



Shenzhen xingtong wireless technology co.,  
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Jiuwei, Xixiang, Baoan District, Shenzhen

# SPECIFICATION

Project Name: PB700K3

Product Name: PB700K3 WIFI/BT Antenna

Product part number: ANT-PB700K3-WIFI-RF1-XT001

Product part number:	Product part number:	Product part number:
Huangjiajun	Wu Yanlong	2024-02-21



Date	2024-02-21
Version	A0
File number	XT-YF-004
Product model	PB700K3-WIFI-ANT
Product number	

Shenzhen Xingtong Wieress Technology Co., Ltd

Product model PB700K3-WIFI-ANT

Product number

### 1.Product Constrution:

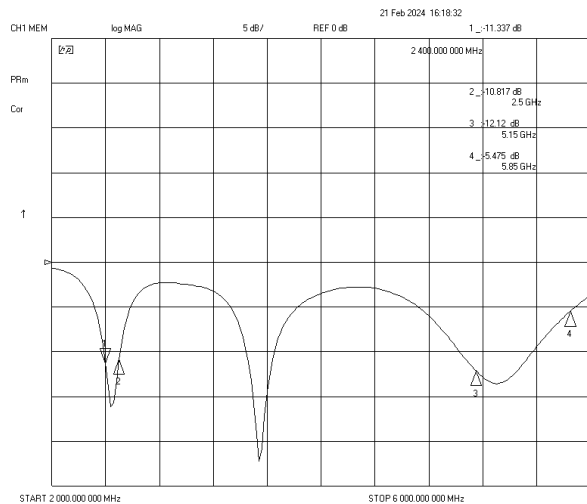
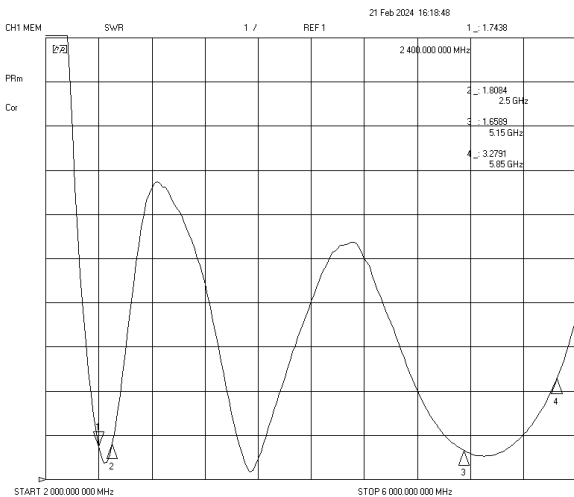
- 1. Antenna material: FPC
- 2. Back glue model: 3M300LE
- 3. Antenna size: 31.1 \* 24.25 (tolerance ± 0.1)
- 4. Coaxial line size: 42mm ∅ 0.81-3rd generation IPEX
- 4. Appearance treatment: Surface antioxidant treatment

### 2. parameters

- Scope of use: Customer supplied machines
- Antenna frequency: 2400-2484mhz 5150-5850mhz
- Antenna free space average gain: 2.4G ≥ 1.22dbi 5.8G ≥ 1.53dbi
- Antenna impedance: 50 ohms
- Polarization mode: horizontal/vertical
- Installation method: Connect the IPEX terminal wire to the motherboard
- Packaging method: Use PE bag+packaging box

### 3.S11 value of antenna (S11)

- 3.1: Antenna standing wave ratio/return loss value



- 3.2: Antenna parameters:

Frequency point	2400mhz	2500mhz	5150Mhz	5850Mhz
SWR(dbm)	1.74	1.80	1.65	3.27
LOG (db)	-11.33	-10.81	-12.12	-5.47



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## 4. Antenna performance (OTA)

### ■ 4.1: Antenna matching suggestions

The antenna cannot be subjected to vector impedance modulation.

