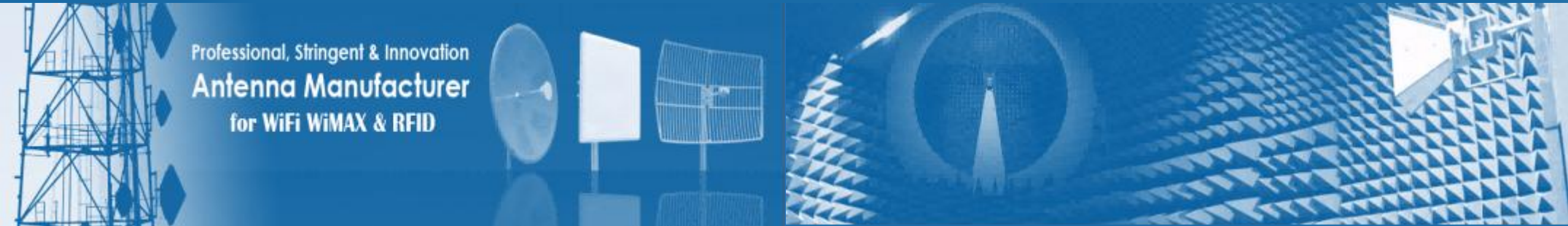


Customer: 汉桑
Designer: ZW
Date: 2025/11/24

A horizontal banner at the bottom of the slide with a blue background. It features a wireframe antenna tower on the left, three different antenna types (parabolic, flat plate, and horn) in the center, and a close-up of a circular antenna with a beam of light on the right.

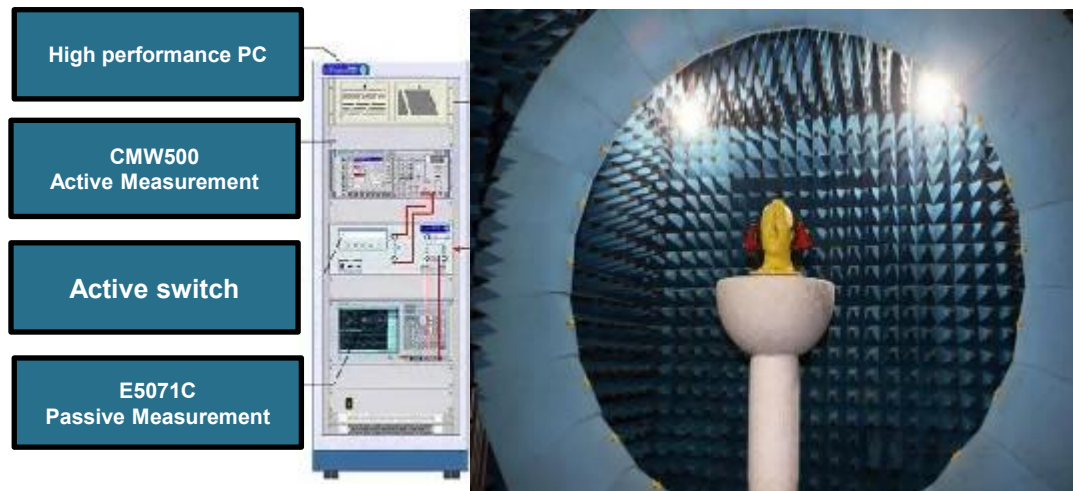
Professional, Stringent & Innovation
Antenna Manufacturer
for WiFi WiMAX & RFID

