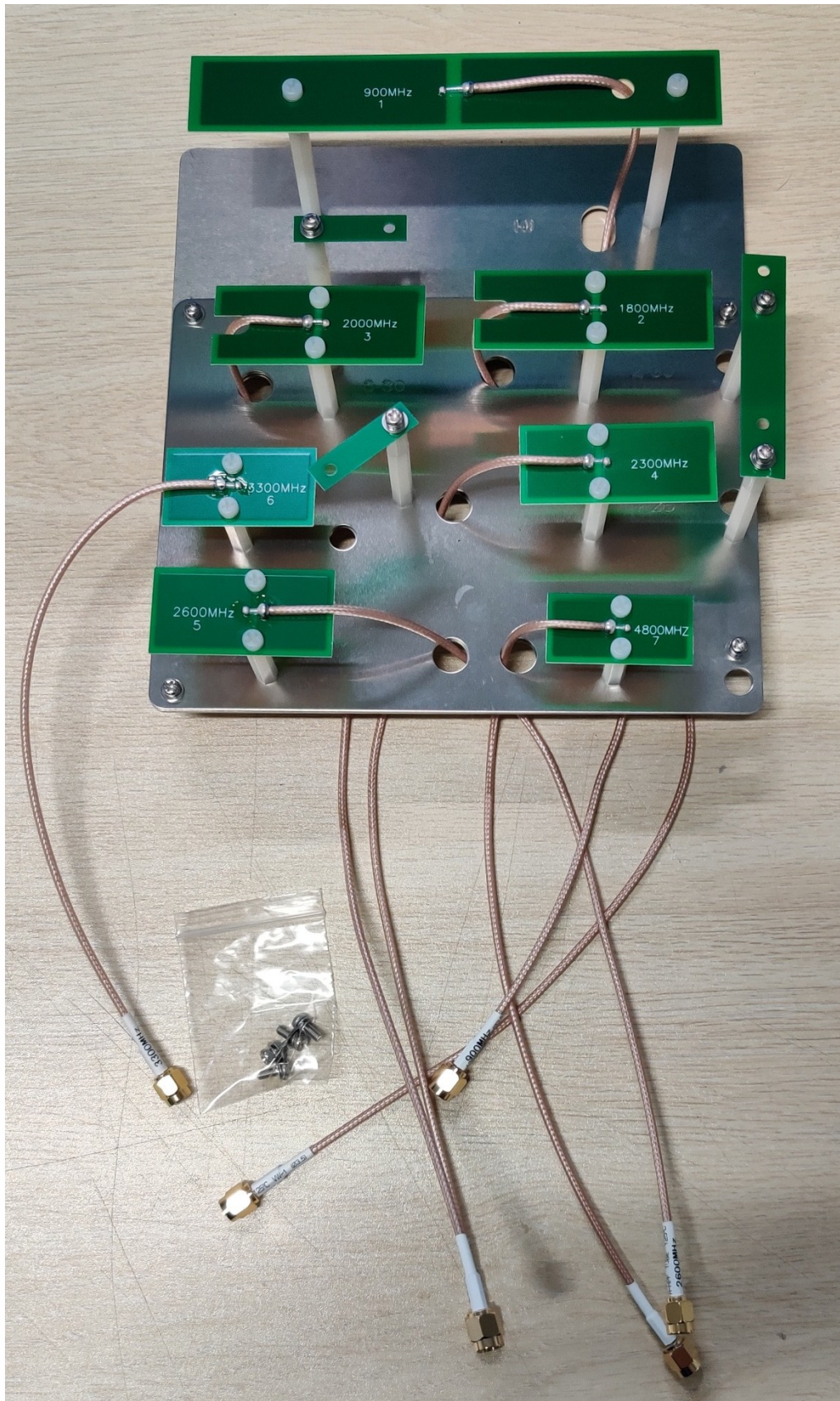


## 1. Antenna Specification/天线标准

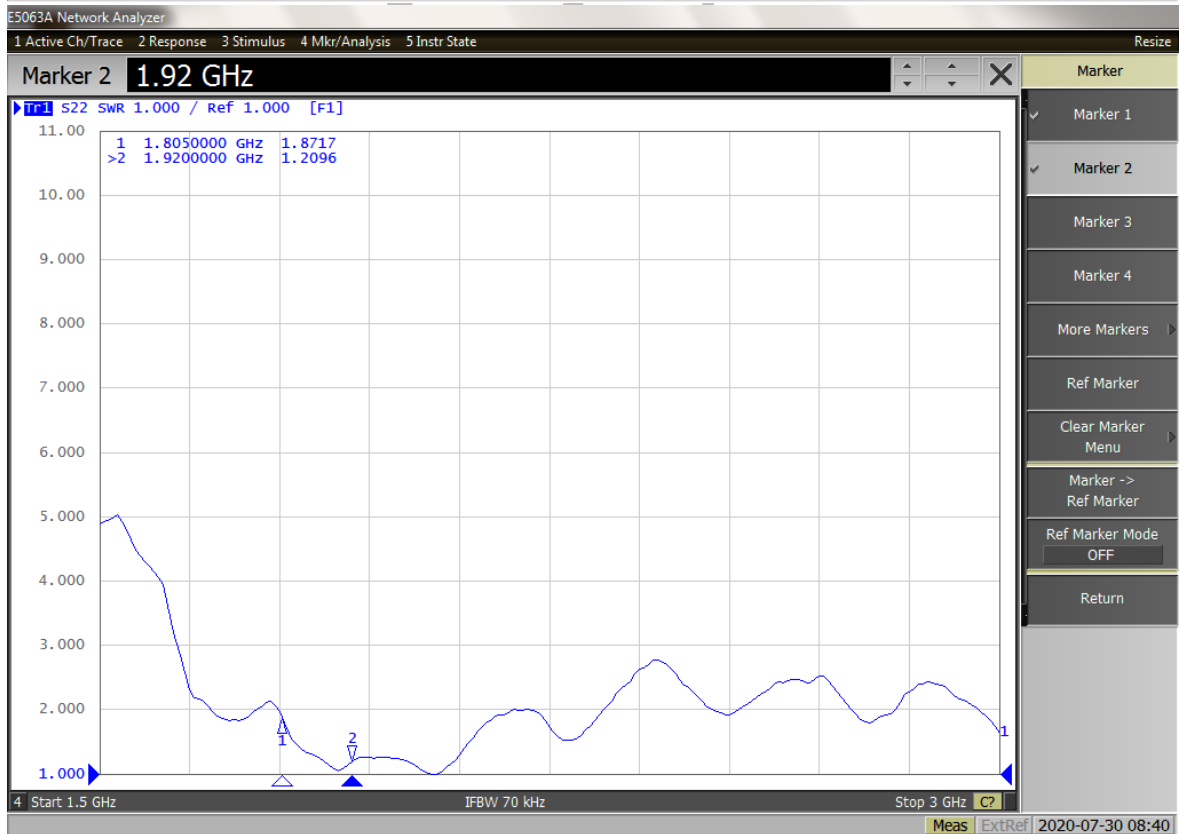
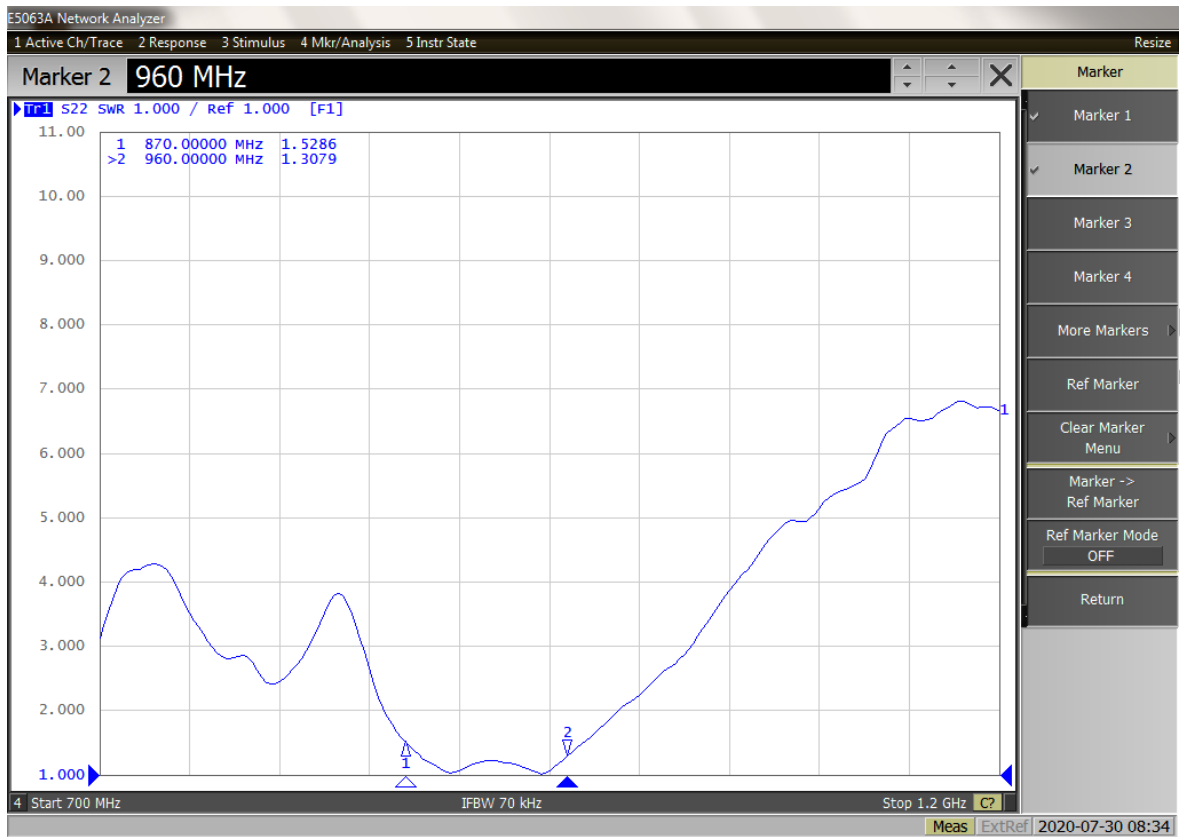
Antenna Specification/天线技术参数		
Electrical Specification/电气特性		
Item/目录	Specification/规格	Comment /备注
Freq. Range/频段范围	870-960(MHz)/1805-1920(MHz)/ 2000-2200(MHz)/2300-2500(MHz)/ 2500-2700(MHz)/3300-3600(MHz) 4800-5850(MHz)	
Impedance/阻抗	50 ( $\Omega$ )	
VSWR/驻波比	$\leq 2.0/\leq 2.0/\leq 2.0/\leq 2.0/\leq 2.0/\leq 2.0/\leq 2.5$	
Directional/辐射方向	Directional	
Polarization/极化形式	Vertical	
Peak Gain/峰值增益	5.55dBi/6.36dBi/7.09dBi/7.64dBi/5.58dBi/6.62dBi/5.09dBi	
