

# **2.4G 2.8x9.95MM Antenna Testing Report**

**Fangge Technology Co.**

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***Date: 2023-02-22***

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***Approval: Grant. Lin***

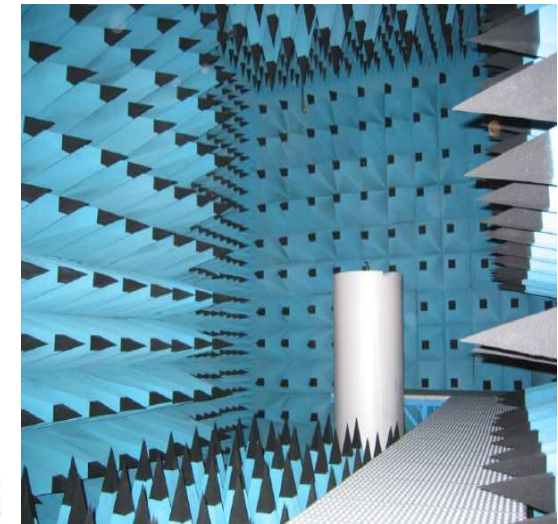
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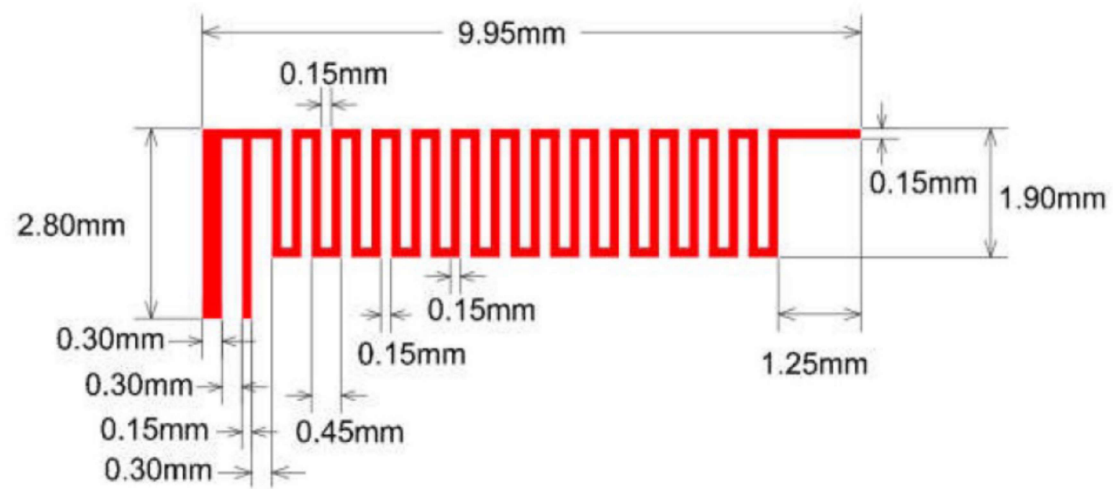
**Confidential Data**

# 1. Testing Item & Equipments

|                             | Testing Item                            | Equipment                                                              |
|-----------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 1. S Parameter              | 1. Return Loss<br>2. S.W.R.             | Network Analyzer-AGILENT ENA5071B                                      |
| 2. Coupling Power Test      | 1. TX Power<br>2. Sensitivity           | 1. GSM Tester: R&S CMD 55<br>2. Shielding Box: R&S CMU-Z11             |
| 3. Radiation Pattern & Gain | 1. Radiation Pattern<br>2. Antenna Gain | 1. Anechoic Chamber 8x4x4 m (3D)<br>2. Network Analyzer-AGILENT 8753ET |



