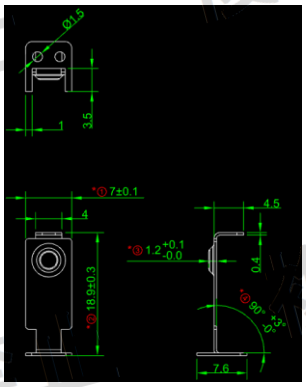
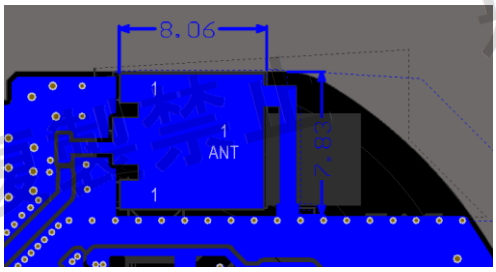
Antenna Specification

Antenna picture	 
Antenna Type	Internal inverted F PCB+Metal antenna
Antenna Peak Gain	1.63 dBi @ 2.4G
Operating Band	2400 MHz ~ 2500 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	M071 SL5H ble mesh 草坪灯
DUT photo	
Test Date	2026-02-04
Test Conductor	Zhuwei

OTA measurement

Test System

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

Figure 1 SY-16 OTA system

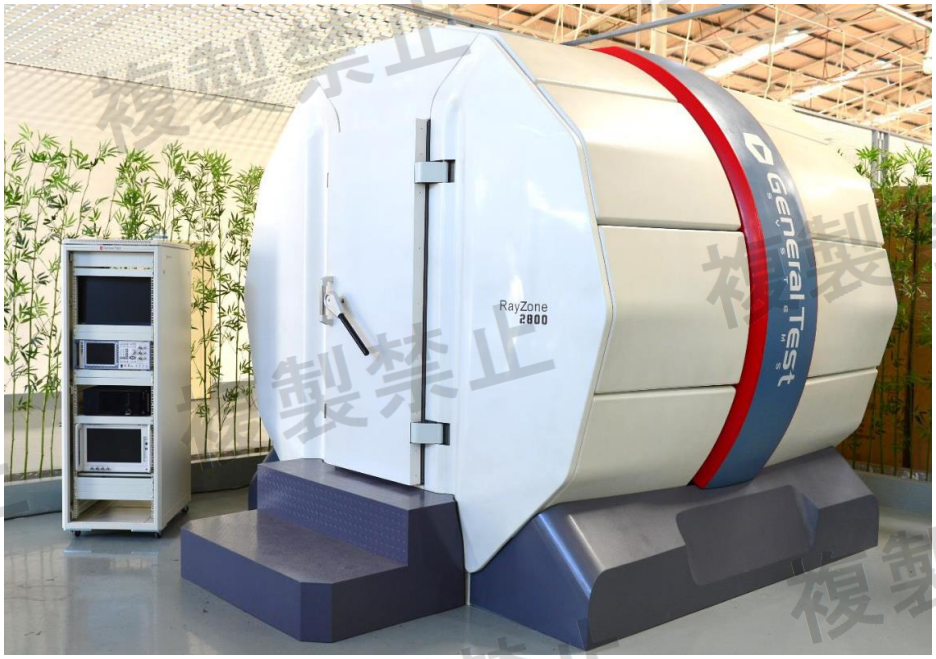


Figure 2 RayZone2800 OTA system

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	2025/4/19	2026/4/18
☐	Anechoic Chamber	Sunyield	SY-16	SI1727	2025/4/28	2026/4/27
☒	Anechoic Chamber	General Test System	RayZone2800	CT10121244 B5079	2025/5/10	2026/5/9

