

样品承认书

SPECIFICATION FOR APPROVAL

● 物料名称

Name of material: P601 天线 (P601 antenna)

● 供应商

V e n d o r N a m e : 深圳星联讯通科技有限公司

Shenzhen Starlink COMM. Technology Co., Ltd.
Room 403, Building A, Zhiyun Industrial Park, No. 13,
Huaxing Road, Tongsheng Community, Dalang Subdistrict,
Longhua District, Shenzhen City

● 物料描述

Material description: FPC焊接Cable (FPC weld
Cable)

● 物料料号

Material number: 1.VR.3713.000065

● 物料丝印

Material screen printing: YX-P601-BT-V1.0

<u>供方确认 Supplier confirmation:</u>		<u>客户确认 customer confirmation:</u>	
<u>测试 test:</u>	<u>研发 RF:</u>	<u>测试 test:</u>	<u>研发 RF:</u>
		<u>采购 purchase:</u>	
<u>品质 quality:</u>	<u>审核 check:</u>	<u>品质 quality:</u>	<u>审核 check:</u>

Directory

- 1、 face
- 2、 catalogue
- 3、 ICD drawing
- 4、 Antenna performance and precautions
- 5、 Full scale measurement report
- 6、 inspection specification
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- 8、 Salt spray test
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REVISION HISTORY

NO.	Date	Version		Update		Cnmment		Written	
1									
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MADE:

CHECK:

Technical drawing of a Third generation terminal, port facing upwards (三代端子, 端口朝上).

Dimensions and specifications:

- Length: 长度length104±1MM (黑色)
- Width: 41±0.2
- Height: 1.22
- Radius: R0.81
- Angle: 90.00°
- Material: 电解铜, PI基材
- Part Name: YX0474-P601-BT
- Part Number: XXX
- Clientele Number: XXX
- Appd: XXXXX
- Rev: A0

Notes:

- Content "XXXX" indicates production date (year and week, e.g. 2101)
- Note:
 - MATERIAL :18/12.5 electrolytic copper, PI base MATERIAL. The green line shows the outline of the copper layer, and the purple line shows the shape.
 - Tolerance requirements are not noted :A. copper foil to copper foil +/-0.05
 - B. Copper foil to shape +/-0.15(special requirements)
 - C. Tolerance from hole to shape +/-0.15(+/-0.10 if special requirements)
- Nickel plating: NI: 2-7um AU: not less than 0.025um (salt spray must be over 48H), ink:
- This FPC adhesive is 3M 9471LSE, the adhesive should be super strong!
- Size requirements:
 - ST size: The minimum measurement quantity is any 35 product sizes selected from 500 for CPK analysis;
 - * size is the key control size;
 - Any material modification must be approved in writing by the Starlink Engineering Department and passed all tests by the Starlink Quality Department;
 - Products must meet ROHS/HF/REACH standards;

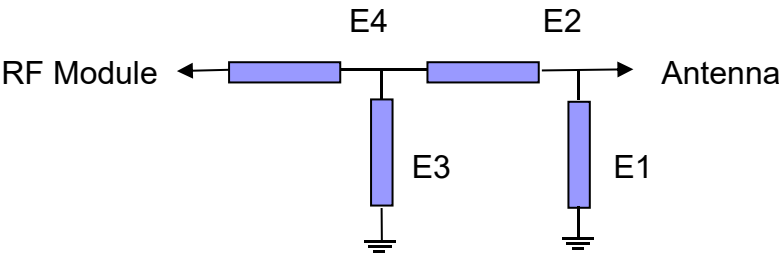
2					1
1	WiFi10天线FPC(黑色)	XXX	XXX	电解铜, PI基材	1
TEM	PART NAME	CLIENTELE UNMBE	P/N	MATERIAL	Q'TY

GENERAL TOLERANCE TABLE				PART NAME	
				YX0474-P601-BT	
LINEAR		ANGULAR		UNIT:	
DIVISION	TOLERANCE	DIVISION	TOLERANCE	PART NUMBER	
0-+0	±0.05	0-5°	±0.5°	(mm)	
10-50	±0.10	5-20°	±1°	MATERIAL	
50-80	±0.15	20-30°	±1.5°	CLIENTELE NUMBER	
>80	±0.2			SEE NOTE	
This document is property of precision technology. It is can not be copied, updated and taken out company,unless be allowed				FINISH	
				APPD:	
SIZE				RF CHKD:	
A4				TITLE:	
NUMBER				YX0474 (BT天线FPC)	
				SCALE: FULL PAGE 1 of 1	
				REV: A0	
				R DR: XXXXXX	

