

# 0002W Antenna specification

<b>Customer</b>	IRAY
<b>Device type</b>	Oral probe
<b>Antenna type</b>	Stamping antenna
<b>Working frequency range</b>	2400~2500MHz/5150~5858MHz
<b>Release date</b>	2021.11.03
<b>Version</b>	V0
<b>Author</b>	Hongle Lv
<b>Reviewer</b>	Arvin Xia

## 1. Summarize

This document is mainly about the information of antenna which is applied on Oral probe made by iRay.

### 1.1 Antenna status



Figure 1 Antenna photo

1.2 Antenna matching

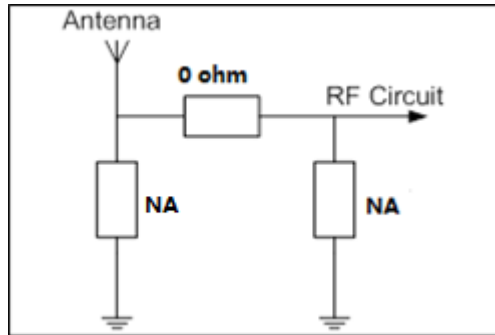


Figure 2 Antenna matching

2. Test environment

Antenna S-parameters are tested by Agilent E5071C network analyzer.

All the radiation parameters are tested by Satimo SG24, SG24 is a nearfield 3D microwave chamber.

The coordinate system is showed below of figure3

SAR is tested by DASY5 system.

