Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: 2.4G/5.8G WIFI Antenna

Part NO.: WF84A.C113.190B.221

Write By: Damon Cui

Issued Date: 2022-11-10

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

R & D Center：Room D 5th Floor Building L,Block E ,71 Baocheng District ,Baoan District ,Shenzhen
Factory：6 Floor,GangHuaXing Industrial Park,Rongshu Road 2nd ,Fuyong,Baoan ,shenzhen
Email:damoncui@tllskylink.com

Specification Summary

A. Electrical Characteristics	
Frequency	**2.4GHz ~2.4835GHz** **5.15GHz ~5.85GHz**
Return Loss	**<-10.0**
Efficiency	**>40%**
Peak Gain	**2.4dbi**
Impedance	**50 Ohm**
Polarization	**Line**
B. Material & Mechanical Characteristics	
Material of Radiator	**Cu**
Cable Type	**ϕ1.13MM Black**
Connector Type	/
Dimension	At Attachment
Heat-durability	**280±5˚C，10sec.**
C. Environmental Characteristics	
Operation Temperature	**- 20 ˚C ~ + 80 ˚C**
Storage Temperature	**- 30 ˚C ~ + 85 ˚C**

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Test Equipment & Conditions

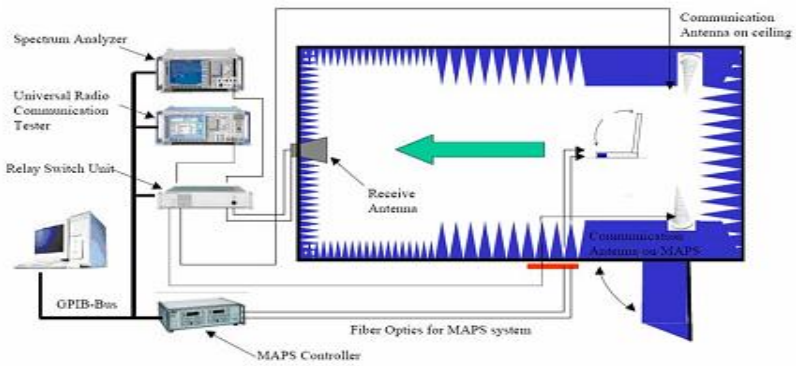
1. Network Analyzers :

Agilent 8753D 5071B

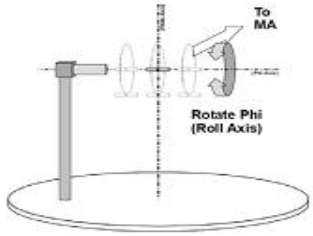
Communications Test Set:

