



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: E150

Product name: E150-FPC-WIFI-ANT

Product item number: ANT-E150WIFISF-XT001

Producer	Audit	Date
Huangjiajun	Wu Yanlong	2024-10-15

Customer confirmation:

Customer name: Shenzhen Xinruizhi Industrial 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!

 Shenzhen Xingtong Wieress Technology Co., Ltd		Date	2024-10-15
		Version	A0
		File number	XT-YF-004
Product model	E150-WIFI antenna	Product number	E150-WIFI-APP

1.Product Constrution:

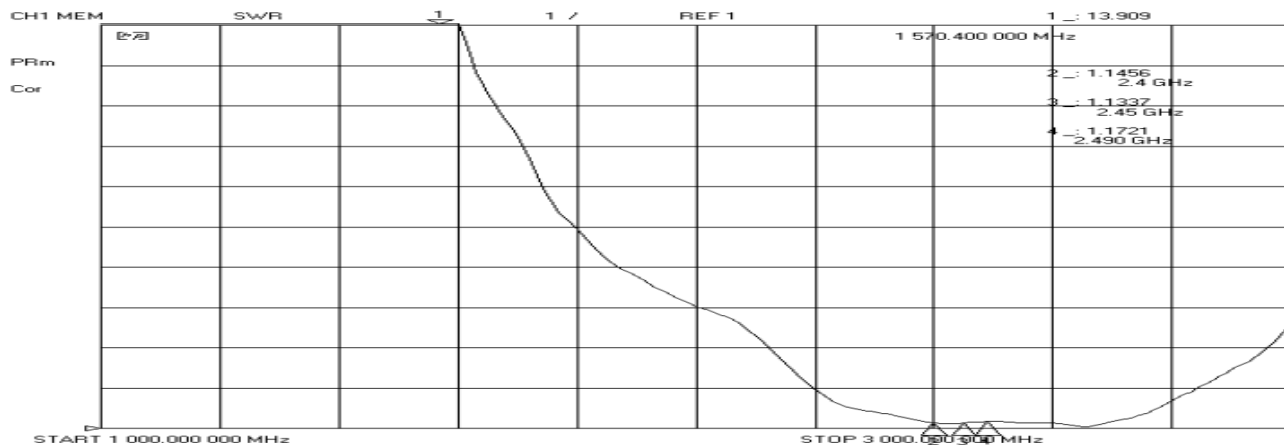
- 1. Antenna material: FPC
- 2. Adhesive tvne: 3M9471
- 3. Antenna size: 28.9*16.55 (Tolerance+0.2)
- 4. Coaxial line size: 90 * 0.81 single head third-generation IPEX terminal (tolerance $\pm 1.0\text{mm}$)

2. parameters

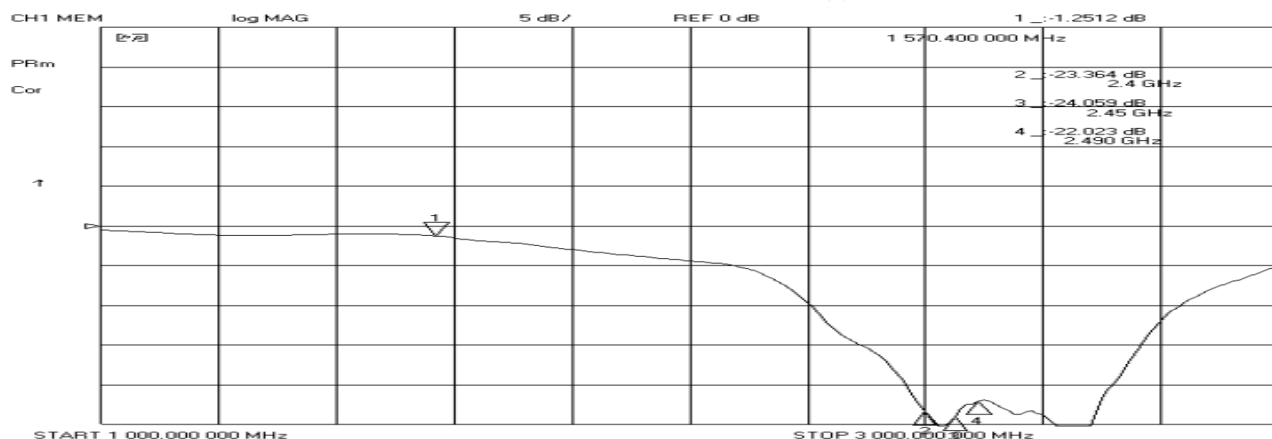
- Scope of use: customer-supplied machines
- Antenna frequency: 2400-2500Mhz
- Polarization method: horizontal/vertical
- Antenna free space gain: 2.4G/2.9dhi (max)
- Installation mode: terminal wire is welded to motherboard OUT
- Packing method: use PE bag+packing box

