

# KC.DA.00223

## Antenna Specification

### 1. Application:

This application shall apply for antenna unit which shall be used such as automotive, conventional communications, smart home, etc..

### 2.Electrical Specification:

*Those specifications were specially defined for customer's model, and all characteristics were measured under the model's handset testing jig .*

#### 2-1. Frequency Band:

| Frequency Band | MHz          |
|----------------|--------------|
| WiFi           | 2400-2500MHz |

#### 2-2. Impedance

50 ohm nominal

#### 2-3. VSWR

##### 2-3-1.Measurement frequency points and VSWR value

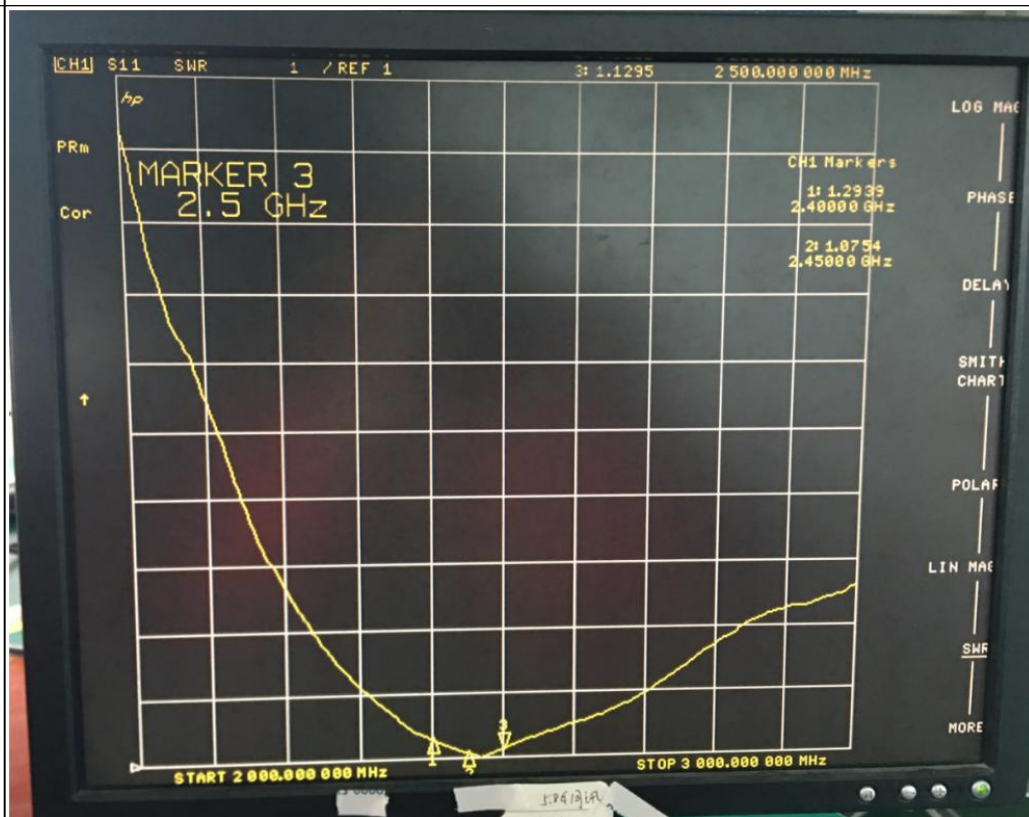
| Frequency Band(MHz)   | 2400 | 2500 |
|-----------------------|------|------|
| Typical Value: (VSWR) | 1.29 | 1.12 |

|                                                                                                                                     |                 |                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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|                                                                                                                                     |                 | P0                                                                                                                                                                                                   |

2-3-4 Measuring Method

1. A 50 $\Omega$  coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR.
2. Keeping this jig away from metal at least 20 cm

