



# Shenzhen Xingtong Wireless

Shenzhen Xingtong Wieress Technology Co.,Ltd

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Ea Address: Xixiang, Baojiwei Qiangrongdong 3 Bu

## Product Specification

Name of : K2

Product part : 2.4GHZ/BT Shrapnel

|              |           |            |
|--------------|-----------|------------|
| Producer     | Ex St     | Su A       |
| <b>Huang</b> | <b>Wu</b> | 2023-11-09 |

Customer

|          |                            |
|----------|----------------------------|
| Customer | Shanghai Feizhi Electronic |
| Approval |                            |
| Time:    |                            |
| Note:    |                            |

Please sign and seal it and return a copy to our company for file.

|                                                                                                                                               |       |          |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|-----------------|
| <br>深圳市星通无线技术有限公司<br>ShenzhenXingtongWieressTechnologyCo.,Ltd |       | Date     | 2023-11-09      |
|                                                                                                                                               |       | versions | A0              |
|                                                                                                                                               |       | File NO. | XT-YF-004       |
| Model                                                                                                                                         | K2-BT | Code     | XT088-BT-2.4GHZ |

1.Product structure (**Product Constrution**)

- 1.Antenna material: white copper
- 2.Back glue model: none
- 3. Antenna size:16.7\*13\*0.3mm(To  $\pm 0.1$ )
- 4.Appearance treatment: surface antioxidant treatment

2.Basic information ( **Parameters**)

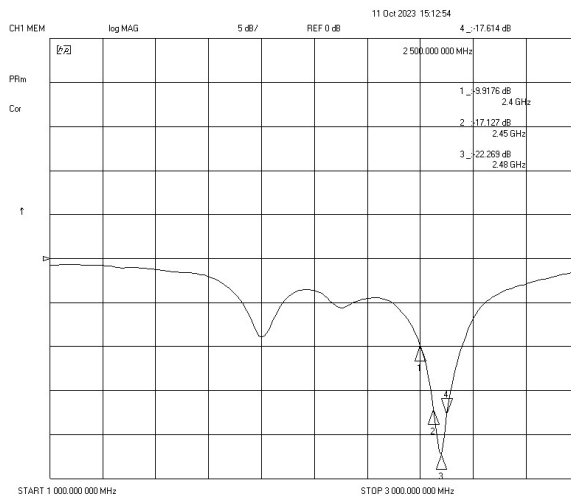
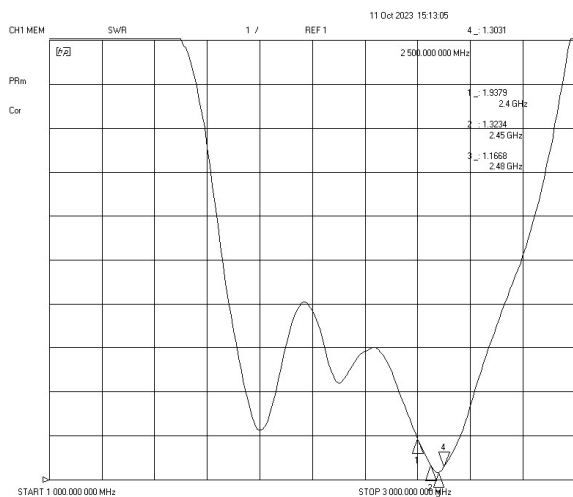
- Scope of use: customer-supplied machines
- Antenna frequency:2.4-2.48Ghz
- Average gain of antenna free space:2.4 $\geq$ 2.0dbi
- Antenna impedance:50ohm
- Installation method: direct plug-in welding
- Packaging method: usePolyethyleneBag+Packing box

3.Aerial **S11**Value

- 3.1: Antenna standing wave ratio/Loss value

| Frequency point | 2400mhz | 2450mhz | 2480mhz |
|-----------------|---------|---------|---------|
| SWR(dbm)        | 1.93    | 1.32    | 1.1     |
| LOG (Dbm)       | -9.9    | -17.1   | -22.2   |

