



Shenzhen Yuhong Industrial Co., Ltd

Parts Acknowledgment

Customer name:	DONGGUAN YUANFENGLUN ELECTRONICS CO., LTD.
Product Model:	A15P-1
Risuntek P/N:	
Version:	A
Product Name:	FPC antenna
Description:	A15P-1-V1.4 FPC antenna 25.17*5.29*0.11mm single-sided adhesive L
date:	2022/12/2

(Customer Signatures)

(PM)	(ME)	(QE)

(Inner Signatures)

(QE)	(ME)	(RF)
ASTON	Cindy	Jake

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<http://www.yuhong-co.com/>

catalogue

one、 Resume

two、 Product drawings

three Description of electrical and
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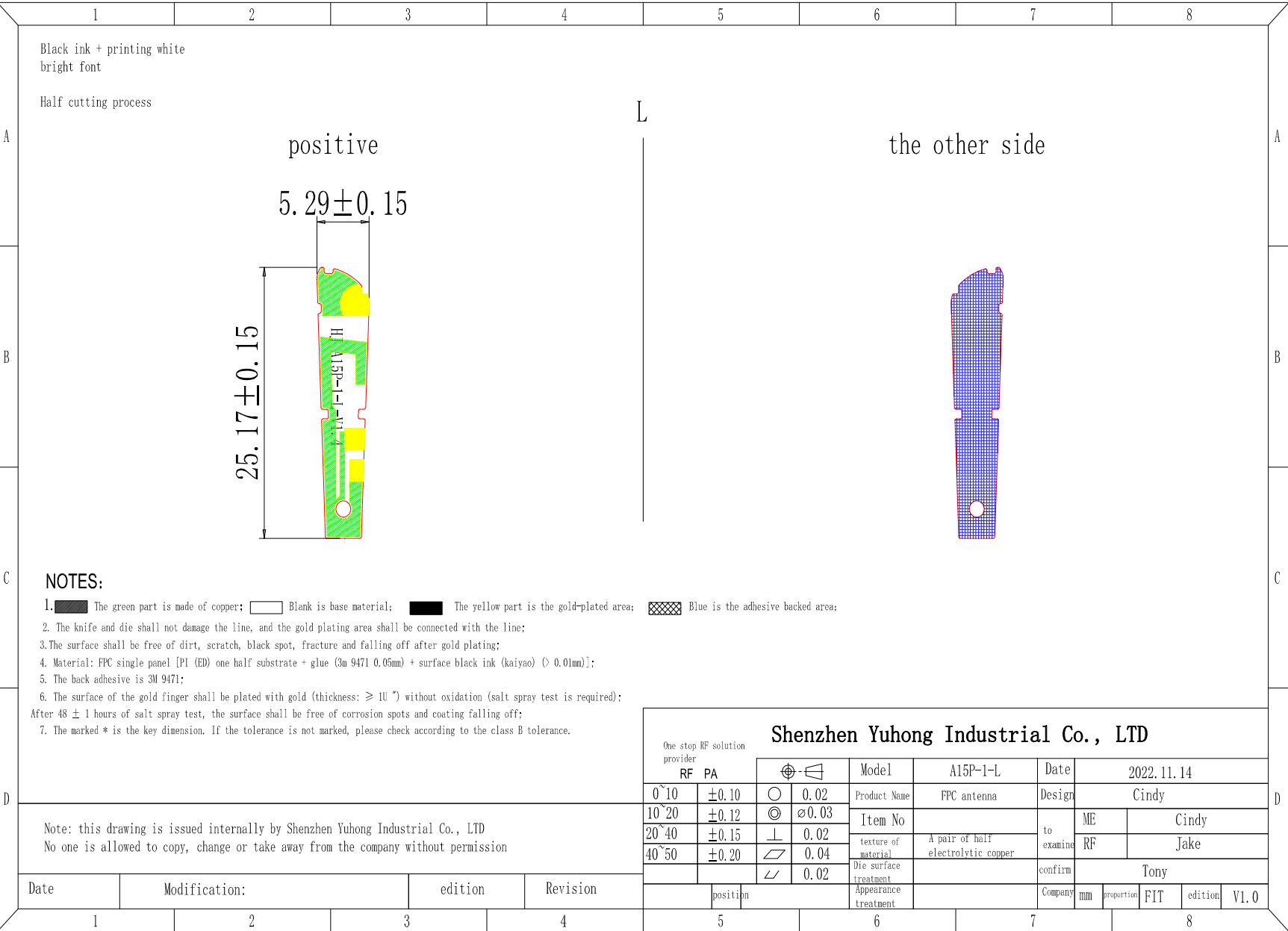
seven Reliability test report

