

## Product Specification

Customer Name: \_\_\_\_\_

Project Name: 2.4G white 5DB set large folding rubber rod antenna

Product Spec: ZK-2.4G-RP.SMA. J-J195

REV: V1.0

Date: 2025.02.17

| drawing       | check        | approved      |
|---------------|--------------|---------------|
| Huang Yongjun | Yu-me i wang | Jiang Zhenhua |



## Index

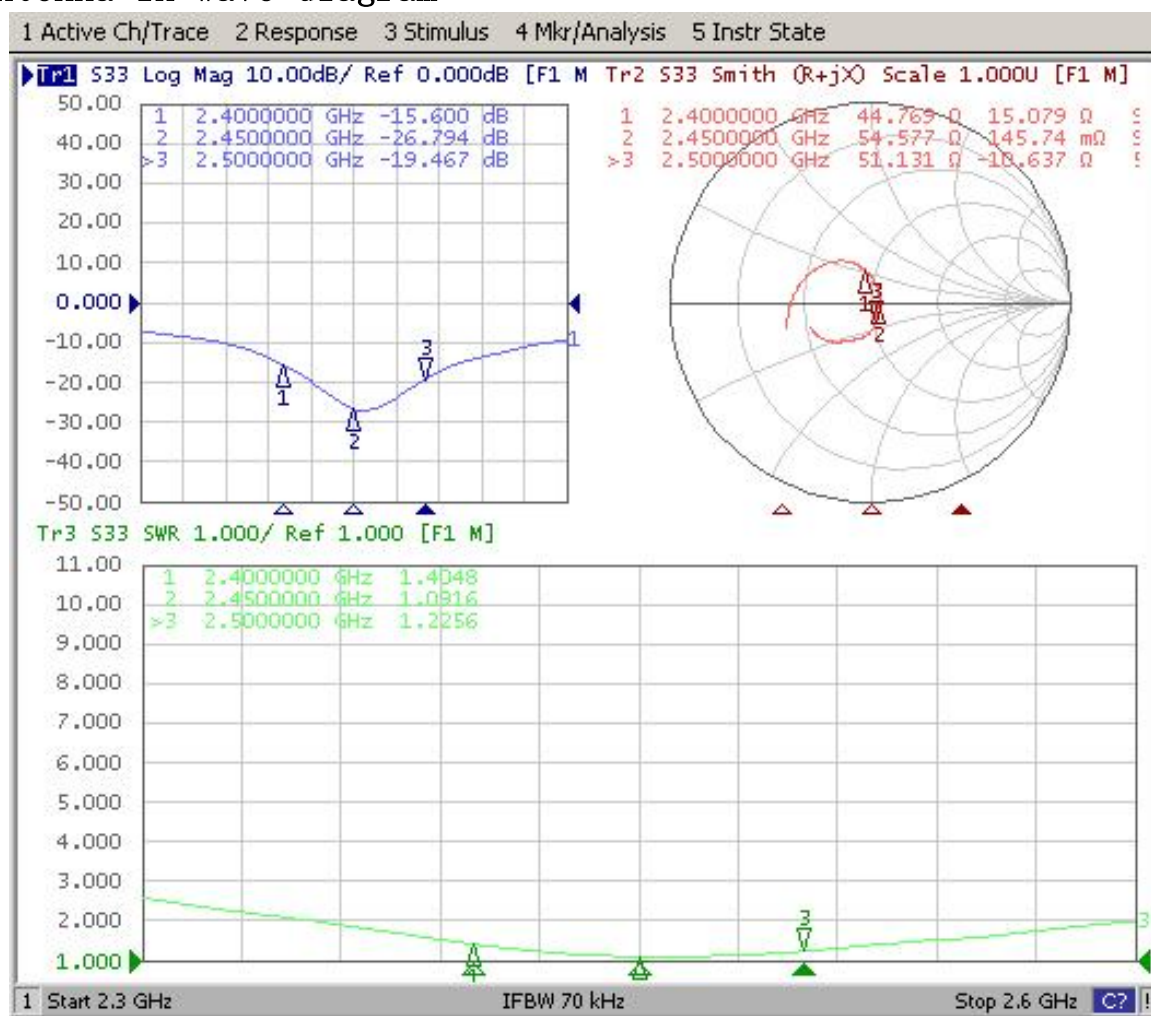
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## Electrical Performance Index

