



2023

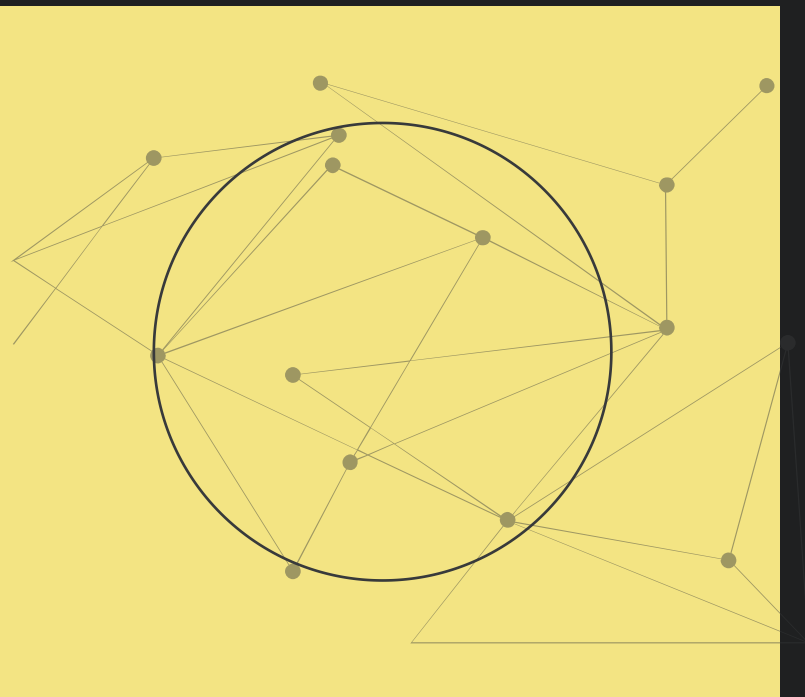
深圳祥博一科技有限公司

Shenzhen Xiangboyi Technology Co. Ltd

1st Floor, Factory Building 2, Haochuang Longhua Industrial Park, No. 95, Yousong Road, Fukang Community, Longhua Sub-district, Longhua District, Shenzhen City

天线规格

Antenna Specifications



01 客户名称/Customer：和天创

02 项目名称/Project：D070

03 立项编号/Project NO：XBY230451

04 工程师/Engineer：
电话/Phone：

PART 1

测试报告版本/Report version

日期 Date	天线版本 Antenna version	主板版本 PCB version	变更描述 Description of Change
2023-11-13			天线测试数据

PART 2

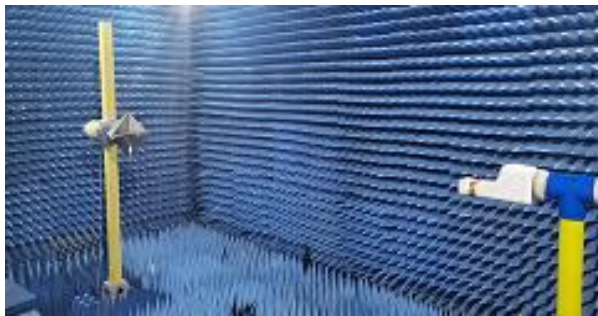
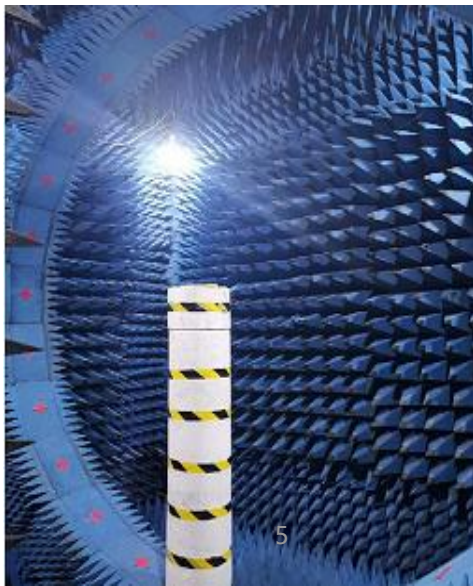
项目信息/Project brief

