



# DK0116 Antenna Test Report

## Antenna Design And Test Report

Date: 2025.10.15

# CONTENTS

**01**

Project Overview

**02**

Test Environment

**03**

Matching Circuit

**04**

Environmental  
Treatment

**05**

Passive Report

**06**

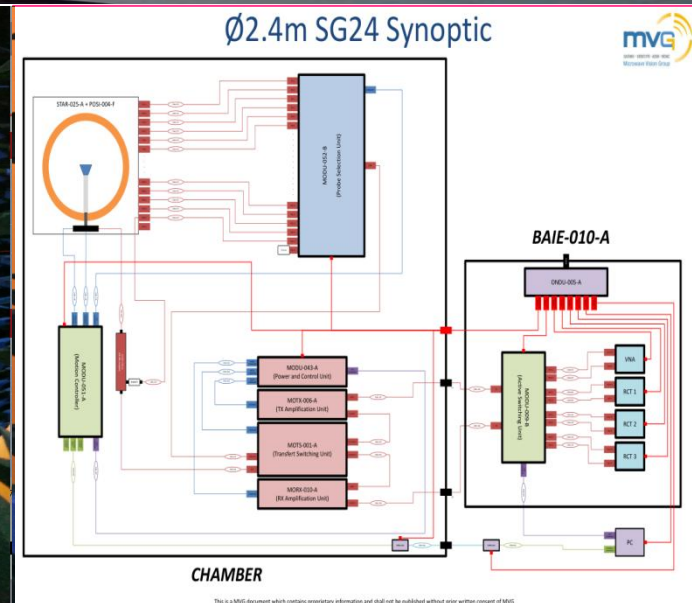
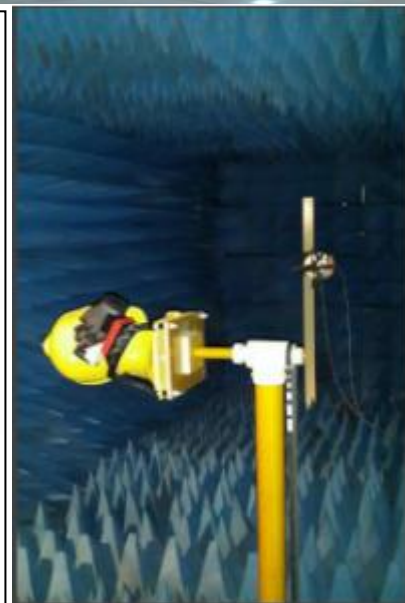
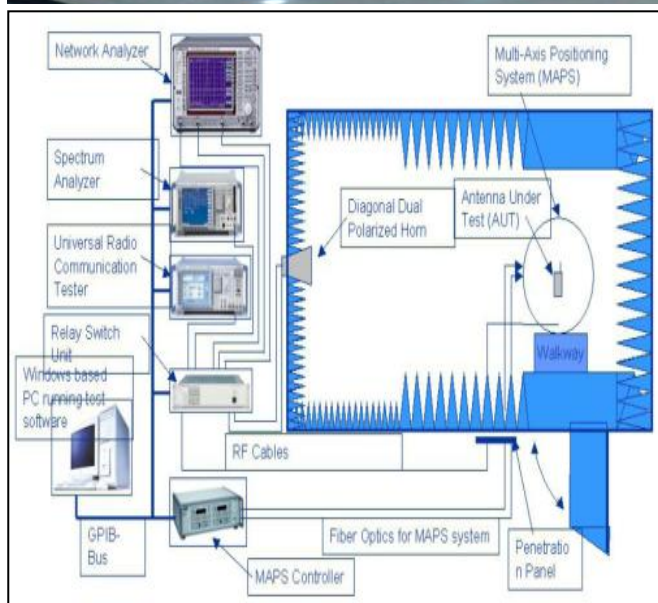
Active Report

