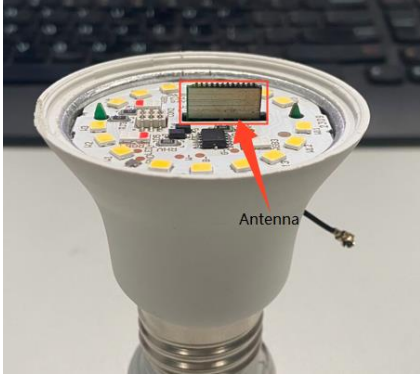



Antenna Specification

Antenna picture	
Antenna Type	Internal inverted F PCB antenna
Antenna Peak Gain	0.57dBi
Operating Band	2400 MHz ~ 2483.5 MHz
Test laboratory name and Address	IoT Antenna Test Laboratory, 3 / A, LEEDARSON LIGHTING CO., LTD. Xingtai Industrial Park, Changtai Economic Development Zone, Zhangzhou, 363900, China
Antenna Manufacturer	LEEDARSON LIGHTING CO., LTD.
Model name	Cedar 7.5W
DUT photo	
Test Date	2023/7/26
Test Conductor	Fenghuijuan

OTA measurement

Test System

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

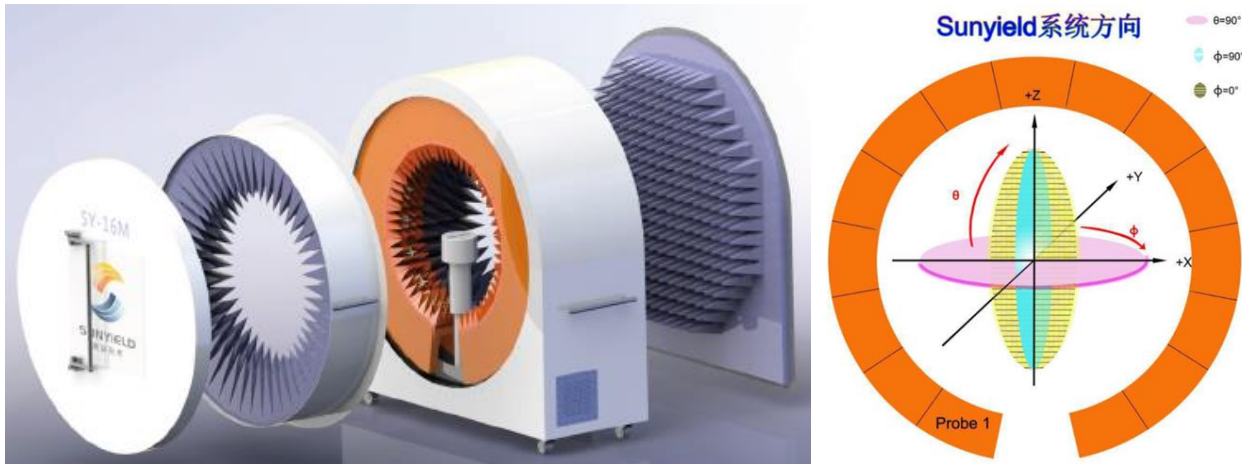


Figure 1 SY-16 OTA system

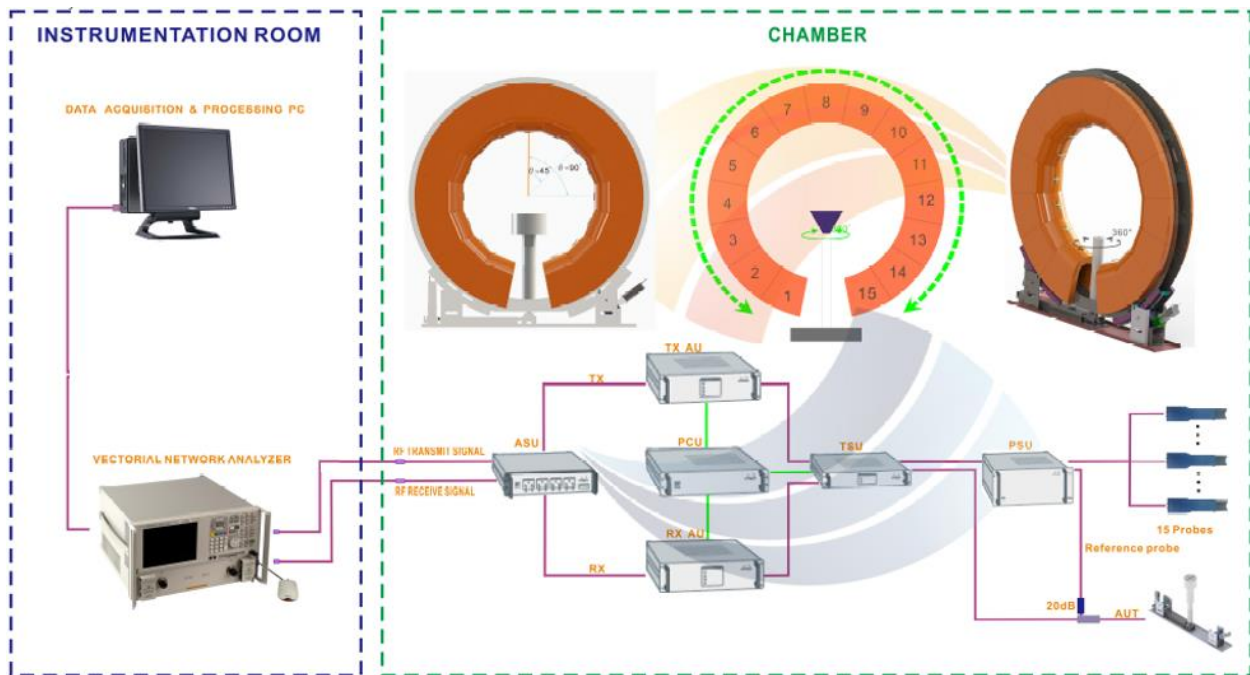


Figure 2 OTA measurement topology

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	-0.70	-5.78	26.43
2410	-0.44	-5.61	27.47
2420	-0.26	-5.46	28.47
2430	-0.04	-5.29	29.59
2440	0.23	-5.05	31.26
2450	0.52	-4.88	32.52
2460	0.57	-4.85	32.71
2470	0.22	-5.15	30.53
2480	0.34	-5.13	30.70
2490	0.41	-5.10	30.90
2500	-0.12	-5.67	27.13

