



# 深圳信诺山通信技术有限公司

Shenzhen SignalSen Telecom Technology Co , .Ltd

## WIFI 天线规格书

物料编号: W183-1B160B-A

|         |     |               |       |        |  |
|---------|-----|---------------|-------|--------|--|
| 客户：     |     |               | 项目名：  |        |  |
| 频段：WIFI |     | 日期：2019.05.14 |       | 版本：R:A |  |
| 研发      | 结构： | 审核：           |       | 批准：    |  |
|         | 射频： | 审核：           |       |        |  |
| 客户审核：   |     |               | 客户批准： |        |  |

# contents

|                                                                 |          |
|-----------------------------------------------------------------|----------|
| <b>contents.....</b>                                            | <b>2</b> |
| <b>1. PROJECT INFORMATION AND ELECTRICAL SPECIFICATION.....</b> | <b>3</b> |
| 1-1 Project picture.....                                        | 3        |
| 1-2 Frequency Band:.....                                        | 3        |
| 1-3 Impedance matching.....                                     | 3        |
| <b>2. VSWR.....</b>                                             | <b>3</b> |
| 2-1 Measuring Method:.....                                      | 3        |
| 2-2 S11 parameter values.....                                   | 4        |
| <b>3. EFFICIENCY AND GAIN.....</b>                              | <b>4</b> |
| 3-1 Efficiency/Gain- WIFI.....                                  | 5        |
| <b>4. THE PRODUCTION INDEX.....</b>                             | <b>7</b> |
| <b>5. STRUCTURAL DRAWINGS.....</b>                              | <b>8</b> |
| <b>6. THE ANTENNA PLACEMENT.....</b>                            | <b>8</b> |

## 1. Project information and Electrical Specification

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

1-1Antenna picture



1-2 Frequency Band:

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

1-3 Impedance matching

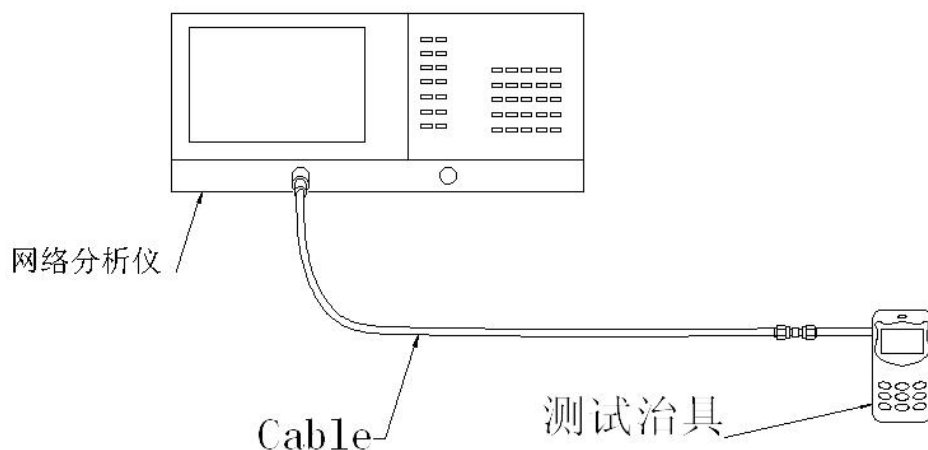
天线原匹配

## 2.VSWR

### 2-1 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 20cm.*

测试示意图如下:



## 2-2 S11 parameter values

|          |      |      |
|----------|------|------|
| 频率 (MHZ) | 2400 | 2500 |
| 驻波       | 1.04 | 1.32 |



