

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ 2.4G/5.8G WIFI Antenna

Part NO. : _____ CY. TX02. C113. 60B. 1

Write By: _____ Fang Zhengfeng

Issued Date: _____ 2023-02-07

Customer

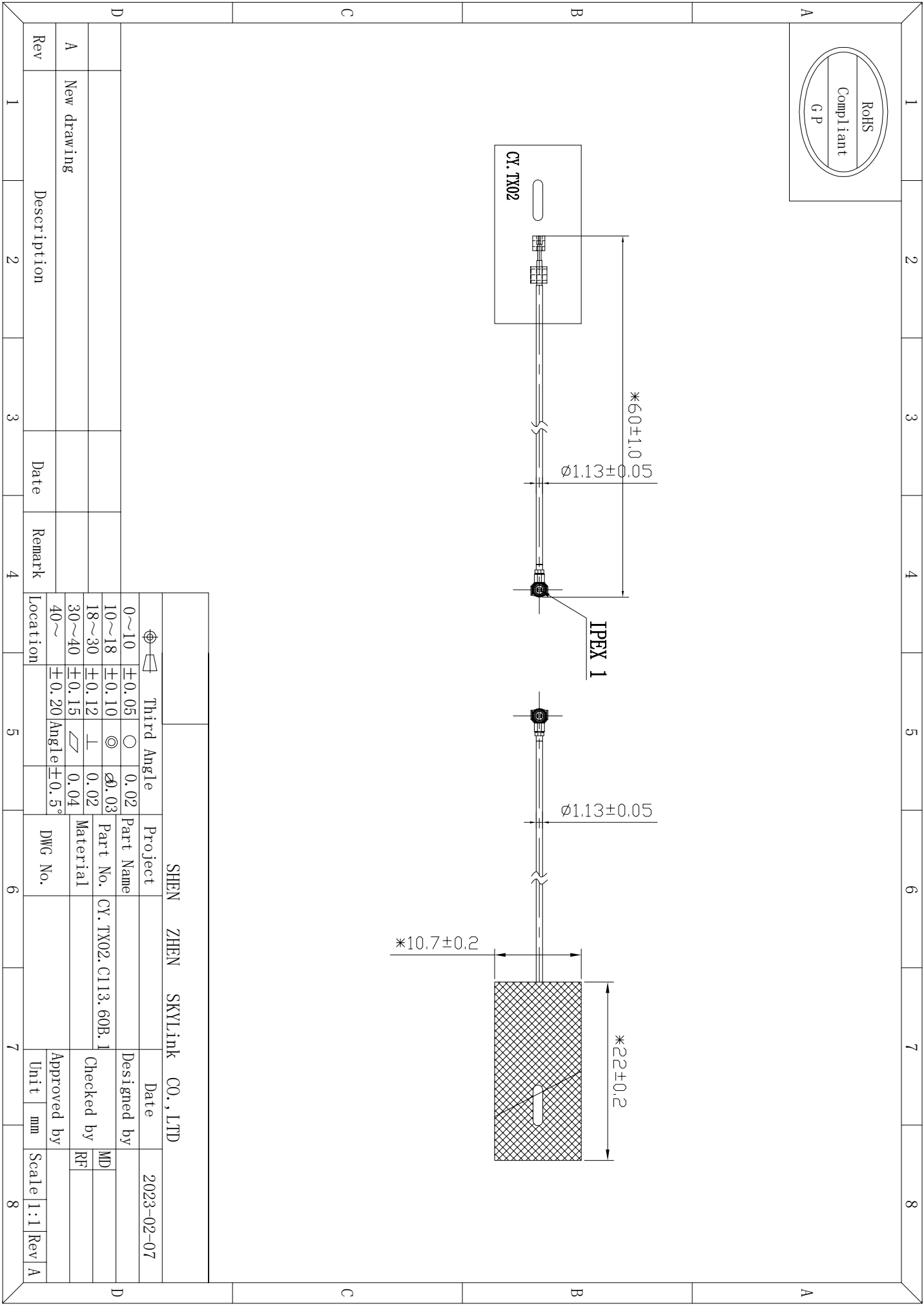
R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz 5150MHz ~5850MHz
Log Mag	<-5dB
Efficiency	>40%
Peak Gain	2.4G:1.96dbi;5G:2.59dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	1.13mm Black
Connector Type	1
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