Radiation Pattern

Table 4 Product coordinates

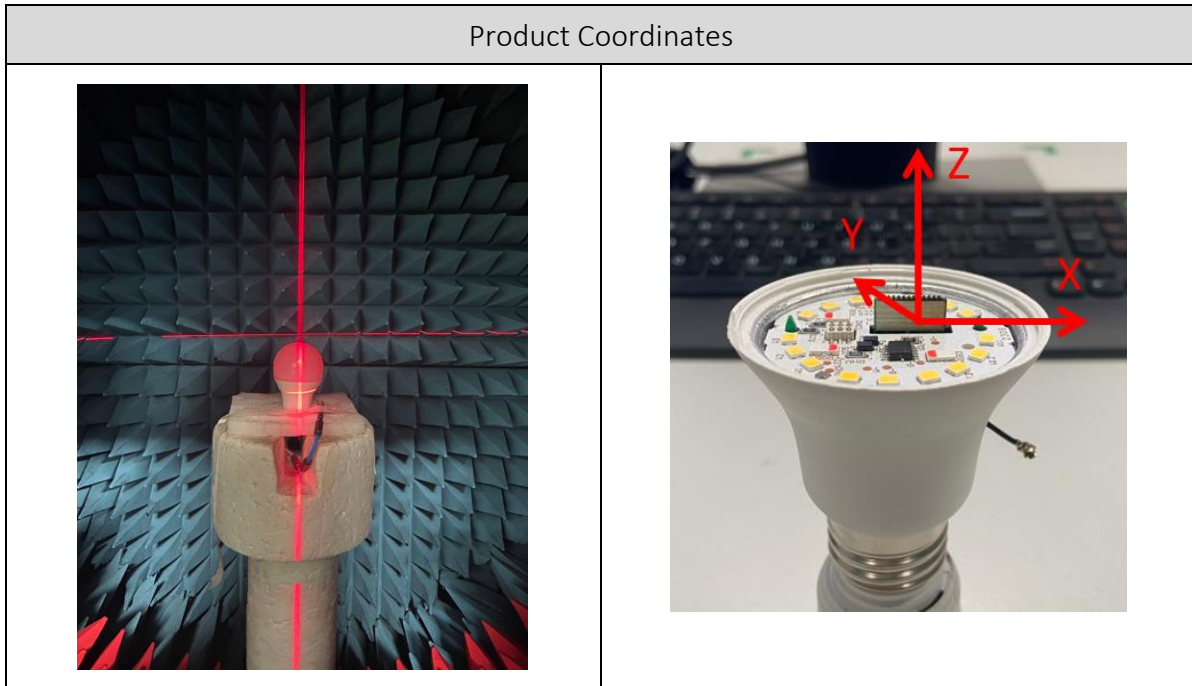


Table 5 3D radiation pattern

