



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	



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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 | |

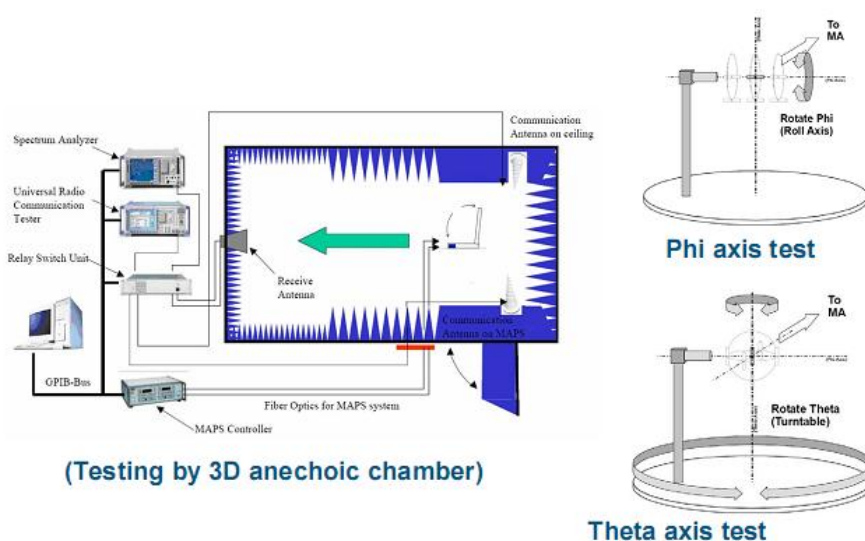


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

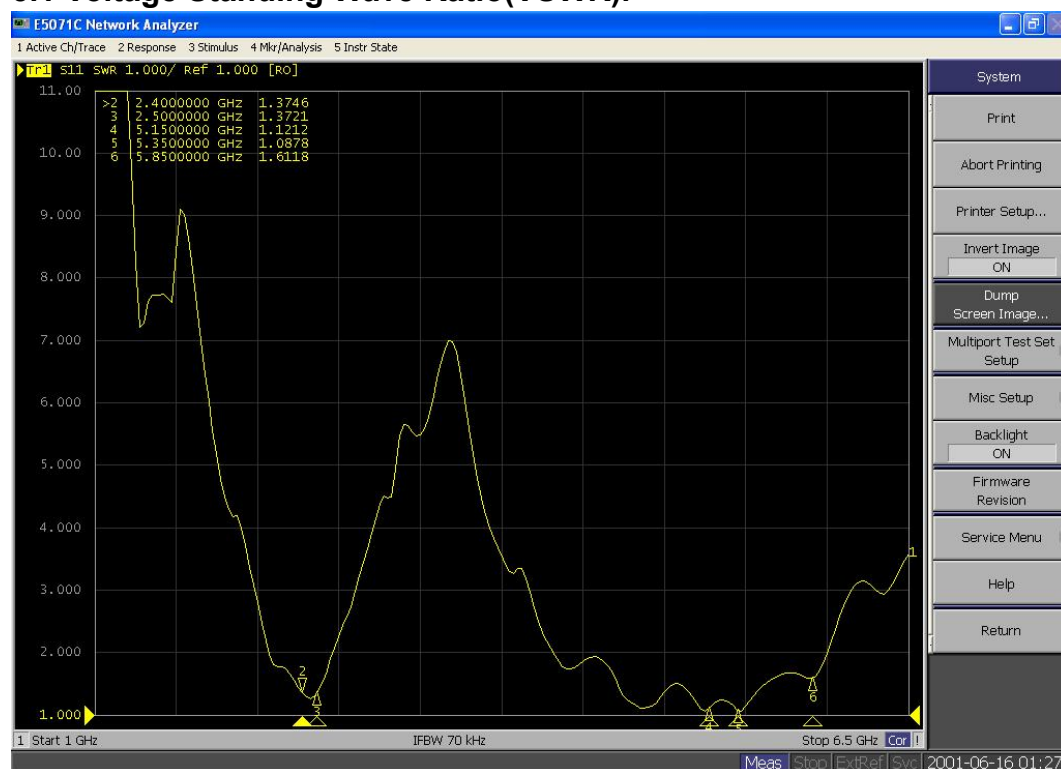
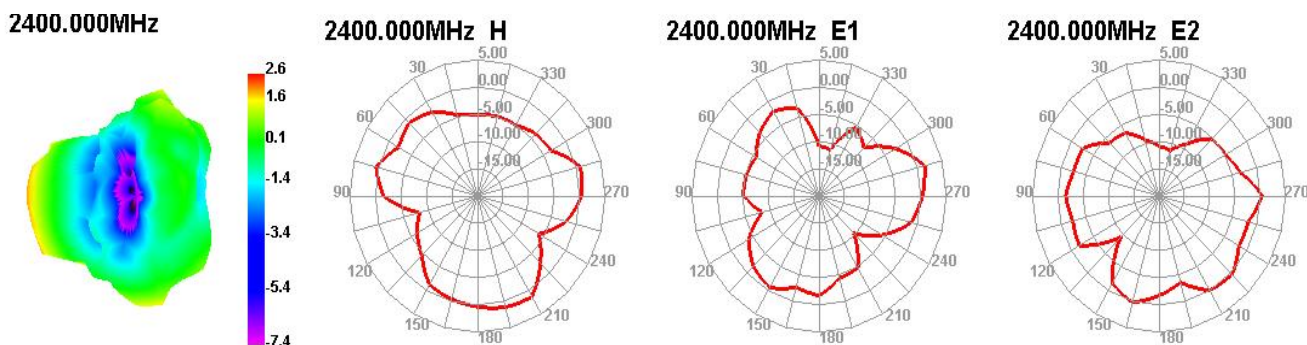


