LYNwave Technology

Antenna & Thermal solution provider

2022

www.lynwave.com

Antenna Test Report

Project Name: EW-7822UNX

Model Name:

Feature: Wifi Dual Band

Application: Dongle

Date	Owner	Revision
01/17	Alex	1. Antenna passive measurement with V1 mockup
02/07	Zino	1. Antenna passive measurement with V1 mockup (new thermal sol.)
05/04	Zino	1. Antenna passive measurement with V2 mockup (without heatsink)
06/23	Zino	1. Antenna passive measurement with T2 mockup
07/06	Zino	1. Add USB GND
07/18	Zino	1. Antenna passive measurement with T3 mockup (Grounding USB)

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Antenna Placement

Antenna	Description	Frequency
Ant.1	2.4/5G	2400 MHz ~ 2500 MHz / 5150 MHz ~ 5825 MHz
Ant.2	2.4/5G	2400 MHz ~ 2500 MHz / 5150 MHz ~ 5825 MHz

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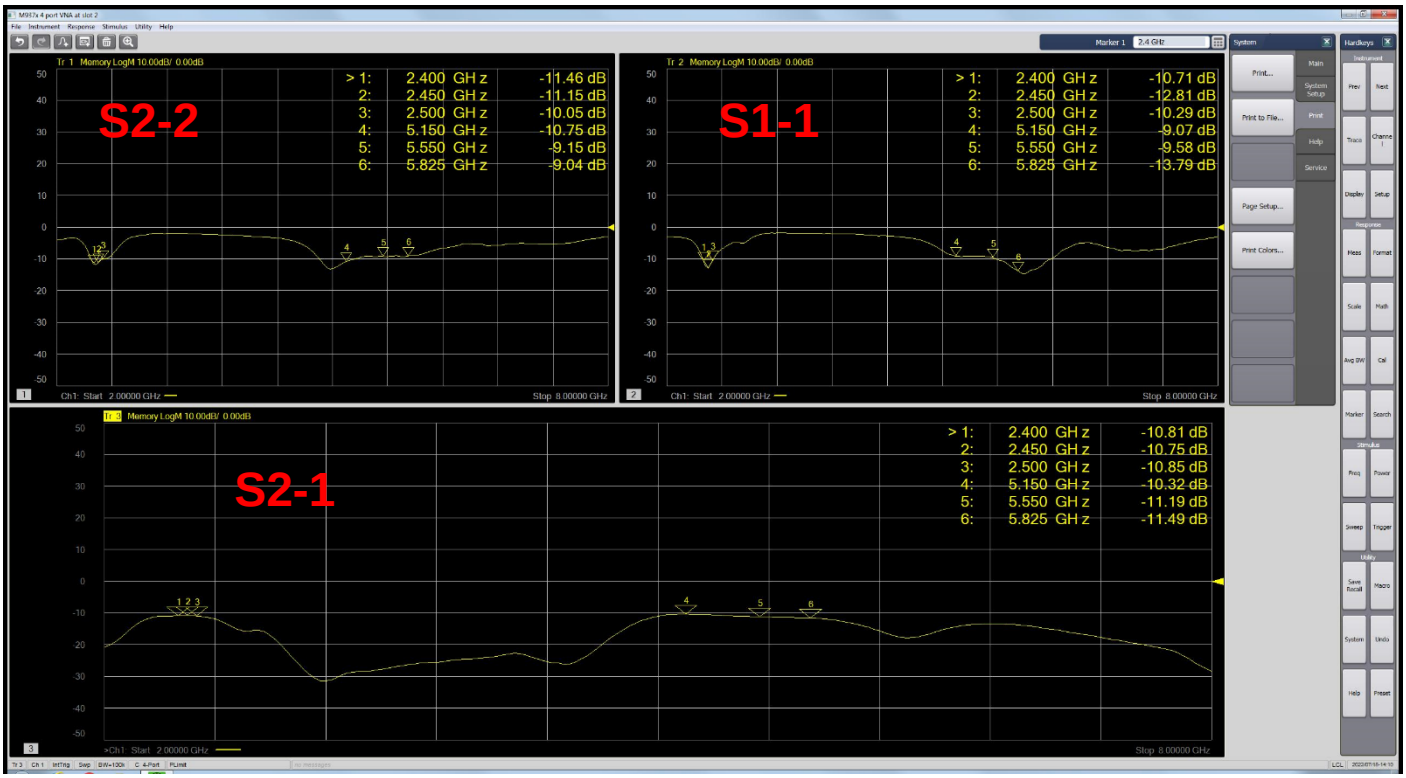
S-Parameters