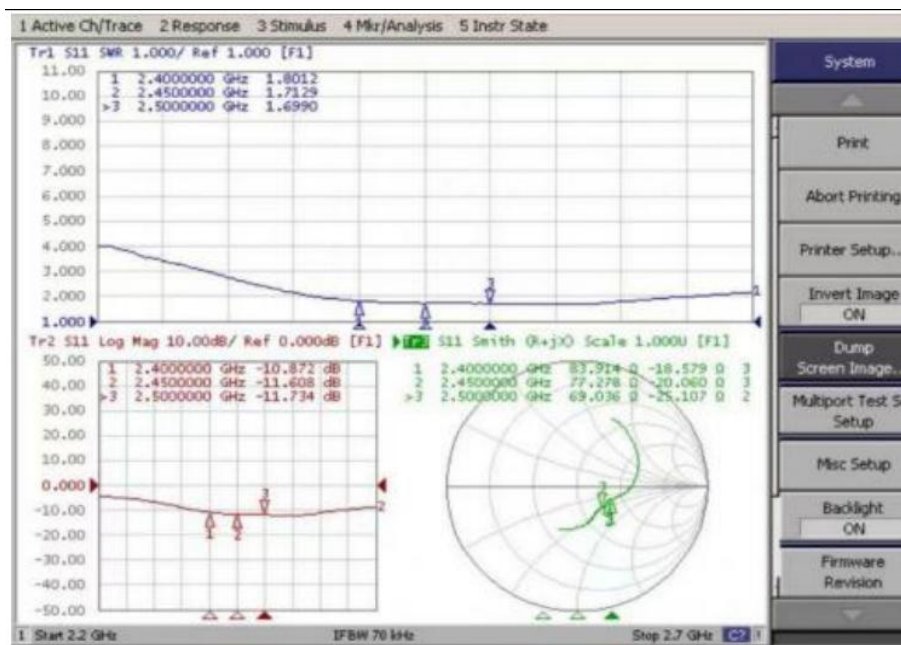
深圳星联讯通科技有限公司

ShenZhen Starlink COMM.

Antenna Matching Modification



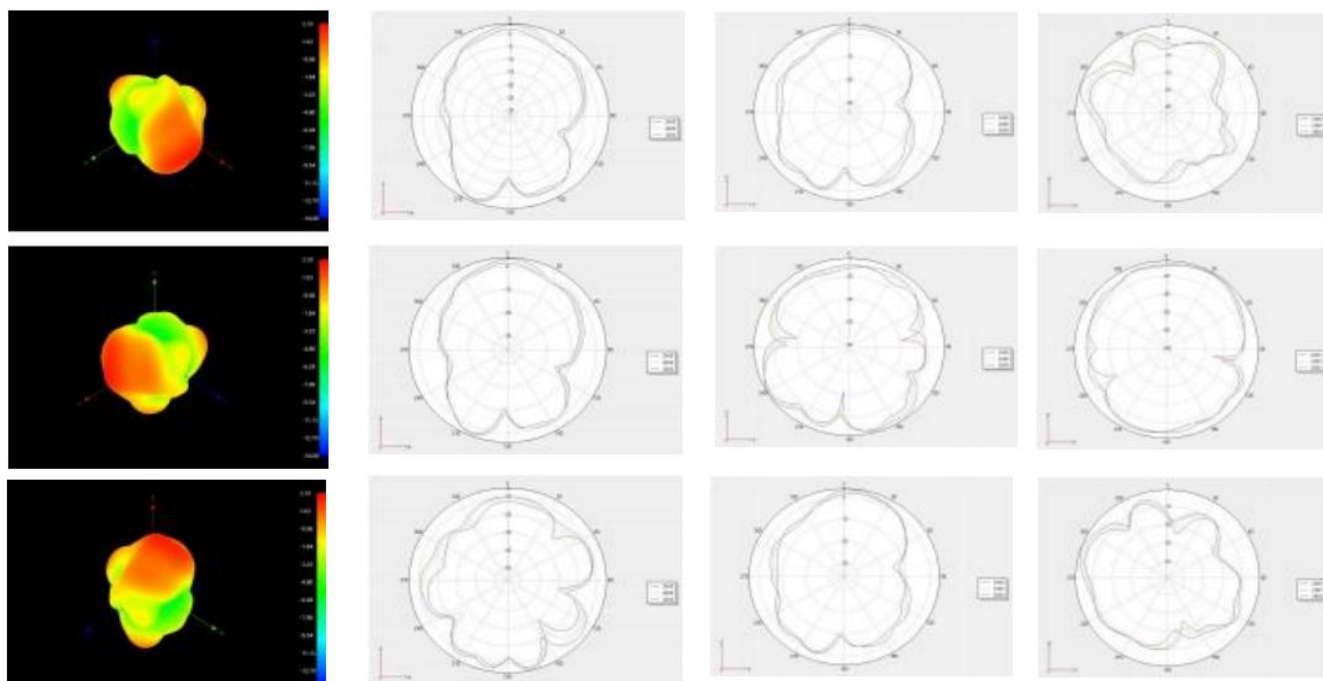
Main antenna	Element	Value
	E1	N/C
	E2	0 Ω
	E3	N/C
	E4	



