



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: _____

Product Name: 2.4GHz Antenna

Product Model: P5

Part Number: LJT02-23112109-R0A

Write By : Huxuwen

Issued Date: 2023-11-21

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	2023/11/21	



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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	≥40%
Impedance	50Ohm
Polarization	Linear
Gain	≤1.80dBi
B. Material & Mechanical Characteristics	
Material of Radiator	Copper tube
Cable Type	Φ 1.13mm,L113mm,Black
Connector Type	IPX1
Dimension	Φ 4.40*113.0mm
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 | |

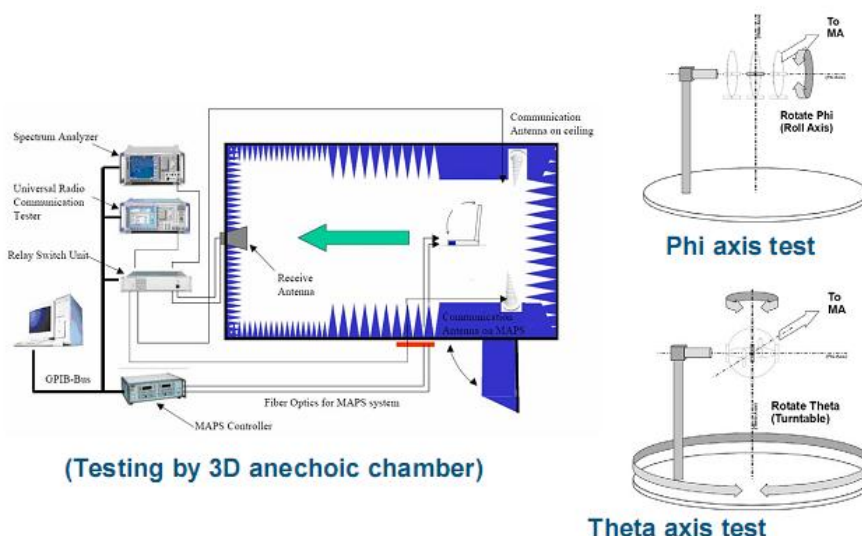


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

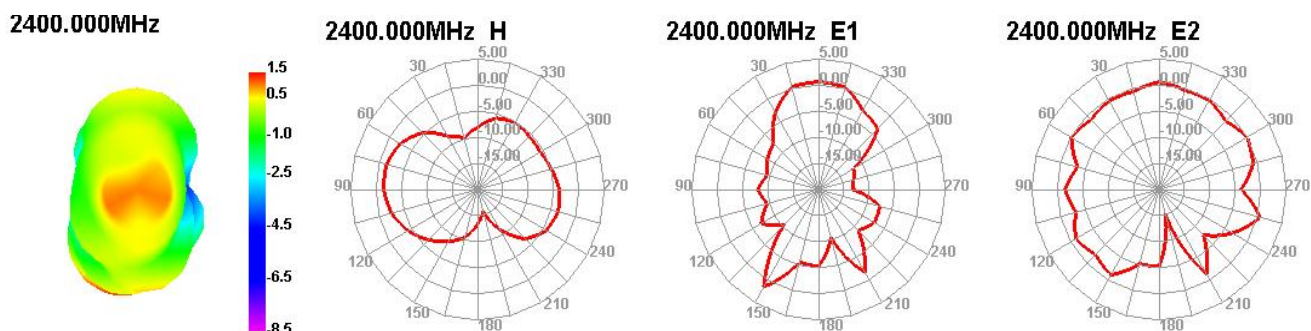


Chart 2 VSWR

5.2 Efficient and gain

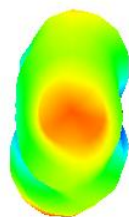
Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test	Effi(%)	47.18	53.75	51.22	50.93	50.25	53.64	55.35	53.98	55.00	54.52	52.35
2.4GHz	Gain(dBi)	1.50	1.79	1.48	1.49	1.36	1.76	1.80	1.61	1.45	1.43	1.67

5.3 Radiation pattern

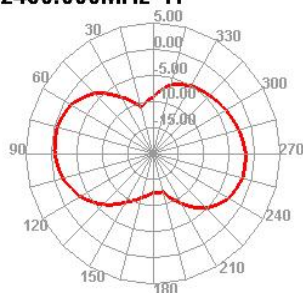




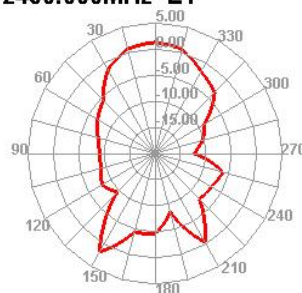
2450.000MHz



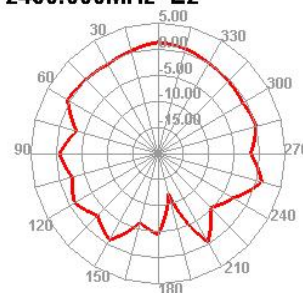
2450.000MHz H



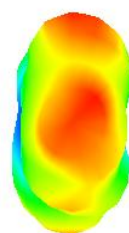
2450.000MHz E1



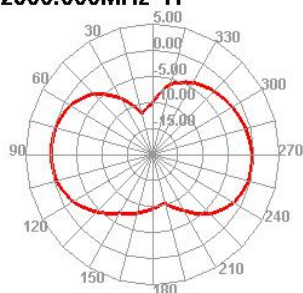
2450.000MHz E2



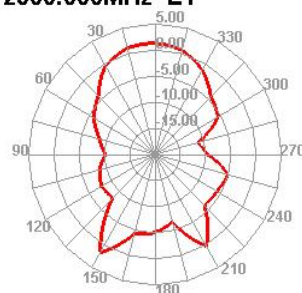
2500.000MHz



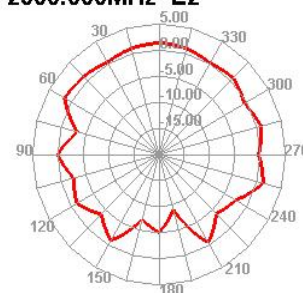
2500.000MHz H



2500.000MHz E1



2500.000MHz E2

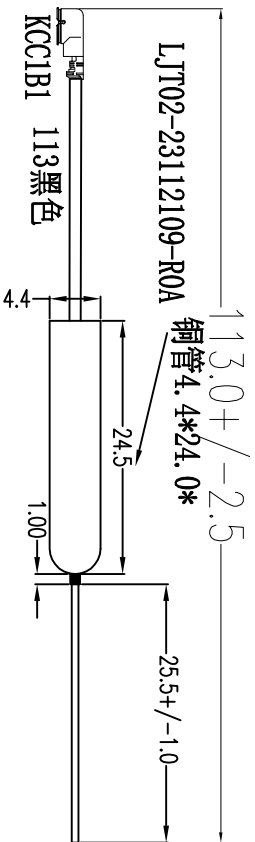
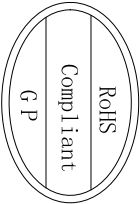


6. Reliability Test

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±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(omit)

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.

Rev	Description	Date	Remark
1	New drawing		

1	Revise								
2	record								
3									

SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

Third Angle	Project	艾莱卡	Date	2023-11-21
0~10 ±0.05	Part Name	ANT	Designed by	
10~18 ±0.10	Part No.	P5	Checked by	MD
18~30 ±0.12	Material		RF	
30~40 ±0.15			Approved by	
40~ ±0.20	Location		Unit	mm
Angle ±0.5°	Treatment	LJT02-23112109-R0A	Scale	FIT
			Rev	A