Agilent E5515C CMW500

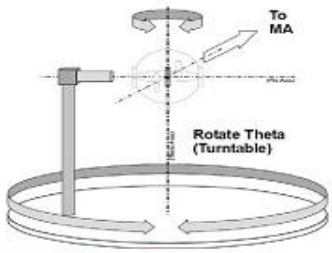
2. 3D Chamber Test System



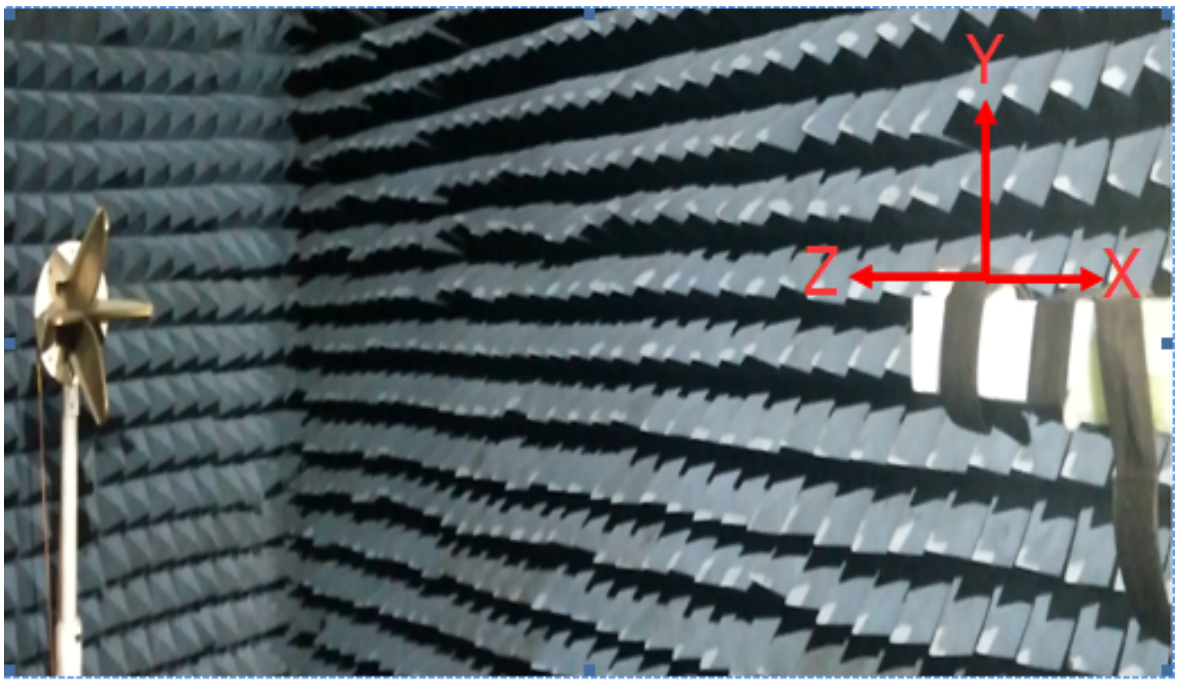
(Testing by 3D anechoic chamber)



Phi axis test



Theta axis test



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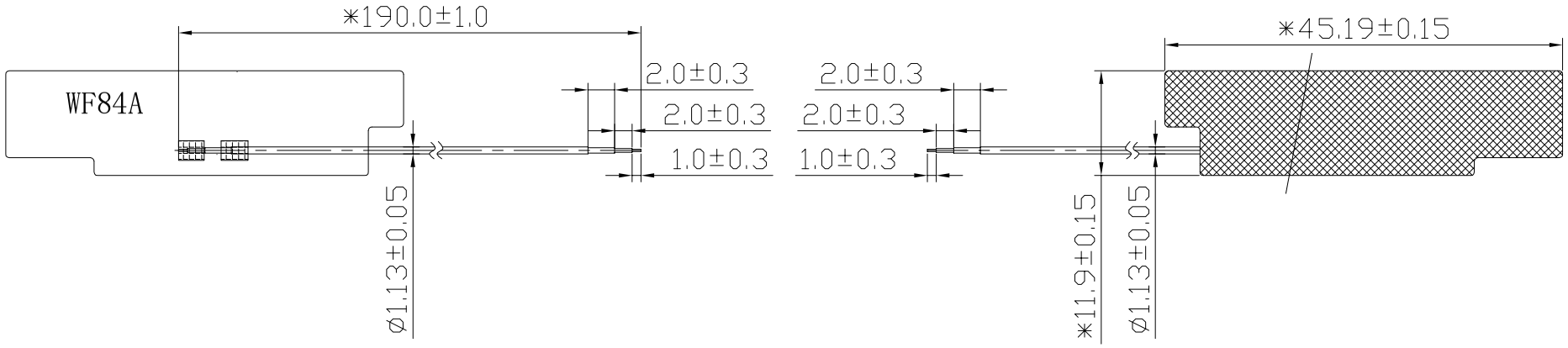
RoHS
Compliant
G P



Rev	Description	Date	Remark
A	New drawing		

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°
Location			

SHEN ZHEN SKYLink CO.,LTD

Third Angle		Date	2022-11-10
Project		Designed by	
Part Name		Checked by	MD
Part No.	WF84A.C113.190B.221		RF
Material		Approved by	
DWG No.		Unit mm	Scale 1:1 Rev A