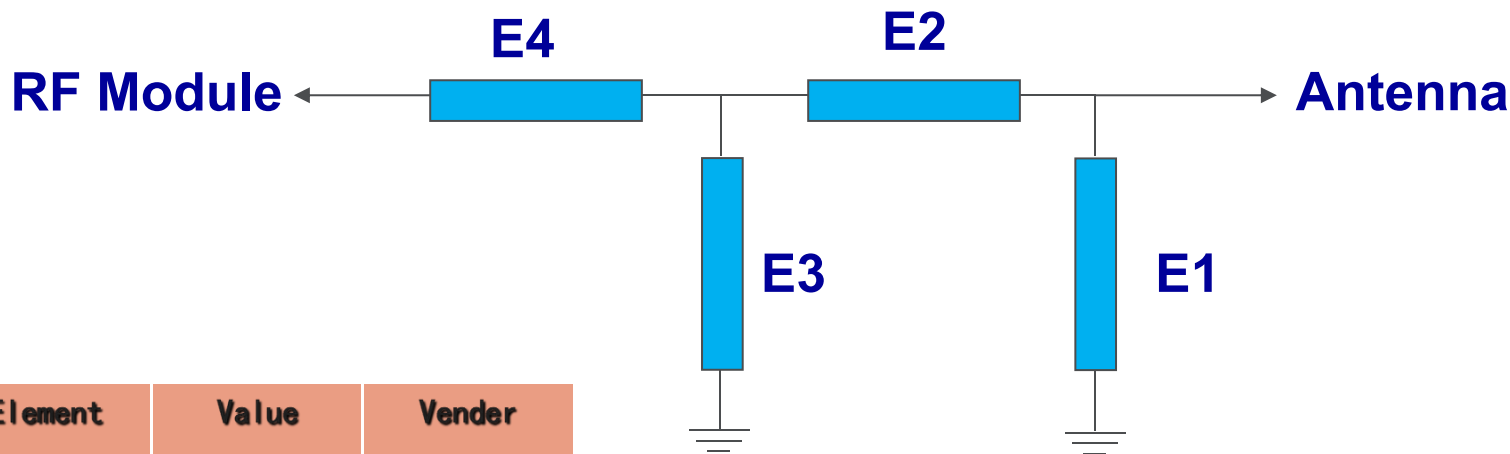
NO	ITEMS	DETAILS
1	工作频段 Operating band	WIFI: B/G/N/A模
2	频率范围 Frequency band	WIFI: 2400-2500Mhz; 5180-5850Mhz
3	天线类型 Antenna type	MAIN: monopole
4	天线材质及实现形状 Material and implementation shape	PCB+焊线 PCB welding wire

PART 3

Test system and equipment

	测试项目/Test items	设备/equipment
1: S参数 S parameter	1. 回波损耗 Return loss 2. 驻波比 VSWR	网络分析仪/Network analyzer: A338/A333
2: 耦合功率测试 Active test	1. 发射功率 Transmitting power 2. 接收灵敏度 Receiving sensitivity	综合测试仪/Comprehensive test instrument: Agilent 8960/ CMW500
3: 辐射模式与增益 Radiation mode and gain	1. 辐射模式 Radiation mode 2. 天线增益 Gain	1. 暗室/Shielding room: 7x4x3 m (ETS-3D) 2. 网络分析仪/Network analyzer: HP 8753D





Element	Value	Vender
E1 (0402)	NA	
E2 (0402)	0 0hm	
E3 (0402)	NA	
E4 (0402)	0 0hm	

Original match unchanged.

PART 5

有源测试数据/Active Test data

WIFI BAND	802.11a : 54MBps (5G)					
Channel	CH36	CH149	CH161			
TRP	16.64	17.45	17.57			
TIS			-70.44			

WIFI BAND	802.11b : 11MBps (2.4G)			802.11g : 54MBps (2.4G)		
Channel	CH1	CH6	CH11	CH1	CH6	CH11
TRP	17.60	18.25	18.12	16.16	16.47	16.82
TIS			-85.21			-69.13

WIFI BAND	802.11n : MCS7 (2.4G)					
Channel	CH1	CH6	CH11			
TRP	15.64	16.23	16.54			
TIS			-71.53			

WiFi 2.4G

Freq (MHz)	Effi (%)	Gain (dBi)
2400	44.52	1.97
2410	34.24	0.88
2420	43.5	1.67
2430	34.44	0.73
2440	44.79	1.52
2450	40.16	1.3
2460	44.41	1.97
2470	37.58	1.51
2480	47.41	2.33
2490	40.11	1.66
2500	40.74	1.71

WiFi 5.8G

Freq (MHz)	Effi (%)	Gain (dBi)
5000	45.42	1.33
5100	48.13	0.92
5200	41.08	-0.25
5300	36.42	-0.69
5400	41.32	0.6
5500	39.48	1.23
5600	44.53	1.42
5700	40.18	0.68
5800	38.35	0.11
5900	35.78	-0.95
6000	30.82	-1.51