| Electrical Specifications |                |
|---------------------------|----------------|
| frequency range           | 2400-2500MHZ   |
| VSWR                      | $\leq 2.0$     |
| GAIN                      | $\leq 5.0$ DBI |
| Radiation                 | OMNI           |
| Polarizatin               | LINEAR         |
| Input Impedance           | 50 $\Omega$    |
| Mechanical Specifications |                |
| Input connector           | RP. SMA. J     |
| Antenna materia           | PCB+spring     |
| Working Temperature       | -30℃~+80℃      |
| Working Humidity          | 40~85%         |

## Test report

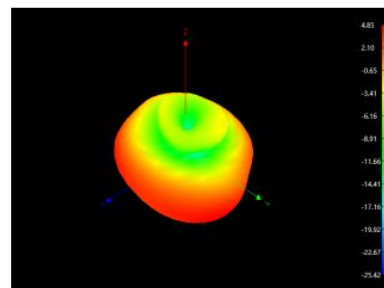
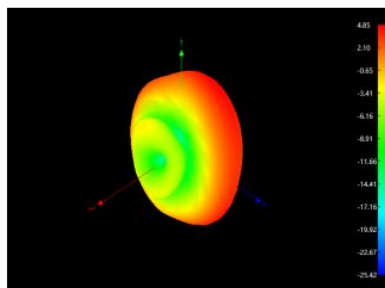
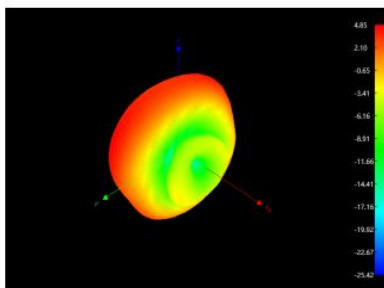
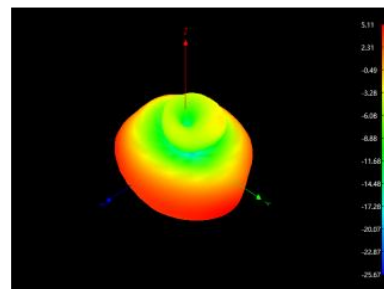
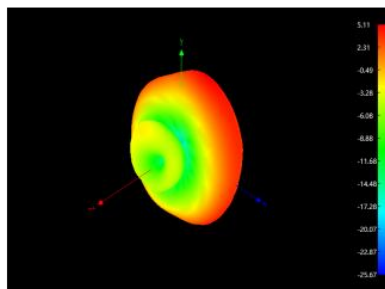
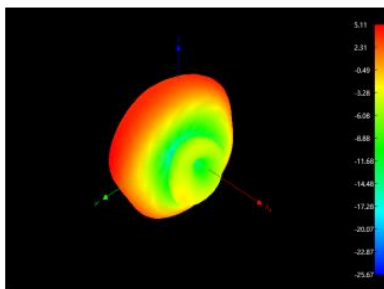
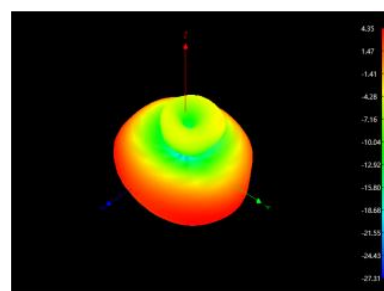
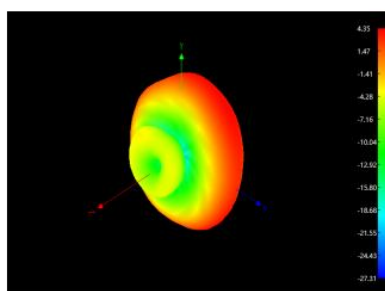
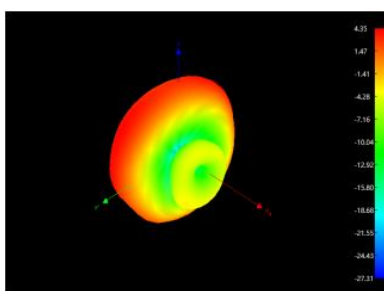
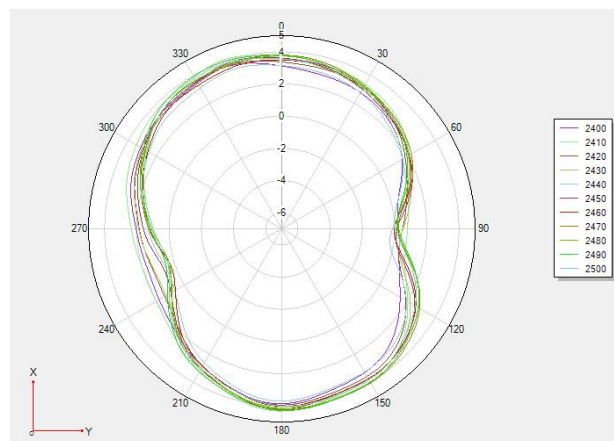
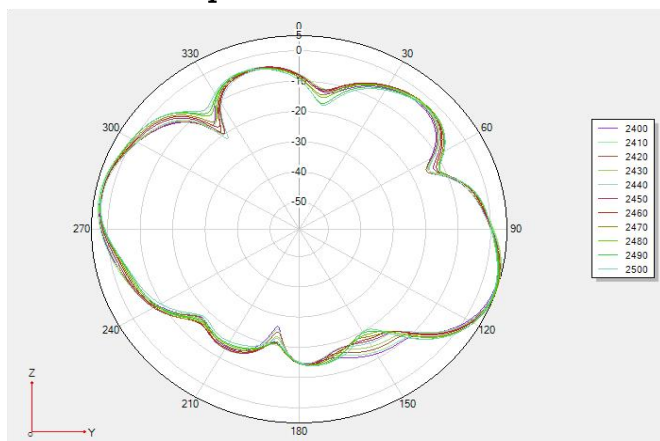
### 1. Antenna in wave diagram



### 2. antenna effeciency

| Frequency/Mhzy | Efficiency / dB | Efficiency / % | MaxGain/dBi |
|----------------|-----------------|----------------|-------------|
| 2400           | -1.31           | 73.96          | 4.35        |
| 2410           | -1.11           | 77.45          | 4.84        |
| 2420           | -1.02           | 79.07          | 4.65        |
| 2430           | -0.98           | 79.8           | 5.01        |
| 2440           | -0.92           | 80.91          | 4.52        |
| 2450           | -0.86           | 82.04          | 5.11        |
| 2460           | -0.85           | 82.22          | 5.03        |
| 2470           | -0.92           | 80.91          | 5.3         |
| 2480           | -1.03           | 78.89          | 5.14        |
| 2490           | -1.16           | 76.56          | 5.07        |
| 2500           | -1.28           | 74.47          | 4.85        |

### 3. Antenna pattern



## Testing Equipment and Principle

### 1. testing facility

Network Analyzers :

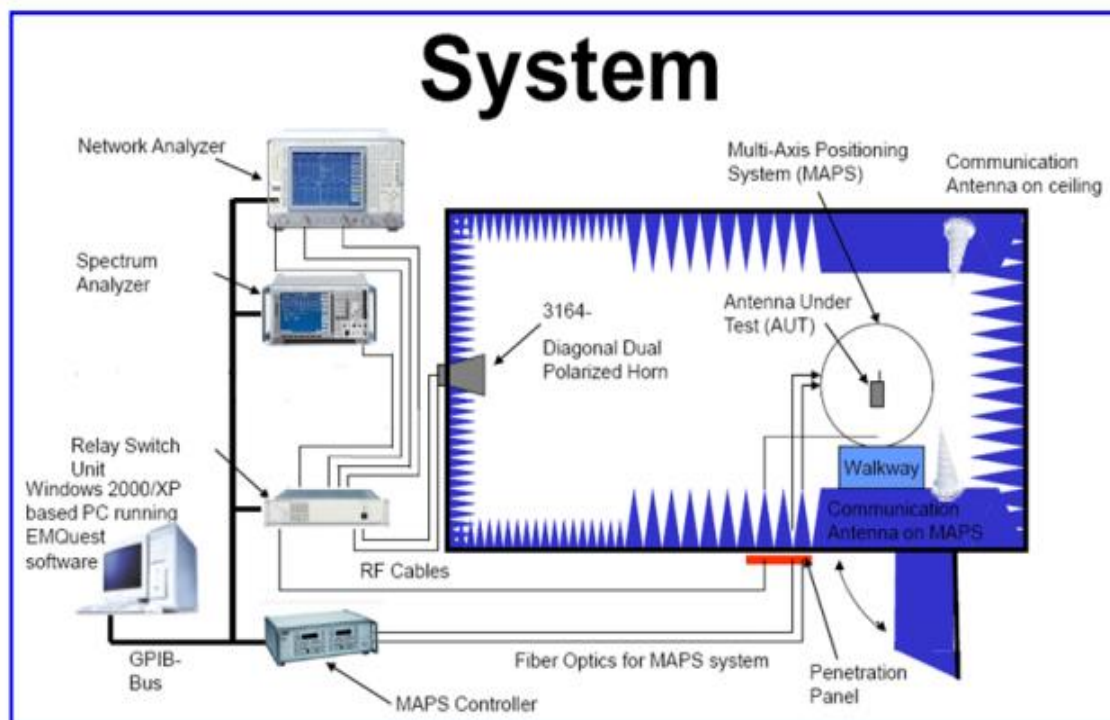
Agilent 8753D 5071B

Communications Test Set:

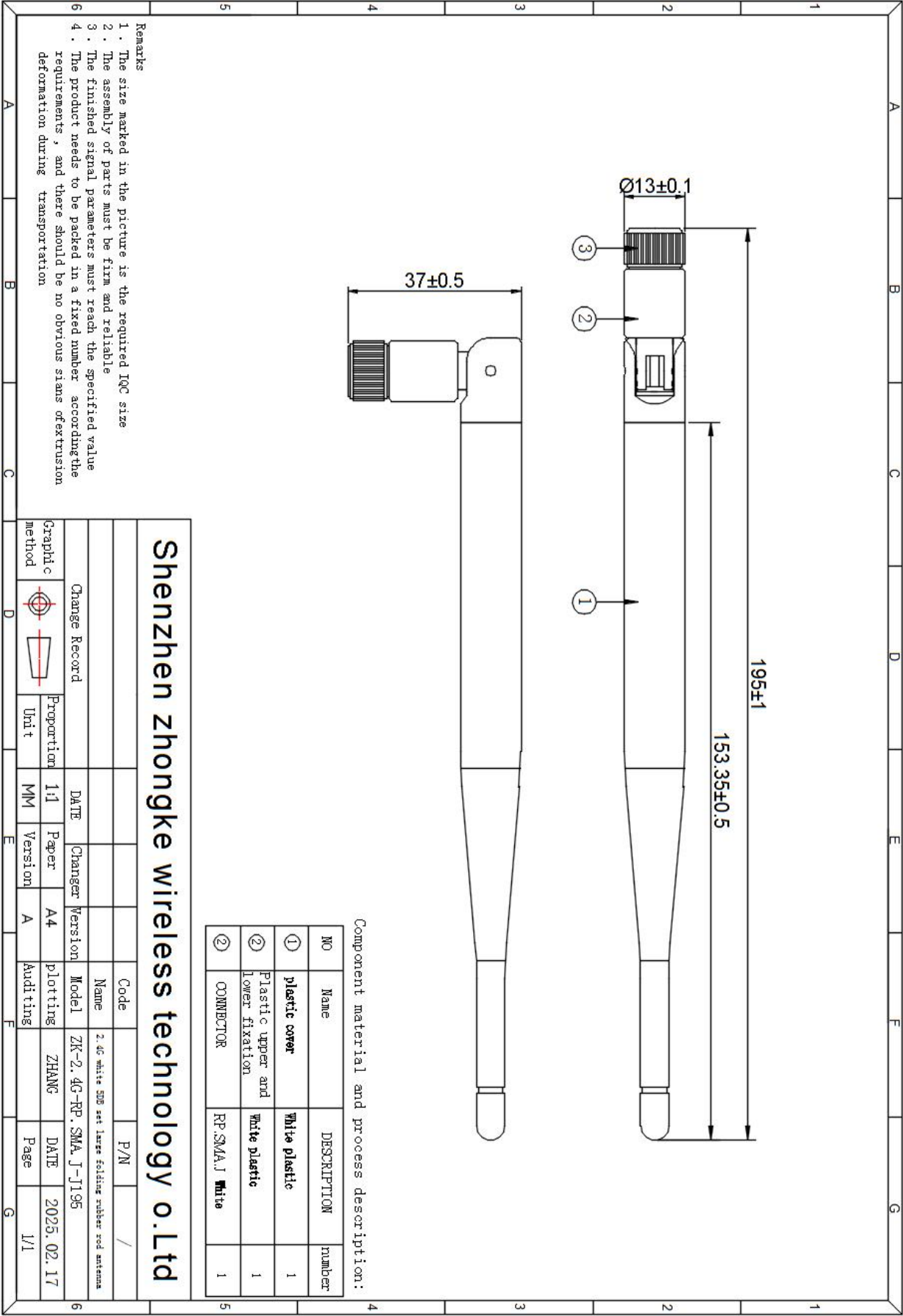
Agilent E5515C

3D Chamber Test System:

### 2. The test principle:



Product Drawing



## Reliability test report

| test item; test project |                                  | test method                                                                                                          | ask                                                                             | bear fruit |
|-------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------|
| C1                      | V. S. W. R.                      | Design net analyzer parameters for testing                                                                           | Directive DUT specification                                                     | pass       |
| M1                      | antenna gain                     | Design the parameters of the antenna dark chamber for testing                                                        | Directive DUT specification                                                     | pass       |
| M2                      | Vibration                        | GB / T2423. 48-2008<br>Amplitude: 0. 03 inch (1.5mm); Freq: 20 to 80to 20 Hz3 directions; 2 hours for each direction | 1. No Visual Damage<br>2. Frequency Tol. ≤5%                                    | pass       |
| M6                      | Random Drop                      | GB / T2423. 8-1995 Single: Height: 1.0 Meter; 3 directions; 1 time for each direction                                | 1. No parts separated 、 fracture<br>2. Frequency Tol. ≤5%                       | pass       |
| E3                      | Dimension                        | Inspection of dimension, color, material, package, surface process.                                                  | Directive DUT specification                                                     | pass       |
| E4                      | Temperature and Humidity Chamber | GB / T 2423. 3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 温度 80°C                                      | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol. ≤5%          | pass       |
