

# S3\_2.4G BT Antenna Evaluation report \_20230224

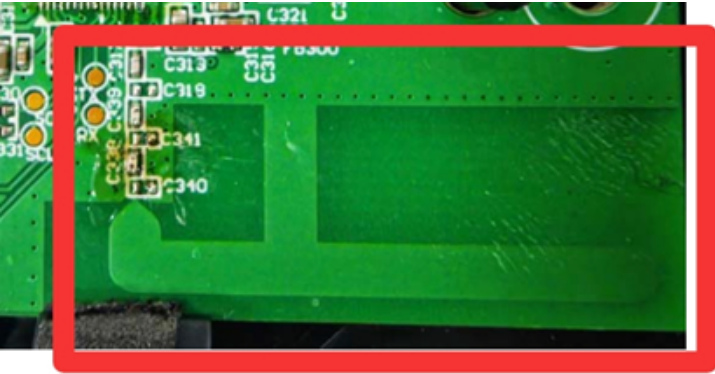
Bill.Ren  
2022/02/24

| Version | Time       | Description                 |
|---------|------------|-----------------------------|
| A1      | 2023/02/24 | S3_2.4G BT first evaluation |

➤ Content

1. Antenna impedance VSWR;
2. Antenna Efficiency;
3. Antenna Gain;
4. Antenna Radiation 3D;
5. Antenna Radiation 2D;

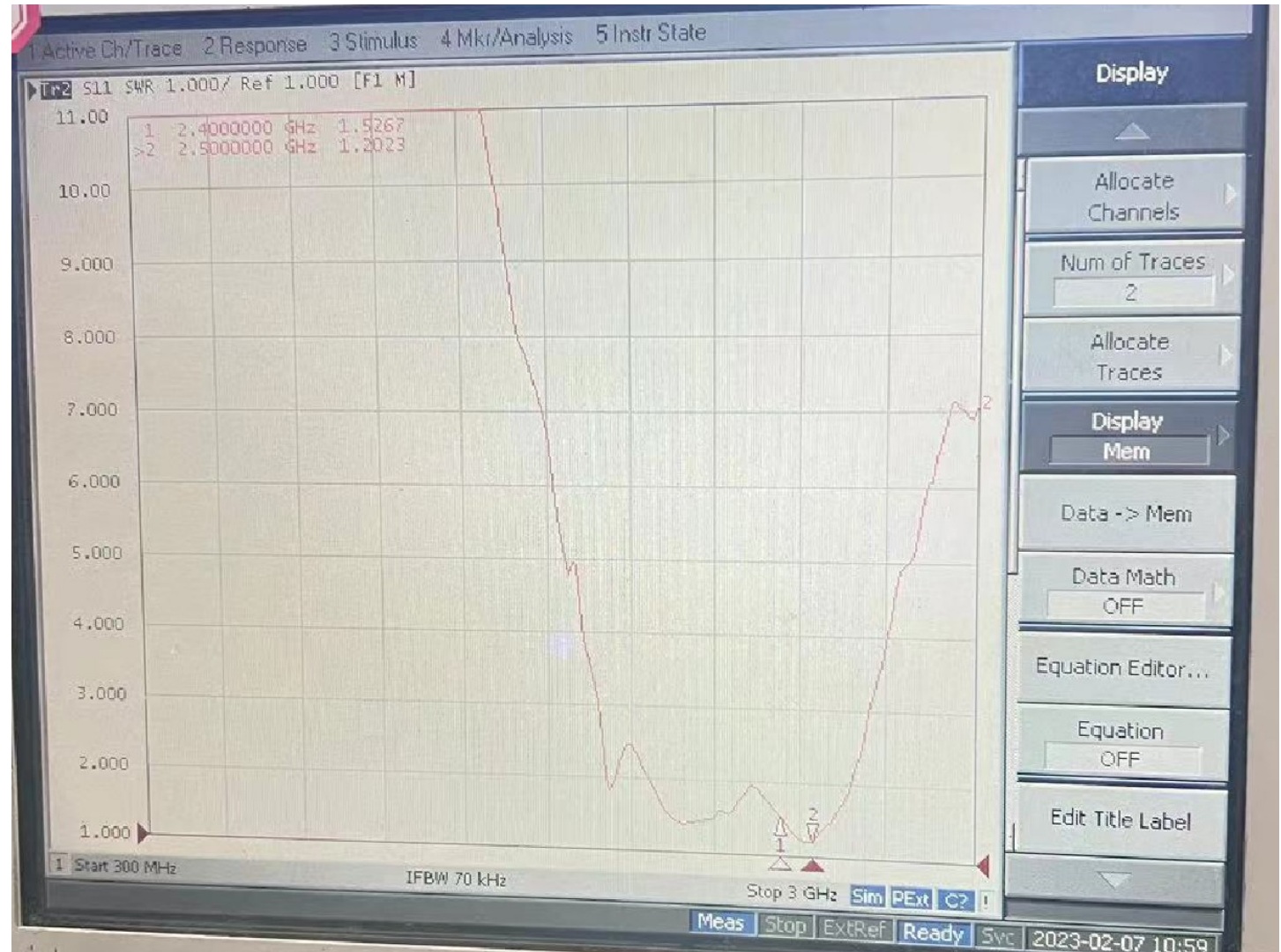
Antenna appearance



Antenna VSWR as below:

#### Comments

- VSWR < 2
- 2.4G: 1.5
- 2.5G: 1.2

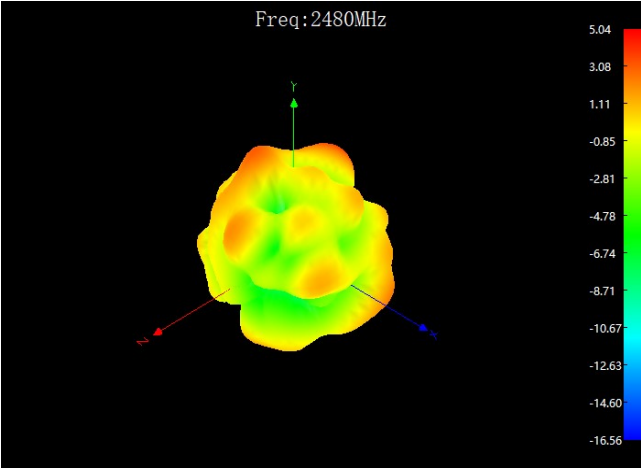
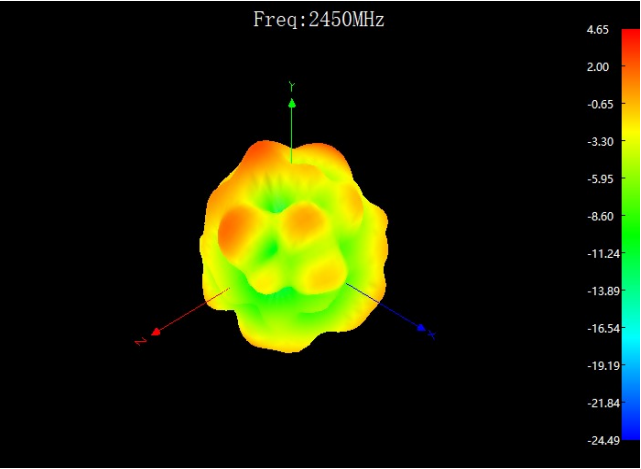
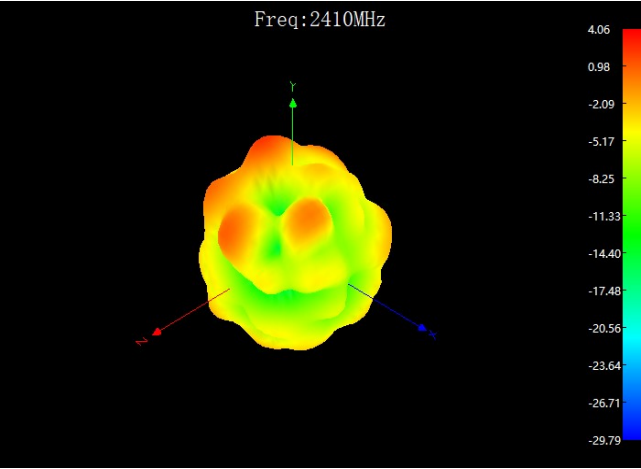


