

Antenna testing Report

HAITONG Beijing

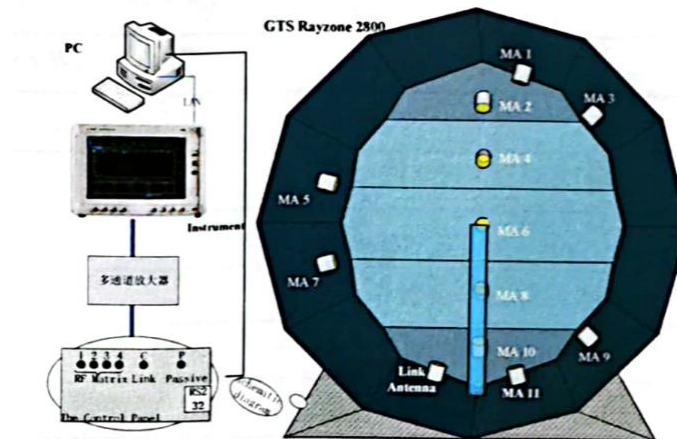
2022.11.03

General Information

- 1.1 General information of testing institutions

Name	Zhejiang Haitong communications electronic Ltd.
Address	Room 405, Building A, Jingmeng Hi-Tech, No 5, Shangdi East Road, Haidian District, Beijing
Tel	\
E-mail	\

1.2 Testing principle



General Information

1.3 Test equipment

Equipment	Model No.	Manufacturer	Calidbartaction	Next calibration date
13 probe microwave chamber	RZ2800	Generaltest	2022.10.09	2022.10.08
Network Analyzer	E5071C	KEYSIGHT	2022.09.14	2022.09.13

1.4 Test environment

Temperature	24.2°C
Humidity	55%RH
Pressure	100.06kPa

2. Sample Information

2.1 Client information

Name	Guangzhou YouLi Plastic Manufacture Co., Ltd.
Address	NO.7, The Keer Road, Dongchong, Nansha, Guangzhou, Guangdong
Contacts	/
Tel	/
E-mail	/