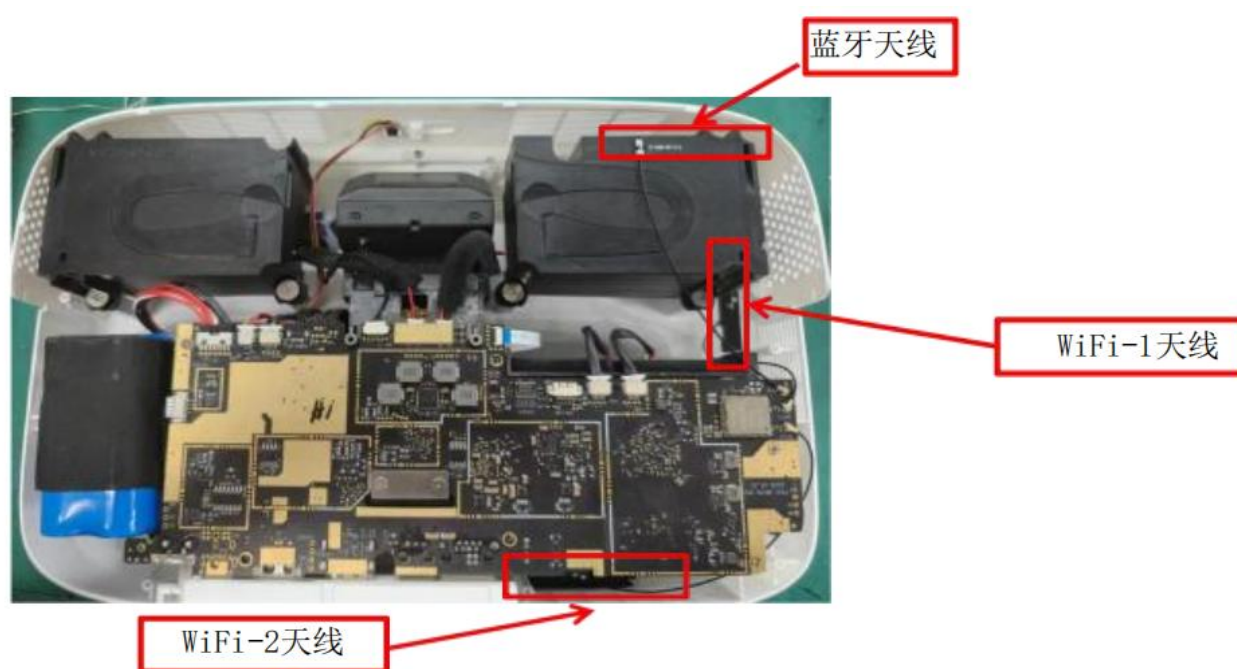
BT-Efficiency

Frequency/Mhz	Efficiency / dB	Efficiency / %	MaxGain/dBi
2400	-2.16	60.77	3.1
2410	-2.16	60.82	3.33
2420	-2.08	61.88	3.07
2430	-2.13	61.2	3.33
2440	-2.03	62.72	3.09
2450	-2.16	60.85	3.25
2460	-2.19	60.46	3.25
2470	-2.19	60.36	3.56
2480	-2.29	59.02	3.95
2490	-2.21	60.12	4.1
2500	-2.14	61.16	4.07