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 matching recommendations

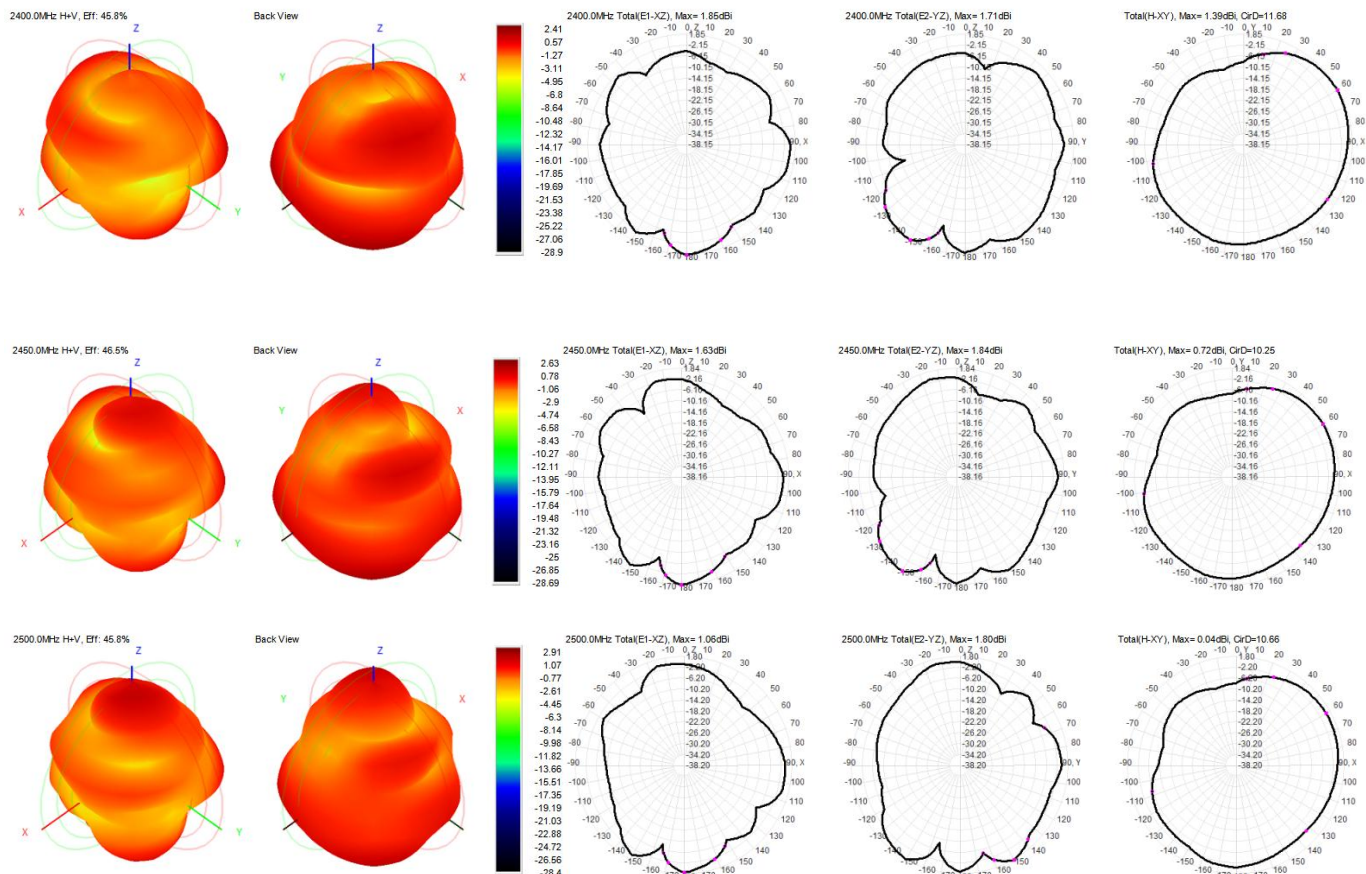
Matching without modification

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)	-3.39	-3.39	-3.30	-3.30	-3.41	-3.32	-3.38	-3.49	-3.36	-3.42	-3.40
Gain (dBi)	2.41	2.56	2.73	2.67	2.56	2.63	2.67	2.67	2.90	2.88	2.91
Efficiency (%)	45.78	45.84	46.72	46.77	45.60	46.53	45.87	44.82	46.09	45.51	45.76
Directivity (dB)	5.81	5.94	6.04	5.97	5.97	5.95	6.06	6.16	6.26	6.30	6.31
Peak Gain Position (Theta)	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00
Peak Gain Position (Phi)	75.00	75.00	60.00	75.00	60.00	75.00	300.00	300.00	300.00	300.00	300.00
Efficiency ThetaPol (%)	27.08	26.94	27.40	27.29	26.03	26.01	25.48	25.10	25.85	25.63	25.99
Efficiency PhiPol (%)	18.70	18.89	19.32	19.48	19.57	20.52	20.40	19.72	20.24	19.88	19.76
Upper Hem. Efficiency (%)	16.25	16.47	17.12	17.53	17.52	18.14	18.08	17.74	18.33	18.21	18.50
Lower Hem. Efficiency (%)	29.53	29.36	29.60	29.24	28.08	28.39	27.79	27.08	27.76	27.29	27.25