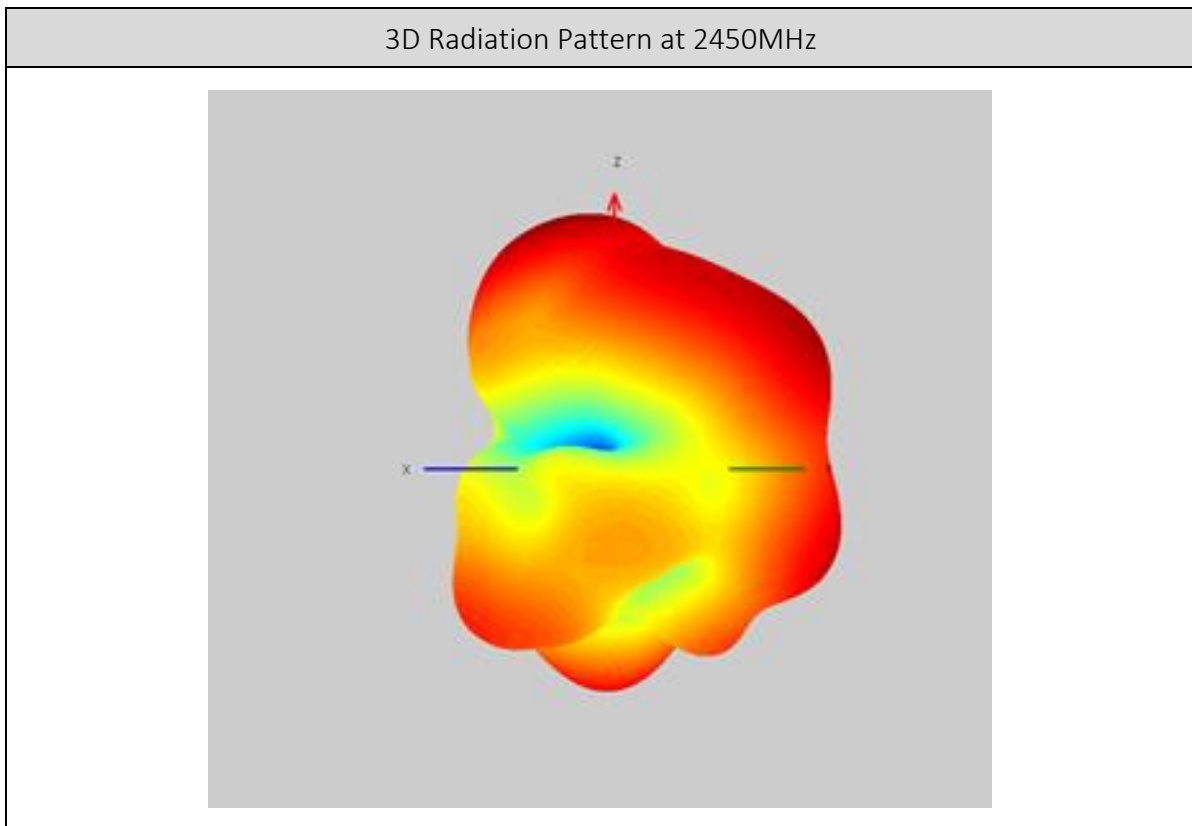


Table 6 Radiation pattern in XY Plane

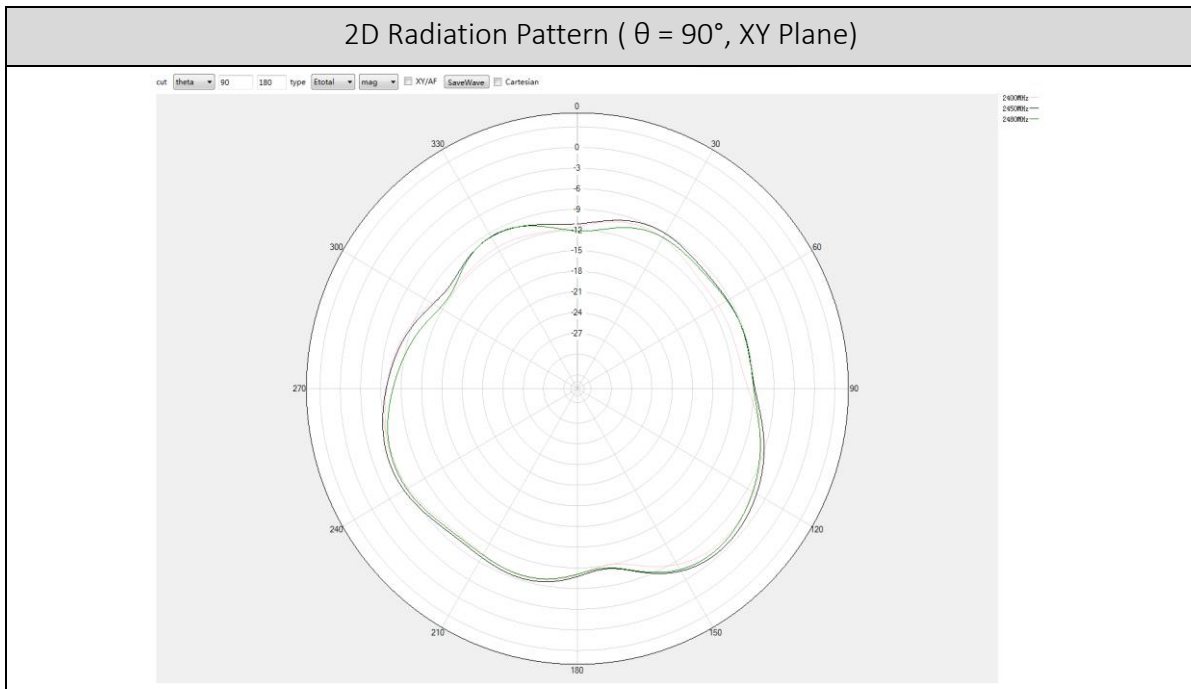