OUTLINE

1. Benchmark
2. S-Parameters (VSWR)
3. Antenna Efficiency& Peak Gain
4. Radiation patterns
5. Summary

HL-Tronics 3D Chamber Structure

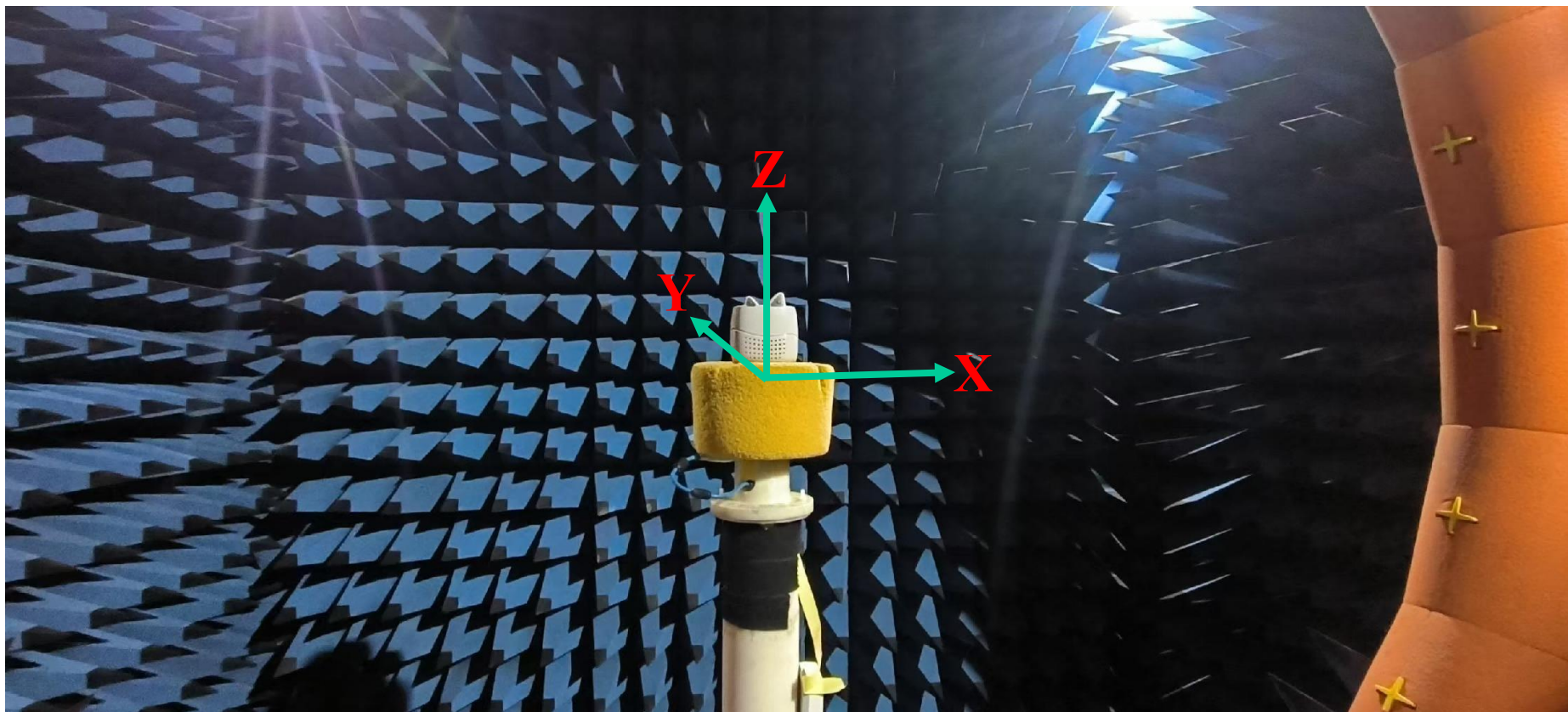
- EMT-24 Series System Components
- Chambers
- EMT Quest Software
- Positioning Systems
- Chamber Room Size: L*W*H=5*5*5 M



