
Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: WIFI Antenna

Part NO. : WF80H.C113.380B.1

Write By: Zhengfeng Fang

Issued Date: 2024-04-12

Customer

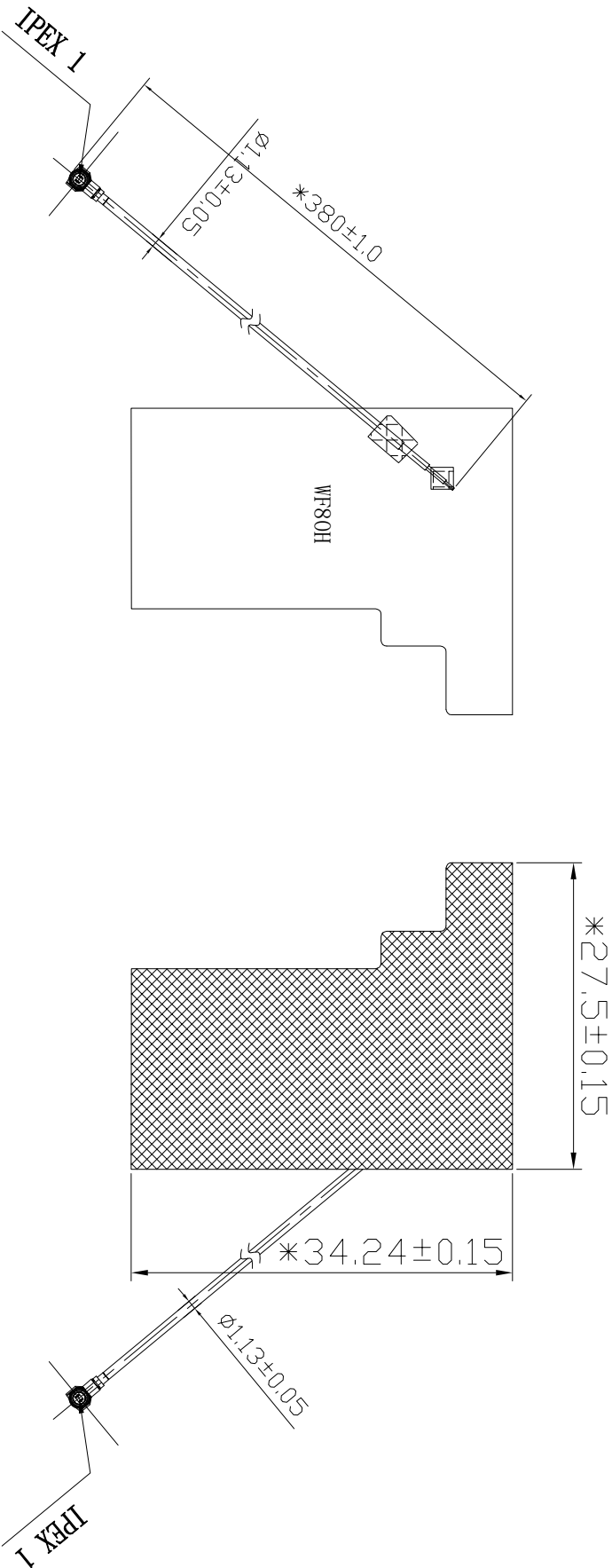
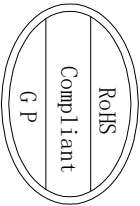
R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz 5150MHz ~5850MHz
Log Mag	<-5dB
Efficiency	>45%
Peak Gain	2.7dbi
Impedance	50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	FPC
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



				SHEN ZHEN SKYLINK CO., LTD			
			Third Angle	Project	Date		
0~10		± 0.05	$\bigcirc$	0.02	Part Name	2024-04-11	
10~18		± 0.10	$\odot$	$\phi 0.03$	Part No.		
18~30		± 0.12	$\perp$	0.02	WF80H, C113.380B.1	Designed by	
30~40		± 0.15	∇	0.04	Material	Checked by	
40~		± 0.20	Angle	$\pm 0.5^\circ$	DWG No.	Approved by	
Location					Unit	mm	Scale 1:1 Rev A