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

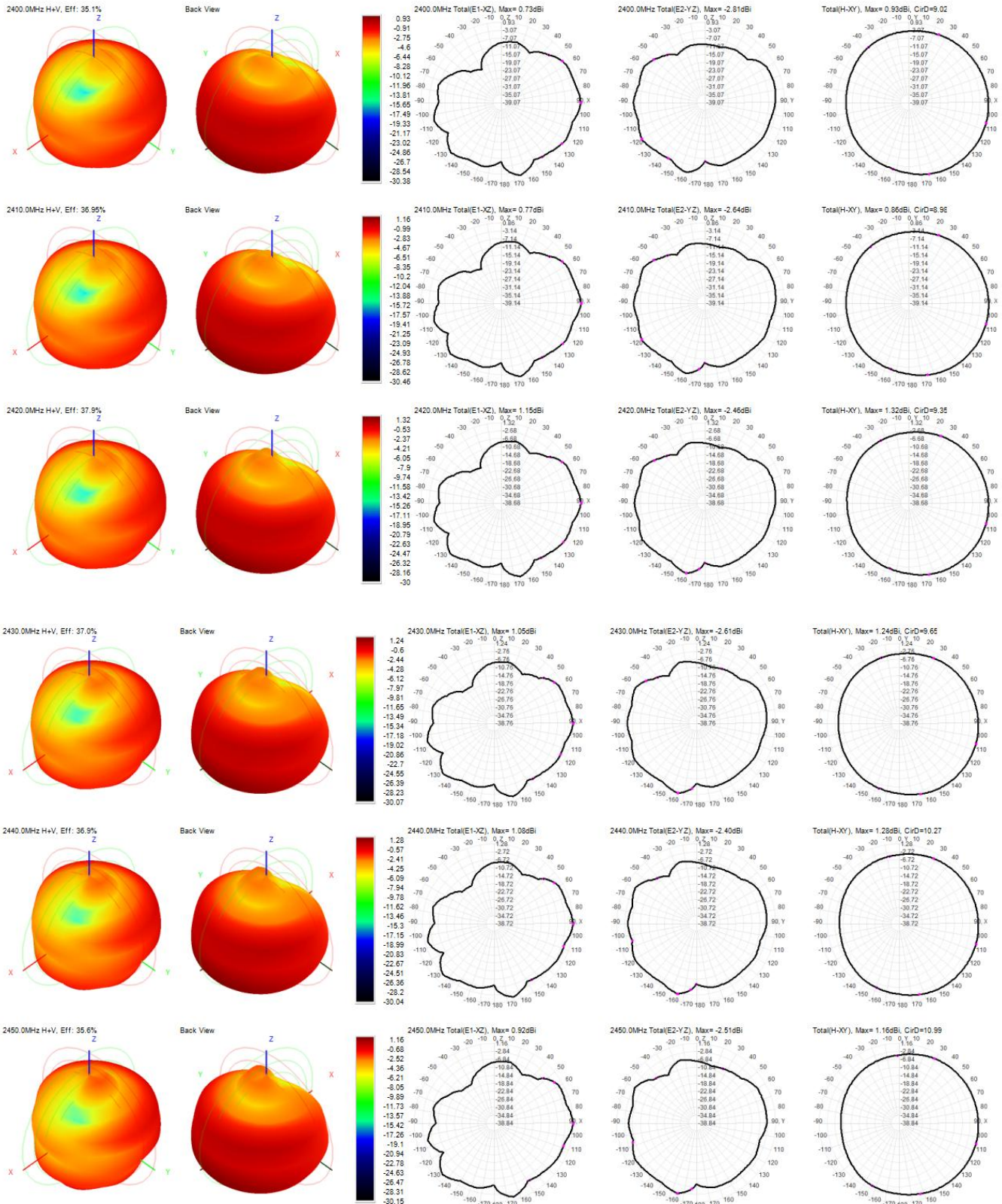
#### 4.2.1: 2.4G-WIFI/BT-2D

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)	-4.55	-4.32	-4.21	-4.32	-4.33	-4.48	-4.57	-4.80	-5.03	-5.43	-5.91
Gain (dBi)	0.93	1.16	1.32	1.24	1.28	1.16	1.11	0.92	0.73	0.37	-0.06
Efficiency (%)	35.06	36.95	37.93	36.97	36.94	35.63	34.90	33.14	31.42	28.64	25.67
Directivity (dB)	5.48	5.42	5.53	5.56	5.60	5.64	5.68	5.71	5.76	5.80	5.85
Peak Gain Position (Theta)	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
Peak Gain Position (Phi)	195.00	195.00	195.00	195.00	195.00	195.00	195.00	195.00	195.00	195.00	180.00
Efficiency ThetaPol (%)	32.32	33.02	34.69	33.51	33.32	31.72	30.85	29.19	27.40	24.84	22.04
Efficiency PhiPol (%)	2.74	2.93	3.25	3.46	3.62	3.91	4.05	3.95	4.02	3.80	3.63
Upper Hem. Efficiency (%)	16.04	17.80	17.06	16.61	16.56	15.86	15.36	14.36	13.49	12.24	10.99
Lower Hem. Efficiency (%)	19.01	19.15	20.88	20.36	20.37	19.77	19.54	18.78	17.94	16.40	14.69

#### 4.2.2: 5.8G-WIFI-2D

Frequency ID	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Frequency (MHz)	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
