

LYNwave Technology

Antenna & Thermal solution provider

Antenna Field Test Report

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

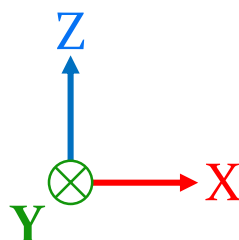
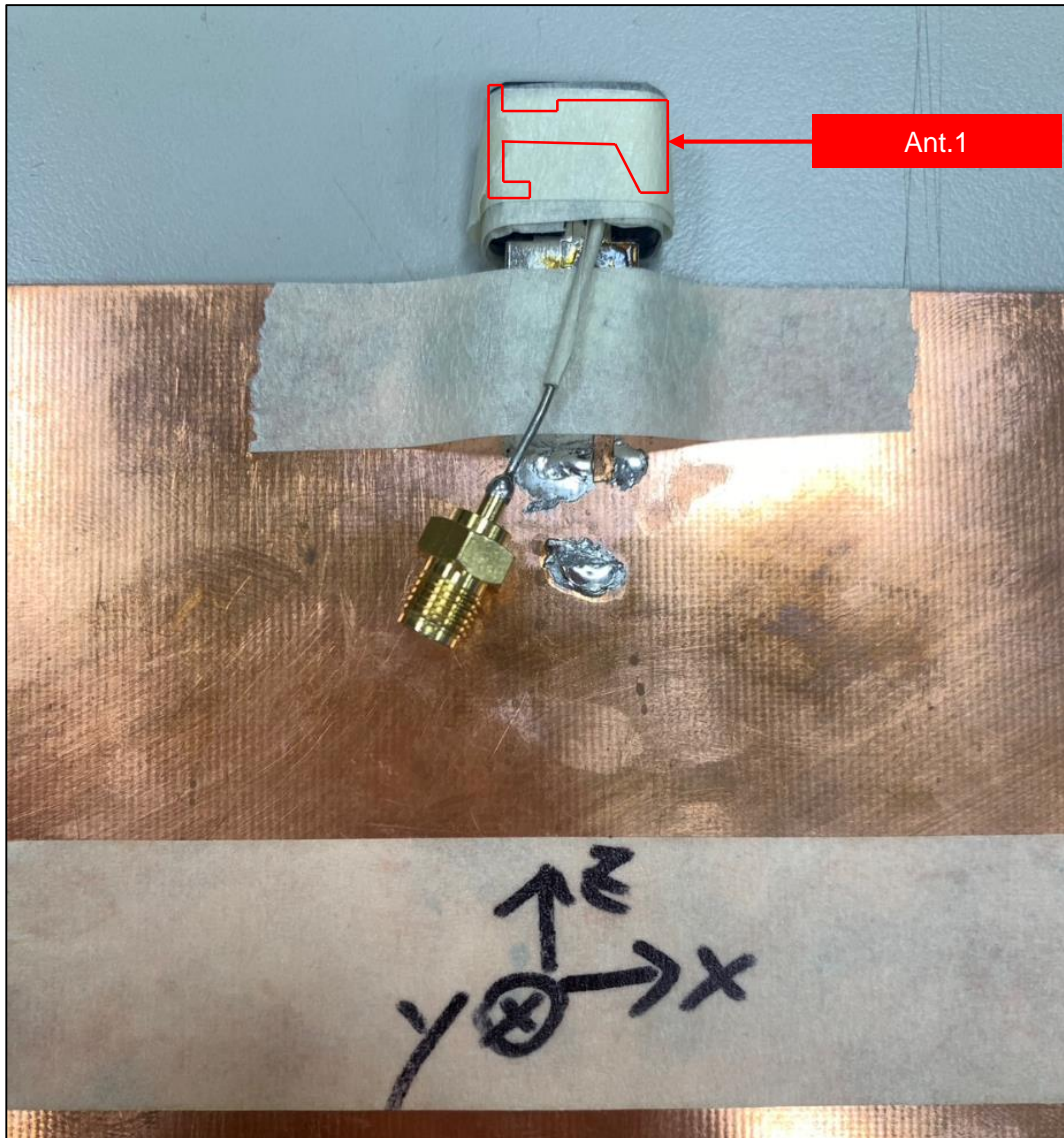
| Date | Owner | Revision |
|------------|-------|---|
| 2023/05/04 | Peter | 1. First antenna evaluation |
