

2639AN

Antenna test report



Antenna Field Test Report

Company: Azurewave

Project Name: 2639AN

Feature: Dual band

Application:

[illegible]

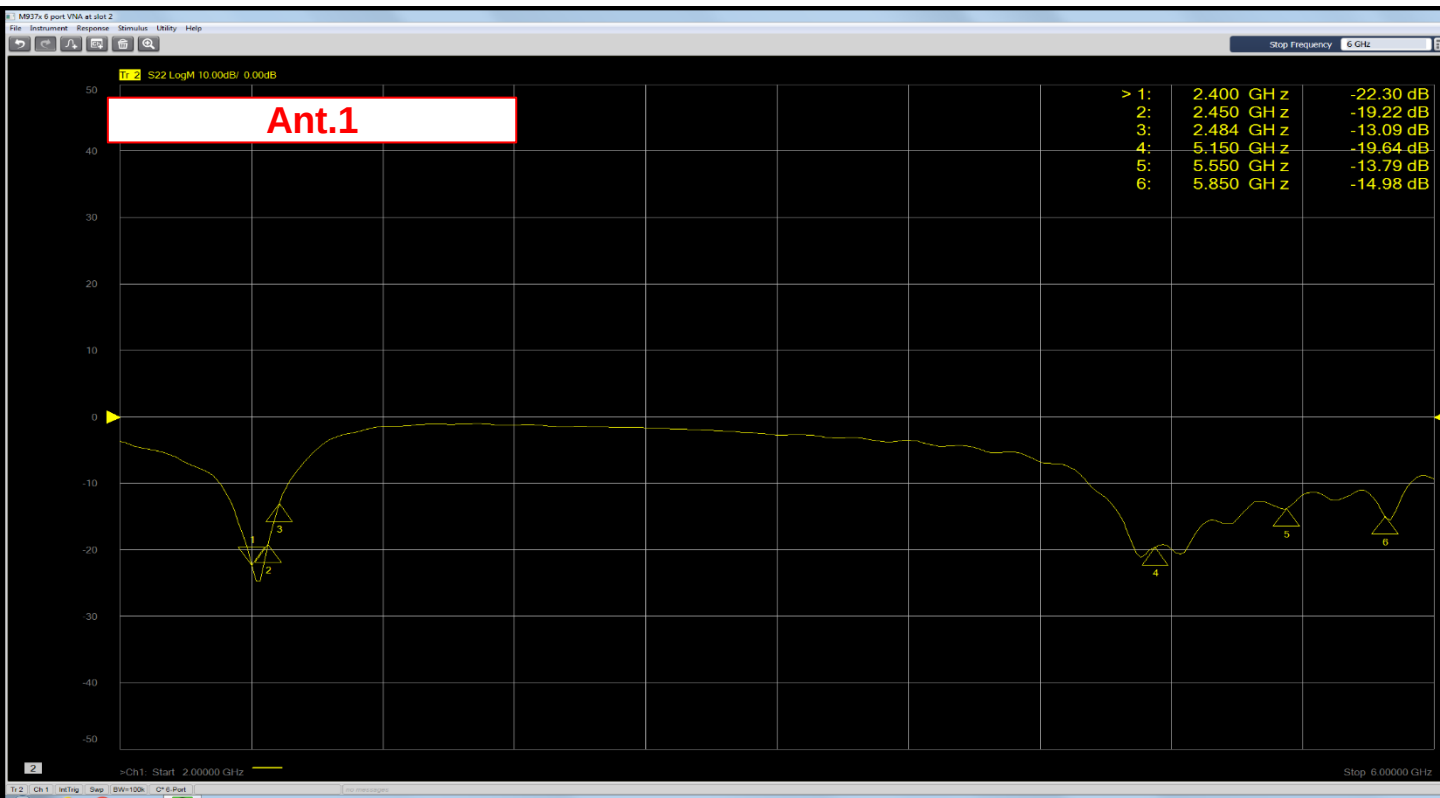
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Antenna Placement

