



深圳自由行通信技术有限公司

Shenzhen Free Walk Communication Technology Co. LTD

ADD: 深圳市宝安西乡鹤洲西区工业园 2 栋 3 楼
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承认书

APPROVAL SHEET

客户 (Customer) : 上海矽昌通信技术有限公司
Shanghai Sichang Communication Technology Co., Ltd

产品 (Product) : 2.4G外置天线(L=60mm)
2.4G External Antenna (L=60mm)

型号 (Model) : WiFi5-L2

客户料号 (Customer
Part Number) :

料号 (Part Number) : Z01-20590-R01

制作人 (Written By) : 胡 涛 Mr Hu

签发时间 (Issued Date) : 2024-09-26

客户 CUSTOMER

工程部 ENGINEER R&D DEPT	品质部 QUALITY DEPT	批准 APPROVED

Free Walk

射频 R&D DEPT	工程部 ENGINEER R&D DEPT	批准 APPROVED
胡 涛	卿创辉	邓凯



深圳自由行通信技术有限公司

Shenzhen Free Walk Communication Technology Co. LTD

文件变更履历表

Document change history

表单编号:QR-ZYX-084 版本: A0

Form number: QR-ZYX-084 Version: A0

产品型号 Product number		文件变更记录 Document change history					
序号 Serial number	变更类型 Change type	文件编号 File Number	变更日期 Change date	变更内容说明 Description of changes	制作/修订 Production/Revision	版本 version	备注 Remarks



目 录

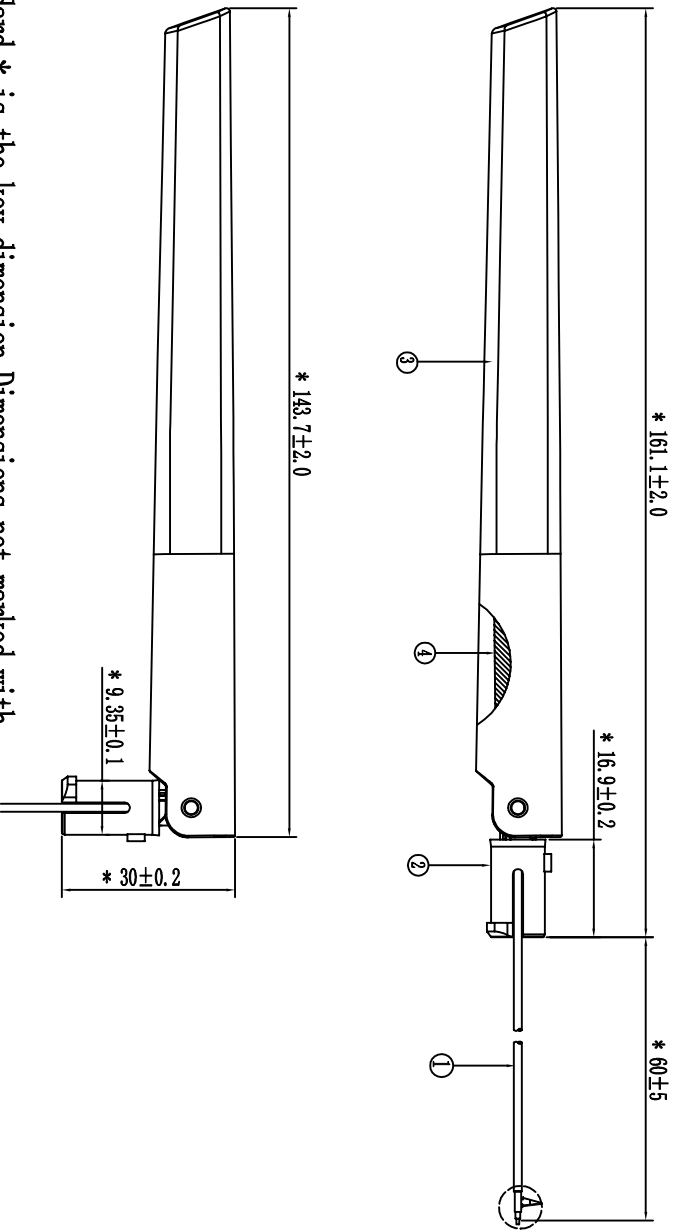
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The basic parameters

A. Electrical Characteristics	
Frequency	2400MHz~2500MHz
VSWR	<2
Efficiency	>60%
Impedance	50 Ohm
Polarization	Vertical
Gain	3dBi
B. Material & Mechanical Characteristics	
Material of Radiator	
Cable Type	Φ1.13mm Gray
Connector Type	焊接
Dimension	
C. Environmental	
Operation Temperature	- 20 °C ~ + 60 °C
Storage Temperature	- 40 °C ~ + 80 °C

