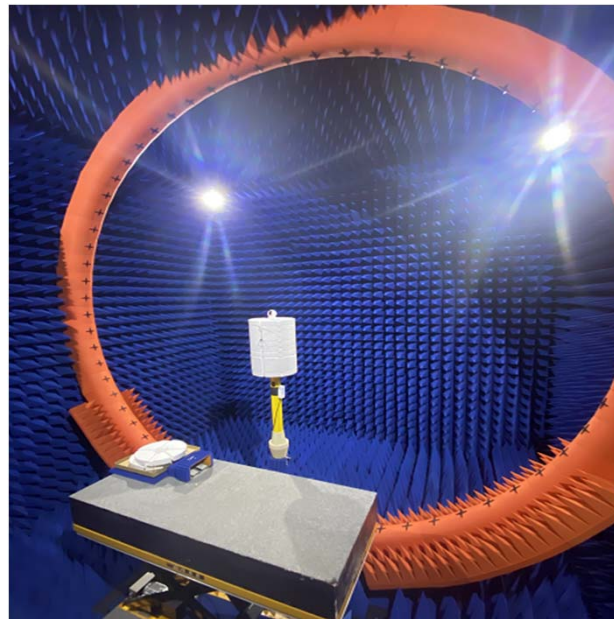


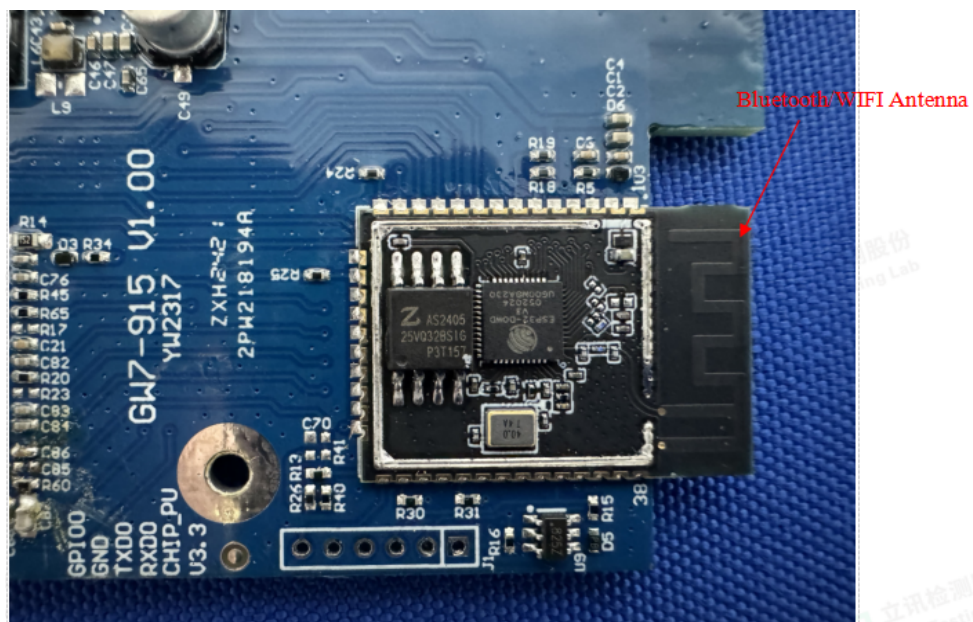
## Antenna Study

- **Client Name:TOWNSTEEL INC.**
- **Project Name : NET DOOR LOCK**
- **Debugging frequency band: 900/930/2400/2500HMz**
- **Valuation date: 2024.05.15**
- **Linkman contacts: gao shang 18925546490**



