



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: 深圳市维度创新实业有限公司

Product Name: WIFI Antenna

Product Model: SC1

Part Number: LJF02-23053108C-R0A

Write By : Pengsiheng

Issued Date: 2023-06-08

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	2023/06/08	



Index

1. Cover	1
2. Index	2
3. Product Specification	3
4. Test Equipment & Conditions	3
5. Test Report	4
6. Reliability Test	5
7. Assemble type	6
8. Product Drawing	7

3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz 5150MHz ~5850 MHz
VSWR	<2.0
Efficiency	≥40%
Impedance	50Ohm
Polarization	Linear
Gain(2.4GHz)	≤2.5dB
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF29A
Cable Type	Φ1.13mm,L100mm,Black
Connector Type	IPX1
Dimension	43.0*11.5mm
C. Environmental	
Operation Temperature	- 20 °C ~ + 70 °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

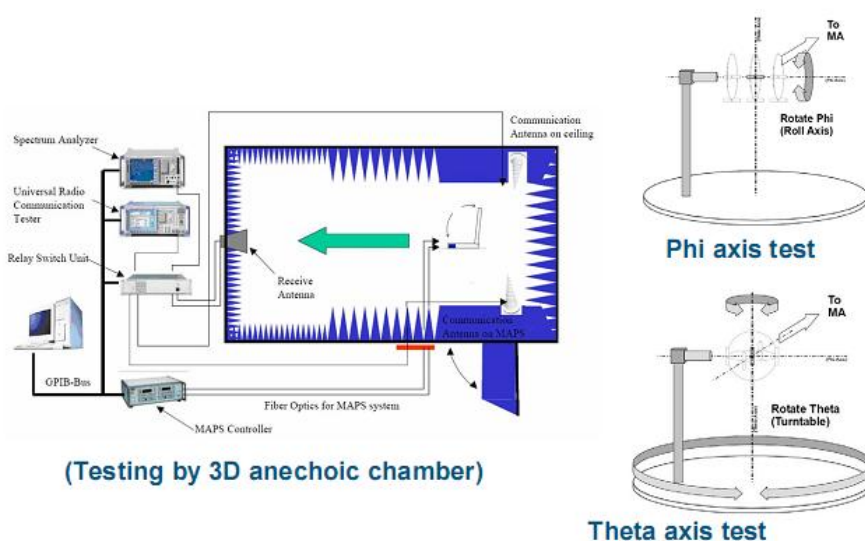


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

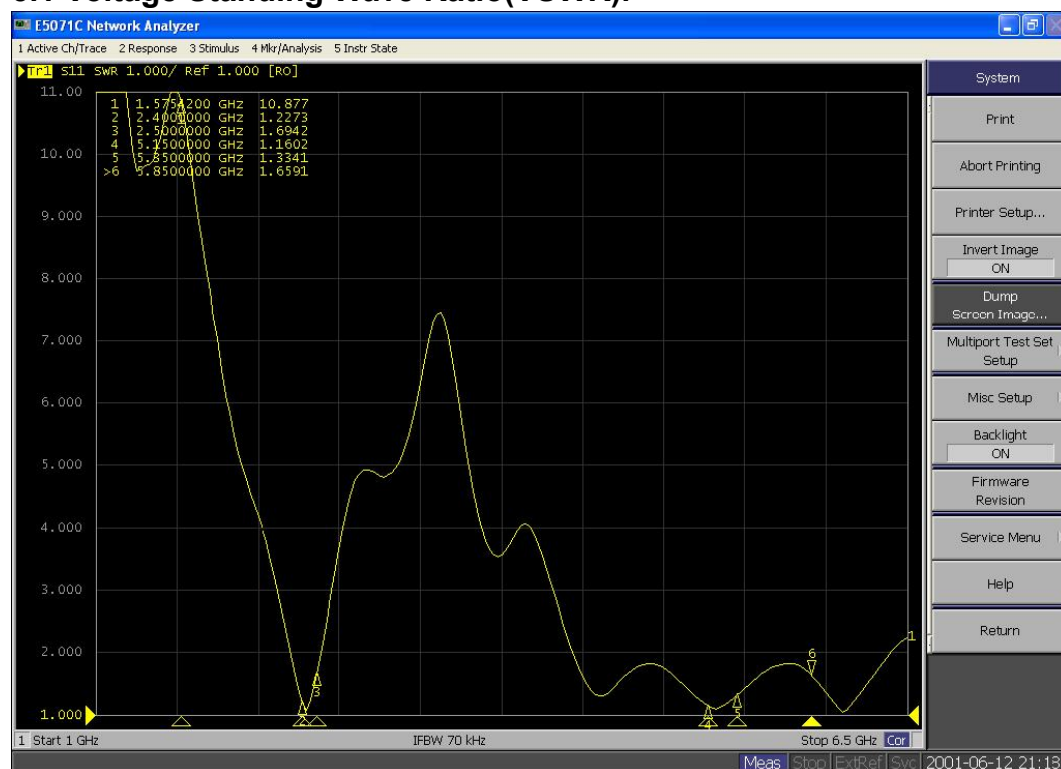


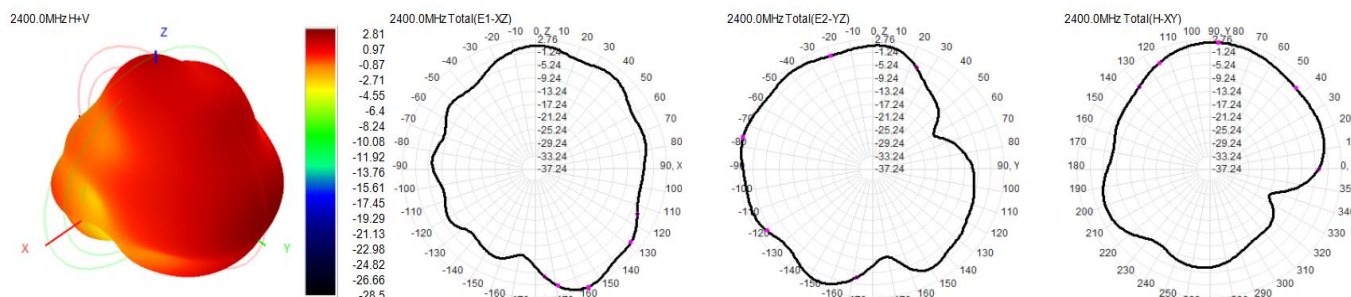
Chart 2 VSWR

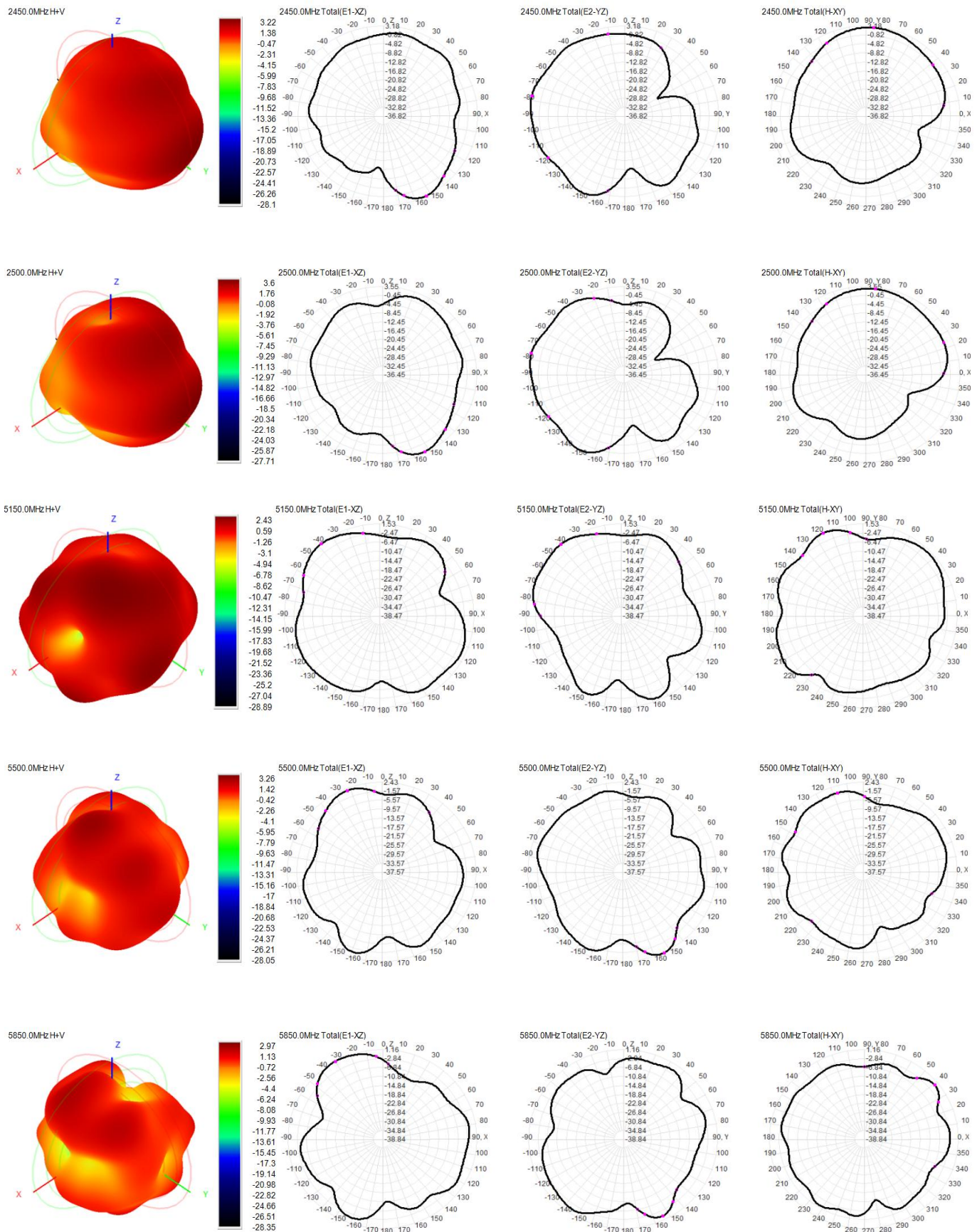
5.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test	Effi(%)	54.73	55.87	55.50	56.20	59.59	59.59	55.21	54.49	51.32	52.36	53.94
2.4GHz	Gain(dBi)	1.91	2.08	2.09	2.09	2.32	2.32	2.42	2.37	2.37	2.43	2.10