|                                                                                                                                               |       |          |                 |
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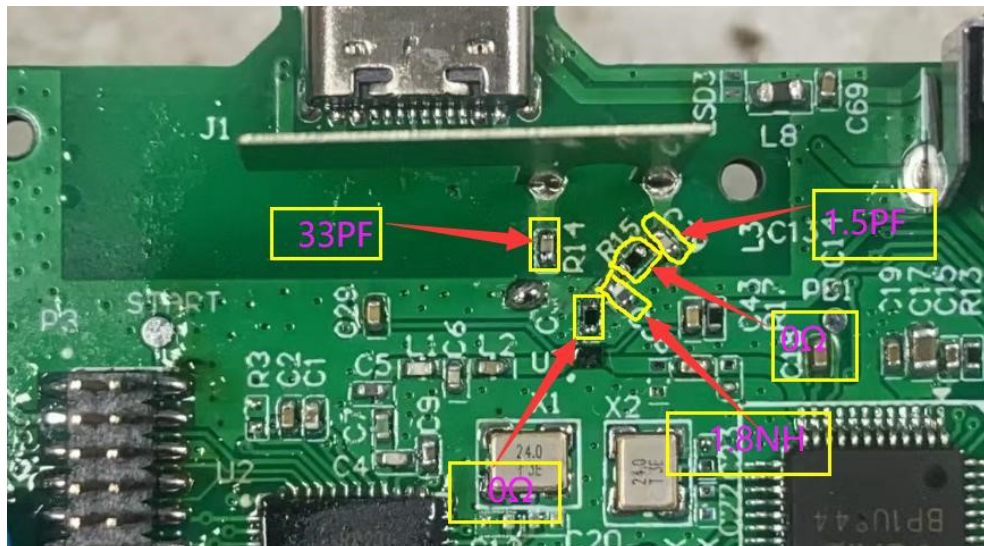


### ■ 3.2: Antenna parameters:

## 4. Antenna performance(OTA)

### ■ 4.1: Antenna matching suggestions

Vector impedance modulation can be carried out.



### ■ 4.2: AntennaOTA/Efficiency/Gain (test instruments: network analyzer, oscilloscope, customer-supply engineering prototype, various standard cards, etc.)



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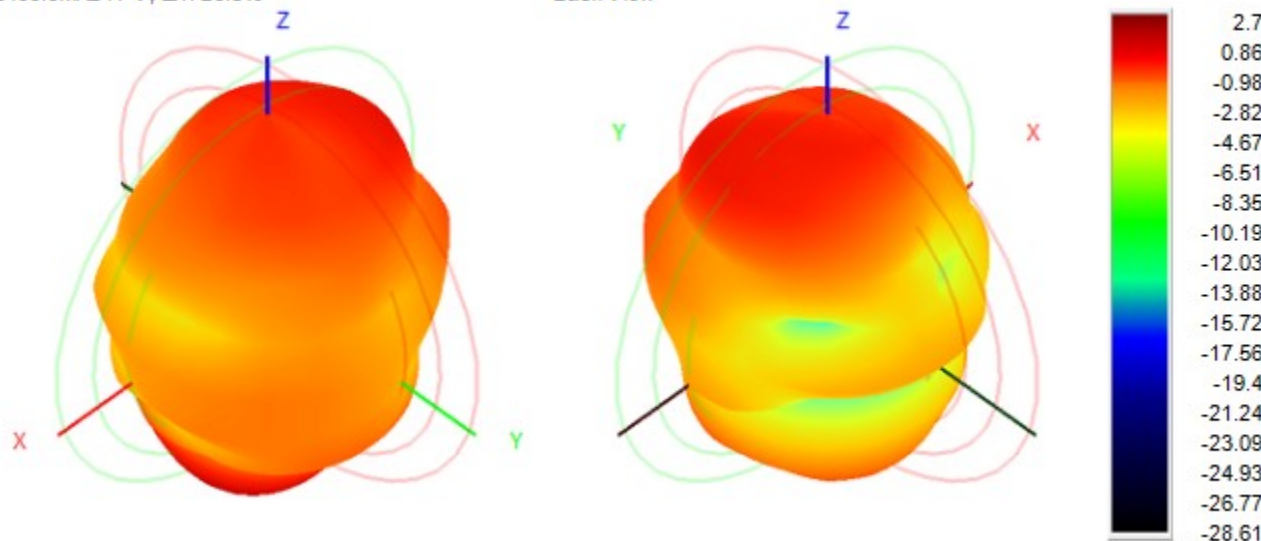
| Frequency ID               | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| Point Values               |        |        |        |        |        |        |        |        |        |        |        |
| Ant. Port Input Pwr. (dBm) | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| Tot. Rad. Pwr. (dBm)       | -5.82  | -5.86  | -5.66  | -5.67  | -5.91  | -5.61  | -5.68  | -5.86  | -5.53  | -5.72  | -5.82  |
| Peak EIRP (dBm)            | 2.70   | 2.61   | 2.76   | 2.70   | 2.42   | 2.57   | 2.30   | 1.95   | 2.08   | 1.72   | 1.44   |
| Directivity (dBi)          | 8.52   | 8.47   | 8.42   | 8.37   | 8.33   | 8.18   | 7.98   | 7.81   | 7.61   | 7.45   | 7.26   |
