

Antenna Specification

Antenna Picture	
Antenna Type	Internal dipole PCB antenna
Antenna Peak Gain	-3.05dBi
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	B38 470LM WS
DUT photo	
Test Date	2025-3-17
Test Conductor	Ou Min

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

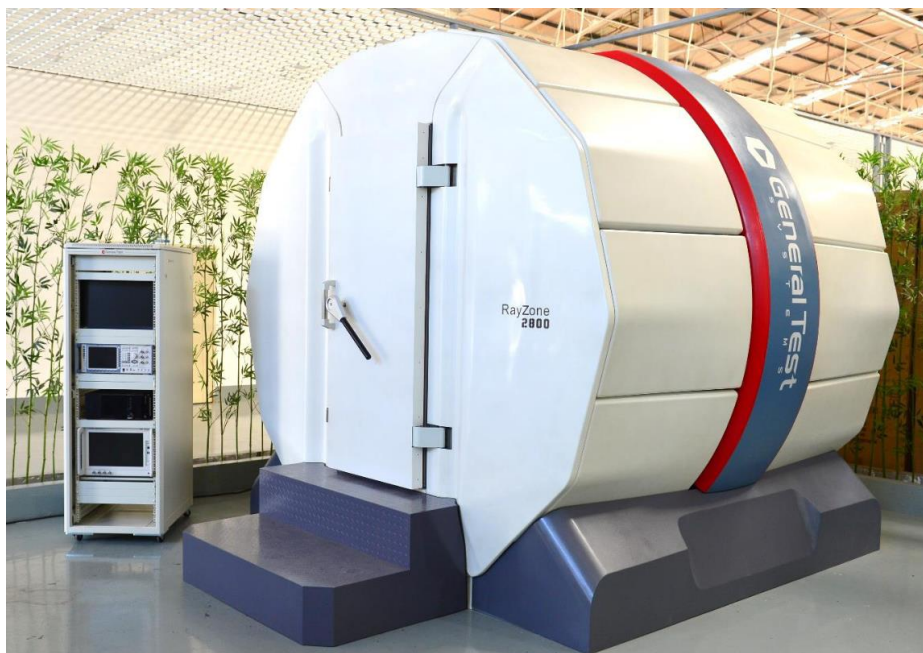


Figure 2 RayZone2800 OTA system

Equipment List

Table 1 Equipment List

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
☒	Network Analyzer	Keysight	E5071C	MY46527808	2025/1/9	2026/1/8
☐	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	-4.00	-6.42	22.80
2410	-4.07	-6.53	22.24
2420	-3.64	-6.13	24.37
2430	-3.21	-5.87	25.88
2440	-3.17	-5.83	26.14
2450	-3.20	-5.81	26.24
2460	-3.05	-5.61	27.46
2470	-3.08	-5.57	27.73
2480	-3.38	-5.82	26.18
2490	-3.78	-6.18	24.08
2500	-3.82	-6.31	23.39

