
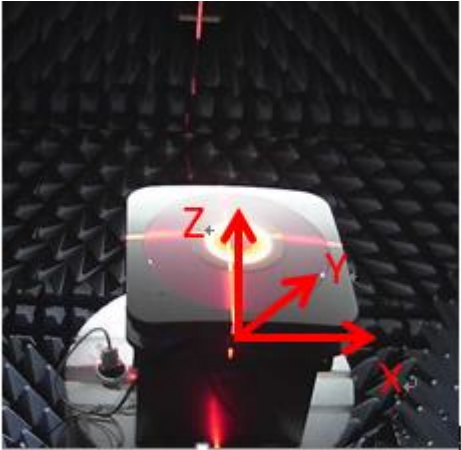


# Antenna Specification

Antenna picture	 <p>Antenna Size: 42x12mm, coaxial <math>\phi</math> 1.13x145mm</p>
Antenna Type	External antenna
Antenna Peak Gain	5.95 dBi
Operating Band	2400 MHz ~ 2480 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 Bath fan 110/160CFM
DUT photo	
Test Date	2023-6-27
Test Conductor	Fenghuijuan

OTA measurement

### Test System

The SY-16 OTA system is an anechoic chamber, which can measure antenna passive data such as antenna efficiency, antenna gain, and 2D&3D pattern. The coordinates and topology are shown as follows:

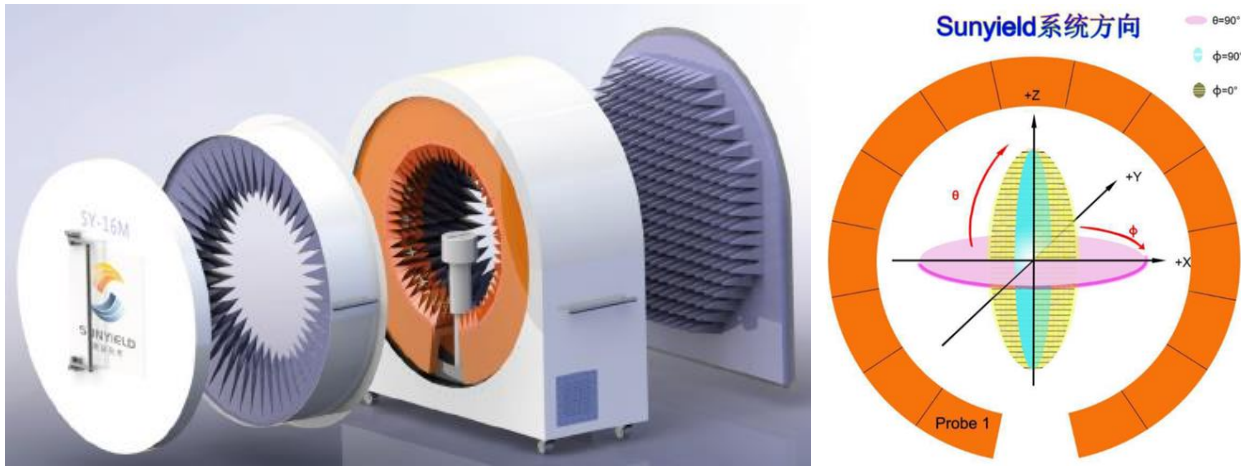


Figure 1 SY-16 OTA system

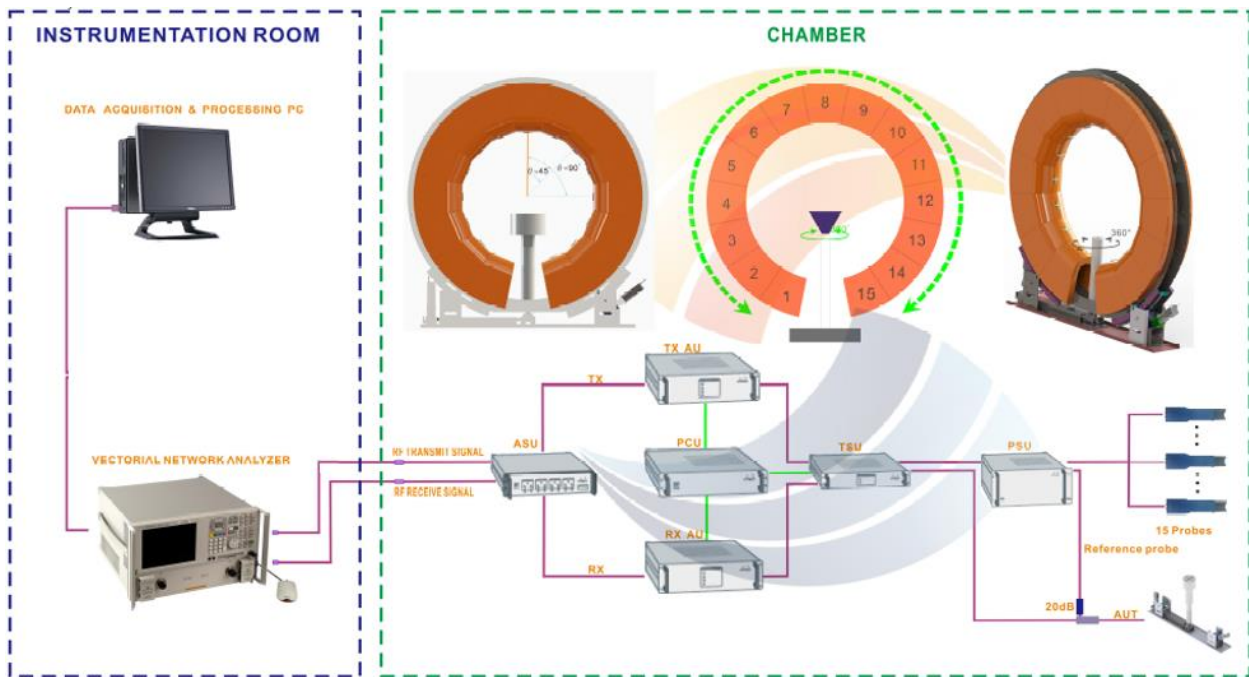


Figure 2 OTA measurement topology

## Equipment List

Table 1 Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Network Analyzer	Keysight	E5071C	MY46527808	2023/1/9	2024/1/8
Anechoic Chamber	Sunyield	SY-16	SI1727	2023/5/10	2024/5/9

## 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 Being Used	PMS
Software Version	V2.8.5

## Test Result

### Efficiency and Gain

Table 3 Antenna Efficiency and Gain

Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	5.89	-1.85	65.36
2410	5.92	-1.57	69.68
2420	5.71	-1.55	70.04
2430	5.71	-1.72	67.33
2440	5.95	-1.72	67.36
2450	5.71	-1.68	67.91
2460	5.46	-2.00	63.15
2470	5.65	-2.18	60.57
2480	5.37	-2.06	62.25
2490	5.34	-2.34	58.39
2500	5.89	-2.41	57.44

