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±10.0MHz
VSWR	<2.0
Efficiency	≥20%
Impedance	50Ohm
Polarization	Linear
Gain	≤2.0dB
B. Material & Mechanical Characteristics	
Material of Radiator	Metal(Carbon steel)
Cable Type	N/A
Connector Type	Soldering(Φ0.5mm)
Dimension	Φ4.0*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
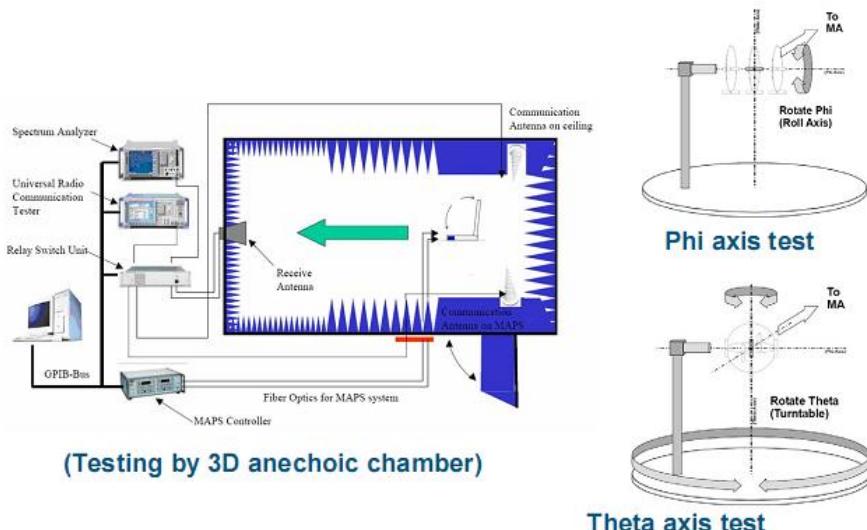


