

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ 2.4G WIFI/BT Antenna _____

Part NO.: _____ W49P. WIFI. C081. 60B. 2 _____

Write By: _____ Damon Cui _____

Issued Date: _____ 2024. 08. 12 _____

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz
	5150MHz-7200MHz
Return Loss	<-10.0 Dbi
Efficiency	>30%
Peak Gain	2.3dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	0.81MM Black
Connector Type	2
Dimension	At Attachment
Heat-durability	280±5°C, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C

● Test Equipment & Conditions

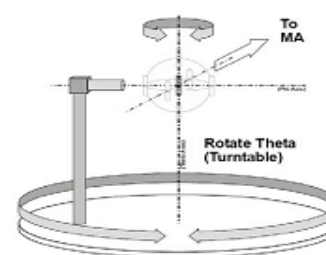
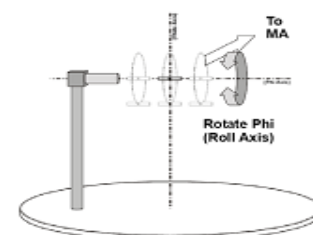
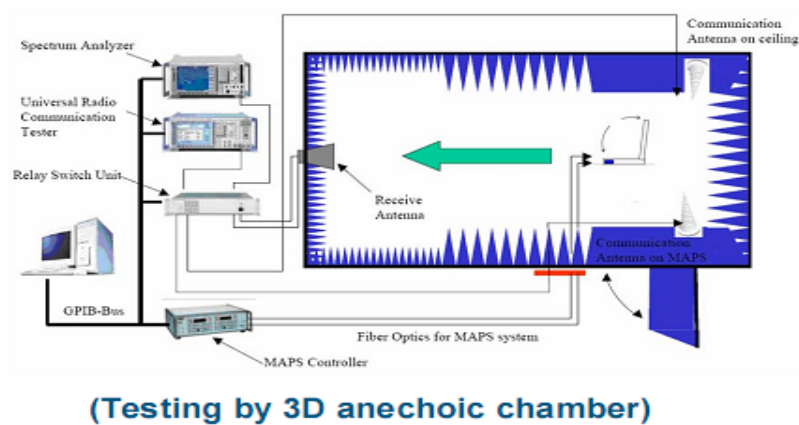
1. Network Analyzers :

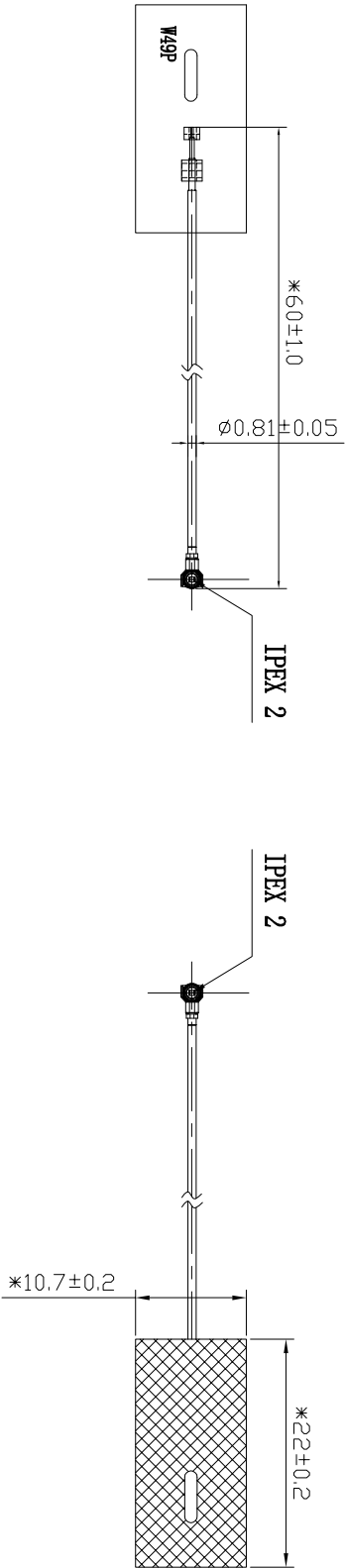
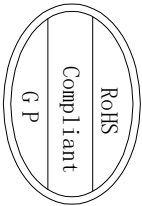
Agilent 8753D 5071B