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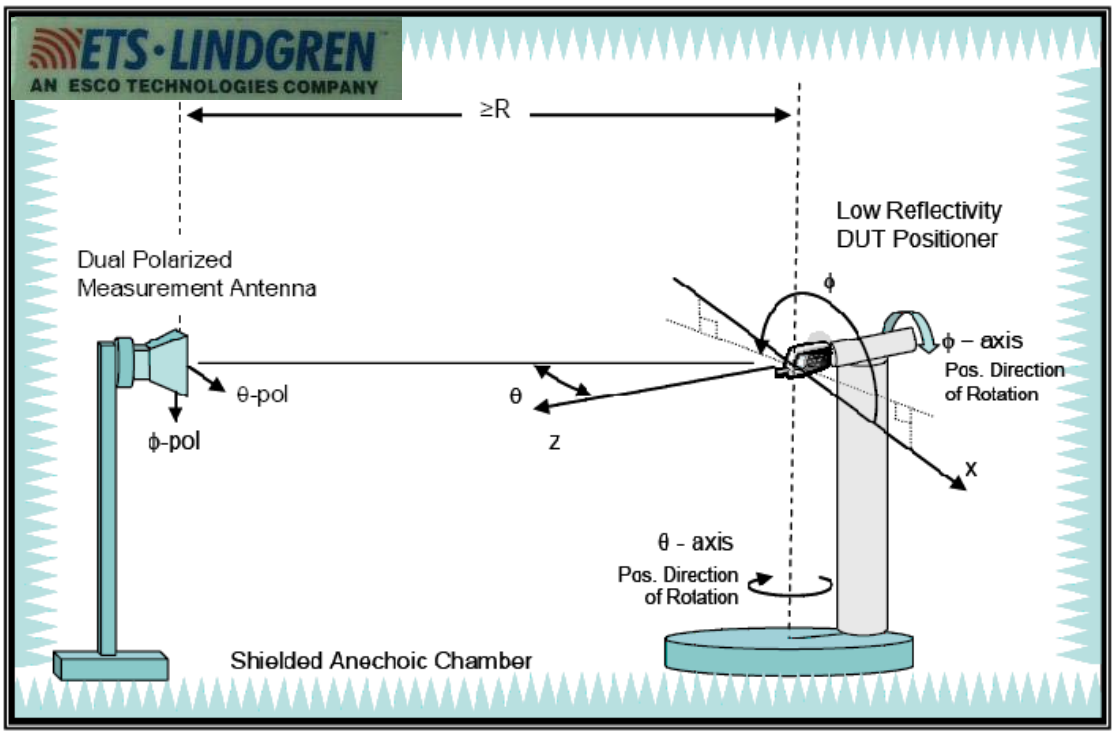
Equipment :
ETS Chamber



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Gain Table

Ant.1						
Frequency (MHz)	2400	2450	2500	5150	5550	5825
Efficiency(%)	31	32	33	42	43	42
Peak Gain(dBi)	-1.4	-0.9	-0.6	0.4	1.8	2.6
Ant.2						
Frequency (MHz)	2400	2450	2500	5150	5550	5825
Efficiency(%)	33	33	34	41	43	43
Peak Gain(dBi)	-1.7	-1.1	-0.9	0.5	2.8	3.0

The antenna characteristics

- Return loss < -8dB in operating band
- Isolation
  - All Band > 10 dB
- Efficiency
  - WIFI 2.4GHz Band ≥ 30%
  - WIFI 5GHz Band ≥ 40%
- Gain
  - WIFI 2.4GHz Band -1.7 ~ -0.6dBi
  - WIFI 5GHz Band 0.4 ~ 3.0dBi

