



Shenzhen Tianyiyuan Electronic Technology Co., Ltd

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## SPECIFICATION FOR APPROVAL

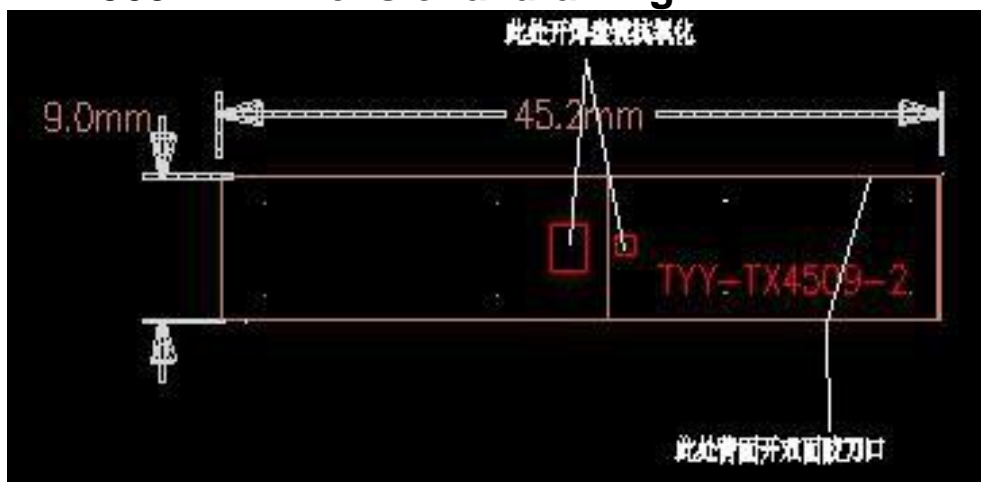
Name: WIFI 2.4GHz antenna  
Item No: TTY-TX4509-2  
Custoer name: Shenzhen Oudesheng Co., Ltd  
Company stamp: \_\_\_\_\_

drawin g			Customer approve
MADE	CHECKED	APPROVED	
QIU	蒋志远	唐晓宏	
DATE: 2019.05.22			DATE

# 1 specifications

The report mainly provides testing of the antenna and various electrical performance parameters of Shenzhen Oude Sound Technology Co., Ltd. TYY-TX4509-2 antenna BT/Wifi 2.4/GHz built-in antenna, WIFI antenna is composed of FPC+RF wires. (As shown in Figure 1 below)

## 1 TYY-TX4509-2 Dimensional drawing



## 2 TYY-TX4509-2 WIFI/BT Antenna finished product



## 3 TYY-TX4509-2 WIFI/BT antenna (Line length 130mm)

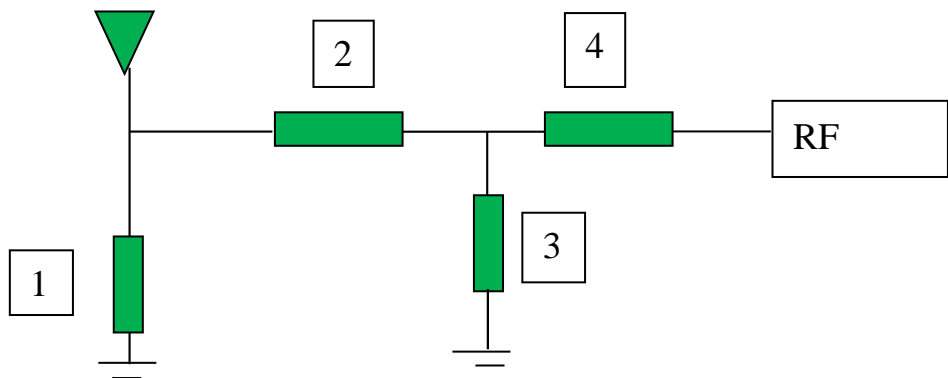


The total length of the antenna in this picture is 130/+2mm, with the other end equipped with a first generation terminal

2. Electrical performance

2.1 Matching circuit for WIFI antenna

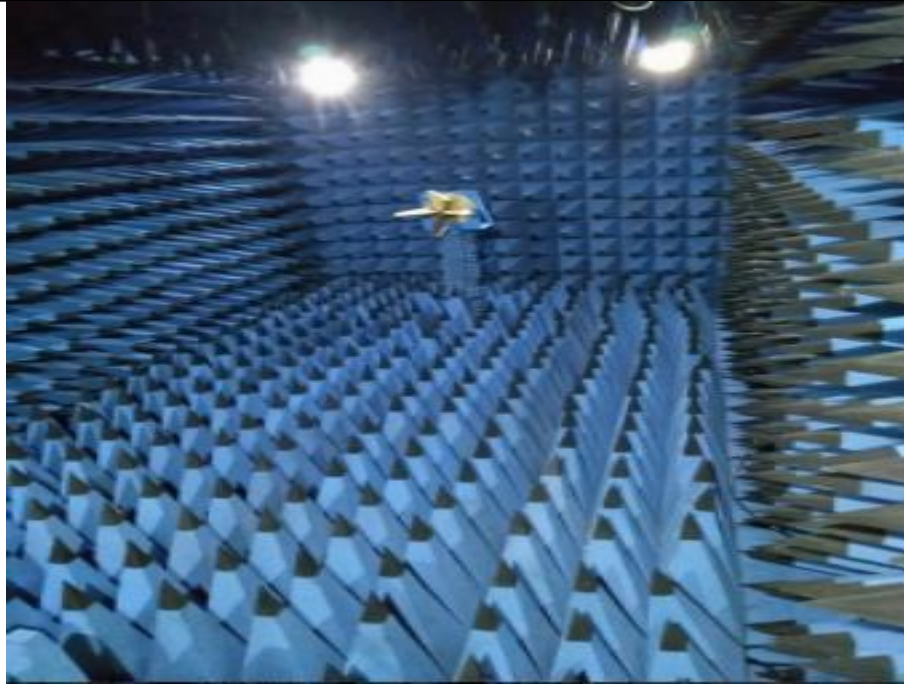
The matching circuit for this project is provided by the customer.



Component number	1	2	3	4
WIFI the best	NC	0Ω	NC	
Original (backup)	Match 50 Ω			

3 O T A Microwave darkroom





## 2.3 standing-wave ratio (VSWR) test

### 2.3.1. Test Settings

VSWR The connection of the testing device in sequence is: Agilent E5071B network analyzer @50  $\Omega$  coaxial

Cable&120mm

Copper Tube&Test

Fixture

Handling of testing fixtures:

Use a hard cable to lead out the SMA-J connector from the antenna 50  $\Omega$  test point on the flat PCB, connect it to a copper tube with a choke coil, and then connect other devices in sequence.

4 WIFI standing-wave ratio



Frequency (MHz)	2410	2450	2490		
VSWR	1.4	1.3	1.4		

## 5 3D effect gain chart

### 深圳天逸源 3D Antenna Pattern Report

Manufacturer	调试
Model Name	天逸源_4509-2
Tester Name	深圳天逸源
Test Date	2019/4/13 16:53
IF BW	100Hz
Port Power	5dBm
Meas Step	30°



Frequency(MHz)	Effi %	Max			Max Position	Gain	Directivity
		Ver	Hor	Sum	Theta / Pie	dBi	
2410 MHz	41.10	-52.86	-66.25	-52.74	90.00 / 330.00	3.16	5.82 dB
2450 MHz	40.41	-52.86	-68.22	-52.75	90.00 / 300.00	2.85	5.38 dB
2490 MHz	39.37	-51.77	-70.46	-51.75	90.00 / 210.00	2.65	5.54 dB

