Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: Shenzhen Creality 3D Technology Co.,LTD

Product Name: WIFI Antenna

Product Model: CL-103

Part Number: LJF02-21051910-R1A

Write By : Huxuwen

Issued Date: 2021-05-19

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	2021/05/19	
V1.1	Revise the spec of cable	2023/02/28	

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3.Product Specification

A. Electrical Characteristics	
Frequency	**2400MHz ~2500 MHz**
VSWR	**<2.0**
Efficiency	**>60%**
Impedance	**50Ohm**
Polarization	**Linear**
Gain	**>=1.8dB**
B. Material & Mechanical Characteristics	
Material of Radiator	**FPC(Green),70B**
Cable Type	**Φ1.37mm,L500mm,Black**
Connector Type	**IPX1**
Dimension	**48.3*8.25mm**
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

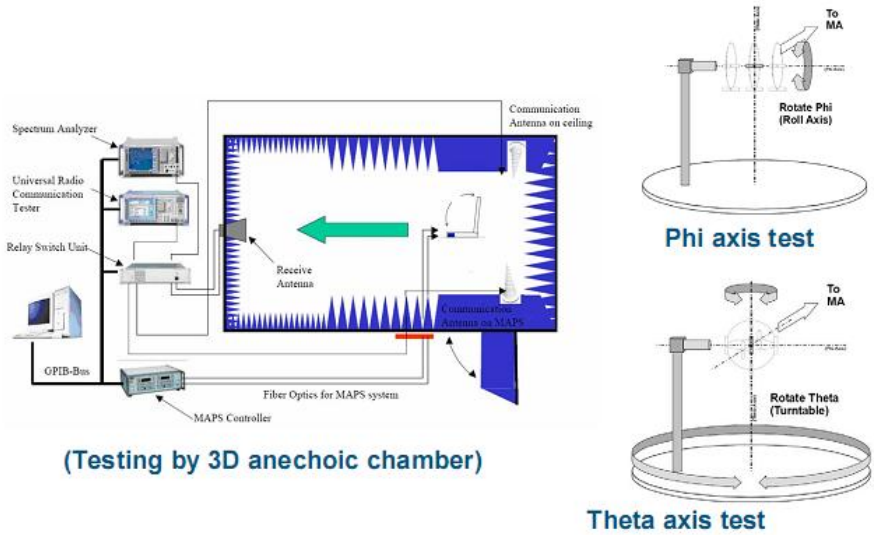

Chart 1 Test topology

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5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