**07**

Conclusion

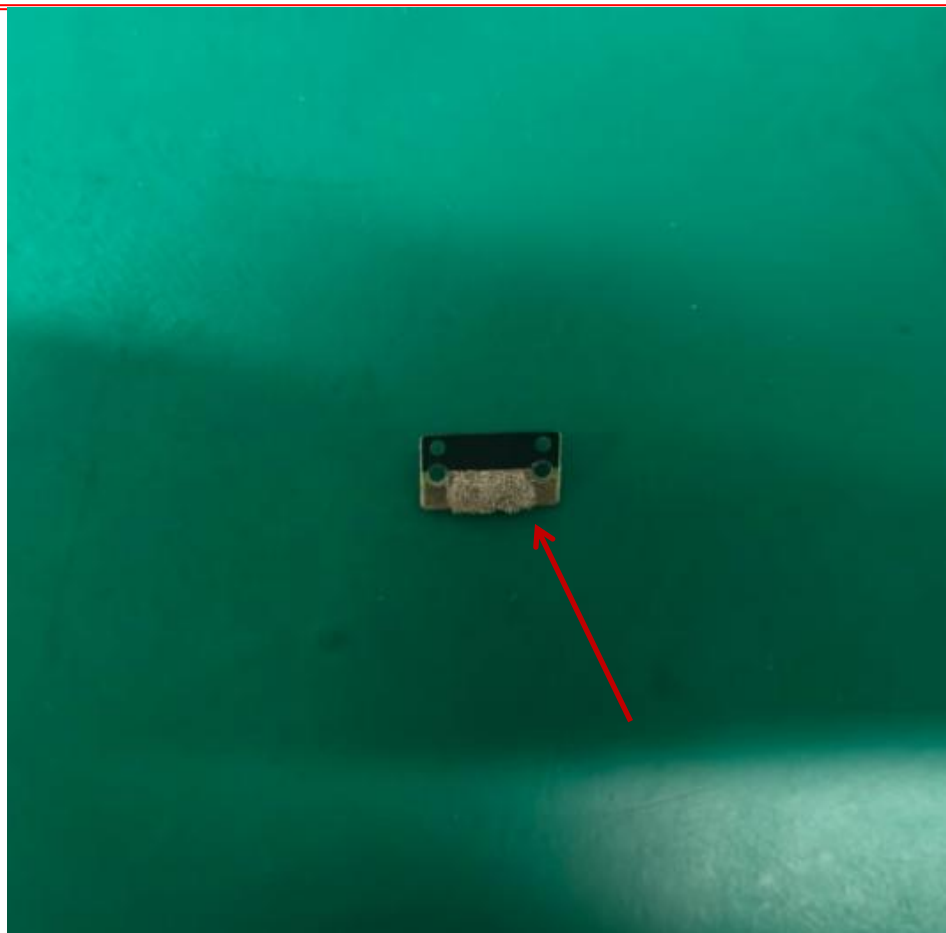


# Test Environment



Darkroom system : MVG SG24LT (Satmio)

