

# KC.IA.00498(venu90)

## 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           | 2400~2500/5150~5850MHz |

#### 2-2. Impedance

50 ohm nominal

#### 2-3. VSWR

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

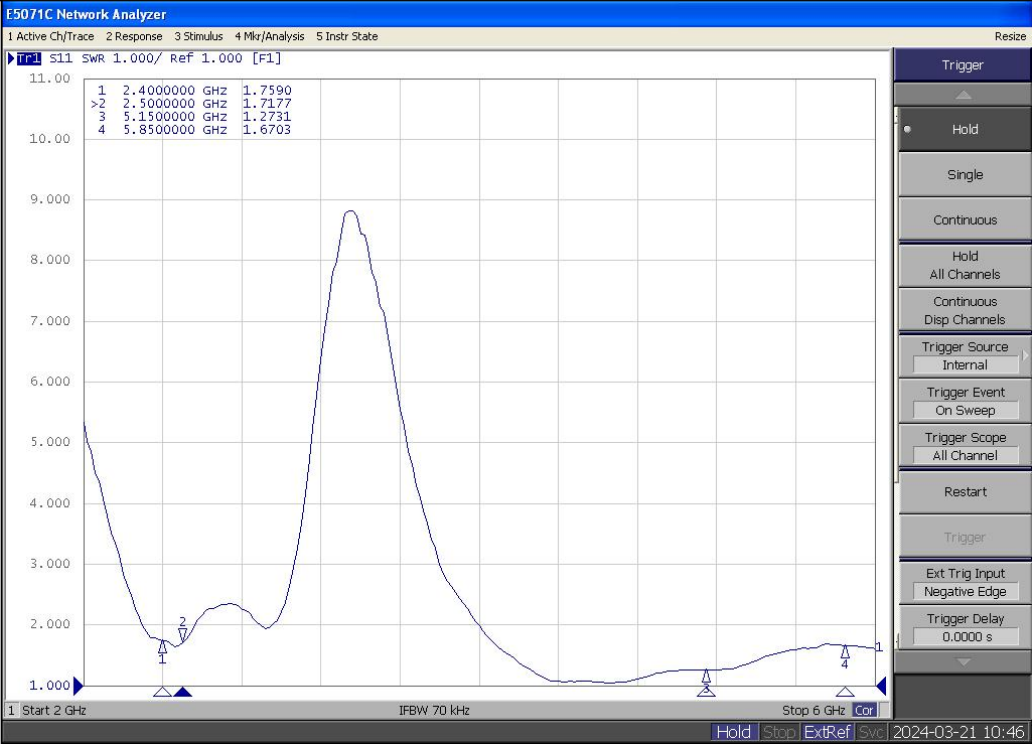
| Frequency Band(MHz)   | 2400 | 2500 | 5150 | 5850 |
|-----------------------|------|------|------|------|
| Typical Value: (VSWR) | 1.7  | 1.7  | 1.2  | 1.6  |

|                                                                                                                                           |                 |                                                                                                |                                                                                                                                                                                                      |  |
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2-3-4 Measuring Method