Efficiency and Gain:

| Frequency/Mhz | Efficiency / dB | Efficiency / % |
|---------------|-----------------|----------------|
| 2400          | -2.3            | 58.88          |
| 2410          | -2.2            | 60.26          |
| 2420          | -2.08           | 61.94          |
| 2430          | -2.01           | 62.95          |
| 2440          | -1.89           | 64.71          |
| 2450          | -1.87           | 65.01          |
| 2460          | -2.09           | 61.8           |
| 2470          | -1.84           | 65.46          |
| 2480          | -1.78           | 66.37          |
| 2490          | -1.67           | 68.08          |
| 2500          | -1.39           | 72.61          |

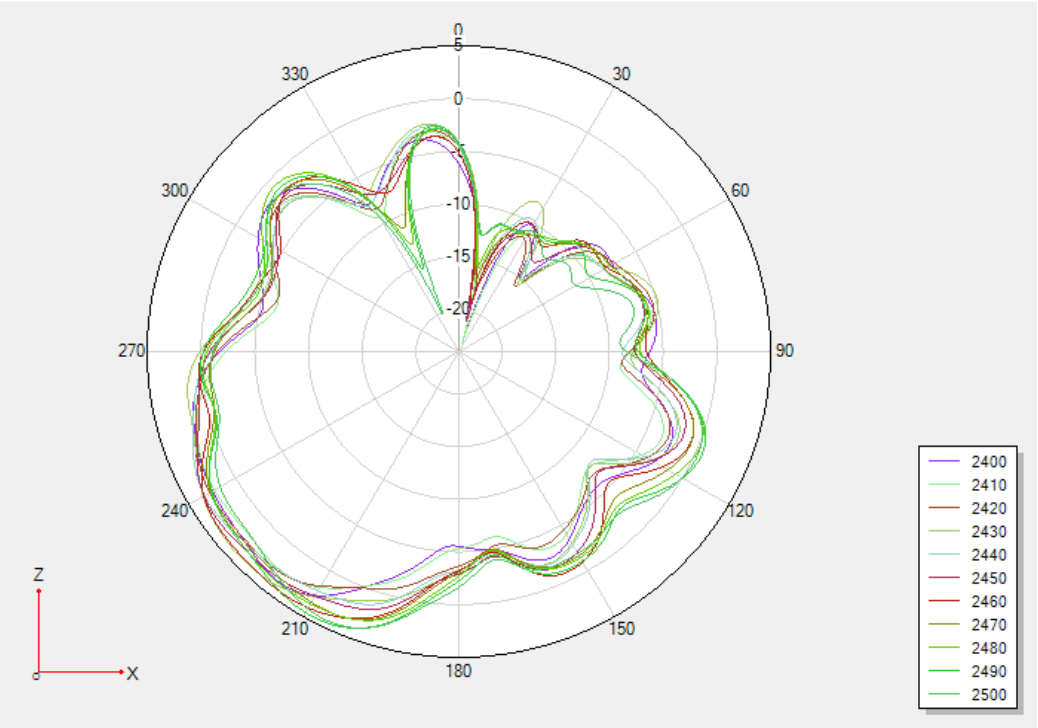
| Frequency/MHz | MaxGain/dBi | AvgGain/dBi |
|---------------|-------------|-------------|
| 2400          | 4.72        | -2.3        |
| 2410          | 4.06        | -2.2        |
| 2420          | 4.77        | -2.08       |
| 2430          | 5.53        | -2.01       |
| 2440          | 4.59        | -1.89       |
| 2450          | 4.65        | -1.87       |
| 2460          | 5.02        | -2.09       |
| 2470          | 4.79        | -1.84       |
| 2480          | 5.04        | -1.78       |
| 2490          | 5.66        | -1.67       |
| 2500          | 5.69        | -1.39       |

Radiation 3D:



Radiation 2D:

$\Phi=0^\circ$



$\Theta=90^\circ$