BT

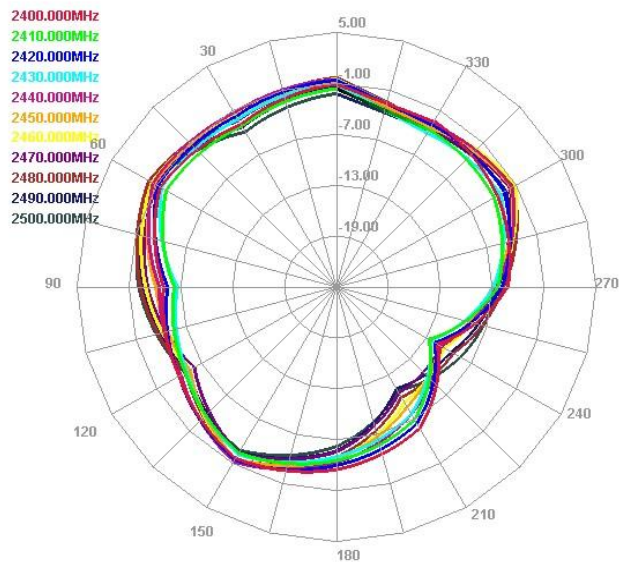
Freq (MHz)	Effi (%)	Gain (dBi)
2400	28.31	-1.35
2410	23.6	-1.09
2420	31.63	-0.74
2430	28.52	-0.87
2440	35.88	0.59
2450	34.14	0.57
2460	38.55	1.44
2470	33.51	0.79
2480	33.24	1.87
2490	32.2	0.76
2500	35.07	1.14

