



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: _____

Product Name: 2.4GHz Antenna

Product Model: TX03

Part Number: LJF02-251018004-R0A

Write By : LIMINGJIN

Issued Date: 2025-10-18

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	2025/10/18	



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3.Product Specification

A. Electrical Characteristics	
Frequency	2400MHz ~2500 MHz
VSWR	<2.0
Efficiency	>40%
Impedance	50Ohm
Polarization	Linear
Gain	≤1.88dBi
B. Material & Mechanical Characteristics	
Material of Radiator	FPC(Black),LJWF25B-R
Cable Type	Φ1.13mm,L52mm,Black
Connector Type	IPX1-U
Dimension	26.0*16.8mm
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 | |

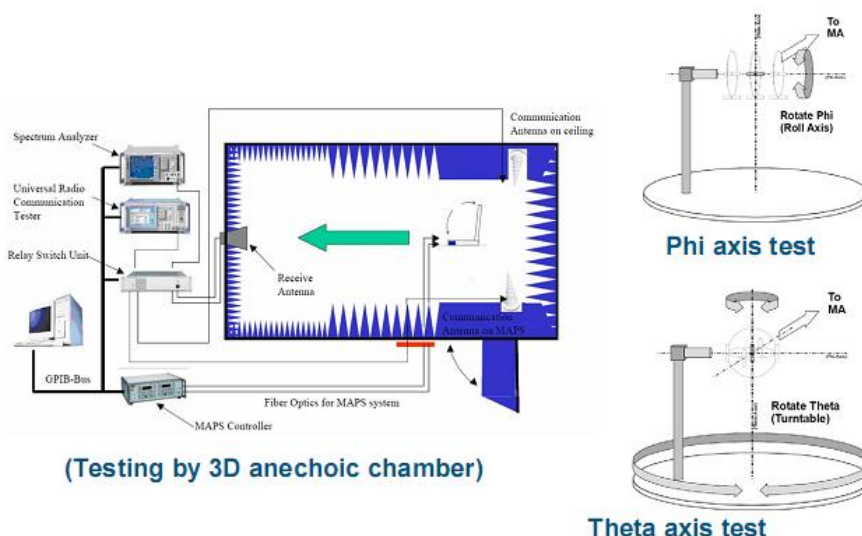


图 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

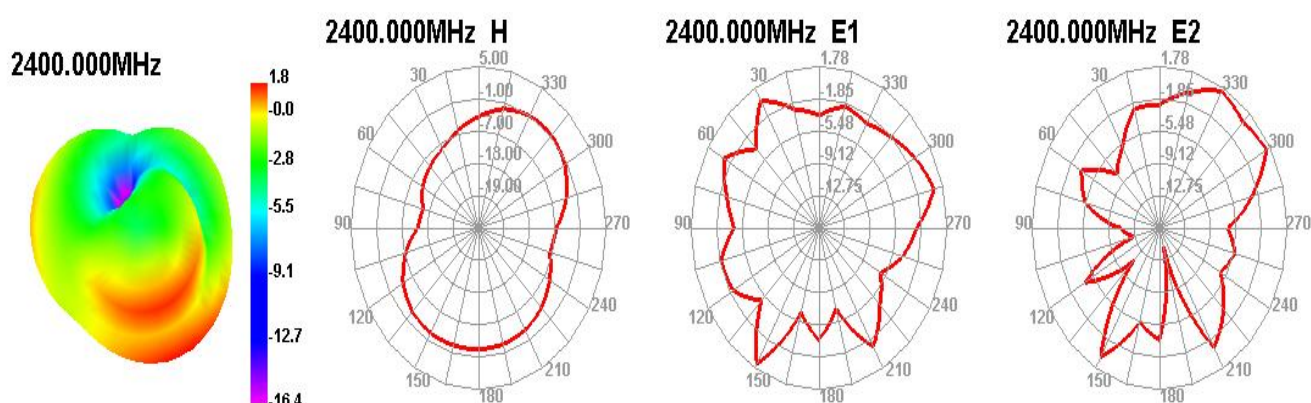


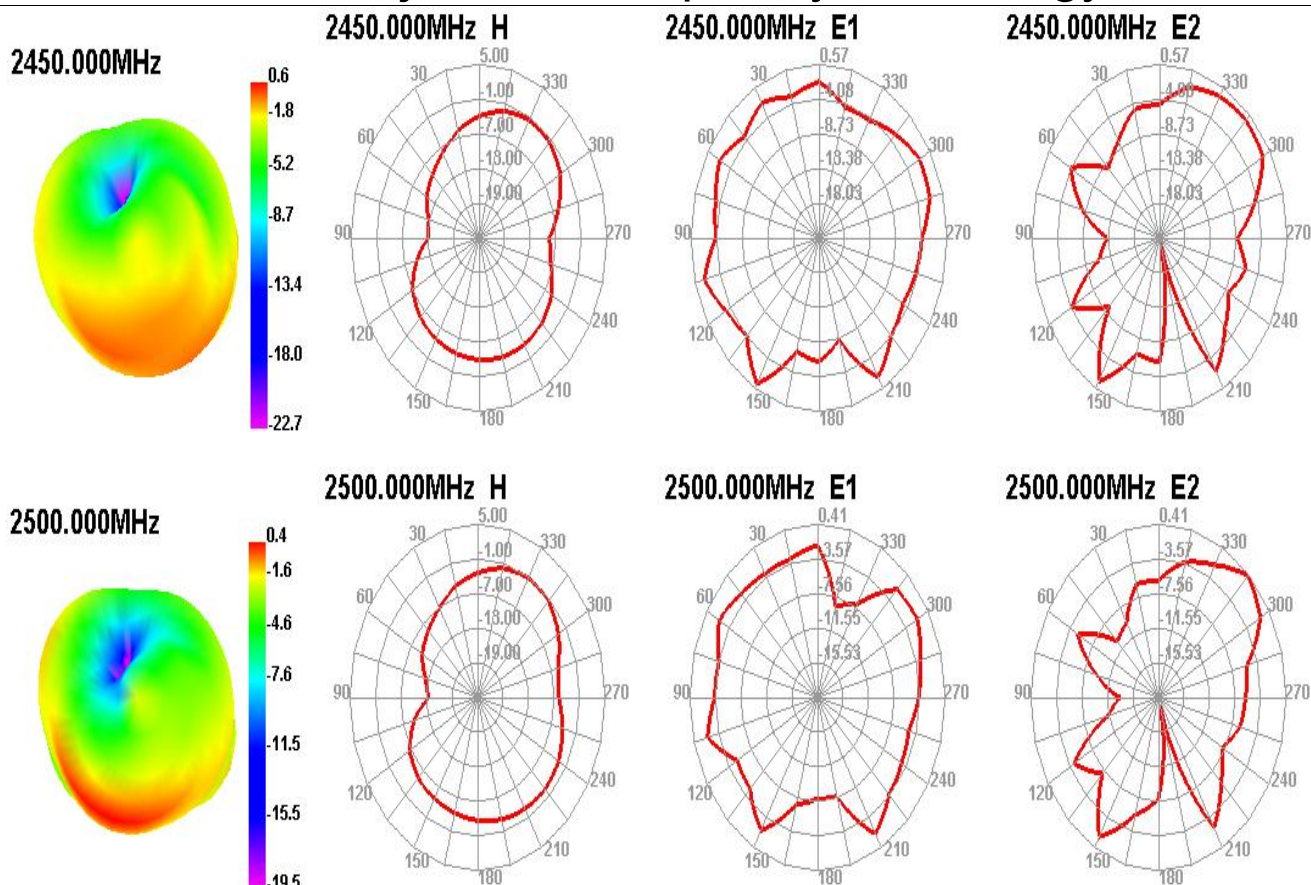
图 2 VSWR

5.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Test	Effi(%)	54.68	53.56	51.95	46.42	44.30	42.97	42.09	41.71	40.27	40.26	40.95
	Gain(dBi)	1.78	1.75	1.66	1.60	1.88	1.57	1.47	1.44	1.69	1.78	1.81

5.3 Radiation pattern.





6. Reliability Test

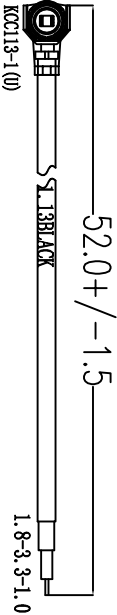
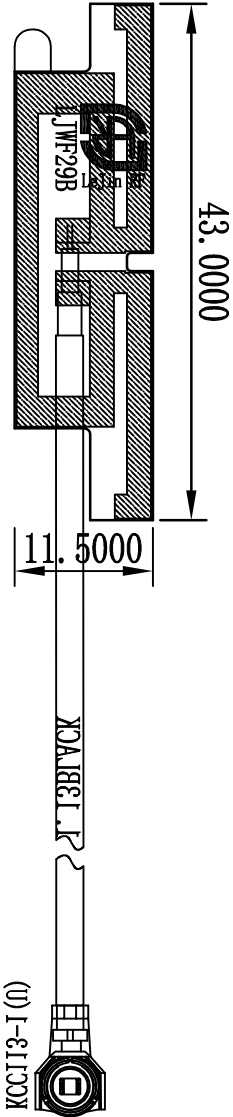
