

SPECIFICATION

ShenZhenTianDaCommunicationCO., LTD



D1 WIFI antenna

Product acknowledgement

client	xunmei	Frequency band	2400-2500MHz
Project name	D1	edition	A
Item part number	Tianda:XN-D1-WI-FP-A Customer part number:1. M. 03. 00. 0. 010	colour	black
RF design	wangxinchuang	Structural design	ZHOULUHU
date	2024.06.27		

Customer confirmation:

Whether the assembly meets your requirements: ☐OK☐NG

ShenZhen TianDa Communication CO., LTD.

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Shenzhen

catalogue

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Confidentiality requirement

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First, WIFI antenna

1. Specifications

The admission book mainly provides the test status of the electrical and structural performance parameters of the D1 project WIFI antenna. Below is Investec Design

Picture of WIFI antenna.



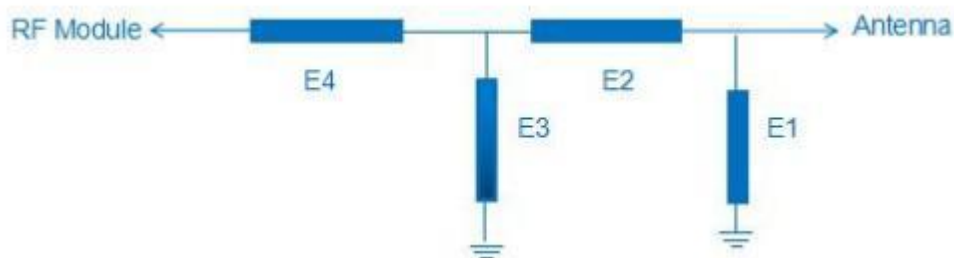
1.1, electrical specifications

1.1.1. Electrical performance index

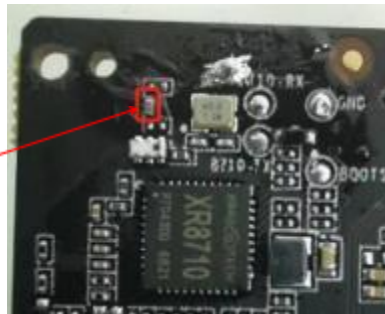
The antenna of this project works at 2400-2500mhz. The following is the electrical performance index of the antenna designed and trial-produced by Investec.

WIFI		
Frequency band	frequency (MHz)	VSWR
2.4G	2400~2500	≤ 2.0

1.1.2、Match the circuit diagram



WIFI天线	
Element	Value
E1 (0201)	NC
E2 (0201)	2.7nH
E3 (0201)	NC
E4 (0201)	



The WIFI antenna matching circuit is a 2.7nH inductance in series from the antenna end.

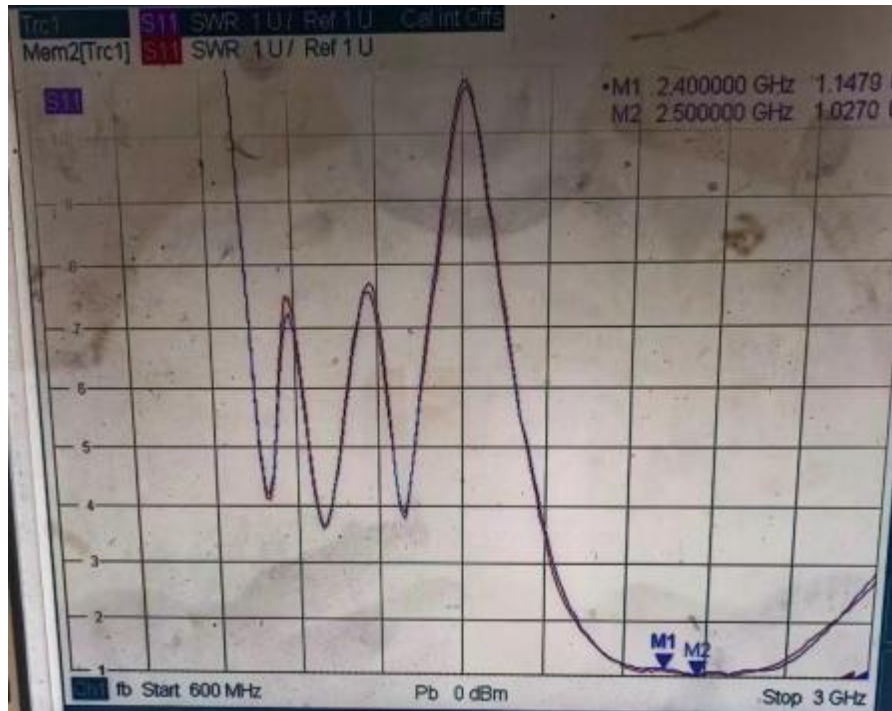
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1.2、Test

