Sample Acknowledgement

SPECIFCATION FOR APPROVAL

Material name

Name of material: PH1020-antenna

Material description: PPC welding cable

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

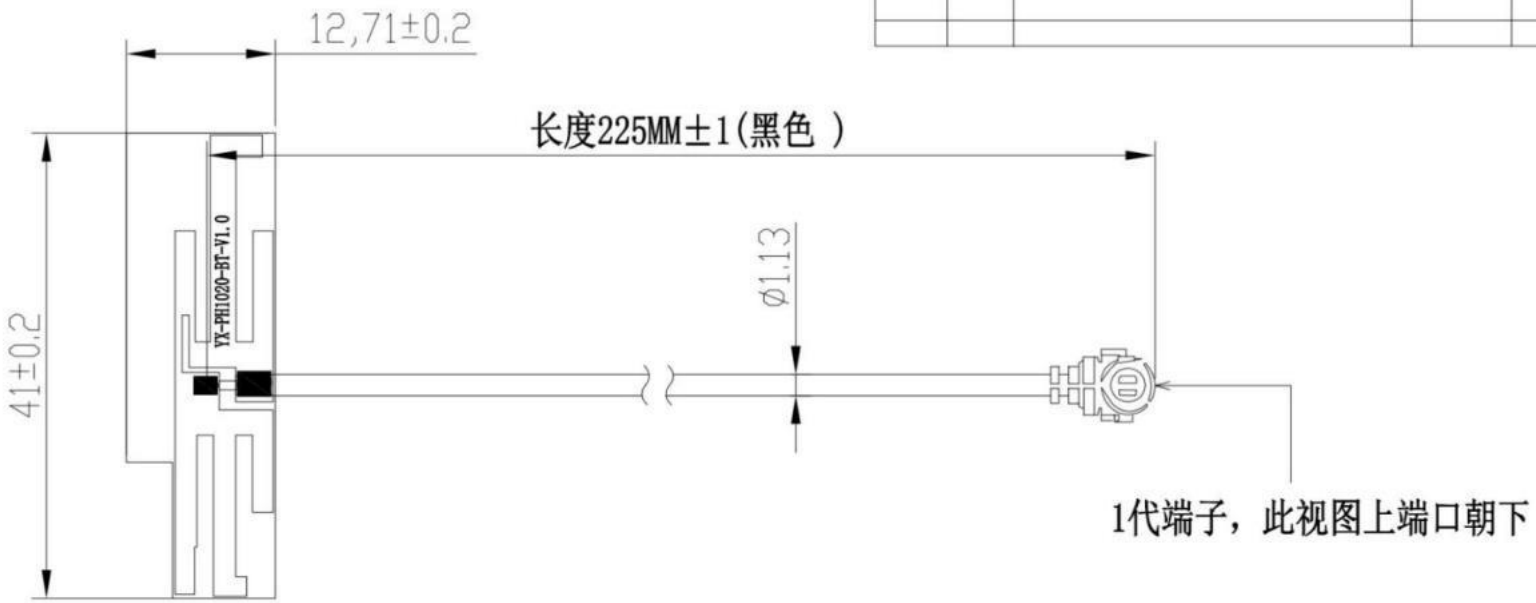
1.VR.3713.000050

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

Table of contents

3.ICD drawings

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



字符说明：

1.内容“XXXX”表示生产日期（年周，如2101）

注:

1.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.

2.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 .

3.镀镍金: NI: 2-7um AU:不小于0.025um (盐雾必须过48H) ,油墨:

4.此FPC背胶为:3M 94711LSE,粘性要超强!

5.表面无压伤,划痕，无油污，斑点，发黑等缺陷;

6.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;

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TEM	PART NAME	CLIENTELE UNMBE	P/N	MATERIAL	O'TY	REMARK
					1	
	BT天线FPC(黑色)	XXX	XXX	电解铜，PI基材	1	

GENERAL TOLERENCE TABLE

LINEAR		ANGULAR	
DIVISION	TOLERENCE	DIVISION	TOLERENCE
0-10	±0.05	0-5°	±0.5°
10-50	±0.10	5-20°	±1°
50-80	±0.15	20-90°	±1.5°
>80	±0.2		

