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华康邦(HKB)

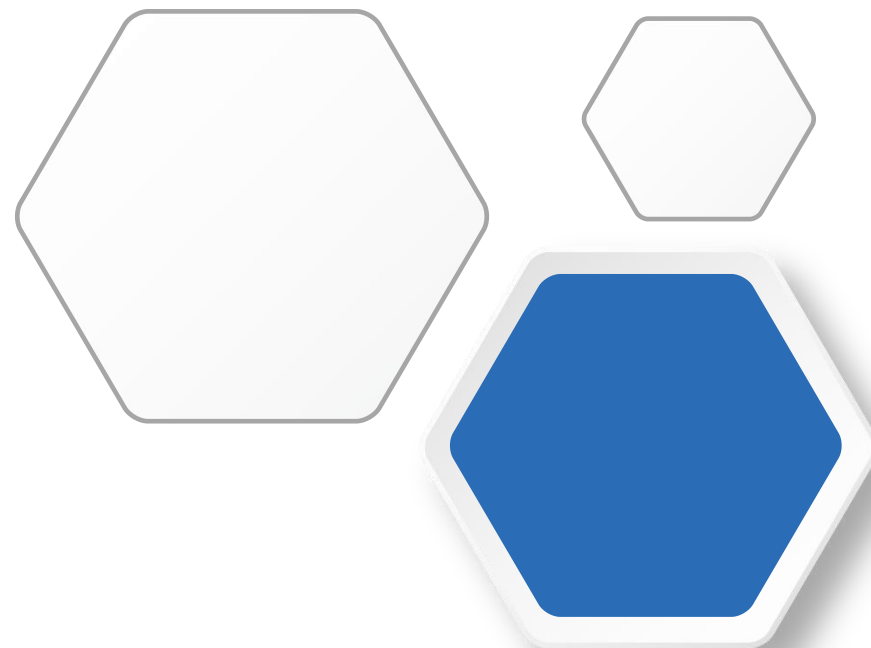
扫地机天线调试报告

Robot Vacuum Cleaner
Debugging Antenna Report



射频:杨宗煜
RF: Yang Zongyu

时间:2022.08.31
Date: August 31, 2022



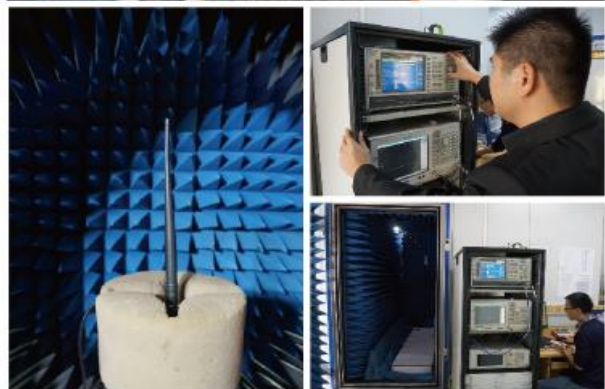




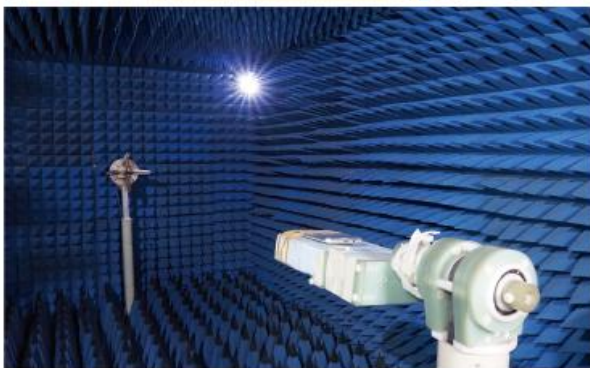
基础信息

Basic information

【SATIMO】



【广屏】



测试系统 Test System

- SATIMO, Agilent E5071C, Anritsu MT8820C, CMW500, StarPoint SP9500

SATIMO暗室-配备

Anritsu综测仪8820c/Agilent网分5071C/Agilent综测仪E4438C

广屏暗室-配备

Agilent-综测仪8960/罗德-cmw500

调试网分

Agilent 网分5071C



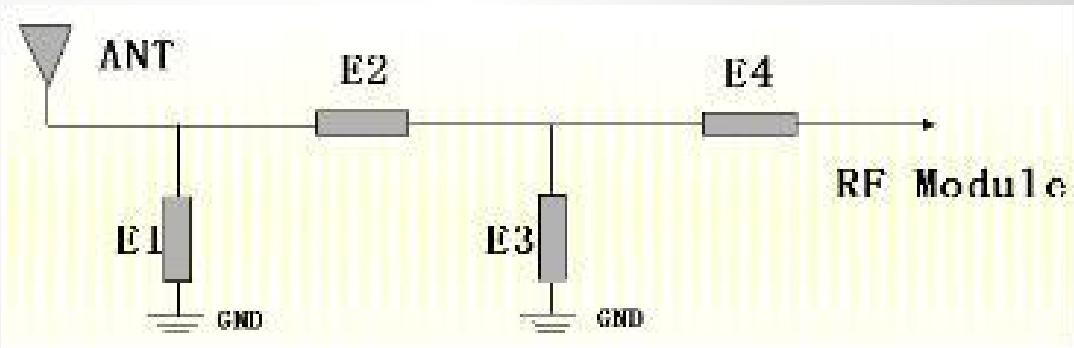
基础信息

Basic information



整机资料 Machine Data

- 客户名称: 旺家
Client Name: Wang Jia
- 项目名称: 扫地机
Project name: Robot Vacuum Cleaner
型号model: T910_WIFI_V1.0 TP
- 频段信息: 433/WIFI:2.4G/5G
Band Information: 433/WIFI:2.4G/5G
- 报告日期: 2022.08.31
Report date: 2022.08.31



天线匹配

Antenna circuit matching description

(1) WIFI天线匹配 WIFI Antenna Matching

原机无更改 No changes to the original machine

(2) 433天线匹配 433 Antenna Matching

原机无更改 No changes to the original machine



测试数据: Test Data

WIFI无源图 - (SWR/Log Mag /Smith)