2-3-5 Picture



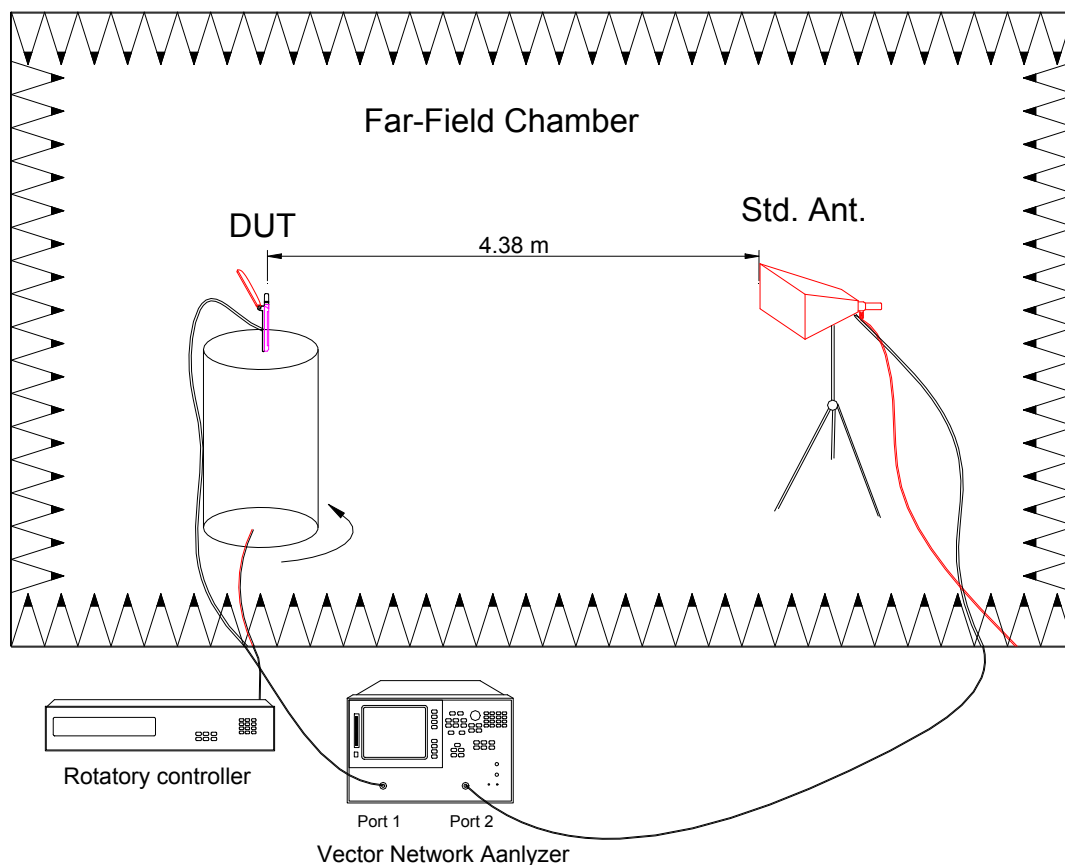
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## 2-4. Efficiency and Gain

### 4-5.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

### 4-5.2 Chamber definition



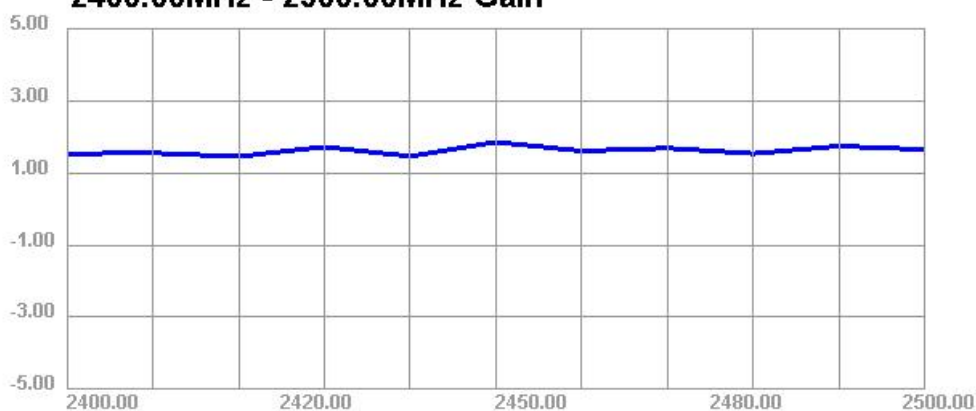
1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quite room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

