

SPECIFICATION



ShenZhen TianDa Communication Co,LTD

B52-ANT1 Antenna

Product Specification

Customer	Xmitech Electronic	Frequency band	2400-2500MHz
Project name	B52	Edition	A
Item number	XM-BS-01-W1-A	Colour	Green
R Fdesign	Wangxinchuang	Structural design	Zhouluhong
Date	2024.10.30		

Customer confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG

ShenZhen TianDa Communication CO., LTD.

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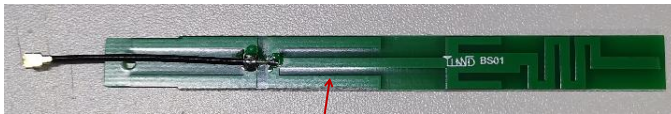
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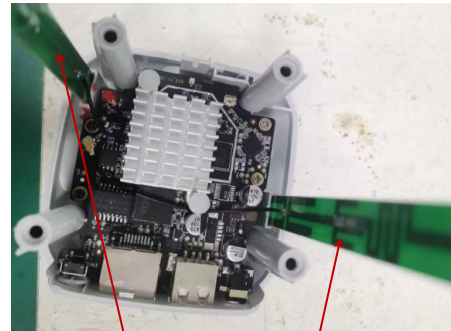
Antenna1

1、Specifications

The specification mainly provides the test status of electrical and structural performance parameters of WIFI antenna in B52 project。 The picture below shows the antenna1 designed by Tianda.



ANT1



ANT1

ANT2

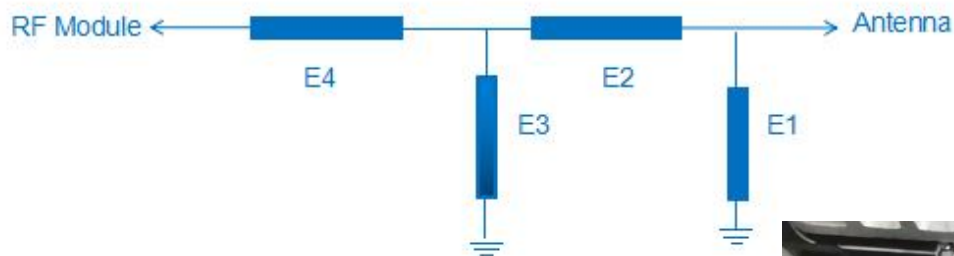
1.1、Electrical specifications

1.1.1、Electrical performance index

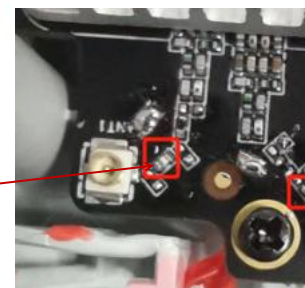
The operating frequency band of the antenna 2400MHz—2500MHz, The following is the electrical performance index of the antenna designed and produced by Tianda.

Ant 1		
Frequency band	Frequency (MHz)	VSWR
2.4G	2400~2500	≤ 2.0

1.1.2、Matching circuit diagram



The matching circuit of ANT1 is a series 2.7nH inductor.

