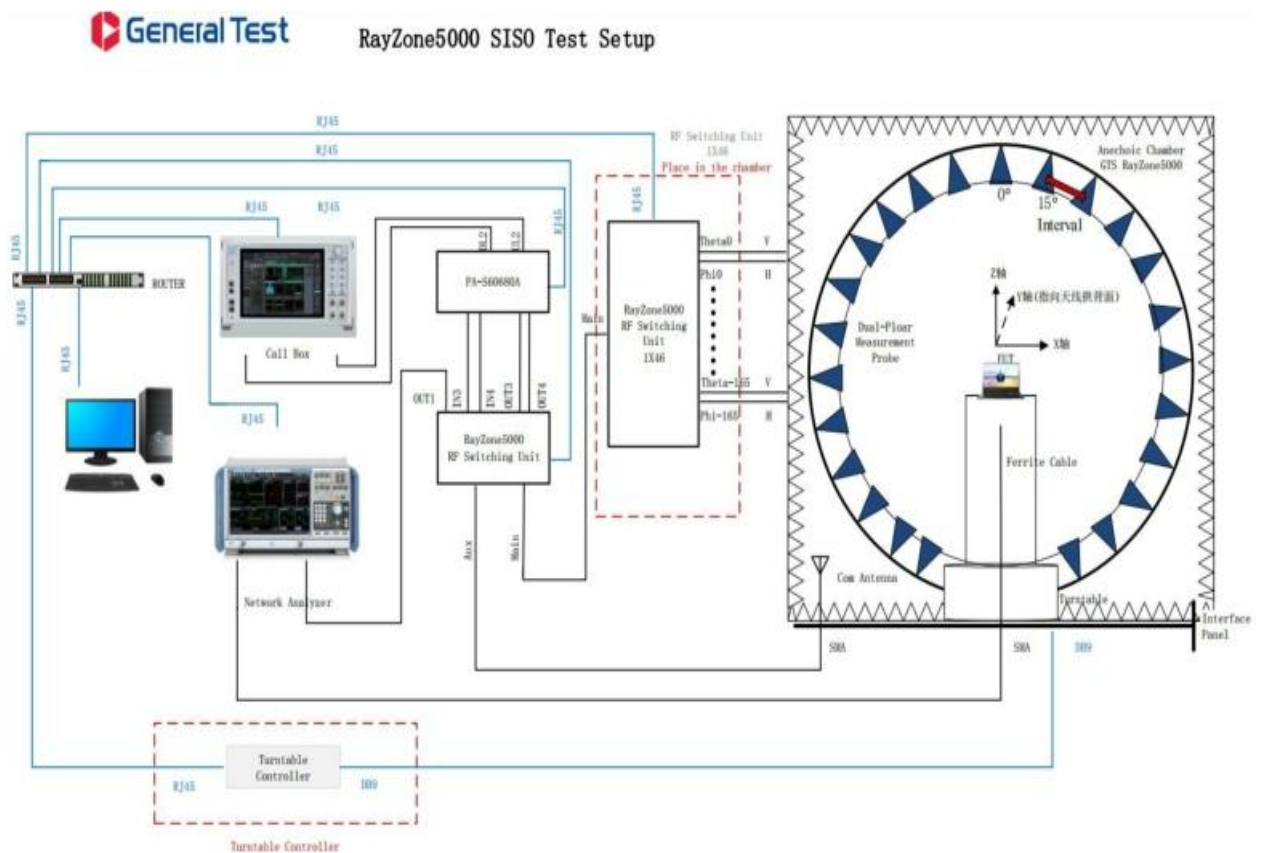


天线报告 Antenna report

Manufacturer : ShenZhen ShanWan Technology Co., Ltd
Add: 5 / F, building 33, chentian Industrial Zone, chentian community, Xixiang street,
Bao'an District, Shenzhen, Guangdong China
Model : Q13

