

SPECIFICATION FOR APPROVAL

Product Name: Wi Fi Steel Antenna

Product Model: KPS-ER03462 Steel Sheet Antenna

Item number (material code): 18600000012302

Specification: Frequency 2.4GHz, built-in material SUS 201, size 22.87 * 18.87 * 0.3mm ROHS.

Change Content History:

Serial number	The content before the change	The changed content	Change date	edition	Page number	person liable
0	First edition	First edition	2024/05/28	A0	8	He Ye/Yao Zehui
1	Reprinting	Reprinting	2024/10/26	A1	8	He Ye/Yao Zehui

Supplier Name: Shenzhen Kaipu Shen Communication Technology Co., Ltd		
Supplier Address: 2nd Floor, Building 1, Yulong Building, Longcheng Industrial Zone, No. 440 Longguan Avenue, Longhua District, Shenzhen		
contact number: 0755-29351613	Fax: 0755-29351510	mailbox: szkpstx@szkpstx.com
(Supplier endorsement)		
Responsible person/date	Review/Date	Approval/Date

This admission letter includes the following contents: (none of which are indispensable)

- 1、Cover
- 2、Parameter specification sheet
- 3、Structural dimension diagram
- 4、Packaging diagram
- 5、BOM Table
- 6、Production Process Flow Chart
- 7、Certification testing status

Customer Name (Company Name): Shenzhen Oni Electronics Co., Ltd			
The judgment result of the demand side (customer): ☐ qualified ☐ unqualified			
The purchaser (customer) acknowledges (please return the entire acknowledgement letter after confirmation)			
Development and Design Engineer/Date	SQE Engineer/Date	Head of Procurement Department/Date	Approval by Development Manager/Date

2、Parameter specification sheet

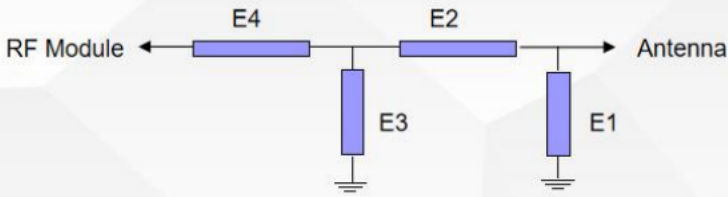
1. Electrical performance parameters

Serial number	project	Parameter specifications	Test conditions
1	frequency(MHZ)	2400 MHZ~2500 MHZ	Network analyzer settings2.4-2.5GHz frequency
2	Gain test	$\geq 2\text{dBi}$	Microwave darkroom
3	Efficiency testing	$\geq 50\%$	Microwave darkroom
4	Voltage standing wave ratio	≤ 2	Network analyzer settings2.4-2.5GHz frequency

2、Mechanical performance parameters

Serial number	project	Parameter specifications	Test conditions
1	Bullet length	$22.87 \pm 0.2(\text{mm})$	Measure the length dimension of the shrapnel using a caliper
2	Bullet width	$18.87 \pm 0.1 \text{ (mm)}$	Measure the width dimension of the shrapnel using a caliper
3	Thickness of shrapnel	$0.3 \pm 0.05 \text{ (mm)}$	Measure the thickness dimension of the shrapnel using a caliper

