



深圳市星通无线技术有限公司

Shenzhen Xingtong Wireless Technology Co., Ltd

Phone: +86-755- 27850514 Fax: +86- 0755-27850514

Address: 3rd Floor, Building A1, Qiangrong East Industrial Zone,
Jiuwei, Xixiang, Baoan District, Shenzhen

Product Specification

Name of: F3-BT

Product part : 2.4GHZ/BT Shrapnel

| | | |
|--------------|-----------|------------|
| Producer | Ex St | Su A |
| Huang | Wu | 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.



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Date

2023-4-25

versions

A0

File NO.

XT-YF-004

Model

F3-BT

Code

XT028-BT-2.4GHZ

1. Product structure (Product Construction)

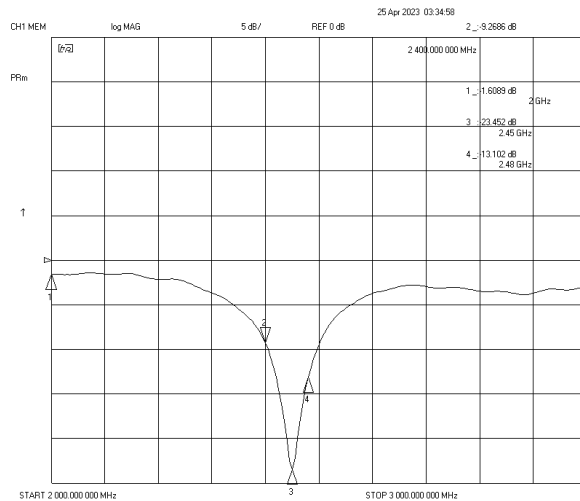
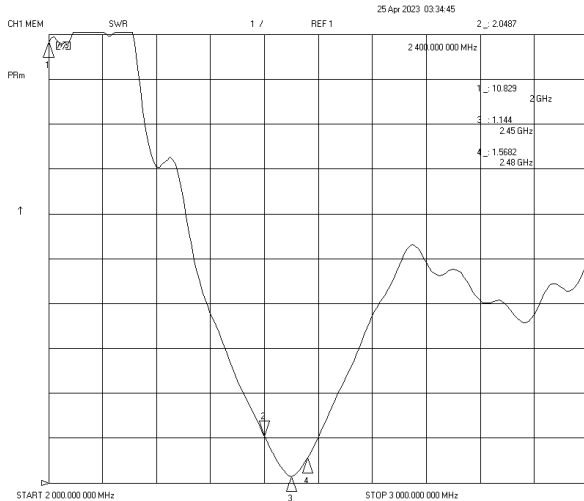
- 1. Antenna material: white copper
- 2. Back glue model: none
- 3. Antenna size: 16.7*13*0.3mm (To ± 0.1)
- 4. Appearance treatment: surface antioxidant treatment

2. Basic information (Parameters)

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

3. Aerial S11 Value

3.1: Antenna standing wave ratio/Loss value



3.2: antenna parameter

■ :

| Fre. | 2400mhz | 2450mhz | 2480mhz |
|-----------|---------|---------|---------|
| SWR(dbm) | 2.0 | 1.1 | 1.5 |
| LOG (dbm) | -9.26 | -23.4 | -13.1 |



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4. Antenna performance(OTA)

■ 4.1: Antenna matching suggestion

Vector impedance modulation is possible

| 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) | -4.90 | -4.91 | -4.80 | -4.80 | -4.84 | -4.69 | -4.64 | -4.66 | -4.43 | -4.50 | -4.48 |
| Gain (dBi) | 0.47 | 0.48 | 0.41 | 0.43 | 0.45 | 0.60 | 0.69 | 0.86 | 1.11 | 1.04 | 1.12 |
| Efficiency (%) | 32.35 | 32.29 | 33.13 | 33.12 | 32.80 | 33.99 | 34.34 | 34.23 | 36.06 | 35.46 | 35.62 |
| Directivity (dB) | 4.43 | 4.73 | 5.01 | 5.13 | 5.29 | 5.29 | 5.33 | 5.51 | 5.55 | 5.54 | 5.60 |
| Peak Gain Position (Theta) | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 | 165.00 |
| Peak Gain Position (Phi) | 180.00 | 180.00 | 180.00 | 180.00 | 180.00 | 180.00 | 180.00 | 180.00 | 180.00 | 180.00 | 180.00 |
| Efficiency ThetaPol (%) | 14.50 | 14.50 | 15.15 | 15.37 | 15.42 | 15.94 | 16.20 | 16.50 | 17.37 | 17.18 | 17.36 |
| Efficiency PhiPol (%) | 17.86 | 17.79 | 17.98 | 17.75 | 17.38 | 18.05 | 18.14 | 17.73 | 18.68 | 18.28 | 18.26 |
| Upper Hem. Efficiency (%) | 17.51 | 17.43 | 17.83 | 17.77 | 17.52 | 18.05 | 18.25 | 18.25 | 19.35 | 19.14 | 19.30 |
| Lower Hem. Efficiency (%) | 14.84 | 14.86 | 15.30 | 15.35 | 15.28 | 15.94 | 16.09 | 15.97 | 16.71 | 16.32 | 16.33 |