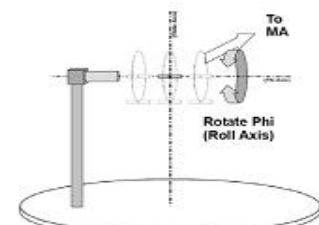
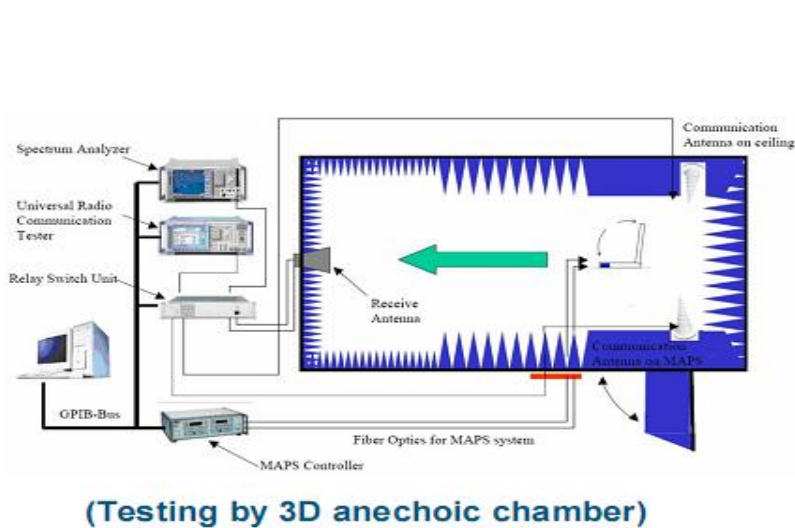
1. Network Analyzers :

Agilent 8753D 5071B

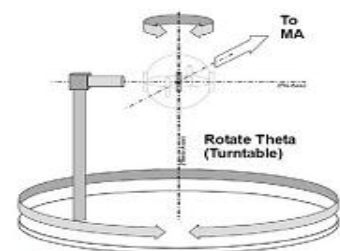
Communications Test Set:

Agilent E5515C CMW500

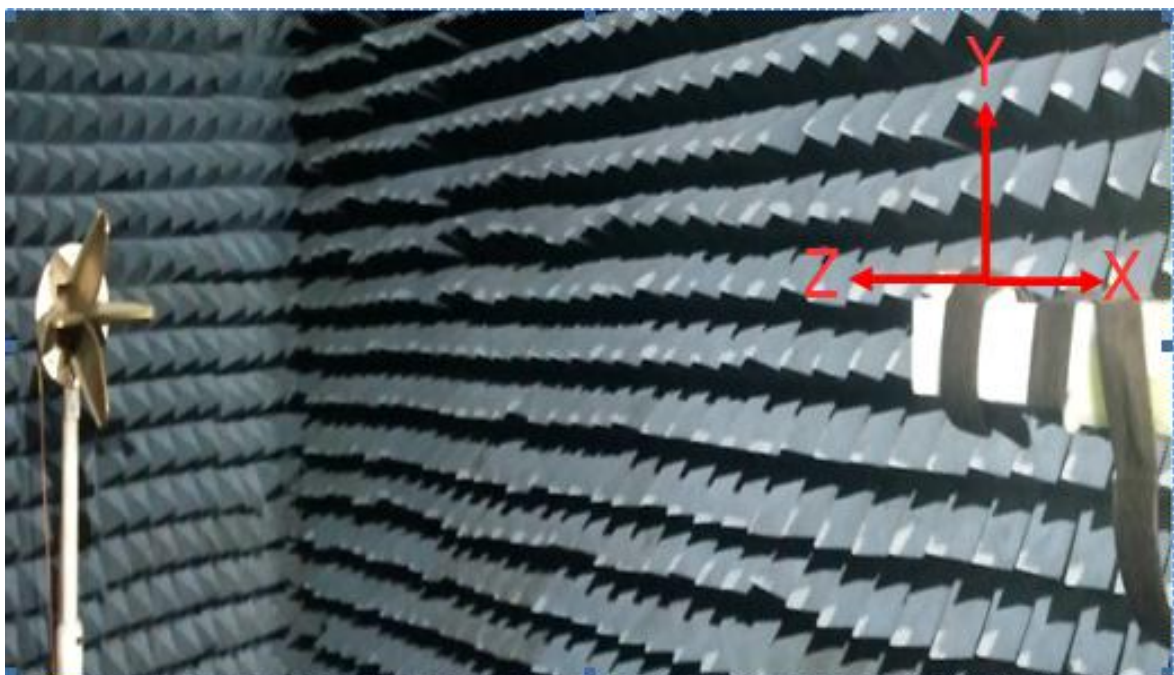
2. 3D Chamber Test System



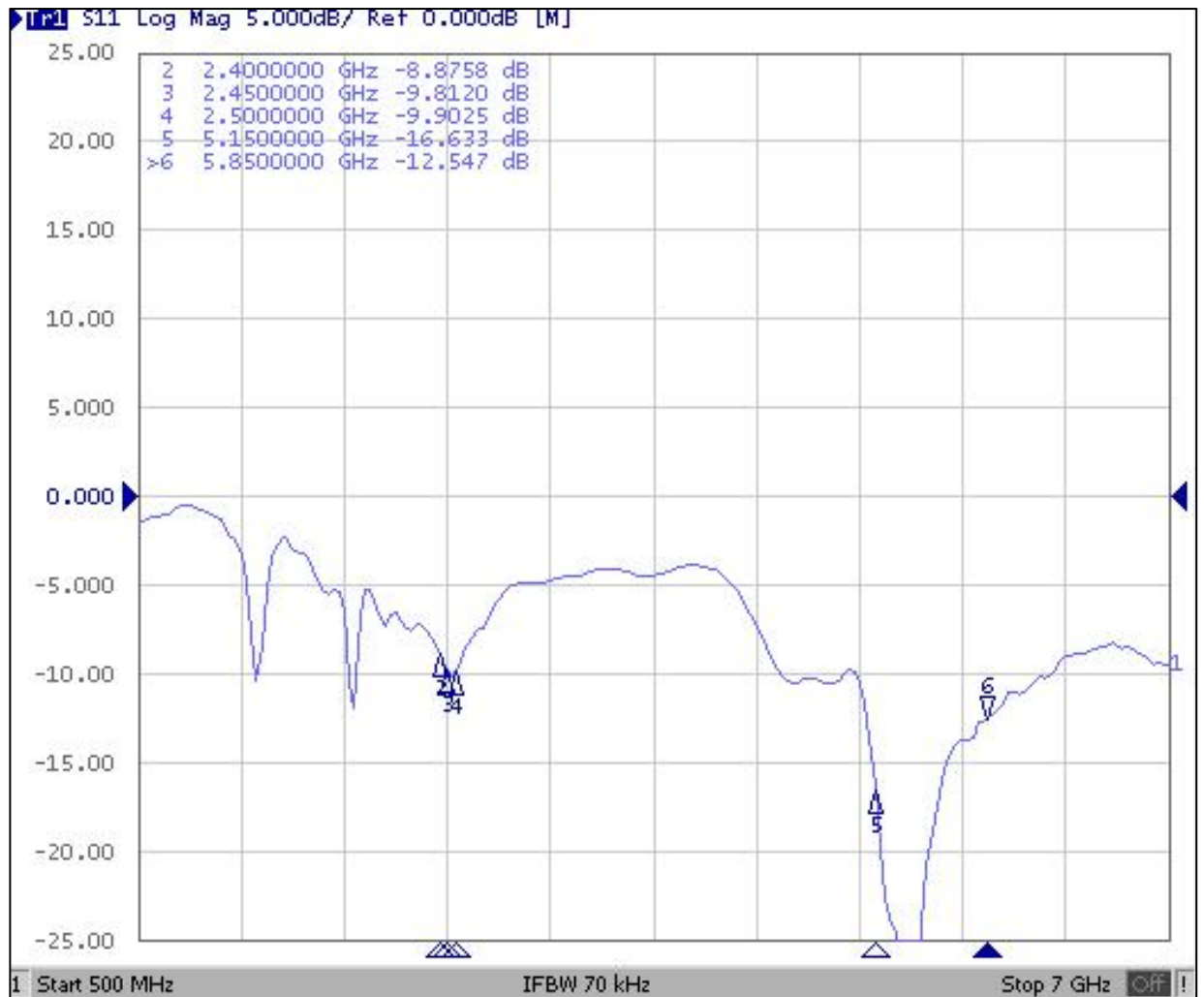
Phi axis test



Theta axis test



◆ Return Loss



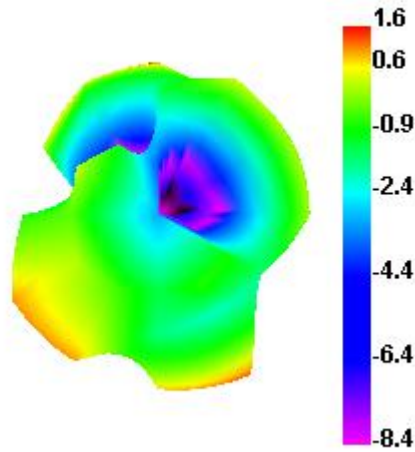
◆ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2400	54.33	1.59
2410	50.44	1.09
2420	48.5	1.1
2430	46.51	1.25
2440	48.87	1.69
2450	46.41	1.64
2460	45.55	1.67
2470	44.1	1.56
2480	47.18	1.76
2490	52.21	1.96
2500	51.24	1.53