1.测试原理 Test principle



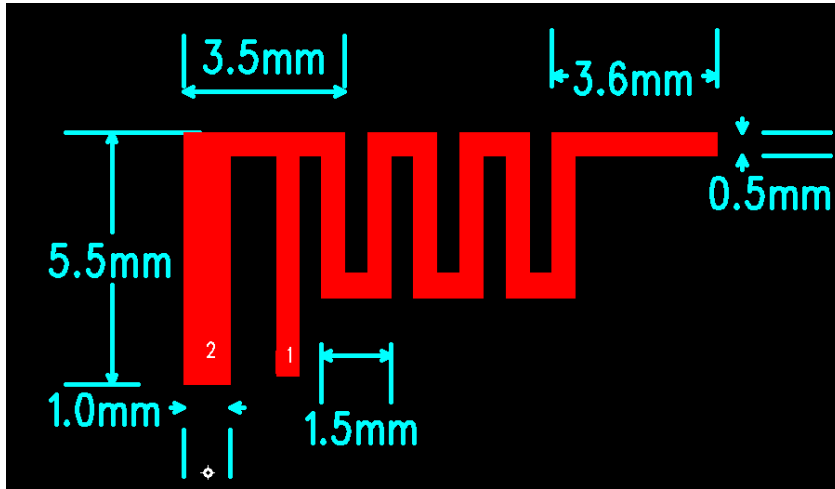
2. 测试设备Test equipment

名称name	型号model	设备编号NO.	厂商manufacturer	校准日期Calibration date	下次校准日期Date of next calibration
OTA 测试系统 Test system	RayZone-5000	RFI-LAB-RF-D00	GTS	2021.3.22	2023.3.21
网络分析仪 Network analyzer	E5071C	RFI-LAB-RF-C02	KEYSIGHT	2022.5.13	2023.5.12
网络分析仪 Network analyzer	E5071C	RFI-LAB-RF-D01	KEYSIGHT	2022.5.13	2023.5.12

3. 测试环境Test environment

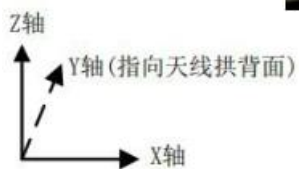
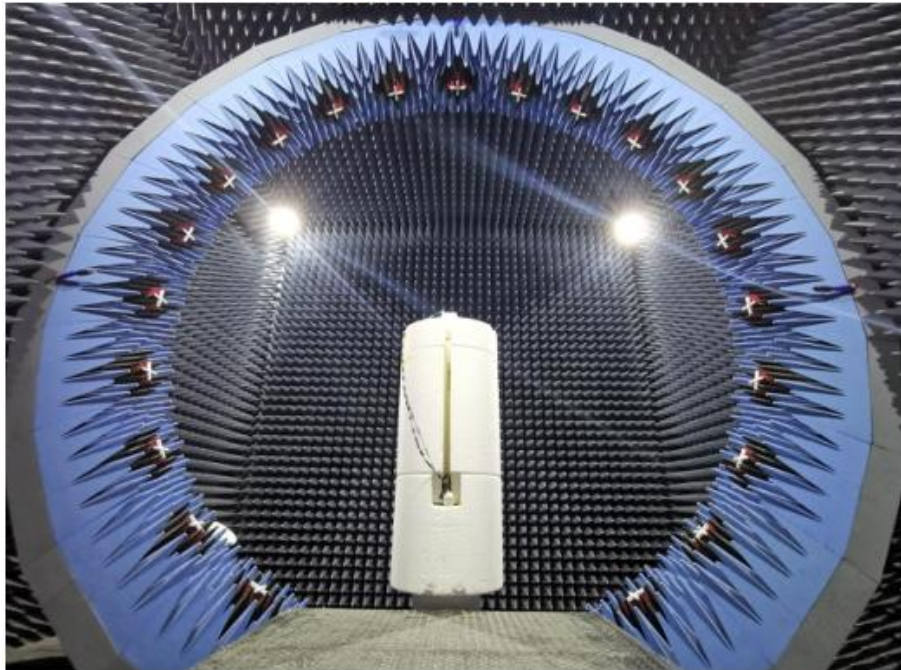
环境温度temperature	23.6°C
相对湿度humidity	58%RH
大气压强 Atmospheric pressure	100.14kPa

