

LYNwave Technology

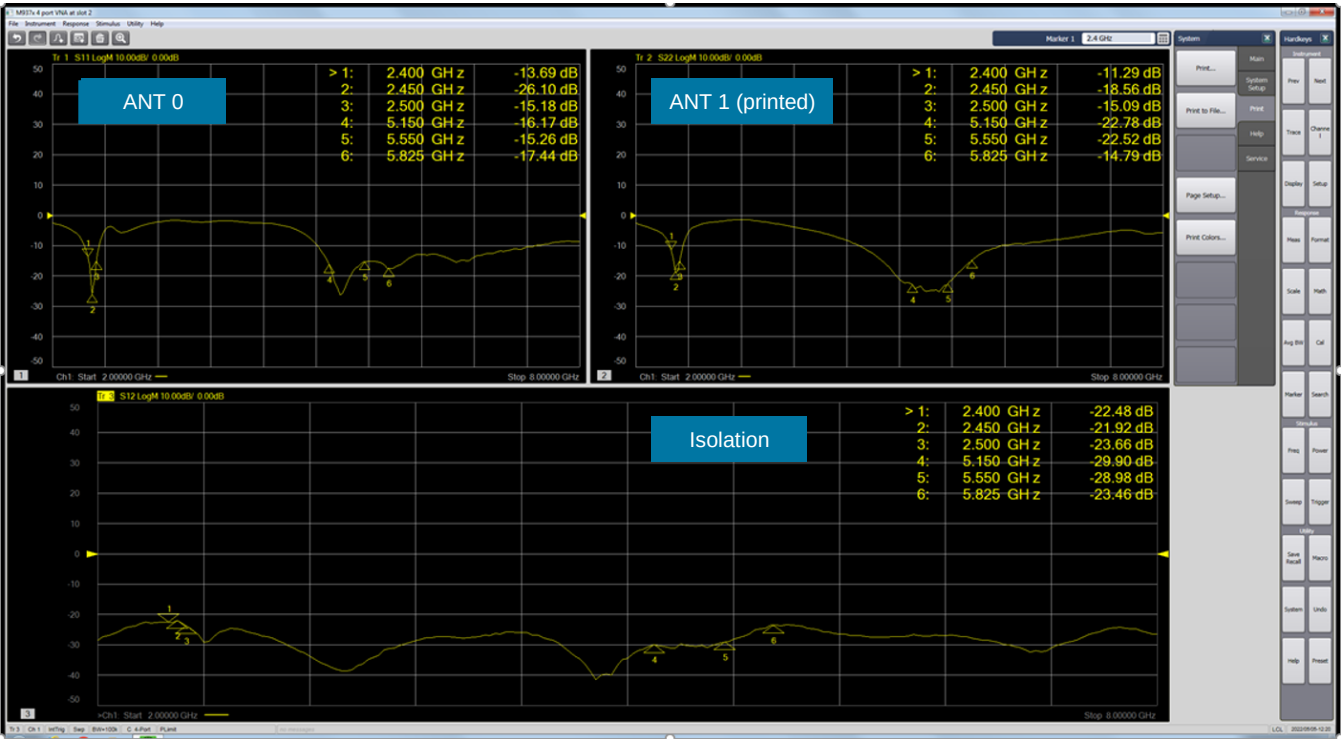
Antenna & Thermal solution provider

Antenna Spec

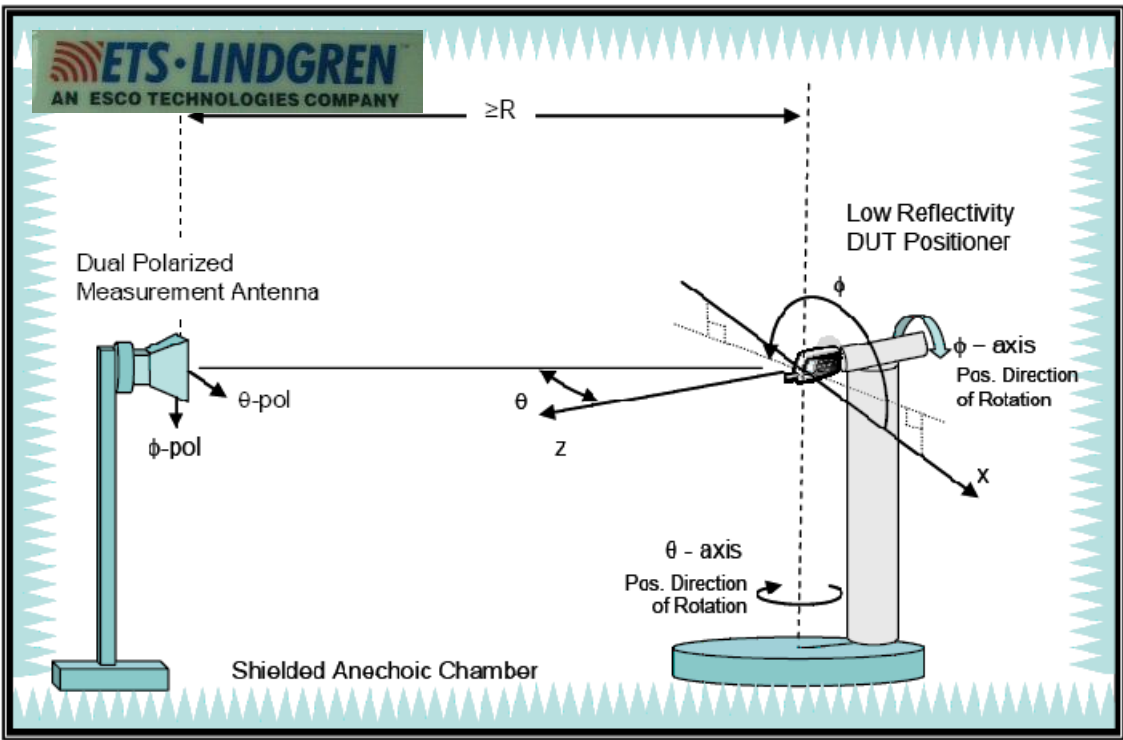
Project Name: AX18U
Model Name: A18
Feature: 2.4G/5G
Application: Dongle
Antenna Type: PCB Antenna

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.0.1 performance in the final mockup.

S-Parameters



Equipment :
ETS Chamber



Gain Table

Ant.0							
Frequency (MHz)	2400	2450	2500	5150	5250	5550	5825
Efficiency(%)	65	72	73	66	68	72	68
Peak Gain(dBi)	1.6	1.7	1.5	1.8	1.85	1.9	1.8
Ant.1							
Frequency (MHz)	2400	2450	2500	5150	5250	5550	5825
Efficiency(%)	55	57	55	66	67	69	68
