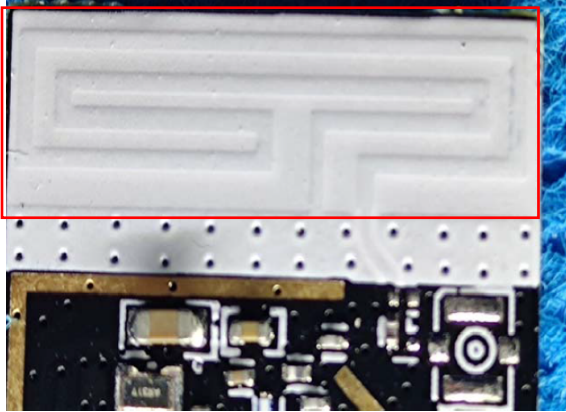
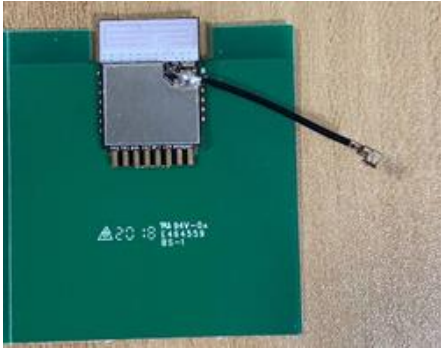


Antenna Information

Antenna Picture	
Antenna Type	PCB Antenna
Antenna Peak Gain	4dBi
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	LA02305
DUT photo	
Report Date	2023-07-06
Test System	SY-16 OTA System
Test Engineer	Oumin

Test Standard

Antenna Performance	Radiation Efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-2021
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Equipment List:

Equipment	Manufacturer	Model No.	Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	2022.10.8	2023.10.7

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:

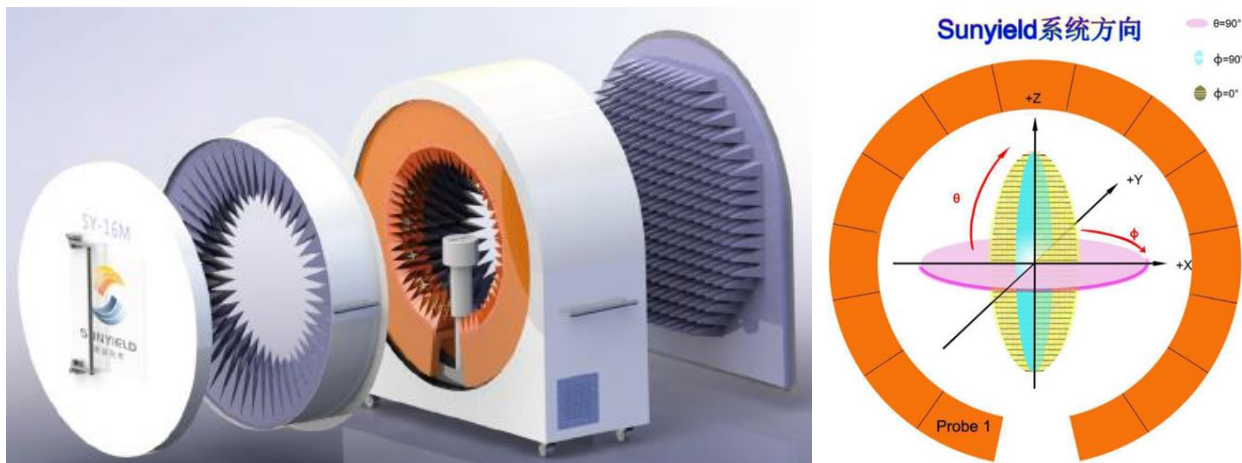


Figure 1 SY-16 OTA system

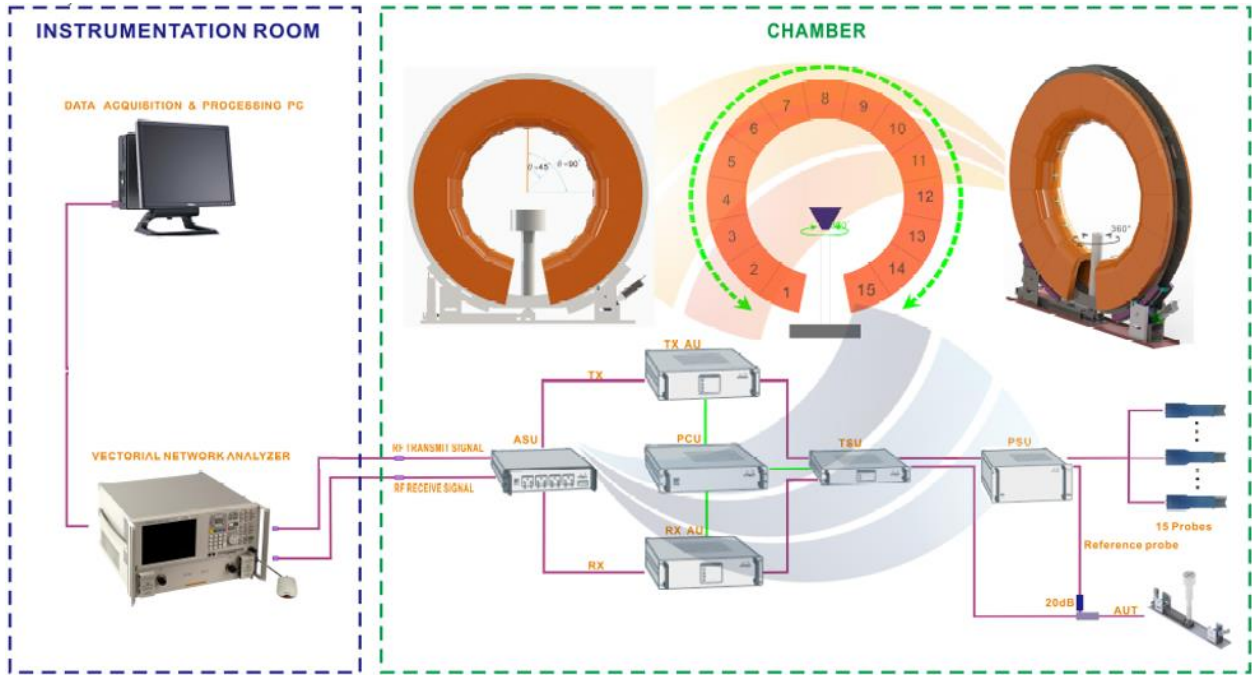


Figure 2 OTA measurement topology

Test Result

Efficiency and Gain

Table 1 Antenna Efficiency and Gain

Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	3.68	-2.37	57.90
2410	3.91	-2.12	61.35
2420	3.92	-2.05	62.34
2430	3.90	-2.02	62.74
2440	3.92	-1.91	64.42
2450	4.00	-1.88	64.91
2460	3.90	-1.91	64.41
2470	3.67	-2.10	61.68
2480	3.73	-2.08	61.96
2490	3.65	-2.19	60.36
2500	3.22	-2.59	55.03