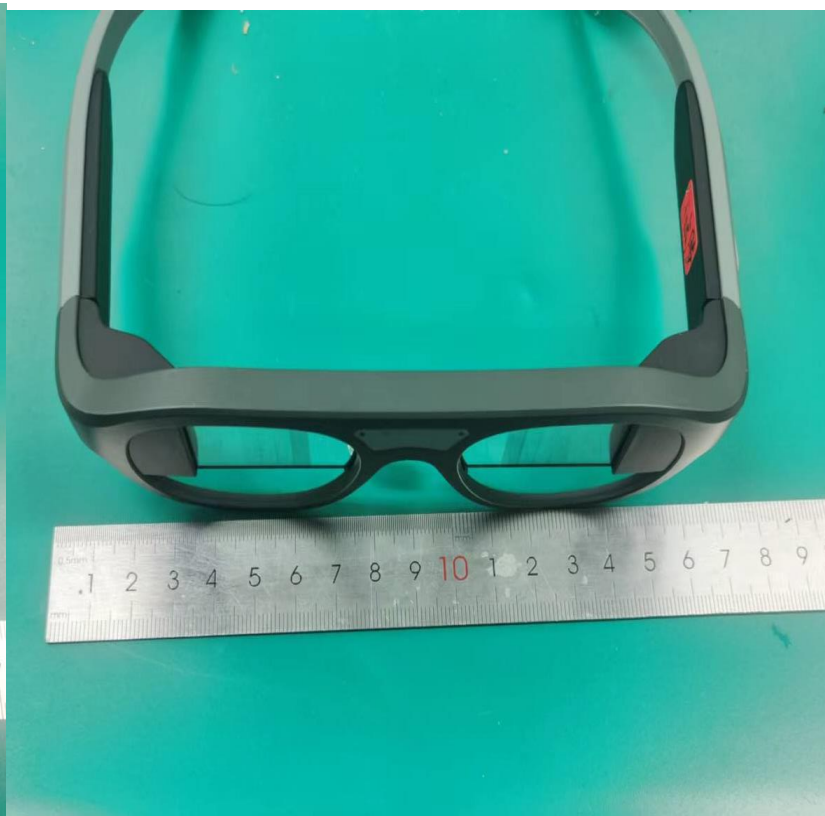
2. Sample Information

2.2 Description of EUT

Product Name	G35
Sample Model	G35
Size	19.50*8.64mm
Serial No.	A
Test Item	Antenna gain; Efficiency; Radiation pattern
Frequency Range	2400MHz-2500MHz
Received Date	2022.11.01
Test Date	2022.11.07
Remark	The length of the RF cable is 100mm

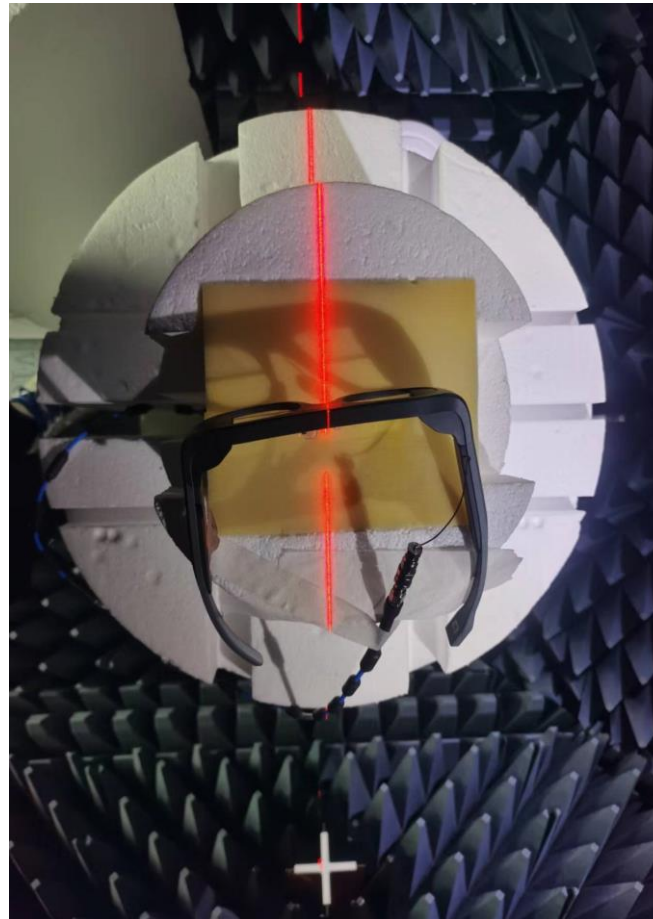
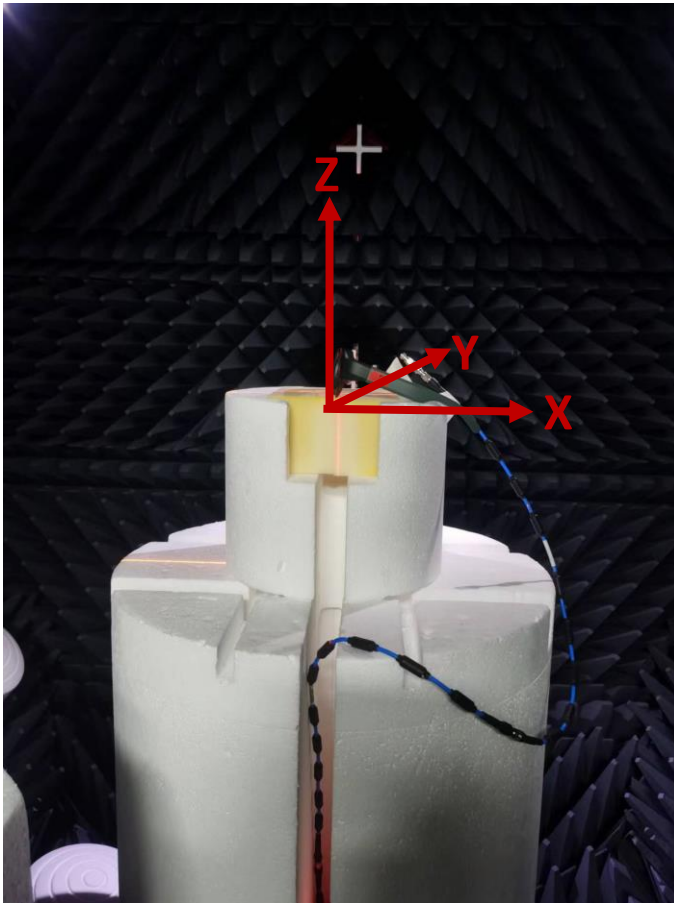
2. Sample Information

