

Shenzhen Yishengbang Technology Co., LTD
Sample acceptance letter
SPECIFICATION FOR APPROVAL

The name of the company: Shenzhen Puer Electronic Co., LTD

The material code: _____

specifications: A1027

Admitted to date: _____

The name of the supplier: Shenzhen Yishengbang Technology Co., LTD

Supplier standard type number: WIFI+GPS:SLK-PNE-3913E

4G AUX:SLK-PNE-2218-R-190111-B 4G MAIN:SLK-PNE-6512A

WIFI+GPS 小板: SLK-PNE-WG-180111-B 4G 小板: SLK-PNE-4G-135111-G

Admit signature					
For acceptance by the contractor			Shenzhen Puer Electronic Co., LTD		
Rf Engineer	quality department	Structural engineer	The engineer	The reviewer	approved
Shi lian Chen	Jie xing Chen	Cailiang Liu			
approved		My signature	Signed and sealed		
date	2022.09.08		date		
Instructions: <input type="checkbox"/> accept <input type="checkbox"/> Conditional acceptance					
note:					



The name of the supplier: Shenzhen Yishengbang Technology Co., LTD

Supplier address : 101, Building C, Shenzhen Qianwan Hard Technology Industrial Park, Bao'an District, Shenzhen

telephone: 18025305599

telephone: 18666299104

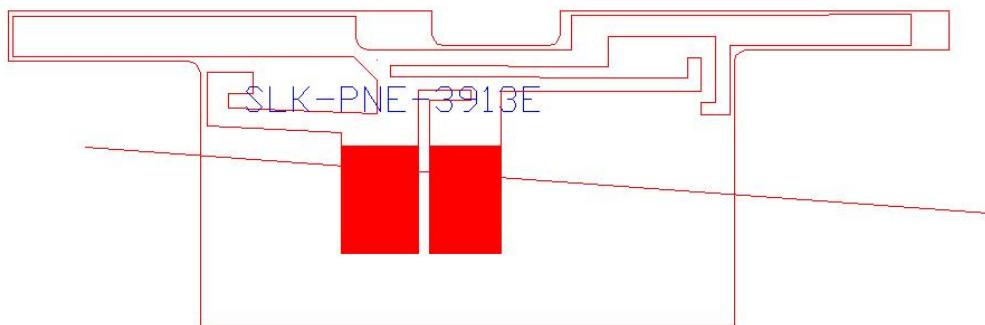
Shenzhen Yishengbang Technology Co., LTD

WIFI+GPS Antenna (3913E)

1. Explanation of Product number :

S L K - P N E - 3 9 1 3 E

1 2



Product Code:

(1) Customer:

PNE: 普耐尔

(2) Project:

3913E: SLK-PNE-3913E (WIFI+GPS antenna GHz)

备注: 配套SLK-PNE-WG-180III-B小板

2. Features

- *Stable and reliable in performances
- *Compact size
- *RoHS compliance

3. Applications

- * IEEE802.11 (a/b/g/n)
- * Hand-held devices when WIFI (802.11a/b/g/n)GPS functions are needed

4. Description

Holy bond's FPC antenna series are specially designed for WIFI (802.11 a/b/g/n) GPS applications. Based on Holy bond's proprietary design and processes, this FPC antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

5. Electrical Specifications

5-1

Characteristics	Specifications	Unit
Outline Dimensions	39.5x 13.25x 0.12	mm
Center Frequency	1.575+2.4-2.5+5.15-5.85	GHz
Bandwidth(under-10dB return loss)	150min	MHz
VSWR	3max	

5-2.