Rev		Description		Date	Remark
1		New drawing			

● Test Equipment & Conditions

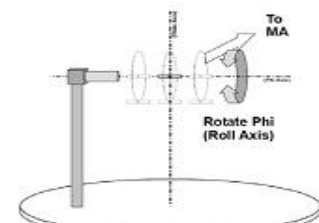
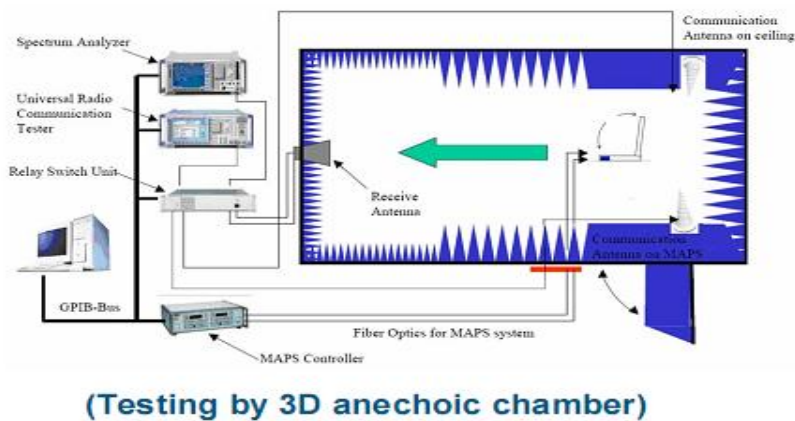
1. Network Analyzers :

Agilent 8753D 5071B

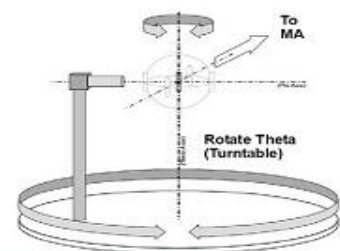
Communications Test Set:

