



Shenzhen Lejin radio frequency technology Co., LTD

## SPECIFICATIONS FOR APPROVAL

Customer Name: SHENZHEN ELECTRON TECHNOLOGY CO.,LTD

Product Name: WIFI Antenna

Product Model: WL1012T/WL1016T

Part Number: LJF01-19041901-R0A

Write By : Huxuwen

Issued Date: 2019-04-19

### CUSTOMER

REV	MODIFIED DESCRIPTION	DATE	REMARK
V1.0	Initial Draft Release	2019/04/19	
V1.1	Support new model WL1016T	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)	≤1.99dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF28C
Cable Type	Φ1.13mm,L100mm,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

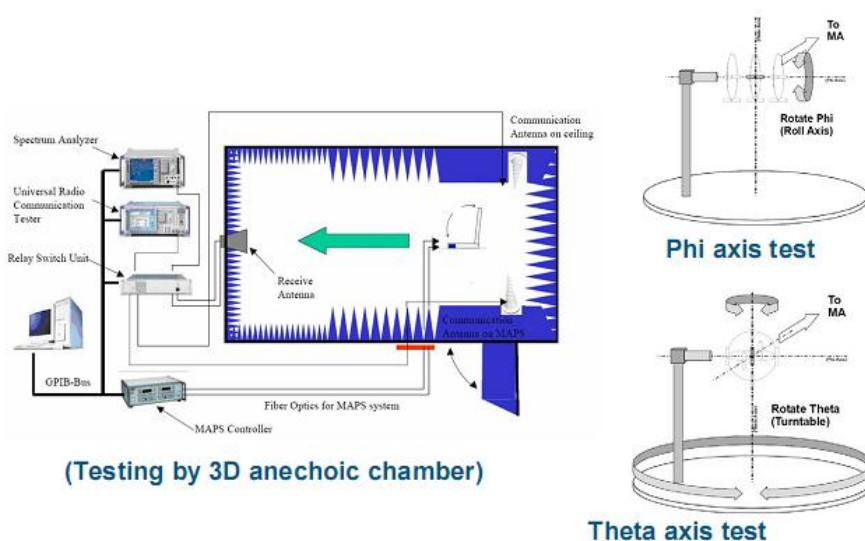


Chart 1 Test topology

## 5.Test Report

### 5.1 Voltage Standing Wave Ratio(VSWR).

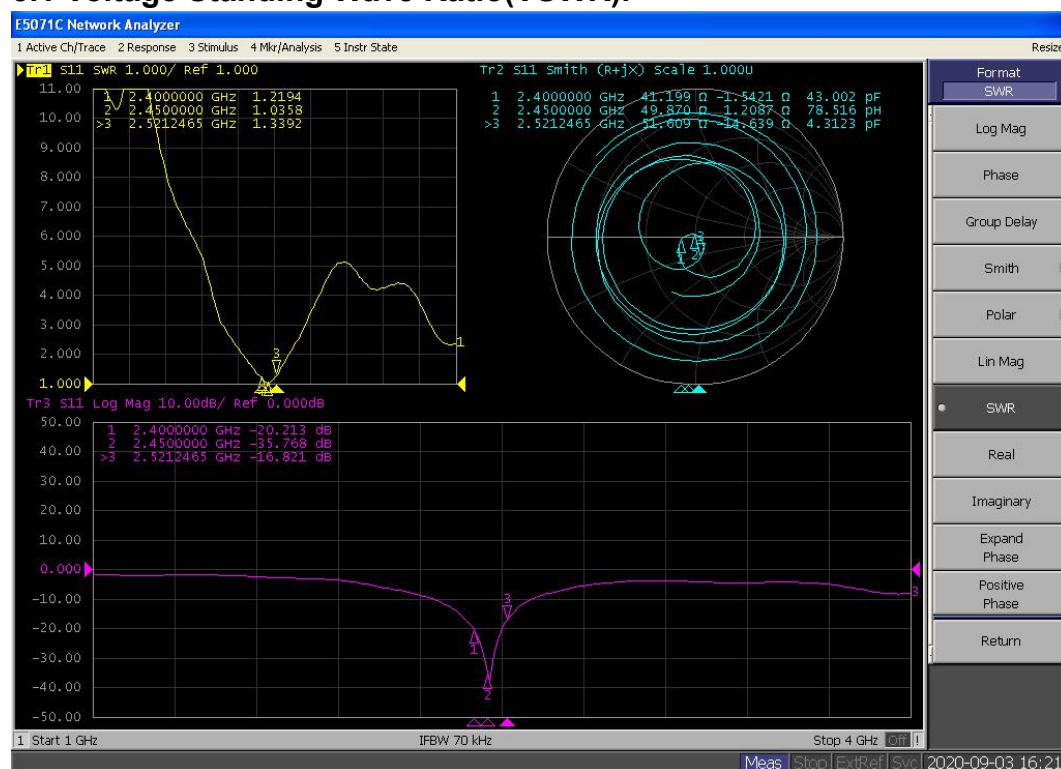
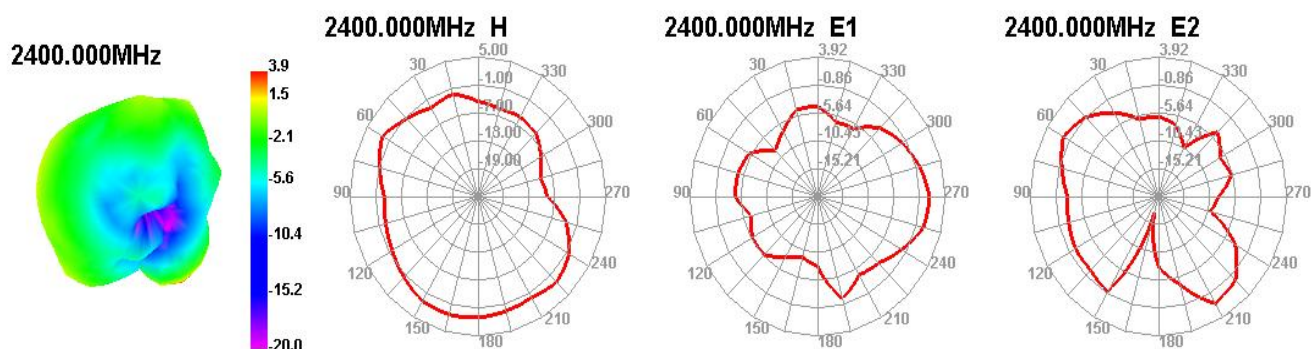