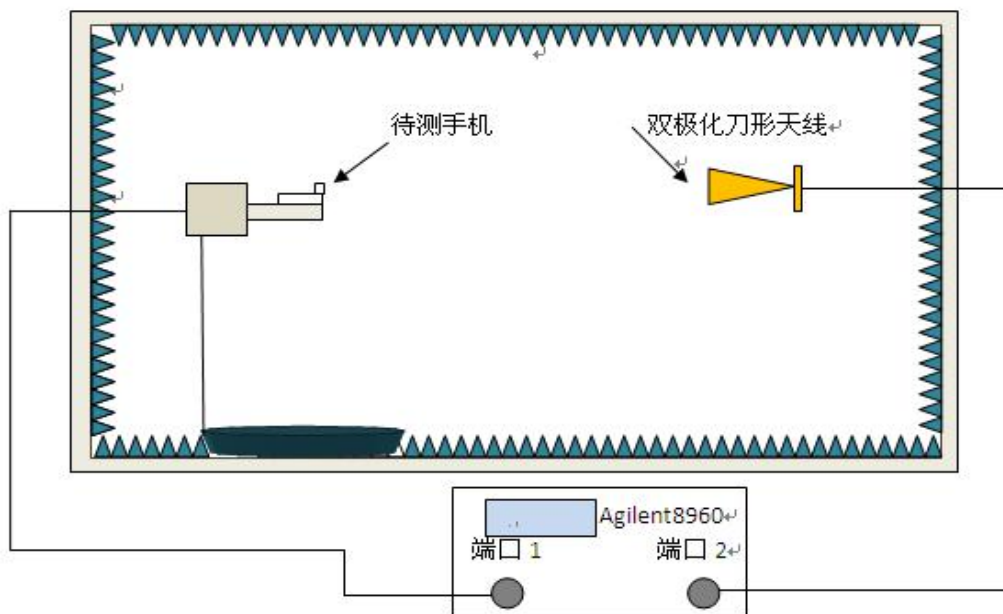
## 3. Efficiency and Gain

### \*measuring and test instruments:

微波暗室, Agilent 网络分析仪, Agilent 频谱分析仪, 8960 综合测试仪, 标准天线

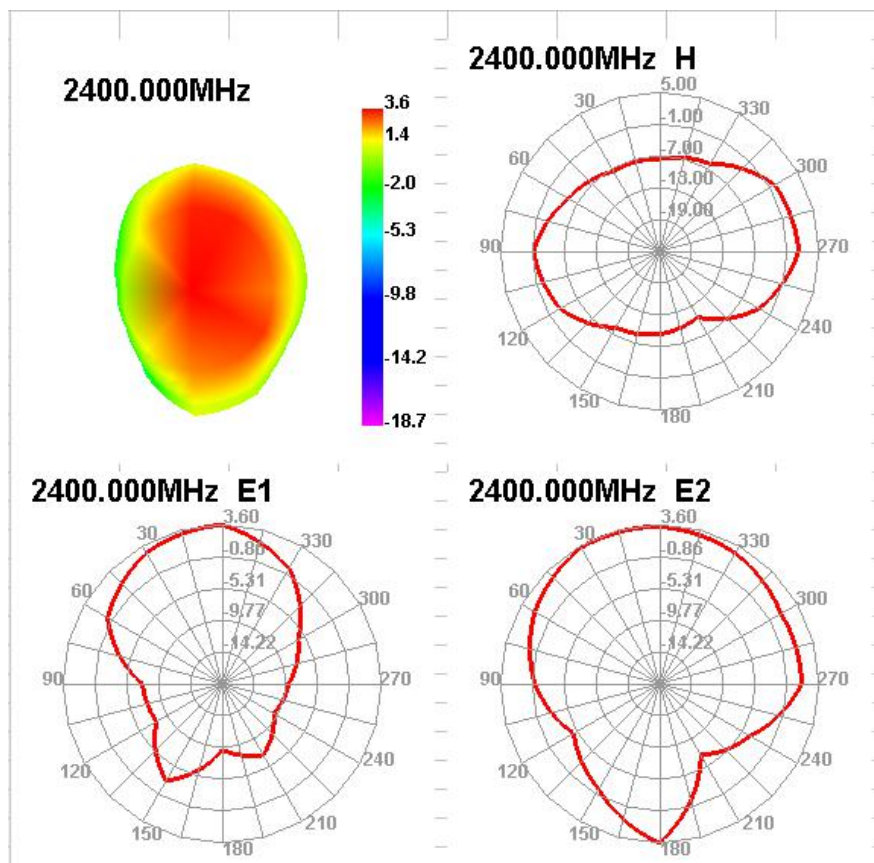
### \*test method:

equipment 以 H 面放于转台中心位置固定, 与喇叭天线中心位置在同一个水平线上。



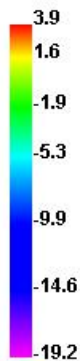
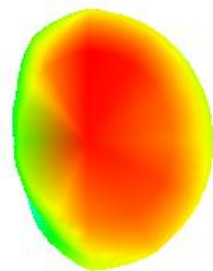
### 3-1 Efficiency/Gain- WIFI

