

LYNwave Technology

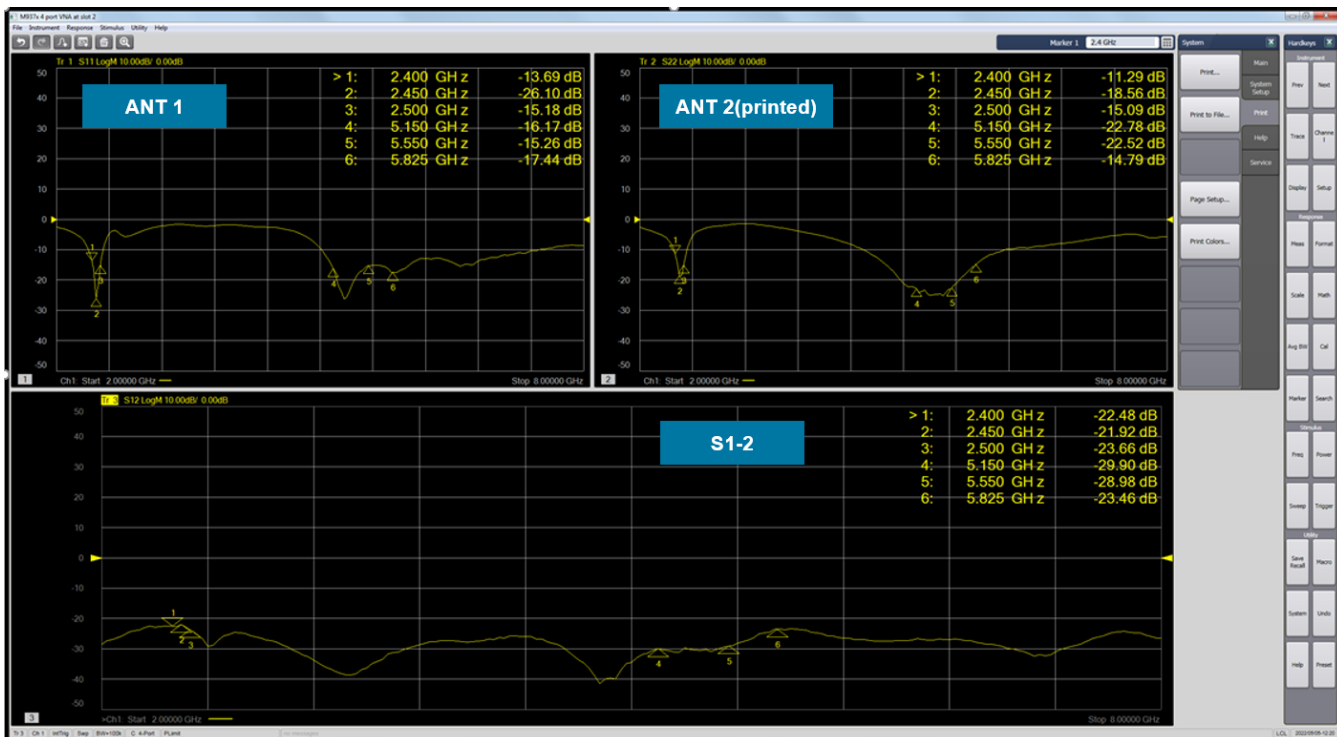
Antenna & Thermal solution provider

Antenna Test Report

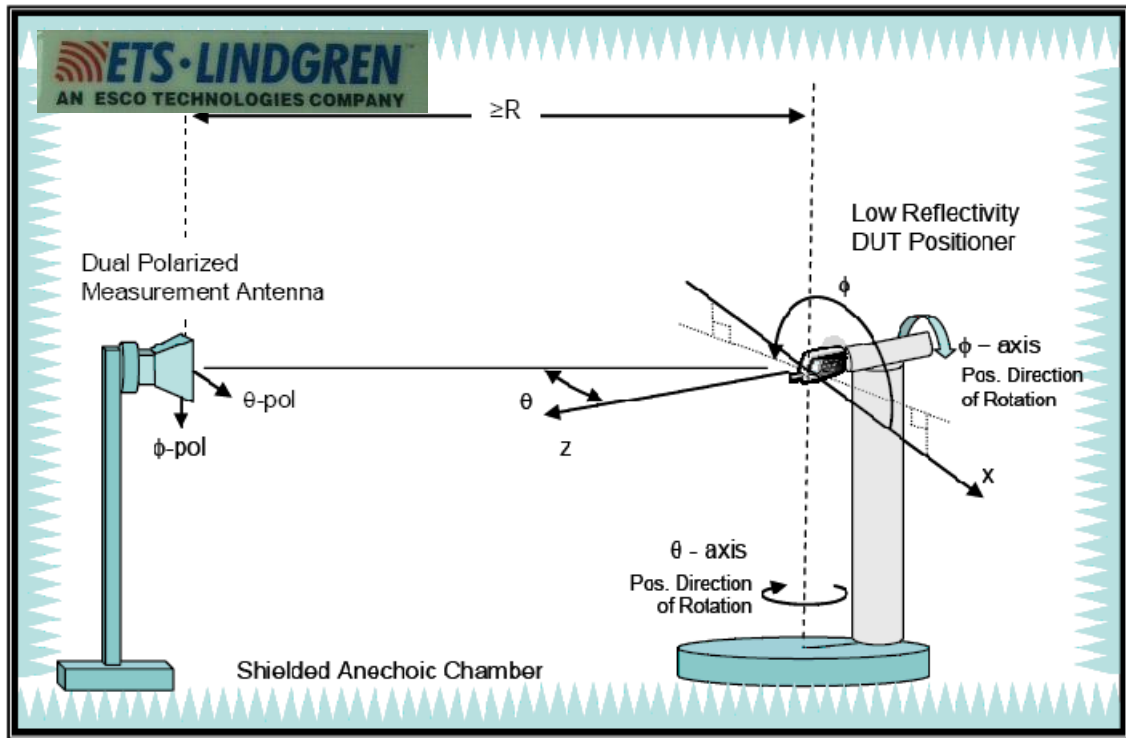
Project Name: AX18U
Model Name:
Feature: 2.4G/5G
Application: Dongle

Date	Owner	Revision
2021/12/14	Jamie	1. ANT. tuning
2022/01/25	Jamie	1. S-Parameter Measurement 2. Antenna Passive Measurement
2022/02/14	Jamie	1. The antenna comparison between not connecting loop , connecting loop and connecting loop with tuning antenna.
2022/05/06	Jamie	1. The fine tune ant.1.2 performance in the final mockup.

S-Parameters



Equipment : ETS Chamber



Gain Table

Ant.1						
Frequency (MHz)	2400	2450	2500	5150	5550	5825
Efficiency(%)	65	72	73	66	72	68
Peak Gain(dBi)	1.8	1.9	1.7	3.3	3.4	3.1
Ant.2						
Frequency (MHz)	2400	2450	2500	5150	5550	5825
Efficiency(%)	55	57	55	66	69	68
Peak Gain(dBi)	2.0	2.2	1.4	1.4	2.4	2.7

The antenna characteristics (ANT.1)

- Return loss < -10dB in operating band
- Efficiency
 - WIFI 2.4 GHz \geq 65%
 - WIFI 5 GHz \geq 65%
- Gain
 - WIFI 2.4GHz Band 1.7~1.9dBi
 - WIFI 5GHz Band 3.1~3.4dBi

The antenna characteristics (ANT.2)

- Return loss < -10dB in operating band
- Efficiency
 - WIFI 2.4 GHz \geq 55%
 - WIFI 5 GHz \geq 65%
- Gain
 - WIFI 2.4GHz Band 1.4~2.2dBi
 - WIFI 5GHz Band 1.4~2.7dBi

