



Antenna Datasheet

Product OC: Y0BMZ0CA5BA

Version: 1.0

Date: 2025-05-08

Status: Preliminary

Product Name: WiFi Antenna

Key Features:

Frequency Band: 2400–2500 MHz

Dimensions: 29.02 mm × 25.97 mm × 0.13 mm

Efficiency: Up to 43 %

RoHS Compliant

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1 Specification

Test Condition: Assembled in test device

1.1. Electrical

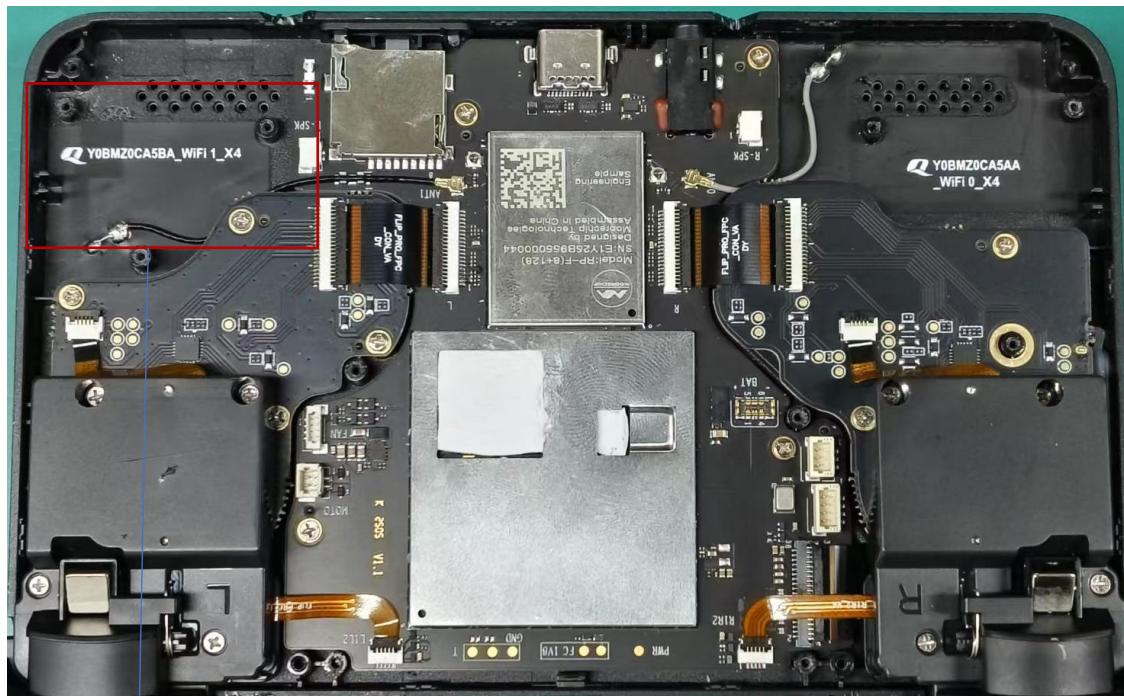
| Electrical | |
|--------------------------|------------------|
| Frequency Range | 2400–2500 MHz |
| Impedance | 50 Ω |
| Polarization | Linear |
| Radiation Pattern | Omni-directional |
| VSWR | ≤ 2.0 |
| Peak Gain | ≤ 1.5 dBi |

1.2. Mechanical & Environmental

| Mechanical | |
|------------------------------|-------------------------------|
| Antenna Dimensions | 29.02 mm × 25.97 mm × 0.13 mm |
| Material & Color | FPC & Black |
| Mounting Type | Φ 0.81 & Black & 50 mm |
| Weight | RF 4 |
| Mounting Type | Adhesive |
| Weight | Typ. 0.26 g |
| Environmental | |
| Operation Temperature | -40 °C to +85 °C |

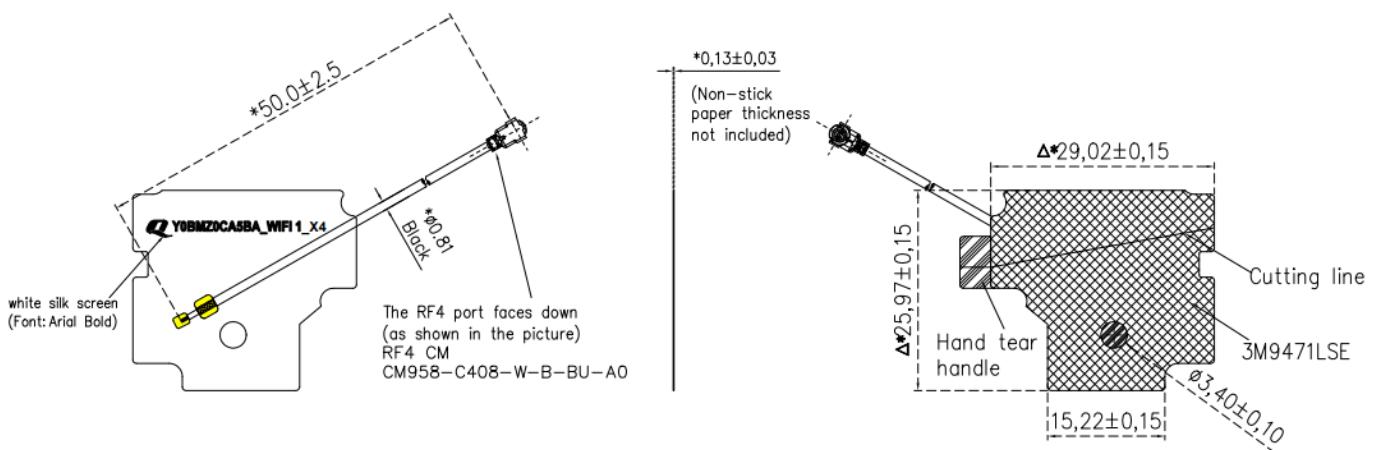
| | |
|---------------------|------------------|
| Storage Temperature | -40 °C to +85 °C |
| RoHS | Yes |