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one、Preparation / revision change resume

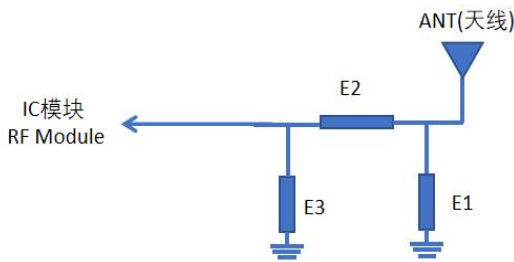
editi on	Revision page	Change time	Changed by	Reason and content of change	remarks
A0	—	2022/12/2	Cindy	Antenna form of the first version	
A1					
A2					
A3					
A4					
A5					
A6					

two、Product drawings



三、Electrical and mechanical properties

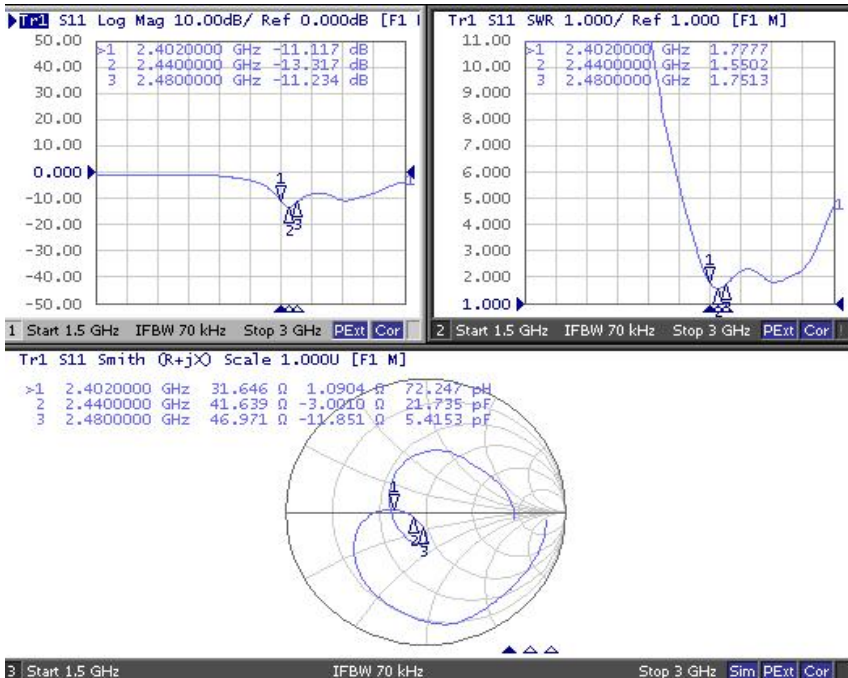
1、Match the circuit diagram



L		
Main Antenna		
Element		
E1 (0201)	N/C	
E2 (0201)	1.5nH	
E3 (0201)	N/C	

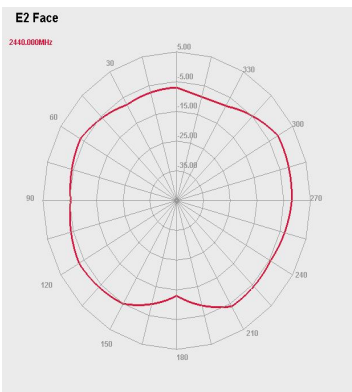
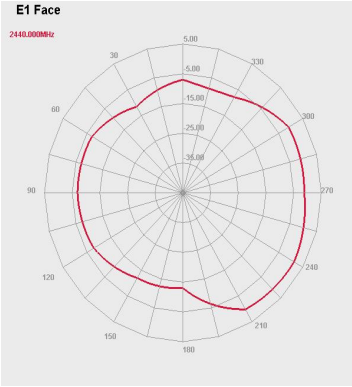
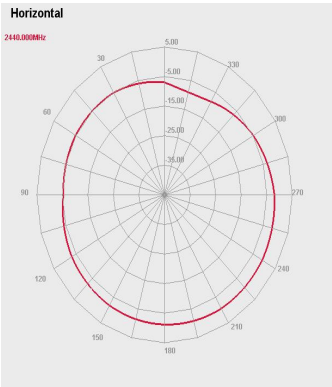
A photograph of the antenna element on a PCB. A yellow arrow points to a small component labeled 1.5nH.

2. S11 parameter



3. Passive efficiency

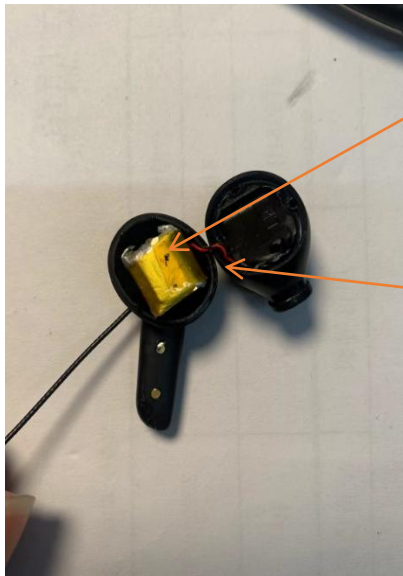
L				
	增益(dBi)	效率(dB)	效率 (%)	
2400	-0.3	-5.8	26.9	
2410	-0.5	-5.7	27.8	
2420	-0.5	-5.5	28.6	
2430	-0.4	-5.4	29.4	
2440	-0.5	-5.2	30.5	
2450	-0.3	-5.4	29.4	
2460	-0.4	-5.7	27.6	
2470	-0.7	-5.8	27.1	
2480	-0.6	-5.9	26.3	
2490	-0.8	-6.0	25.2	