Beam Width/波束宽度	900MHz 70°/1800MHz 65°/2000MHz 60°/2300MHz 60° /2500MHz 60°/3300MHz 55°/4800MHz 55°	
Total Efficiency/无源效率	45%/50%/50%/60%/50%/60%/25%	
Mechanical Specification/机械指标		
Antenna type/天线类型	Panel antenna	
Connector Type/连接器类型	SMA-J	
RF Cable Type/射频线型号	RG316	
Connector Torque Test/连接器扭力	N/A	
Connector Pull Test/连接器拉力	$\geq 3.0\text{Kg}$	
Salt Spray/盐雾测试	48(H)	
Environmental Specification /环境指标		
Operating temp/工作温度	-40°C ~ +80°C	
Storage temp/存储温度	-40°C ~ +80°C	

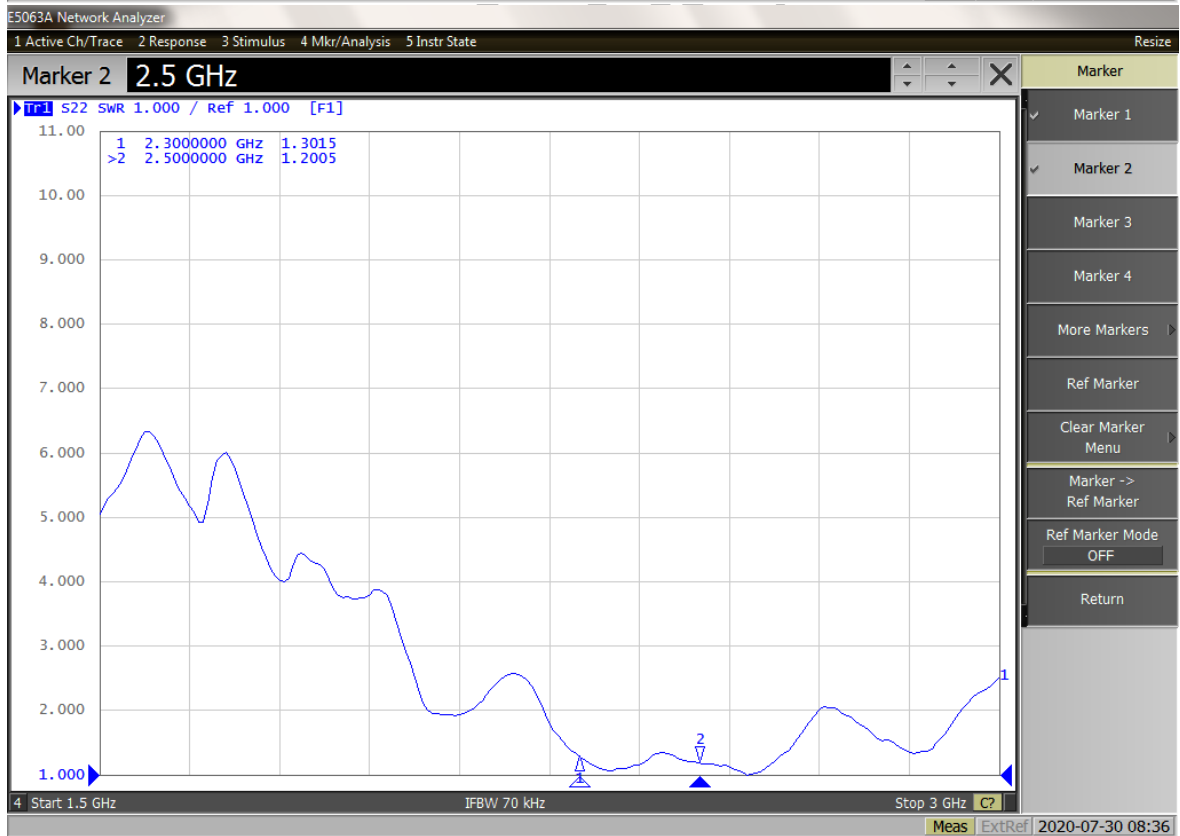
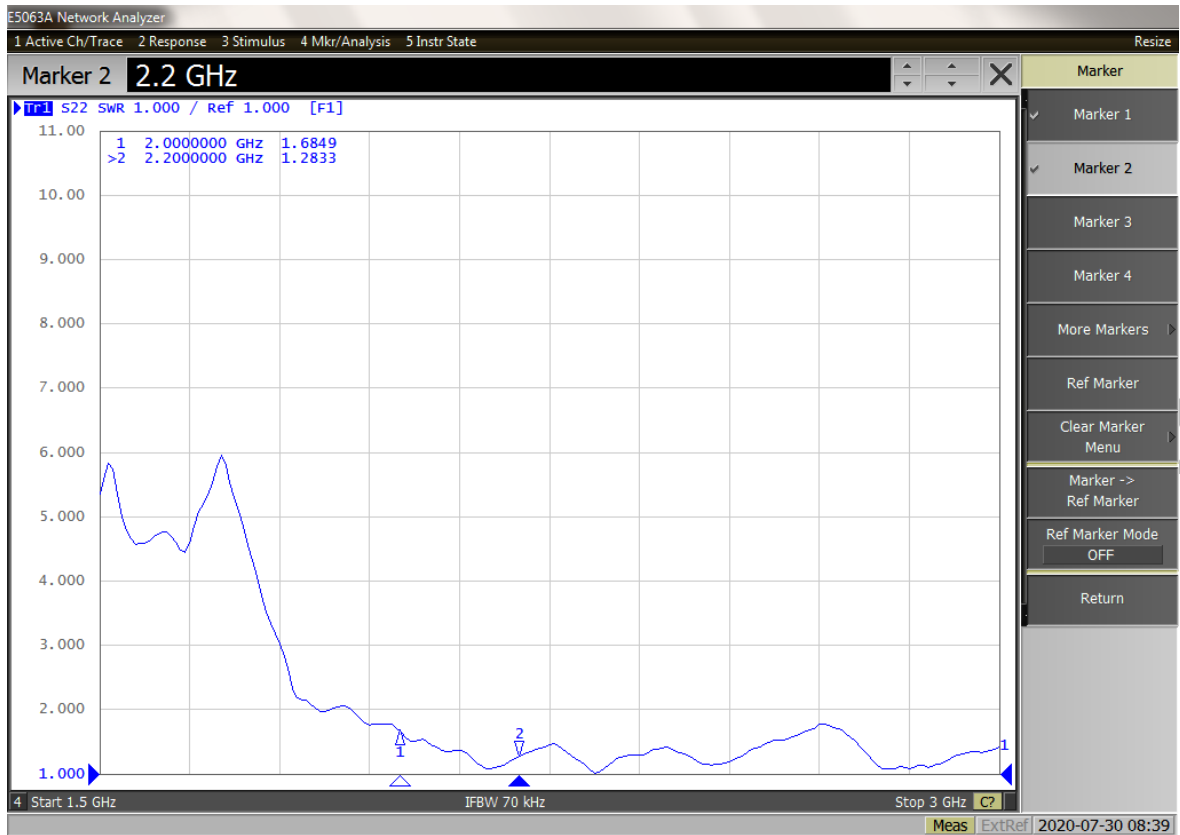
**2. Antenna Picture/天线图片**