# Environmental Treatment



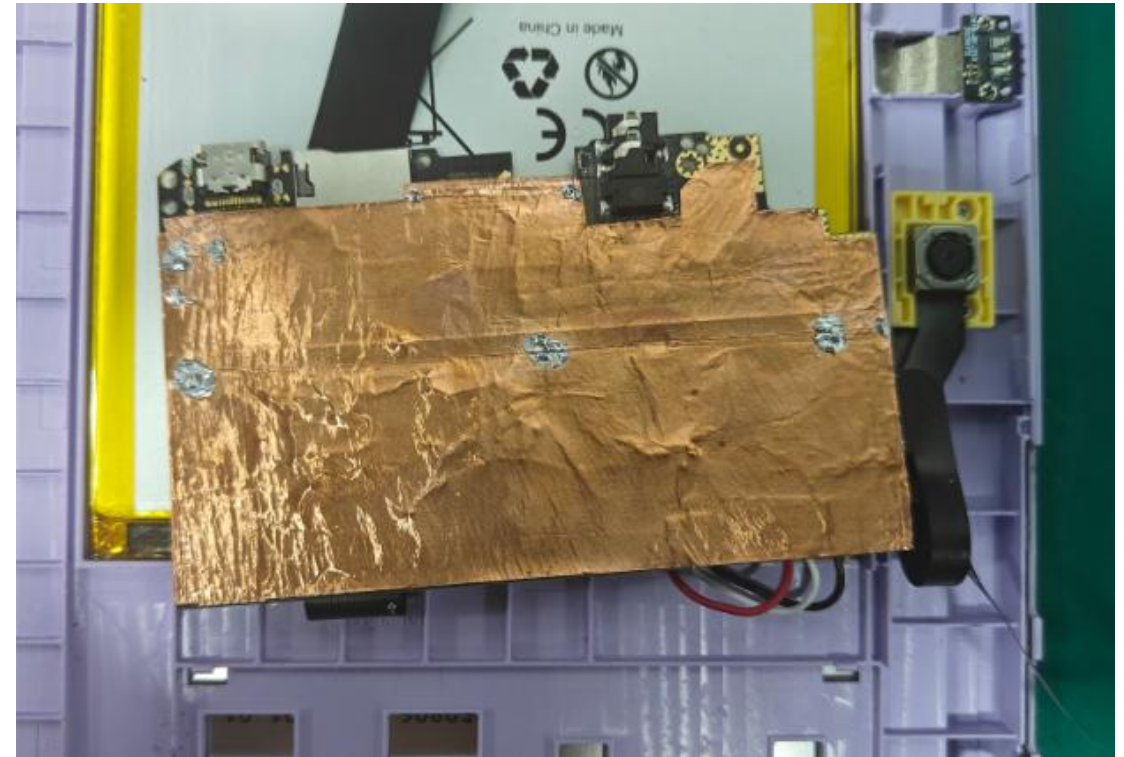
**Add conductive foam to the small metal part**



**Attach one end of the conductive cloth to the metal part of the screen and the other end to the lower part of the small plate fixing place, in contact with the foam of the small plate**



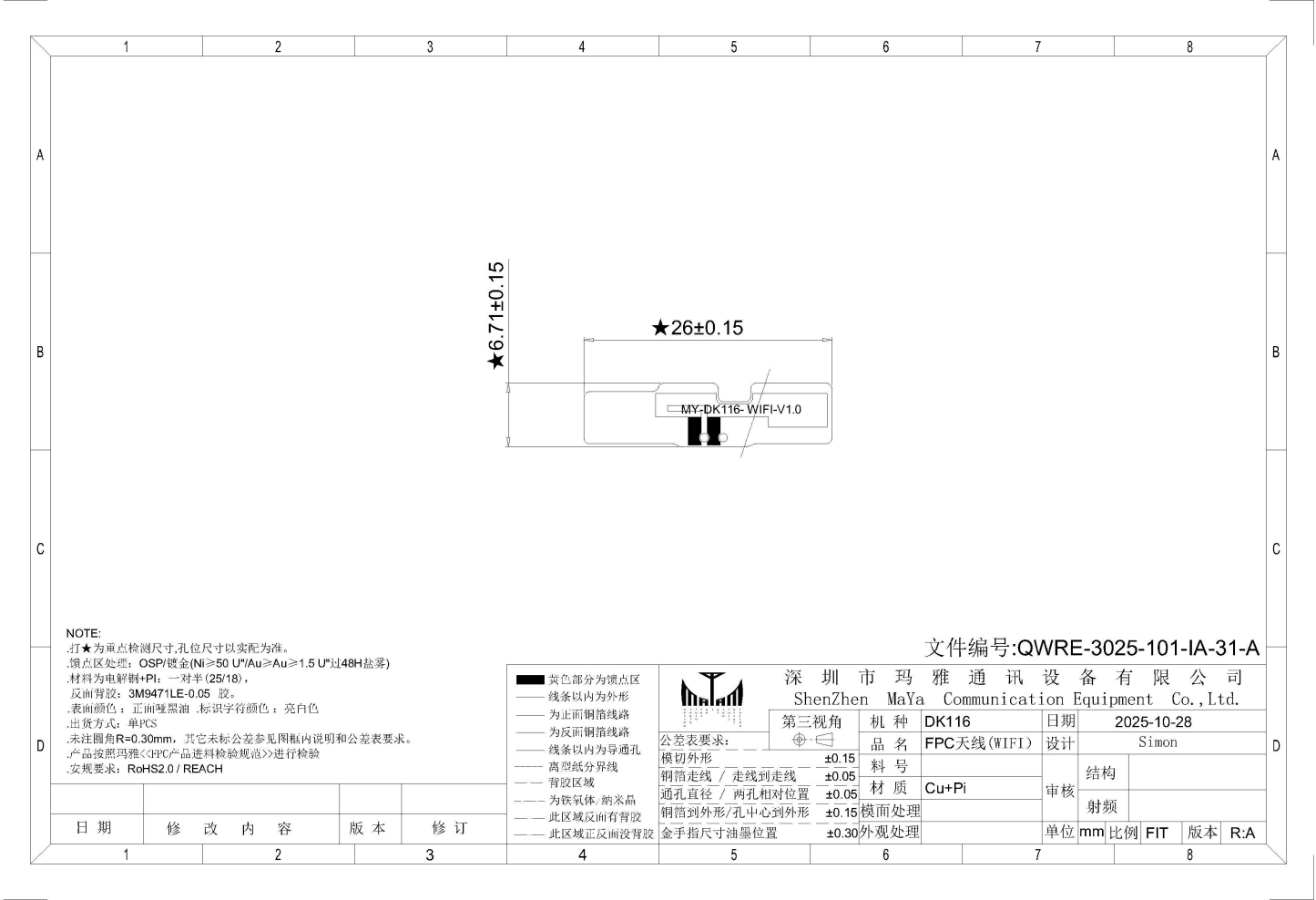
**Add a conductive cloth cover at the end of the screen line**



