

Sample Acknowledgement

SPECIFICATION FOR APPROVAL

Material name

Name of material: PH1020-antenna

Material description: PPC welding cable

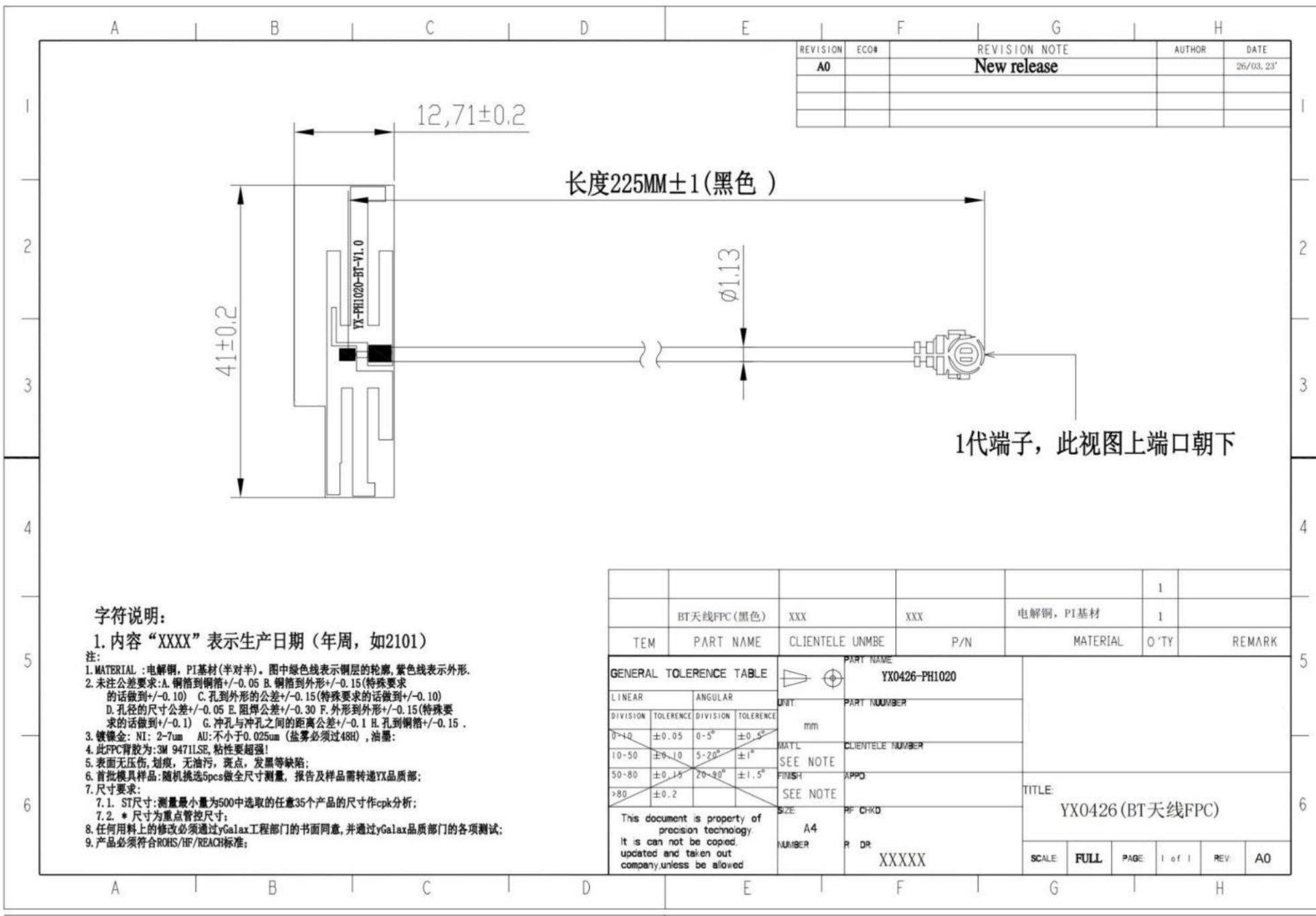
Material number: 1.VR.3713.000048 / 1.VR.3713.000049
1.VR.3713.000050

Material screen printing: YX-PH1020-BT-V1.0; YX-PH1020-WIFI0-V1.0
YX-PH1020-WIFI1-V1.0

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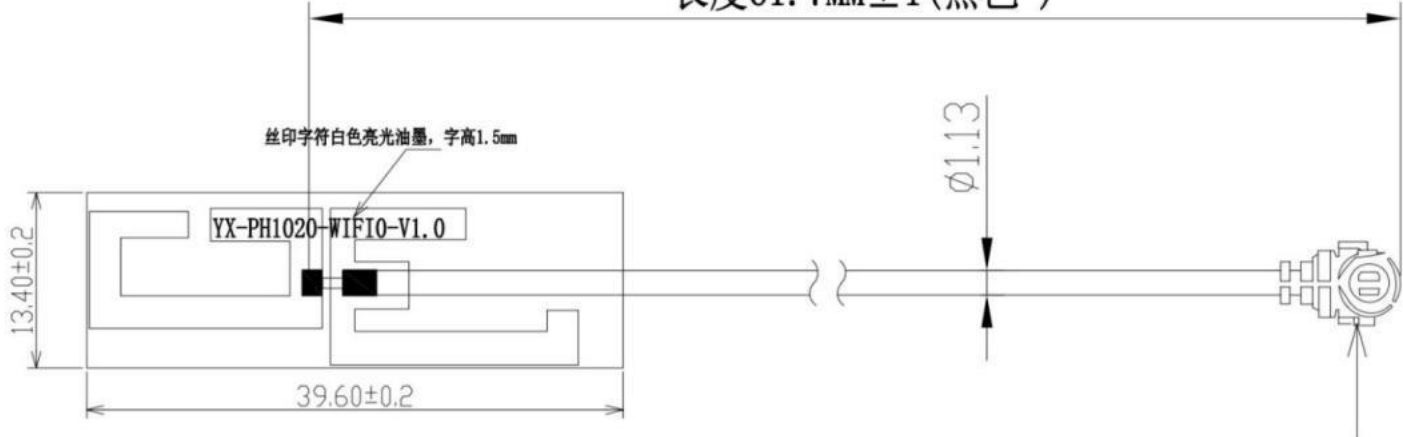
1. Cover
2. Directory
3. ICD Diagram
4. Antenna performance and precautions
5. QC engineering drawings
6. RoHS information
7. Salt spray test
8. High and low temperature test