UNIT: mm

MAT'L: SEE NOTE

FINISH: SEE NOTE

SIZE: A4

NUMBER

PART NAME: YX0426-PH1020

PART NUMBER

CLIENTELE NUMBER

APPD

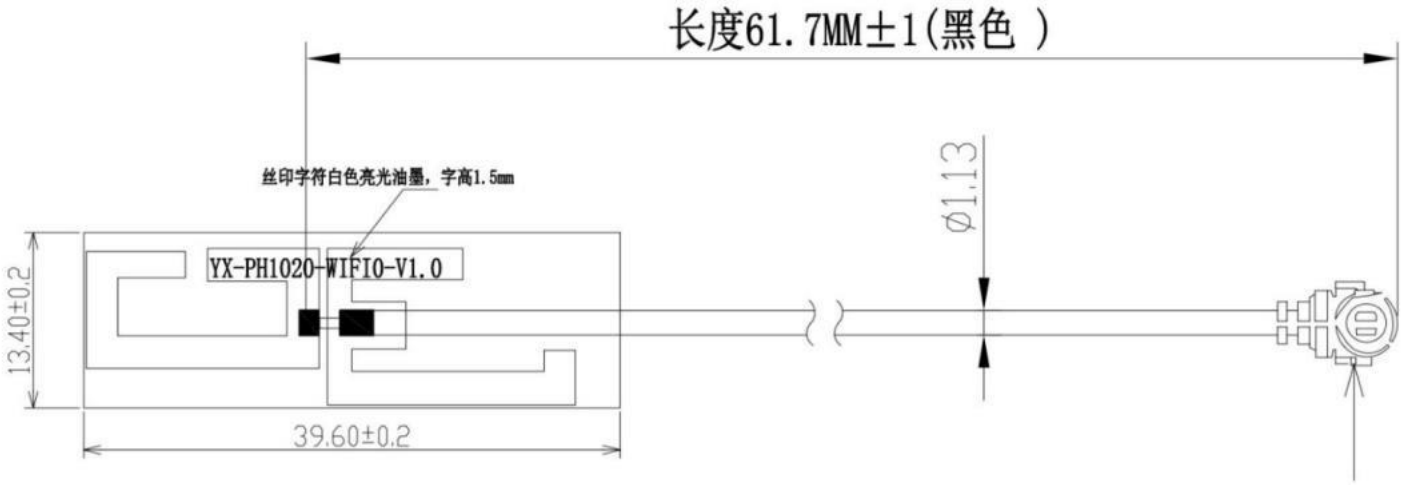
RF CHKD

R DR: XXXXX

TITLE: YX0426(BT天线FPC)

SCALE: FULL | PAGE: 1 of 1 | REV: A0

REVISION	ECO#	REVISION NOTE	AUTHOR	DATE
A0		New release		26/03.23'



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					1	
	WIFI0天线FPC(黑色)	XXX	XXX	电解铜，PI基材	1	

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UNIT: mm

MAT'L: SEE NOTE

FINISH: SEE NOTE

SIZE: A4

NUMBER

PART NAME: YX0426-PH1020

PART NUMBER

CLIENTELE NUMBER

APPD

PF CHKD

R DR: XXXXX

TITLE: YX0426(WIFI0天线FPC)

SCALE:	FULL	PAGE:	1 of 1	REV:	A0

REVISION	ECO#	REVISION NOTE	AUTHOR	DATE
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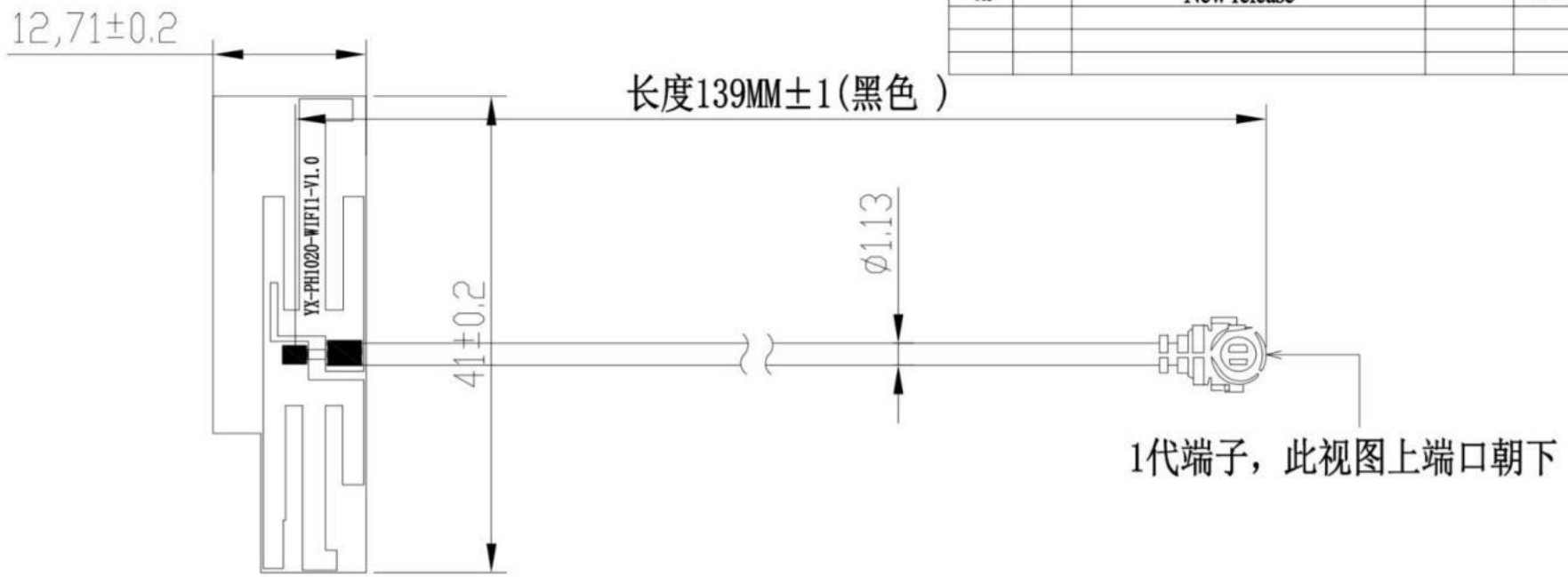

