

# SPECIFICATION



深圳市天达通信有限公司

ShenZhen TianDa Communication CO., LTD

Model: FP101BA

## 产品规格书

客户	普锐	频段	2400-2500MHz 5150-5850MHz
项目名称	FP101BA	版本	A
项目料号	PR-FP-10-WB-A	颜色	黑色
R F 设计	王新闻	结构设计	周芦洪
日期	2025.04.02		

客户确认:

装配是否符合贵司要求: OK NG

深圳市天达通信有限公司	ShenZhen TianDa Communication CO., LTD.
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## 一、WIFI 天线

### 1、Specification

The letter of recognition mainly provides the test status of the electrical and structural performance parameters of the FP101BA project WIFI antenna. The following figure is a picture of the WIFI antenna designed by Tianda.



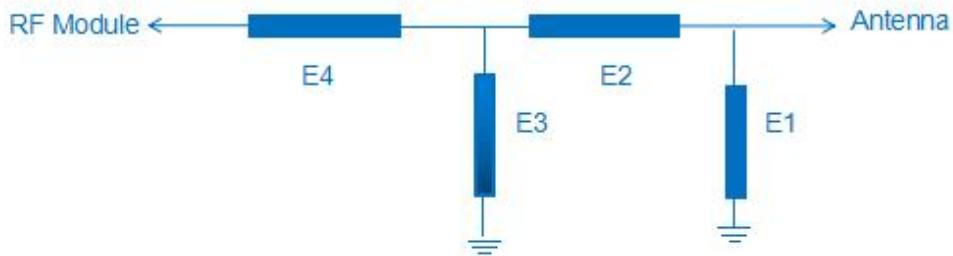
#### 1.1、Electrical specifications

##### 1.1.1、Electrical performance index

The antenna working frequency band of this project is 2400~2500MHz and 5150~5850MHz. The following are the electrical performance indexes of the antenna designed and trial-produced by Tianda。

WIFI		
Band	Frequency (MHz)	VSWR
WIFI 2.4G	2400~2500	≤2.0
WIFI 5G	5150~5850	≤3.0

##### 1.1.2、Match the circuit diagram



The matching circuit of the WIFI antenna is the original matching of the motherboard.

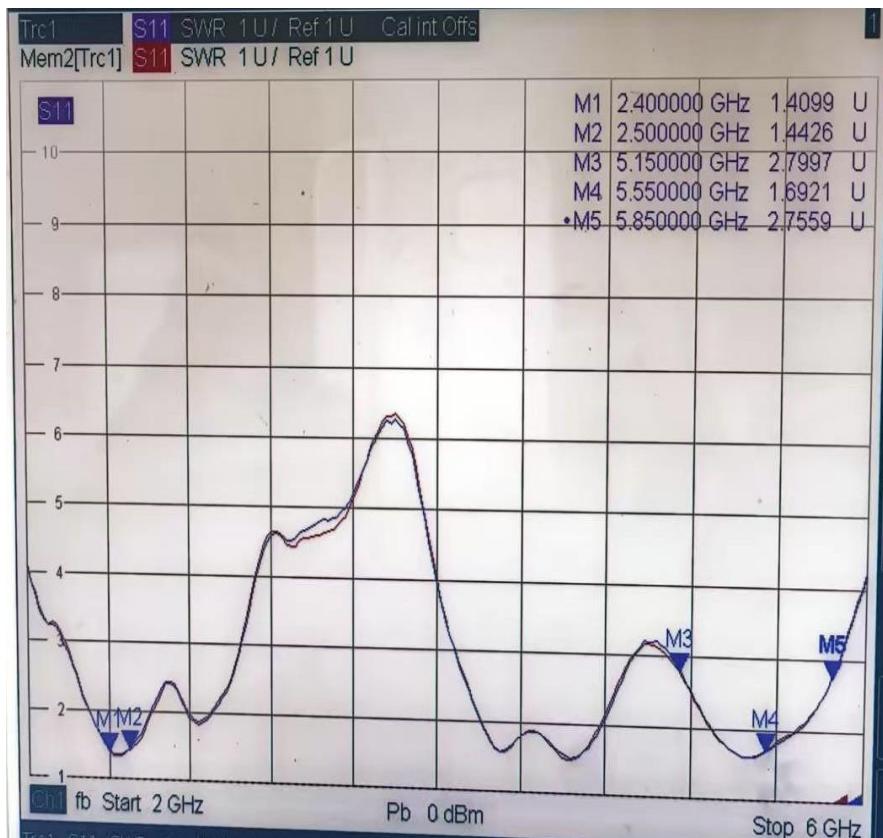
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## 1.2、Test