2500	-0.9	-6.3	25.0	



4. Active data

L				
	channel	TRP (dbm)	TIS (dbm)	
Free space	0	3.7	-89.3	
	39	3.6	-90.4	
	78	3.0	-89.6	
	channel	TRP (dbm)	TIS (dbm)	
Second generation head die	0	-7.2	-79.6	
	39	-6.3	-80.1	
	78	-6.5	-80.2	

5. Environmental treatment



The battery position is shown in the figure. The battery cable length is 25MM. No stranded cable is required

The horn wire is placed as shown in the figure. The horn wire is 25MM long and the twisted wire is processed with 2 turns

four、Full-size measurement report

	code		Part name		FPC antenna	Specifications	A15P-1-L-V1.4 FPC antenna						Material Science	FPC (1 half)
	supplier	Yuhong		Measuring tools		Quadratic element,	Measurement		MM				Date of measurement	2022/12/2
NO.	DIMENSION	upper limit	+ TOL.	- TOL.	lower limit	Measured 1	Measured 2	Measured 3	Measured 4	Measured 5	Measured 6	Measured 7	UPPER $\leq$ 100%	LOWER $\leq$ 100%
A15P-1-L-V1.4	25.17	25.32	0.15	0.15	25.02	25.210	25.170	25.180	25.210	25.260	25.120	25.270	67%	33%
	5.29	5.44	0.15	0.15	5.14	5.340	5.320	5.200	5.390	5.160	5.360	5.230	67%	87%

