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C059-510510-A

ZYXEL / NWA30BE

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Revised History



Released Date	Version	Record
2025/07/17	V1.00	Initial Antenna Test Report

Specification



Requirements of Antenna Design

RF Function	Number of ANT	Frequency Band	Remark
Wi-Fi	1	2412-2472 MHz / 5180-5825 MHz	

Requirements of Measurement

Test Item	Specification	Remark
Return loss	> 10 dB	
Isolation	NA	
Peak gain	< 3dBi	
Efficiency	> 60%	
Radiation pattern	Scale: +10 ~ -40dBi, Angle step size: 5 degree	

Antenna Dimension and Placement

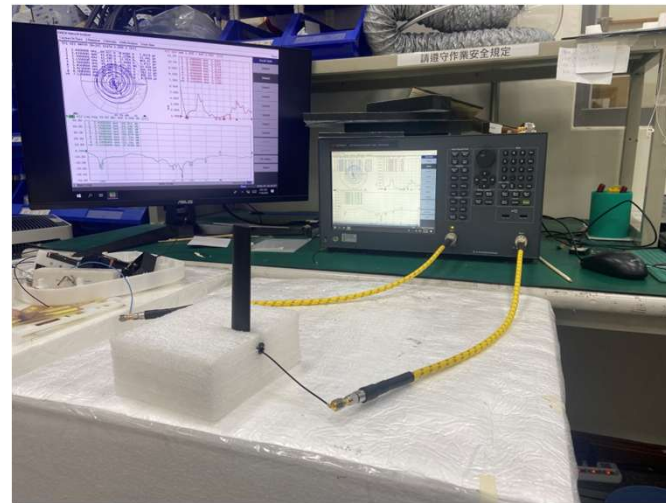


Antenna	ANT Type	Size (L * W * H* T)	Cable Length (mm)	Cable Type
Ant.1	Dipole	NA	NA	NA

