

Antenna Specification

Antenna Type	Internal IFA PCB antenna
Antenna Peak Gain	1.53 dBi
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	9290037453B, 9290037595B
Test Date	2024-4-16
Test Conductor	Xiuweisong

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

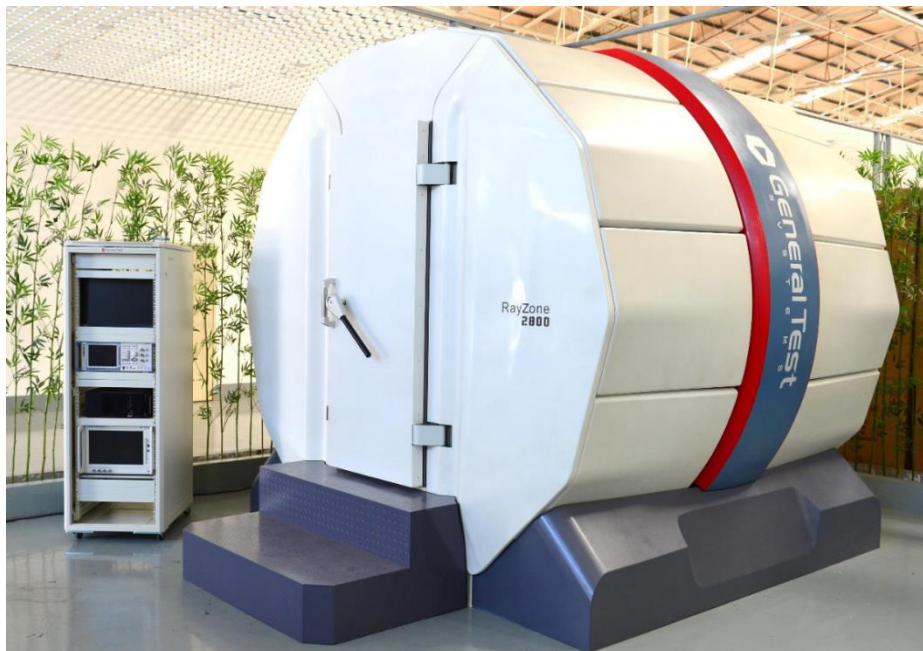


Figure 2 RayZone2800 OTA system

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	2023/4/20	2024/4/19
☒	Anechoic Chamber	Sunyield	SY-16	SI1727	2023/5/10	2024/5/9
☐	Anechoic Chamber	General Test System	RayZone2800	CT10121244 B5079	2023/5/20	2024/5/19

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	0.56	-2.25	59.58
2410	0.21	-2.46	56.75
2420	0.13	-2.53	55.85
2430	0.35	-2.45	56.87
2440	0.85	-2.30	58.94
2450	1.22	-2.29	59.08
2460	1.43	-2.22	59.99
2470	1.38	-2.23	59.90
2480	1.53	-2.08	61.97
2490	1.42	-2.12	61.40
2500	1.11	-2.34	58.33

Radiation Pattern

Table 4 Product coordinates

Please refer to antenna setup photos.