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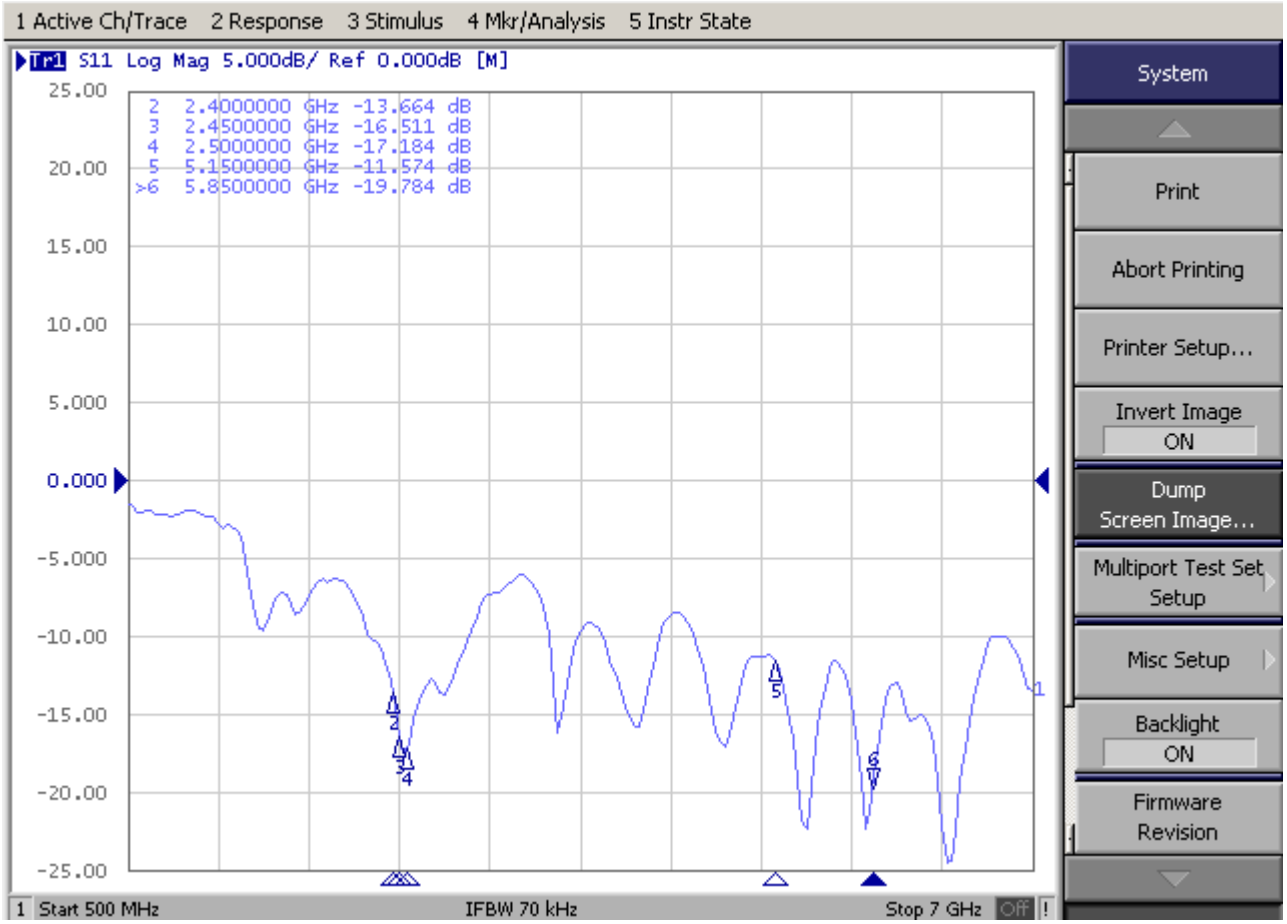
Return Loss


1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Tr1 S11 Log Mag 5.000dB/ Ref 0.000dB [M]
2 2.4000000 GHz -13.664 dB
3 2.4500000 GHz -16.511 dB
4 2.5000000 GHz -17.184 dB
5 5.1500000 GHz -11.574 dB
>6 5.8500000 GHz -19.784 dB
25.00
20.00
15.00
10.00
5.000
0.000
-5.000
-10.00
-15.00
-20.00
-25.00
1 Start 500 MHz
IFBW 70 kHz
Stop 7 GHz
System
Print
Abort Printing
Printer Setup...
Invert Image
ON
Dump
Screen Image...
Multiport Test Set
Setup
Misc Setup
Backlight
ON
Firmware
Revision

Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)	Freq (MHz)	Effi (%)	Gain (dBi)
2400	48.7	1.31	5150	44.82	2.27
2410	50.33	1.72	5200	44.98	2.13
2420	53.26	2.0			
2430	56.91	2.4			
2440	54.06	2.4			
2450	51.16	2.4			
2460	51.82	2.31			
2470	55.15	2.4			
2480	57.02	2.21			
2490	60.23	2.23			
2500	59.46	2.14			
			5750	53.98	2.44
			5800	55.51	2.35
			5850	59.87	2.20

