



Shenzhen Lejin radio frequency technology Co., LTD

SPECIFICATIONS FOR APPROVAL

Customer Name: _____

Product Name: 433M Antenna

Product Model: IP06

Part Number: LJS062201A

Write By : Huxuwen

Issued Date: 2022-03-29

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	2022/03/29	



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3.Product Specification

A. Electrical Characteristics	
Frequency	433.92MHz $\pm$ 10.0MHz
VSWR	<2.0
Efficiency	$\geq$ 20%
Impedance	50Ohm
Polarization	Linear
Gain	$\leq$ 2.0dB
B. Material & Mechanical Characteristics	
Material of Radiator	Metal(Carbon steel)
Cable Type	N/A
Connector Type	Soldering(Φ 0.5mm)
Dimension	Φ 4.0*22.0mm
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 | |

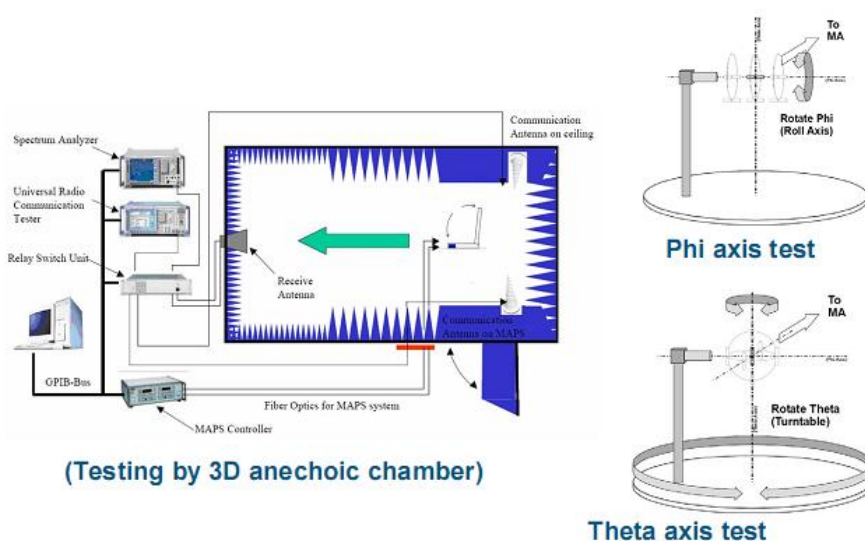


Chart 1 Test topology

5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).