3.ICD drawings



REVISION	ECO#	REVISION NOTE	AUTHOR	DATE
A0		New release		26/03, 23'

长度61.7MM±1(黑色)



1代端子, 此视图上端口朝下

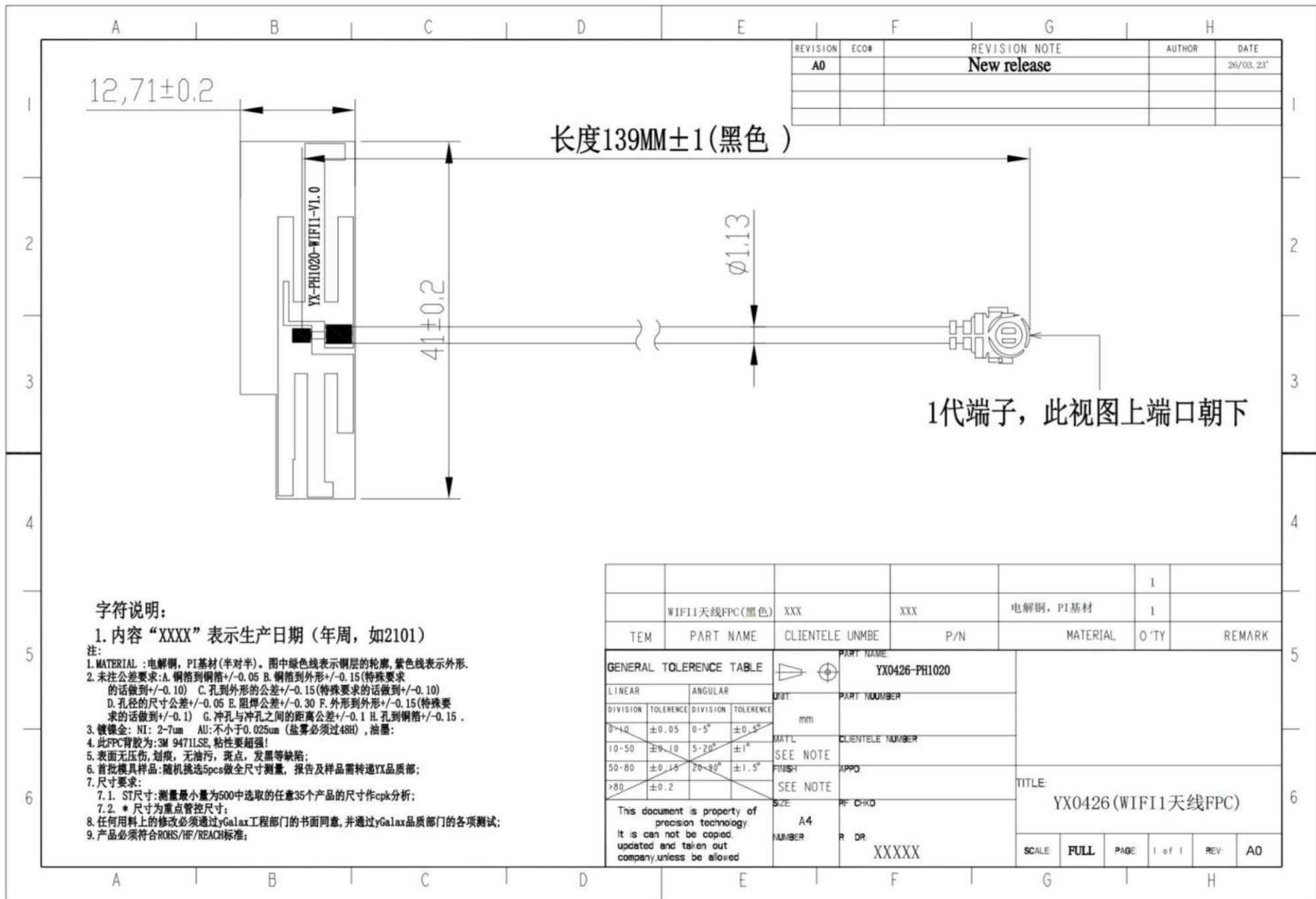
字符说明:

1. 内容“XXXX”表示生产日期(年周, 如2101)

注:

- MATERIAL : 电解铜, PI基材(半对半)。图中绿色线表示铜层的轮廓, 紫色线表示外形。
- 未注公差要求: A. 铜箔到铜箔 ± 0.05 B. 铜箔到外形 ± 0.15 (特殊要求的话做到 ± 0.10) C. 孔到外形的公差 ± 0.15 (特殊要求的话做到 ± 0.10) D. 孔径的尺寸公差 ± 0.05 E. 阻焊公差 ± 0.30 F. 外形到外形 ± 0.15 (特殊要求的话做到 ± 0.1) G. 冲孔与冲孔之间的距离公差 ± 0.1 H. 孔到铜箔 ± 0.15 。
- 镀金: NI: 2-7um AU: 不小于0.025um (盐雾必须过48H), 油墨:
- 此FPC背胶为: 3M 9471LSE, 粘性要超强!
- 表面无压伤, 划痕, 无油污, 斑点, 发黑等缺陷;
- 首批模具样品: 随机挑选5pcs做全尺寸测量, 报告及样品需转递YX品质部;
- 尺寸要求:
 - ST尺寸: 测量最小量为500中选取的任意35个产品的尺寸作cpk分析;
 - * 尺寸为重点管控尺寸;
- 任何用料上的修改必须通过yGalax工程部门的书面同意, 并通过yGalax品质部门的各项测试;
- 产品必须符合ROHS/HF/REACH标准;