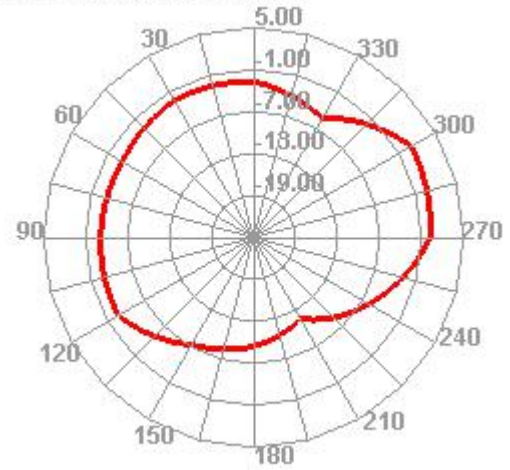
Freq (MHz)	Effi (%)	Gain (dBi)
5150	44.16	1.73
5200	40.22	1.82
5250	40.67	1.36
5300	40.6	0.63
5350	41.63	1.04
5400	44.93	1.76
5450	46.36	2.14
5500	48.32	2.09
5550	52.15	2.59
5600	53.22	2.37
5650	52.54	2.48
5700	48.25	2.28
5750	51.33	2.29
5800	57.74	2.4
5850	54.79	2.29

