



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

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

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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[illegible]

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	
Material of Radiator	Internal FPC(M659A)
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 | |

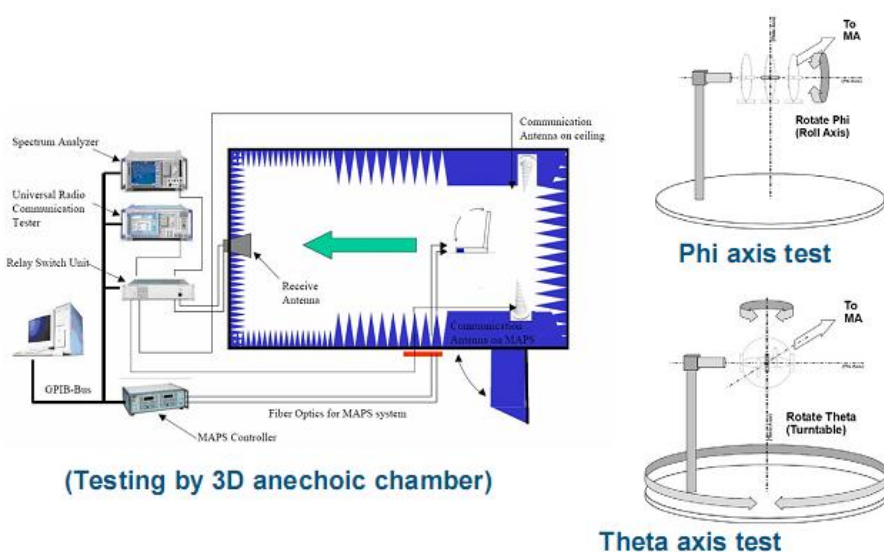
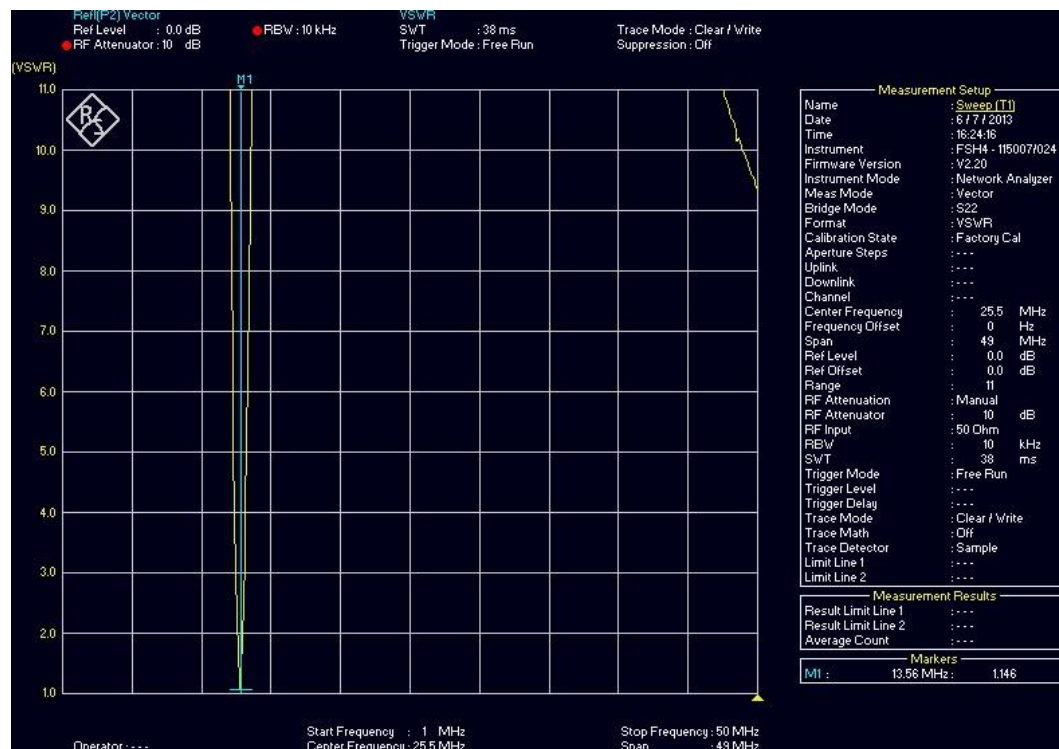


图 1 test topology

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.

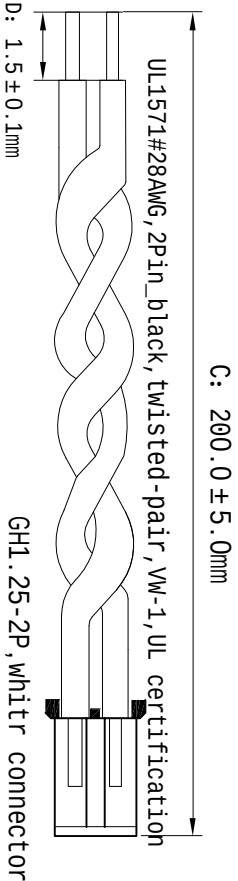
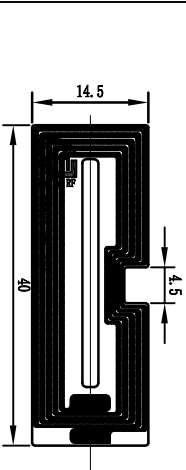
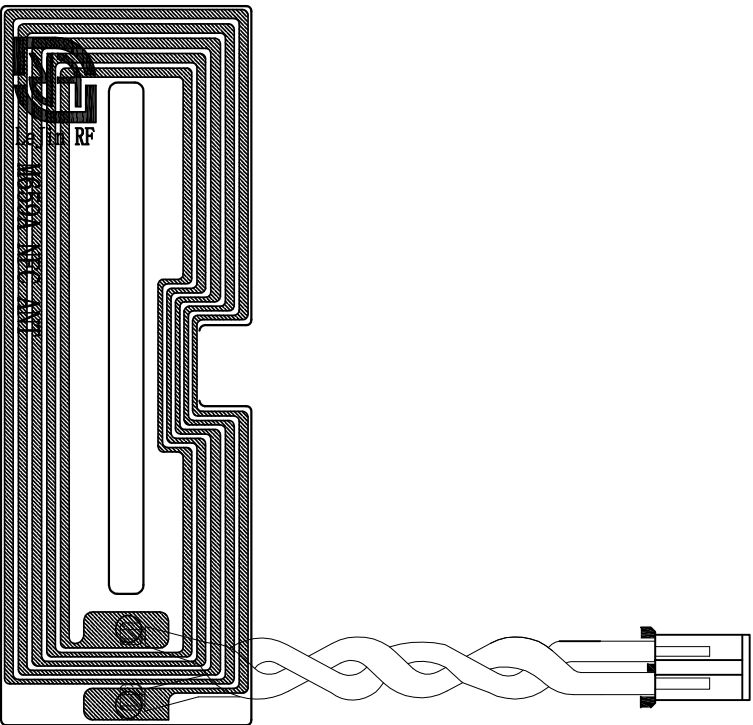


6. Reliability Test

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 appearance rusting	PASS

7. Real picture

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.

D					
A	New drawing				
Rev	Description	Date	Remark		
1	2	3	4		