

# Antenna Specifications

|                   |                |                            |                 |
|-------------------|----------------|----------------------------|-----------------|
| CUSTOMER          |                | 佳维视                        |                 |
| CS P/N            |                | 2.4G 外置天线(长度 37.7mm)       |                 |
| HX P/N            |                | <u>A20-003 (长度 37.7mm)</u> |                 |
| Checked by(RF)    | Checked by(ME) | Checked by(QA)             | Approval led by |
|                   |                |                            |                 |
| Customer Approval |                |                            |                 |

客户料号: WIFI 连接线 36.001.0000023  
WIFI 天线 36.001.0000028



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## 1. General Description

This document provides the antenna specifications on electric, mechanic and reliability. The testing conditions and related pictures are also included.

### 1.1 Print Acceptance

Samples and Antenna Specifications are to be sent to customer. When they are approved, the approval form should be completed, signed, and sent back to Hengxiangtong before further mass production batches can be delivered.

### 1.2 Coordinate System

The coordinate system for the phone is defined as follows:

- Origin in center of gravity.
- Positive X axis is perpendicular to, and directed from, front plane.
- Positive Y axis is perpendicular to, and directed from, right side plane (as seen from front).
- Positive Z axis is perpendicular to, and directed from, top plane.

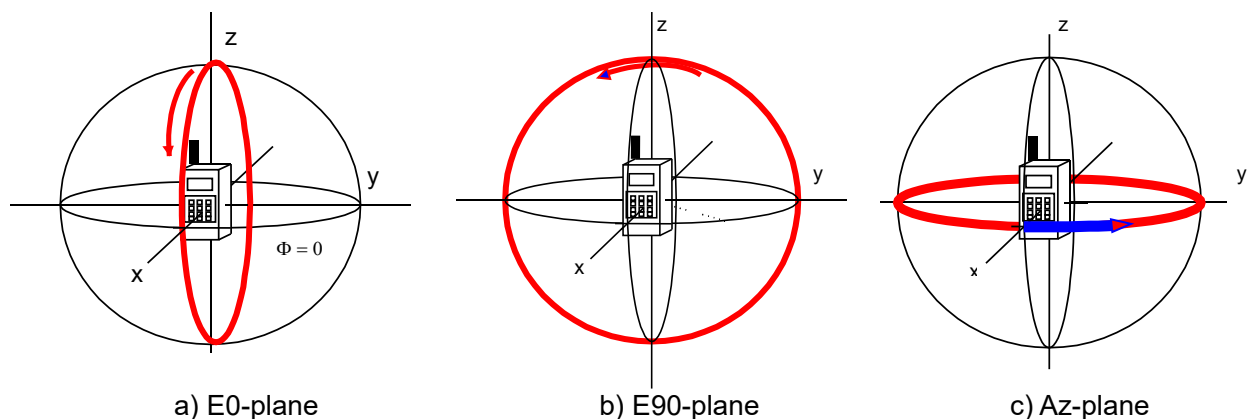


Figure 1-1 The coordinate system for the phone



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## 2. Specifications

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ---- 2.4G. Figure 2-1 shows the antenna designed by HX & The fixturing of 2.4G



Figure 2-1 The antenna designed by HX & The fixturing of 2.4G



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## 2.1 Frequency Band

| Band | Frequency(MHz) |
|------|----------------|
| 2.4G | 2400-2500      |

## 2.2 Impedance

### 2.2.1 Nominal

Nominal Impedance(including matching circuit) : 50 ohms

### 2.2.2 Matching Circuit

The matching circuit is as Figure 2-2.