## 3. Antenna test result/测试结果

### 3.1 Return loss/Smith chart/VSWR/回波损耗/史密斯图/驻波比





P/N:

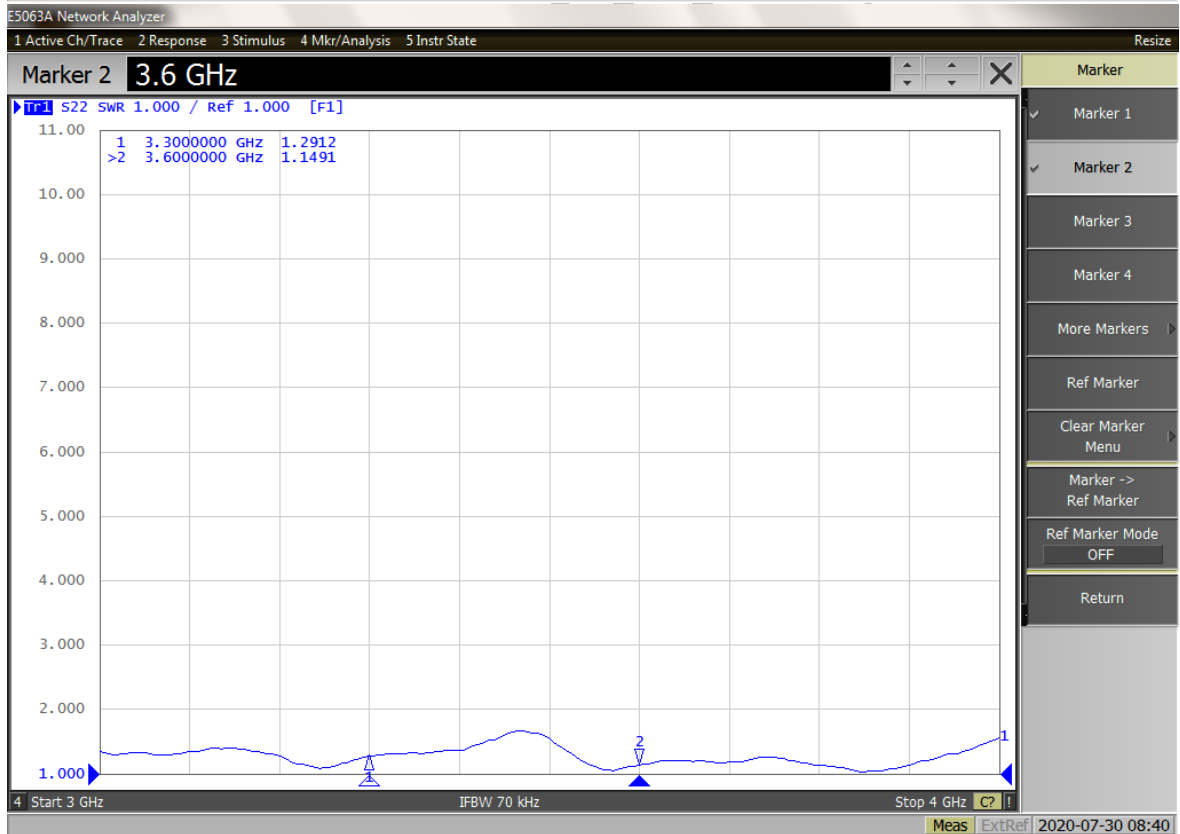
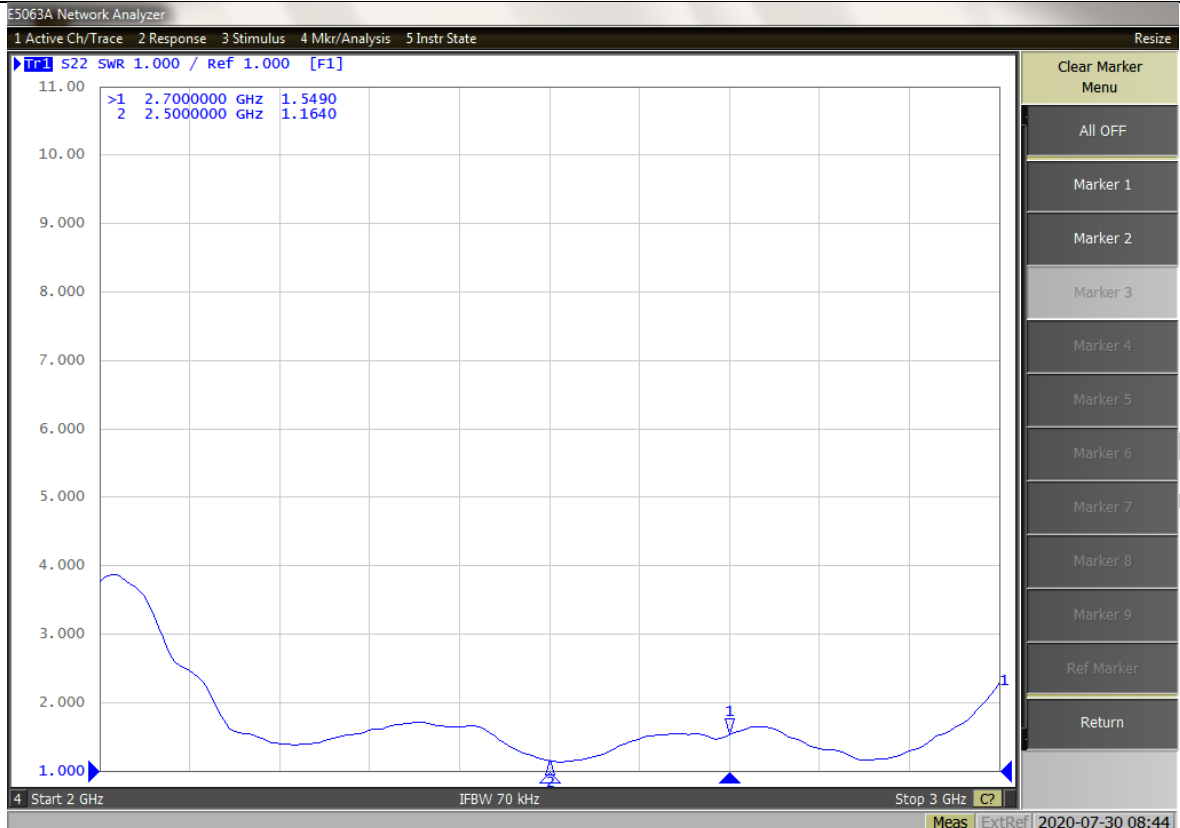
81800U386