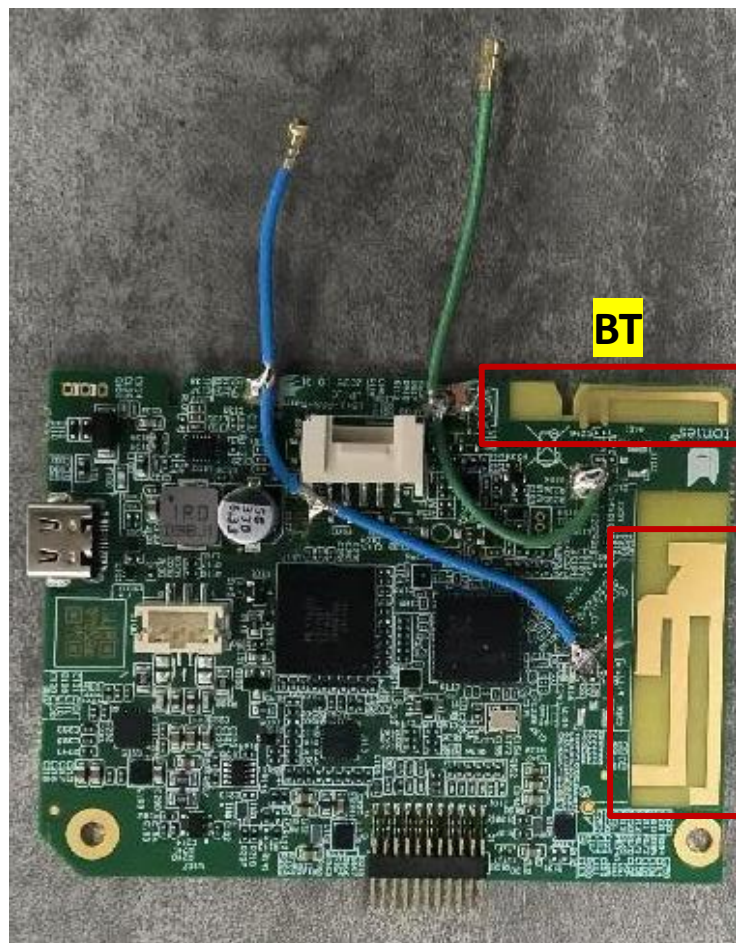
VSWR were performed using a keysight S-parameter Network Analyzer.



