



Lejin RF

Shenzhen Lejin radio frequency technology Co., LTD

## SPECIFICATIONS FOR APPROVAL

Customer Name: Sorenson Communications, LLC

Product Name: 2.4G Antenna

Product Model: P3

Part Number: LJT02-23112508-R0A

Write By : Mingjin Li

Issued Date: 2023-11-25

### 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	2023/11/25	



Lejin RF

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### 3. Product Specification

A. Electrical Characteristics	
<b>Frequency</b>	2400MHz ~2525 MHz
<b>VSWR</b>	<2.0
<b>Efficiency</b>	≥40%
<b>Impedance</b>	50Ohm
<b>Polarization</b>	Linear
<b>Gain(2.4G)</b>	≤2.07dB
B. Material & Mechanical Characteristics	
<b>Material of Radiator</b>	Copper tube
<b>Cable Type</b>	Φ1.13mm,L70mm,black
<b>Connector Type</b>	IPX1
<b>Dimension</b>	Φ4.4mm*24.0mm
C. Environmental	
<b>Operation Temperature</b>	- 20 °C ~ + 70 °C
<b>Storage Temperature</b>	- 30 °C ~ + 85 °C
<b>Humidity</b>	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

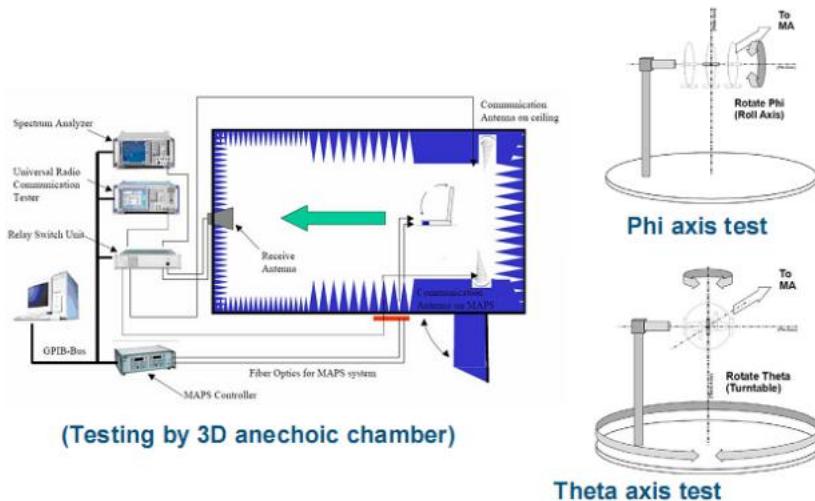


Chart 1 Test topology

## 5. Test Report

### 5.1 Voltage Standing Wave Ratio(VSWR).

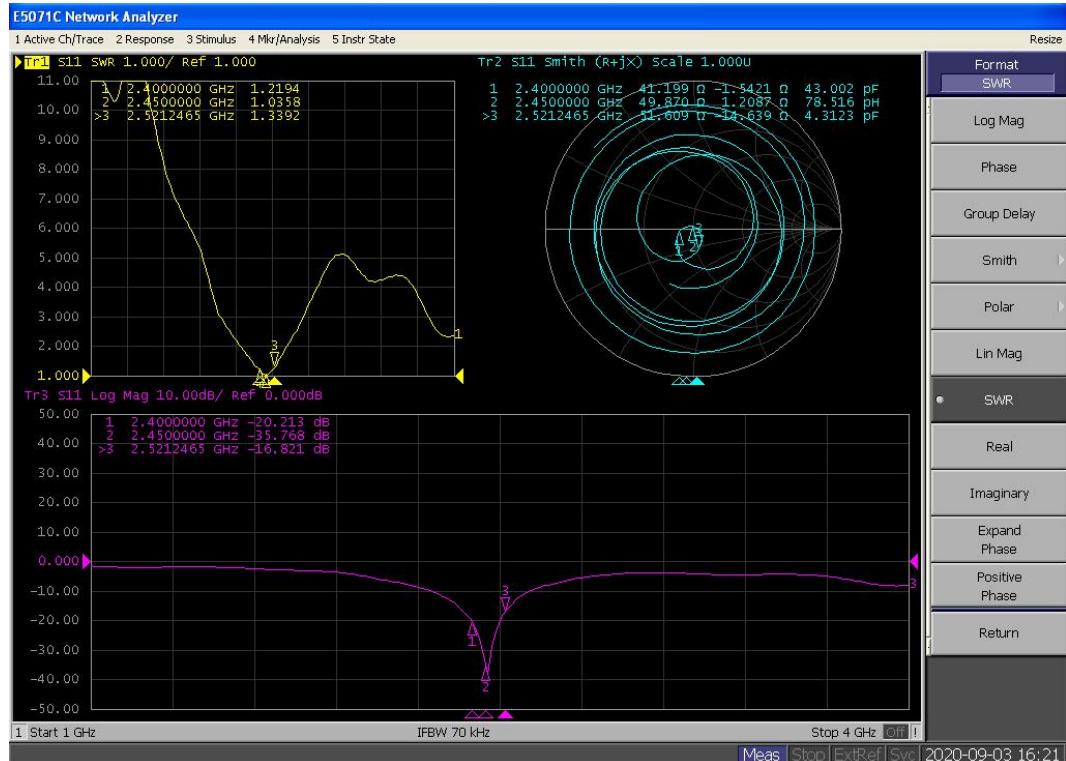
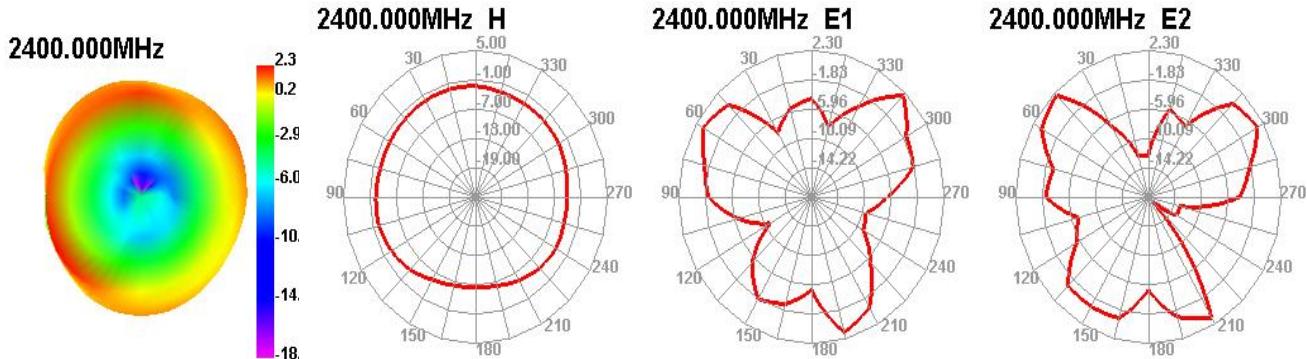