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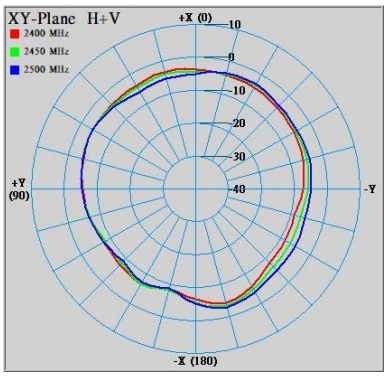
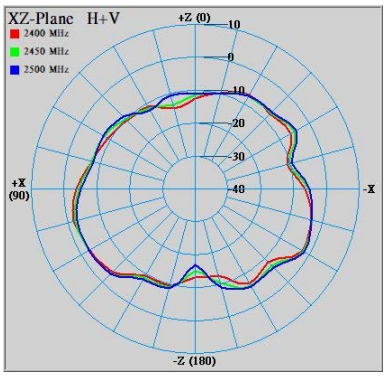
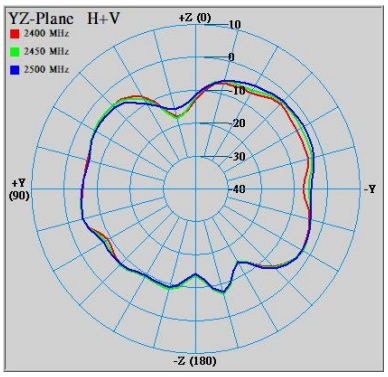
Ant.1_ 2D.3D Radiation Pattern
Frequency(MHz) : 2D. 2400~2500
3D. 2450

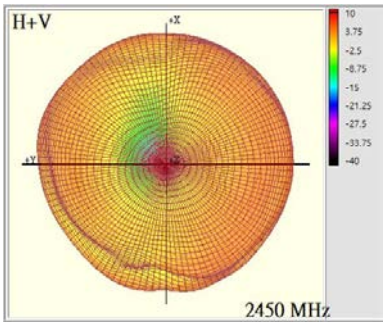
Radiation Pattern :

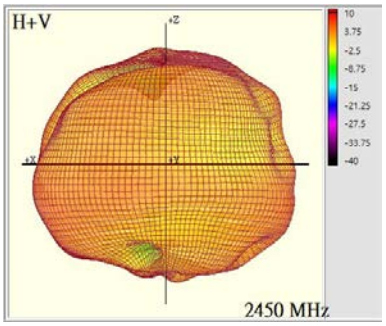
Azimuth Plane	Elevation Plane phi = 0	Elevation Plane phi = 90

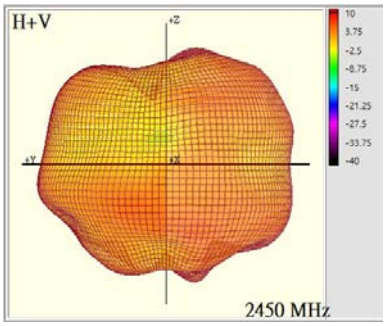












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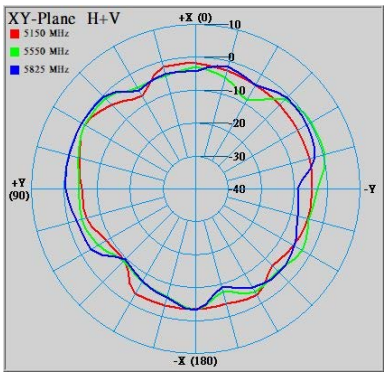
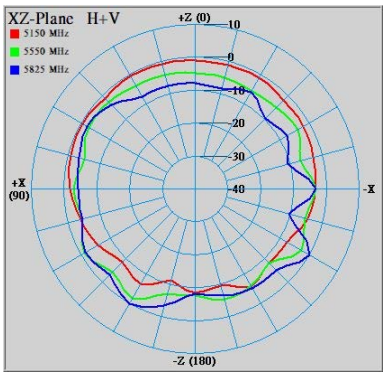
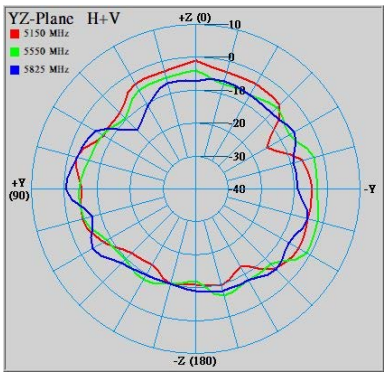
Ant.1_ 2D.3D Radiation Pattern
Frequency(MHz) : 2D. 5150~5825
3D. 5550