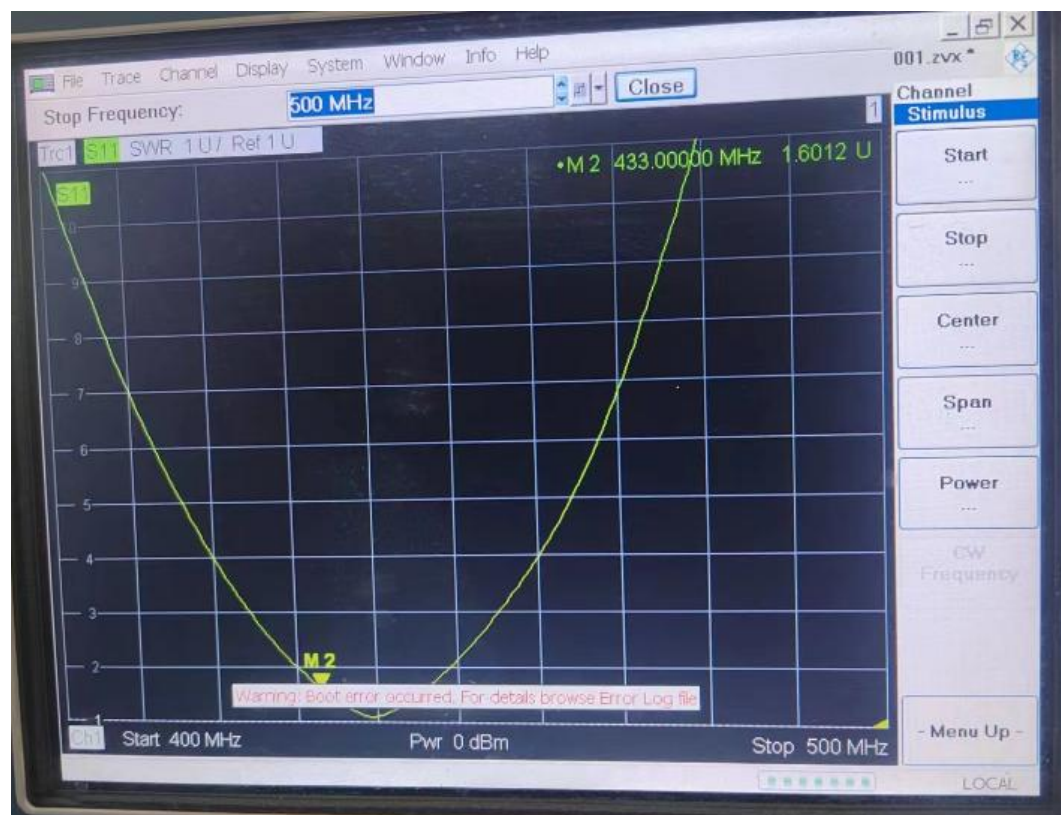
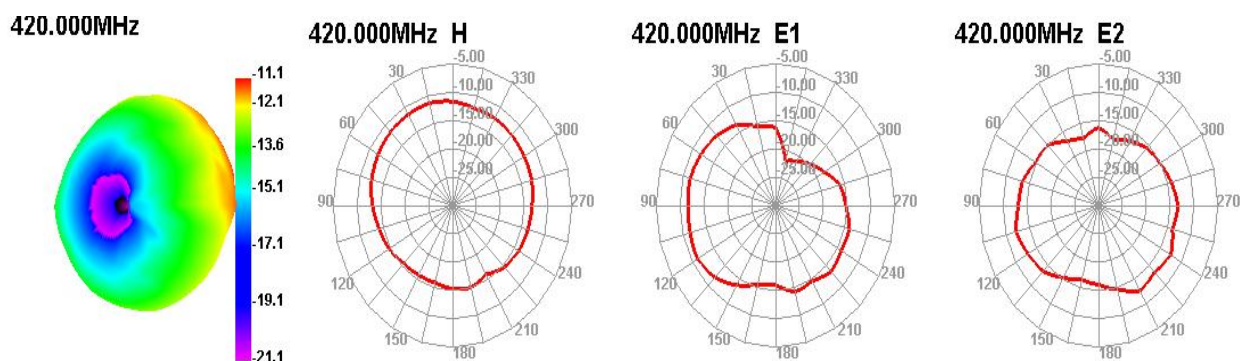


