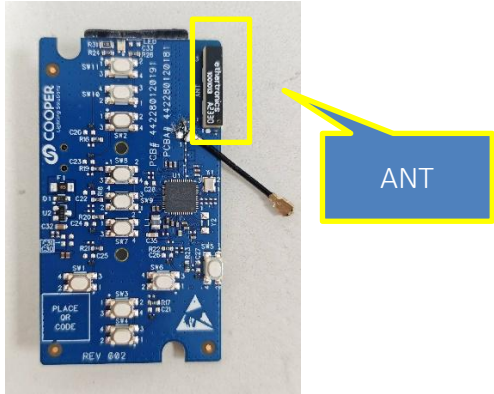
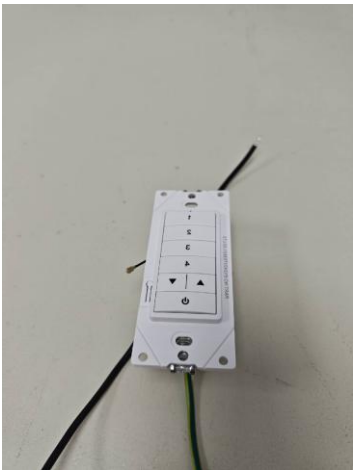


Antenna Specification

Antenna picture	
Antenna Type	SMT chip Antenna
Antenna Peak Gain	1.14dBi
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	No-Neutral AC BLE 7 键 Keypad
DUT photo	
Test Date	2026-08-10
Test Conductor	Xiu Weisong

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

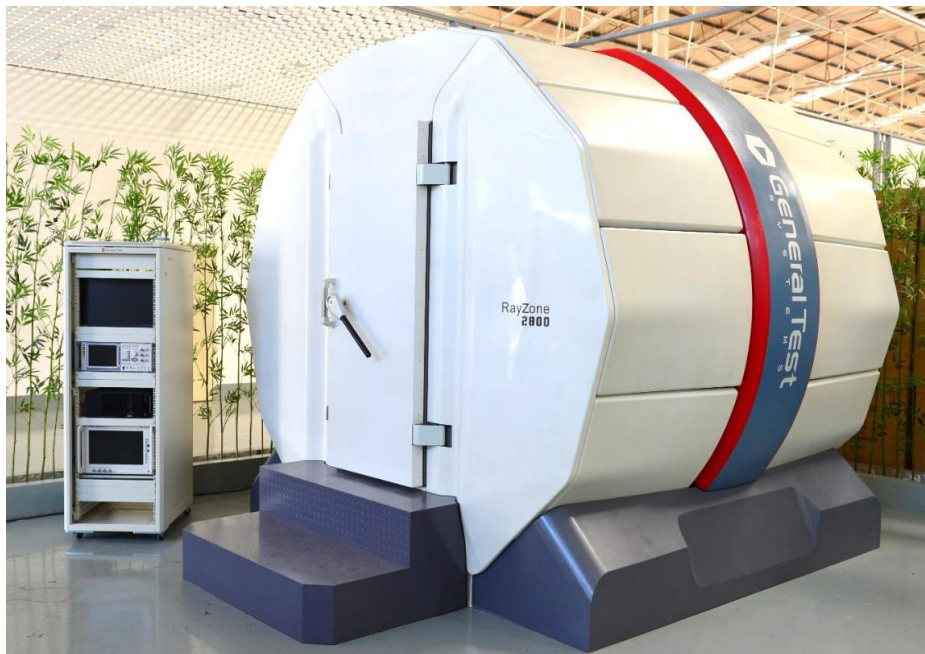


Figure 2 RayZone2800 OTA system

Equipment List

Table 1 Equipment List

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
☒	Network Analyzer	Keysight	E5071C	MY46527808	2026/1/9	2027/1/8
☒	Network Analyzer	Keysight	E5071C	MY46108051	2026/4/19	2027/4/18
☐	Anechoic Chamber	Sunyield	SY-16	SI1727	2026/4/28	2027/4/27
☒	Anechoic Chamber	General Test System	RayZone2800	CT10121244 B5079	2026/5/10	2027/5/9