					1			
	WIFI0天线FPC(黑色)	XXX	XXX	电解铜, PI基材	1			
TEM	PART NAME	CLIENTELE UNMBE	P/N	MATERIAL	O'TY	REMARK		
GENERAL TOLERANCE TABLE				TITLE: YX0426(WIFI0天线FPC)				
LINEAR		ANGULAR					PART NAME	
DIVISION TOLERANCE		DIVISION TOLERANCE					UNIT: PART NUMBER	
0~10 ±0.05 0~5° ±0.5°		mm					CLIENTELE NUMBER	
10~50 ±0.10 5~20° ±1°		MATL					APPO	
50~80 ±0.15 20~30° ±1.5°		SEE NOTE		SCALE FULL PAGE 1 of 1 REV: A0				
>80 ±0.2		FINISH						
This document is property of precision technology. It is can not be copied, updated and taken out company, unless be allowed		SIZE: A4		YX0426(WIFI0天线FPC)				
		NUMBER		R DR: XXXXX				

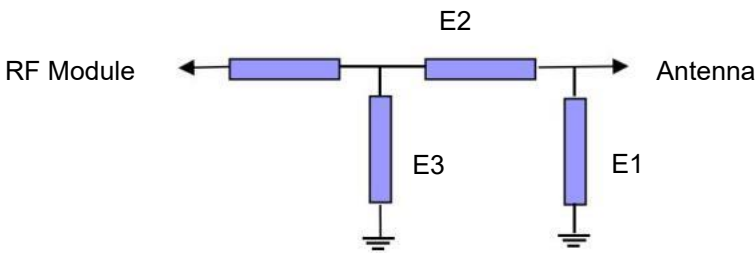


Antenna performance parameters and precautions

Project machine diagram



Matching circuit



	Elemen	Value
WiFi Antenna	E1	N/C
	E2	0.5
	E3	N/C

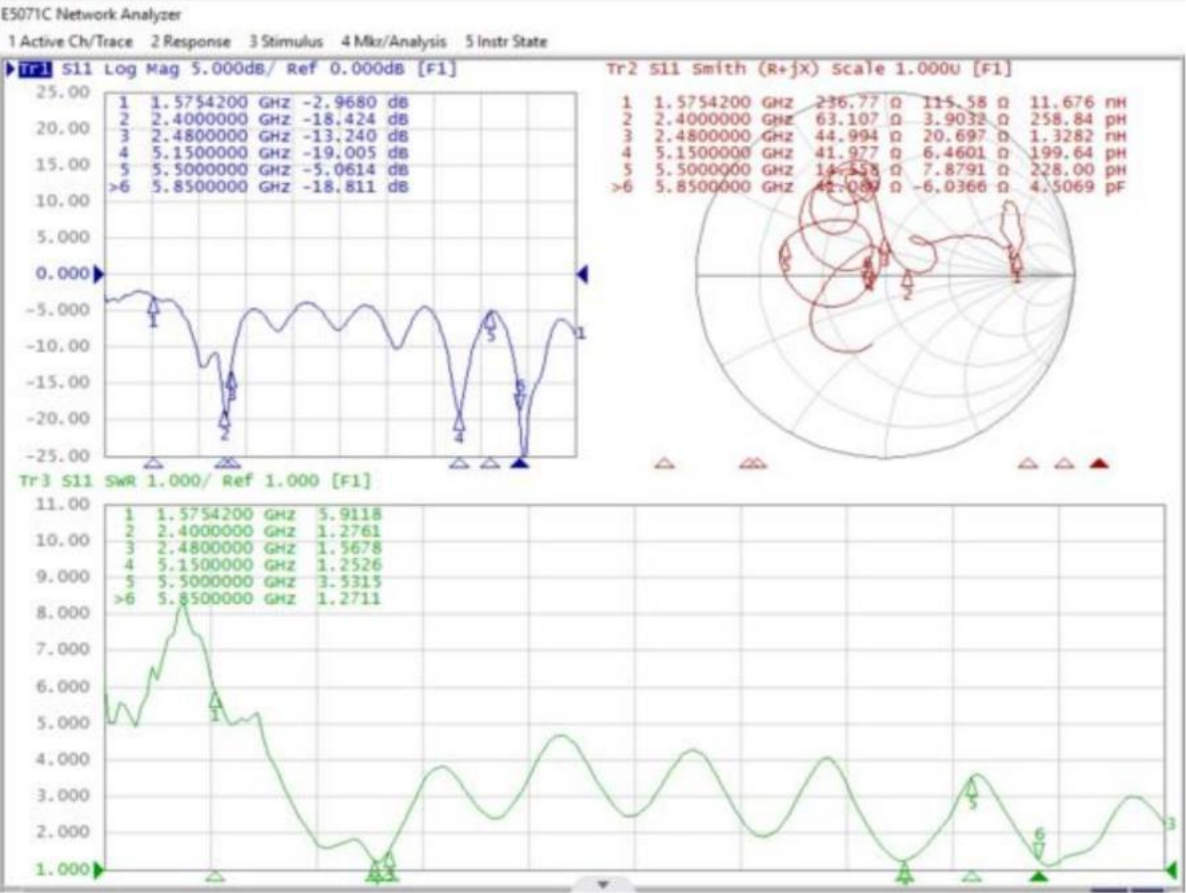
Note: All antenna matching circuits are unchanged. Original matching.

