

Huizhou Hexinda Electronics Co., Ltd

SPECIFICATION FOR APPROVAL

| | |
|-----------------------|------------|
| Customer Name | |
| Product name | WIFI ant |
| Product number | |
| Prepared By | |
| Checked By | NULL |
| Approved By | |
| Apply Date | 2020.11.10 |

| CUSTOMER SIGNATURE | | |
|---|------------|-------------|
| Prepared By | Checked By | Approved By |
| | | |
| PLEASE RETURN TO US ONE COPY OF "SPECIFICATION FOR APPROVAL" WITH YOUR APPROVED SIGNATURES. | | |

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| | |
|-----------------------------|-----------------|
| 頻率範圍 Frequency range | 2400MHz~2500MHz |
| 駐波比係數 VSWR | <2.0 |
| 增益 Gain | 5.98dBi |
| 輸入阻抗 Input Impedance | 50±5 (Ω) |
| 極化方式 Polarization | |

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Revision History

| Date | Revision | Description of Changes |
|------------|----------|---|
| 2020-11-10 | RA | Measured with 2.4G WIFI Antenna sample. |

1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the 2.4G WIFI Antenna program. We test the antenna with the latest version handset. And it seems to be acceptable.

2 General Description

2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

3 Mechanical Description

4 Electrical Performance

4.1 Set-up

4.1.1 VSWR

VSWR measurements (S11) were performed using an Agilent 8753D Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

4.1.2 Gain & Radiation Patterns

The gain of the antenna was measured in the Lxc's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 300 MHz through 3 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