4. 样品实物Size



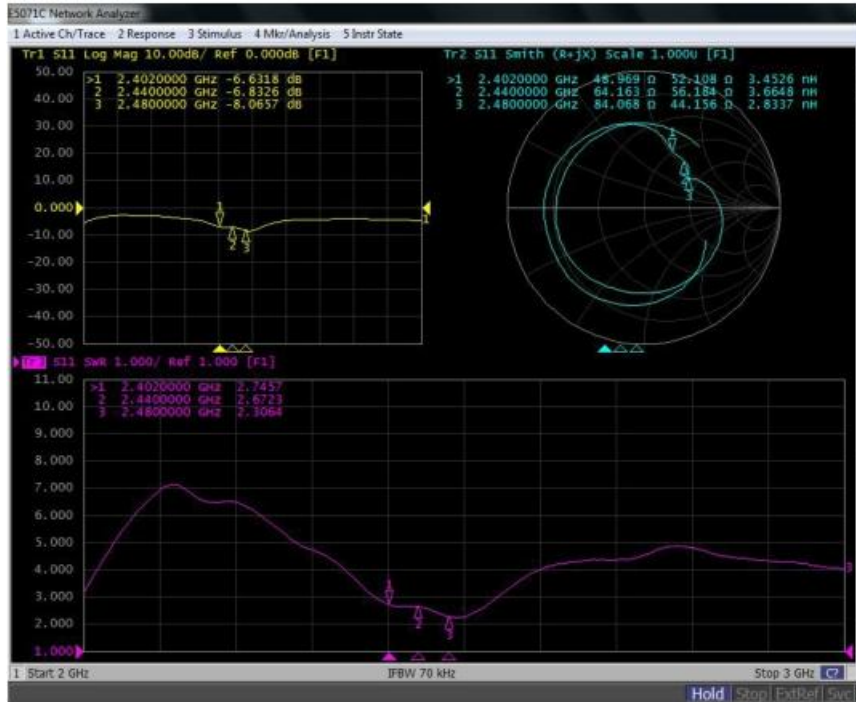
5. 样品实测摆放图 Test Setup

主视图



7. 测试数据 Test Data

7.1 网络分析仪测试 Data



7.2 VSWR

frequency/MHz	2402	2440	2480
VSWR	2.7457	2.6723	2.3064

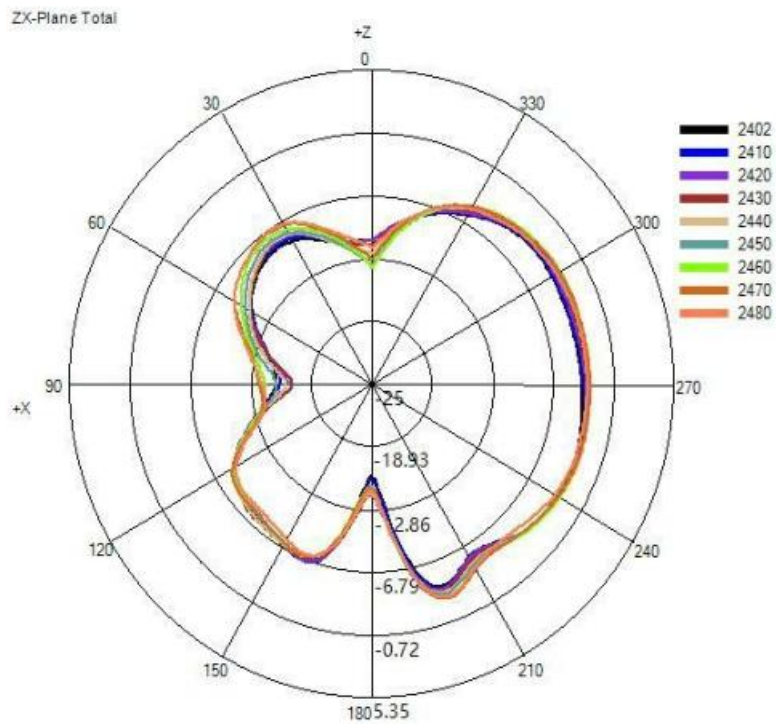
7.3 Gain and efficiency

frequency/MHz	2402	2410	2420	2430	2440	2450	2460	2470	2480
Gain/dBi	-1.97	-1.95	-1.63	-1.49	-1.27	-1.06	-0.85	-0.91	-0.95
efficiency/%	17.88	18.34	19.20	19.89	20.58	20.86	21.78	22.18	21.03