**The back of the main board is covered with copper or conductive cloth for shielding**



# Antenna Size Drawing

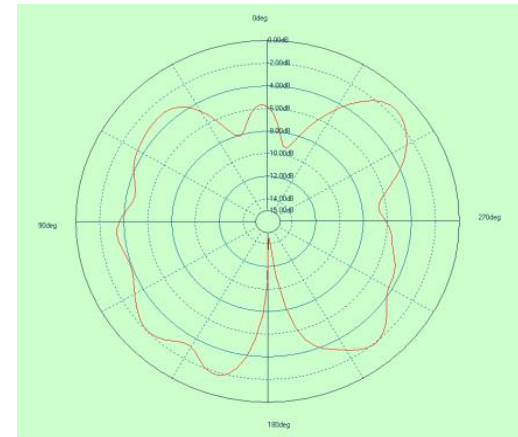
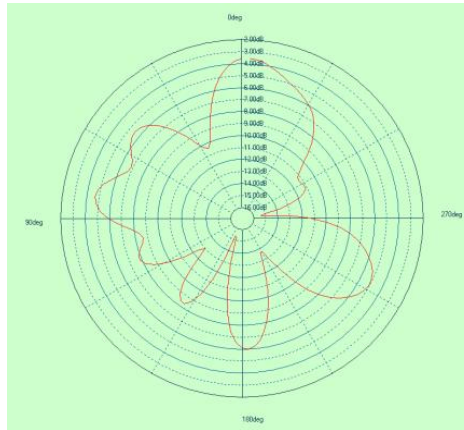
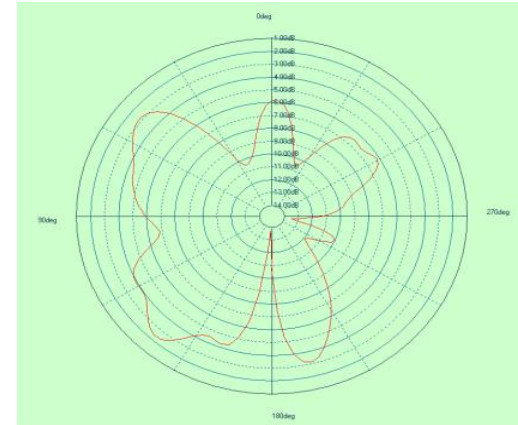
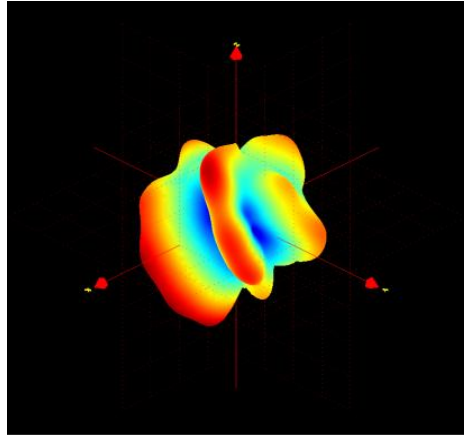


