



# DK 077- Antenna Test Report



**Date: 2024.4.23**

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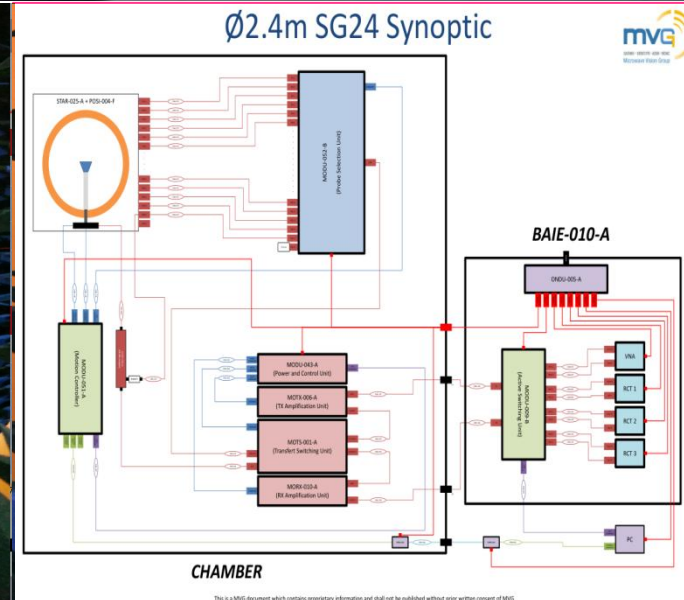
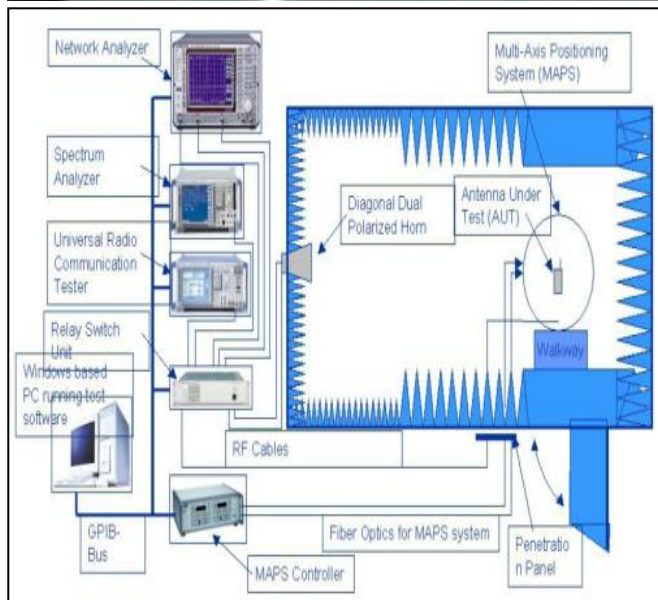
Conclusion





|                          |               |                |           |                     |
|--------------------------|---------------|----------------|-----------|---------------------|
| Antenna design spectrum: | WIFI 2.4/5.8G | Repor version: | Date      | Content             |
| Type of antenna:         | PIFA          | V1.0           | 2024.4.23 | Antenna test report |

