



Dongguan RF Electronic Technology Co., Ltd

Company Address: No. 1, Qinghu Head Sankeng Industrial Zone, Tangsha Town, Dongguan City Tel: 0769-38940168 Fax: 0769-39010966 Website: <http://rflink.net.cn>

SPECIFICATION SHEET

CUSTOMER NAME: KAON

PRODUCT NAME: 2.4/5G 1.13 black wire + terminal L=150MM

CUSTOMER P/N: 1290-00283

Ren Feng P/N: 3010101180 REV:A

National invention patent No

	MANUFACTURER SIGNATURE
CHECKED BY:	Zhong Qing
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APPROVED BY:	Yao Dingjun
DATE:	2025-09-17



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1. Document reversion history

No.	Date	Detail revision and change	Version
1	2025-09-17	Initial release	A
2			
3			
4			
5			
6			



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2. List of raw materials

NO.	part name	material	Color	quantity	Material manufacturer
1	1.13 Wire	Tin plating /FEP	black	1	Kai Bo
2	PCB	FR-4	black	1	Yao Xian
3	Terminal	Phosphor bronze	/	1	CAI Mei



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3. Technical information

3.1 Electrical specifications

Frequency	2400~2500MHz	5150~5875MHz
VSWR	2.0:1 blow	2.0 :1 blow
Peak gain	1.9 dBi	2.0 dBi
Input impedance	50 Ω	
Polarization	Linear	
Radiation properties	Omni-directional	
Maximum power	2Watts	

3.2 Mechanical specifications

Antenna size	33.5(mm) x 9.0(mm) x 1.0(mm)
Material	FR-4
Connector type	Domestic-made IPEX 1 generation
Cable length	150mm
Cable color	Black
Operating temperature	-40 °C to +80 °C
Operating humidity	0 ~ 95%

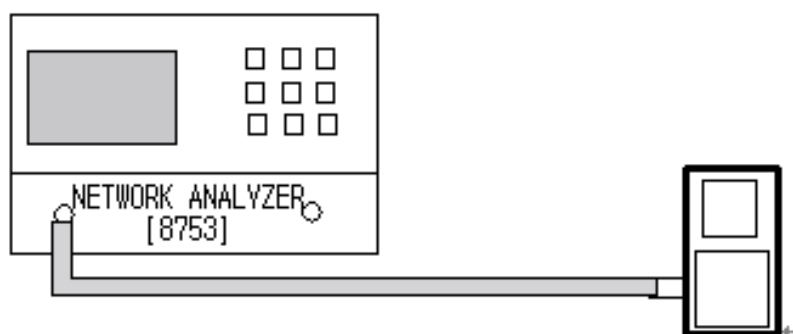
3.3 Packaging specifications

Part name	Quantity	Material	Remarks
PE bag	1Bag (100pcs)	PP	200x180mm
Outer box	1Bag (4000pcs)	K=k paper	350x300x200mm

4. Electrical test environment

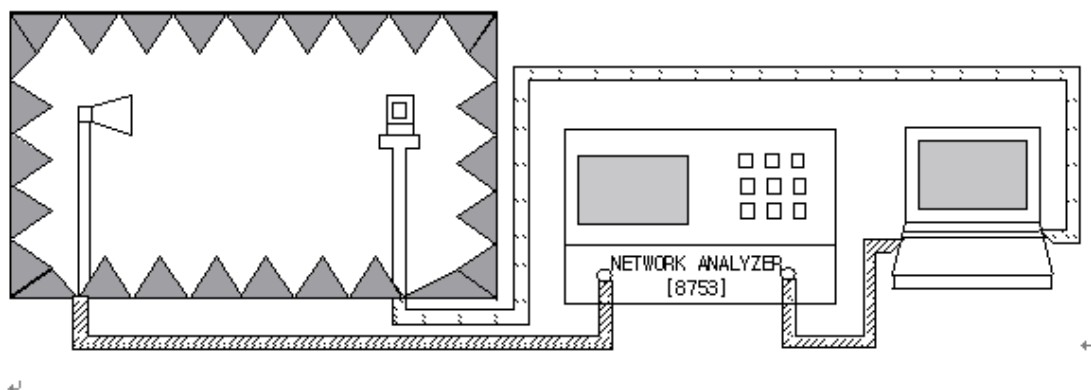
4.1 VSWR

- ① Connect the measurement cable to the Network analyzer.
- ② Set and calibrate the Network analyzer to match the measurement frequency.
- ③ Install the antenna and measure the VSWR.