Agilent E5515C CMW500

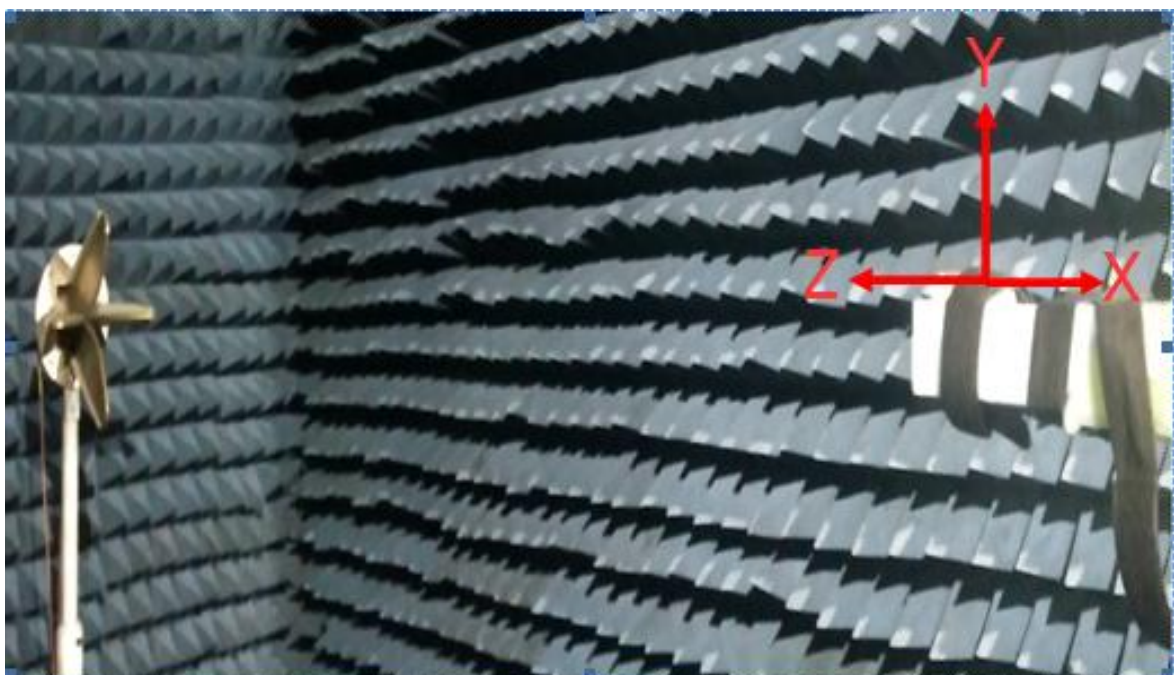
2. 3D Chamber Test System



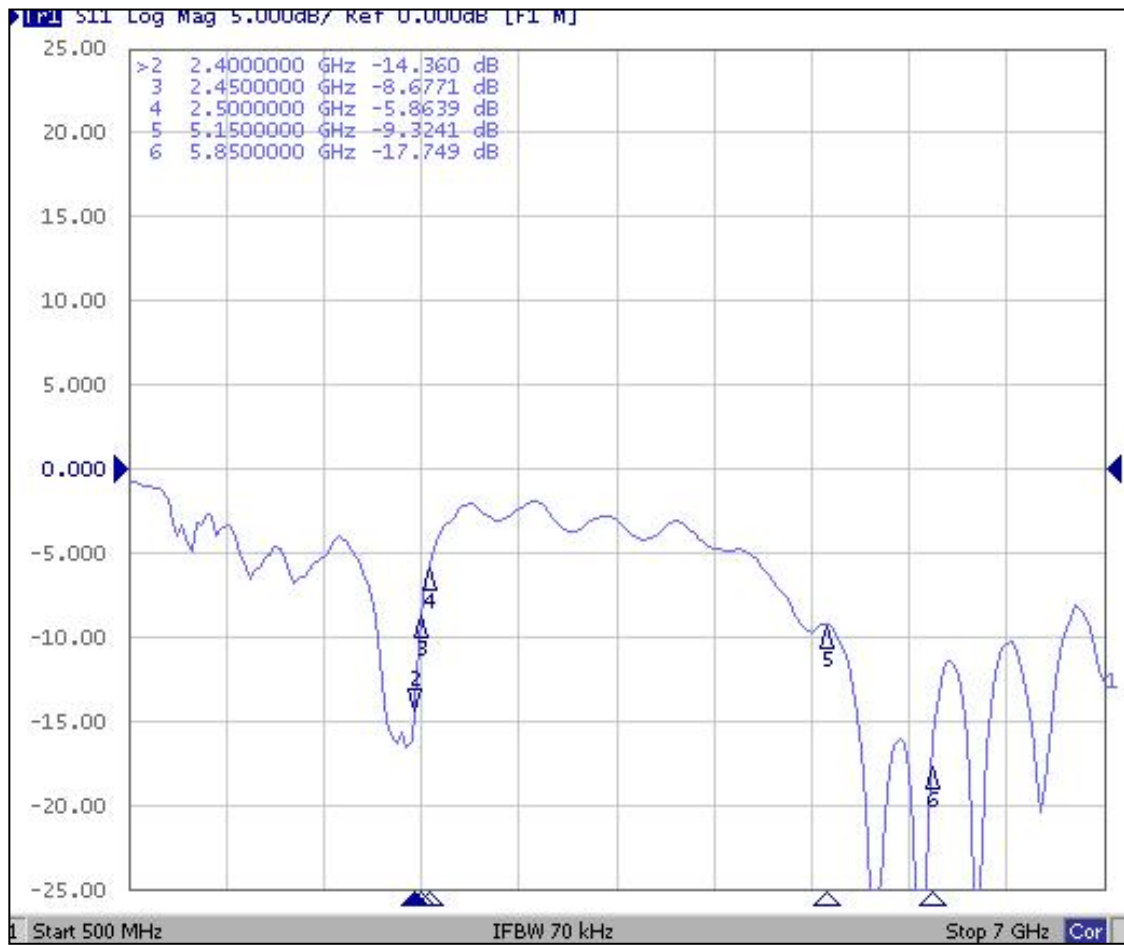
Phi axis test



Theta axis test



◆ Return Loss



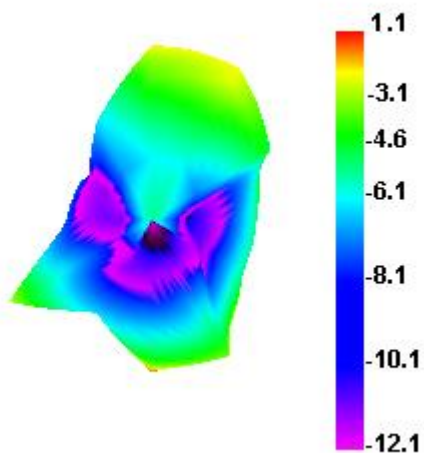
◆ Gain & Efficiency

Freq (MHz)	Effi (%)	Gain (dBi)
2400	47.48	1.09
2410	40.48	1.62
2420	41.77	1.01
2430	43.47	1.45
2440	43.62	1.01
2450	44.29	0.51