Chart 1 Test topology

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5.Test Report

5.1 Voltage Standing Wave Ratio(VSWR).
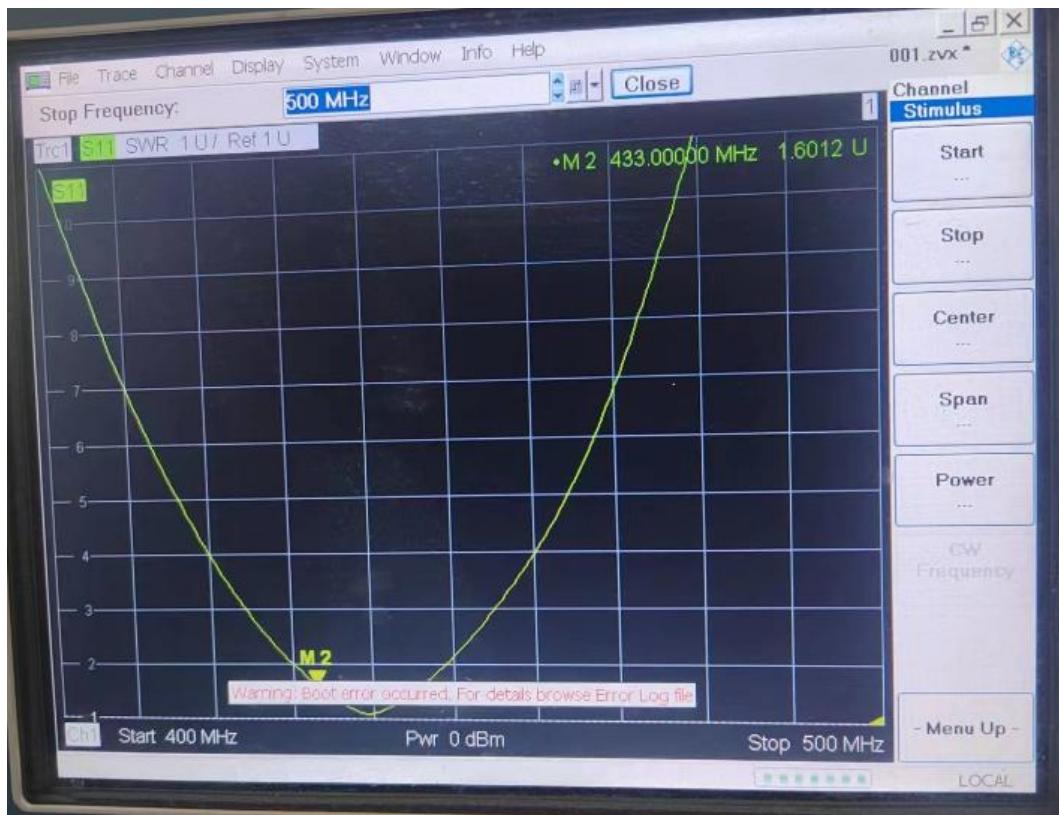
Chart 2 VSWR

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
433M	Gain(dBi)	0.45	0.78	1.20	0.74	0.45