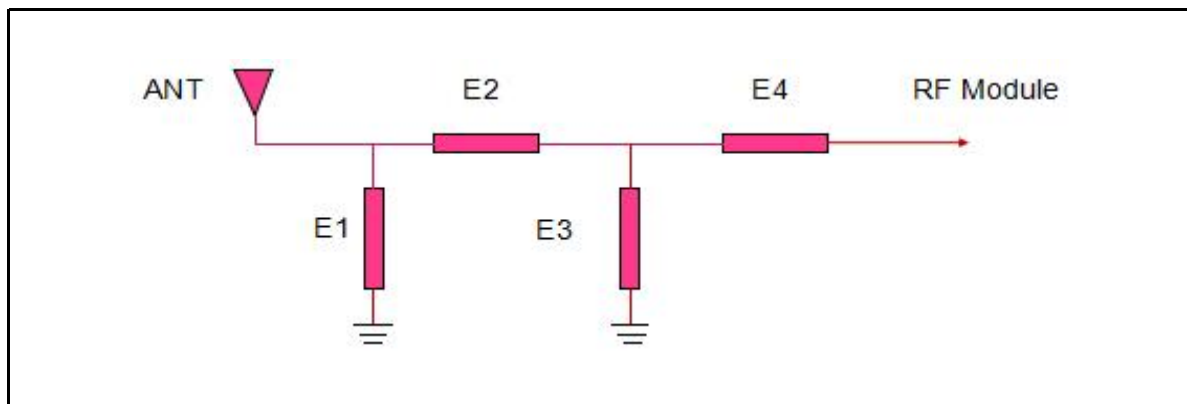
## Test Environment



Darkroom system : MVG SG24LT (Satmio)

# Matching Circuit

| main antenna design |       |
|---------------------|-------|
| Element             | Value |
| E1(0201):           | /     |
| E2(0201):           | /     |
| E3(0201):           | /     |



Note: The matching circuit has not changed.

Figure: The red box is grounded with conductive cloth.





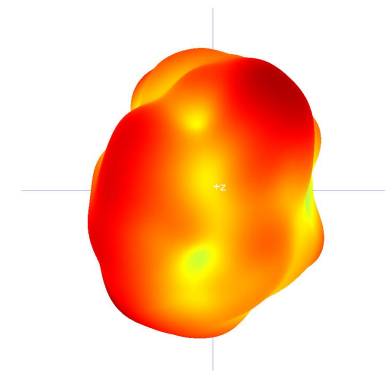
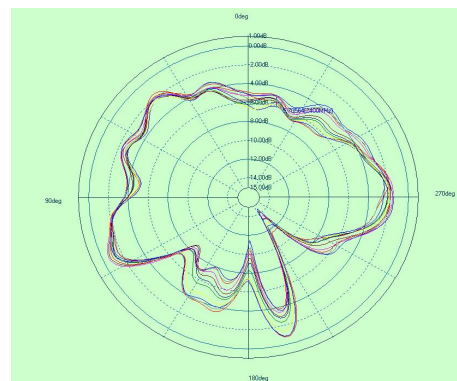
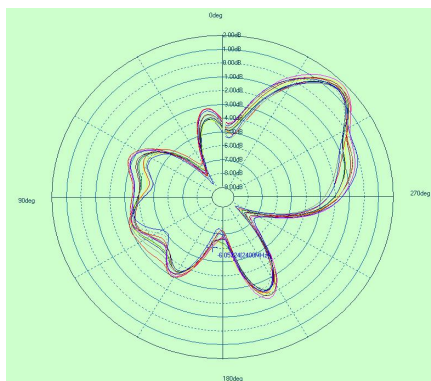
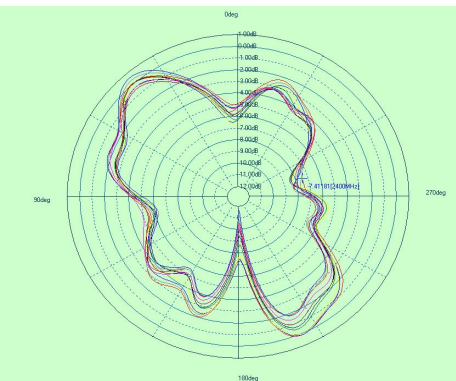
WIFI passive Efficiency, Gain