1.2.1、Passive testing

1.2.1.1、Antenna standing wave test (VSWR)



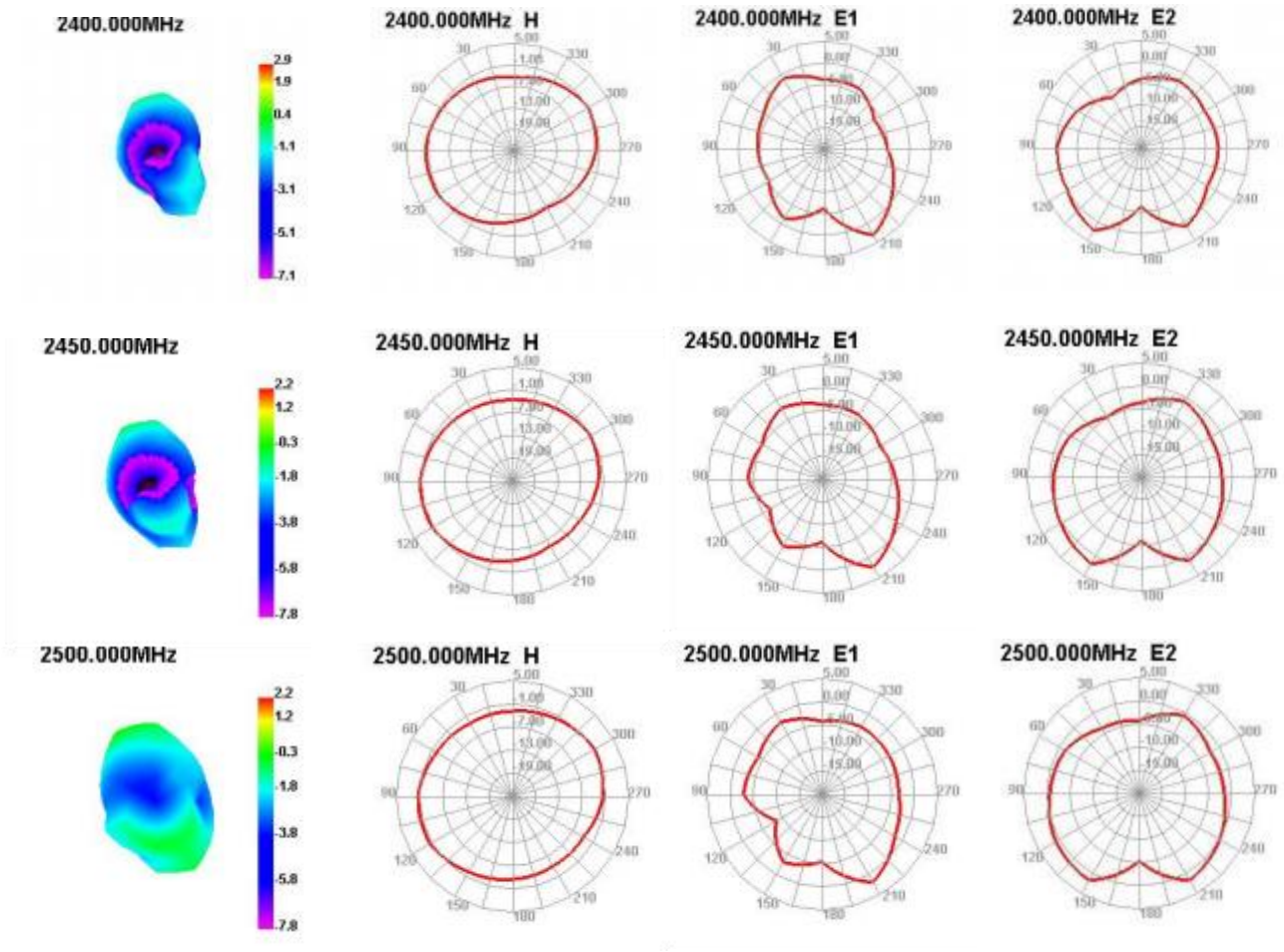
1.2.1.2、Antenna gain, efficiency

Passive Test For 2.4G-2.5G									
Freq (MHz)	Effi (%)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)	AttH (dB)	AttV (dB)
2400	62	2.93	0.78	23.453	38.546	2.93	-7.91	46.87	46.81
2410	64.24	2.8	0.65	25.082	39.159	2.8	-7.45	47.08	47.17
2420	63.47	2.63	0.48	25.192	38.276	2.63	-7.29	47.06	47.12
2430	59.6	2.18	0.03	23.666	35.935	2.18	-7.07	47	47.09
2440	64.48	2.45	0.3	25.456	39.02	2.45	-6.81	47.5	47.69
2450	63.37	2.25	0.1	25.001	38.369	2.25	-6.92	47.48	47.63
2460	64.22	2.27	0.12	25.431	38.788	2.27	-7.54	47.73	47.89
2470	68.23	2.42	0.27	27.517	40.708	2.42	-7.36	47.81	48.06
2480	65.83	2.23	0.08	26.962	38.871	2.23	-8.19	47.79	47.96
2490	67.28	2.41	0.26	27.666	39.61	2.41	-8.17	48.2	48.46
2500	68.89	2.2	0.05	28.965	39.923	2.2	-8.65	47.83	48.01

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1.2.2、Antenna pattern