BT ANTENNA direct pattern



Antenna assembly drawing



Shenzhen yGalax Technologies Limited				File NO#		
				MADE DATE		
	FPC ante inspection specification			PAGE		
				VISION	A0	
1. purpose: Strict inspection, control the use of defective products, ensure product quality requirements. .						
2. range of application: FPC Ante.						
3. work content						
	item	content	tool	inspection standard	defect describe	FAULT GRADE
pack age		INDENTIFI CATION	by sight	The outer package has clear label, indicating the product name, specification, quantity, date, etc.	The mark is not clear and cannot be read.	MIN
		MATERIAL	by sight	Uniform packaging, clean and tidy, no damage, no impact on handling, storage, no wrong loading, mixed loading, less loading.	Packaging is not uniform, dirty, wet, damage, affect handling, storage.	MIN
face		FACIAL	by sight	No breakage, copper exposure, cracking, color difference, glue benefit on FPC, no oxidation, brittle crack on golden finger.	FPC has damage, copper exposure, cracking, color difference, glue, gold finger oxidation, brittle crack.	MAJ
stru ctur e		size	Vernie r	Circuit board size (length, width and height) is the same as	The dimensions are different from the pattern.	MAJ
		material proof	sample	Same as the sample.	The material is different from the template	MAJ
func tion		electropl ating	model	Gold finger gilded bright, 100% coverage.	Plating is not bright, plating coverage is low.	MAJ
		FIT	Frame	Attach the FPC to the housing, and the preset paste position is consistent, no more or less.	Attach the FPC to the housing, and the preset position of the paste is not consistent, there is more or less.	MAJ
MADE BY:			Audit:		Approver:	

RoHS Restricted Substance Composition sheet

Product information provided												
customer name		Metarial NO#		Project name		manufacturer				green mark		
		YX-P601-BT-V1.0		P601		Shenzhen Starlink COMM.				/		
Product composition information												
item	part name	part NO#	VOLUME UP	Third party test report		Limit substance content PPM						remark
				DATE	number	(Pb)	(Cd)	(Hg)	(Cr ⁶⁺)	(PBB)	(PBDE)	
1	3M adhesive	/	honjingxinban	2021/1/13	SHAEC2100467601	O	O	O	O	O	O	
2	COPPER CLAD LAMINATE	/	caigelundi	2021/3/3	SHAEC2103249001	O	O	O	O	O	O	
3	ink	/	kaiyao	2021/8/17	ERT2102095	O	O	O	O	O	O	
4	electroplating	/	jiahongtai	2021-5-13	A2210168276101001E	O	O	O	O	O	O	

填写人：

填写人公司/部门：品质部

Salt spray test report

date: 20250527

product name	P601	customer name	
supplier	Shenzhen Starlink COMM.	National test standard	GB/T 2423.2-2008
Sample situation	QTY: 5PCS		
	MATERIAL: One - sided half - half colloidal electrolytic copper	plating thickness : ≥3U"	
TEST DATE	FROM 20220525 9:00 TO 20220527 9: 00 TOTAL 48 H		
TEST TYPE:	<input checked="" type="checkbox"/> NSS	<input type="checkbox"/> ASS	<input type="checkbox"/> CASS
test condition	saline solution: 5%		PH:7.0
	the temperature inside the box: 35°C		relative humidity: 85%
	Spray way: <input checked="" type="checkbox"/> continue <input type="checkbox"/> gap		compressed air pressure: 1kg/cm²
	Salt spray sedimentation rate: 1-2ml/80cm2/h		Fog fluid collection:
	test cycle: A loop		Spray time: 48 h
test result	Appearance after test: The appearance is intact without significant change.		
	Coating: no peeling, no corrosion		
	Surface spraying, screen printing: no shedding, no bubbles		

NOTE:

1, salt spray test operating standards in accordance with the People's Republic of China national standard GB/T2423.17-2008

2. The test results shall be determined according to the national standard GB/T6461-02 of the People's Republic of China

test date:

check:

High and low temperature test records

product name	P601	customer name		
test QTY	6 pcs	TEST DATE	2025/5/21	
cycle-index	1	test time	48H	
test condition high temperature: + <u>65</u> °C humidity: <u>90</u> % RH low temperature: - <u> </u> °C test: high-temp: <u>48</u> H low-temp: <u> </u> H				
test project	Uncycled test		cycled test	
item	After the high temperature	After low temperature	After the high temperature	After low temperature
1	OK	/		
2	OK	/		
3	OK	/		
4	OK	/		
5	OK	/		
6	OK	/		
Post test defect:				
reason analysis:				
improvement measure:				
test result: <input checked="" type="checkbox"/> pass <input type="checkbox"/> fail				

AUDIT:

record: