

Shenzhen Kaipushen Communication Technology Co., Ltd

Sample approve sheet

Customer: Leqi

Item name: 4180

Sample name: ZigBee aerial -2

Description/color: black

Release Date: 2022/6/23

Supplier confirmed	Make	R&D	Structure	Quality
	Liu Xiao meng 2022-07-22			

Customer confirmed	Item	Appearance	Structure	Quality

Conclusion	<input type="checkbox"/> MP use <input type="checkbox"/> Limited use () K
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 ROHS

Supplier name: Shenzhen Kaipushen Communication Technology Co., Ltd

Supplier address: 2nd Floor, Building 1, Yulong Building, Longcheng Industrial Zone, No.440, Longguan Avenue, Longhua District, Shenzhen

Tel: 0755-29351613

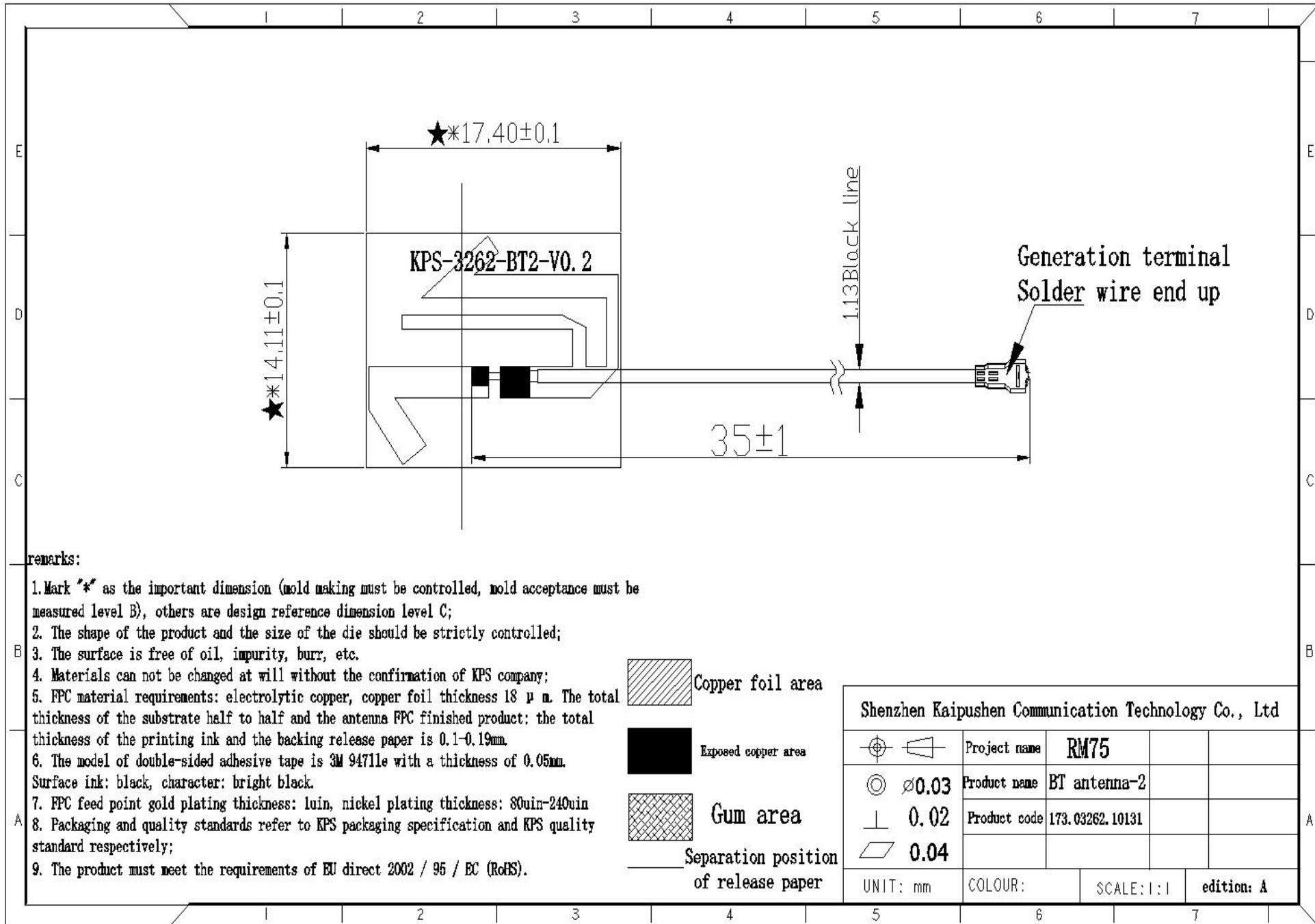
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3. ICD Drawing




remarks:

1. Mark "*" as the important dimension (mold making must be controlled, mold acceptance must be measured level B), others are design reference dimension level C;
2. The shape of the product and the size of the die should be strictly controlled;
3. The surface is free of oil, impurity, burr, etc.
4. Materials can not be changed at will without the confirmation of KPS company;
5. FPC material requirements: electrolytic copper, copper foil thickness 18 μ m. The total thickness of the substrate half to half and the antenna FPC finished product: the total thickness of the printing ink and the backing release paper is 0.1-0.19mm.
6. The model of double-sided adhesive tape is 3M 94711e with a thickness of 0.05mm. Surface ink: black, character: bright black.
7. FPC feed point gold plating thickness: 1uin, nickel plating thickness: 80uin-240uin
8. Packaging and quality standards refer to KPS packaging specification and KPS quality standard respectively;
9. The product must meet the requirements of EU direct 2002 / 96 / EC (RoHS).

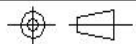
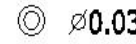
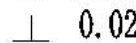

 Copper foil area

 Exposed copper area

 Gum area

 Separation position of release paper

Shenzhen Kaipushen Communication Technology Co., Ltd

	Project name	RM75		
	Product name	BT antenna-2		
	Product code	173.03262.10131		
				

UNIT: mm COLOUR: SCALE: 1:1 edition: A

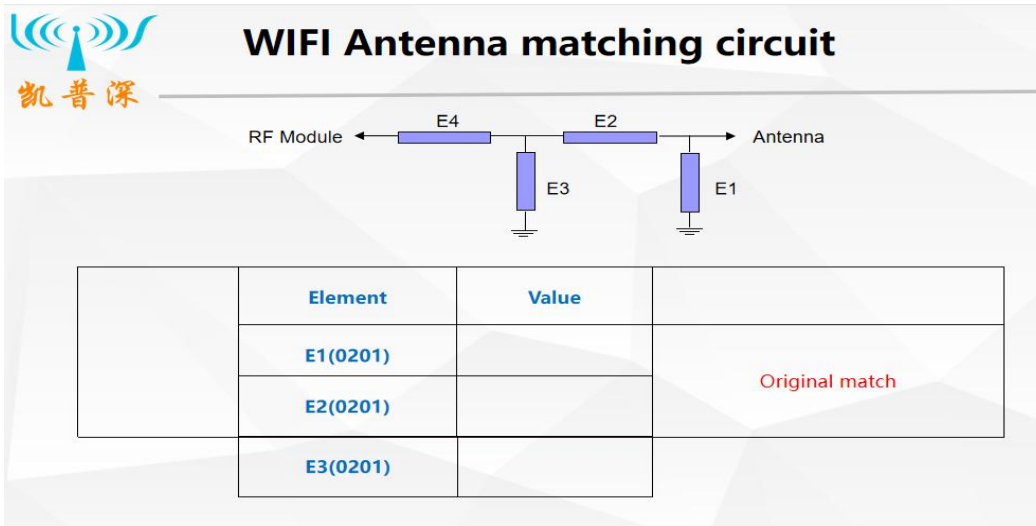
4.1 Aerial function

4.1-1 Specificatin standard

The working frequency band of wifi antenna produces resonance at 2400m-2500m

4.1-2 Matching circuit of antenna.

