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

Product specification

Product number：V8

Product name：V8 WIFI/BT ANT

Product item number： 2025-07-11-V1

Producer	Audit	Date
Huangjiajun	Wu Yanlong	2025-7-11

Customer confirmation:：

Customer name: Shenzhen Hongding Weishi Technology Co., Ltd
Approval ： Date ：
Notes ：

Please sign and stamp the document before returning it to our company for archiving. Thank you for your cooperation!

星通无线 XTWX Shenzhen Xingtong Wieress Technology Co., Ltd		Date	2025-7-11
		Version	A0
		File number	XT-YF-004
Product model	V8 WIFI-ANT	Product number	V8 APP-RA

1.Product Constrution

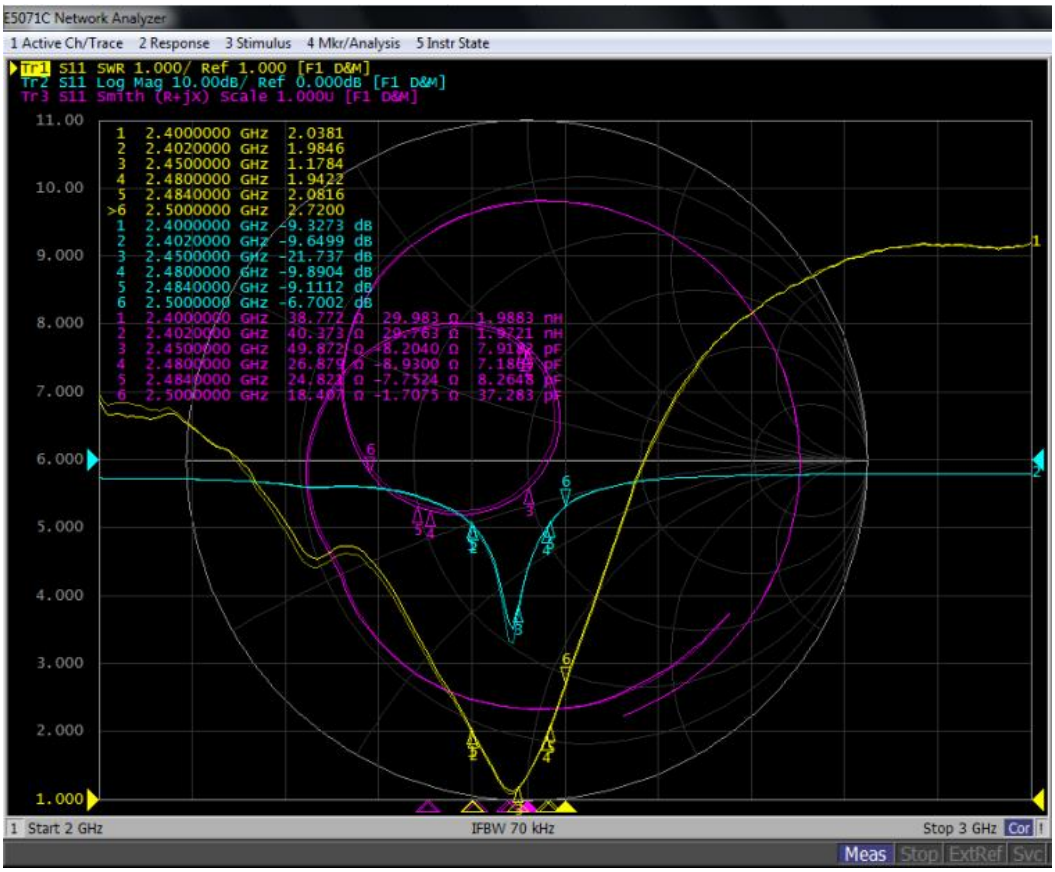
- 1.Antenna material: FPC
- 2.Adhesive model: 3M9471
- 3.Antenna size: 19.91mm * 15.75mm * 0.2mm (length and width tolerance ± 0.1mm, thickness tolerance ± 0.02mm)
- 4.Coaxial dimension: 82 ₵ 0.81 fourth generation IPEX (tolerance ± 1.0mm)

2. Parameter index

- Scope of use: Customer supplied machines
- Antenna frequency: 2.4G (2402-2484MHz)
- Antenna impedance: 50 Ω
- Antenna standing wave:<2.08
- Return loss:<-21.73 db
- Maximum gain of antenna: 1.34dbi
- Polarization mode: vertical/horizontal
- Power capacity: 5W
- Installation method: Connect the terminal wire to the motherboard

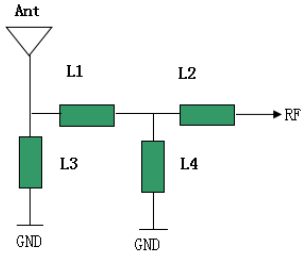
3.S11 value of antenna (S11)

- 3.1: Antenna standing wave ratio/loss value -2.4G



4.Antenna performance (OTA)