PART 7

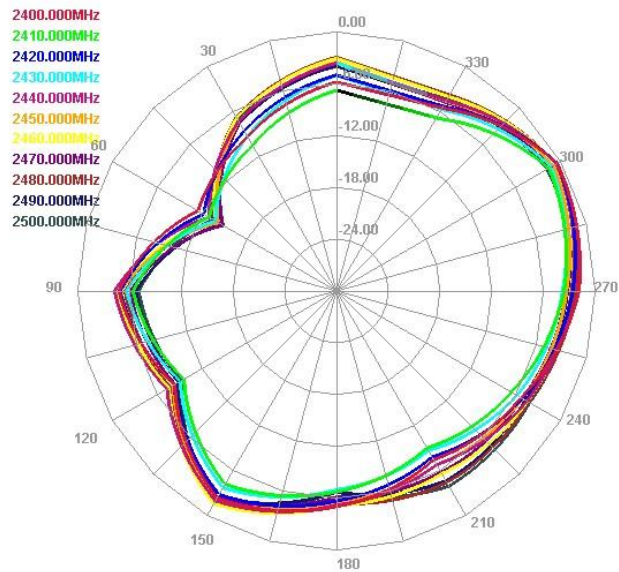
无源方向图/Passive directional graph

WiFi 2.4G

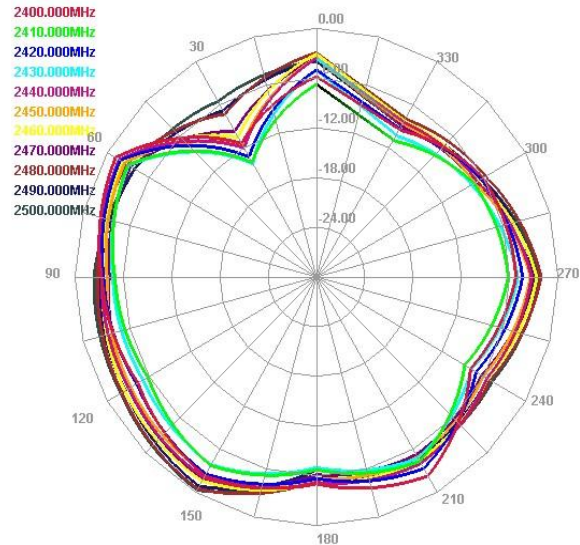
Horizontal



E1 Face



E2 Face

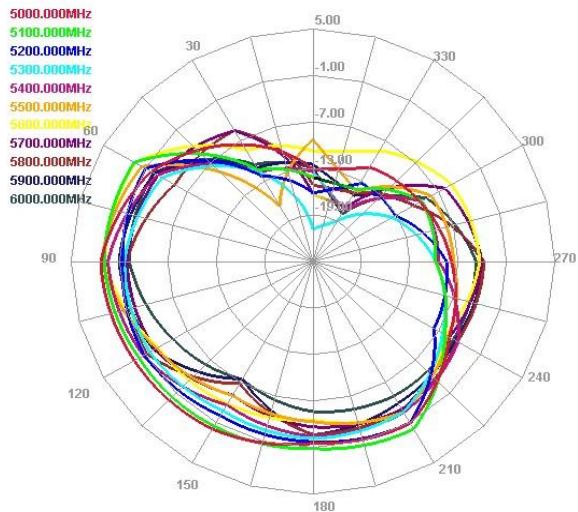


PART 7

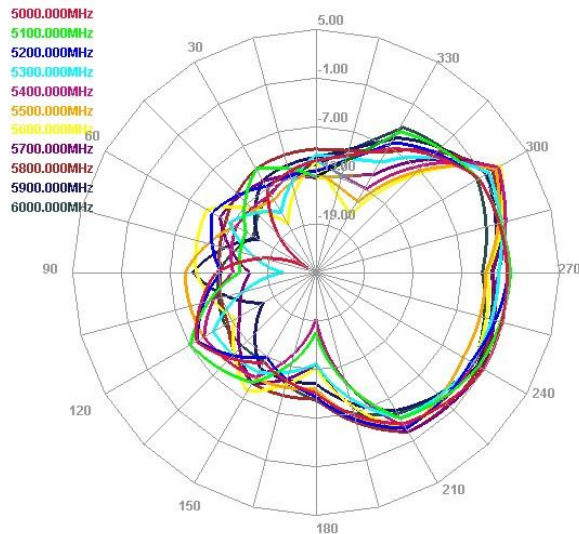
无源方向图/Passive directional graph

WiFi 5.8G

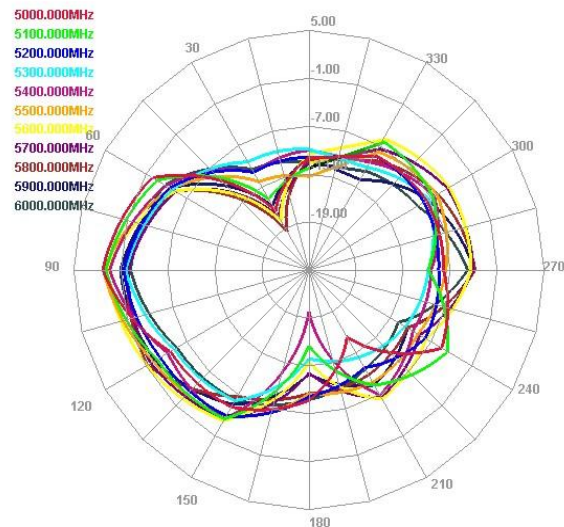