Test Setup for S-parameter Measurement

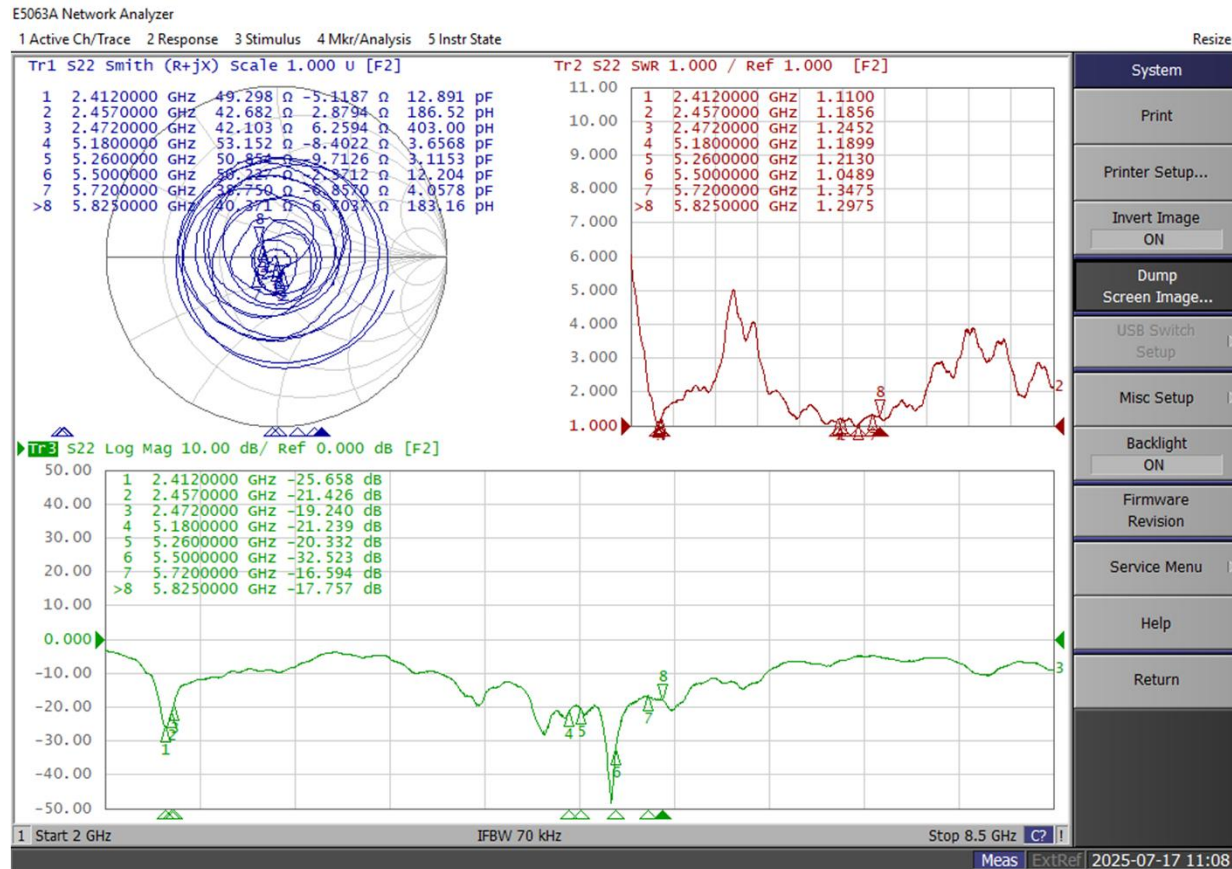


Equipment	Brand	Model	S/N
Network Analyzer	Keysight	E5063A	MY54706080



Return Loss

Ant.1 [2412-2472 / 5180-5825(MHz)]

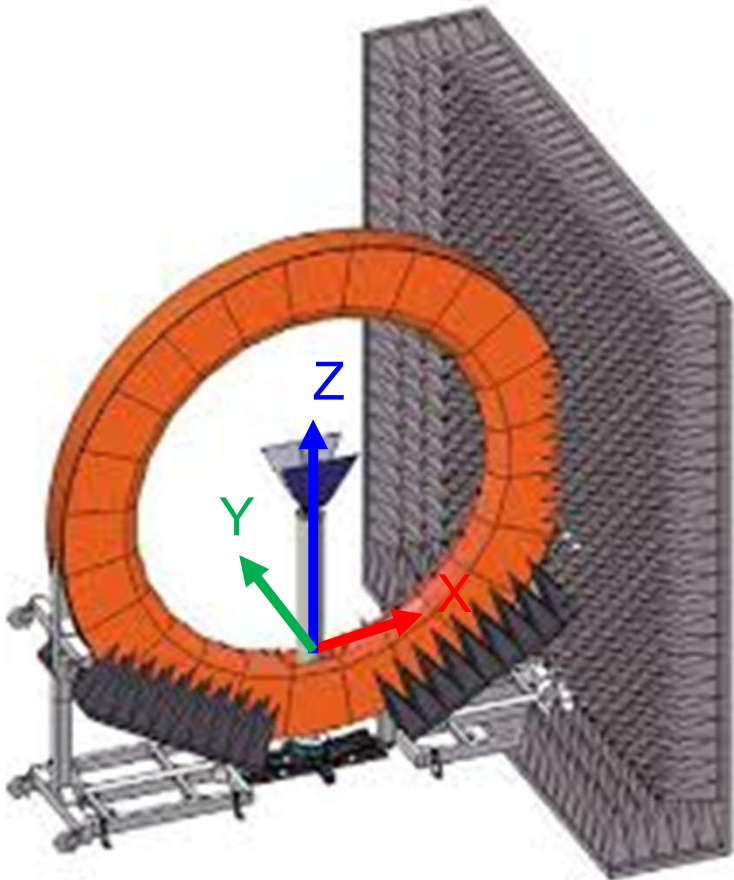


Test Setup for Radiation Pattern Measurement



- SATIMO SG-24L Multi-Probe Antenna Measurement System
 - Frequency range: 400 MHz – 9 GHz
 - Chamber Room Size: 5m L x 5m W x 5m H