2460	41.34	0.85
2470	40.84	0.75
2480	40.6	0.78
2490	40.6	0.96
2500	49.02	0.84

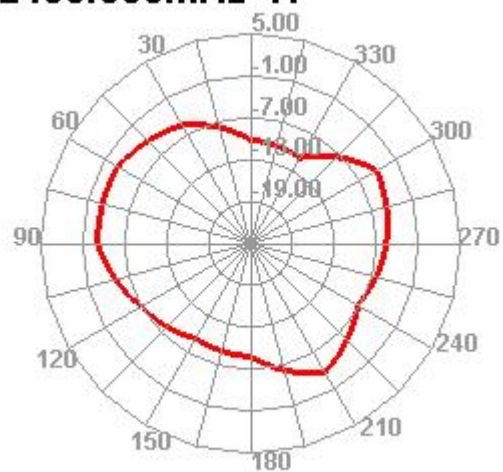
Freq (MHz)	Effi (%)	Gain (dB)
5150	39.88	2.28
5200	45.26	2.29
5250	43.05	2.17
5300	41.58	2.47
5350	47.17	2.66
5400	46.48	2.56
5450	42.62	2.25
5500	40.41	2.04
5550	36.68	2.67
5600	34.97	2.34
5650	34.02	1.9
5700	31.73	1.47
5750	31.49	1.41
5800	30.93	1.27
5850	33.8	1.43