1. A 50Ω 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



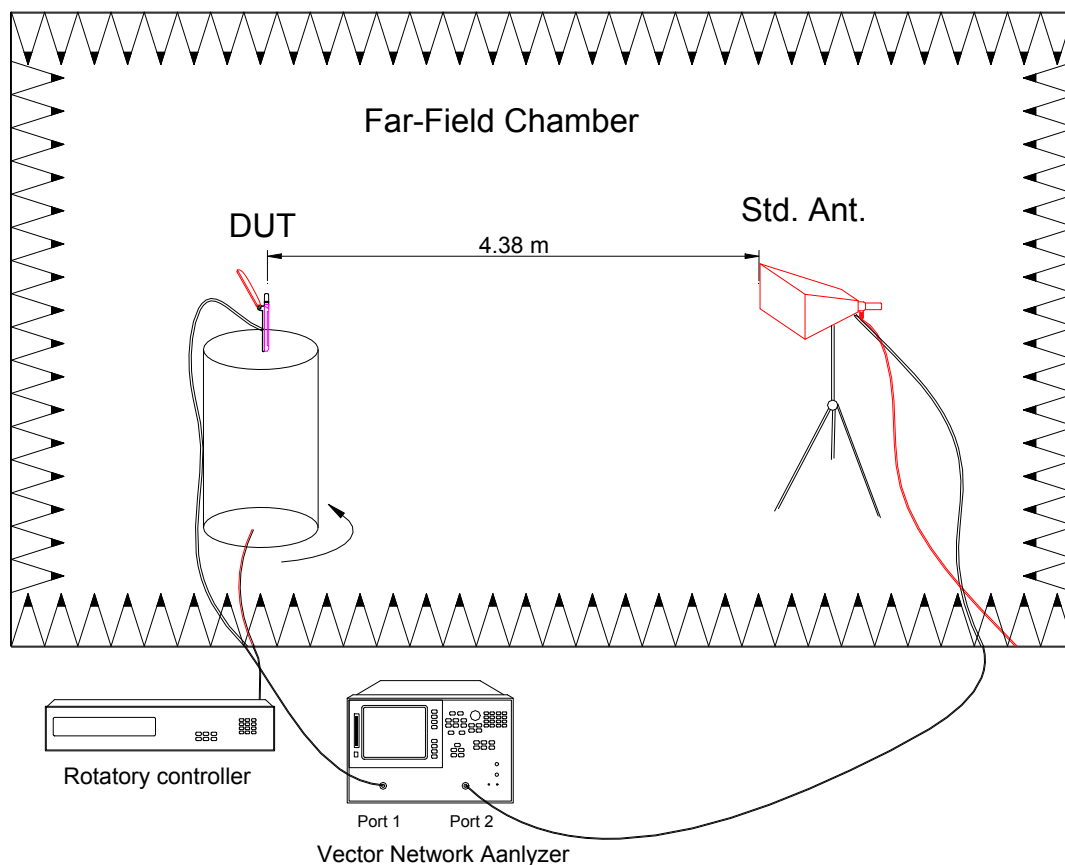
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## 2-4. Efficiency and Gain

### 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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## 2-4-1 Efficiency and Gain and 3D Date

| Frequency/MHz | Efficiency / % | MaxGain/dBi | Frequency/MHz | Efficiency / % | MaxGain/dBi |
|---------------|----------------|-------------|---------------|----------------|-------------|
| 2400          | 54.67          | 1.62        | 5390          | 60.12          | 3.86        |
| 2410          | 54.36          | 1.93        | 5410          | 58.75          | 3.89        |
| 2420          | 54.87          | 1.71        | 5430          | 57.94          | 3.62        |
| 2430          | 55.92          | 2.05        | 5450          | 60.53          | 3.67        |
| 2440          | 55.39          | 1.81        | 5470          | 61.09          | 3.72        |
| 2450          | 56.34          | 1.75        | 5490          | 59.7           | 3.68        |
| 2460          | 57.32          | 1.9         | 5510          | 60.26          | 3.69        |
| 2470          | 56.67          | 1.61        | 5530          | 59.57          | 3.72        |
| 2480          | 57.09          | 2.25        | 5550          | 58.48          | 3.67        |
| 2490          | 58.24          | 2.05        | 5570          | 56.89          | 3.7         |
| 2500          | 58.48          | 2.42        | 5590          | 57.02          | 3.63        |
|               |                |             | 5610          | 57.02          | 3.58        |
| 5150          | 53.83          | 2.15        | 5630          | 58.21          | 3.59        |
| 5170          | 54.45          | 2.39        | 5650          | 56.75          | 3.36        |
| 5190          | 52.84          | 2.36        | 5670          | 56.75          | 3.25        |
| 5210          | 55.98          | 2.6         | 5690          | 54.83          | 3.04        |
| 5230          | 56.75          | 2.7         | 5710          | 54.7           | 3.1         |
| 5250          | 55.85          | 2.66        | 5730          | 51.76          | 2.93        |
| 5270          | 54.45          | 2.46        | 5750          | 53.21          | 3.2         |
| 5290          | 56.62          | 2.6         | 5770          | 51.64          | 3.22        |
| 5310          | 57.54          | 2.84        | 5790          | 52.12          | 3.39        |
| 5330          | 58.75          | 3.33        | 5810          | 51.42          | 3.14        |
| 5350          | 58.48          | 3.51        | 5830          | 51.53          | 3.25        |
| 5370          | 59.57          | 3.72        | 5850          | 52.42          | 3.18        |

