深圳市鑫域达科技有限公司

SHENGZHEN XYD TELECOMMUNICATION TECHNOLOGY CO.,LTD.

移动通信终端天线

Mobile communication terminal antenna

产品设计与制造规格书

Product design and manufacturing specifications

◆ 客户名称/ Customer：天和荣

◆ 项目名称/Project: P68-2.4/5.8G

◆ 物料名称/Name: WiFi Antenna (V1 版)

◆ 天线材质/Antenna materials: FPC+CABLE

◆ 物料编号/Part no: DBT-P68-2.4/5.8G WIFI-V1

◆ 设计/Designer:

◆ 审核/Check:

◆ 客户确认签章/Approved：

地址/Add: 深圳市南山区西丽镇平山一路云谷二期 8 栋 505
Rm505, 8th building, Yungu 2nd period, pingshan No.1 Road, Xili Town,Nanshan District, ShenZhen , China
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传真/Fax: 86-755-83763348
电邮/Email: dbt1668@163.com

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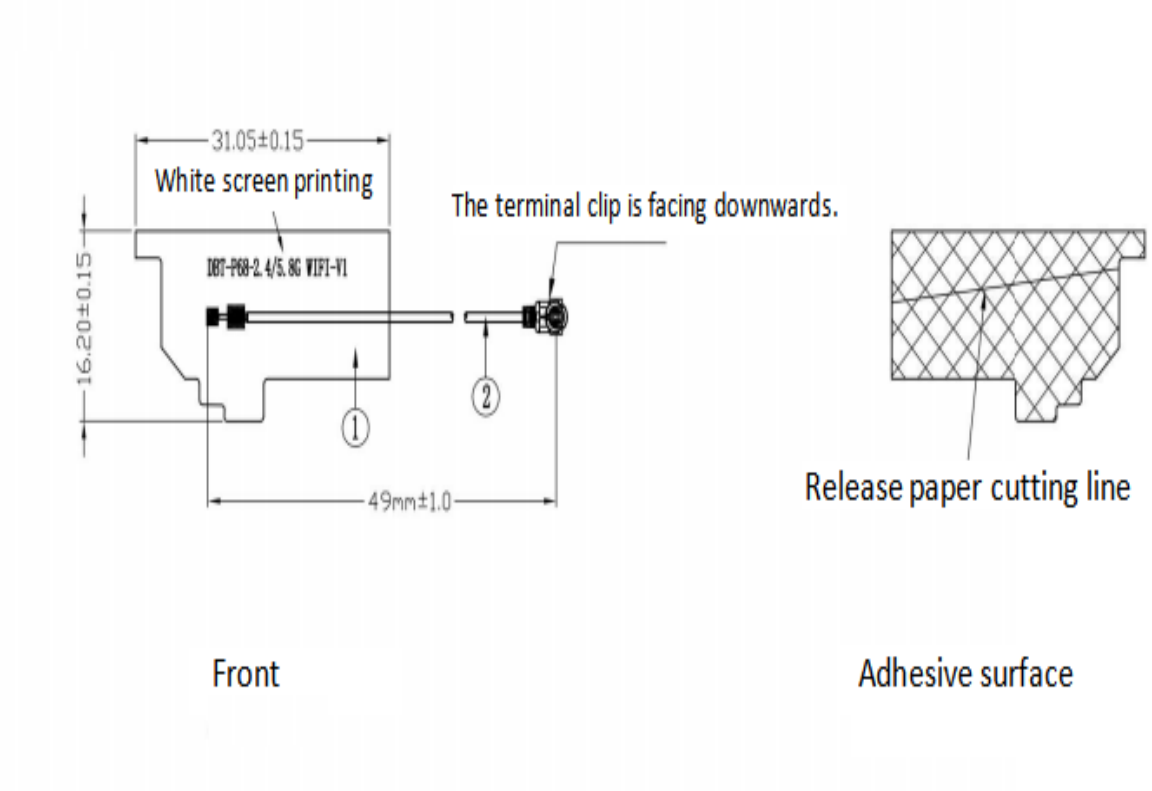
1. 天线 2D 图/Antenna 2D diagram



