



Shenzhen xingtong wireless technology co.,  
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Address: 3/F, Building A1, Qiangrongdong Industrial Zone,  
Jiuwei, Xixiang, Baoan District, Shenzhen

# Product specification

Product number: Food dispenser

Product name: WIFI-IPEX/ANT

Product item number:

| Producer    | Audit      | Date       |
|-------------|------------|------------|
| Huangjiajun | Wu Yanlong | 2023-06-09 |

Customer confirmation:

|                                                      |
|------------------------------------------------------|
| Customer name: Guangzhou Xiaopai Technology Co., Ltd |
| Approval :                                           |
| Date :                                               |
| Notes :                                              |

Please accept your signature and seal and return one copy to our company for filing. Thank you for your cooperation!

|                                                                                                                                  |                             |                |             |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------|-------------|
| <br>Shenzhen Xingtong Wieress Technology Co., Ltd |                             | Date           | 2023-06-09  |
|                                                                                                                                  |                             | Version        | A0          |
|                                                                                                                                  |                             | File number    | XT-YF-004   |
| Product model                                                                                                                    | Food dispenser-WIFI antenna | Product number | XT-WIFI-APP |

## 1.Product Constrution:

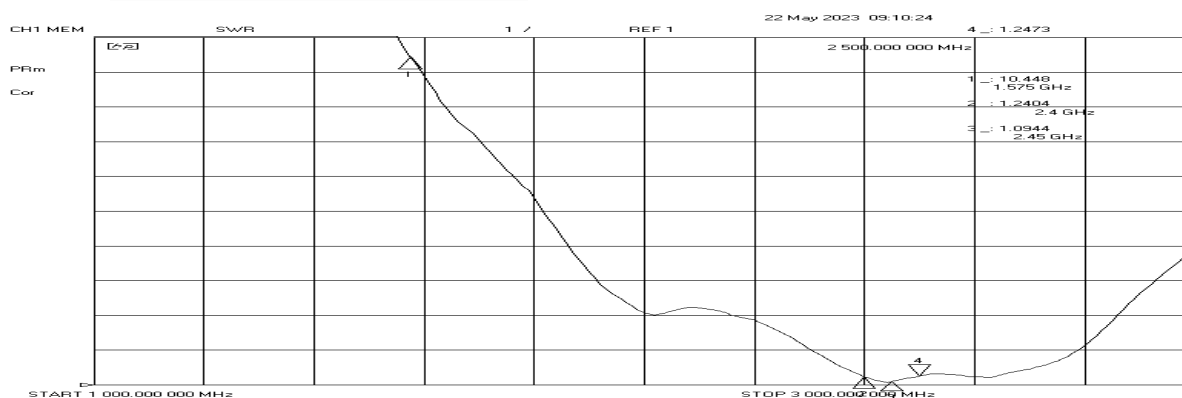
- 1. Antenna material: FPC
- 2. Adhesive tvne: 3M9471
- 3. Antenna size: 42.5\*8.98 (Tolerance+0.2)
- 4. Coaxial line size: 140 \* 1.13 single head first generation IPEX terminal (tolerance  $\pm 1.0\text{mm}$ )

## 2. parameters

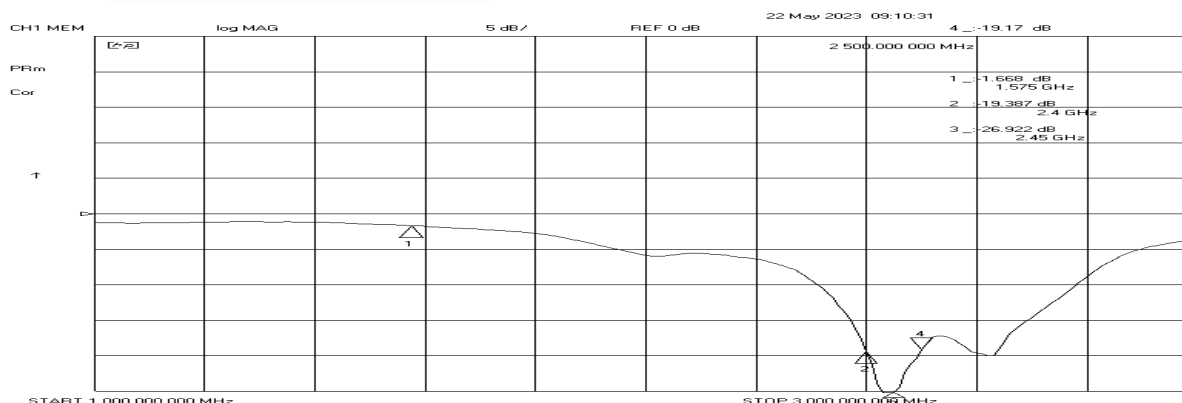
- Scope of use: customer-supplied machines
- Antenna frequency: 2412-2484Mhz
- Polarization method: horizontal/vertical
- Antenna standing wave:  $< 1.5\text{dbm}$
- Return loss:  $< -15\text{db}$
- Antenna free space gain: 2.4G/3.09dBi(max)
- Installation mode: terminal wire is welded to motherboard OUT
- Packing method: use PE bag+packing box