Efficiency (dBi)	-4.01	-3.20	-2.97	-3.78	-3.44	-2.95	-4.02	-3.85	-2.83	-4.12	-4.02	-3.08	-3.77	-4.46	-2.86
Gain (dBi)	1.48	1.46	2.08	1.48	2.53	2.48	2.00	2.09	3.08	1.78	1.28	1.79	1.64	1.02	2.58
Efficiency (%)	39.72	47.88	50.52	41.86	45.26	50.72	39.61	41.21	52.17	38.73	39.61	49.22	42.00	35.78	51.72
Directivity (dB)	4.49	4.66	5.05	5.26	5.97	5.43	6.02	5.94	5.90	4.90	5.30	4.86	5.40	5.48	5.44
Peak Gain Position (Theta)	90.00	75.00	75.00	90.00	75.00	60.00	60.00	60.00	60.00	90.00	90.00	60.00	75.00	90.00	75.00
Peak Gain Position (Phi)	30.00	15.00	30.00	30.00	30.00	15.00	15.00	15.00	15.00	45.00	45.00	15.00	165.00	45.00	45.00
Efficiency ThetaPol (%)	17.62	21.75	22.62	19.00	20.53	24.15	19.63	20.98	27.15	20.38	20.82	26.50	21.82	18.75	27.28
Efficiency PhiPol (%)	22.10	26.14	27.90	22.86	24.73	26.57	19.97	20.23	25.02	18.35	18.79	22.72	20.17	17.03	24.44
Upper Hem. Efficiency (%)	23.41	28.09	29.68	24.56	25.90	28.34	21.49	22.60	27.92	20.56	21.28	26.28	22.55	19.10	26.29
Lower Hem. Efficiency (%)	16.31	19.79	20.83	17.29	19.36	22.38	18.12	18.60	24.26	18.17	18.33	22.94	19.44	16.68	25.43