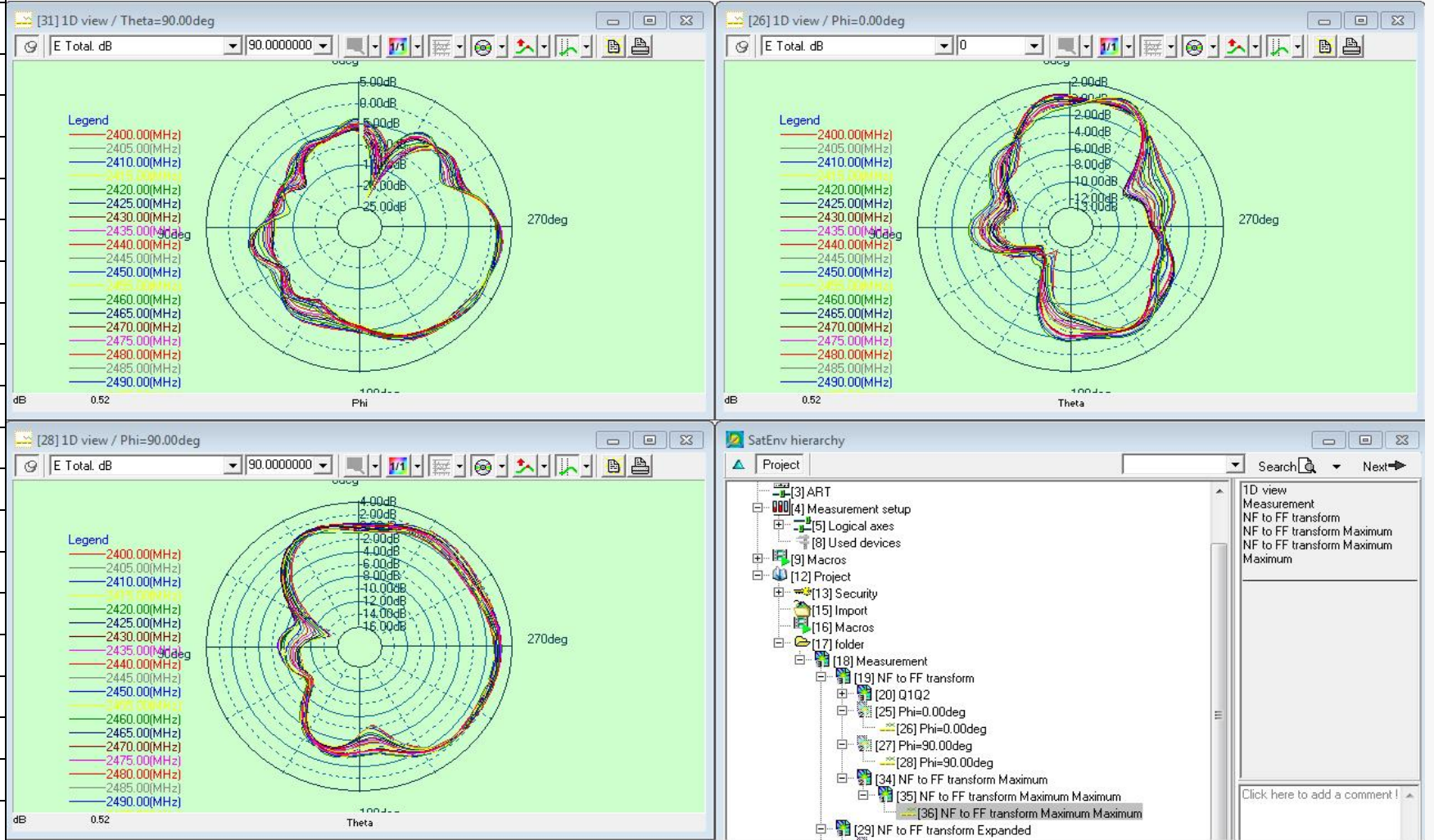
测试数据: Test Data

WIFI-2.4G无源数据 (效率/增益/方向图)

WIFI-2.4G passive data (efficiency/gain/direction map)

