



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

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

Product Name: WIFI/BT Antenna

Product Model: PF012

Part Number: LJF02-24122708-R0A

Write By : FUQIANG

Issued Date: 2024-12-27

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	2024/12/27	



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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	≥40%
Impedance	50Ohm
Type	Dipole
Polarization	Linear
Gain	≤3.50dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF35A-R
Cable Type	Φ1.13mm,L300mm,Black
Connector Type	IPX1
Dimension	34.0*10.0mm
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 | |

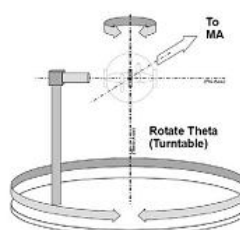
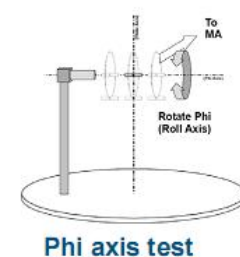
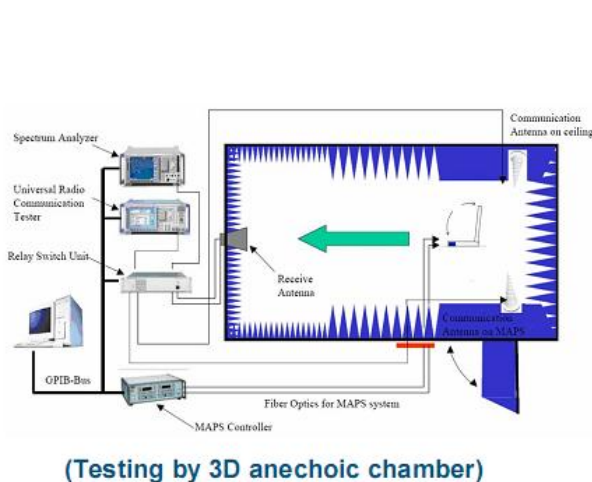




Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

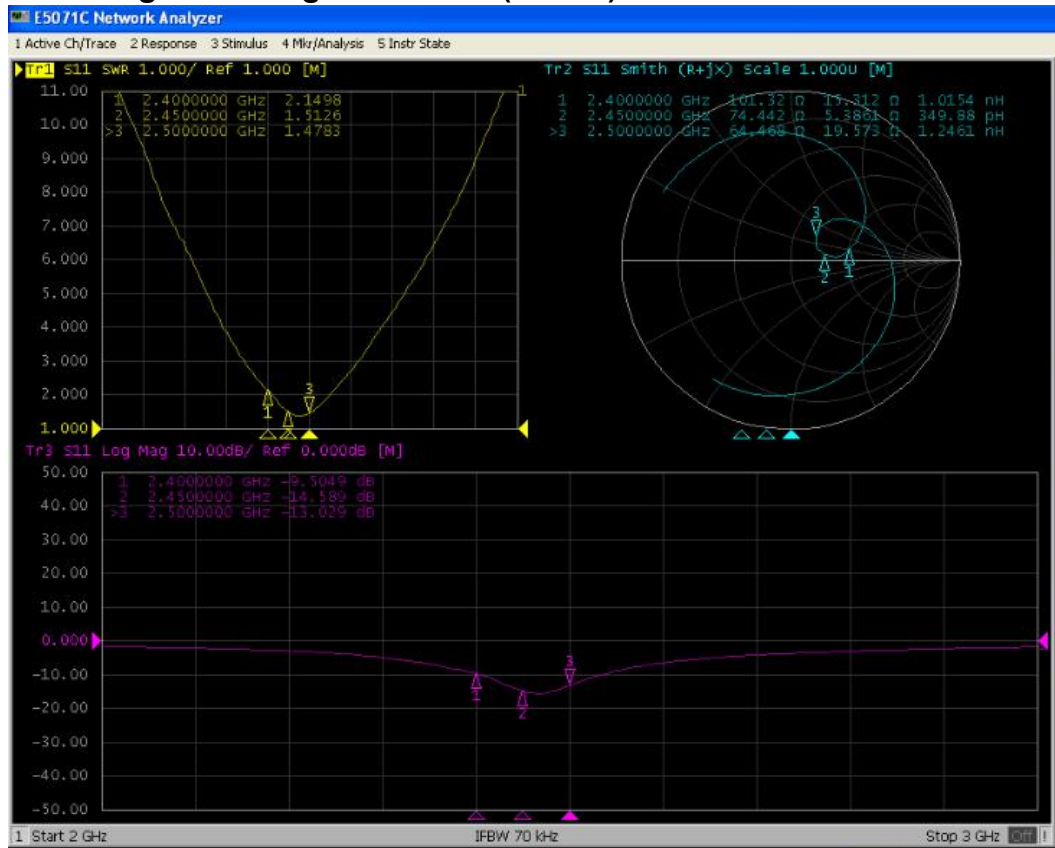
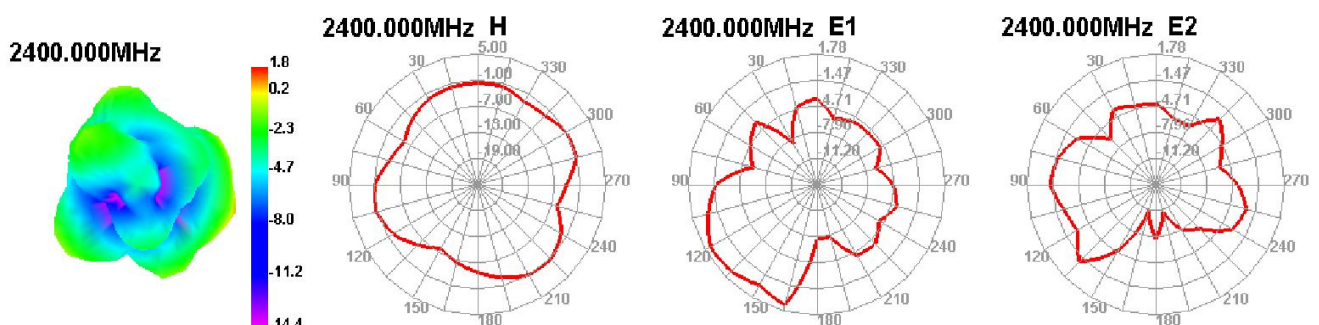


