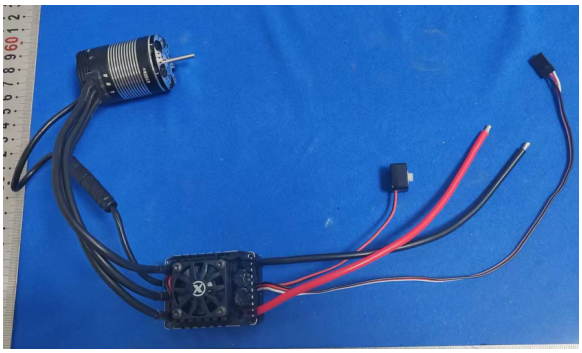
Antenna Specification

Antenna picture	
Antenna Type	PCB antenna
Antenna Peak Gain	4 dBi
Operating Band	2400 MHz ~ 2500MHz
Test laboratory name and Address	8E, Kechuang Building, Quanzhi Science and Technology Innovation Park, Shasong Road, Shajing Street, Baoan, Shenzhen, Guangdong, China
Antenna Manufacturer	Shenzhen XC-ESC Technology Co., LTD.
Model name	Electronic Speed Controller (ESC)
DUT photo	
Test Date	2023-6-27
Test Conductor	Fenghuijuan

OTA measurement

Test System

The SY-16 OTA system is an anechoic chamber, which can measures antenna passive data such as antenna efficiency, antenna gain, and 2D&3D pattern. The coordinates and topology are shown as follow:

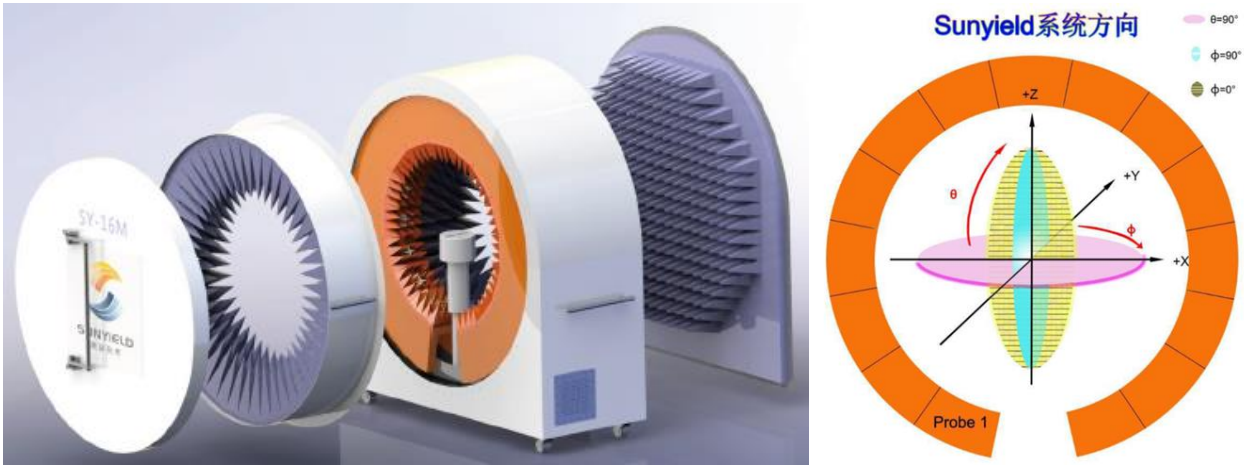


Figure 1 SY-16 OTA system

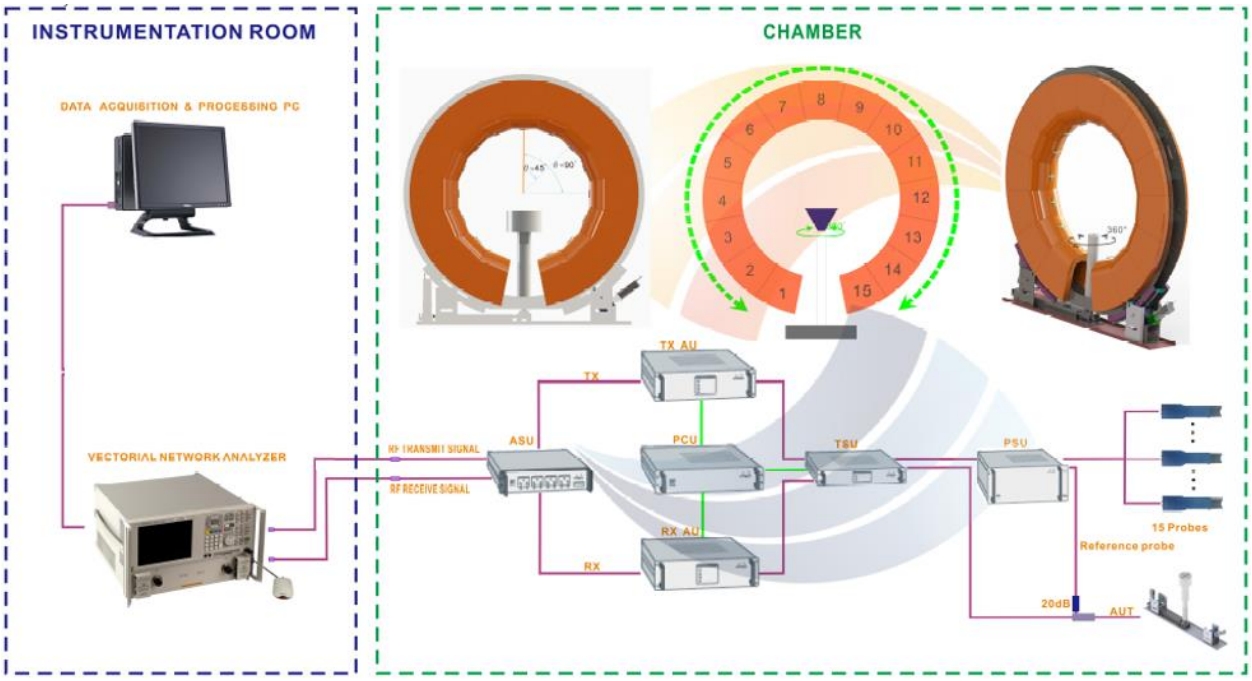


Figure 2 OTA measurement topology

Equipment List

Table 1 Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Network Analyzer	Keysight	E5071C	MY46527808	2023/1/9	2024/1/8
Anechoic Chamber	Sunyield	SY-16	SI1727	2023/5/10	2024/5/9

Test Method

Table 2 Test Method

Name	Antenna Performance
Parameter	Radiation Efficiency
Test Method	IEEE Standard Test Procedures for Antennas
Standard No.	ANSI/IEEE Std 149-2021
Test Software Being Used	PMS
Software Version	V2.8.5

Test Result

Efficiency and Gain

Table 3 Antenna Efficiency and Gain

Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	3.71	-2.16	60.86
2410	3.97	-1.98	63.42
2420	4.00	-2.02	62.78
2430	3.80	-2.12	61.31
2440	3.85	-2.02	62.86
2450	3.92	-2.07	62.02
2460	3.90	-2.09	61.84
2470	3.71	-2.13	61.22
2480	3.74	-2.13	61.23
2490	3.74	-2.09	61.83
2500	3.73	-2.13	61.27