| 2023/08/15 | Peter | 1. Add New HSK and component in module 2. Antenna evaluation |
| 2023/11/28 | Peter | 1. 1st sample field test report |
| 2024/02/19 | Peter | 1. 2nd sample field test report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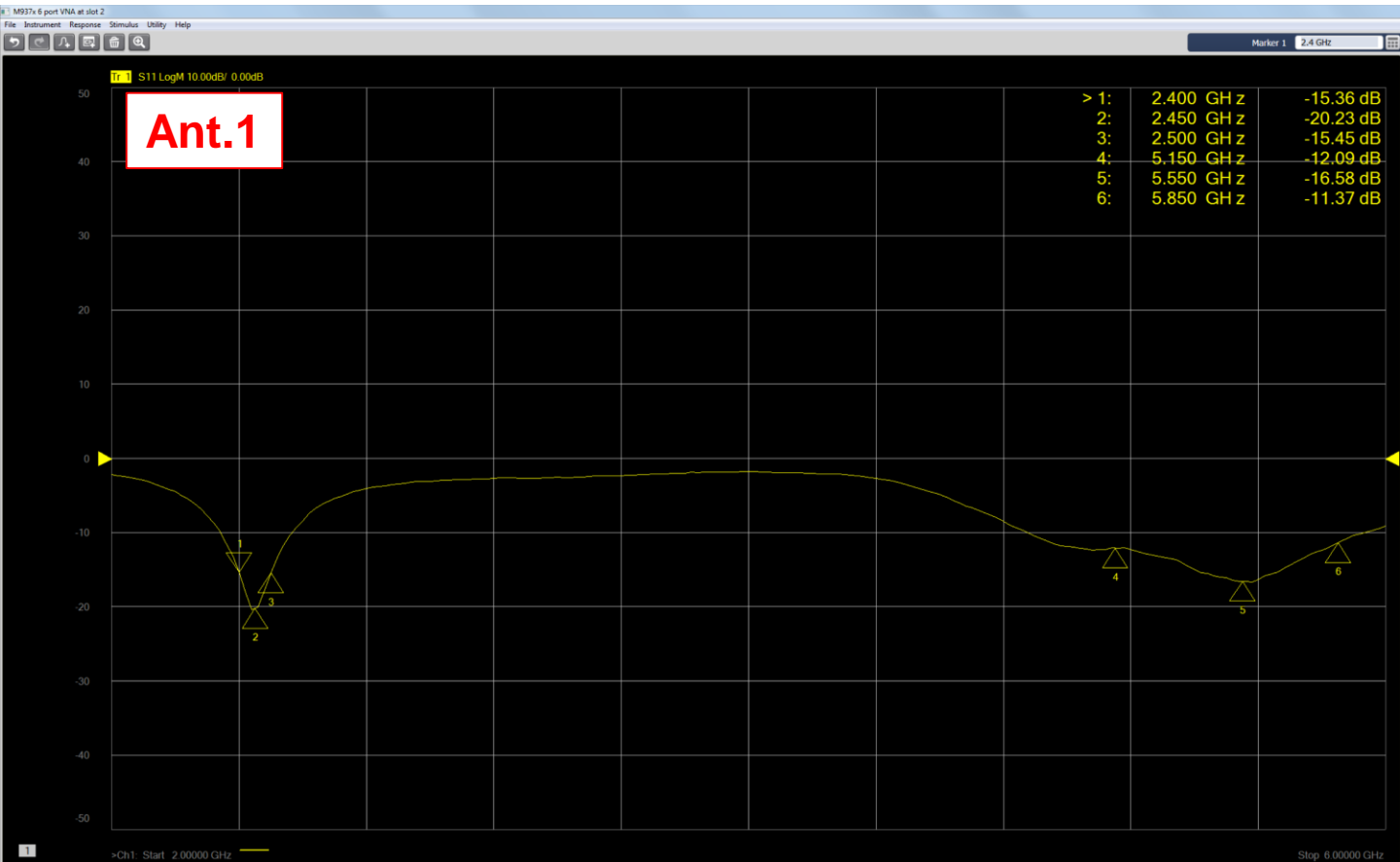
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Antenna Placement