◆ Radiation Pattern

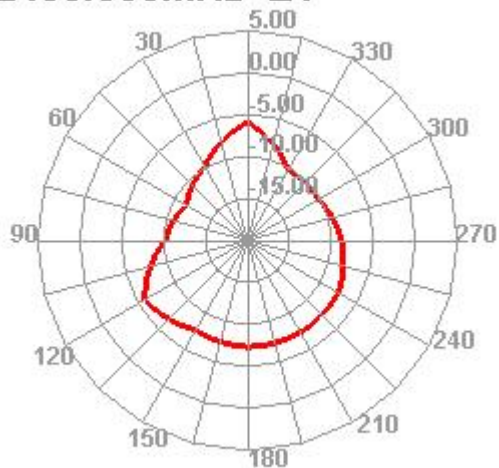
2400.000MHz



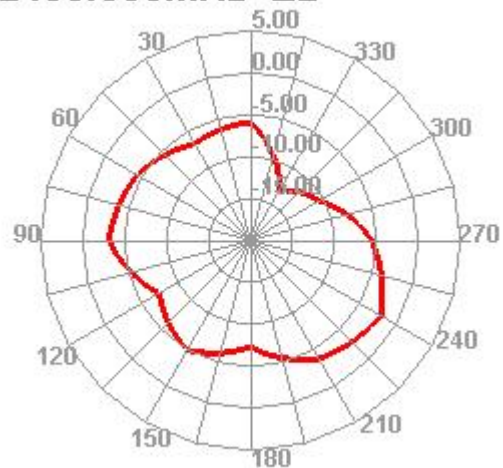
2400.000MHz H



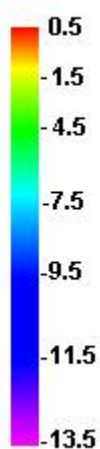
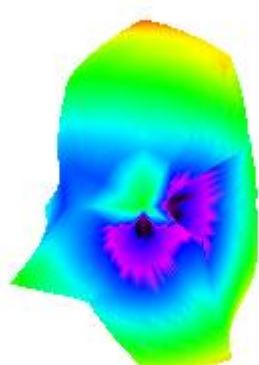
2400.000MHz E1



