

# Shenzhen Wanfangmaier Technology Co., Ltd

Customer Name: CarPlay Navigation

Supplier specification model: 2.4GHz PCB antenna

Customer Material Code: 30110-01290

Customer Material Name: 2.4GHz PCB antenna

Customer specifications Model:

出厂签章:

核准	审核	制作

客户承认签章:

承认结果:  合格  不合格

批准	审核	检验

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# 承认书

客户 (Customer) : \_\_\_\_\_

产品 (Product) : 2. 4GHz PCB antenna

型号 (Model) : \_\_\_\_\_

料号 (Part Number) : 30110-01290

制作人 (Written By) : \_\_\_\_\_

签发时间 (Issued Date) : 2023-05-10

## 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
罗工	罗工	

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## The basic parameters

A. Electrical Characteristics	
<b>Frequency</b>	<b>2400 MHz ~2500MHz</b>
<b>VSWR</b>	<b><math>\leq 2</math></b>
<b>Efficiency</b>	<b>&gt;60%</b>
<b>Impedance</b>	<b>50 Ohm</b>
<b>Polarization</b>	<b>Linear</b>
<b>Gain</b>	<b>2dBi <math>\pm</math> 1</b>
B. Material & Mechanical Characteristics	
<b>Material of Radiator</b>	
<b>Cable Type</b>	
C. Environmental	
<b>Operation Temperature</b>	<b>- 20 °C ~ + 60 °C</b>
<b>Storage Temperature</b>	<b>- 40 °C ~ + 80 °C</b>

# Test Equipment & Conditions

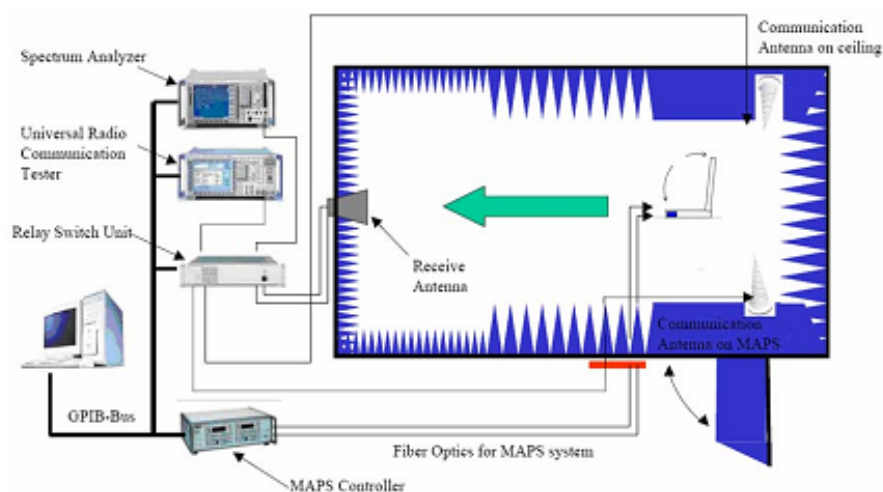
## 1. Network Analyzers :

Agilent 8753D 5071C

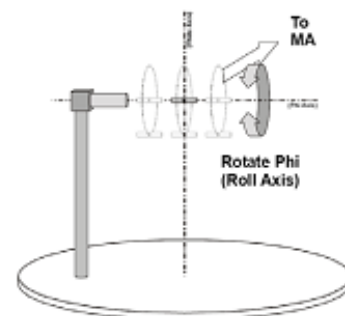
## 2. Communications Test Set:

Agilent 8960 CMW500

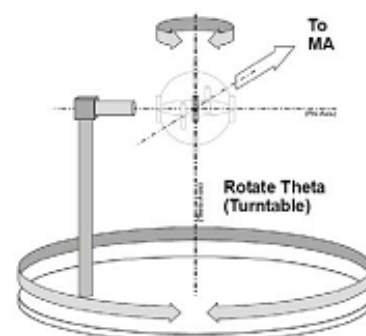
## 3. 3D Chamber Test System



(Testing by 3D anechoic chamber)