WiFi active test data

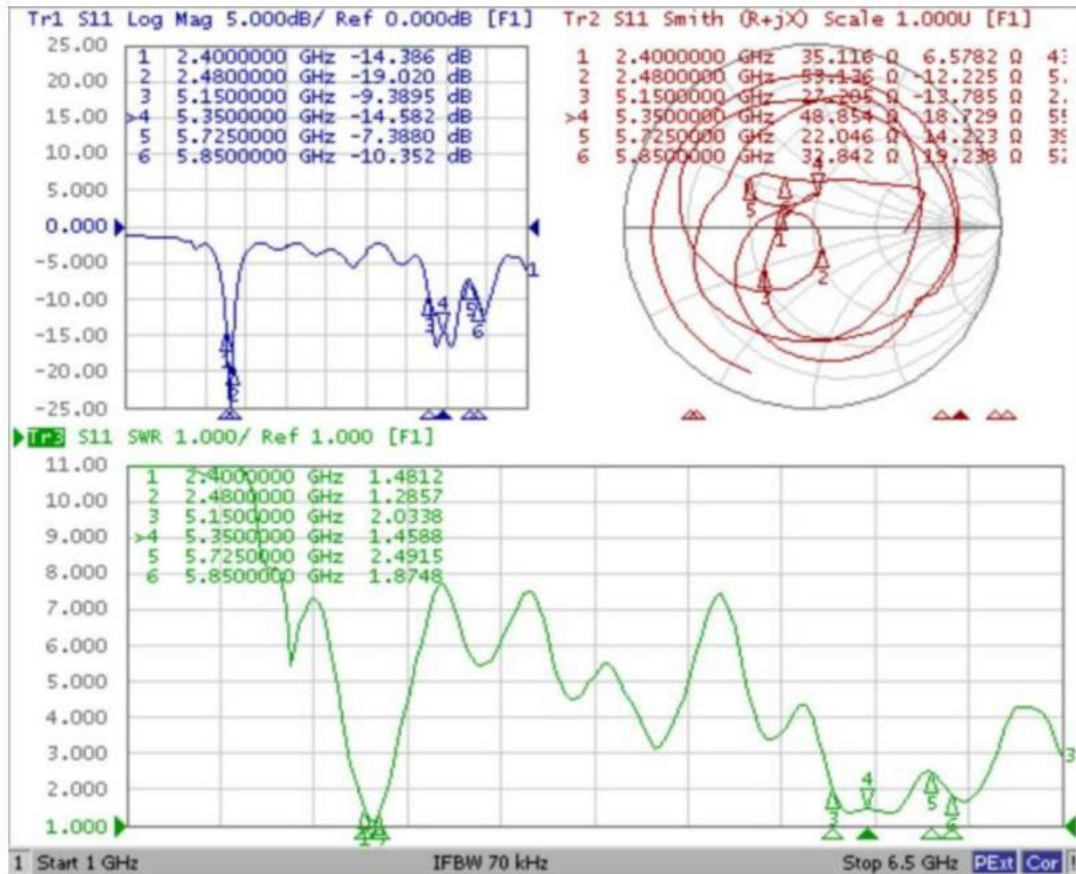
FS Channel	TRP	TIS	Channel	TRP	TIS
2.4WIFI-B	1 17.62 -79.65		5GWIFI-A	36 15.16 -74.65	
	6 17.73 -78.89			149 15.51 -75.38	
	11			165 16.43 -75.35	

17.4 -78.77

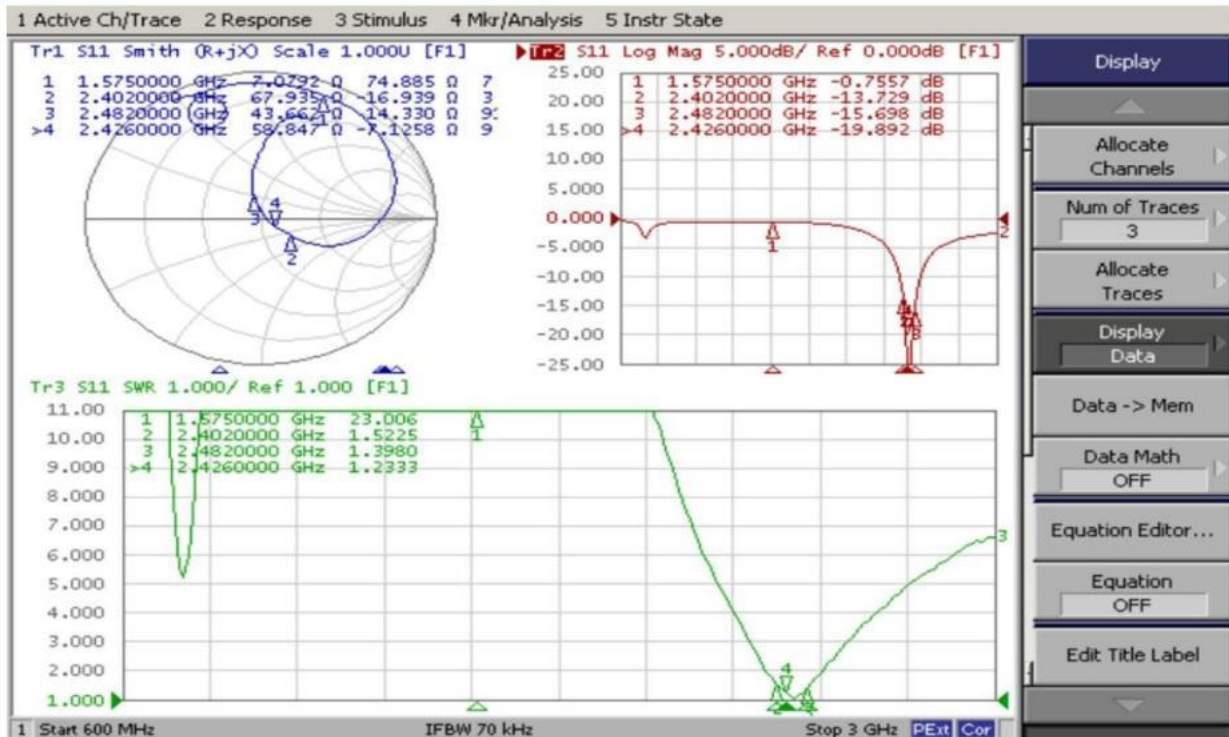
WL0-S11 Parameters



WL1-S11 Parameters



WL1-S11 Parameters



WL0 - Efficiency/Gain

Frequency	Efficiency	Efficiency	Gain/ dBi
2400	-2.55	55.54	3.49
2410	-2.42	57.22	3.56
2420	-2.34	58.37	3.36
2430	-2.53	55.91	3.51
2440	-2.71	53.52	3.34
2450	-2.55	55.54	3.14
2460	-2.80	52.45	2.86
2470	-3.03	49.82	3.21
2480	-2.97	50.51	3.03
2490	-3.12	48.79	2.46
2500	-3.33	46.45	2.83