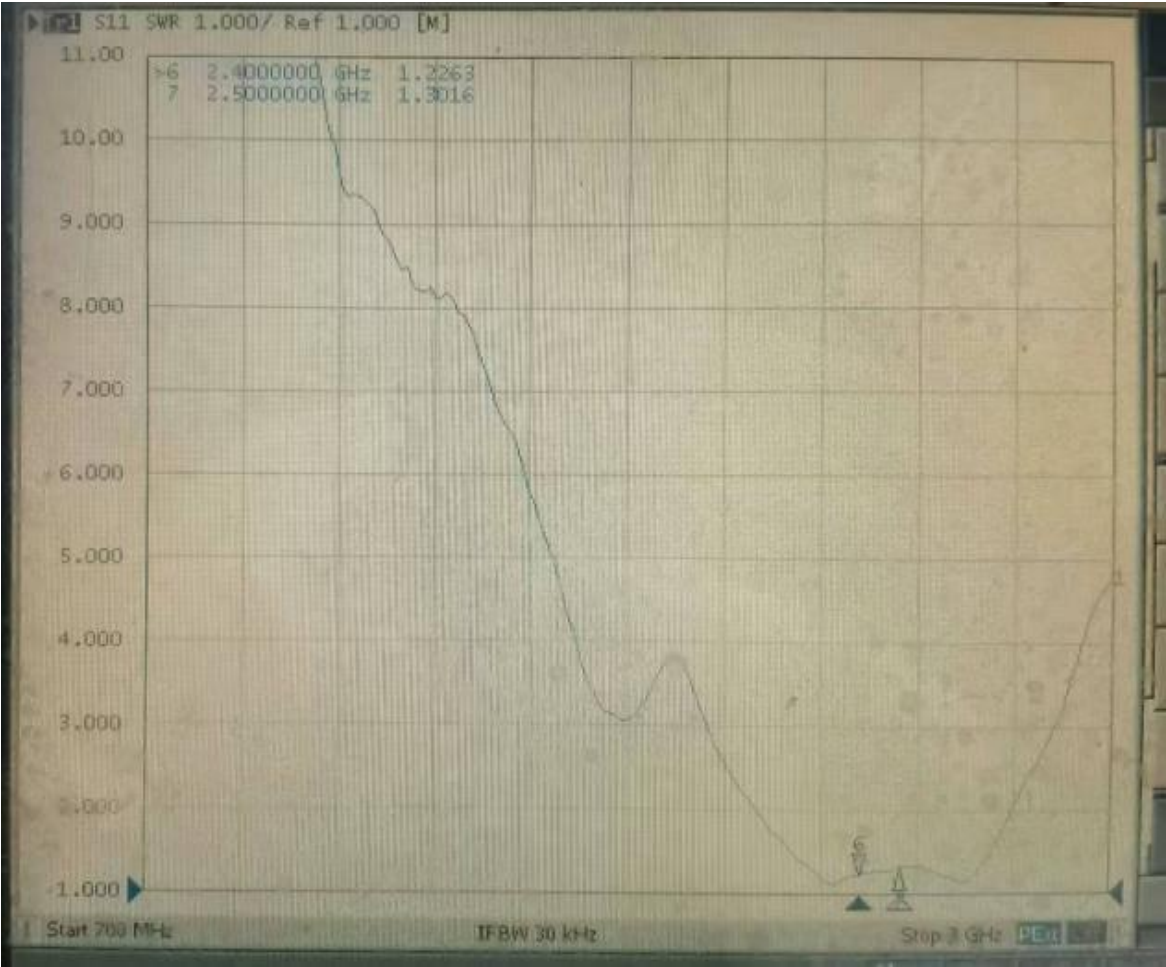
2.1、Antenna matching circuit



主天线	Element	Value	Attached image description
	E1(0201)	NC	Original motherboard matching
	E2/E4(0201)	0Ω	
	E3(0201)	NC	

2.2、Test report

Passive test results



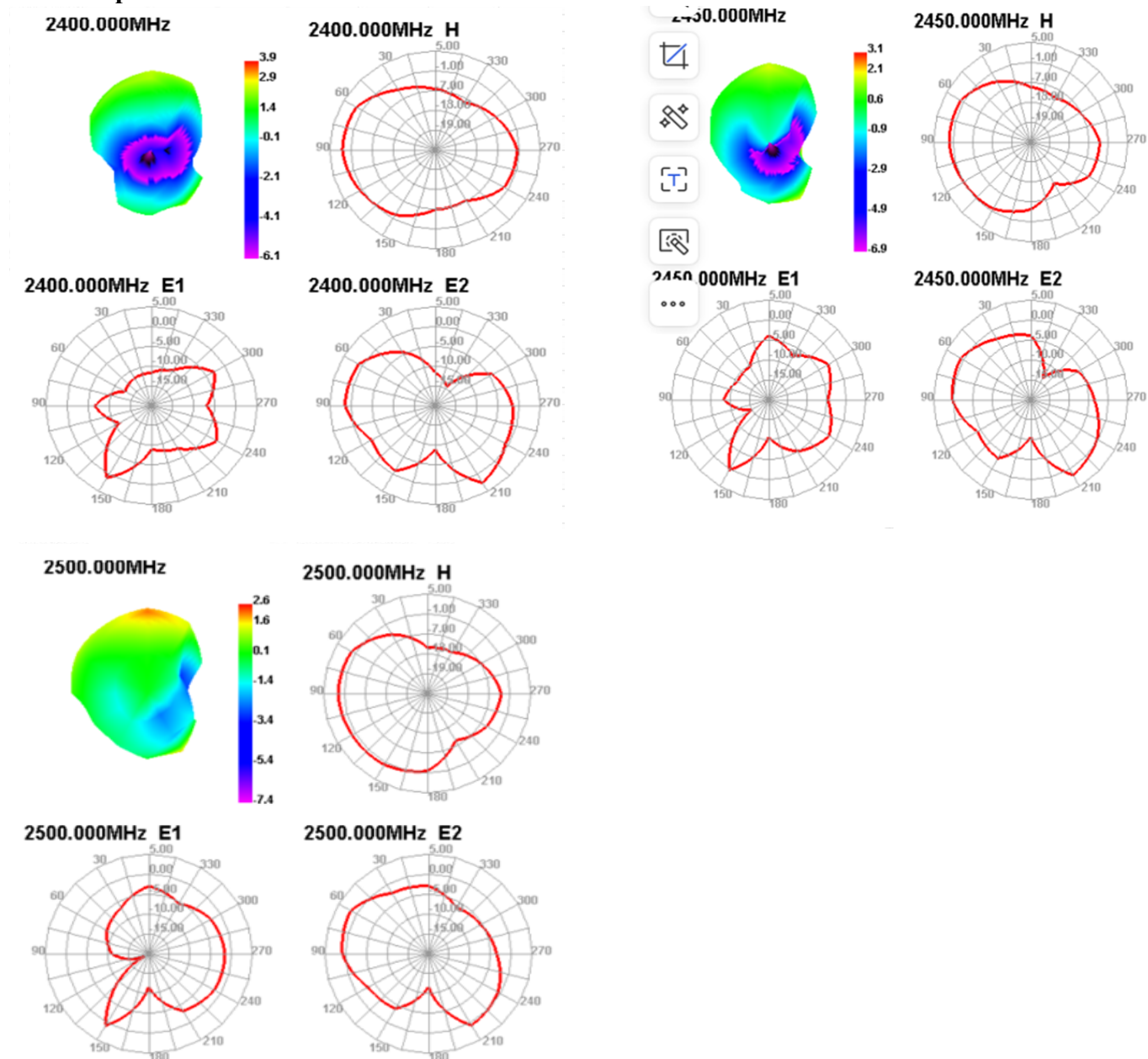
2.3、Antenna test data:

WIFI B 11M	channle	TRP (dbm)	TIS (dbm)
	1	17.2	-85.9
	6	17.1	-85.2
	11	17.4	-86

2.4、WIFI Passive antenna test data:

Passive Test For WIFI2.4			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	51.21	-2.91	2.63
2410	50.02	-3.01	2.49
2420	50.71	-2.95	2.57
2430	52.26	-2.82	2.82
2440	51.74	-2.86	2.64
2450	53.42	-2.72	2.89
2460	56.64	-2.47	3.16
2470	56.68	-2.47	3.28
2480	56.67	-2.47	3.08
2490	55.23	-2.58	2.97
2500	53.17	-2.74	2.64

Antenna pattern:



2.5、reliability test

Serial number	Project	Experimental conditions	Standard requirements
1	Salt spray test	1. The temperature inside the salt spray box is 35 ± 2 °C; laboratory temperature $22-30$ °C 2. The settling speed of salt spray is 1-2 L/h per 80cm² area after 24h spray, the concentration of sodium chloride is 50 ± 10g/L, and the PH value is 6-7.2	After 24 hours, there is no oxidation on the surface of the product, and the electrical test meets the standard requirements; 2. Electrical testing meets standard requirements, voltage standing wave ratio test is qualified

三、Structural dimension drawing (CA file)

Technical drawing of a shell with three views (A, B, C) and a flattened route diagram. The drawing includes a title block with the company name 'Shenzhen Kaipu Shen Communication Technology Co., Ltd' and a table with technical specifications.

序号	日期	修改内容	版本	备注
1				
2				
3				
4				
5				
6				
7				
8				

Shenzhen Kaipu Shen Communication Technology Co., Ltd

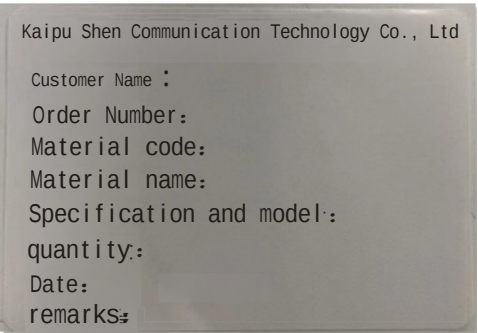
图例	第三角法	尺寸	公差	材料	表面处理	外观处理
0~10	±0.10	0.02	0.02	品种	0342	日期
10~20	±0.12	0.03	0.03	品名	IP天线	设计
20~40	±0.15	0.02	0.02	料号	031 02402 1114	审核
40~	±0.20	0.04	0.04	材质	SUS 304 T=0.3	标准