- 2.3 EUT appearance



2. Sample Information

2.4 DUT setup photo of free space OTA testing



3. Test Results

3.1 Test uncertainty

Item	Uncertainty
Antenna Gain	$\pm 1\text{dB}$
Radiation Pattern	$\pm 0.5\text{dB}$

3.2 Test data

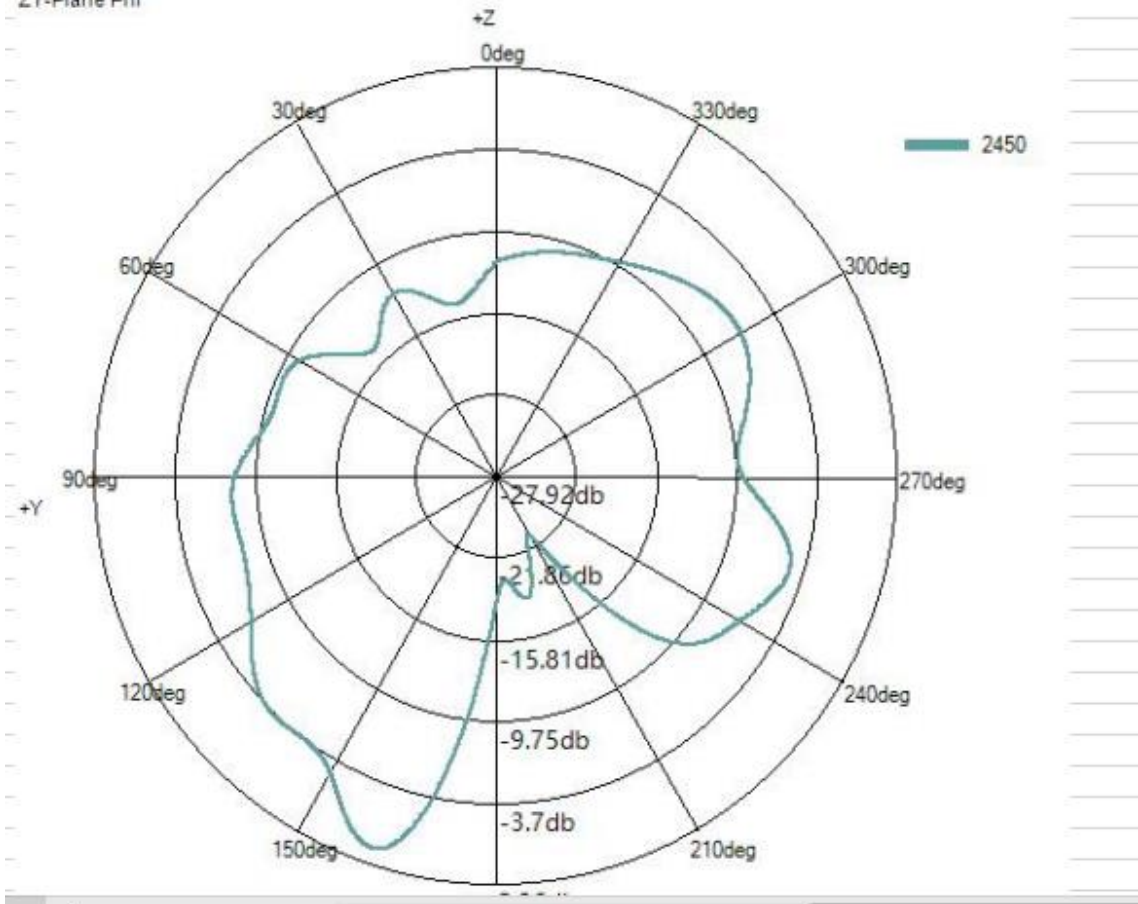
- 3.2.1 Typical free space efficiency and gain