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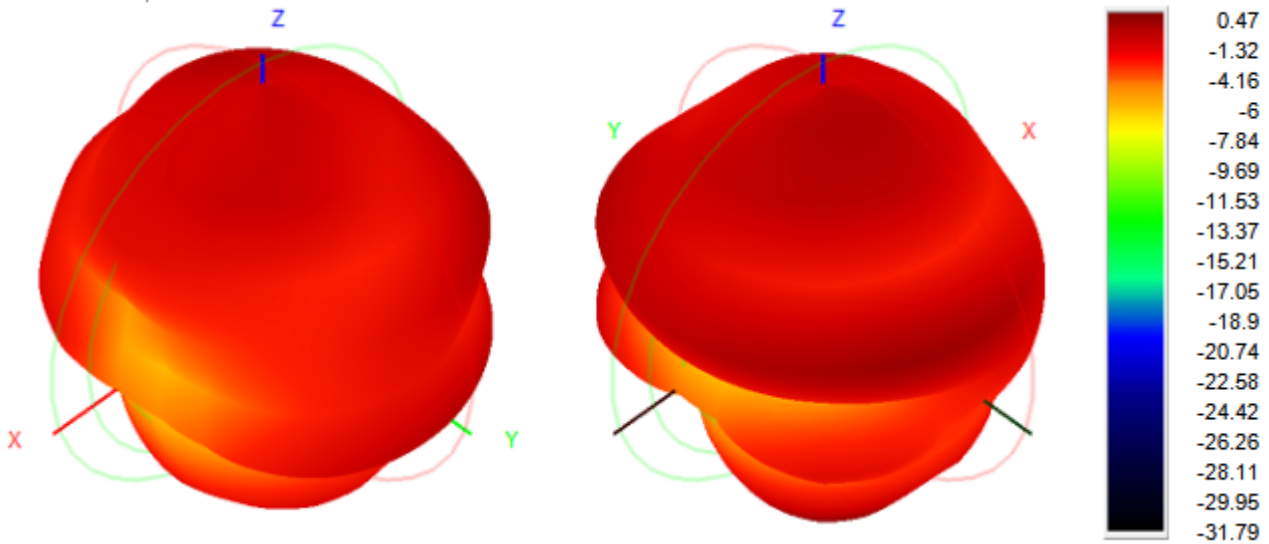
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■ 4.3: OTA-2.4G-3D

2.4GHz: -0.47dBi

2400.0MHz H+V, Eff: 32.4%

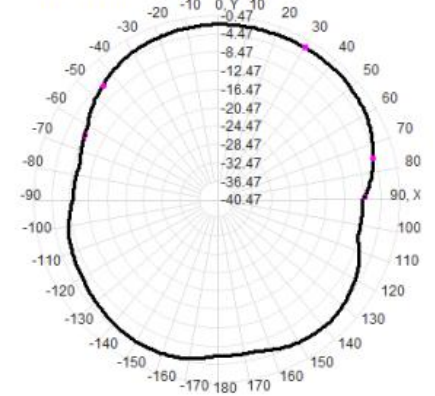
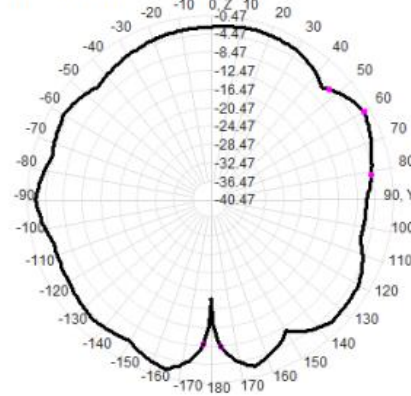
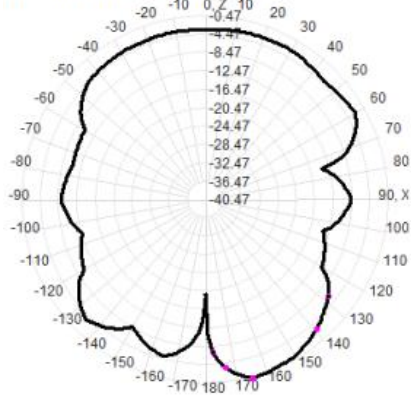
Back View



