

# 深圳市晨信微科技有限公司

Shenzhen Chenxin Micro Technology Co., Ltd.

## 承 认 书

Customer Name: \_\_\_\_\_

Client type:   P21  \_\_\_\_\_

Customer part number:   01.14.0043  \_\_\_\_\_

Specifications: 内置天线Antenna/2.4G~5.8G-WiFi/3dBi/50ohm/FPC43.4\*12mm/  
RF1.13mm黑色同轴线L=170mm+Ipex1\_\_\_\_\_

Address: Room 512, No. 6095-2, Bao'an Avenue, Xinghe Community, Fuhai Subdistrict, Bao'an District, Shenzhen City

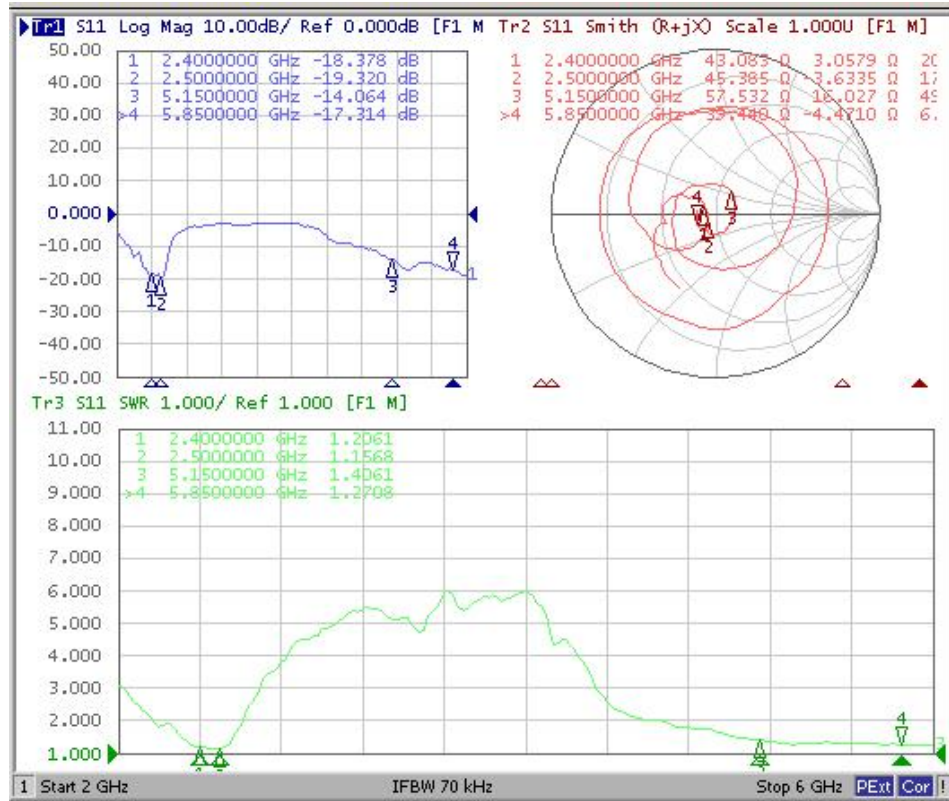
Contact person: Wang Jianguo (13424341872)

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## Passive performance test parameters

S11



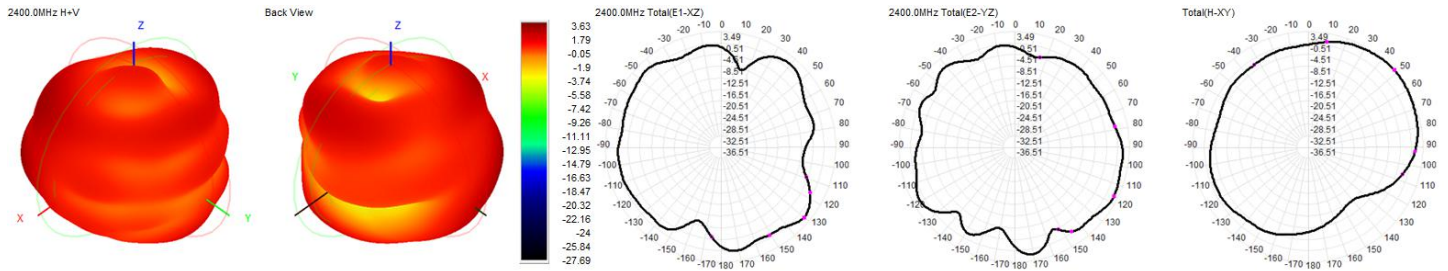
|            |        |        |        |        |
|------------|--------|--------|--------|--------|
| Fre(GHz)   | 2.4    | 2.5    | 5.15   | 5.85   |
| ReturnLoss | -18.37 | -19.32 | -14.06 | -17.31 |
| VSWR       | 1.20   | 1.15   | 1.40   | 1.27   |