## WIFI passive Efficiency, Gain

| 1         |            |                 | 1         |           | 1         |            | 1               |           | 1         |
|-----------|------------|-----------------|-----------|-----------|-----------|------------|-----------------|-----------|-----------|
| Frequency | Efficiency | Efficiency . dB | Frequency | Gain . dB | Frequency | Efficiency | Efficiency . dB | Frequency | Gain . dB |
| 2400 MHZ  | 30.0%      | -5.23           | 2400 MHZ  | -0.14     | 5200 MHZ  | 19.8%      | -7.03           | 5200 MHZ  | -1.88     |
| 2403 MHZ  | 30.3%      | -5.19           | 2403 MHZ  | -0.01     | 5220 MHZ  | 20.2%      | -6.94           | 5220 MHZ  | -1.85     |
| 2407 MHZ  | 30.0%      | -5.23           | 2407 MHZ  | -0.17     | 5240 MHZ  | 19.8%      | -7.03           | 5240 MHZ  | -1.81     |
| 2410 MHZ  | 30.8%      | -5.11           | 2410 MHZ  | -0.04     | 5260 MHZ  | 20.6%      | -6.86           | 5260 MHZ  | -1.65     |
| 2413 MHZ  | 31.5%      | -5.02           | 2413 MHZ  | 0.24      | 5280 MHZ  | 20.7%      | -6.83           | 5280 MHZ  | -1.52     |
| 2417 MHZ  | 30.9%      | -5.09           | 2417 MHZ  | -0.08     | 5300 MHZ  | 21.5%      | -6.67           | 5300 MHZ  | -1.33     |
| 2420 MHZ  | 31.3%      | -5.05           | 2420 MHZ  | 0.05      | 5320 MHZ  | 20.4%      | -6.91           | 5320 MHZ  | -1.59     |
| 2423 MHZ  | 31.1%      | -5.07           | 2423 MHZ  | 0.09      | 5340 MHZ  | 20.6%      | -6.86           | 5340 MHZ  | -1.49     |
| 2427 MHZ  | 30.7%      | -5.13           | 2427 MHZ  | -0.18     | 5360 MHZ  | 21.5%      | -6.68           | 5360 MHZ  | -0.90     |
| 2430 MHZ  | 31.8%      | -4.98           | 2430 MHZ  | 0.10      | 5380 MHZ  | 20.9%      | -6.80           | 5380 MHZ  | -0.89     |
| 2433 MHZ  | 32.6%      | -4.87           | 2433 MHZ  | 0.22      | 5400 MHZ  | 22.0%      | -6.57           | 5400 MHZ  | -0.72     |
| 2437 MHZ  | 32.3%      | -4.90           | 2437 MHZ  | 0.07      | 5420 MHZ  | 22.5%      | -6.47           | 5420 MHZ  | -0.50     |
| 2440 MHZ  | 32.7%      | -4.86           | 2440 MHZ  | 0.23      | 5440 MHZ  | 23.3%      | -6.33           | 5440 MHZ  | -0.18     |
| 2443 MHZ  | 32.5%      | -4.88           | 2443 MHZ  | 0.06      | 5460 MHZ  | 22.8%      | -6.42           | 5460 MHZ  | -0.14     |
| 2447 MHZ  | 32.3%      | -4.90           | 2447 MHZ  | 0.14      | 5480 MHZ  | 23.0%      | -6.38           | 5480 MHZ  | 0.09      |
| 2450 MHZ  | 33.2%      | -4.78           | 2450 MHZ  | 0.27      | 5500 MHZ  | 23.8%      | -6.23           | 5500 MHZ  | 0.39      |
| 2453 MHZ  | 33.2%      | -4.79           | 2453 MHZ  | 0.06      | 5520 MHZ  | 22.9%      | -6.41           | 5520 MHZ  | 0.45      |
| 2457 MHZ  | 33.2%      | -4.79           | 2457 MHZ  | 0.26      | 5540 MHZ  | 23.3%      | -6.33           | 5540 MHZ  | 0.89      |
| 2460 MHZ  | 33.6%      | -4.74           | 2460 MHZ  | 0.24      | 5560 MHZ  | 23.2%      | -6.34           | 5560 MHZ  | 1.11      |
| 2463 MHZ  | 32.8%      | -4.84           | 2463 MHZ  | 0.11      | 5580 MHZ  | 23.2%      | -6.34           | 5580 MHZ  | 1.26      |
| 2467 MHZ  | 32.9%      | -4.82           | 2467 MHZ  | 0.69      | 5600 MHZ  | 24.0%      | -6.20           | 5600 MHZ  | 1.52      |
| 2470 MHZ  | 33.5%      | -4.75           | 2470 MHZ  | 0.47      | 5620 MHZ  | 24.0%      | -6.21           | 5620 MHZ  | 1.54      |
| 2473 MHZ  | 33.2%      | -4.79           | 2473 MHZ  | 0.42      | 5640 MHZ  | 24.8%      | -6.05           | 5640 MHZ  | 1.69      |
| 2477 MHZ  | 33.6%      | -4.74           | 2477 MHZ  | 0.91      | 5660 MHZ  | 24.6%      | -6.09           | 5660 MHZ  | 1.62      |
| 2480 MHZ  | 34.0%      | -4.69           | 2480 MHZ  | 0.70      | 5680 MHZ  | 25.0%      | -6.02           | 5680 MHZ  | 1.62      |
| 2483 MHZ  | 33.7%      | -4.72           | 2483 MHZ  | 0.72      | 5700 MHZ  | 25.5%      | -5.93           | 5700 MHZ  | 1.76      |
| 2487 MHZ  | 34.2%      | -4.66           | 2487 MHZ  | 1.15      | 5720 MHZ  | 25.2%      | -5.99           | 5720 MHZ  | 1.62      |
| 2490 MHZ  | 34.5%      | -4.62           | 2490 MHZ  | 0.87      | 5740 MHZ  | 25.9%      | -5.87           | 5740 MHZ  | 1.78      |
| 2493 MHZ  | 34.1%      | -4.67           | 2493 MHZ  | 0.86      | 5760 MHZ  | 26.4%      | -5.78           | 5760 MHZ  | 1.88      |
| 2497 MHZ  | 34.9%      | -4.57           | 2497 MHZ  | 1.14      | 5780 MHZ  | 26.7%      | -5.73           | 5780 MHZ  | 1.81      |
| 2500 MHZ  | 34.8%      | -4.58           | 2500 MHZ  | 0.91      | 5800 MHZ  | 27.5%      | -5.61           | 5800 MHZ  | 1.91      |

