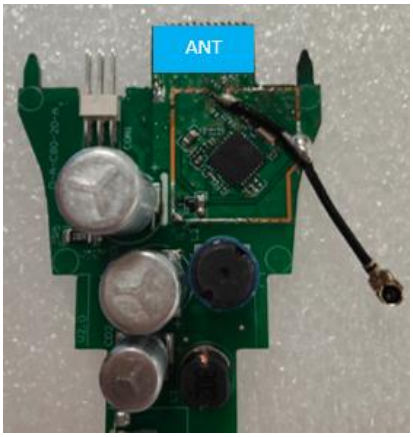
# Antenna Specification

| | |
|---|---|
| Antenna picture |  |
| Antenna Type | PCB antenna |
| Antenna Peak Gain | -0.87 dBi |
| 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 | A19 800lm CCT |
| DUT photo |  |
| Test Date | 2024-01-03 |
| Test Conductor | Ou Min |

OTA measurement

## Test System

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

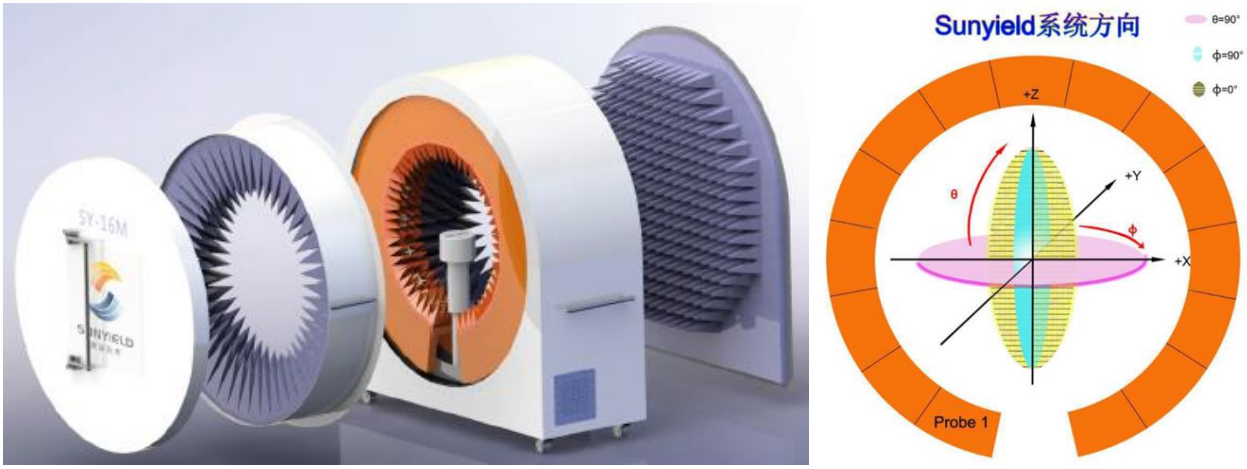



Figure 1 SY-16 OTA system

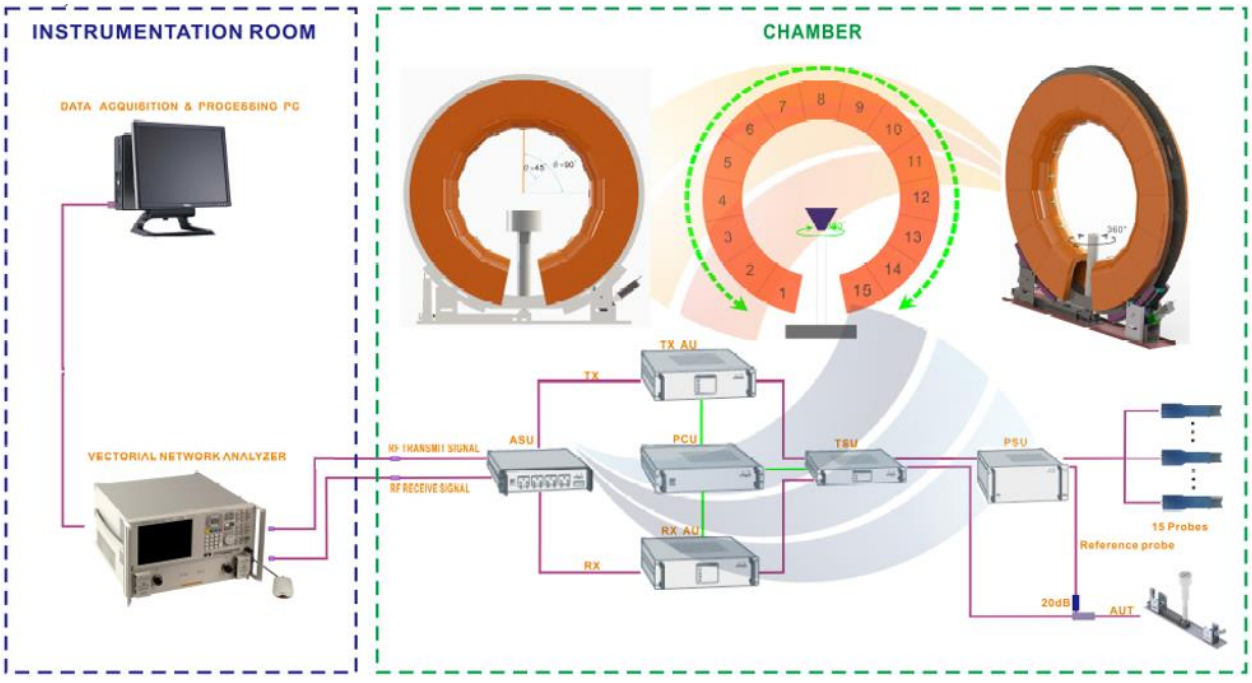



Figure 2 OTA measurement topology

## 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 | -2.06 | -7.68 | 17.06 |
| 2410 | -1.48 | -7.11 | 19.47 |