Frequency/MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain(dBi)	0.48	0.76	1.27	1.79	2.06	2.01	1.65	1.04	0.34	-0.16	-0.88
Efficiency(%)	26.71	28.99	32.97	37.30	40.31	40.99	38.49	33.78	28.54	25.28	21.44

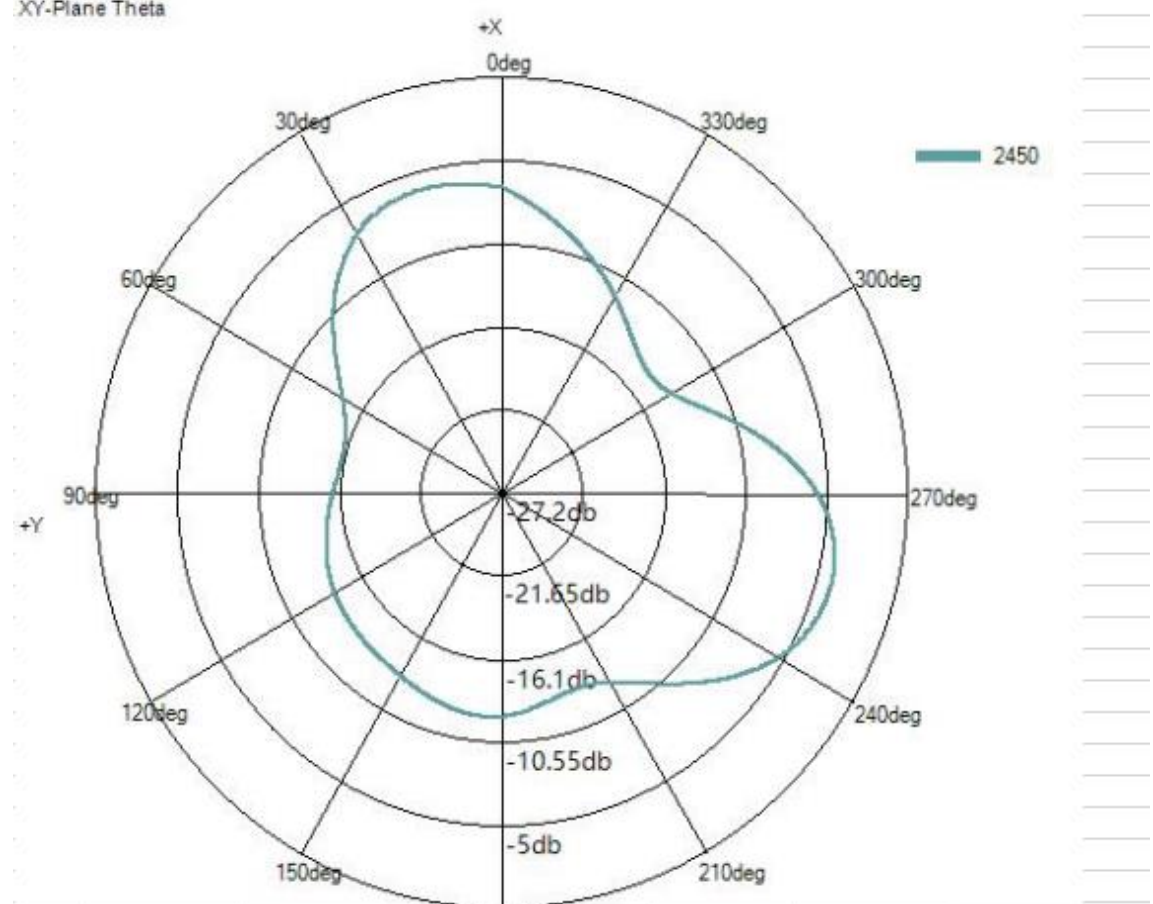
3. Test Results

