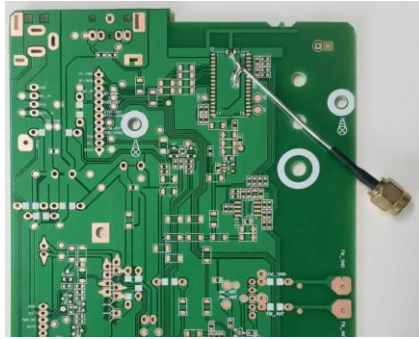
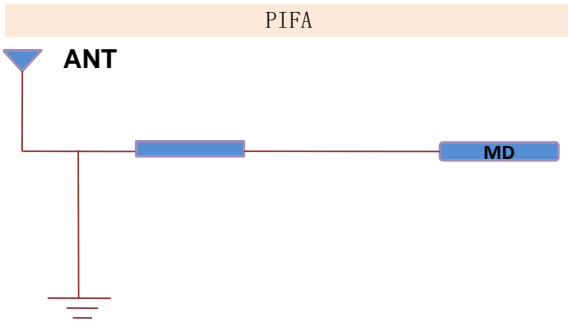




U4A Antenna Test Report V1

Description:
* Carry out test of customer provided antenna sample
* This report shows test data
* This report do not provide conclusions

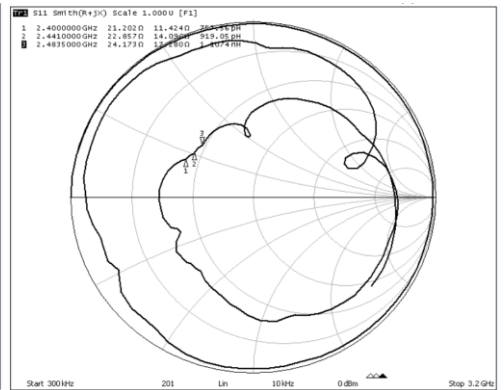
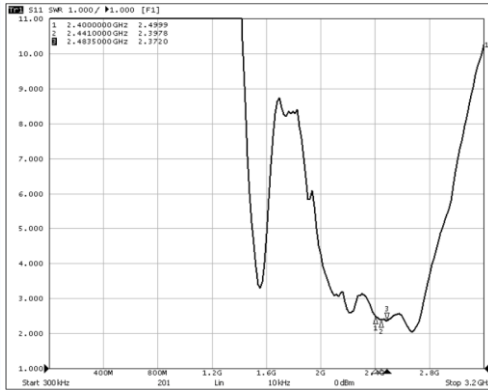
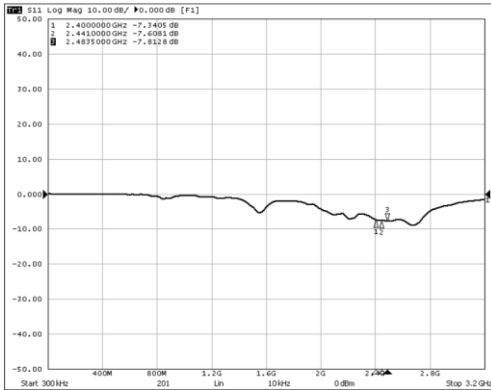
Antenna matching wiring



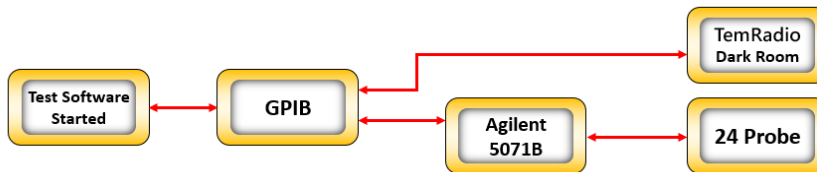
PIFA	
Antenna matching circuit	
E1-(0402)	None
E2-(0402)	None
E3-(0402)	None

Antenna Passive test data (Free space) Return Loss

Antenna sample: U4A



Test Procedure:

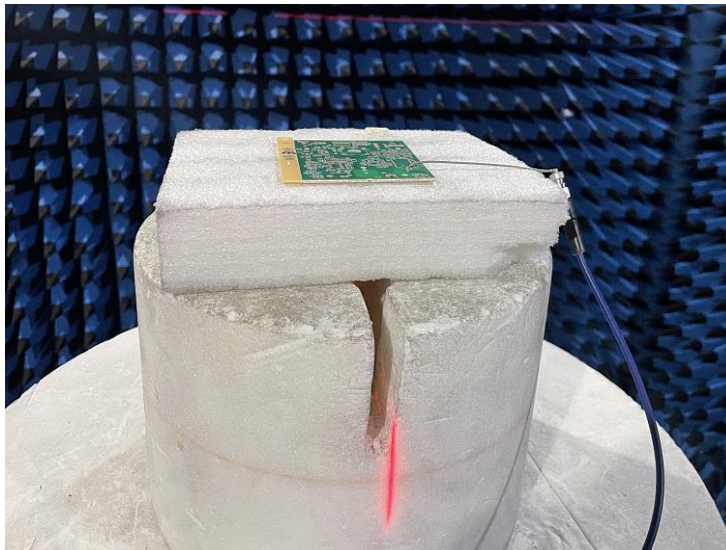


1. TemRadio turn on the Test Software, Name: XH-IOE Active Suite, Version No.: V 3.5.05;
2. XH-IOE Active Suite via GPIB (General Purpose Interface Bus) to control the shielding room (darkroom)'s TemRadio;
3. Meanwhile, GPIB control the Agilent 5071B to read the Antenna data by 24 Probe;
4. Agilent 5071B will analysis the data and generate the result;
5. Agilent 5071B will feedback to XH-IOE Active Suite to generate the test report.

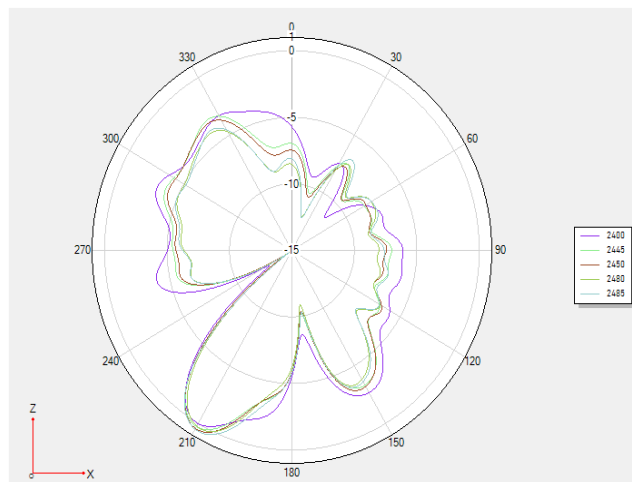
## Antenna Efficiency Test

BT			
Frequency / MHz	Efficiency / dB	Efficiency / %	Gain / dBi
2400	-3.78	40.18	0.53
2410	-3.95	39.27	0.42
2430	-3.99	38.9	0.45
2450	-3.98	38.99	0.41
2460	-4.26	36.5	0.32
2470	-4.09	37.99	0.37
2480	-4.02	38.63	0.33
2490	-3.88	39.93	0.39

