

Antenna Specification

Antenna Picture	
Antenna Type	Internal inverted F PCB antenna
Antenna Peak Gain	-1.51 dBi
Operating Band	2400 MHz ~ 2480 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	A60 470LM WS
DUT photo	
Test Date	2024-10-25
Test Conductor	Oumin

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

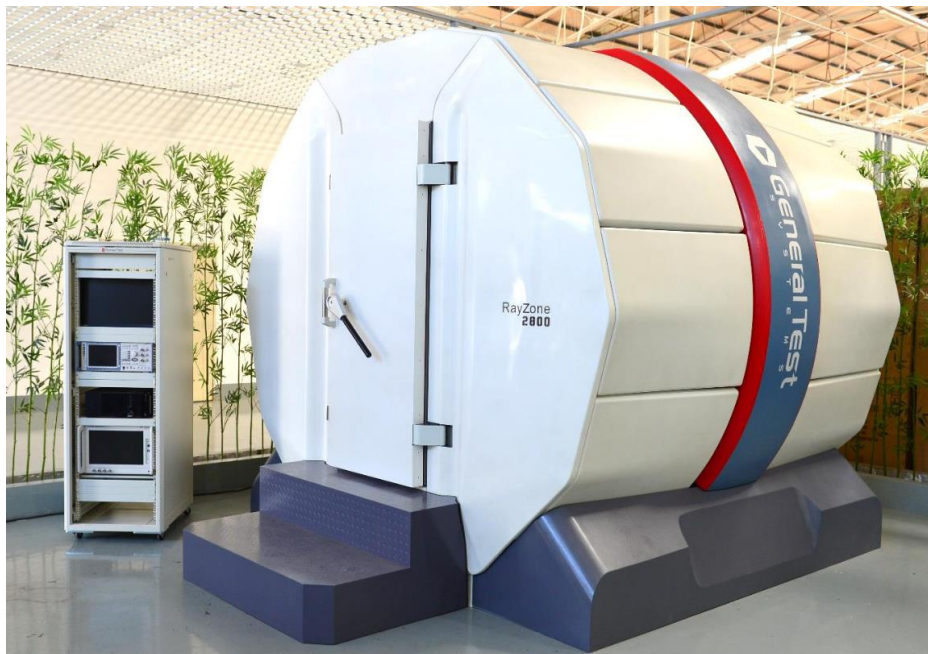


Figure 2 RayZone2800 OTA system

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	-1.73	-6.08	24.63
2410	-1.70	-6.13	24.37
2420	-1.51	-5.87	25.86
2430	-1.53	-5.88	25.84
2440	-1.54	-5.76	26.55
2450	-1.56	-5.65	27.24
2460	-1.69	-5.72	26.80
2470	-1.66	-5.82	26.20
2480	-1.79	-5.76	26.54
2490	-1.80	-5.96	25.38
2500	-1.97	-6.24	23.79

Radiation Pattern

Table 4 Product coordinates

Product Coordinates	

Table 5 3D radiation pattern

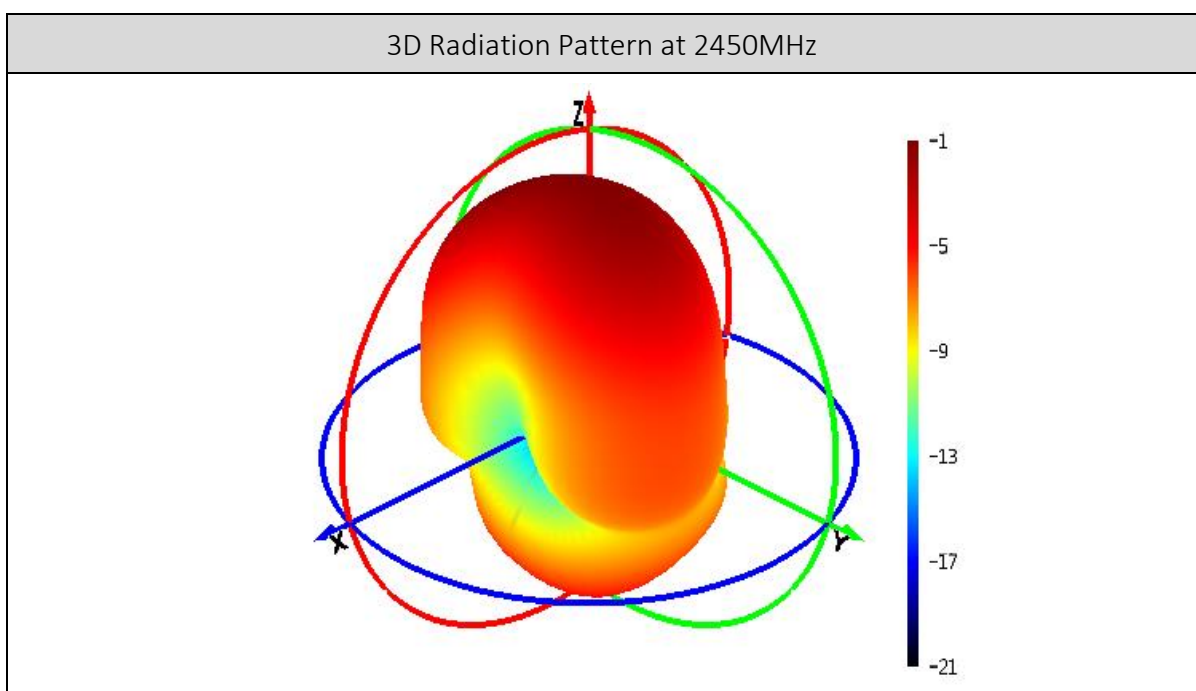


Table 6 Radiation pattern in XY Plane

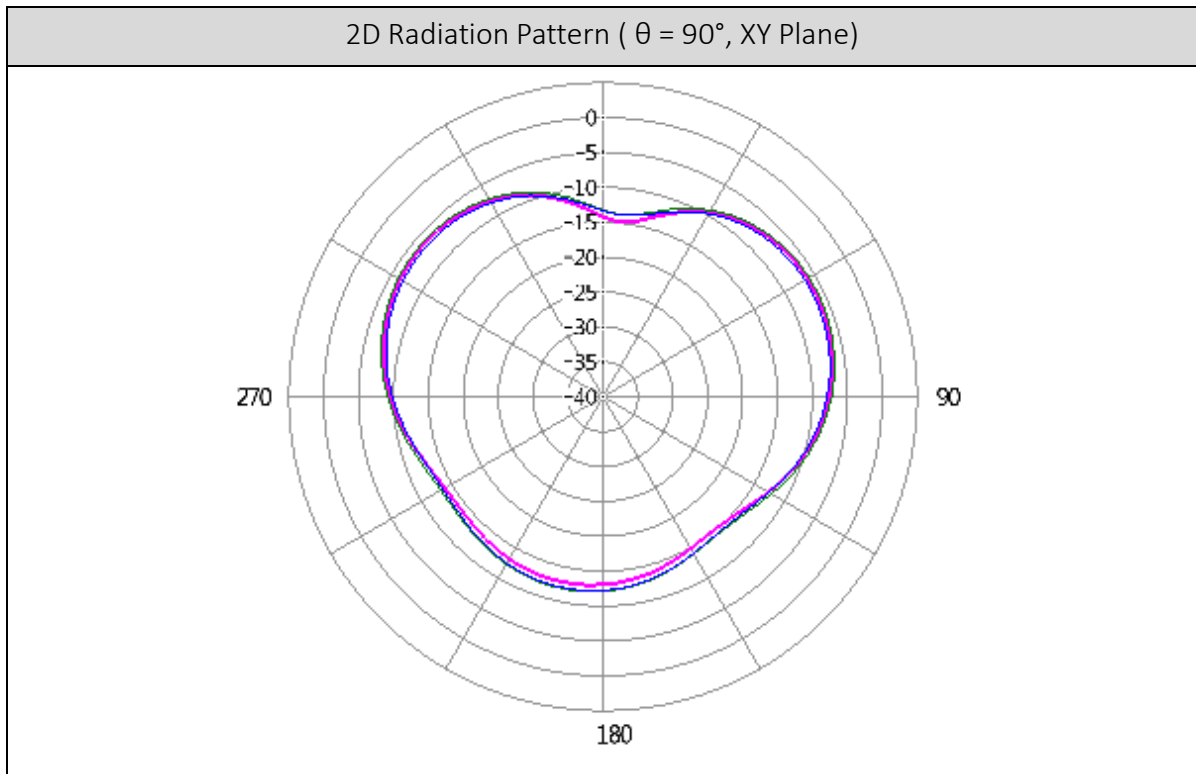


Table 7 Radiation pattern in XZ Plane

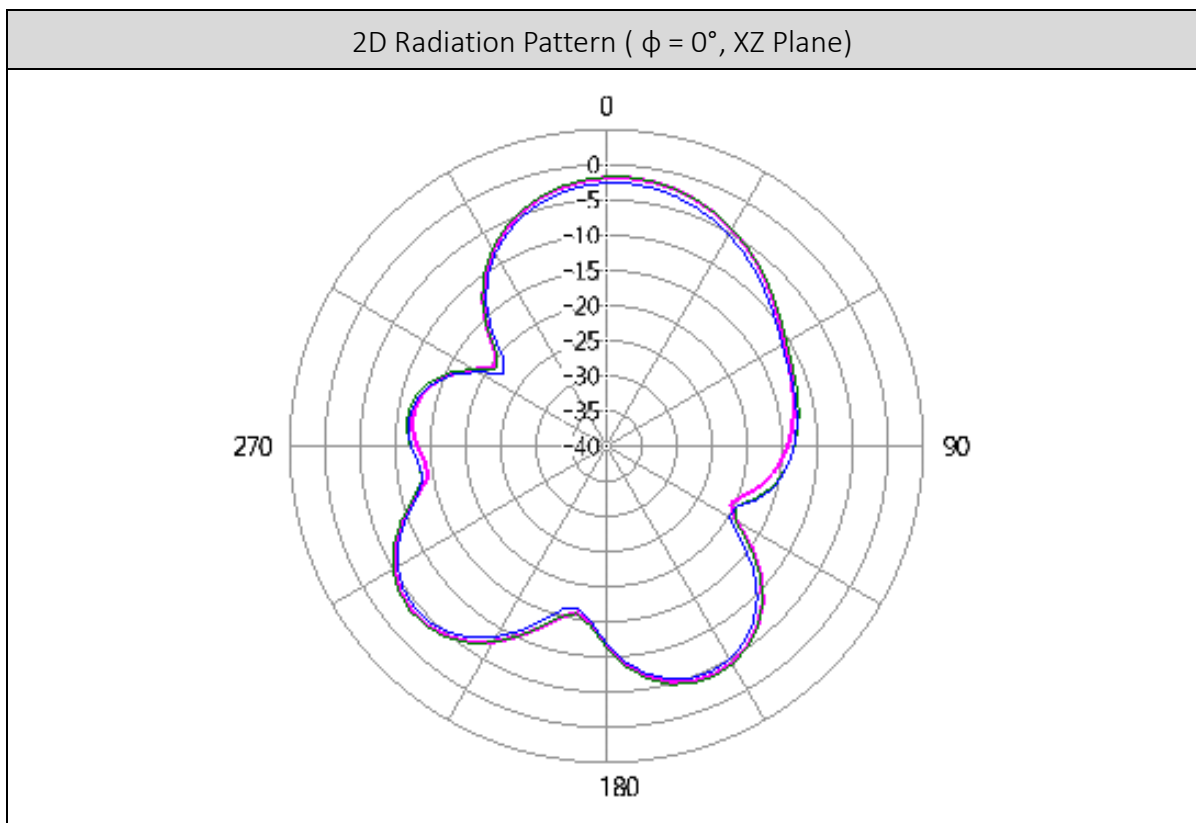


Table 8 Radiation pattern in YZ Plane