4.2 Radiation pattern & Gain

- ① Calibrate the chamber system using the reference antenna, the software for controlling the chamber system is set to the measurement frequency band.
- ② Fit the antenna in chamber.
- ③ Measure the gain, efficiency, and radiation pattern.



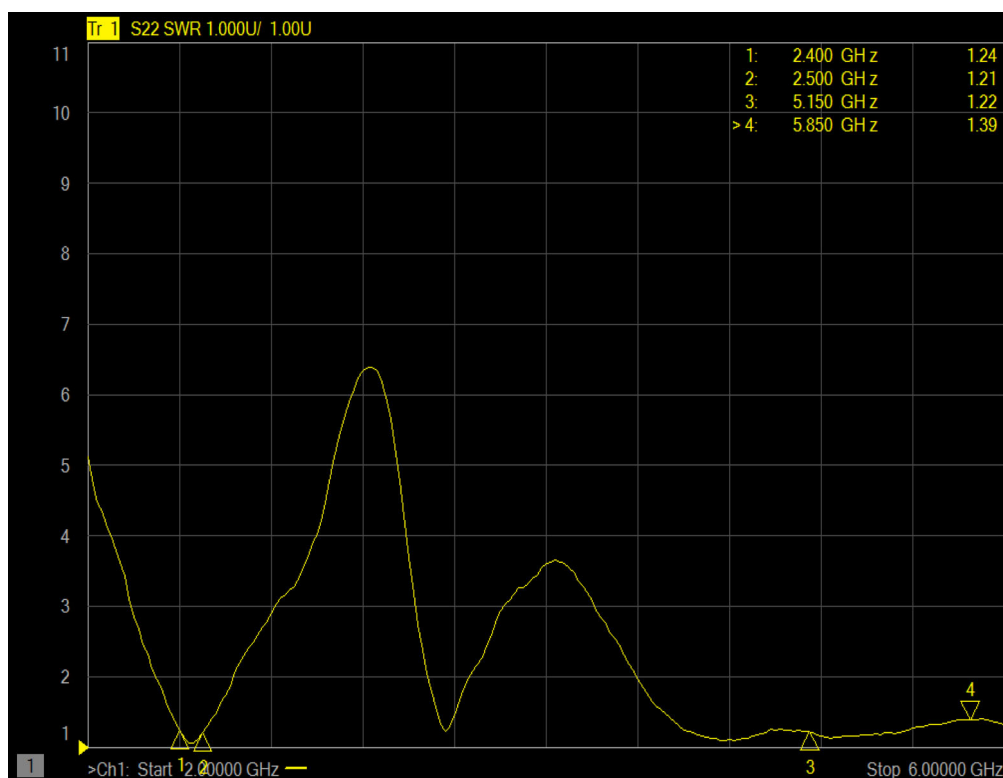


5. Electrical characteristic

5.1 VSWR

The VSWR characteristics must satisfy the following electrical demands.

Frequency	2400~2500MHz	5150~5875MHz
VSWR	2.0 :1 blow	2.0 :1 blow





5.2 Gain & Efficiency

The unit of gain is “dBi” and it must satisfy the following specifications.

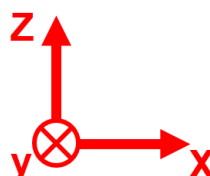
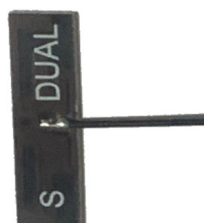
Frequency	2400~2500MHz	5150~5875MHz
Peak gain	1.9 dBi	2.0 dBi

Frequency / MHz	Efficiency / %	Gain/ dBi
2400	32.39	1.75
2410	40.21	1.68
2420	40.82	1.82
2430	40.30	1.81
2440	40.36	1.68
2450	40.26	1.45
2460	42.16	1.68
2470	40.15	1.81
2480	41.17	1.90
2490	42.32	1.36
2500	42.61	1.26

Frequency / MHz	Efficiency / %	Gain/ dBi
5150	50.91	1.89
5200	51.62	1.76
5250	50.88	1.82
5300	51.22	1.86
5350	60.18	2.00
5400	51.72	1.92
5450	51.24	1.84
5500	52.25	1.92
5550	51.17	1.95
5600	49.45	1.96
5650	49.50	1.85
5700	51.20	2.00
5750	52.09	1.61
5800	56.18	1.27
5850	52.70	1.89

