

Antenna Specification

Antenna picture	
Antenna Type	Internal Monopole Metal antenna
Antenna Peak Gain	-2.78 dBi
Operating Band	2400 MHz ~ 2500 MHz
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	A19 RGBTW
DUT photo	
Test Date	2025-10-25
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	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	-2.78	-7.32	18.53
2410	-2.99	-7.58	17.47
2420	-3.50	-8.07	15.59
2430	-3.50	-7.99	15.88
2440	-3.48	-7.88	16.31
2450	-4.09	-8.53	14.02
2460	-4.11	-8.71	13.45
2470	-3.68	-8.32	14.71
2480	-3.49	-8.28	14.86
2490	-3.55	-8.46	14.27
2500	-2.91	-7.94	16.07

Radiation Pattern

Table 4 Product coordinates

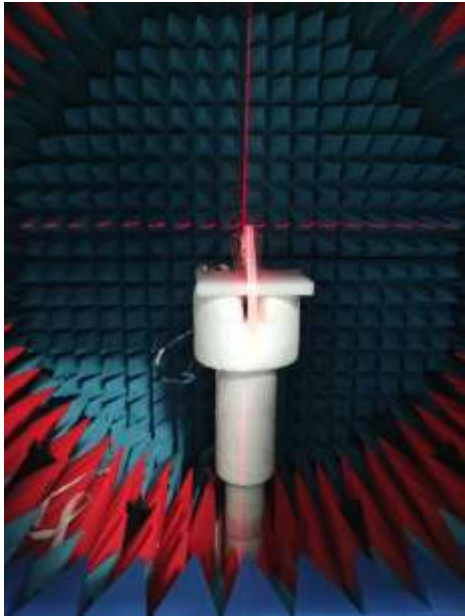
Product Coordinates	
	

Table 5 3D radiation pattern

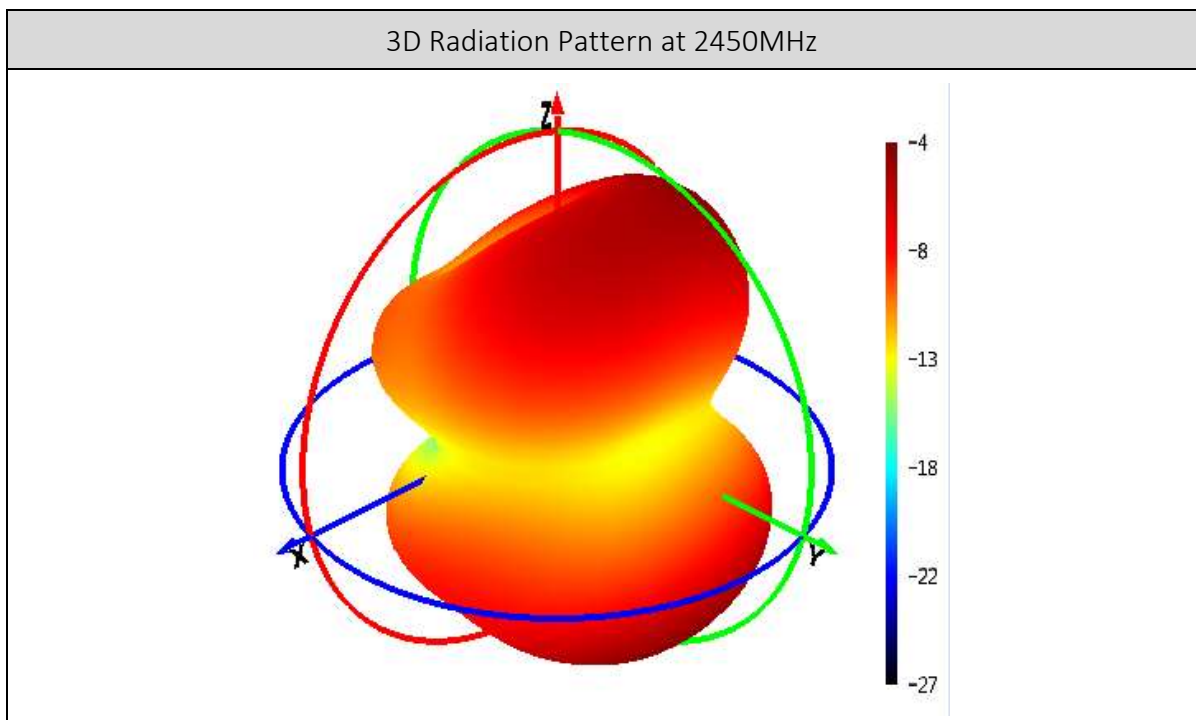


Table 6 Radiation pattern in XY Plane

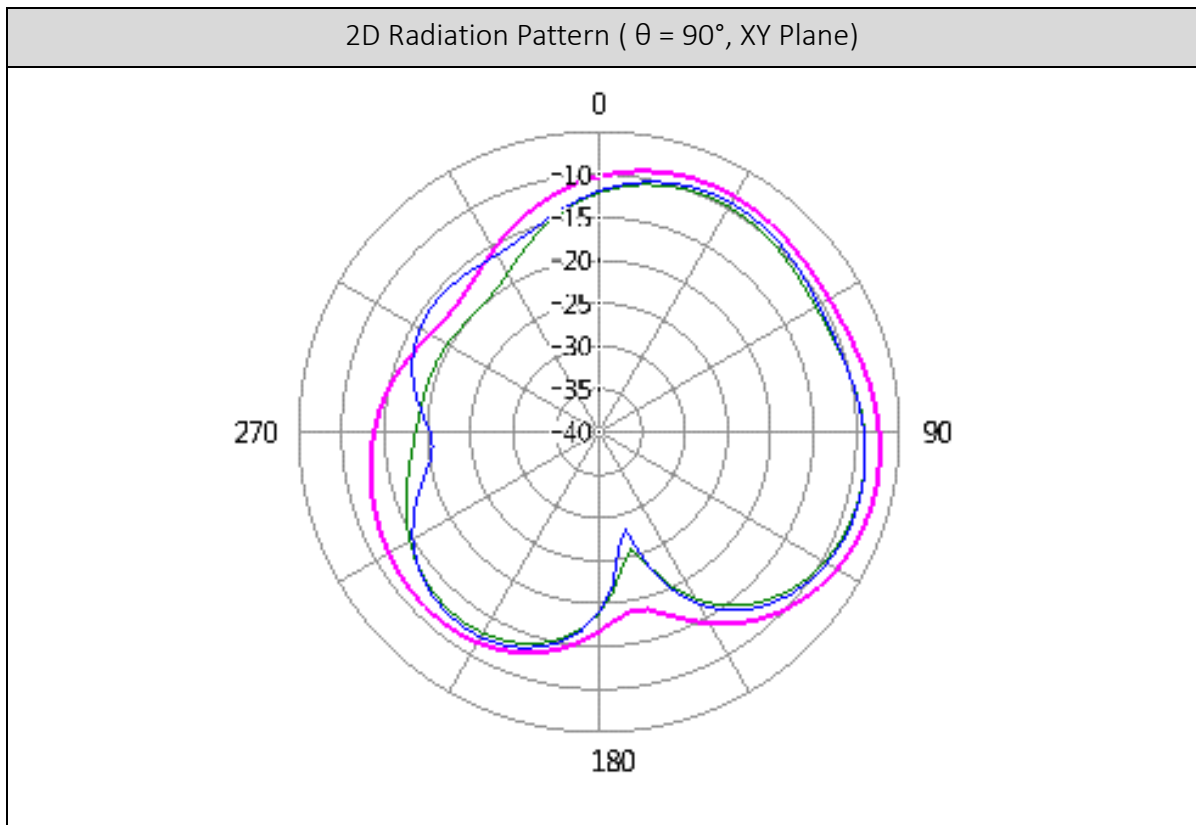


Table 7 Radiation pattern in XZ Plane

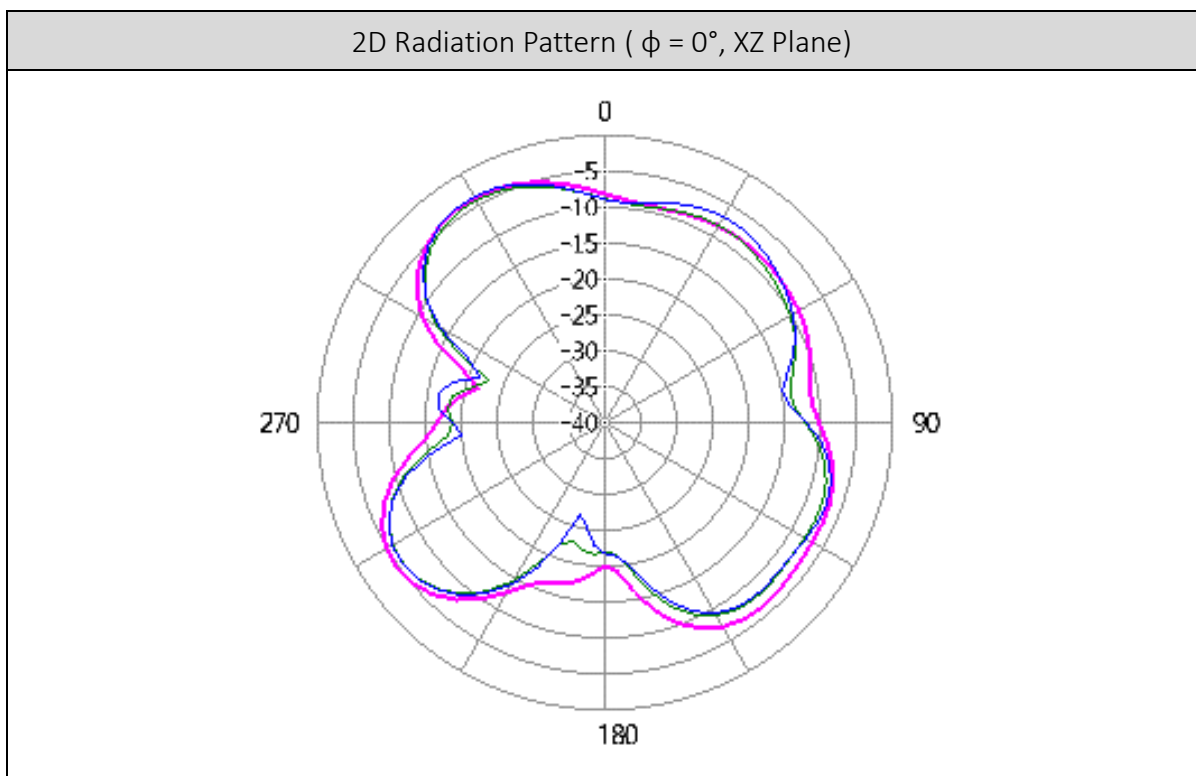


Table 8 Radiation pattern in YZ Plane