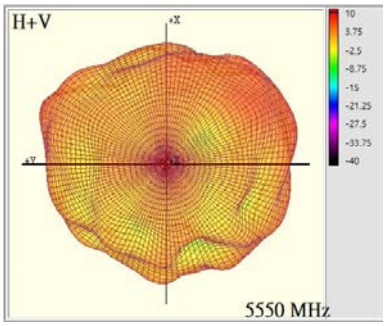
Radiation Pattern :

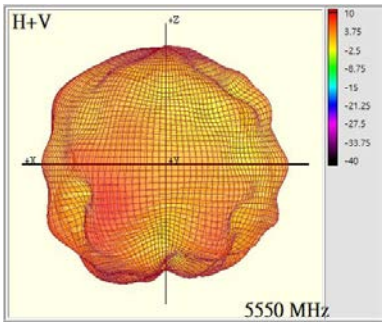
Azimuth Plane	Elevation Plane phi = 0	Elevation Plane phi = 90

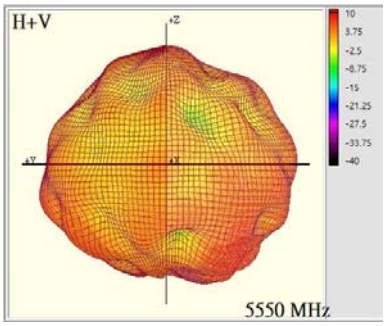












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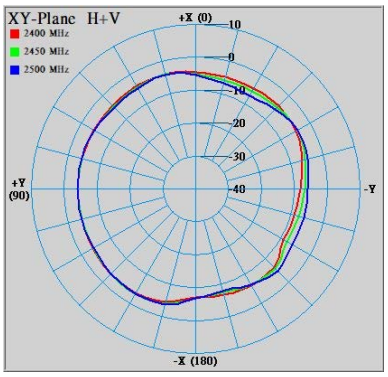
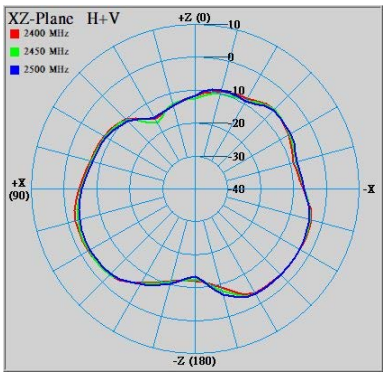
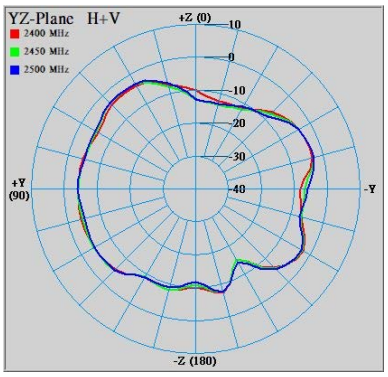
Ant.2_ 2D.3D Radiation Pattern
Frequency(MHz) : 2D. 2400~2500
3D. 2450

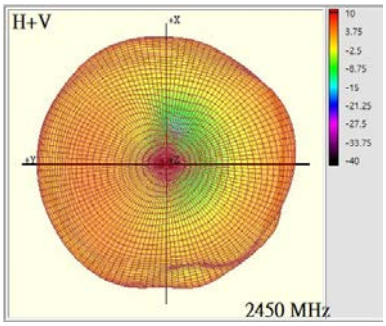
Radiation Pattern :