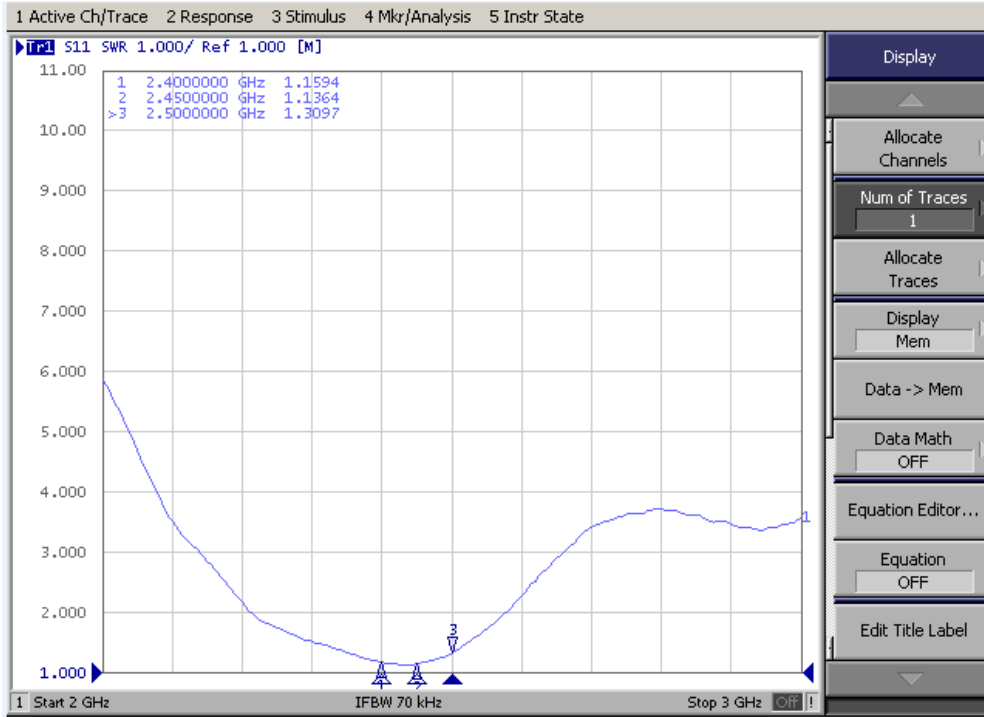
Phi axis test



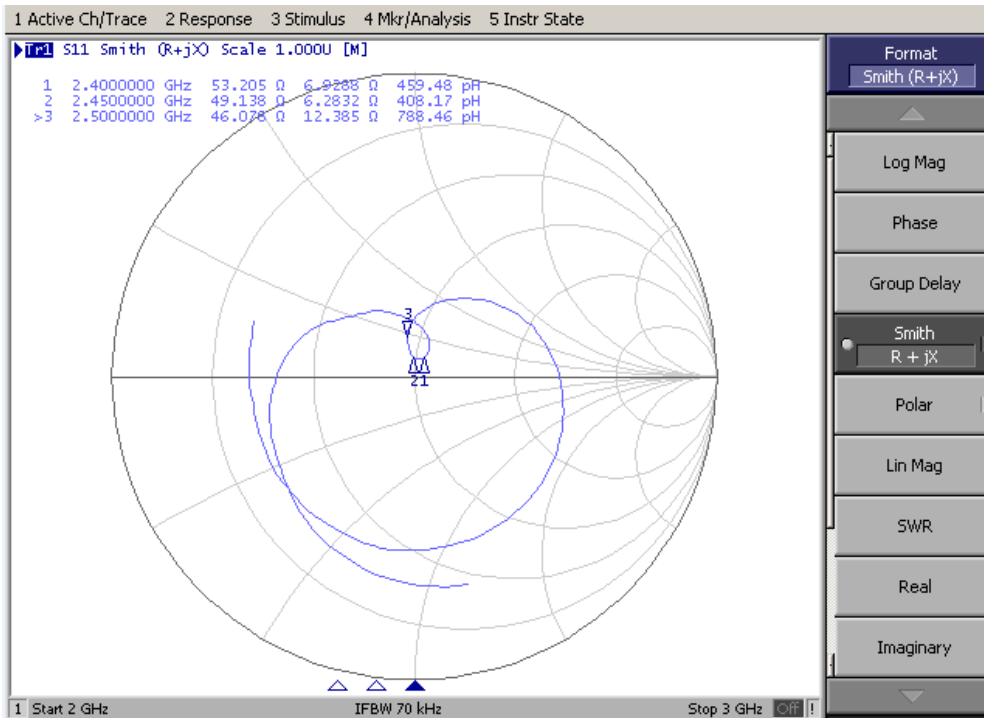
Theta axis test

# 测试数据

## SWR



## Smith



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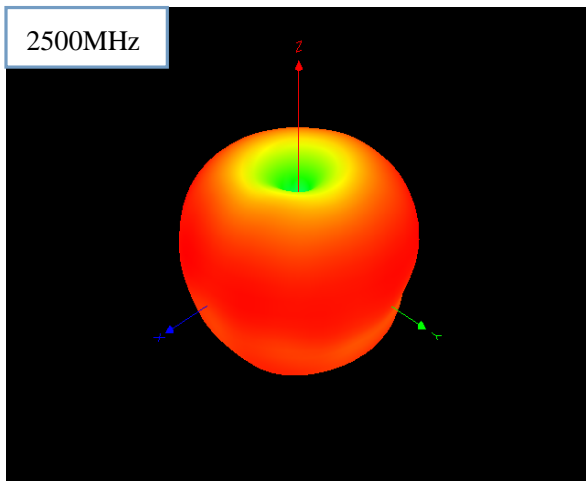
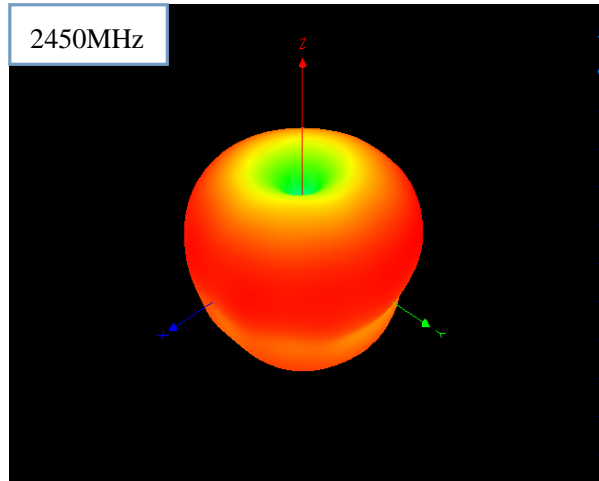
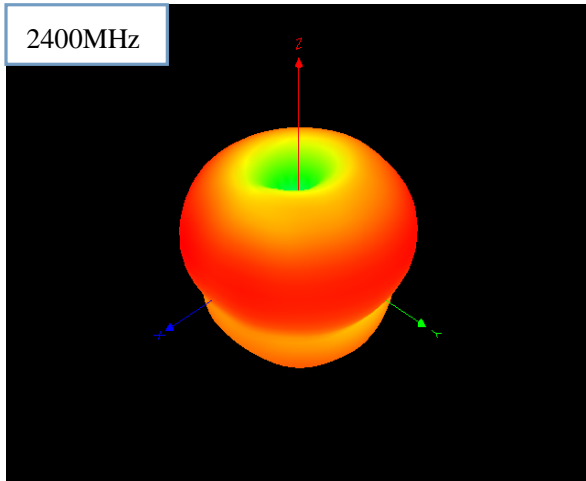
效率&增益:  
**Efficency&Gain**

Freq (MHz)	Effi (%)	Gain (dBi)
2400	78.11	2.89
2410	72.92	2.42
2420	70.83	2.26
2430	70.92	2.13
