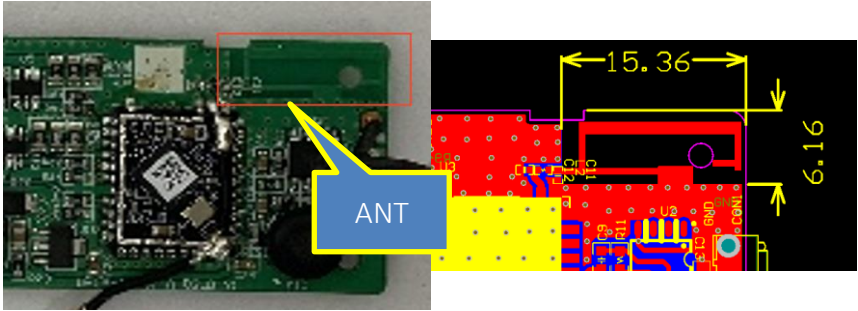


Antenna Specification

Antenna picture	
Antenna Type	Internal inverted F PCB antenna
Antenna Peak Gain	0.30dBi
Operating Band	2400 MHz ~ 2480 MHz
Test laboratory name and Address	IoT Antenna Test Laboratory, 11 / F, LEEDARSON LIGHTING CO., LTD. Xingtai Industrial Park, Changtai Economic Development Zone, Zhangzhou, 363900, China
Antenna Manufacturer	LEEDARSON LIGHTING CO., LTD.
Model name	Matter 全彩灯带
DUT photo	
Test Date	2024-10-24
Test Conductor	Xiaokun Lin

OTA measurement

Test System

The SY-16 OTA system and RayZone2800 OTA system are anechoic chambers, which can measure antenna passive data such as antenna efficiency, antenna gain, and 2D&3D pattern. The systems are shown as follows:



Figure 1 SY-16 OTA system

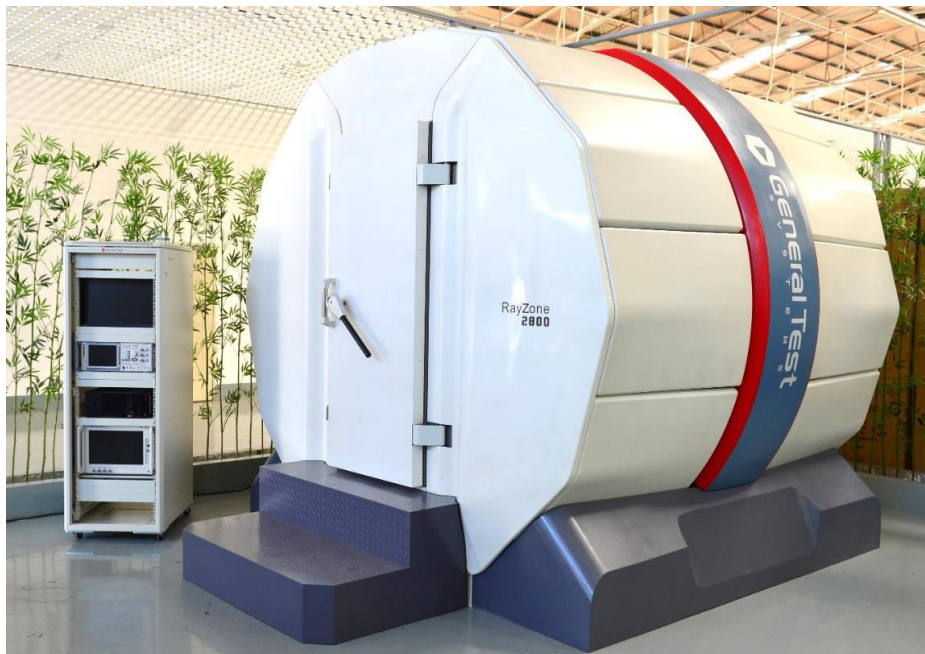


Figure 2 RayZone2800 OTA system

Equipment List

Table 1 Equipment List

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
☒	Network Analyzer	Keysight	E5071C	MY46527808	2024/1/9	2025/1/8
☐	Network Analyzer	Keysight	E5071C	MY46108051	2024/4/19	2025/4/18
☒	Anechoic Chamber	Sunyield	SY-16	SI1727	2024/4/28	2025/4/27
☐	Anechoic Chamber	General Test System	RayZone2800	CT10121244 B5079	2024/5/10	2025/5/9