Antenna	Description	Frequency
Ant.1	Dual Band	2400 – 2500 MHz 5150 – 5850 MHz

S-Parameters



Equipment :
Satimo

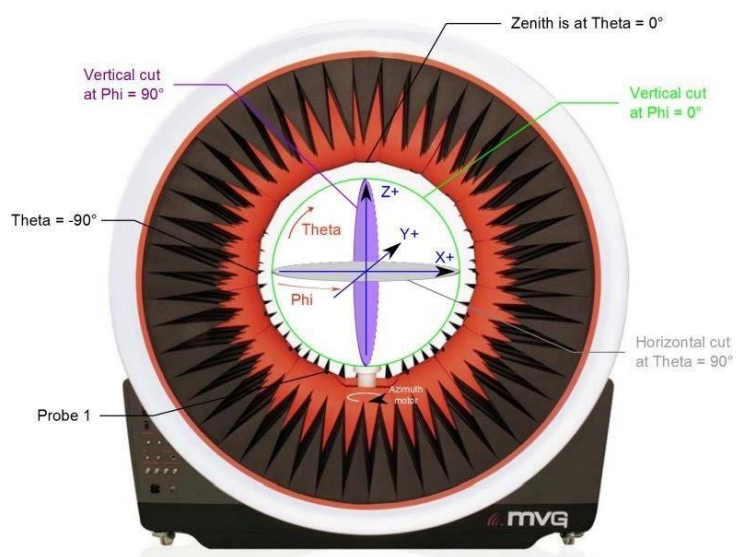
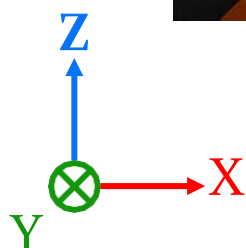
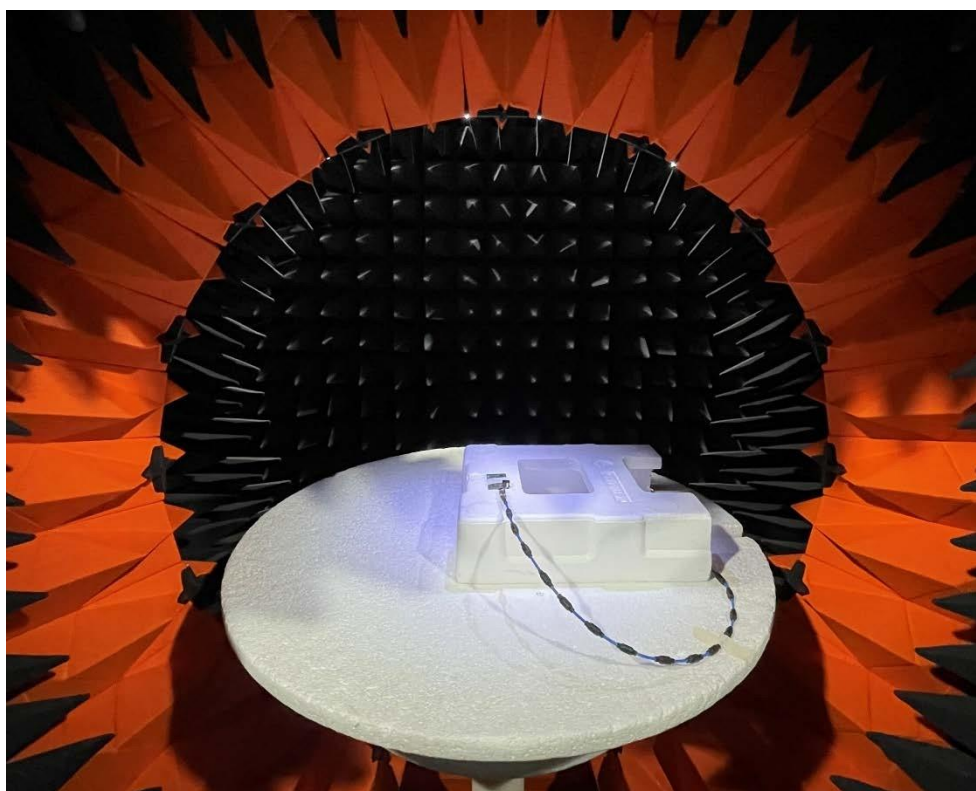


