

SPECIFICATION



ShenZhen TianDa Communication Co,LTD

Little BT Transmitter Antenna

Product Specification

Customer	深圳睿翼互联科技有限公司	Frequency band	2400-2500MHz
Project name	Little BT transmitter	Edition	A
Item number	YB-XB-TF-BT-A	Colour	Black
R Fdesign	Wang Xinchuang	Structural design	Zhou Luhong
Date	2025.12.01		

Customer confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG

ShenZhen TianDa Communication CO., LTD.

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BT Antenna

1、Specifications

The specification mainly provides the test status of electrical and structural performance parameters of BT antenna in Little BT transmitter project。The picture below shows the antenna designed by Tianda.



BT

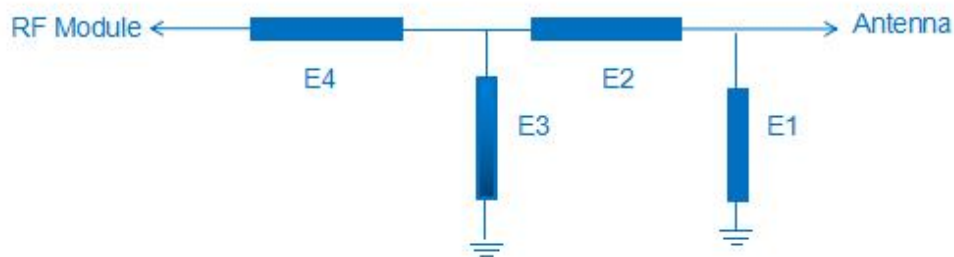
1.1、Electrical specifications

1.1.1、Electrical performance index

The operating frequency band of the antenna 2400MHz--2500MHz, The following is the electrical performance index of the antenna designed and produced by Tianda.

BT		
Frequency band	Frequency (MHz)	VSWR
2.4G	2400~2500	≤ 2.2

1.1.2、Matching circuit diagram



The matching circuit of BT is the original matching of the motherboard, and there is no change.

1.2、Testing

1.2.1、Passive test data

1.2.1.1、VSWR

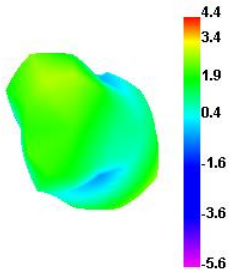


1.2.1.2、Antenna Gain and Efficiency

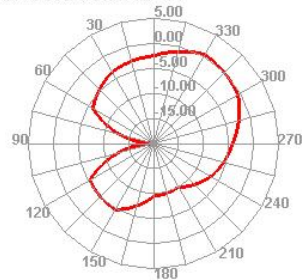
Passive Test For 2.4G-2.5G							
Freq (MHz)	Effi (%)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	AttH (dB)	AttV (dB)
2400	63.24	4.42	2.27	23.595	39.649	45.62	45.61
2410	62.62	4.44	2.29	22.933	39.684	45.73	45.65
2420	61.53	4.31	2.16	22.326	39.205	45.78	45.82
2430	63.52	4.34	2.19	23.036	40.487	45.98	46.04
2440	63.41	4.23	2.08	23.151	40.259	46.27	46.36
2450	65.23	4.33	2.18	23.996	41.235	46.36	46.45
2460	65.87	4.4	2.25	24.332	41.536	46.49	46.51
2470	65.05	4.42	2.27	23.984	41.069	46.77	46.77
2480	63.4	4.34	2.19	23.29	40.114	46.75	46.76
2490	68.58	4.65	2.5	25.118	43.464	47.24	47.24
2500	62.99	4.21	2.06	23.044	39.946	46.81	46.78