E5071C



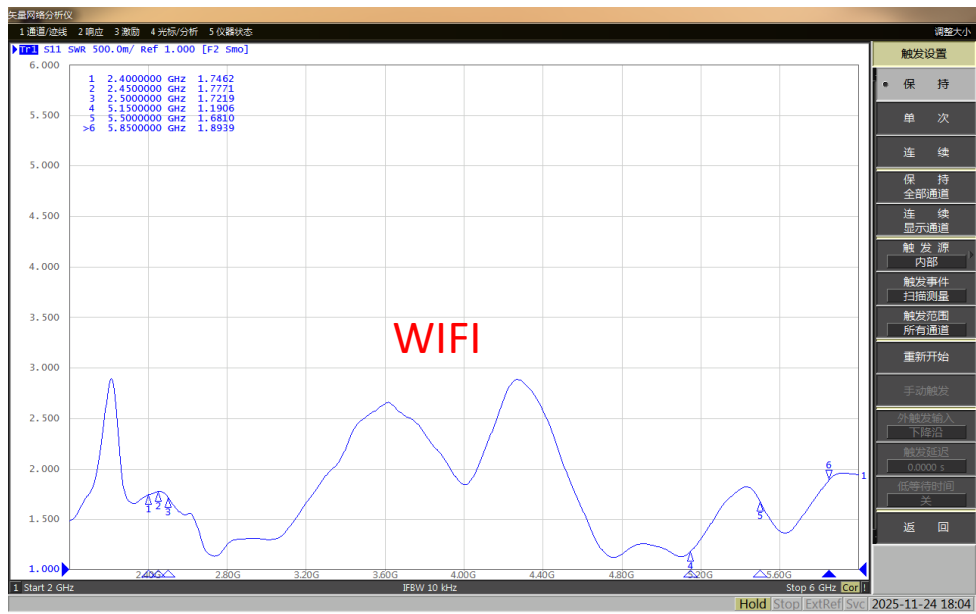
1. Benchmark



WIFI:2400-2500/5150-5850MHz
BT:2400-2500MHz

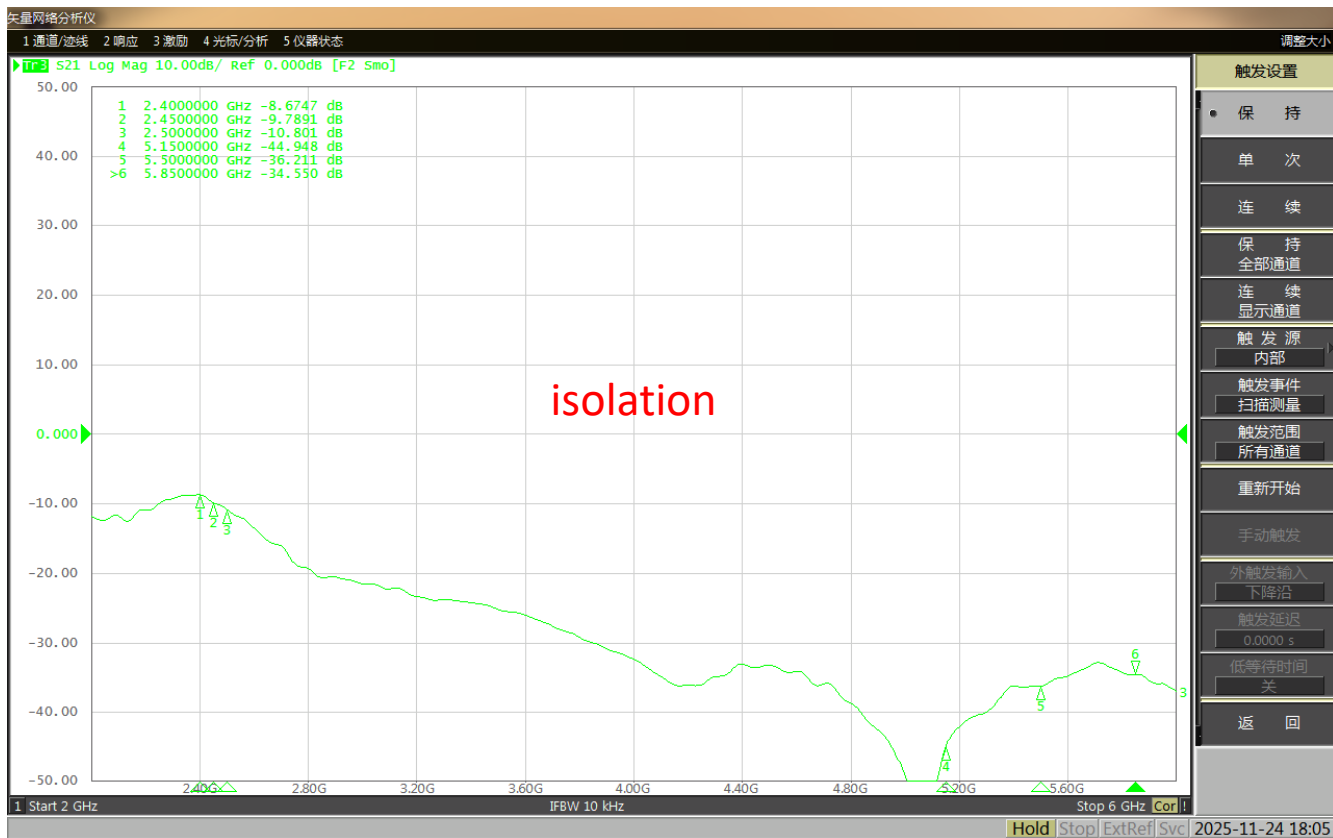
cable length:
RG1.37lowloss **120mm**

2. S-Parameters(VSWR&isolation)

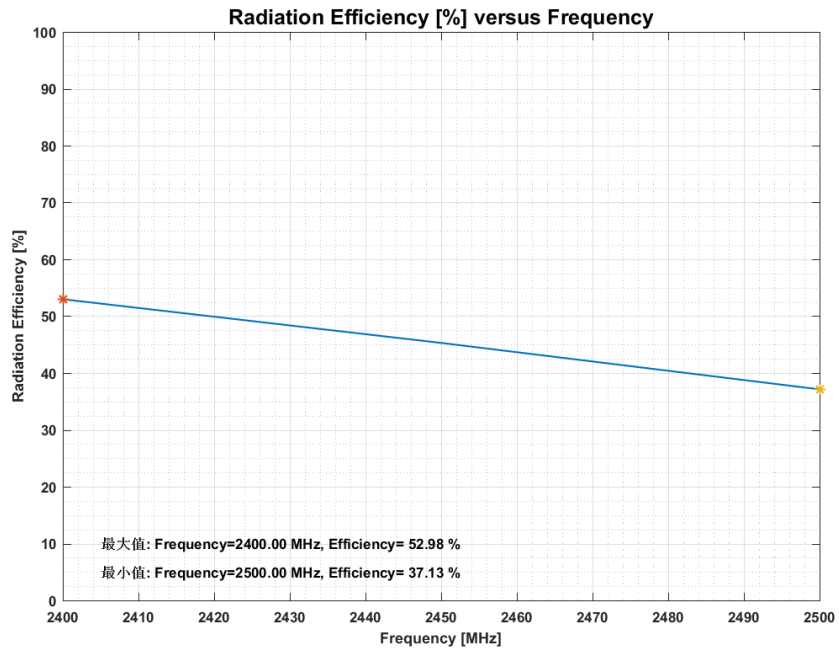


isolation

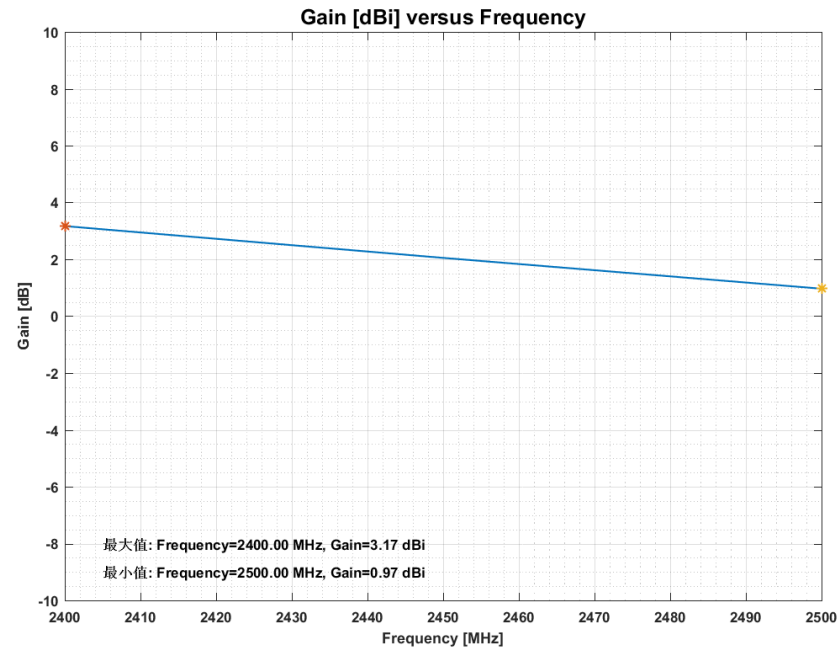
2. S-Parameters(VSWR&isolation)



