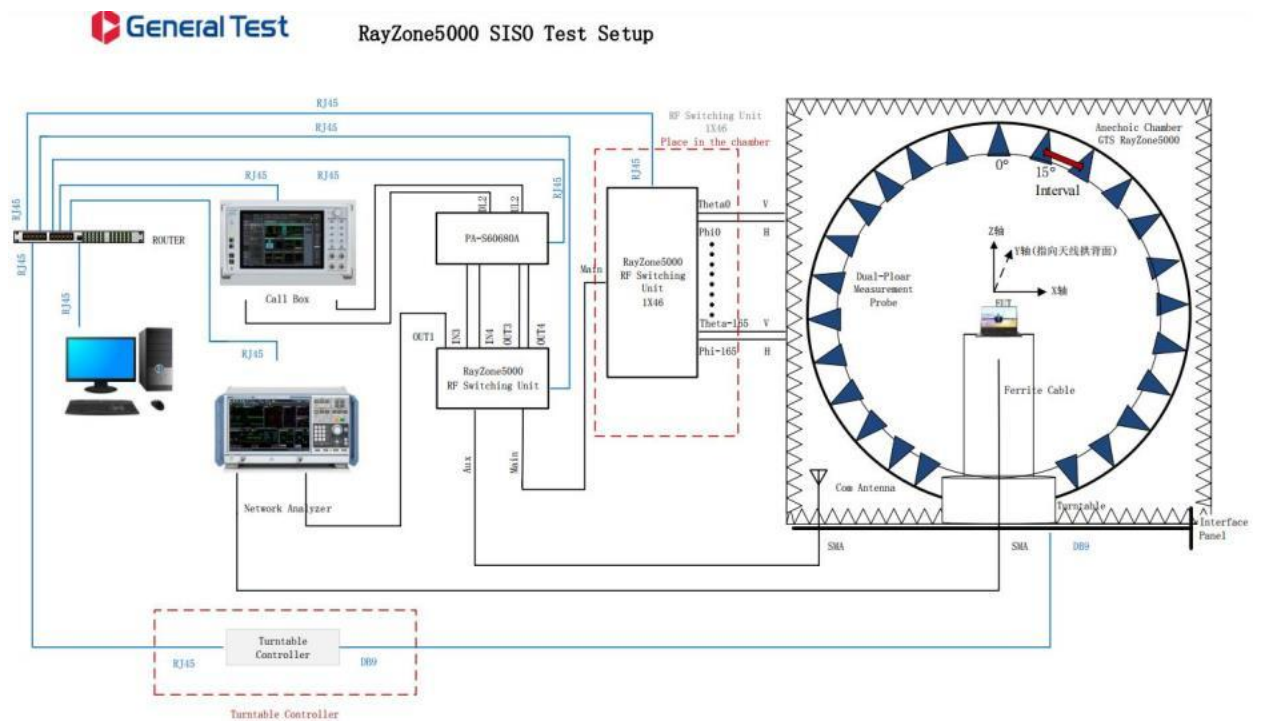


# Antenna Report

## 1、basic information

### 1.1 test philosophy



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## 1.2 test equipment

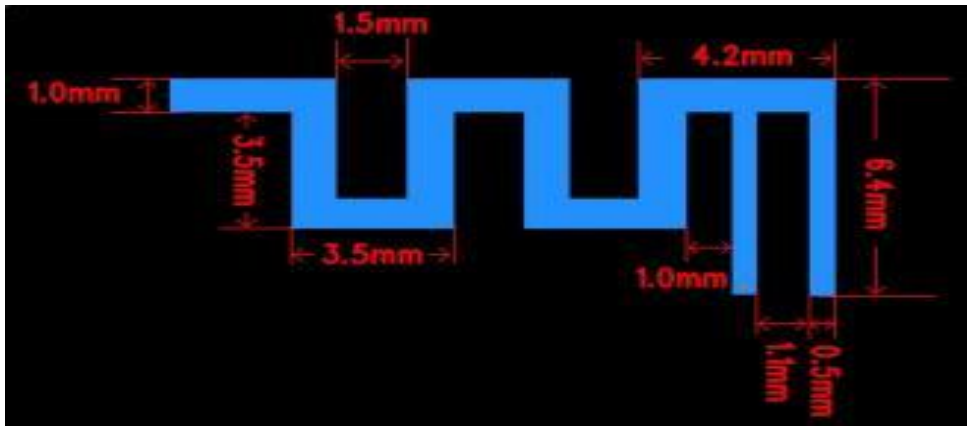
Name	Model	equipment number	manufacture	calibration date	Next calibration
OTA test system	RayZone-5000	RFI-LAB-RF-D00	GTS	2021.3.22	2023.3.21
network analyzer	E5071C	RFI-LAB-RF-C02	KEYSIGHT	2022.5.13	2023.5.12
network analyzer	E5071C	RFI-LAB-RF-D01	KEYSIGHT	2022.5.13	2023.5.12