Table 7 Radiation pattern in XZ Plane

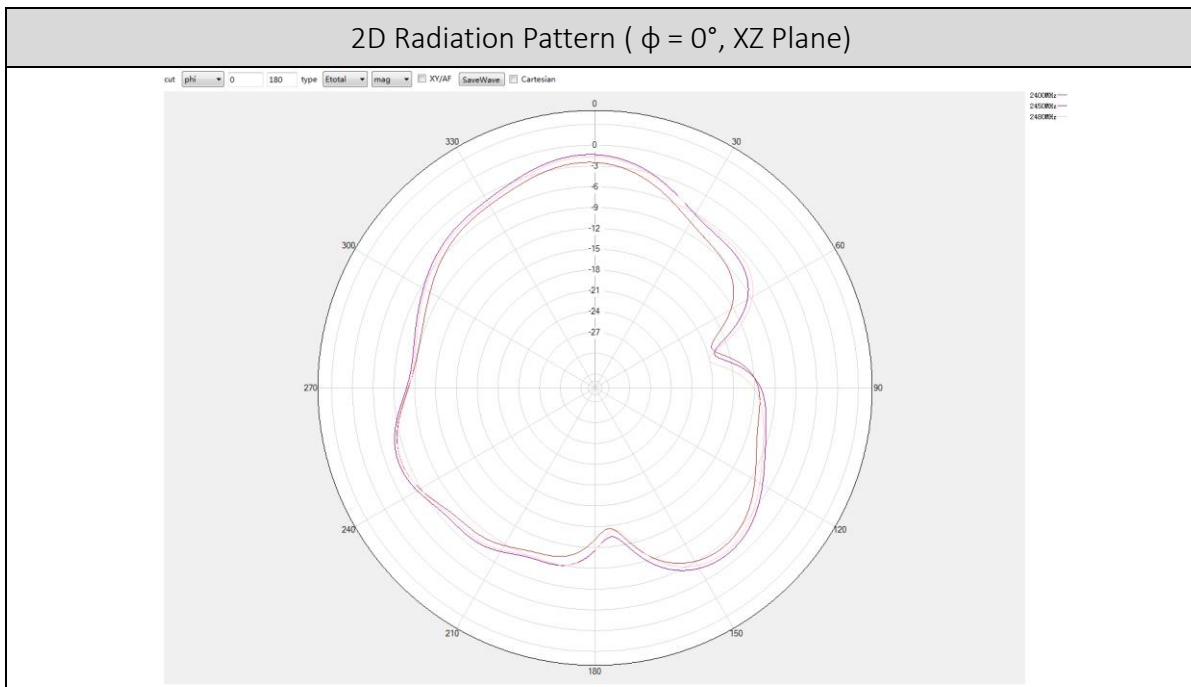


Table 8 Radiation pattern in YZ Plane