### 4.2.3: WIFI OTA-2.4G-3D







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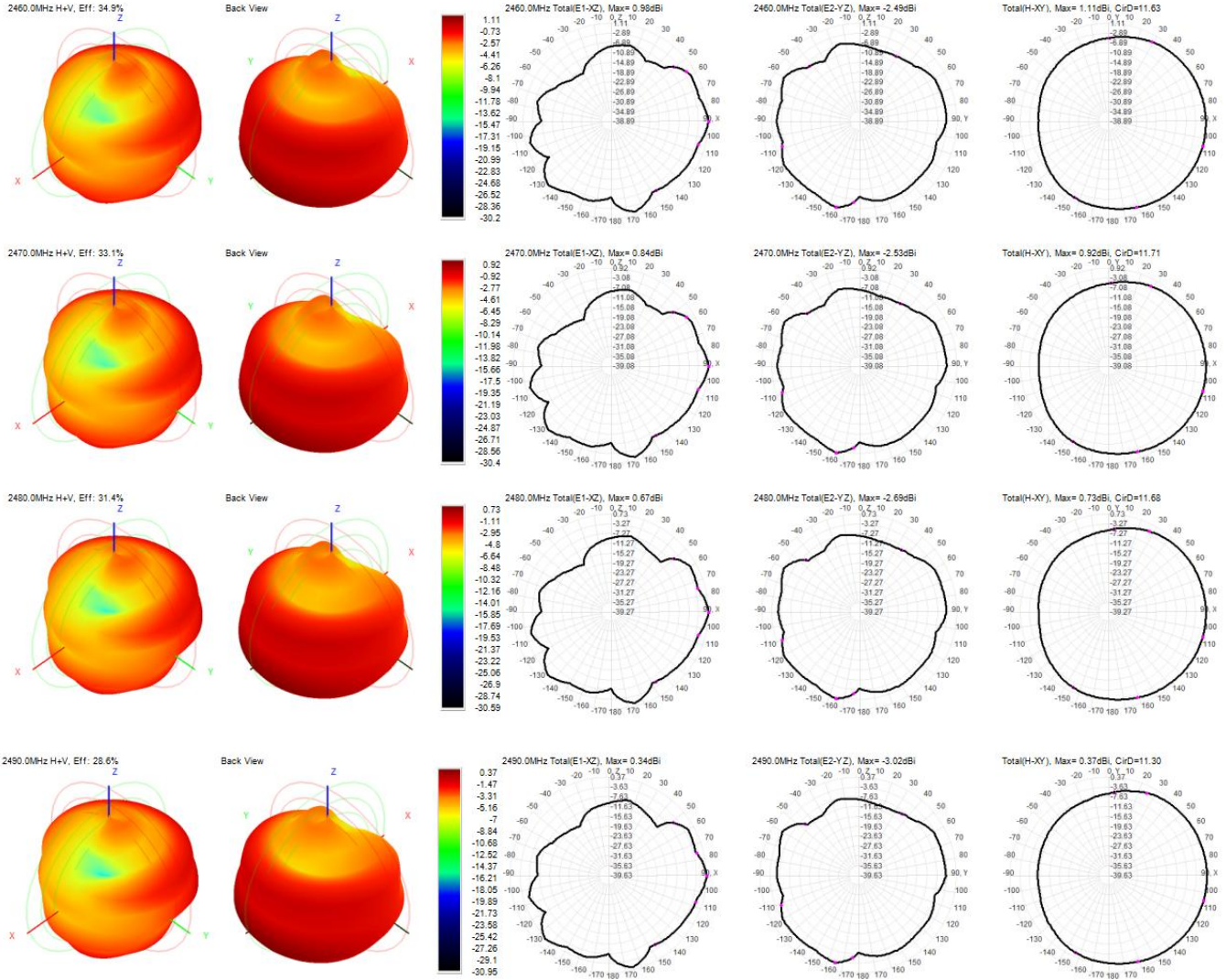