Frequency	Efficiency	Efficiency	Gain/ dBi
5150	-2.46	56.75	5.31
5170	-2.52	55.98	5.56
5190	-2.68	53.95	5.57
5210	-2.71	53.58	5.58
5230	-2.80	52.48	5.77
5250	-2.82	52.24	5.62
5270	-2.96	50.58	5.56
5290	-2.99	50.23	5.51
5310	-3.03	49.77	5.63
5330	-3.05	49.55	5.81
5350	-2.96	50.58	5.9
5370	-2.96	50.58	6.15
5390	-2.98	50.35	5.88
5410	-2.99	50.23	5.9
5430	-3.04	49.66	5.8
5450	-3.16	48.31	5.69
5470	-3.27	47.1	5.85
5490	-3.36	46.13	5.6

Frequency	Efficiency	Efficiency	Gain/ dBi
5510	-3.51	44.57	5.48
5530	-3.56	44.06	5.3
5550	-3.64	43.25	5.33
5570	-3.68	42.85	5.27
5590	-2.38	57.76	5.22
5610	-2.41	57.36	5.15
5630	-2.41	57.36	4.91
5650	-2.43	57.17	5.04
5670	-2.46	56.78	5.21
5690	-2.52	56.02	5.32
5710	-2.62	54.72	5.42
5730	-2.68	53.9	5.38
5750	-2.74	53.19	5.37
5770	-2.79	52.58	5.42
5790	-2.88	51.56	5.37
5810	-2.96	50.56	5.32
5830	-3.05	49.59	5.26
5850	-3.12	48.73	5.26

WL1-Efficiency/Gain

Frequency	Efficiency	Efficiency	Gain/ dBi
2400	-2.33	58.45	3.4
2410	-2.21	60.16	3.67
2420	-2.16	60.86	3.52
2430	-2.31	58.79	2.5
2440	-2.38	57.78	2.66
2450	-2.23	59.82	2.68
2460	-2.46	56.78	3.1
2470	-2.64	54.5	2.42
2480	-2.50	56.29	2.61
2490	-2.84	51.99	2.72
2500	-2.93	50.92	2.99

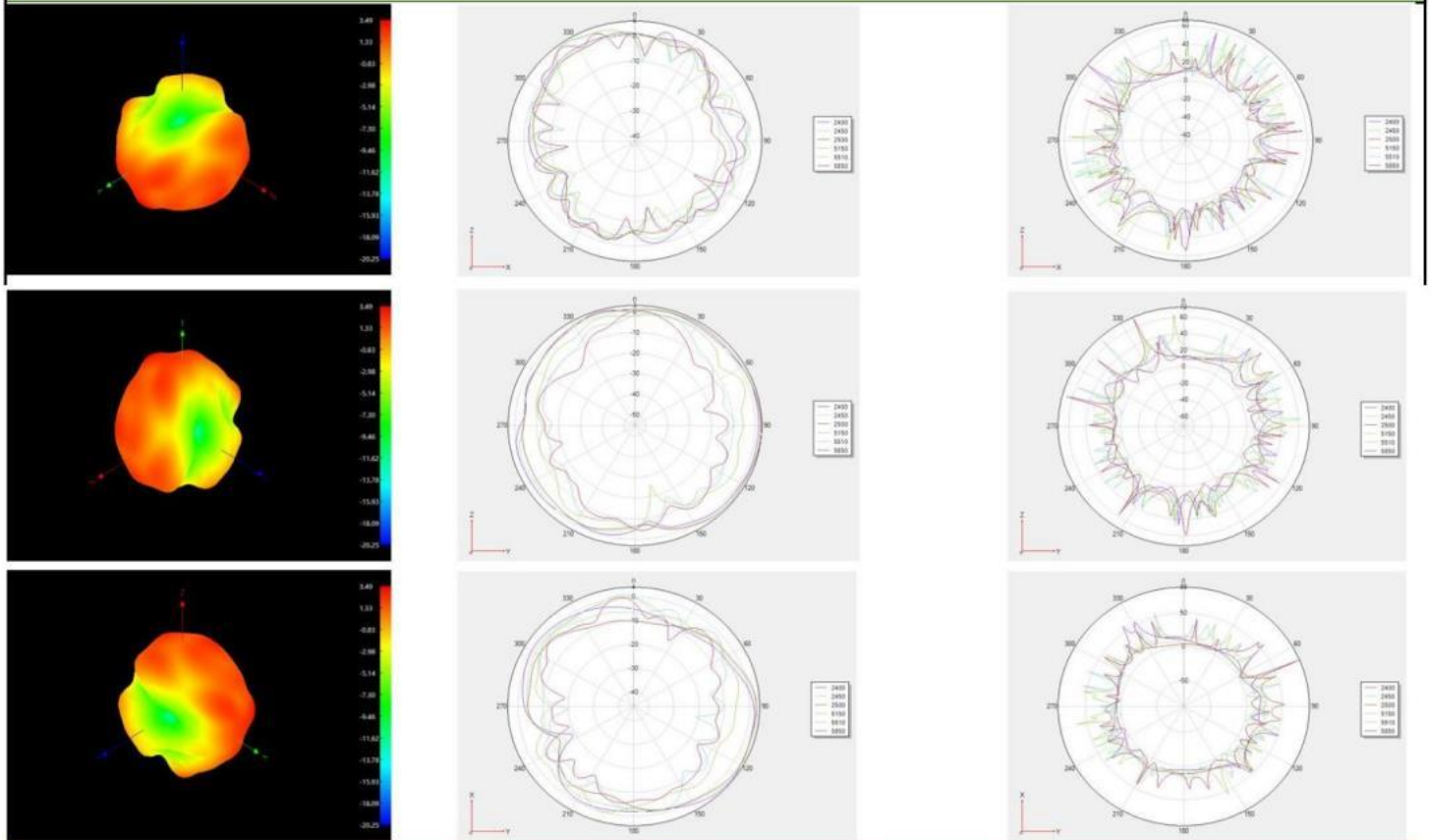
Frequency	Efficiency	Efficiency	Gain/ dBi
5150	-2.70	53.71	4.63
5170	-2.60	54.98	4.74
5190	-2.73	53.39	4.77
5210	-2.65	54.34	4.75
5230	-2.73	53.39	4.68
5250	-2.64	54.5	4.69
5270	-2.78	52.76	4.45
5290	-2.80	52.45	4.36
5310	-2.76	52.92	4.63
5330	-2.84	51.99	4.7
5350	-2.67	54.02	5.04
5370	-2.69	53.87	5.24
5390	-2.62	54.66	5.33
5410	-2.52	55.96	5.48
5430	-2.51	56.12	5.39
5450	-2.56	55.47	5.46
5470	-2.71	53.55	5.31
5490	-2.75	53.08	5.08

