

LYNwave Technology

Antenna & Thermal solution provider

Antenna Field Test Report

Company: Edimax
Project Name: EW-7611UXB
Application:

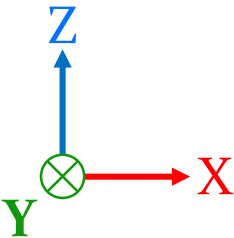
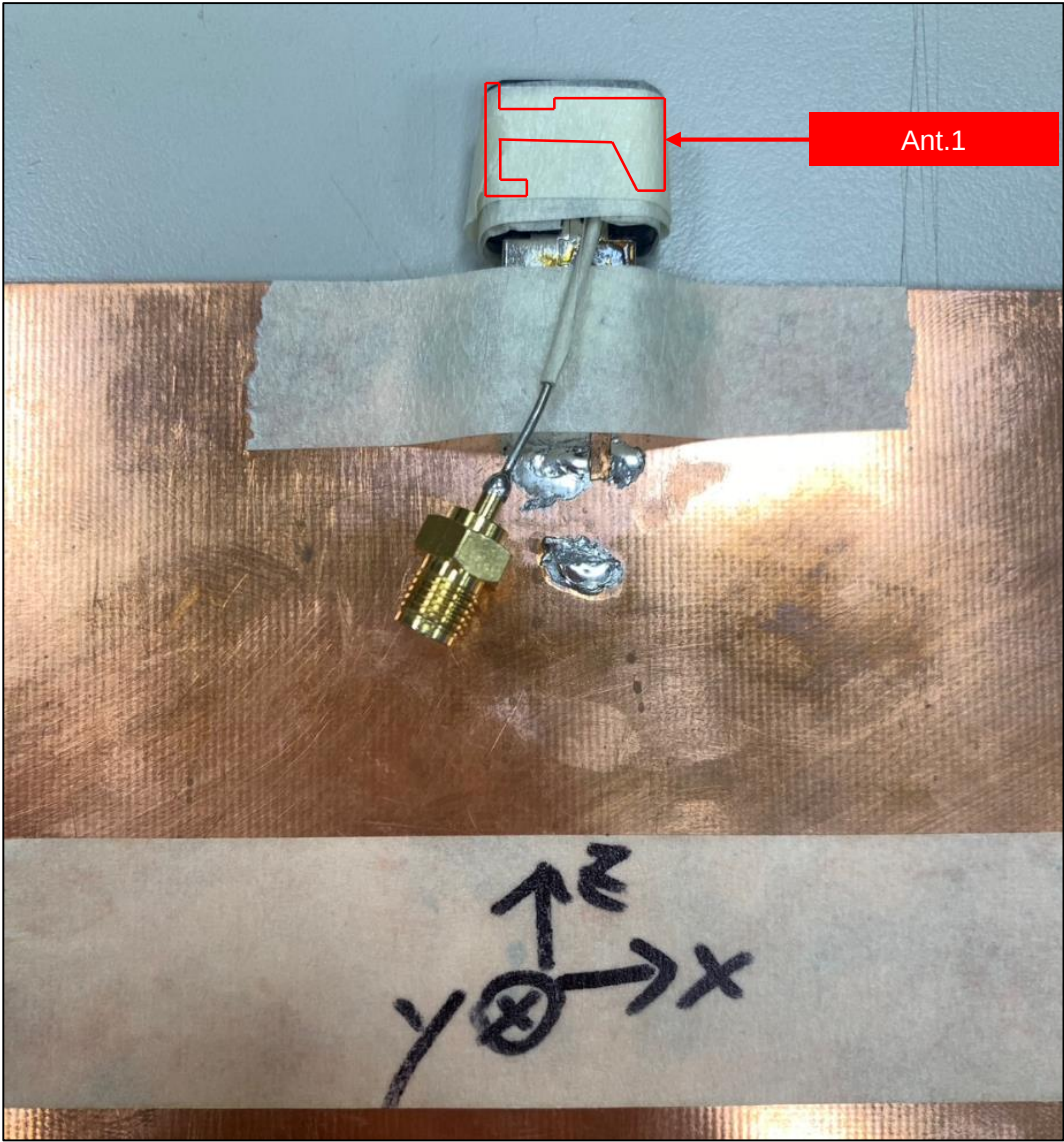
Date	Owner	Revision
2023/05/04	Peter	1. First antenna evaluation
2023/08/15	Peter	1. Add New HSK and component in module 2. Antenna evaluation
2023/11/28	Peter	1. 1st sample field test report
2024/02/19	Peter	1. 2nd sample field test report