## 3.S11 value of antenna (S11)

### ■ 3.1: antenna standing wave ratio

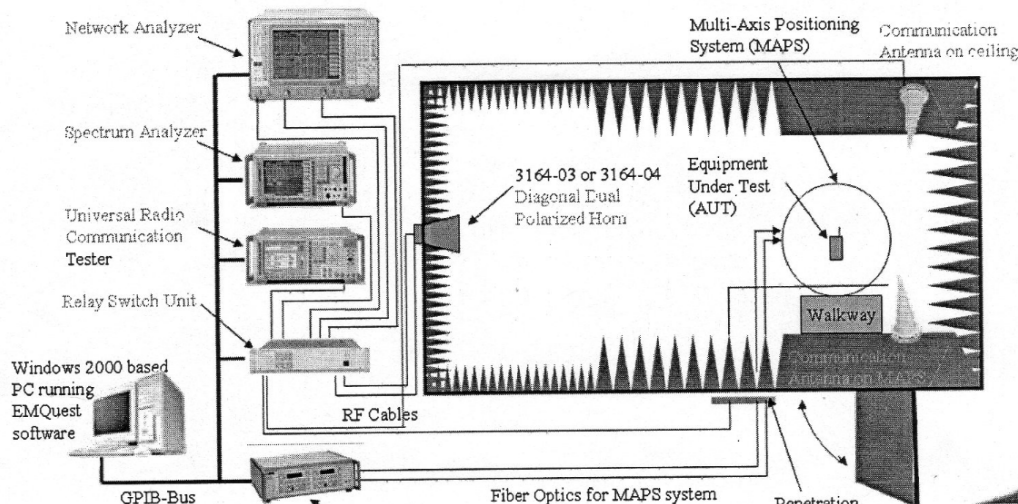


### ■ 3.2: Antenna return loss value



## 4. Antenna performance (OTA)

### ■ 4.1: Antenna testing environment



### ■ 4.2: Antenna OTA/ efficiency/gain (test instruments: network analyzer, oscilloscope, customer engineering prototype, various standard cards, etc.)

2.4G-2D

| Frequency ID               | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| Efficiency (dBi)           | -2.84  | -2.87  | -2.70  | -2.72  | -2.91  | -2.54  | -2.59  | -2.82  | -2.46  | -2.65  | -2.71  |
| Gain (dBi)                 | 2.62   | 2.62   | 2.80   | 2.92   | 2.78   | 3.09   | 3.03   | 2.65   | 2.91   | 2.68   | 2.68   |
| Efficiency (%)             | 52.05  | 51.61  | 53.65  | 53.43  | 51.14  | 55.68  | 55.07  | 52.28  | 56.82  | 54.30  | 53.60  |
| Directivity (dB)           | 5.46   | 5.49   | 5.50   | 5.64   | 5.69   | 5.63   | 5.62   | 5.47   | 5.36   | 5.33   | 5.39   |
| Peak Gain Position (Theta) | 120.00 | 120.00 | 165.00 | 165.00 | 165.00 | 120.00 | 120.00 | 120.00 | 165.00 | 150.00 | 135.00 |
| Peak Gain Position (Phi)   | 180.00 | 180.00 | 315.00 | 315.00 | 315.00 | 180.00 | 195.00 | 195.00 | 315.00 | 240.00 | 180.00 |
| Efficiency ThetaPol (%)    | 19.82  | 19.63  | 20.60  | 20.65  | 19.49  | 20.71  | 20.31  | 19.54  | 21.33  | 20.37  | 20.30  |
| Efficiency PhiPol (%)      | 32.24  | 31.98  | 33.04  | 32.78  | 31.65  | 34.98  | 34.75  | 32.74  | 35.48  | 33.92  | 33.30  |
| Upper Hem. Efficiency (%)  | 20.38  | 20.02  | 20.58  | 20.27  | 19.07  | 20.50  | 20.12  | 19.16  | 20.96  | 20.28  | 20.32  |
| Lower Hem. Efficiency (%)  | 31.67  | 31.59  | 33.07  | 33.16  | 32.07  | 35.19  | 34.94  | 33.12  | 35.86  | 34.01  | 33.27  |