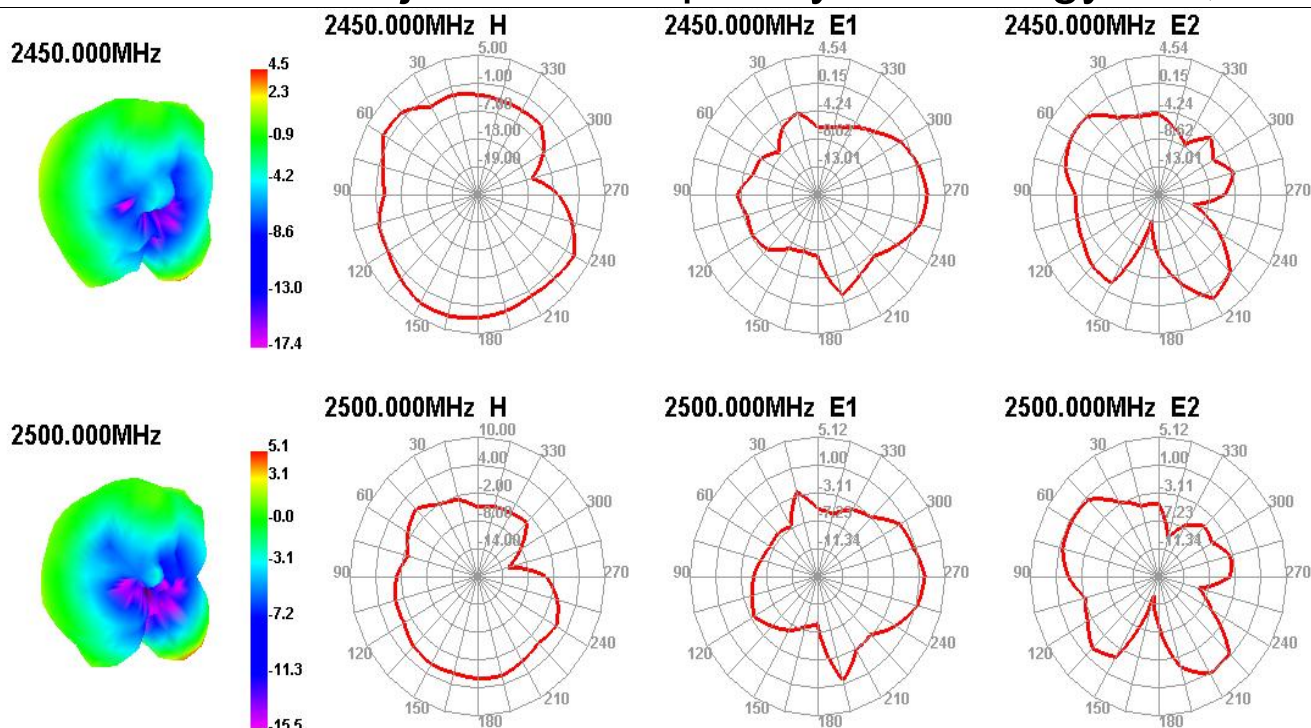
Chart 2 VSWR

### 5.2 Efficient and gain.

Passive Test For 2.4G	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	49.63	47.27	45.06	48.89	47.57	50.64	49.99	52.53	50.40	52.25	46.44
	Gain(dBi)	1.78	1.81	1.99	1.76	1.93	1.95	1.89	1.91	1.85	1.85	1.40