### 1.2.1、Passive testing

#### 1.2.1.1、(VSWR)



#### 1.2.1.2、Antenna gain, efficiency

Passive Test For 2.4G-2.5G							
Freq (MHz)	Effi (%)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	AttH (dB)	AttV (dB)
2400	44.7	2.71	0.56	27.441	17.257	46.87	46.81
2410	42.25	2.47	0.32	25.945	16.307	47.08	47.17
2420	42.05	2.48	0.33	25.766	16.279	47.06	47.12
2430	41.78	2.45	0.3	25.529	16.255	47	47.09
2440	42.07	2.64	0.49	25.612	16.457	47.5	47.69
2450	43.68	2.81	0.66	26.4	17.284	47.48	47.63
2460	42.12	2.71	0.56	25.218	16.904	47.73	47.89
2470	40.31	2.54	0.39	23.824	16.486	47.81	48.06
2480	40.86	2.58	0.43	23.855	17.006	47.79	47.96
2490	41.16	2.87	0.72	23.939	17.226	48.2	48.46
2500	39.09	2.35	0.2	22.467	16.622	47.83	48.01

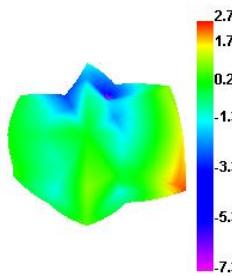
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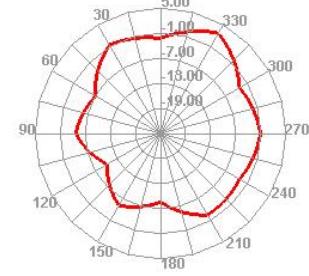
Passive Test For 5150MHz-5850MHz							
Freq (MHz)	Effi (%)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	AttH (dB)	AttV (dB)
5150	46.5	3.09	0.94	32.693	13.807	52.27	51.98
5200	45.1	3.11	0.96	31.886	13.215	52.76	52.44
5250	47.17	3.85	1.7	33.703	13.467	53.06	52.77
5300	52.08	4.41	2.26	37.018	15.065	52.79	52.82
5350	51.23	4.59	2.44	36.088	15.141	52.81	52.75
5400	49.36	4.42	2.27	33.958	15.407	53.19	53.19
5450	55.4	5.08	2.93	37.844	17.559	53.26	53.33
5500	55.42	4.99	2.84	37.334	18.091	53.11	53.03
5550	56.33	5.01	2.86	37.964	18.367	53.41	53.58
5600	50.7	4.26	2.11	33.963	16.737	52.72	52.91
5650	49.25	3.73	1.58	33.01	16.245	52.95	52.66
5700	47.52	3.07	0.92	31.893	15.624	52.76	52.75
5750	46.22	2.59	0.44	31.108	15.111	53.58	53.05
5800	44.17	2.07	-0.08	29.697	14.476	52.84	52.87
5850	44.02	1.91	-0.24	29.731	14.291	52.84	52.44

