

# **Test Report of 2.4GHz Wi-Fi Module**



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Dept. of Information Technology  
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**Prepared by**

**..μ-t4--**

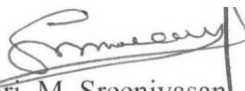
Shri. Danduri Kati Reddy

Scientist-B

MCAD

SAMEER-CEM

**Reviewed by**



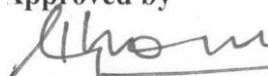
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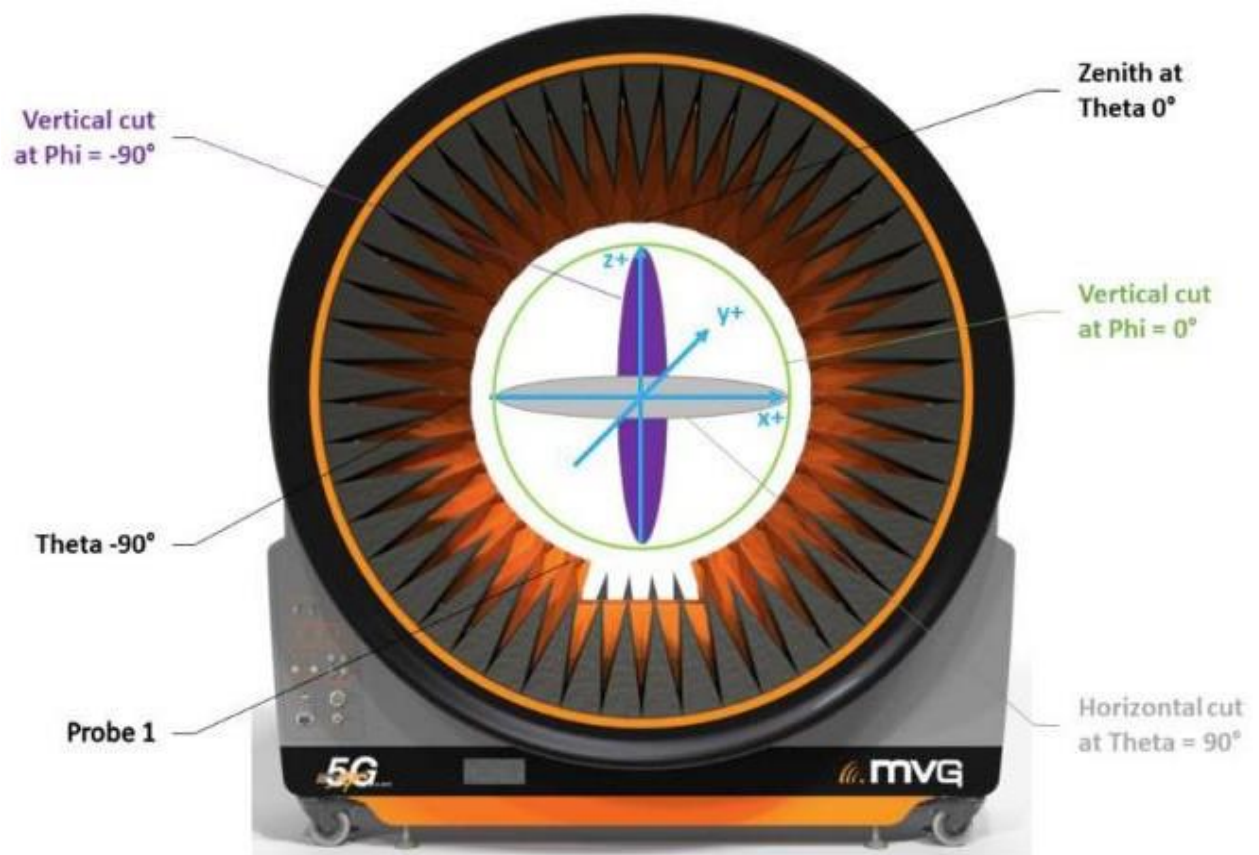