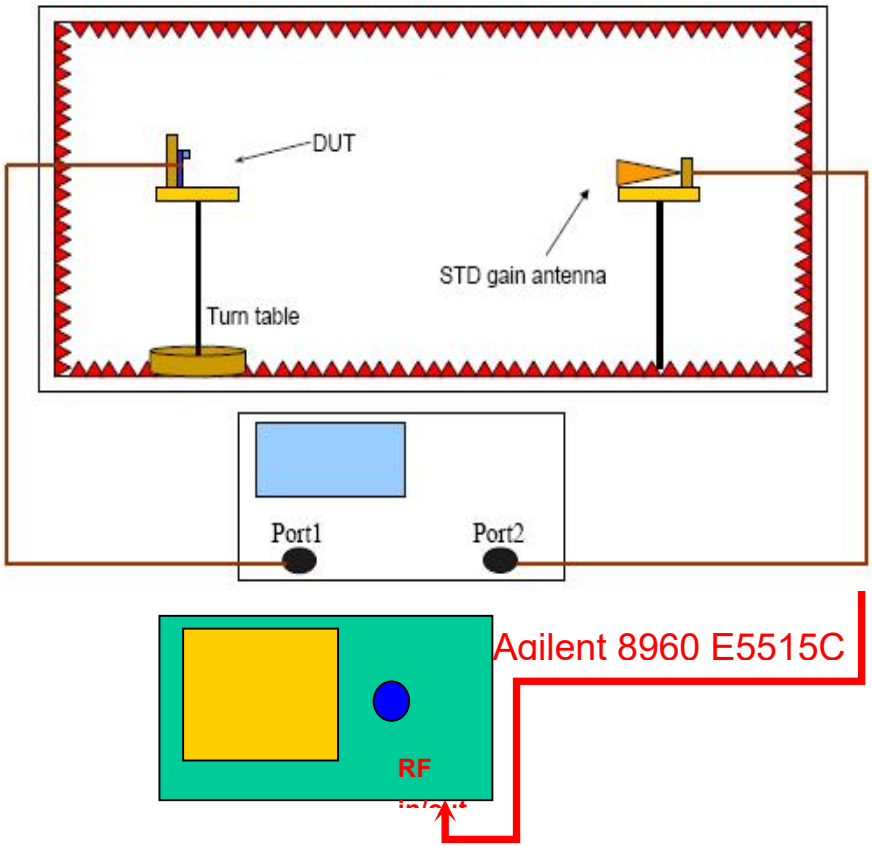
Note: The tolerance for laser proofing is 0.3.
Technical requirements:
1. The * symbol represents the key dimensions. Dimensions not marked should refer to the 2nd drawing. Other dimensions should be based on actual assembly.
2
Base material: 25m, copper tape: 18mm:
The area is the wiring area.

2.技术指标/ Technical target

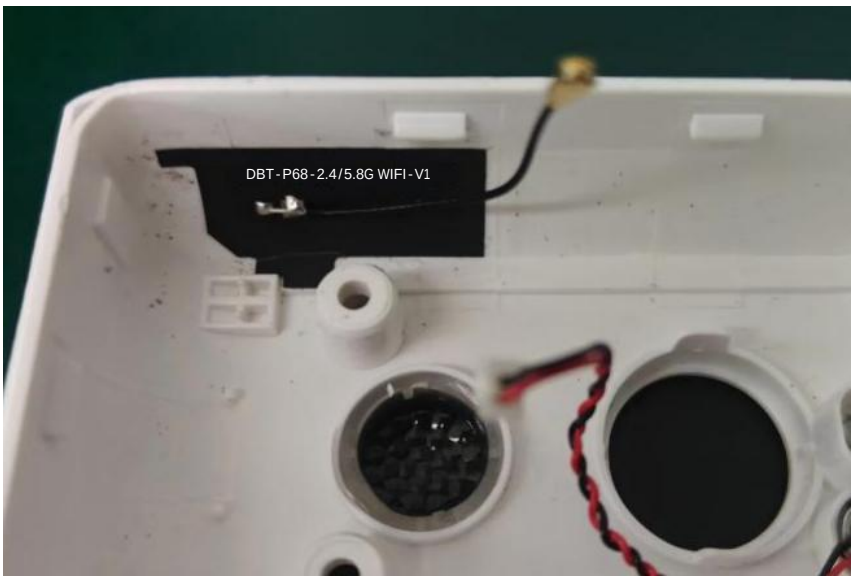
A. 电气性能/**Electrical Parameter**	
工作频率范围/**Frequency Range**	**2400~ 2500 MHz** **4900~ 5900 MHz**
驻波比/**VSWR**	**2400~ 2500 MHz: <3.0** **4900~ 5900 MHz: <2.5**
天线增益/**Gain**（**Max**）	**2400~ 2500 MHz: 3.0 dBi** **4900~ 5900 MHz: 2.47 dBi**
平均辐射效率/ **Average radiation efficiency**	**2400~ 2500MHz :46.7 %** **4900~ 5900MHz :45.6 %**
阻抗/**Input Impedance**	**50 ohm**
B. 材料/ **Material**	
FPC+CABLE	
C. 环境/**Environmental Science**	
工作温度/**Working Temperature**	**- 30˚C ~ + 85 ˚C**
储藏温度/**Storage temperature**	**- 30˚C ~ + 85 ˚C**