6		7	8	
序号 NO	品名 Name	材料/规格 Material	颜色 Colour	数量 Amount
①	RF line	Ø1.13mm	grey	1
②	Lower mount	ABS	white	1
③	Set rods	TPEE	white	1
④	PCB	FR4	white	1
⑤				
⑥				
⑦				
⑧				



notes:

- Standard * is the key dimension, Dimensions not marked with tolerance shall be tested according to ± 0.15
- Refer to drawing without dimension; Other dimensions are subject to actual matching;
- Refer to drawing without dimension; Other dimensions are subject to actual matching;
- accord with ROHS

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Shenzhen Free Walk Technology Co. LTD

Third angle system	机种/Project	Wi-Fi5-L2	Date	2024-08-14
0~10	±0.10	○	0.02	
10~20	±0.15	◎	0.03	
20~40	±0.20	⊥	0.02	
40~	±0.25	∇	0.04	
		∨	0.02	
Do not measure the drawings location		N/A	unit	mm
			Scale	1:1
			Rea	A

Test Equipment & Conditions

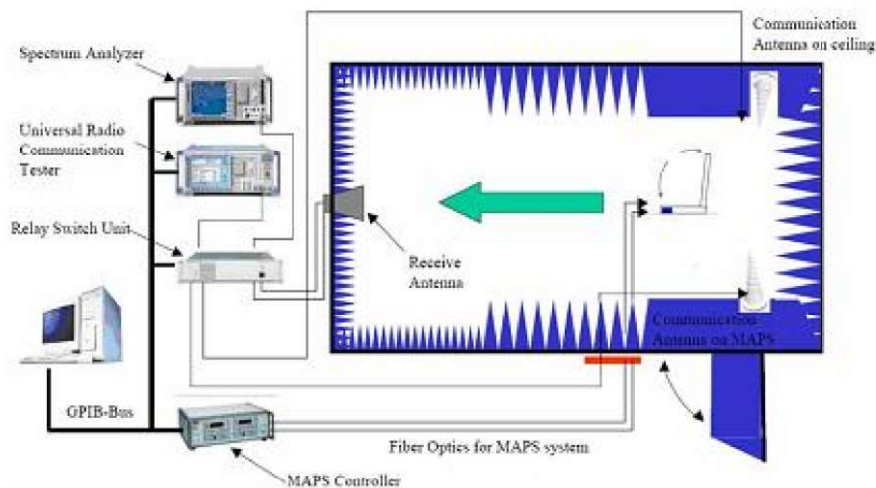
1. Network Analyzers :

Agilent 8753D 5071C

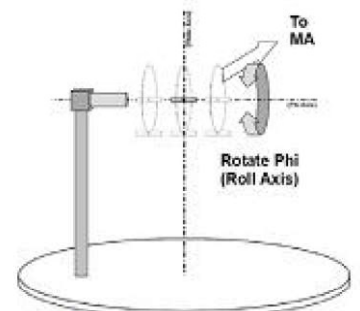
2. Communications Test Set:

Agilent 8960 CMW500

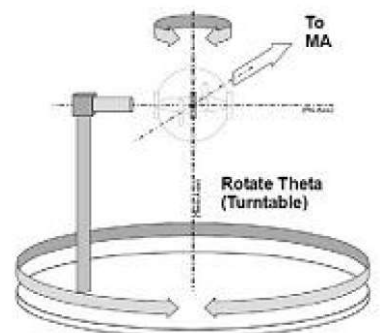
3. 3D Chamber Test System



(Testing by 3D anechoic chamber)