### 1.2.1.3、antenna pattern

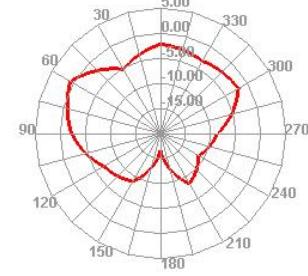
2400.000MHz



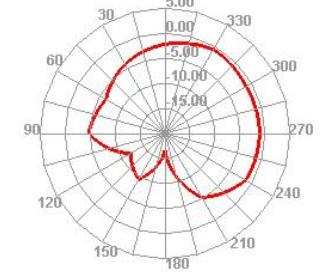
2400.000MHz H



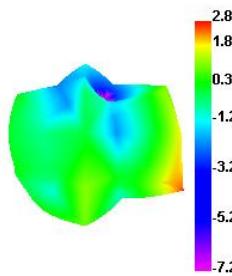
2400.000MHz E1



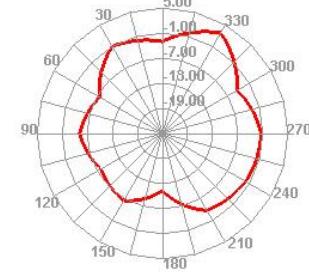
2400.000MHz E2



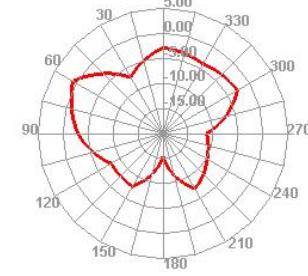
2450.000MHz



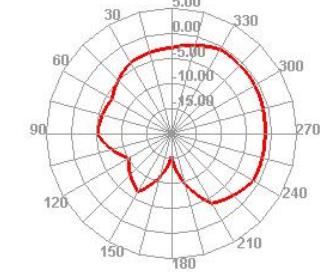
2450.000MHz H



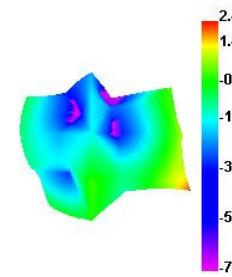
2450.000MHz E1