2400.0MHz Total(E1-XZ), Max= 0.47dBi

2400.0MHz Total(E2-YZ), Max=-2.02dBi

Total(H-XY), Max=-2.30dBi, CirD=7.30





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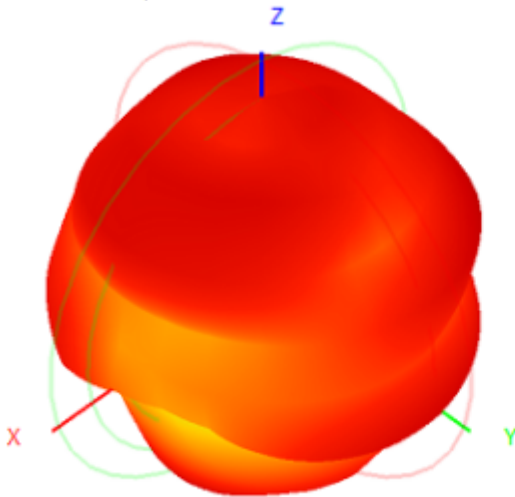
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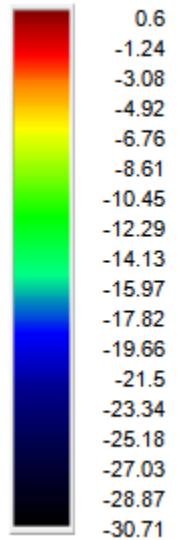
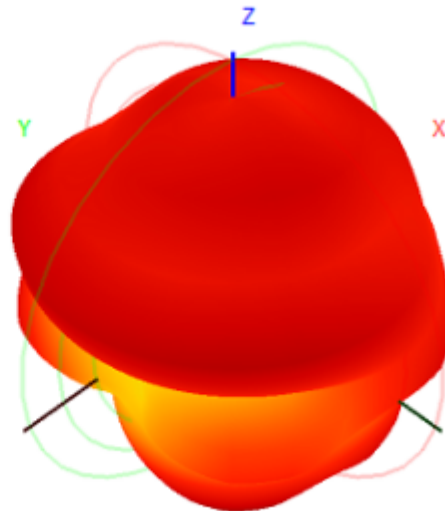
XT028-BT-2.4GHZ