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					1	
	WIFI1天线FPC(黑色)	XXX	XXX	电解铜，PI基材	1	

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LINEAR		ANGULAR	
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PART NAME: YX0426-PH1020

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APPD

PF CHKD

R DR: XXXXX

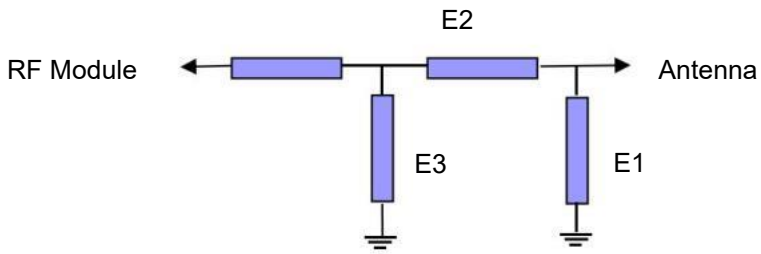
TITLE: YX0426(WIFI1天线FPC)

SCALE:	FULL	PAGE:	1 of 1	REV:	A0

Antenna performance parameters and precautions

Project machine diagram

Matching circuit



	Element	Value
WiFi Antenna	E1	N/C
	E2	0ÿ
	E3	N/C

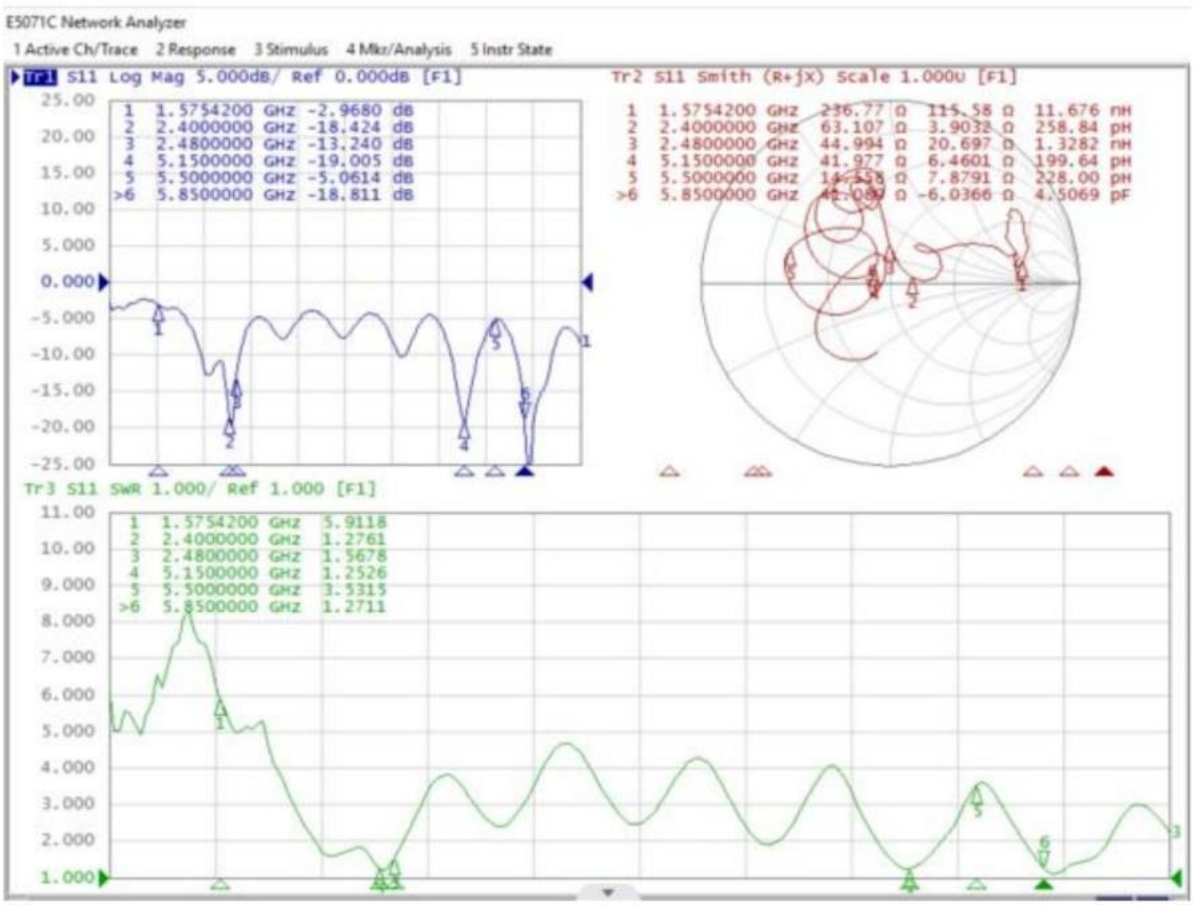
Note: All antenna matching circuits are unchanged. Original matching.