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



S-Parameters



Equipment :
Satimo

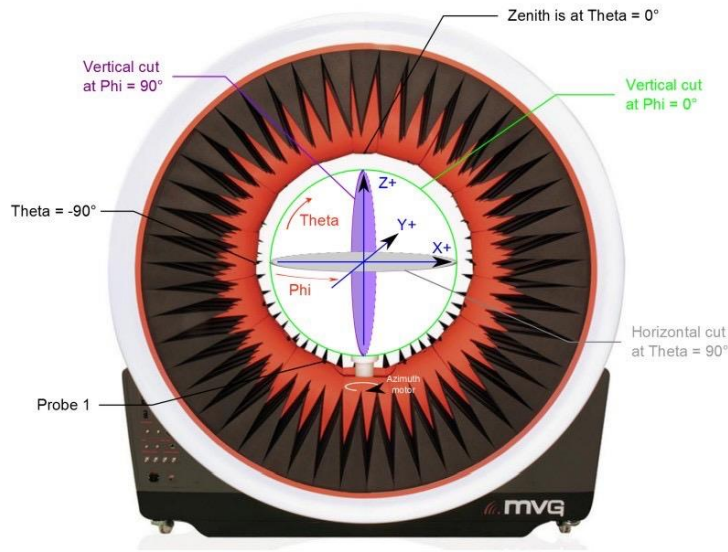
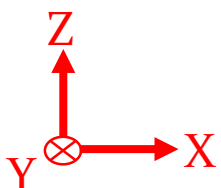
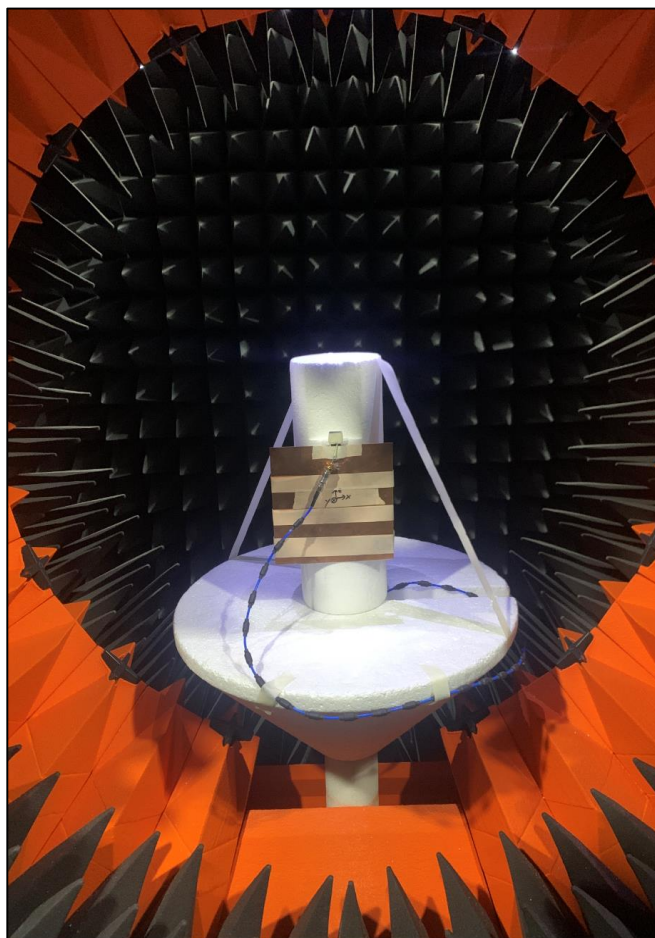