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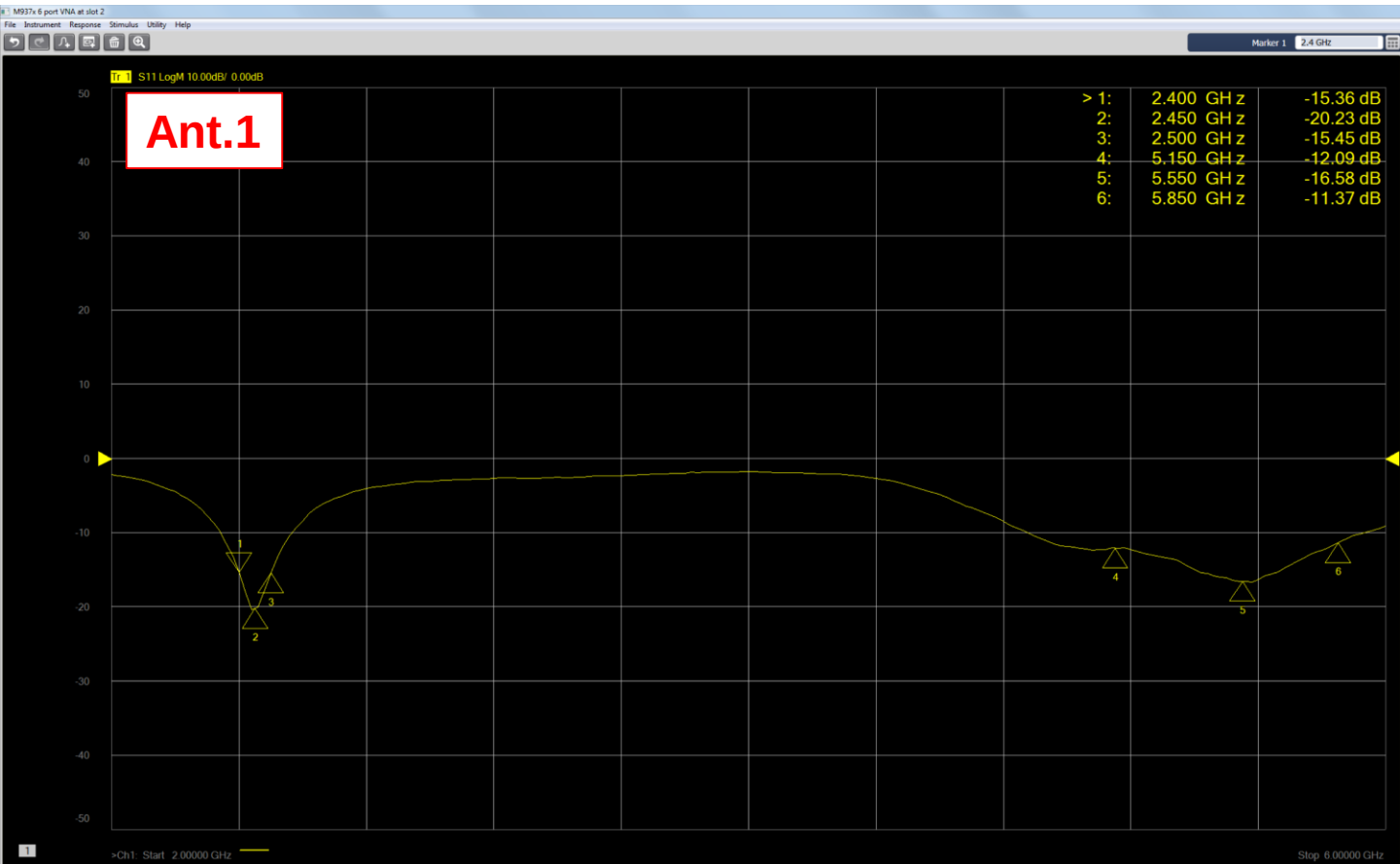
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Antenna Placement

Antenna	Description	Frequency
Ant.1	WIFI Dual band	2400 – 2500MHz / 5150 – 5850 MHz