WiFi active test data

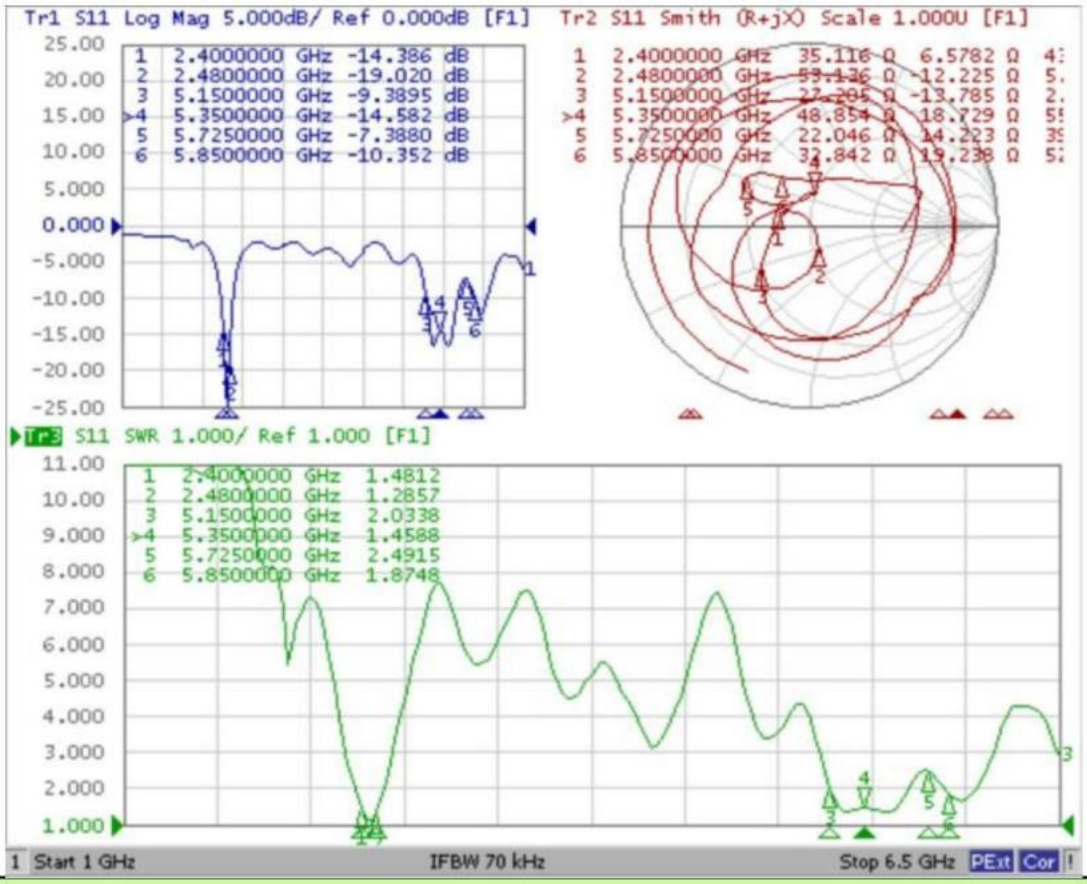
FS Channel		TRP	TIS
2.4WIFI-B	1	17.62	-79.65
	6	17.73	-78.89
	11		
		17.4	-78.77