Radiation Pattern

Table 2 Product coordinates

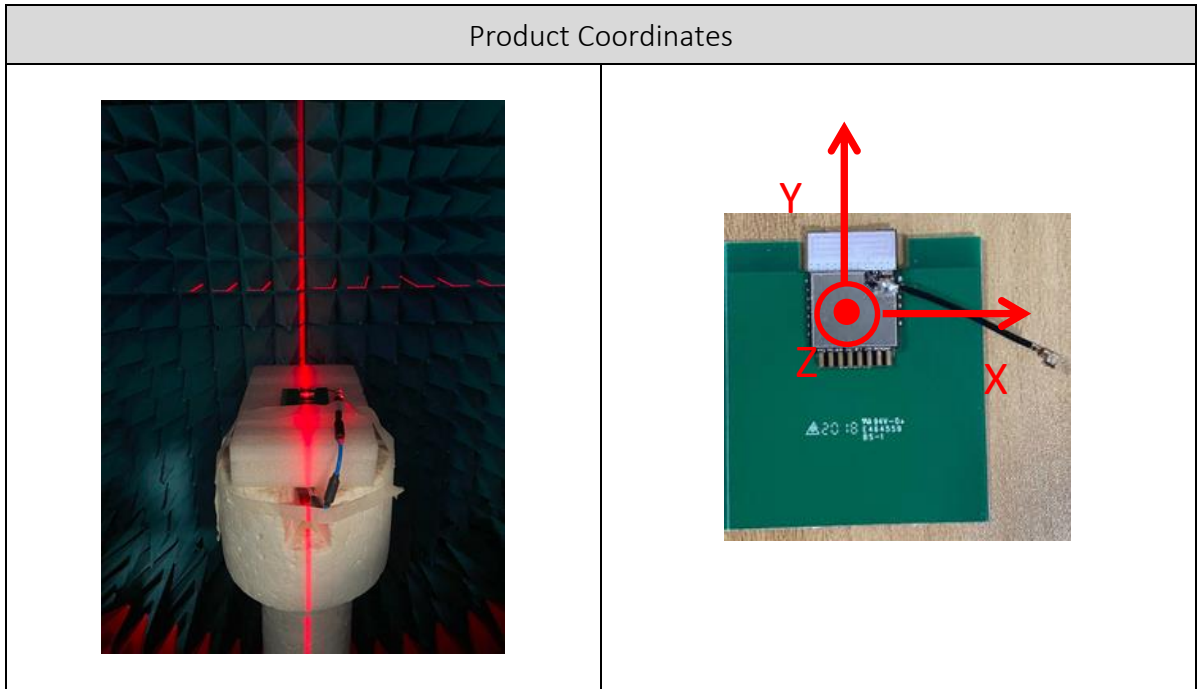


Table 3 3D radiation pattern

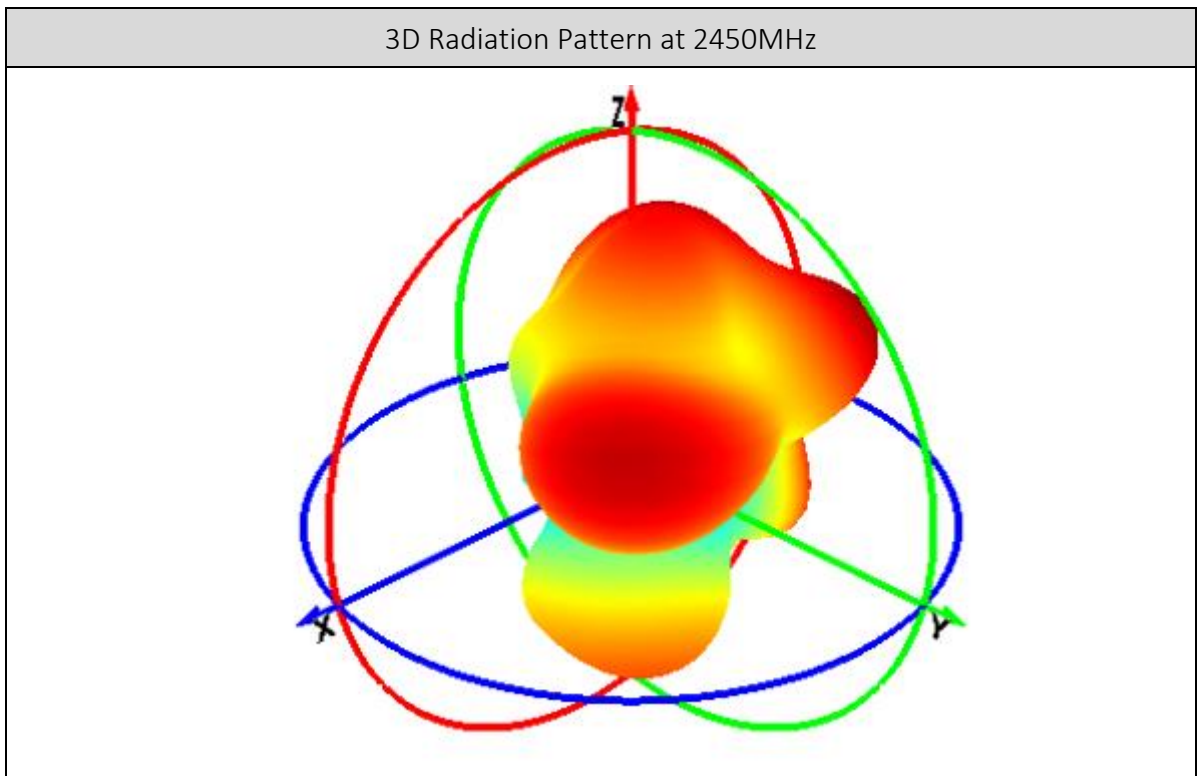