VSWR

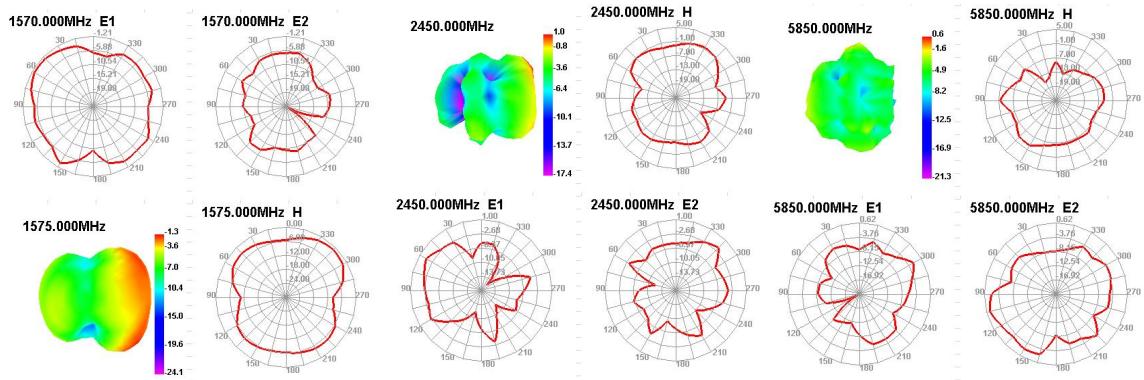


S11

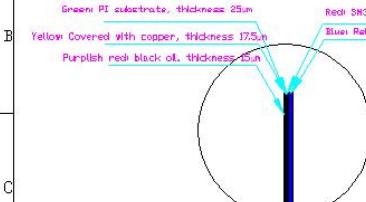
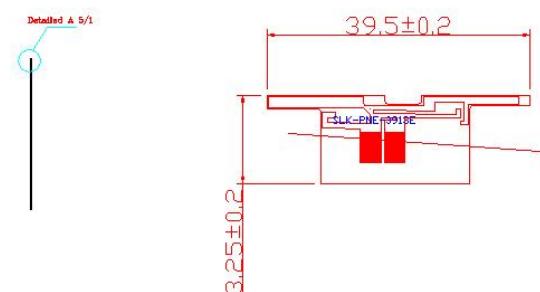


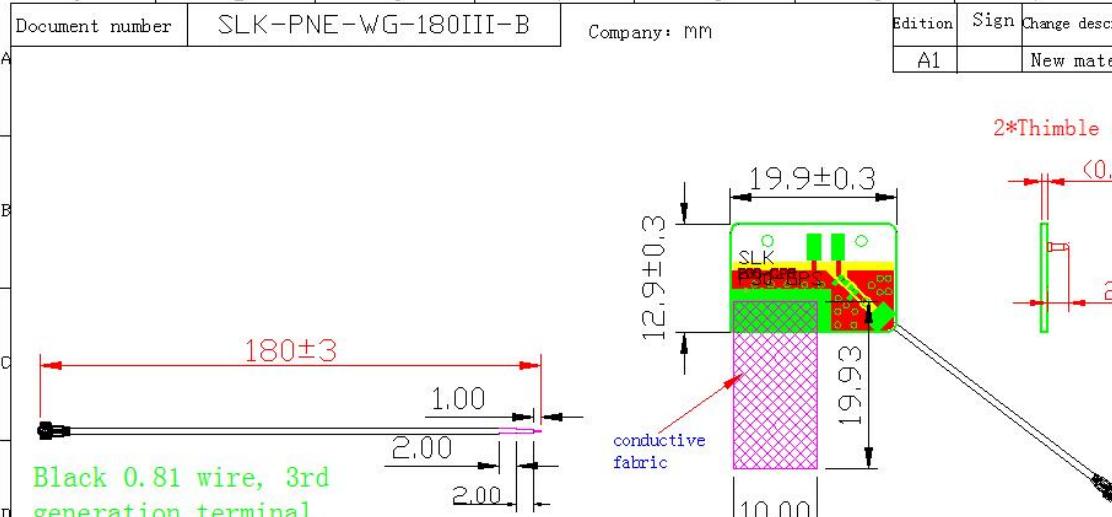
5-3.WIFI +GPS Antenna Gain/Efficiency/Radiation Pattern of 3D

