

# Test Report

**Antenna:** CW324S

**Version:** B

**Release date:** 2025/3/18

Model : AR0206

Brand : Logitech, logitech G, logi, G

Prepared by: Ken Yen

Checked by: Sam Wu

Approved by: Mike Yang

# Report Outline

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## **1. Background**

## **2. Measurement Setup**

2.1 Reflection coefficient measurement

2.2 Radiation pattern measurement

2.3 Mechanical setting

## **3. Experimental Results**

3.1 S Parameters

3.2 Radiation efficiency and peak gain

# Measurement Setup

## Reflection Coefficient Measurement

- a. Equipment : Network Analyzer(Agilent E5071A)
- b. Test items : S-parameters (Impedance, return loss, VSWR)

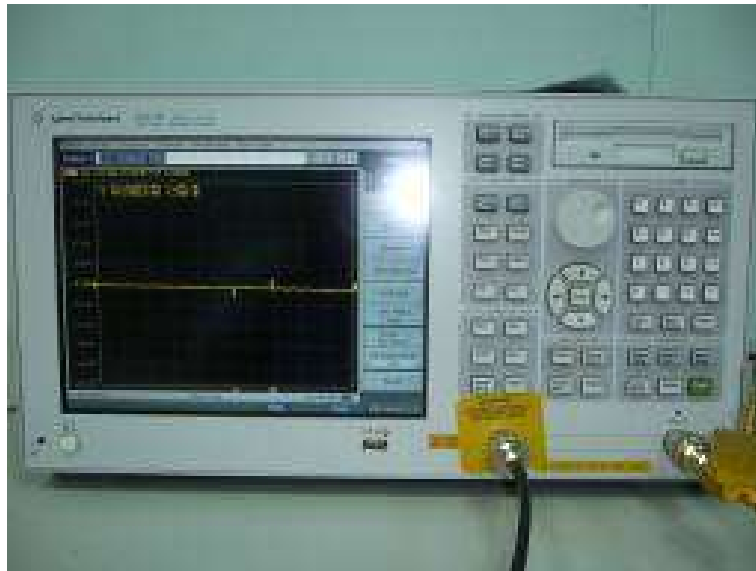


Figure. Network Analyzer(Agilent E5071A)

# Measurement Setup

## Radiation Pattern Measurement

- a. Equipment : Anechoic Chamber, Network Analyzer (Agilent E5071C), Standard Horn.
- b. Test items : Gain, efficiency, 2D gain pattern, 3D gain pattern