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SCALE :                      UNIT : mm

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DESIGNED BY: De wen                      APPROVED BY: YS

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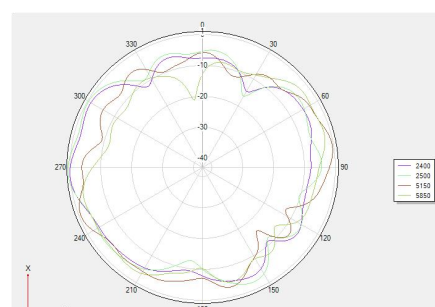
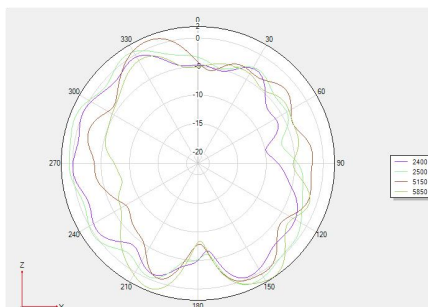
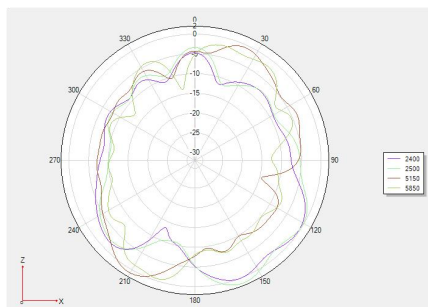
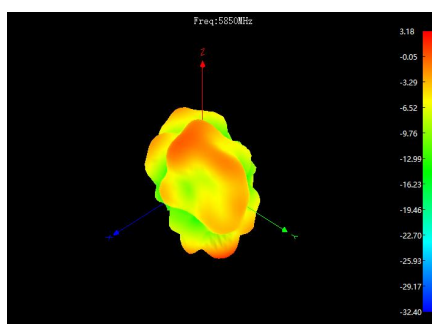
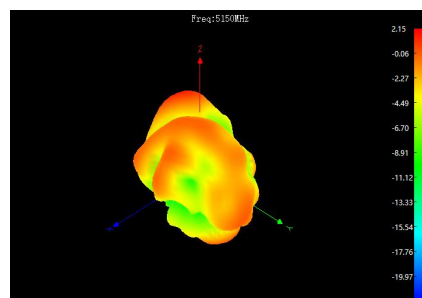
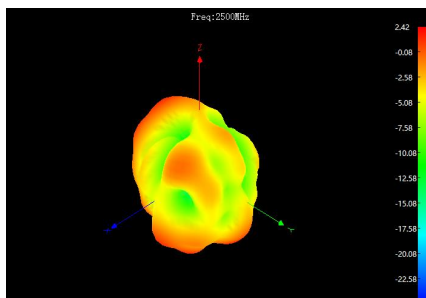
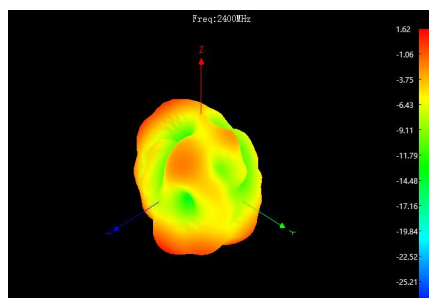
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### 3. Antenna environm