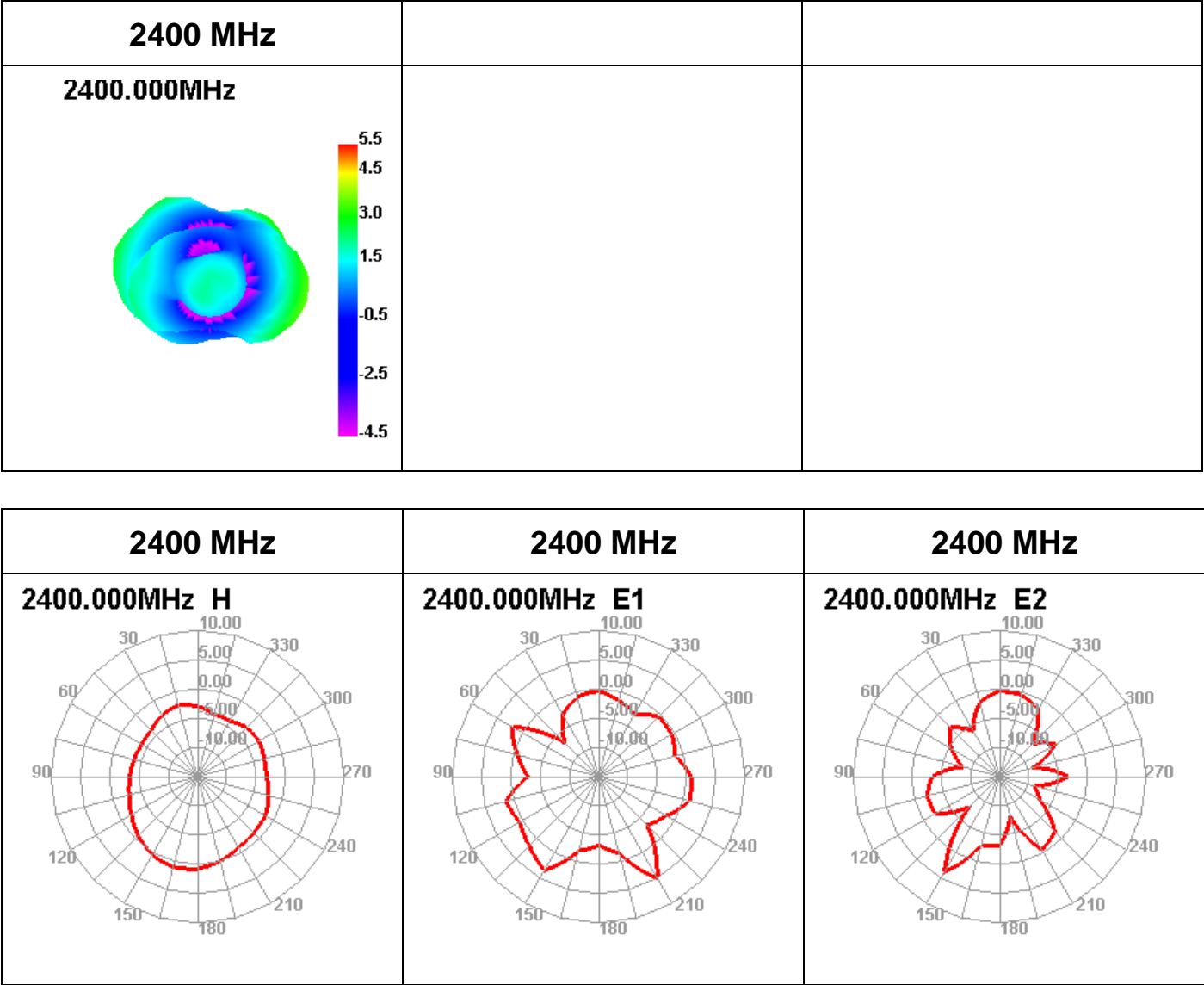
4.1.3 Matching Circuit Description

No changed..

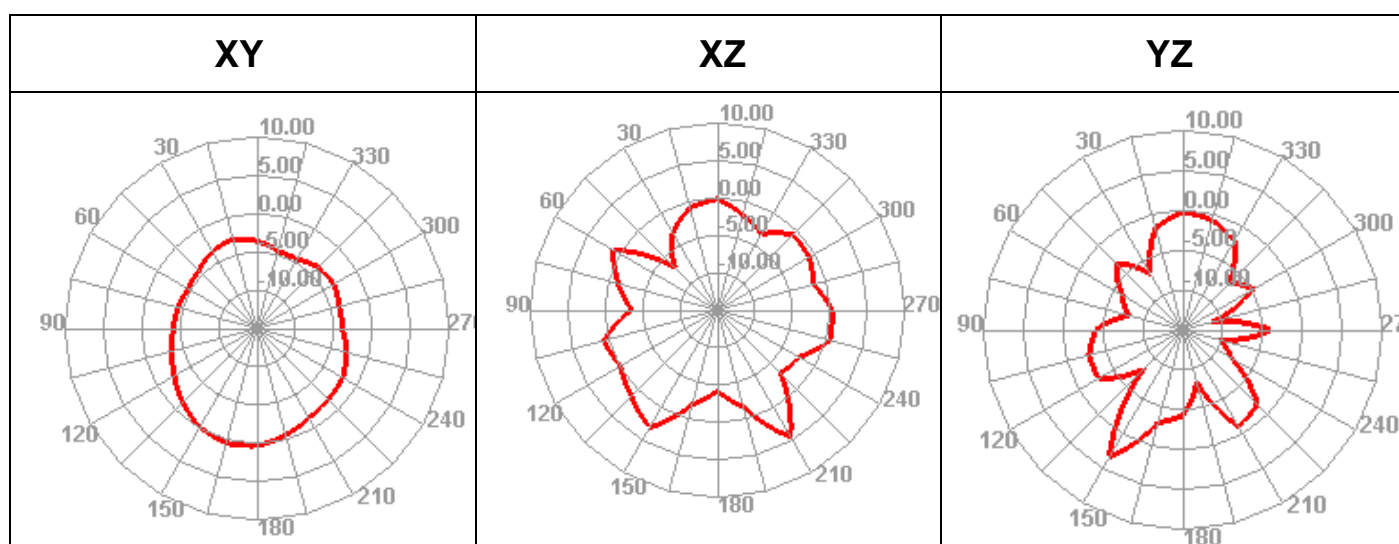
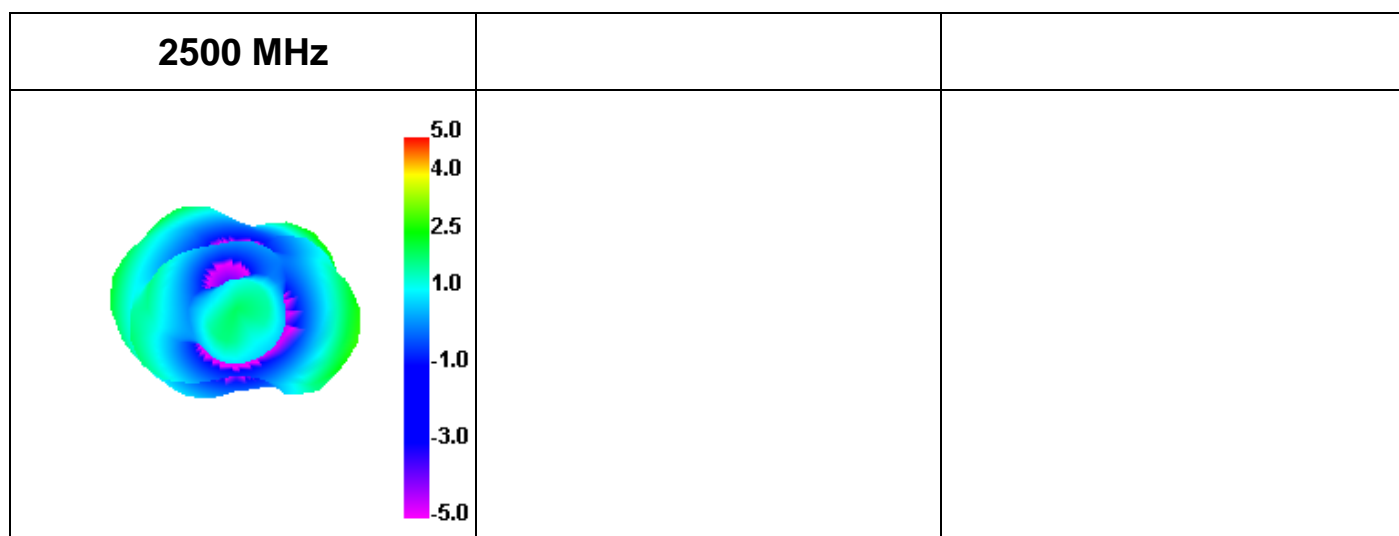
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4.2 Measurement Data