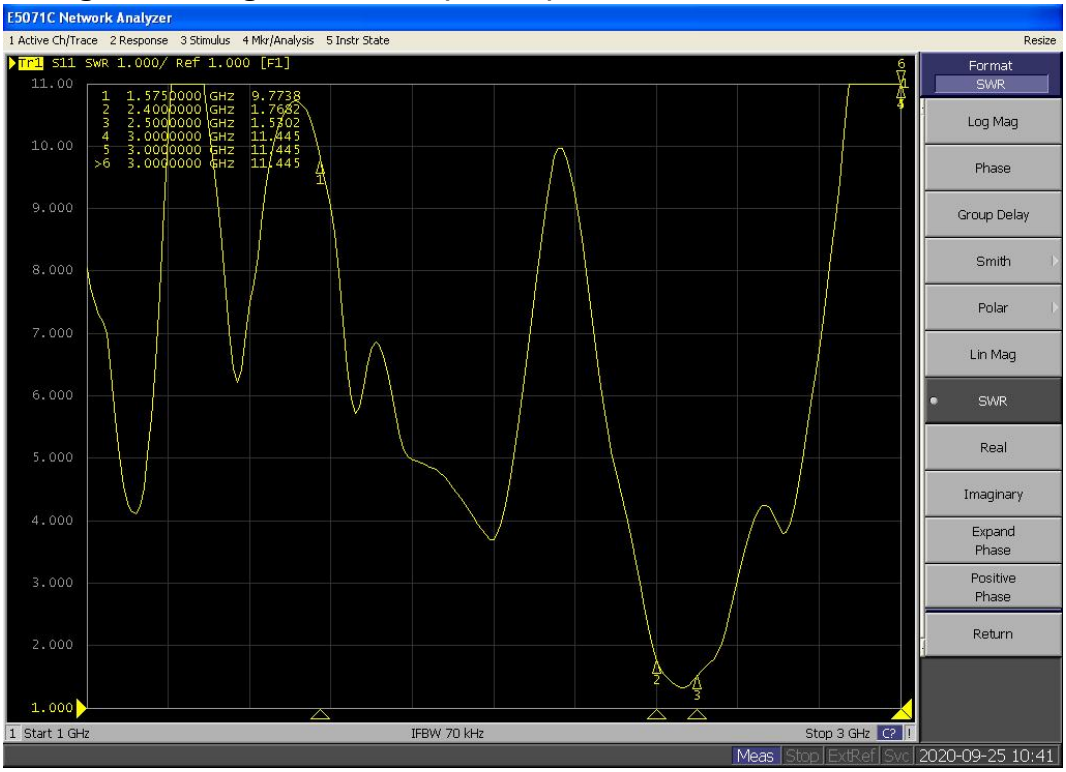
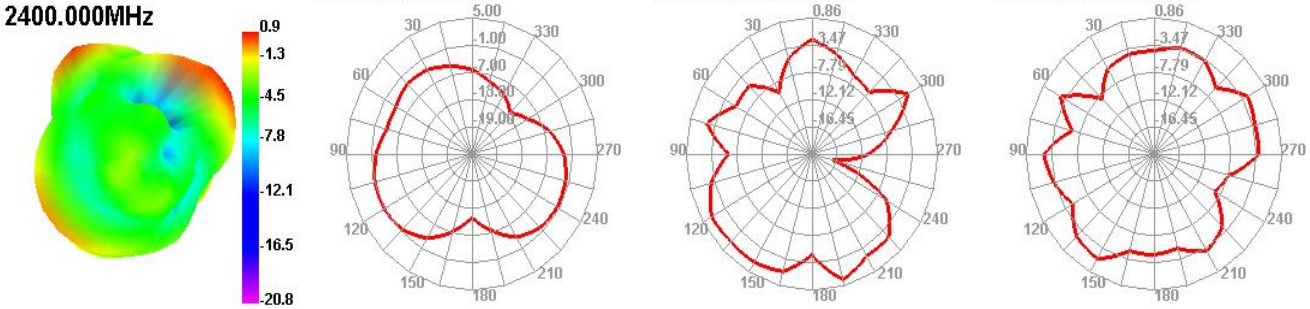


Chart 2 VSWR

5.2 Efficient and gain.

Passive Test For WIFI 2.4G	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	67.47	69.42	72.23	73.69	70.52	71.04	65.51	68.02	65.23	60.17	53.71
	Gain(dBi)	1.88	2.03	2.20	2.24	2.12	2.19	2.04	2.02	1.87	1.92	1.69