■ 4.1：Antenna matching suggestions



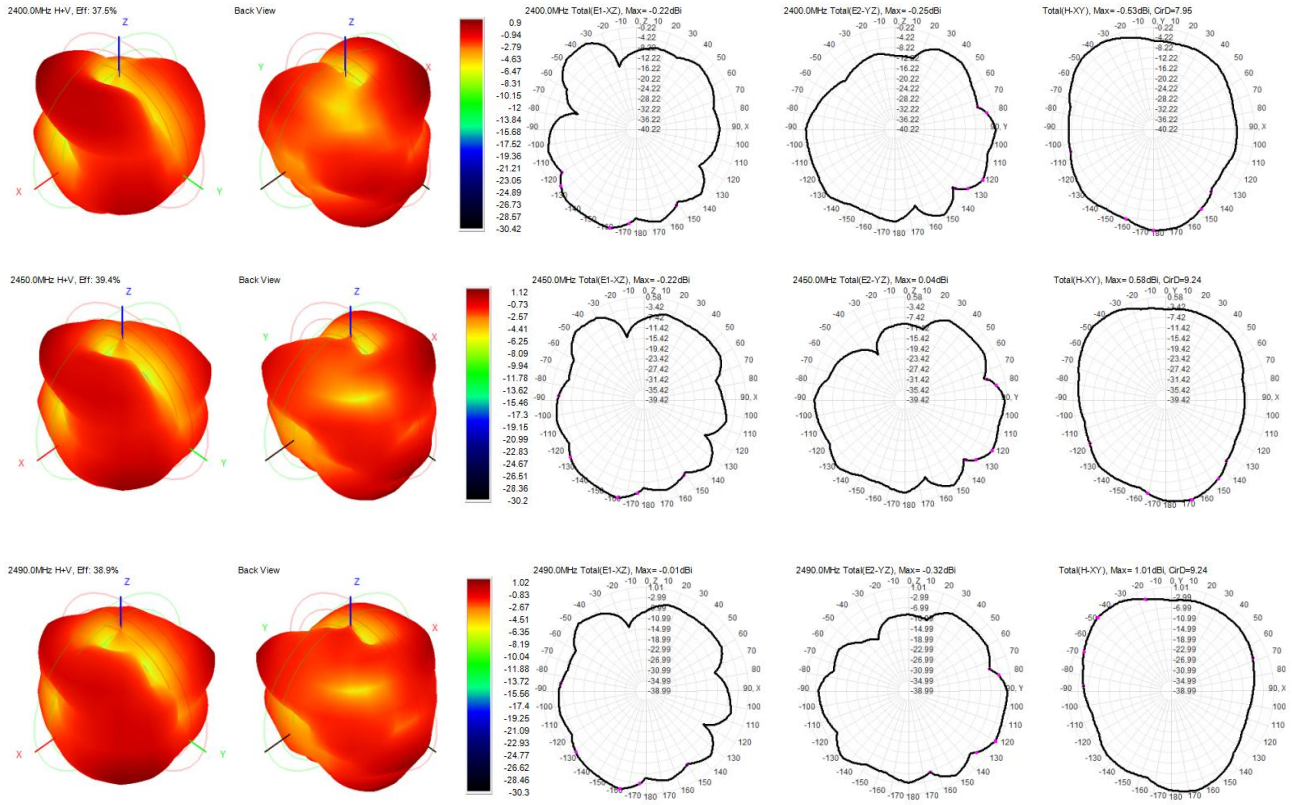
Antenna	
Element	Value
L1 (0201)	
L2 (0201)	
L3 (0201)	
L4 (0201)	
匹配无修改	