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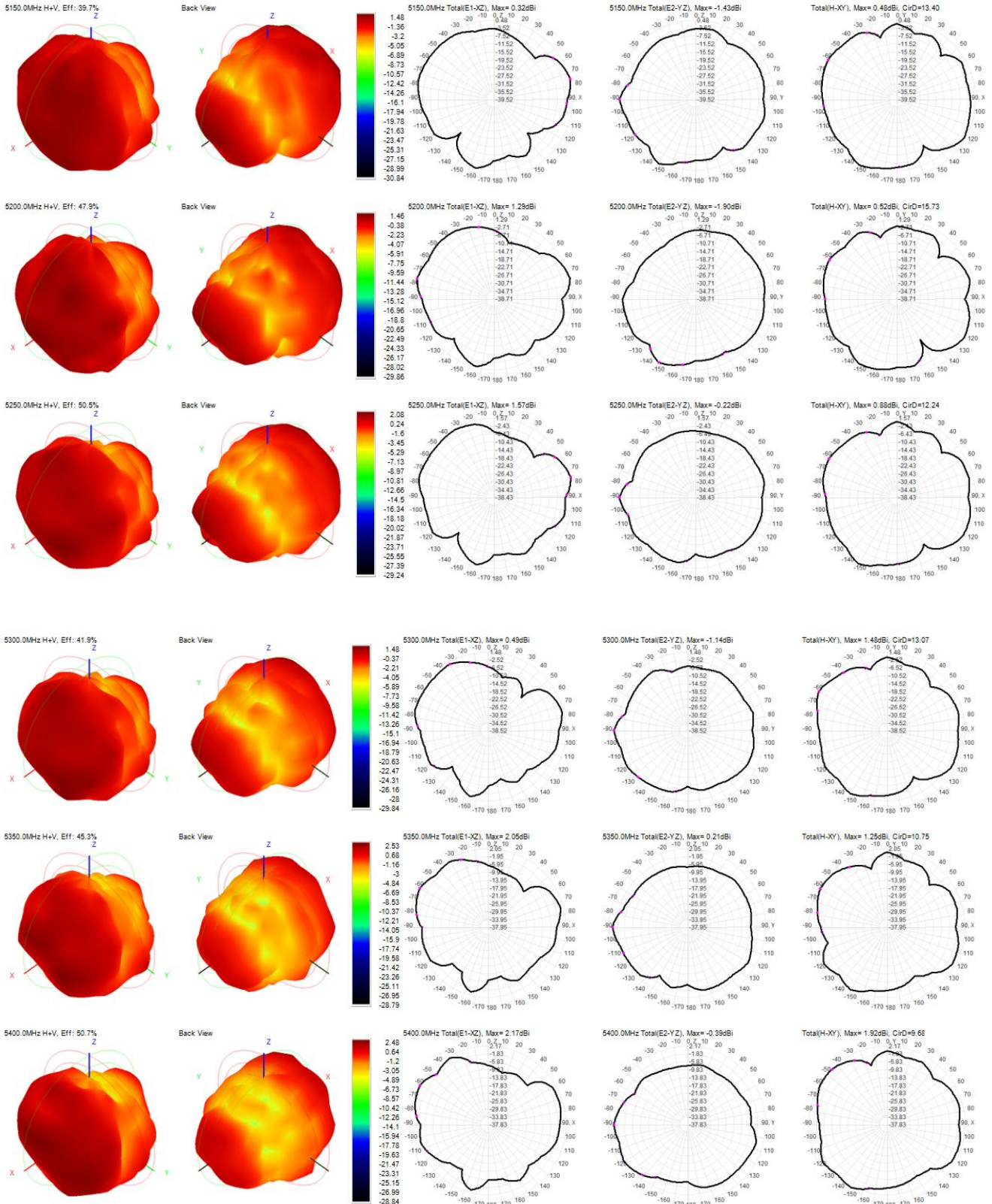
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4.2.4: WIFI-OTA-5.8G-3D