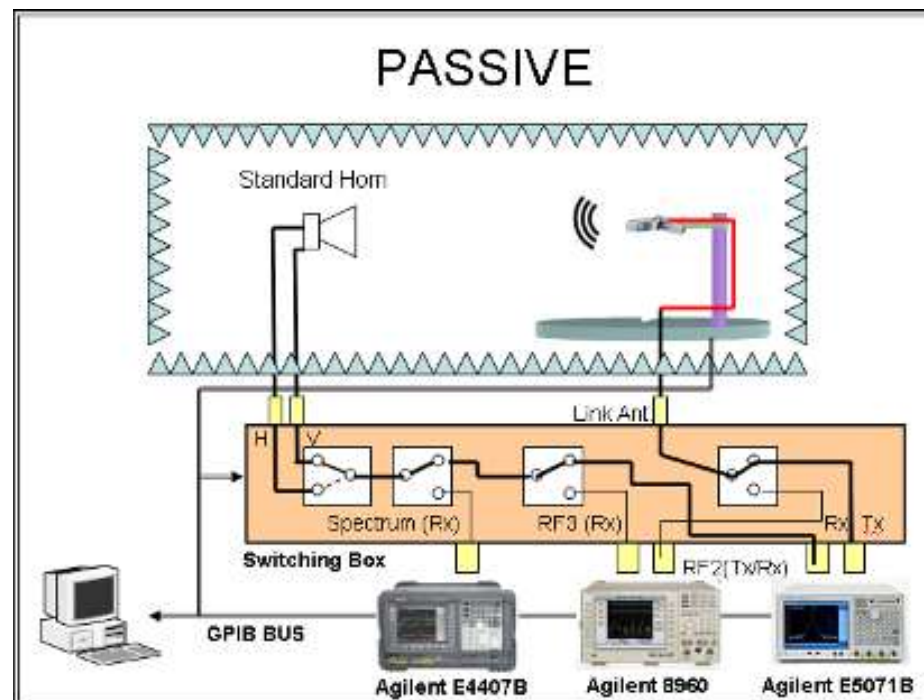
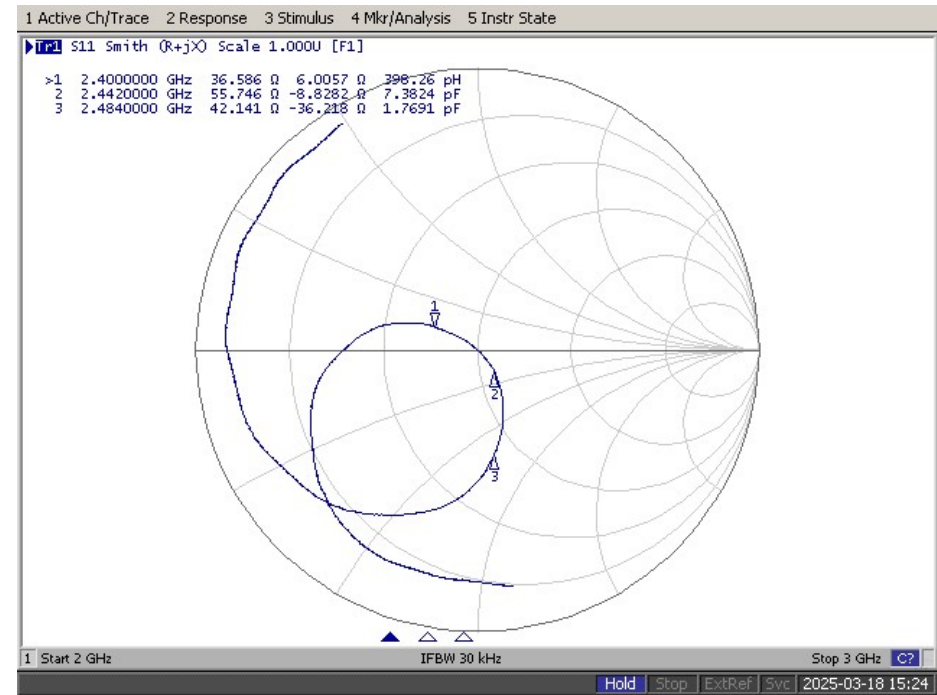
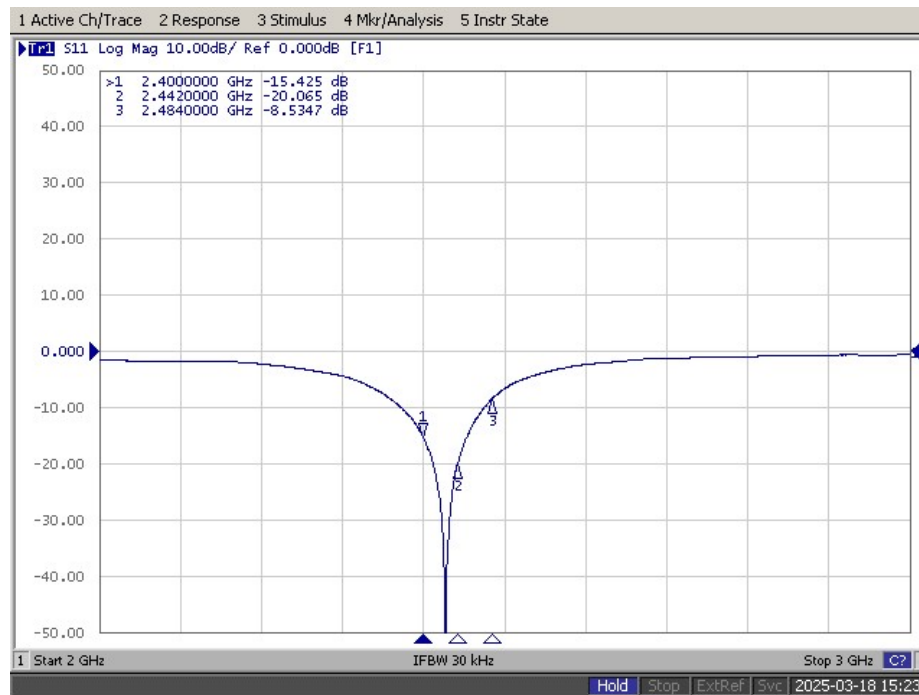