Horizontal



E1 Face



E2 Face

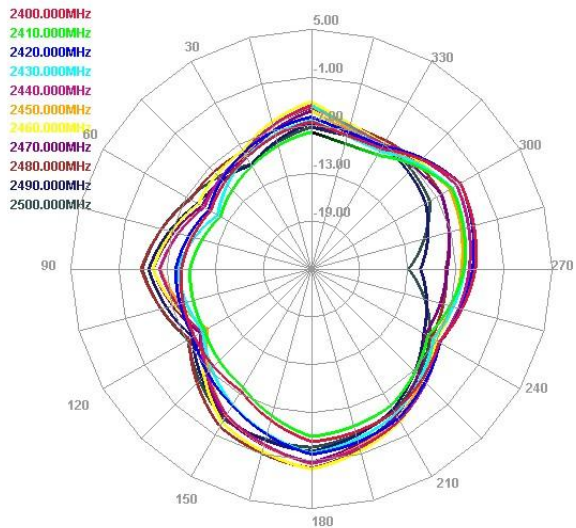


PART 7

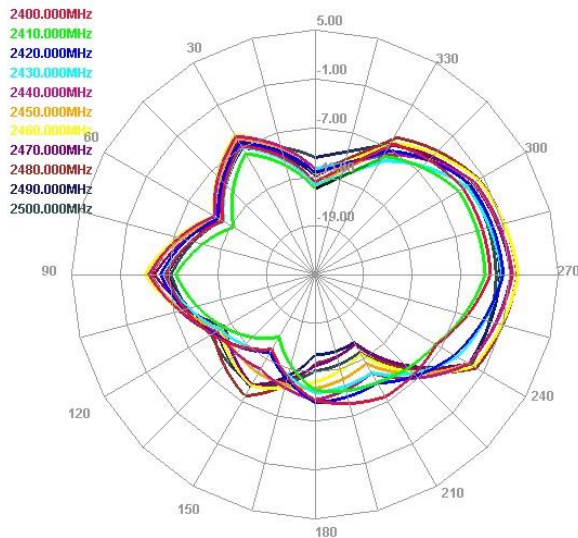
无源方向图/Passive directional graph

BT

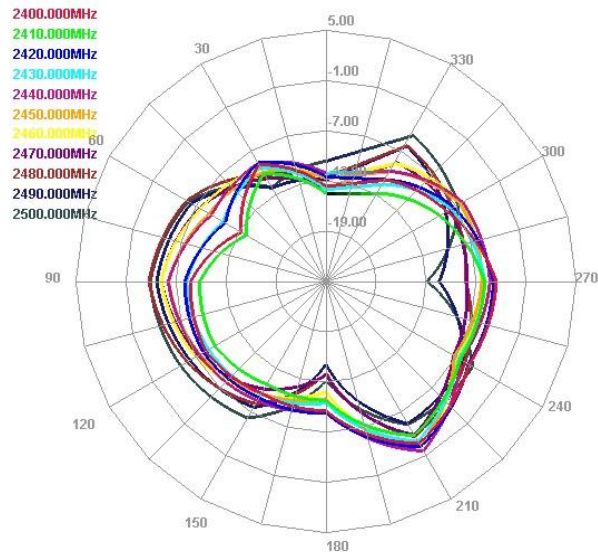
Horizontal



E1 Face

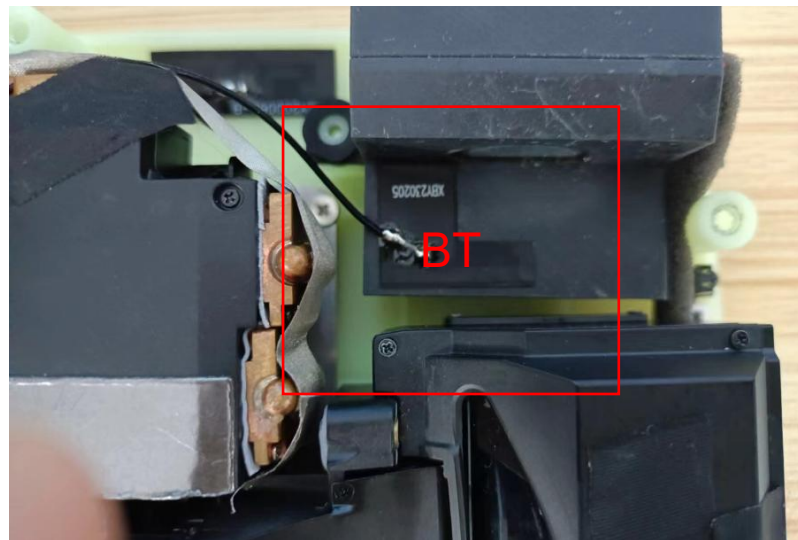
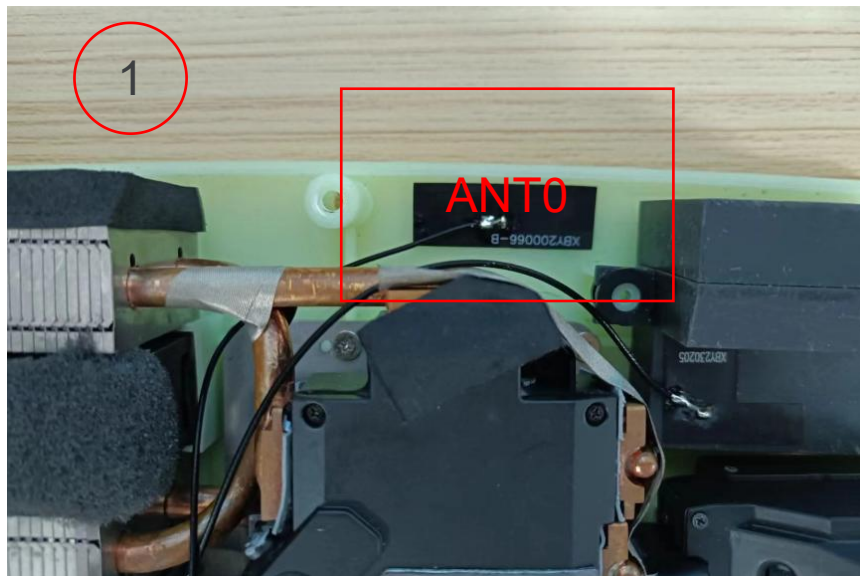


