

2. 4G Antenna reporter

Innovation never end.....

Customer	Version	Engineer	Date
		Zhou Kun	October 6, 2023

Outline Summary

● Purpose

2.4G antenna test. Result as following.

● Agenda

- Test Environment and Equipment
- Antenna Positions

Test Result : Gain&Efficiency

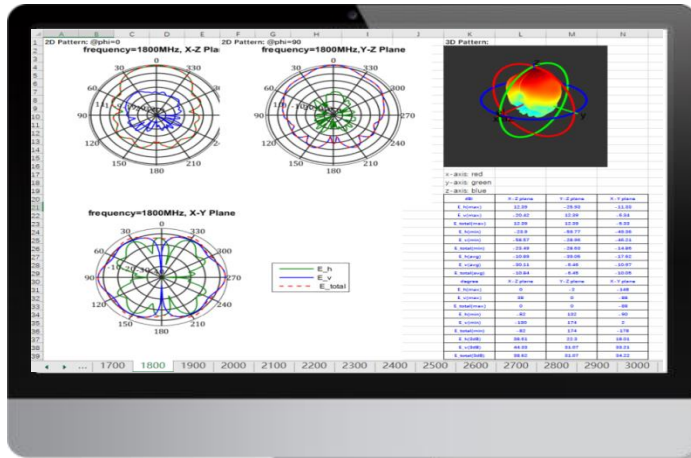
Test Result : 3D Radiation Pattern

● Result & Suggestions

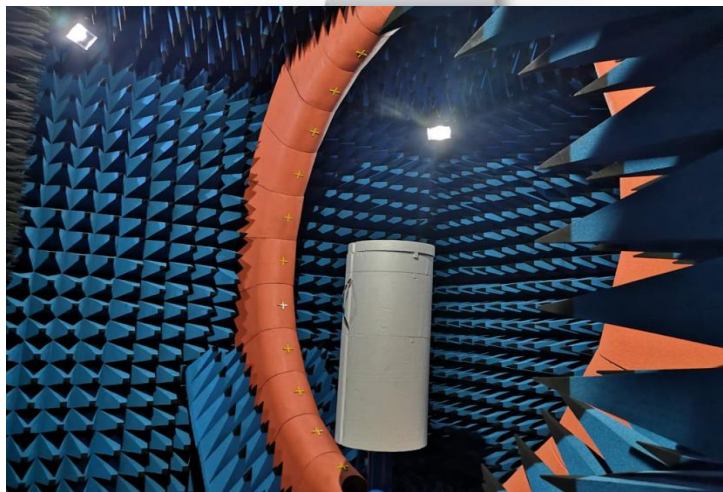