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

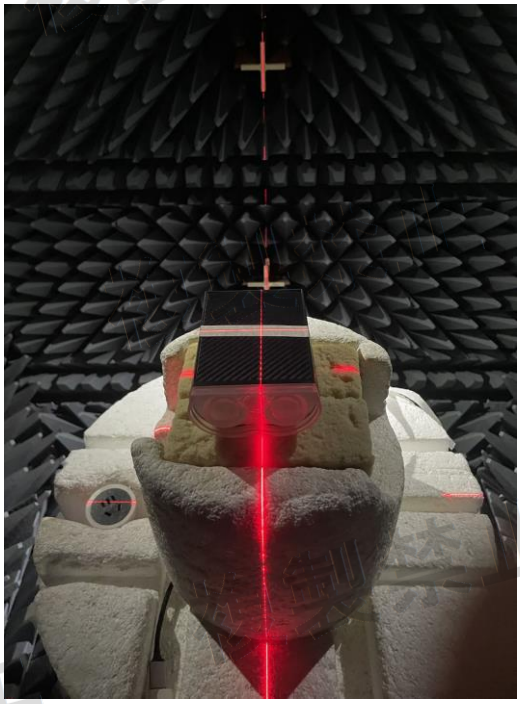
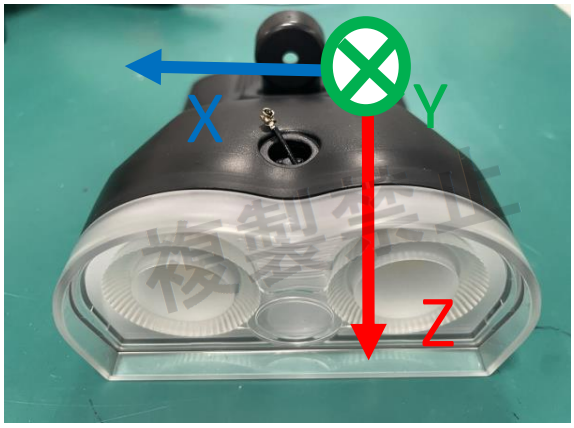
Table 3 Antenna Efficiency and Gain

Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	1.05	-2.68	53.95
2410	1.09	-2.72	53.50
2420	1.48	-2.66	54.25
2430	1.32	-2.63	54.60
2440	1.45	-2.51	56.09
2450	1.36	-2.40	57.54
2460	1.46	-2.39	57.63
2470	1.21	-2.42	57.29
2480	1.63	-2.46	56.73
2490	1.32	-2.42	57.26
2500	1.22	-2.49	56.42

複製禁止

Radiation Pattern

Table 4 Product coordinates

Product Coordinates	
	

複製禁止

Table 5 3D radiation pattern @ 2450 MHz

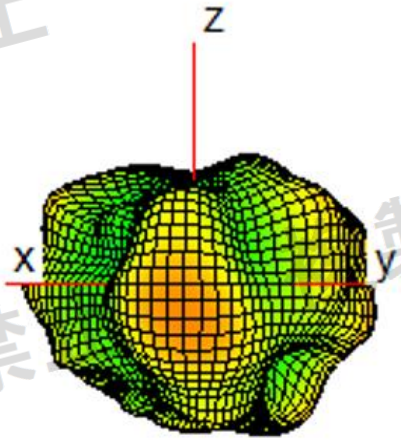
3D Radiation Pattern at 2450 MHz


Table 6 Radiation pattern in XY Plane

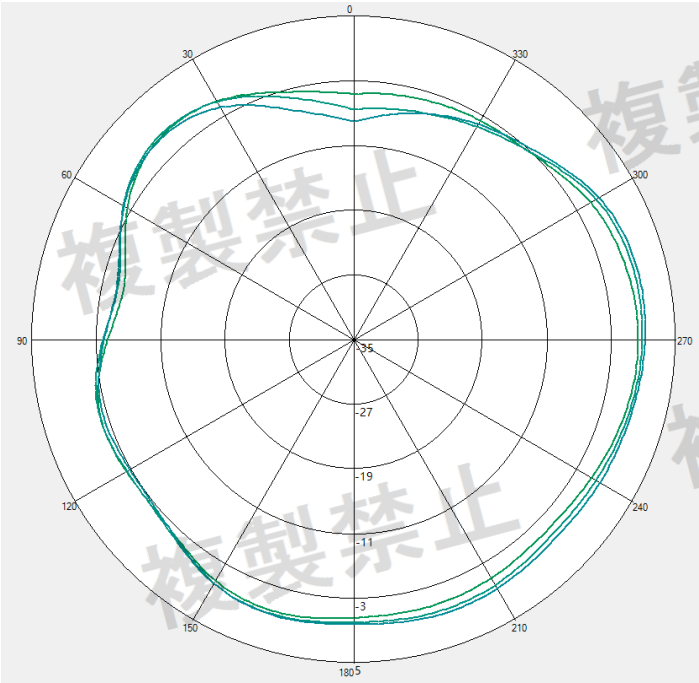
2D Radiation Pattern (θ = 90°, XY Plane)