E2 Face



PART 8

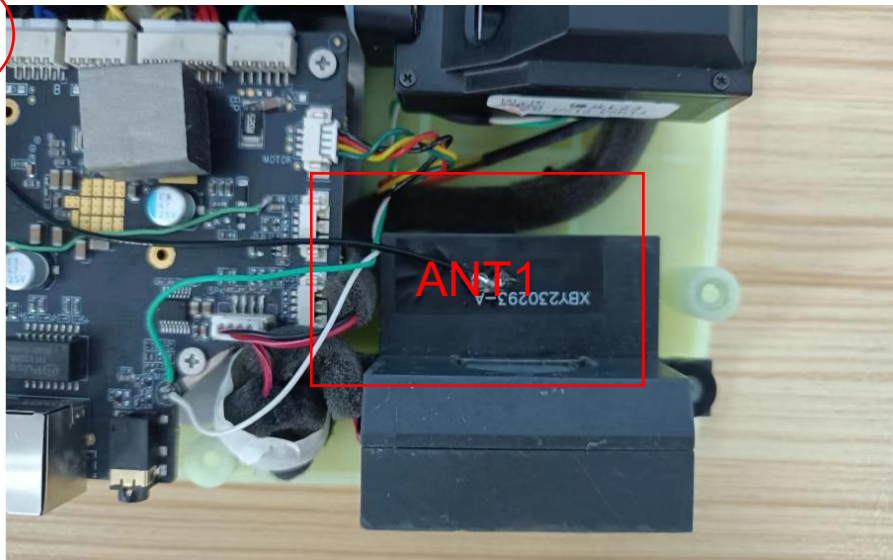
组装方式/Assembly method



PART 8

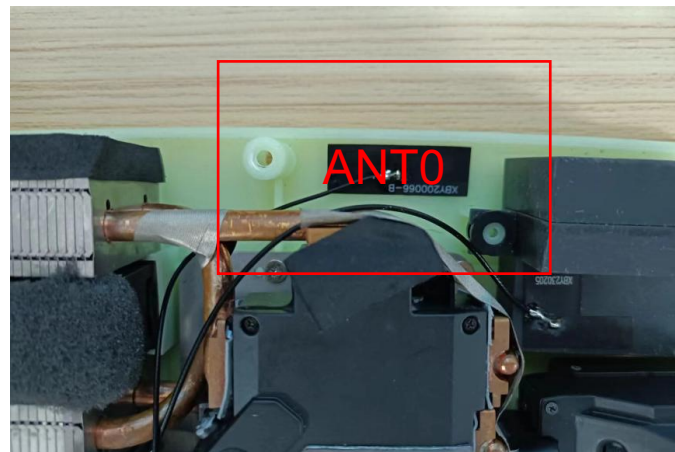
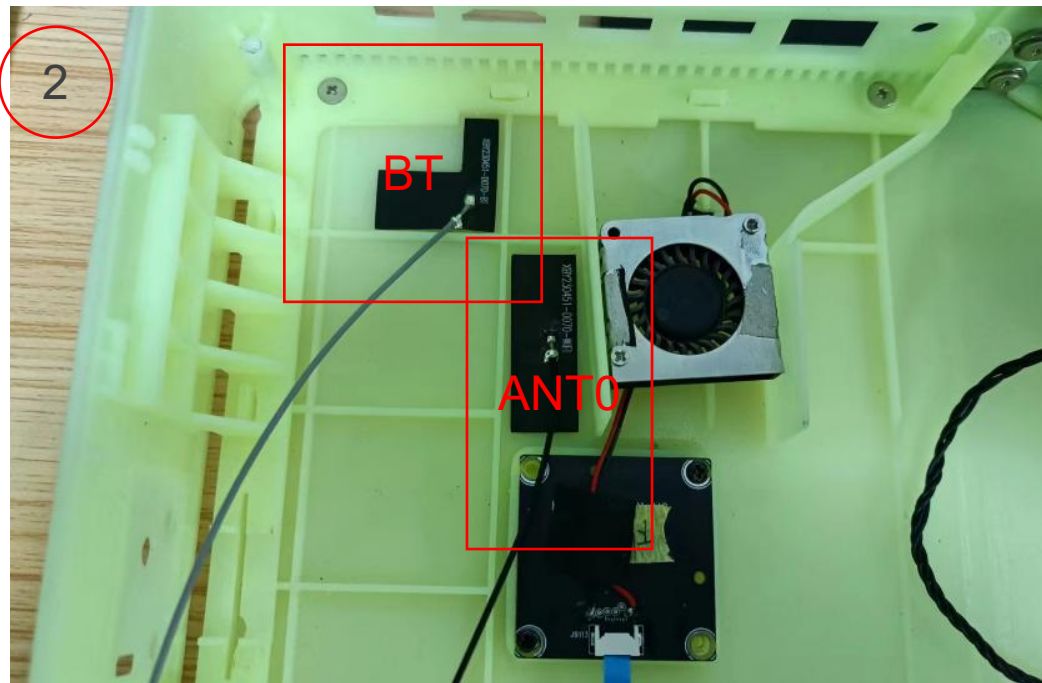
组装方式/Assembly method