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	PMS-V2.8.5	☒	MaxSign-V1.4.3	☐

Test Result

Efficiency and Gain

Table 3 Antenna Efficiency and Gain

Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	-0.17	-4.56	34.97
2410	-0.21	-4.65	34.30
2420	-0.32	-4.34	36.81
2430	0.02	-3.96	40.15
2440	0.30	-4.36	36.63
2450	0.03	-4.34	36.83
2460	-0.01	-3.87	40.98
2470	0.13	-3.64	43.28
2480	0.11	-3.94	40.34
2490	0.14	-3.66	43.06
2500	0.84	-3.17	48.25

Radiation Pattern

Table 4 Product coordinates

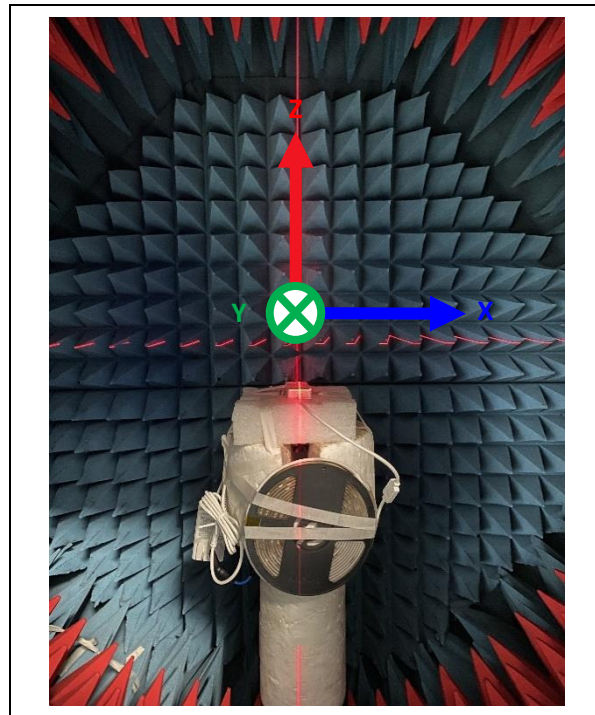