Shri. K. George Thomas

Scientist-F & Head

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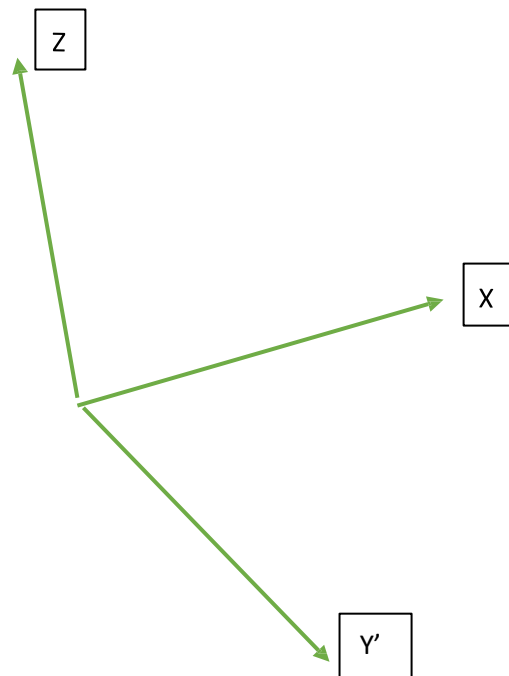
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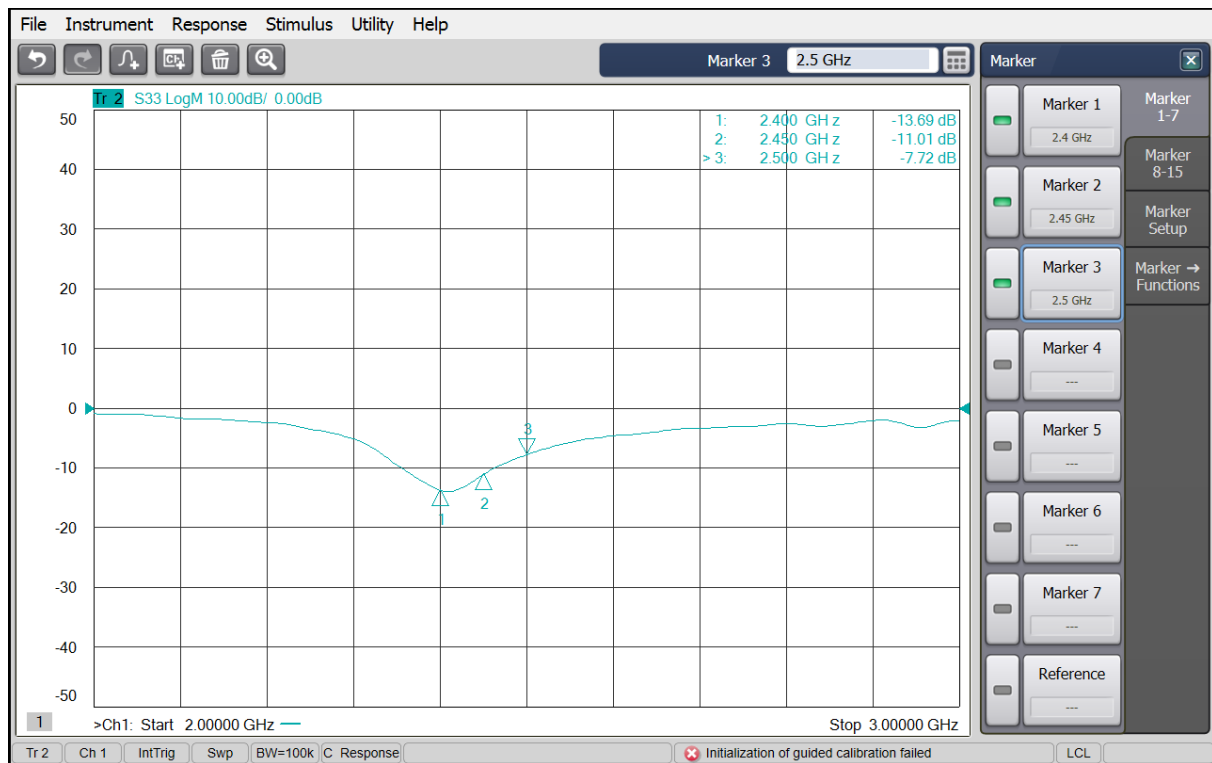
**Fig-1: Reference Coordinate System**