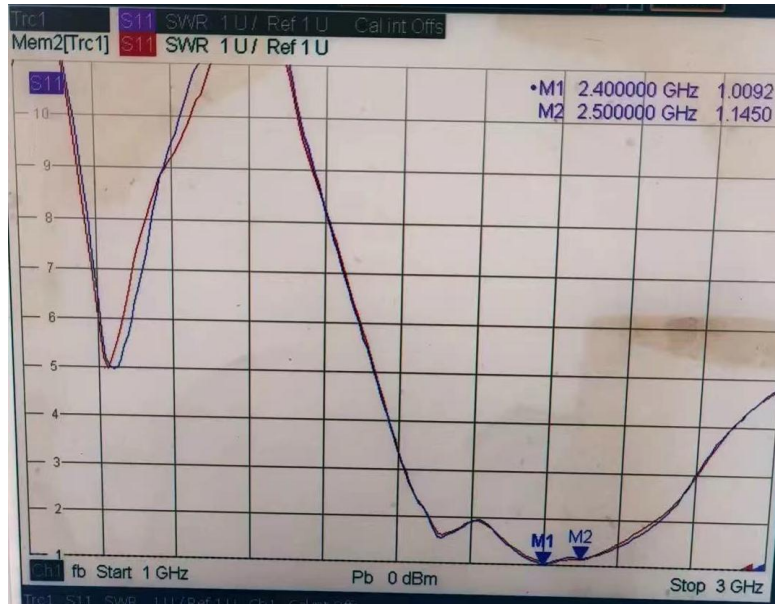


1.2、Testing

1.2.1、Passive test data

1.2.1.1、VSWR

ANT1

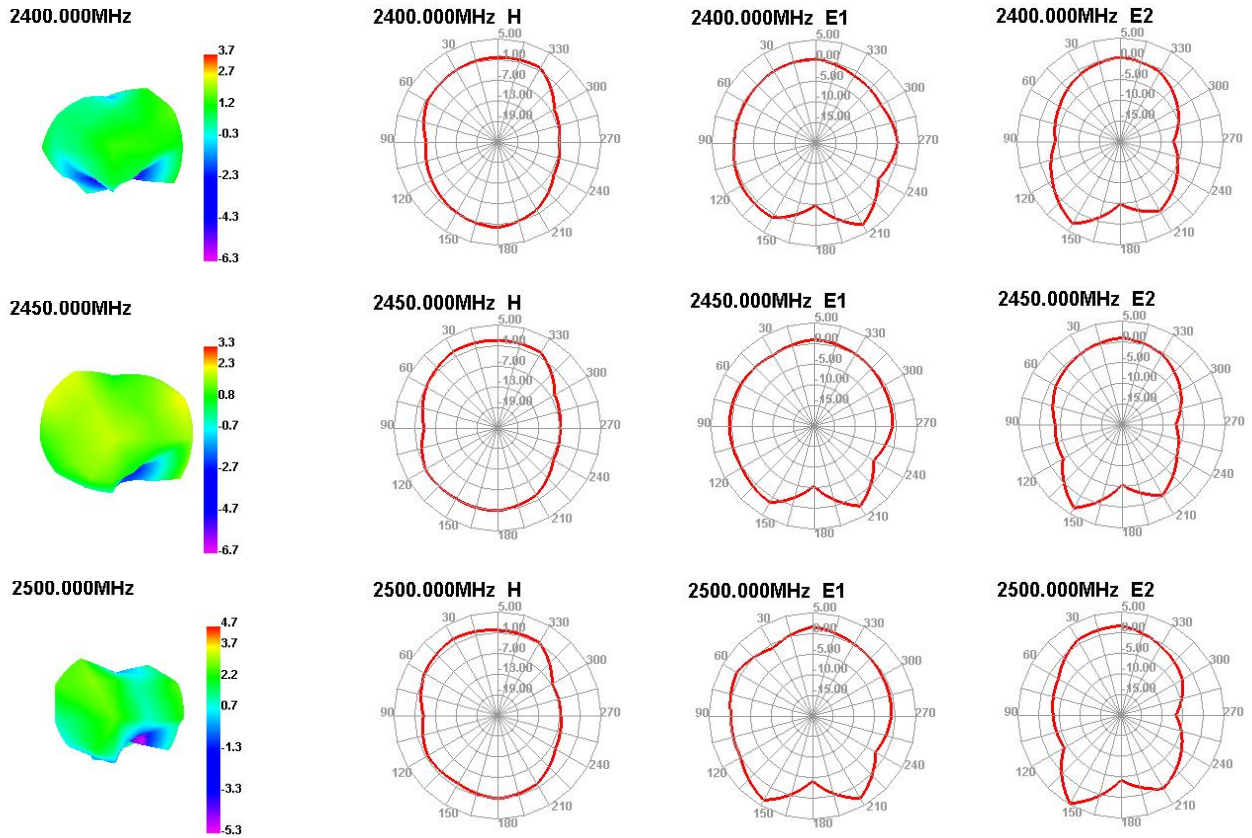


1.2.1.2、Antenna Gain and Efficiency

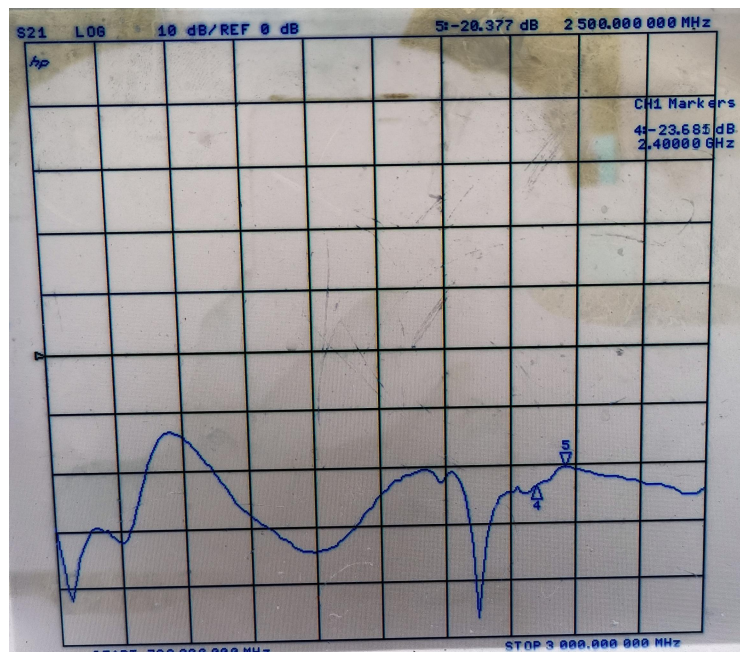
ANT1

Passive Test For 2.4G-2.5G							
Freq (MHz)	Effi (%)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	AttH (dB)	AttV (dB)
2400	76.3	3.73	1.58	32.121	44.179	46.87	46.81
2410	76.44	3.57	1.42	32.699	43.741	47.08	47.17
2420	75.14	3.31	1.16	33.434	41.704	47.06	47.12
2430	74.29	2.98	0.83	34.657	39.637	47	47.09
2440	79.21	3.17	1.02	38.124	41.087	47.5	47.69
2450	81.05	3.28	1.13	39.541	41.508	47.48	47.63
2460	83.49	3.51	1.36	40.564	42.924	47.73	47.89
2470	82.55	3.89	1.74	39.369	43.181	47.81	48.06
2480	82.06	4.06	1.91	38.104	43.953	47.79	47.96
2490	83.84	4.69	2.54	37.719	46.124	48.2	48.46
2500	83.09	4.73	2.58	36.858	46.234	47.83	48.01

1.2.1.3、 Antenna pattern



1.2.1.4、 Antenna Isolation



The isolation between antennas is - 20.3dB ~-23.6dB.