Table 5 3D radiation pattern

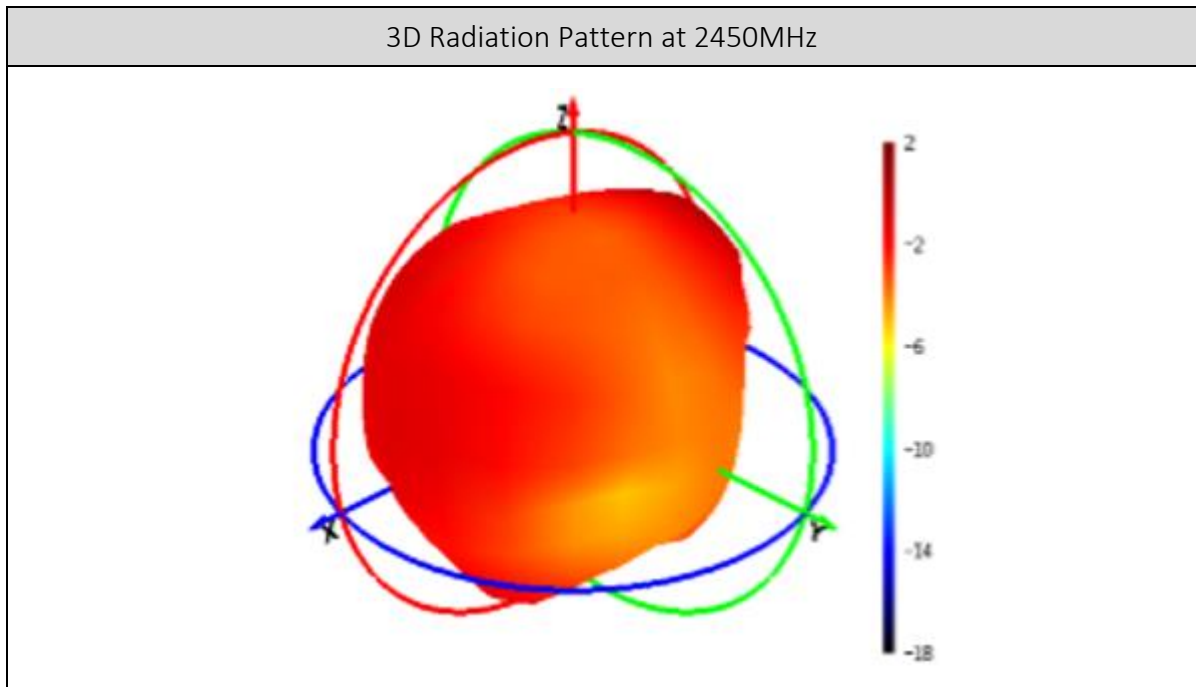
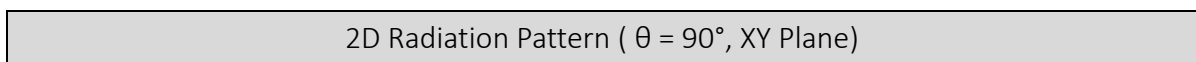