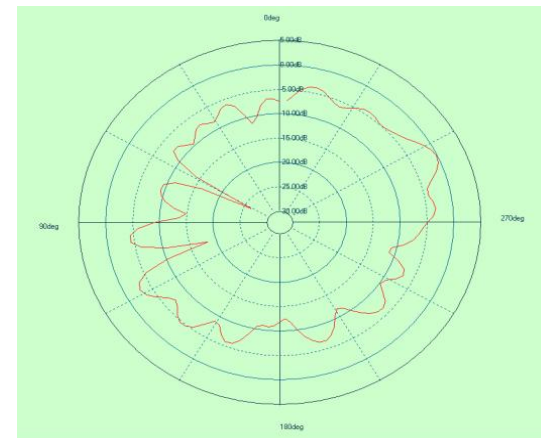
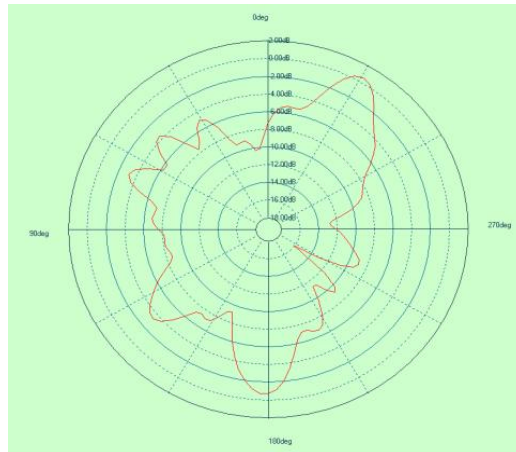
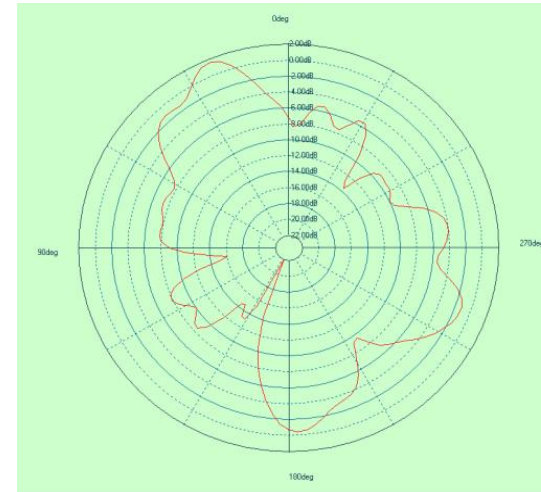
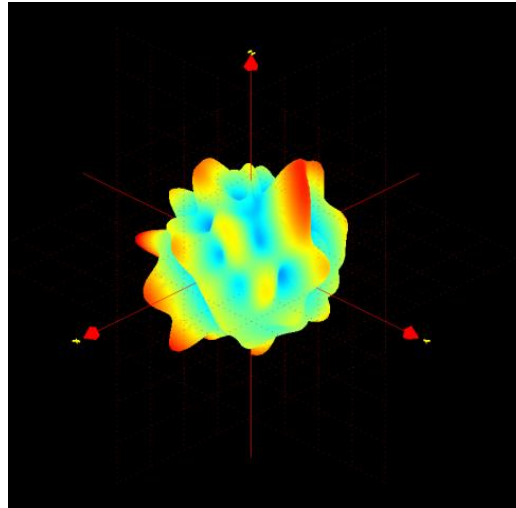
Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