Frequency	Efficiency	Efficiency	Gain/ dBi
5510	-2.88	51.53	4.93
5530	-2.81	52.3	4.81
5550	-2.78	52.76	4.93
5570	-2.81	52.3	4.78
5590	-2.79	52.61	4.93
5610	-2.89	51.37	4.69
5630	-2.87	51.68	4.62
5650	-2.89	51.37	4.58
5670	-2.88	51.53	4.5
5690	-2.91	51.22	4.58
5710	-3.11	48.83	4.35
5730	-3.24	47.37	4.03
5750	-3.35	46.24	3.9
5770	-3.44	45.26	3.59
5790	-3.56	44.02	3.51
5810	-3.63	43.34	3.53
5830	-3.66	43.08	3.55
5850	-3.78	41.89	3.76

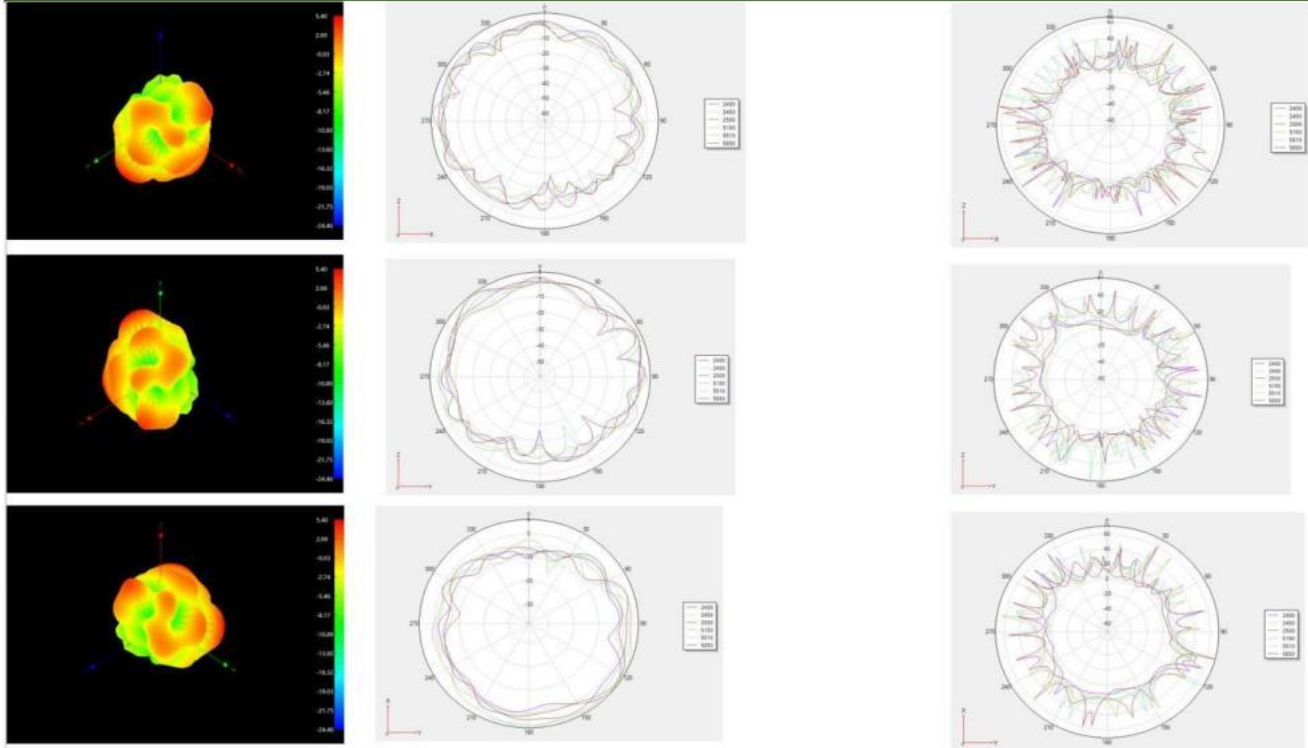
BT-Efficiency/Gain

Frequency	Efficiency	Efficiency	Gain/ dBi
2400	-3.13	48.64	1.91
2410	-3.10	48.93	1.65
2420	-3.05	49.5	1.42
2430	-3.21	47.72	1.62
2440	-3.28	46.99	1.49
2450	-3.20	47.81	1.05
2460	-3.38	45.93	1.15
2470	-3.58	43.89	1.28
2480	-3.55	44.14	0.73
2490	-3.73	42.36	0.73
2500	-3.86	41.11	0.79

