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	

Add：Rm 301B,A4 Bld,Junfeng Innovation Park,Fuyong, Baoan Dist,Shenzhen. Tel:0755-27780515 Email:phxcler@szljrf.com

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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	Φ0.9mm,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

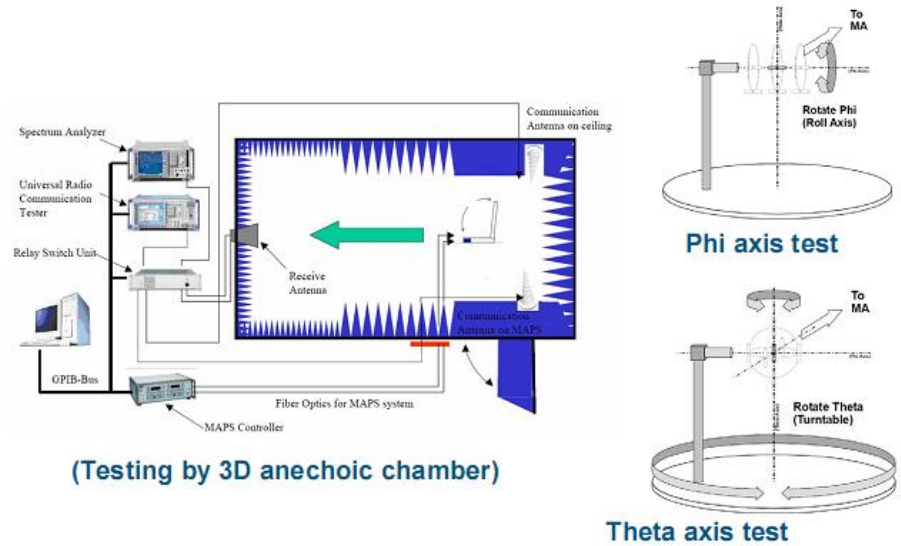

图 1 test topology

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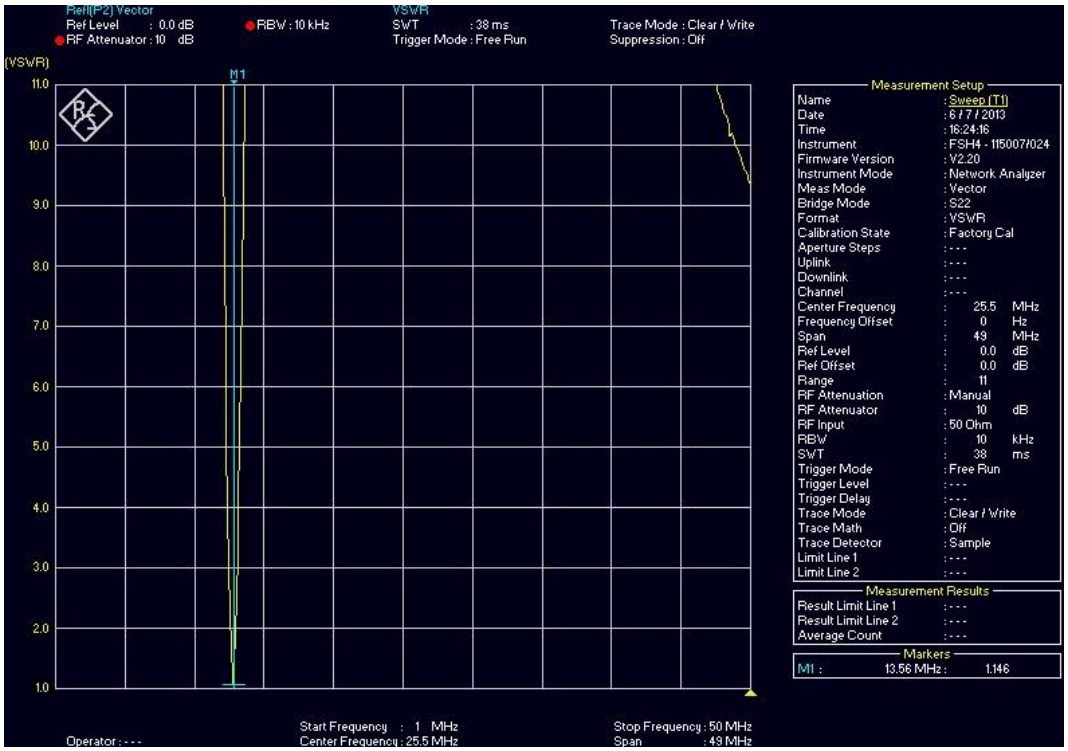
5.Test Report



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 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.Real picture