Communications Test Set:

Agilent E5515C CMW500

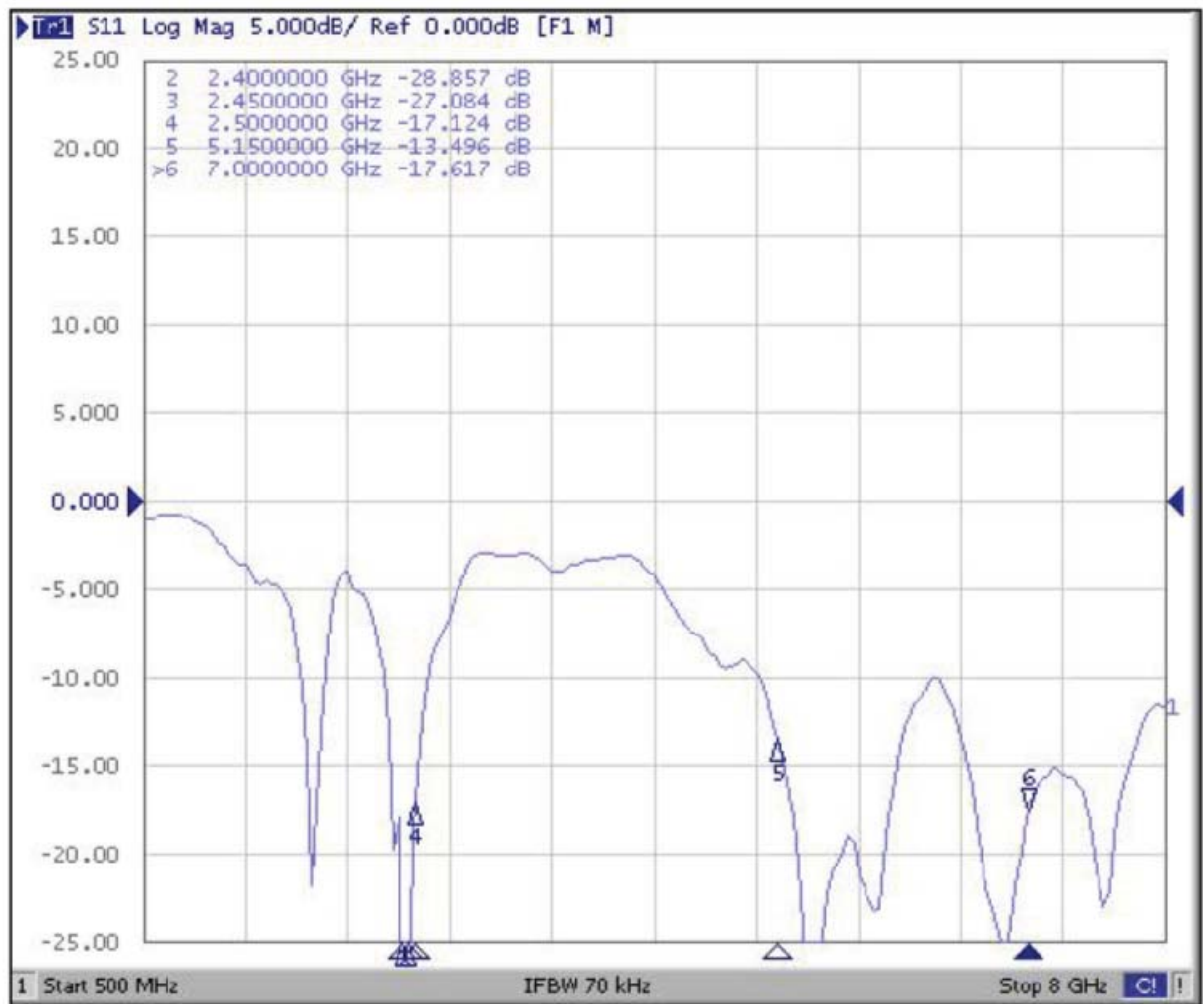
2. 3D Chamber Test System





1		2	3	4	5	6	7	8
A								A
B								B
C								C
D								D

◆ Return Loss



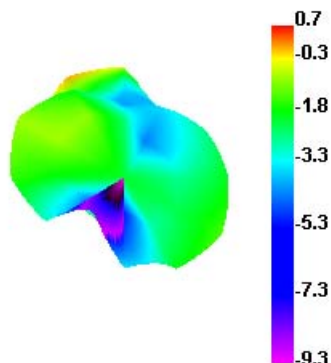
◆ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dB)
2400	32.86	0.69
2410	31.16	0.25
2420	31.14	-0.07
2430	31.65	-0.26
2440	32.59	-0.36
2450	31.67	-0.53
2460	31.21	-0.46
2470	30.43	-0.51
2480	31.12	-0.43
2490	32.48	-0.44
2500	32.51	-0.91

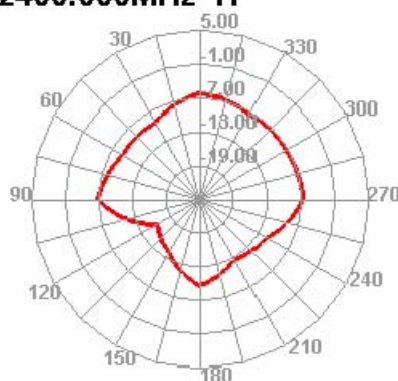
Freq (MHz)	Effi (%)	Gain (dB)
5150	37.49	0.8
5350	43.44	1.2
5550	42.69	2.2
5750	36.93	1.46
5950	33.65	0.82
6150	33.44	-0.38
6350	32.85	-1.14
6550	42.84	1.41
6750	43.82	1.49
6950	46.94	1.62
7150	41.24	2.31