Frequency(MHz)	Efficiency(%)	AverageGAIN(dB)	Peak GAIN(dBi)
1570	36.36	-4.39	-1.21
1575	36.98	-4.32	-1.3
1580	35.96	-4.44	-0.78
2400	35.17	-4.54	0.57
2410	35.97	-4.44	0.56
2420	34.3	-4.65	1.1
2430	37.43	-4.27	1.27
2440	34.64	-4.6	1.19
2450	39.85	-4	1
2460	36.35	-4.4	1.32
2470	36.27	-4.4	1.17
2480	34.26	-4.65	1.66
2490	34.41	-4.63	1.3
2500	36.9	-4.33	2.06
5150	30.24	-5.19	-0.09
5350	31.38	-5.03	0.05
5550	32.24	-4.92	0.39
5750	36.39	-4.39	1.01
5850	30.47	-5.16	0.6



6. Antenna Dimensions (unit: mm)

1	2	3	4	5	6	7	8
Document number	SLK-PNE-3913E			Company: MM	Edition	Sign	Change description
A				A1	New material 22-07-19A		
B				Detailed A 5/1			
C							
D							
E	<p>Technical requirements:</p> <ol style="list-style-type: none"> 1. FPC base material: PI, the shaded part is copper foil, black oil on the surface 2. Back glue model: 3M300. 3. Copper exposed in red part; The surface shall be free of oil, impurities, burrs, etc. 4. Cut off the release paper by hand to avoid damaging the line. 5. Important dimensions shall be marked with "*" (the mold shall be controlled during manufacturing and must be measured during mold acceptance); 			Design	Cai liang liu	Name	
F				To examine	Zhen Hang	Customer item No	
				Approval		weight	quantity proportion
						1:1	
					Sheet 1 of 1		
					Shenzhen Yishengbang Electronics Co., Ltd		
1	2	3	4	5	6	7	8

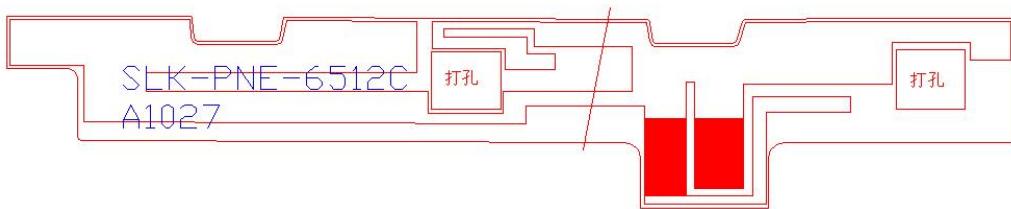
1	2	3	4	5	6	7	8
Document number	SLK-PNE-WG-180III-B			Company: MM	Edition	Sign	Change description
A				A1	New material 22-07-19A		
B							
C							
D							
E	<p>Technical requirements:</p> <ol style="list-style-type: none"> 1. PCB base material: FR4, black oil on the surface. 2. Copper exposure in red parts; No grease, impurity, burr on the surface. 3. Important dimensions are marked with "*" (mould production should be controlled, mould acceptance must be tested); 4. Cable 0.81 black, 180MM wire length third-generation terminal 			Design	Cai liang liu	Name	
F				To examine	Zhen Hang	Customer item No	
				Approval		weight	quantity proportion
						1:1	
					Sheet 1 of 1		
					Shenzhen Yishengbang Electronics Co., Ltd		
1	2	3	4	5	6	7	8

4G MAIN Antenna (6512A)

1. Explanation of Product number :

S L K - P N E - 6 5 1 2 A

1 2



Product Code:

(1) Customer:

PNE: 普耐尔

(2) Project:

6512A: SLK-PNE-6512A (4G MAIN antenna)

备注: 配套SLK-PNE-4G-135III-G小板

2. Features

- *Stable and reliable in performances
- *Compact size
- *RoHS compliance

3. Description

Holy bond's FPC antenna series are specially designed for 4G applications. Based on Holy bond's proprietary design and processes, this FPC antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

4. Electrical Specifications

4-1

Characteristics	Specifications	Unit
Outline Dimensions	65.84x 12.41 x 0.12	mm
Bandwidth(under-10dB return loss)	150min	MHz
VSWR	5max	