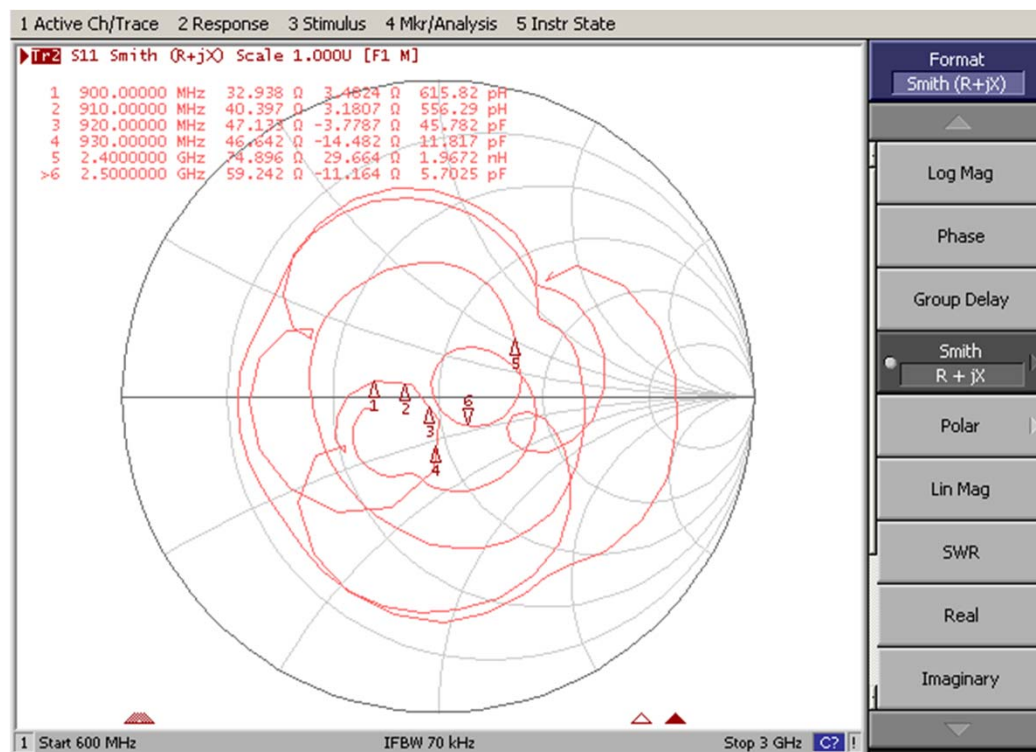
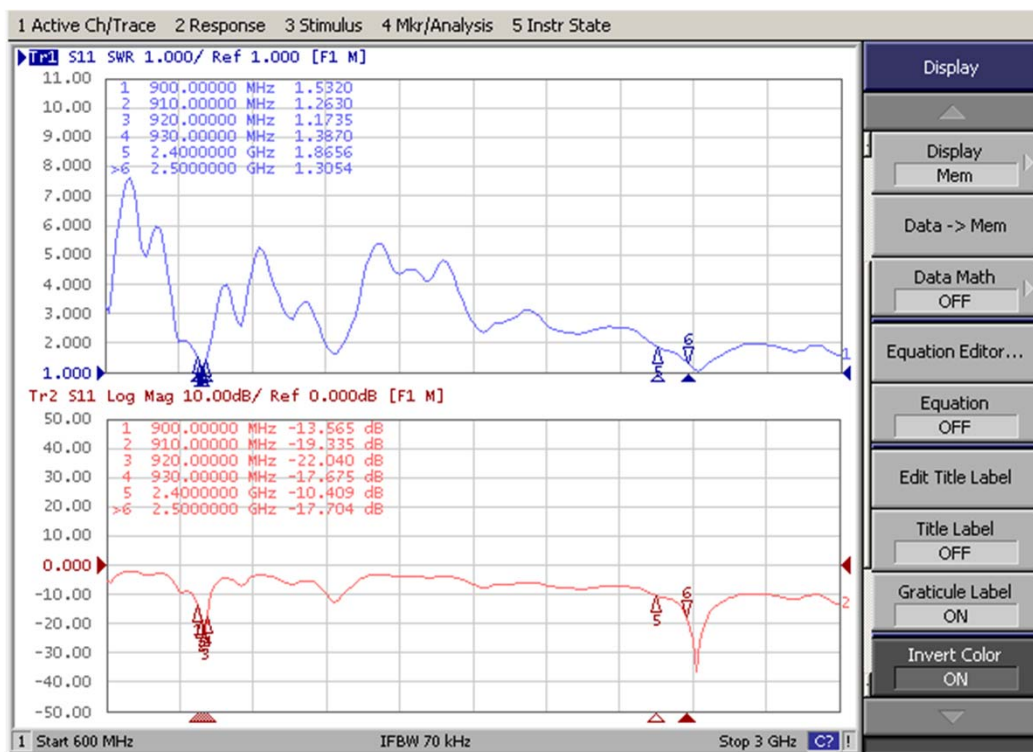
Testing 3D microwave darkroom(6m\*6m\*6m)