Figure. Scheme of radiation pattern measurement system

# Experimental results

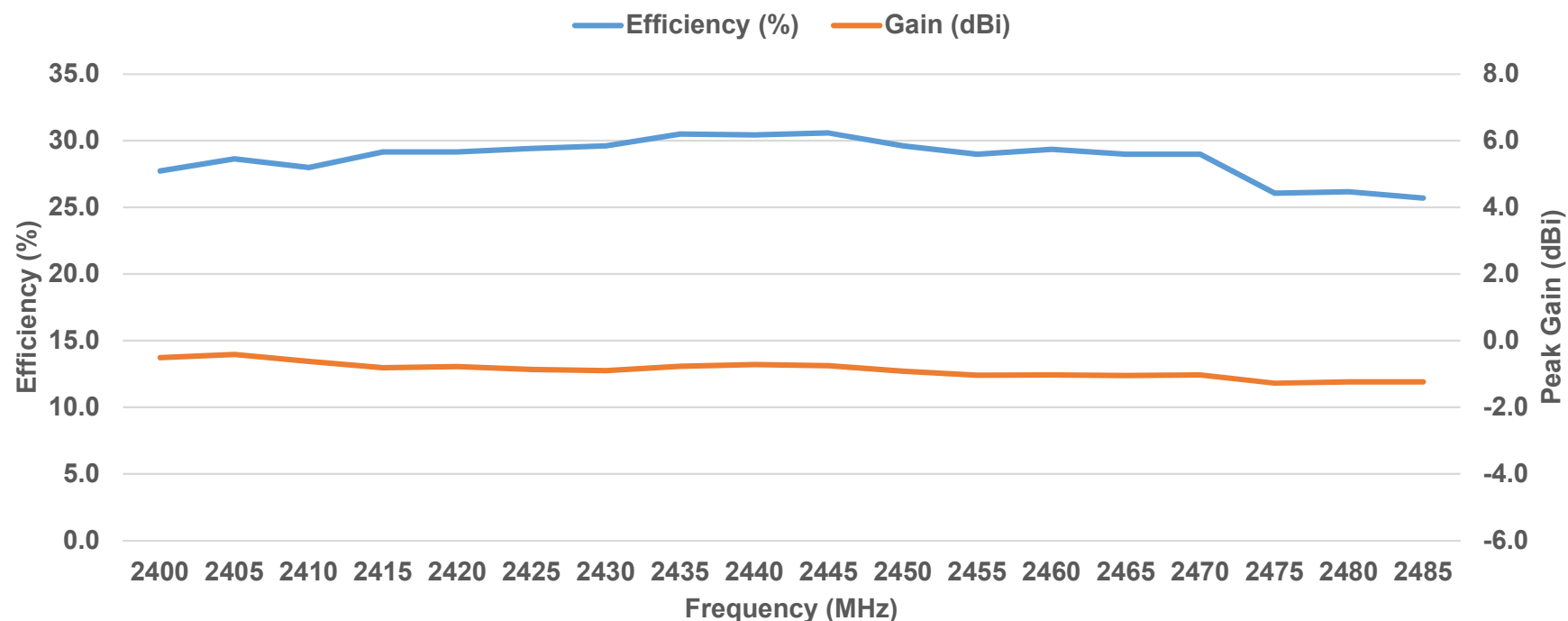
# Experimental results

## S-Parameters



# Experimental results

## Radiation efficiency and peak gain



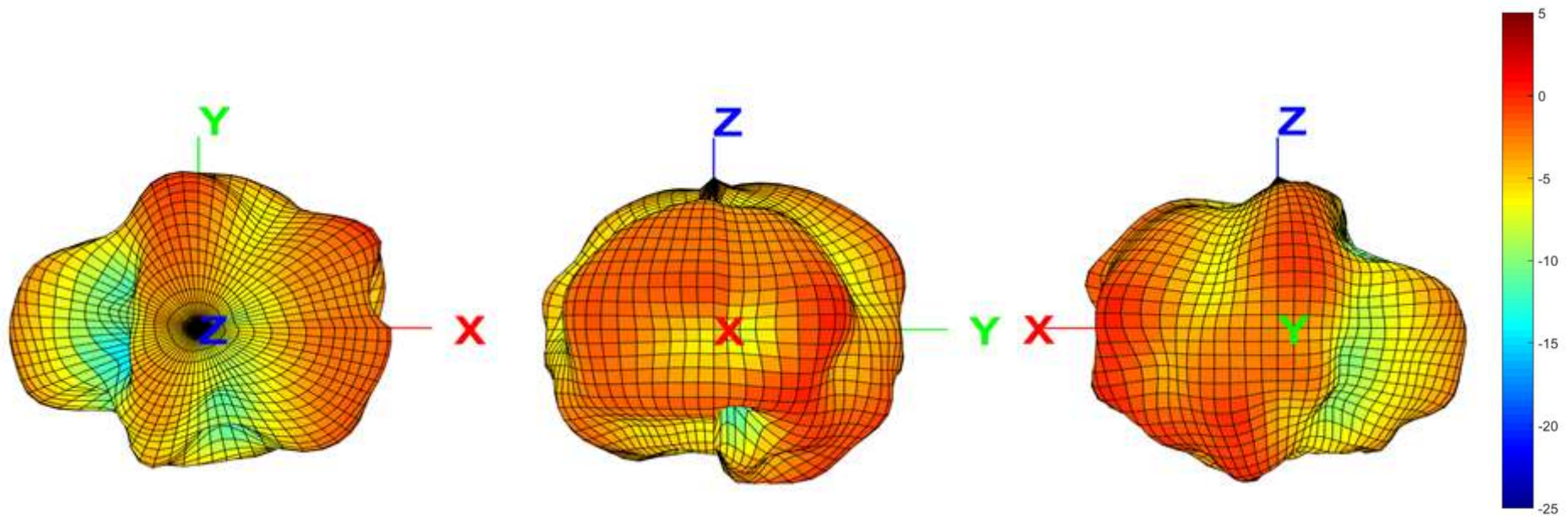
### 2400-2485 MHz

| Frequency (MHz) | 2400 | 2405 | 2410 | 2415 | 2420 | 2425 | 2430 | 2435 | 2440 | 2445 | 2450 | 2455 | 2460 | 2465 | 2470 | 2475 | 2480 | 2485 |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Efficiency (dB) | -5.6 | -5.4 | -5.5 | -5.4 | -5.4 | -5.3 | -5.3 | -5.2 | -5.2 | -5.1 | -5.3 | -5.4 | -5.3 | -5.4 | -5.4 | -5.8 | -5.8 | -5.9 |
| Efficiency (%)  | 27.7 | 28.6 | 28.0 | 29.2 | 29.2 | 29.4 | 29.6 | 30.5 | 30.4 | 30.6 | 29.6 | 29.0 | 29.4 | 29.0 | 29.0 | 26.1 | 26.2 | 25.7 |