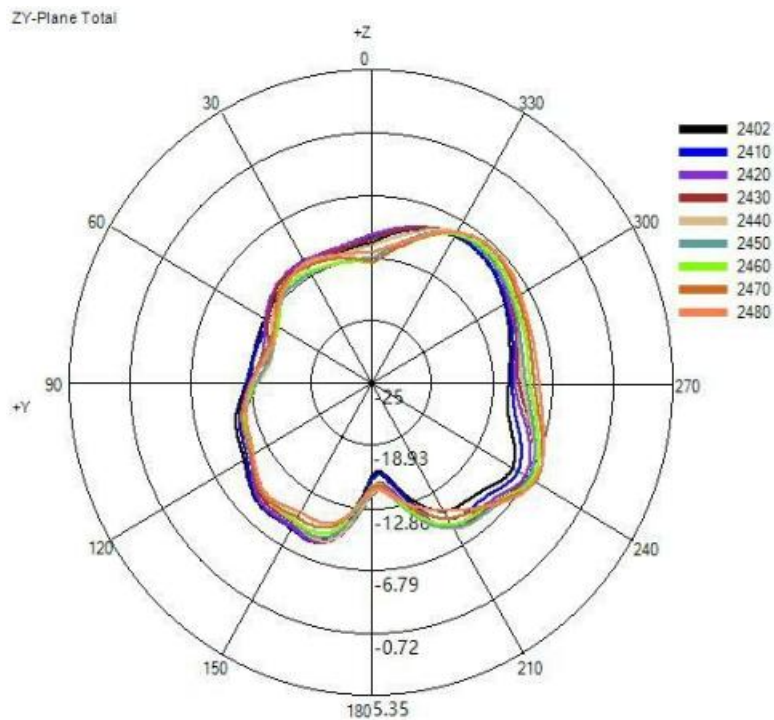
7.4 Roundness of the directional graph

frequency/MHz	2402	2410	2420	2430	2440	2450	2460	2470	2480
H Theta=90/dB	20.55	20.57	20.15	19.12	18.93	20.11	20.49	19.26	16.51

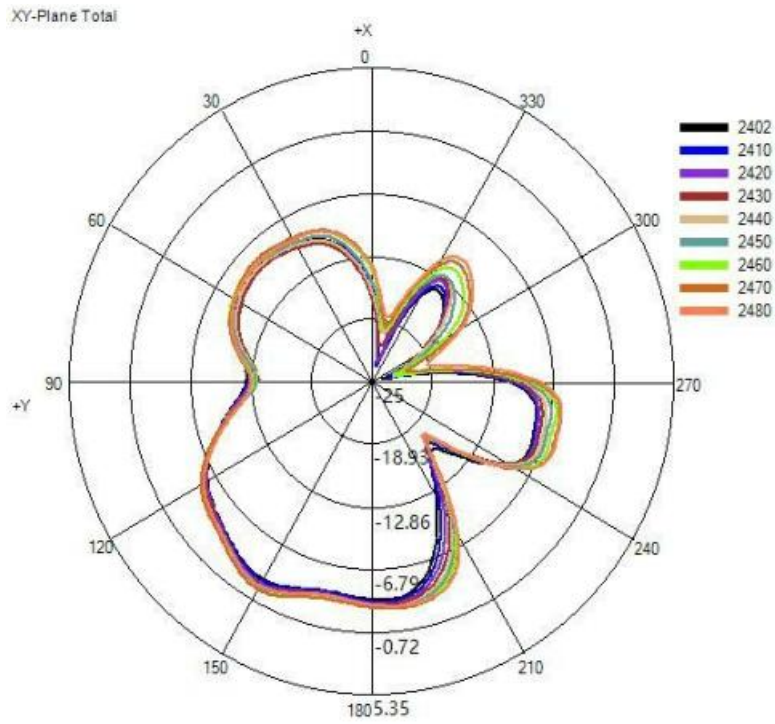
7.5 Directional diagram



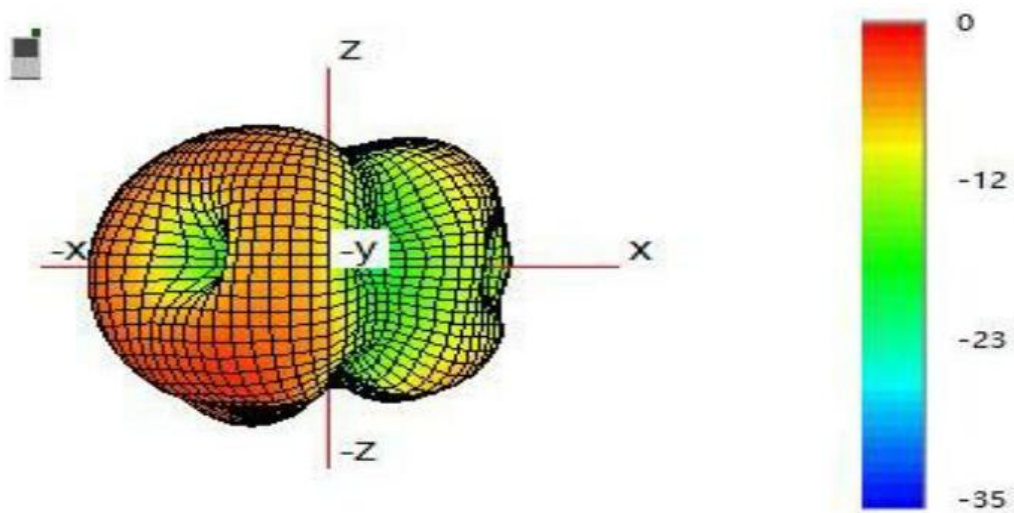
(2) Y-Z (dBi):



(3) X-Y (dBi):



(4) 2470MHz 3D (dBi):



-----end-----