Radiation Pattern

Table 4 Product coordinates

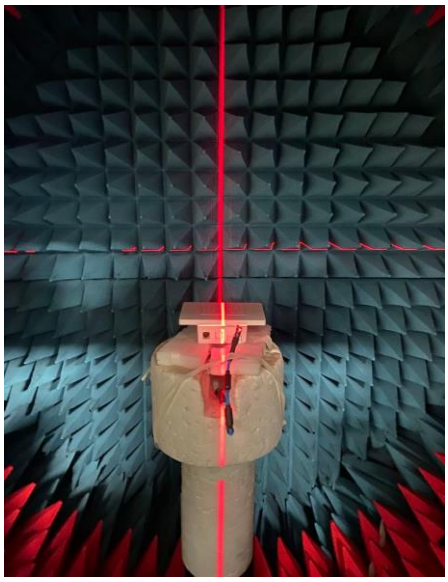
Product Coordinates


Table 5 3D radiation pattern

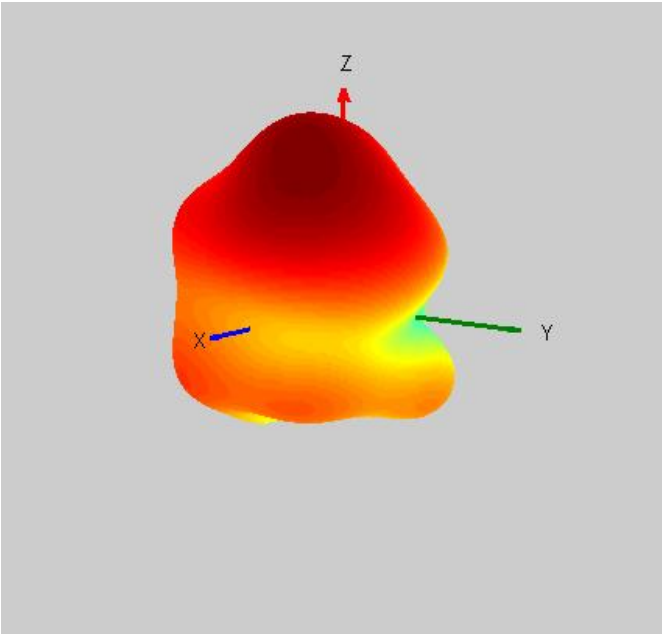
3D Radiation Pattern at 2450MHz


Table 6 Radiation pattern in XY Plane

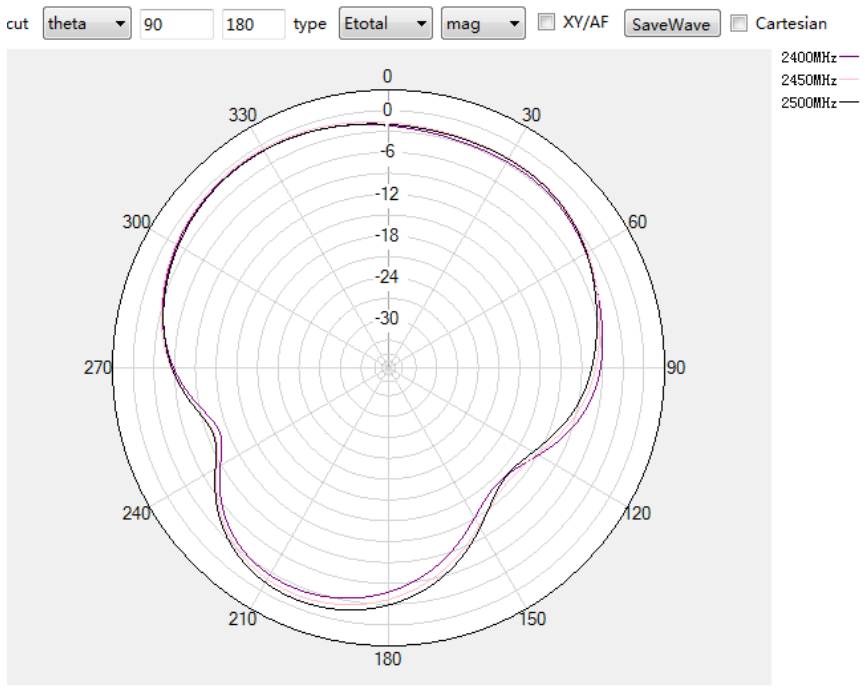
2D Radiation Pattern (θ = 90°, XY Plane)