3.2.2 Typical free space 2D radiation pattern

Freq(MHz)	2450	ZY-Plane	Max.	-0.14987	Ave.	-8.22605	Min.	-22.94
ZY-Plane Phi								



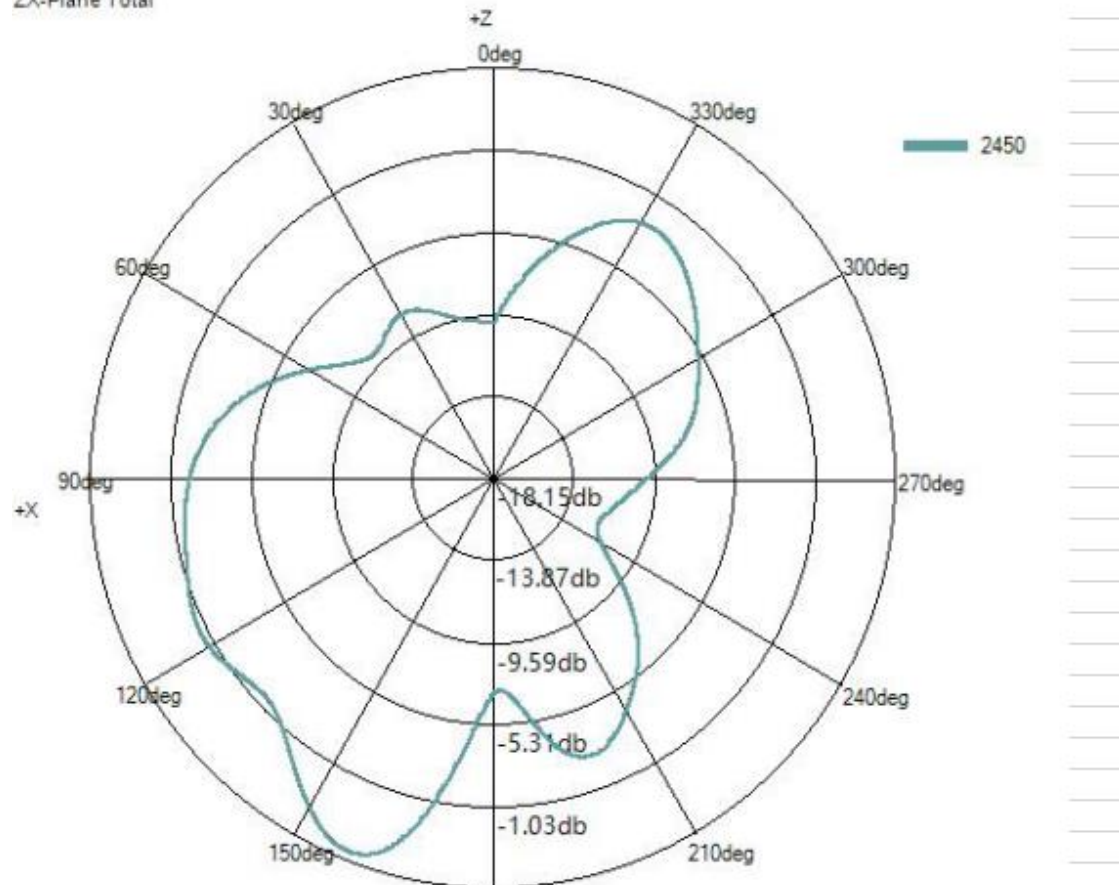
Freq(MHz)	2450	XY-Plane	Max.	-5.33054	Ave.	-9.50344	Min.	-15.55
XY-Plane Theta								