Radiation Pattern

Table 4 Product coordinates

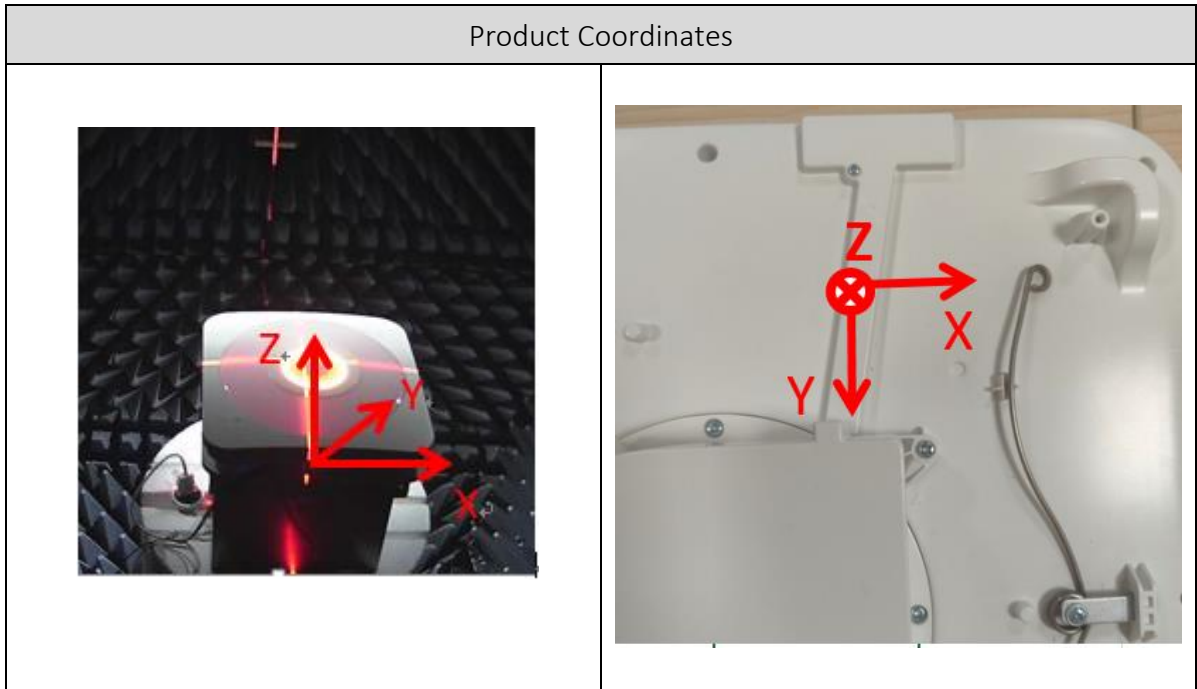


Table 5 3D radiation pattern