◆ Radiation Pattern

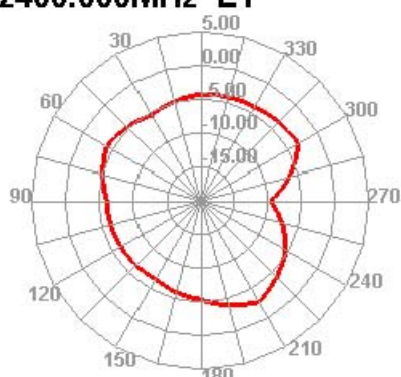
2400.000MHz



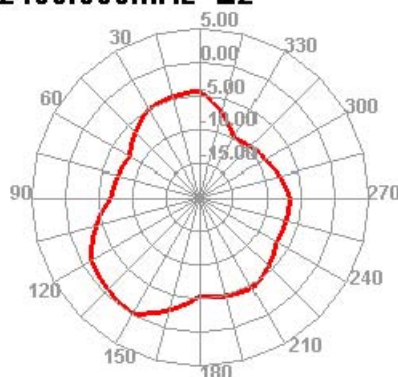
2400.000MHz H



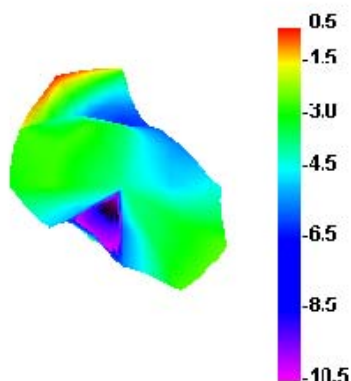
2400.000MHz E1



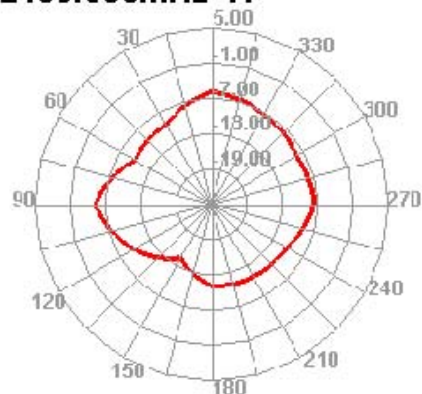
2400.000MHz E2



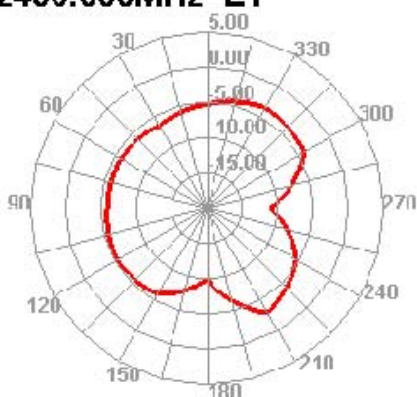
2450.000MHz



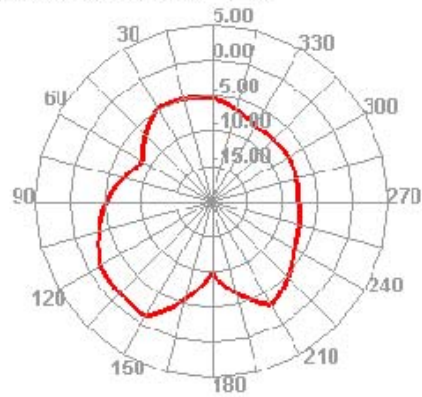
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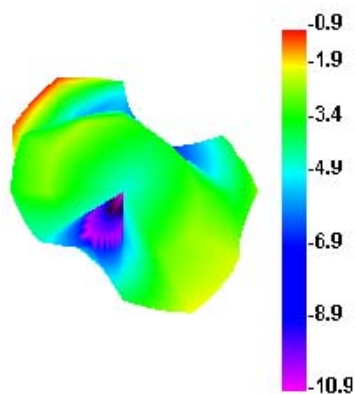
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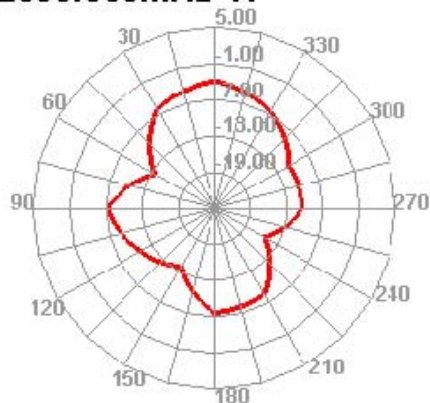