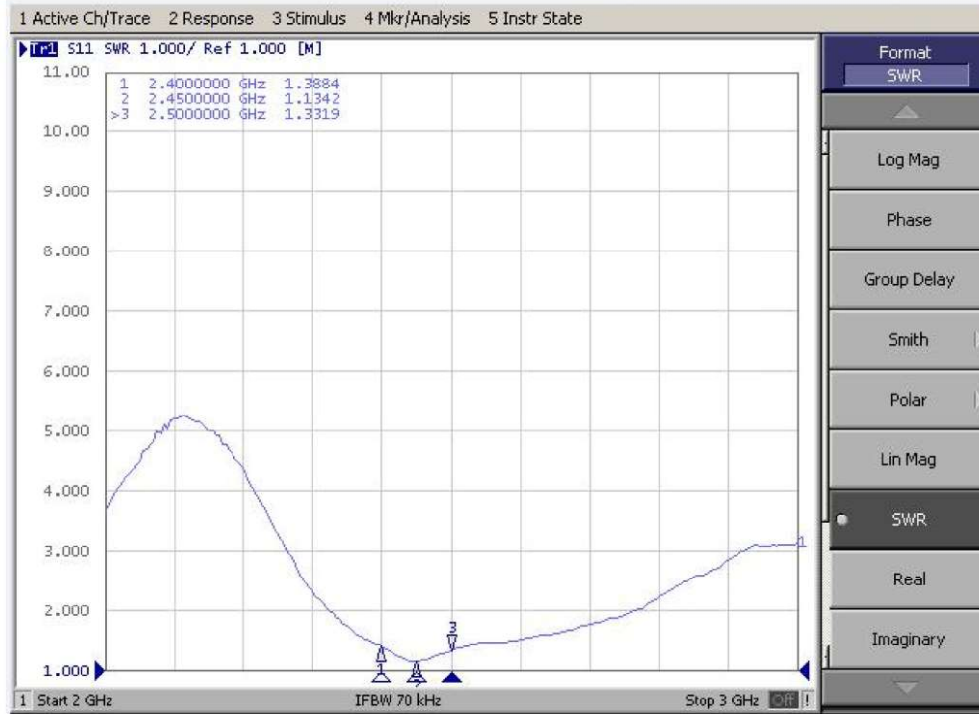
Phi axis test



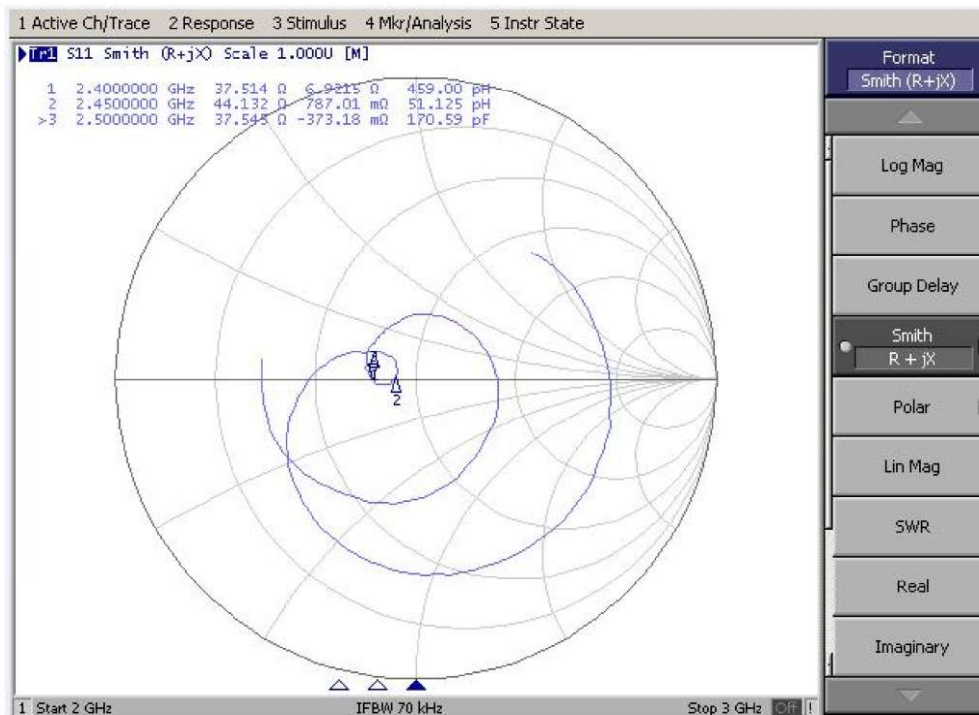
Theta axis test

测试数据

SWR



Smith($R+jX$)





效率&增益:
Efficiency&Gain

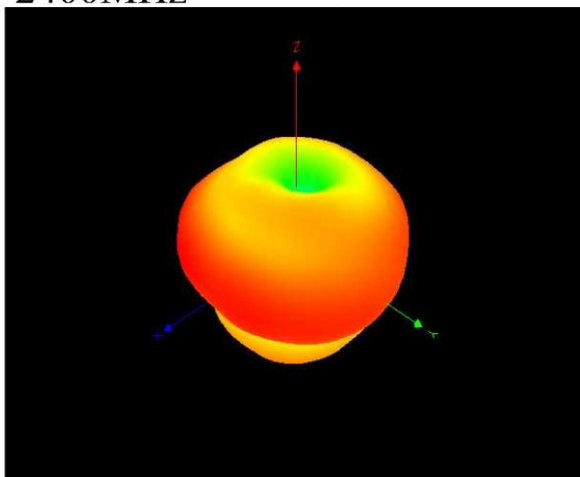
Freq (MHz)	Effi (%)	Gain (dBi)
2400	72.18	3.85
2410	68.83	3.71
2420	65.29	3.45
2430	66.38	3.42
2440	73.46	3.63
2450	73.46	3.41
2460	72.27	3.33
2470	74.30	3.53
2480	73.50	3.63
2490	72.42	3.32
2500	69.52	3.47