|                                           |                 |                                                                                                                                                                                                      |                           |
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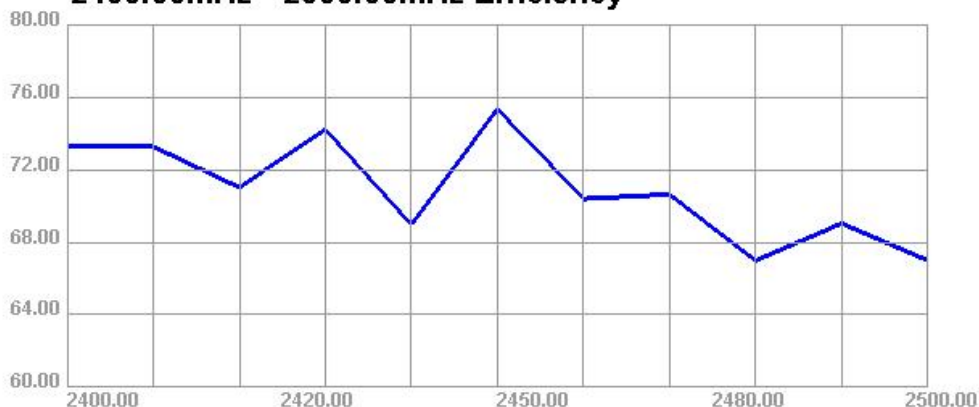
## 2-5-1 Efficiency and Gain and 3D Date

| Passive Test For WIFI2 |             |              |               |               |            |             |             |             |                    |                    |
|------------------------|-------------|--------------|---------------|---------------|------------|-------------|-------------|-------------|--------------------|--------------------|
| Freq<br>(MHz)          | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) | Gain<br>(dBd) | UHS<br>(%) | DHIS<br>(%) | Max<br>(dB) | Min<br>(dB) | Attenu<br>t<br>Hor | Attenu<br>t<br>Ver |
| 2400                   | 73.3        | -1.35        | 1.53          | -0.62         | 39.113     | 34.188      | 1.53        | -19.75      | 53.58              | 53.59              |
| 2420                   | 71.02       | -1.49        | 1.45          | -0.7          | 37.158     | 33.864      | 1.45        | -18.86      | 53.83              | 53.76              |
| 2450                   | 75.35       | -1.23        | 1.85          | -0.3          | 37.977     | 37.368      | 1.85        | -17.95      | 54.17              | 54.08              |
| 2480                   | 66.98       | -1.74        | 1.54          | -0.61         | 32.936     | 34.048      | 1.54        | -20.36      | 54.08              | 53.86              |
| 2500                   | 67          | -1.74        | 1.65          | -0.5          | 32.476     | 34.521      | 1.65        | -22.18      | 54.04              | 53.84              |