Table 7 Radiation pattern in XZ Plane

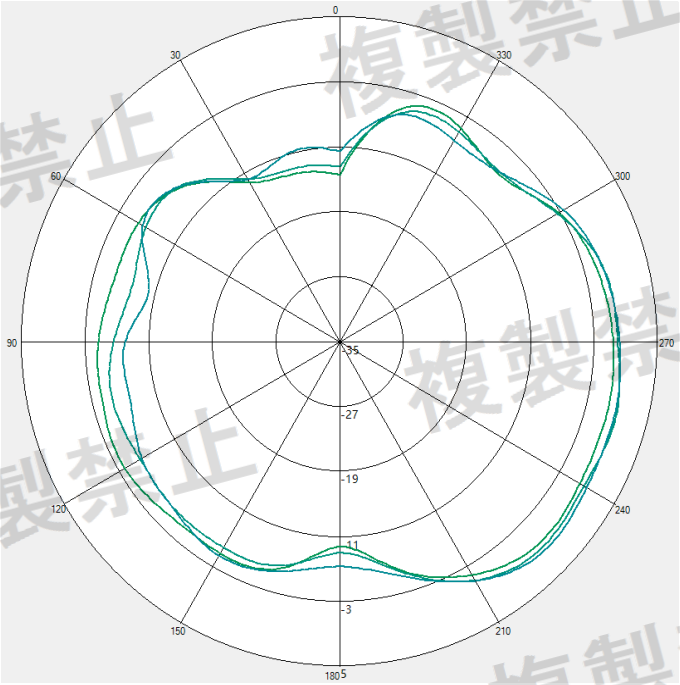
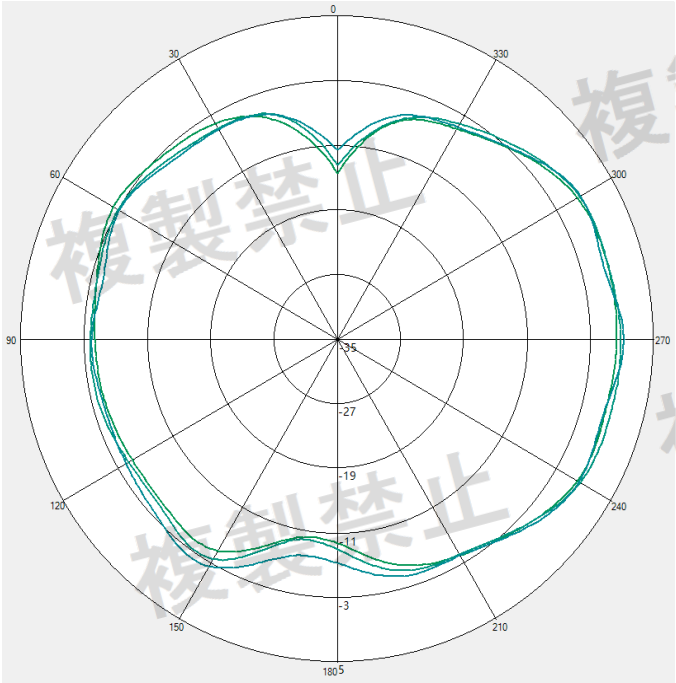
2D Radiation Pattern (ϕ = 0°, XZ Plane)


Table 8 Radiation pattern in YZ Plane

2D Radiation Pattern (ϕ = 90°, YZ Plane)