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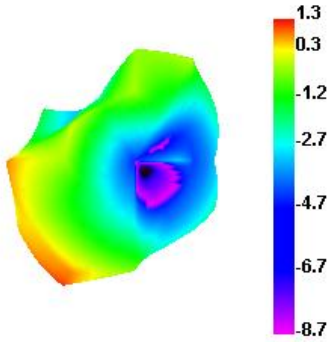
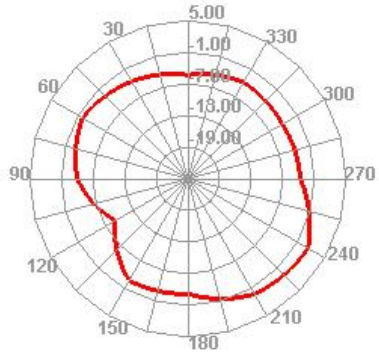
Radiation Pattern

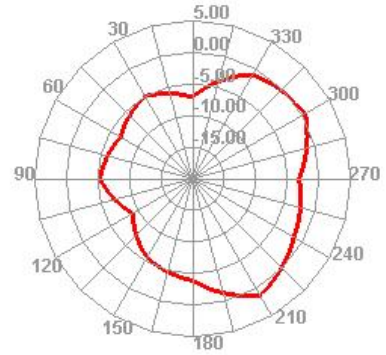
2400.000MHz



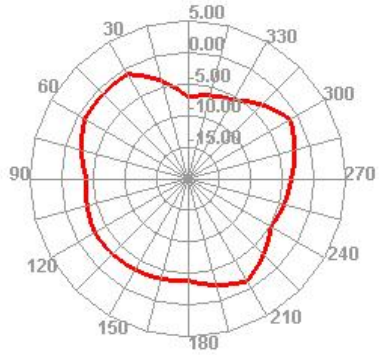
2400.000MHz H



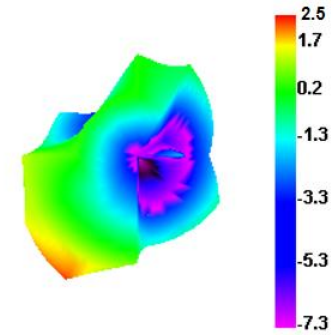
2400.000MHz E1



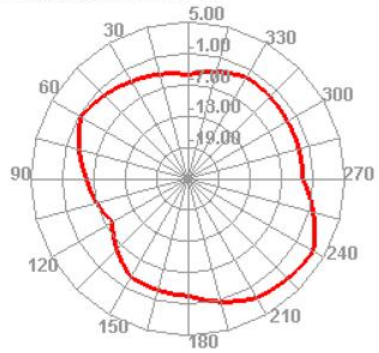
2400.000MHz E2



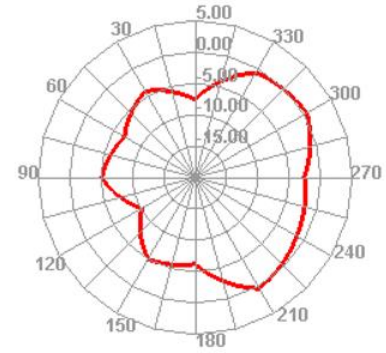
2450.000MHz



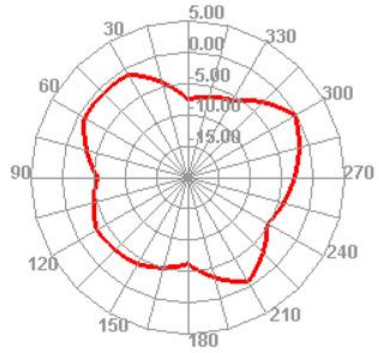
2450.000MHz H



2450.000MHz E1



2450.000MHz E2



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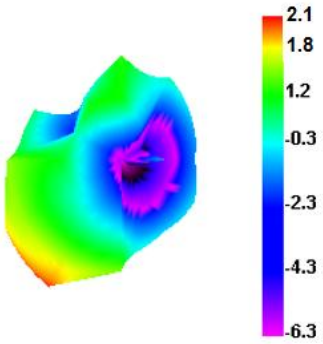
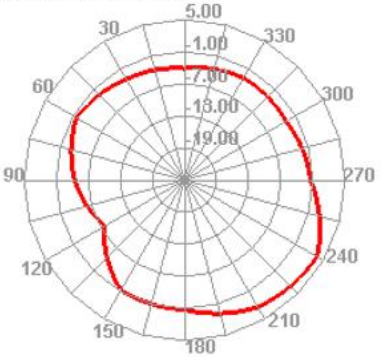
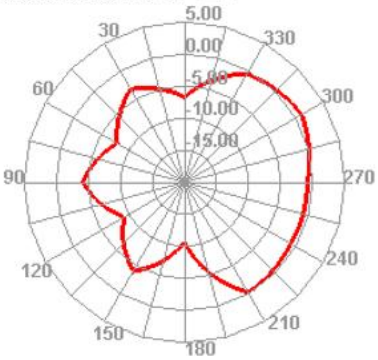
2500.000MHz