Peak Gain(dBi)	1.8	1.9	1.2	1.2	1.7	1.9	2.2

The antenna characteristics (ANT.0)

- Return loss < -10dB in operating band
- Efficiency
 - WIFI 2.4 GHz ≥ 65%
 - WIFI 5 GHz ≥ 65%
- Gain
 - WIFI 2.4GHz Band 1.5~1.6dBi
 - WIFI 5GHz Band 1.8~1.9dBi

The antenna characteristics (ANT.1)

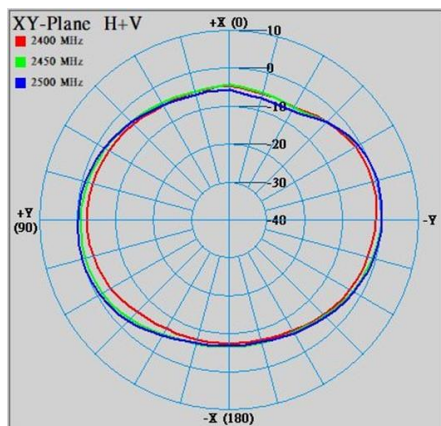
- Return loss < -10dB in operating band
- Efficiency
 - WIFI 2.4 GHz ≥ 55%
 - WIFI 5 GHz ≥ 65%
- Gain
 - WIFI 2.4GHz Band 1.2~1.9dBi
 - WIFI 5GHz Band 1.2~2.2dBi

Ant.0_2.4GHz 2D.3D Radiation Pattern

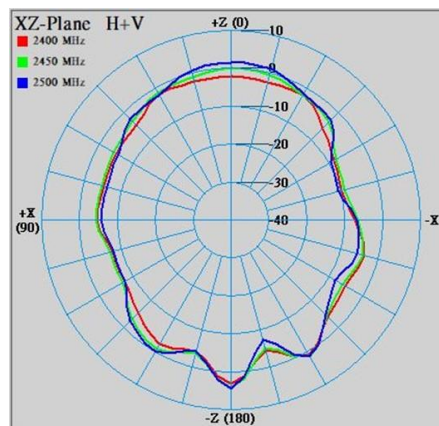
Frequency(MHz) : 2D. 2400~2500
3D. 2450

Radiation Pattern :