3.动态测试数据--- 天线安置在设备里/Dynamic test instructions - Antennas are placed in electronic scales

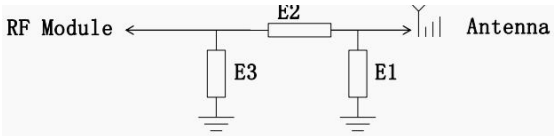
测试仪器/ Testing instrument：**Anrits CMW500+ Anechoic Chamber 6X4X3m(3D-OTA)**



4.天线安装图示/Diagram of antenna installation



5.匹配电路/Matching Circuit



Element	MAIN (主天线)	GPS/WIFI/BT (三合一天线)	DIV (分集天线)
E1			
E2			
E3			

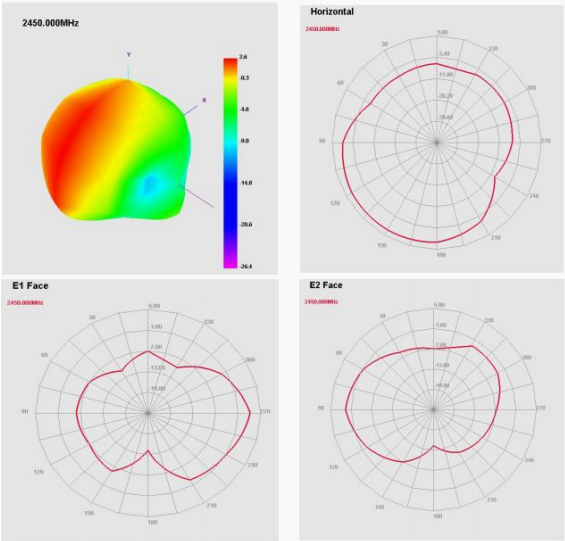
未改匹配，默认OR

(天线匹配未改/The antenna match has no modified)