Passive	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Test WIFI	Effi(%)	59.20	61.12	55.39	54.59	57.92	52.56	48.10	50.14	53.27	51.64	53.44	53.24	50.22	50.00	48.30
5G	Gain(dBi)	2.43	2.29	1.95	2.00	2.16	2.20	2.11	2.46	2.47	2.04	2.48	2.49	2.48	2.44	2.17

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.&Humidity 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.&Humidity Tester	No material deformation is allowed. Electronic Performance is ok.	PASS
3 Salt-Spray 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 appearance rusting	PASS

7. Assemble type.

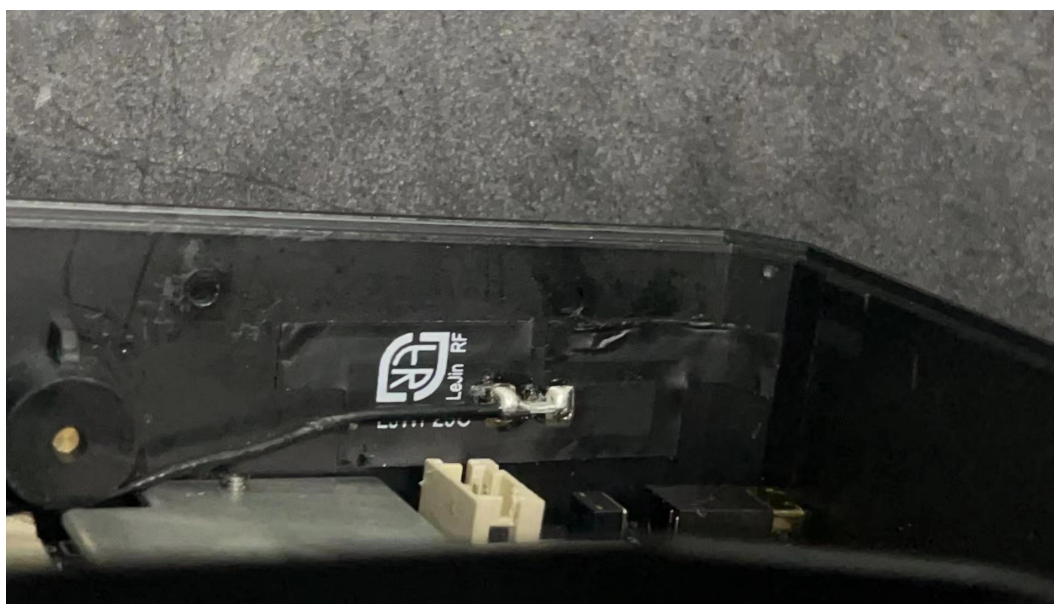