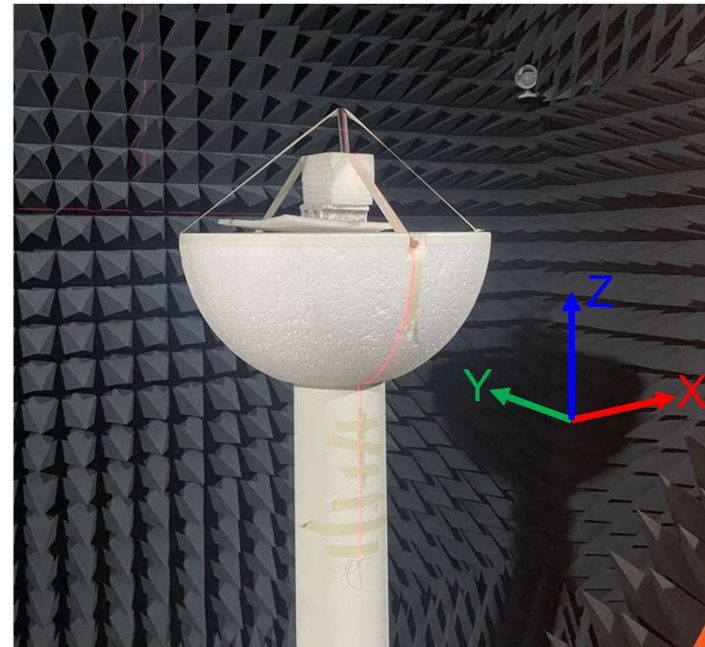
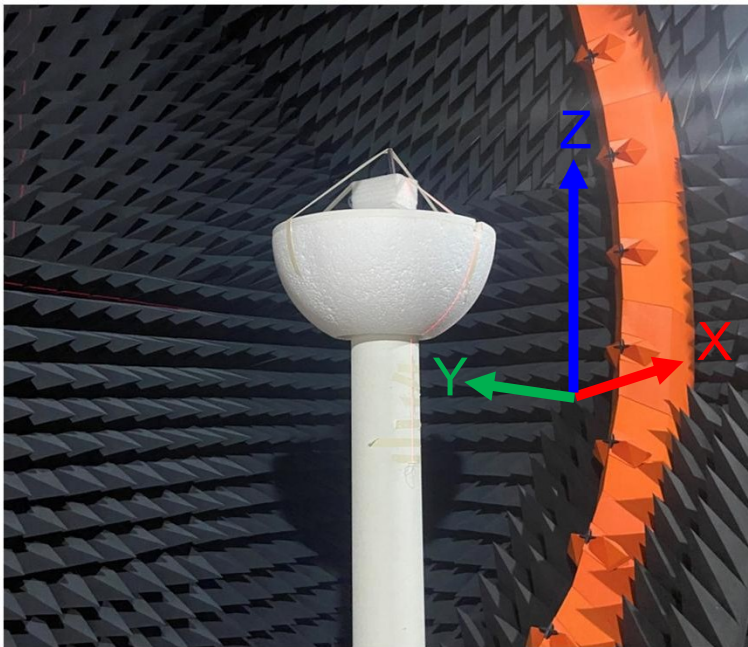
Chamber	Brand	Model	Location
SATIMO	SATIMO	SG-24	Taiwan HsinChu



Test Setup for Radiation Pattern Measurement

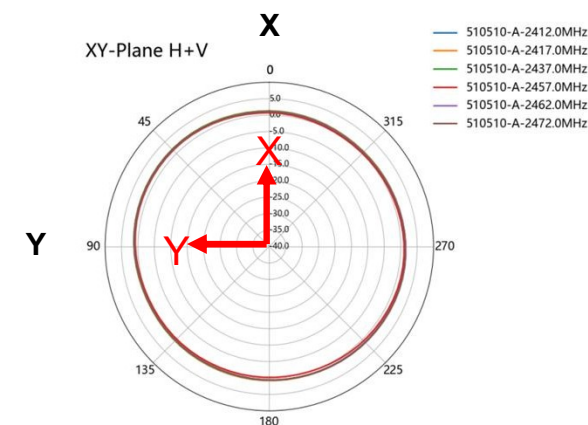
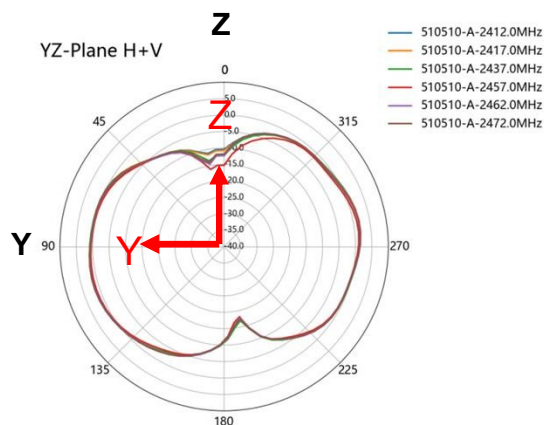
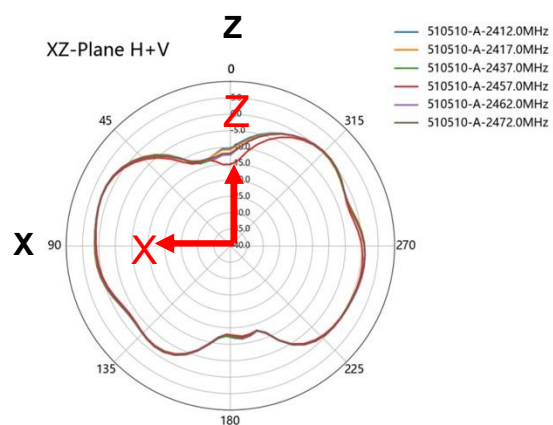
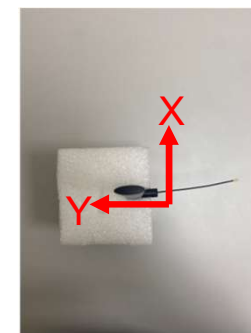
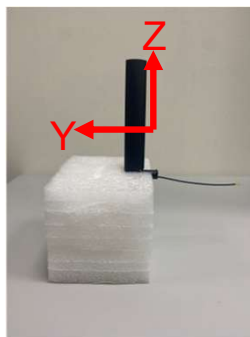
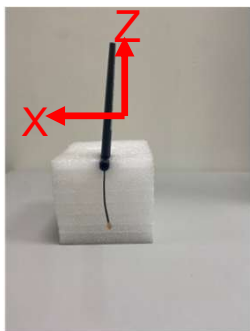