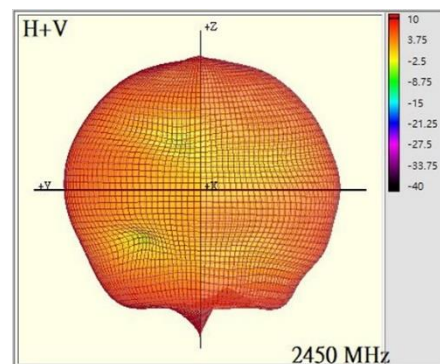
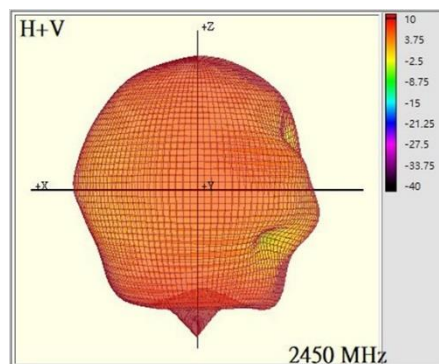
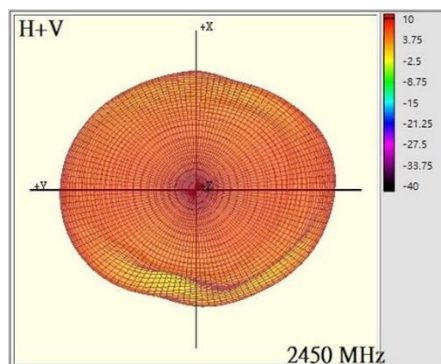
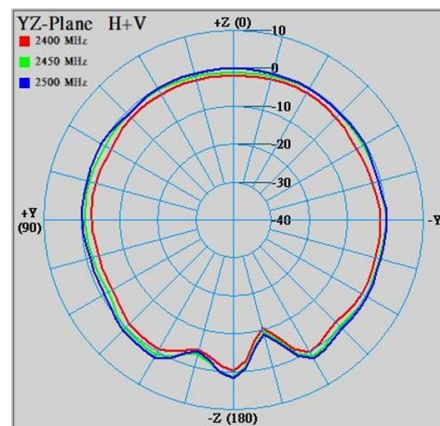
Azimuth Plane



Elevation Plane
phi = 0



Elevation Plane
phi = 90



Ant.0_5GHz 2D.3D Radiation Pattern

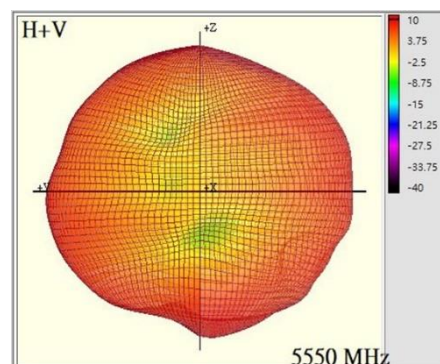
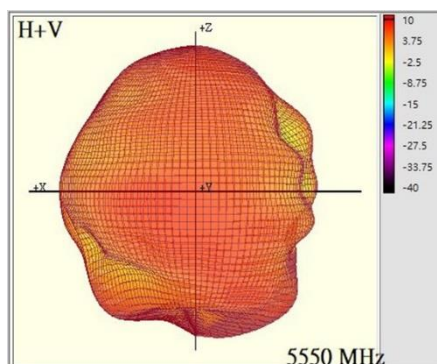
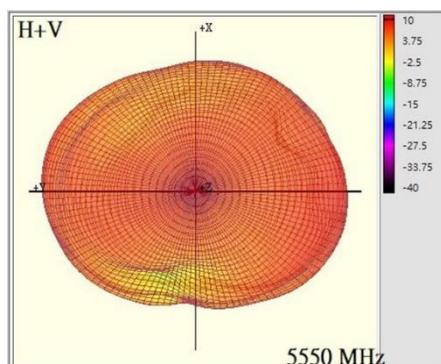
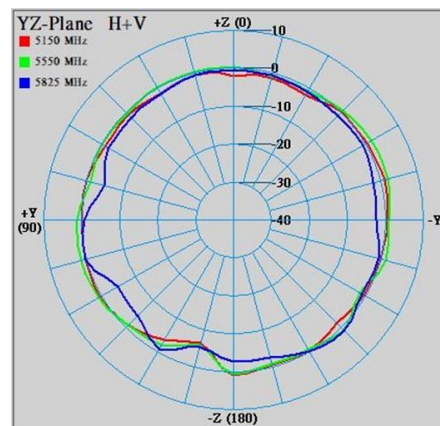
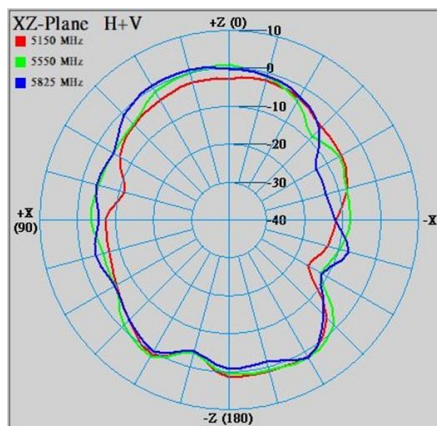
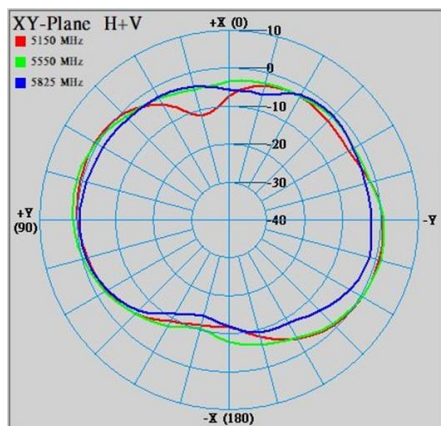
Frequency(MHz) : 2D. 5150~5825
3D. 5550