| Peak Gain (dBi) | -0.5 | -0.4 | -0.6 | -0.8 | -0.8 | -0.9 | -0.9 | -0.8 | -0.7 | -0.8 | -0.9 | -1.0 | -1.0 | -1.1 | -1.0 | -1.3 | -1.2 | -1.2 |



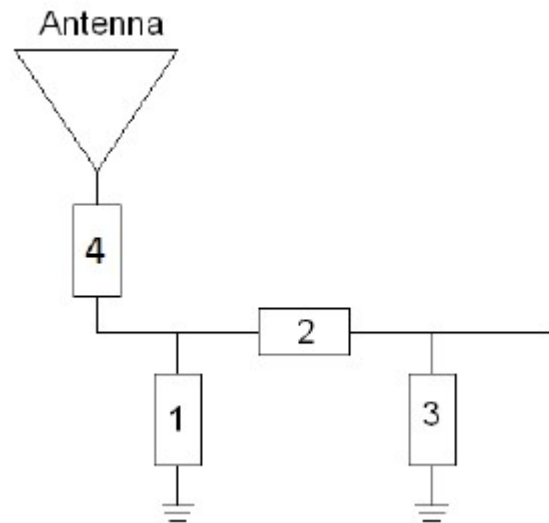
# Experimental results

## 3D Gain Pattern (Radiation Pattern @ 2442 MHz) (unit: dBi)



# Experimental results

## Matching Circuit



| System Matching Circuit Component |               |        |                    |
|-----------------------------------|---------------|--------|--------------------|
| Location                          | Description   | Vendor | P/N                |
| 1                                 | NA            | -      | -                  |
| 2                                 | 2.7nH, (0201) | MURATA | LQP03TG2N7B02D     |
| 3                                 | 0.7pF, (0201) | MURATA | GRM0335C1HR70WA01D |
| 4                                 | 6.8nH, (0201) | MURATA | LQP03TG6N8H02D     |