

Antenna Specification

Antenna picture	
Antenna Type	Wire antenna
Antenna Peak Gain	1.2dBi
Operating Band	2400-2500MHz
Test laboratory name and Address	4 / F, Building B, Hengchao Industrial Park, 208 Tangtou Avenue, Langxin Community, Shiyan Street, Baoan District, Shenzhen
Antenna Manufacturer	Shenzhen Simingsheng Technology Co., Ltd.
Model name	Smart LED Light
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:

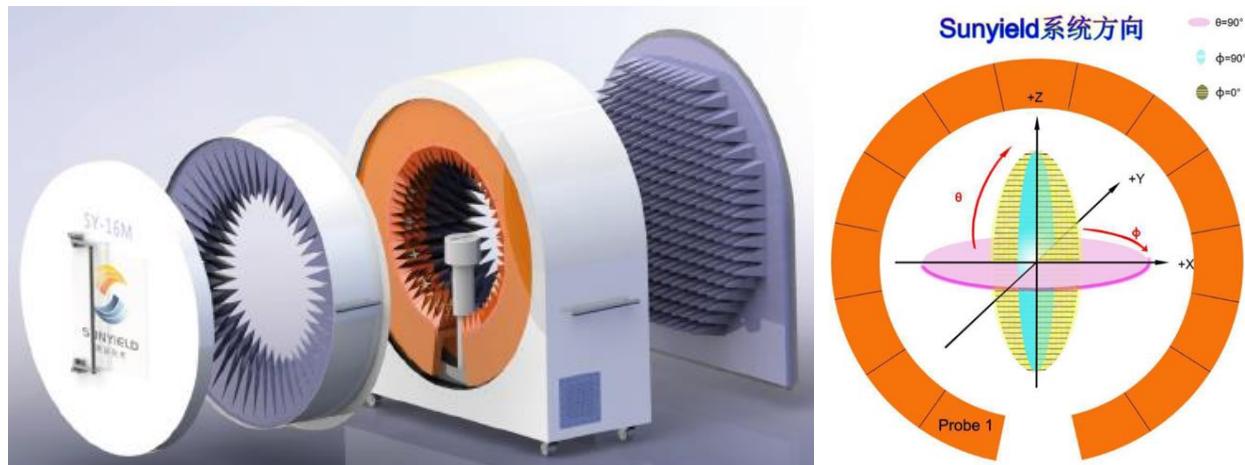


Figure 1 SY-16 OTA system

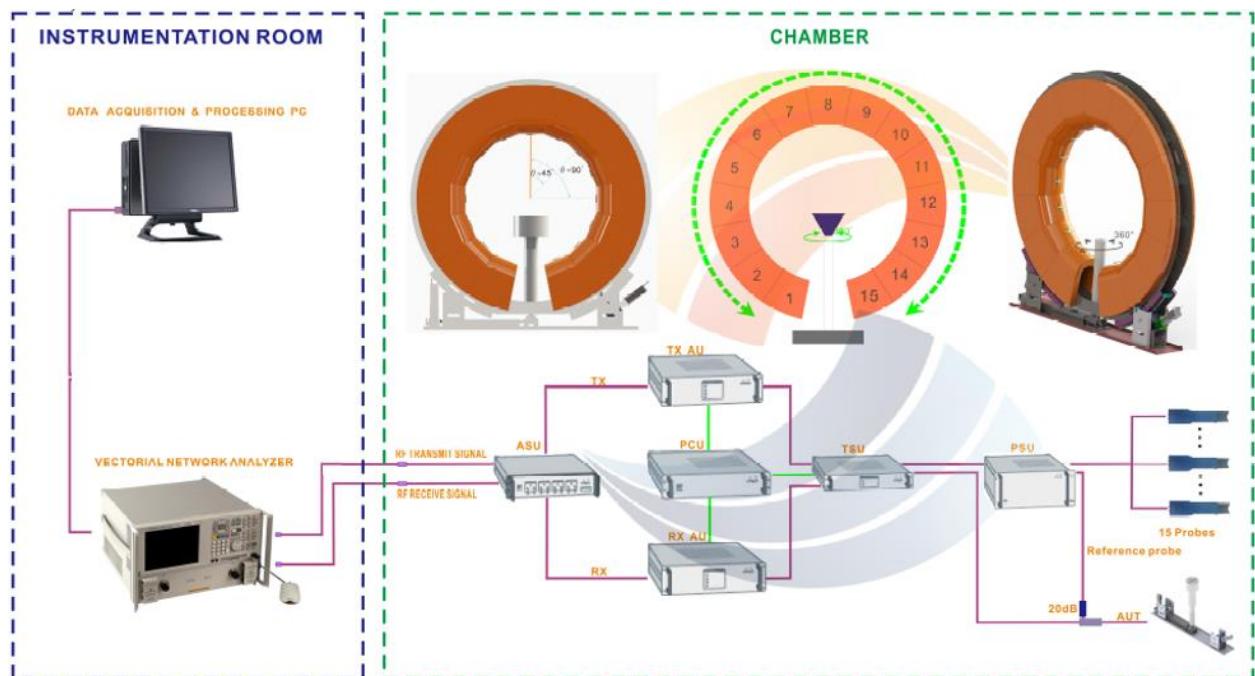


Figure 2 OTA measurement topology

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	Gain/ dB
2400	0.82
2410	0.78
2420	0.78
2430	0.67
2440	0.91
2450	1.2
2460	0.99
2470	0.66
2480	0.2
2490	0.2
2500	0.49