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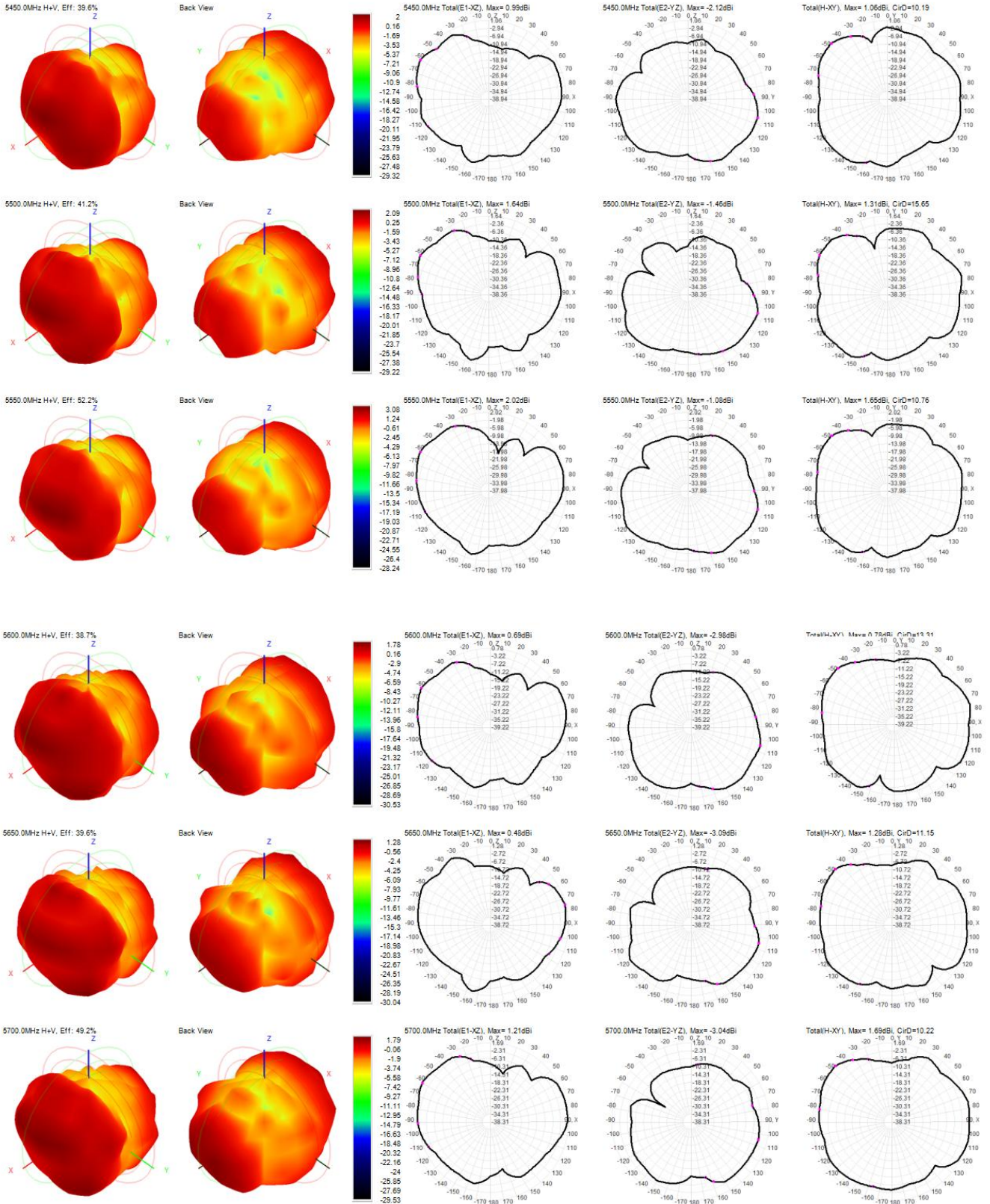
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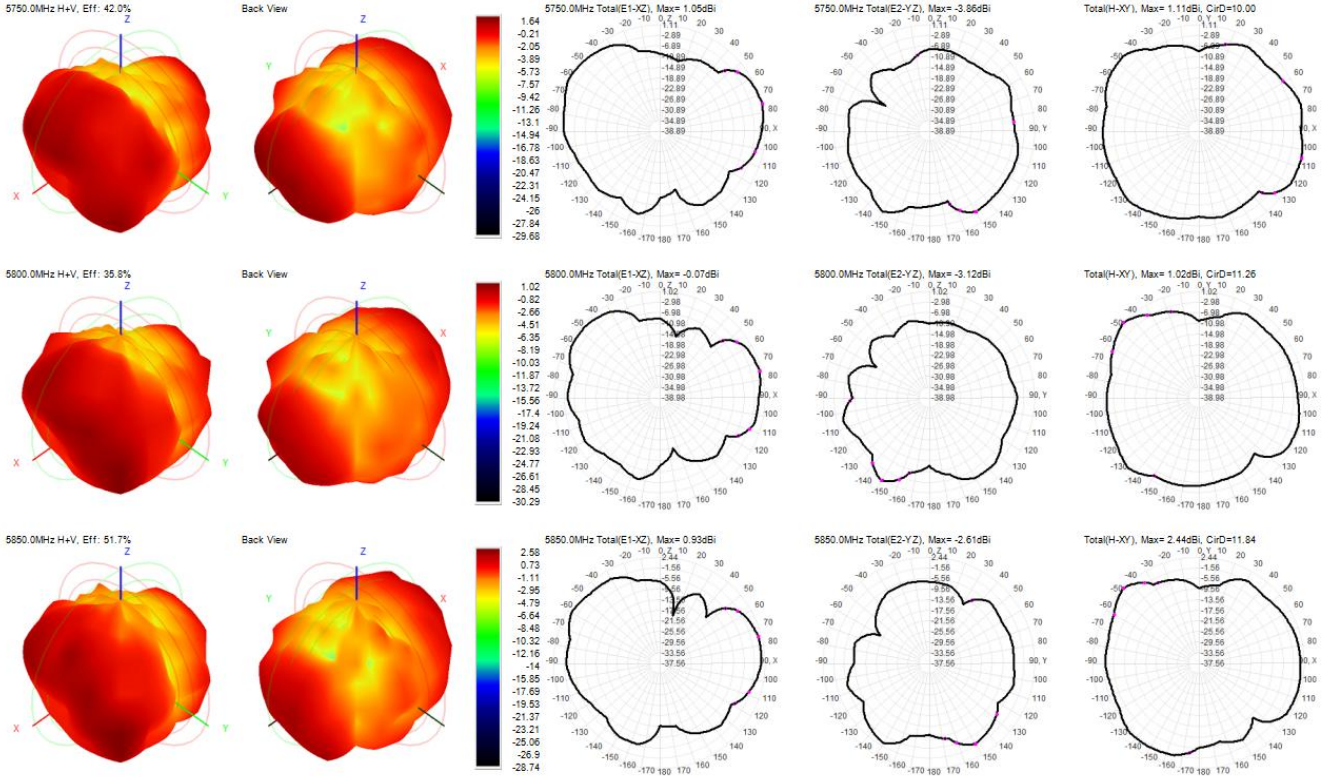