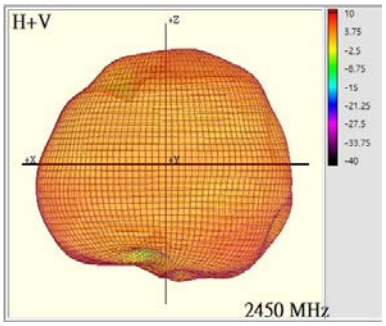
Azimuth Plane	Elevation Plane phi = 0	Elevation Plane phi = 90

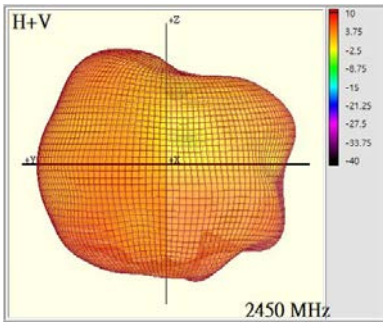












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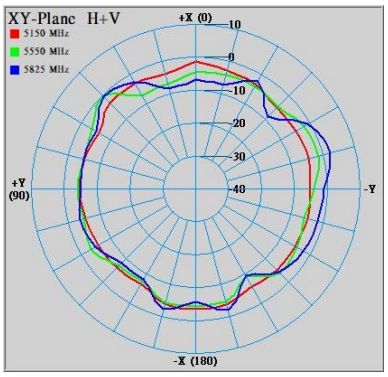
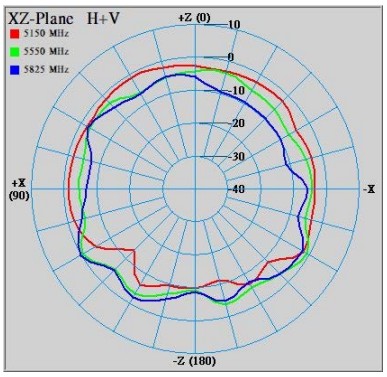
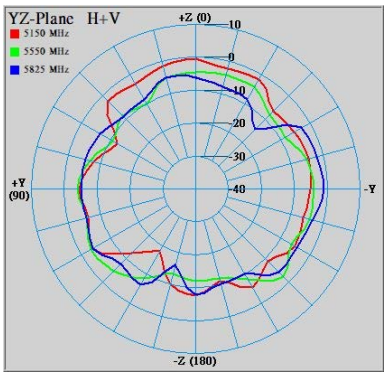
Ant.2_ 2D.3D Radiation Pattern
Frequency(MHz) : 2D. 5150~5825
3D. 5550

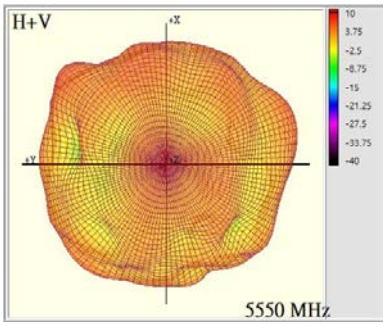
Radiation Pattern :

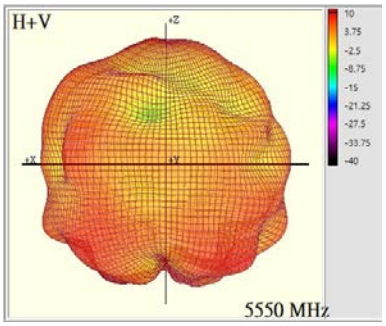
Azimuth Plane	Elevation Plane phi = 0	Elevation Plane phi = 90

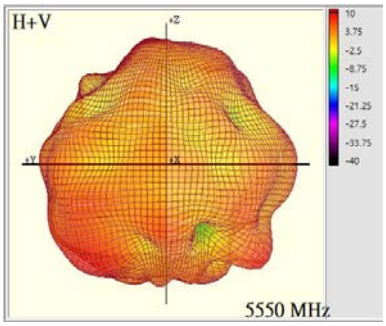












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