| Passive Test For wifi2.4G-2 |          |           |            |            |          |          |             |             |
|-----------------------------|----------|-----------|------------|------------|----------|----------|-------------|-------------|
| Freq (MHz)                  | Effi (%) | Effi (dB) | Gain (dBi) | Gain (dBd) | Max (dB) | Min (dB) | Attenut Hor | Attenut Ver |
| 2400                        | 62.82    | -2.02     | 3.6        | 1.45       | 3.6      | -18.68   | 51.11       | 50.57       |
| 2450                        | 65.44    | -1.84     | 3.89       | 1.74       | 3.89     | -19.16   | 51.94       | 51.53       |
| 2500                        | 64.72    | -1.89     | 4.03       | 1.88       | 4.03     | -16.65   | 51.98       | 51.64       |

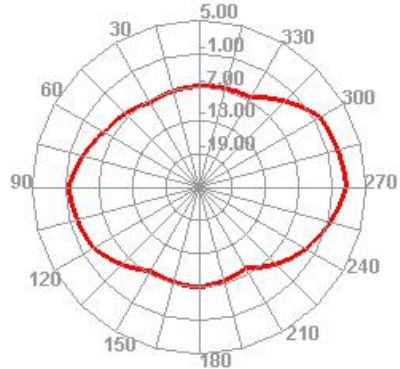




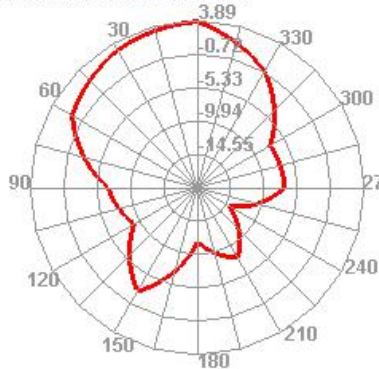
2450.000MHz



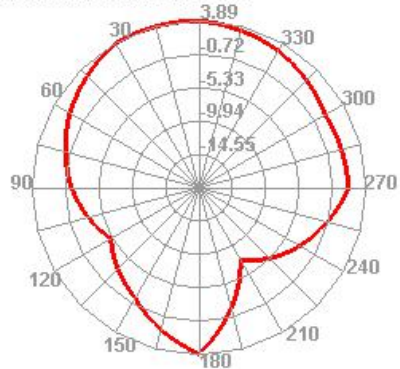
2450.000MHz H



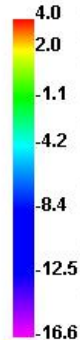
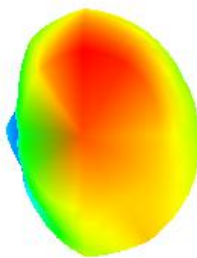
2450.000MHz E1



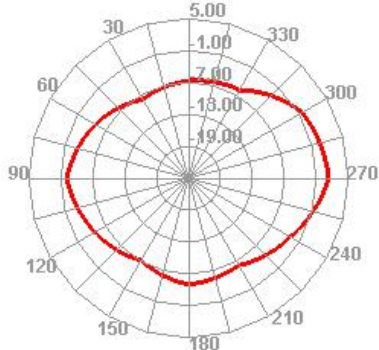
2450.000MHz E2



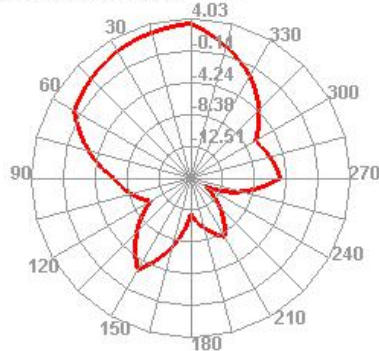
2500.000MHz



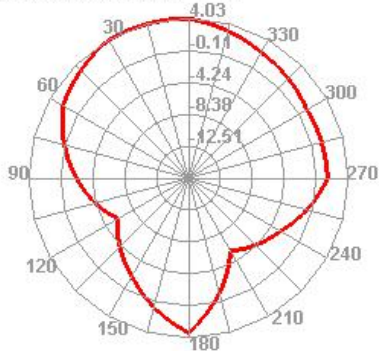
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



#### 4. The production index

天线量产时，以驻波比作为量产测试标准。

根据项目本身的差异,给出如下标准:

| 频率                  | 量产标准                         |
|---------------------|------------------------------|
| WIFI (2400-2500Mhz) | VSWR (量产产品) < VSWR(设计样品)+0.5 |

## 5.structural drawings