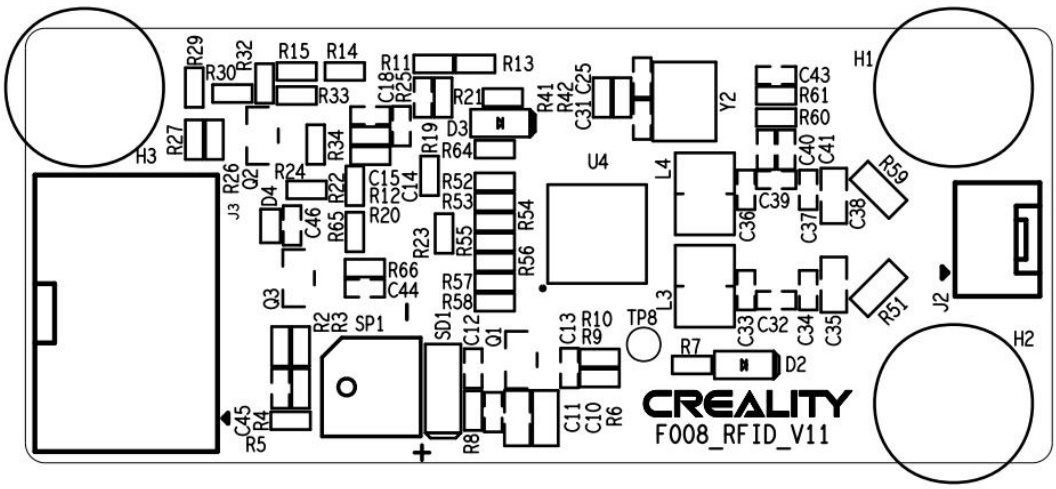


Chart 3 PCB layout

8.Product Drawing

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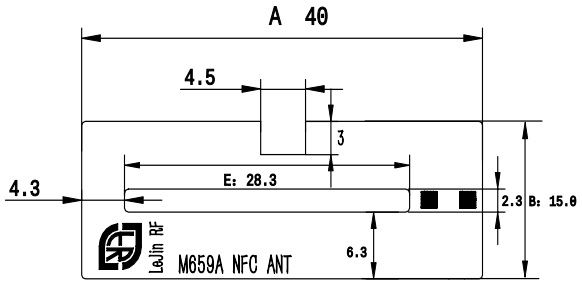
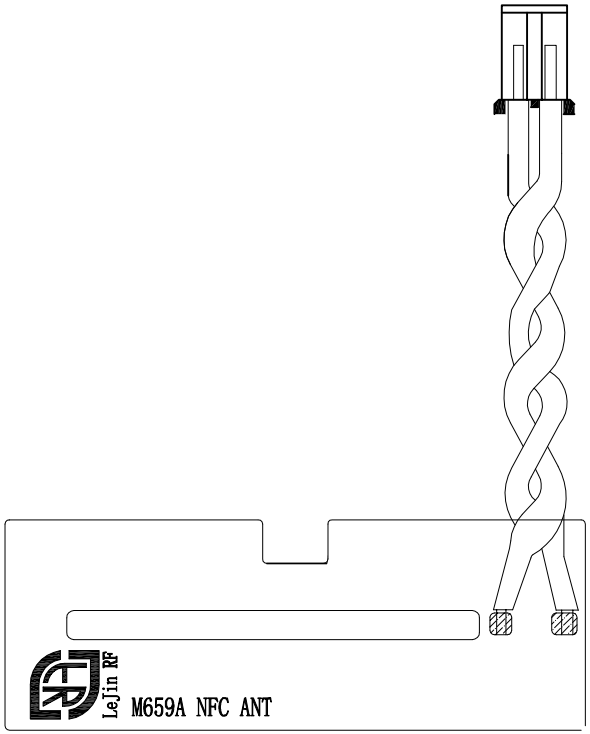
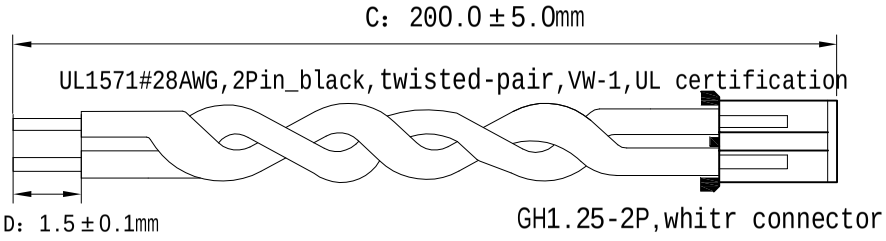
RoHS
Compliant
G P







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		

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SHEN ZHEN LEJIN RADIO FREQUENCY CO.,LTD

Third Angle				Project	Creality 3D	Date	2025-03-26
0～10	±0.05	○	0.02	Part Name	NFC ANT	Designed by	
10～18	±0.10	◎	∅0.03	Part No.		Checked by	MD
18～30	±0.12	⊥	0.02	Material			RF
30～40	±0.15	▱	0.04	Treatment	LJNF02-25032610-R0A	Approved by	
40～	±0.20	Angle	±0.5°			Unit mm	Scale FIT Rev A
Location							