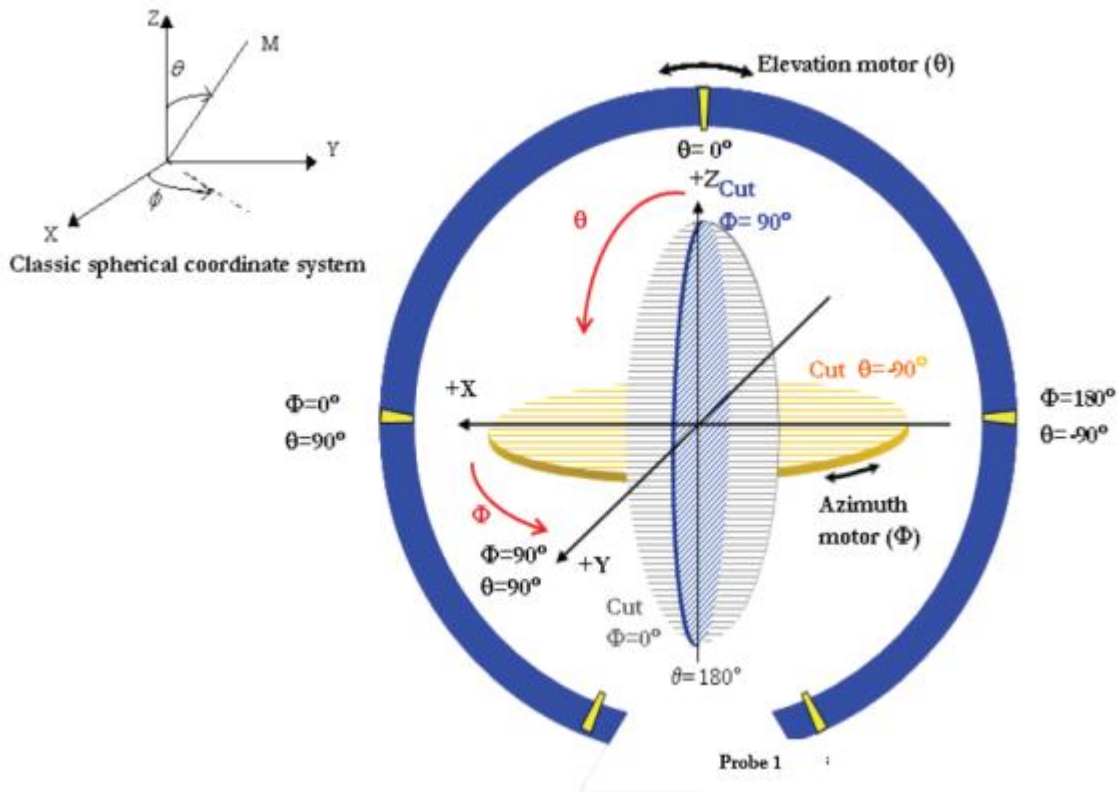


Figure 3 Coordinate system of 3D microwave chamber

### 3. Test result

#### 3.1 S11

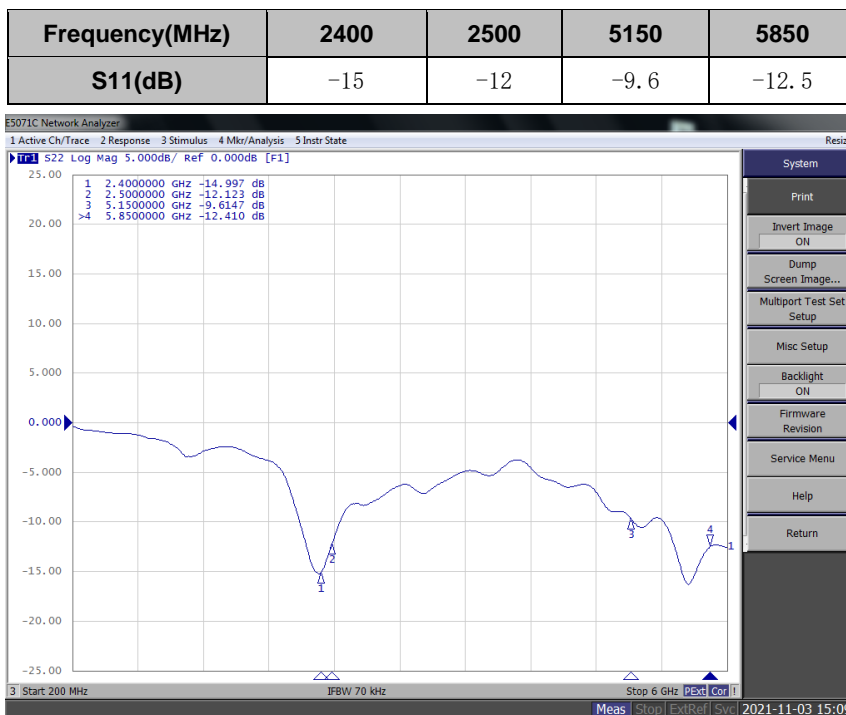


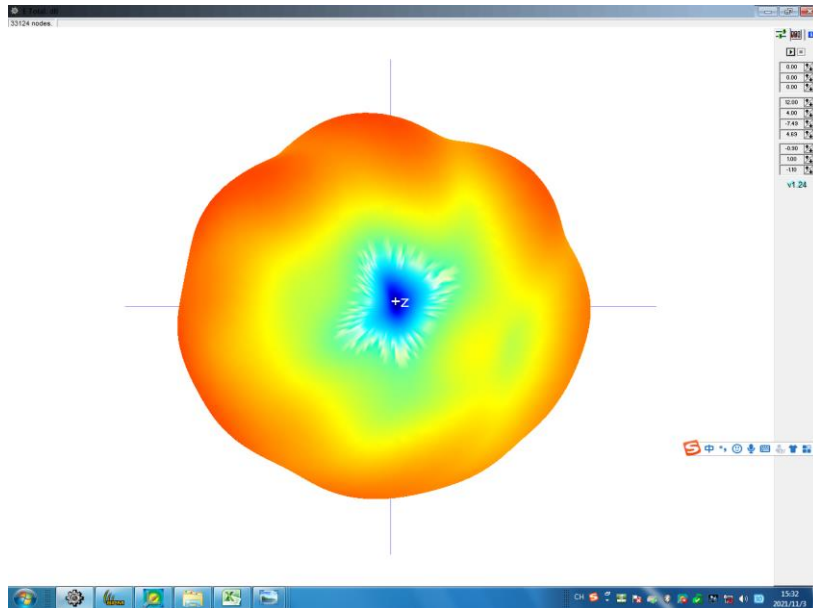
Figure 4 S11

#### 3.2 Antenna efficiency

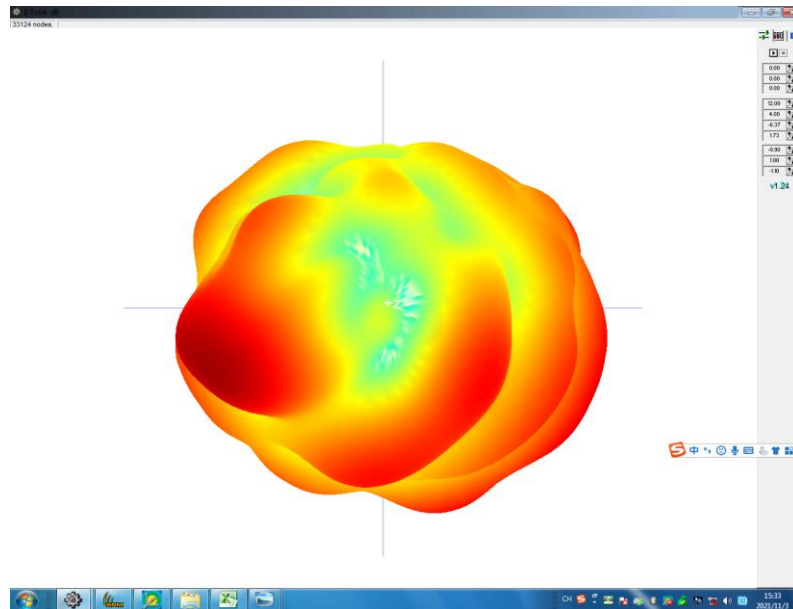
Frequency	Efficiency	Gain. dBi	Frequency	Efficiency	Gain. dBi
2400	76%	4.7	5150	52%	2.1
2410	76%	4.4	5200	53%	1.9
2420	75%	4.4	5250	51%	1.6
2430	77%	4.4	5300	48%	1.4
2440	76%	4.5	5350	54%	1.7
2450	76%	4.7	5400	58%	1.7
2460	77%	4.8	5450	60%	2.0
2470	78%	4.7	5500	61%	2.2
2480	78%	4.7	5550	62%	2.1
2490	79%	4.7	5600	59%	2.5
2500	77%	4.6	5650	57%	2.4
			5700	53%	2.5
			5750	47%	1.8
			5800	46%	2.4
			5850	42%	2.4