## 1.3 testing environment

environment temperature	23.7°C
relative humidity	58%RH
atmospheric pressure	100.14kPa

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## 2. Sample drawing



## 3. Sample layout diagram

front view



## 3.test result

### 3.1检测依据

Object name	name of parameter	public string function name	standard number
Mobile communication antenna	radiation pattern	General technical specification for mobile communication antennas	GB/T 9410-2008
	antenna gain		
	voltage standing wave ratio		
	Roundness of the directional graph		
Antenna	Gain and directivity	IEEE Standard procedure for antenna testing	ANSI/IEEE Std 149-1979
	radiant efficiency		
	impedance		

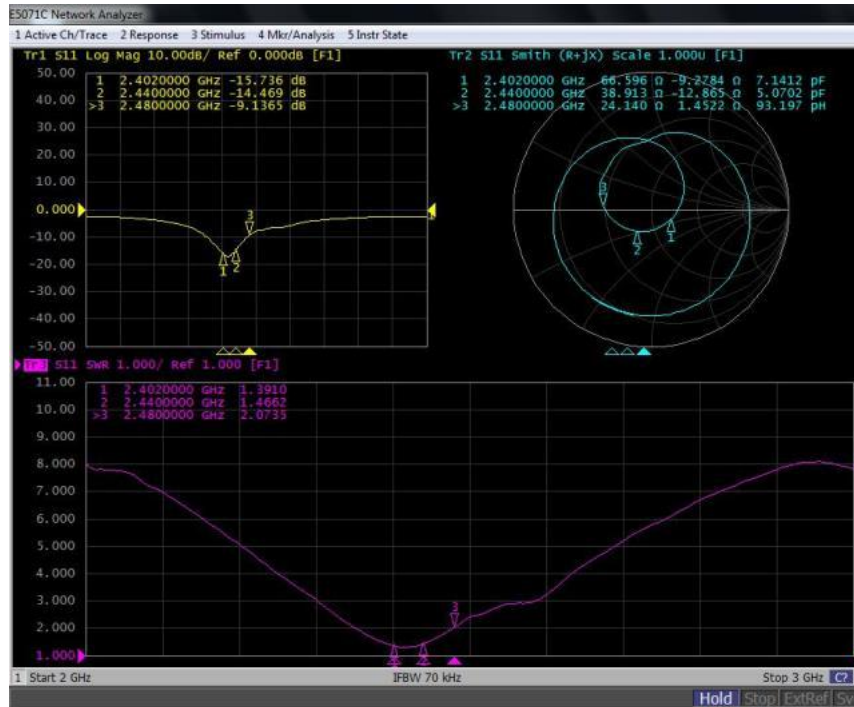
### 3.2Test uncertainty

the calculation of Uncertainty is based on the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO, which uses K=2 inclusion factor and 95% confidence level to represent extended uncertainty.