S-Parameters



Equipment :
Satimo

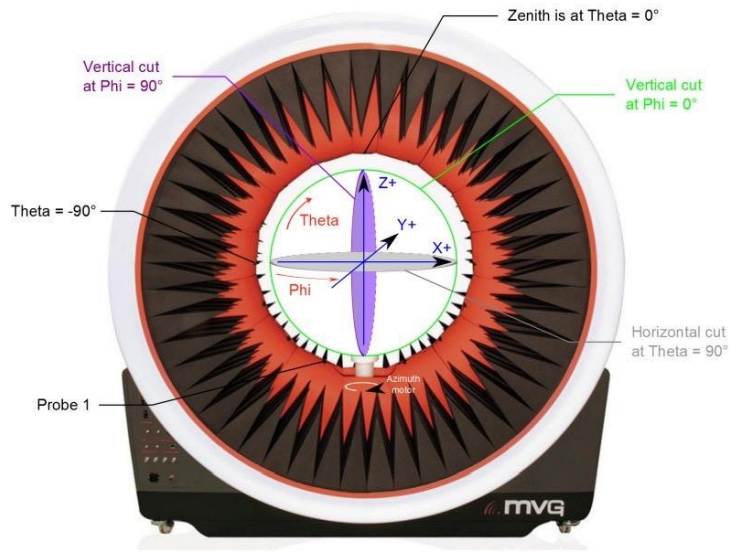
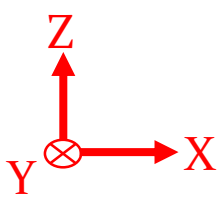
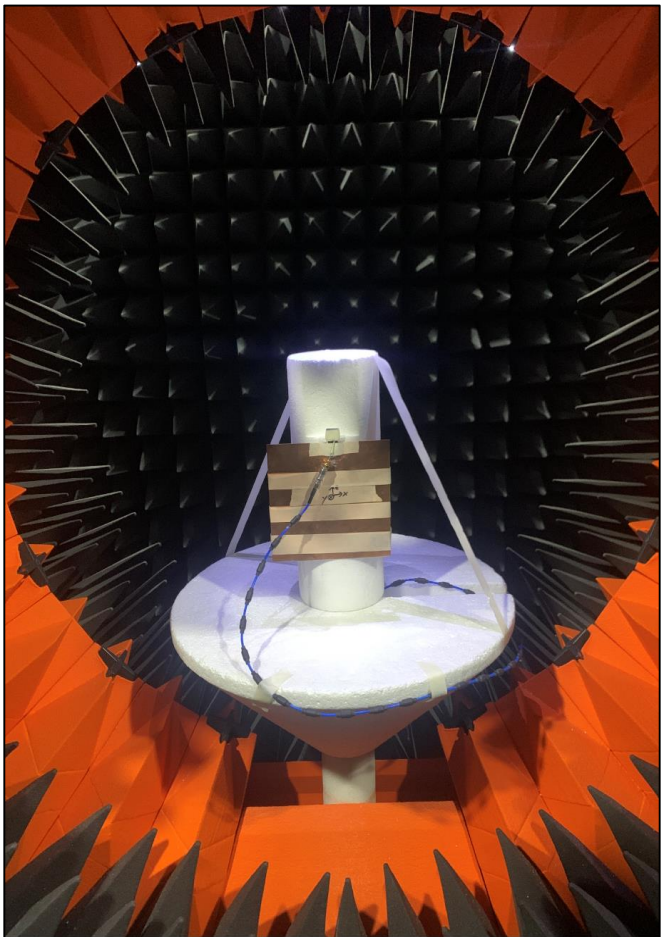


Figure 3.12: StarLab spherical coordinate system



Gain Table

	Frequency(MHz)	2400	2450	2500	5150	5550	5850
Ant.1	Peak Gain(dBi)	3.0	3.0	2.9	3.2	3.2	3.4
	Efficiency(%)	45	45	46	50	53	54

The antenna characteristics

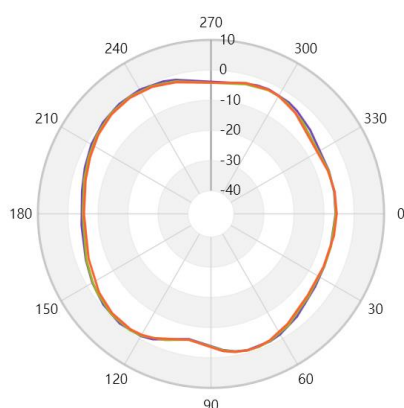
- **Return loss**
 - All band < -10dB in operating band
- **Gain**
 - 2G = 2.9 ~ 3.0dBi
 - 5G = 3.2 ~ 3.4dBi
- **Efficiency**
 - 2G> 45% in operating band
 - 5G> 50% in operating band

