

Shenzhen Kaipu Shen Communication Technology
Co., Ltd

Sample Confirmation Letter

Customer Name: Yongzhi Xing

Project Name: KPS019-18

Sample Name: WIFI Antenna

Color/Version: Black/A

Date of signature: 2024-09-002

Supplier confirmation	make	R&D personnel	structure	quality

Customer confirmation	project	appearance	structure	quality

conclusion	<input type="checkbox"/> Batch use MP <input type="checkbox"/> Limited use () K
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☐ ROHS

Supplier Name: Shenzhen Kaipu Shen Communication Technology Co., Ltd

Supplier Address: 2nd Floor, Yulong Office Building, Longcheng Industrial
Zone, No. 440 Longguan Avenue, Longhua New District, Shenzhen

Telephone: 0755-29351613

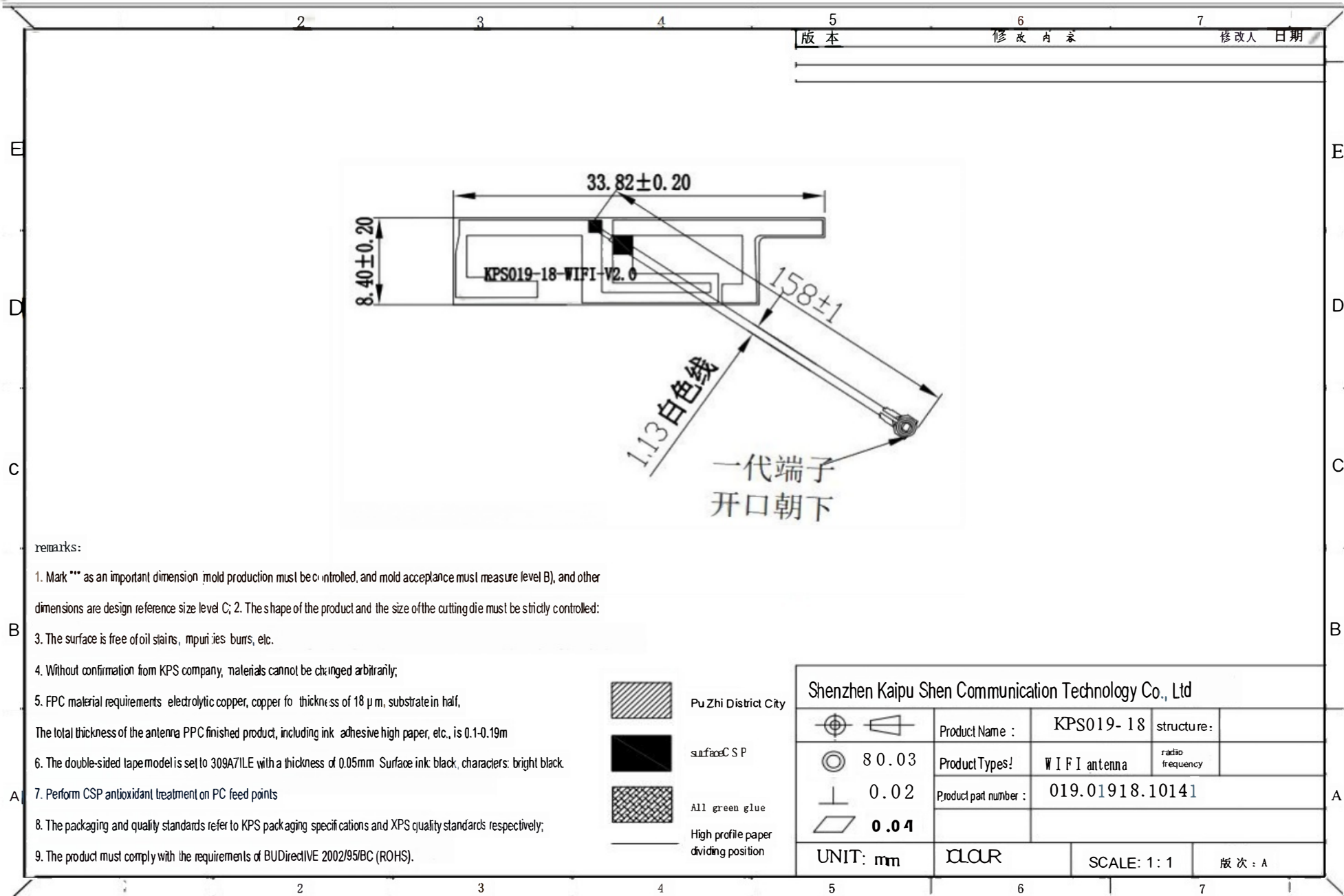
Fax: 0755-29351510

E-mail:szkpstx@szkpstx.com

catalogue





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3.1: Antenna structure diagram



remarks:

1. Mark *** as an important dimension, mold production must be controlled, and mold acceptance must measure level B), and other dimensions are design reference size level C; 2. The shape of the product and the size of the cutting die must be strictly controlled;
3. The surface is free of oil stains, impurities, burrs, etc.
4. Without confirmation from KPS company, materials cannot be changed arbitrarily;
5. FPC material requirements: electrolytic copper, copper foil thickness of 18 μm, substrate in half,
The total thickness of the antenna PPC finished product, including ink, adhesive high paper, etc., is 0.1-0.19mm
6. The double-sided tape model is set to 309A71LE with a thickness of 0.05mm. Surface ink: black, characters: bright black
7. Perform CSP antioxidant treatment on PC feed points
8. The packaging and quality standards refer to KPS packaging specifications and XPS quality standards respectively;
9. The product must comply with the requirements of BUDirectIVE 2002/95/BC (ROHS).

-  Pu Zhi District City
-  surface CSP
-  All green glue
-  High profile paper dividing position

Shenzhen Kaipu Shen Communication Technology Co., Ltd				
		Product Name :	KPS019-18	structure:
	8 0.03	Product Types:	WIFI antenna	radio frequency
	0.02	Product part number :	019.01918.10141	
	0.04			
UNIT: mm		COLOR	SCALE: 1:1	版次: A

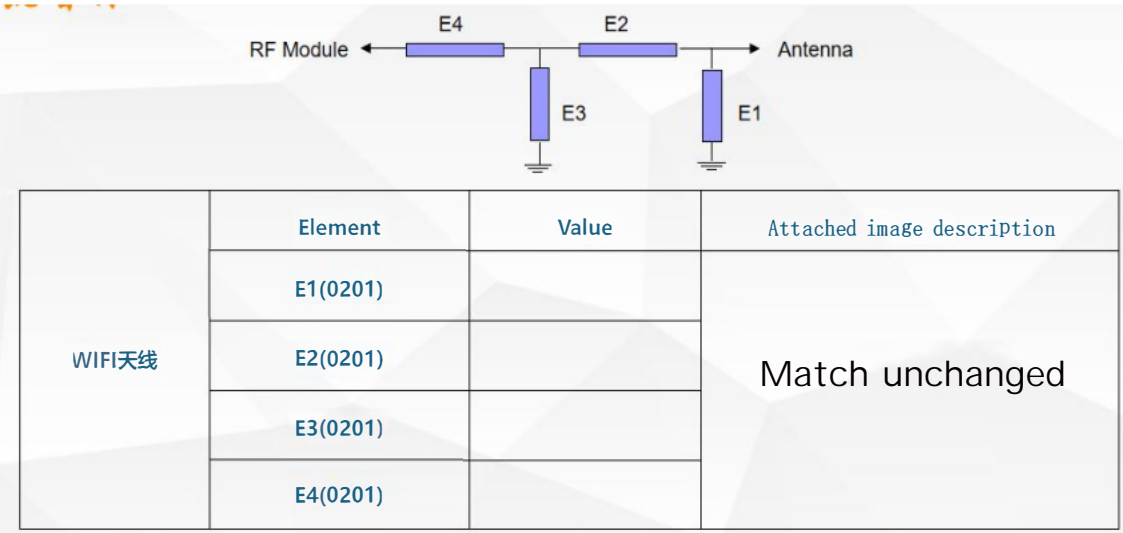
4.1 Antenna performance

4.1-1 Specification standards

The WIFI antenna operates in the frequency range of 2400M-2500M and 5100M-5800M, causing resonance.