◆ Radiation Pattern

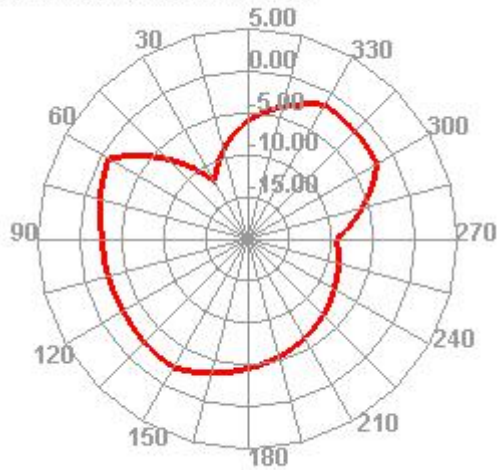
2400.000MHz



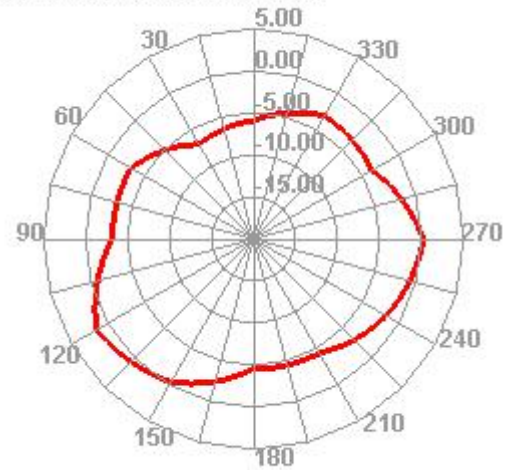
2400.000MHz H



2400.000MHz E1

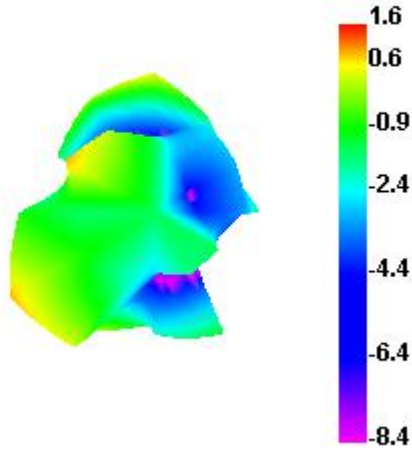


2400.000MHz E2

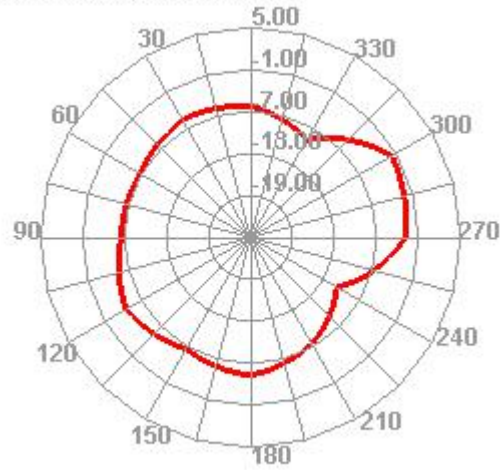


◆ Radiation Pattern

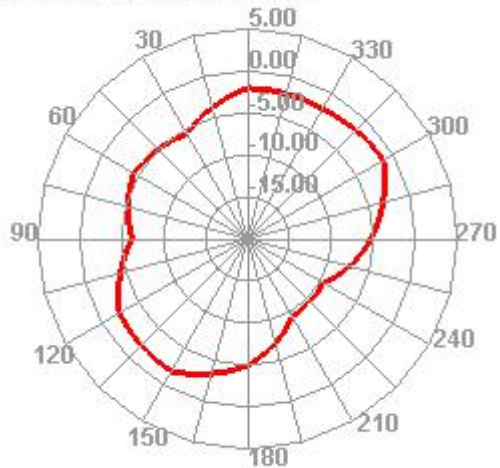
2450.000MHz



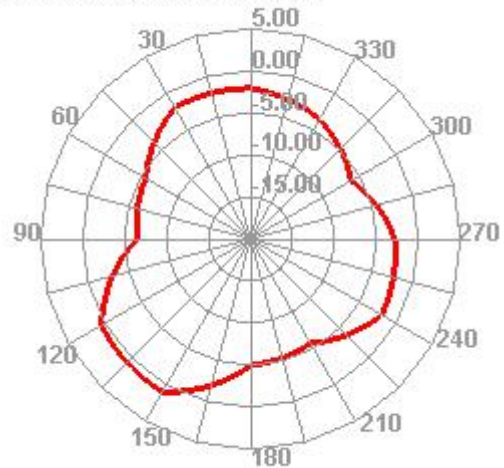
2450.000MHz H



2450.000MHz E1

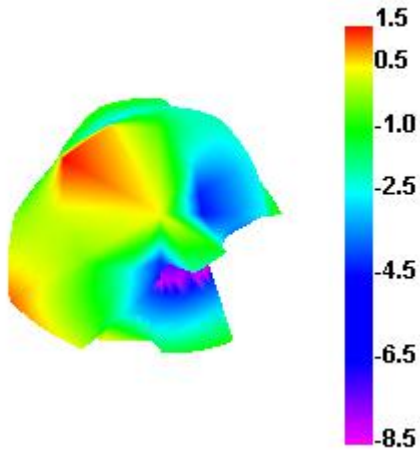


2450.000MHz E2

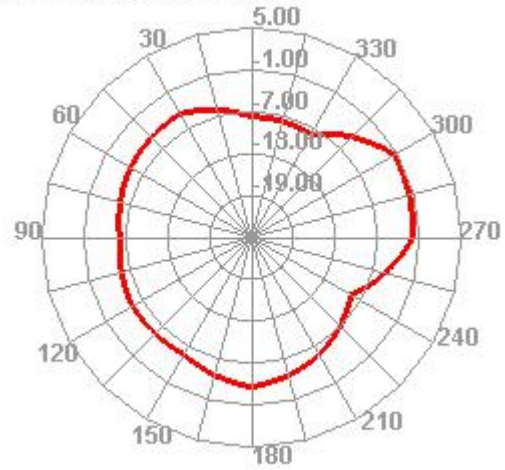


◆ Radiation Pattern

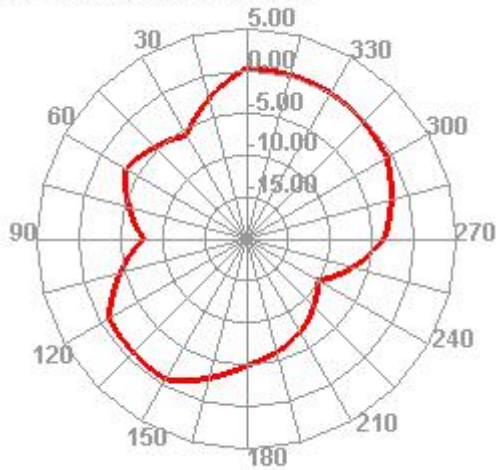
2500.000MHz



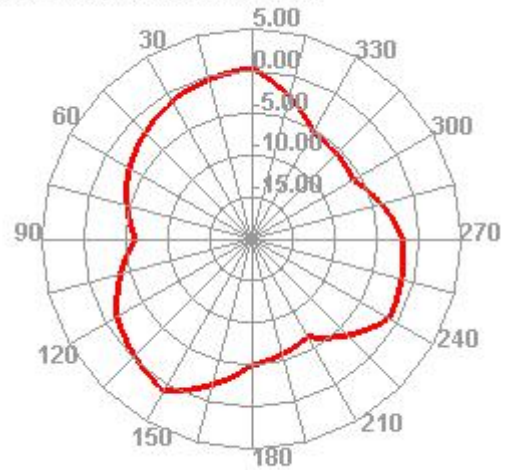
2500.000MHz H



2500.000MHz E1

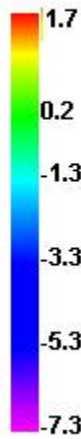
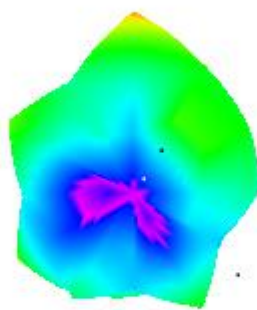