Radiation Pattern :

Azimuth Plane

Elevation Plane
 $\phi = 0$

Elevation Plane
 $\phi = 90$

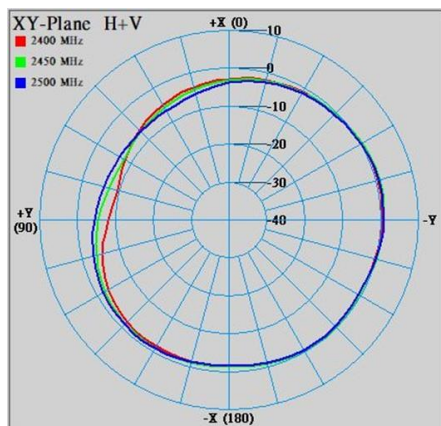


Ant.1_2.4GHz 2D.3D Radiation Pattern

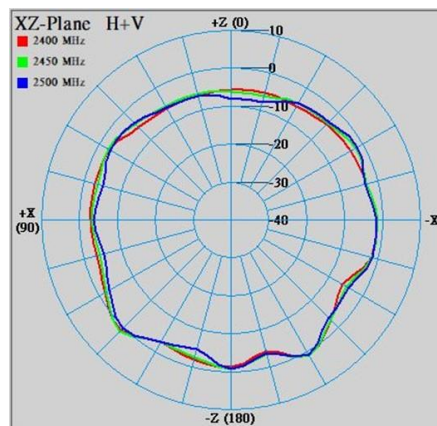
Frequency(MHz) : 2D. 2400~2500
3D. 2450

Radiation Pattern :

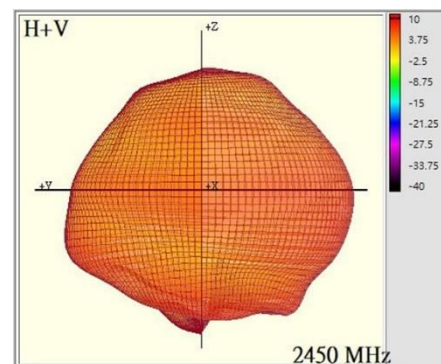
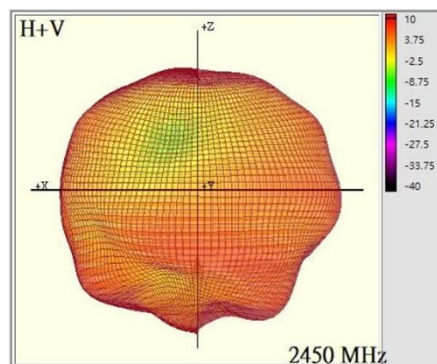
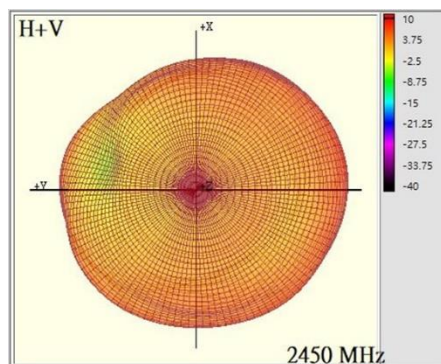
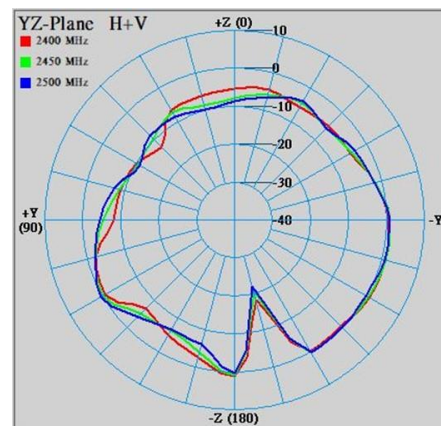
Azimuth Plane