1号（白色线）

| Frequency | Efficiency | Efficiency.<br>dB | Gain.dB | Frequency | Efficiency | Efficiency.<br>dB | Gain.dB |
|-----------|------------|-------------------|---------|-----------|------------|-------------------|---------|
| 2400      | 48%        | -3.16             | 1.97    | 5150      | 53%        | -2.79             | 5.56    |
| 2410      | 47%        | -3.33             | 1.79    | 5200      | 48%        | -3.18             | 4.18    |
| 2420      | 46%        | -3.34             | 1.88    | 5250      | 53%        | -2.72             | 3.47    |
| 2430      | 47%        | -3.26             | 2.17    | 5300      | 59%        | -2.28             | 4.64    |
| 2440      | 46%        | -3.37             | 1.87    | 5350      | 57%        | -2.44             | 5.14    |
| 2450      | 45%        | -3.49             | 1.72    | 5400      | 52%        | -2.81             | 5.09    |
| 2460      | 46%        | -3.36             | 2.07    | 5450      | 52%        | -2.80             | 4.79    |
| 2470      | 48%        | -3.16             | 2.26    | 5500      | 46%        | -3.37             | 4.44    |
| 2480      | 48%        | -3.22             | 1.91    | 5550      | 46%        | -3.37             | 4.49    |
| 2490      | 47%        | -3.28             | 1.60    | 5600      | 54%        | -2.70             | 5.68    |
| 2500      | 48%        | -3.23             | 1.68    | 5650      | 61%        | -2.13             | 6.32    |
|           |            |                   |         | 5700      | 59%        | -2.30             | 6.32    |
|           |            |                   |         | 5750      | 52%        | -2.86             | 6.18    |
|           |            |                   |         | 5800      | 49%        | -3.09             | 6.10    |
|           |            |                   |         | 5850      | 58%        | -2.36             | 6.85    |

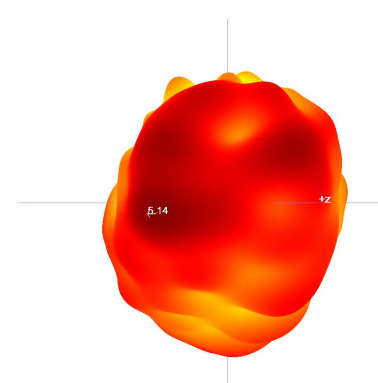
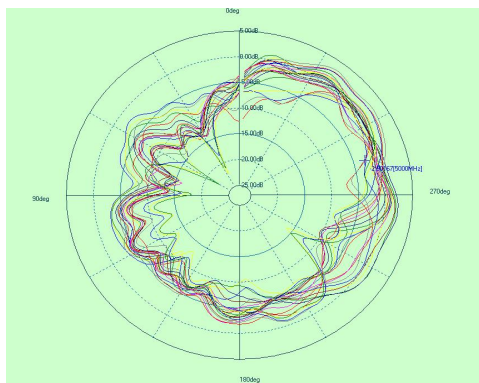
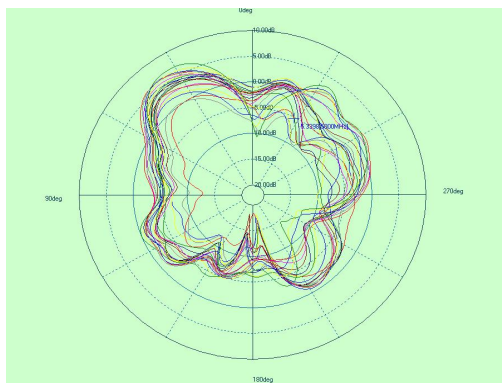
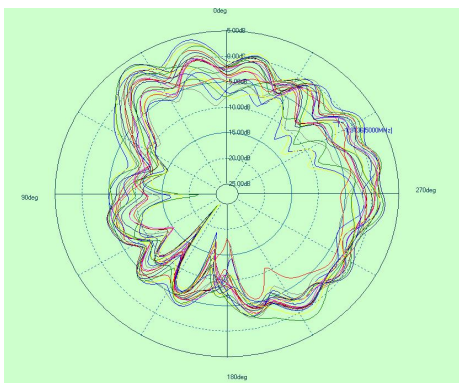
Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer    Darkroom system : MVG SG24LT (Satmio)