## 2.4G Passive pattern



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer    Darkroom system : MVG SG24LT (Satmio)

## 5.8G Passive pattern



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer    Darkroom system : MVG SG24LT (Satmio)



| Band   | CH | TRP   | TIS    | Band    | CH | TRP   | TIS    |
|--------|----|-------|--------|---------|----|-------|--------|
| WIFI B | L  | 15    |        | WIFI A  | L  | 15.58 |        |
|        | M  | 14.83 |        |         | M  | 15.2  |        |
|        | H  | 14.88 | -80.67 |         | H  | 15.02 | -70.55 |
| WIFI G | L  | 12.25 |        | WIFI AC | L  | 18.56 |        |
|        | M  | 12.14 |        |         | M  | 16.18 |        |
|        | H  | 12.46 | -68.14 |         | H  | 14.2  | -64.47 |
| WIFI N | L  | 12.14 |        | WIFI AX | L  | 18.38 |        |
|        | M  | 12.18 |        |         | M  | 13.43 |        |
|        | H  | 12.28 | -65.84 |         | H  | 12.29 | -63.15 |



# Passive Report

---



1. This report is the sample antenna test results .
2. If you have any questions, please call.

# THANK YOU



If you have any questions, please contact us  
Daily service hours : Monday to Saturday 9:00-18:00  
Switchboard Hotline : 0755-36615535 Fax: 0755-82916227  
 website : [www.mayaant.com](http://www.mayaant.com)

Confidentiality requirements

Shenzhen Maya communication equipment Co., Ltd. has owned the information provided by the proprietary technology and is not allowed to disclose it to any person or company without the prior written consent of Shenzhen Maya communication equipment Co., Ltd.