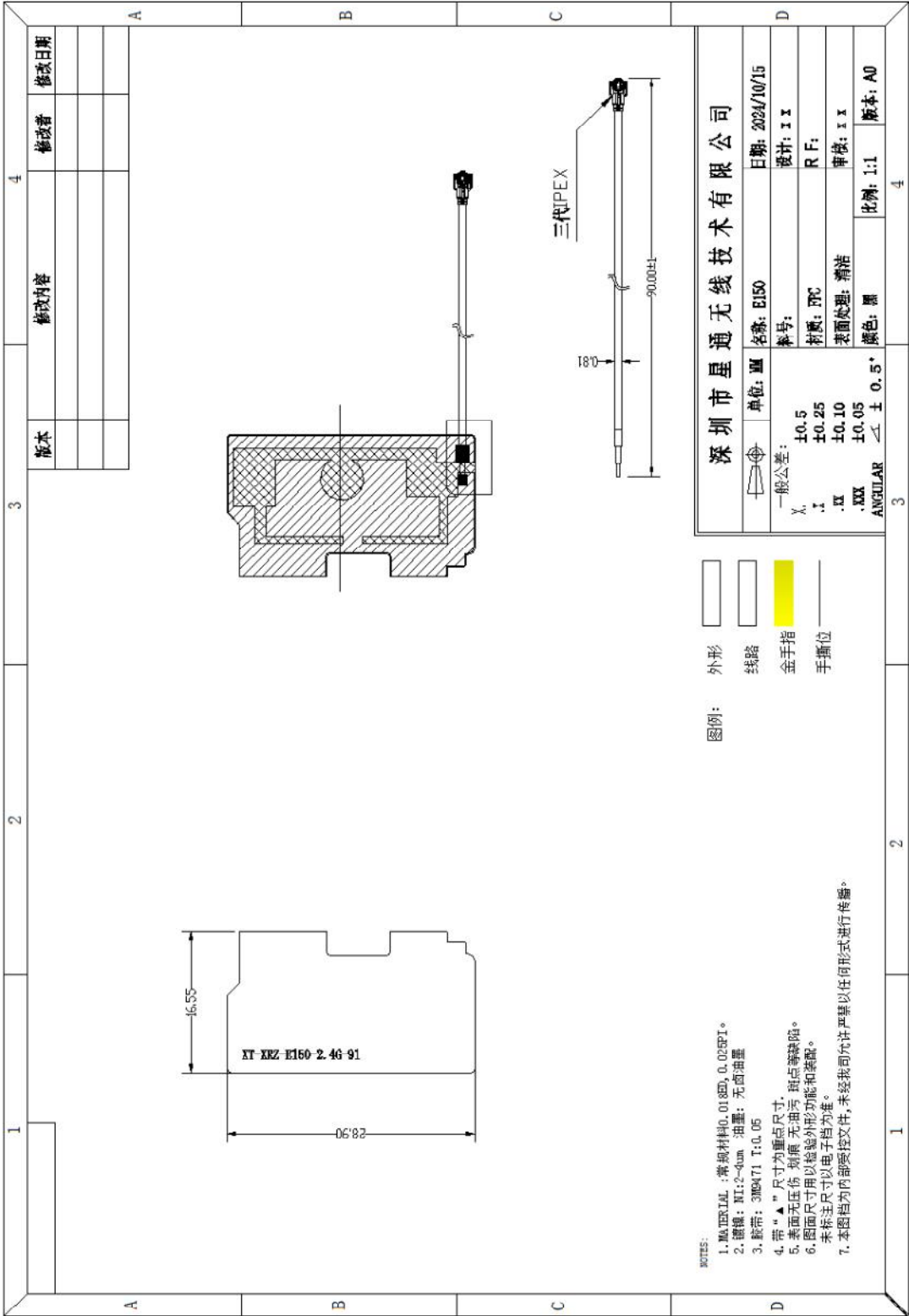
3D-OTA-2.4G



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5. Attached figure:

5. 1: Finished antenna drawing



6. Maintenance verification:

Tests/test items	Maintainability	Inspection order number
Product name/specification	2.4G WIFI built-in fpc antenna	Test quantity: 5PCS
Date of inspection: 2024/10/15		Completiondate: 2024/10/15

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 $\geq 0.6\text{kgf}$.				
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

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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	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

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7. Matters needing attention:



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