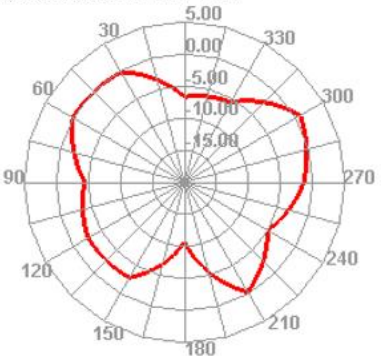
2500.000MHz H



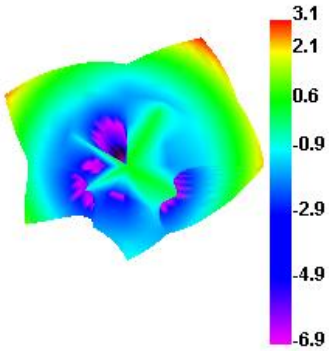
2500.000MHz E1



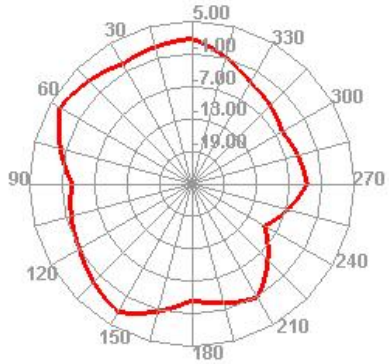
2500.000MHz E2



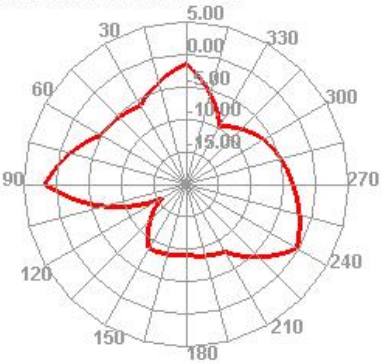
5150.000MHz



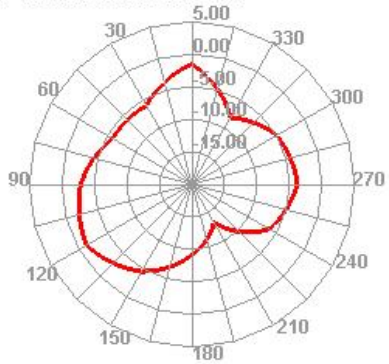
5150.000MHz H



5150.000MHz E1



5150.000MHz E2



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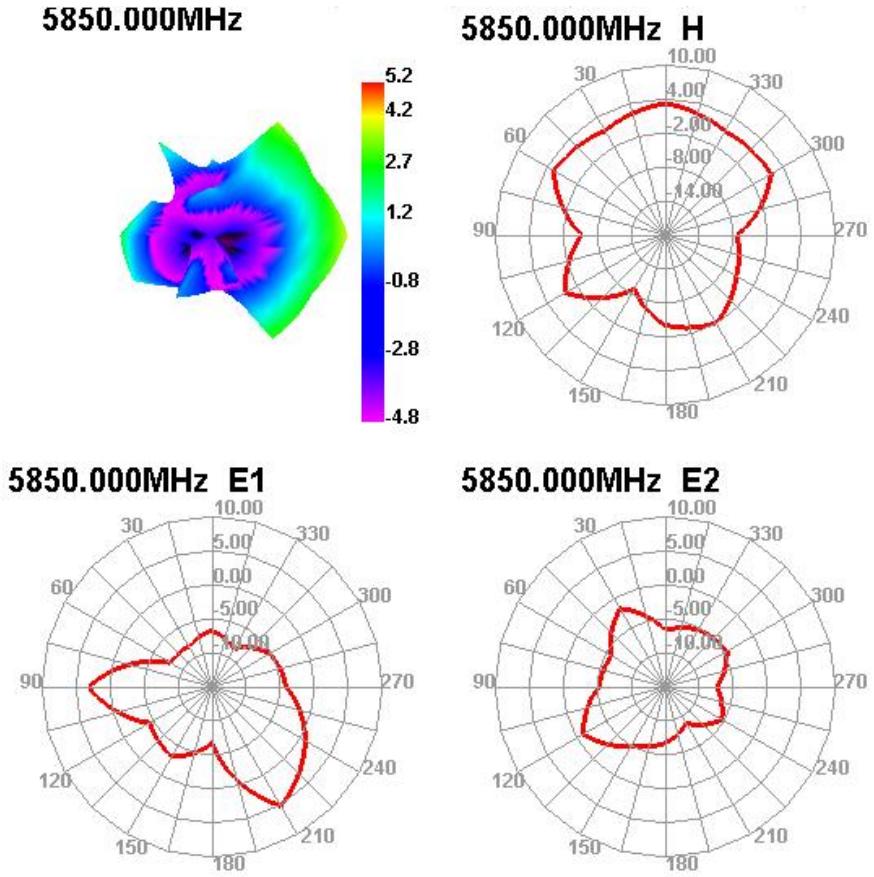