1



PART 8

2#组装方式/Assembly method



PART 8

2#有源测试数据/Active Test data

2

WIFI BAND	802.11a : 54Mbps (5G)					
Channel	CH36	CH149	CH161			
TRP	16.75	17.58	16.23			
TIS			-69.30			

WIFI BAND	802.11b : 11Mbps (2.4G)			802.11g : 54Mbps (2.4G)		
Channel	CH1	CH6	CH11	CH1	CH6	CH11
TRP	17.88	17.28	17.37	17.51	17.83	16.48
TIS			-81.36			-68.47

WIFI BAND	802.11n : MCS7 (2.4G)					
Channel	CH1	CH6	CH11			
TRP	16.69	17.31	17.12			
TIS			-70.23			

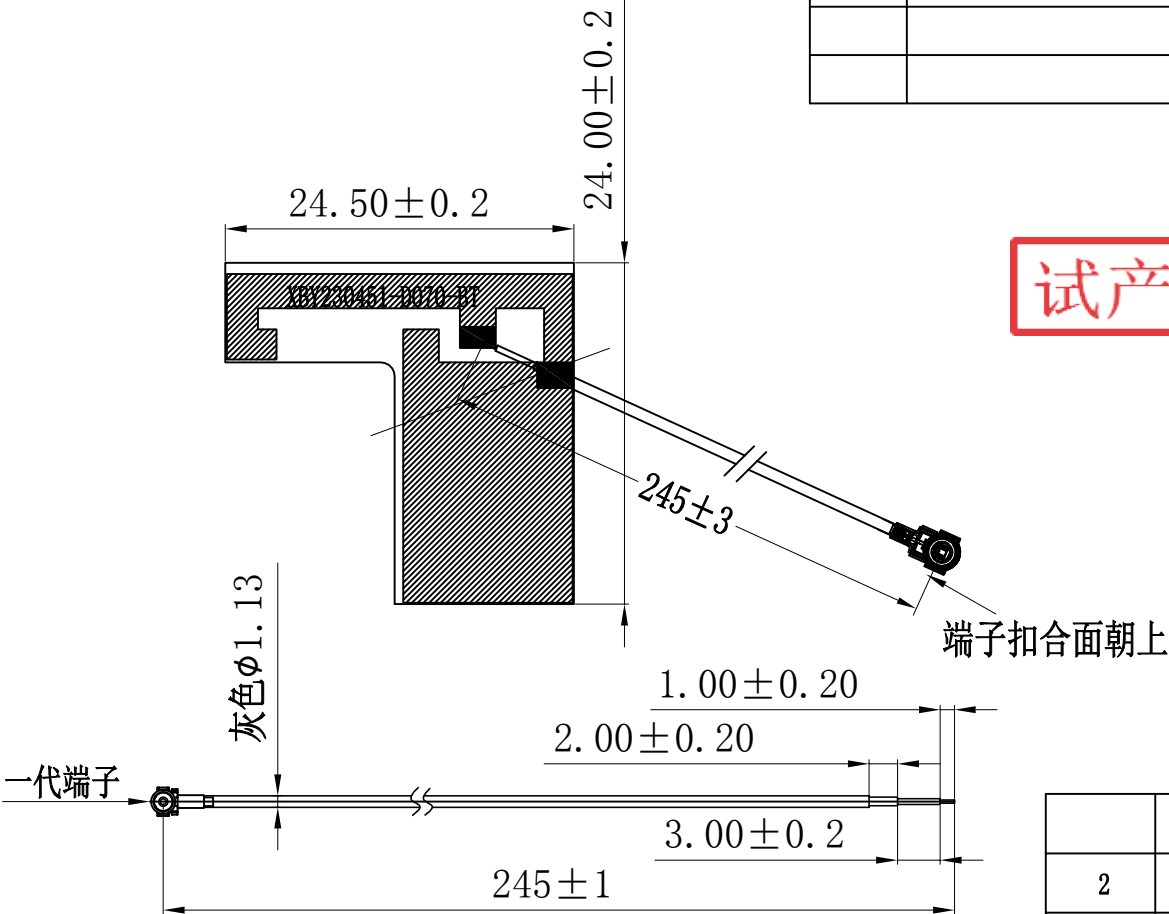
PART 9

整机图片 Picture of complete machine



版本	变更内容	日期	变更者	确认

试产图纸



工艺要求

1. 材质：单面电解铜一对半材质
2. 背胶：3M 467
3. 油墨：无卤油墨, 亚黑
3. 字符：亚白字符
4. 镀点：抗氧化
5. 表面无压伤，划痕，油污，斑点等不良

包装要求：焊接好后需拆分下来按100PCS装密封袋，密封袋上需有标签，注明立项号 日期和数量等信息

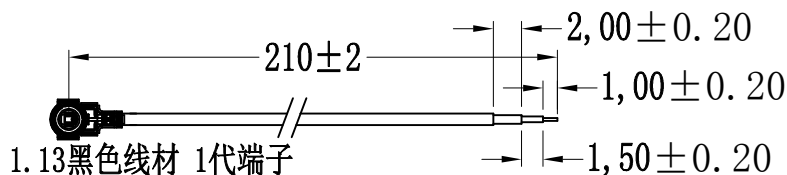
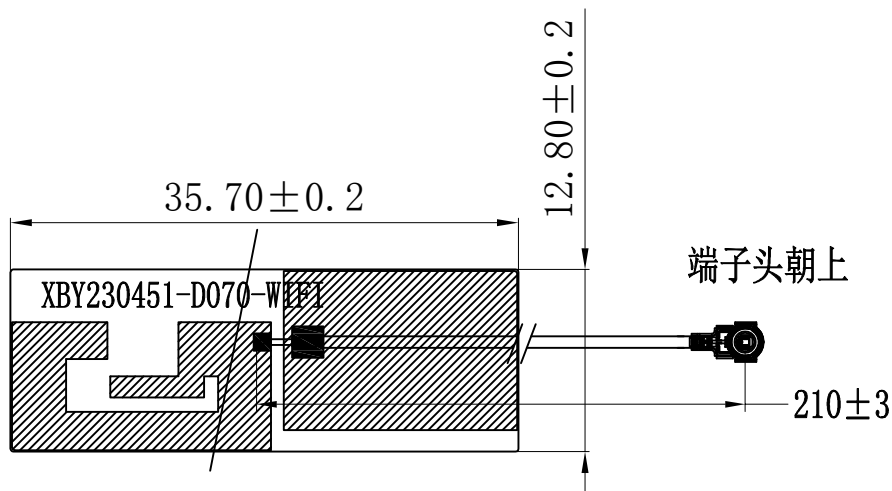