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	0.21	-3.25	47.36
2410	0.18	-3.26	47.19
2420	0.35	-3.25	47.28
2430	0.47	-3.19	47.98
2440	0.77	-2.99	50.22
2450	1.00	-2.80	52.51
2460	1.14	-2.71	53.52
2470	1.09	-2.70	53.75
2480	1.11	-2.66	54.22
2490	1.13	-2.61	54.78
2500	1.12	-2.60	54.98

Radiation Pattern

Table 4 Product coordinates

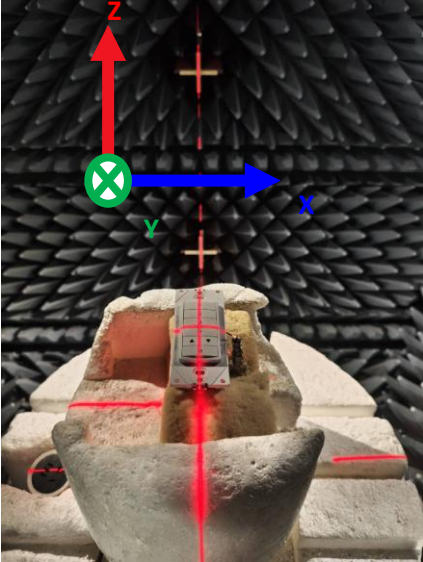
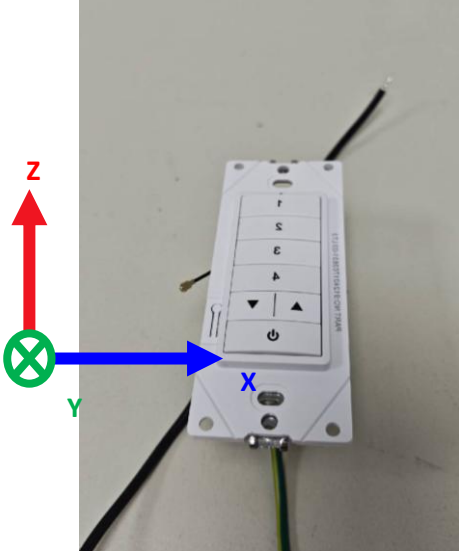
Product Coordinates	
	