| Efficiency (dB)            | -5.82  | -5.86  | -5.66  | -5.67  | -5.91  | -5.61  | -5.68  | -5.86  | -5.53  | -5.72  | -5.82  |
| Efficiency (%)             | 26.20  | 26.00  | 27.20  | 27.10  | 25.60  | 27.50  | 27.10  | 25.90  | 28.00  | 26.80  | 26.20  |
| Gain (dBi)                 | 2.70   | 2.61   | 2.76   | 2.70   | 2.42   | 2.57   | 2.30   | 1.95   | 2.08   | 1.72   | 1.44   |
| NHPRP $\pm$ Pi/4 (dBm)     | -9.08  | -9.13  | -8.95  | -8.95  | -9.16  | -8.81  | -8.81  | -8.96  | -8.60  | -8.74  | -8.80  |
| NHPRP $\pm$ Pi/6 (dBm)     | -11.10 | -11.19 | -11.01 | -11.01 | -11.21 | -10.82 | -10.82 | -10.97 | -10.64 | -10.81 | -10.90 |
| NHPRP $\pm$ Pi/8 (dBm)     | -12.62 | -12.69 | -12.49 | -12.45 | -12.59 | -12.14 | -12.12 | -12.25 | -11.94 | -12.12 | -12.24 |
| Upper Hem. PRP (dBm)       | -9.52  | -9.49  | -9.25  | -9.22  | -9.41  | -9.02  | -8.99  | -9.07  | -8.66  | -8.80  | -8.89  |
| Lower Hem. PRP (dBm)       | -8.23  | -8.32  | -8.16  | -8.20  | -8.49  | -8.26  | -8.40  | -8.68  | -8.42  | -8.66  | -8.78  |
| Upper Hem. PRP (%)         | 11.16  | 11.24  | 11.87  | 11.97  | 11.47  | 12.54  | 12.61  | 12.38  | 13.60  | 13.17  | 12.91  |
| Lower Hem. PRP (%)         | 15.03  | 14.73  | 15.28  | 15.12  | 14.15  | 14.92  | 14.45  | 13.55  | 14.38  | 13.60  | 13.26  |