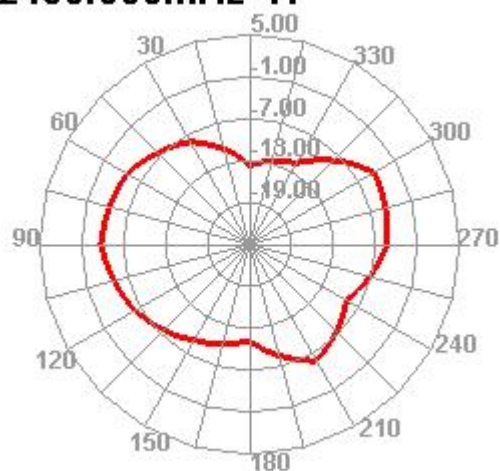
2400.000MHz E2



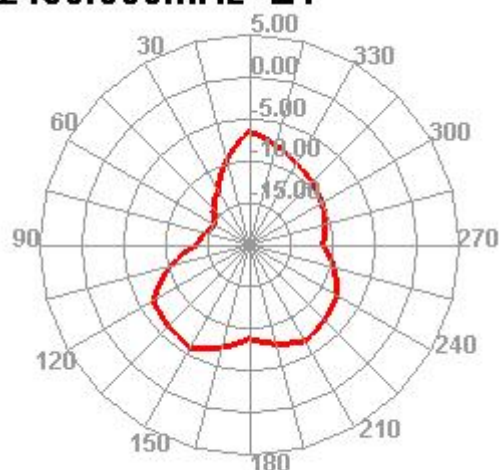
2450.000MHz



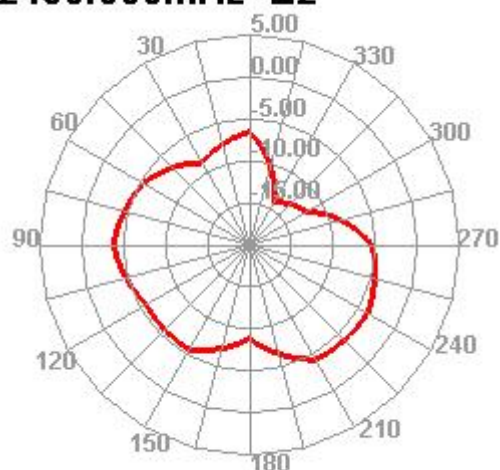
2450.000MHz H



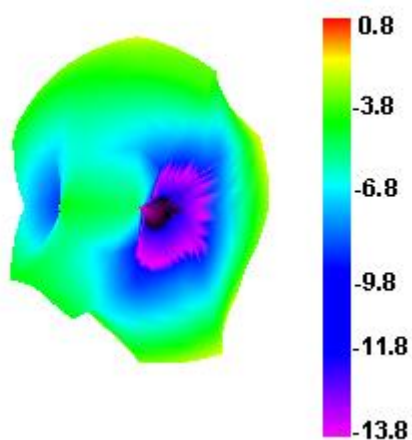
2450.000MHz E1



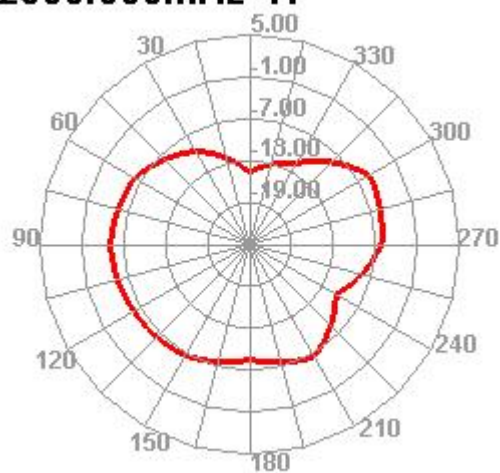
2450.000MHz E2



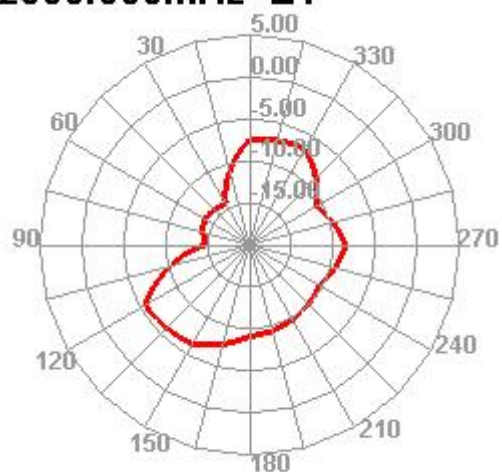
2500.000MHz



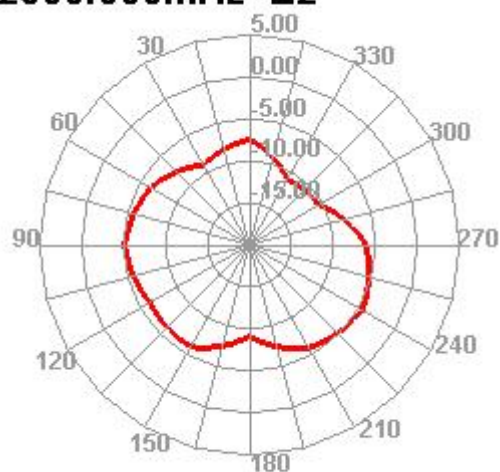
2500.000MHz H



