

Antenna Specification

Antenna Type	Metal IFA antenna
Antenna Peak Gain	0.45 dBi @ Sub-G; 4.80 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	7PFYA2
Test Date	2025-09-29
Test Conductor	Fenghuijuan

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 (%)
902	-0.07	-3.51	44.57
904	0.05	-3.44	45.26
906	0.01	-3.50	44.68
908	-0.03	-3.52	44.44
910	0.04	-3.44	45.30
912	0.11	-3.40	45.67
914	0.15	-3.42	45.47
916	0.06	-3.54	44.27
918	-0.05	-3.67	43.00
920	-0.06	-3.67	42.97
922	0.08	-3.55	44.20

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924	0.29	-3.40	45.75
926	0.45	-3.32	46.59
928	0.45	-3.39	45.87
2400	4.58	-2.75	53.11
2410	4.73	-2.57	55.37
2420	4.80	-2.44	57.06
2430	4.57	-2.60	54.91
2440	4.56	-2.52	55.93
2450	4.61	-2.55	55.62
2460	4.44	-2.67	54.09
2470	4.17	-2.77	52.90
2480	3.97	-2.86	51.72
2490	3.61	-3.08	49.21
2500	3.44	-3.15	48.44

Table 5 3D radiation pattern

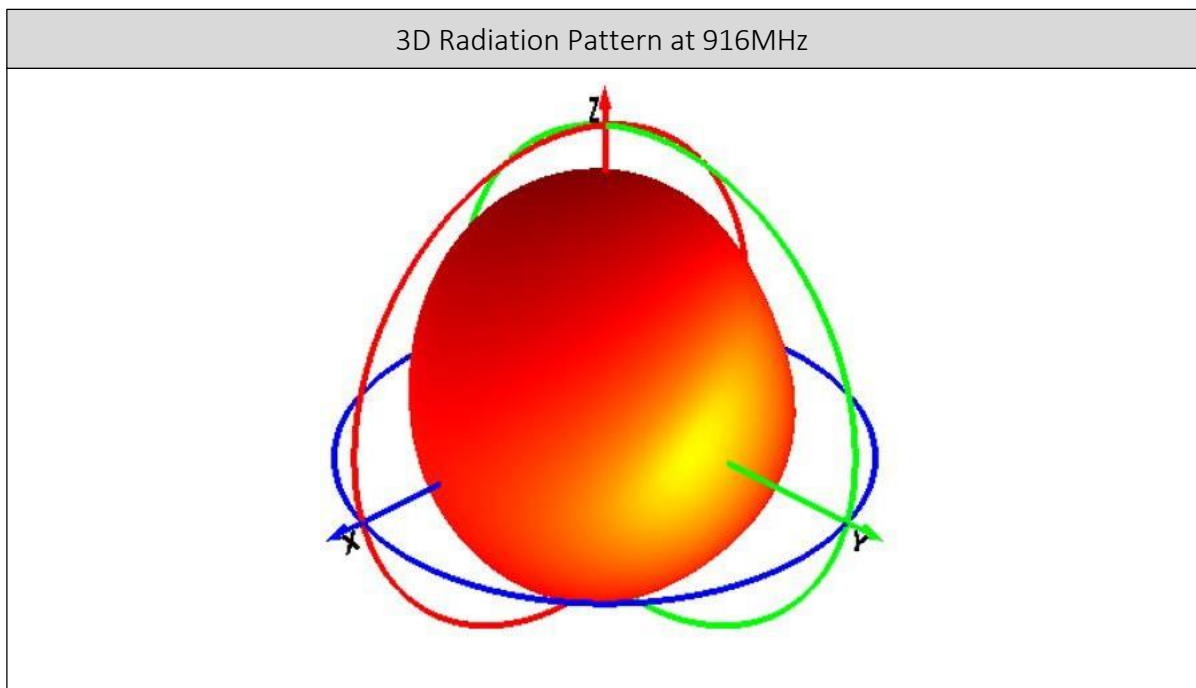


Table 6 Radiation pattern in XY Plane

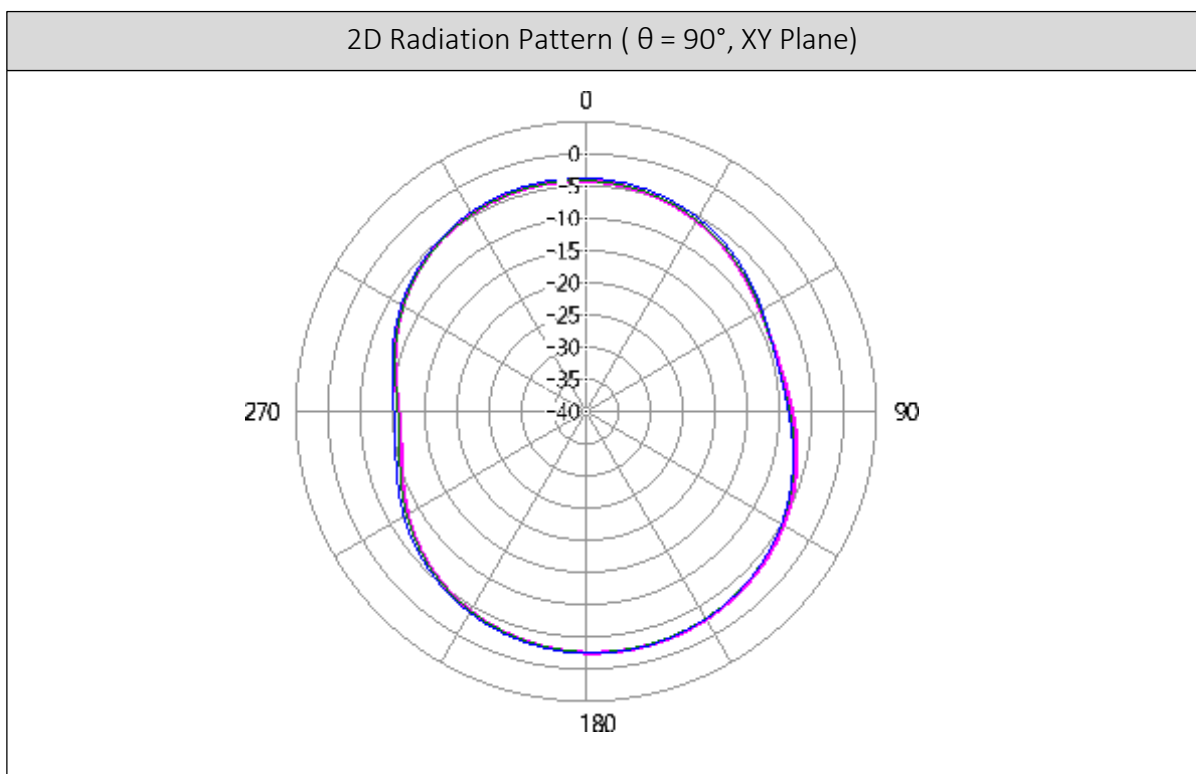


Table 7 Radiation pattern in XZ Plane

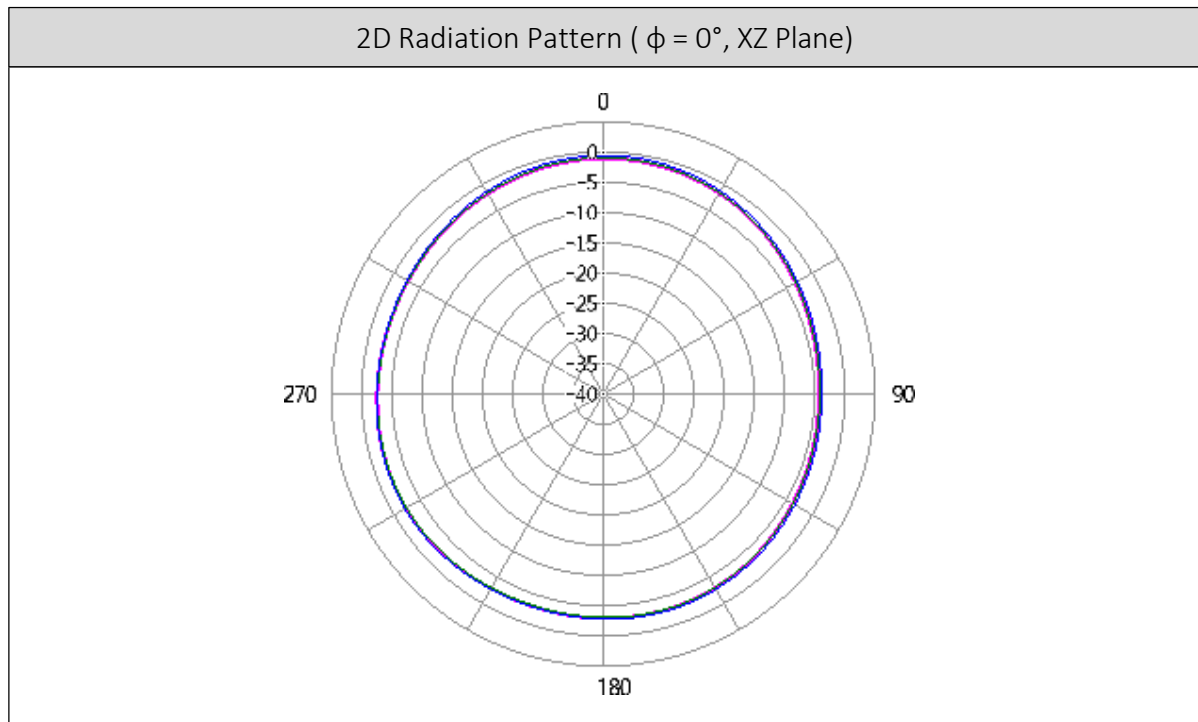


Table 8 Radiation pattern in YZ Plane

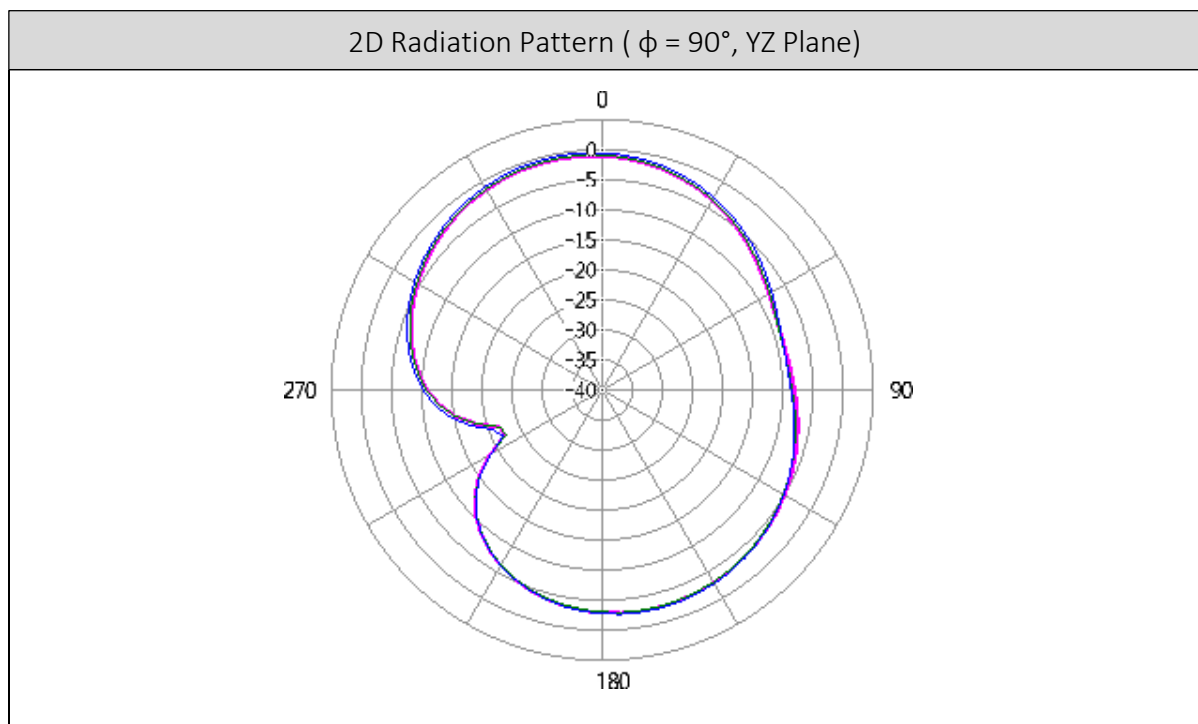