Figure 3.12: StarLab spherical coordinate system



Gain Table

Ant.1	Frequency(MHz)	2400	2450	2500
	Peak Gain(dBi)	2.0	2.2	2.5
	Efficiency (%)	68	63	60
	Frequency(MHz)	5150	5550	5850
	Peak Gain(dBi)	3.7	5.2	4.2
	Efficiency (%)	74	71	70

Above Peak Gain= on Board antenna peak gain-path loss + Chamber's receiving RX peak gain

The antenna characteristics

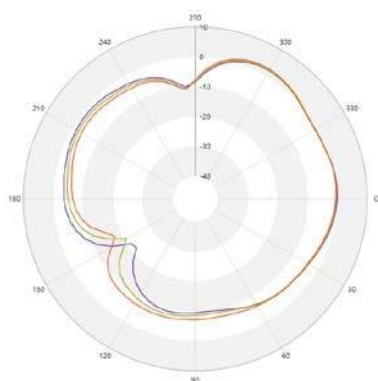
- **Return loss**
 - All band < -10dB in operating band
- **Gain**
 - 2.4GHz Band : 2.0 ~ 2.5dBi
 - 5GHz Band : 4.2 ~ 5.2dBi
- **Efficiency**
 - 2.4GHz Band > 60%
 - 5GHz Band > 70%

Ant.1_2.4GHz 2D Radiation Pattern

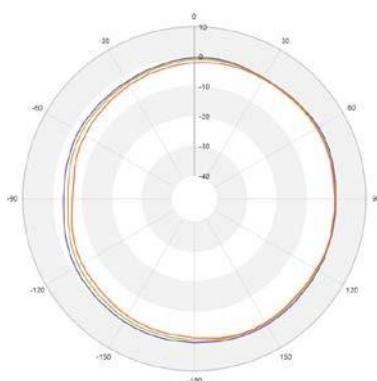
Frequency(MHz) : 2400~2500

Radiation Pattern :

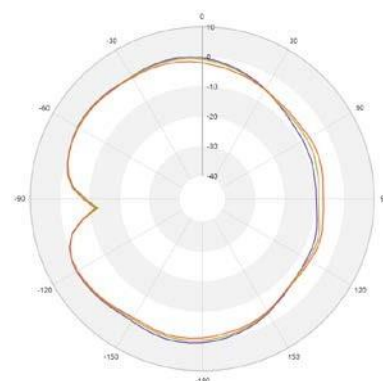
Azimuth Plane
Theta = 90



Elevation Plane
phi = 0



Elevation Plane
phi = 90



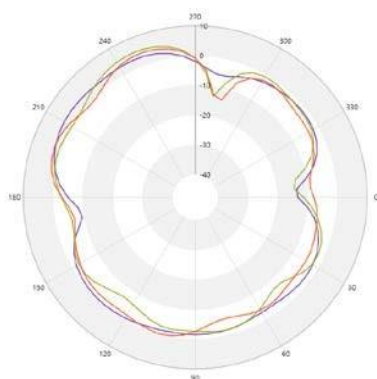
— 2400.00 MHz
— 2450.00 MHz
— 2500.00 MHz

Ant.1_5GHz 2D Radiation Pattern

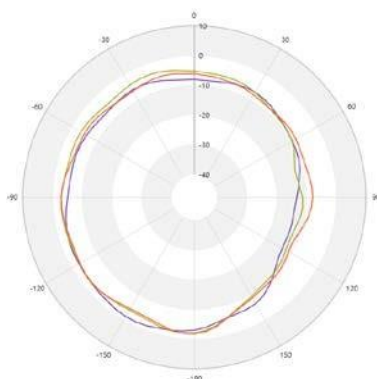
Frequency(MHz) : 5150~5850

Radiation Pattern :