## Module-2

**WILCS02\_SD\_EVB\_R403\_3nH\_L402\_OR**

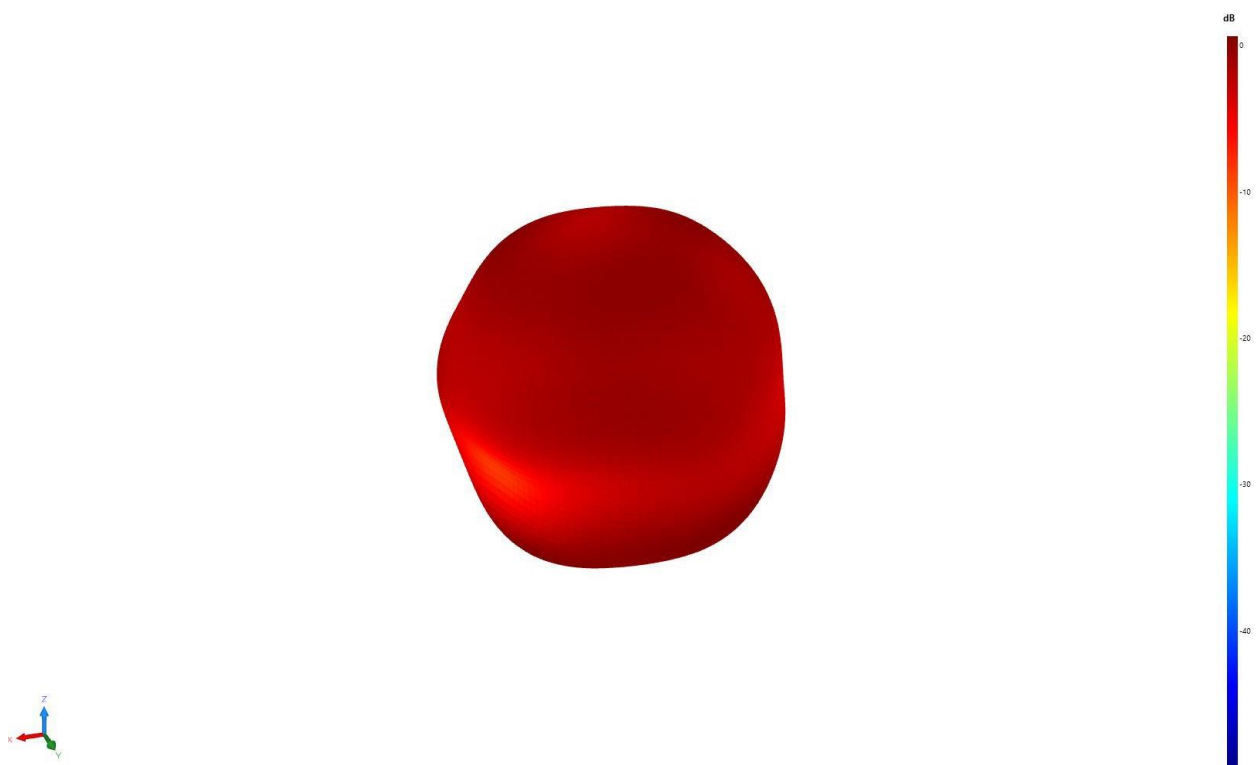


## Return Loss Plot:



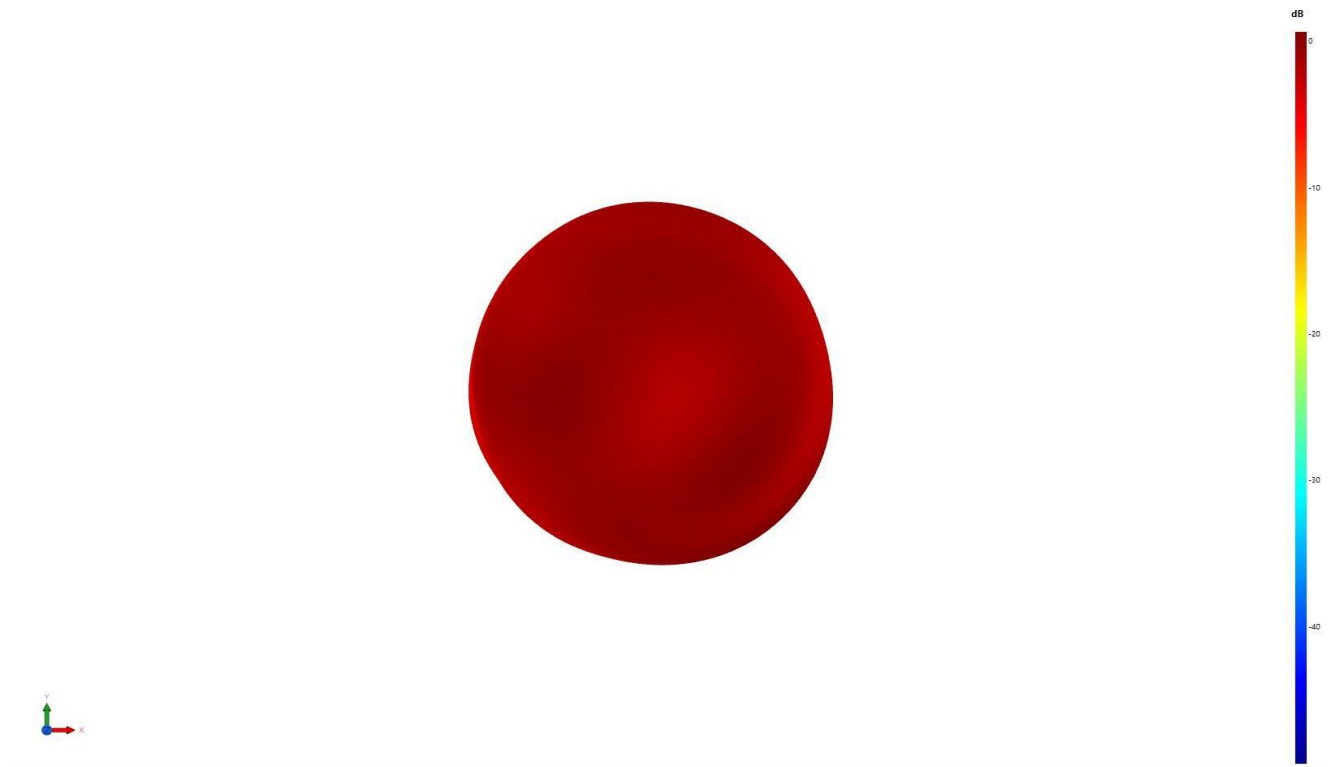