1. There must be no defects such as deformation, warping, burrs, oil stains, scratches, etc; Fit according to shell material matching 2. Material is nickel plated with SUS 304, T=0.3;
 3. Unmarked dimensions shall be measured 1:1 according to the CAD electronic drawing file;
 4. The unmarked tolerance shall be executed according to the CAD electronic drawing tolerance table;
 5. The surface of the shrapnel is printed with text, as shown in the diagram, and the font should be visible before clearing

The route is based on flattening

四、Packaging diagram (fill in instructions: The inserted image must be clearly visible)

1. Packaging photos (pictures):

1、Photos or pictures of individual material packaging	2、Photos or pictures of single-layer placement of inner packaging
	
3、Photos or pictures of the outer packaging	4、Supplier material packaging anti-counterfeiting mark
	

2. Material Packaging Information Form:

Serial number	Material name	Material specifications	texture of material	Is it anti-static	Quantity of single box packaging	Single box packaging weight (KG)	remarks
1	WIFI Shrapnel	22.87×18.87×0.3	SUS3.4 T=0.3	YES	11250PCS	Total weight5KG	
2	Blister tray	335*285*33 mm	PVC	NO	1250PCS		
3	cardboard	340*290MM	Corrugated paper (B=C)	NO	2PCS		
4	carton	350*310*300MM	Corrugated paper(B=B)	NO	1PCS		

The shipping packaging method is (4): 1. Roll packaging; 2. Disk installation; 3. Bulk; 4. Carton packaging; 5. Rubber box packaging; 6. Other_____.

Supplier Material Coding Rules:

Product/Material Code Reference Table

Example of incoming material number: The part number is 10. HY802.10A02 code reference table is as follows

1		2	3						备注
客户名	客户代码	项目代码	材质信息	材质代码	天线类别	天线代码	颜色	颜色代码	
**	10	XXXXX	材质信息	材质代码	天线类别	天线代码	颜色	颜色代码	10. HY802. 10A02
			FPC	10	无	10		0	前面两位是客户代码. 中间是项目型号. 后面5五位是材质代码+ 天线类别+颜色代码
			五金弹片	11	2/3G/GSM 主天线	11	黑色	1	
			LDS	12	WIFI/BT/GPS 天线	12	白色	2	
			塑胶支架	13	WIFI/BT 天线	13	灰色	3	
			同轴线	14	WIFI 天线	14	银色	4	
			导线	15	GPS	15	黄色	5	
			顶针	16	BT	16	粉红色	6	
			陶瓷	17	LTE主天线	17	绿色	7	
			泡棉	18	GSM 副天线(LTE)	18	香槟金	8	
			天线组件 (FPC+支架)	19	分集天线	19		9	
			天线组件 (五金+支架)	20	FM	20			
			外置天线	21	NFC	21			
			弹簧天线	22	CDMA	22			
			PCB	23	组件天线	23			
			喷涂	24	4G/三合一/分集天线	24			
			PCBA	25		25			
			背胶	26		26			

五、BOM (Bill of Materials) (filling instructions: all sub components must be expanded)

Serial number	Item Material Name	texture of material	Specification/Model	brand	Supplier Name	consumption
1	Shrapnel	plate with nickel	22.87*18.87*0.3mm	\	Jie Hongyuan	1PCS
2	carton	K=K, Three layer paper material	320*240*160mm	\	Jie Hongyuan	1/11250

六、Production Process Flow Chart

flow chart	Serial number	Assignment Name	Method steps	File Number	edition	Key workstations
	1	Full inspection of appearance	Check whether the shrapnel is bent or deformed, whether there is rust or oxidation on the surface, and place the good products into the packaging turntable. Place the defective products into the red adhesive.	WI-RD-8087	A0	*
	2	Blister tray packaging	Load the self inspected qualified products into vacuum formed trays, 100PCS/tray, and attach label paper and RoHS label	WI-RD-8088	A0	
	3	Sealed box	The packaged products will be packed into cardboard boxes, with each box containing 1000pcs. The cardboard box is sealed with tape in a "I" shape and labeled with cardboard and RoHS labels.	WI-RD-8089	A0	
start: ▽ task: □ inspect: ◇ end: ▲ Key workstations: *						

7、 Certification testing status (fill in instructions: If relevant testing certification has been conducted, please check the box in parentheses and indicate the corresponding certification or report number)

☐ UL certification or report number:

☐ VDE certification or report number:

☐ CE certification or report number:

☐ FCC certification or report number:

ROHS certification or report number: CANEC23001108902

REACH certification or report number:

☐ EMC certification or report number:

☐ CCC certification or report number:

SRRC certification or report number:

☐ Other certification or report numbers:

☐ No product certification