Radiation Pattern

Table 4 Product coordinates

Product Coordinates	

Table 5 3D radiation pattern

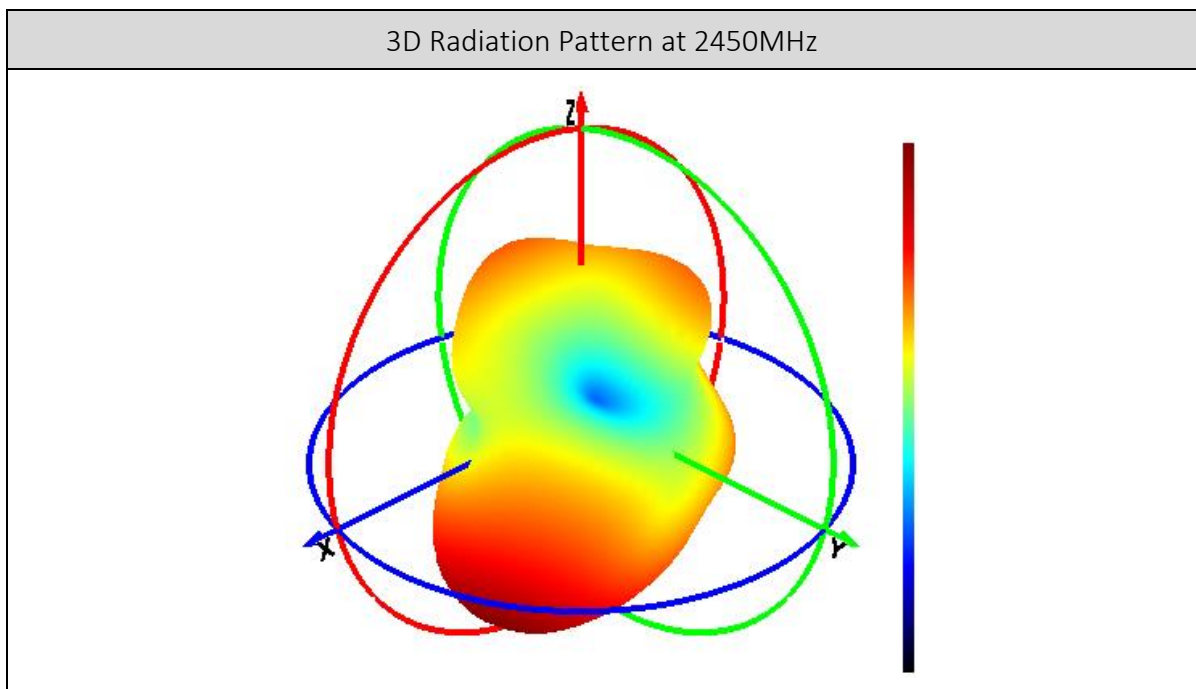


Table 6 Radiation pattern in XY Plane