**Fig-10 : Return loss plot of Module-2**

**Freq= 2.4 GHz :**



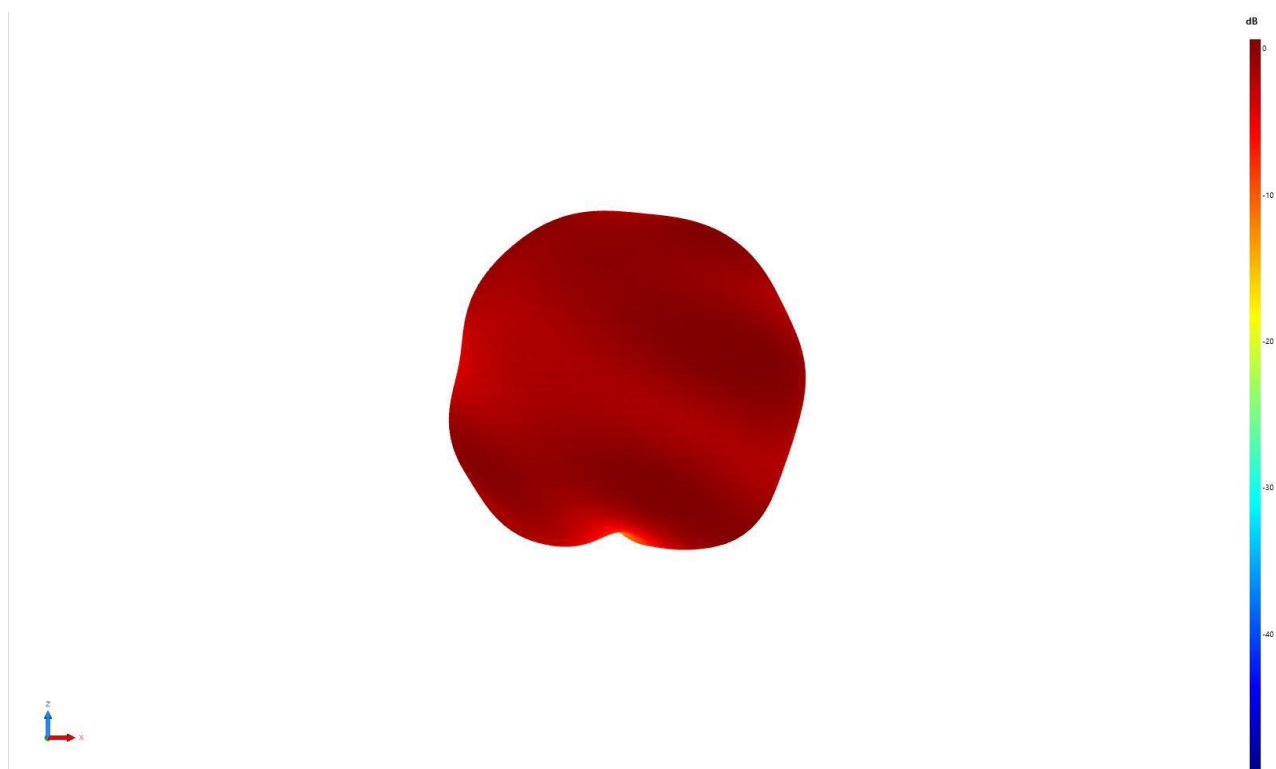
**Fig-11: Radiation pattern (Slant view)**