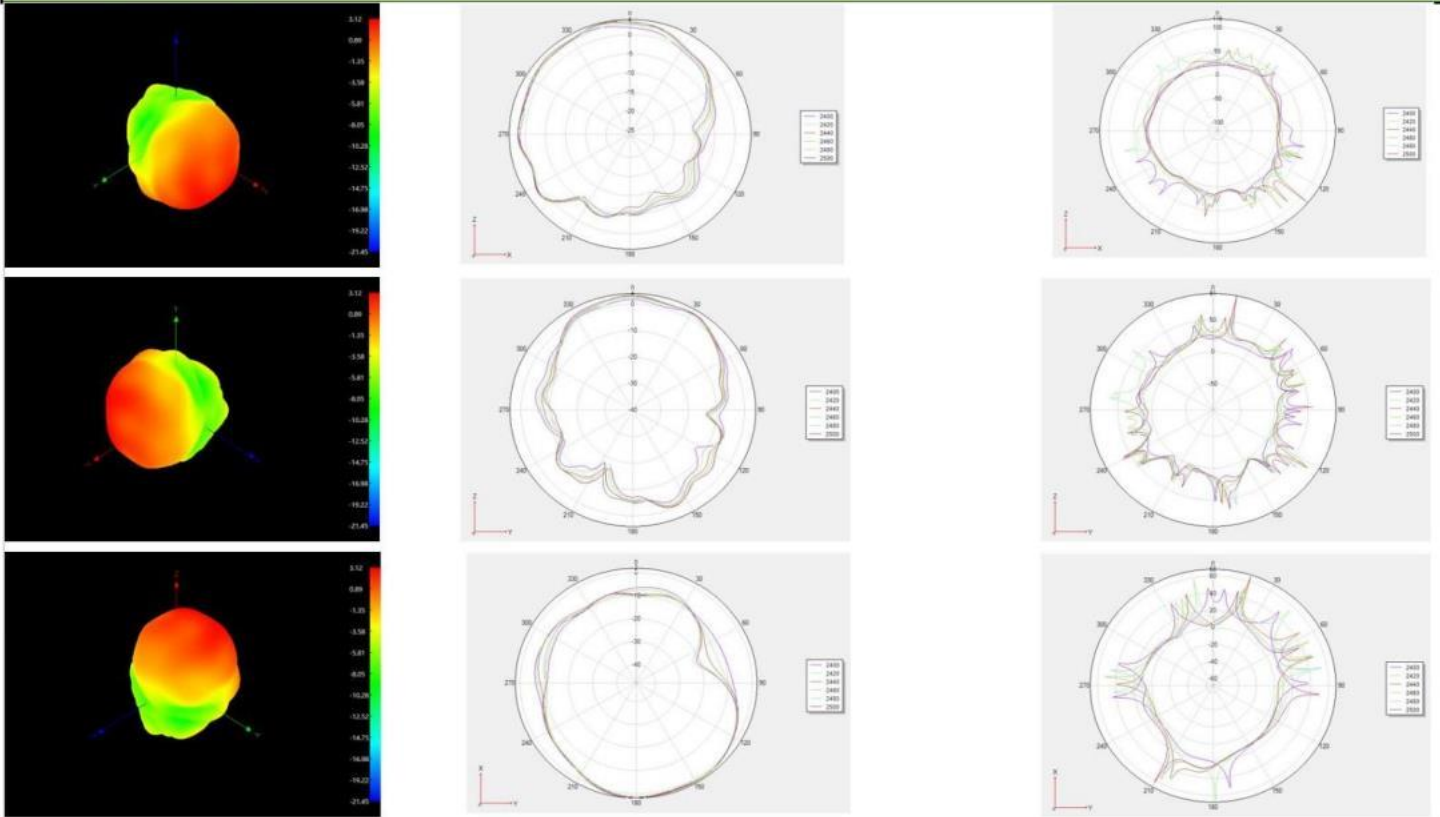
WL0-Directional Pattern



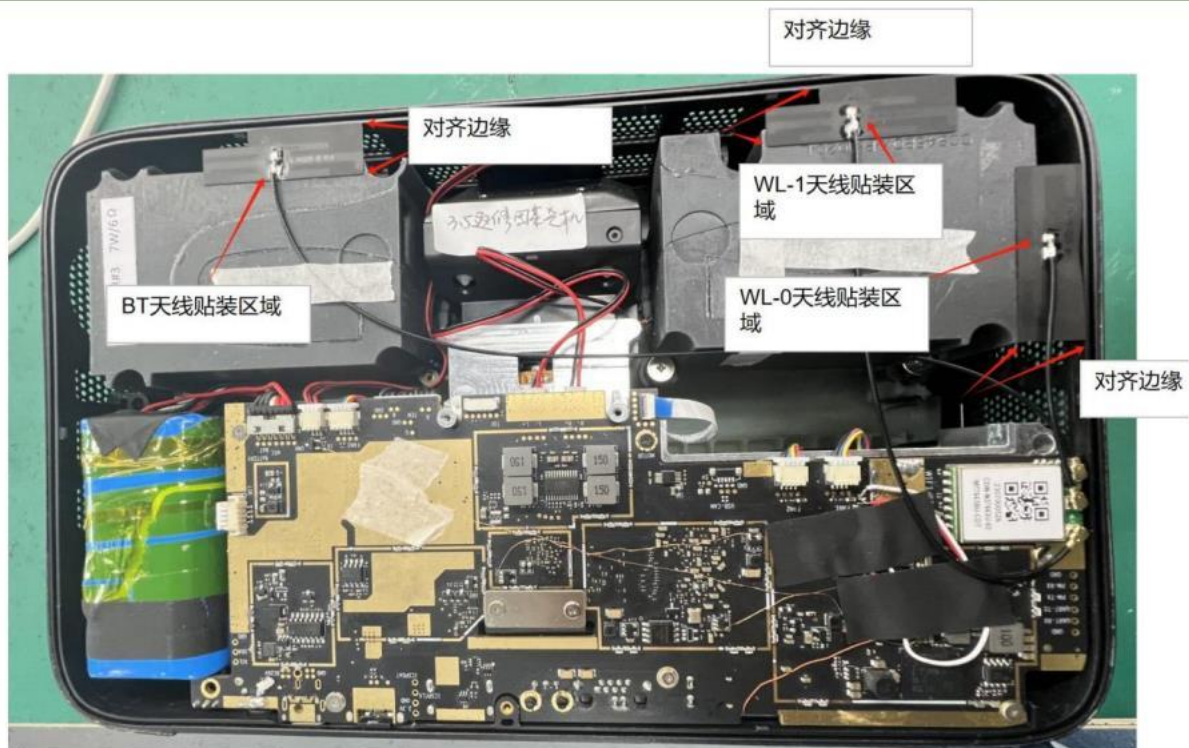
WL1-Directional Pattern



BT-Directional Diagram



Antenna mounting area



		Shenzhen Galaxy Radio Technology Co., Ltd.			QC Engineering Drawings			Document No. YX--CPA-QA004 Date of Establishment			2019/7/10	
								file version	A/01		page number	page 1 of 1
Process		Key points of control			Management responsibility test method			Testing method			Corrective measures	
Serial number	main process	Construction name say	Controlled Items	Regulatory Standards	Responsible	normal Number of samples	principal	Inspection Party Law	test tool	Record Type	Solution	
		start										
1		Received material	quantity/product name/specification	Engineering BOM Material Receiving Operation Instructions	Materials Officer					Electronic Account	Contact the supplier and issue a Return Order	
2		Incoming Materials test	Specifications/Models/Packaging	Engineering BOM Sampling Inspection Plan IQC Incoming Material Inspection Guide	IQC	MA=0.25 MI=0.65	IQC	1. Visual inspection 2. Machine test 3. Sampling	Secondary Yuan cursor Caliper	IQC Incoming Material Inspection Record	If the inspection is OK, it will be stamped with PASS, and if the inspection is NG, it will be stamped with unqualified products. The label also issues an 8D Report Problem Solving Report "Notice" was issued to inform suppliers to return products and make improvements.	
4		Material	quantity/product name/specification	Production Directive Material Receiving Operation Instructions	Materials Officer					Material Delivery Registration Form		
		Packaging	materials/quantity/labeling "Finished product packaging operation instructions"	Packer								
		Shipping test	Appearance Bad record Size test Bad marking Good product packaging Environmental requirements	Engineering BOM Sampling Inspection Plan OQC Final Inspection Operation Instructions	OQC	MA=0.25 MI=0.65	OQC	1. Visual inspection 2. Machine test 3. Sampling	Secondary Yuan cursor Caliper	OQC Finished Product Inspection Record	If the same model and weight are missing during daily inspection If the number of occurrences is greater than or equal to 3, OQC will issue the "8D Report Problem Solving Report" to the production manager Seek analysis and improvement.	
25		Shipping	quantity Delivery Note	Finished Product Shipping Operation Instructions						Electronic Account		
		Finish										
Symbol	Revision Date	Revisions				Revised by		Fiction		Audit		Approval
ÿ												
ÿ								date		date		date
ÿ												

RoHS restricted substances questionnaire

Product information												
client's name		Material Name/Model		project name		manufacturer				Green material identification		
Follow the Moring		PH1020-Antenna		PH1020		Shenzhen Galaxy Radio Technology Co., Ltd.				/		
Product composition information												