无

Figure 2-2: Matching circuit

## 2.3 Passive Measurements

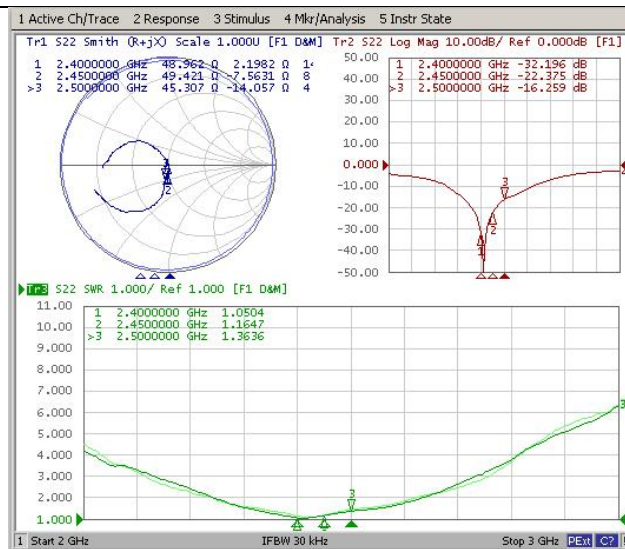
### 2.3.1 VSWR & Gain Specifications

| VSWR         |            | GAIN       |                    |
|--------------|------------|------------|--------------------|
| Freq. Band   | SPEC       | Freq. Band | SPEC               |
| 2400-2500MHz | $\leq 2.0$ | 2400-2500  | $\geq 0\text{dBi}$ |

### 2.3.2 S11 of the Typical Sample

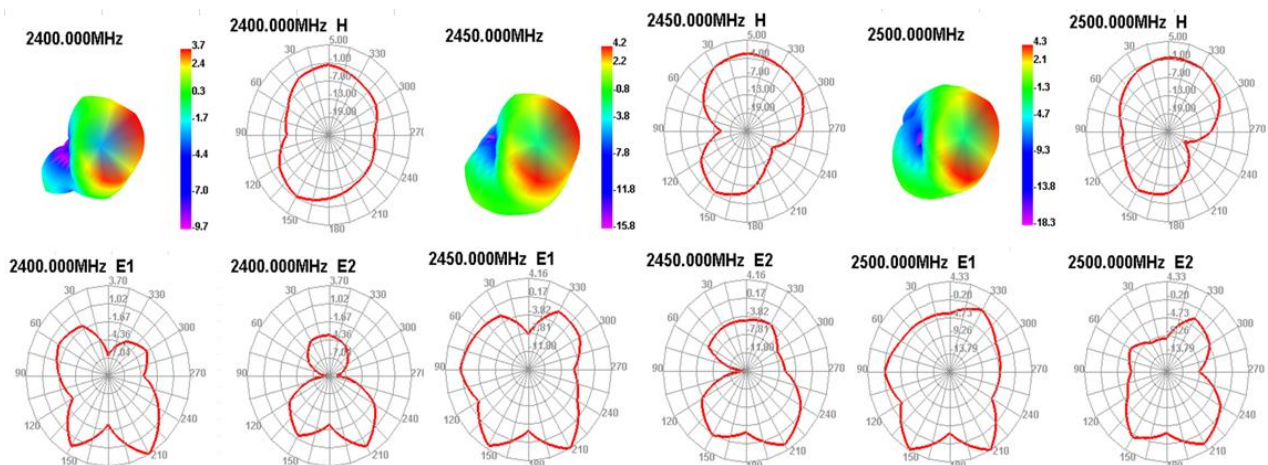
| Freq (MHz) | 2400  | 2450  | 2500  |
|------------|-------|-------|-------|
| RL         | -32.1 | -22.3 | -16.2 |
| VSWR       | 1.05  | 1.16  | 1.36  |


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### 2.3.3 Gain Effi. & Ration Pattern of the Typical Sample

| Passive Test For 2.4-2.5G |          |           |            |
|---------------------------|----------|-----------|------------|
| Freq (MHz)                | Effi (%) | Effi (dB) | Gain (dBi) |
| 2400                      | 65.5     | -1.84     | 3.7        |
| 2410                      | 64.39    | -1.91     | 3.87       |
| 2420                      | 63.71    | -1.96     | 3.81       |
| 2430                      | 64.34    | -1.92     | 3.81       |
| 2440                      | 65.49    | -1.84     | 3.91       |
| 2450                      | 69.11    | -1.6      | 4.16       |
| 2460                      | 66.81    | -1.75     | 4.28       |
| 2470                      | 64.54    | -1.9      | 4.23       |
| 2480                      | 62.92    | -2.01     | 4.27       |
| 2490                      | 61.11    | -2.14     | 4.25       |
| 2500                      | 61.85    | -2.09     | 4.33       |