#### ■ 4.3: AntennaOTA-2.4G-3D

2.4GHz: Maximum gain 0.47dBi

2400.0MHz H+V, Eff: 26.3%

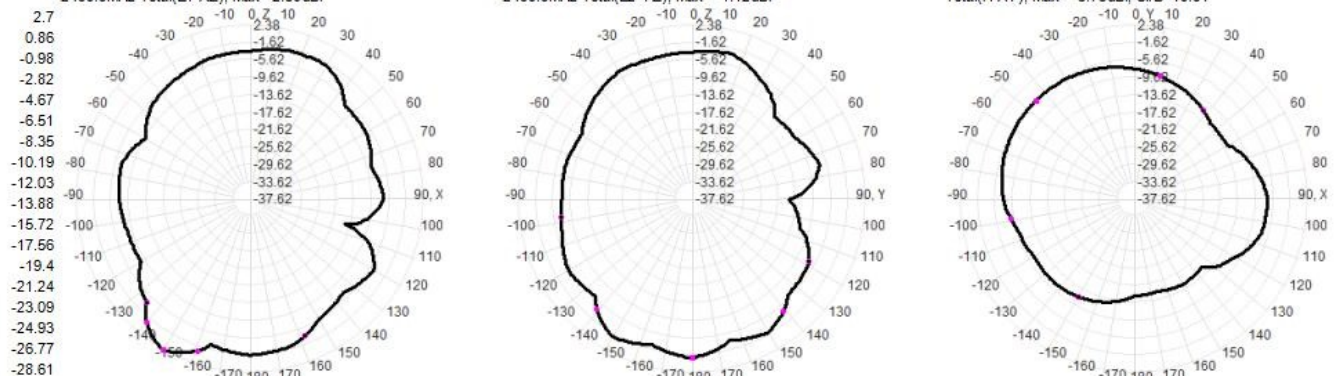
Back View



2400.0MHz Total(E1-XZ), Max= 2.38dBi

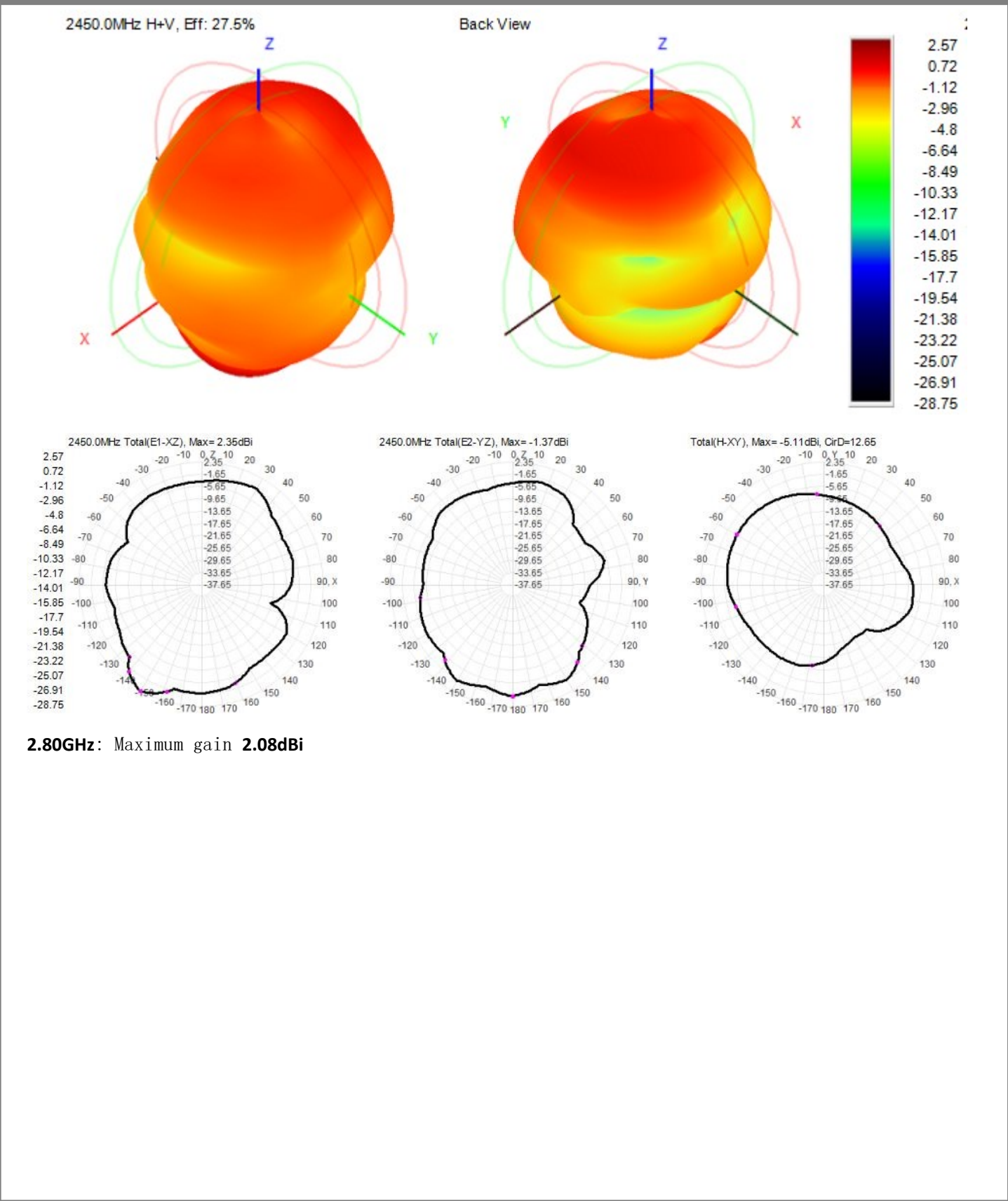
2400.0MHz Total(E2-YZ), Max= -1.12dBi

Total(H-XY), Max= -5.75dBi, CirD=10.01



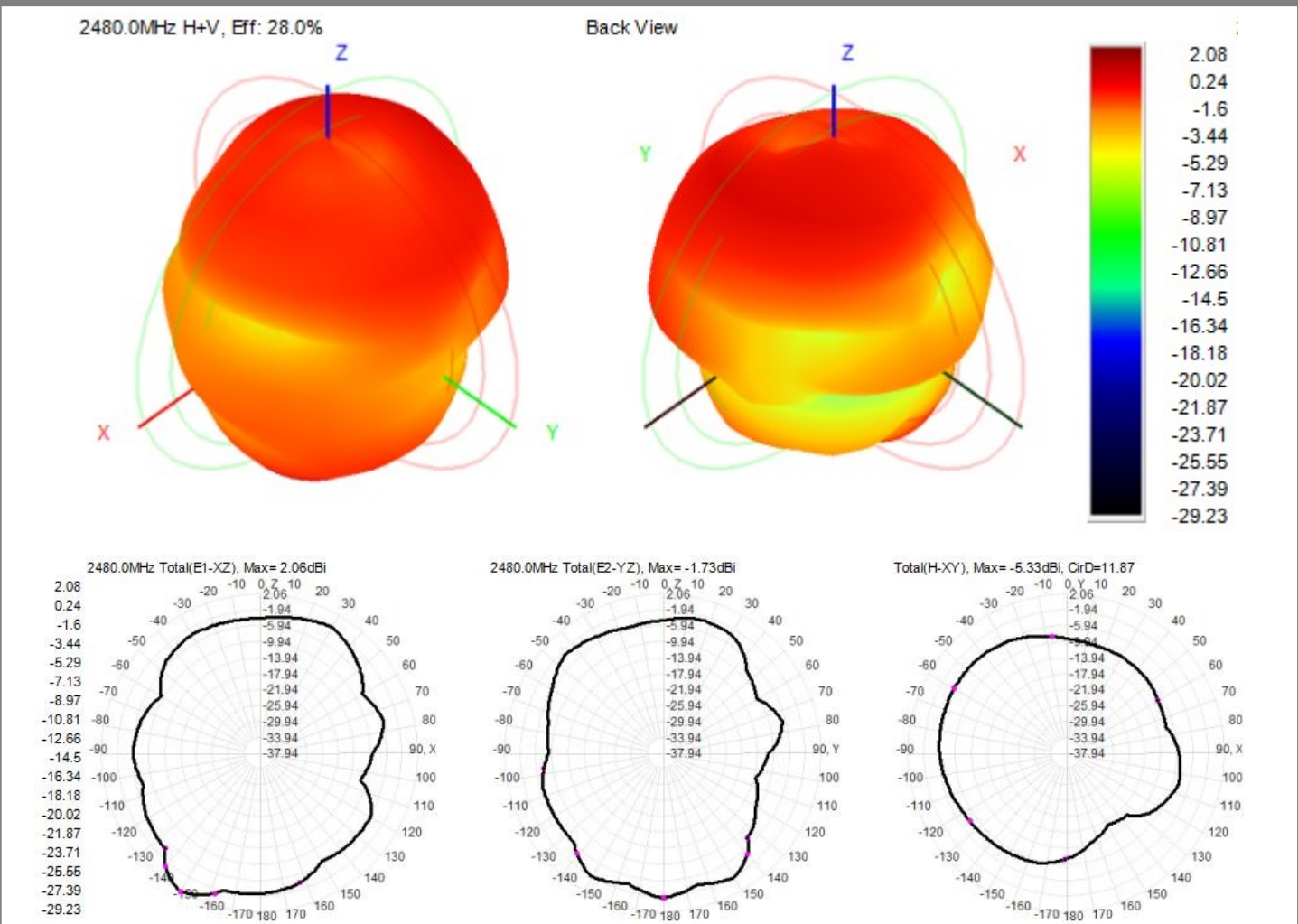
2.45GHz: Maximum gain 2.57dBi

|                                                                                                                                                                          |       |          |                 |