**Freq= 2.4 GHz :**



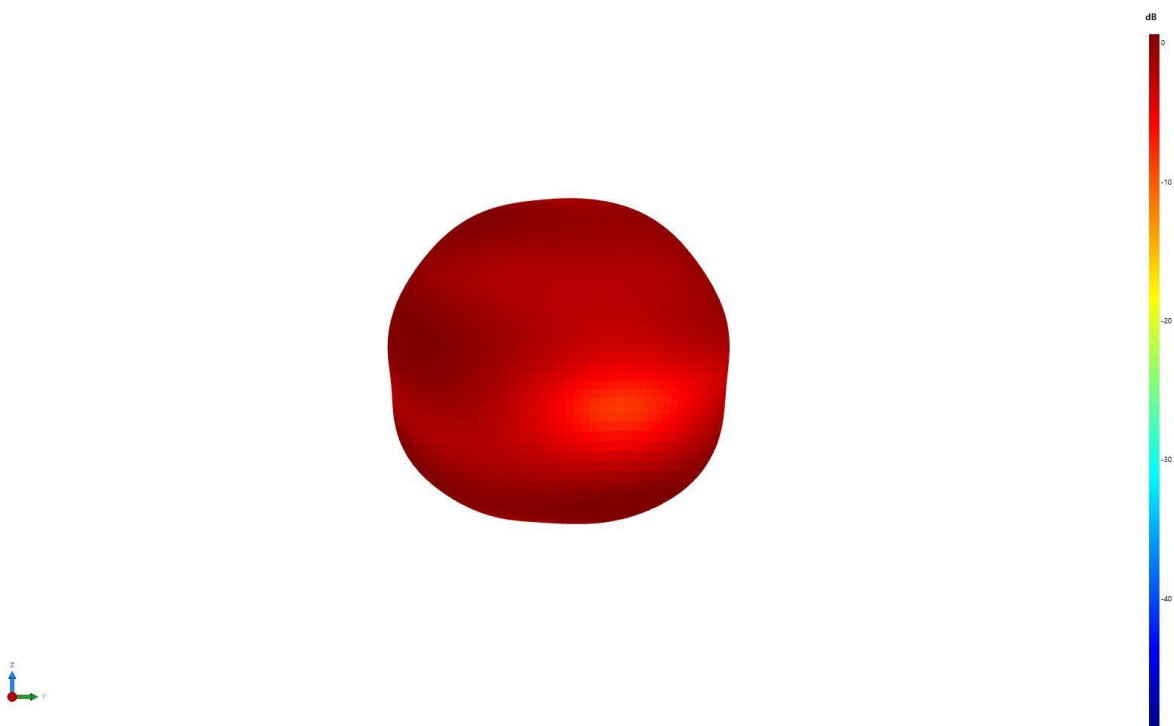
**Fig-12 : Radiation pattern (XY view)**