Channel		TRP	TIS
5GWIFI-A	36	15.16	-74.65
	149	15.51	-75.38
	165	16.43	-75.35

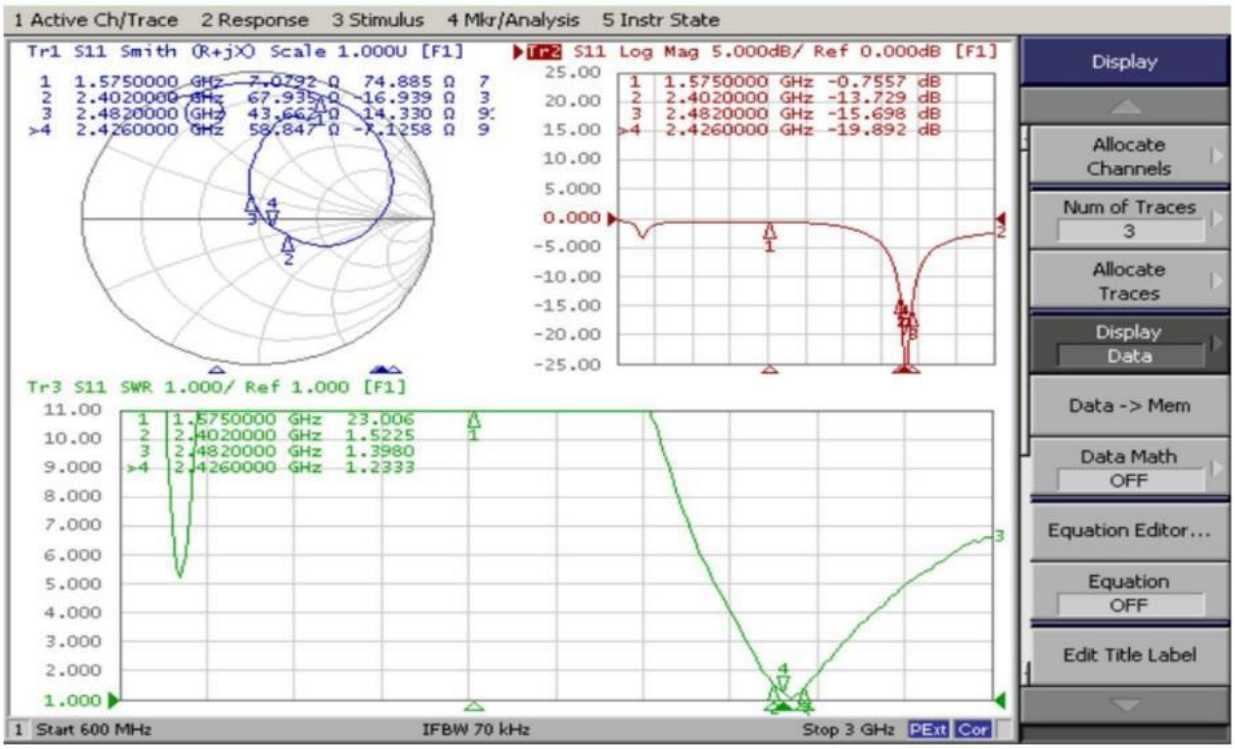
WL0-S11 Parameters



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

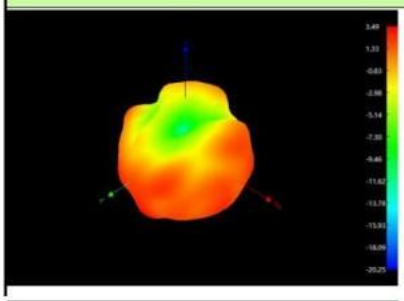
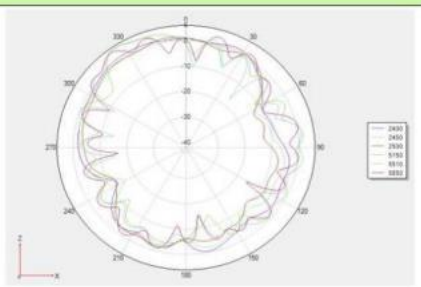
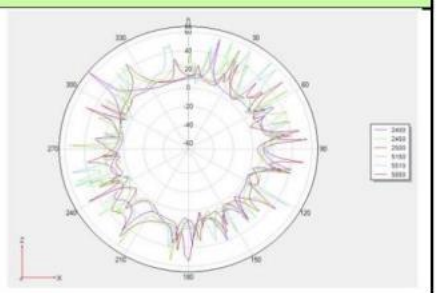
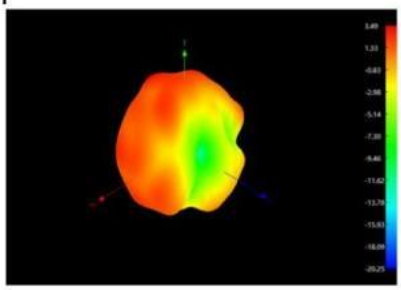
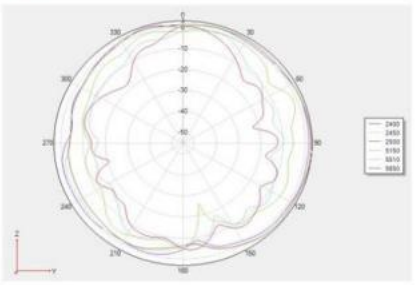
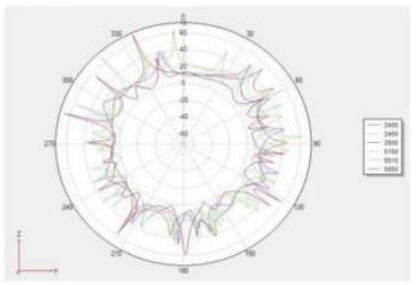