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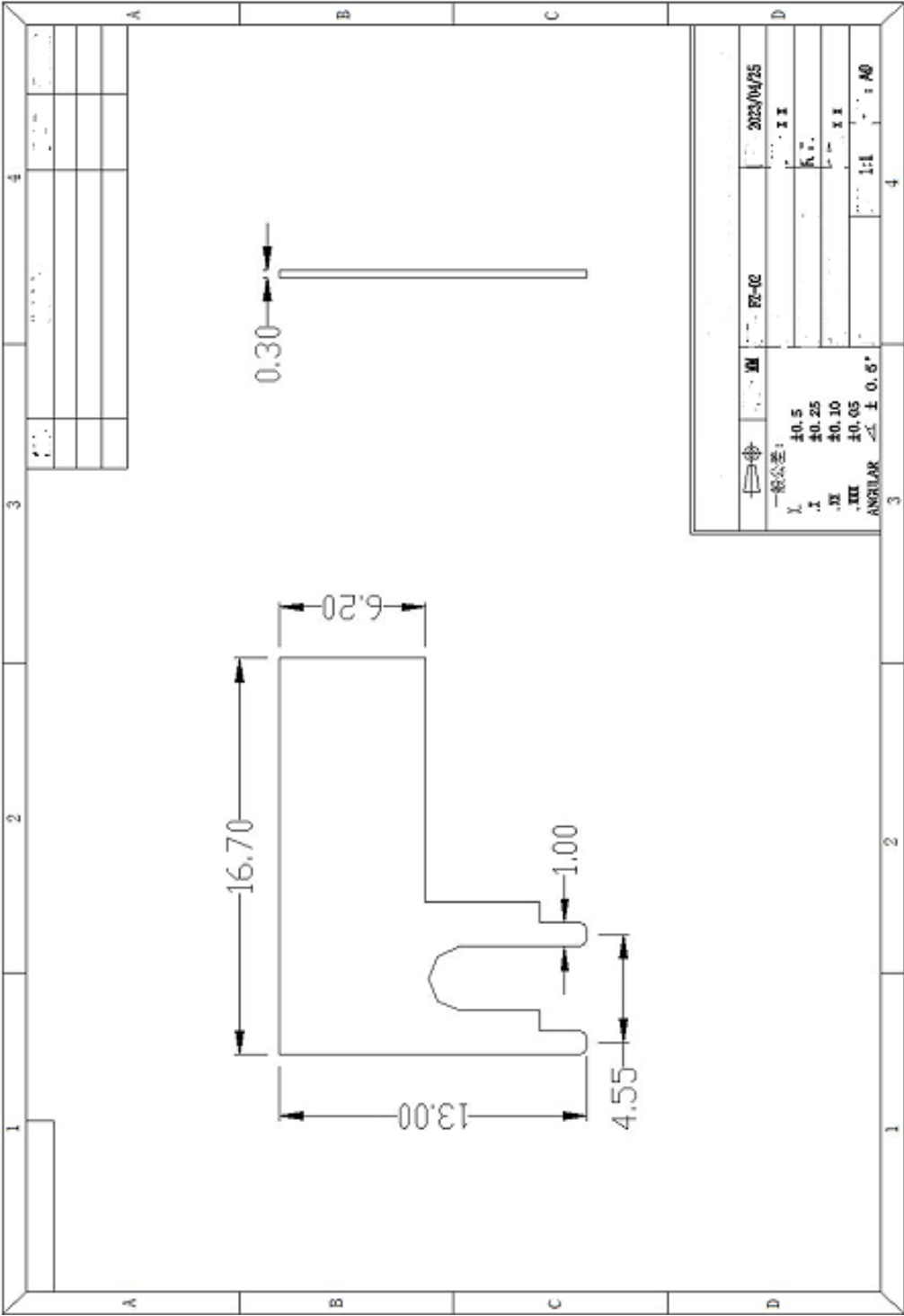
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| Model                                                                                                                                                                                   | K2-BT | Code     | XT088-BT-2.4GHZ |



5.Attached picture:

■5.1: Picture of the finished antenna

