



## 深圳市星通无线技术有限公司

Shenzhen Xingtong Wireless Technology Co., Ltd

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# Product specification

Project name: S8

Product name: S8- dual frequency WiFi antenna

Product Part number:

|     |     |          |
|-----|-----|----------|
| 制作  | 审 核 | 日 期      |
| 黄加俊 | 吴延龙 | 2025-1-8 |

### 客户确认

|       |    |
|-------|----|
| 客户名称: | 鸿顶 |
| 批准:   |    |
| 时间:   |    |
| 注释:   |    |

请贵司承应签字盖章后返回一份给我司存档, 多谢合作!



深圳市星通无线技术有限公司

Shenzhen Xingtong Wieress Technology Co., Ltd

日期

2025-1-8

版本

A0

文件编号

XT-YF-004

产品名称

S8-WIFI

版本编号

XT-APP-RA

## 1.产品结构 (Product Constrution)

1. Antenna material: FPC
  2. Adhesive type: 3M9471
  3. Antenna size: 43\*6.5 (tolerance  $\pm 0.5\text{mm}$ )
  4. Product description: FPC- dual frequency wifi antenna, coaxial line specification
1. 13- total length 70MM.

## 3.基本信息 (parameters)

Scope of use: customer machine

Antenna frequency: 2402-2484Mhz 5150-5850Mhz

Antenna voltage standing wave ratio:  $2.4\text{G} < 1.69$

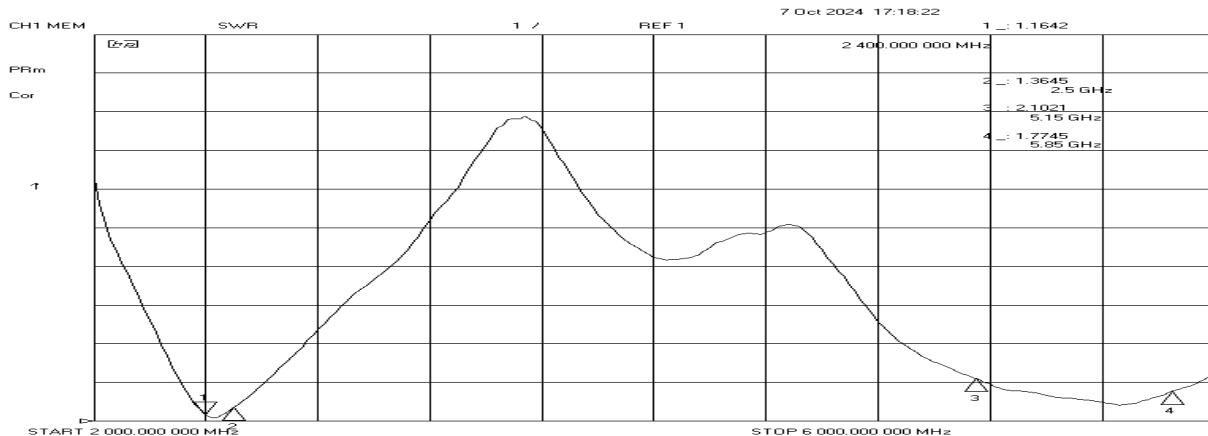
· Antenna free space maximum gain:  $2.4\text{G} \geq 2.35\text{dbi}$