4-2

VSWR



S11



4-3. 2G/3G/4G Antenna TRP/TIS

2G 频段	LTE-L	LTE-M	LTE-R	TIS	增益
GSM850	25.73	25.68	25.37	-102.69	0.8
GSM900	25.62	25.25	25.4	-101.99	0.9
GSM1800	24.41	24.26	23.61	-101.23	1.1
GSM1900	25.4	25.19	25.33	-102.47	1.2
3G 频段	LTE-L	LTE-M	LTE-R	TIS	增益
WCDMA-B1	17.16	17.45	17.53	-103.59	1.3
WCDMA-B2	16.46	16.06	16.17	-103.37	1.2
WCDMA-B5	17.78	17.38	17.11	-103.63	0.8
4G 频段	LTE-L	LTE-M	LTE-R	TIS	增益
LTE-2	16.51	16.79	17.03	-91.39	1.2
LTE-4	16.73	17.01	17.14	-90.06	1.1
LTE-7	17.38	17.16	16.73	-88.21	1.4
LTE-8	16.4	16.46	16.29	-87.54	0.8
LTE-28	14.51	15.25	16.09	-89.73	0.7

5. Antenna Dimensions (unit: mm)

1	2	3	4	5	6	7	8
Document number	SLK-PNE-6512C			Company: MM	Edition	Sign	Change description
A				A1	New material 22-07-19A		
B				Detailed A 5/1			
C				Detailed A 5/1			
D							
E	<p>Technical requirements:</p> <ol style="list-style-type: none"> 1. FPC base material: PI, the shaded part is copper foil, black oil on the surface 2. Back glue model: 3M300. 3. Copper exposed in red part; The surface shall be free of oil, impurities, burrs, etc. 4. Cut off the release paper by hand to avoid damaging the line. 5. Important dimensions shall be marked with "*" (the mold shall be controlled during manufacturing and must be measured during mold acceptance); 			Design	Cai liang liu	Name	
F				To examine	Zhen Hang	Customer item No	
				Approval	weight	quantity	proportion
						1:1	
				Sheet 1 of 1			
				Shenzhen Yishengbang Electronics Co., Ltd			
1	2	3	4	5	6	7	8

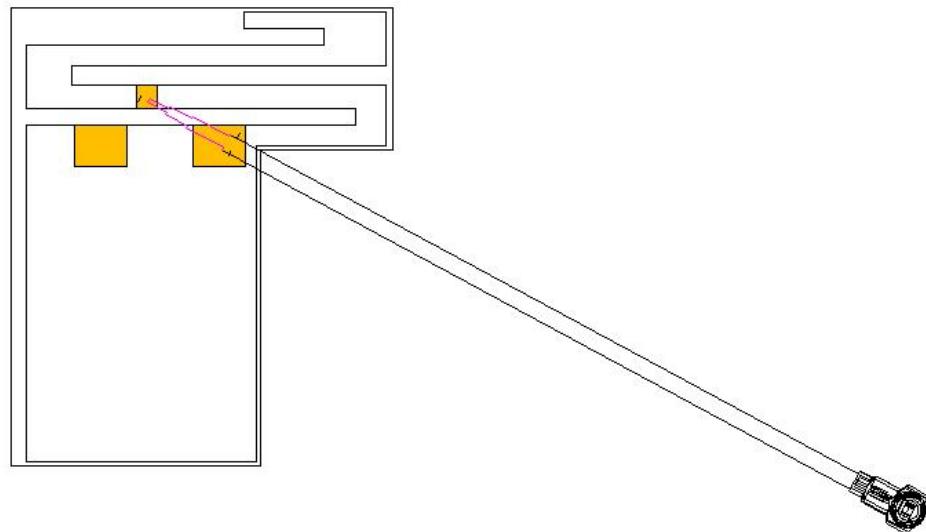
1	2	3	4	5	6	7	8
Document number	SLK-PNE-4G-135III-G			Company: MM	Edition	Sign	Change description
A				A1	New material 22-07-19A		
B				Detailed A 5/1			
C				Detailed A 5/1			
D				Detailed A 5/1			
E	<p>Technical requirements:</p> <ol style="list-style-type: none"> 1. PCB base material: FR4, black oil on the surface. 2. Copper exposure in red parts; No grease, impurity, burr on the surface. 3. Important dimensions are marked with "*" (mould production should be controlled, mould acceptance must be tested); 4. Cable line gray 0.81, wire length 135MM, three generation terminal 			Design	Cai liang liu	Name	
F				To examine	Zhen Hang	Customer item No	
				Approval	weight	quantity	proportion
						1:1	
				Sheet 1 of 1			
				Shenzhen Yishengbang Electronics Co., Ltd			
1	2	3	4	5	6	7	8