|                                                                                                                                                                                         |       |          |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|-----------------|
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6Notes:



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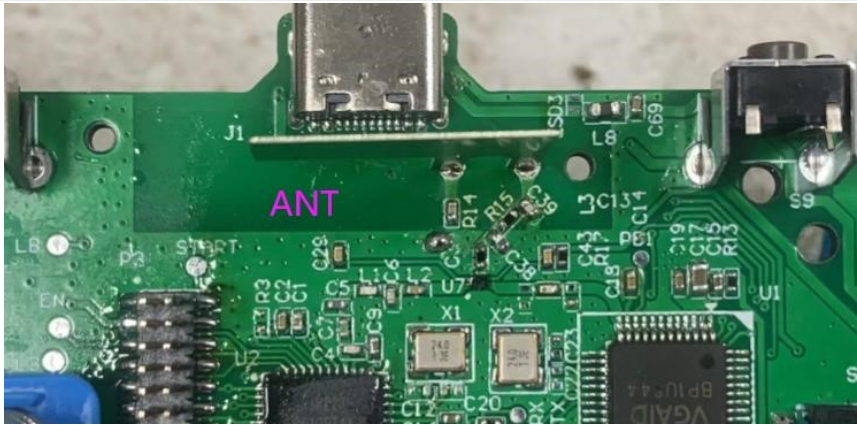
XT-YF-004

Model

K2-B

Code

XT088-BT-2.4GHZ



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