4.1-2 The matching circuit of the antenna

Main antenna: The matching circuit is as follows:



4.2 Standing Wave Ratio (VSWR) Test

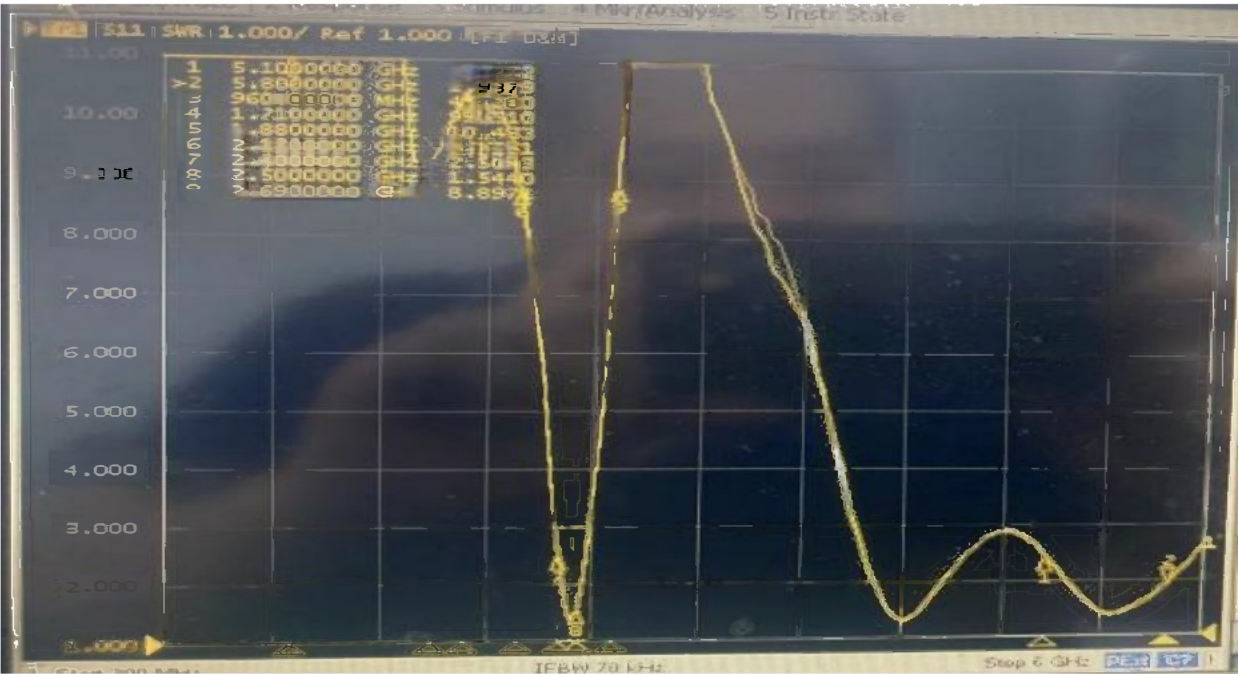
4.2-1 Test settings

The standing wave ratio (VSWR) testing device is sequentially connected as follows: E571B network analyzer → 50 ohm coaxial cable → 150mm long copper tube → testing fixture.

rocessing of test fixture: Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the PCB of the machine

Connect the copper tube with a choke coil, and then connect other devices in sequence

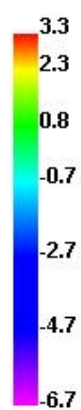
4.2-3 Passive test results



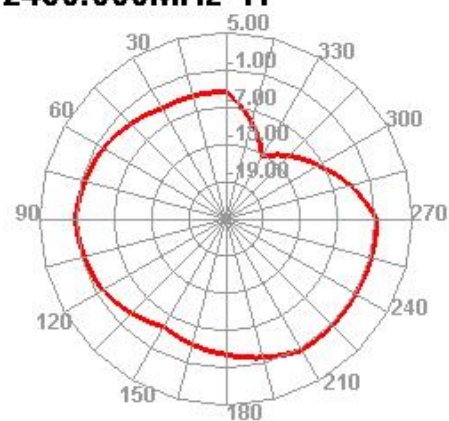
4.2-4 Whole machine active test data:
Antenna test data:

Passive Test For WIFI2.4			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	48.47	-3.15	0.56
2410	51.11	-2.91	0.69
2420	46.55	-3.32	0.31
2430	54.71	-2.62	1.24
2440	53.88	-2.69	1.37
2450	54.65	-2.62	1.54
2460	52.83	-2.77	1.23
2470	57.11	-2.43	1.53
2480	56.34	-2.49	1.4
2490	58.83	-2.3	1.53
2500	58.64	-2.32	1.72