Date

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XT-YF-004

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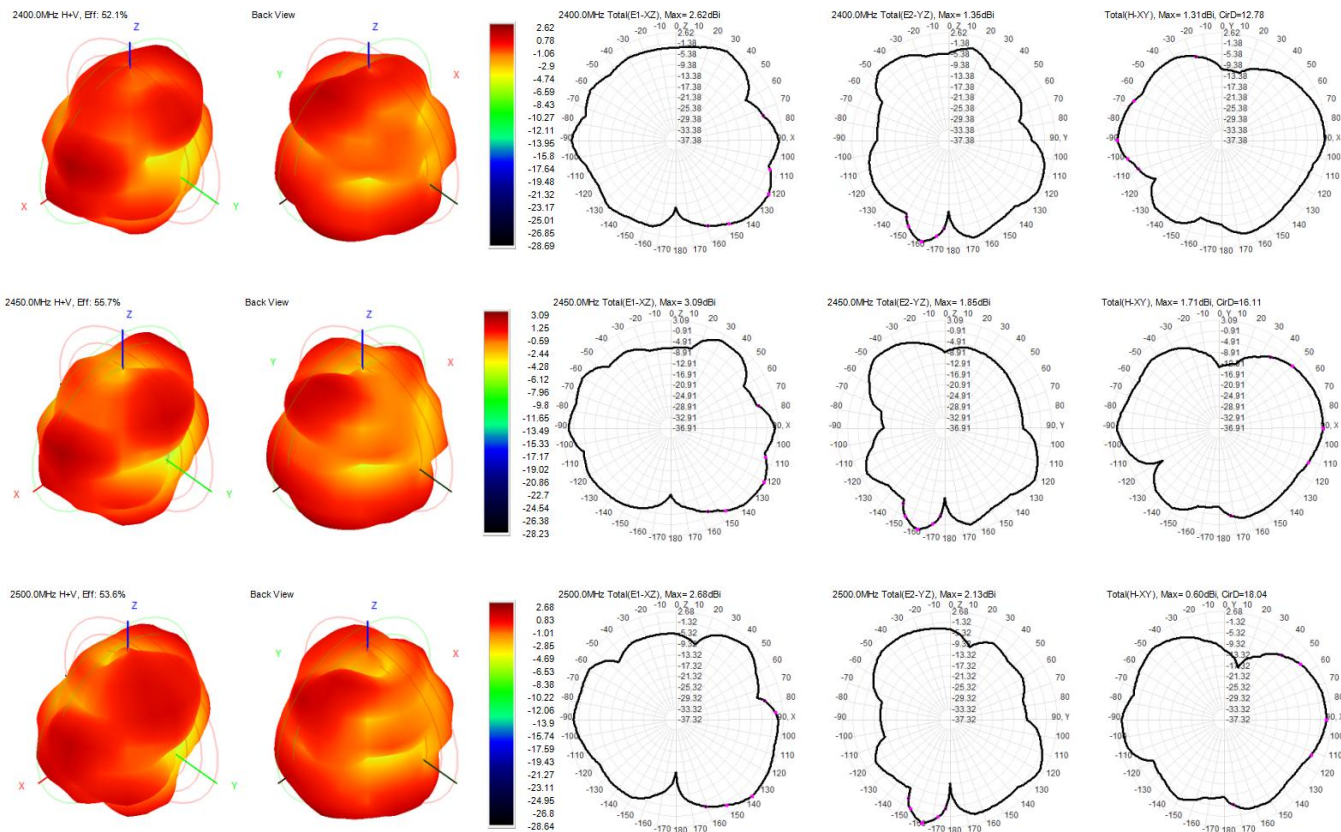
Product model