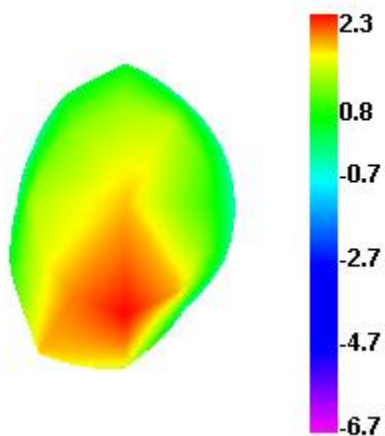
2500.000MHz E1



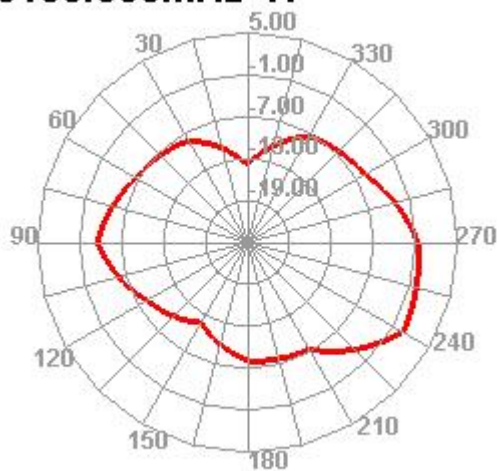
2500.000MHz E2



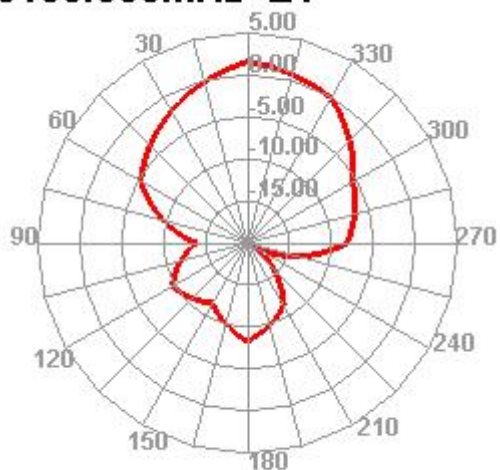
5150.000MHz



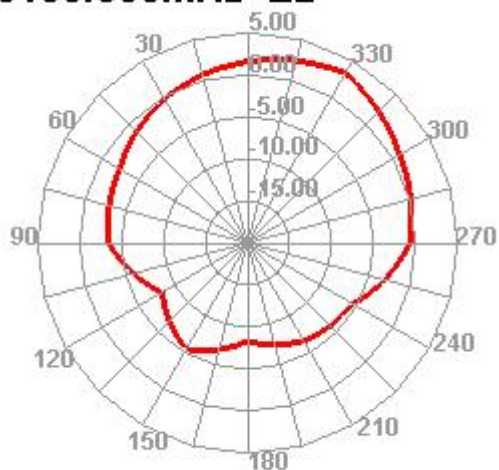
5150.000MHz H



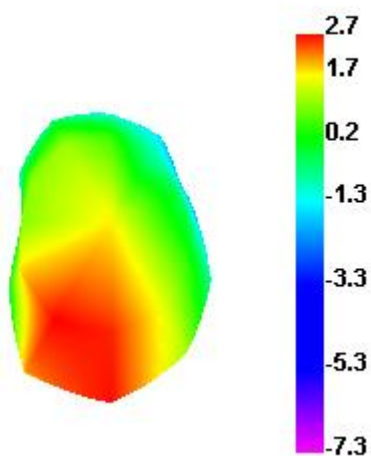
5150.000MHz E1



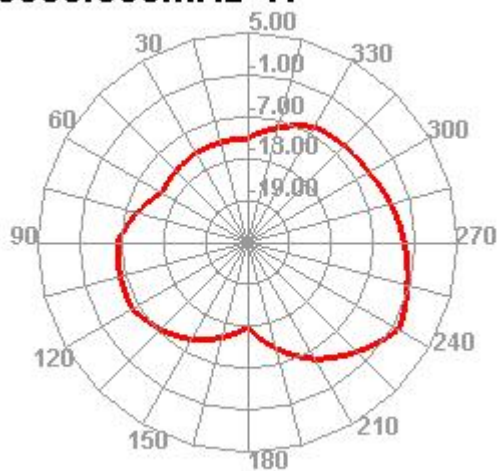
5150.000MHz E2



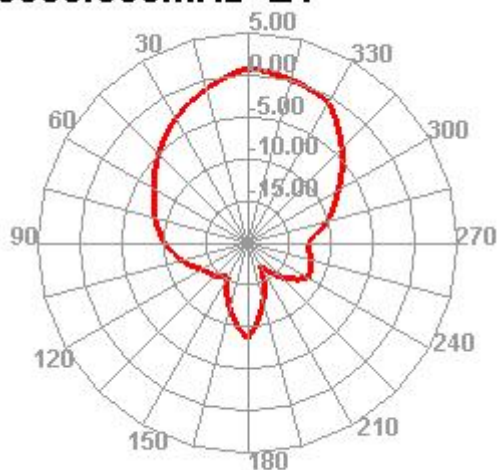