**Freq= 2.4 GHz :**



**Fig-13 : Radiation pattern (XZ view)**

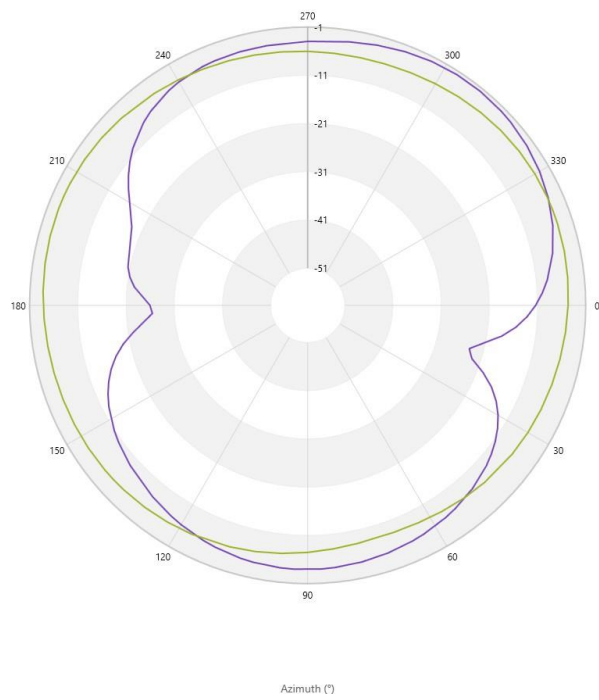
**Freq= 2.4 GHz :**



**Fig-14: Radiation pattern (YZ view)**

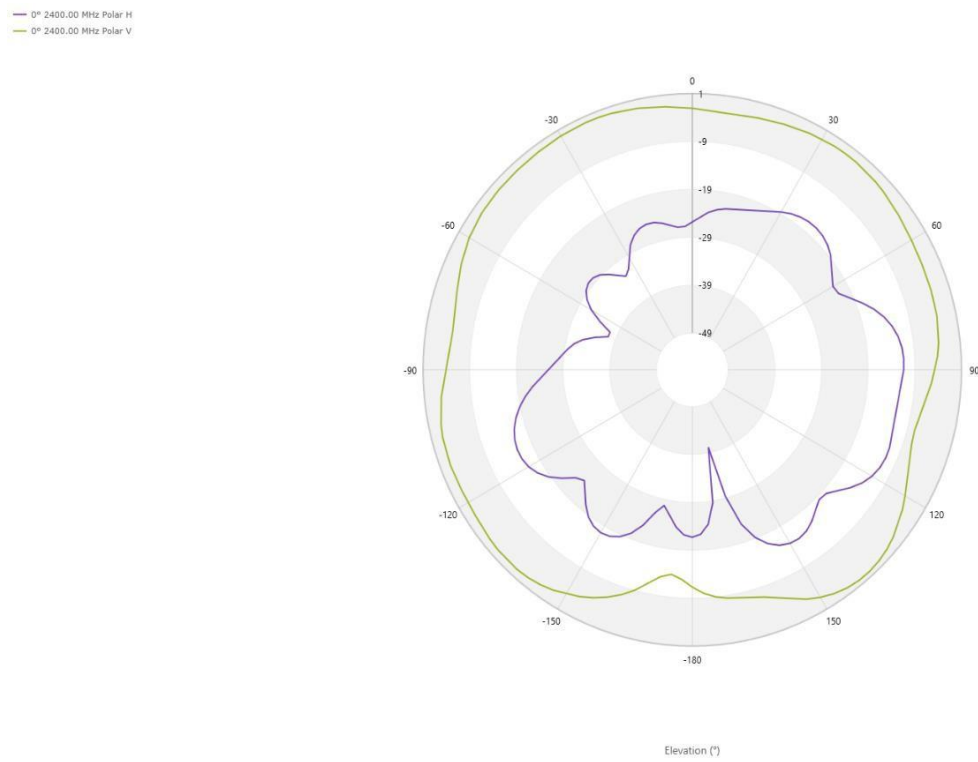
**Freq=2.4 GHz :**

— 90° 2400.00 MHz Polar H  
— 90° 2400.00 MHz Polar V



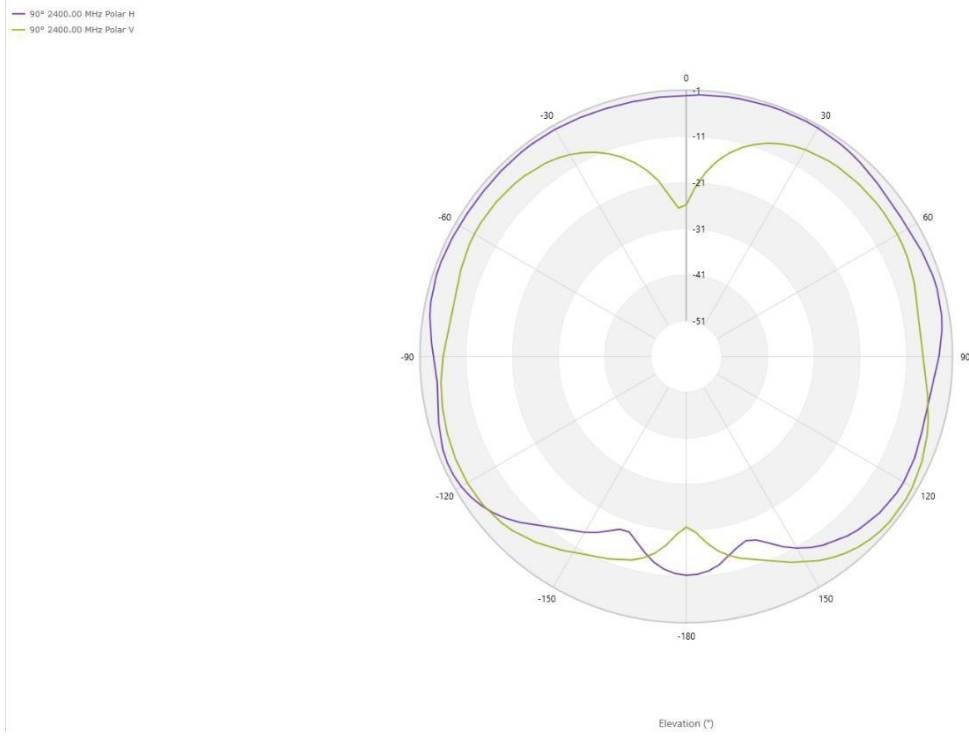
**Fig-15: AZ plane pattern @ Theta=90 deg**

**Freq=2.4 GHz :**



**Fig-16: EL plane pattern @ Phi=0 deg**

**Freq=2.4 GHz :**



**Fig-17: EL plane pattern @ Phi=90 deg**

## Gain(dB) : Module-2

| Freq(MHz) | Gain(dB) |
|-----------|----------|
| 2400      | 0.66     |
| 2405      | 0.63     |
| 2410      | 0.9      |
| 2415      | 0.9      |
| 2420      | 0.92     |
| 2425      | 0.9      |
| 2430      | 1        |
| 2435      | 1.09     |
| 2440      | 1.07     |
| 2445      | 1.18     |
| 2450      | 0.89     |
| 2455      | 0.8      |
| 2460      | 0.73     |
| 2465      | 0.76     |
| 2470      | 0.75     |
| 2475      | 0.87     |
| 2480      | 0.67     |
| 2485      | 0.54     |
| 2490      | 0.5      |
| 2495      | 0.53     |
| 2500      | 0.45     |

**Table-4: Gain (dB) for Module-2**

## Efficiency (Linear) : Module-2

| Freq(MHz) | Efficiency |
|-----------|------------|
| 2400      | 0.67       |
| 2405      | 0.69       |
| 2410      | 0.71       |
| 2415      | 0.71       |