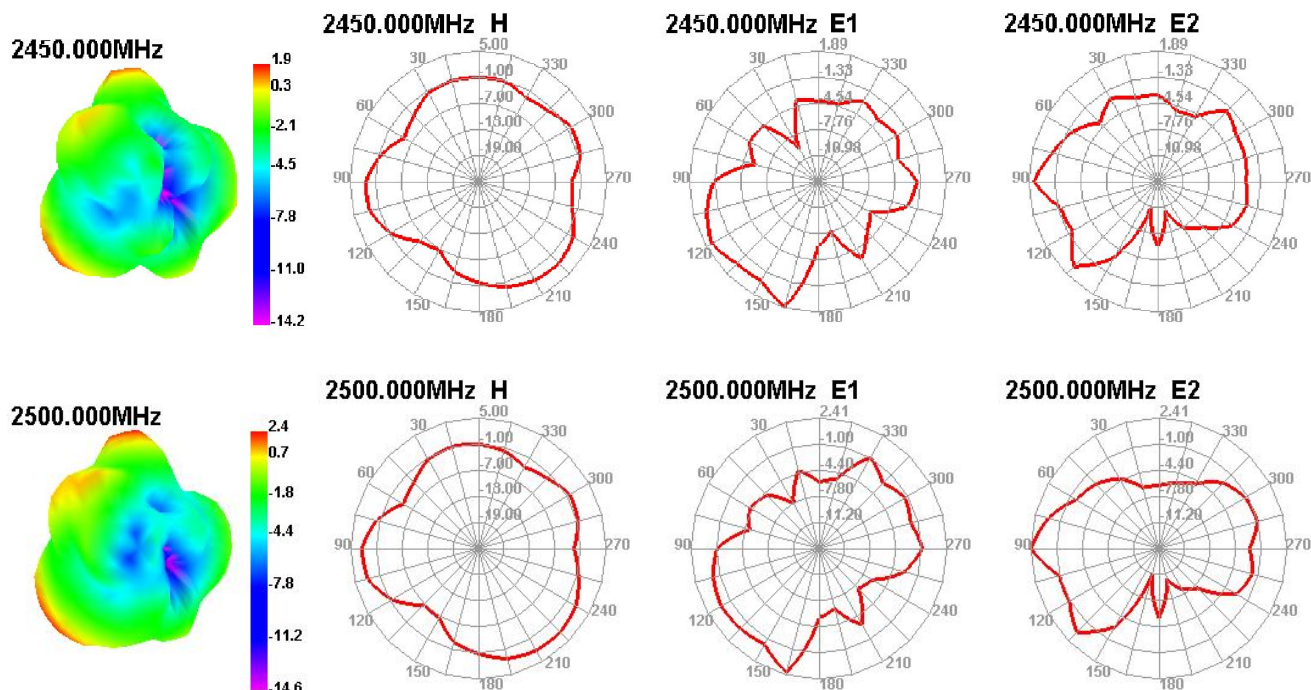
Chart 2 VSWR

5.2 Efficient and gain(estimating conducted by Lejin in Jan,2021,using 3D drawing document that provided by Creality.)

Passive Test	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	45.81	44.26	47.82	47.20	53.84	47.12	46.80	50.33	48.06	62.25	53.04
2.4GHz	Gain(dBi)	1.78	1.71	1.66	2.32	1.93	1.89	1.55	2.08	2.10	2.41	2.37

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.&Hum. 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.&Hum. 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