测量工具：卡尺

序号	品名	颜色	规格	数量
2	射频线	灰色	1.13	1
1	FPC	黑色		1

LENGTH	A	B	C
L<=10	±0.05	±0.10	±0.15
10<L<=50	±0.10	±0.15	±0.20
50<L<=150	±0.15	±0.20	±0.30
L>150	±0.20	±0.25	±0.40
角度公差	±1°	公差等级	B

深圳祥博一科技有限公司			
客户料号		设计	
XBY 料号	XBY230451-BT	审核	庄永根
版 本	TA	日 期	2023-11-17
单 位	MM	第三视角	

试产图纸



工艺要求

1. 材质：单面电解铜一对半材质
2. 背胶：3M 467
3. 油墨：无卤油墨, 亚黑
3. 字符：亚白字符
4. 镀点：抗氧化
5. 表面无压伤, 划痕, 油污, 斑点等不良

包装要求：焊接好后需拆分下来按100PCS装密封袋，密封袋上需有标签，注明立项号 日期和数量等信息

测量工具：卡尺

2	射频线	黑色	1.13	1
1	FPC	黑色		1
序号	品名	颜色	规格	数量

LENGTH	A	B	C	深圳祥博一科技有限公司			
$L \leq 10$	± 0.05	± 0.10	± 0.15	客户料号		设计	庄永根
$10 < L \leq 50$	± 0.10	± 0.15	± 0.20	XBY 料号	XBY230451-WIFI	审核	
$50 < L \leq 150$	± 0.15	± 0.20	± 0.30	版 本	TA	日 期	2023-11-17
$L > 150$	± 0.20	± 0.25	± 0.40	单 位	MM	第三视角	
角度公差	$\pm 1^\circ$	公差等级	B				