Ant.1_2.4 GHz 2D Radiation Pattern

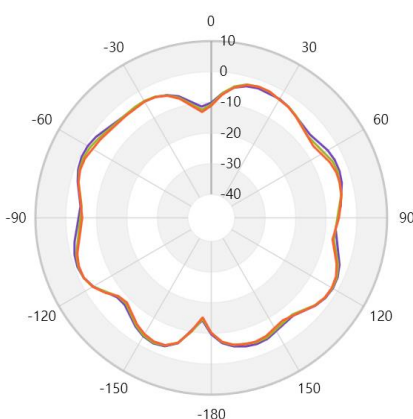
Frequency(MHz) : 2400~2500

Radiation Pattern :

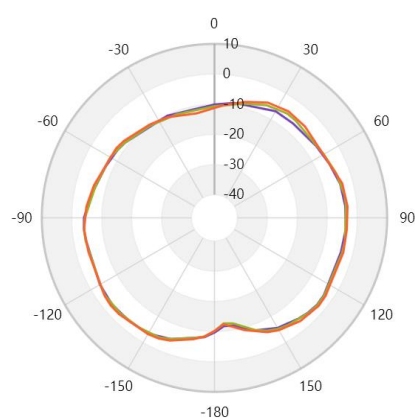
Azimuth Plane
Theta = 90



Elevation Plane
Phi = 0

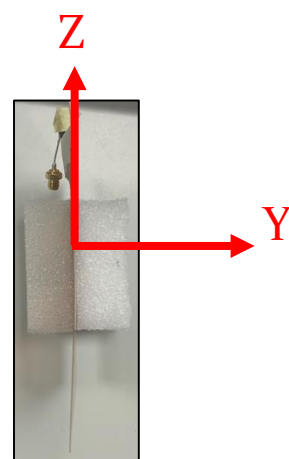
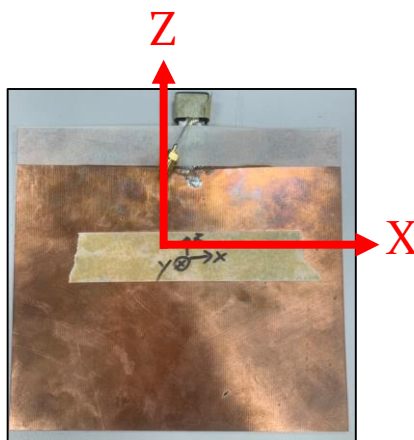
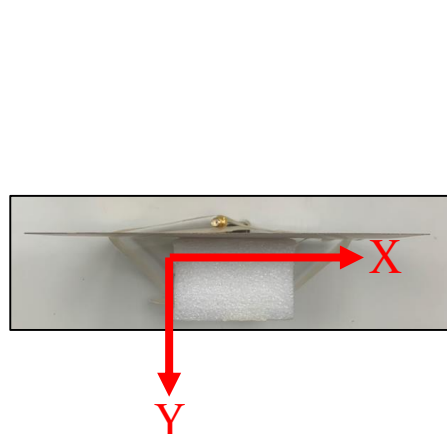


Elevation Plane
Phi = 90



— 2400.00 MHz
— 2450.00 MHz
— 2500.00 MHz

Setup :

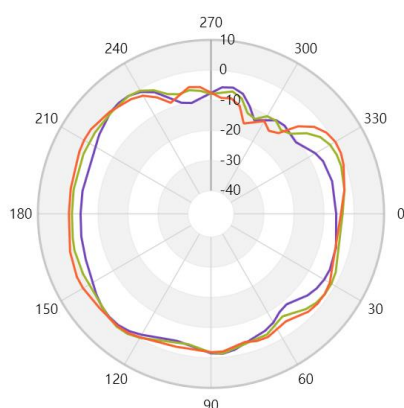


Ant.1_5 GHz 2D Radiation Pattern

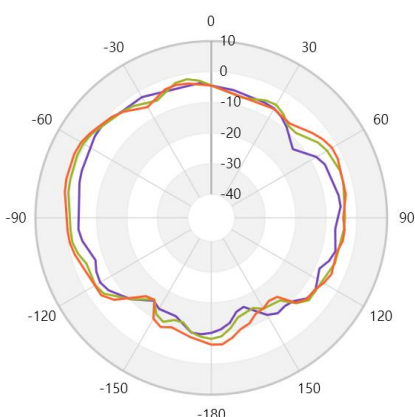
Frequency(MHz) : 5150~5850

Radiation Pattern :