3. Antenna Efficiency& Peak Gain (BT)

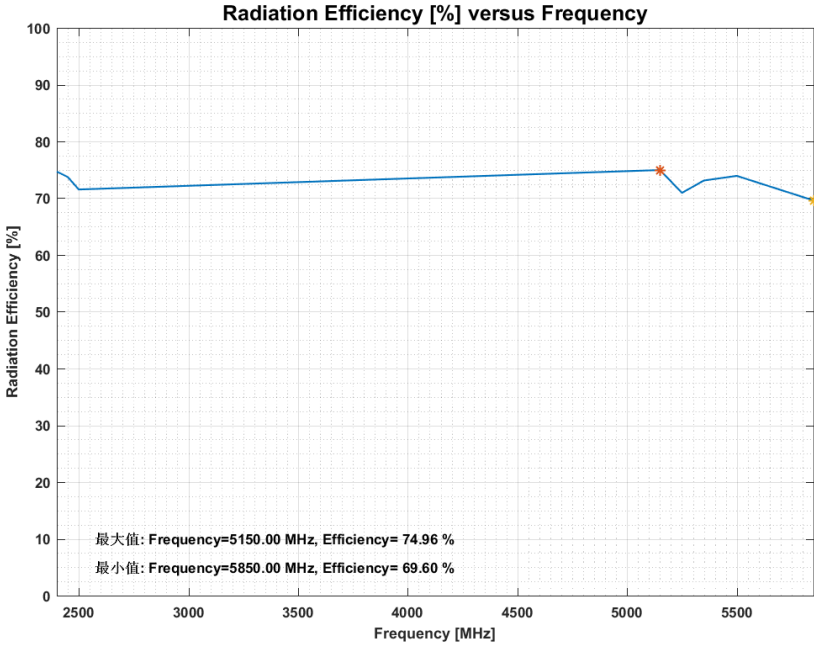


efficiency

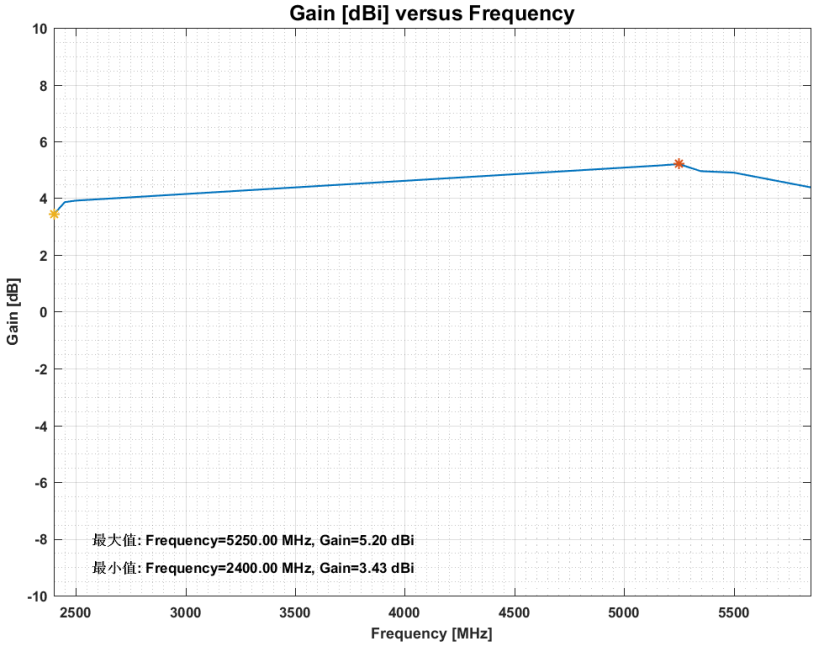


peakgain

3. Antenna Efficiency& Peak Gain (WIFI)

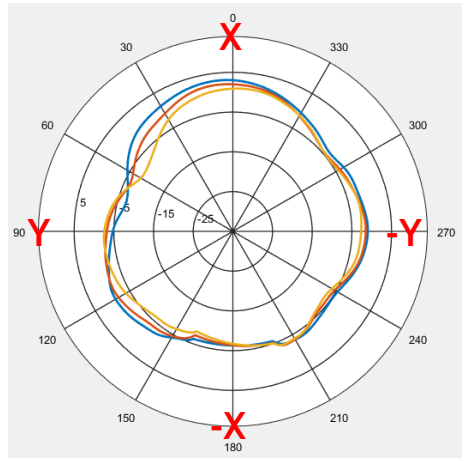
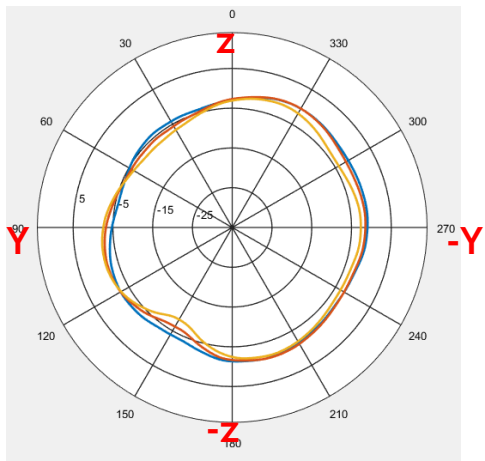
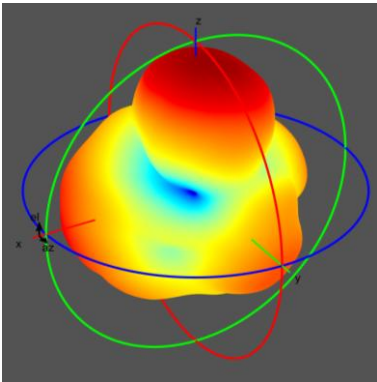
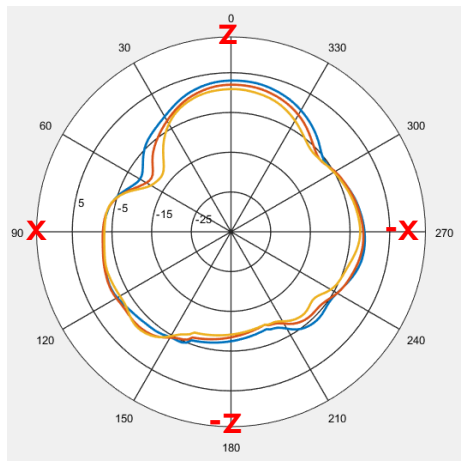
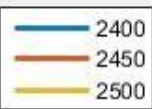