Elevation Plane
phi = 0



Elevation Plane
phi = 90



Ant.1_5GHz 2D.3D Radiation Pattern

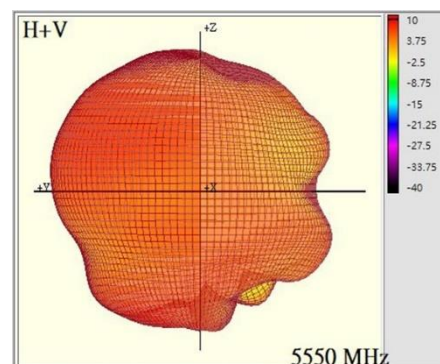
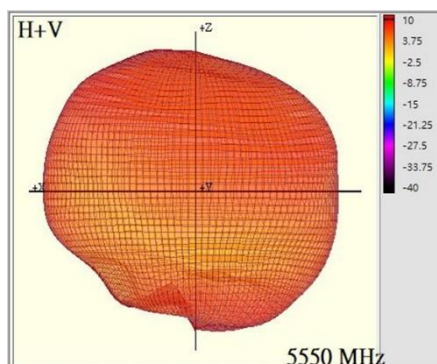
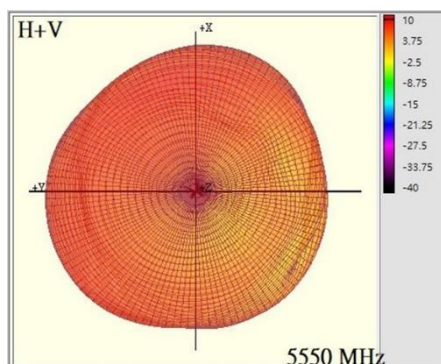
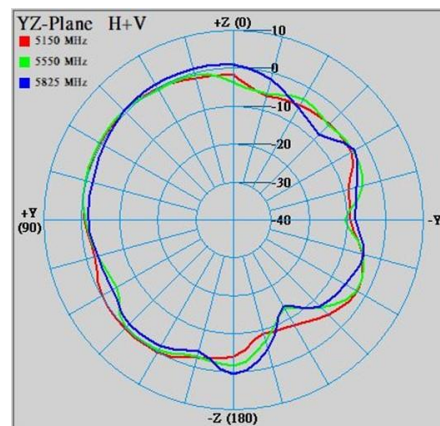
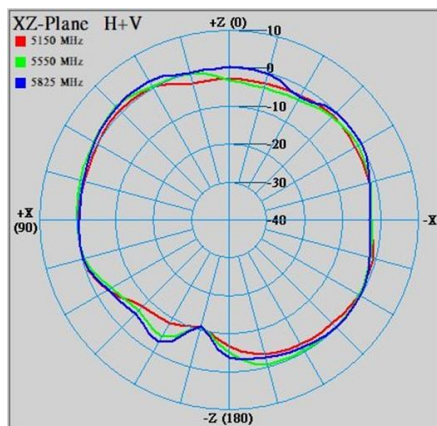
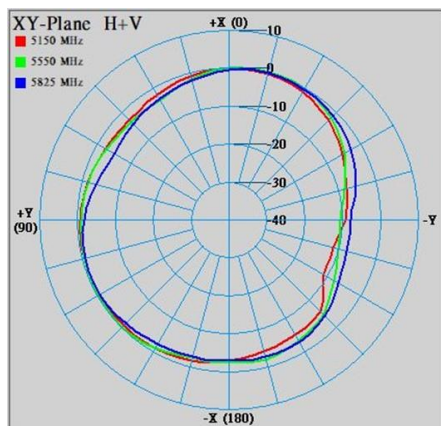
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3D. 5550

Radiation Pattern :

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