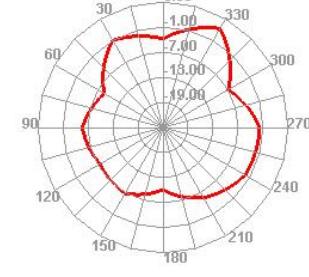
2450.000MHz E2



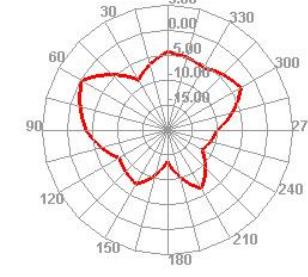
2500.000MHz



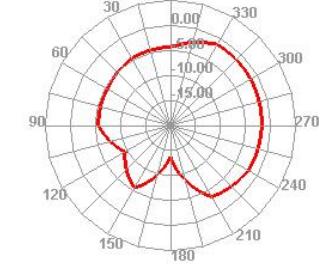
2500.000MHz H



2500.000MHz E1

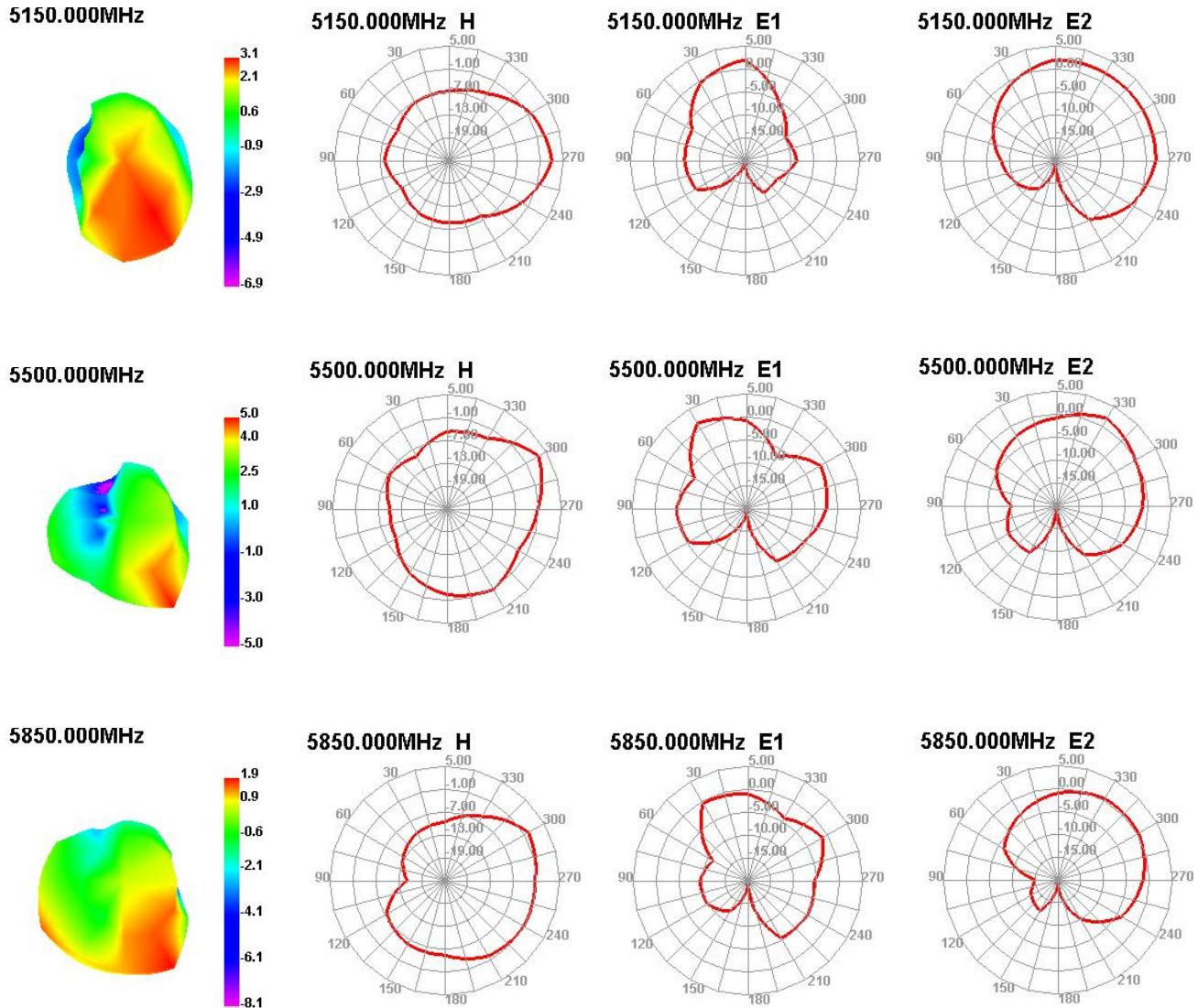


2500.000MHz E2



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### 1.2.2、The whole machine has active test data

<b>b模式 (11M)</b>		暗室 ■ 三角锥 □ 屏蔽箱 □		
Band	2.4G			
Channel	1	6	11	
TRP	15.8	16.5	16.1	
TIS	-82.1	-83.2	-83.1	