Radiation Pattern

Table 4 Product coordinates

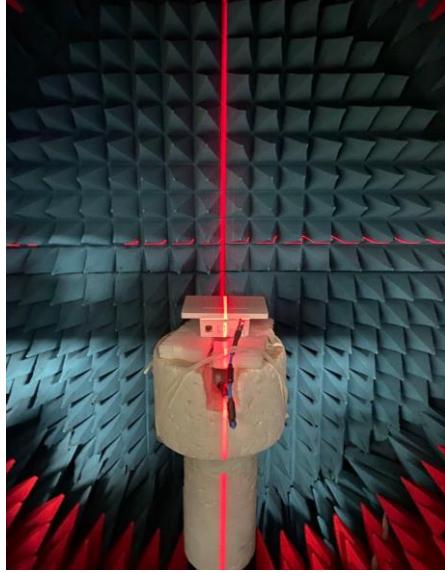
Product Coordinates
 A photograph of a white cylindrical antenna mounted on a black base, positioned in a large anechoic chamber. The chamber walls are covered with a grid of dark, triangular acoustic absorbers. A red laser beam is directed vertically upwards from the top of the antenna.

Table 5 3D radiation pattern

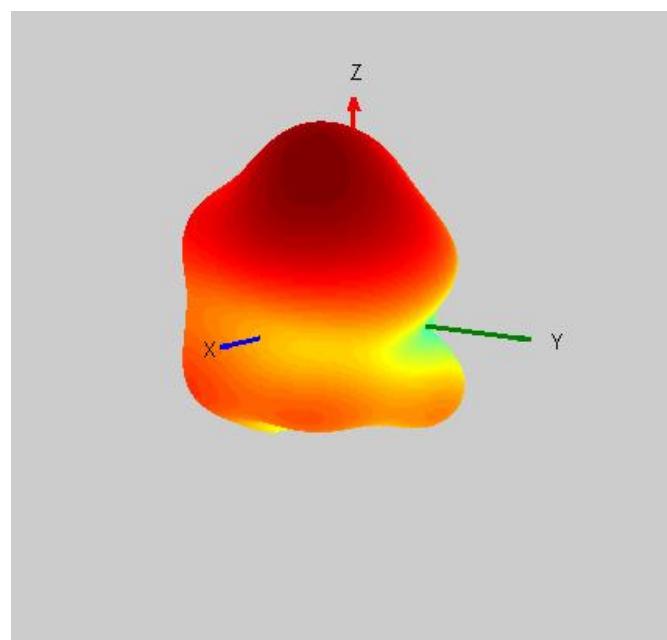
3D Radiation Pattern at 2450MHz
 A 3D surface plot representing the radiation pattern of the antenna at 2450MHz. The pattern is highly directional, forming a sharp peak. The vertical axis is labeled 'Z' with a red arrow pointing upwards. The horizontal axes are labeled 'X' (blue arrow) and 'Y' (green arrow), indicating the horizontal plane.