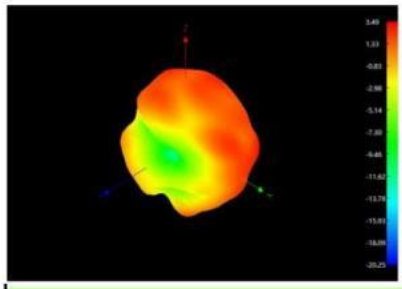
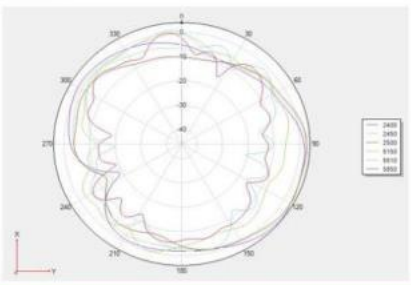
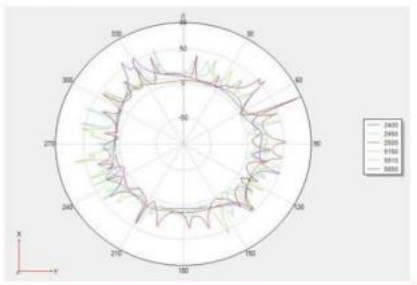
Frequency	Efficiency	Efficiency	Gain/ dBi
5150	-2.70	53.71	4.63
5170	-2.60	54.98	4.74
5190	-2.73	53.39	4.77
5210	-2.65	54.34	4.75
5230	-2.73	53.39	4.68
5250	-2.64	54.5	4.69
5270	-2.78	52.76	4.45
5290	-2.80	52.45	4.36
5310	-2.76	52.92	4.63
5330	-2.84	51.99	4.7
5350	-2.67	54.02	5.04
5370	-2.69	53.87	5.24
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