1.2.2、OTA test data

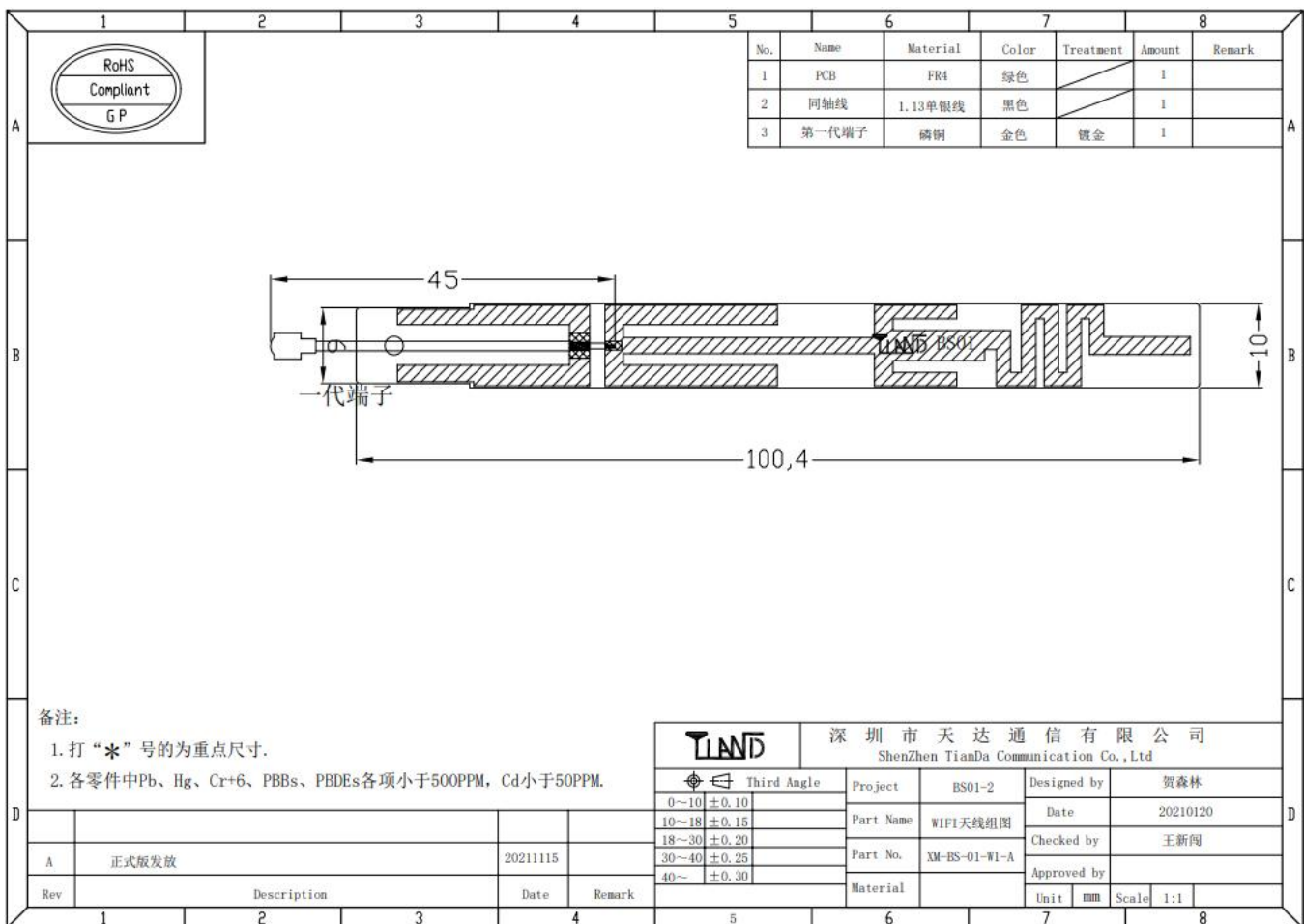
b (11M)	暗室 ■ 三角锥 □ 屏蔽箱 □		
Band	2.4G		
Channel	1	7	13
TRP	17.9	19.0	19.8
TIS	-90.8	-90.0	-90.3

2、Structural specifications

2.1、Antenna composition

Antenna1 is mainly composed of PCB+Cable lines.

2.2、Drawings



2.3、Dimension Measurement

Quantity Key size	1	2	3	4
100.40 ± 0.1	100.39	100.41	100.40	100.41
10.00 ± 0.1	10.00	9.99	10.02	10.00
45.00 ± 2.0	45.03	45.11	44.97	45.02

3、Conclusion

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

4、Packaging

Pack with PE bag.