Serial Number	Part Name	Part Number	Part Supplier	Third-party test report		Restricted Substance Content PPM						Remark
				date	serial number	lead (Pb)	cadmium (Cd)	HG (Hg)	Hexavalent Chromium (Cr 6+)	Polybrominated hexabrom (PBB)	Polybrominated deca-brom (PBDE)	
1	3M Adhesive		/ Hongjinxingbang	2021/1/13	SHAEC2100467601	O	O	O	O	O	O	
2	Base material (copper foil)		/ Cai Grundy	2021/3/3	SHAEC2103249001	O	O	O	O	O	O	
3	Ink	/	Kaiyao	2021/8/17	ERT2102095	O	O	O	O	O	O	
4	plating	/	Jiahongtai	2021-5-13	A2210168276101001E	O	O	O	O	O	O	
Note: 1. Please use • or × to indicate whether the content of the six restricted substances is in compliance or not; • indicates compliance; × indicates non-compliance. 2. PPM limit value: cadmium <100PPM; lead/mercury/hexavalent chromium/PBB/PBDE <1000PPM. 3. The total amount of lead, hexavalent chromium, mercury and cadmium in packaging materials shall not exceed 100 ppm. 4. Please fill in this form completely and stamp it. Suppliers here refer to direct trading parties. (Provide a stamped paper or scanned PDF file)												

Salt spray test report

Date: March 21, 2024

product name	PH1020	client's name	Follow the Morning
supplier	Shenzhen Galaxy Radio Technology Co., Ltd. company	National testing standards	GB/T 2423.2-2008
Sample situation	Sample quantity: 5PCS		
	Substrate: FPC		Plating:
The test starts and ends at 9:00 on March 21, 2024, and ends at 9:00 on March 23, 2024, for a total of 48 hours.			
Test Type:	√ NSS	ASS	CASS
Test conditions	Saline solution: 5%		PH:7.0
	Temperature in the box: 35°C		Relative humidity: 85%
	Spray mode: Continuous √Intermittent		Compressed air pressure: 1kg/cm²
	Salt spray deposition rate: 1-2ml/80cm2/h		Mist liquid collection: 1.4ml/80cm2/h
	Test period: __1__ cycles		Spray time: 48 h
test results	Appearance after the test: The appearance is intact and there is no obvious change.		
	Plating: No peeling, no rust		
	Surface spraying and silk-screen printing: no shedding and no bubbles.		

Note: 1.
The salt spray test operation standard is implemented in accordance with the national standard of the People's Republic of China GB/T2423.17-2008
2. The test result judgment standard is in accordance with the national standard GB/T6461-02 of the People's Republic of China.

High/Low Temperature Test Records

product name	PH1020	client's name	Follow the Morning	
test numbers	6 pcs	Test date	March 21, 2024	
Cycles	1	testing time	48H	
Test Conditions: Temperature: + 65 degrees Humidity: 90% RH Low temperature: - / degrees Test time: High temperature: 48 H Low temperature: / H				
Test items	Uncirculated test		Cycle Test	
Serial number	After high temperature	After low temperature	After high temperature	After low temperature
1	OK	/		
2	OK	/		
3	OK	/		
4	OK	/		
5	OK	/		
6	OK	/		
Post-test defects:				
Cause Analysis:				
Improvements:				
Experimental results: ☒ qualified ☐ Failure				