Device orientation & measurement setup in the chamber



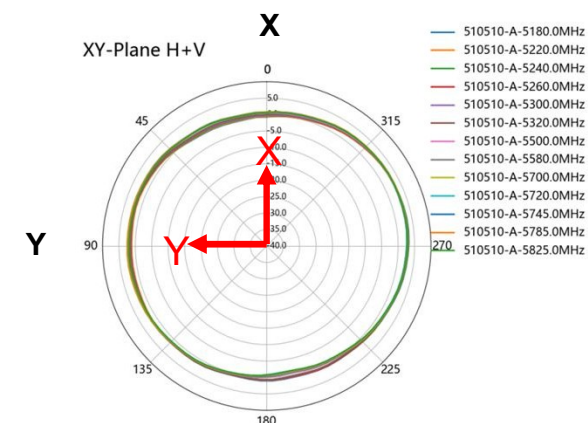
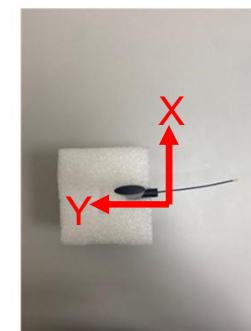
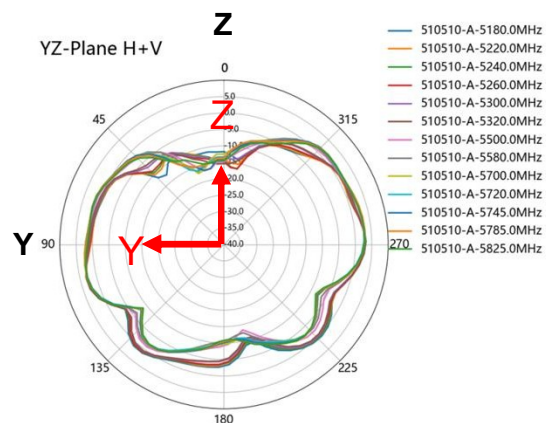
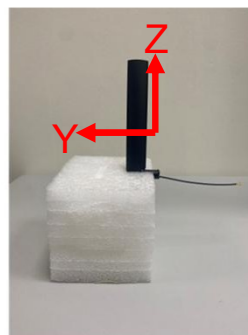
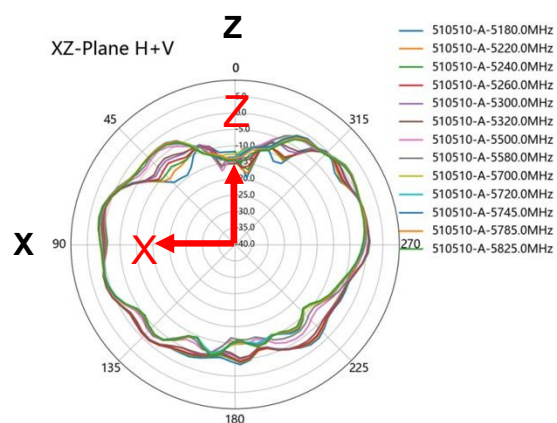
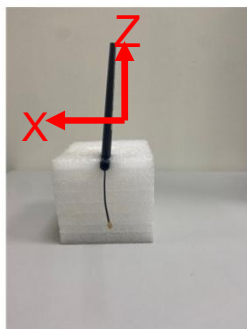
2D Radiation Pattern Results

Ant.1 (2412-2472 MHz)



2D Radiation Pattern Results

Ant.1 (5180-5825 MHz)



Return Loss



Frequency(MHz)	Ant.1 (dB)
2412	25
2457	21
2472	19
5180	21
5260	20
5500	32
5720	16
5825	17

3D Peak Gain& Efficiency



Frequency (MHz)	Ant.1	
	Peak Gain (dBi)	Efficiency (%)
2412	2.22	80
2457	2.32	79
2472	2.12	79
5180	2.95	78
5260	2.89	77
5500	2.91	77
5720	2.76	77
5825	2.85	75



Thank You

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