方向图

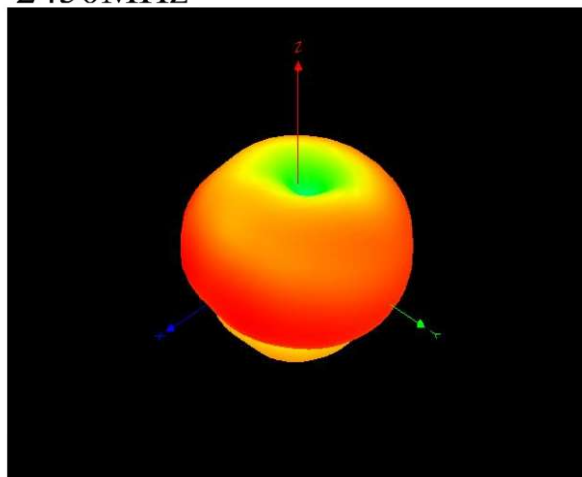
Patten

3D图

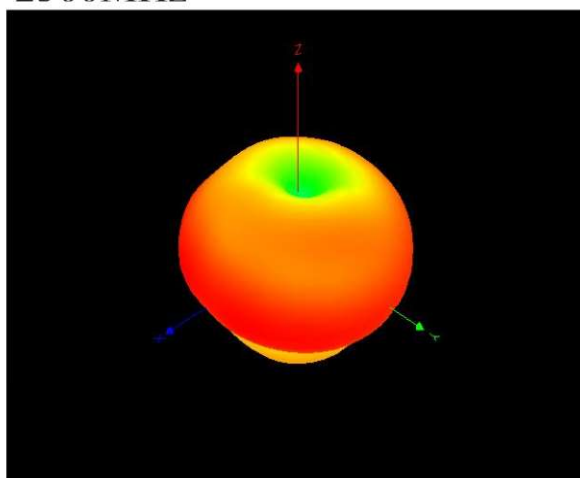
2400MHz



2450MHz

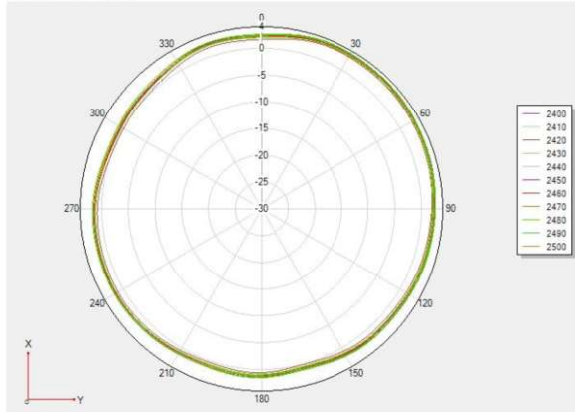


2500MHz

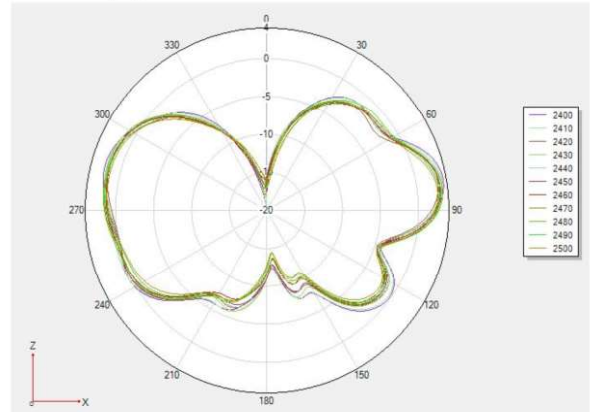


2D图

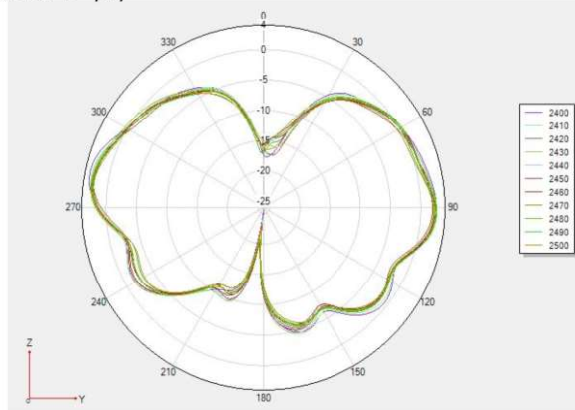
XOY 面



ZOX 面

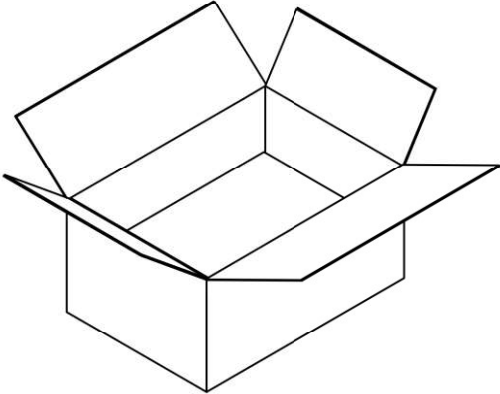
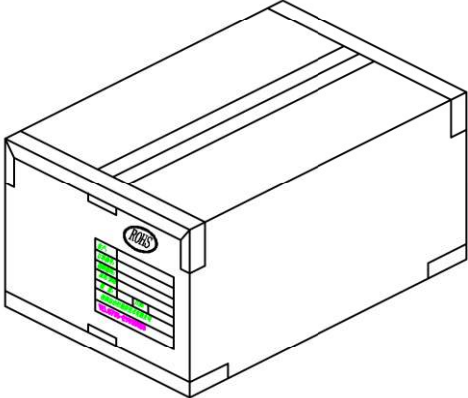


ZOY 面



产品包装规范

page: 1 of 1

产品名称 :天线	版本: A00
	客户特殊要求除外