## Efficiency, gain, radiation pattern

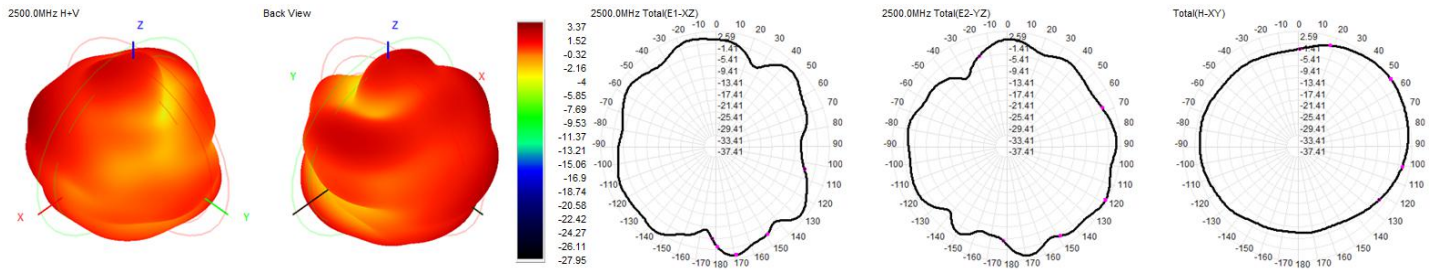
| <div></div> |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency ID                                                                                  | 1      | 3      | 5      | 7      | 9      | 11     | 12     | 14     | 16     | 18     | 20     | 22     | 24     | 26     |
| Frequency (MHz)                                                                               | 2400.0 | 2420.0 | 2440.0 | 2460.0 | 2480.0 | 2500.0 | 5150.0 | 5250.0 | 5350.0 | 5450.0 | 5550.0 | 5650.0 | 5750.0 | 5850.0 |
| Efficiency (dBi)                                                                              | -1.19  | -1.24  | -1.59  | -1.91  | -2.08  | -1.91  | -1.46  | -2.12  | -2.08  | -2.07  | -1.93  | -1.99  | -2.41  | -2.33  |
| Gain (dBi)                                                                                    | 3.63   | 3.09   | 2.46   | 3.03   | 3.34   | 3.37   | 5.71   | 4.89   | 4.18   | 4.94   | 4.89   | 4.69   | 4.46   | 3.86   |
| Efficiency (%)                                                                                | 76.10  | 75.23  | 69.38  | 64.36  | 61.95  | 64.44  | 71.47  | 61.44  | 61.99  | 62.05  | 64.15  | 63.27  | 57.42  | 58.53  |
| Directivity (dB)                                                                              | 4.82   | 4.32   | 4.05   | 4.95   | 5.42   | 5.27   | 7.17   | 7.00   | 6.26   | 7.02   | 6.82   | 6.68   | 6.87   | 6.18   |
| Peak Gain Position (Theta)                                                                    | 87.00  | 87.00  | 118.00 | 118.00 | 118.00 | 118.00 | 71.00  | 73.00  | 70.00  | 70.00  | 70.00  | 68.00  | 71.00  | 66.00  |
| Peak Gain Position (Phi)                                                                      | 313.00 | 307.00 | 313.00 | 315.00 | 307.00 | 301.00 | 58.00  | 51.00  | 81.00  | 67.00  | 63.00  | 70.00  | 73.00  | 101.00 |
| Efficiency ThetaPol (%)                                                                       | 16.53  | 15.45  | 13.71  | 11.87  | 11.30  | 13.02  | 41.43  | 34.86  | 35.15  | 36.29  | 38.22  | 35.33  | 33.16  | 32.66  |
| Efficiency PhiPol (%)                                                                         | 59.56  | 59.79  | 55.67  | 52.48  | 50.66  | 51.42  | 30.05  | 26.58  | 26.84  | 25.76  | 25.92  | 27.94  | 24.26  | 25.87  |
| Upper Hem. Efficiency (%)                                                                     | 36.38  | 35.70  | 32.41  | 29.31  | 27.99  | 29.50  | 44.48  | 37.08  | 35.98  | 38.08  | 38.40  | 36.80  | 33.30  | 33.78  |
| Lower Hem. Efficiency (%)                                                                     | 39.72  | 39.53  | 36.97  | 35.05  | 33.96  | 34.94  | 26.99  | 24.36  | 26.01  | 23.97  | 25.75  | 26.47  | 24.11  | 24.76  |