1.2.1.3、Antenna pattern

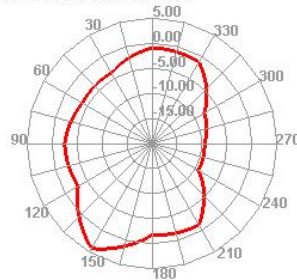
2400.000MHz



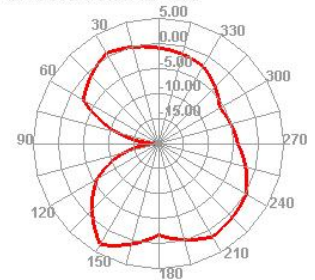
2400.000MHz H



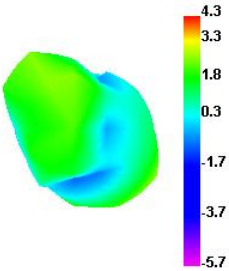
2400.000MHz E1



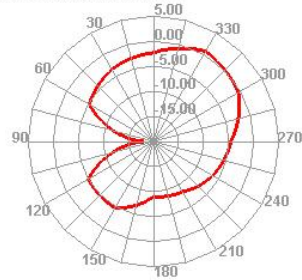
2400.000MHz E2



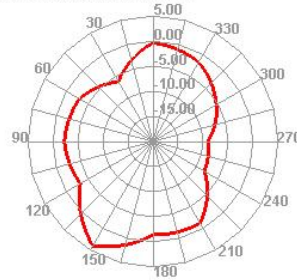
2450.000MHz



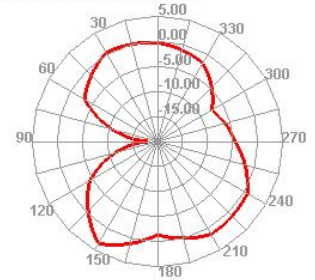
2450.000MHz H



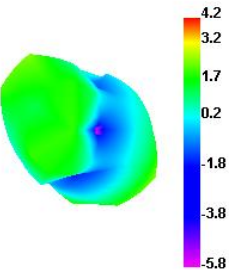
2450.000MHz E1



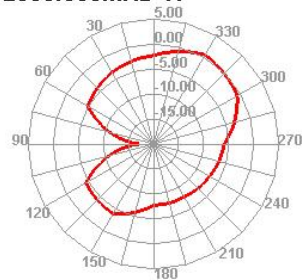
2450.000MHz E2



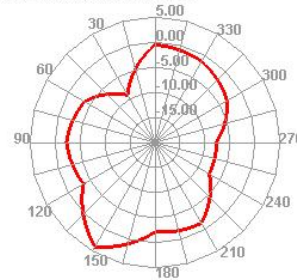
2500.000MHz



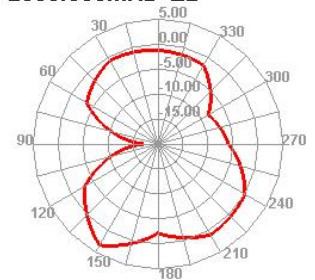
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



1.2.2、OTA test data

Test Result	Bluetooth (OTA)		
	0	39	78
Frequency (MHz)	2402	2441	2480
TRP (dBm)	16.9	16.9	16.6
TIS (dBm)	-88.1	-86.9	-87.2

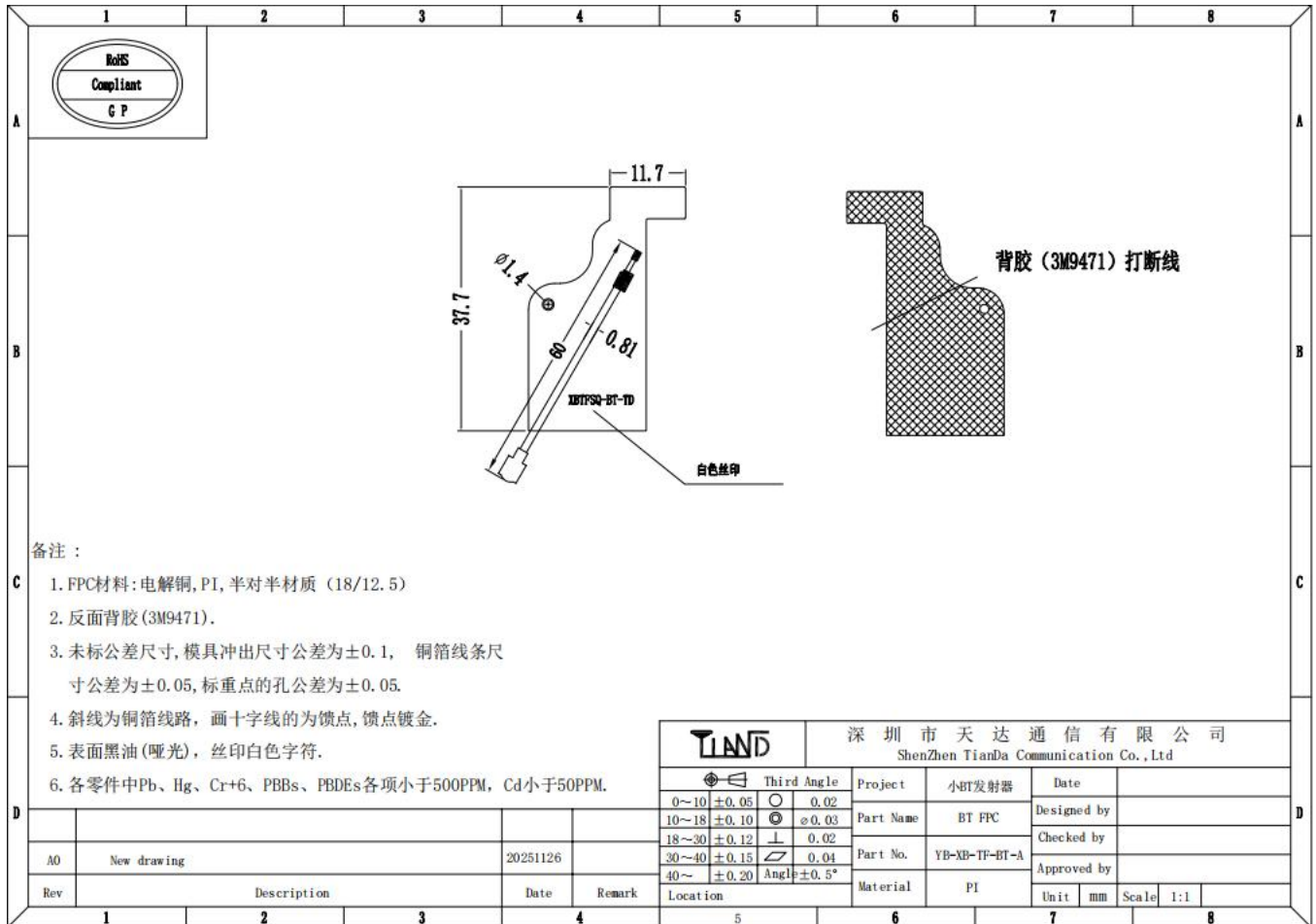
The above is the OTA data of the customer-supplied trial production machine tested in our company's microwave anechoic chamber.

2、Structural specifications

2.1、Antenna composition

WIFI antenna is mainly composed of FPC+Cable lines.

2.2、Drawings



3、Conclusion

This antenna was designed based on the prototype provided by the customer, and the electrical parameters and structural dimensions have met the technical requirements. Please confirm!