一：成品天线  三：将装好的天线放入纸箱中(以实际数量为准)  二：用PE袋装起来, 数量以 (30 50PCS) 整数装 以实际为准  四：封箱, 外箱贴我司生产标签和 ROHS 标签(最终以实际情况为 准!)	



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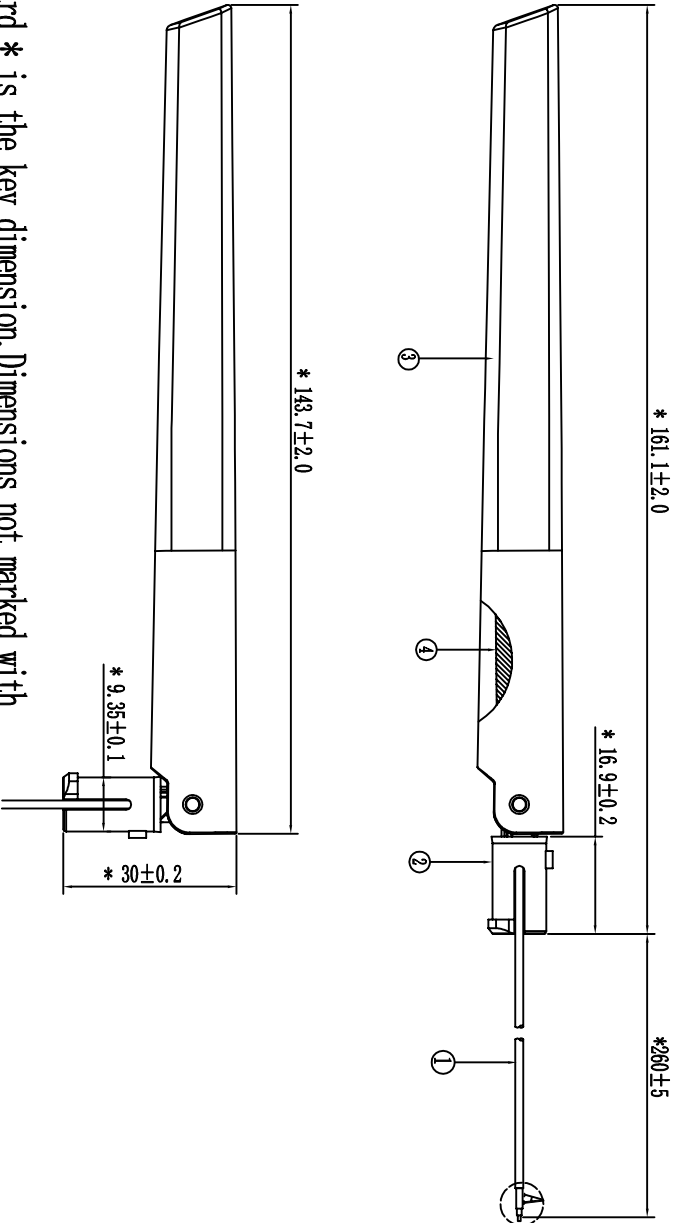
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0~10	±0.10	品名/Part Name	2.4G-Antenna	Checked by	
10~20	±0.15	料号/Part NO	Z01-20501-R01		
20~40	±0.20	客户料号			
40~	±0.25	Customer P/N			
Do not measure the drawings location		N/A	unit	mm	Scale
					1:1
					Rea
					A

