

Shenzhen Zhibotong Eletronics Co., Ltd.

Antenna specification acknowledgement

编号 : SLSOA20221217FZF01

客户名称 : Shenzhen Zhibotong Eletronics Co., Ltd.

项目名称 : WIFI Antenna

产品描述 : FPC adhesive welding 0.81mm black coaxial line
length 90mm second generation terminals

客户料号 : _____

我司料号 : W49. V3. C081. 90B. 2

板 本 : V3. 0

日 期 : 2022-12-17

客户

工程	采购	承认
Cady	Snowy	Zhu haixia

天联凌

研发	工程	审核

● Specification Summary

A. Electrical Characteristics	
Frequency	2400MHz ~2500MHz 5150MHz ~5850MHz
Log Mag	<-7dB
Efficiency	>30%
Peak Gain	WIFI2.4G:1.5dbi WIFI5G(band4):1.33dbi
Impedance	>50 Ohm
Polarization	Line
B. Material & Mechanical Characteristics	
Material of Radiator	Cu
Cable Type	0.81mm
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

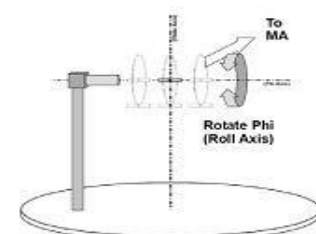
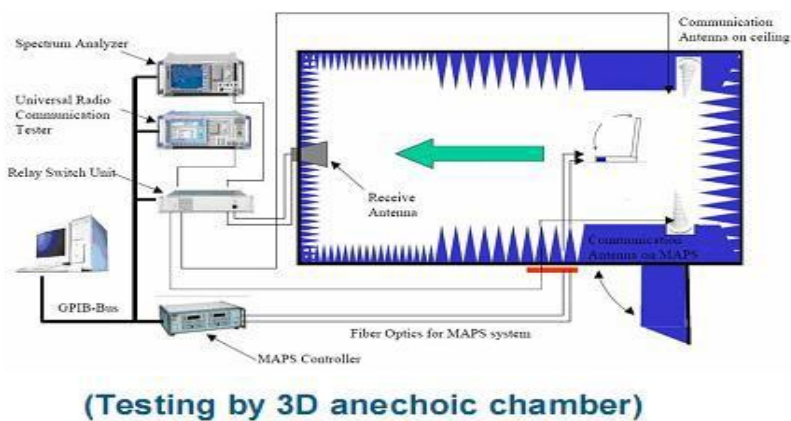
1. Network Analyzers :

Agilent 8753D 5071B

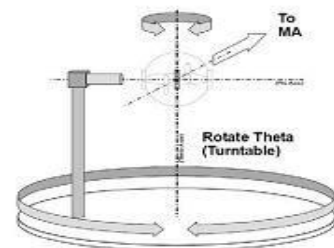
Communications Test Set:

Agilent E5515C CMW500

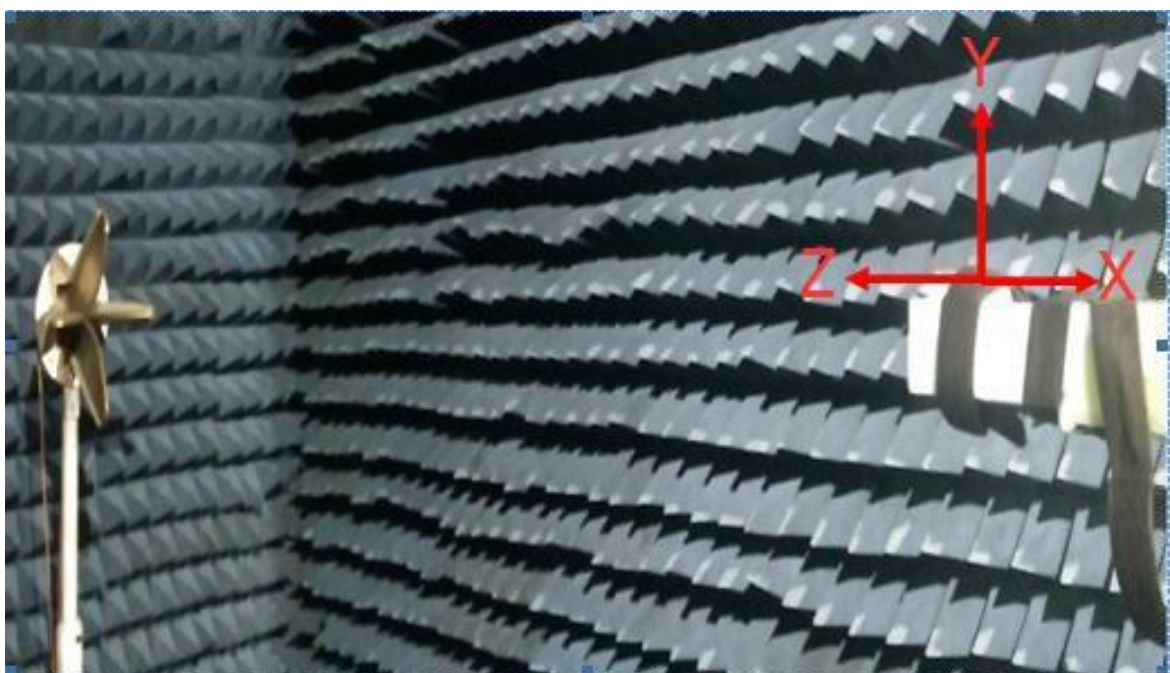
2. 3D Chamber Test System



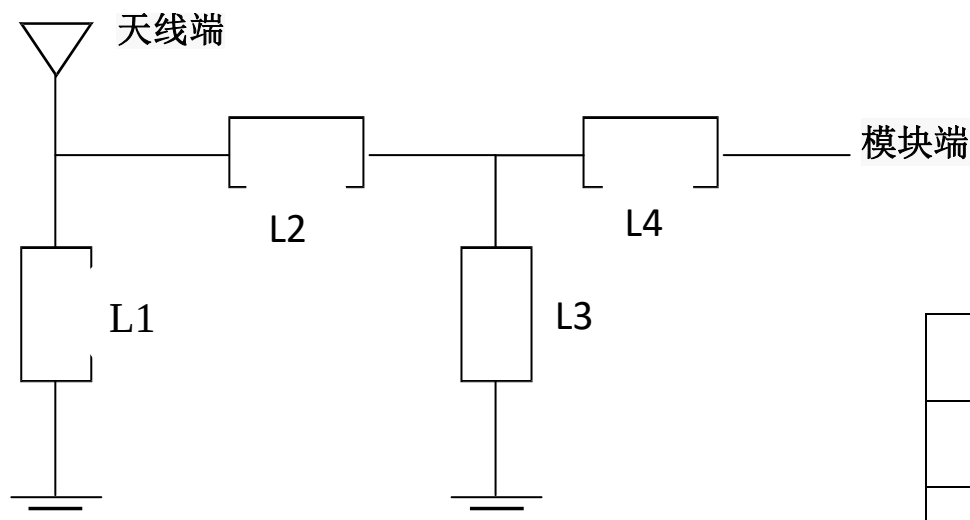
Phi axis test



Theta axis test



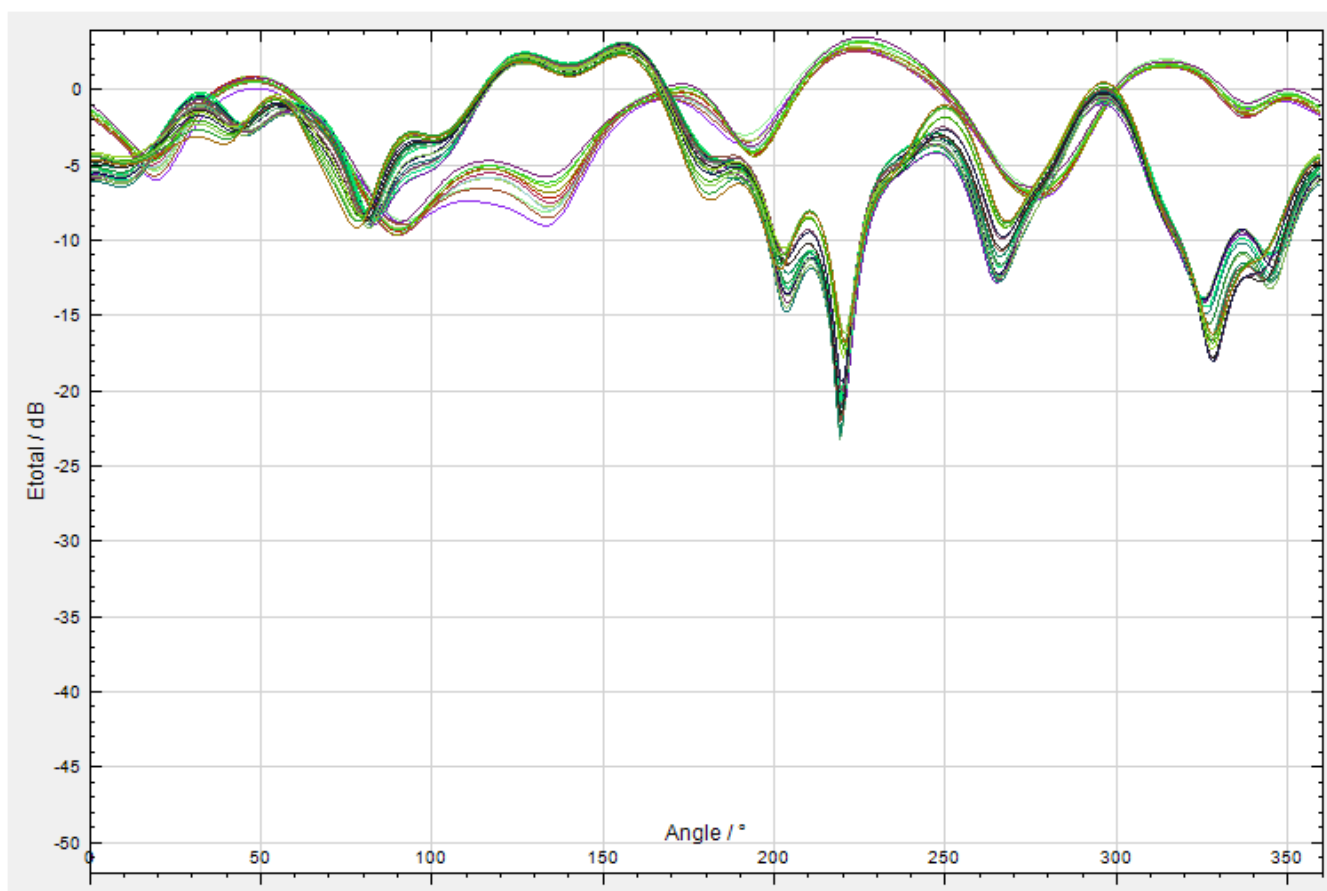
● 匹配电路（matching circuit）



L1	/
L2	/
L3	/
L4	/

原主板匹配电路不变

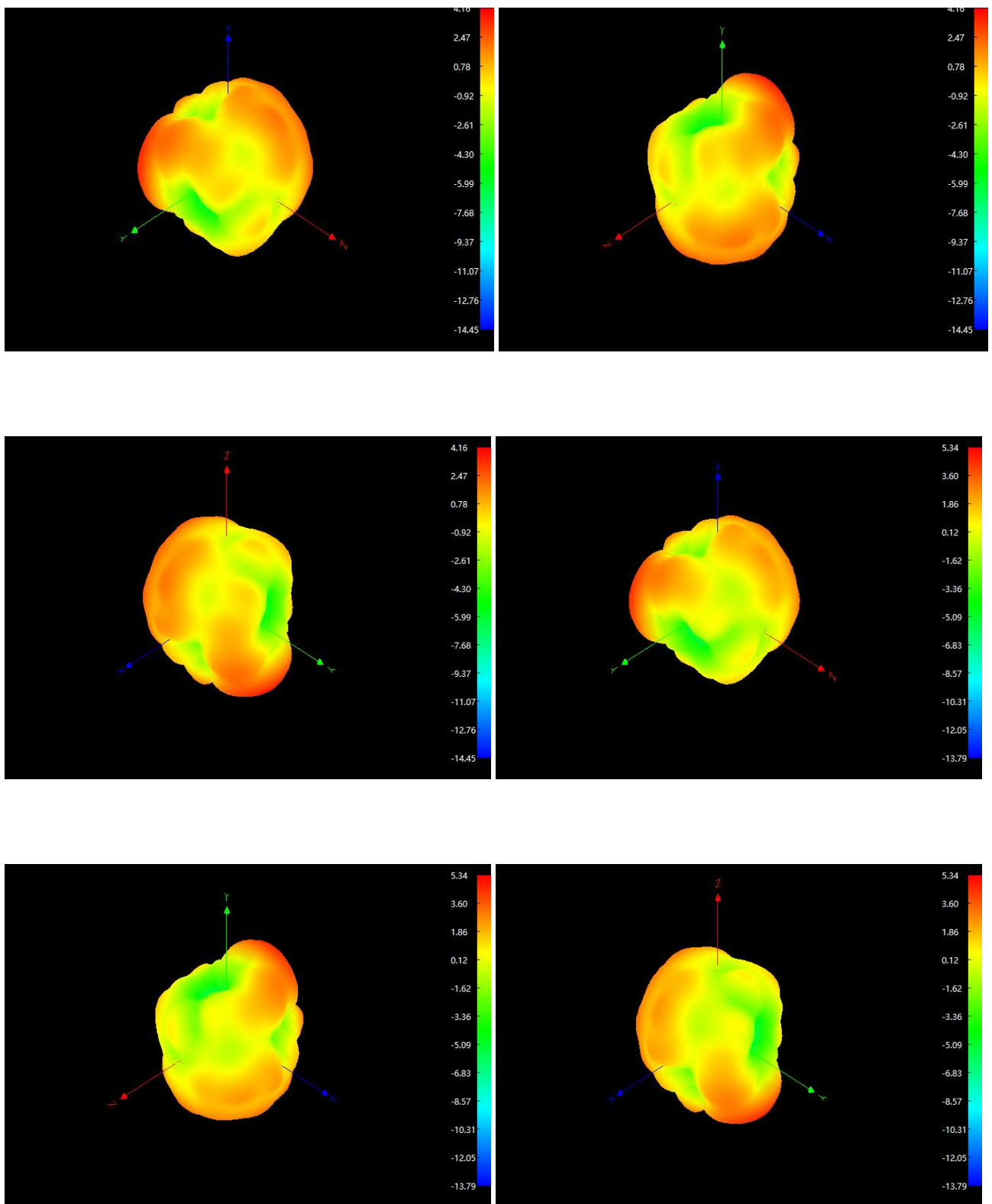