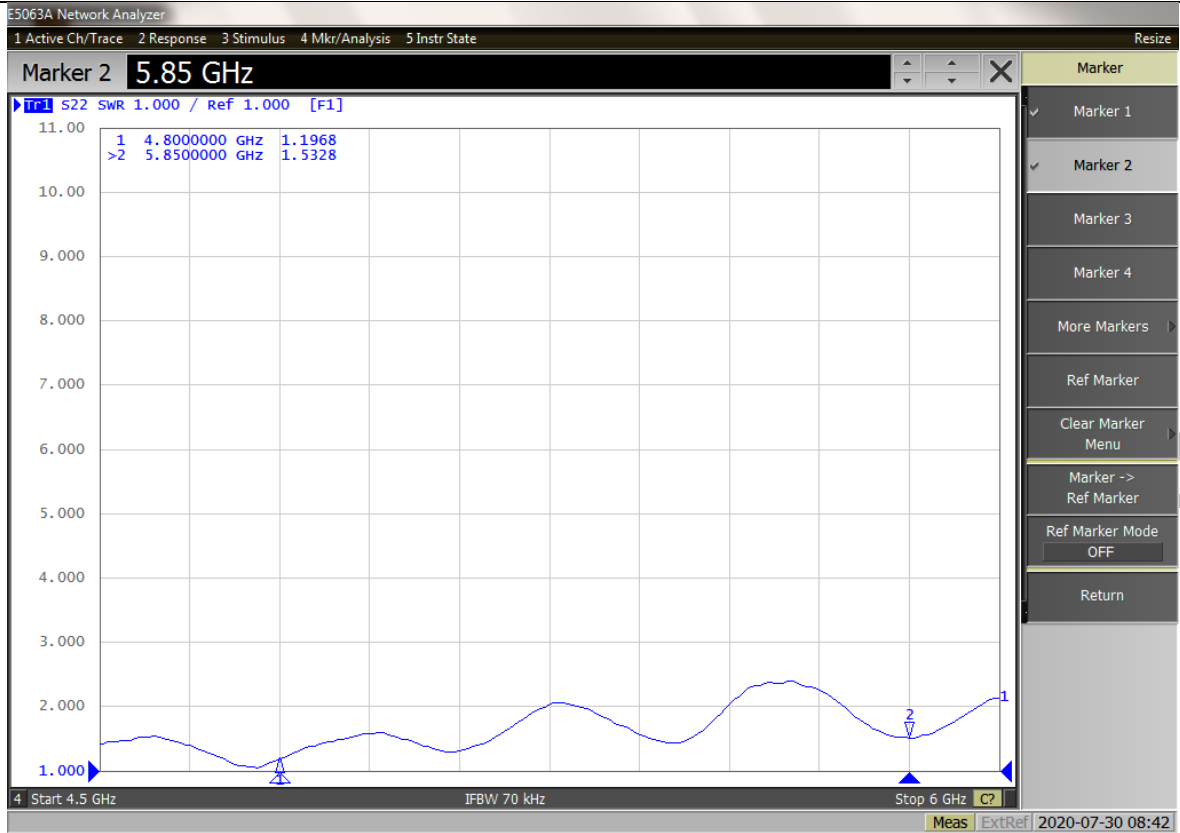
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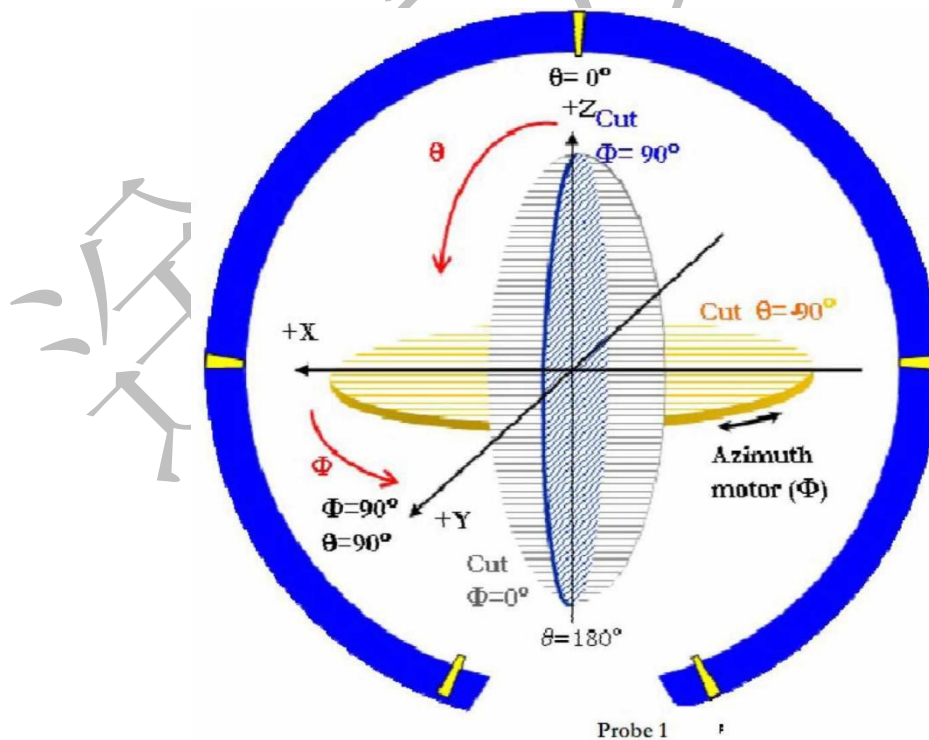
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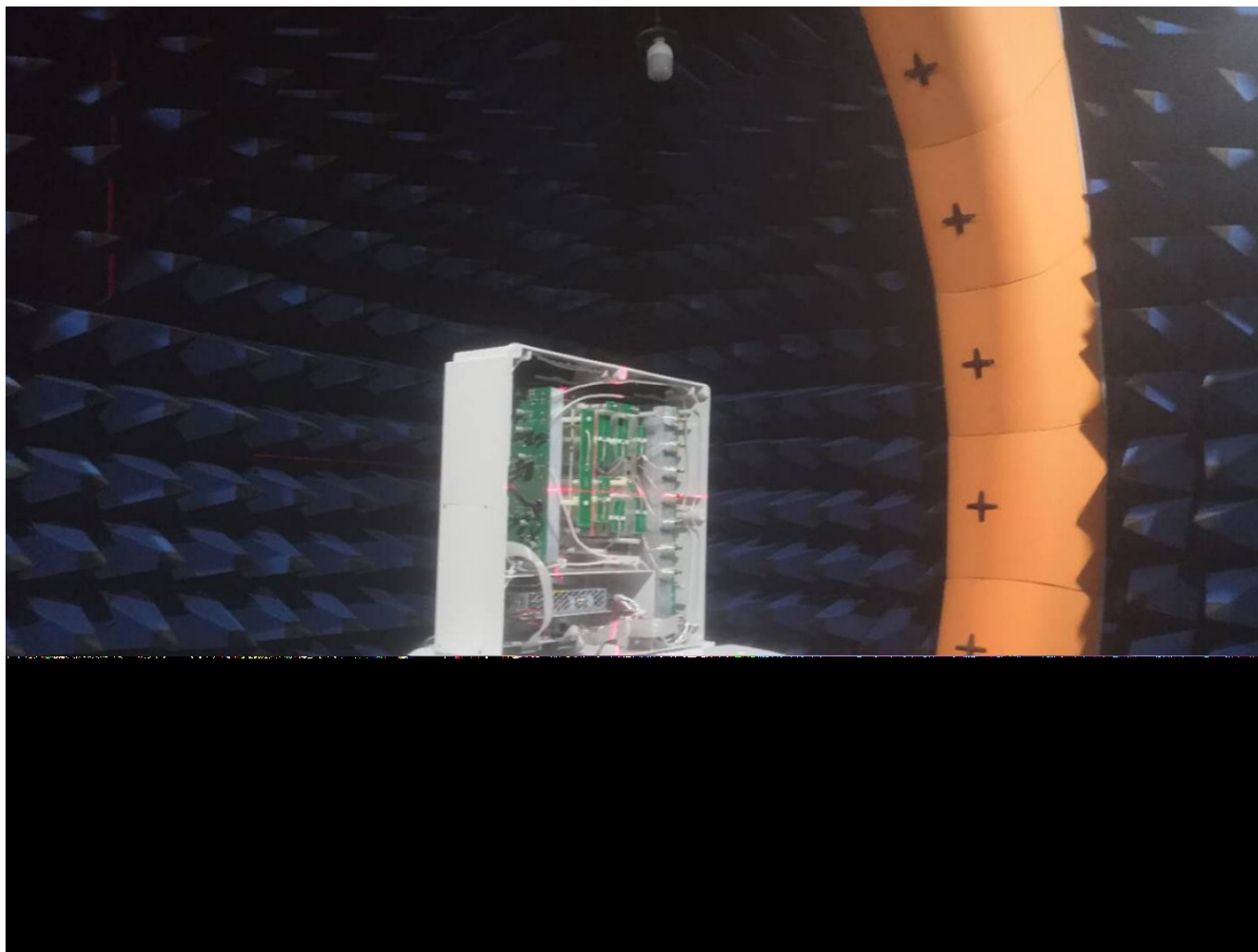