Antenna – Radiation Pattern Test Data



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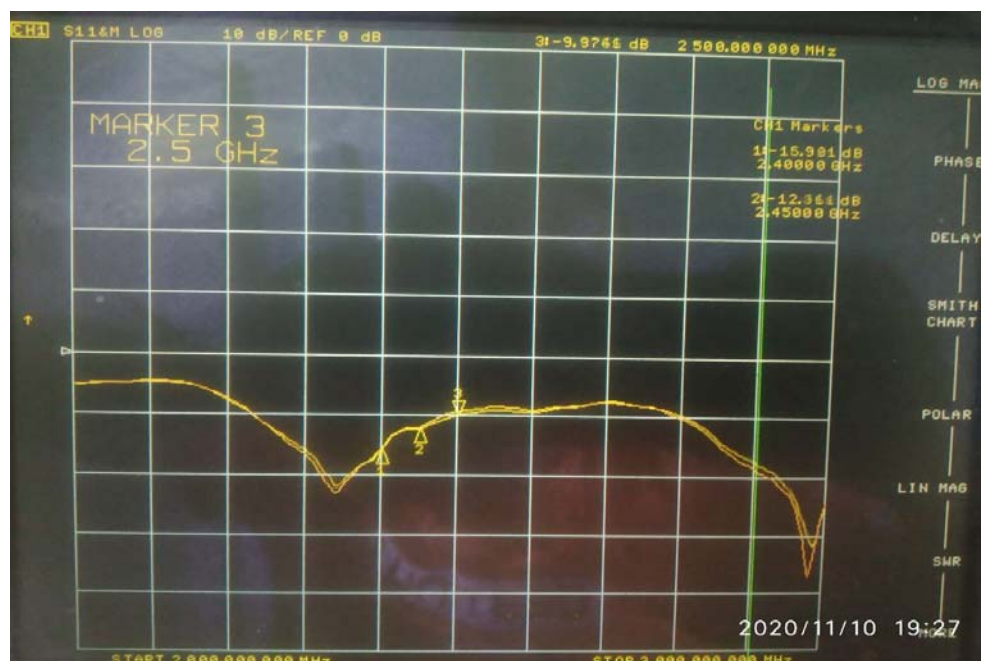


| Passive Test For 2.4 | | | | | | | | | | | | |
|----------------------|-------------|--------------|---------------|---------------|------------|------------|-------------|-------------|----------------------|--------------------|--------------|--------------|
| Freq (MHz) | Effi (%) | Effi (dB) | Gain (dBi) | Gain (dBd) | UHS (%) | DHS (%) | Max (dB) | Min (dB) | Directivity (dBi) | Beamwidth (3dB) | AttH (dB) | AttV (dB) |
| 2400 | 74.75 | -1.26 | 5.49 | 3.34 | 30.023 | 44.723 | 5.49 | -11.47 | 6.75 | 0 | 50.91 | 50.87 |
| 2410 | 66.9 | -1.75 | 5 | 2.85 | 26.961 | 39.937 | 5 | -11.93 | 6.75 | 0 | 51.03 | 50.97 |
| 2420 | 63.3 | -1.99 | 4.61 | 2.46 | 25.655 | 37.649 | 4.61 | -13.2 | 6.59 | 0 | 50.9 | 50.84 |
| 2430 | 60.26 | -2.2 | 4.29 | 2.14 | 24.54 | 35.722 | 4.29 | -14.66 | 6.49 | 0 | 51.06 | 51.01 |
| 2440 | 67.83 | -1.69 | 4.81 | 2.66 | 27.521 | 40.313 | 4.81 | -15.75 | 6.5 | 0 | 50.91 | 50.89 |
| 2450 | 68.29 | -1.66 | 4.95 | 2.8 | 27.68 | 40.607 | 4.95 | -16.22 | 6.6 | 0 | 51.1 | 51.09 |
| 2460 | 76.55 | -1.16 | 5.64 | 3.49 | 30.97 | 45.576 | 5.64 | -13.77 | 6.8 | 0 | 51.29 | 51.33 |
| 2470 | 75.6 | -1.21 | 5.75 | 3.6 | 30.628 | 44.968 | 5.75 | -11.47 | 6.97 | 0 | 51.23 | 51.27 |
| 2480 | 78.08 | -1.07 | 5.98 | 3.83 | 31.673 | 46.405 | 5.98 | -11.94 | 7.06 | 0 | 51.41 | 51.5 |
| 2490 | 72.87 | -1.37 | 5.75 | 3.6 | 29.569 | 43.301 | 5.75 | -14.4 | 7.13 | 0 | 51.67 | 51.77 |
| 2500 | 79.13 | -1.02 | 5.68 | 4.03 | 31.949 | 47.184 | 6.18 | -16.96 | 7.19 | 0 | 51.75 | 51.89 |