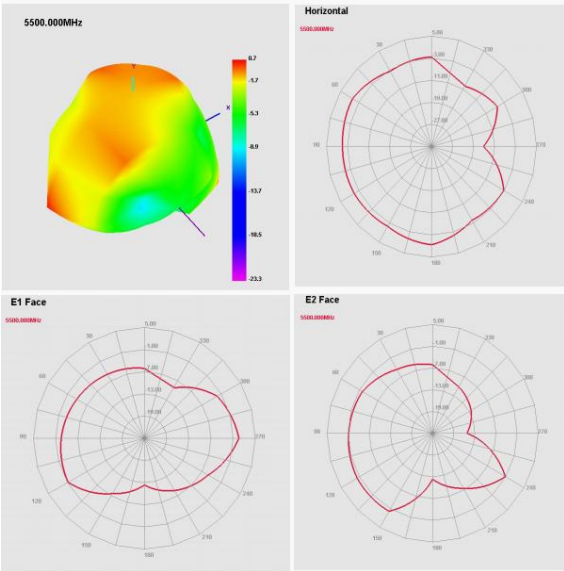
6.天线实际测试数据/Antenna test report

6.1）天线效率/增益/方向图 Antenna Efficiency/gain/pattern

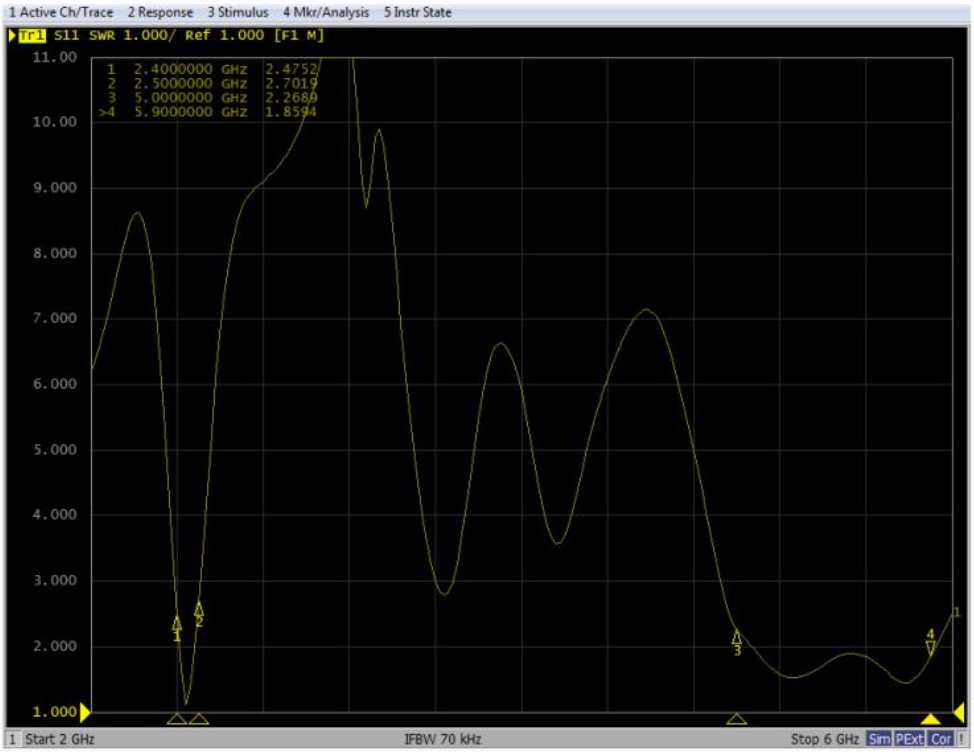
Freq (MHz)	Effi (%)	Gain (dBi)
2400	43.62	1.26
2410	44.23	1.6
2420	46.57	2.18
2430	46.13	2.43
2440	50.17	2.91
2450	51.79	2.61
2460	47.9	2.76
2470	46.55	3
2480	46.62	2.54
2490	45.55	1.95
2500	44.27	1.73



Freq (MHz)	Effi (%)	Gain (dBi)
4900	42.25	1.05
5000	44.04	1.35
5100	43.89	0.77
5200	42.74	0.63
5300	43.91	0.88
5400	44.46	-0.54
5500	46.67	0.69
5600	50.84	1.52
5700	49.32	2.4
5800	48.43	2.47
5900	45.52	1.87



6.2）天线驻波比/Antenna standing wave ratio



6.3）天线有源数据/Antenna active data

	802.11b : 11MBps		
Test	Wifi 2G TRP		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	14.87	14.34	13.83
Test	Wifi 2G TIS		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-87.89	-87.67	-87.03

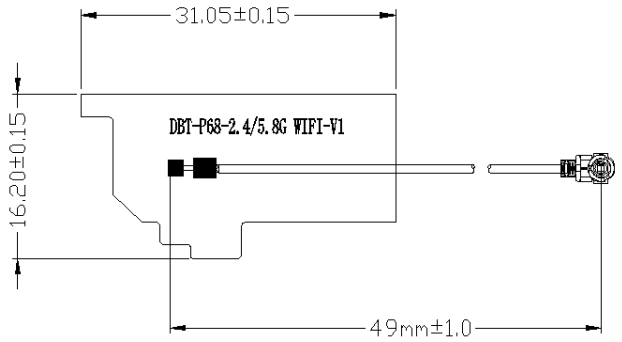
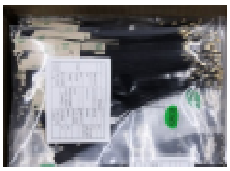
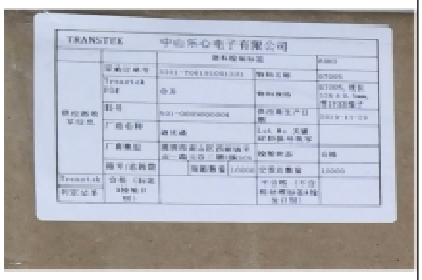
	802.11n : MCS7		
Test	Wifi 5G TRP		
Result	36	64	161
Frequency (MHz)	5180	5320	5805
Txp Ave(dBm)	16.08	16.62	15.16
Test	Wifi 5G TIS		
Result	36	64	161
Frequency (MHz)	5180	5320	5805
Sens Ave(dBm)	-71.46	-72.03	-72.58