2.45GHz: 0.6dBi

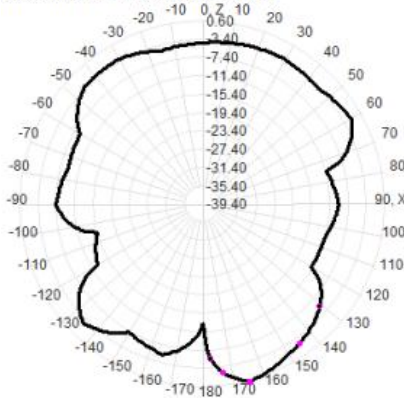
2450.0MHz H+V, Eff: 34.0%



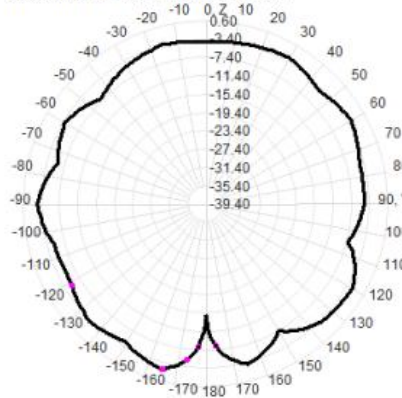
Back View



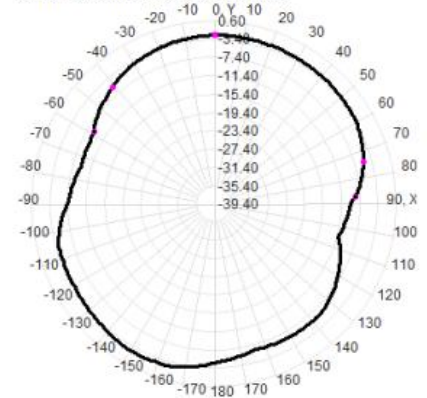
2450.0MHz Total(E1-XZ), Max= 0.60dBi



2450.0MHz Total(E2-YZ), Max= -2.19dBi



Total(H-XY), Max= -2.55dBi, CirD=8.86





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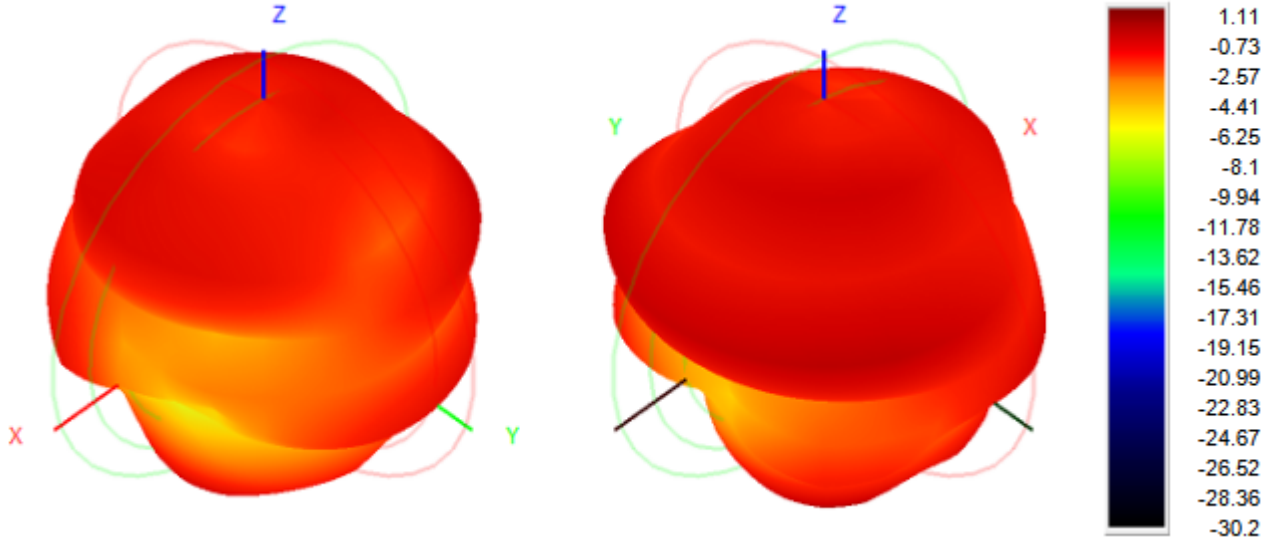
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XT028-BT-2.4GHZ

2.48GHz: 1.11dBi

2480.0MHz H+V, Eff: 36.1%

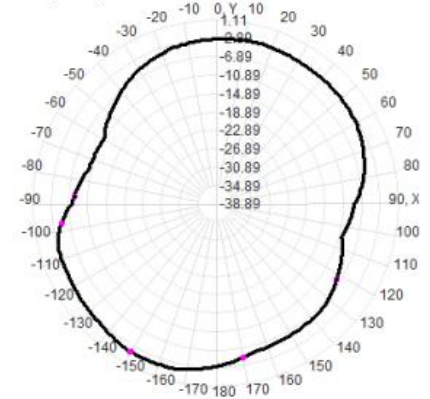
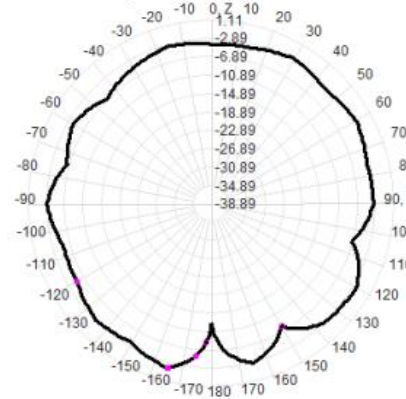
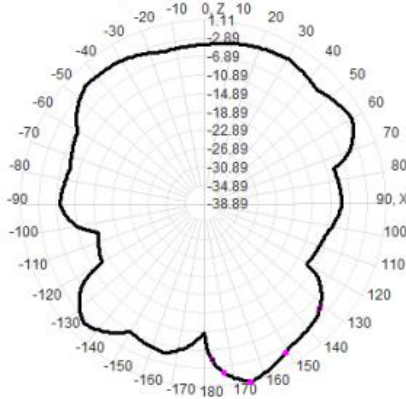
Back View