2400-2500MHZ Efficiency

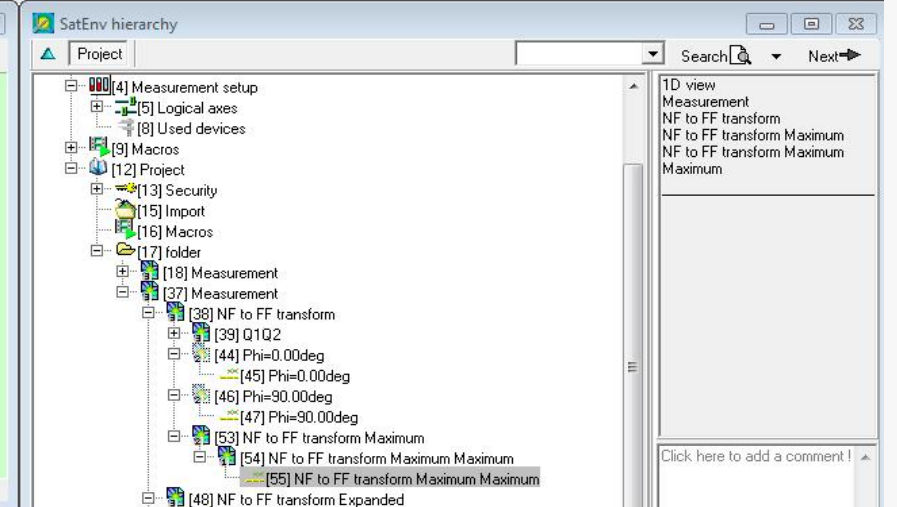
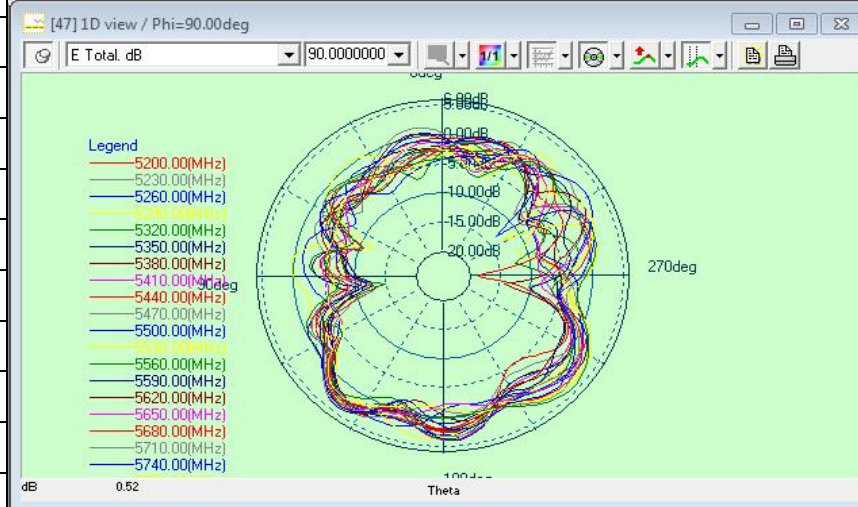
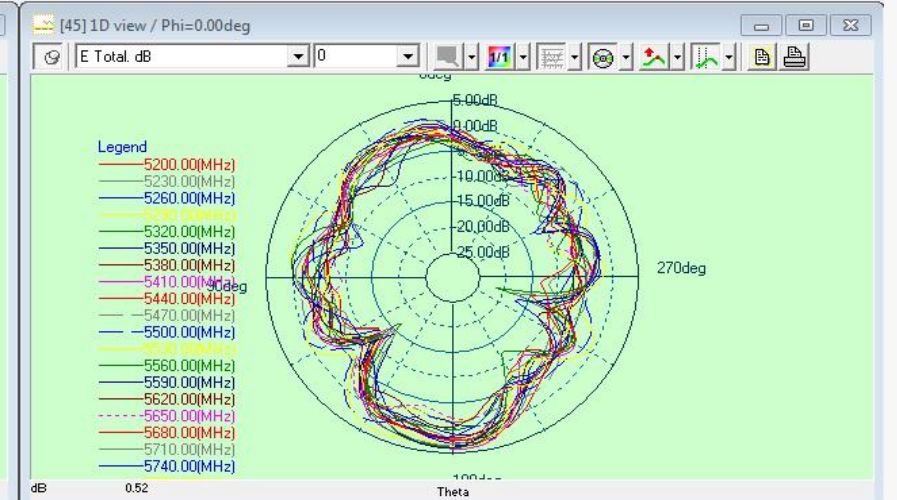
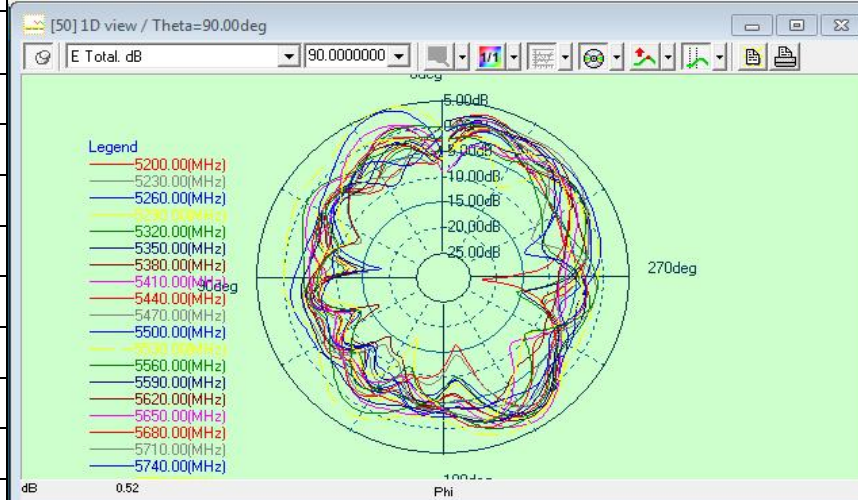
Frequency	Efficiency	Gain. dBi
2400MHz	53%	2.94
2405MHz	52%	2.97
2410MHz	53%	3.07
2415MHz	52%	2.89
2420MHz	52%	3.08
2425MHz	52%	2.95
2430MHz	52%	2.99
2435MHz	51%	2.95
2440MHz	51%	2.79
2445MHz	48%	2.55
2450MHz	50%	2.73
2455MHz	49%	2.38
2460MHz	50%	2.79
2465MHz	50%	2.33
2470MHz	49%	2.30
2475MHz	49%	2.45
2480MHz	49%	2.23
2485MHz	52%	2.58
2490MHz	53%	2.45
2495MHz	53%	2.30
2500MHz	52%	2.16





