

1. Overview of the Acknowledgment

The acknowledgment describes the condition of the WIFI antenna of the Shadow Cube 2.4/5GHz Ver1.0, which is in the frequency band of 2.4/5GHz, and the manufacturer is Shenzhen Ouhuang Communication Technology Co., Ltd.

2. Appearance



3. Electrical performance

2.4G-2.5G; 5.15G-5.85G

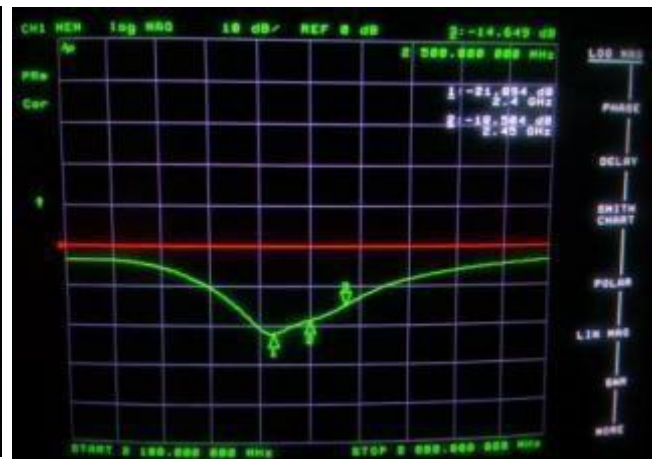
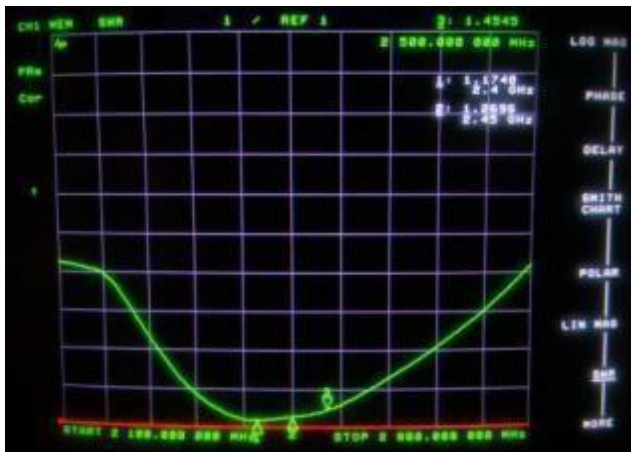
| Transmit/Receive Frequency Bands (Hz) | WIFI |
|--|-----------------------|
| | 2.4G-2.5G;5.15G-5.85G |

3.4 Passive Test Data:

3.4.1 2.4G Data:

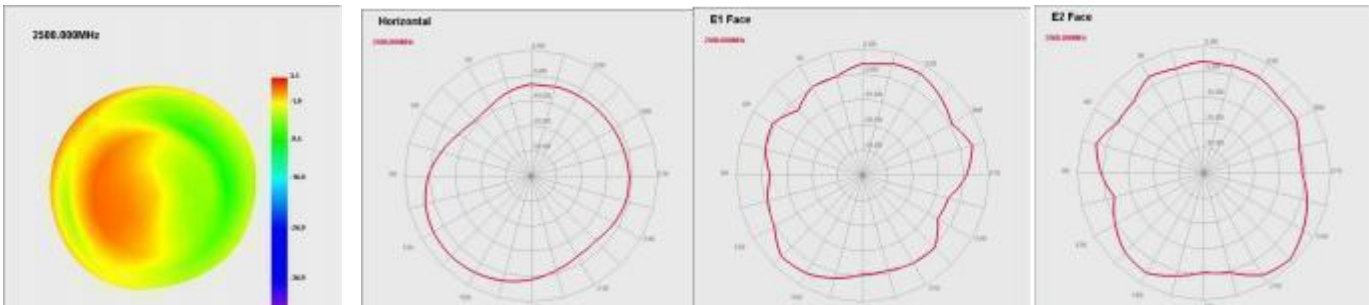
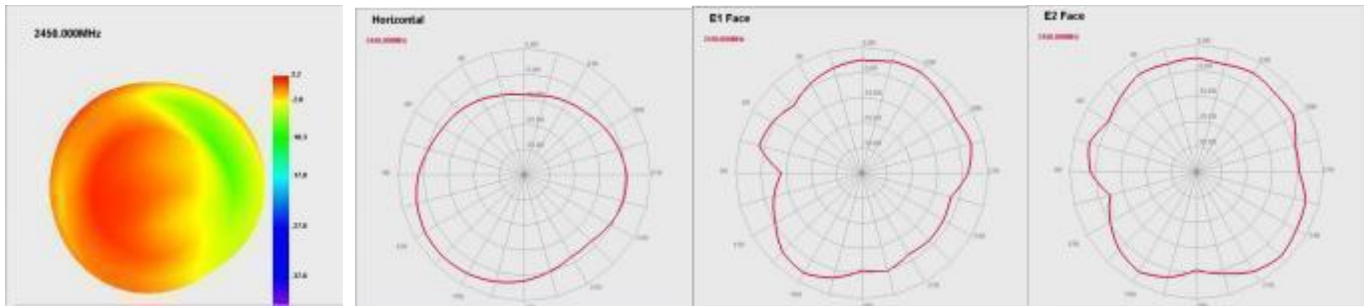
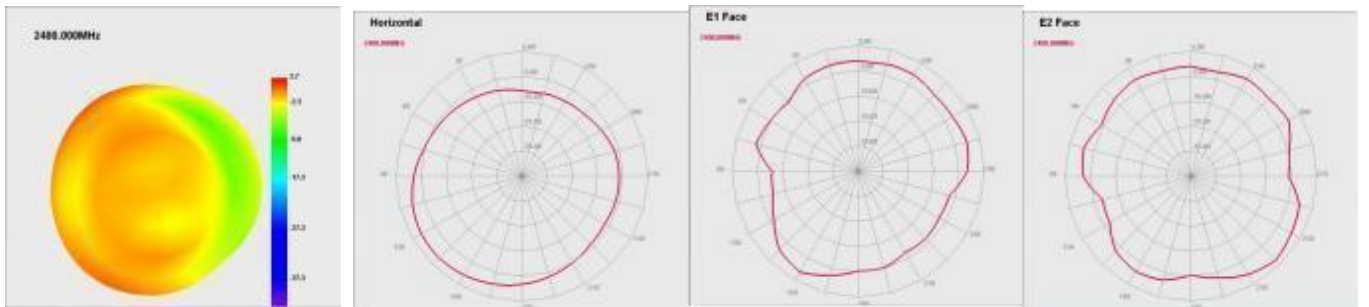
| Electrical Properties | |
|------------------------------|------------------|
| Frequency | 2.4GHz-2.5GHz |
| Impedance | 50 ohm Nominal |
| V. S. W. R | 1: 1.17 Max |
| Return Loss | -21.89dB Max |
| Radiation | Omni-directional |
| Polarization | Linear, Vertical |

VSWR&Return Loss&Smith Chart:



Passive Test For 2.4G-wifi

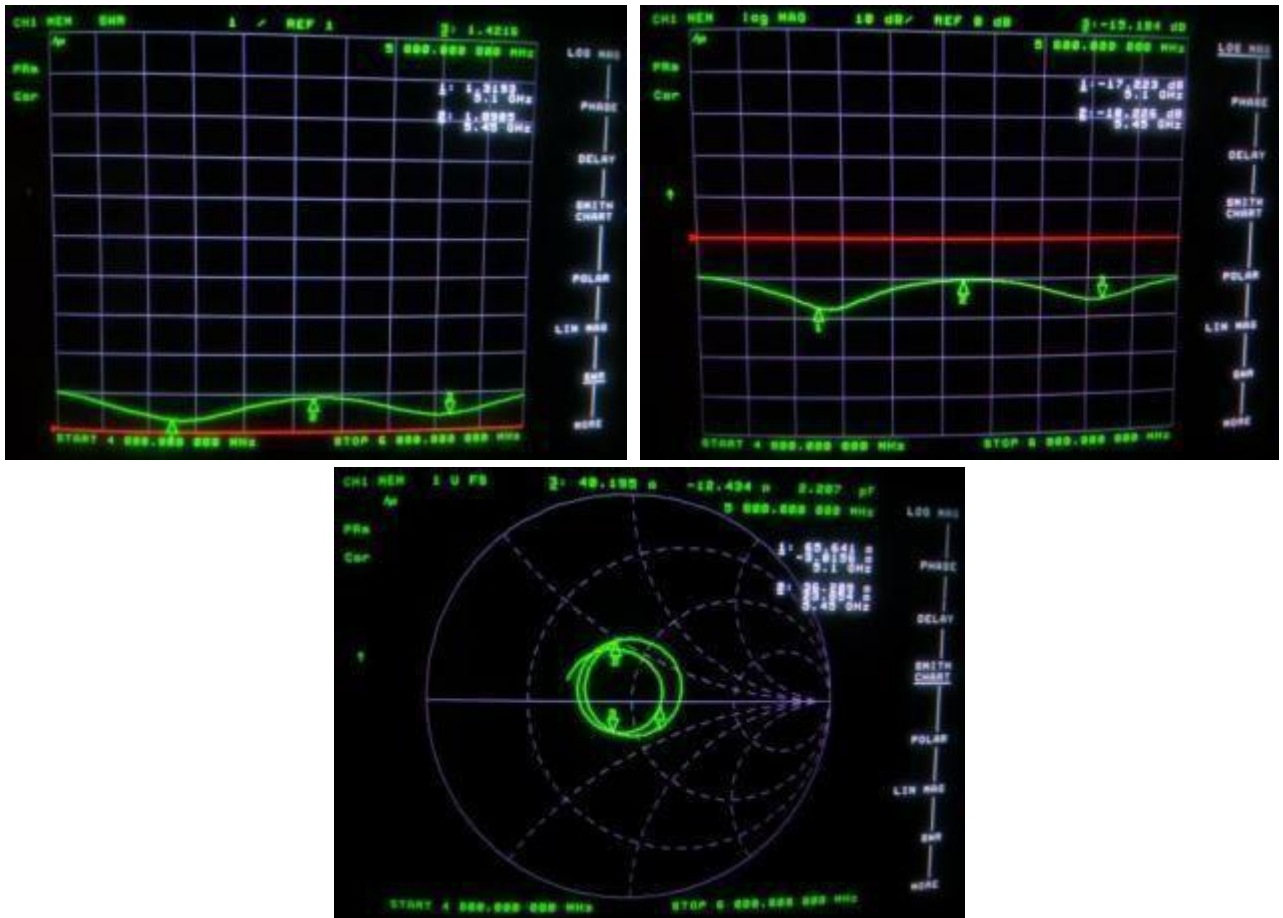
| Freq | Effi | Gain | Gain | UHS | DHIS | Max | Min |
|-------|-------|-------|-------|--------|--------|------|--------|
| (MHz) | (%) | (dBi) | (dBd) | (%) | (%) | (dB) | (dB) |
| 2400 | 63.61 | 2.69 | 0.54 | 28.461 | 24.258 | 2.69 | -10.85 |
| 2450 | 64.25 | 2.15 | 0 | 27.346 | 25.613 | 2.15 | -13.24 |
| 2500 | 62.41 | 3.11 | 0.96 | 29.349 | 26.427 | 3.11 | -13.95 |



3.4.2 5G Data:

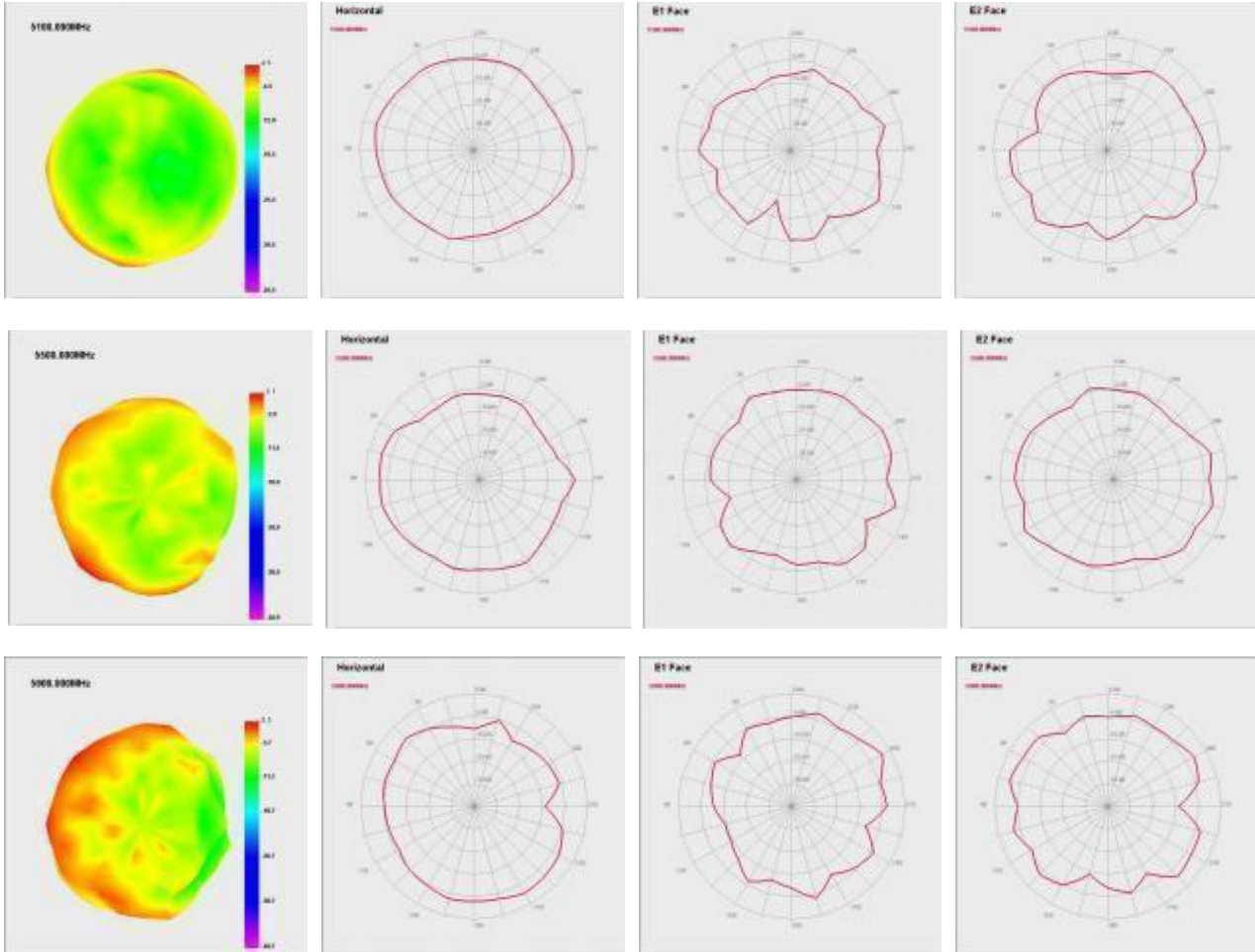
| Electrical Properties | |
|-----------------------|------------------|
| Frequency | 5.1GHz-5.9GHz |
| Impedance | 50 ohm Nominal |
| V. S. W. R | 1: 1.31 Max |
| Return Loss | -17.22dB Max |
| Radiation | Omni-directional |
| Polarization | Linear, Vertical |

VSWR&Return Loss&Smith Chart:



Passive Test For 5G-wifi

| Freq (MHz) | Effi (%) | Gain (dBi) | Gain (dBd) | UHIS (%) | DHIS (%) | Max (dB) | Min (dB) |
|---------------|-------------|---------------|---------------|-------------|-------------|-------------|-------------|
| 5100 | 63.16 | 2.54 | 0.39 | 18.945 | 15.461 | 2.54 | -19.68 |
| 5500 | 62.46 | 3.13 | 0.98 | 19.346 | 16.257 | 3.13 | -16.54 |
| 5900 | 63.92 | 3.25 | 1.10 | 20.524 | 14.643 | 3.25 | -18.6 |



4. Antenna structure