## Antenna Size



# S Parameter\_Return Loss&VSWR-Smith

Dongguan UB Electronics Co., Ltd

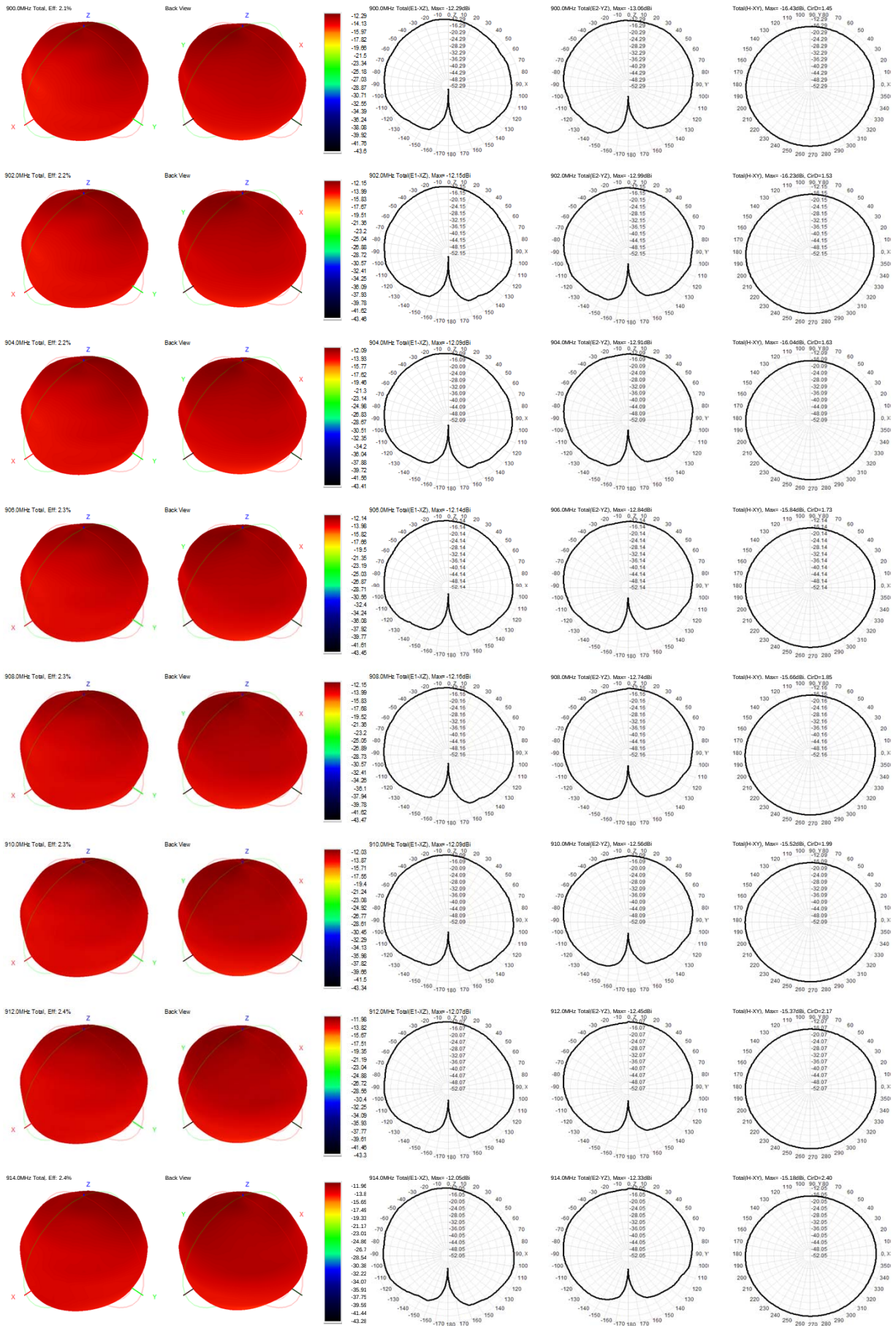


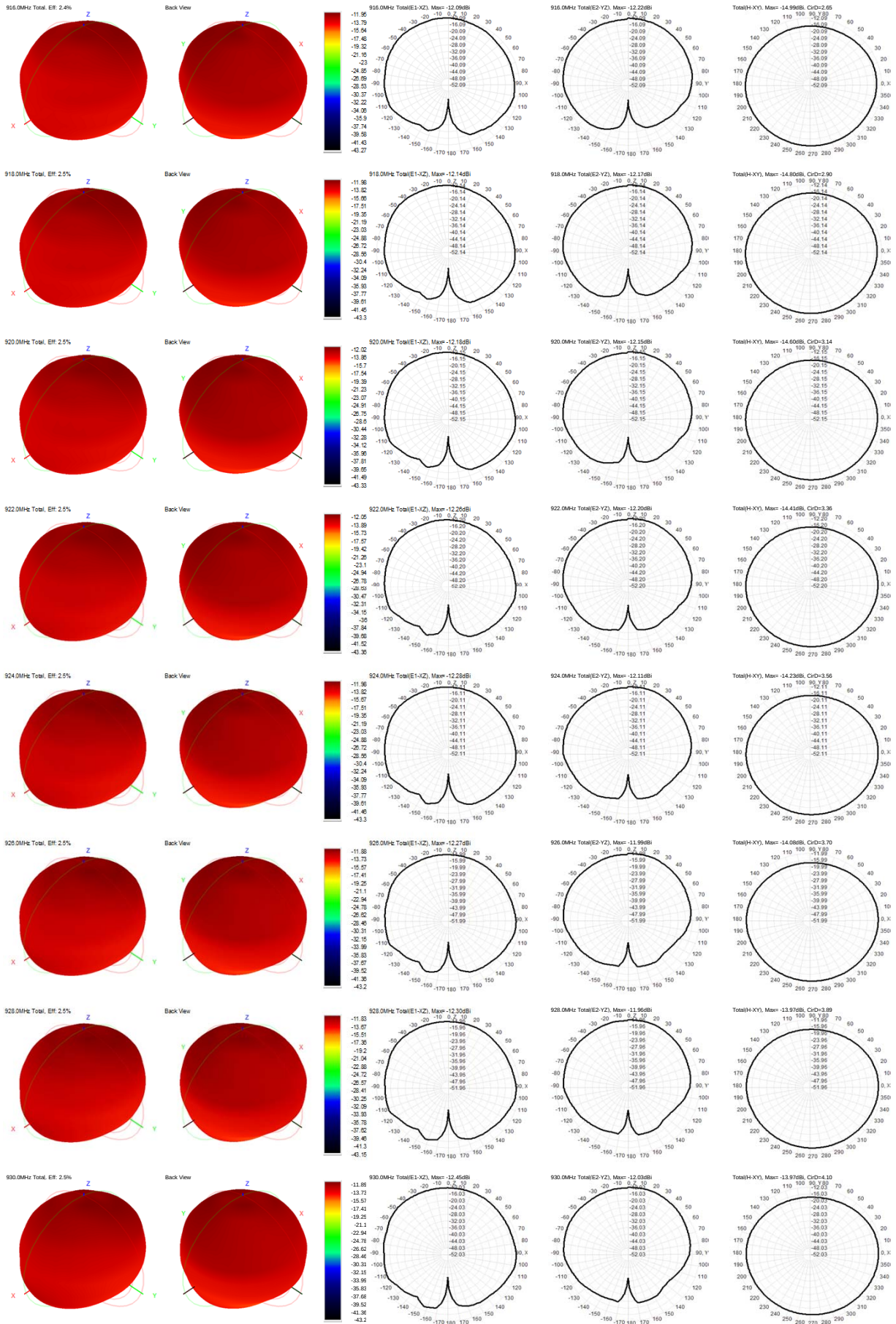
# Efficiency and Gain

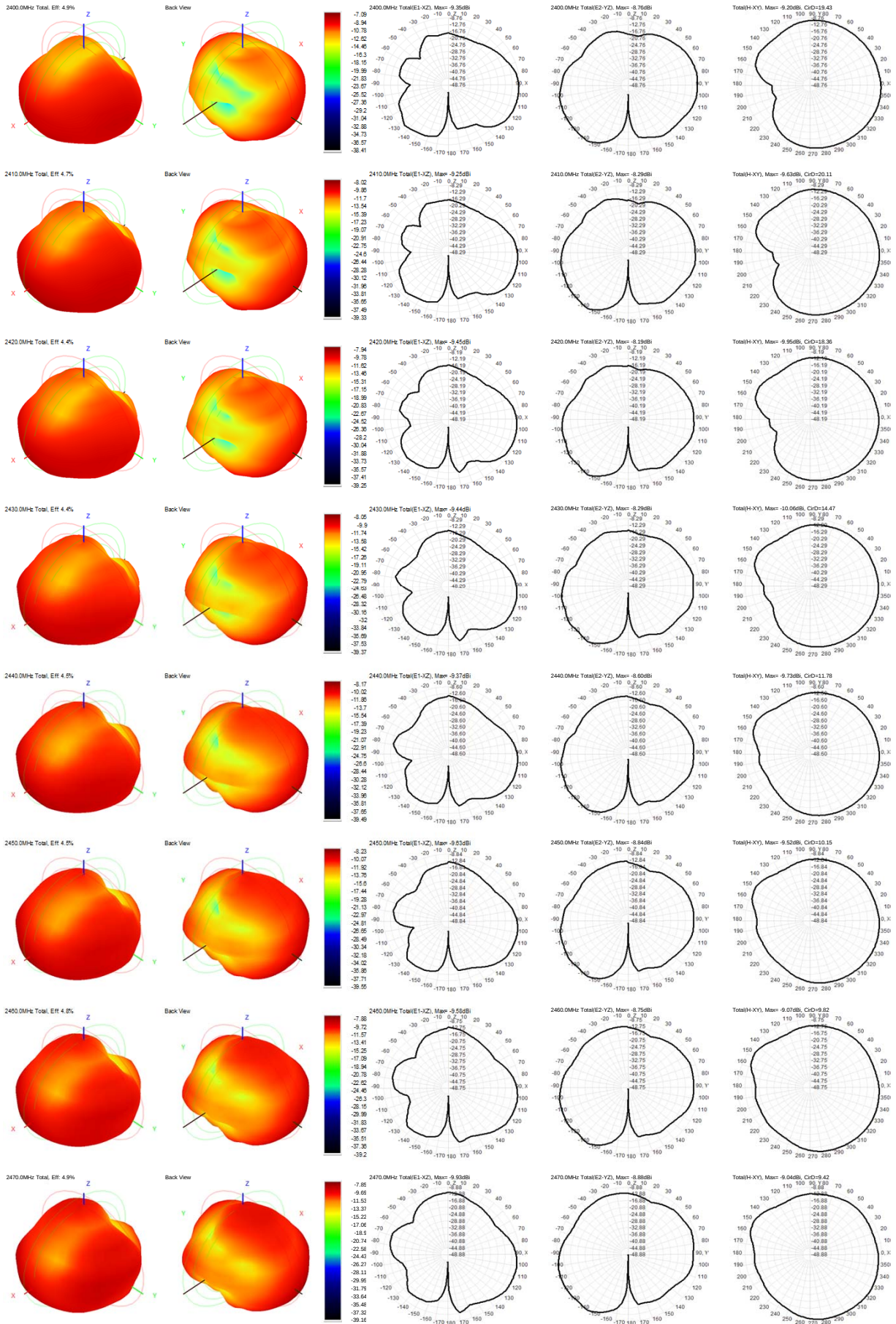
Dongguan UB Electronics Co., Ltd

| Frequency ID    | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz) | 900.0  | 902.0  | 904.0  | 906.0  | 908.0  | 910.0  | 912.0  | 914.0  | 916.0  | 918.0  | 920.0  | 922.0  | 924.0  | 926.0  | 928.0  | 930.0  |