efficiency

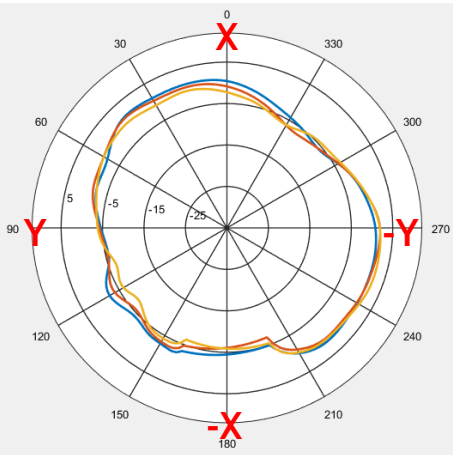
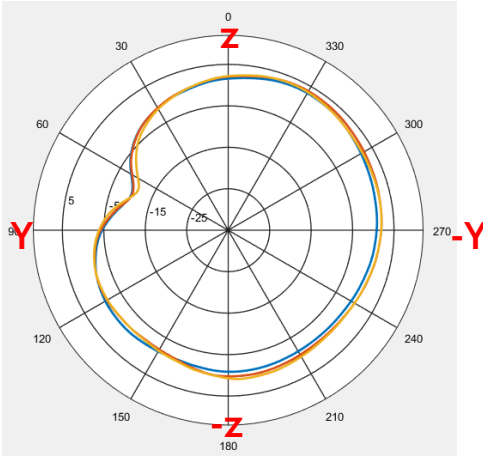
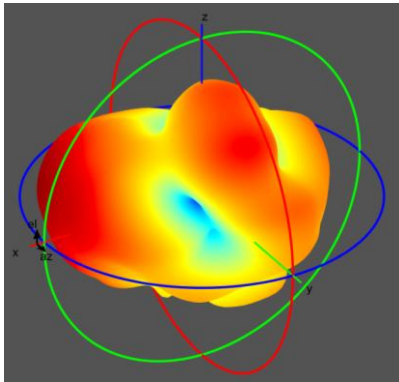
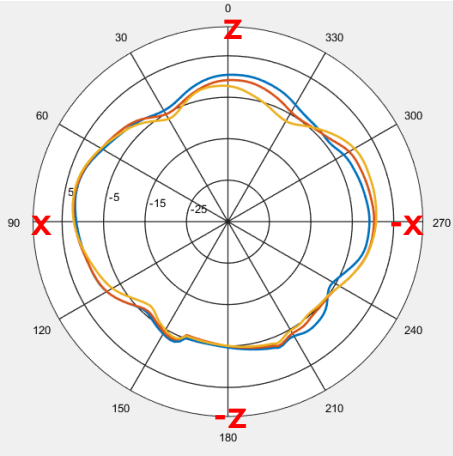
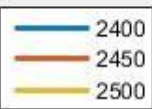