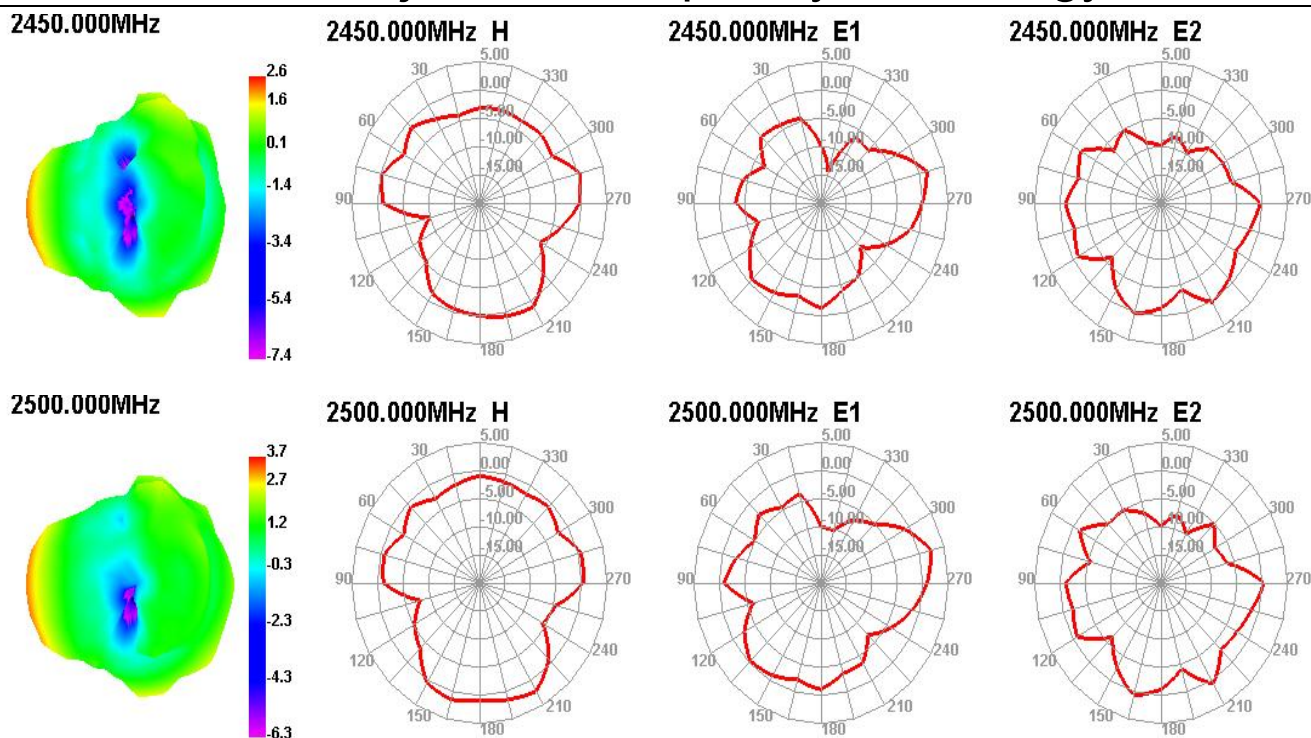
Chart 2 VSWR

5.2 Efficient and gain.

Passive Test For 2.4G	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	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

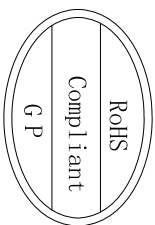


Chart 4 WL1506T assemble type



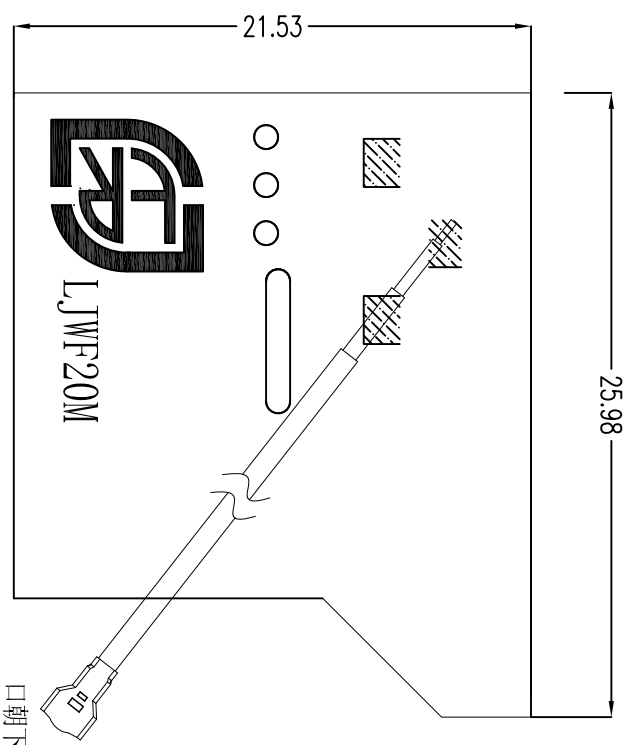
Chart 5 WL1703T assemble type

8.Product Drawing



此图适用于

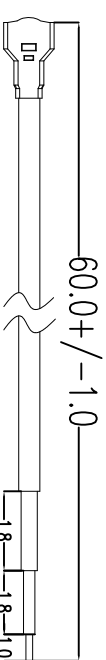
ELC:WL1703T/WL1506T/WL1303T



- 25.98

LJWF20M

口朝下



1.13 黑色银锡线一代端子

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 。各零件中Pb、Hg、Cr+6、PBBs、PBDE各项小于1000PPM，Cd小于100PPM。

深圳乐进射频科技有限公司 SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

Third Angle		Project	ELC	Date	2019-11-20	
0~10	±0.05	○	0.02	Part Name		
10~18	±0.10	◎	∅0.03	Part No.	MD	
18~30	±0.12	⊥	0.02	Checked by	RF	
30~40	±0.15	∇	0.04			
40~	±0.20	Angle	±0.5°	Material		
				LJ[F01-19112002-R0A	Approved by	

[illegible]