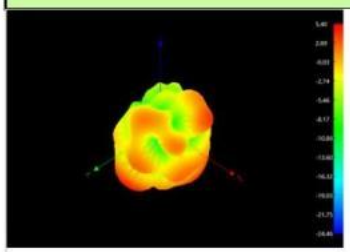
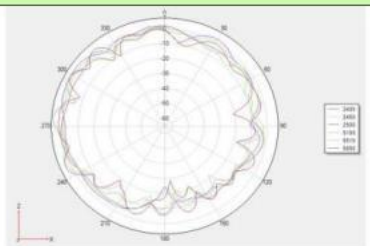
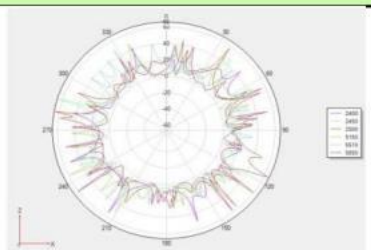
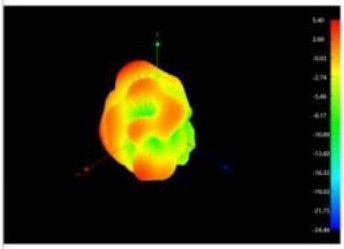
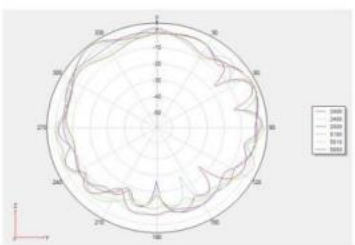
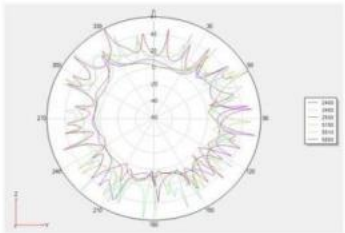
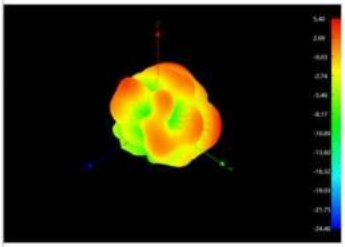
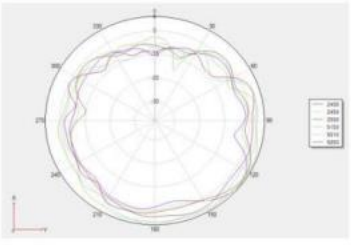
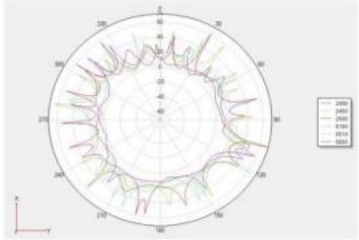
BT-Efficiency/Gain