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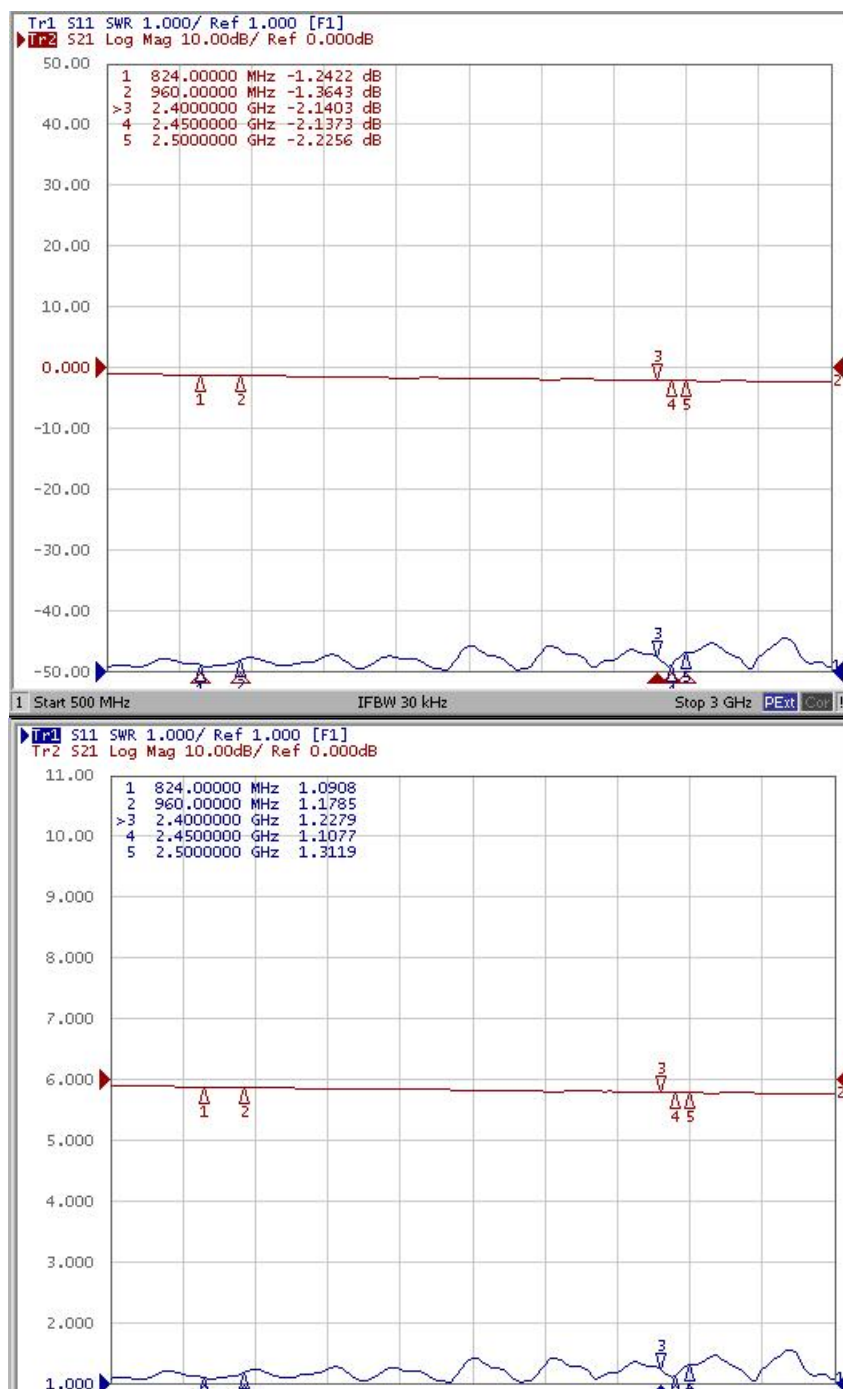
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## 2.3.4 S21&S11 of the Typical Sample

|             |           |
|-------------|-----------|
| Length (mm) | 400       |
| S21-RL      | -2.1~-2.2 |
| S11-VSWR    | 1.22~1.31 |