| 2420 | -1.40 | -6.99 | 20.00 |
| 2430 | -1.66 | -7.19 | 19.12 |
| 2440 | -1.26 | -6.72 | 21.29 |
| 2450 | -0.87 | -6.42 | 22.78 |
| 2460 | -1.16 | -6.70 | 21.36 |
| 2470 | -1.36 | -6.80 | 20.88 |
| 2480 | -0.98 | -6.44 | 22.71 |
| 2490 | -1.05 | -6.46 | 22.58 |
| 2500 | -1.34 | -6.71 | 21.31 |

## Radiation Pattern

Table 4 Product coordinates

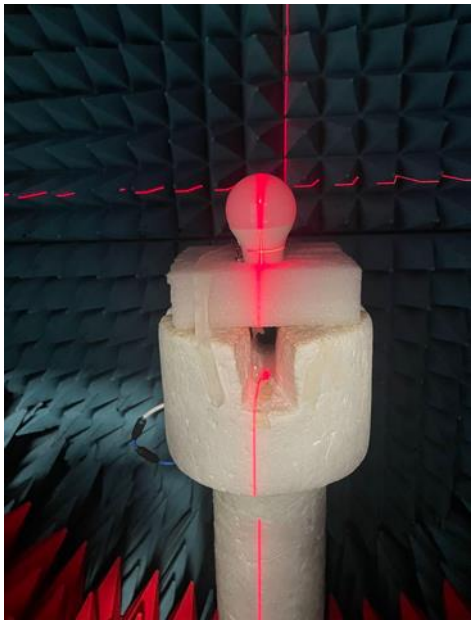
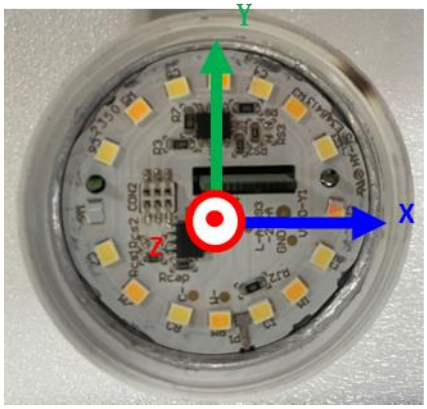
| Product Coordinates | |
|---|---|
|  |  |

Table 5 3D radiation pattern

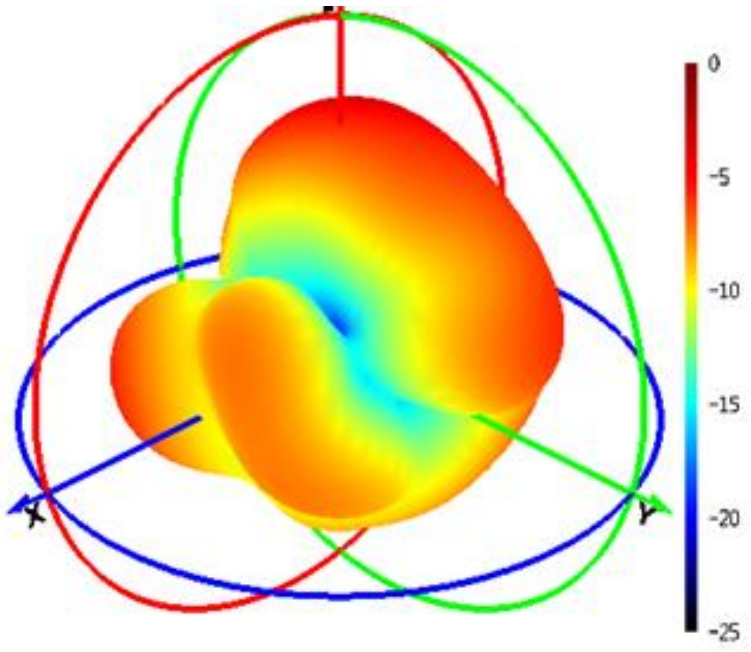
| 3D Radiation Pattern at 2450MHz |
|---|
|  |