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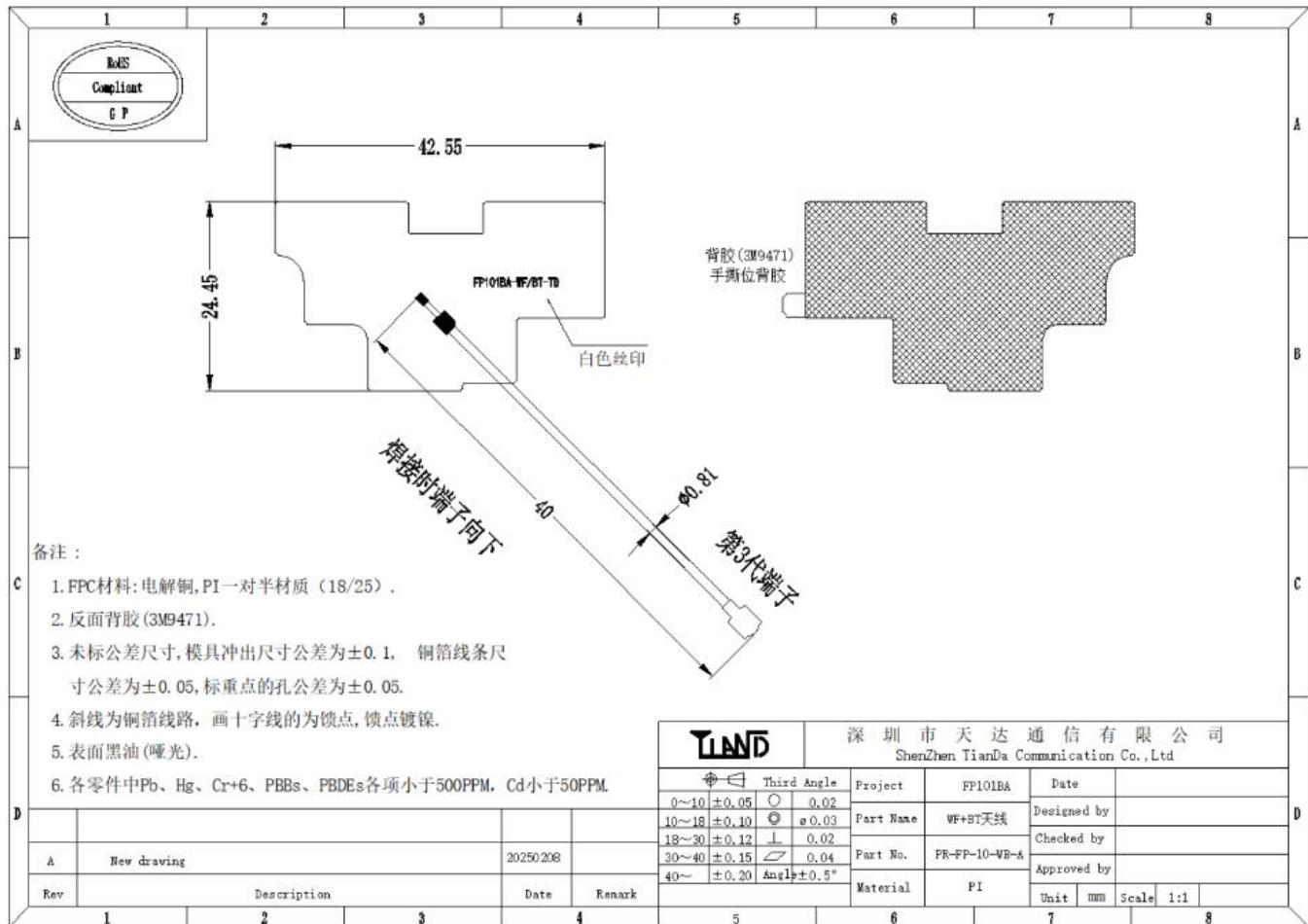
<b>a模式 (54M)</b>	暗室 ■ 三角锥 □ 屏蔽箱 □		
Band	<b>5G</b>		
Channel	<b>36</b>	<b>149</b>	<b>165</b>
TRP	<b>11.5</b>	<b>11.3</b>	<b>11.5</b>
TIS	<b>-70.8</b>	<b>-71.6</b>	<b>-71.7</b>

## 2、Structural specifications

### 2.1、Antenna composition

The WIFI antenna is mainly composed of FPC+cable wire.

### 2.2、schedule drawing



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