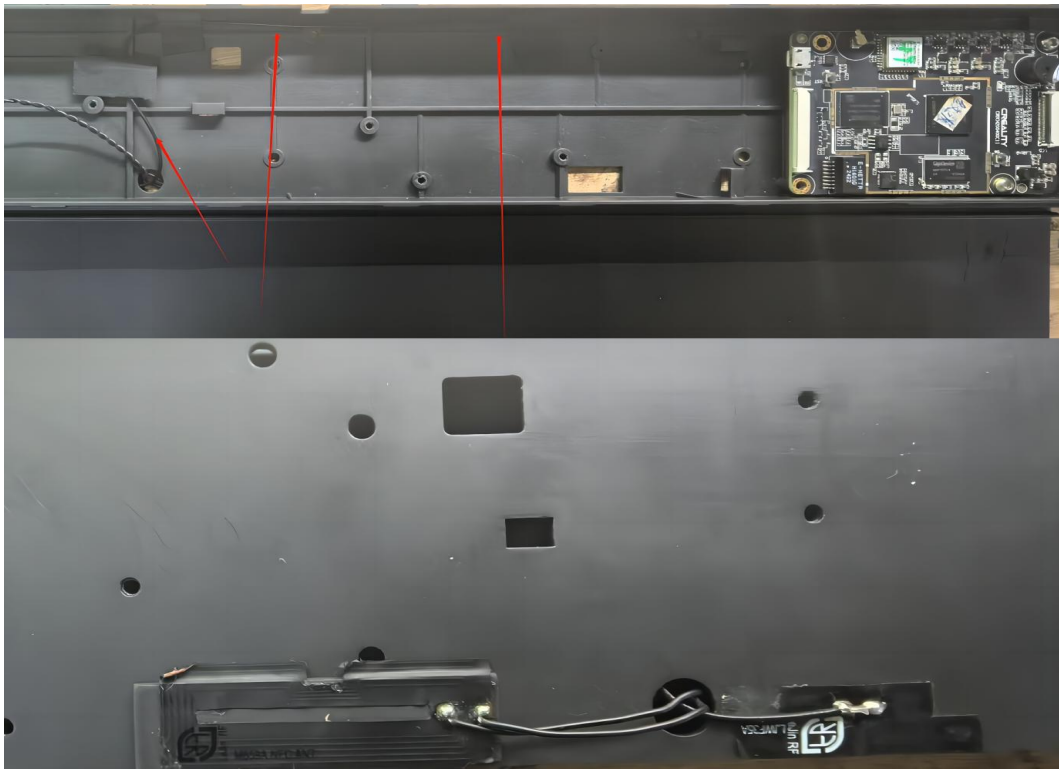
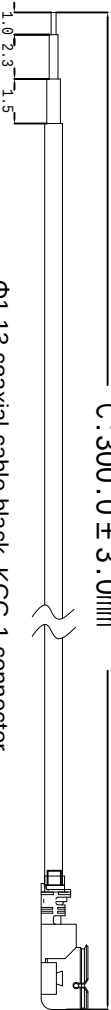
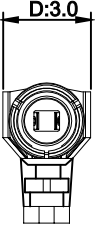
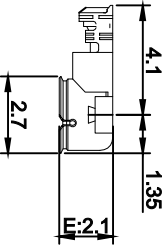
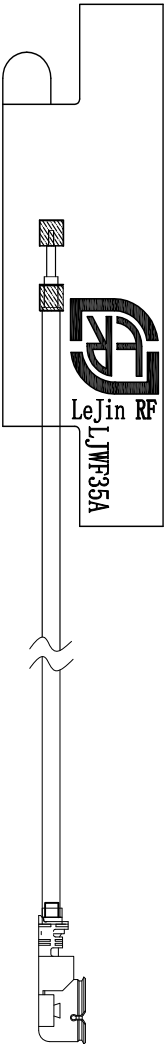
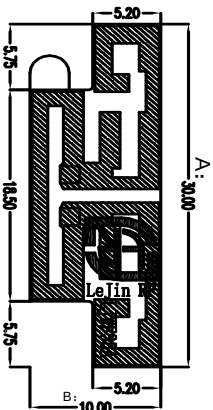
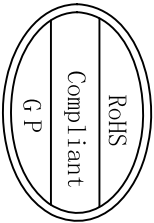


Chart 3 Assemble type

8.Product Drawing



Remark:

- 1.FPC material:Electrolytic copper.
- 2.Backing in behind:3M300LSE.
- 3.Tolerance: Cutting die:±0.1mm;Circuit on FPC:±0.05mm; others are ±0.05mm.
- 4.ROHS:(Pb,Hg,Cr+6,PBBS,PBDEs)<1000ppm; Cd,<100ppm.



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



Third Angle

Project Creativity 3D

Date 2024-12-27

0~10 ±0.05

Part Name

WIFI ANT

Designed by

10~18 ±0.10

Part No.

Checked by

18~30 ±0.12

Material

MD

30~40 ±0.15

Treatment

Approved by

40~ ±0.20

LJF02-24122708-R0A

Unit

1	2	3	4	5	6	7	8
Rev	Description	Date	Remark	Location		Unit	mm
1						Scale	FTT
						Rev	A