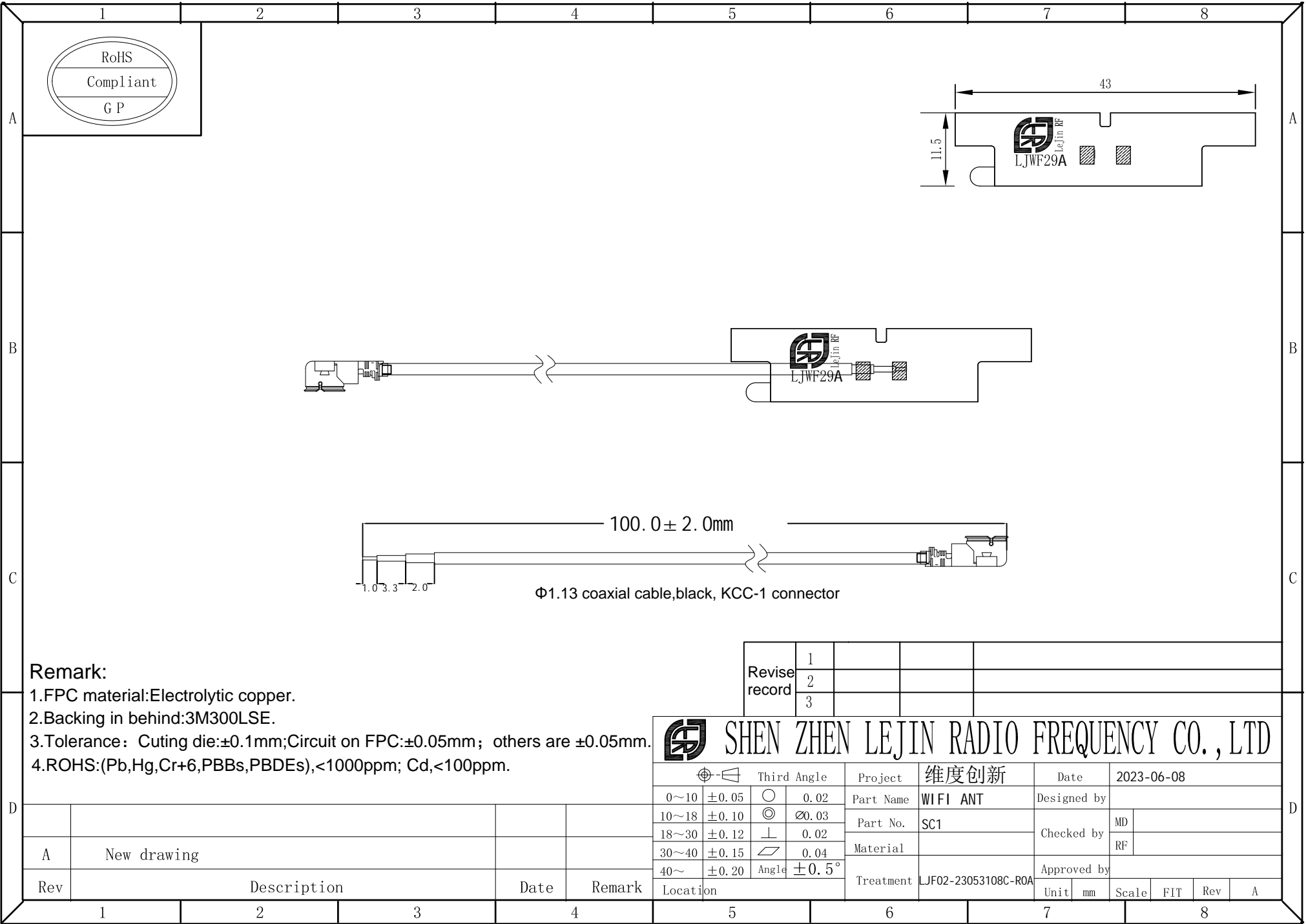


Chart3 assemble type

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.

Revise record	1			
	2			
	3			

SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD											
		Third Angle	Project	维度创新	Date	2023-06-08					
0~10	±0.05		0.02	Part Name	WIFI ANT	Designed by					
10~18	±0.10		Ø0.03	Part No.	SC1	Checked by	MD				
18~30	±0.12		0.02	Material			RF				
30~40	±0.15		0.04	Treatment	LJF02-23053108C-ROA	Approved by					
40~	±0.20	Angle	±0.5°								
Location					Unit	mm	Scale	FIT	Rev	A	

Rev	Description			Date	Remark
	1	2	3		
A	New drawing				