1.2.3、Active test data of the whole machine

b模式 (11M)	暗室 ■ 三角锥 □ 屏蔽箱 □		
Band	2.4G		
Channel	1	7	13
TRP	19.9	19.9	19.5
TIS	-87.8	-88.9	-88.5

The above is the data of the whole machine tested by our company in the dark room on the customer pilot production machine.

Second, structural specifications

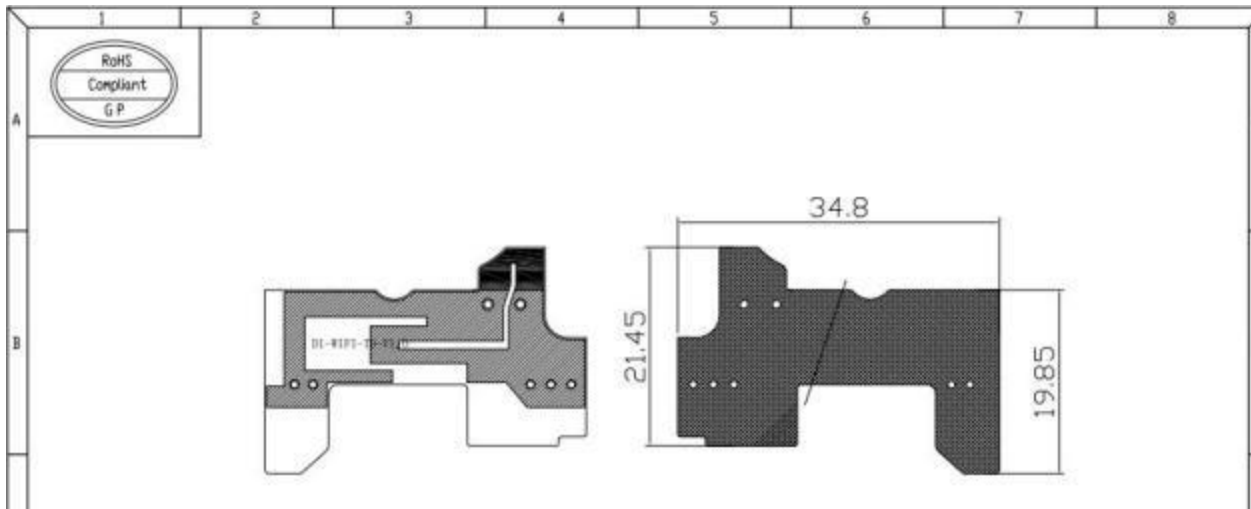
2.1 Antenna composition

The WIFI antenna is mainly composed of FPC.

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2.2、Engineering drawing



2.3、Dimensional measurement

Quantity Key dimension		2	3	4
34.80 ± 0.20	34.81	34.80	34.81	34.78
21.45 ± 0.20	21.45	21.43	21.47	21.45
19.85 ± 0.20	19.82	19.85	19.85	19.87

Iii. Conclusion

This antenna is designed on the prototype provided by the customer at present, the electrical parameters and structural size have reached the technical requirements, please confirm!

Iv. Packaging

Pack in PE bag.

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