Table 6 Radiation pattern in XY Plane



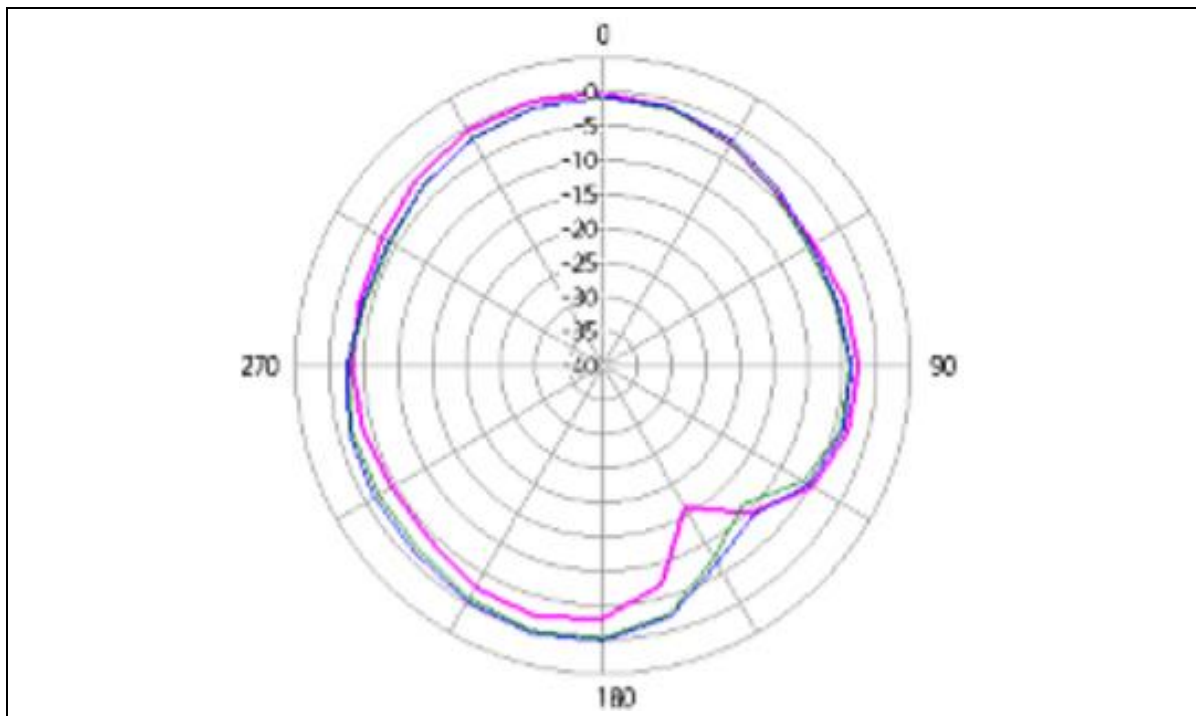


Table 7 Radiation pattern in XZ Plane

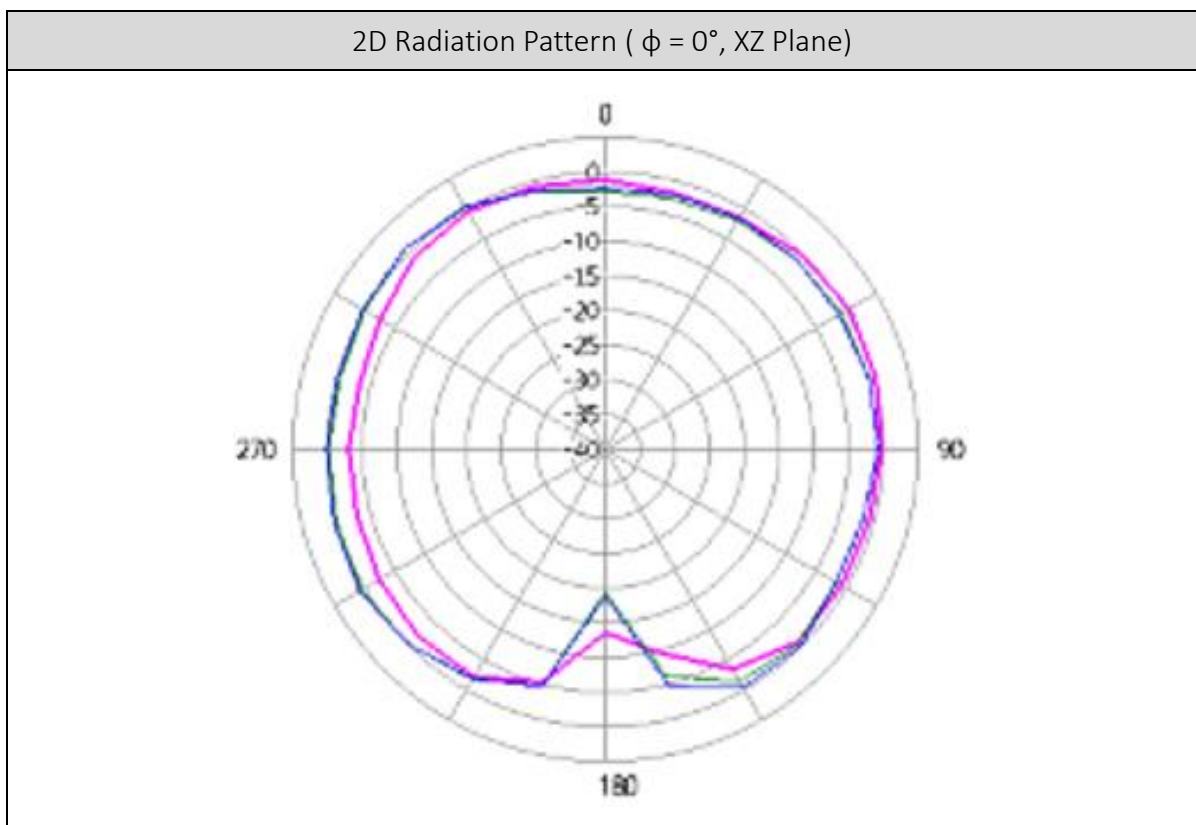


Table 8 Radiation pattern in YZ Plane

