

Antenna Specification

Antenna Type	Metal IFA antenna
Antenna Peak Gain	0.88 dBi @ Sub-G; 3.85 dBi @ BLE
Operating Band	902 ~ 928 MHz & 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	6A33F2
Test Date	2025-09-26
Test Conductor	ouyanglongji

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	Sunyild	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 (%)
902	-0.92	-6.49	22.45
904	-0.62	-6.23	23.8
906	-0.47	-6.1	24.54
908	-0.34	-5.94	25.44
910	-0.1	-5.68	27.02
912	0.12	-5.48	28.32
914	0.3	-5.34	29.23
916	0.34	-5.33	29.3
918	0.33	-5.33	29.29
920	0.38	-5.26	29.8
922	0.56	-5.07	31.09

924	0.78	-4.91	32.3
926	0.88	-4.9	32.39
928	0.8	-5.02	31.46
2400	3.61	-1.92	64.28
2410	3.72	-1.8	66.13
2420	3.81	-1.6	69.13
2430	3.76	-1.69	67.72
2440	3.6	-1.64	68.54
2450	3.75	-1.61	69.06
2460	3.85	-1.55	69.91
2470	3.71	-1.64	68.61
2480	3.73	-1.64	68.57
2490	3.71	-1.59	69.29
2500	3.68	-1.57	69.72

Radiation Pattern

Table 5 3D radiation pattern @ 915 MHz

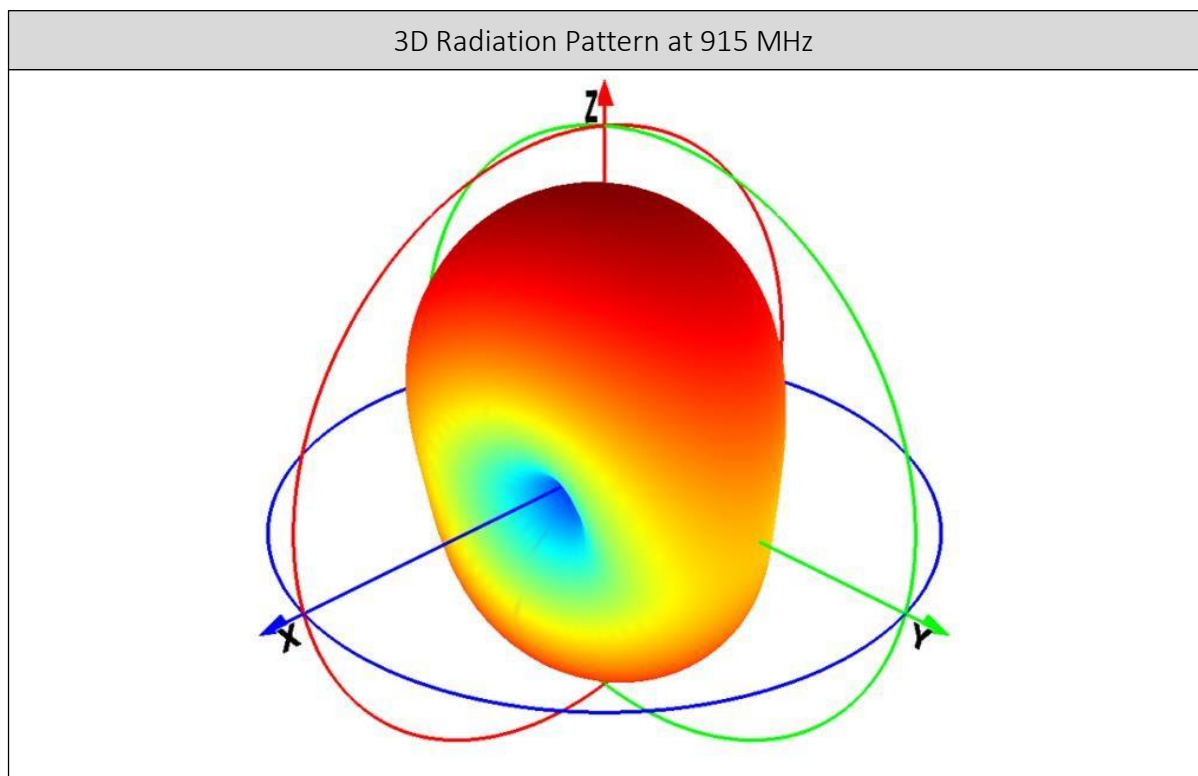


Table 6 Radiation pattern in XY Plane

2D Radiation Pattern ($\theta = 90^\circ$, XY Plane)

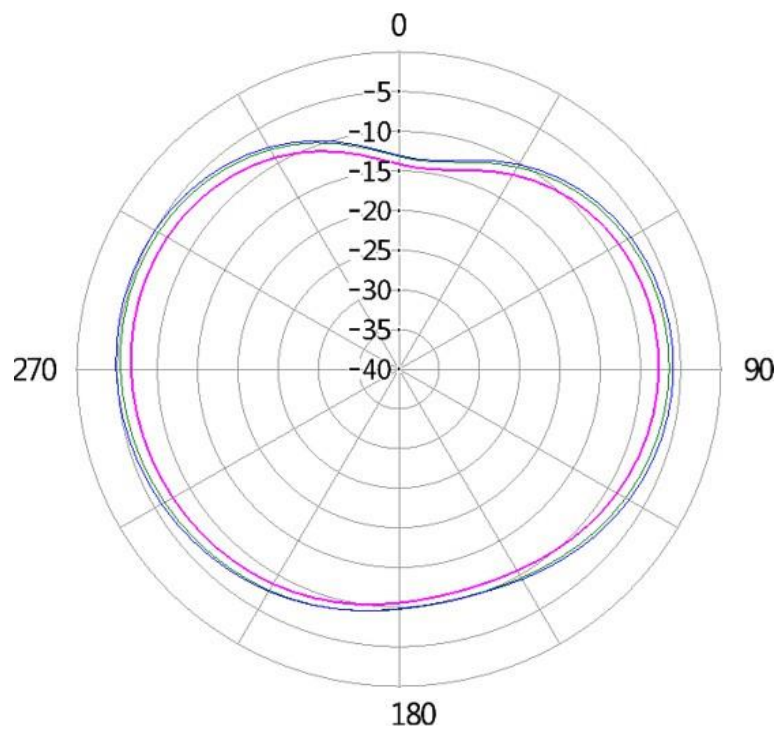


Table 7 Radiation pattern in XZ Plane

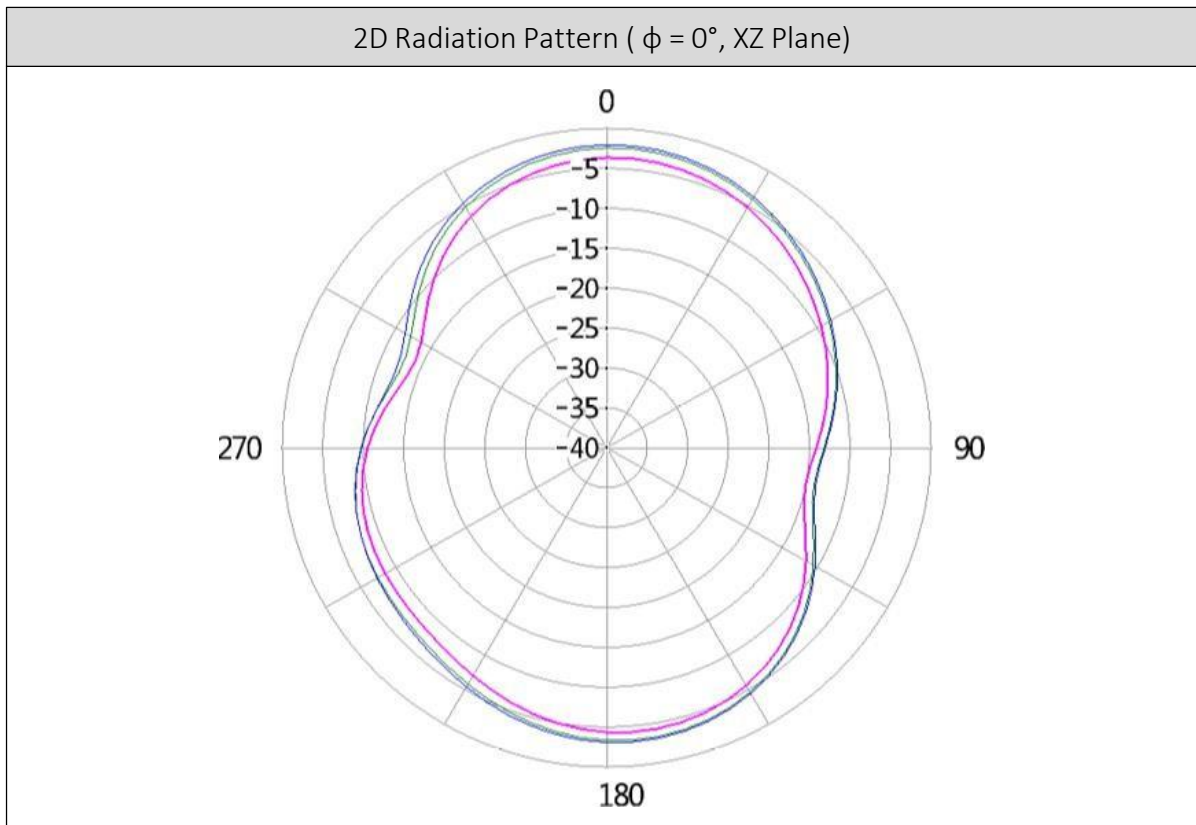


Table 8 Radiation pattern in YZ Plane

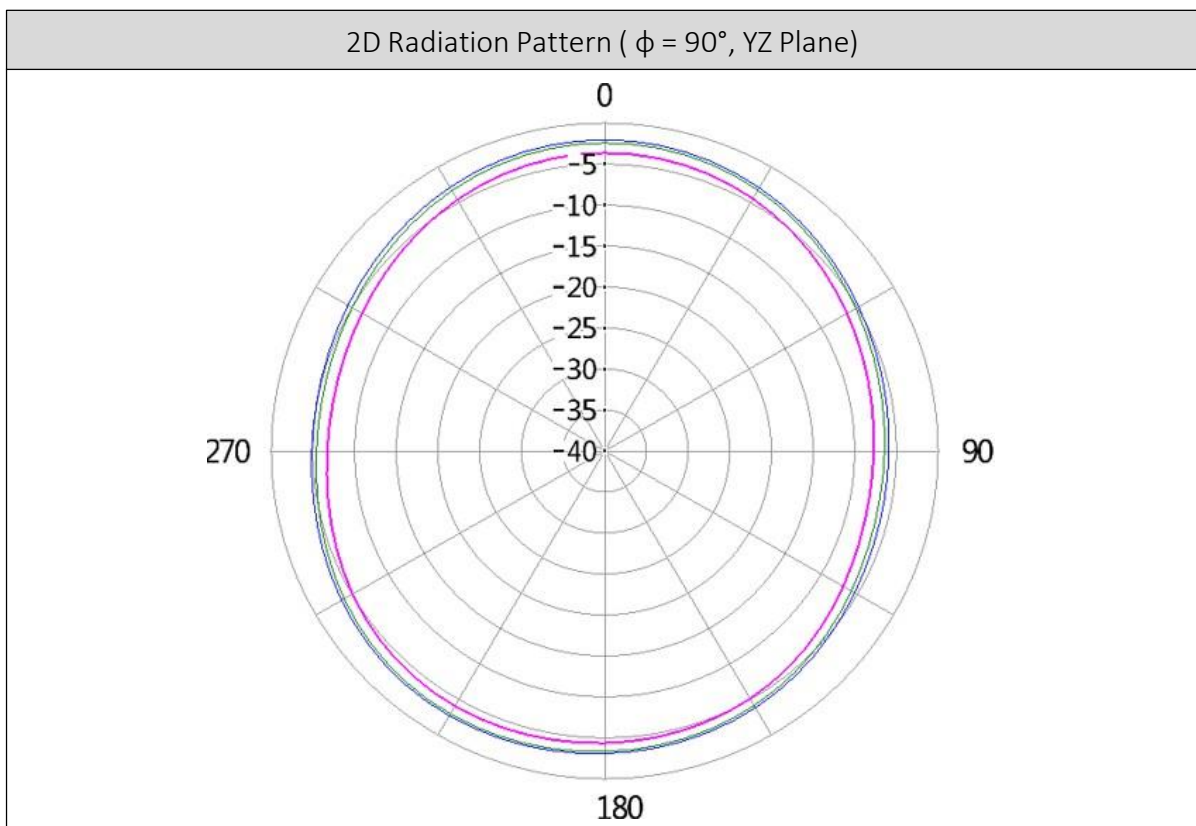


Table 9 3D radiation pattern @ 2450 MHz

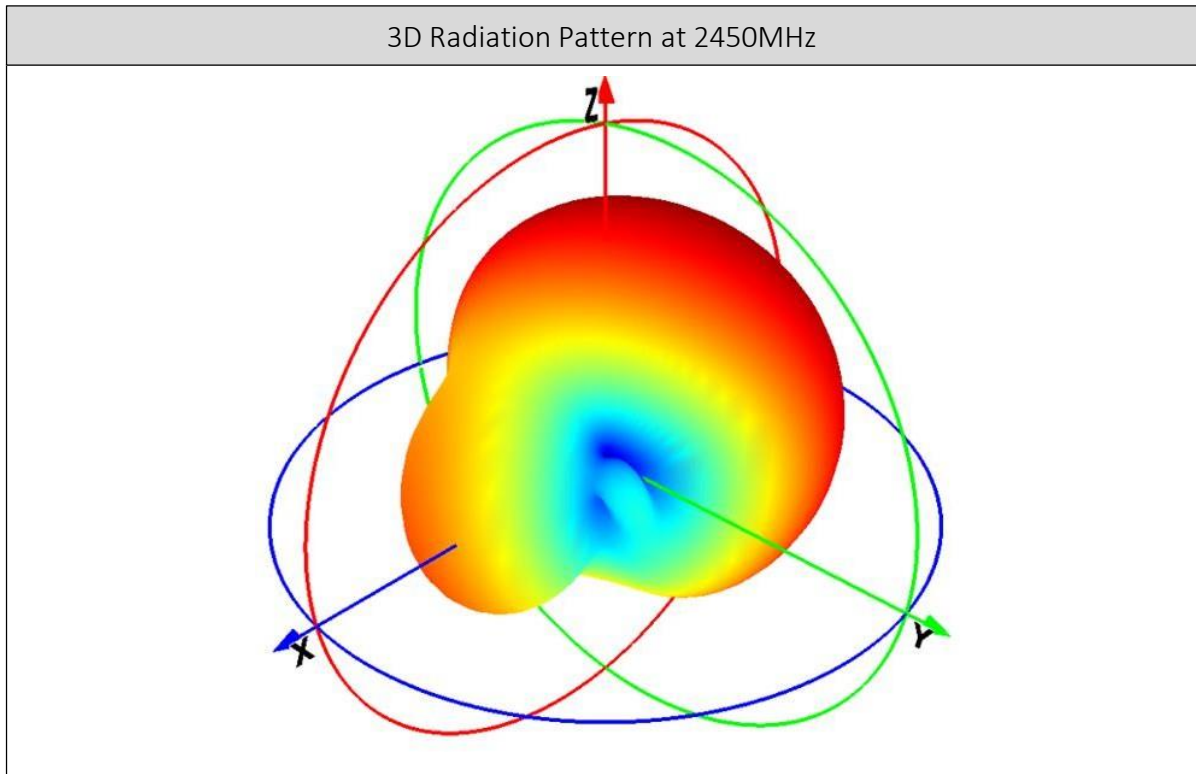


Table 10 Radiation pattern in XY Plane

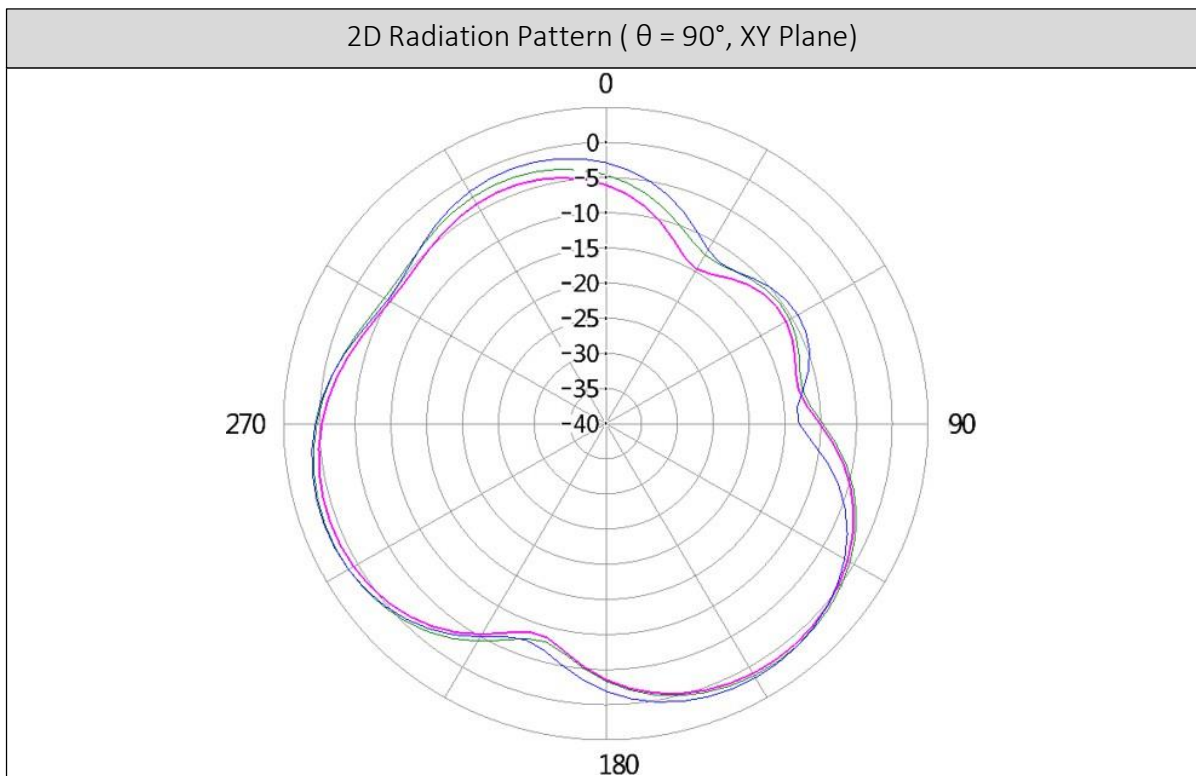


Table 11 Radiation pattern in XZ Plane

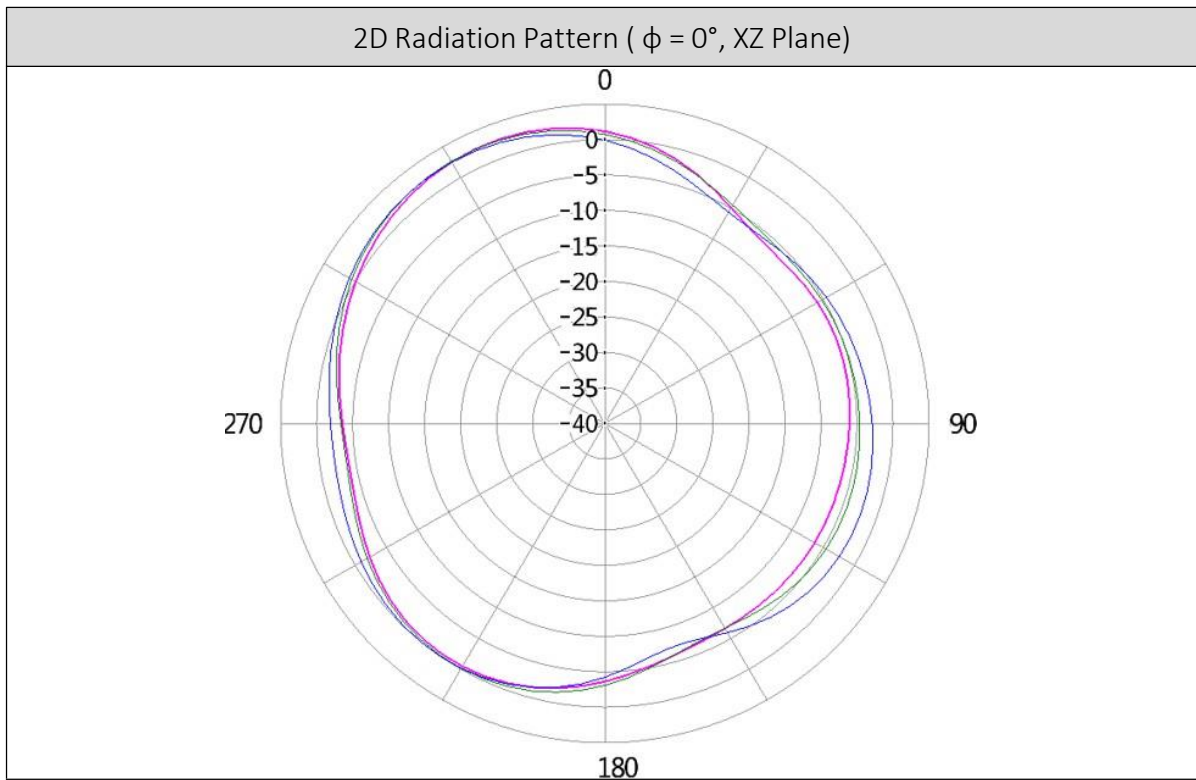


Table 12 Radiation pattern in YZ Plane