400mm



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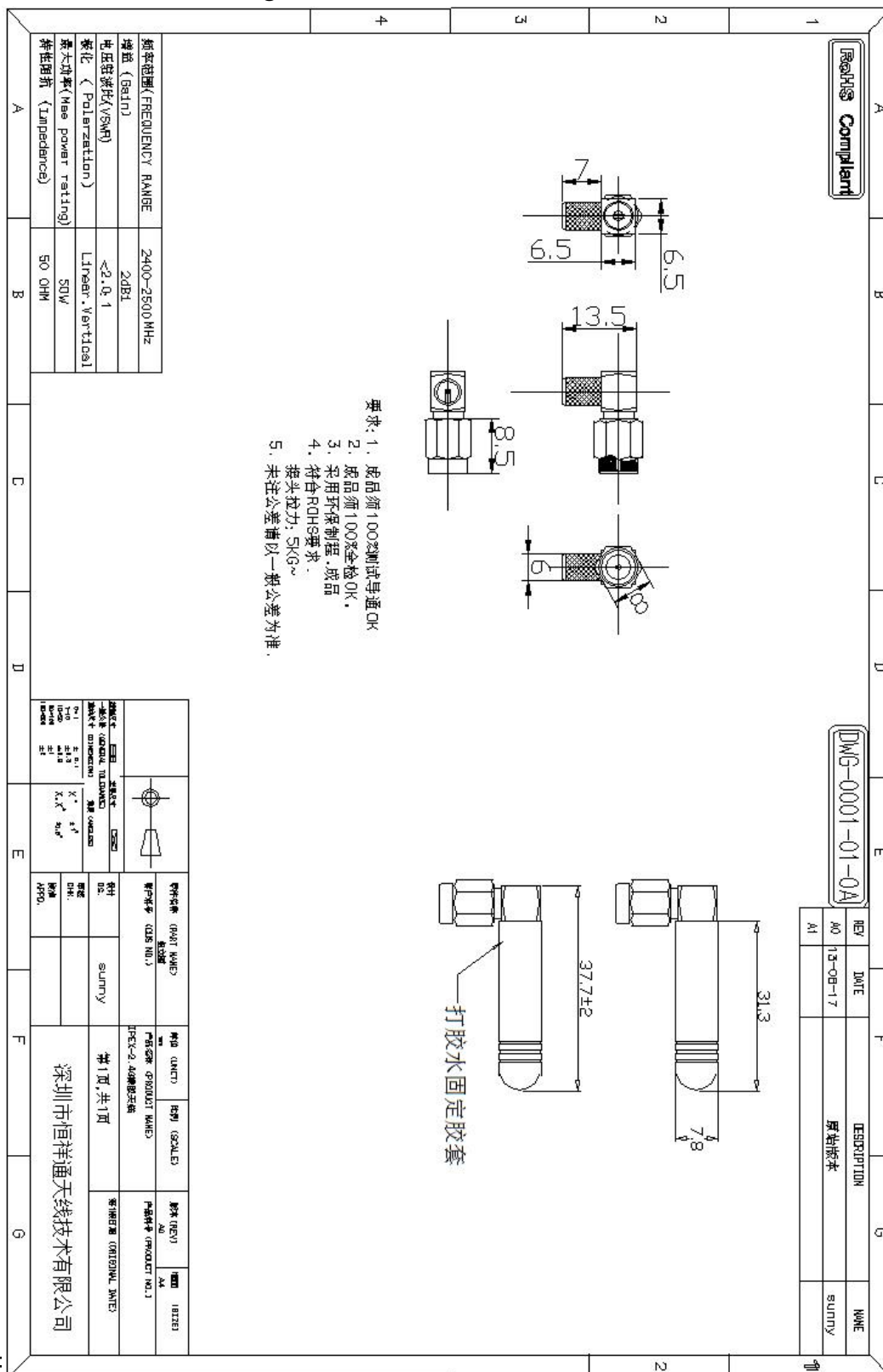


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## 3. Mechanical Properties

### 3.1 Specifications Drawings



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[illegible]



## 4. Environmental Characteristic

| Test Item           | Test description                                                          |
|---------------------|---------------------------------------------------------------------------|
| 1. Low Temperature  | Temp.: -20 °C<br>Time: 24 hours                                           |
| 2. High Temperature | Temp.: 80°C<br>Time: 24 hours                                             |
| 3. Salt Fog         | 5±0.1% Nad salt fog<br>PH Value: 6.5-7.2<br>Temp: 35±1°C<br>Time:24 hours |