Ant.1_2.4GHz 2D.3D Radiation Pattern

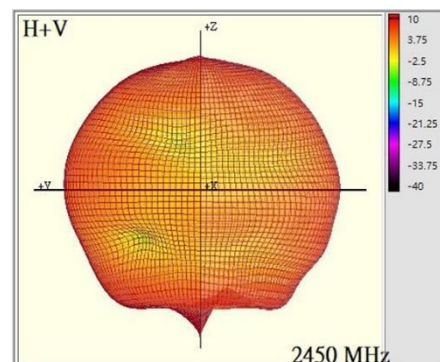
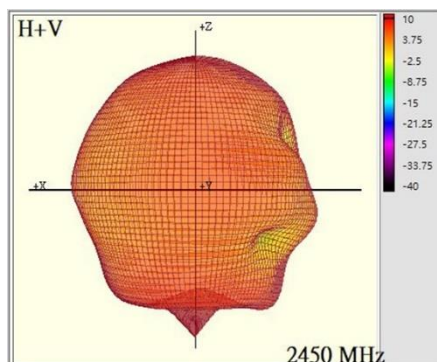
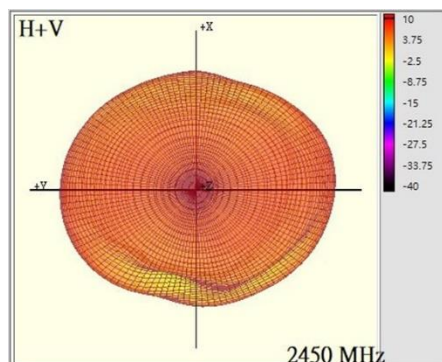
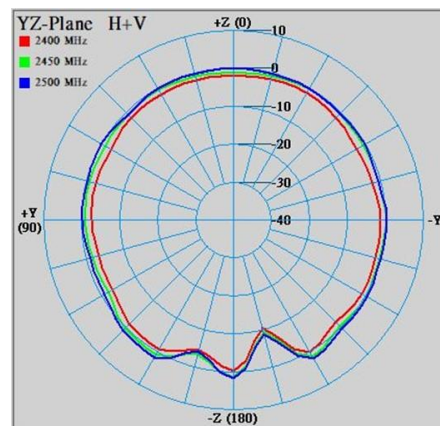
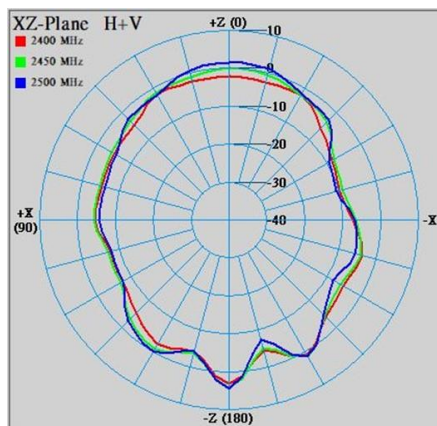
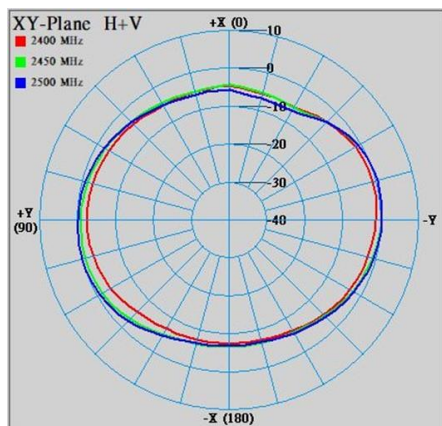
Frequency(MHz) : 2D. 2400~2500
3D. 2450

Radiation Pattern :

Azimuth Plane

Elevation Plane
phi = 0

Elevation Plane
phi = 90



Ant.1_5GHz 2D.3D Radiation Pattern

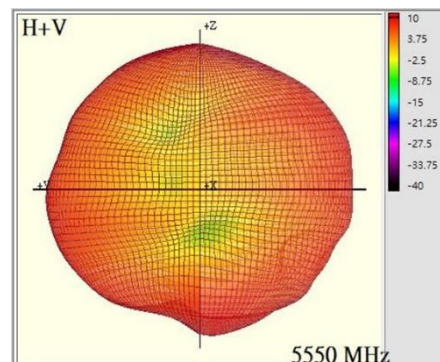
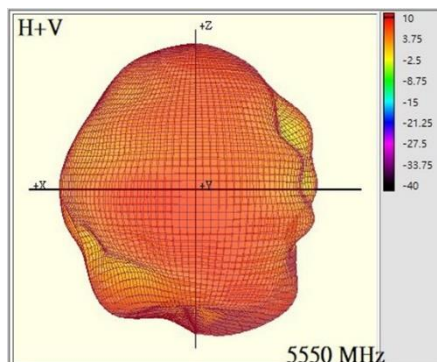
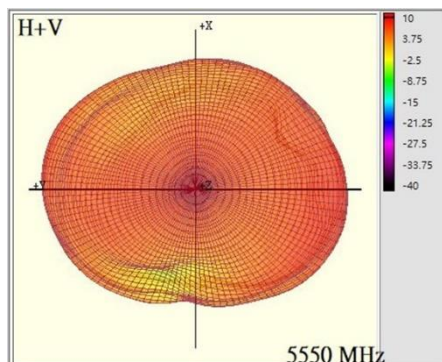
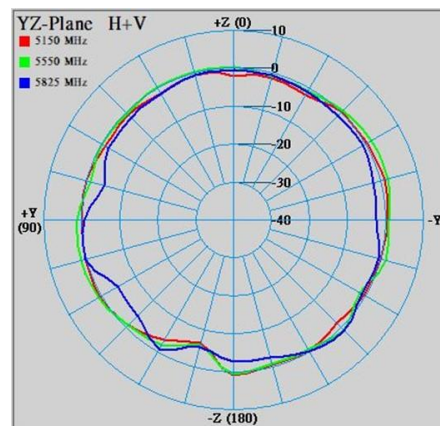
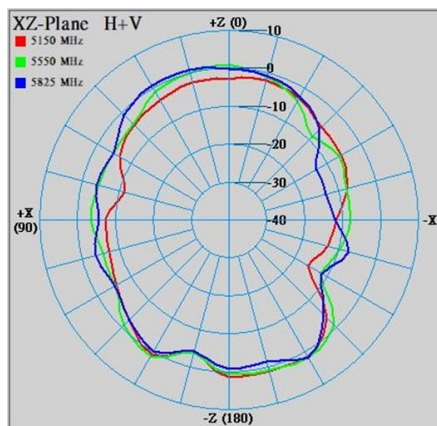
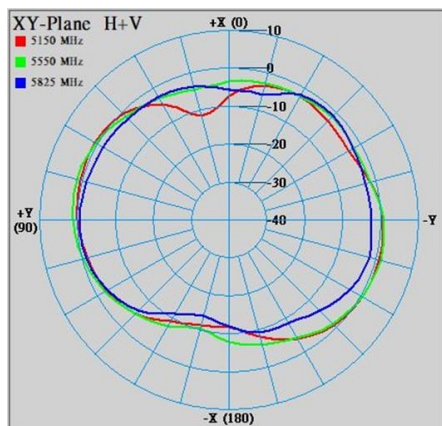
Frequency(MHz) : 2D. 5150~5825
3D. 5550