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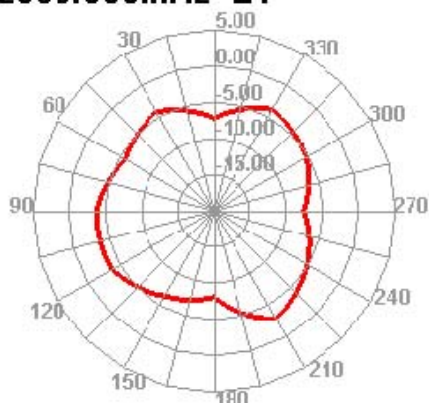
2500.000MHz



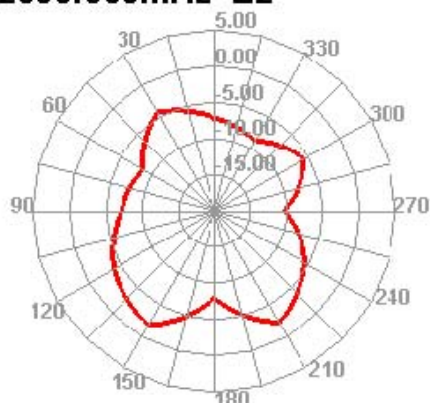
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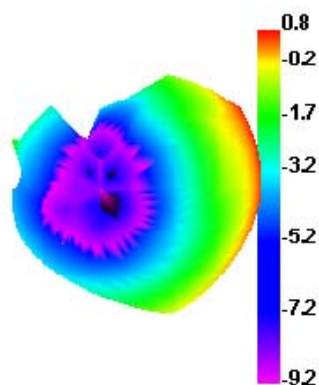
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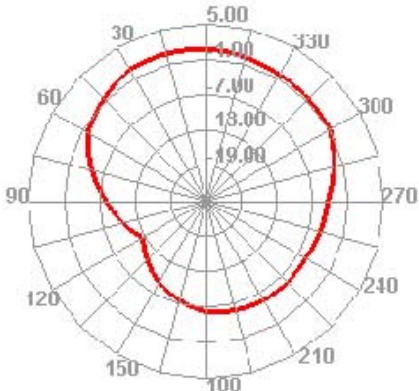
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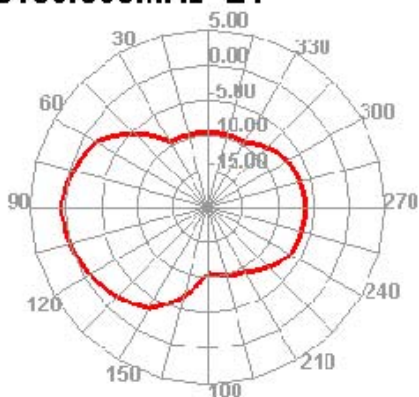
5150.000MHz