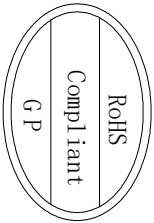
Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃ , Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃, test antenna after 2 hours.	Temp.&Hum. 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.&Hum. 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:24hours	Salt-Spray Tester	No color change No appear rusting	PASS
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7. Assemble type(omit)

8.Product Drawing



深圳乐进射频科技有限公司
SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

0~10	±0.05	○	0.02	Project	ALK_TX03	Date	2025-10-28
10~18	±0.10	◎	Ø0.03	Part Name	TX03 ANT	Designed by	
18~30	±0.12	⊥	0.02	Part No.		Checked by	
30~40	±0.15	∠	0.04	Material	LJF01-19042701A-R0A	MD	
40~	±0.20	Angle	±0.5°	Treatment	LJF02-251018004-R2A	RF	

Rev		Date		Remark		Location		Unit		Scale		FIT		Rev		A	
1		2		3		4		5		6		7		8		9	
A		20251028更新图纸，更换FPC，由LJWF25B变更为LJWF29B，即时生效		版本升级为R2A		0~10		±0.05		○		0.02		Project		ALK_TX03	
Description		Date		Remark		10~18		±0.10		◎		Ø0.03		Part Name		TX03 ANT	
1		2		3		18~30		±0.12		⊥		0.02		Part No.			
1		2		3		30~40		±0.15		∠		0.04		Material		LJF01-19042701A-R0A	
1		2		3		40~		±0.20		Angle		±0.5°		Treatment		LJF02-251018004-R2A	