1.3. Antenna Assembly



Y0BMZ0CA5BA

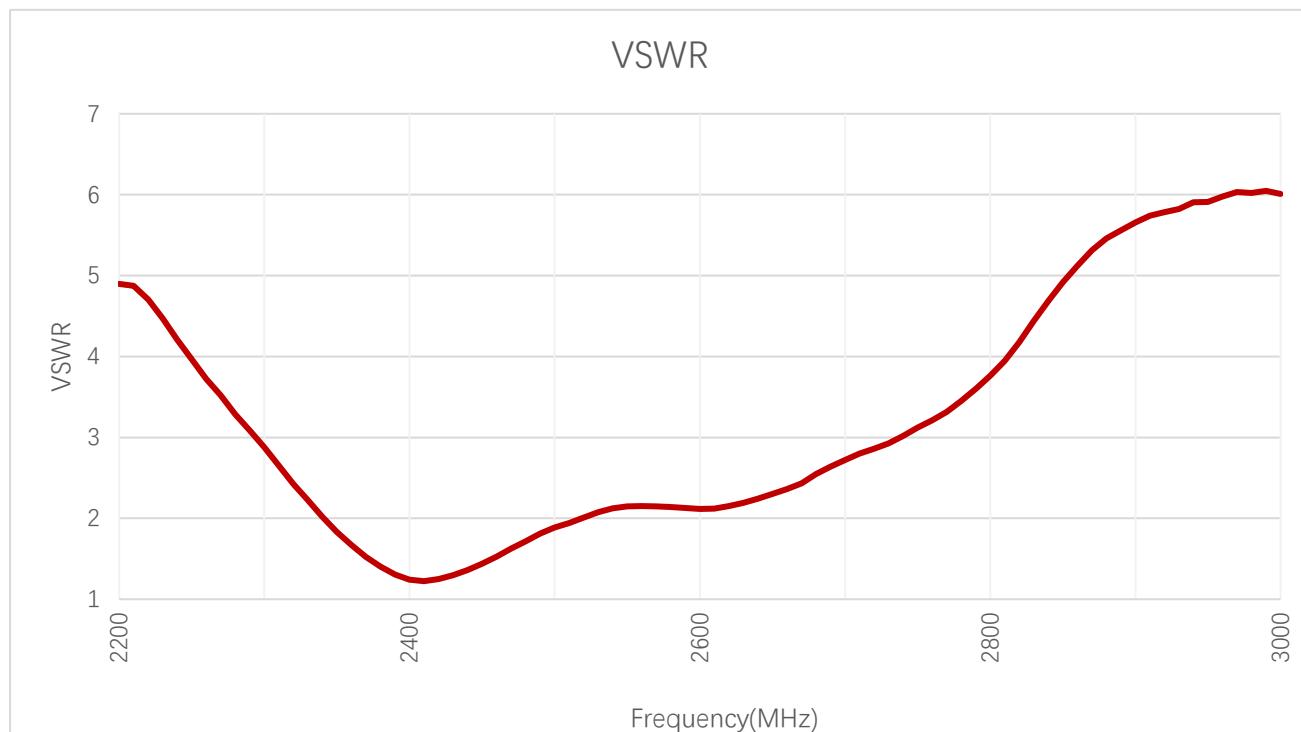
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

3.1.1. VSWR

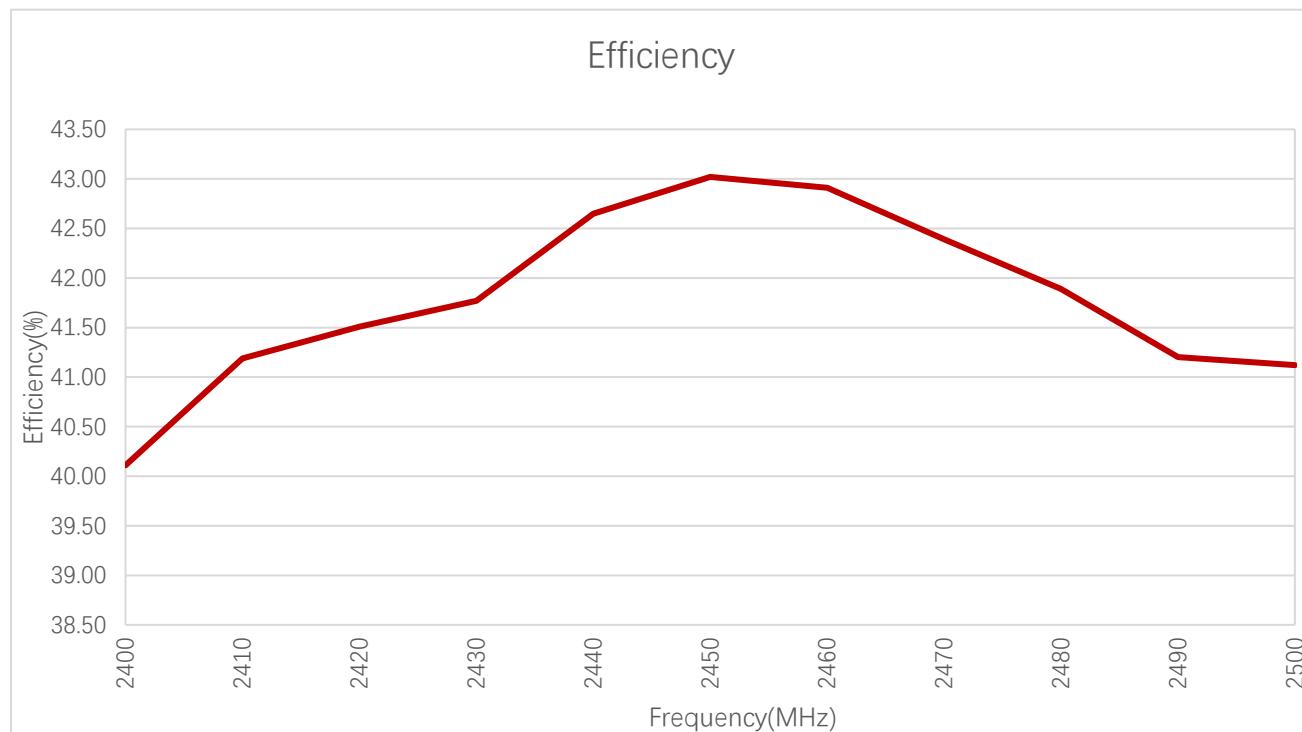


VSWR

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6525 | 7125 |
|-----------------|------|------|------|------|------|------|------|------|------|
| VSWR | 1.24 | 1.44 | 1.89 | - | - | - | - | - | - |

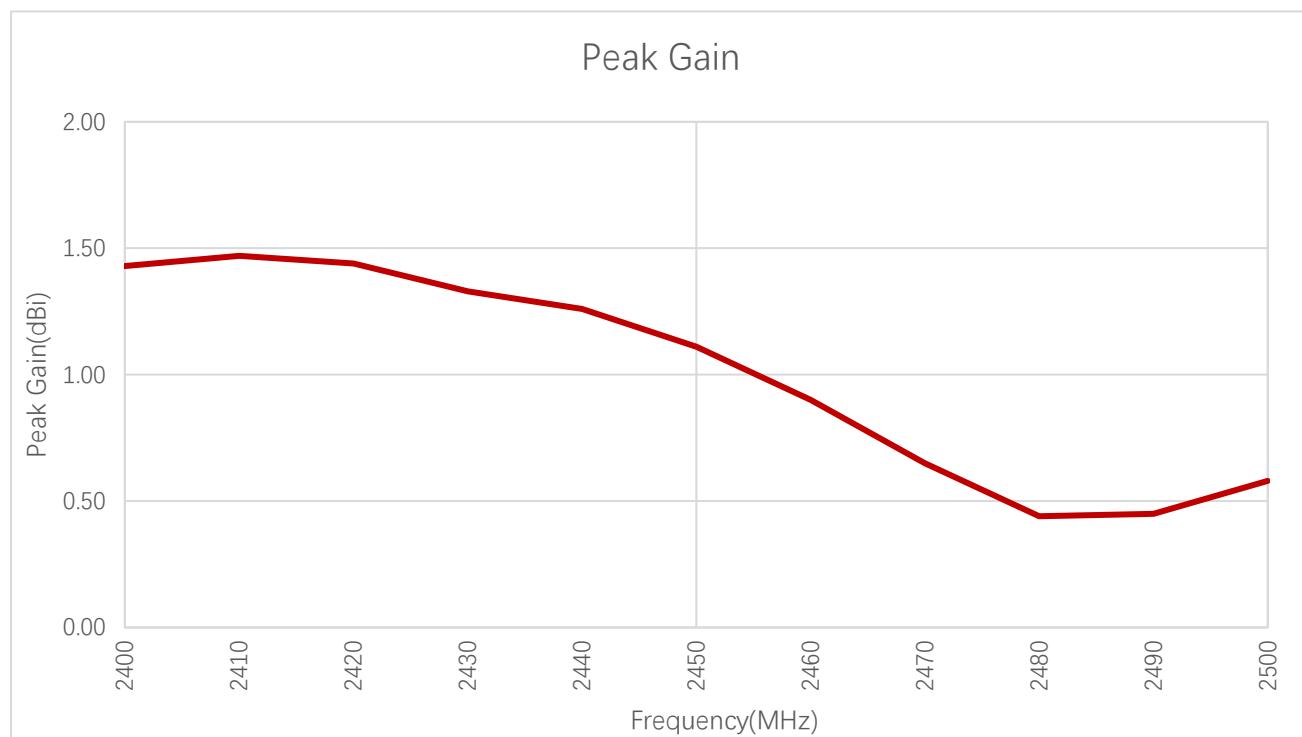
3.2. Radiation Performance Test

3.2.1. Efficiency



| Efficiency (%) | | | | | | | | | |
|-----------------|------|------|------|------|------|------|------|------|------|
| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6525 | 7125 |
| Efficiency (%) | 40.1 | 43.0 | 41.1 | - | - | - | - | - | - |

3.2.2. Peak Gain

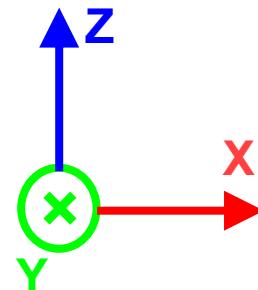
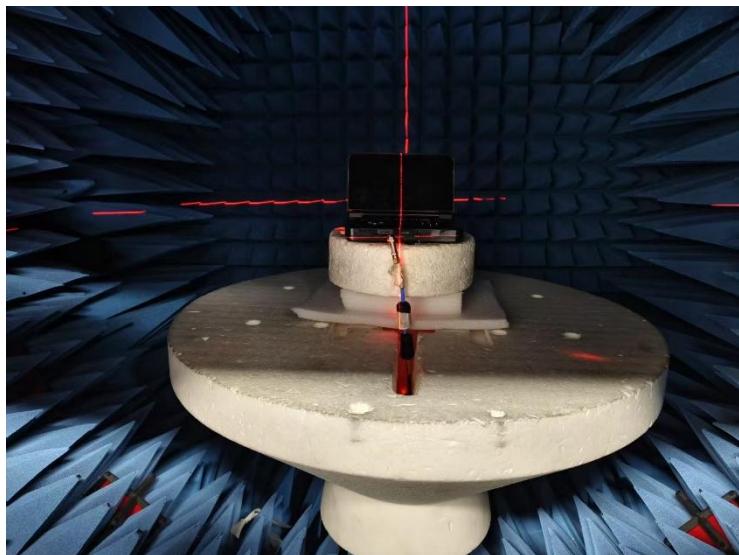


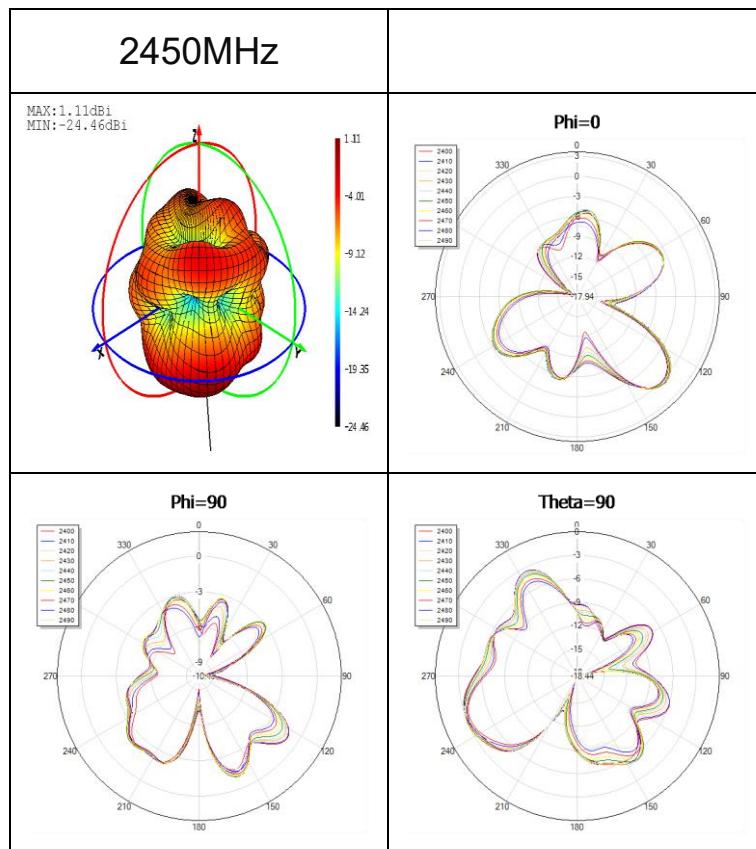
Peak Gain (dBi)

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6525 | 7125 |
|-----------------|------|------|------|------|------|------|------|------|------|
| Peak Gain (dBi) | 1.43 | 1.11 | 0.58 | - | - | - | - | - | - |

3.2.3. 2D Radiation Pattern

- Test Condition: Assembled in test device
- Test Chamber: SZ-S-1





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Revision History

| Version | Date | Author | Note |
|---------|------------|---------------------------------------|--------------------------|
| - | 2025-05-08 | Lyney LIN/ Shea LI/ Rainey LIAO | Creation of the document |
| 1.0 | 2025-05-08 | Lyney LIN/ Shea LI/ Rainey LIAO | First official release |



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Antenna Datasheet

Product OC: Y0BMZ0CA5AA

Version: 1.0

Date: 2025-05-08

Status: Preliminary

Product Name: WIFI Antenna

Key Features:

Frequency Band: 2400–2500 MHz

Dimensions: 40.82 mm × 28.46 mm × 0.13mm

Efficiency: Up to 27.9 %

RoHS Compliant

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1 Specification

Test Condition: Assembled in test device

1.1. Electrical

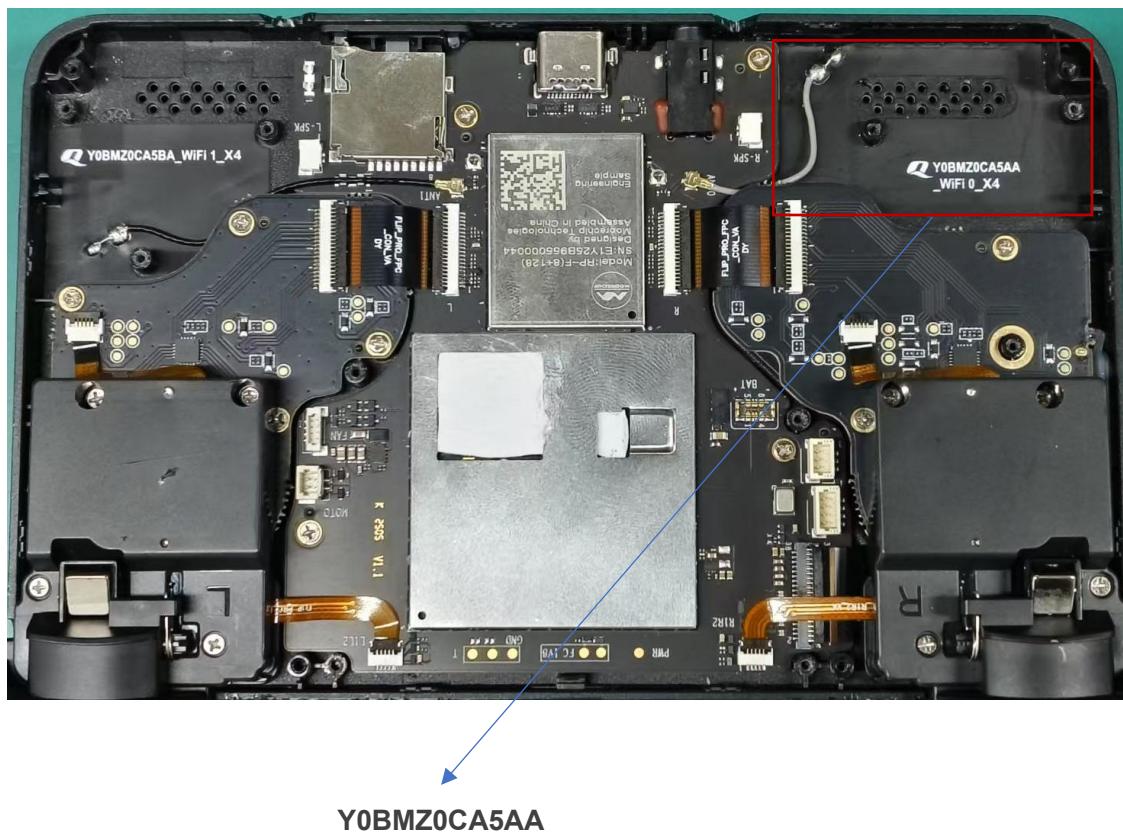
| Electrical | |
|--------------------------|------------------|
| Frequency Range | 2400–2500 MHz, |
| Impedance | 50 Ω |
| Polarization | Linear |
| Radiation Pattern | Omni-directional |
| VSWR | ≤ 2 |
| Peak Gain | ≤ 1.7 dBi |

1.2. Mechanical & Environmental

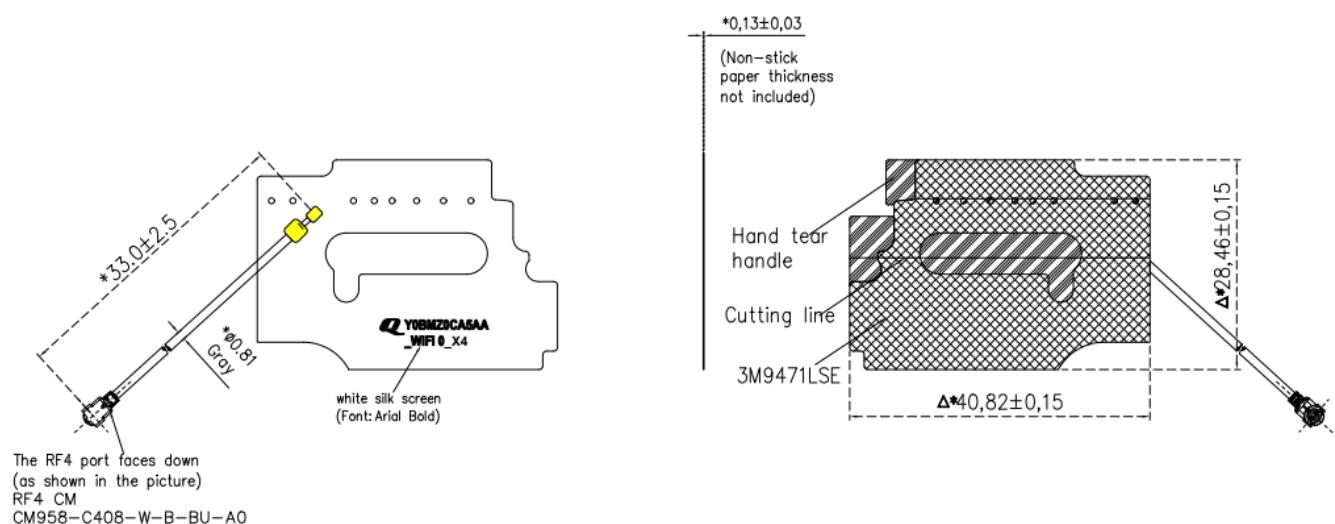
| Mechanical | |
|------------------------------|-------------------------------|
| Antenna Dimensions | 40.82 mm × 28.46 mm × 0.13 mm |
| Material & Color | FPC & Black |
| Mounting Type | Φ 0.81 & Grey & 33 mm |
| Weight | RF 4 |
| Mounting Type | Adhesive |
| Weight | Typ. 0.34 g |
| Environmental | |
| Operation Temperature | -40 °C to +85 °C |

| | |
|---------------------|------------------|
| Storage Temperature | -40 °C to +85 °C |
| RoHS | Yes |

1.3. Antenna Assembly



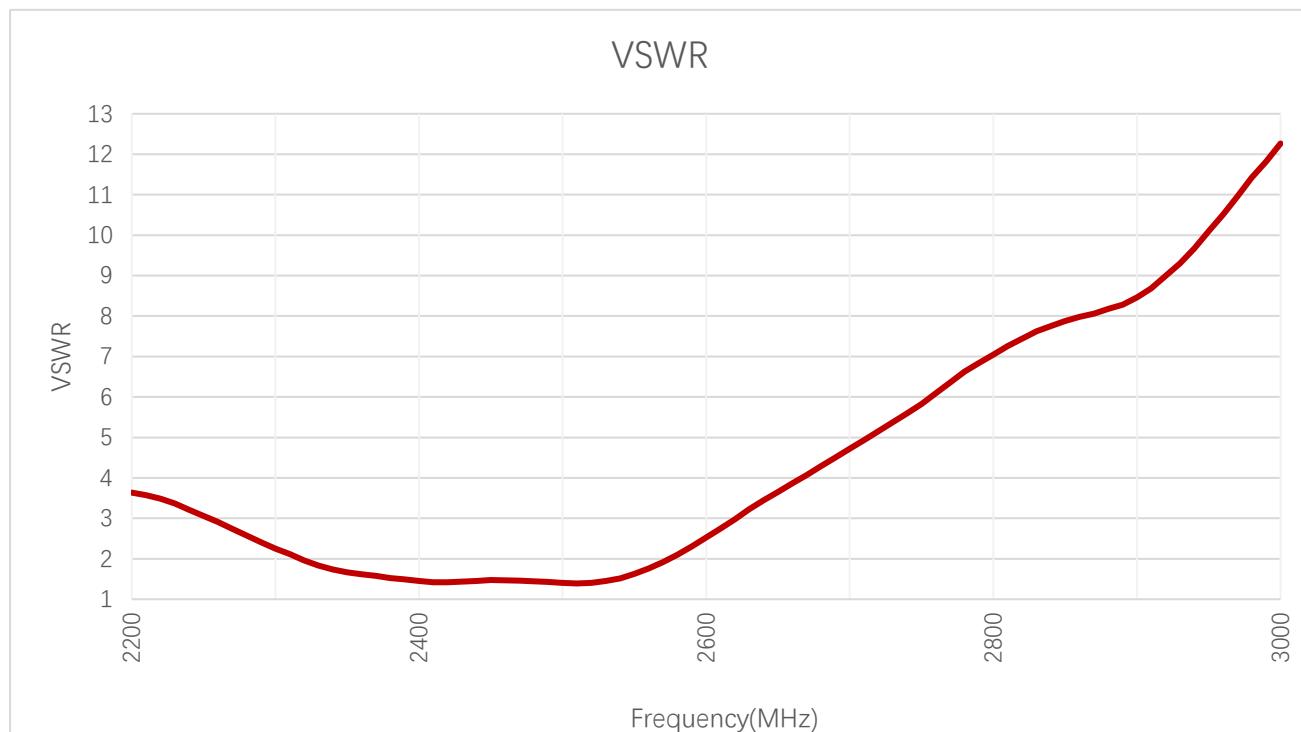
2 Drawing



3 Detailed Performance

3.1. S-Parameter Test

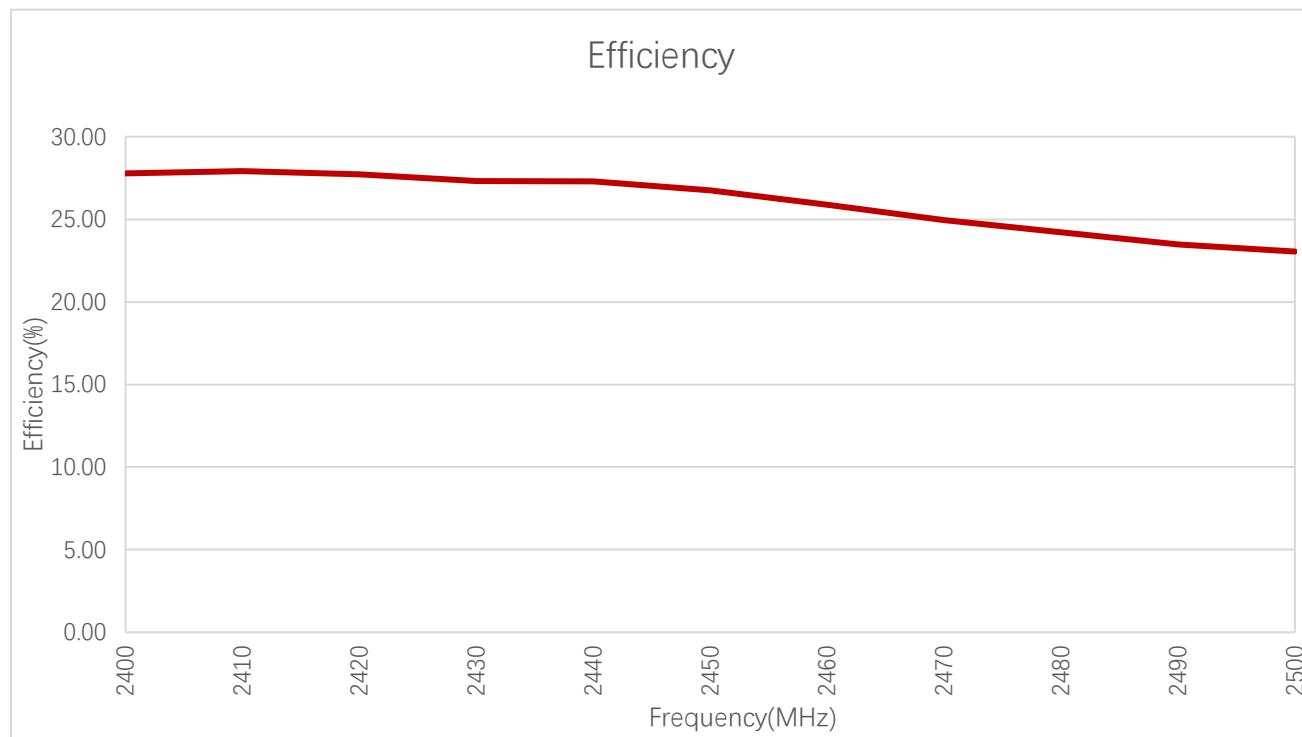
3.1.1. VSWR



| VSWR | | | | | | | | | |
|-----------------|------|------|------|------|------|------|------|------|------|
| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6525 | 7125 |
| VSWR | 1.45 | 1.47 | 1.41 | - | - | - | - | - | - |

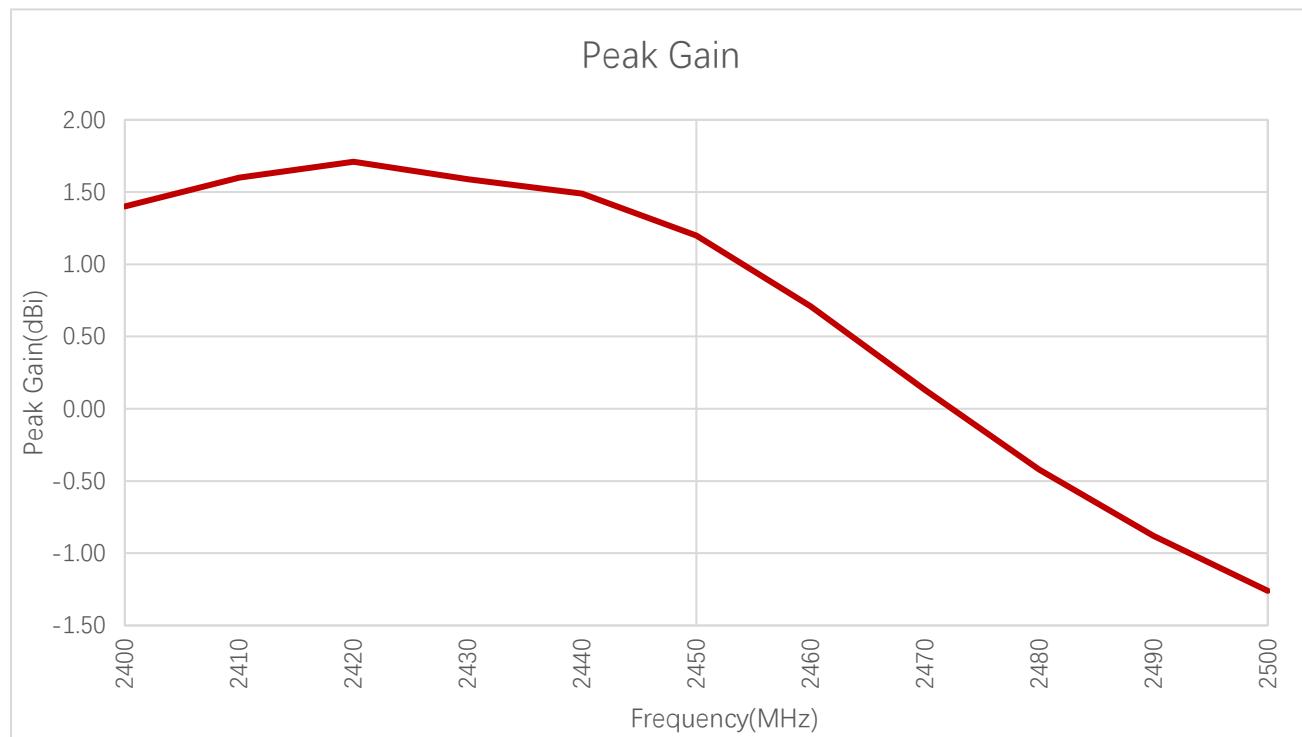
3.2. Radiation Performance Test

3.2.1. Efficiency



| Efficiency (%) | | | | | | | | | |
|-----------------|------|------|------|------|------|------|------|------|------|
| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6525 | 7125 |
| Efficiency (%) | 27.8 | 26.8 | 23.1 | - | - | - | - | - | - |

3.2.2. Peak Gain

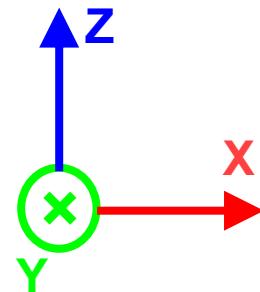
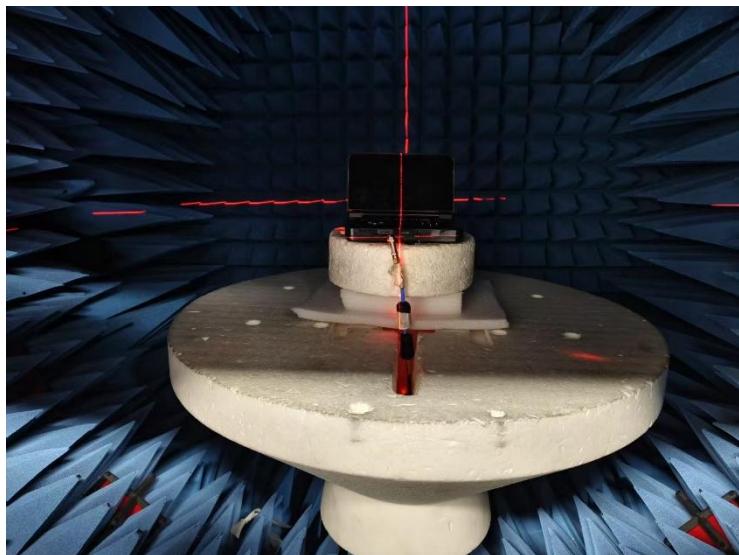