5550.000MHz



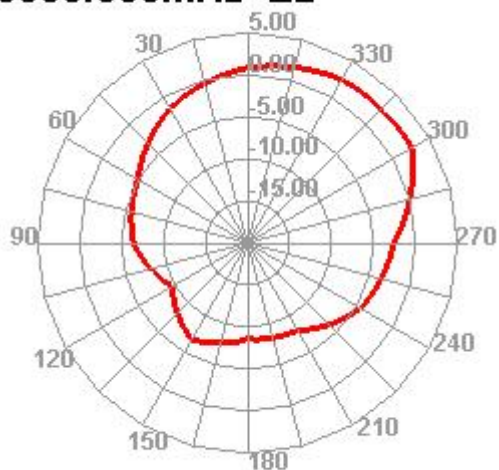
5550.000MHz H



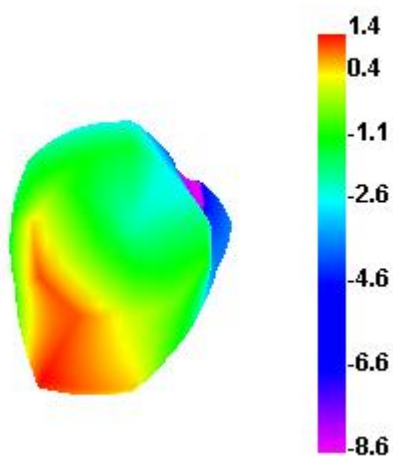
5550.000MHz E1



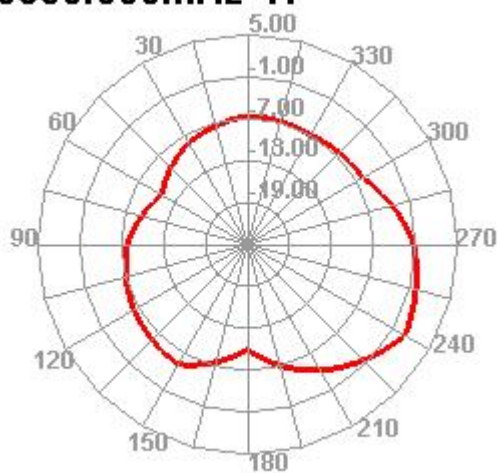
5550.000MHz E2



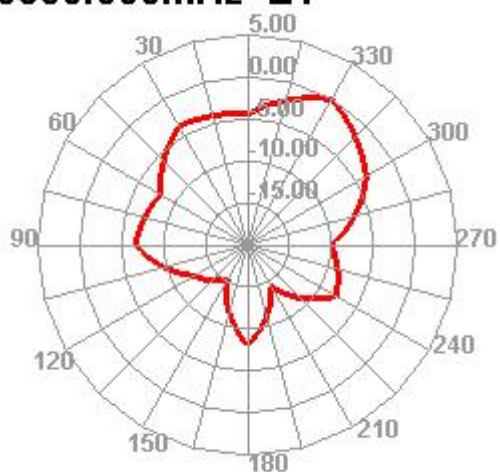
5850.000MHz



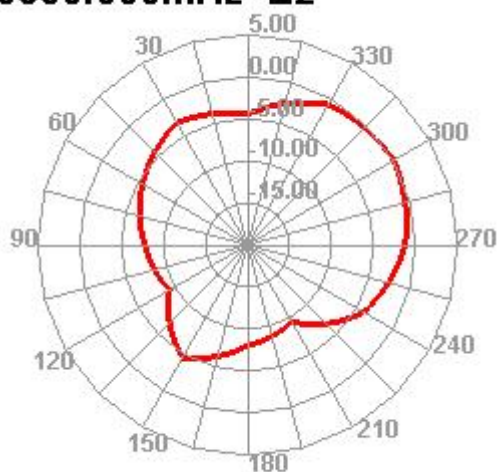
5850.000MHz H



5850.000MHz E1



5850.000MHz E2



◆ 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