5.3 Radiation pattern.
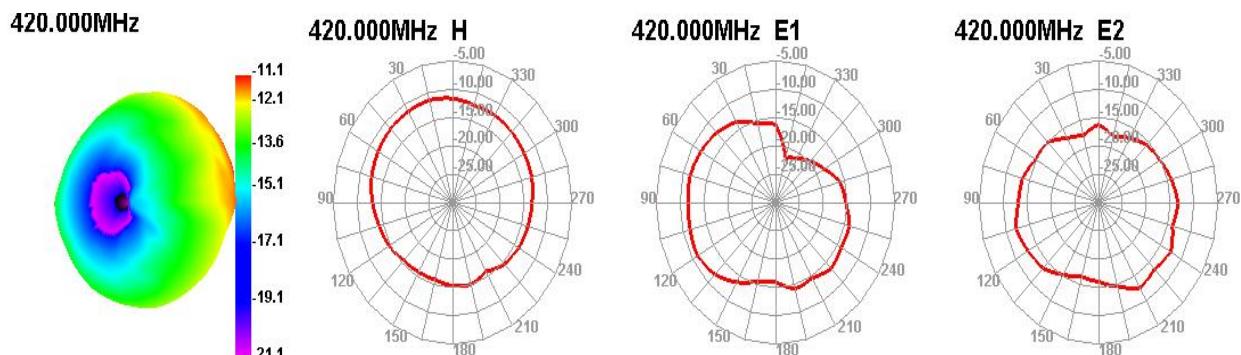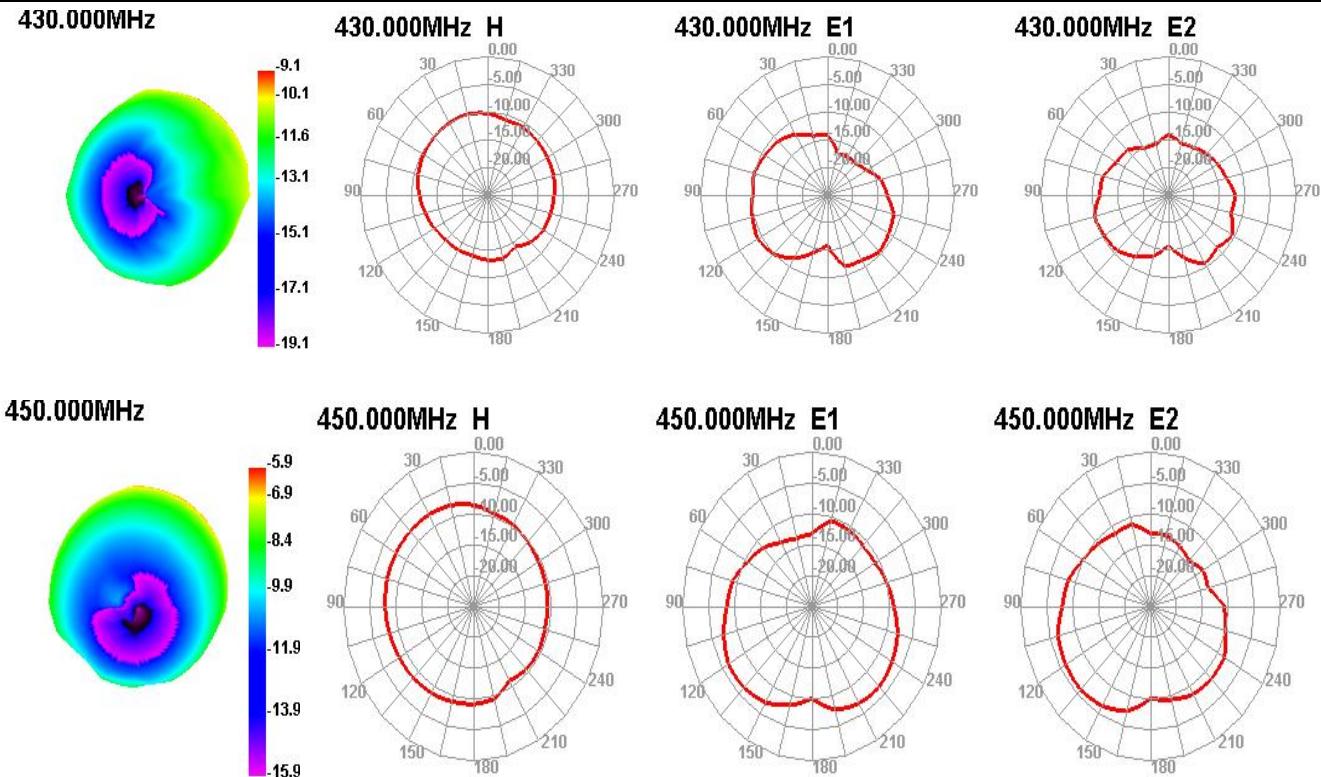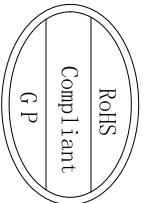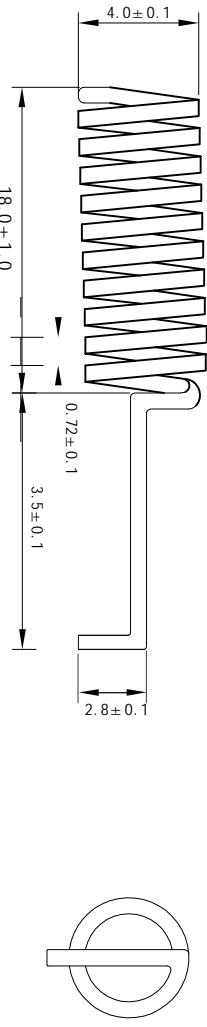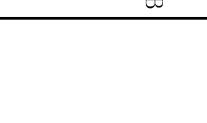
6.Reliability Test

	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 for44 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 tempto 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

4.0±0.1

18.0±1.0

0.72±0.1

3.5±0.1

2.8±0.1

RoHS Compliant GP

Rev / Description / Date / Remark table:

Rev	Description	Date	Remark
A	New drawing		

	1	2	3	4	5

Tolerance table:

Location			
0~10	±0.05	○	0.02
10~18	±0.10	◎	Ø0.03
18~30	±0.12	⊥	0.02
30~40	±0.15	◯	0.04
40~	±0.20	Angle	±0.5°

⊕⊡ ⊥⊿ Third Angle

Revise record: 1 / 2 / 3

SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD

Project		Date	2023-03-13
Part Name	433M ANT	Designed by	MD
Part No.		Checked by	RF
Material		Approved by	
Treatment	LJS062201A	Unit mm	Scale FIT	Rev A