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

4.2.1： 2.4G-2D

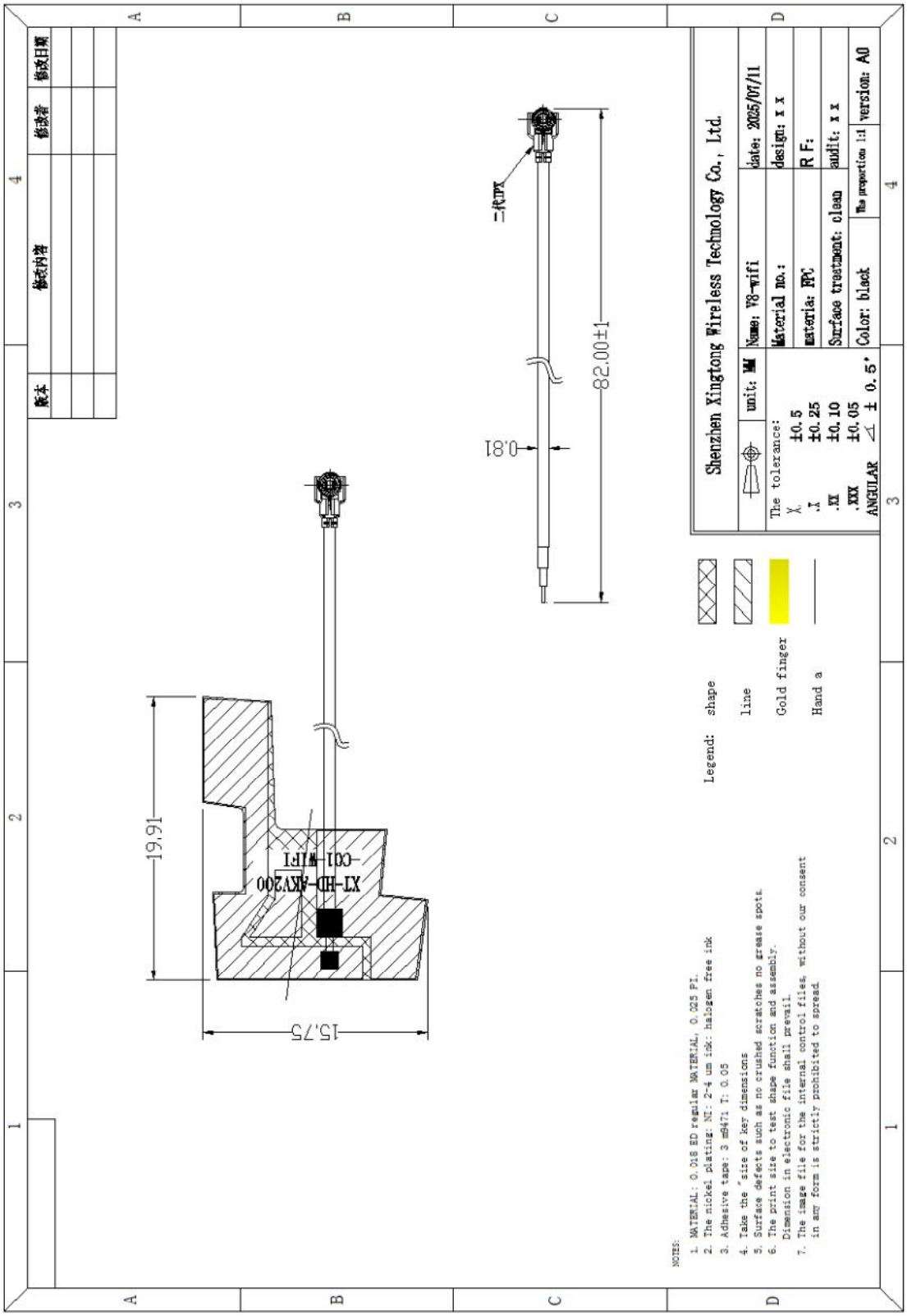
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-4.25	-4.28	-4.10	-4.12	-4.38	-4.05	-4.12	-4.34	-3.93	-4.10	-4.15
Gain (dBi)	0.90	0.81	1.03	1.06	0.77	1.12	1.03	0.89	1.34	1.02	1.01
Efficiency (%)	37.55	37.30	38.90	38.70	36.47	39.40	38.76	36.80	40.44	38.93	38.46
Directivity (dB)	5.15	5.10	5.13	5.19	5.15	5.16	5.14	5.23	5.27	5.11	5.16
Peak Gain Position (Theta)	45.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	90.00
Peak Gain Position (Phi)	300.00	255.00	255.00	240.00	240.00	255.00	255.00	255.00	255.00	255.00	45.00
Efficiency ThetaPol (%)	22.01	21.73	22.69	22.68	21.18	22.58	22.03	21.01	22.97	21.94	21.82
Efficiency PhiPol (%)	15.54	15.58	16.21	16.02	15.29	16.81	16.73	15.78	17.47	17.00	16.64
Upper Hem. Efficiency (%)	16.78	16.46	17.06	16.97	16.00	17.35	17.13	16.34	18.05	17.48	17.30
Lower Hem. Efficiency (%)	20.77	20.85	21.84	21.73	20.48	22.05	21.63	20.46	22.38	21.45	21.16

4.2.1： 2.4G-3D



5. Attached image:

■ 5.1：Antenna finished product diagram



6. Maintenance verification:

Tests/test items	Maintainability	Inspection order number
Product name/specification	WIFI built-in fpc antenna	Test quantity: 5PCS
Date of inspection: 2025-7-11		Completiondate: 2025-711

Test/inspection equipment:

1. The tensile tester tests 5 times. (The tester is shown in the figure)

Note: Uniform speed test is required, not extreme speed test.

Projects / Condition	Maintaining force between terminal and cable ≥ 0.6kgf.				
Test times	1	2	3	4	5
test result	0.6	0.7	0.7	0.9	0.7

Test/inspection result: acceptable

Test/inspection judgment: ■Qualified ☐Unqualified ☐Make no judgment

Test: Zhu Yongjian Audit: Wu Yanlong

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	Ok
2	weldability	245℃, 5s, smooth tin surface, solder surface≥95%	Tin furnace	Ok
3	Pulling force	N/A	tautness meter	Ok
4	Reverse pulling force	N/A	tautness meter	Ok
5	Peel strength (covering film)	≥0.35kg/cm	peel strength	Ok
6	Peel strength (copper foil)	≥0.8kg/cm	peel strength	Ok
7	Hot melt adhesive fluidity	0.1～0.15	/	Ok

7. Matters needing attention:

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