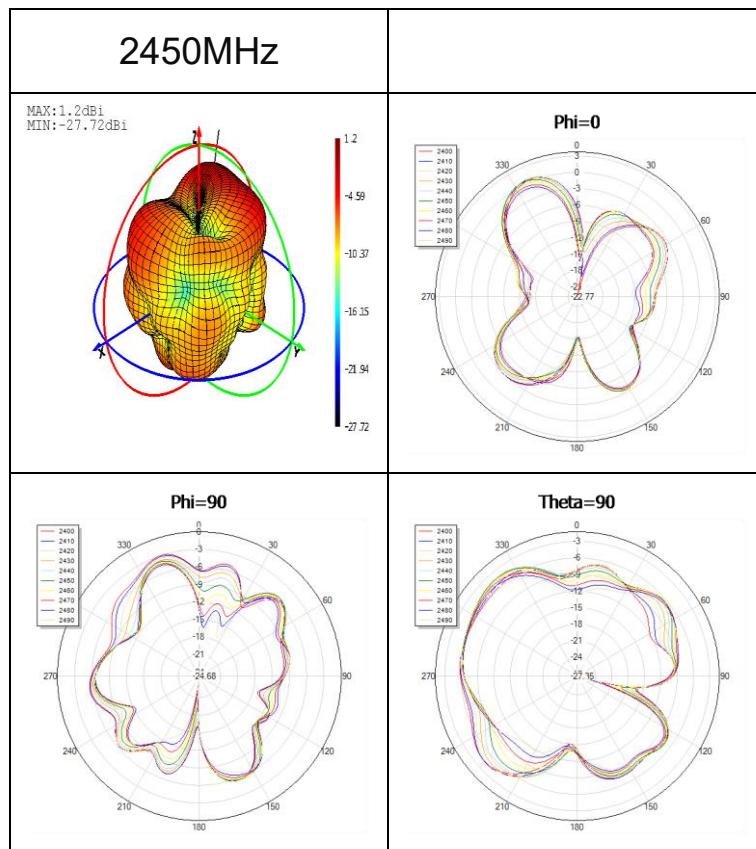
Peak Gain (dBi)

| Frequency (MHz) | 2400 | 2450 | 2500 | 5150 | 5500 | 5850 | 5925 | 6525 | 7125 |
|-----------------|------|------|-------|------|------|------|------|------|------|
| Peak Gain (dBi) | 1.40 | 1.20 | -1.26 | - | - | - | - | - | - |

3.2.3. 2D Radiation Pattern

- Test Condition: Assembled in test device
- Test Chamber: SZ-S-1





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