



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: _____

Product Name: _____ **NFC antenna** _____

Product Model: _____

Part Number: _____ **LJNF02-25032610-R0A** _____

Write By : _____ **Limingjin** _____

Issued Date: _____ **2025-03-26** _____

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	2024/11/24	
V1.1	Revise the length of cable,support new model	2025/03/26	



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3.Product Specification

A. Electrical Characteristics	
Frequency	13.56MHz
VSWR	≤ 3.0
Efficiency	N/A
Impedance	50~90Ohm
Polarization	N/A
Gain	N/A
B. Material & Mechanical Characteristics	
Antenna type	FPC Antenna
Cable Type	$\Phi 0.9\text{mm}$,twisted-pair,L200mm,Black
Connector Type	1.25Pin*2
Dimension	40.0mm*14.5mm
C. Environmental	
Operation Temperature	- 20 °C ~ + 50 °C
Storage Temperature	- 30 °C ~ + 80 °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.Spectrum analyzer | RS FPS8 FSH4 |
| 4.3D Chamber Test System | |

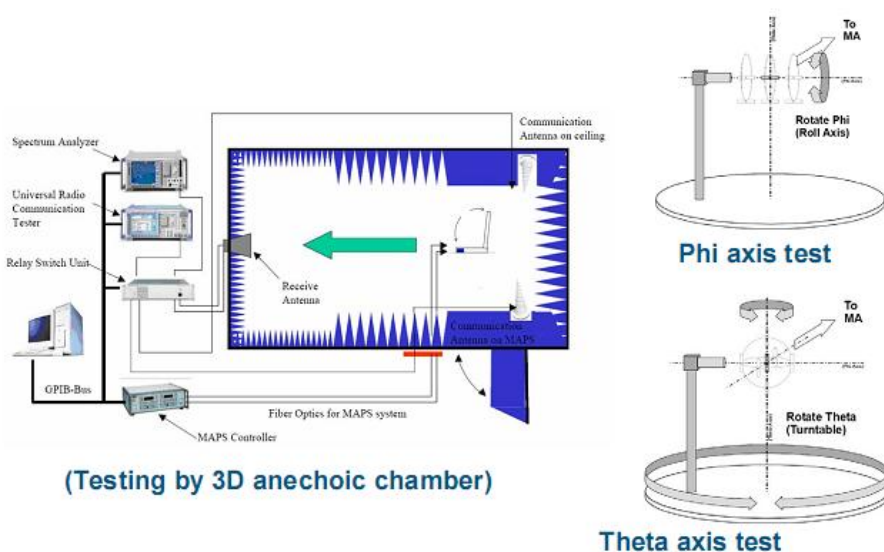
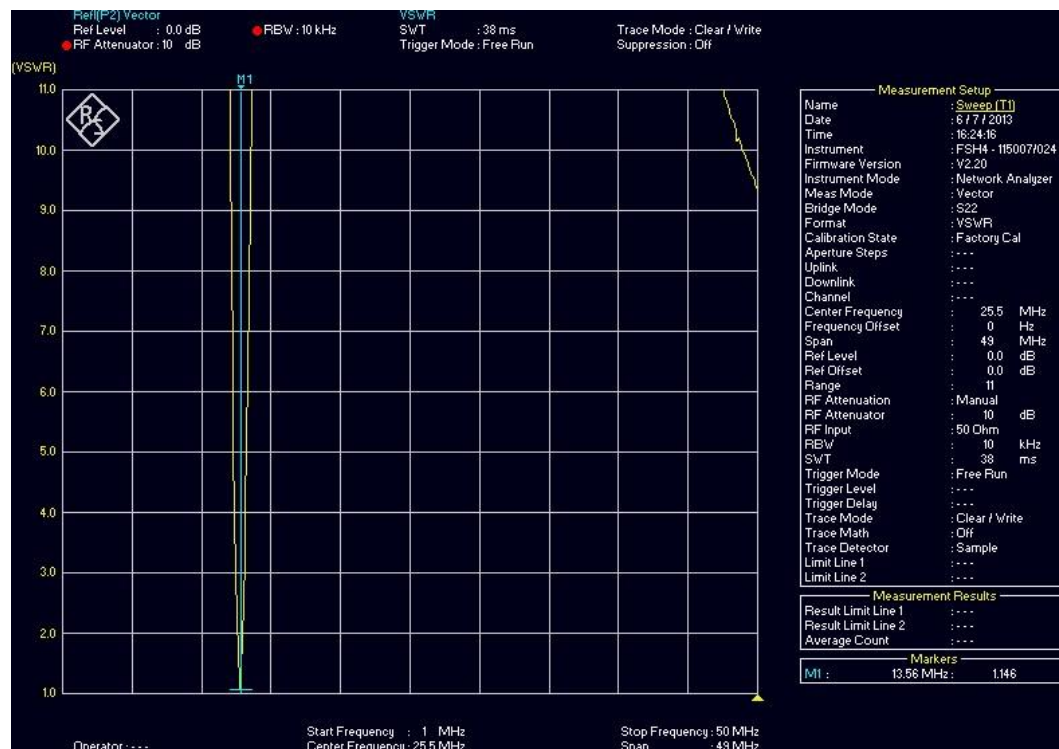


图 1 test topology

5.Test Report



5.1 Matching network.

Chart 2 Matching network

5.2 NFC(13.56MHz) parameter.

Inductance:1.51uH;

Capacitance:47pF;

Quality factor:41;

Impedance:1.33 Ω

Performance: Class A/B/F card:0.1% Error rate.