◆ Log Mag



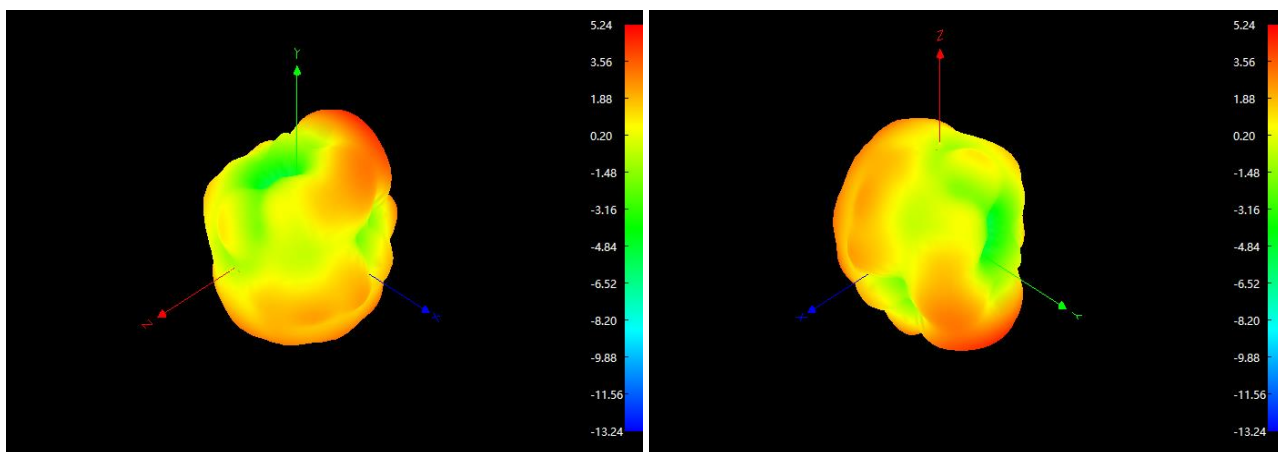
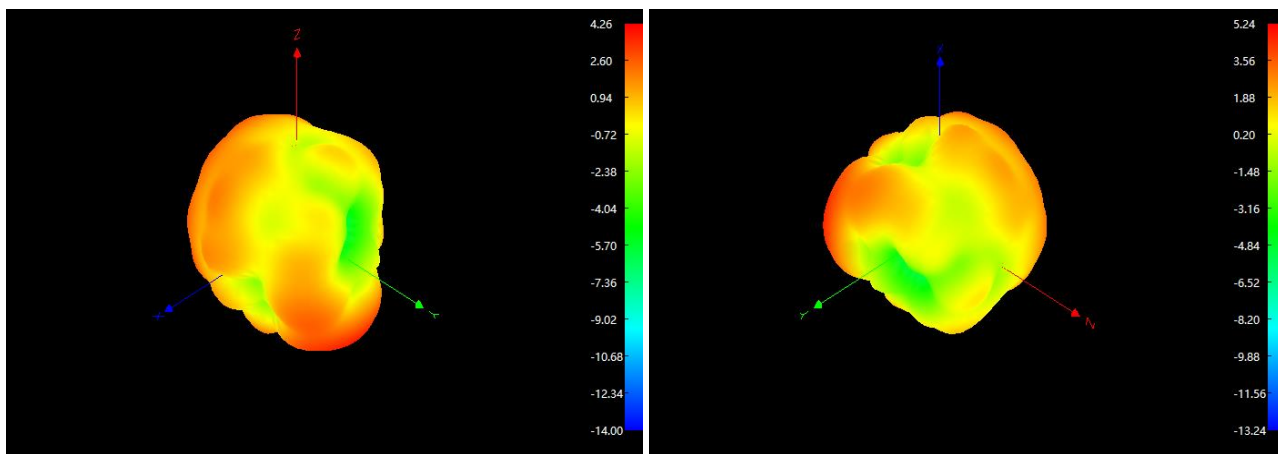
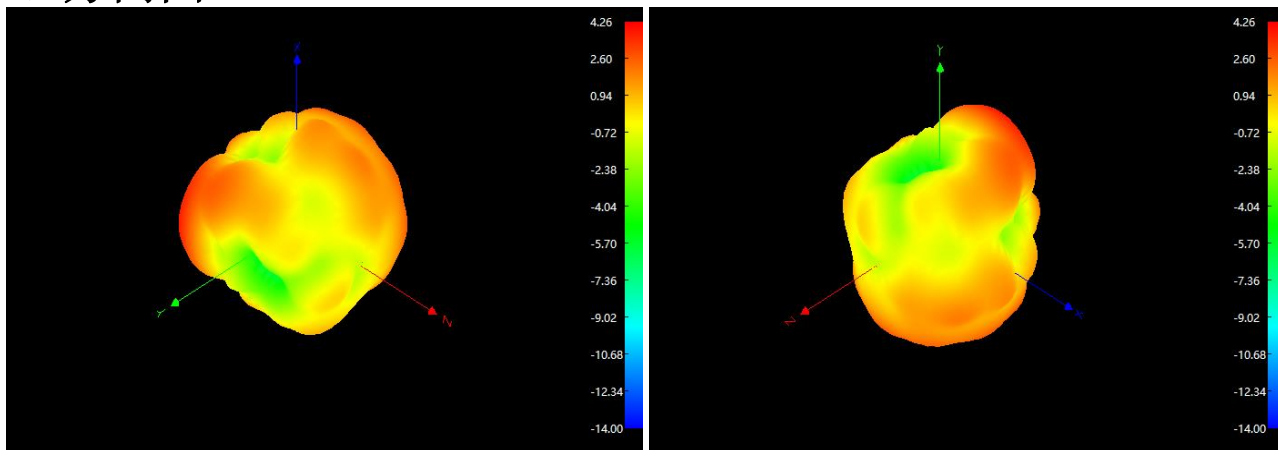
◆ Gain & Efficiency

Frequency/MHz	MaxGain/dBi	AvgGain/dBi
2400	4.16	-1.56
2410	5.34	-1.07
2420	4.26	-1.42
2430	5.24	-1.1
2440	4.13	-1.31
2450	4.63	-1.25
2460	4.35	-1.17
2470	4.53	-1.27
2480	4.75	-1.02
2490	4.6	-1.25
2500	5.19	-0.94
5700	5.67	-0.77
5710	5.36	-0.97
5720	5.6	-0.78
5730	5.45	-0.87
5740	5.38	-0.89
5750	5.61	-0.76
5760	5.02	-1.06
5770	5.58	-0.71
5780	4.92	-1.09
5790	5.4	-0.8
5800	5.01	-0.95
5810	5.03	-0.95
5820	5.13	-0.85
5830	4.78	-1.1
5840	5.1	-0.92
5850	4.58	-1.21