### 3.2 The gain and total efficiency test/增益和效率测试

#### 3.2.1 The definition of coordinate system/坐标系定义-Satimo SG24



The coordinate system of Chamber/暗室坐标系



The production test position/天线测试放置位置

### 3.2.2 The test result of total efficiency and total gain/天线效率及增益测试结果

#### 870MHz-960MHz

Frequency	Gain (dBi)	Efficiency(%)
870MHz	4.00	53%
880MHz	4.18	55%
890MHz	4.90	53%
900MHz	4.67	47%
910MHz	4.74	47%
920MHz	4.40	46%
930MHz	4.08	42%
940MHz	4.23	41%
950MHz	4.69	43%
960MHz	5.55	47%
AVG	4.54	47%

**2000MHz-2200MHz**

Frequency	Gain (dBi)	Efficiency(%)
2000MHz	5.27	53%
2020MHz	5.15	56%
2040MHz	4.49	50%
2060MHz	4.59	49%
2080MHz	5.20	55%
2100MHz	4.69	55%
2120MHz	5.41	59%
2140MHz	5.78	62%
2160MHz	6.83	65%
2180MHz	7.09	65%
2200MHz	6.66	60%
AVG	5.56	57%

**1805-1920MHz**

Frequency	Gain (dBi)	Efficiency(%)
1800MHz	4.50	49%
1810MHz	4.68	49%
1820MHz	5.17	51%
1830MHz	4.74	52%
1840MHz	4.90	52%
1850MHz	4.90	51%
1860MHz	4.86	52%
1870MHz	4.90	55%
1880MHz	5.52	57%
1890MHz	5.82	57%
1900MHz	6.02	56%
1910MHz	6.32	58%
1920MHz	6.36	59%
AVG	5.28	54%

**2300-2500MHz**

Frequency	Gain (dBi)	Efficiency(%)
2300MHz	5.29	58%
2320MHz	6.41	58%
2340MHz	6.64	64%
2360MHz	6.93	65%
2380MHz	6.55	66%
2400MHz	6.14	63%
2420MHz	6.11	62%

2440MHz	5.61	60%
2460MHz	6.00	60%
2480MHz	6.44	63%
2500MHz	7.64	69%
AVG	6.34	63%

### 3300-3600MHz

Frequency	Gain (dBi)	Efficiency(%)
3300MHz	5.29	60%
3330MHz	5.66	63%
3360MHz	5.53	60%
3390MHz	6.24	60%
3420MHz	6.62	62%
3450MHz	6.16	61%
3480MHz	5.36	58%
3510MHz	4.67	59%
3540MHz	5.35	62%
3570MHz	5.40	59%
3600MHz	5.21	58%
AVG	5.59	60%

### 4800-5850MHz

Frequency	Gain (dBi)	Efficiency(%)
4800MHz	4.92	38%
4900MHz	5.09	32%
5000MHz	5.28	29%
5100MHz	5.22	34%
5200MHz	4.69	32%
5300MHz	3.49	30%
5400MHz	5.09	36%
5500MHz	3.89	29%
5600MHz	2.89	25%
5700MHz	3.33	27%
5800MHz	2.87	29%
5850MHz	2.77	26%
AVG	4.13	30%

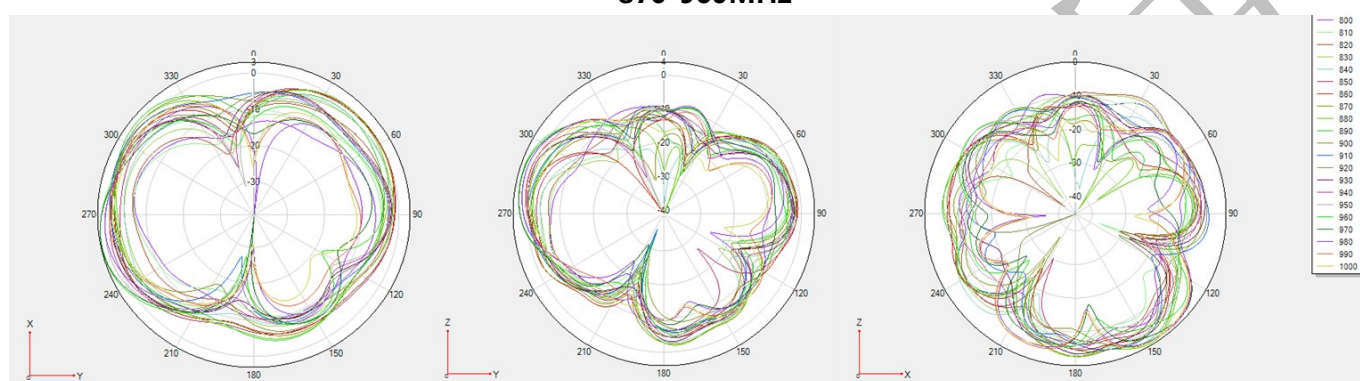
### 2500-2700MHz

Frequency	Gain (dBi)	Efficiency(%)
2500MHz	5.58	58%
2520MHz	5.05	57%
2540MHz	4.16	54%
2560MHz	3.67	52%
2580MHz	4.03	53%