WIFI无源数据 - WiFi Passive data

5200-5800MHZ Efficiency		
Frequency	Efficiency	Gain. dBi
5200MHz	52%	3. 20
5230MHz	49%	2. 66
5260MHz	54%	3. 37
5290MHz	54%	3. 98
5320MHz	48%	2. 86
5350MHz	46%	2. 75
5380MHz	50%	3. 06
5410MHz	56%	4. 01
5440MHz	48%	3. 18
5470MHz	58%	3. 49
5500MHz	59%	4. 56
5530MHz	60%	5. 09
5560MHz	56%	3. 64
5590MHz	53%	4. 01
5620MHz	48%	3. 53
5650MHz	51%	2. 81
5680MHz	51%	2. 99
5710MHz	55%	3. 93
5740MHz	54%	3. 69
5770MHz	51%	3. 70
5800MHz	49%	4. 24





测试数据: Test Data

433无源图 433 Passive Diagram -(SWR/Log Mag /Smith)





Antenna Performance Table					
Antenna	Frequency	Mode	Channel No.	TRP (dBm)	TIS (dBm)
原天线	2.4G	b模式(11MHz)	1	15.35	-60.12
			7	14.42	-55.34
			13	13.99	-60.44
	5G	a模式(54MHz)	36	5.81	-49.01
			64	6.25	-43.51
			149	7.06	-53.62
			165	7.52	-59.18
拓频调试天线	2.4G	b模式(11MHz)	1	15.16	-63.77
			7	14.93	-57.71
			13	15.01	-61.23
	5G	a模式(54MHz)	36	7.67	-53.4
			64	7.42	-51.37
			112	10.15	-52.92
			165	8.59	-56.91



测试数据:

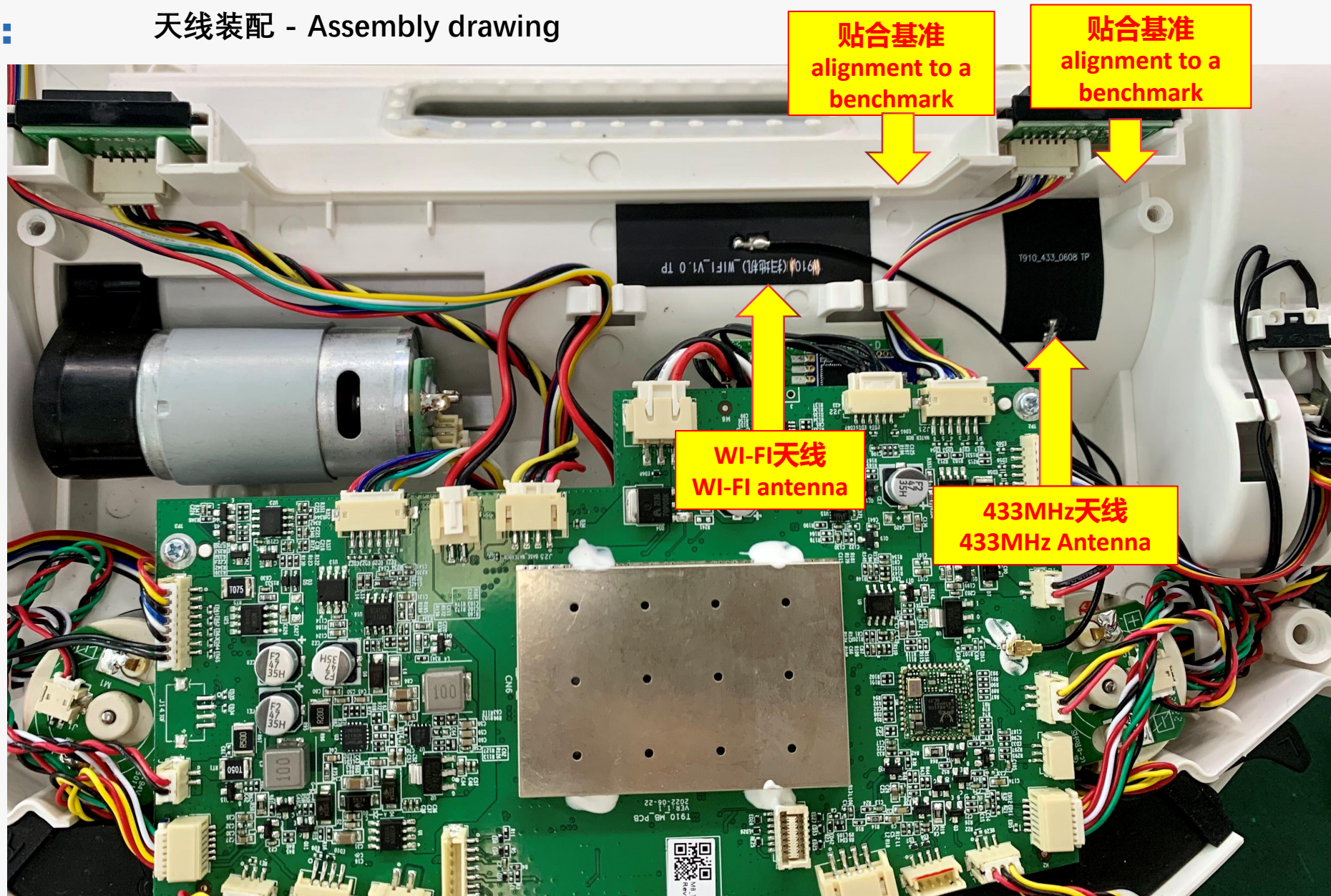
Test Data

天线装配 - Assembly drawing

如右图所示:

图中红色标识为天线粘贴基准角, 粘贴天线时, 天线请与图中箭头位置的壳料边, 保持平行, 以便保证天线一致性。

As shown in the right figure:
The red mark in the figure is the antenna pasting reference angle, when pasting the antenna, the antenna please with the arrow position in the figure of the shell material edge, to keep parallel, in order to ensure the consistency of the antenna.





规划总结

Planning to summarize

0 0
以上为扫地机项目样品天线无修改的测试数据和原机天线的测试对比数据。

The above is the test data of the sweeper project sample antenna without modification and the test comparison data of the original antenna.

经测试发现，原机天线和后续优化的天线wifi灵敏度都偏低，做拉外置试验也无提升。还请协助分析一下，谢谢！

The test found that the original antenna and the subsequent optimization of the antenna's wifi sensitivity are low, do pull the external test also did not improve. Please also help to analyze, thank you!

THANK YOU