4G AUX Antenna (2218)

1. Explanation of Product number:

S L K - P N E - 2 2 1 8 - R - 1 9 0 I I I - B

1 2 3 4 5



Product Code:

(1) Customer:

PNE: 普耐尔

(2) Project:

2218: SLK-2218 (4G AUX antenna)

(3) Welding Position

R: Right

(4) Cable Length:

190III: 190III*0.81 三代端子

(5) Cable Color

B: Black

2. Features

*Stable and reliable in performances

*Compact size

*RoHS compliance

3. Description

Holy bond's FPC antenna series are specially designed for 4G applications. Based on Holy bond's proprietary design and processes, this FPC antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

4. Electrical Specifications

4-1

Characteristics	Specifications	Unit
Outline Dimensions	18.2x 21.8x 0.12	mm
Bandwidth(under-10dB return loss)	150min	MHz
VSWR	5max	

4-2

VSWR



S11



5. Antenna Dimensions (unit: mm)

1	2	3	4	5	6	7	8																								
Document number				Company: mm																											
SLK-PNE-2218-R-190III-B				Edition		Sign	Change description																								
				A1		New material 22-07-19 A																									
<p>Green: PI substrate, thickness 25μm Yellow: Covered with copper, thickness 17.5μm Purple: Redi black oil, thickness 15μm Redi 3M300 adhesive, thickness 50μm Blue: Release paper, thickness 100μm</p>																															
<p>Detailed A 5/1</p>																															
<p>190±3.0 1.20 2.00 2.00</p> <p>Black 0.81 wire, 3rd generation terminal</p>																															
<p>21.80±0.2</p>																															
<p>Technical requirements:</p> <ol style="list-style-type: none"> 1. FPC base material: PI, the shaded part is copper foil, butter on the surface 2. Back glue model: 3m300. 3. Copper exposed in red part; The surface shall be free of oil, impurities, burrs, etc. 4. Cut off the release paper by hand to avoid damaging the line. 5. Important dimensions shall be marked with "*" (the mold shall be controlled during manufacturing and must be measured during mold acceptance); 6. The terminal line is black 0.81mm, the third-generation terminal is 190MM long 																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Design</td> <td style="width: 25%;">Cailiang liu</td> <td style="width: 25%; text-align: center;"> </td> <td style="width: 25%;">Name</td> </tr> <tr> <td>To examine</td> <td>Zhen Hang</td> <td colspan="2"></td> </tr> <tr> <td>Approval</td> <td></td> <td>weight</td> <td>quantity</td> </tr> <tr> <td></td> <td></td> <td></td> <td>proportion</td> </tr> <tr> <td></td> <td></td> <td></td> <td>1:1</td> </tr> <tr> <td colspan="4" style="text-align: center;">Sheet 1 of 1</td> </tr> <tr> <td colspan="4" style="text-align: right;">Shenzhen Yishengbang Electronics Co., Ltd</td> </tr> </table>				Design	Cailiang liu		Name	To examine	Zhen Hang			Approval		weight	quantity				proportion				1:1	Sheet 1 of 1				Shenzhen Yishengbang Electronics Co., Ltd			
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Shenzhen Yishengbang Electronics Co., Ltd																															

6. Antenna Picture



As shown in the picture:

1. Wrap the screen cables with a conductive cloth
2. Wrap the camera cables with a conductive cloth, and then attach a conductive foam to the back cover
3. Connect the conductive cloth on the shielding cover of the mainboard and put a conductive foam or sponge on the back cover. Then pull it to the screen for grounding
4. The copper leakage area of the rear cover is grounded with conductive foam
5. Handle the original environment at the bottom of the mainboard, attach conductive sponge to the copper leakage area and ground the screen