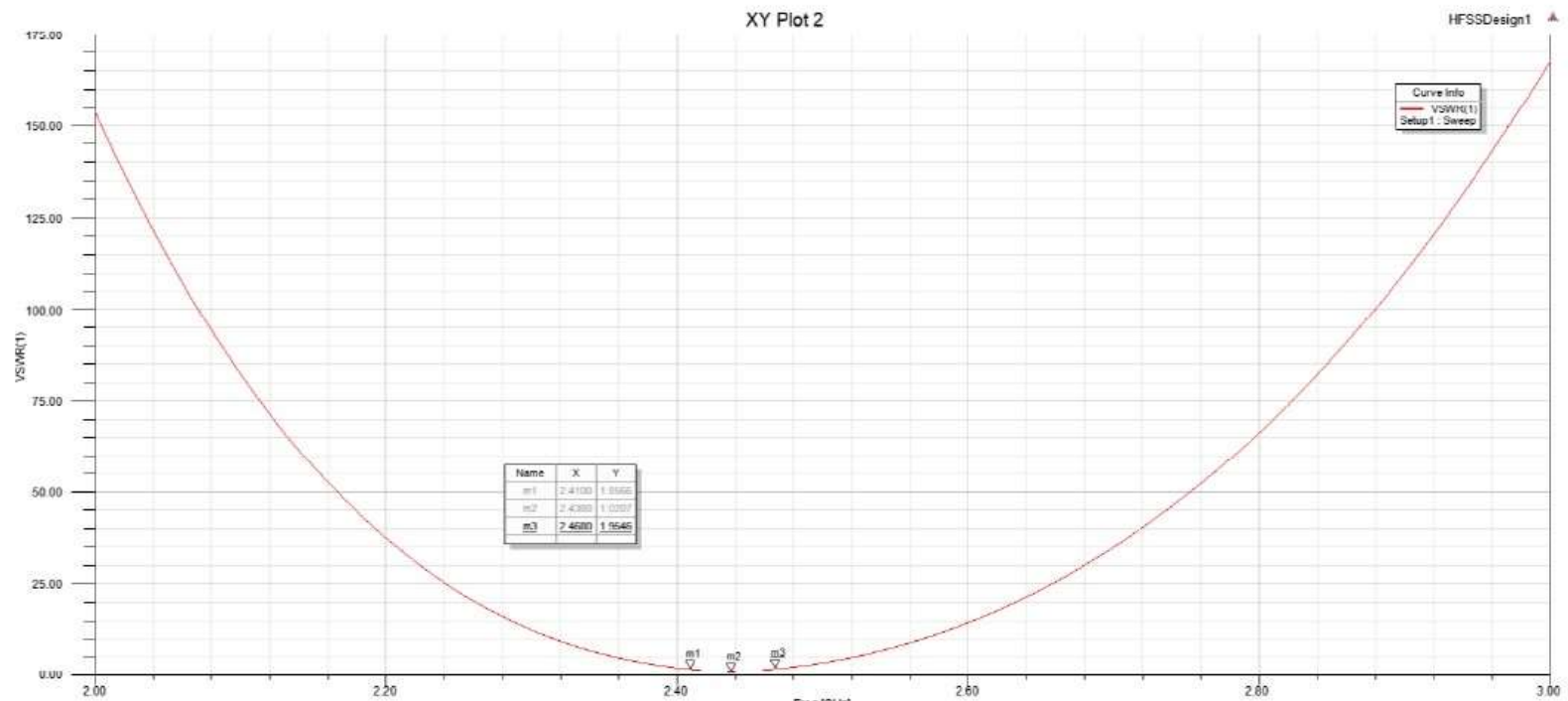
## 2. Antenna Structure



### 3. S Parameter Test

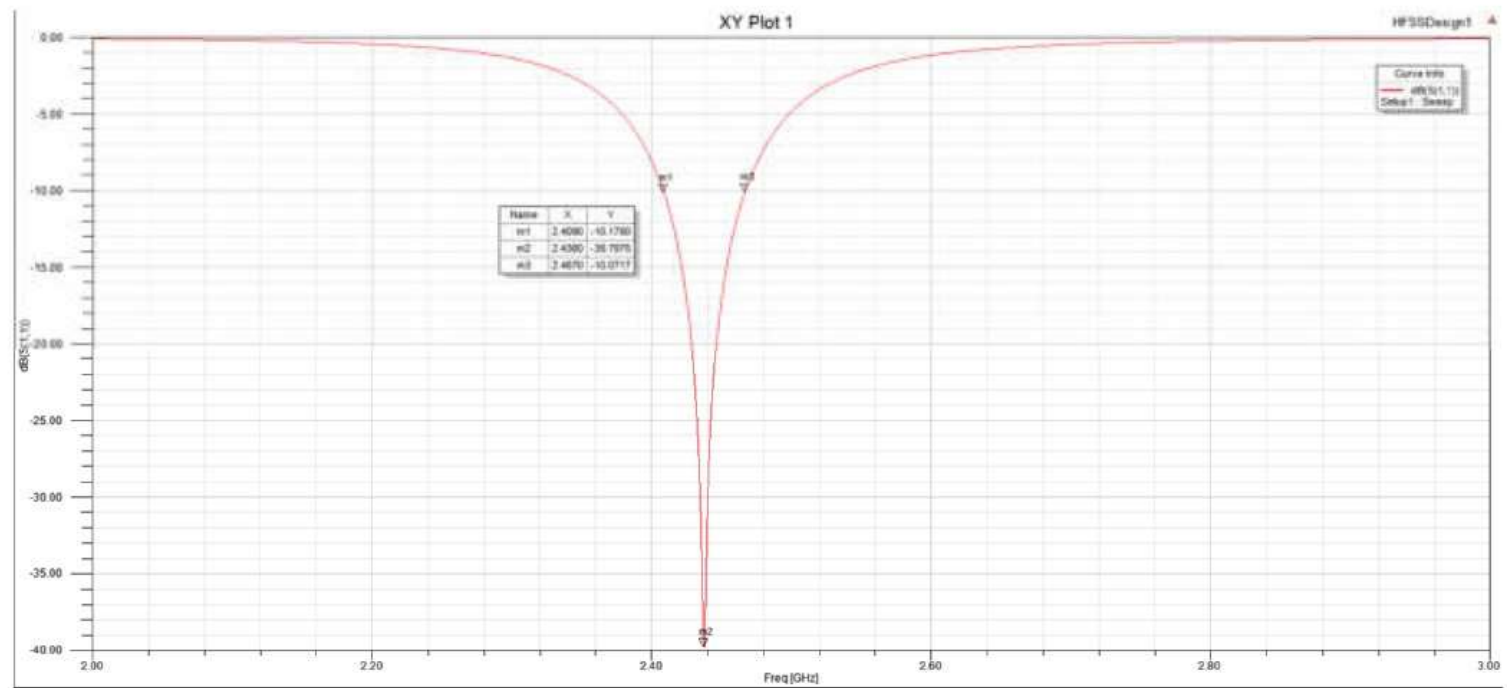
No.1 SWR

中心频点 VSWR: 1.02@2.438GHz



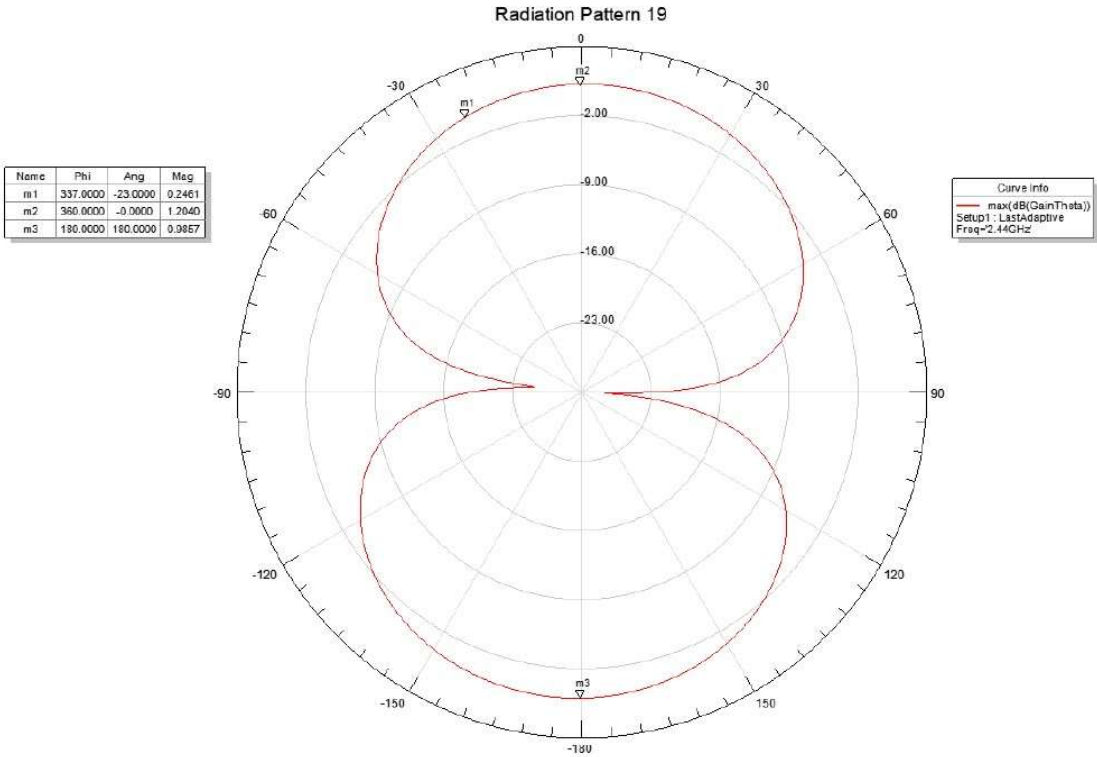
## No.2 S11

中心频带 S11: -39.8dB@2.438GHz



No.3

E 面:



## 4. Gain Test Results

|                                                     |                          |
|-----------------------------------------------------|--------------------------|
| <b>A. Electrical Characteristics</b>                |                          |
| <b>Frequency</b> （频率范围）                             | <b>2400 ~ 2500 MHz</b>   |
| <b>S.W.R.</b> （驻波比）                                 | <b>&lt;= 2.0</b>         |
| <b>Antenna Gain</b> （增益）                            | <b>1.3dBi</b>            |
| <b>Polarization</b> （极化方式）                          | <b>Linear</b>            |
| <b>Impedance</b> （阻抗）                               | <b>50 Ohm</b>            |
| <b>B. Material &amp; Mechanical Characteristics</b> |                          |
| <b>Material of Radiator</b> （辐射材质）                  | <b>Cu</b>                |
| <b>Size</b> （线材类型）                                  | <b>2.8*9.95mm</b>        |
|                                                     |                          |
| <b>C. Environmental</b>                             |                          |
| <b>Operation Temperature</b>                        | <b>- 40 °C ~ + 65 °C</b> |
| <b>Storage Temperature</b>                          | <b>- 40 °C ~ + 80 °C</b> |
| <b>Antenna Color Storage life</b>                   | <b>&lt; 2 year</b>       |