Table 7 Radiation pattern in XZ Plane

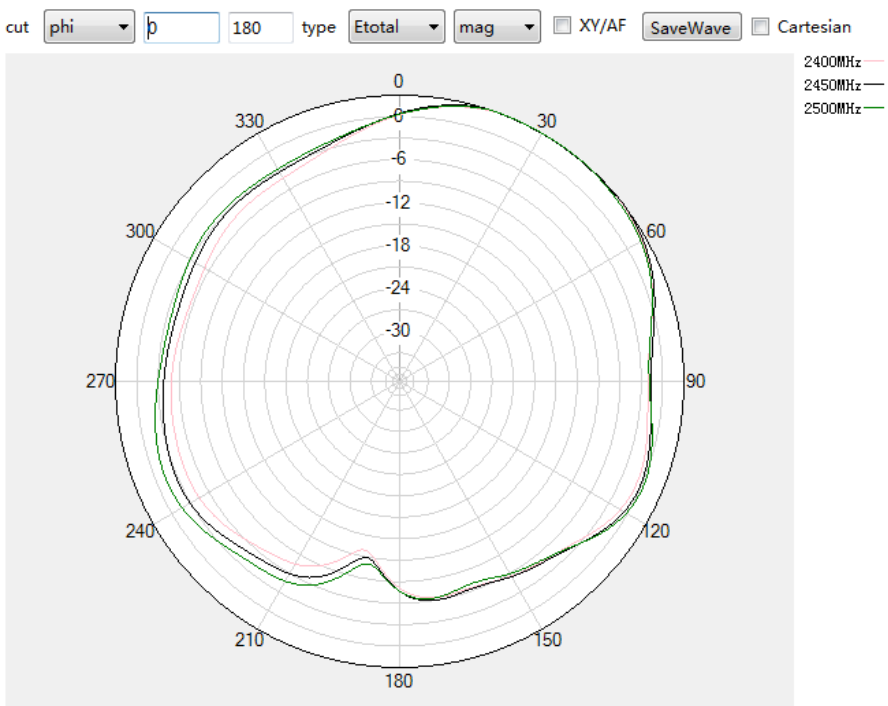
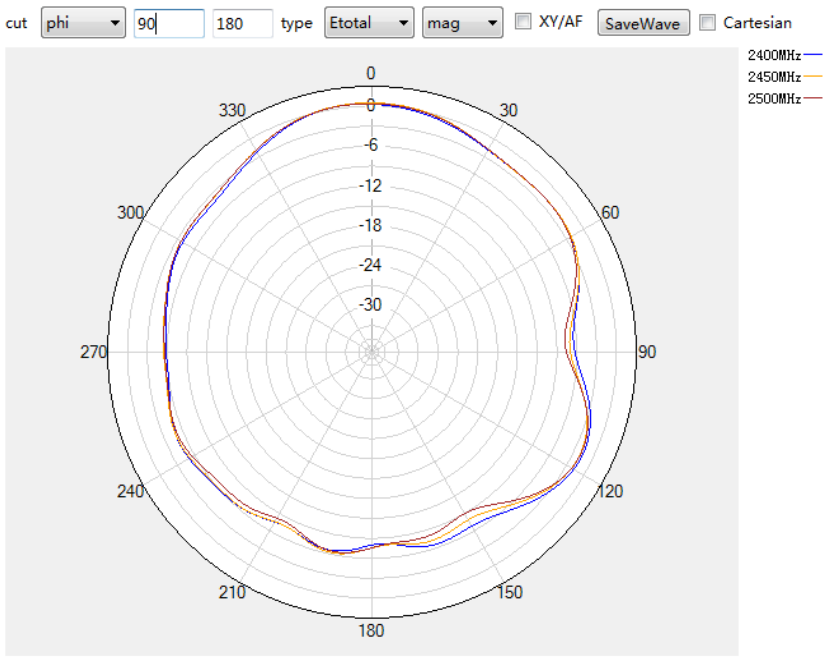
2D Radiation Pattern (ϕ = 0°, XZ Plane)


Table 8 Radiation pattern in YZ Plane

2D Radiation Pattern (ϕ = 90°, YZ Plane)