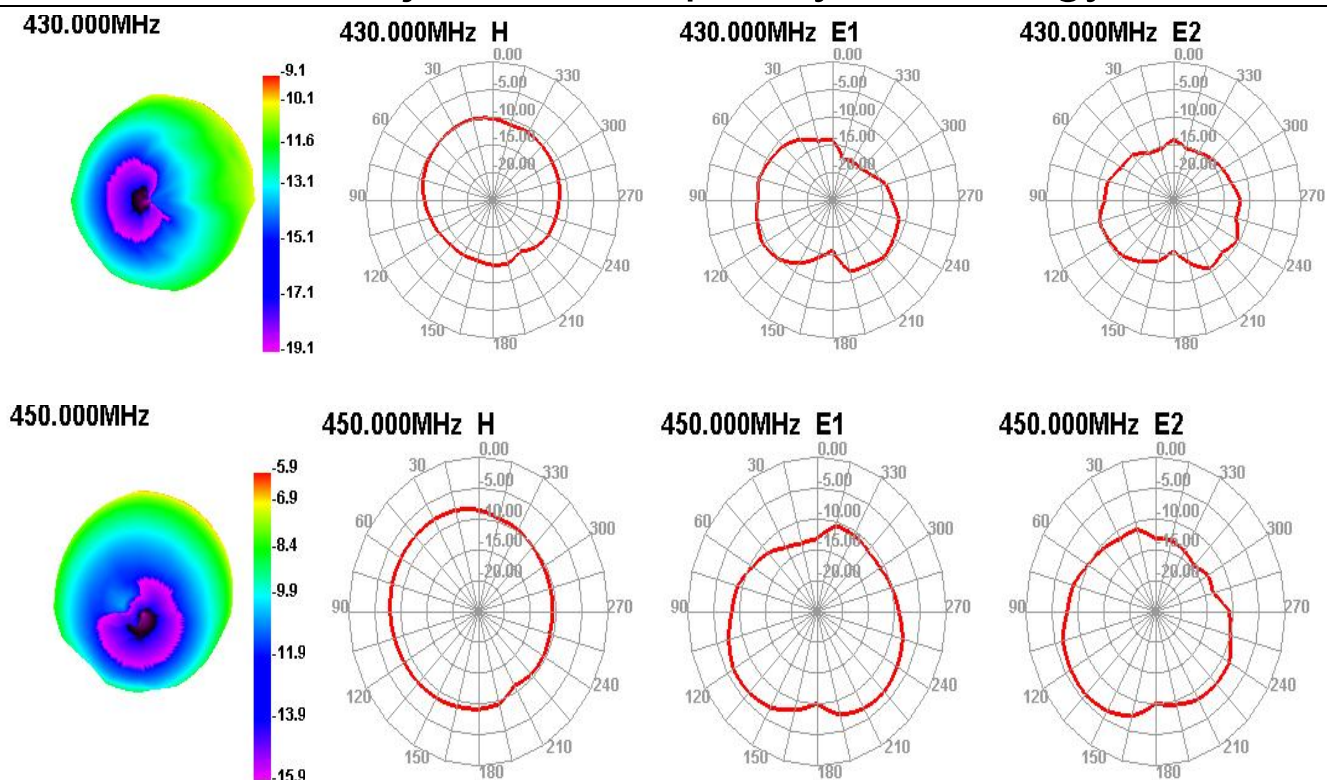
Chart 2 VSWR

5.2 Efficient and gain.

Passive	Freq(MHz)	410	420	430	440	450
Test For	Effi(%)	17.77	20.12	22.01	18.75	15.21
	Gain(dBi)	0.45	0.78	1.20	0.74	0.45

5.3 Radiation pattern.



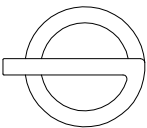
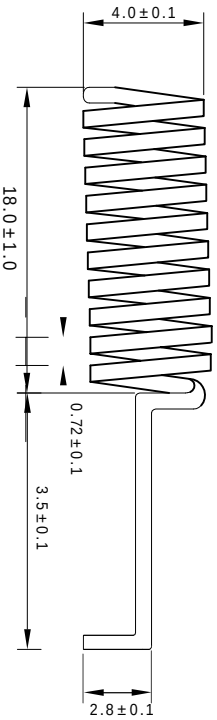
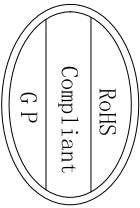


6. Reliability Test

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 Test time: 24 hours	Salt-Spray Tester	No color change No appear rusting	PASS

7. Assemble type (omit)

8. Product Drawing



1			
Revise	2		
record	3		

SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

	Third Angle	Project	Date	2023-03-13	
0~10	±0.05	○	0.02	Part Name	433M ANT
10~18	±0.10	◎	∅0.03	Part No.	
18~30	±0.12	└	0.02	Material	
30~40	±0.15	∇	0.04	Approved by	
40~	±0.20	Angle	±0.5°	Unit	mm
Location		Treatment	LJS062201A	Scale	FIT

Unit

mm

Scale

FIT

Rev

A

1	2	3	4	5	6	7	8
A							
B							
C							
D							
Rev				Date			
1				4			
Description				Remark			
2							
New drawing							
A							