Table 5 3D radiation pattern

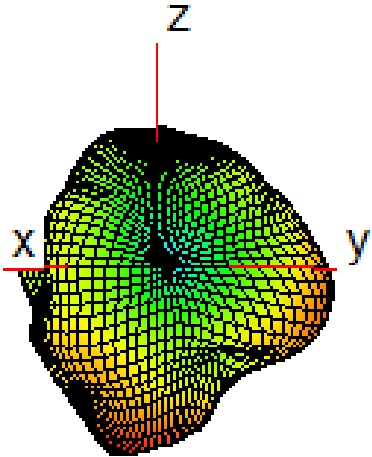
3D Radiation Pattern at 2450MHz


Table 6 Radiation pattern in XY Plane

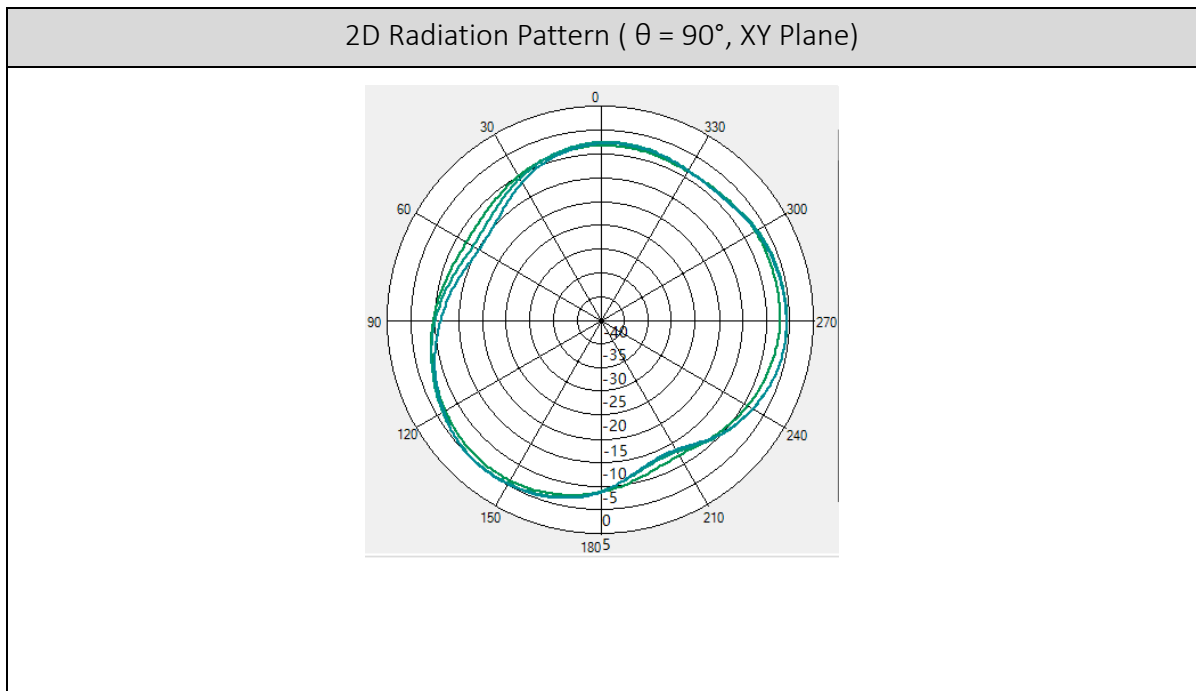


Table 7 Radiation pattern in XZ Plane

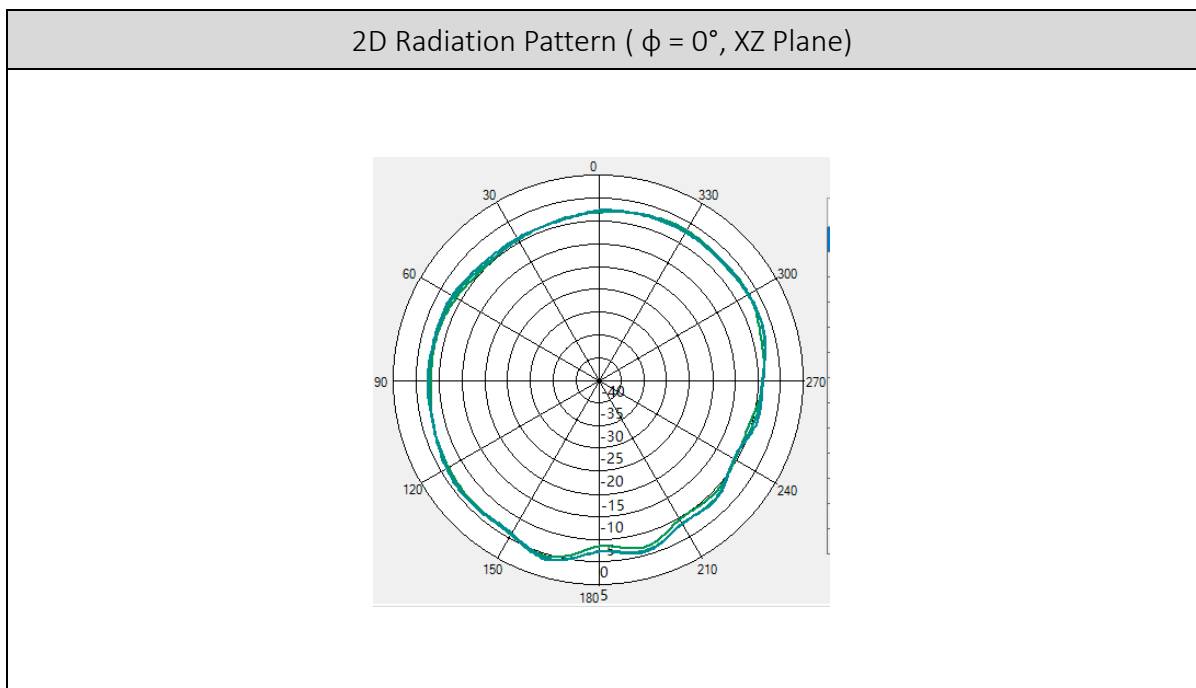


Table 8 Radiation pattern in YZ Plane

2D Radiation Pattern ($\phi = 90^\circ$, YZ Plane)