Food dispenser-WIFI antenna

Product  
number

XT-WIFI-APP

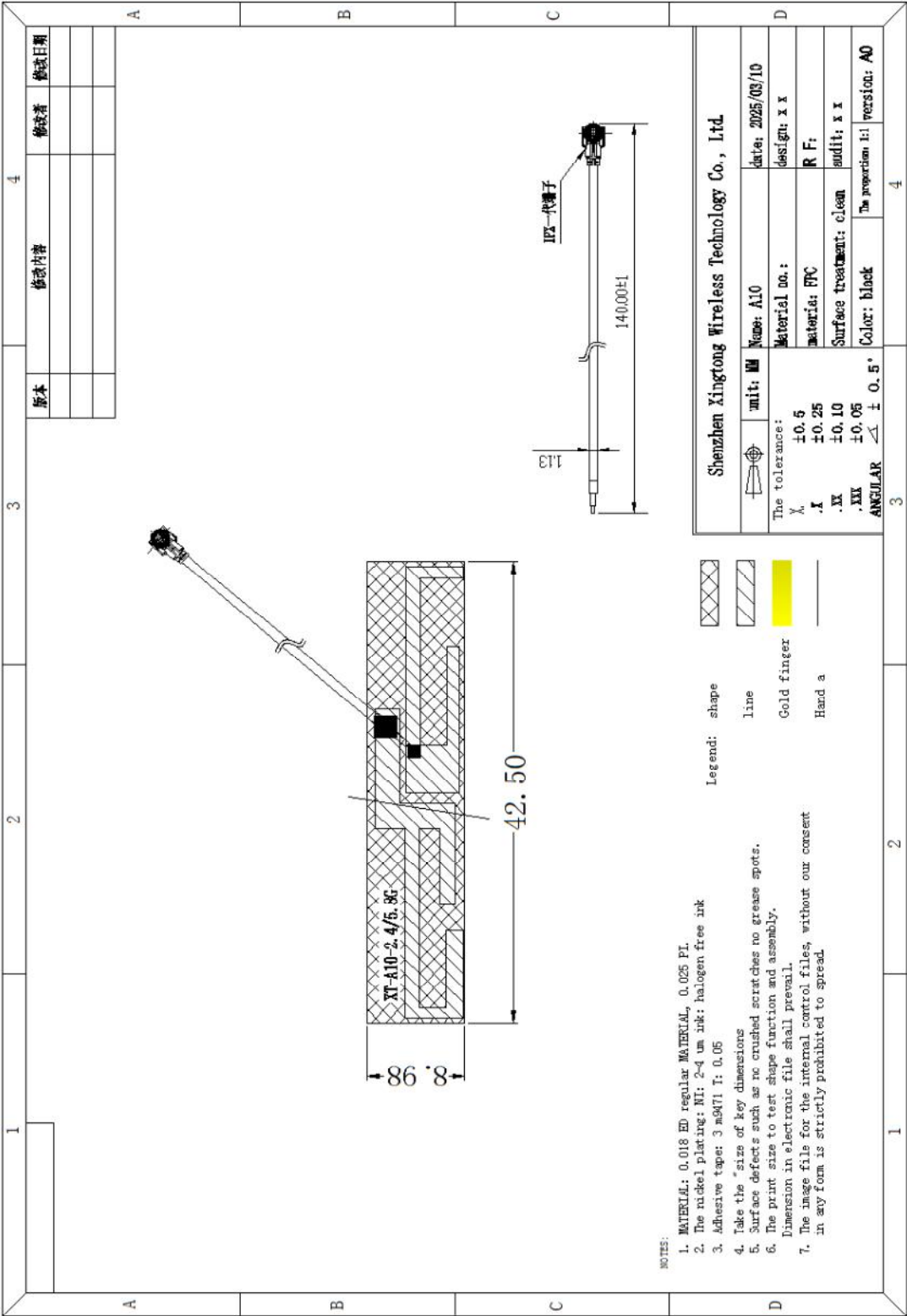
## 3D-OTA-2.4G



|                                                                                                                                  |                             |                |             |
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| Product model                                                                                                                    | Food dispenser-WIFI antenna | Product number | XT-WIFI-APP |

5. Attached figure:

5. 1: Finished antenna drawing





|                                                                                                                                  |                             |                |             |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------|-------------|
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## 7. Reliability test:

| Serialnumber | test item                     | Test requirements                      | testing tool   | test result |
|--------------|-------------------------------|----------------------------------------|----------------|-------------|
| 1            | Resistance to tin melting     | 288℃, 10S, no delamination, no foaming | Tin furnace    | 0k          |
| 2            | weldability                   | 245℃, 5s, smooth tin surface, solder   | Tin furnace    | 0k          |
| 3            | Pulling force                 | N/A                                    | tautness meter | 0k          |
| 4            | Reverse pulling force         | N/A                                    | tautness meter | 0k          |
| 5            | Peel strength (covering film) | $\geq 0.35\text{kg/cm}$                | peel strength  | 0k          |
| 6            | Peel strength (copper foil)   | $\geq 0.8\text{kg/cm}$                 | peel strength  | 0k          |
| 7            | Hot melt adhesive fluidity    | 0.1~0.15                               | /              | 0k          |

## 8.Matters needing attention:



After opening, please carefully check whether the goods are complete. If there is any damage, please contact us immediately.