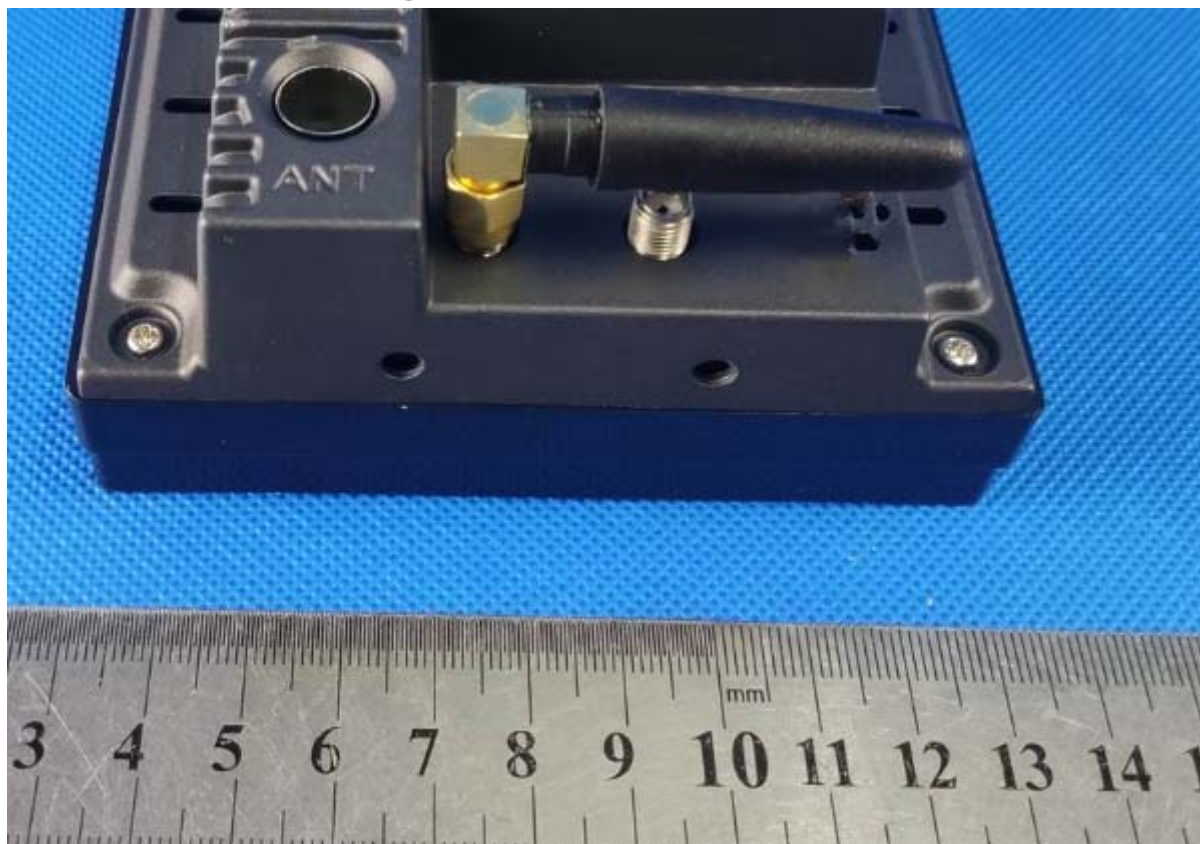
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5 Plots

5.1 VSWR



6 Mechanical drawing



7 Conclusion

From the above test results, we can know the electrical performance of the antenna is seems good.

Shenzhen Yangyue Electronic Communication Technology Co., Ltd, look forward to your confirmation, thank you for your cooperation !