Figure 3.12: StarLab spherical coordinate system



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

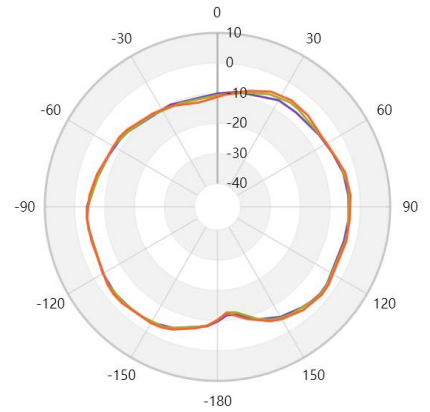
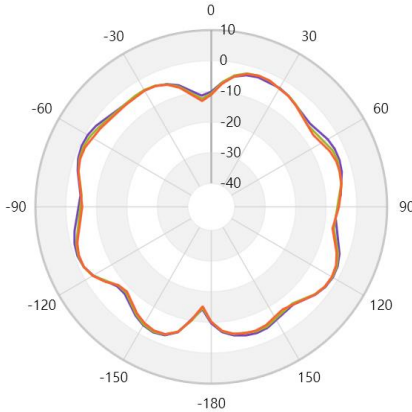
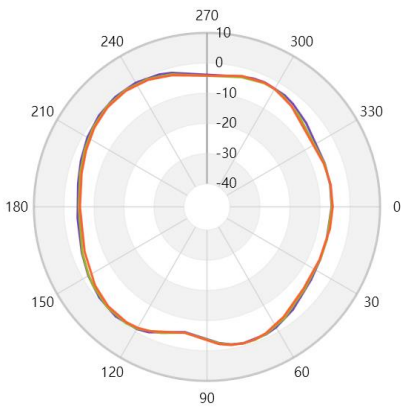
Frequency(MHz) : 2400~2500

Radiation Pattern :

Azimuth Plane
Theta = 90

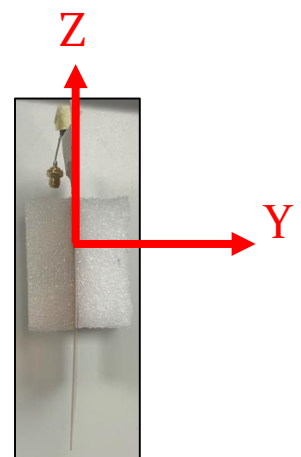
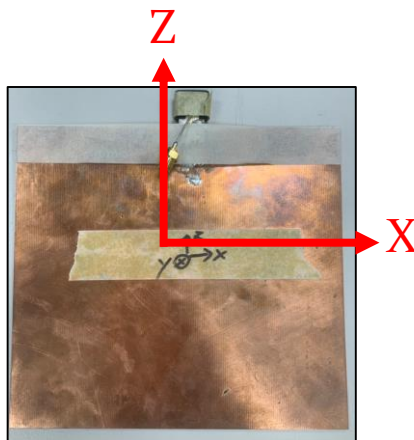
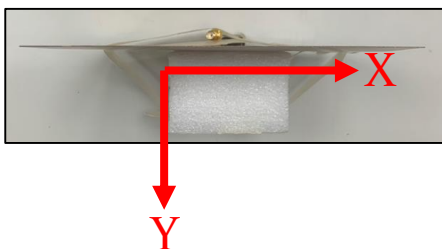
Elevation Plane
Phi = 0

Elevation Plane
Phi = 90



- 2400.00 MHz
- 2450.00 MHz
- 2500.00 MHz

Setup :



Ant.1_5 GHz 2D Radiation Pattern

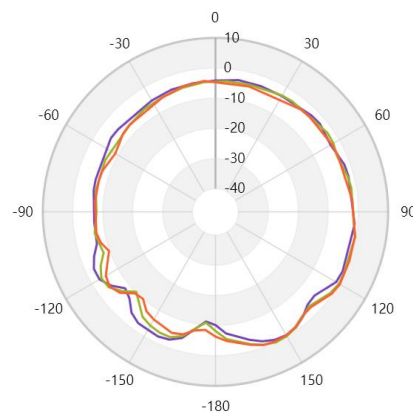
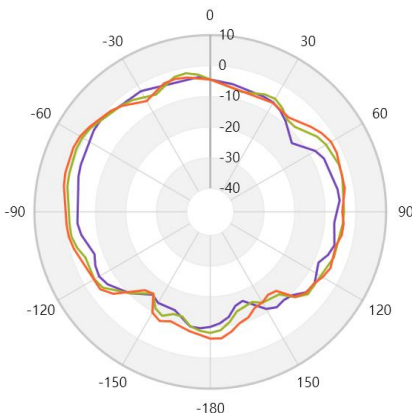
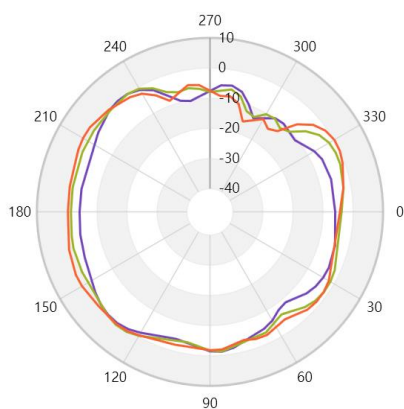
Frequency(MHz) : 5150~5850

Radiation Pattern :

Azimuth Plane
Theta = 90

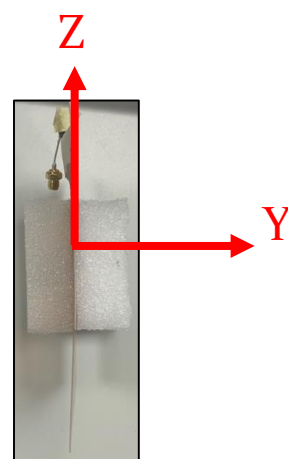
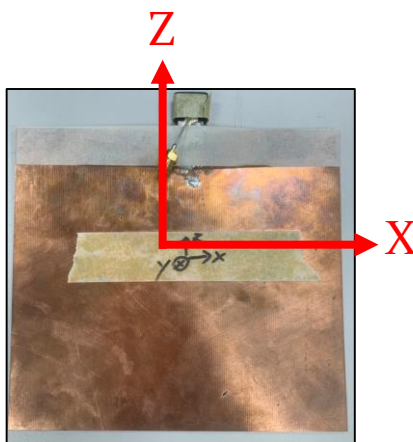
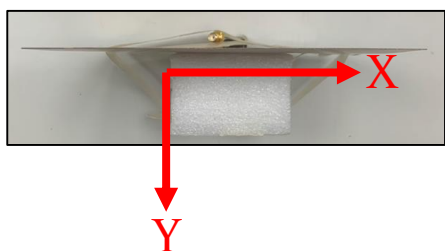
Elevation Plane
Phi = 0

Elevation Plane
Phi = 90



- 5150.00 MHz
- 5550.00 MHz
- 5850.00 MHz

Setup :



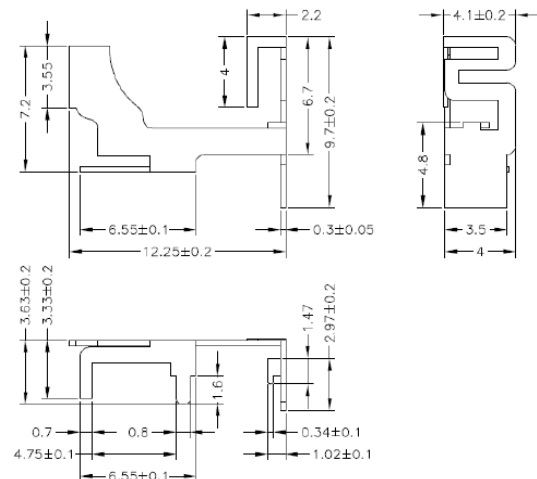
Summary

The antenna characteristics

- **Return loss**
 - All band < -10dB in operating band
- **Gain**
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- **Efficiency**
 - 2G > 45% in operating band
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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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