Test Equipment & Conditions

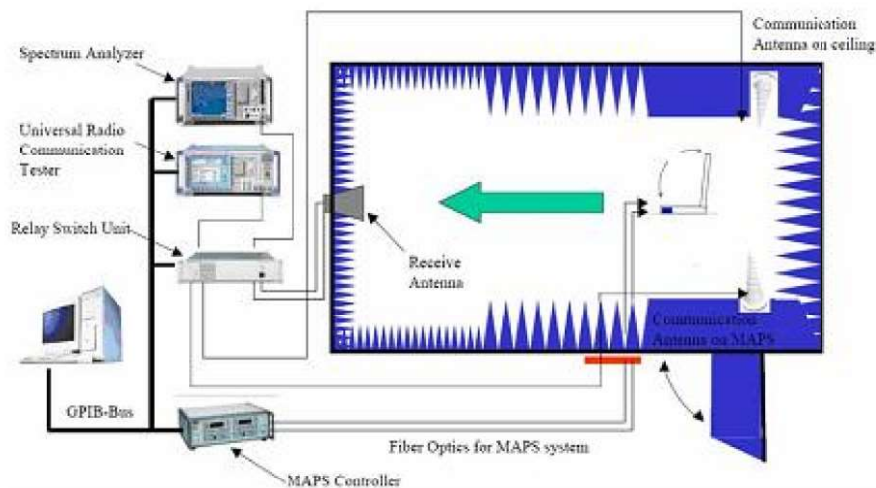
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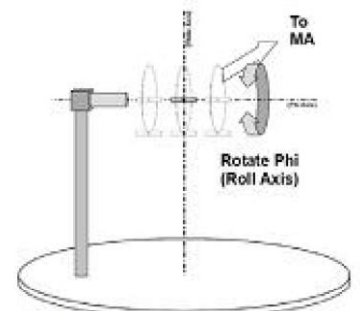
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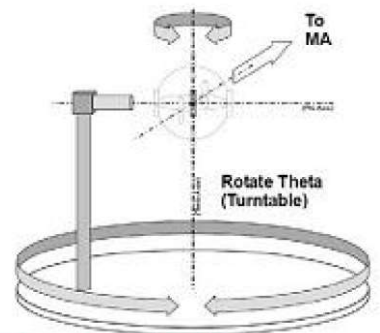
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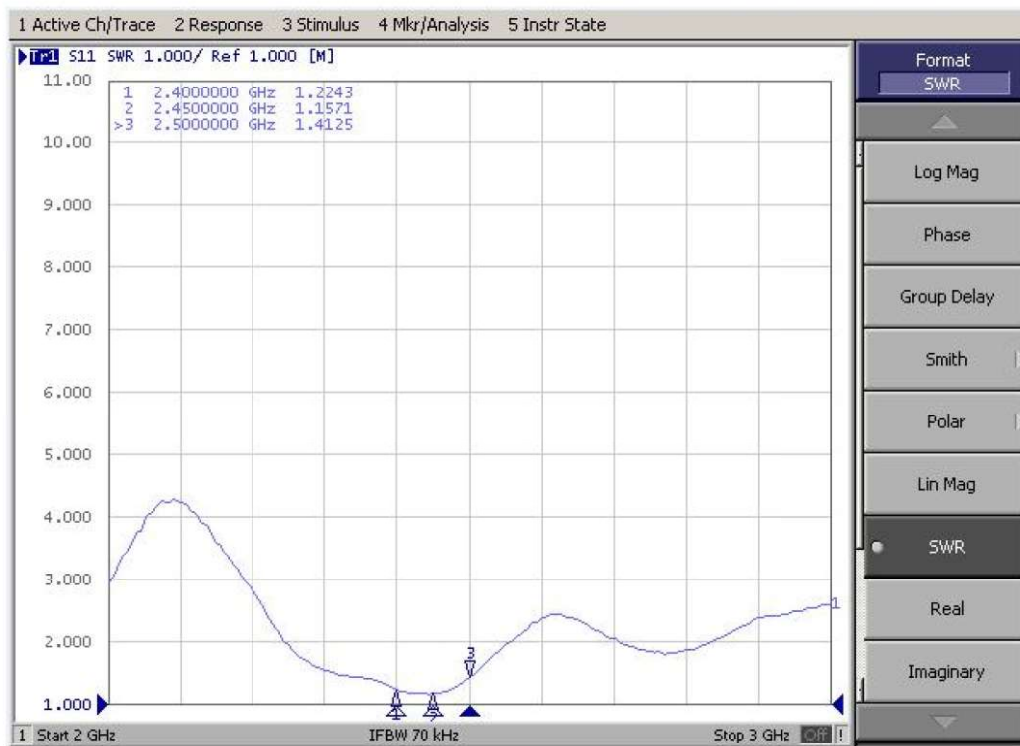
Phi axis test