Table 6 Radiation pattern in XY Plane

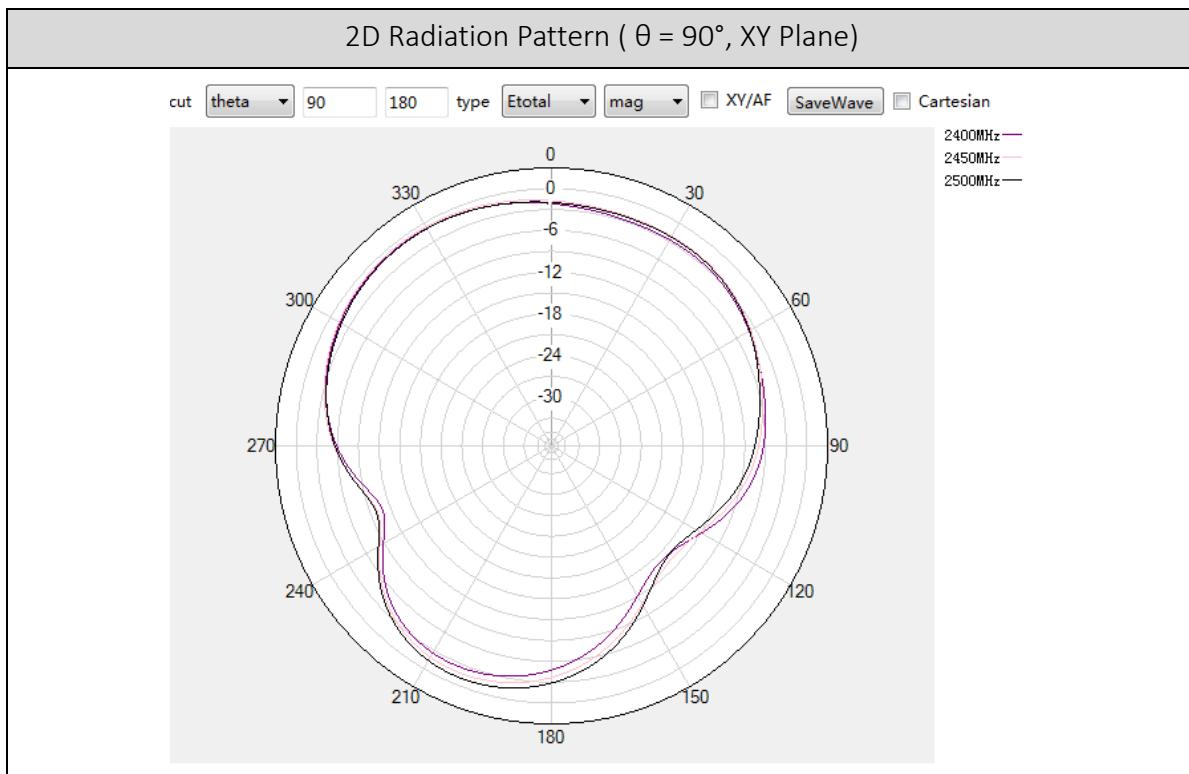


Table 7 Radiation pattern in XZ Plane

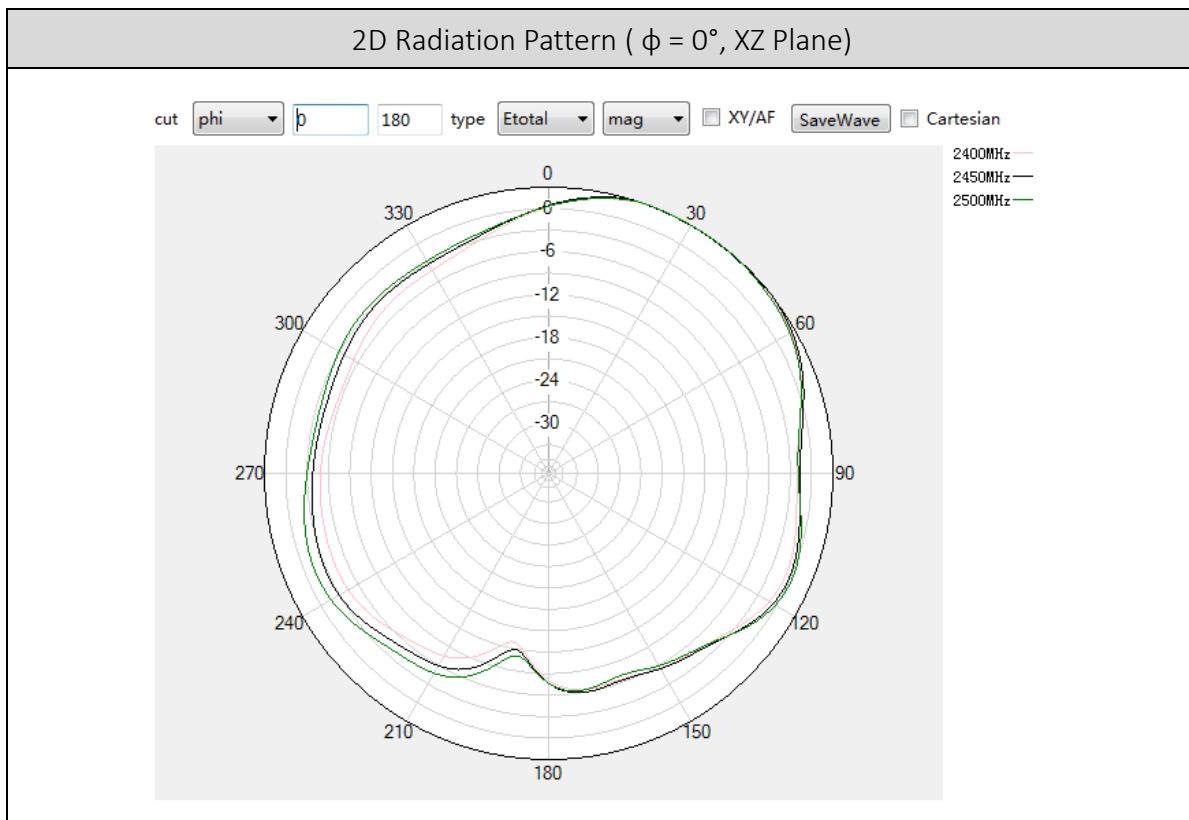


Table 8 Radiation pattern in YZ Plane