2500.000MHz E2

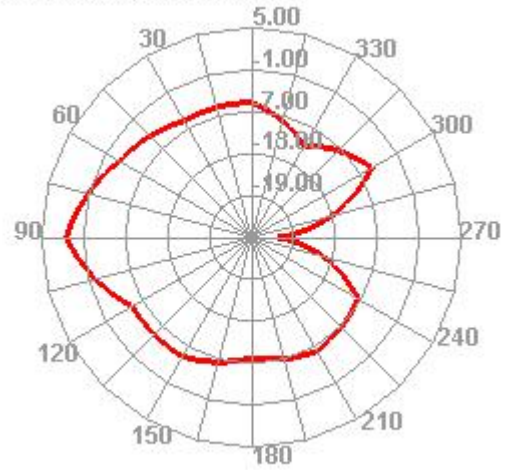


◆ Radiation Pattern

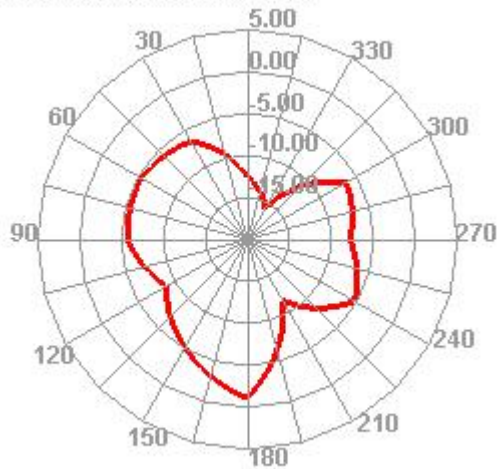
5150.000MHz



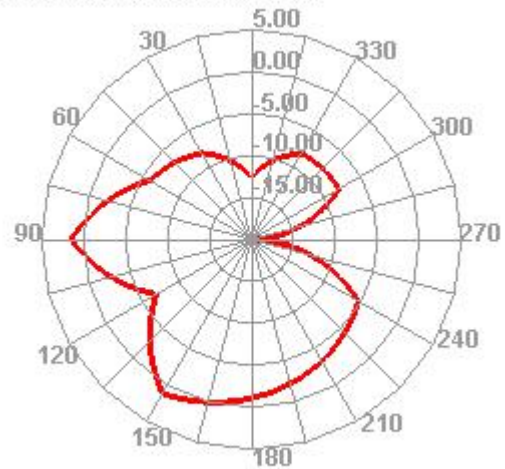
5150.000MHz H



5150.000MHz E1

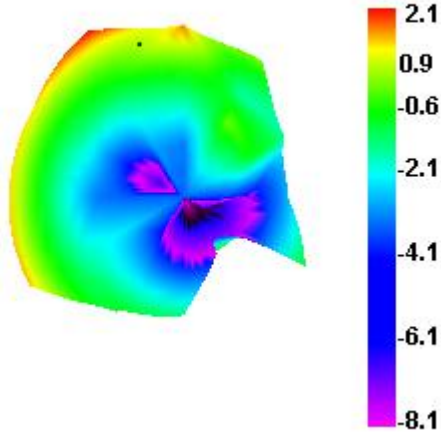


5150.000MHz E2

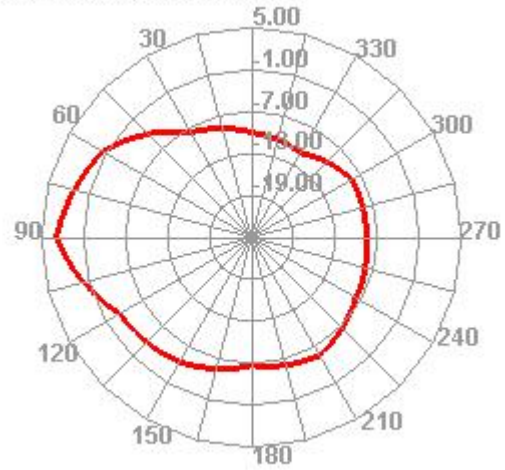


◆ Radiation Pattern