3. Test Results

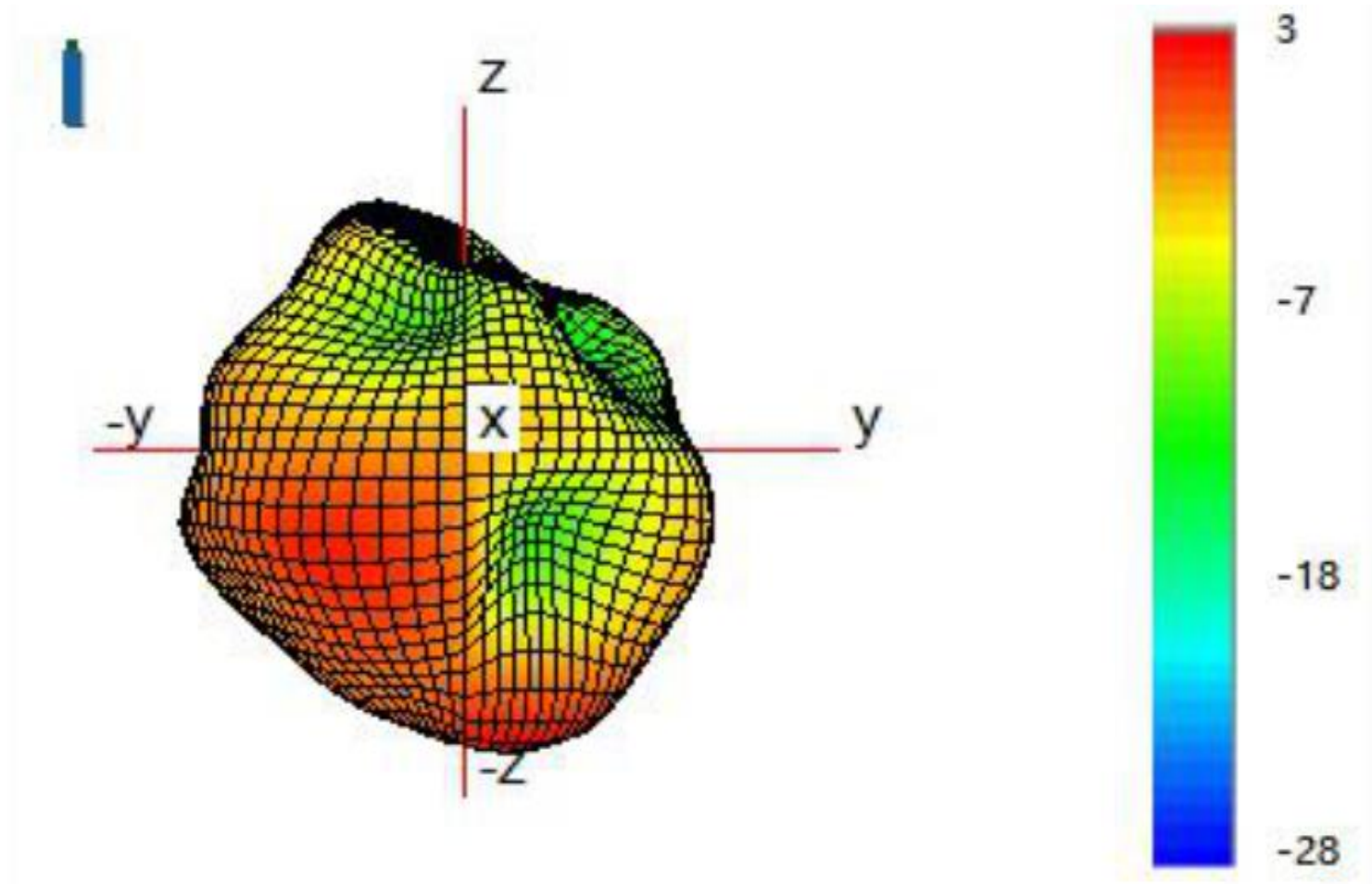
3.2.2 Typical free space 2D radiation pattern

Freq (MHz) 2450 ZX-Plane Max. 1.580059 Ave. -4.24748 Min. -11.72
ZX-Plane Total



3. Test Results

3.2.3 Typical Free Space 3D Radiation Pattern at 2.45GHz:



Thanks.