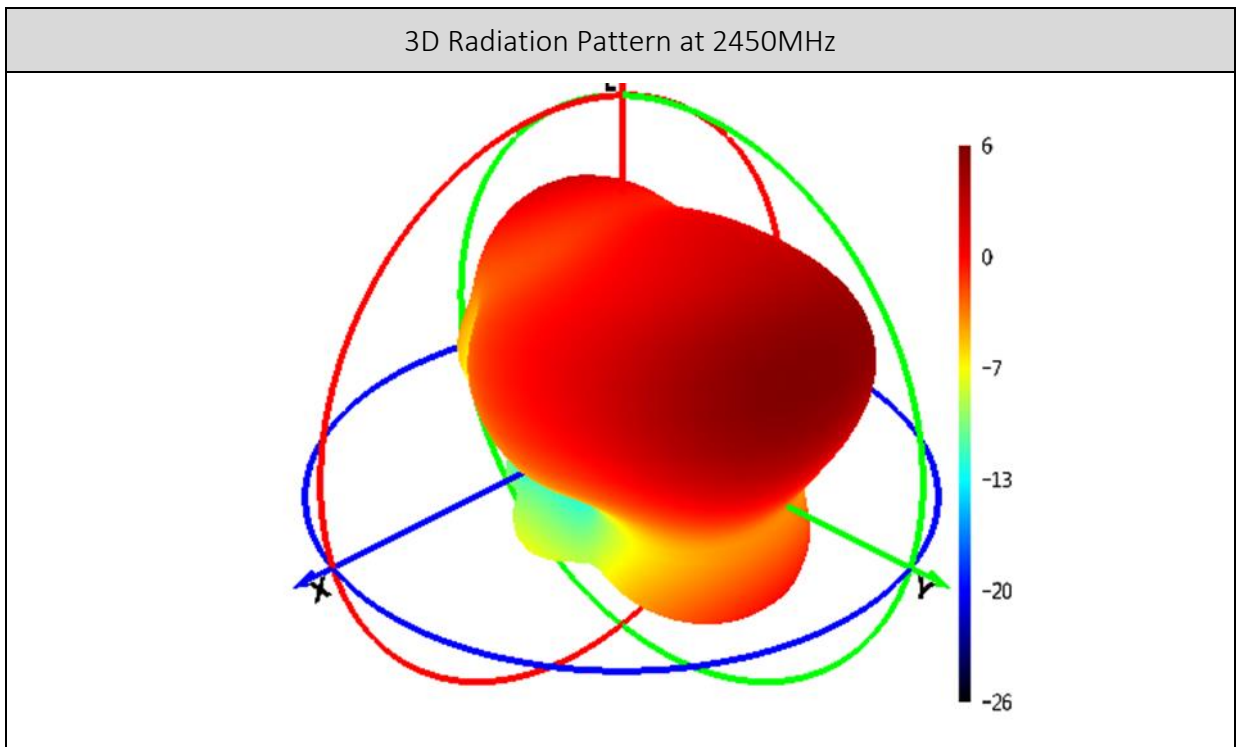


Table 6 Radiation pattern in XY Plane

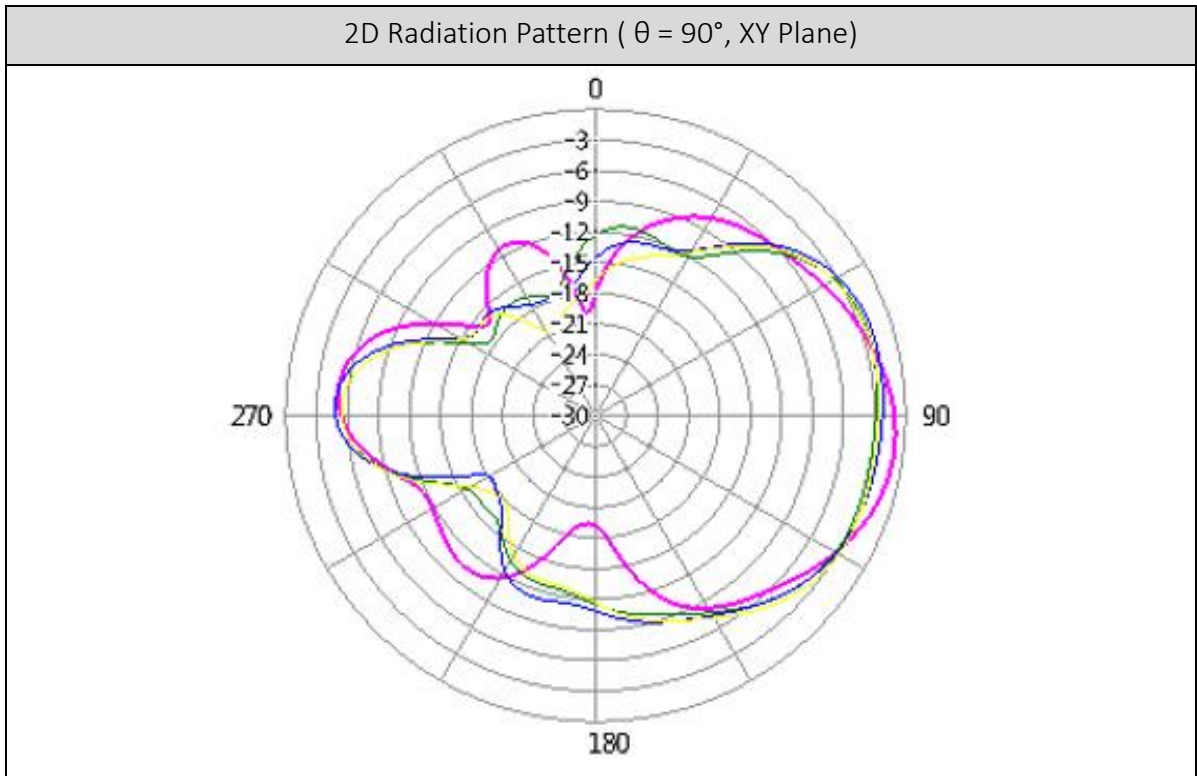