| Gain (dBi)      | -12.29 | -12.15 | -12.09 | -12.14 | -12.15 | -12.03 | -11.98 | -11.96 | -11.95 | -11.98 | -12.02 | -12.05 | -11.98 | -11.88 | -11.83 | -11.89 |
| Efficiency (%)  | 2.11   | 2.17   | 2.21   | 2.25   | 2.29   | 2.34   | 2.37   | 2.40   | 2.44   | 2.46   | 2.45   | 2.45   | 2.47   | 2.49   | 2.50   | 2.50   |

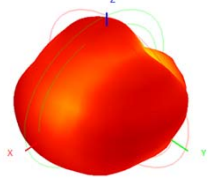
| 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| -7.09  | -8.02  | -7.94  | -8.05  | -8.17  | -8.23  | -7.88  | -7.85  | -8.31  | -8.01  | -8.03  |
| 4.87   | 4.72   | 4.43   | 4.45   | 4.54   | 4.53   | 4.82   | 4.93   | 4.70   | 4.67   | 4.71   |



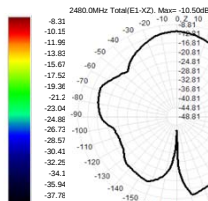
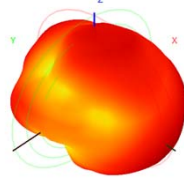




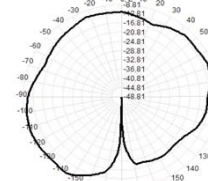
2480.0MHz Total, Eff: 4.7%



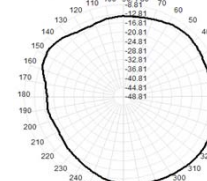
Back View



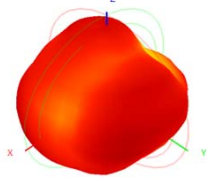
2480.0MHz Total(E2-YZ), Max:-8.81dB



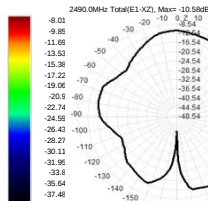
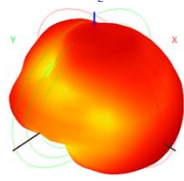