Table 4 Radiation pattern in XY Plane

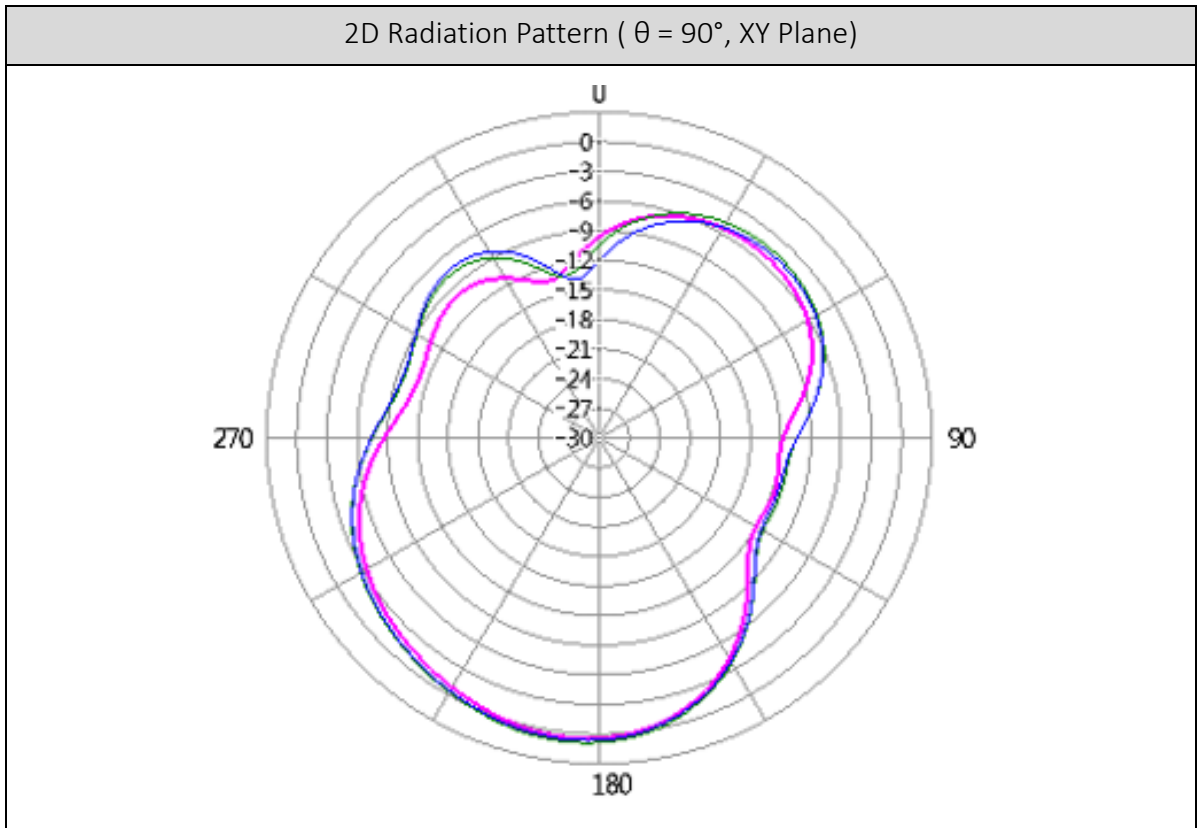


Table 5 Radiation pattern in XZ Plane

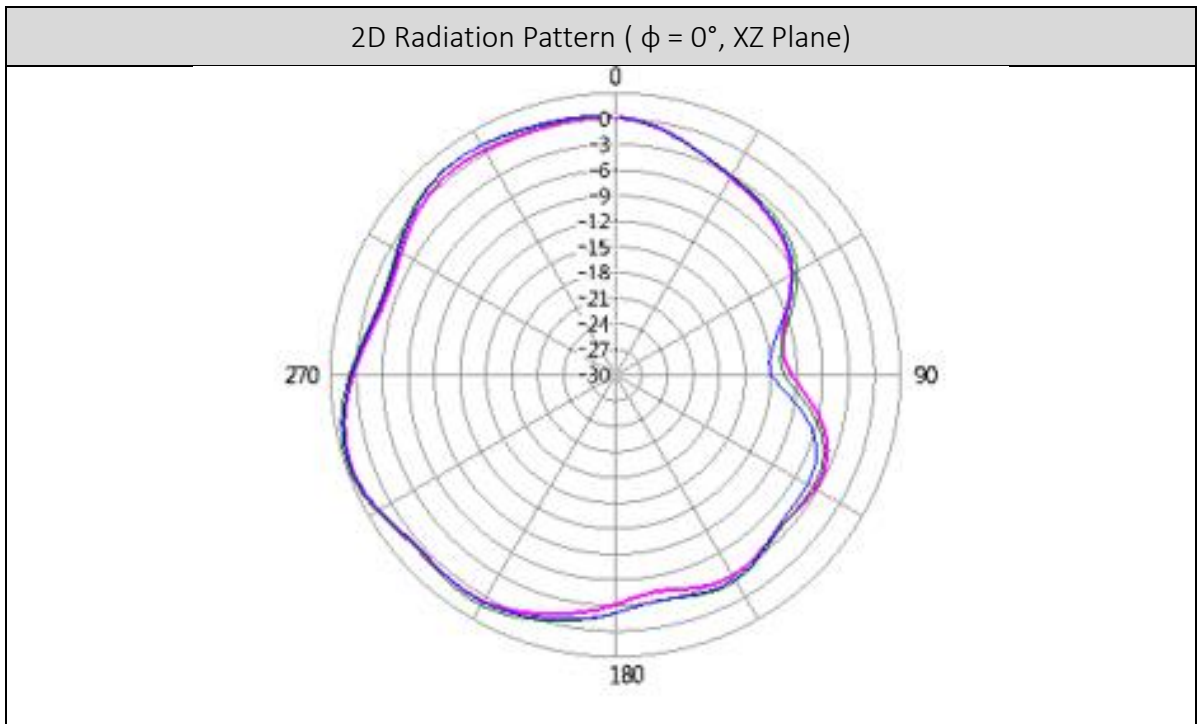


Table 6 Radiation pattern in YZ Plane