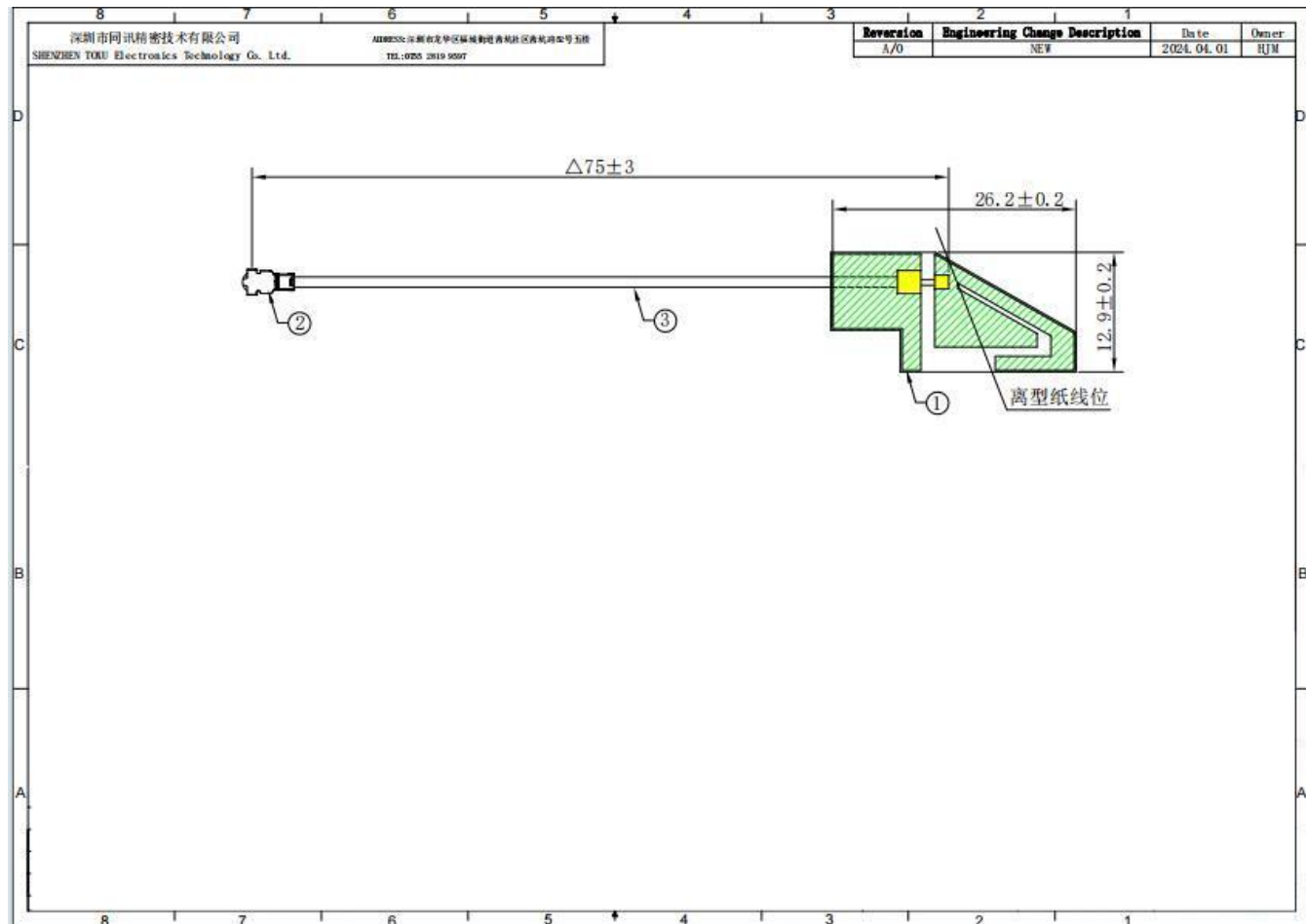


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## 4. Mechanical Specification:

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

The appearance of the antenna is according to drawing



|                                                                                                       |                 |                                                                                                                                                                                                      |                           |
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## 5 .Packaging specification:

Product number: xxxxx

Product model: xxxxx

### 一、 Label requirements:

|                 |         |              |       |
|-----------------|---------|--------------|-------|
| Customer        | xxx     |              |       |
| supplier        | xxxxx   |              |       |
| Material coding | xx      |              |       |
| Product model   | xx      |              |       |
| Number          | XXX PCS | Factory date | X X X |
| Remarks         |         |              |       |

### 二、 Boxing:

Job description:

#### 1. Inner packaging:

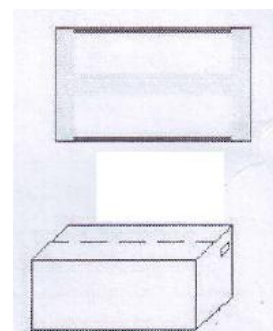
XXpcs A bag

#### 2. External packaging:

Xx PCS ;

#### 3. Matters needing attention:

- Whether to add partition and pearl cotton;
- Label attachments, such as ROHS, etc.;



|                                                                                                                                                 |                 |                                                                                                                                                                                                      |
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