Item	uncertainty
SWR	$\pm 0.3$
Gain, efficiency	$\pm 0.72\text{dB}$

## 3.3 test data

### 3.3.1 Network analyzer test



### 3.3.2 SWR

Frq/MHz	2402	2440	2480
SWR	1.3910	1.4662	2.0735

### 3.3.3 Gain and efficiency

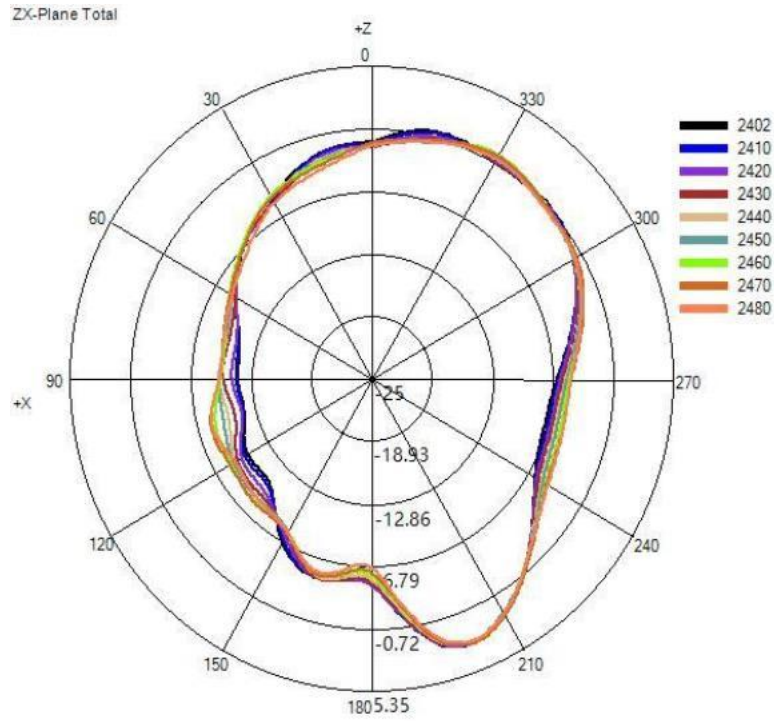
Frq/MHz	2402	2410	2420	2430	2440	2450	2460	2470	2480
Gain/dBi	2.85	2.88	2.79	2.77	2.69	2.52	2.46	2.41	2.03
efficiency/%	44.98	45.34	44.93	45.74	46.00	45.14	45.56	44.49	40.81

### 3.3.4 Roundness of the directional graph

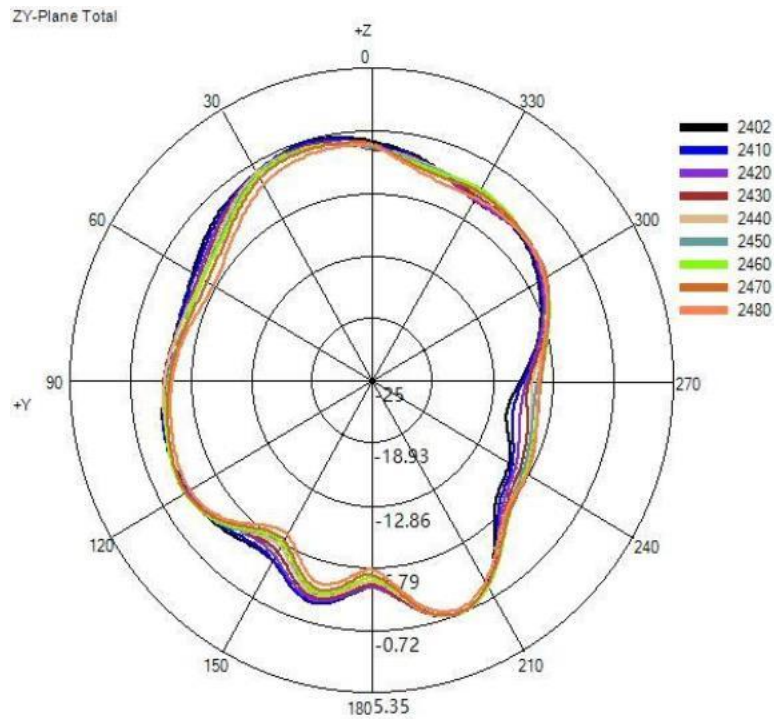
Frq/MHz	2402	2410	2420	2430	2440	2450	2460	2470	2480
H Theta=90/dB	14.22	14.43	14.31	13.68	13.38	13.30	13.18	13.31	13.58