Radiation Pattern :

Azimuth Plane

Elevation Plane
phi = 0

Elevation Plane
phi = 90



Ant.2_2.4GHz 2D.3D Radiation Pattern

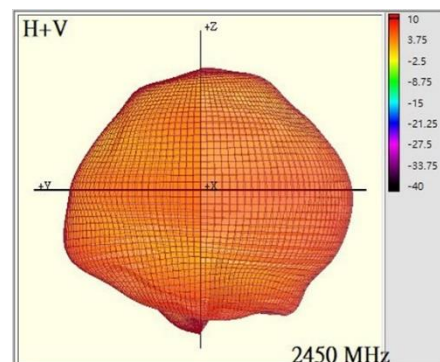
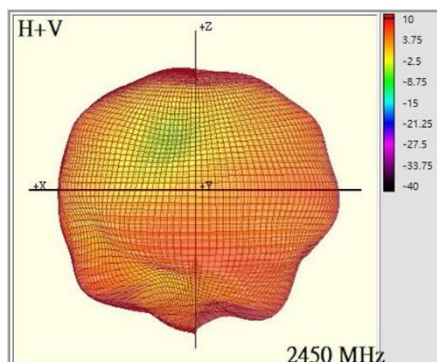
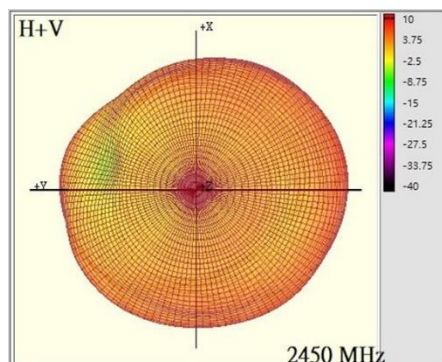
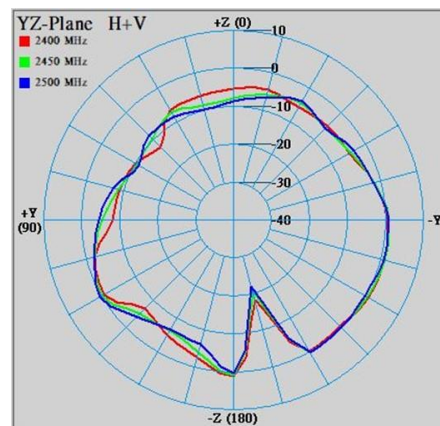
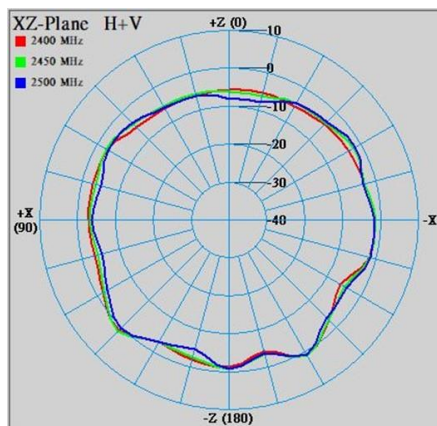
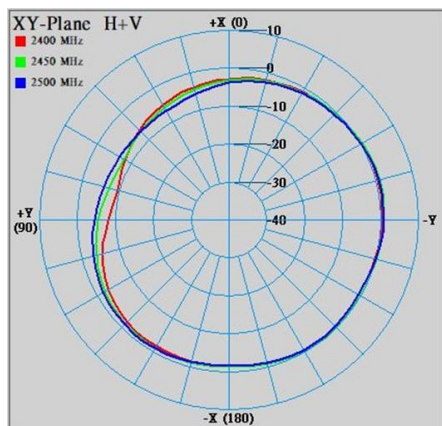
Frequency(MHz) : 2D. 2400~2500
3D. 2450