5.3 Radiation pattern.



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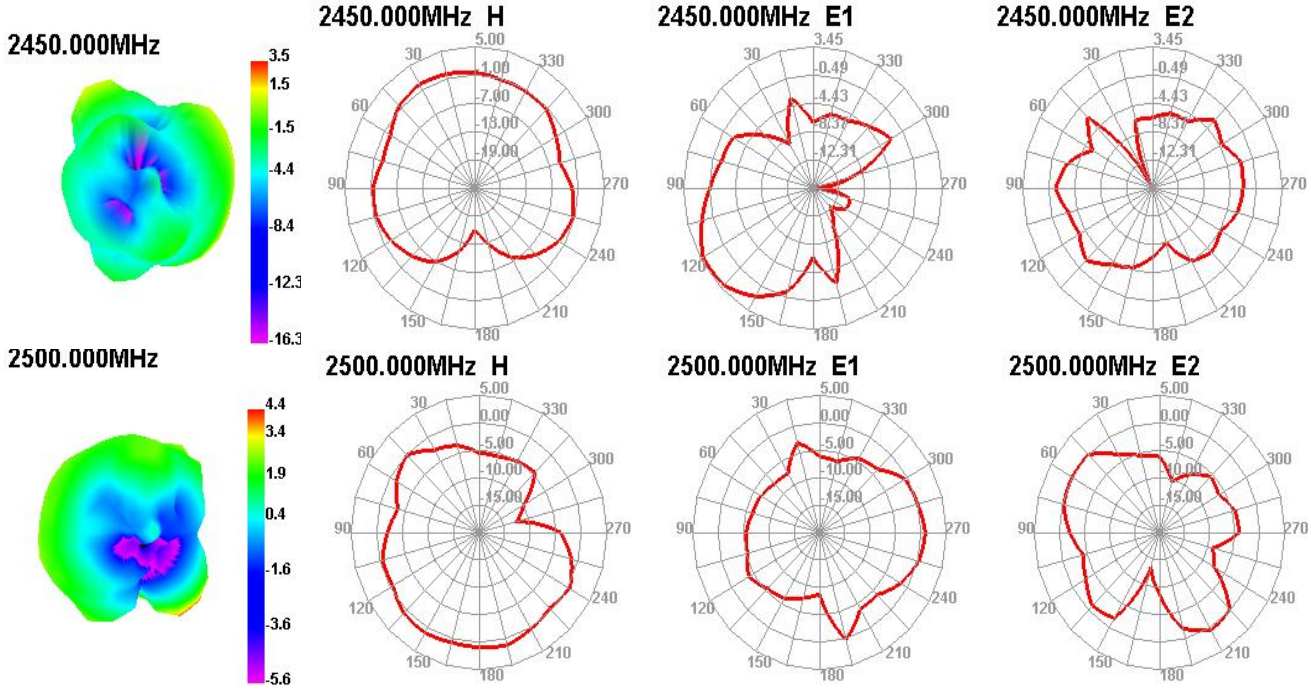

6.Reliability Test

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(omitted)

8.Product Drawing

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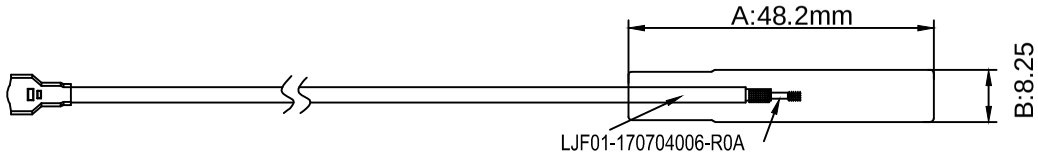
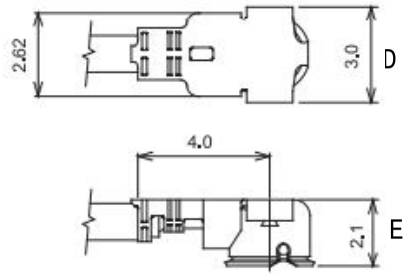
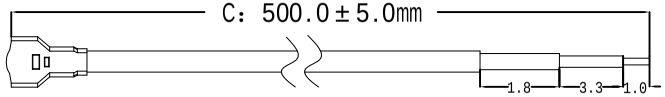
RoHS
Compliant
G P







Φ1.37 coaxial cable, 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.

Rev	Description	Date	Remark
A	New drawing		

SHEN ZHEN LEJIN RADIO FREQUENCY CO.,LTD

Third Angle				Project	Creality 3D	Date	2018-08-09
0～10	±0.05	○	0.02	Part Name	2.4G ANT	Designed by	
10～18	±0.10	◎	⌀0.03	Part No.	CL103	Checked by	MD
18～30	±0.12	⊥	0.02	Material			RF
30～40	±0.15	▱	0.04	Treatment	LJF02-21051910-R1A	Approved by	
40～	±0.20	Angle	±0.5°			Unit mm	Scale FIT Rev A
Location							