## 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

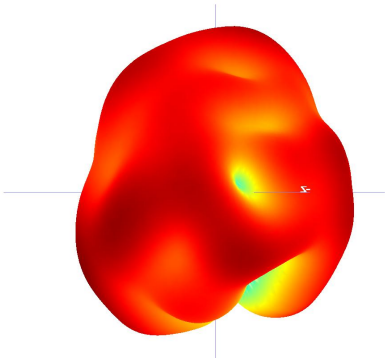
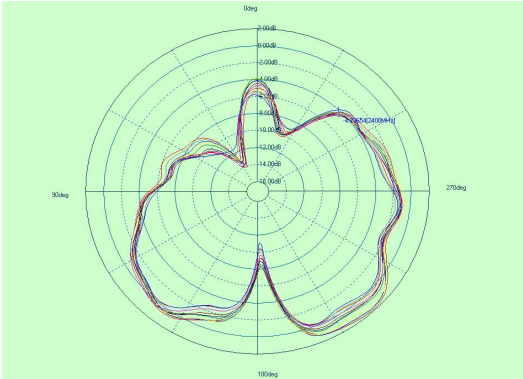
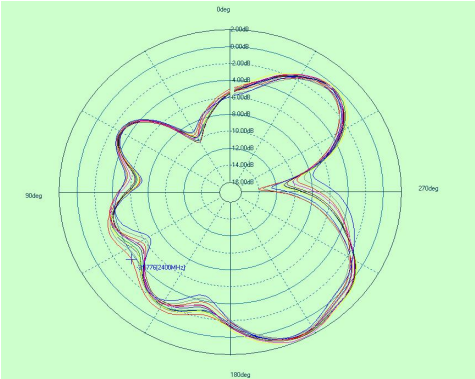
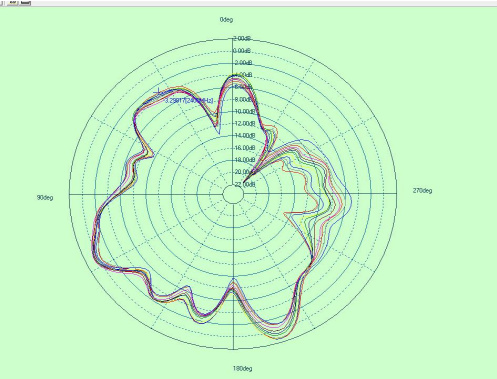


Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer    Darkroom system : MVG SG24LT (Satmio)