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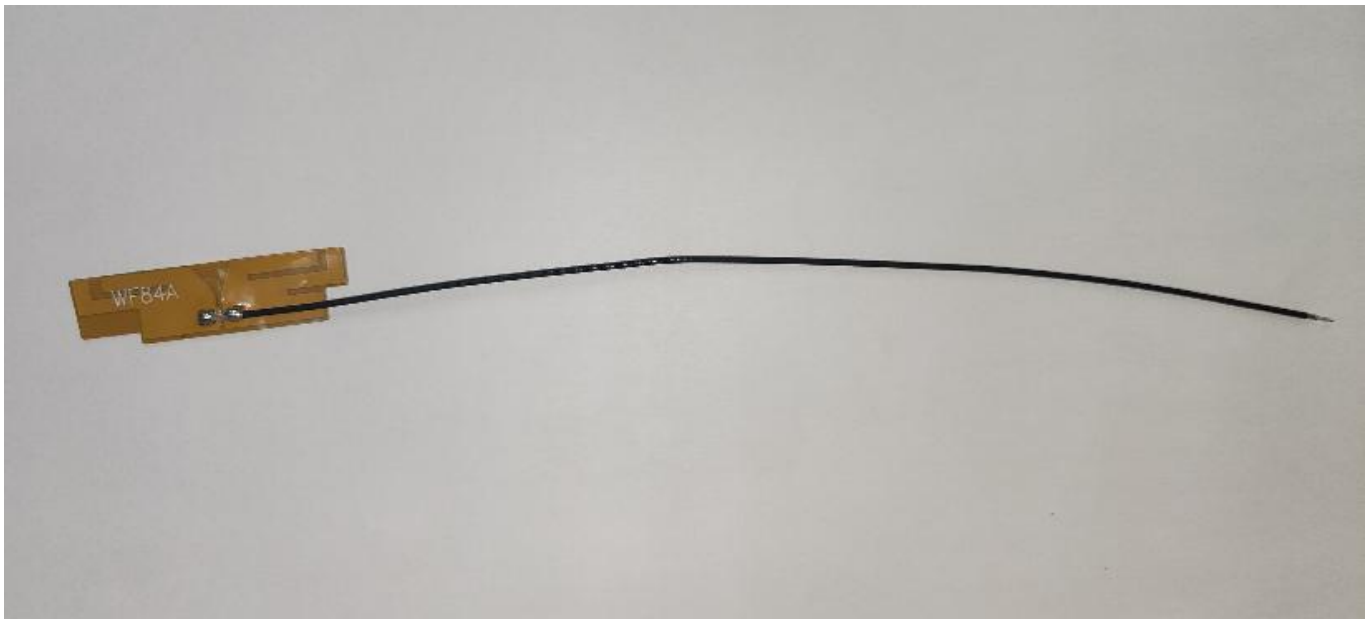
Antenna Picture



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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±2℃ 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

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