| 2420      | 0.71       |
| 2425      | 0.72       |
| 2430      | 0.72       |
| 2435      | 0.73       |
| 2440      | 0.72       |
| 2445      | 0.71       |
| 2450      | 0.7        |
| 2455      | 0.68       |
| 2460      | 0.67       |
| 2465      | 0.66       |
| 2470      | 0.66       |
| 2475      | 0.66       |
| 2480      | 0.64       |
| 2485      | 0.63       |
| 2490      | 0.61       |
| 2495      | 0.61       |
| 2500      | 0.6        |

**Table-5: Efficiency for Module-2**

#### **Directivity (dB) : Module-4**

| Freq(MHz) | Directivity(dB) |
|-----------|-----------------|
| 2400      | 2.4             |
| 2405      | 2.26            |
| 2410      | 2.41            |
| 2415      | 2.39            |
| 2420      | 2.39            |
| 2425      | 2.35            |
| 2430      | 2.43            |
| 2435      | 2.45            |
| 2440      | 2.46            |
| 2445      | 2.64            |
| 2450      | 2.46            |
| 2455      | 2.48            |
| 2460      | 2.47            |
| 2465      | 2.56            |
| 2470      | 2.55            |
| 2475      | 2.68            |
| 2480      | 2.58            |
| 2485      | 2.57            |
| 2490      | 2.62            |
| 2495      | 2.7             |
| 2500      | 2.66            |

**Table-6: Directivity(dB) for Module-2**