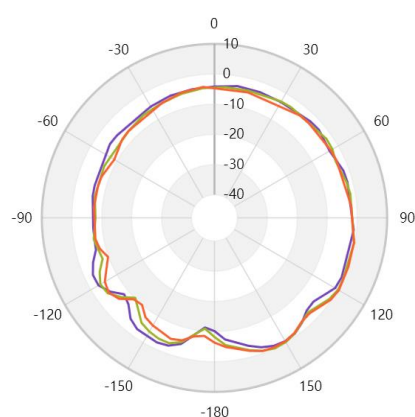
Azimuth Plane
Theta = 90



Elevation Plane
Phi = 0

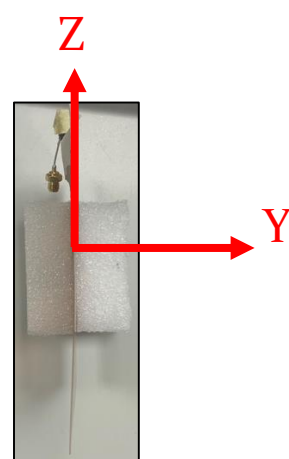
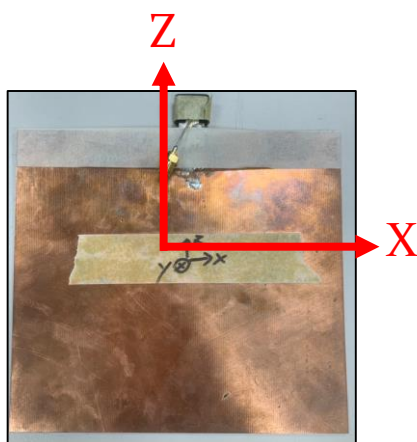
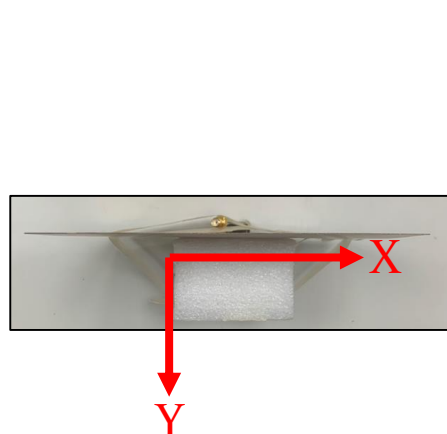


Elevation Plane
Phi = 90



— 5150.00 MHz
— 5550.00 MHz
— 5850.00 MHz

Setup :



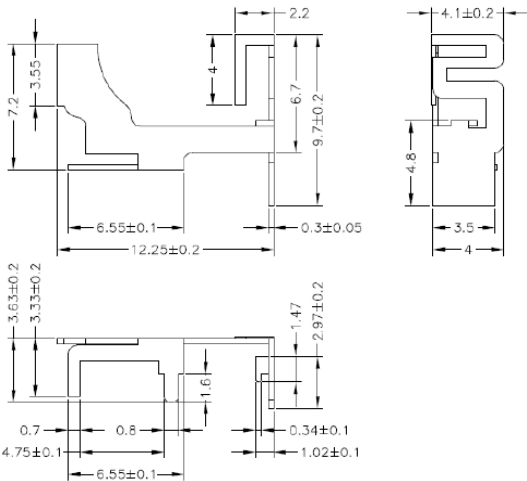
Summary

The antenna characteristics

- **Return loss**
 - All band < -10dB in operating band
- **Gain**
 - 2G = 2.9 ~ 3.0dBi
 - 5G = 3.2 ~ 3.4dBi
- **Efficiency**
 - 2G> 45% in operating band
 - 5G> 50% in operating band

Mechanical Specification

Category	Specification
Dimension (mm)	12.25 x 9.7 x 4.1
Thickness (mm)	0.3
Weight (g)	TBD
Connector	N/A
Cable	N/A
Cable Length (mm)	N/A
Material	Metal (SUS430)
Operating Temp (°C)	-40°C ~ +85°C
Storage Temp (°C)	23 ± 5°C
Storage Humidity (%)	30% ~ 70%



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