### 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

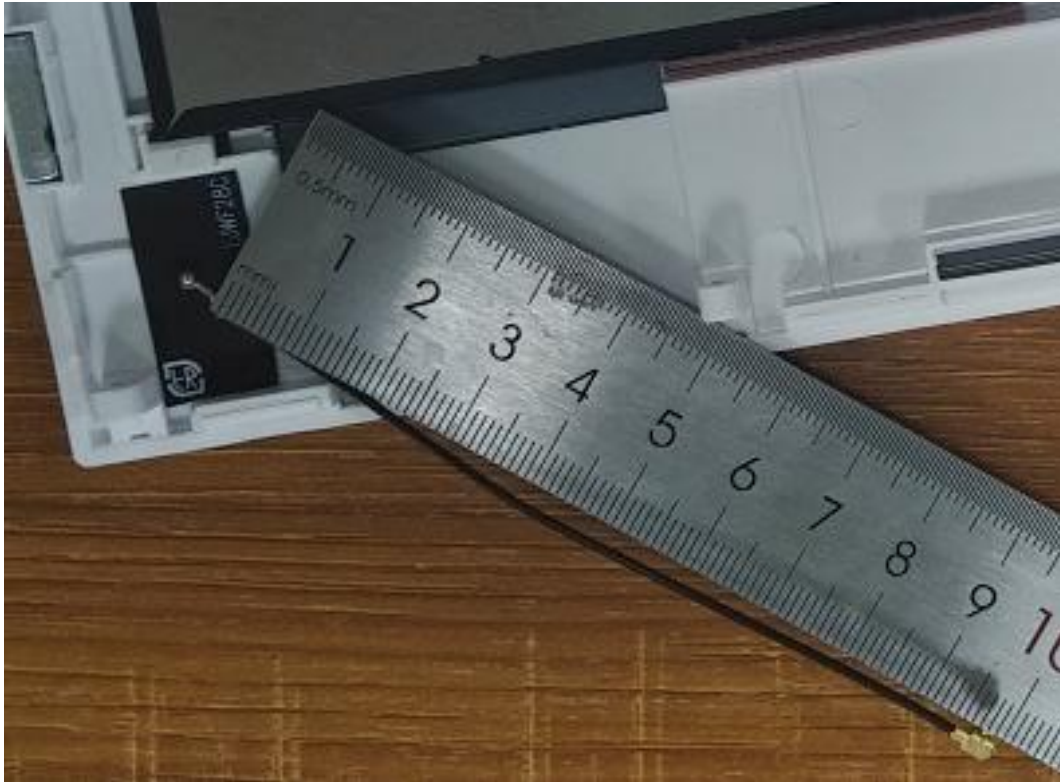


Chart 3 WL1012T/WL1016T assemble type

## 8.Product Drawing

1

2

3

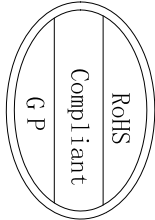
由 Autodesk 教育版产品制作

6

7

8

A

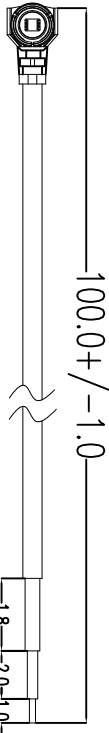
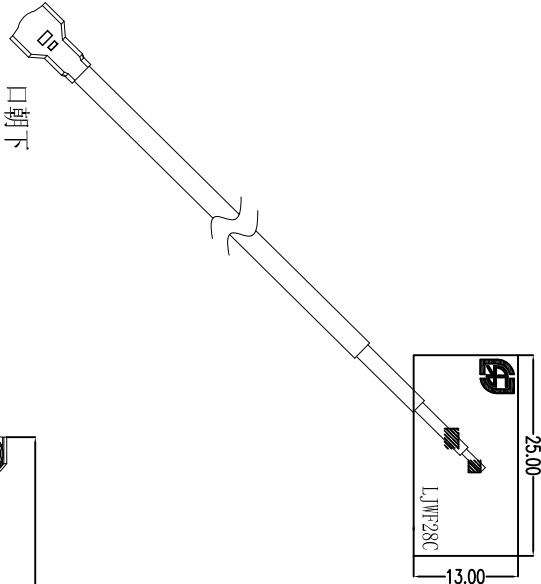


此PVC为焊接类型的PVC，  
油墨需耐300° 以上高温

A

由 Autodesk 教育版产品制作

由 Autodesk 教育版产品制作



要求:

1. “\*”为重点尺寸.
2. FPC材料: 电解铜, 一对半材质 (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.


D

D



深圳乐进频科有限公司

SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

5. 各零件中Pb、Hg、Cr+6、PBBS、PBDEs各项小于1000PPM, Cd小于100PPM.														
					Third Angle	Project	ELC	Date	2019-04-19					
				0~10	±0.05	○	0.02	Part Name	WIFI_双频 ANT		Designed by			
				10~18	±0.10	◎	Ø0.03	Part No.			Checked by	MD		
				18~30	±0.12	┘	0.02	Material			RF			
A	New drawing			30~40	±0.15	▱	0.04							
				40~	±0.20	Angle	±0.5°							
				Location										
Rev	Description			Date	Remark	Treatment	LJ[F00-19041901-r0A	Approved by						
1	2	3						Unit	mm	Scale	FIT	Rev	A	
非门制品教育版														
6														
7														
8														