peakgain

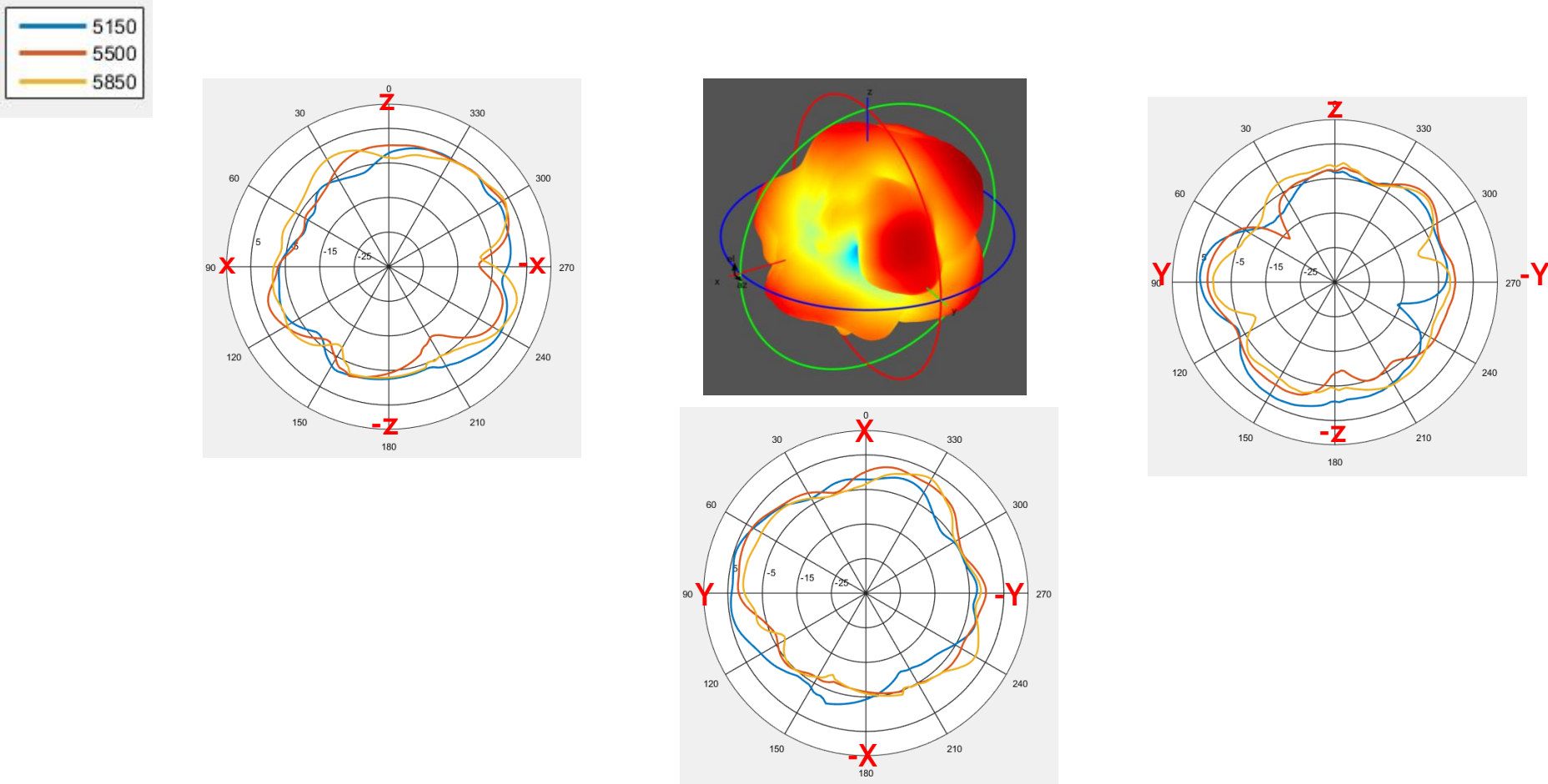
4. Radiation patterns (BT)



4. Radiation patterns (WIFI-2G)



4. Radiation patterns (WIFI-5G)



5. Summary

The above tests all include RG1.37lowloss cable (150mm) loss, and the actual antenna efficiency and gain increase by 0.5-0.7dB on this basis. So add the test cable line loss 0.6dBi,the final ANT gain list:

Item	Frequency (MHz)	2400	2450	2500	5150	5300	5500	5850
WIFI	Gain(dBi)	4.03	4.46	4.51	5.75	5.6	5.5	4.98
	Efficiency(%)	74.68	73.73	71.53	74.96	72.53	73.93	69.60
BT	Gain(dBi)	3.77	2.65	1.57				
	Efficiency(%)	52.98	45.29	37.13				

Thanks!