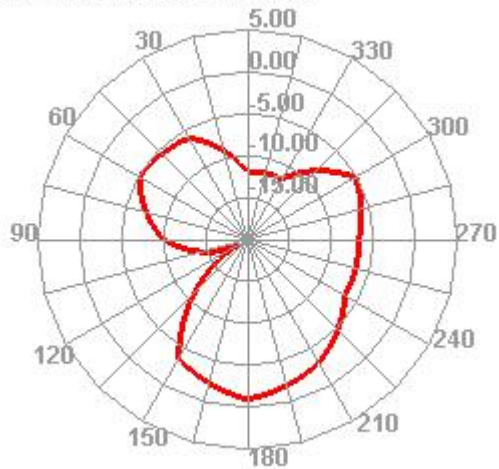
5500.000MHz



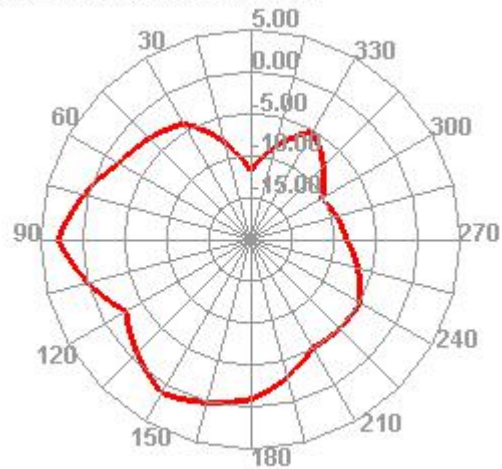
5500.000MHz H



5500.000MHz E1

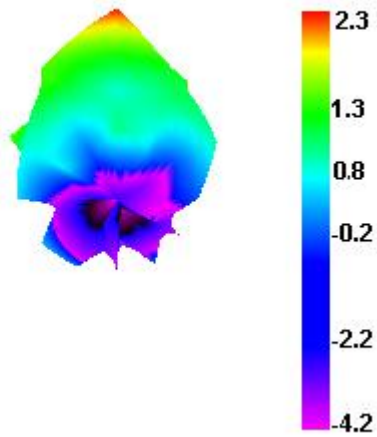


5500.000MHz E2

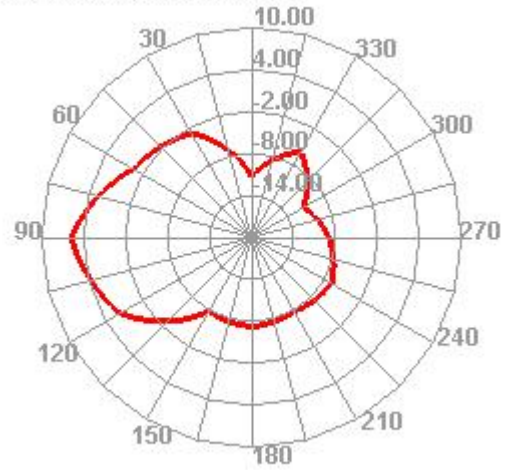


◆ Radiation Pattern

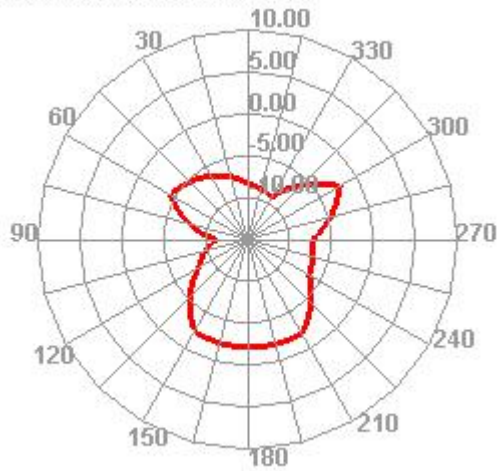
5850.000MHz



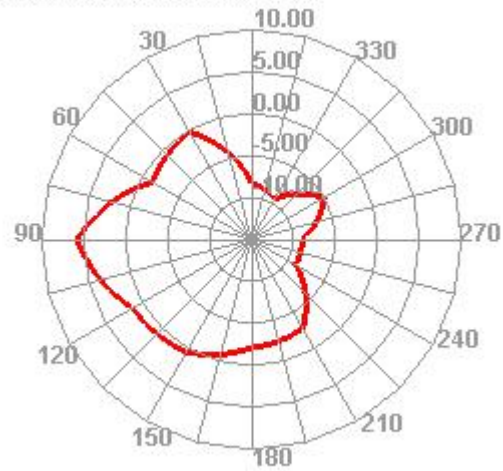