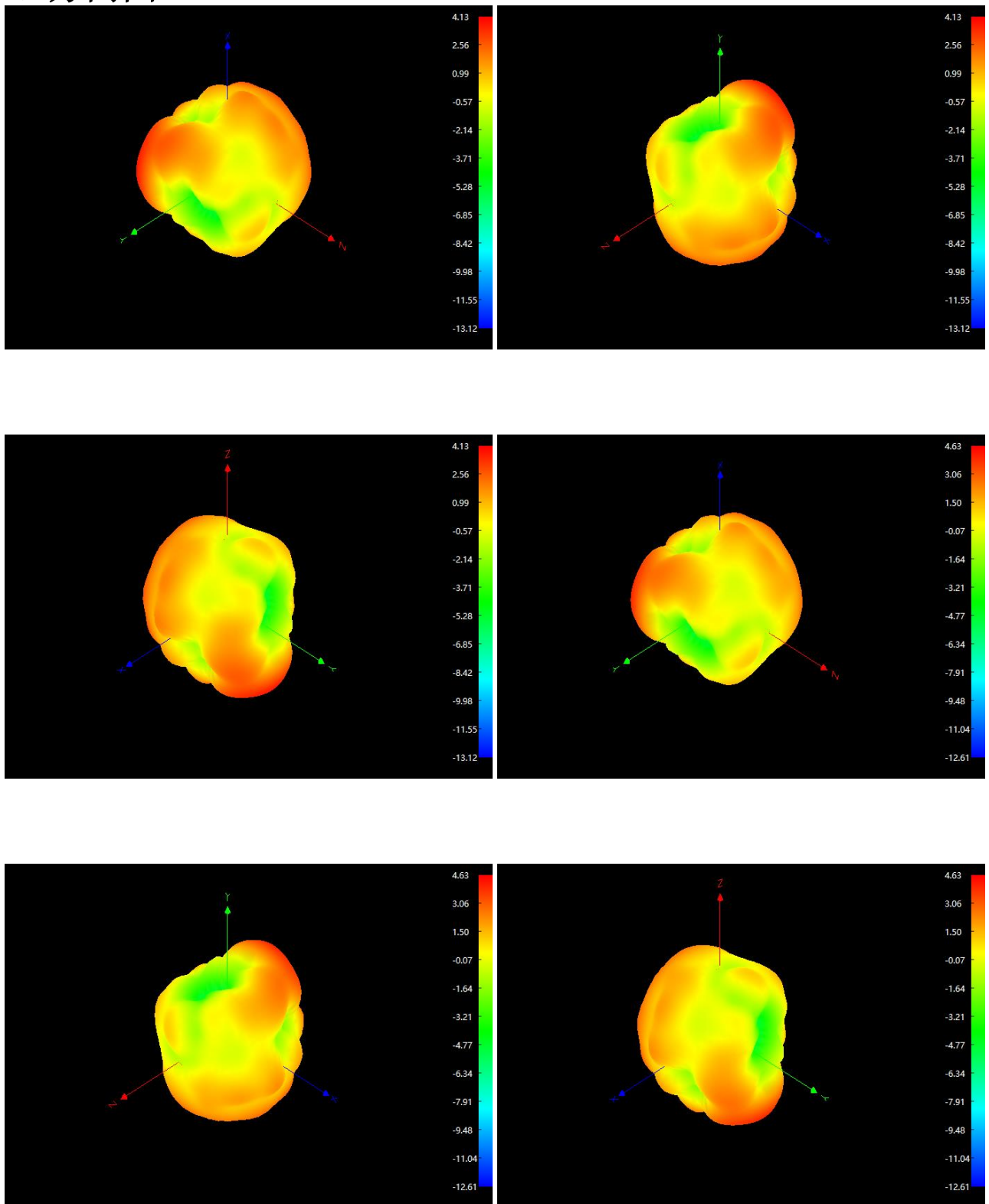
◆ 方向图



◆ 方向图

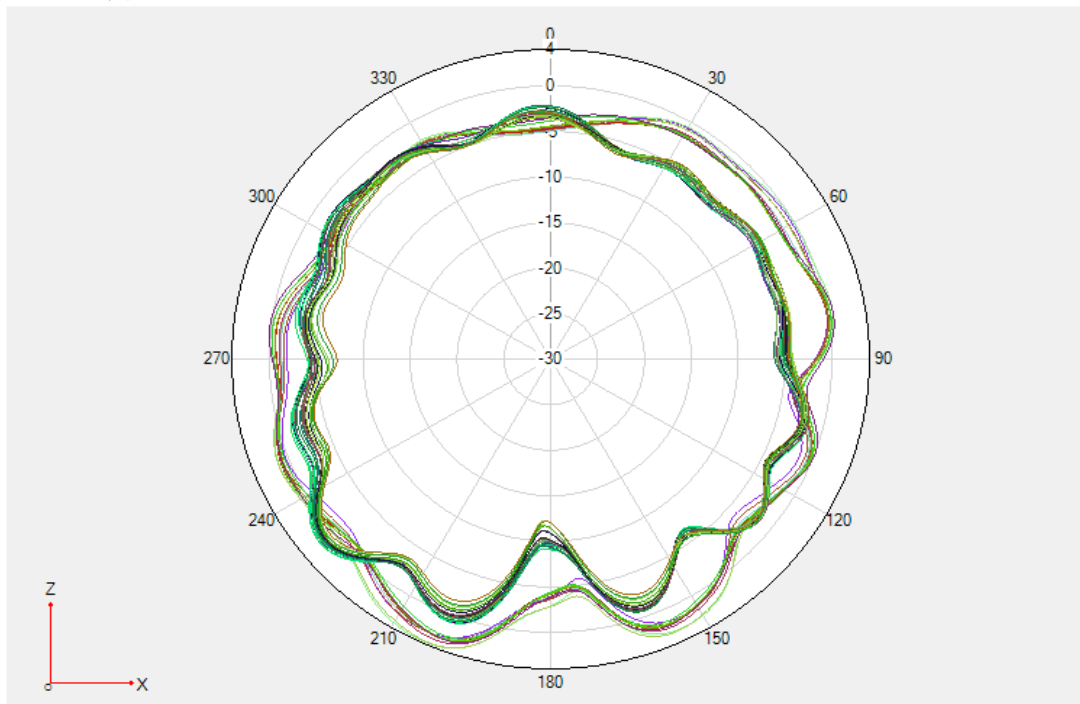


◆ 方向图

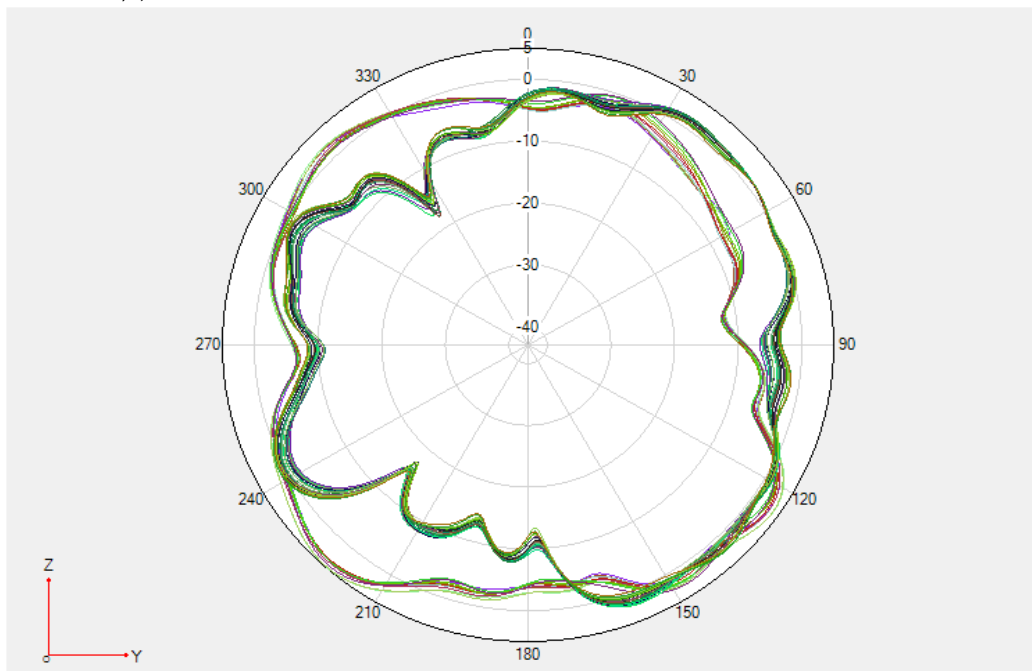


◆ 方向图

Phi 0 2D 图

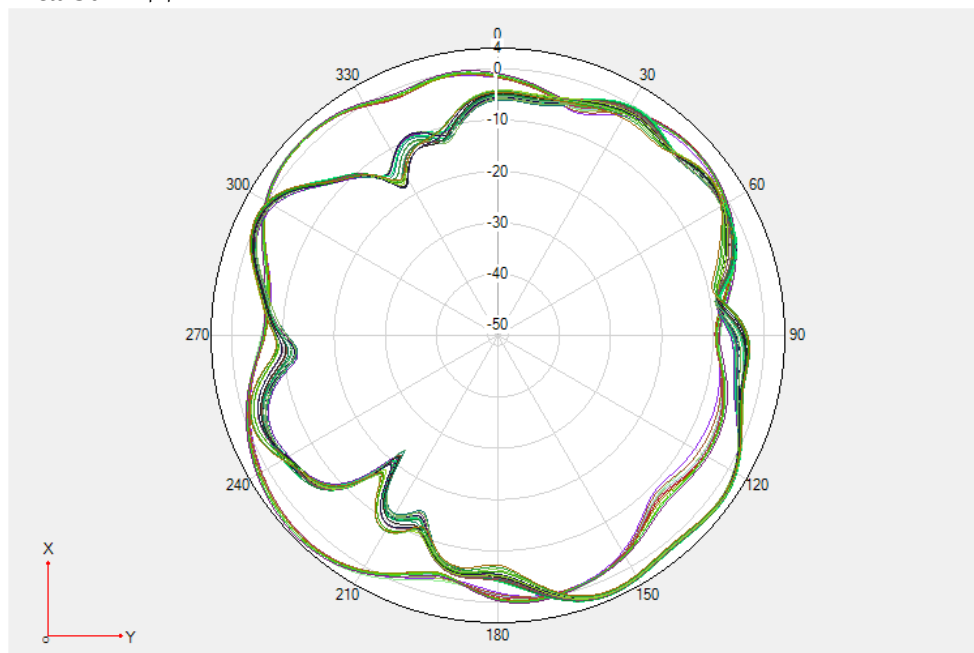


Phi 90 2D 图



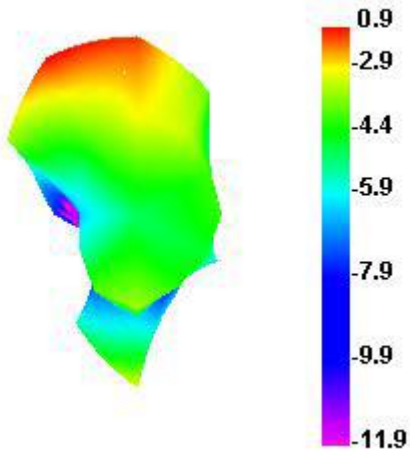
◆ 方向图