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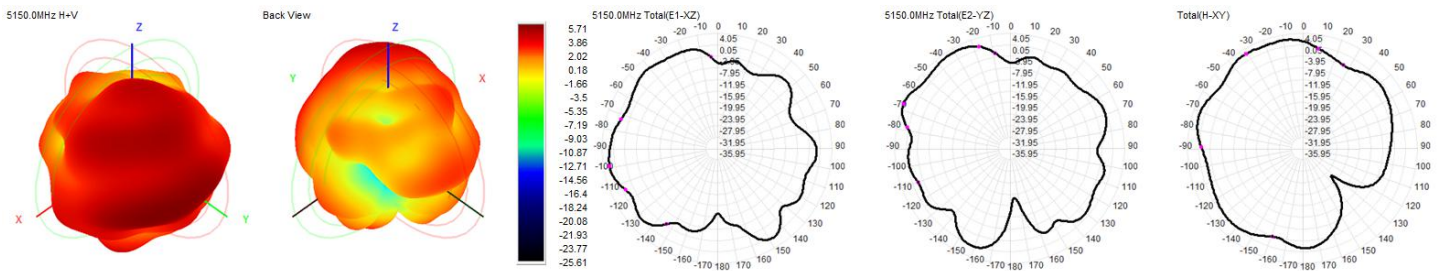
## Radiation Patterns at 2.4GHz



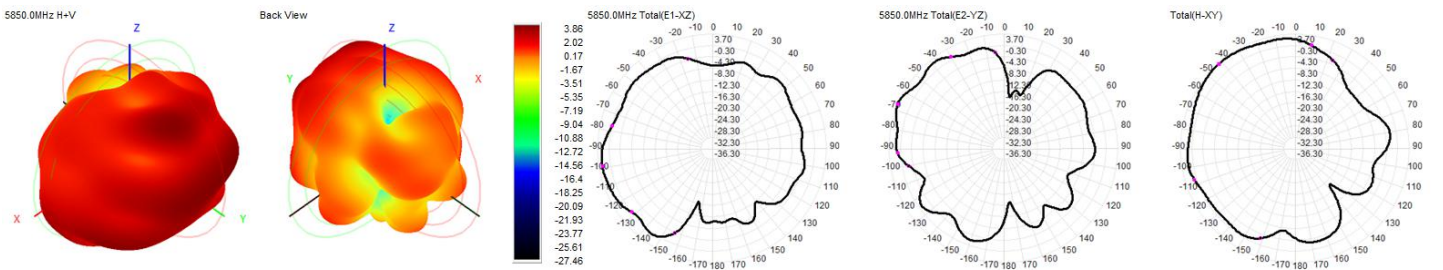
## Radiation Patterns at 2.5GHz



## Radiation Patterns at 5.15GHz



## Radiation Patterns at 5.85GHz



Shenzhen Chenxin Micro Technology Co., Ltd.

Electrical performance parameters

| Electrical parameters    |        |                           |
|--------------------------|--------|---------------------------|
| Frequency range          |        | 2.4-2.5GHz / 5.15-5.85GHz |
| Input impedance          |        | 50Ω                       |
| Standing Bobby           |        | <2.0                      |
| Gain                     | 2.4GHz | 3 dBi                     |
|                          | 5.8GHz | 3 dBi                     |
| polarization mode        |        | Cross-polarization        |
| Radiation direction      |        | Omnidirectional           |
| Connector model          |        | Ipex1                     |
| Mechanical parameters    |        |                           |
| Line length              |        | 170mm                     |
| sustaining force         |        | /                         |
| coaxial cable            |        | Black 1.13mm              |
| Salt spray test          |        |                           |
| Environmental parameters |        |                           |
| Operating temperature    |        | - 40~85°C                 |