Total(H-XY), Max:-9.16dB, Crd=9.60



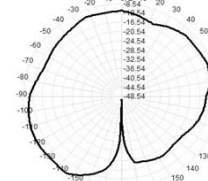
2490.0MHz Total, Eff: 4.7%



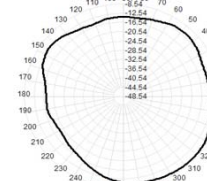
Back View



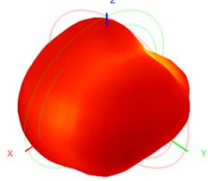
2490.0MHz Total(E2-YZ), Max:-8.54dB



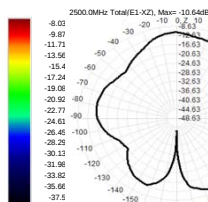
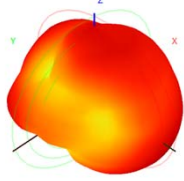
Total(H-XY), Max:-9.50dB, Crd=9.57



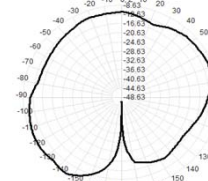
2500.0MHz Total, Eff: 4.7%



Back View



2500.0MHz Total(E2-YZ), Max:-8.63dB



Total(H-XY), Max:-9.95dB, Crd=8.90