Prepared by: Zhang Qinghua

Reviewed by: maoluping

Date 2022/12/2

five、CPK Report

Shenzhen Yuhong Industrial Co., Ltd

Project name	A15P-1-L-V1.4				Customer	DONGGUAN YUANFENGLUN ELECTRONICS CO., LTD.			
Description	antenna				Inspected	Cindy			
Material	One pair and half electrolytic copper				Inches/MM	mm			
Revision	A				Date	2022/12/2			
Dim. Designator	25.17	5.29							
Upper Limit	25.32	5.44							
Lower Limit	25.02	5.14							
1	25.18	5.29							
2	25.16	5.31							
3	25.17	5.27							
4	25.21	5.33							
5	25.17	5.33							
6	25.19	5.30							
7	25.17	5.28							
8	25.23	5.27							
9	25.21	5.33							
10	25.22	5.33							
11	25.20	5.28							
12	25.24	5.33							
13	25.21	5.31							
14	25.15	5.34							
15	25.23	5.32							
16	25.16	5.30							
17	25.23	5.33							
18	25.17	5.33							
19	25.23	5.34							
20	25.24	5.27							
21	25.16	5.33							
22	25.20	5.33							
23	25.19	5.30							
24	25.20	5.31							
25	25.16	5.27							
26	25.20	5.28							
27	25.19	5.27							
28	25.15	5.34							
29	25.22	5.33							
30	25.19	5.28							
31	25.21	5.31							
32	25.19	5.27							
MAX.	25.24	5.34							
MIN.	25.15	5.27							
AVERAGE	25.19	5.31							
STDEV	0.03	0.03							
CP	1.81	1.94							
Cpk	1.51	1.72							
TOOLING(测量工具)	卡尺	卡尺							

Prepared by : aston Checked by : Cindy Approved by : Jake

six、Environmental management substance component deployment table

The Parts List of Enviromental Management Substances

Product Information		Supplier Contact Information		Report type	Confirm the result	remarks
Part name	FPC The antenna	Compony Name	Shenzhen Yuhong Industrial Co., Ltd	☒ RoHS 2.0	☐	Metal provides RoHS 4 items and other 10 items
Risuntek P/N		Contact Name/Title	Aston	☒ HF	☐	Cl&br for non-metallic parts
Supplier's P/N	A15P-1-L-V1.4	Date:YY/MM/DD	2022/12/2	☒ CP65	/	Parts in contact with skin
Manufacurering site	Dongguan	E-mail address		☒ REACH	☐	According to the latest SVHC list
Total weight (g)		Tel. No.	13714345069	☒ other ()	/	Such as be, pops, pfos/pfoa, etc
				☒ MSDS	☐	Article 17. Seal and validity

No.	Customer item number	Part name	Homogeneo us material	Test Report No.	Test Date (YY/MM/DD)	Test result (ppm)												Test report	MSDS
						Pb	Cd	Hg	Cr6 +	PBB	PBD E	Cl	Br	DEH P	DBP	BBP	DIB P		
1	A15P-1-L-V1.4	Base material	CAI Lunge Di	SHAEC2202460504	2022. 4. 08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	 电解中文ROHS (1).PDF	 基材MSDS.pdf
2		ink	Youri black oil	ETR22705905 ETR22705913	2022/8/5	ND	ND	ND	ND	ND	ND	434	ND	ND	ND	ND	ND	 PS-800 ROHS (1).PDF  PS-800 ROHS (2).PDF	 MSDS_PS-800黑色油墨.pdf
3		Gummed paper	3M9471	CANEC2200386501 CANEC2200386502	2022/1/12	ND	ND	ND	ND	ND	ND	162	ND	ND	ND	ND	ND	 3M9471 ROHS (1).PDF  3M9471 ROHS (2).PDF	 MSDS_3M9471白色.pdf
4		Gold plated	To get rich	A2210513116101001E / A2210513116102001E	2021/10/15	ND	ND	ND	ND	ND	ND	124	ND	ND	ND	ND	ND	 ROHS 2.0  ROHS 2.0	 中文版FPC镀镍金层MSDS.pdf
5		White character ink	Chuan yu	ETR22A01347M01	2021/10/29	ND	ND	ND	ND	ND	ND	625	ND	ND	ND	ND	ND	 ETR22A01347M01(150W)ROHS F	 MSDS_ZSR-150白色文字油墨.pdf