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.&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 temp to 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: $35 \pm 2^\circ\text{C}$ Humidity: 85% NaCl salt spray: $5 \pm 1\%$. PH value: 6.5~7.2 Testtime: 24 hours	Salt-Spray Tester	No color change No appear rusting	PASS

7. Real picture

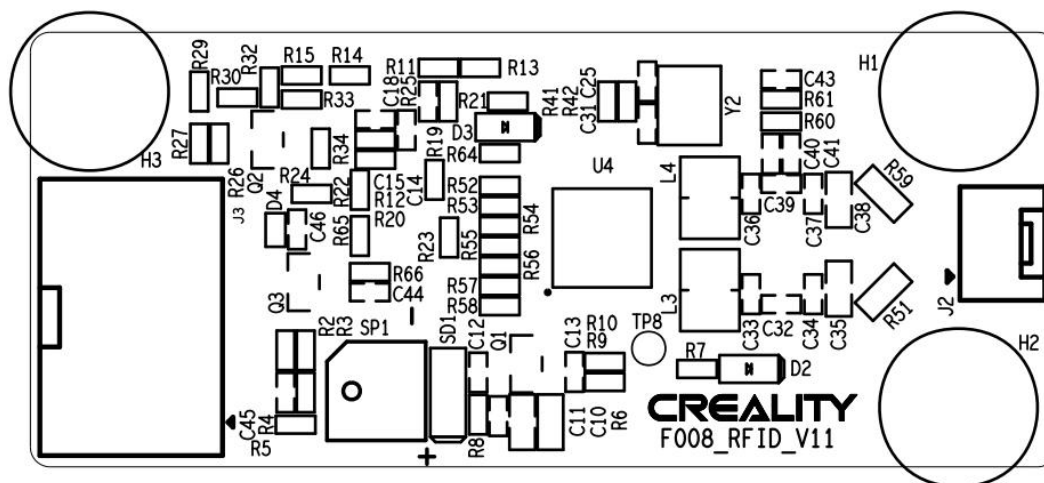
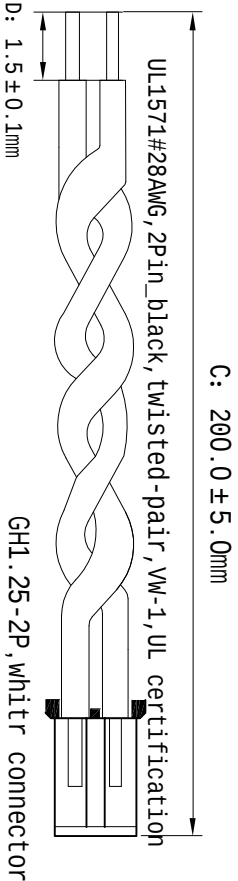
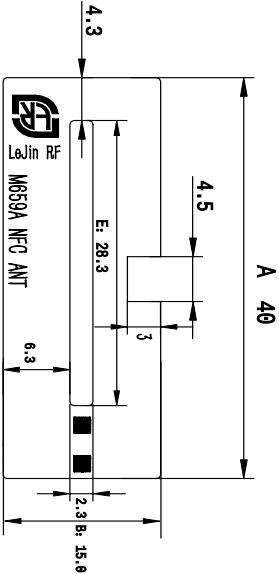
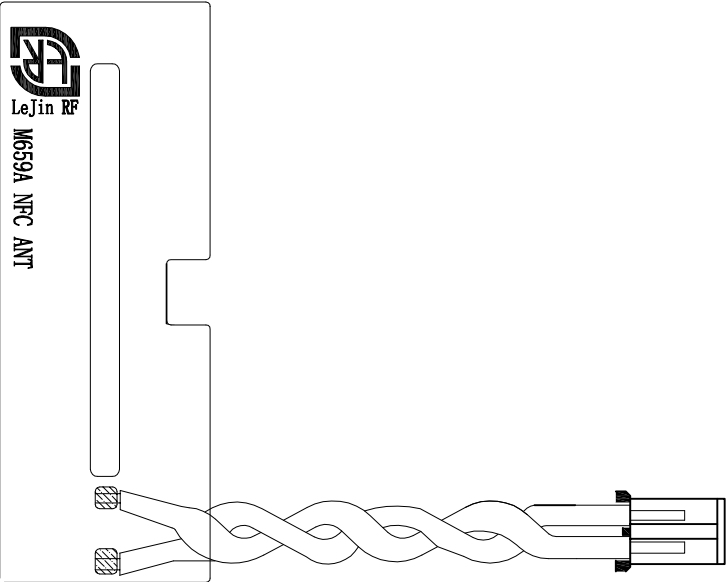
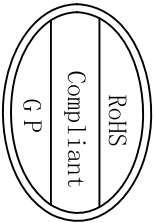


Chart 3 PCB layout

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

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4.ROHS:(Pb,Hg,Cr+6,PBBs,PBDEs),<1000ppm; Cd,<100ppm.									
D									
A	New drawing								
Rev	Description	Date	Remark						
1	2	3	4						
SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD									
Lejin 深 圳 乐 进 射 频 科 技 有 限 公 司									
Third Angle									
0~10	±0.05	○	0.02	Project	Creality 3D	Date	2025-03-26		
10~18	±0.10	◎	0.03	Part Name	NFC ANT	Designed by			
18~30	±0.12	⊥	0.02	Part No.		Checked by	MD		
30~40	±0.15	∠	0.04	Material		RF			
40~	±0.20	Angle	±0.5°	Treatment	LJMF02-25032610-ROA	Approved by			
Location				Unit	mm	Scale	FIT	Rev	A
5	6	7	8						