2600MHz	4.41	55%
2620MHz	4.99	54%
2640MHz	5.01	50%
2660MHz	5.41	53%
2680MHz	4.95	51%
2700MHz	4.17	49%
AVG	4.68	53%

### 3.2.3 The antenna radiation pattern(2D)/天线辐射方向图 ( 2D )

#### 870-960MHz

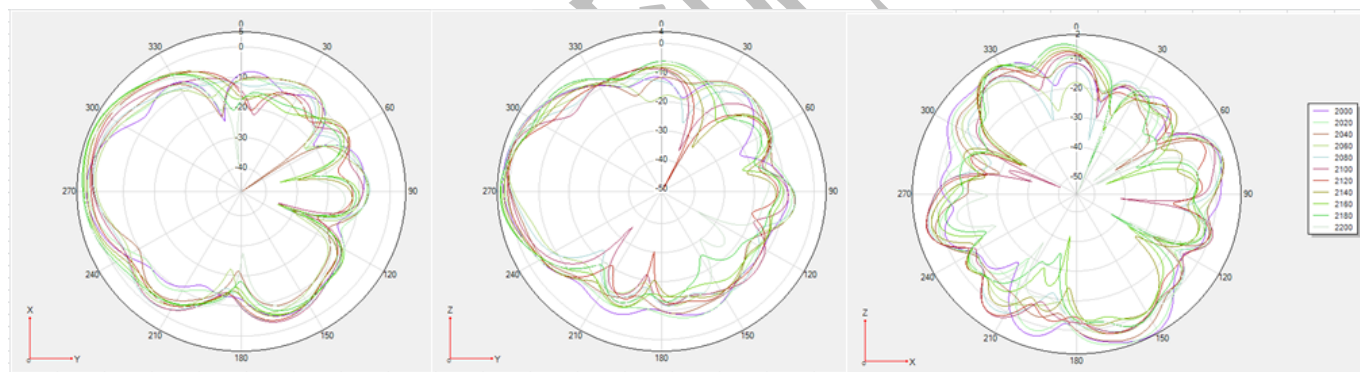


XOY

YOZ

XOZ

#### 2000-2180MHz

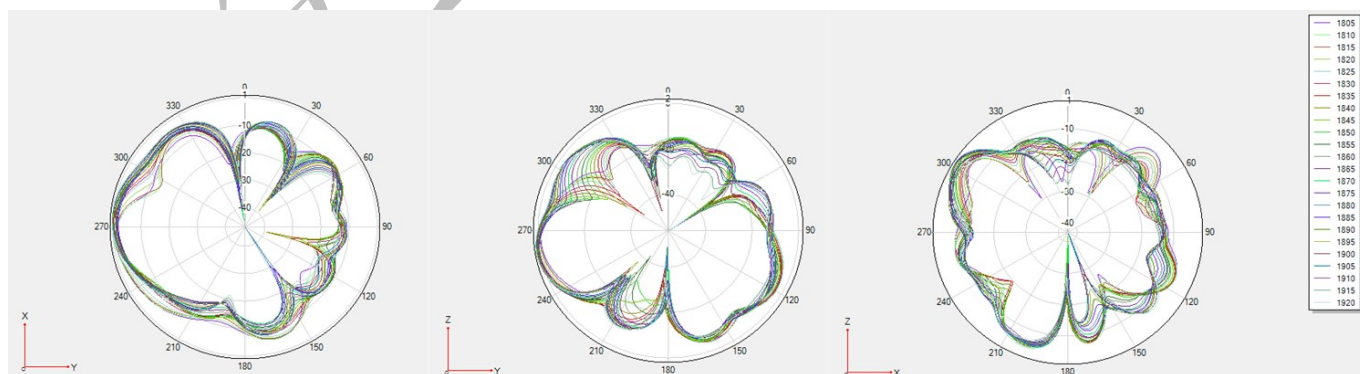


XOY

YOZ

XOZ

#### 1805-1920MHz



XOY

YOZ

XOZ

P/N:

81800U386

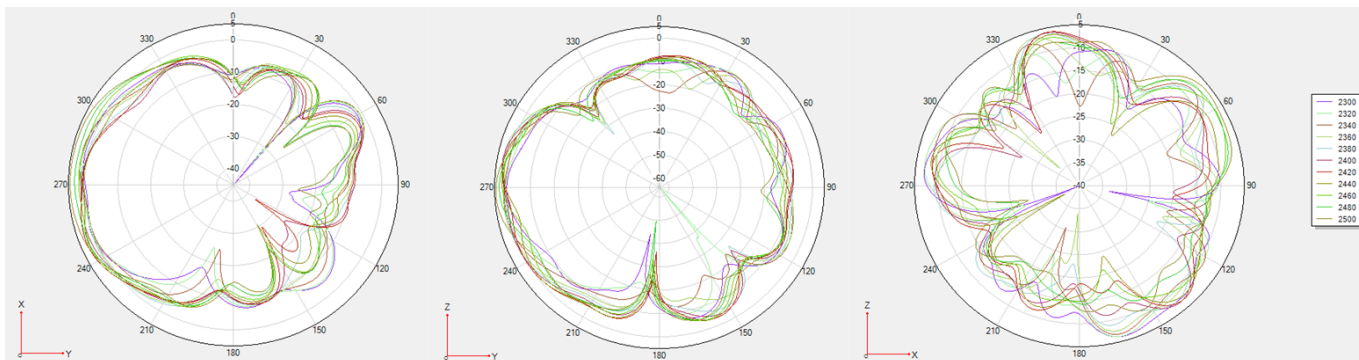
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## 2300-2500MHz

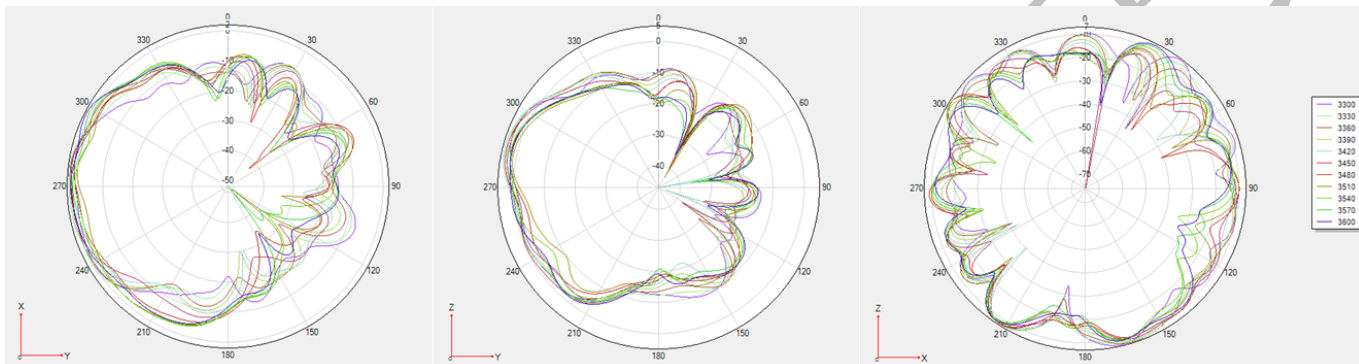


XOY

YOZ

XOZ

## 3300-3600MHz

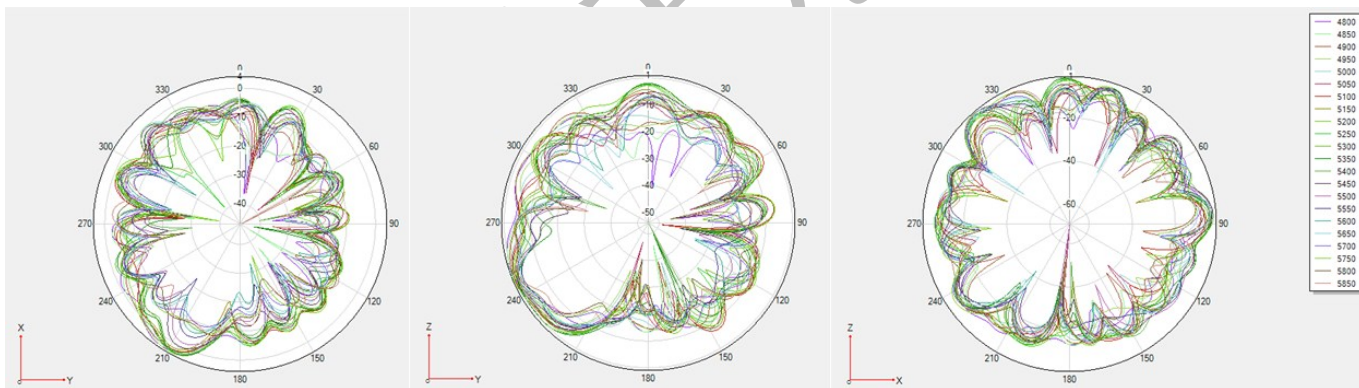


XOY

YOZ

XOZ

## 4800-5850MHz

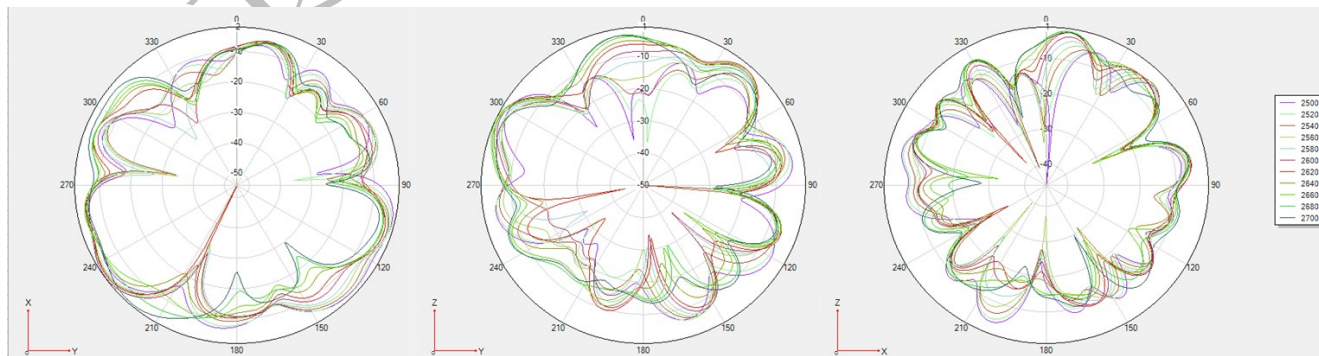


XOY

YOZ

XOZ

## 2500-2700MHz



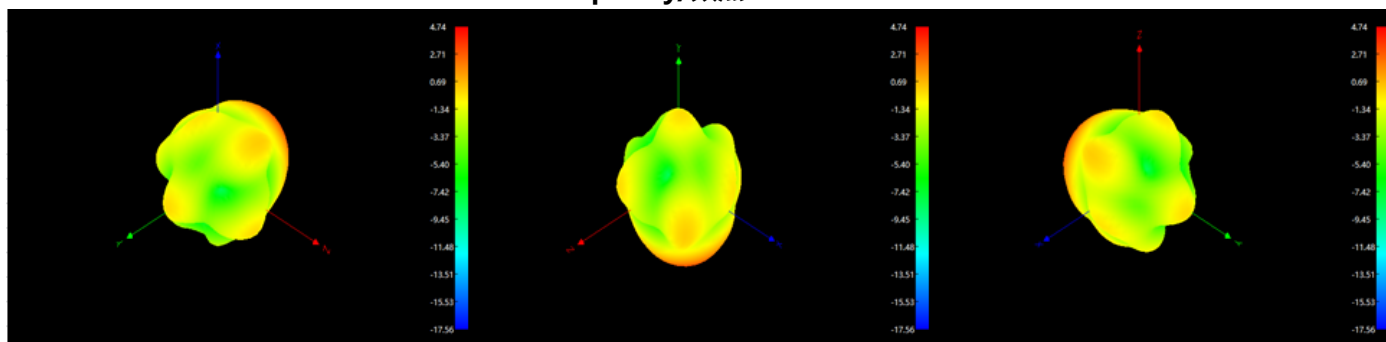
XOY

YOZ

XOZ

### 3.2.4 The antenna radiation pattern(3D)/天线辐射方向图 ( 3D )

Frequency/频点 910MHz

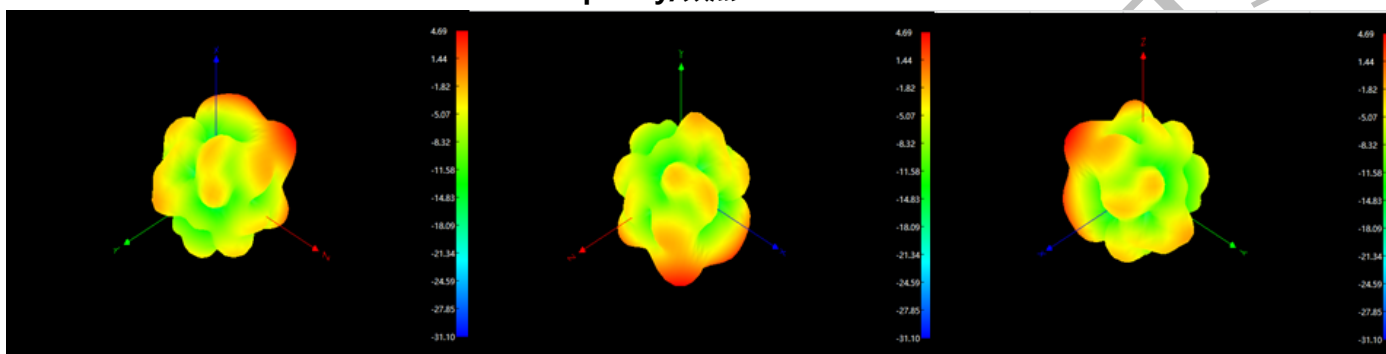


XOY

YOZ

XOZ

Frequency/频点 2100MHz

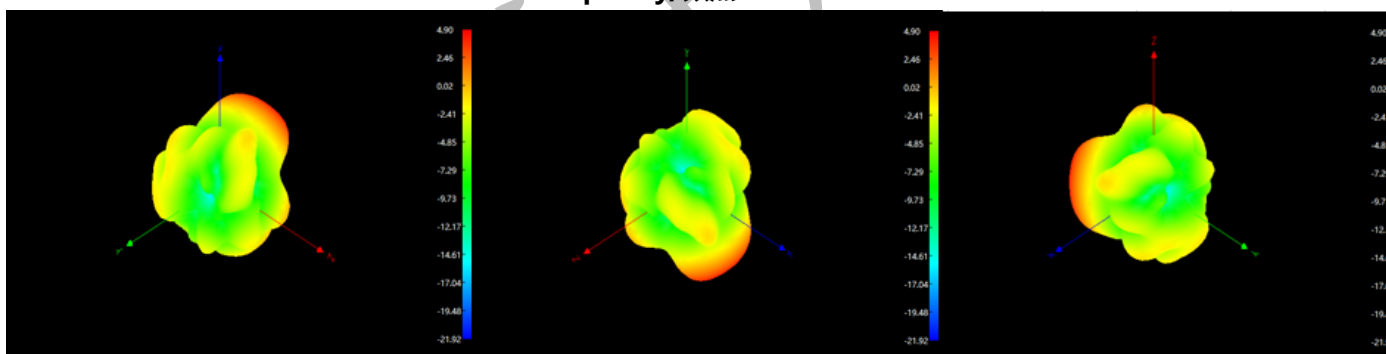


XOY

YOZ

XOZ

Frequency/频点 1870MHz

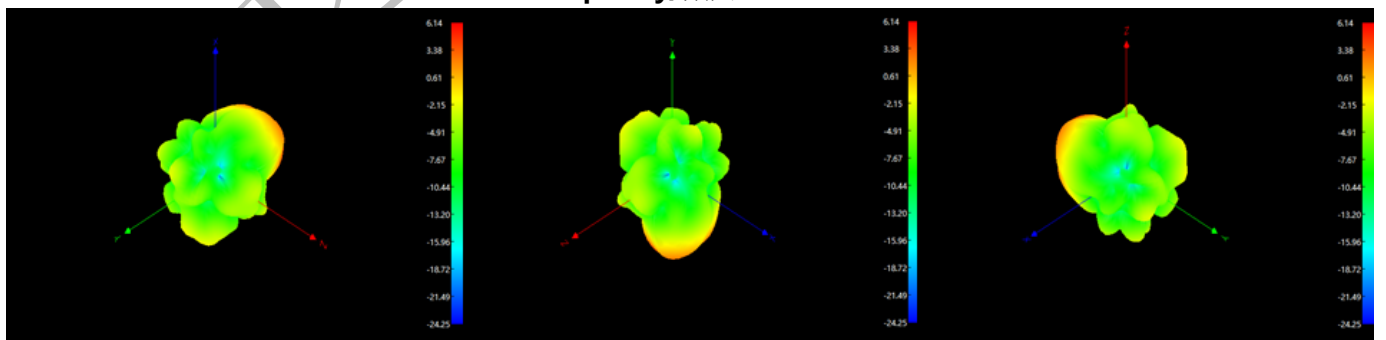


XOY

YOZ

XOZ

Frequency/频点 2400MHz

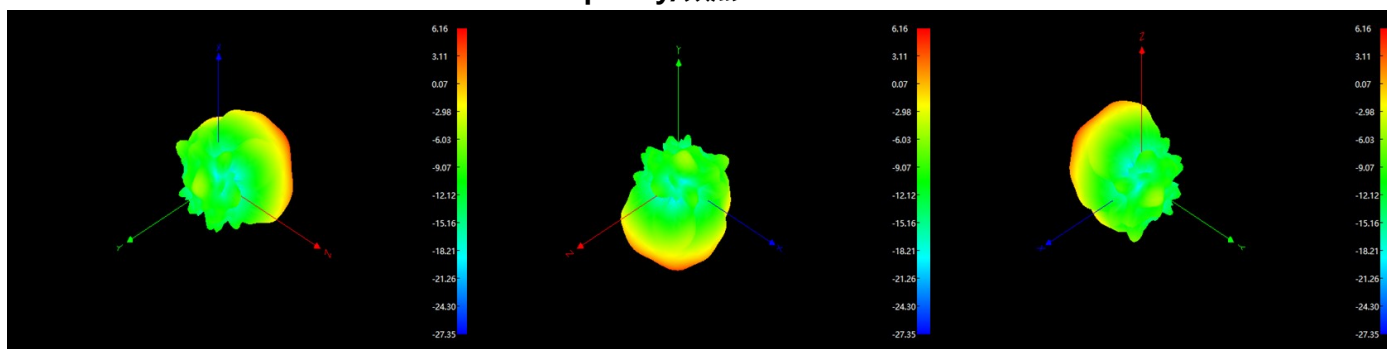


XOY

YOZ

XOZ

## Frequency/频点 3450MHz

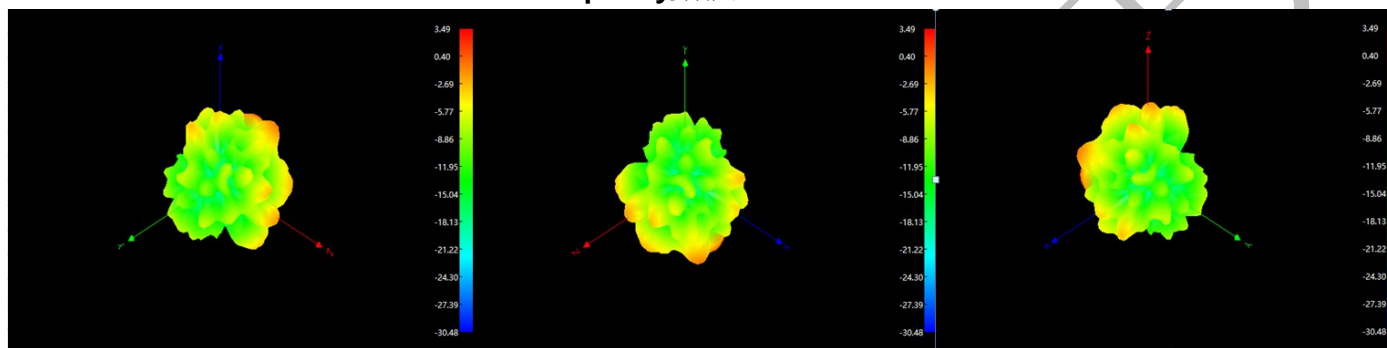


XOY

YOZ

XOZ

## Frequency/频点 5300MHz

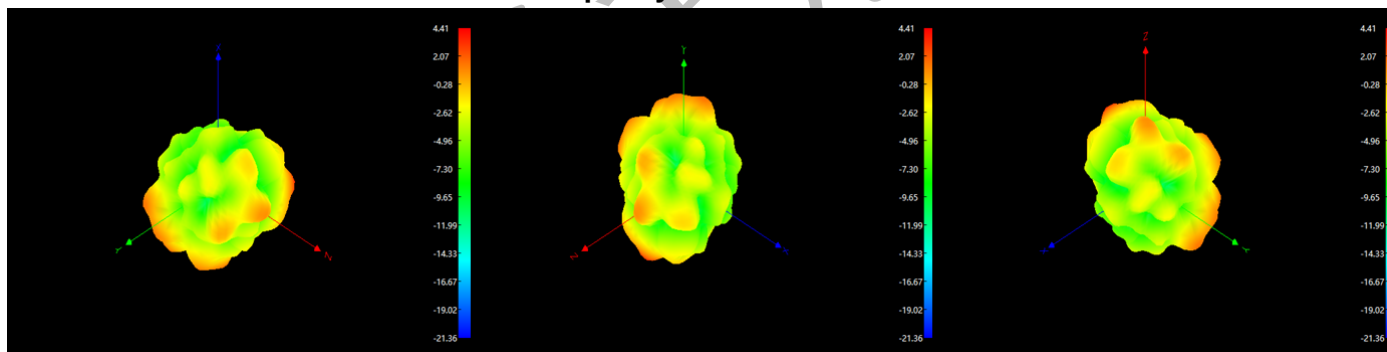


XOY

YOZ

XOZ

## Frequency/频点 2500MHz



XOY

YOZ

XOZ