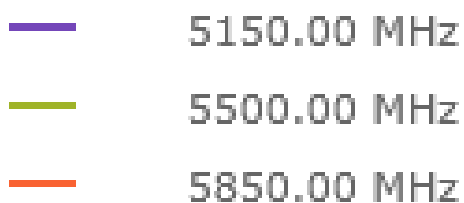
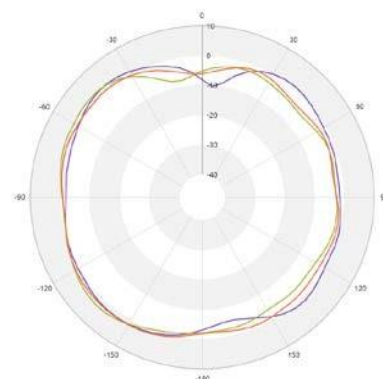
Azimuth Plane
Theta = 90



Elevation Plane
phi = 0



Elevation Plane
phi = 90

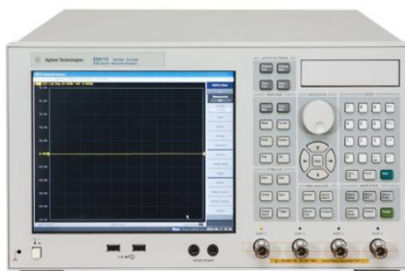


Setup :

Test equipment



Agilent E5071C
100 kHz - 8.5 GHz
ENA Series Network Analyzer



StarLab 10GHz Passive & OTA Performance Test System

Frequency Bands: 600 MHz to 10GHz

Max. Size of DUT: 450mm for spherical set-up

Max. Weight of DUT: 10 kgs

Measurement Capabilities:

- Gain
- Directivity
- Beamwidth
- Cross polar discrimination
- Sidelobe levels
- 3D radiation pattern
- Radiation pattern in any polarization (linear or circular)
- Antenna efficiency test
- TRP, TIS, EIRP and RIS measurement



Measurement set up info

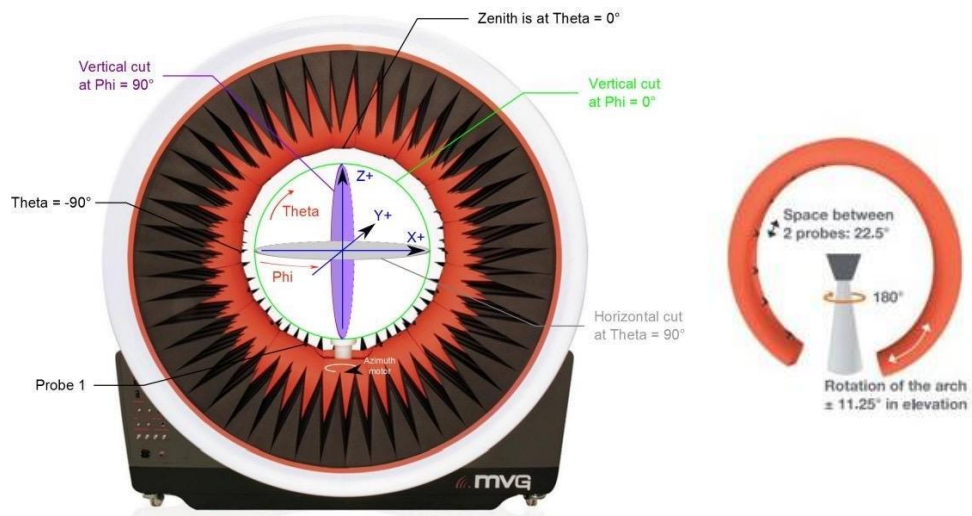


Figure 3.12: StarLab spherical coordinate system

Oversampling with StarLab

On a StarLab system, oversampling is performed by a mechanical rotation of the arch in elevation. Oversampling capability is integrated in the mechanical architecture of the system itself (no need for an extra goniometer).