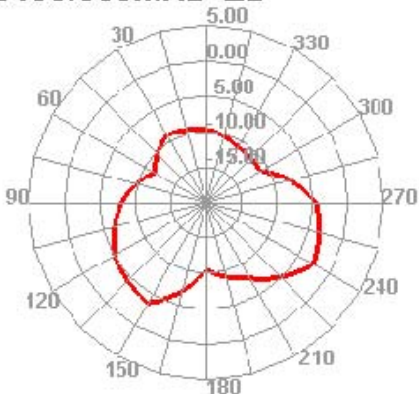
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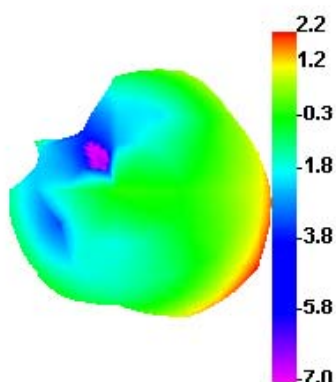
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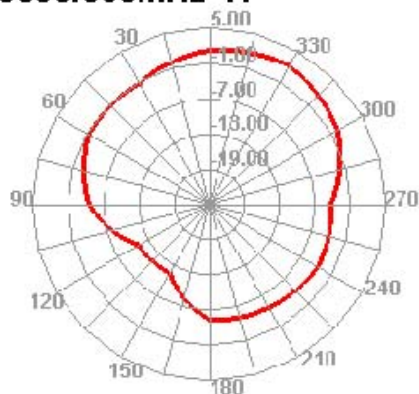
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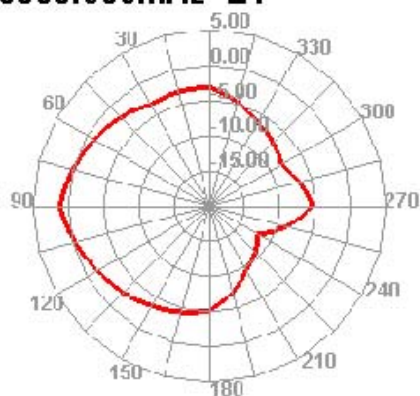
5500.000MHz



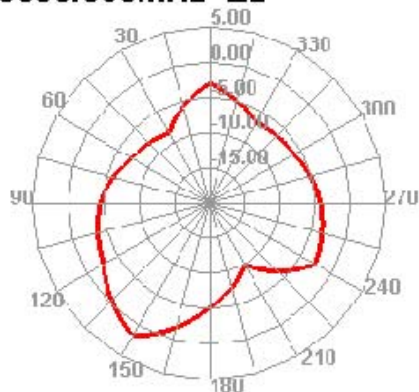
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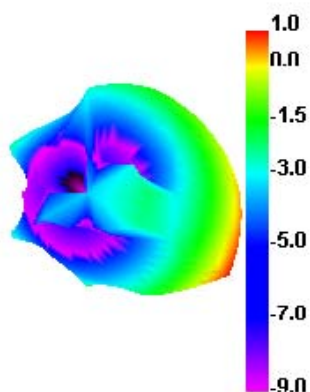
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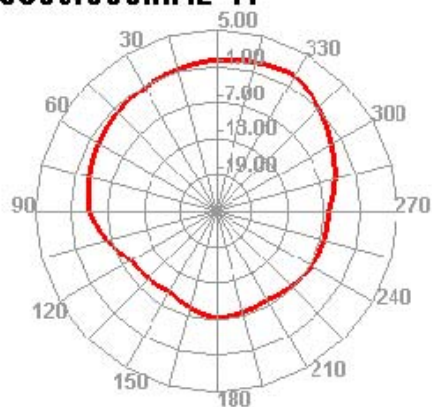
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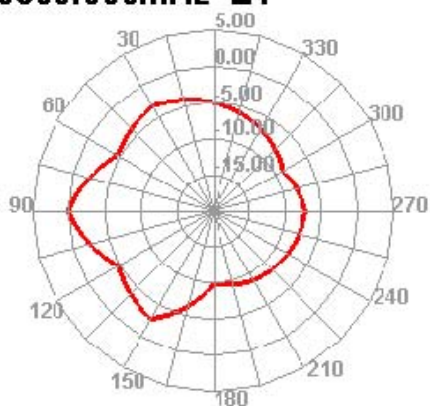
5800.000MHz