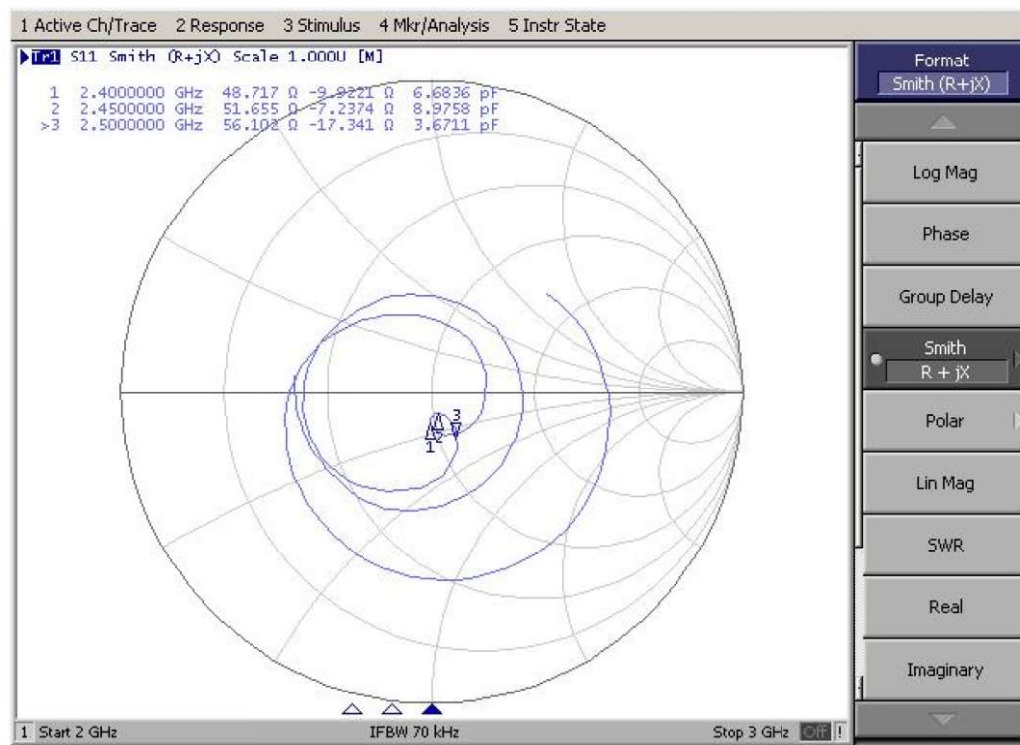
Theta axis test

测试数据

SWR



Smith(R+jX)





效率&增益:
Efficiency&Gain

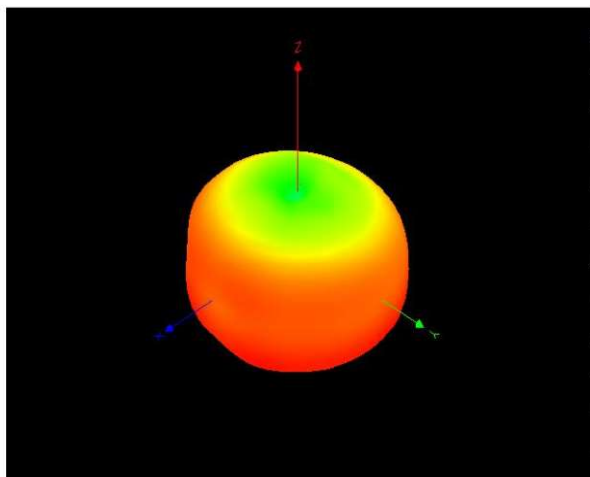
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2430	70.53	3.75
2440	73.92	3.99
2450	73.45	3.72
2460	72.68	3.62
2470	74.18	3.71
2480	74.18	3.77
2490	72.31	3.43
2500	69.10	3.36