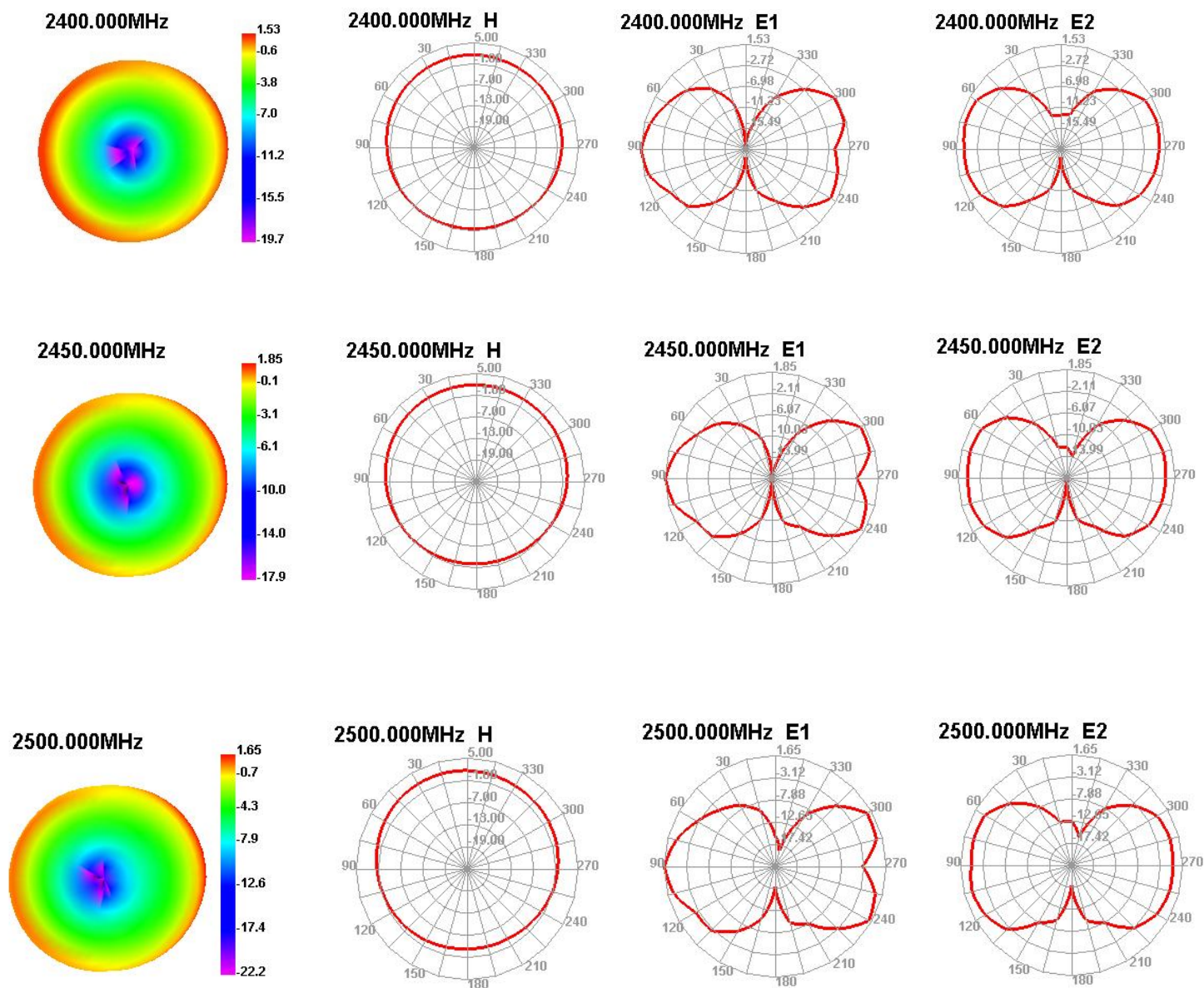
**2400.00MHz - 2500.00MHz Gain**



**2400.00MHz - 2500.00MHz Efficiency**



|                                           |                 |                                                                                                                                                                                                      |                           |
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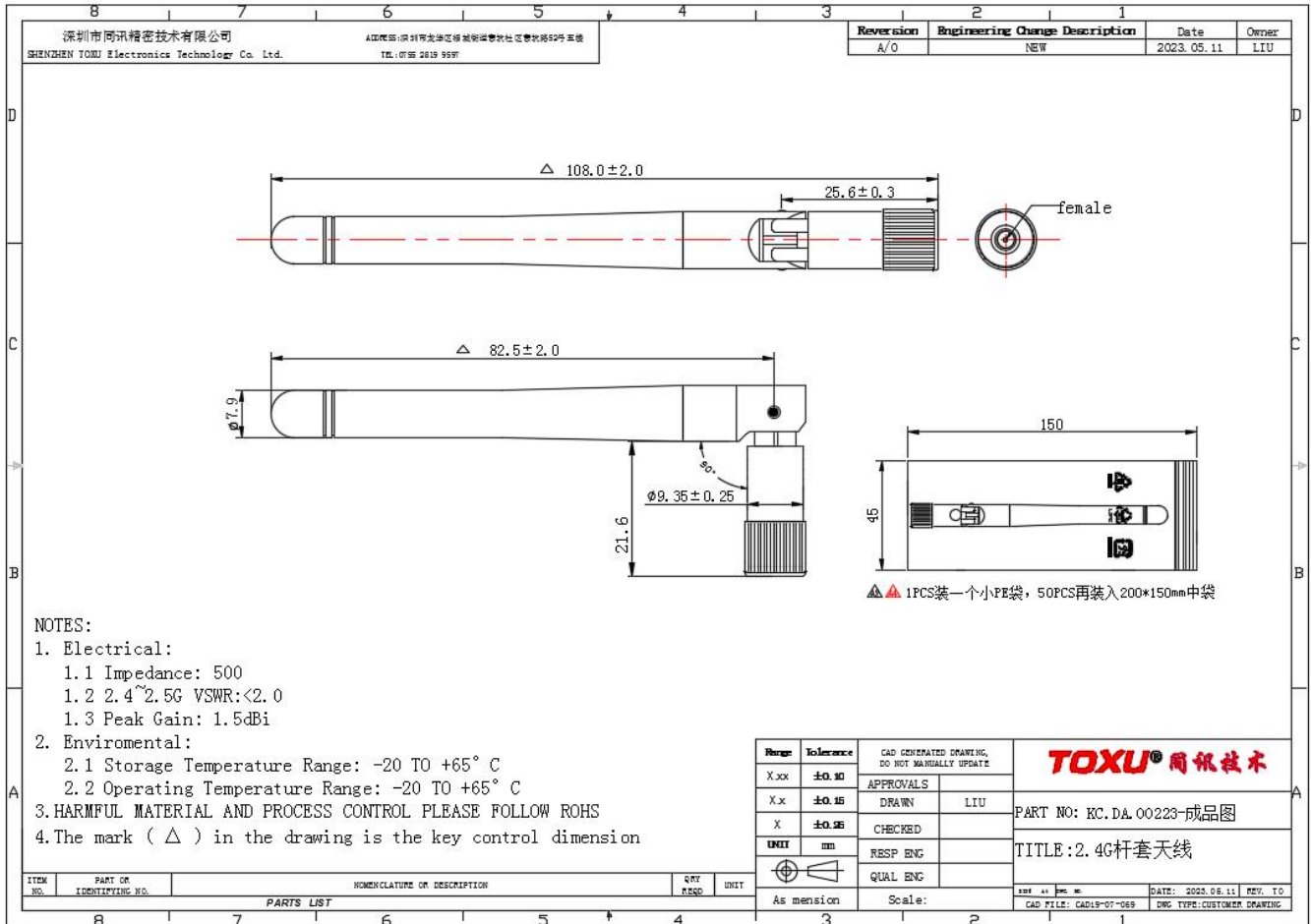


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### 3. Mechanical Specification:

#### 3-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing

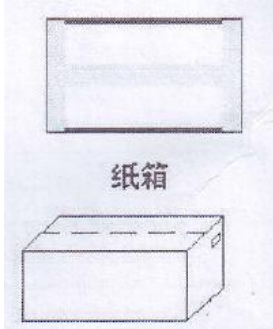


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## 4 .Packaging specification:

|                                               |         |                     |       |
|-----------------------------------------------|---------|---------------------|-------|
| <b>Product number:</b> xxxxx                  |         |                     |       |
| <b>Product model:</b> xxxxx                   |         |                     |       |
| <b>一、 Label requirements:</b>                 |         |                     |       |
| <b>Customer</b>                               | xxx     |                     |       |
| <b>supplier</b>                               | xxxxxx  |                     |       |
| <b>Material coding</b>                        | xx      |                     |       |
| <b>Product model</b>                          | xx      |                     |       |
| <b>Number</b>                                 | XXX PCS | <b>Factory date</b> | X X X |
| <b>Remarks</b>                                |         |                     |       |
| <b>二、 Boxing:</b>                             |         |                     |       |
| <b>Job description:</b>                       |         |                     |       |
| <b>1. Inner packaging:</b>                    |         |                     |       |
| XXpcs A bag                                   |         |                     |       |
| <b>2. External packaging:</b>                 |         |                     |       |
| Xx PCS ;                                      |         |                     |       |
| <b>3. Matters needing attention:</b>          |         |                     |       |
| a. Whether to add partition and pearl cotton; |         |                     |       |
| b. Label attachments, such as ROHS, etc.;     |         |                     |       |

|                                           |                 |                                                                                                                                                                                                      |                           |
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