Test Environment and Equipments

Equipment : EMT-24 Multiple Probe Ball Surface Field System

Testing Software: EM-Testing



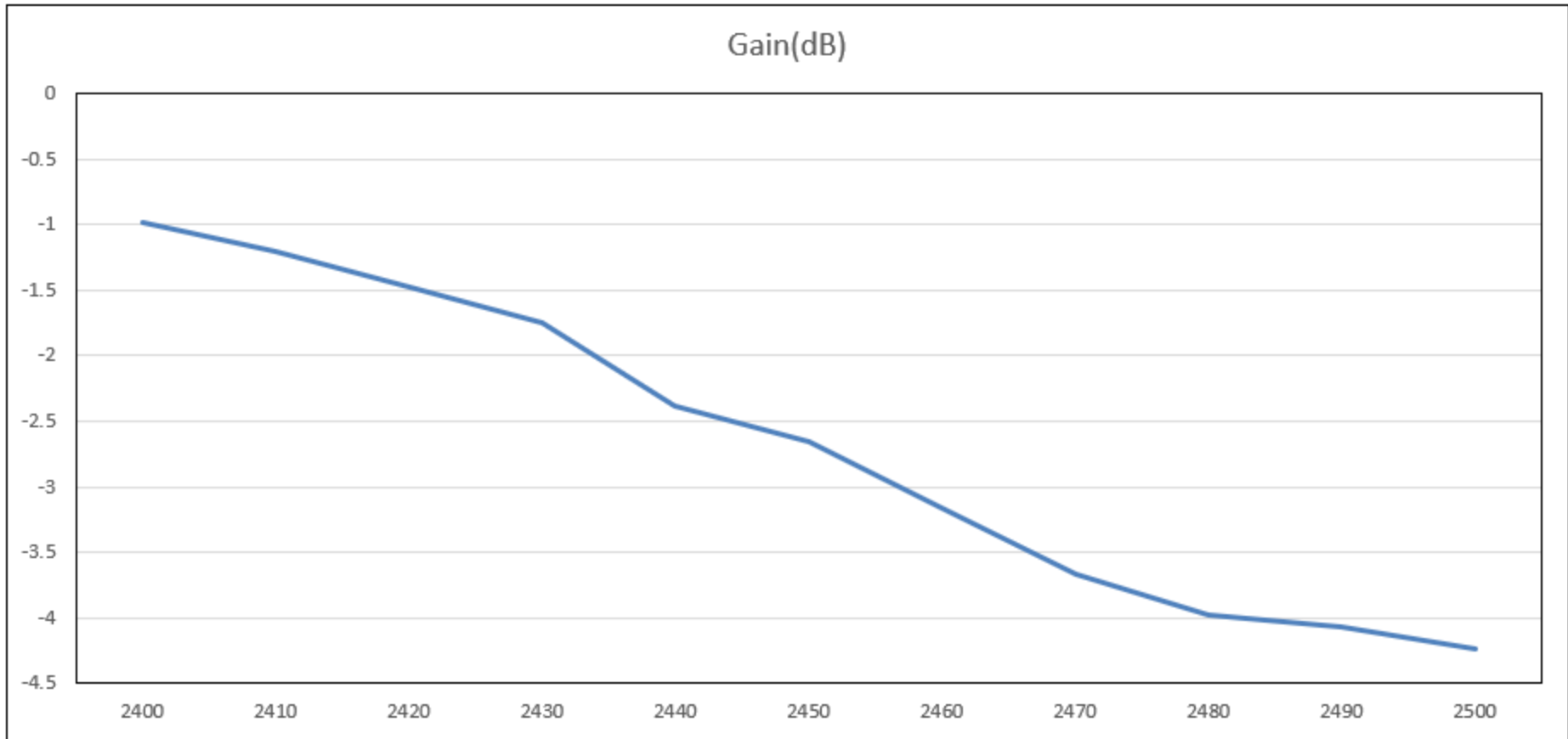
Frequency range: 400MHz~6.0GHz
System dynamic range: 60dB(typical)
Number of system probes: twenty-four
Maximum load bearing of the tested antenna:
50KG (foam 25KG/nylon 50KG)
Maximum size of the tested antenna: 1.34 meters
Phase center testing accuracy: $\leq 1\text{mm}$



