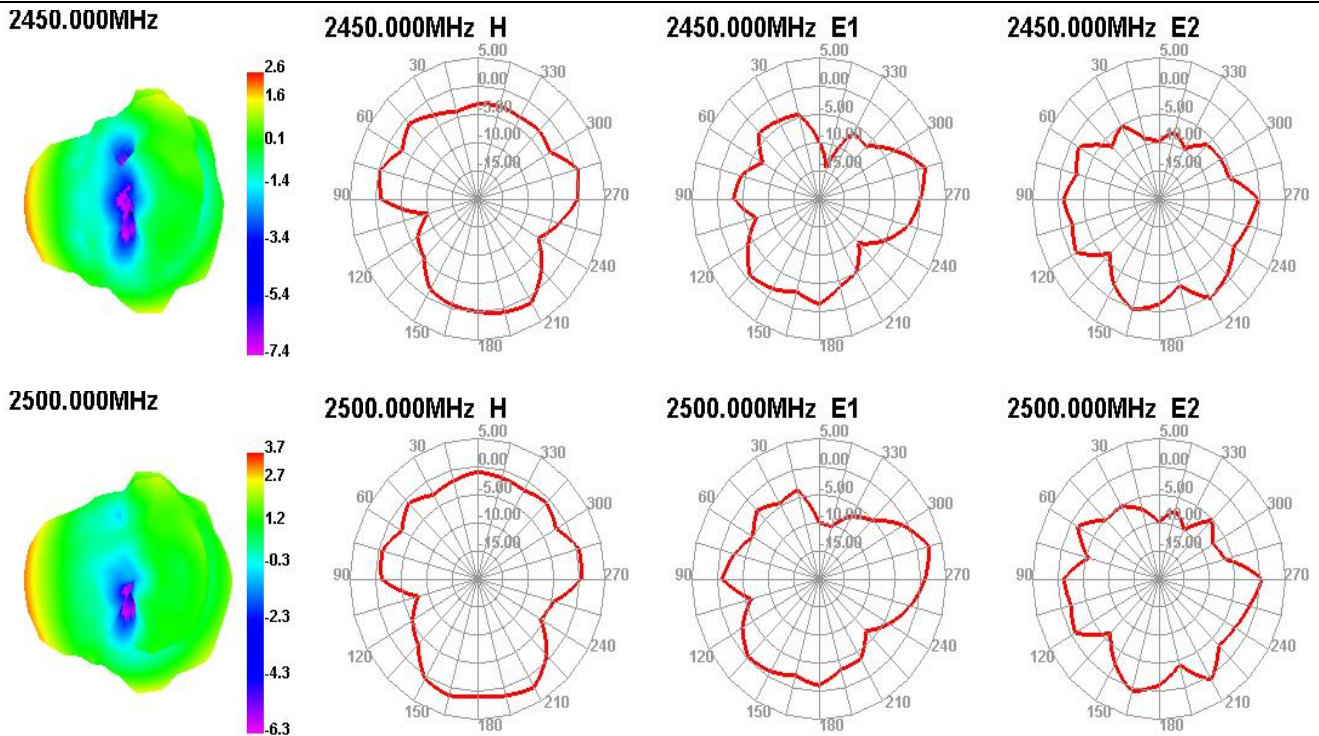
Chart 2 VSWR

5.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test For 2.4G	Effi(%)	47.64	49.38	47.26	50.93	48.67	54.61	54.68	50.10	55.88	46.01	41.10
	Gain(dBi)	1.86	1.92	1.89	1.87	1.98	1.97	2.00	2.02	1.91	1.92	1.48

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±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 WL1303T/WL1316T/WL1318T assemble type

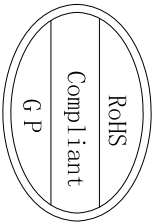


Chart 4 WL1506T assemble type

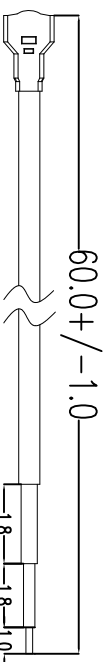
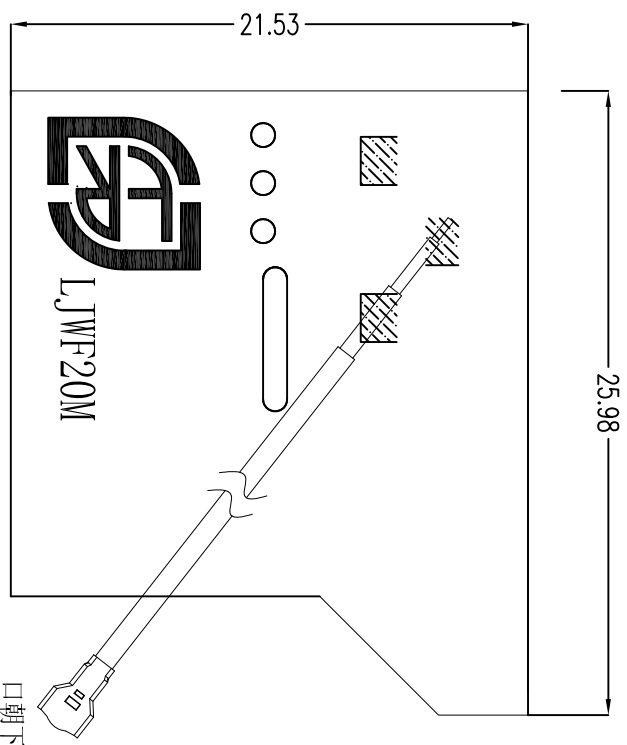


Chart 5 WL1703T assemble type

8.Product Drawing



此图适用于
ELC:WL1703T/WL1506T/WL1303T



- 要求:
1. “*”为重点尺寸.
 2. FPC材料: 电解铜, PI-18/25材质 (蔡伦格帝).
 3. 反面背胶 (3M300LSE).
 4. 未标公差尺寸请依图纸, 模具冲出尺寸公差为±0.1, 铜箔线条尺寸公差为±0.05, 标重点的孔公差为±0.05.
 5. 各零件中Pb、Hg、Cr+6、PBBs、PBDEs各项小于1000PPM, Cd小于100PPM.

Rev	Description	Date	Remark
1	New drawing		

		深圳乐进射频频科技术有限公司 SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD	
0~10 10~18 18~30 30~40 40~	±0.05 ±0.10 ±0.12 ±0.15 ±0.20	Third Angle <input type="radio"/> 0.02 <input checked="" type="radio"/> 0.03 <input type="radio"/> 0.02 <input type="radio"/> 0.04 <input type="radio"/> ±0.5°	Project Part Name Part No. Material Treatment
		ELC LJF01-19112002-R0A	
		Date 2019-11-20	
		Designed by Checked by RF	
		Approved by Unit mm Scale FIT Rev A	