	802.11g : 54MBps		
Test	Wifi 2G TRP		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	13.78	13.26	13.03
Test	Wifi 2G TIS		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-74.92	-74.09	-73.49

	802.11a : 54MBps		
Test	Wifi 5G TRP		
Result	36	64	161
Frequency (MHz)	5180	5320	5805
Txp Ave(dBm)	16.2	16.97	16.28
Test	Wifi 5G TIS		
Result	36	64	161
Frequency (MHz)	5180	5320	5805
Sens Ave(dBm)	-72.47	-72.17	-72.36

	802.11n : MCS7		
Test	Wifi 2G TRP		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Txp Ave(dBm)	13.72	13.14	13.07
Test	Wifi 2G TIS		
Result	1	6	11
Frequency (MHz)	2412	2437	2462
Sens Ave(dBm)	-72.6	-72.99	-72.18

7.包装方式/Packing method

<table>
<tr><td colspan="2">1.单个产品 2D 图/2D drawing of the product</td><td rowspan="3">产品料号/
The product material number</td><td rowspan="3"></td></tr>
<tr><td colspan="2"> 
</td></tr>
<tr><td colspan="2">产品名称 /
Product name</td><td>P68-2.4/5.8G WIFI</td></tr>
<tr><td colspan="2">2.箱内所有层堆放后的照片/Photos of all stacked layers in the box</td><td>3.整箱封箱后的照片/ Photo of the whole case after sealing</td><td colspan="2">产品版本/
Product version</td><td>V1</td></tr>
<tr><td colspan="2"> </td><td> </td><td colspan="2">一包数量/
Number of full pages</td><td>200PCS</td></tr>
<tr><td colspan="2"></td><td></td><td colspan="2">备注:每箱数量以实际为准，左侧图片为参考，按实物为准。 /Remarks: the quantity of each box shall be actual, the picture on the left side shall be for reference, and the actual goods shall be regarded as standard.</td><td></td></tr>
<tr><td colspan="2">4.一包的照片/
A whole pack of photos</td><td>5.整箱的箱表面贴的标签的照片/A photograph of the label on the surface of the entire case</td><td colspan="3" rowspan="2">储存条件:－10° 至 30° 之间，湿度 70%RH 以下的室内. /Storage conditions:between -10 ° to 30 ° , humidity 70% Rh below the indoor.</td></tr>
<tr><td colspan="2">  </td><td> 
</td></tr>
<tr><td colspan="7">注：上图中的图片只用做包装标准示范，不能用做最终资料审核。 /Note: the picture in the picture above is only used for packing standard demonstration, not for final data audit.</td></tr>
<tr><td>确认者
/Confirmer</td><td>杨小平/
Yang Xiaoping</td><td></td><td>日期/Date</td><td>2026-4-13</td><td></td><td></td></tr>
</table>

注/Remark：

1.以上测试结果限于测试样机/The above test results are limited to the test prototype.

2.整机壳料工艺、软件版本、配件(摄像头FPC、喇叭、听筒、马达、电池等)、芯片的改变都会导致整机天线性能变化。/Full shell material technology, software version, accessories (camera， FPC, speaker, receiver, motor, battery, etc.), core The performance of the whole antenna will change with the change of the chip.

3.整机的环境处理（如接地位置、尺寸，屏蔽方式等）改变会导致整机性能变化。/The change of environmental treatment (such as grounding position, size, shielding mode, etc.) of the whole machine will lead to the change of the performance of the whole machine.

郑重申明/Solemnly declare:

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