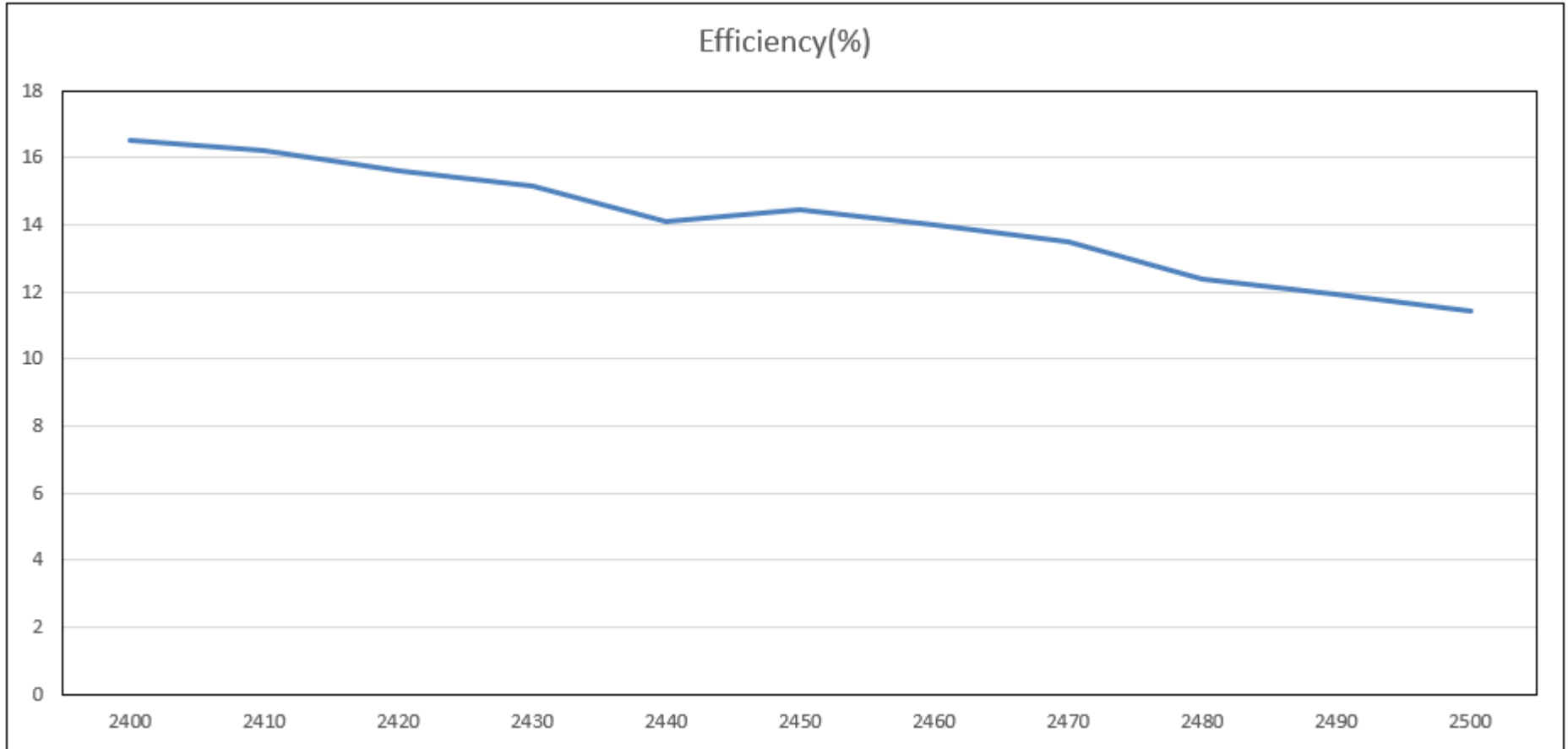
Summary of test data

Frequency (MHz)	Directivity(dB)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
2400	6.8394	-0.9856	-7.825	16.5007
2410	6.6965	-1.2083	-7.9048	16.2
2420	6.5796	-1.4825	-8.0622	15.6237
2430	6.4438	-1.7458	-8.1896	15.1719
2440	6.137	-2.3786	-8.5156	14.0748
2450	5.7582	-2.6505	-8.4087	14.4254
2460	5.3837	-3.1573	-8.541	13.9926
2470	5.0441	-3.6606	-8.7046	13.4752
2480	5.1008	-3.974	-9.0748	12.3742
2490	5.1662	-4.0732	-9.2394	11.9141
2500	5.1947	-4.2332	-9.4279	11.4079

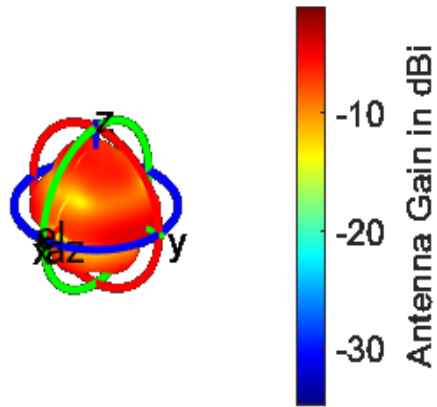
Gain Data



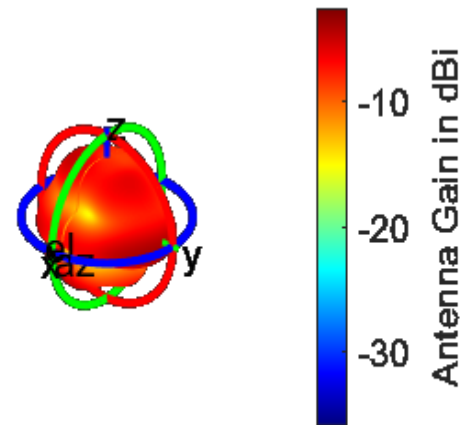
Efficiency Data



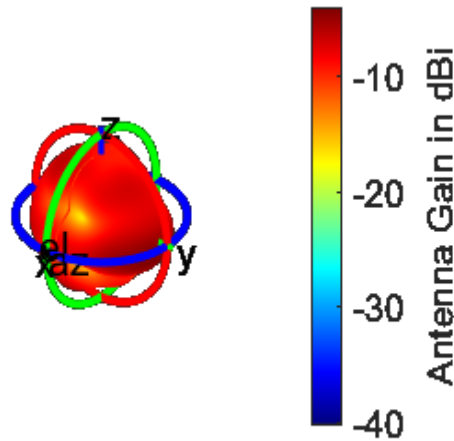
3D Pattern



2400



2450



2500



Thanks for cooperation!