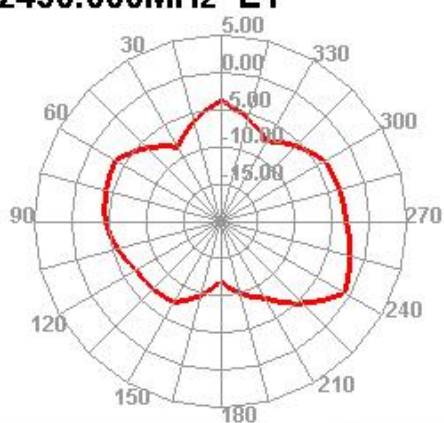
2450.000MHz



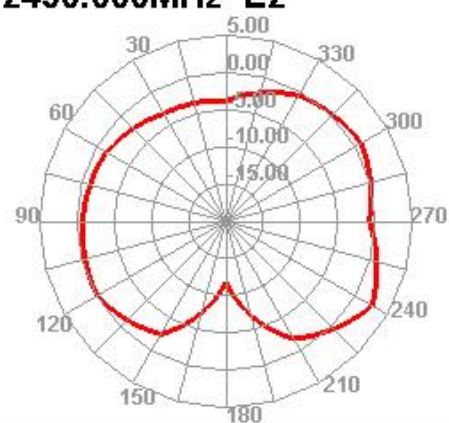
2450.000MHz H



2450.000MHz E1



2450.000MHz E2



Full size measurement report

	customer	Yongzhi Xing		Project Name		KPS019-18					Material Science	Electrolytic copper
	supplier	Kaipu Shen		Measurement tools		pixiv		Measurement unit		MM	Measurement date	2024/9/2
No.	size	upper limit	+ TOL.	- TOL.	lower limit	Actual testing1	Actual testing2	Actual testing3	Actual testing4	Actual testing5	UPPER \leq 100%	LOWER \leq 100%
1	33.82	34.02	0.20	0.20	33.62	33.80	33.82	33.75	33.85	33.82	15%	35%
2	8.40	8.60	0.20	0.20	8.20	8.45	8.40	8.38	8.42	8.40	25%	10%
3	158.00	159.00	1.00	1.00	157.00	158.00	158.05	158.02	158.00	158.00	5%	0%
4	The following blank space											
5												
6												
7												
8												
9												
10												

Table: He Ye

Reviewed by: Wu Xingtuo

Salt spray test report

date: 2/9/2024

project	KPS019-18-FPC天线	Customer Name	Yongzhi Xing
supplier	Shenzhen Kaipu Shen Communication Technology Co., Ltd	National testing standards	GB/T 2423.2-2008
Sample situation	Sample quantity: 5PCS		
Test time	24 H		
Test type	<input checked="" type="checkbox"/> NSS	<input type="checkbox"/> ASS	<input type="checkbox"/> CASS
Experimental conditions	Salt solution: 5%		PH:7.0
	Temperature inside the box: 35° C		relative humidity: 85%
	Spray mode: <input checked="" type="checkbox"/> continuity <input type="checkbox"/> intermission		Compressed air pressure: 1kg/cm²
	Salt spray settling rate: 1-2ml/80cm2/h		Mist collection: 1.4ml/80cm2/h
	Test cycle: __1__A cycle		Spray time: 24 h
test result	Appearance after the experiment: The appearance is intact and undamaged, with no significant changes.		
	Coating: No peeling or rusting		
	Surface spraying and screen printing: no peeling or bubbles		
explain: 1. The standard for salt spray test operation shall be implemented in accordance with the national standard GB/T2423.17-2008 of the People's Republic of China 2. The judgment criteria for test piece results shall be implemented in accordance with the national standard GB/T6461-02 of the People's Republic of China			

High/Low Temperature Test Record

Product Name	KPS019-18	Customer Name	Yongzhi Xing
Test quantity	5 pcs	date of observation	2/9/2024
Number of cycles	1	time	24H
Test conditions: high temperature: + 65° humidity: 90 % low temperature: - 20° Testing time: high temperature: 24 H low temperature: 24 H			
Test project	Unrecycled testing		Loop testing
Serial number	After high temperature	After low temperature	After high temperature After low temperature
1	OK	OK	
2	OK	OK	
3	OK	OK	
4	OK	OK	
5	OK	OK	
6	OK	OK	
Shortage after testing:			
Cause analysis:			
Improvement measures:			
experimental result : ✓ qualified ✗ unqualified			

Review: Wu Xingtuo

Record: He Ye

Packaging method

Customer Name	Yongzhi Xing	Material Name:	KPS019-18-FPC antenna
Packaging quantity:	1箱	packaging:	Cardboard box
Packing quantity:		Packaging method:	Sealed pocket packaging



Figure 1: Single piece packaging



Figure 2: Packing and



Figure 3: View of the packaging box
(front, side, top)



Figure 4: Outer box label