## WIFI passive Efficiency, Gain

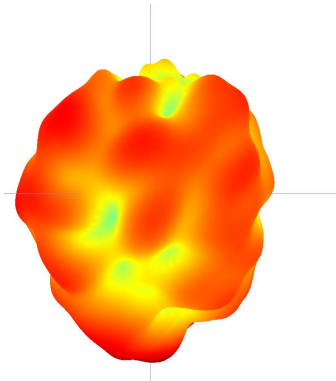
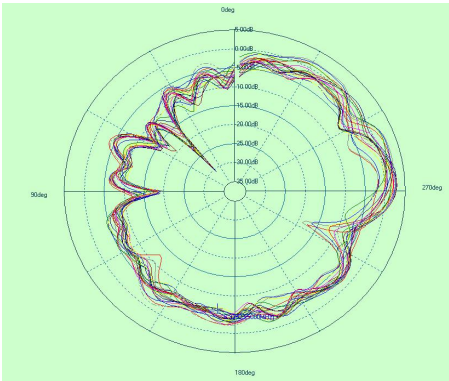
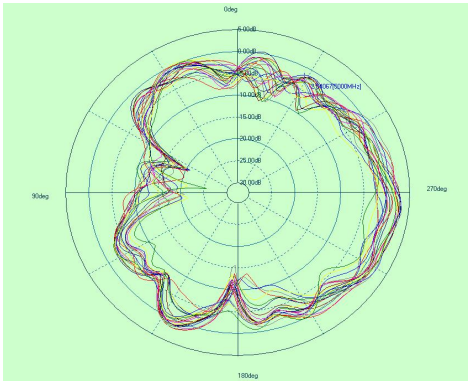
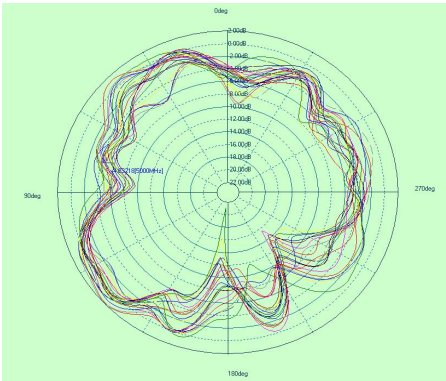
| Frequency | Efficiency | Efficiency.<br>dB | Gain.dB | Frequency | Efficiency | Efficiency.<br>dB | Gain.dB |
|-----------|------------|-------------------|---------|-----------|------------|-------------------|---------|
| 2400      | 49%        | -3.06             | 2.17    | 5150      | 43%        | -3.63             | 2.97    |
| 2410      | 47%        | -3.27             | 2.03    | 5200      | 41%        | -3.84             | 2.50    |
| 2420      | 47%        | -3.25             | 1.96    | 5250      | 45%        | -3.51             | 2.83    |
| 2430      | 49%        | -3.06             | 2.10    | 5300      | 49%        | -3.09             | 3.47    |
| 2440      | 48%        | -3.22             | 1.80    | 5350      | 47%        | -3.29             | 3.31    |
| 2450      | 46%        | -3.35             | 1.66    | 5400      | 43%        | -3.70             | 2.50    |
| 2460      | 47%        | -3.32             | 1.96    | 5450      | 46%        | -3.41             | 2.81    |
| 2470      | 47%        | -3.27             | 2.10    | 5500      | 41%        | -3.88             | 2.55    |
| 2480      | 44%        | -3.52             | 1.66    | 5550      | 41%        | -3.84             | 2.78    |
| 2490      | 43%        | -3.64             | 1.36    | 5600      | 48%        | -3.21             | 2.97    |
| 2500      | 44%        | -3.61             | 1.40    | 5650      | 55%        | -2.56             | 4.42    |
|           |            |                   |         | 5700      | 56%        | -2.53             | 4.88    |
|           |            |                   |         | 5750      | 51%        | -2.96             | 4.44    |
|           |            |                   |         | 5800      | 48%        | -3.23             | 3.63    |
|           |            |                   |         | 5850      | 53%        | -2.77             | 3.61    |

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





# Passive Report





OTA

| 2.4G | Band             | CH  | TRP   | TIS    |
|------|------------------|-----|-------|--------|
|      | b (11M)          | 1   | 10.28 |        |
|      |                  | 7   | 11.26 |        |
|      |                  | 13  | 12.38 | -73.74 |
|      | g (54M)          | 1   | 10.18 |        |
|      |                  | 7   | 10.74 |        |
|      |                  | 13  | 11.43 | -63.28 |
|      | n (MCS7)         | 1   | 10.35 |        |
|      |                  | 7   | 10.35 |        |
|      |                  | 13  | 11.35 | -61.25 |
|      |                  |     |       |        |
| 5.8G | a<br><br>(54M)   | 36  | 12.51 |        |
|      |                  | 149 | 16.01 |        |
|      |                  | 165 | 17.38 | -73.22 |
|      | ac<br><br>(MCS8) | 36  | 10.92 |        |
|      |                  | 149 | 15.17 |        |
|      |                  | 165 | 15.67 | -64.32 |
|      | ax<br><br>(MCS8) | 36  | 12.12 |        |
|      |                  | 149 | 15.33 |        |
|      |                  | 165 | 15.28 | -64.69 |

## Conclusion

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  
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