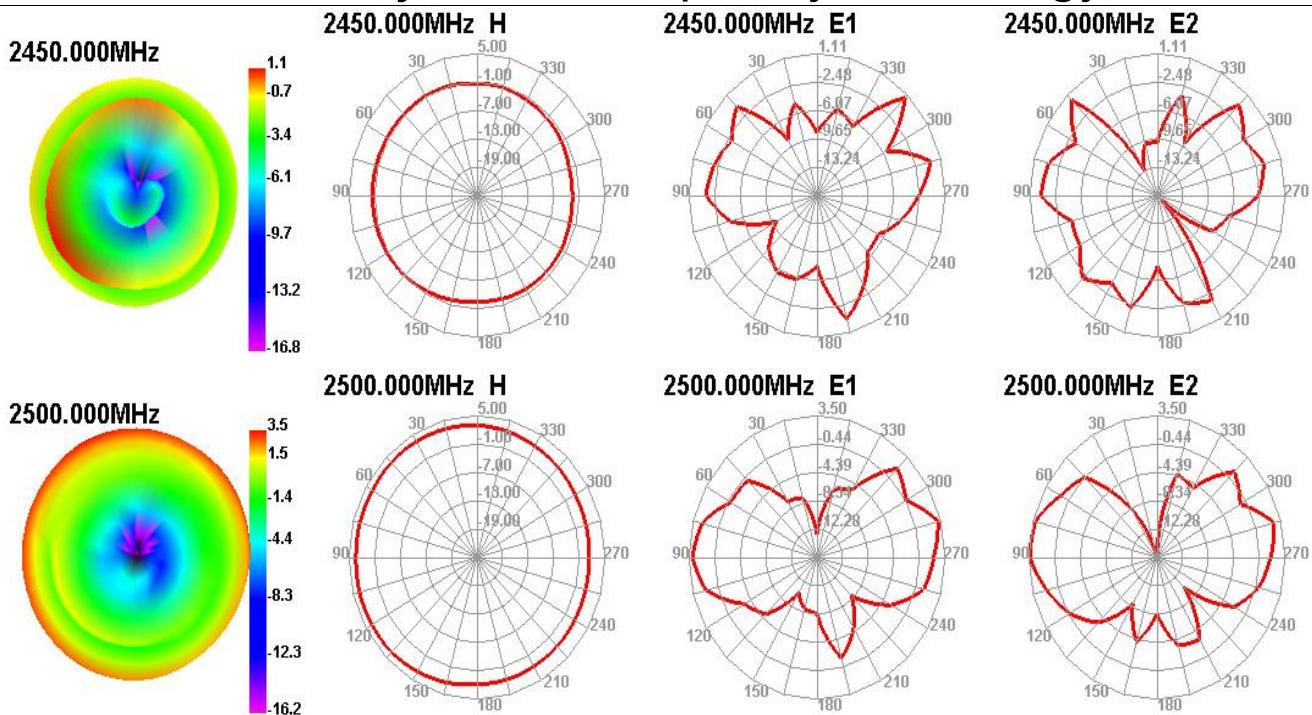
Chart 2 VSWR

### 5.2 Efficient and gain.

Passive	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	2520	2530
Test For	Effi(%)	57.66	63.34	56.48	57.02	59.82	59.12	55.64	60.81	55.18	50.44	51.01	49.47	53.37	51.65
2.4GHz	Gain(dBi)	1.93	1.97	1.86	2.02	2.07	2.02	1.91	1.83	1.85	1.85	1.87	1.85	1.79	1.88

### 5.3 Radiation pattern.





## 6. Reliability Test

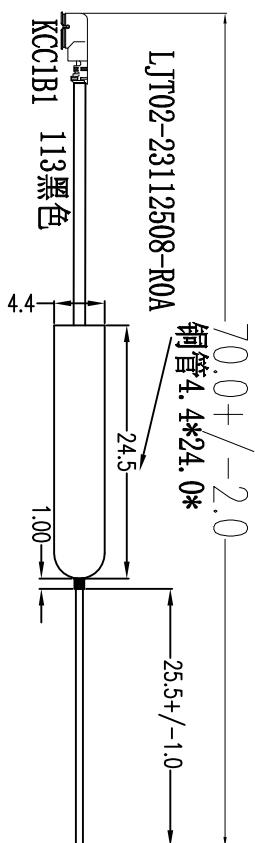
Test Item	Test condition	Equipment	Specification	Result
1 Low Temp. Storage Test	Temperature: -30°C , Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25 °C and humidity is 65% for one hour, then step-down the temp. to -30 °C in one hour, store antenna for 44 hours; step-up temp to 25°C,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°C Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25 °C and humidity is 65% for one hour, then step-up the temp. to 80 °C and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25 °C ,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: $35 \pm 2$ °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

## 7. Assemble type

## 8. Product Drawing

RoHS  
Compliant  
G P

线材焊钢管图



C

B

A

深圳乐进射频科技有限公司

		Third Angle	Project	Date	2023-11-25
		0~10	$\pm 0.05$	0.02	Part Name
D		10~18	$\pm 0.10$	$\odot 0.03$	Part No.
A	New drawing	18~30	$\pm 0.12$	$\pm 0.02$	Material
		30~40	$\pm 0.15$	$\odot 0.04$	DWG No.
		40~	$\pm 0.20$	Angle $\pm 0.5^\circ$	Approved by
Rev	Description	Date	Remark	location	Unit mm Scale 1:1 Rev A

1	2	3	4	5	6	7	8
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