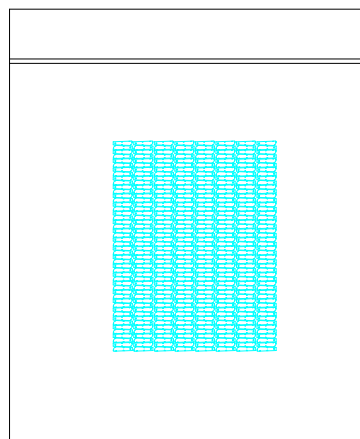
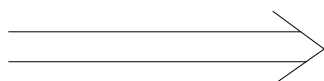
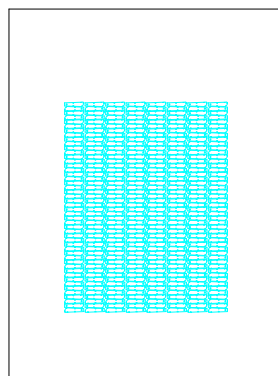
seven、Reliability test report

customer			DONGGUAN YUANFENGLUN ELECTRONICS CO., LTD.	entry name	A15P-1-L-V1.4 FPC antenna	
Test time:			2022/11/02--2022/11/04	Number of tests	5PCS for each test item	
Serial number	Test items	Test instrument	test method	Criteria:		determine
1	Salt spray test	Salt spray test machine	The tested products were placed in the salt spray testing machine containing 5%±1%Nacl solution. The laboratory temperature was 35° , the pressure barrel temperature was 47° , and the pressure was 1kgf/cm2. The test lasted for 48 hours. The product shall be placed at 45° . After the test, the product shall be taken out, washed and dried for inspection	Appearance after test: The appearance is intact without significant change. Coating: no peeling, no corrosion. Surface spraying, screen printing: no off, no bubbles to determine		PASS
2	Cold and hot shock	Constant temperature and humidity box	Put the test product flat in the testing machine, set the test conditions, high temperature is 85℃, a cycle test for 24 hours; The low temperature was -30℃, and the test was conducted for 2 cycles. The test was started after setting. At the end of the test, the product was removed for inspection after 2 hours of recovery.	There is no change in color, gloss, surface appearance, hardness, scratch, crack, warping or electrical damage. Be judged as qualified		PASS
备注:						
Tabulation: AstonReviewed by: CindyApproved by: Jake						

eight、Packing

Material no:		The product name:	FPC antenna
Product specification:	A15P-1-L FPC antenna	Packaging materials:	Seal pockets, cartons
Number of packages:	5000PCS/package	The packing way:	5000pcs/ package, one box of 1-16 packages
Packing quantity:	80000PCS		

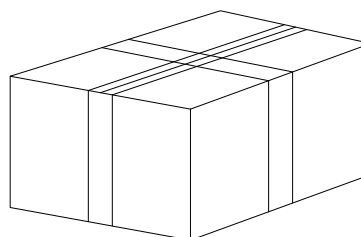
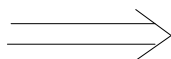
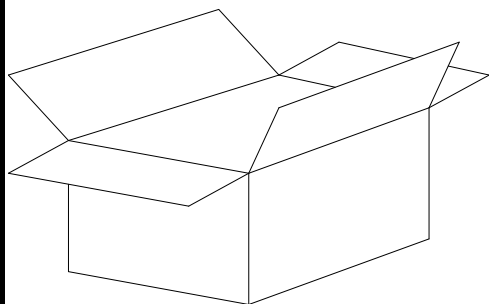
1、 Small package



FPC antenna (full plate half cut shipment): 250*220

PE bag 5000PCS antenna

2、 The big package



One box of 1-16 bags (5000-80000pcs antenna)

3、Note: FPC products are manufactured by half cutting.

Small package quantity: 5000pcs / bag;

Large package quantity: 5000-80000pcs / box

4. Precautions:

4.1 the storage of products shall ensure that the ambient temperature is between $-10^{\circ}\text{C} \sim +24^{\circ}\text{C}$, the humidity is less than 90%, the warehouse is free of rain leakage, the ground is moisture-proof, and the surrounding of the warehouse is protected from acid fog and salt fog. The storage period of the product is 180 days;

4.2 the products can be transported by land, water and air, and shall be protected from rain during transportation;

4.3 stacking requirements: XXX;

(other requirements, such as: no throwing from height, etc.)

Draw up: Aston

to examine: Cindy

approval: Jake