Table 5 3D radiation pattern

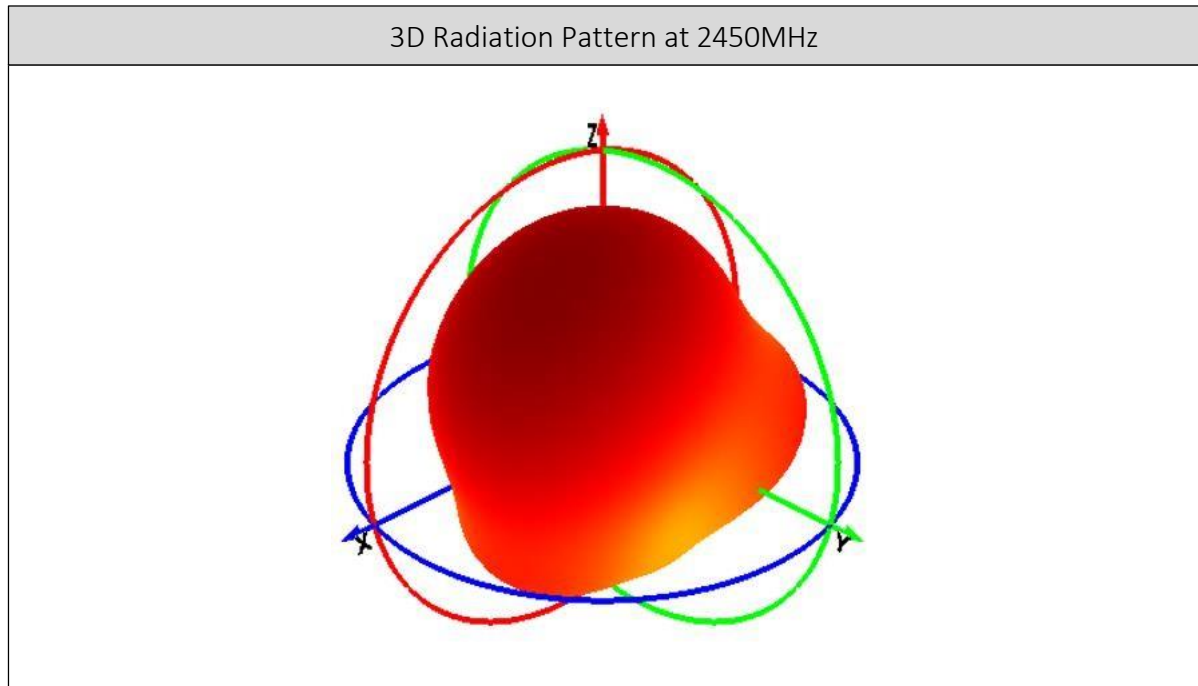


Table 6 Radiation pattern in XY Plane

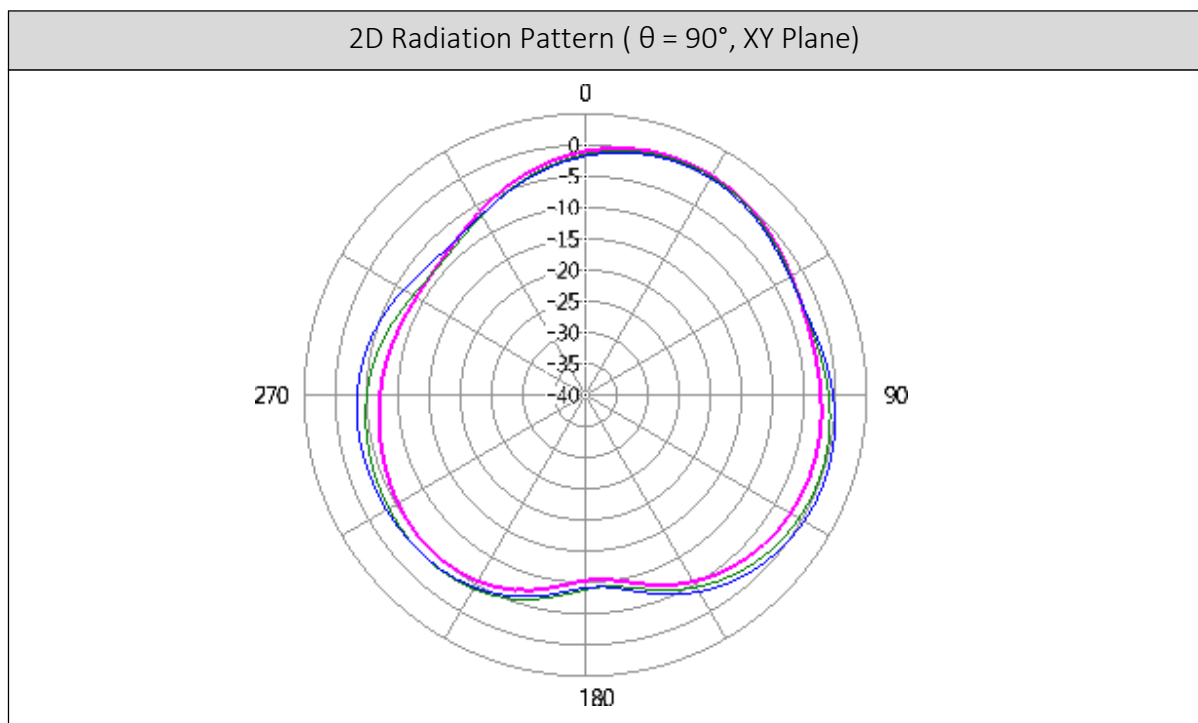


Table 7 Radiation pattern in XZ Plane

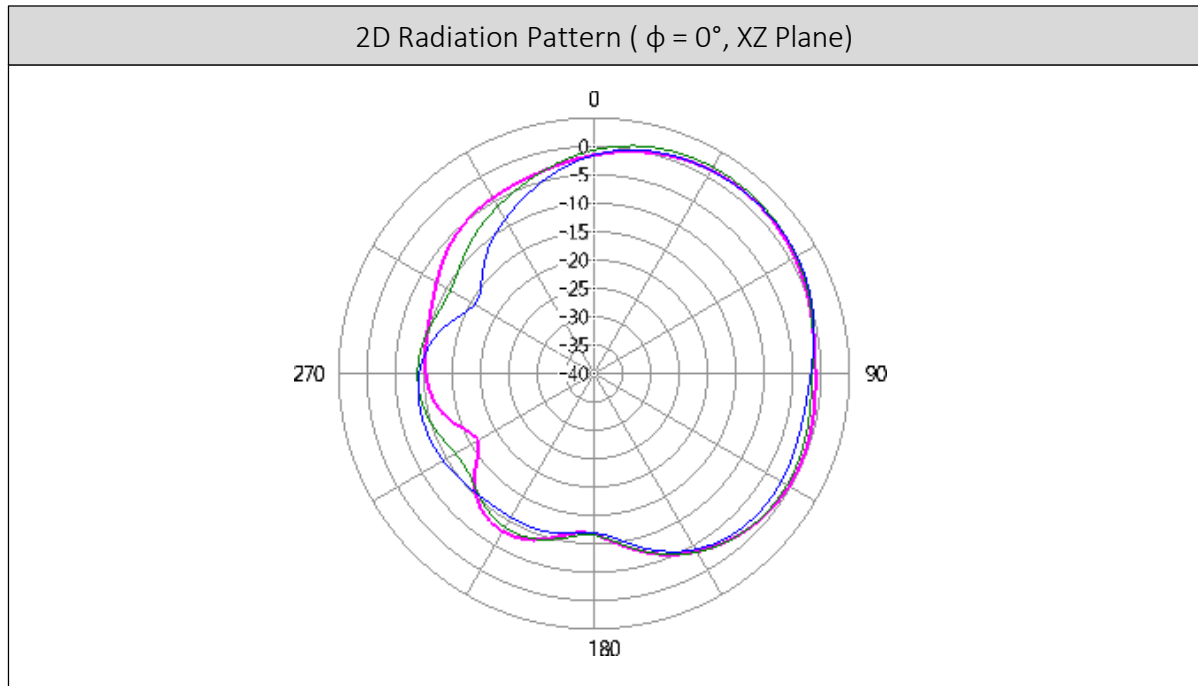


Table 8 Radiation pattern in YZ Plane