Table 7 Radiation pattern in XZ Plane

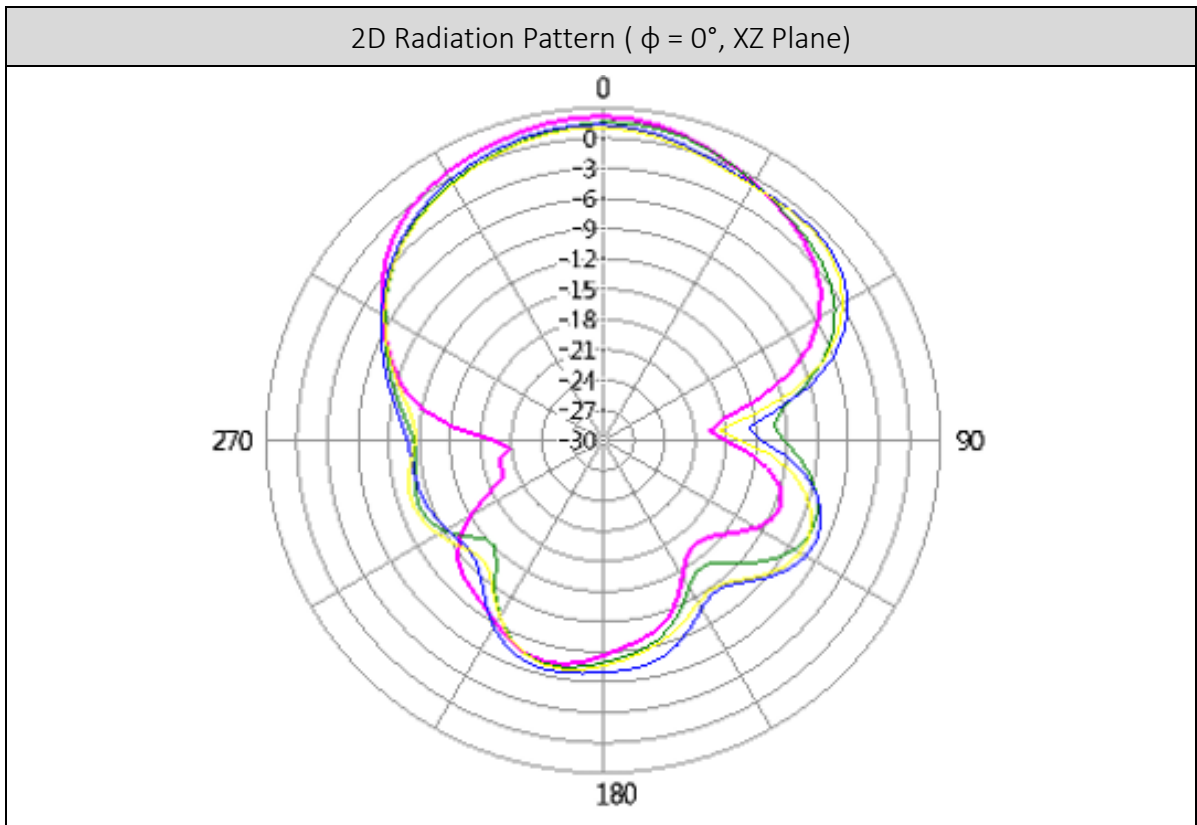


Table 8 Radiation pattern in YZ Plane