方向图

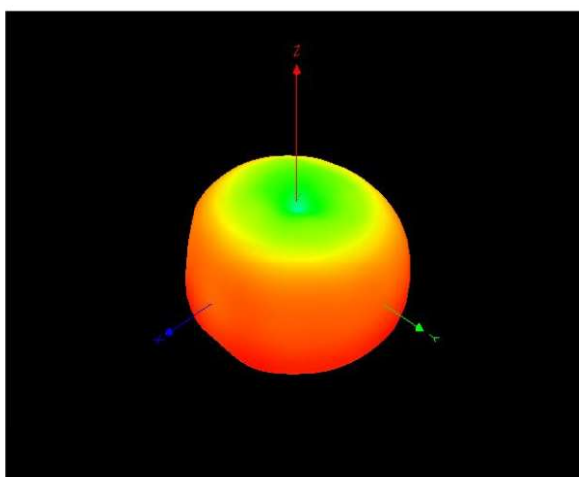
Patten

3D图

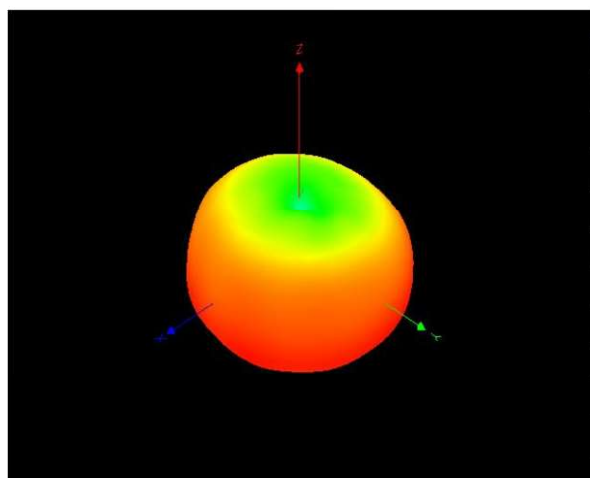
2400MHz



2450MHz

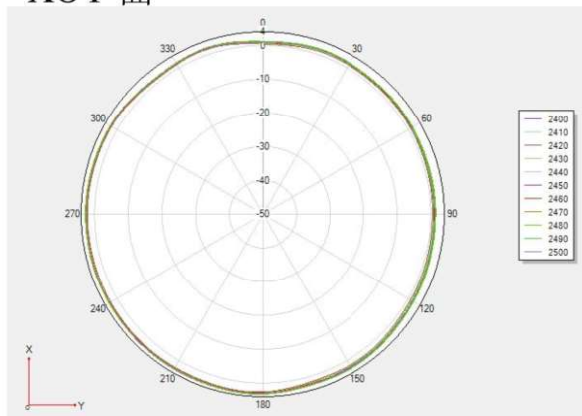


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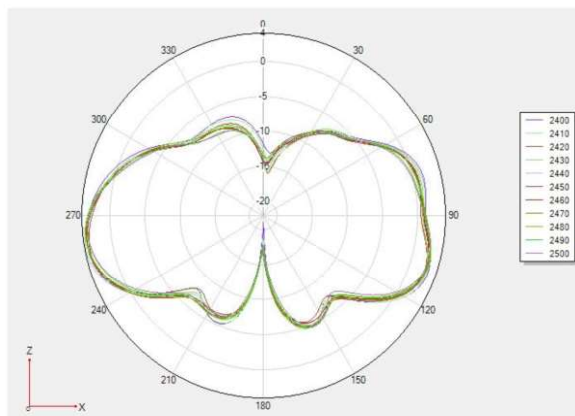


2D图

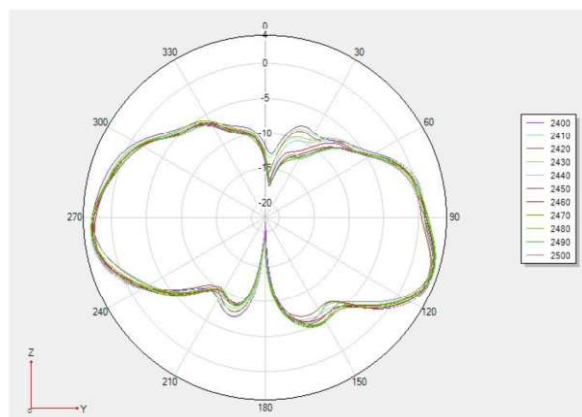
XOY 面



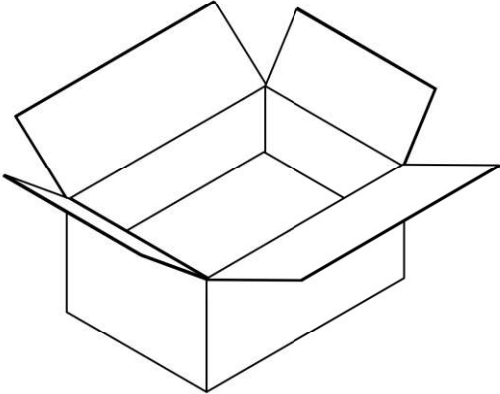
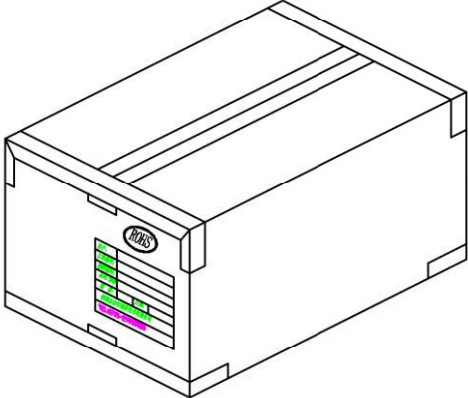
ZOX 面



ZOY 面



产品包装规范

产品名称 :天线		版本: A00
		客户特殊要求除外
一：成品天线  二：用PE袋装起来, 数量以 (30 50PCS) 整数装 以实际为准  三：将装好的天线放入纸箱中(以实际数量为准)  四：封箱, 外箱贴我司生产标签和 ROHS 标签(最终以实际情况为 准!)		