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

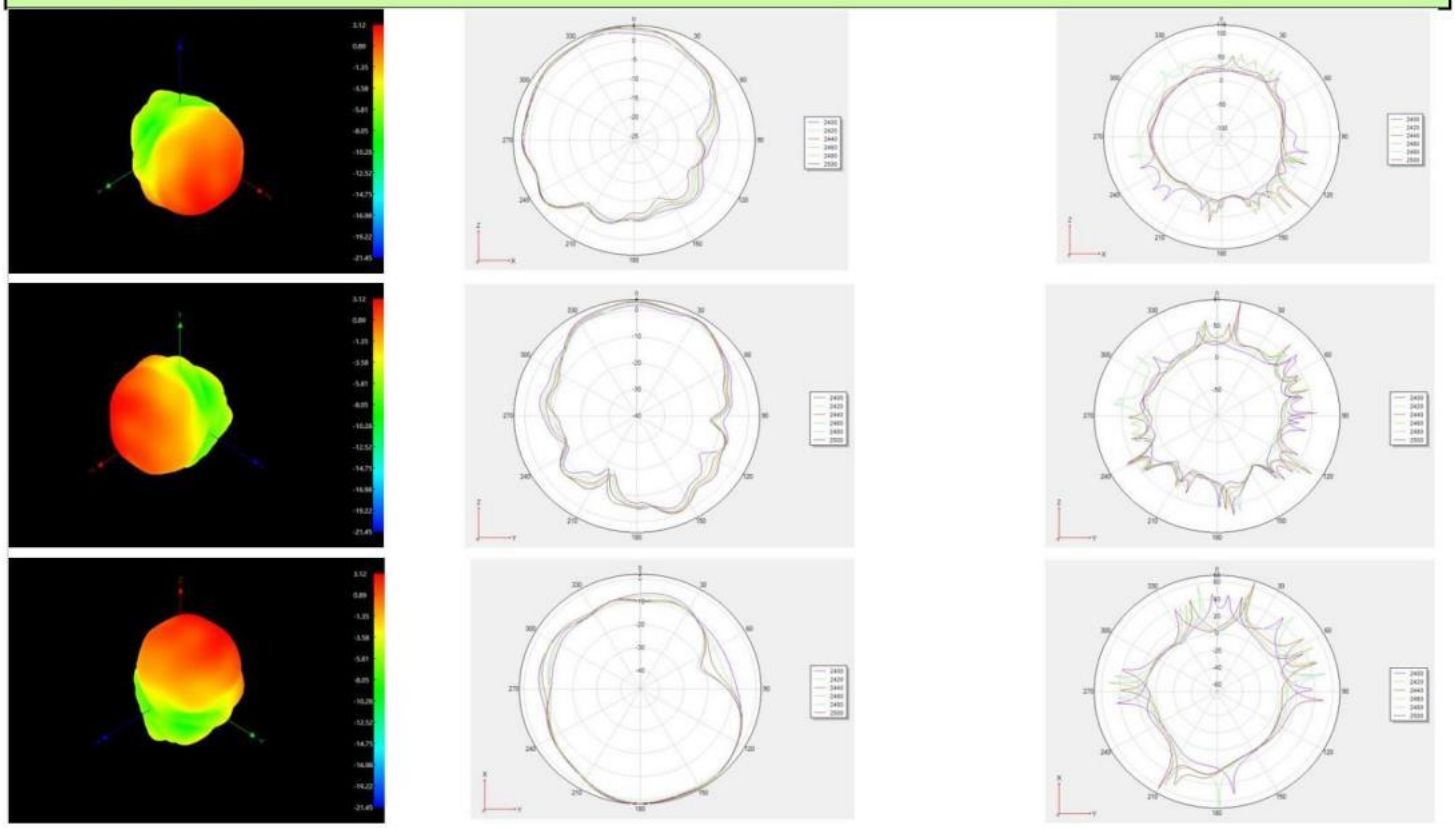
WL0-Directional Pattern

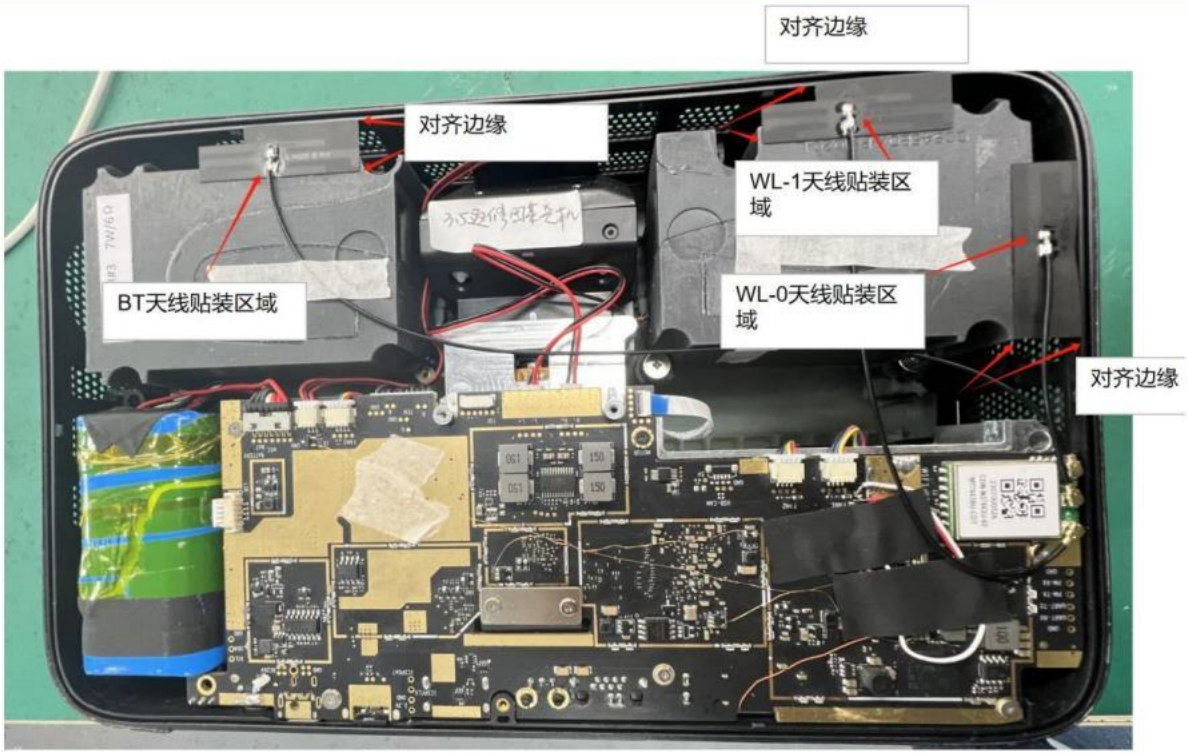
WL1-Directional Pattern

BT-Directional Diagram



Antenna mounting area



	Shenzhen Galaxy Radio Technology Co., Ltd.		QC Engineering Drawings				Document No. YX--QPA-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 Planÿ 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 ÿ	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	
twenty two		Packaging	materials/quantity/labeling "Finished product packaging operation instructions"		Packer						
twenty one		Shipping test	Appearance Bad record Size test Bad marking Good product packaging Environmental requirements	Engineering BOM Sampling Inspection Planÿ OQC Final Inspection Operation Instructions ÿ	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 ÿ	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	Product Specifications 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 Morning	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 benzene (PBB)	Polybrominated Phenyl ether 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: √ ualified ☐ Failure