Theta 90 2D 图

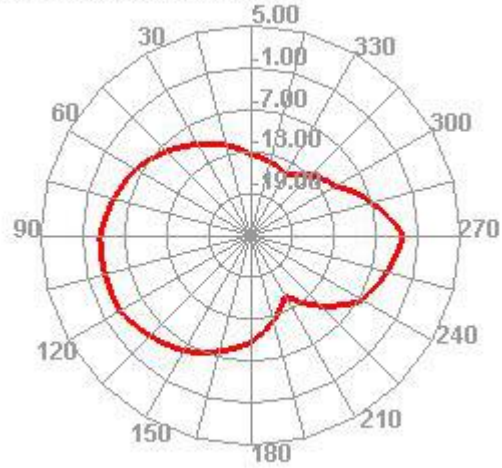


◆ 方向图

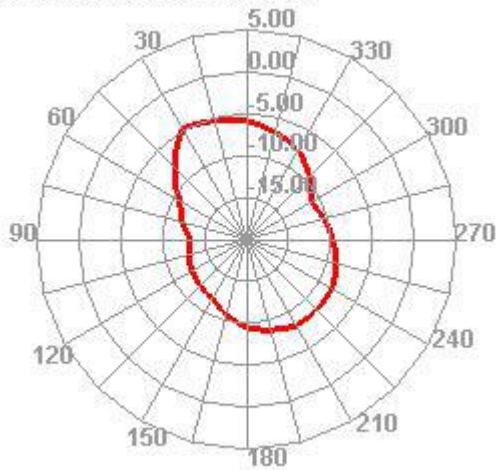
2450.000MHz



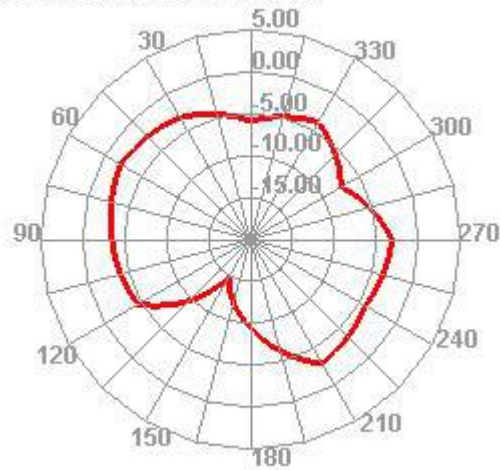
2450.000MHz H



2450.000MHz E1

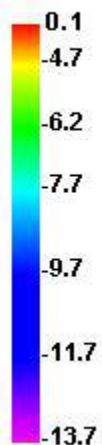
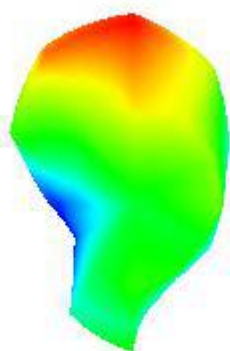