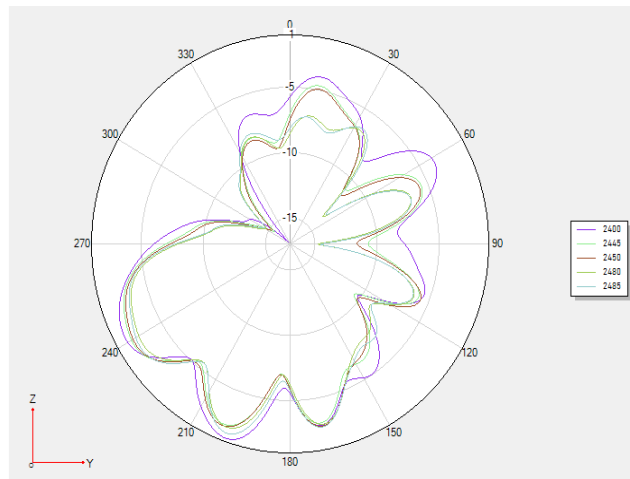
## Reference test environment



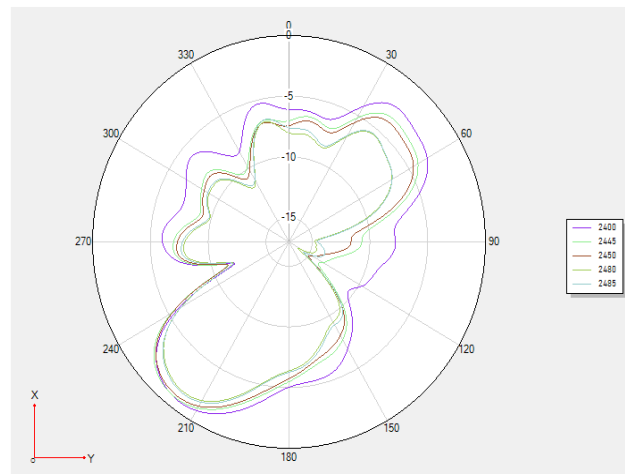
## 2D direction diagram



Phi 0 2D diagram

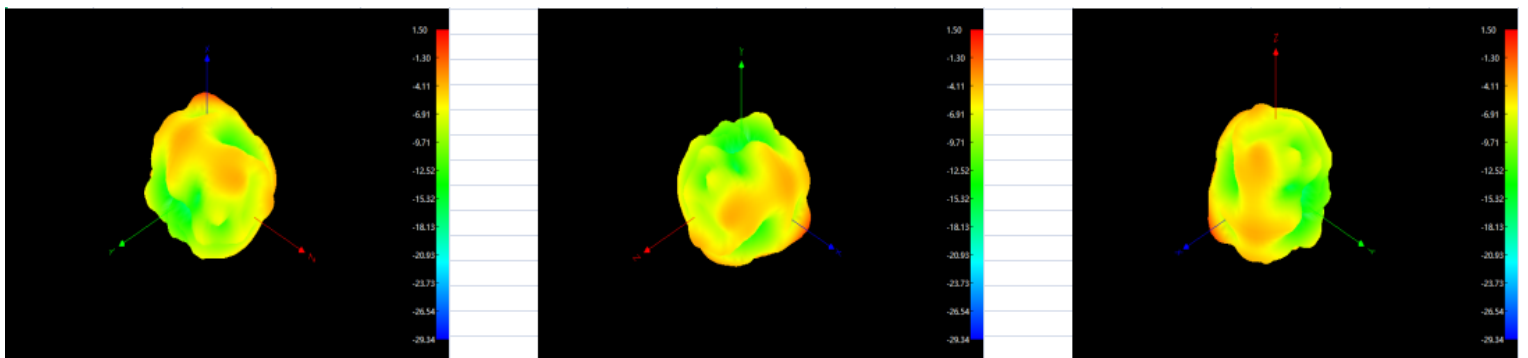


Phi 90 2D diagram

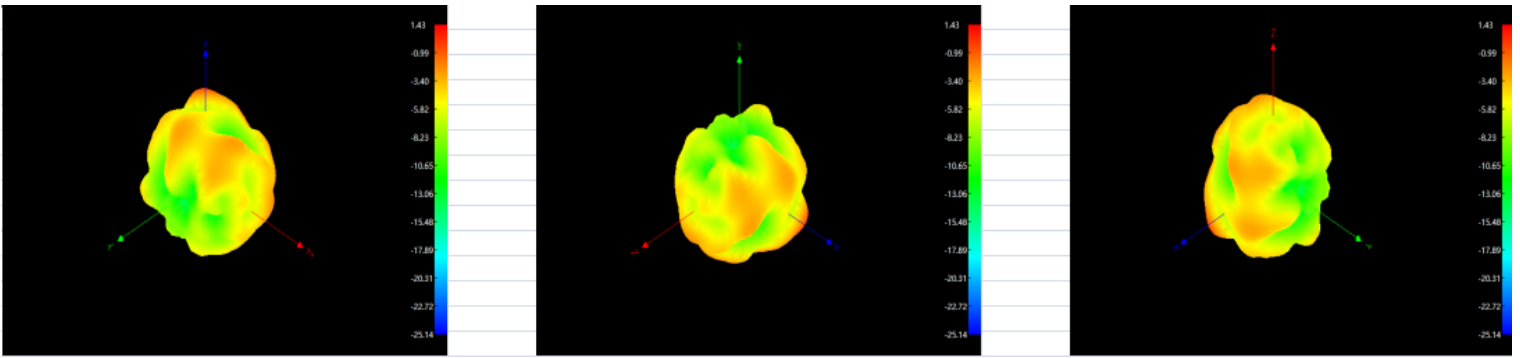


Theta 90 2D diagram

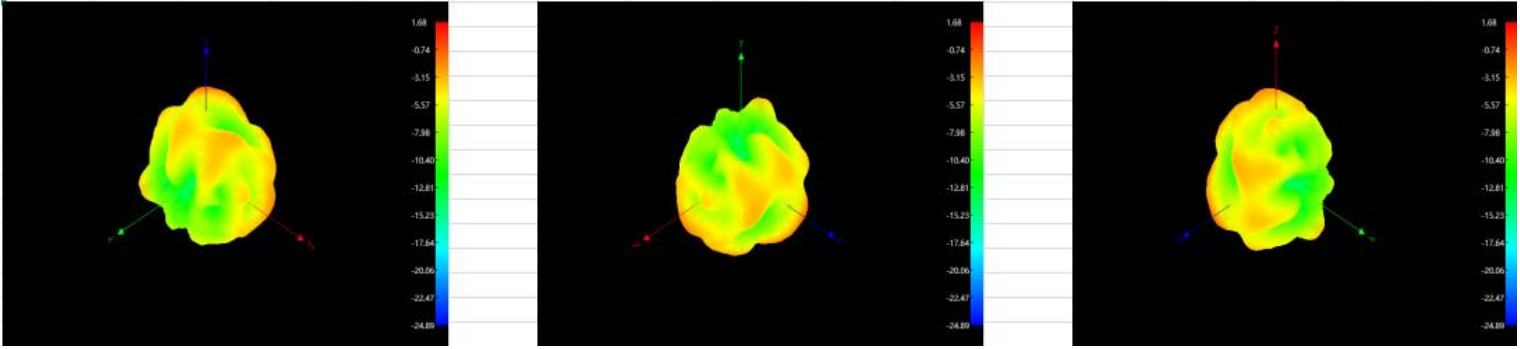
### 3D direction diagram



2400MHz

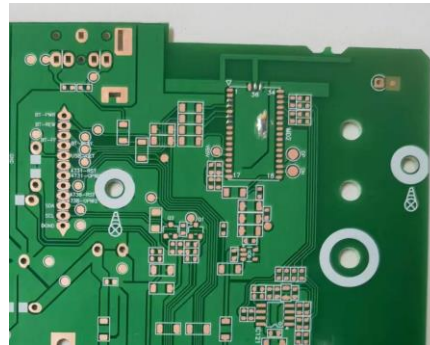


2450MHz



2485MHz

### Antenna Photo



### Testing Equipment List

	Test items	Equipments	Calibration Date
S Parameters	Return loss	RF Network Analyzer: Agilent E5071B	1 Apr 2023
	SWR		
Coupled Power Test	Tx Power	Wireless communicaion Test: Agilent 8960 E5515C	1 Apr 2023
	Rx Sensitivity	LTE/WIFI/BT tester : R&S CMW500	1 Apr 2023
Radiation Pattern and Gain	radiation pattern	Dark Room: 8x4x4 m (3D)	1 Apr 2023
	Antenna Gain	RF Network Analyzer: Agilent E5071B	1 Apr 2023

Test Date: 4 Mar 2024

Test Personnel: Mr. Yang Xiang

Antenna Brand: Sangean

Antenna Model: U4A