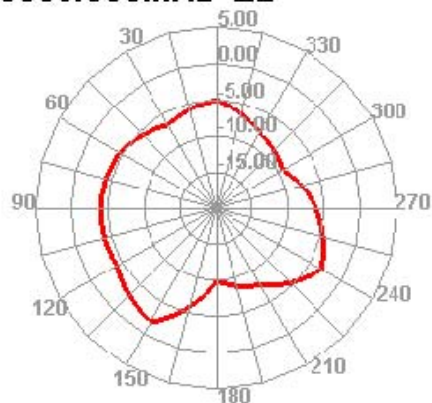
5800.000MHz H



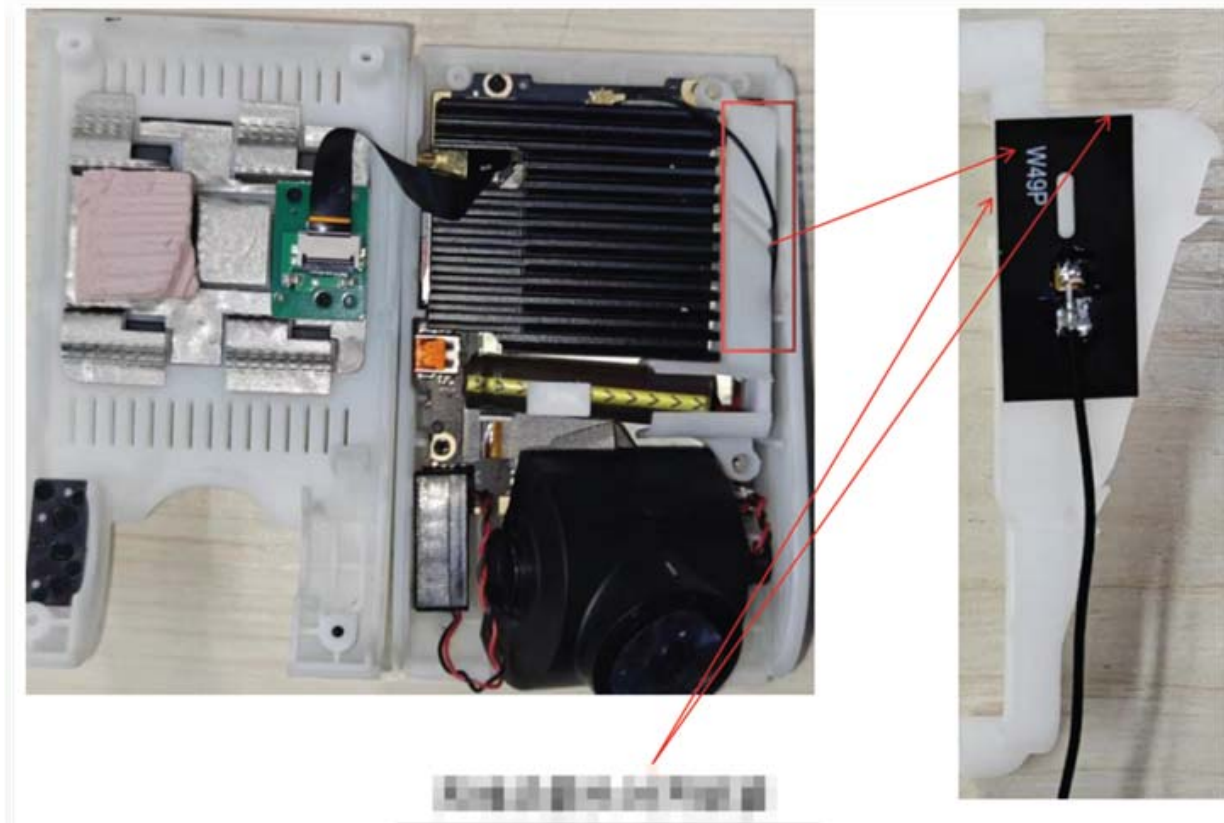
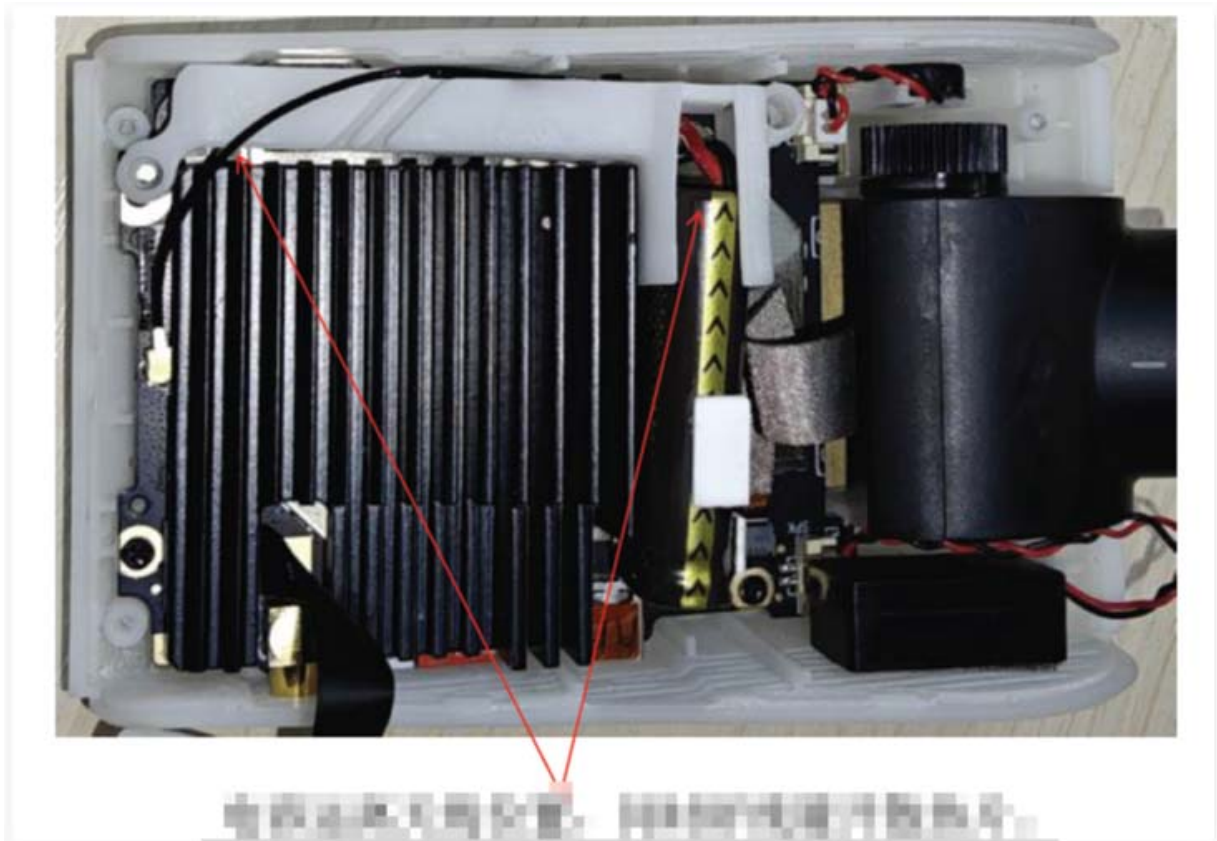
5800.000MHz E1



5800.000MHz E2



◆ Antenna Picture



◆ 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: $35 \pm 2^{\circ}\text{C}$ Humidity: 85% NaCl salt spray :5 ± 1 %.PH value :6.5~7.2 Test time:24hours	Salt-Spray Tester	No color change No appear rusting	PASS