## 3.3.5 directional diagram

(1) X-Z面(单位: dBi):



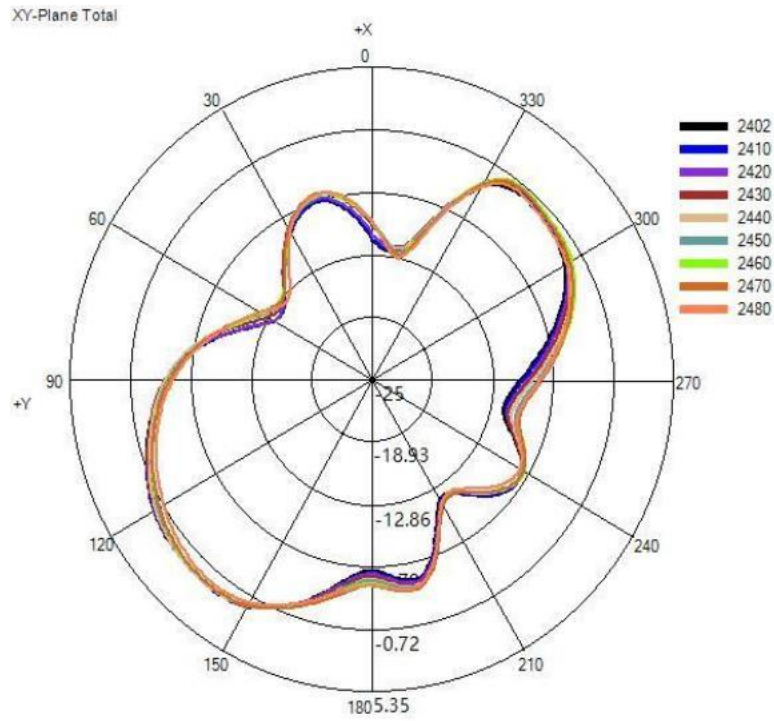
(2) Y-Z面(单位: dBi):



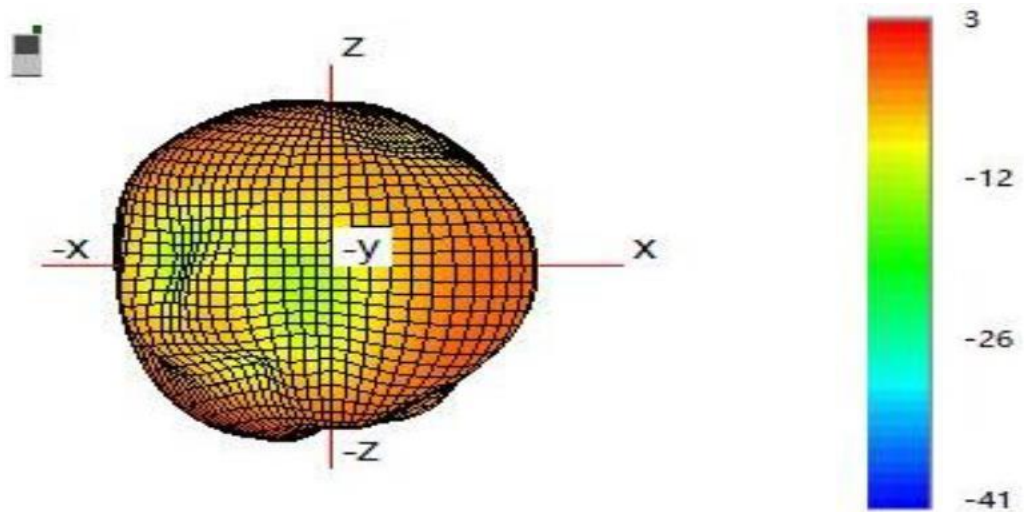


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(3) X-Y面(单位: dBi):



(4) 2410MHz的 3D方向图(单位: dBi):



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结束  
(以下内容空白)