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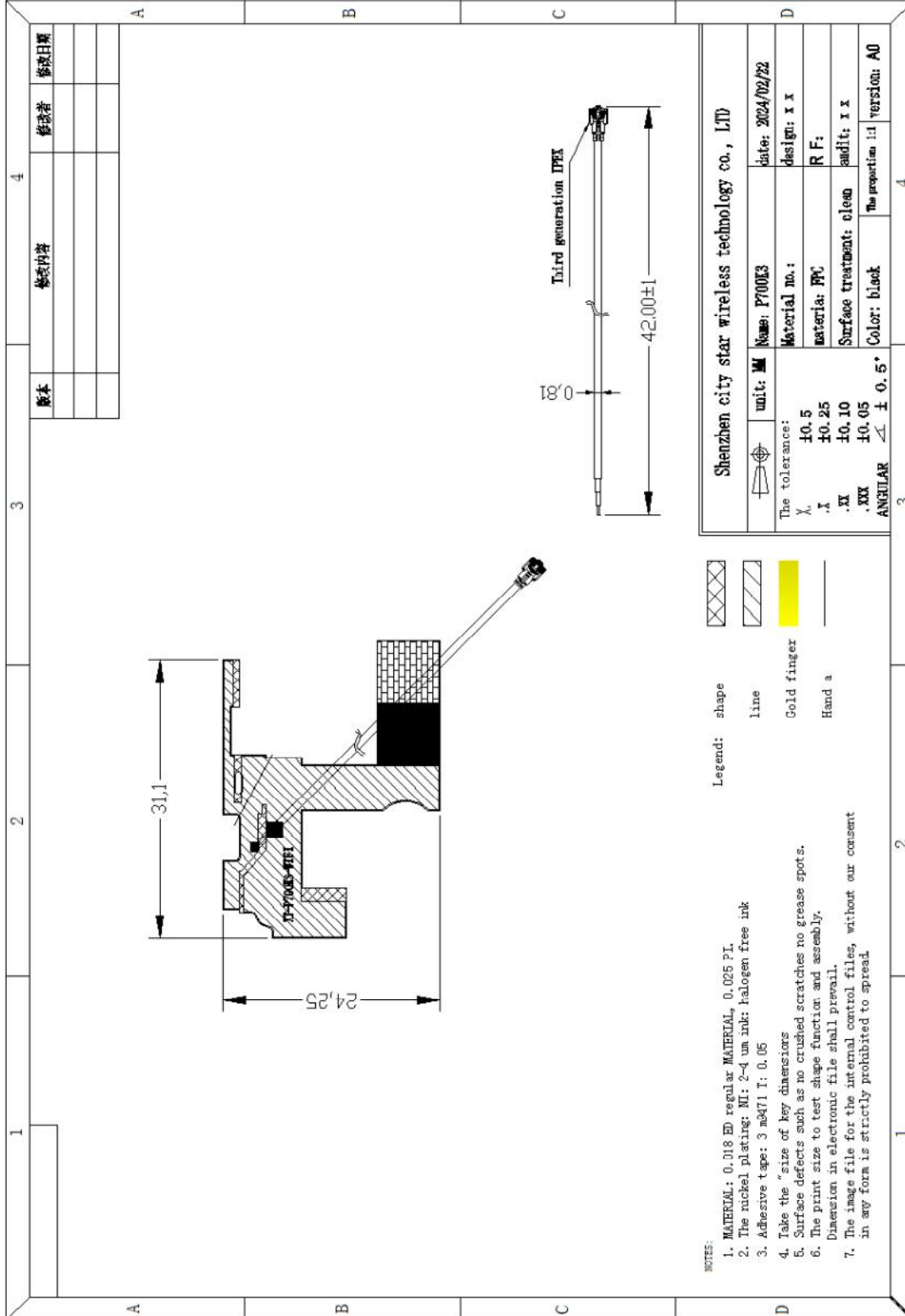
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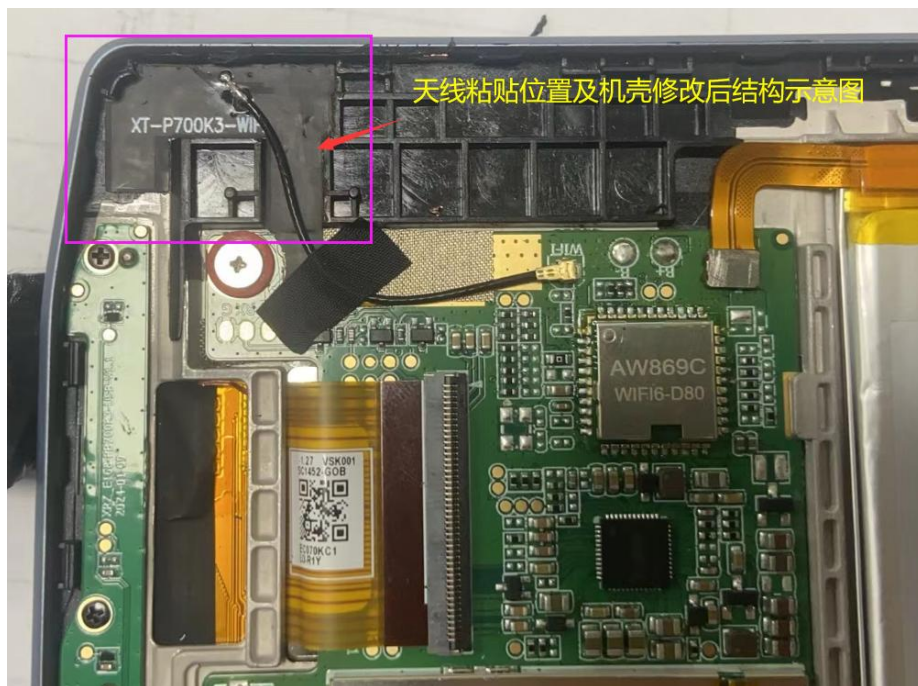
### 5. Attached image:

#### 5.1: Finished antenna diagram



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## 6. Notes:



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