2480.0MHz Total(E1-XZ), Max= 1.11dBi

2480.0MHz Total(E2-YZ), Max= -2.06dBi

Total(H-XY), Max= -1.80dBi, CirD=8.95





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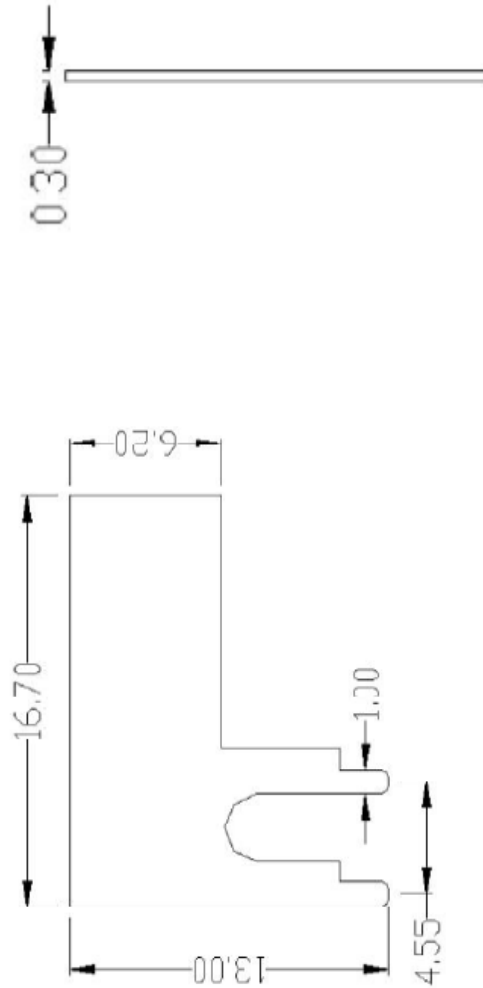
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5. Figure:

■ 5.1: Antenna diagram

Unit:mm





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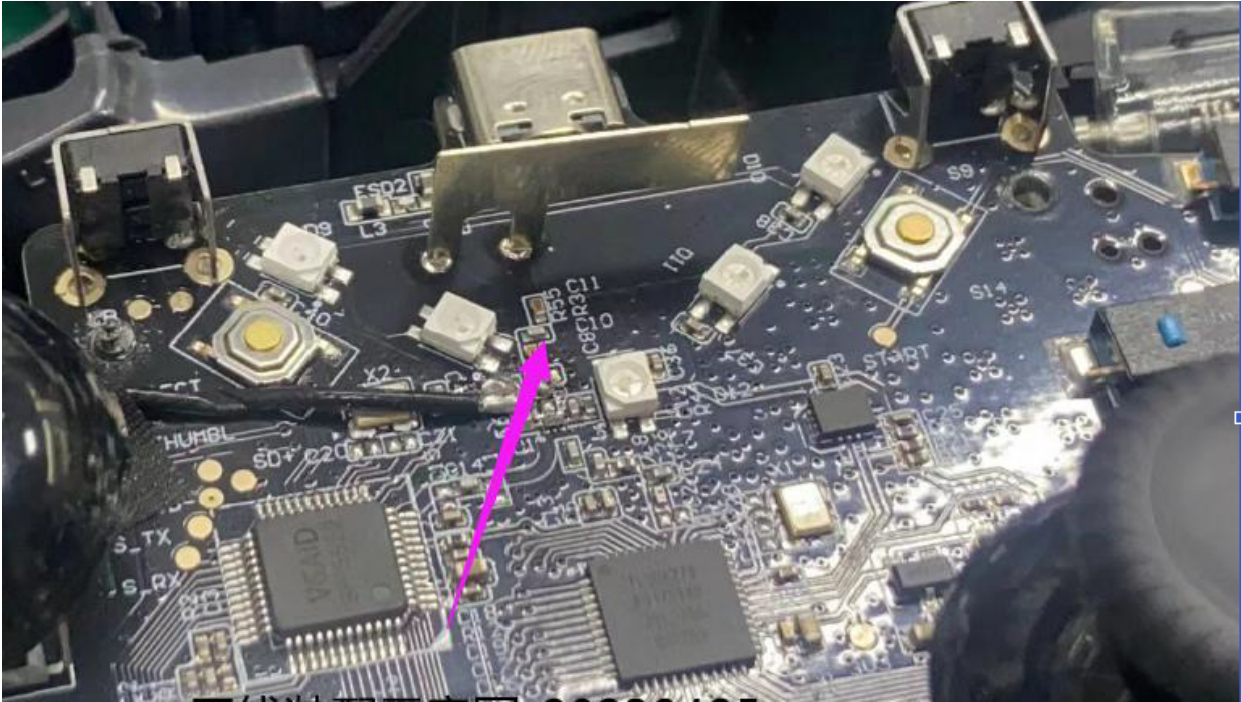
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6 matters need attention:



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