Table 6 Radiation pattern in XY Plane

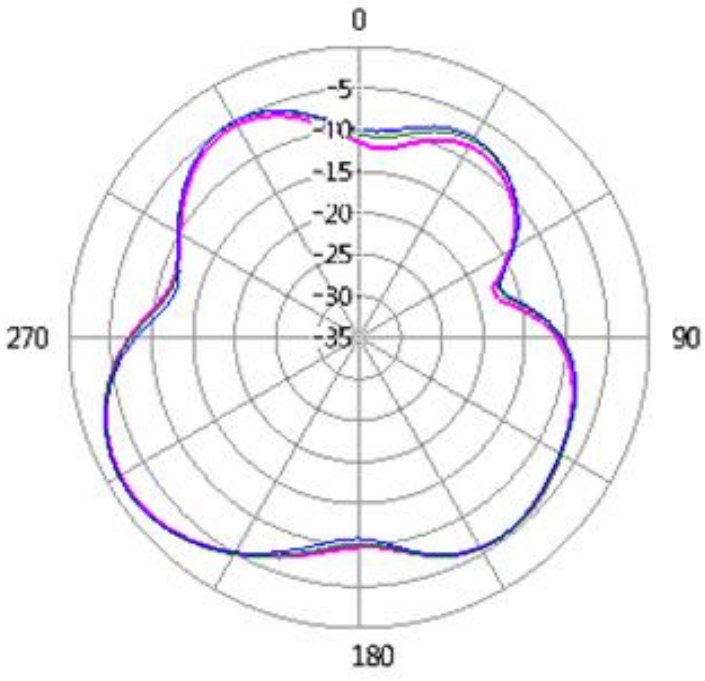
| 2D Radiation Pattern ( θ = 90°, XY Plane) |
| --- |
|  |



Table 7 Radiation pattern in XZ Plane

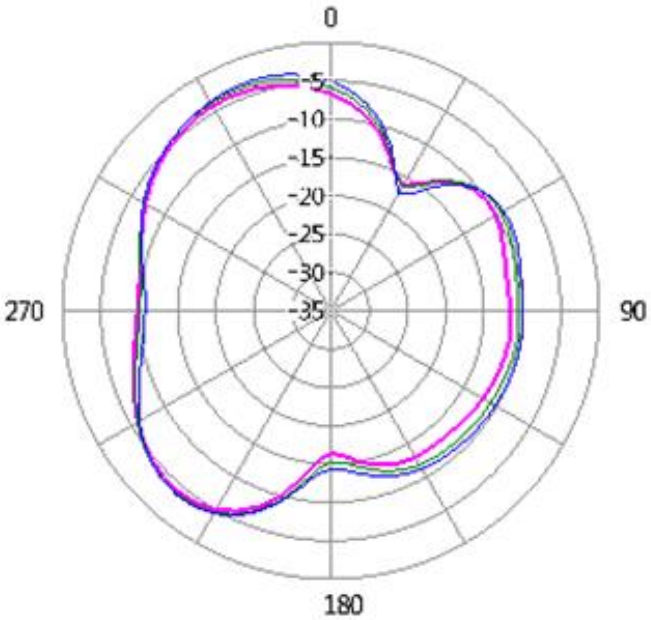
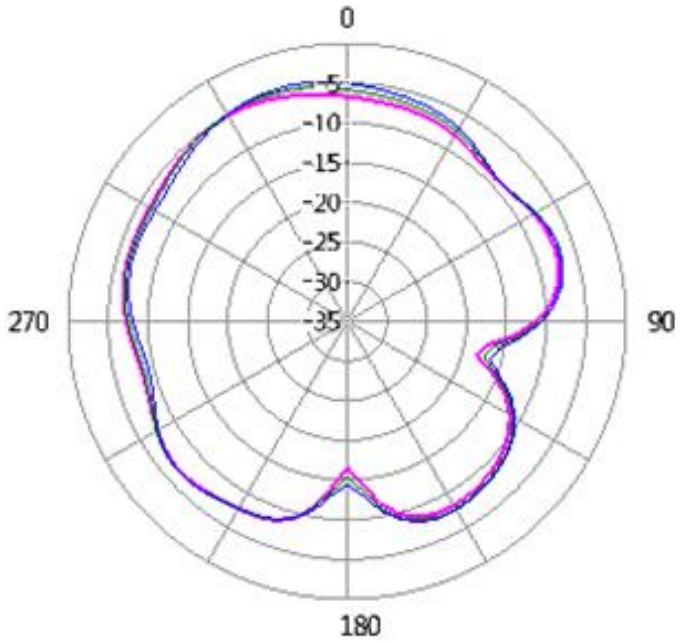
| 2D Radiation Pattern ( ϕ = 0°, XZ Plane) |
| --- |
|  |

Table 8 Radiation pattern in YZ Plane

| 2D Radiation Pattern ( ϕ = 90°, YZ Plane) |
| --- |
|  |