· Antenna impedance:  $50\Omega$

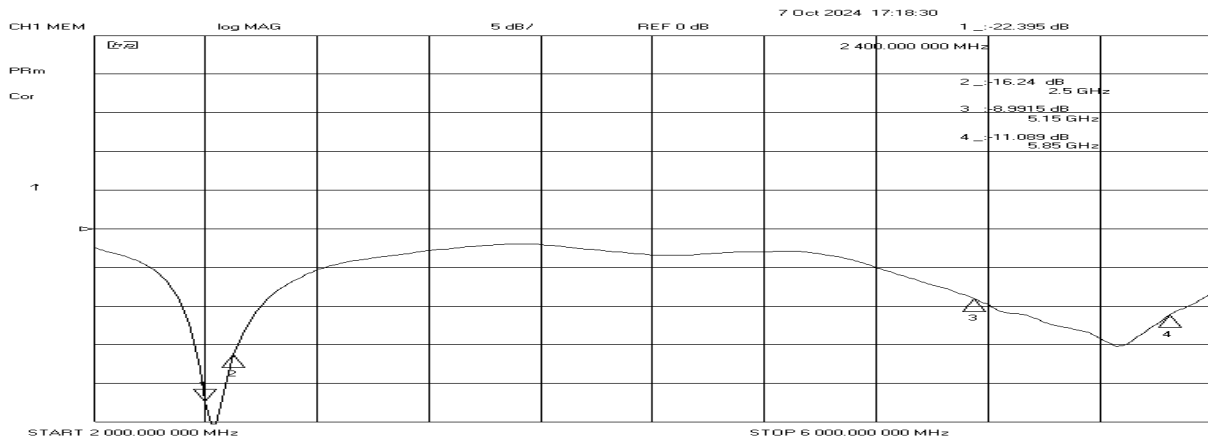
Polarization mode: horizontal/vertical

## 3.天线 S11 值 (S11)

### ■ 3.1: 天线驻波比

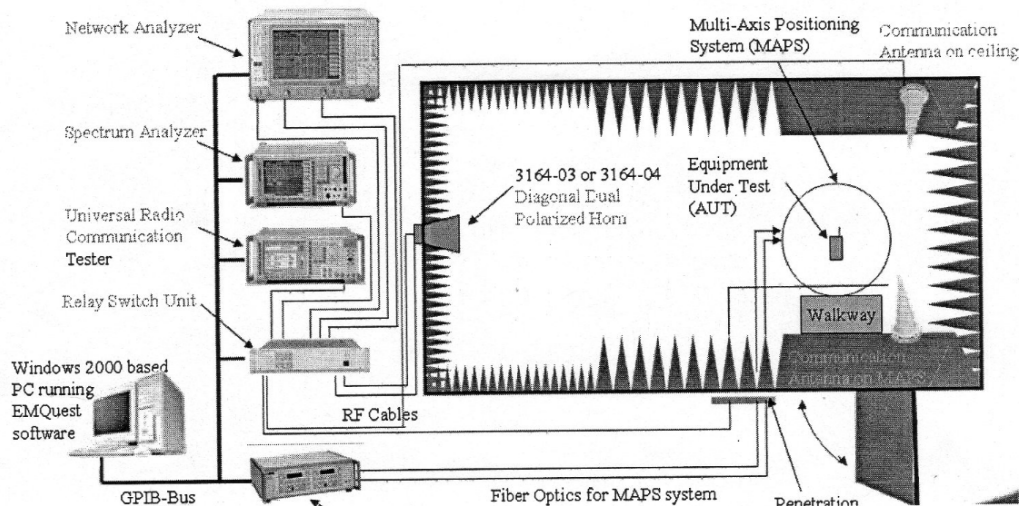


### ■ 3.2: 天线回损值



## 4.天线(OTA)测试环境

- 4.1: 测试环境及仪器: 3D微波暗室, 网络分析仪、PC测试软件、工程样品、10db衰减器等



- 4.2: 天线效率/增益

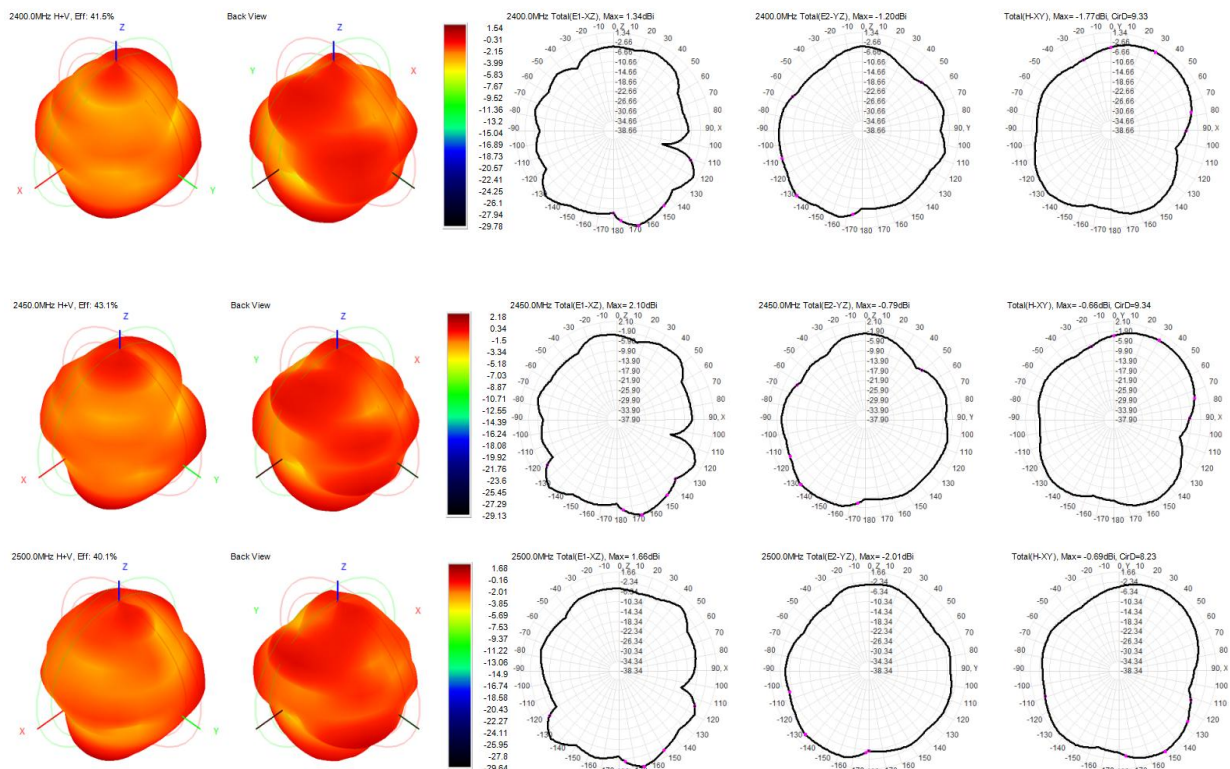
- 4.2.1 2.4G-OTA

| Frequency ID               | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| Efficiency (dBi)           | -3.81  | -3.66  | -3.69  | -3.42  | -3.51  | -3.65  | -3.73  | -3.67  | -3.86  | -3.92  | -3.96  |
| Gain (dBi)                 | 1.54   | 2.35   | 2.29   | 1.43   | 1.34   | 2.18   | 0.97   | 2.20   | 2.01   | 1.50   | 1.68   |
| Efficiency (%)             | 41.58  | 43.02  | 42.79  | 45.49  | 44.63  | 43.12  | 42.37  | 42.94  | 41.13  | 40.53  | 40.14  |
| Directivity (dB)           | 6.02   | 6.01   | 5.98   | 5.93   | 5.94   | 5.84   | 5.87   | 5.87   | 5.87   | 5.87   | 5.98   |
| Peak Gain Position (Theta) | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 |
| Peak Gain Position (Phi)   | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 180.00 | 165.00 |
| Efficiency ThetaPol (%)    | 22.41  | 26.90  | 26.93  | 22.36  | 21.80  | 26.81  | 20.06  | 26.84  | 25.60  | 22.67  | 22.95  |
| Efficiency PhiPol (%)      | 13.17  | 16.13  | 15.86  | 13.13  | 12.83  | 16.31  | 12.31  | 16.11  | 15.52  | 13.86  | 14.16  |
| Upper Hem. Efficiency (%)  | 13.25  | 16.12  | 16.04  | 13.34  | 13.11  | 16.52  | 12.60  | 16.91  | 16.33  | 14.55  | 14.77  |
| Lower Hem. Efficiency (%)  | 22.33  | 26.90  | 26.75  | 22.15  | 21.52  | 26.60  | 19.77  | 26.03  | 24.79  | 21.99  | 22.34  |