2450.000MHz E2

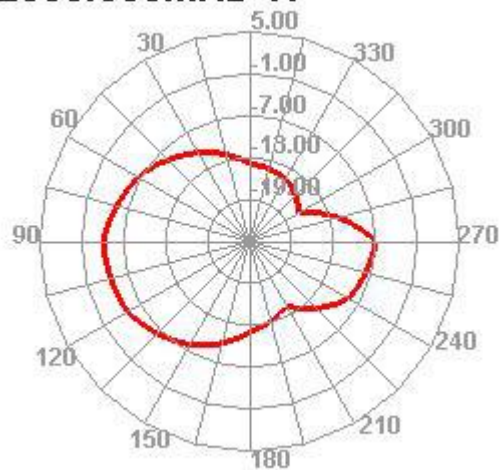


◆ 方向图

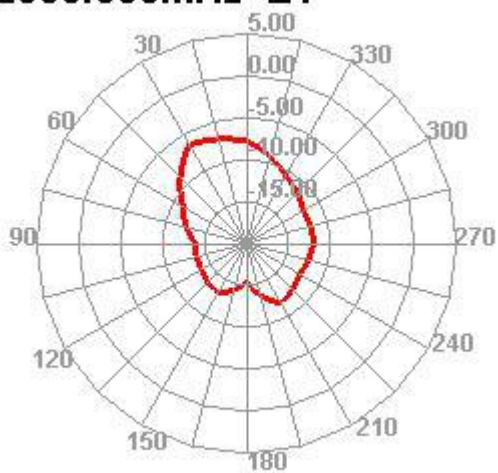
2500.000MHz



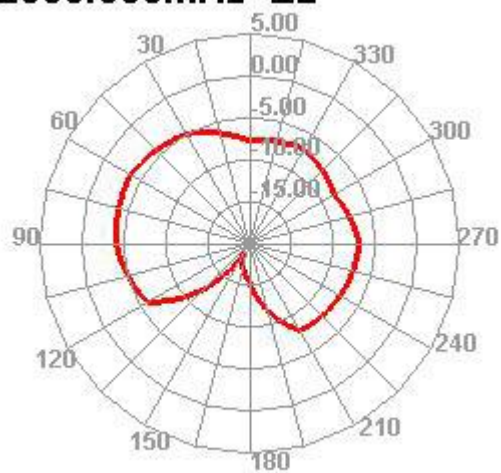
2500.000MHz H



2500.000MHz E1

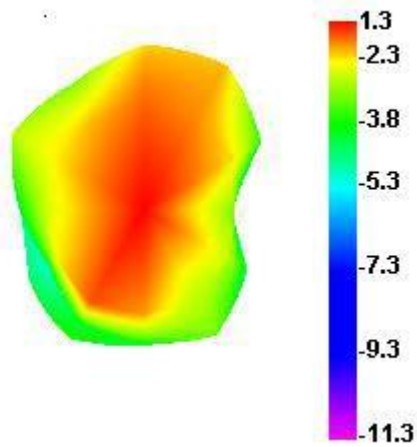


2500.000MHz E2

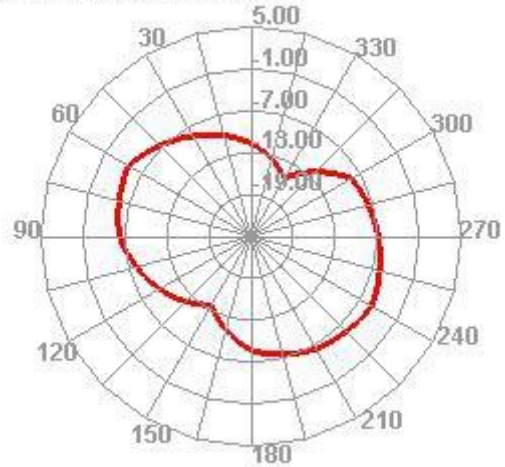


◆ 方向图

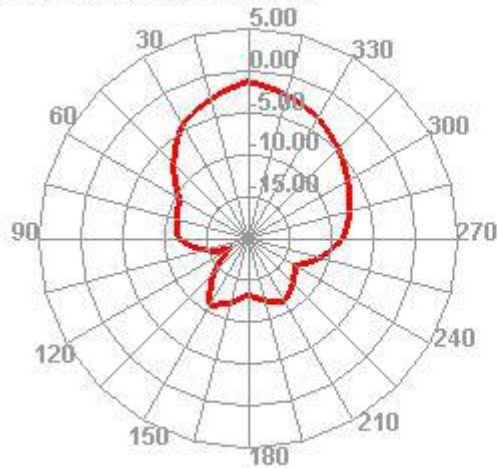
5150.000MHz



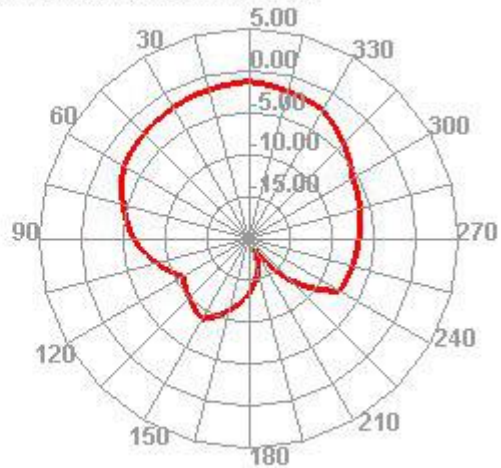
5150.000MHz H



5150.000MHz E1

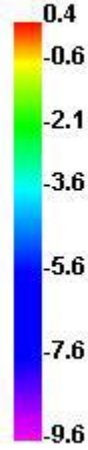
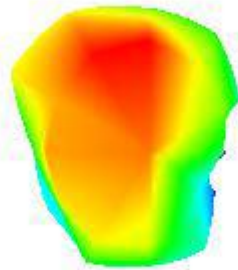