Table 5 3D radiation pattern

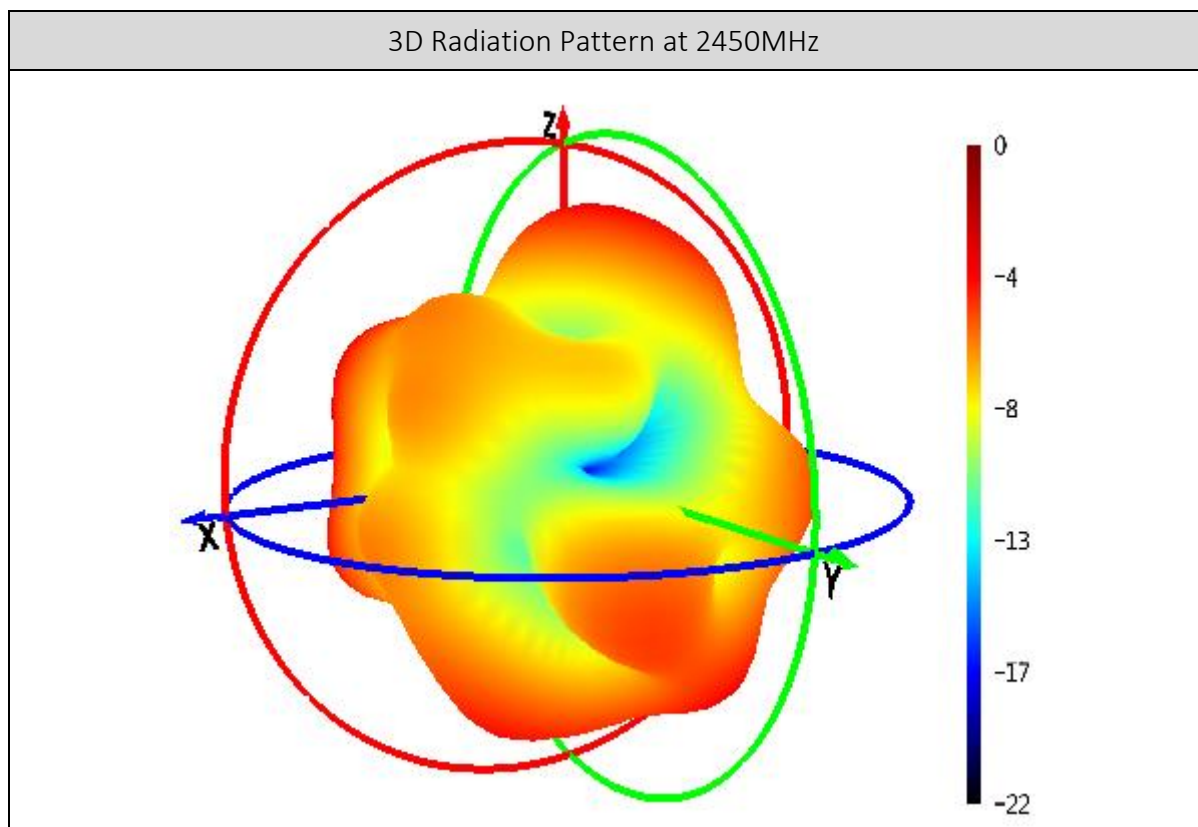


Table 6 Radiation pattern in XY Plane

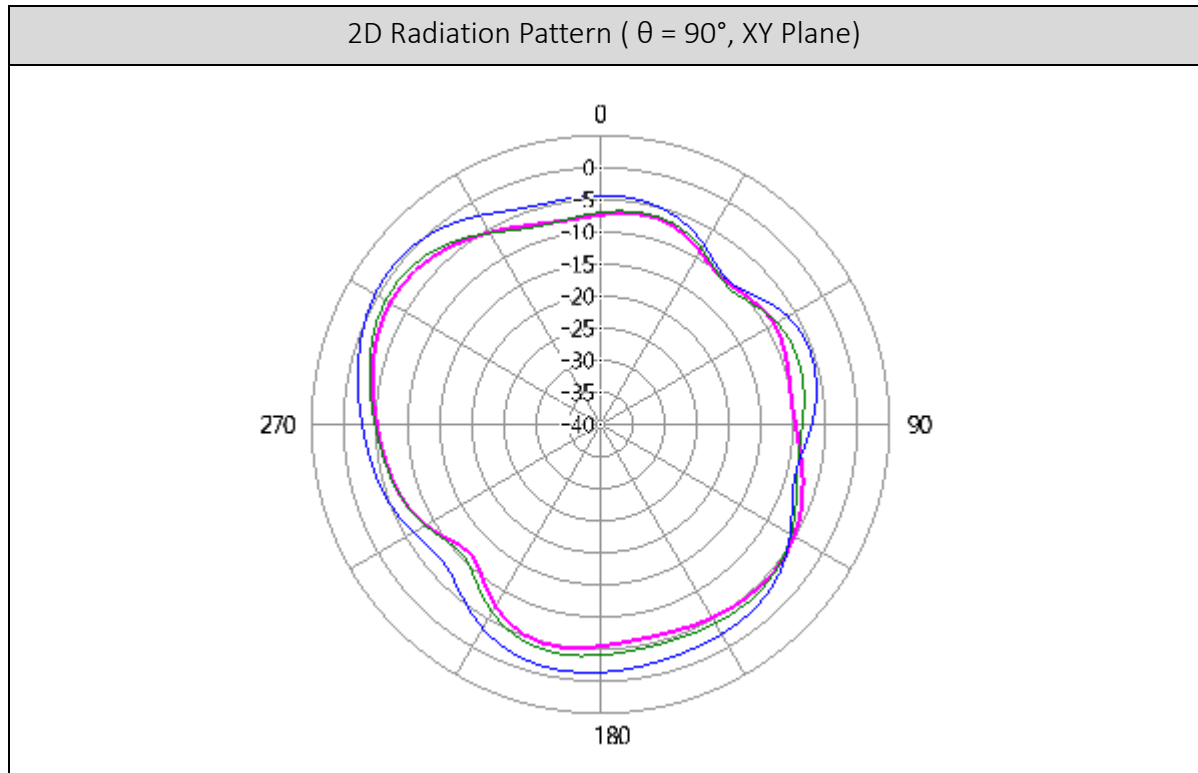


Table 7 Radiation pattern in XZ Plane

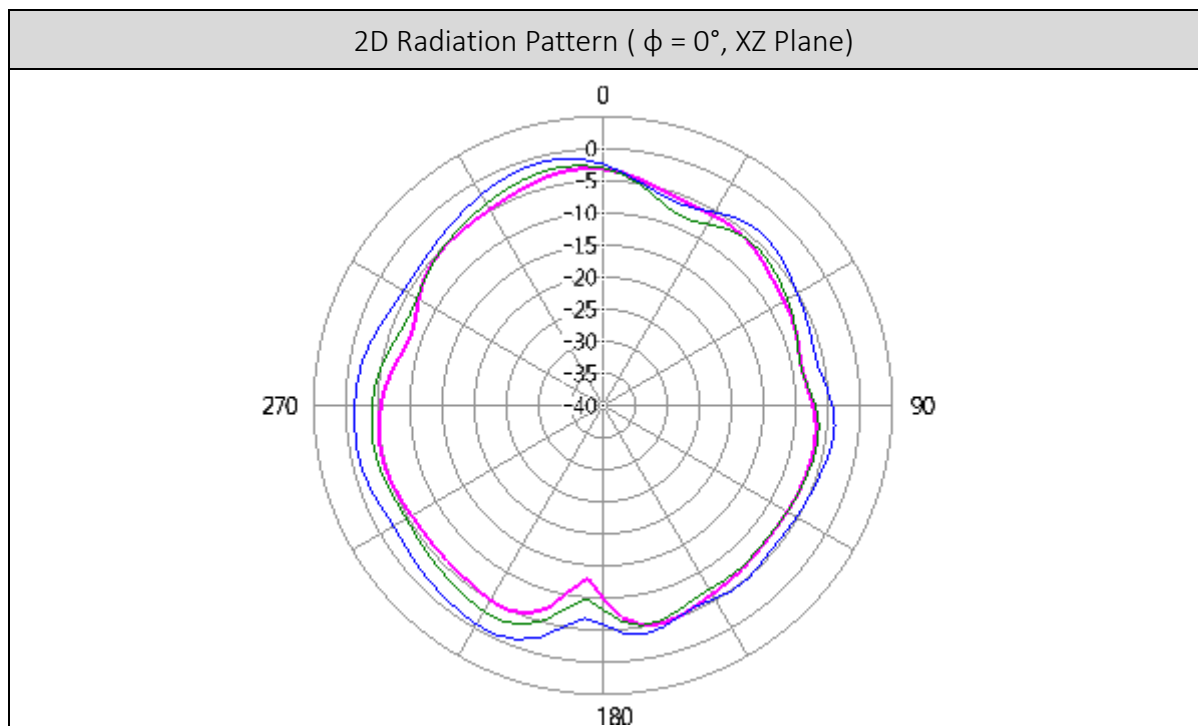


Table 8 Radiation pattern in YZ Plane