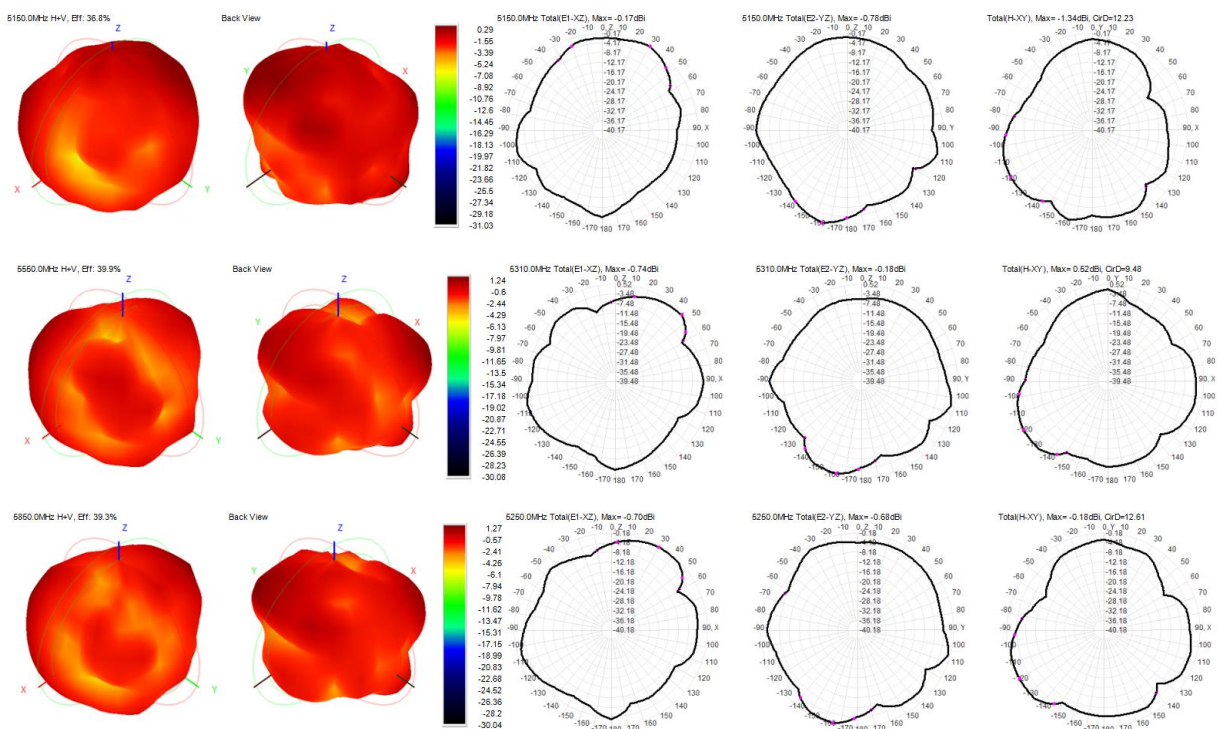
- 4.2.2 5G-OTA

| Frequency ID               | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 5150.0 | 5220.0 | 5290.0 | 5360.0 | 5430.0 | 5500.0 | 5570.0 | 5640.0 | 5710.0 | 5780.0 | 5850.0 |
| Efficiency (dBi)           | -4.34  | -4.02  | -4.11  | -4.22  | -4.00  | -3.99  | -4.15  | -4.26  | -4.37  | -3.55  | -4.06  |
| Gain (dBi)                 | 0.29   | 1.23   | 1.21   | 1.04   | 1.01   | 1.24   | 0.75   | 1.61   | 0.53   | 1.96   | 1.27   |
| Efficiency (%)             | 36.77  | 39.65  | 38.82  | 37.87  | 39.86  | 39.88  | 38.47  | 37.52  | 36.56  | 44.13  | 39.30  |
| Directivity (dB)           | 4.63   | 5.25   | 5.32   | 5.26   | 5.01   | 5.23   | 4.90   | 5.87   | 4.90   | 5.52   | 5.33   |
| Peak Gain Position (Theta) | 105.00 | 75.00  | 75.00  | 75.00  | 30.00  | 60.00  | 45.00  | 60.00  | 30.00  | 60.00  | 45.00  |
| Peak Gain Position (Phi)   | 285.00 | 315.00 | 315.00 | 315.00 | 150.00 | 315.00 | 150.00 | 315.00 | 150.00 | 315.00 | 150.00 |
| Efficiency ThetaPol (%)    | 17.13  | 22.00  | 18.03  | 18.19  | 18.72  | 18.40  | 18.22  | 16.76  | 17.29  | 20.07  | 18.32  |
| Efficiency PhiPol (%)      | 19.64  | 17.65  | 20.78  | 19.68  | 21.13  | 21.48  | 20.24  | 20.76  | 19.27  | 24.06  | 20.98  |
| Upper Hem. Efficiency (%)  | 21.75  | 21.12  | 20.59  | 22.04  | 23.10  | 21.66  | 22.30  | 20.84  | 20.70  | 25.43  | 22.10  |
| Lower Hem. Efficiency (%)  | 15.02  | 18.53  | 18.23  | 15.83  | 16.75  | 18.22  | 16.17  | 16.68  | 15.86  | 18.70  | 17.20  |

### 4.2.3 天线OTA-2.4G-3D



### 4.2.4 天线OTA-5G-3D



|                                                                                                                                                   |         |      |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-----------|
| <br>深圳市星通无线技术有限公司<br>Shenzhen Xingtong Wieress Technology Co., Ltd |         | 日 期  | 2025-1-8  |
|                                                                                                                                                   |         | 版本   | A0        |
|                                                                                                                                                   |         | 文件编号 | XT-YF-004 |
| 产品名称                                                                                                                                              | S8-WIFI | 版本编号 | XT-APP-RA |

5. 附图：

■ 5.1：天线工程图