2440	74.66	2.50
2450	73.87	2.62
2460	73.71	2.59
2470	78.62	2.46
2480	79.16	2.52
2490	73.55	2.03
2500	71.22	2.03

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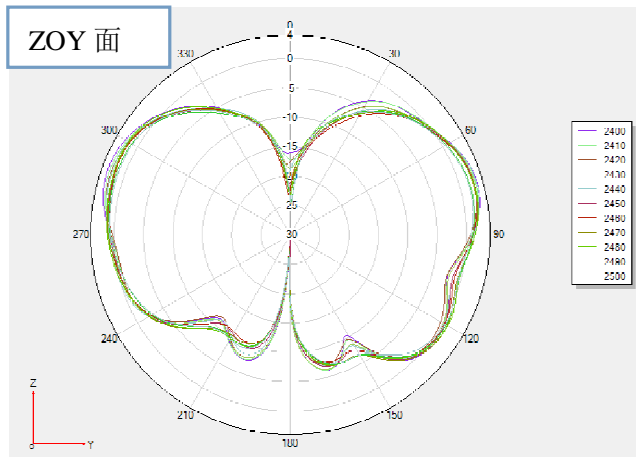
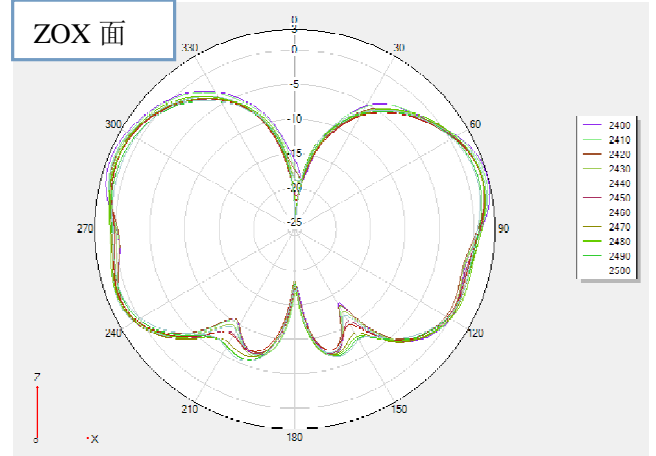
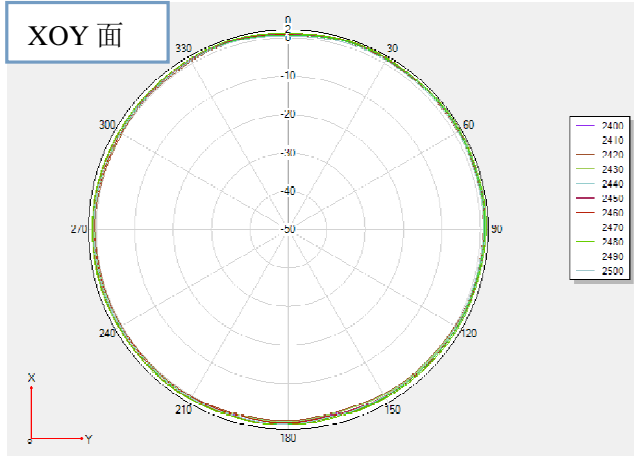
# Direction map (3D map)

## Patten



# Direction diagram (2D diagram)

## Patten





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# Antenna picture