5850.000MHz H



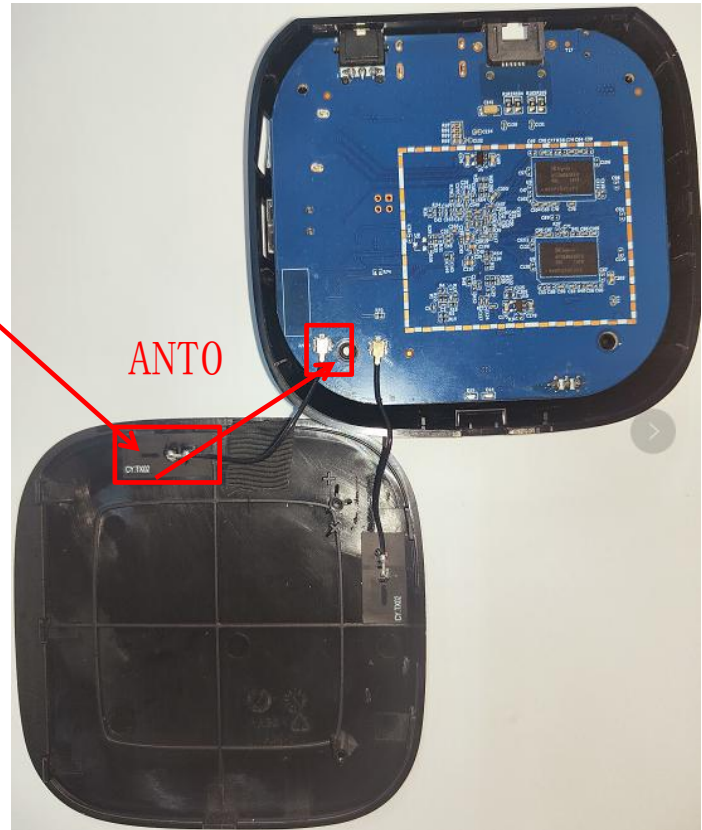
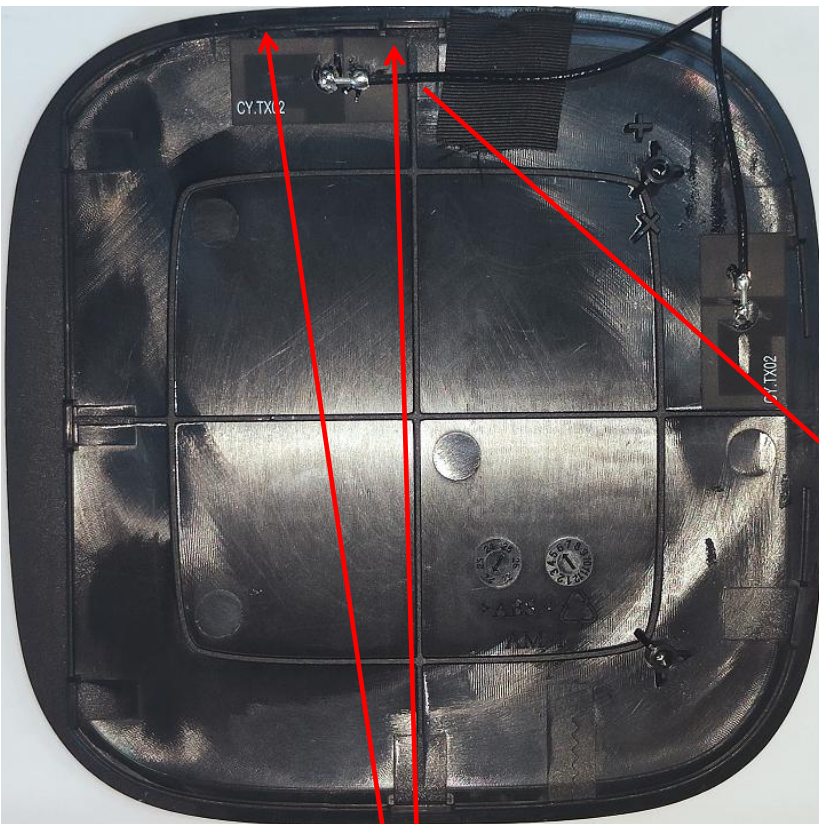
5850.000MHz E1



5850.000MHz E2



◆ Antenna Picture



天线沿机壳骨位对齐贴紧

◆ 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 :$5\pm 1\%$.PH value :6.5~7.2 Test time:24hours	Salt-Spray Tester	No color change No appear rusting	PASS