The antenna matching circuit is as follows:



4.2 Standing wave ratio test (VSWR) :

4.2-1 Test settings

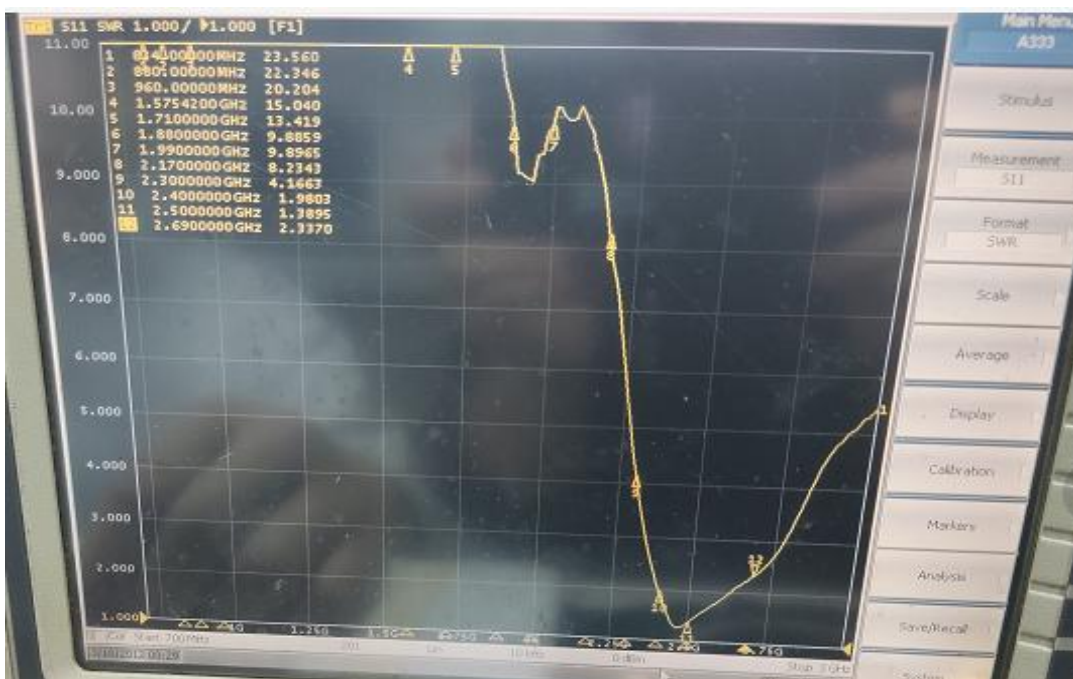
The standing wave ratio test device is connected in turn: E571BNetwork analyzer→50Coaxial line of OhmCable→150mmlong copper pipe→test fixture.

Treatment of test fixture: Use a hard cable to lead out from the 50 ohm test point of the antenna on the PCB of the machine u...SMA-JThe joint is connected with the copper pipe with choke ring, and then connected with other devices.

4.2-2 Voltage standing wave ratio test :

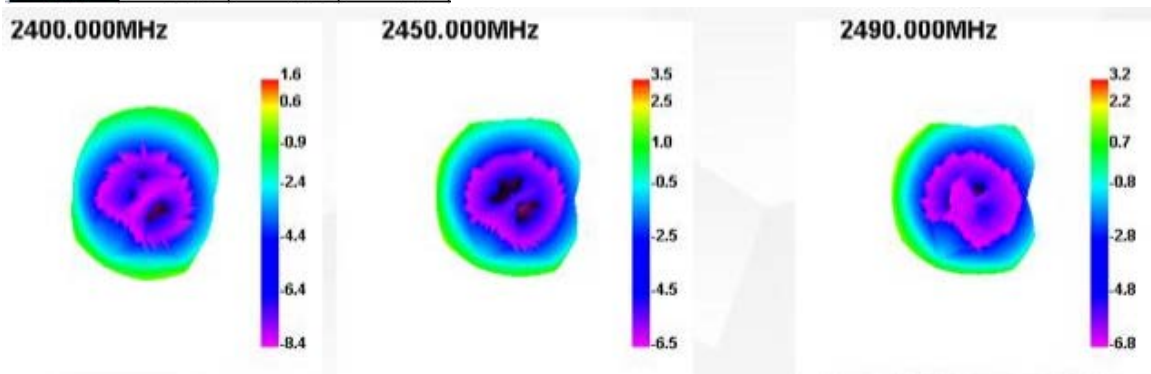
The following table shows: WIFIStanding wave ratio of edge frequency points of antenna operating frequency band:

Fre (MHZ)	2400	2450	2500
VSWR	1.5	1.3	1.6



4.2-3 Passive test results

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	30.07	-5.22	-0.17
2410	29.3	-5.33	-0.22
2420	30.19	-5.2	0.05
2430	32.07	-4.94	0.31
2440	31.38	-5.03	0.23
2450	32.1	-4.93	-0.34
2460	32.76	-4.85	-0.01
2470	32.05	-4.94	-0.07
2480	30.06	-5.22	0.76
2490	32.73	-4.85	1.3
2500	36.92	-4.33	1.92



4.3 Environmental manipulation:

Environmental treatment of the whole machine

The original environment of the whole machine remains unchanged

Full dimensional measurement report

NO.	Customer	Leqi		Item name		3262							Material	Electrolytic copper
	Supplier	Kaipushen		Measure tools		Quadratic		Measure unit		MM			Measure date	2022/7/28
	dim	URL	+ TOL.	- TOL.	LR	actual 1	actual 2	actual 3	actual 4	actual 5	actual 6	actual 7	UPPER ≤ 100%	LOWER ≤ 100%
1	17.40	17.50	0.10	0.10	17.30	17.41	17.38	17.38	17.37	17.42	17.42	17.42	20%	30%
2	14.11	14.21	0.10	0.10	14.01	14.09	14.13	14.13	14.13	14.09	14.08	14.09	20%	30%
3														
4														
5														
6														
7														
8														
9														
10														
11														

Tabulation: Jian Chen

Examine and Verify :Wu Xingtuo

Salt spray test report

Date: 2022 年 07 月 28日

Item	4180-FPC aerial	Customer	Leqi
Supplier	Shenzhen Kaipushen Communication Technology Co., Ltd	National Test standard	GB/T 2423.2-2008
Sample situation	Sample qty: 5PCS		
	Base material:Half to one-third electrolytic copper with glue		
Test time	Total 24H		
Test type:	<input checked="" type="checkbox"/> NSS	<input type="checkbox"/> ASS	<input type="checkbox"/> CASS
Test condition	Salt solution: 5%		PH:7.0
	Chamber temp: 35° C		Relative humidity: 85%
	Spray way: <input checked="" type="checkbox"/> continuation <input type="checkbox"/> intermittence		Compressed air pressure: 1kg/cm ²
	Salt spray sedimentation rate: 1-2ml/80cm ² /h		Fog fluid collection: 1.4ml/80cm ² /h
	Test cycle: __1__ cycle		Spray time: 24 h
Test results	Appearance after test:appearance intact, without obvious change		
	Coating: no spalling, no rust		
	Surface spraying, silk screen: no falling off, no bubbles.		
Explanation: 1、 Salt spray test operating standards in accordance with the People's Republic of China national standard GB/T2423.17-2008 implementation. 2、 The test piece results are determined according to the national standard GB/ T6451-02 of the People's Republic of China.			
Operator by/date: Jian Chen Approved by/date: Wu Xingtuo 2022.07.29			

High-low temperature test record

Product name	4180	Customer name	Leqi	
Test qtu	5 pcs	Test date	2022年7月28日	
Cycle number	1	Time	24H	
<p>Test Condition:</p> <p>High temp: + <u>65</u> degrees Humidity: <u>90</u> % RH</p> <p>Low temp: - <u> </u> degree</p> <p>Test time: high temp: <u>24</u> H low temp: <u>24</u> H</p>				
Test item	Uncycled test		Cycled test	
No	After high temp	After low temp	After high temp	After low temp
1	OK	OK		
2	OK	OK		
3	OK	OK		
4	OK	OK		
5	OK	OK		
6	OK	OK		
After test deficiency::				
Reason analysis:				
Improvement measures:				
Test results: √ Pass Fail				

Packing

Customer:	Leqi	Material name:	4180-FPC aerial
packing qty:	one carton	Packing material:	Carton
Qty/carton:		Packing way:	Ziplock bag



Picture 1: Single package



Picture 2: Packing way



Picture 3: Packing view (front, side, top)



Picture 4: packing

Fiction: LiMinghui

auditing: Wu Xingtuo