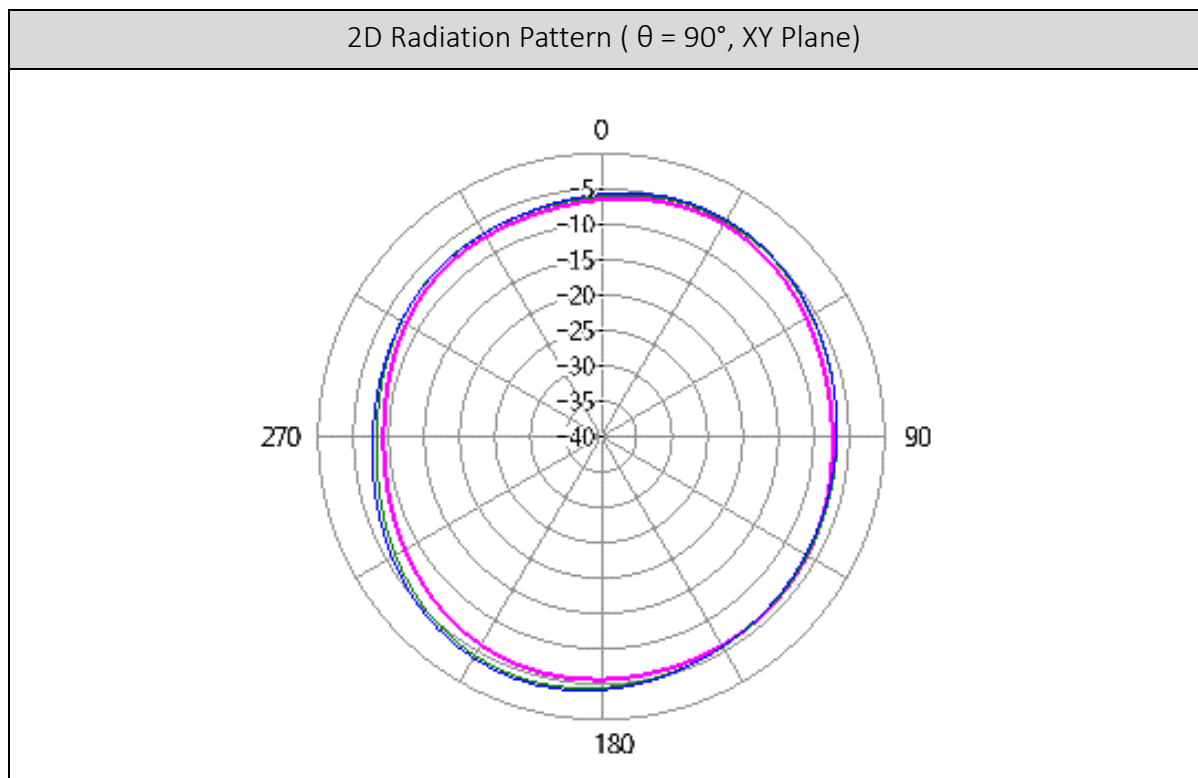


Table 7 Radiation pattern in XZ Plane

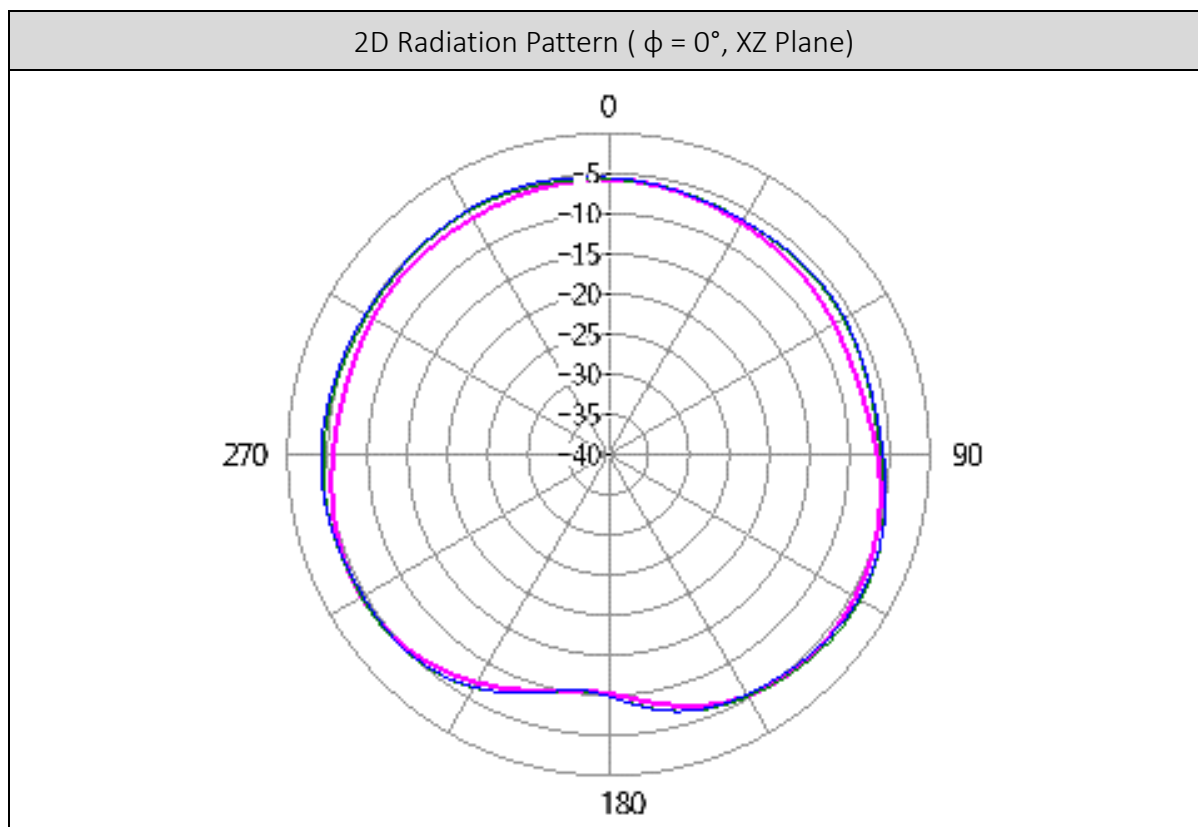


Table 8 Radiation pattern in YZ Plane