Radiation Pattern :

Azimuth Plane

Elevation Plane
phi = 0

Elevation Plane
phi = 90



Ant.2_5GHz 2D.3D Radiation Pattern

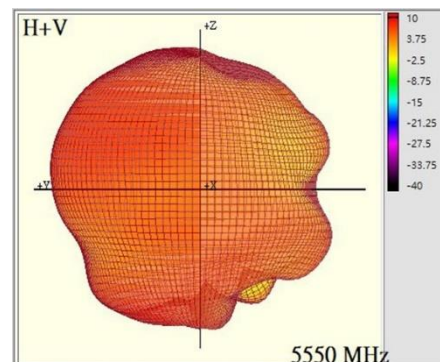
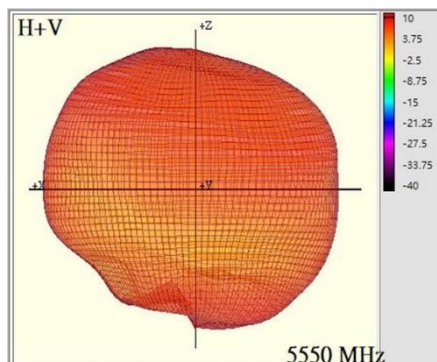
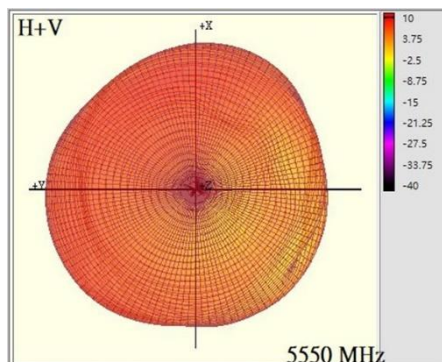
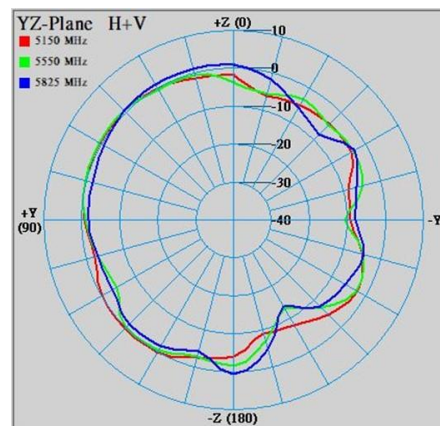
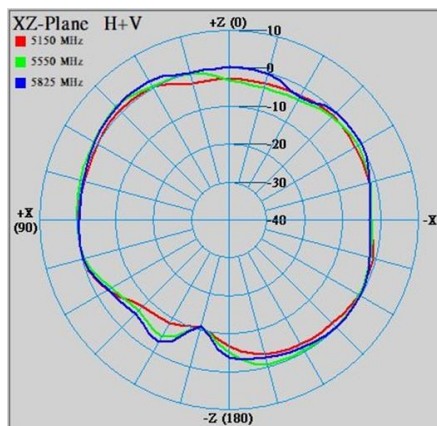
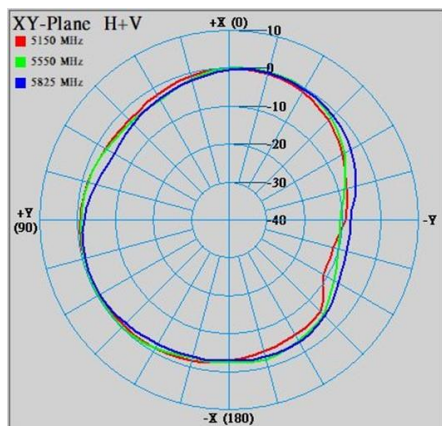
Frequency(MHz) : 2D. 5150~5825
3D. 5550

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