5150.000MHz E2

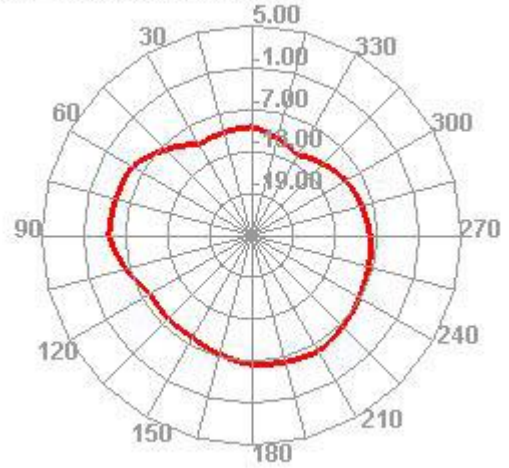


◆ 方向图

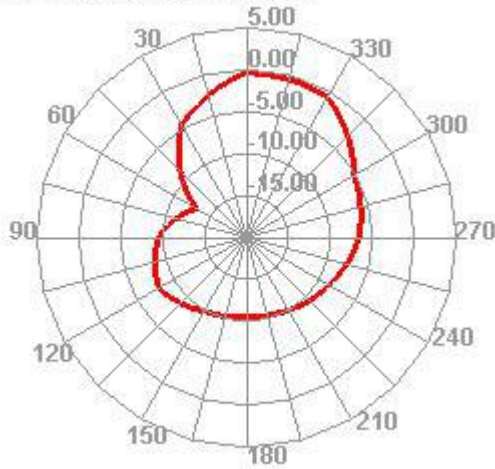
5500.000MHz



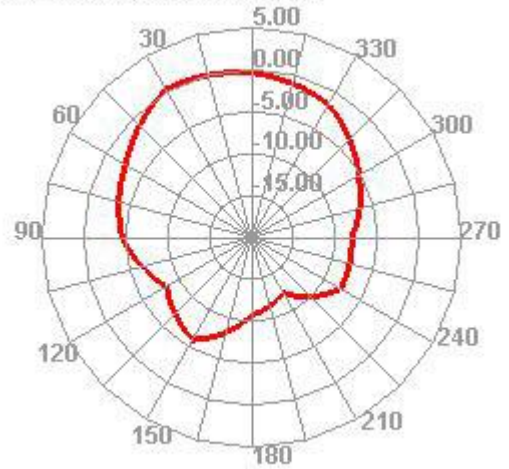
5500.000MHz H



5500.000MHz E1

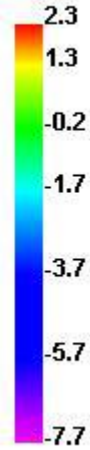
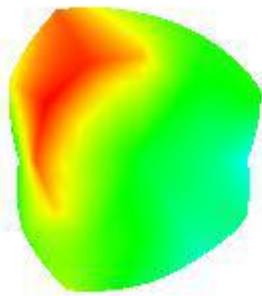


5500.000MHz E2

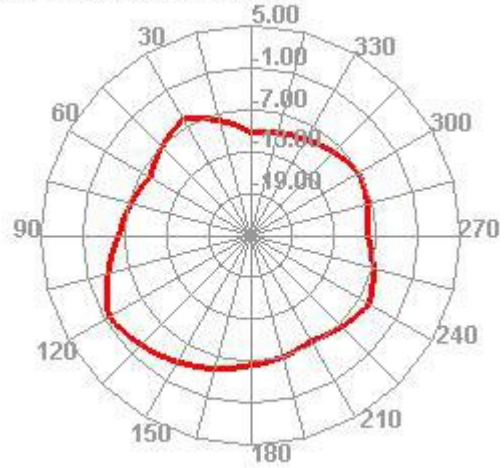


◆ 方向图

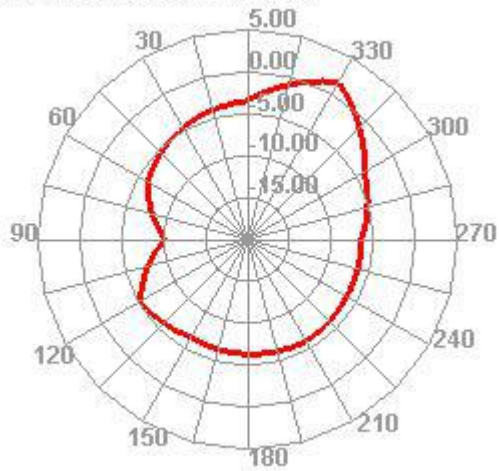
5850.000MHz



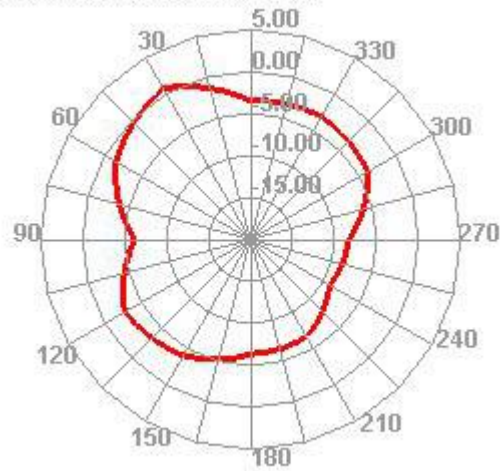
5850.000MHz H



5850.000MHz E1



5850.000MHz E2



◆ 天线装配方式



◆ 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