| E5                      | Thermal Shock                    | GB / T 2423. 22 - 2008 - 40°C (30 minutes) to + 80°C (30 minutes); Cycles: 24-40°C                                   | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol. ≤5% 频率偏移 ≤5% | pass       |
| R1                      | Aging test                       | GB / T 2423. 2-2008 Temp: 80°C; Time: 24 hours                                                                       | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol. ≤5%          | pass       |
| M1                      | RoHS                             | With Reference to IEC 62321:2008 with flow chart                                                                     | Directive RoHS 2015/863/EU                                                      | pass       |

## packing specifications

Product name / specification:

### 1、 labeling requirement

| *****                         |       |
|-------------------------------|-------|
| Purchase order number         | ***** |
| material code                 | ***** |
| Product name<br>specification | ***** |
| Quantity                      | ***** |
| remarks                       | ***** |

| *****                         |       |
|-------------------------------|-------|
| Purchase order number         | ***** |
| material code                 | ***** |
| Product name<br>specification | ***** |
| Quantity                      | ***** |
| remarks                       | ***** |

### 2、 The packing requirements

job description :

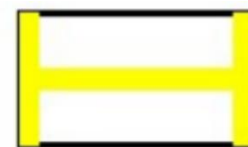
#### 1). inner packing:

Product\_\_\_PCS in a small bag

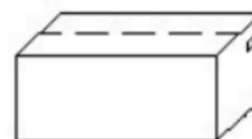


#### 2). external packing:

Determine the quantity / box according to the actual quantity



carton



### 3、 matters need attention:

- 1). Whether to add a partition board, pearl cotton;
- 2). Attachment of labels, such as ROHS;