## 3.3 3D radiation pattern

2450MHz

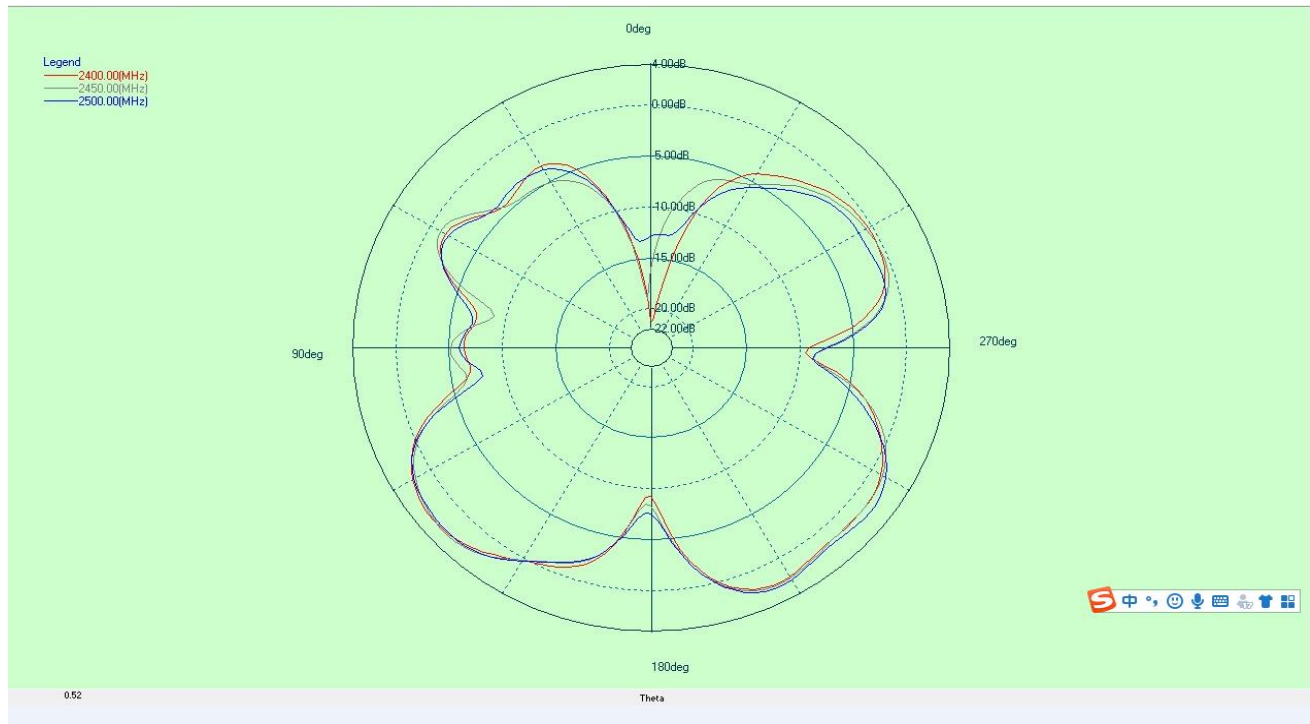


5500MHz

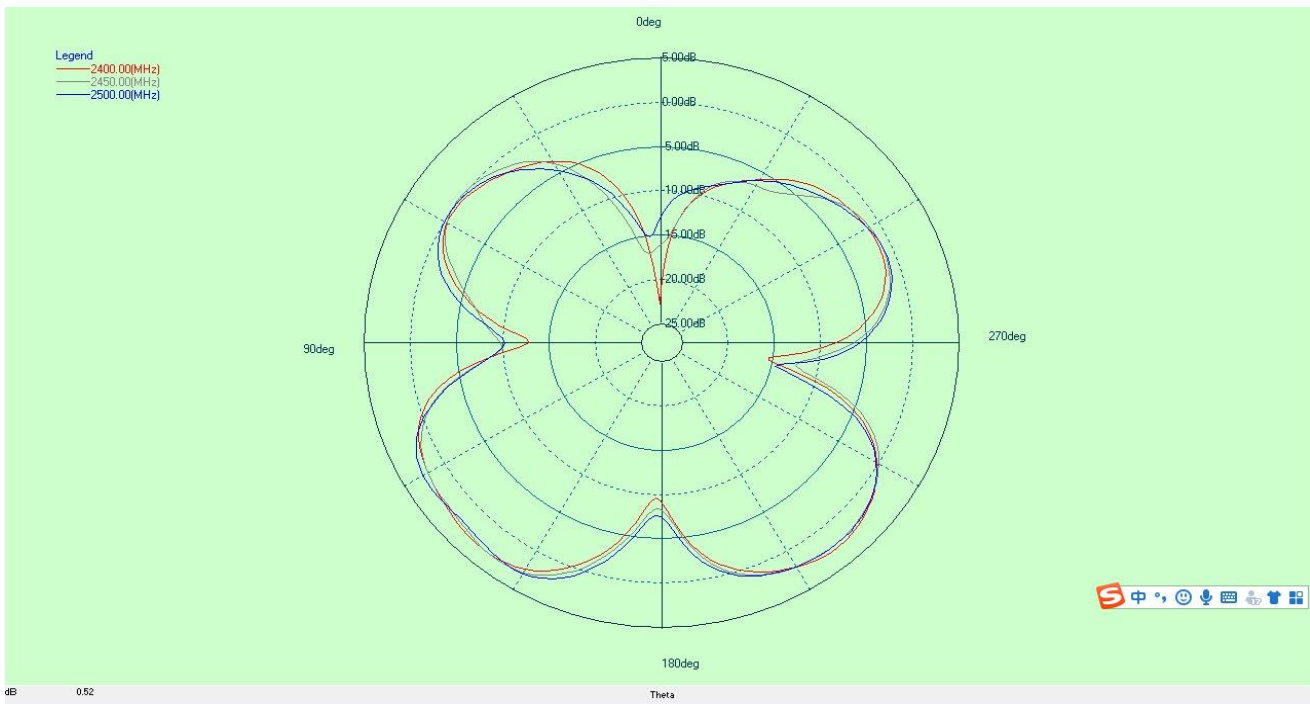


## 3.4 2D section view of standard cut

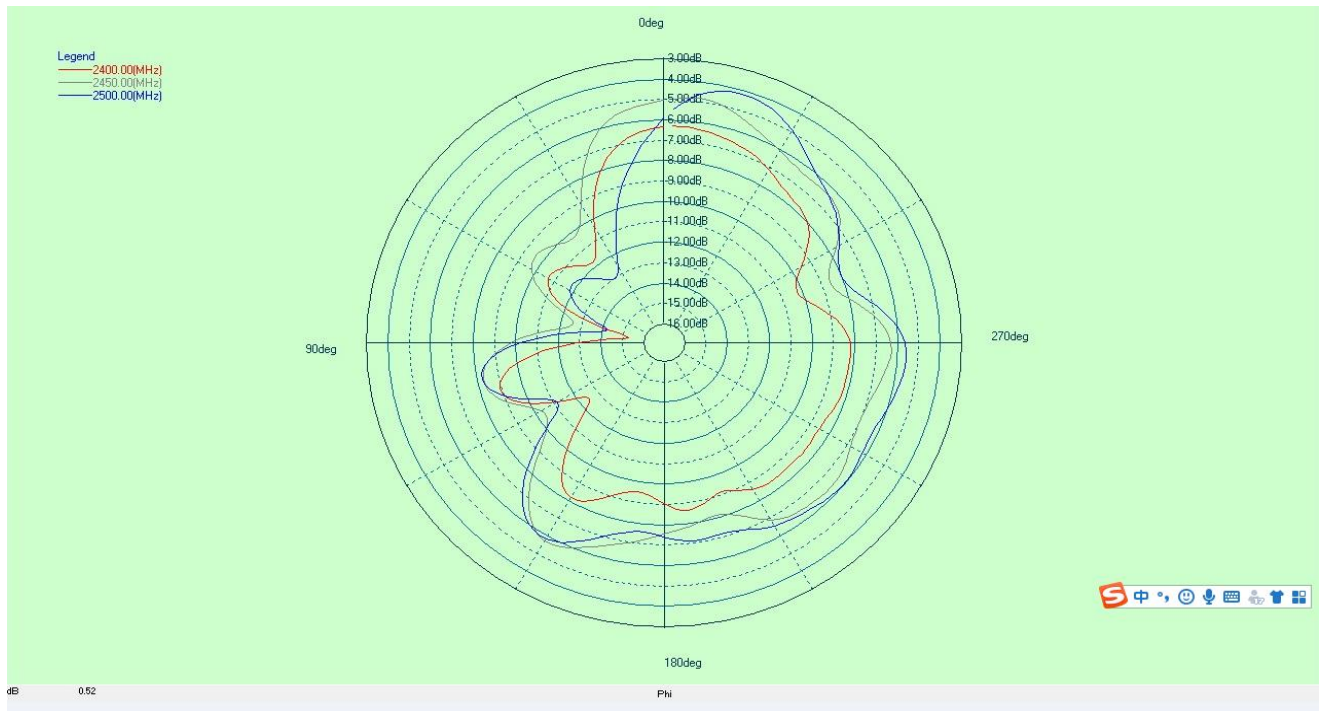
WIFI 2.45G



$\Phi = 0^\circ$

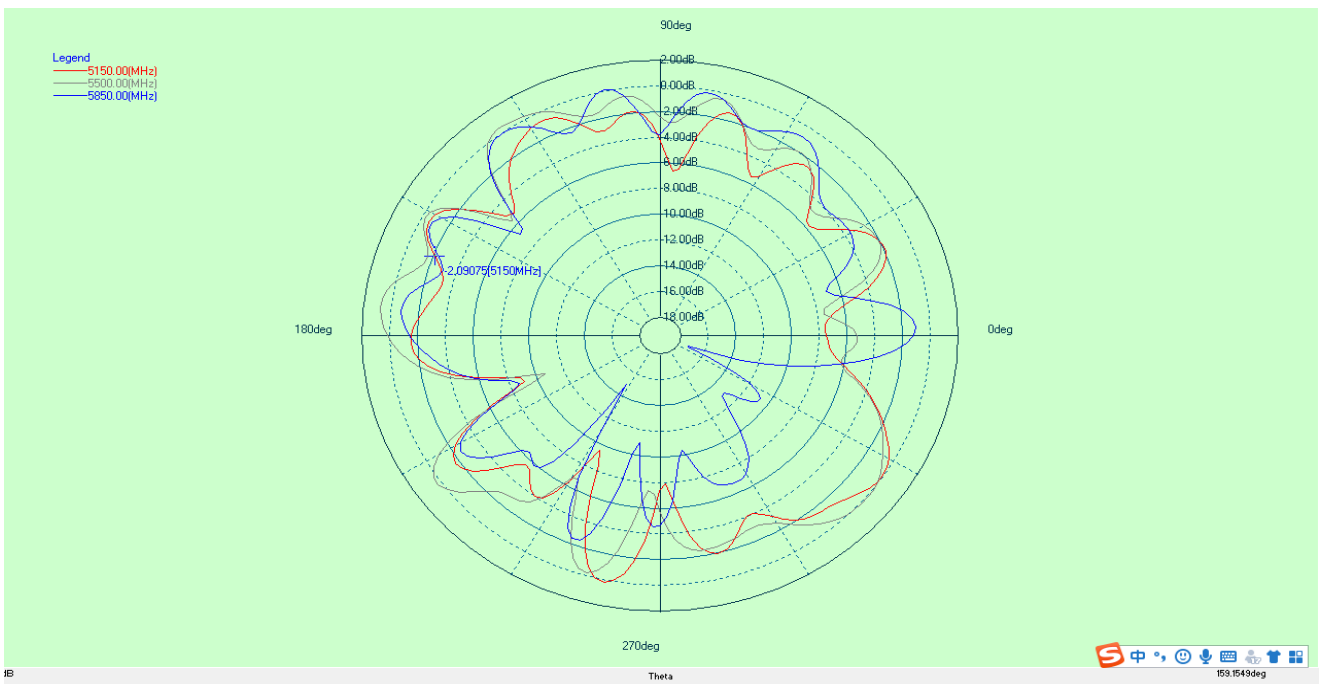


$\Phi = 90^\circ$

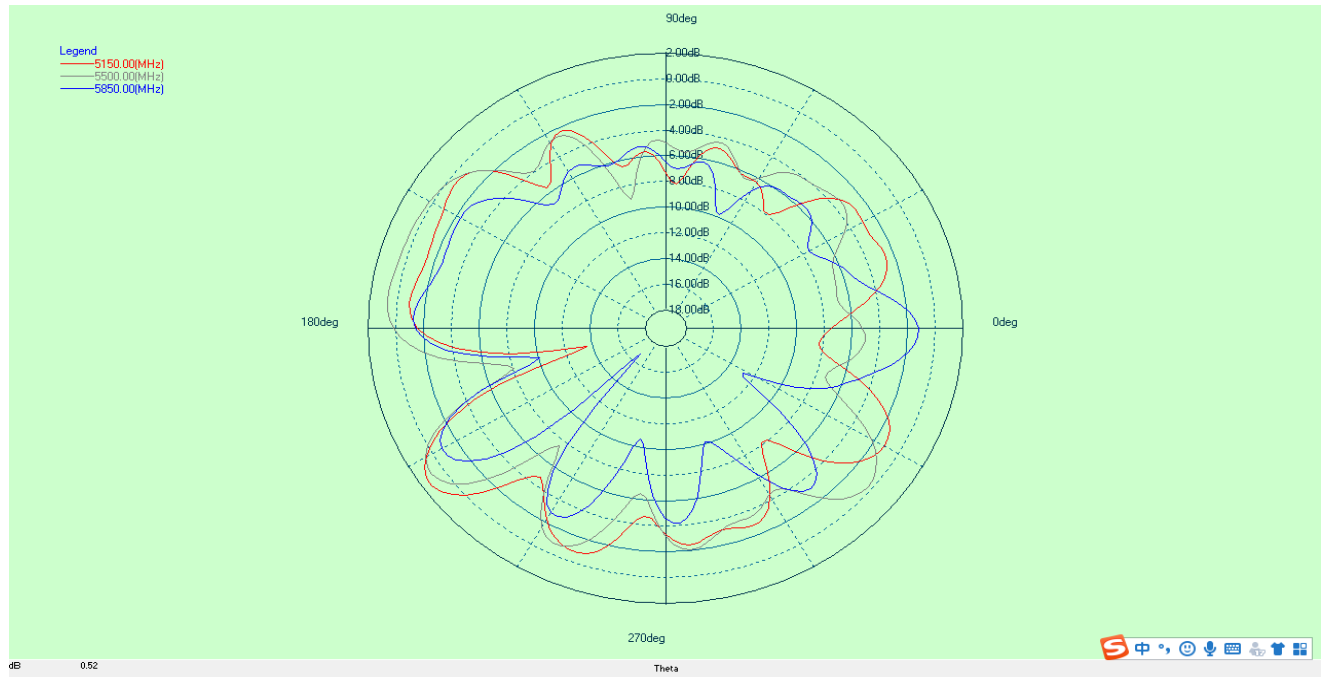


Theta=90°

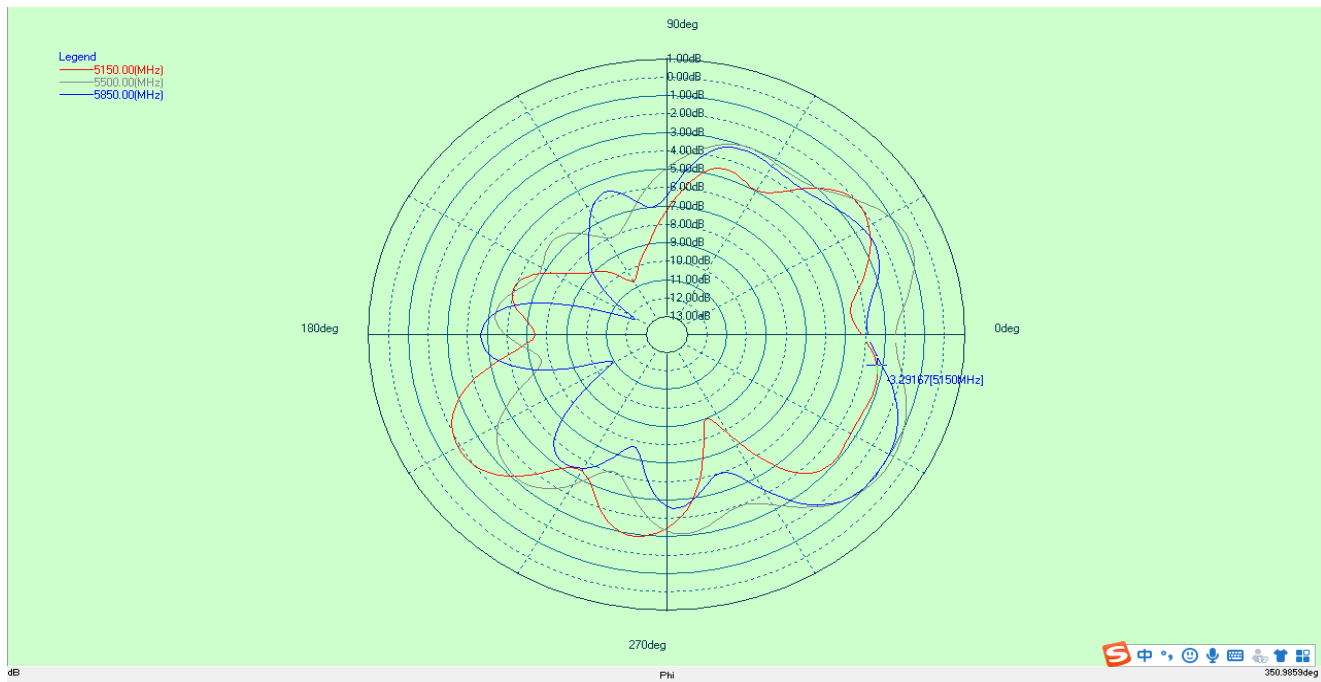
WIFI 5.5G



Phi=0°



Phi=90°

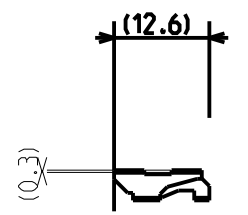
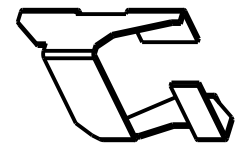
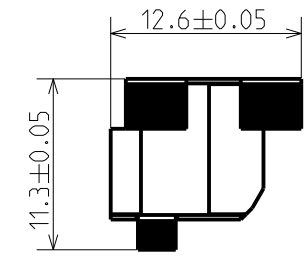
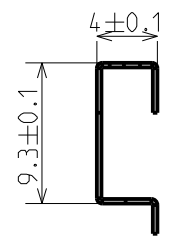
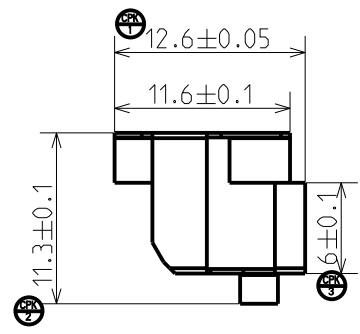
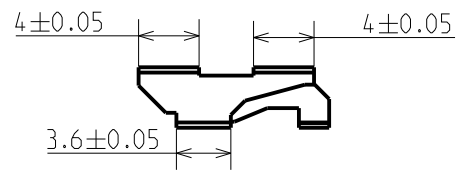


Theta=90°

## 4. Machincal drawing

ROHS/HF

REVISION	ECO#	REVISION NOTE	AUTHOR	DATE
A2				20210713
A3				20210809



比例 1.000

- 注:
1. 部件应当符合所有3d数据;
  2. 材料: 洋白铜,厚0.3+/-0.013;
  3. 电镀: 镀镍
  4. 触脚弹性要求: 待定
  5. 需通过HAITONG品质部门要求的各项测试;
  6. 材料纹路方向与弹脚折弯线允许夹角为45到90度;
  7. 毛刺高度不超过0.02 毛刺方向: 参考图档所示;
  8. 外观清洁, 无明显折痕, 表面无刮伤等不良;
  9. 产品局部外形根据电性能要求可能调整, 模具需考虑微调的方便性, 具体位置参考图档所示;
  10. 零件标记: 按指定位置, 线宽0.2, 深0.05;
  11. 首批模具样品: 随机挑选5pcs做全尺寸测量, 报告及样品需转递HT品质部;
  12. 尺寸要求:
    - 12.1. ST尺寸: 测量最小量为500中选取的任意35个产品的尺寸作pk分析;
    - 12.2. \* 尺寸为重点管控尺寸
  13. 任何用料上的修改必须通过HAITONG工程部门的书面同意;
  14. 产品必须符合 (RoHS/HF/REACH) 的要求;

GENERAL TOLERANCE TABLE			
LINEAR		ANGULAR	
DIVISION	TOLERANCE	DIVISION	TOLERANCE
0-10	±0.05	0-5°	±0.5°
10-50	±0.10	5-20°	±1°
50-80	±0.15	20-90°	±1.5°
>80	±0.2		

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		<b>PART NAME:</b> SH1367_W IF I_MTL	
<b>UNIT:</b>		<b>PART NUMBER:</b> 0	
<b>MAT'L:</b>		<b>CLIENTELE NUMBER:</b>	
<b>FINSH:</b>		<b>APPD:</b>	
<b>SIZE:</b> A4		<b>RF CHKD:</b>	
<b>NUMBER:</b>		<b>ME DR:</b> Jimmy	

**NHAIT** 浙江海通通讯电子有限公司  
Zhejiang Haitong Communication Electronics Co., Ltd.

**TITLE:**  
SH1367\_W IF I\_MTL 弹片

SCALE:	1.000	PAGE:	1 of 1	REV:	A3
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## 5. Packing description