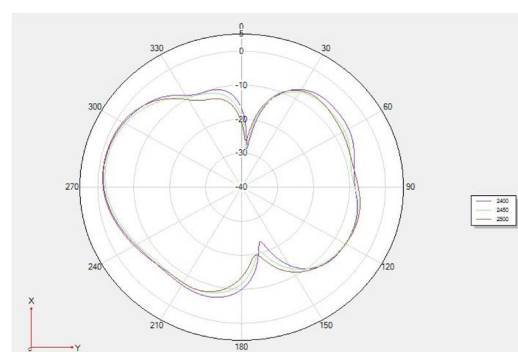
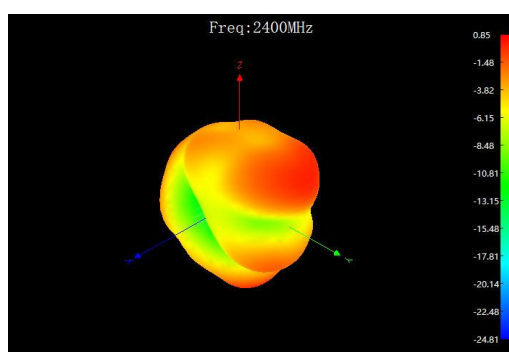
5.3 Radiation pattern

Radiation pattern of the antenna has Omni-directional pattern in H-Plane.

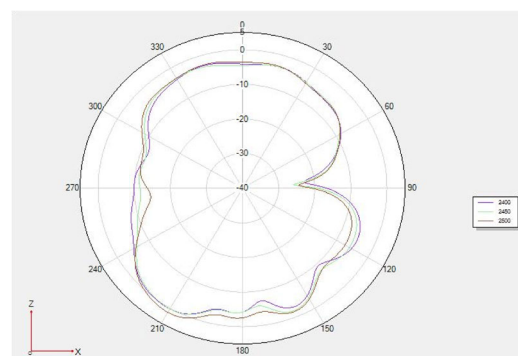
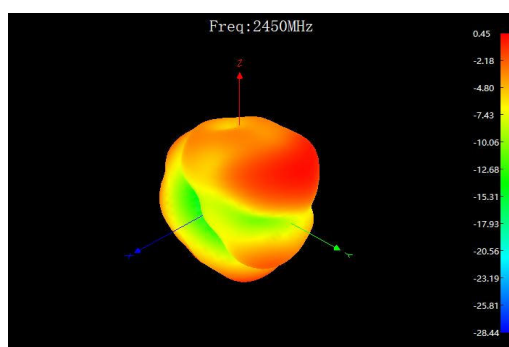


5.3.1 2.4G

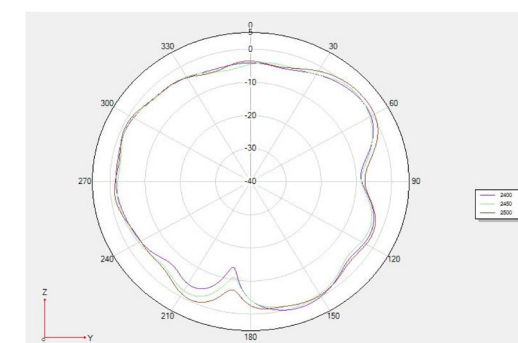
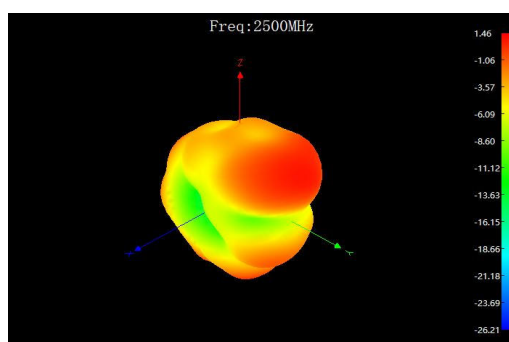
2400 MHZ



2450 MHZ

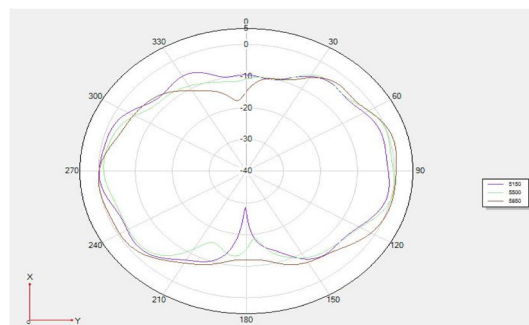
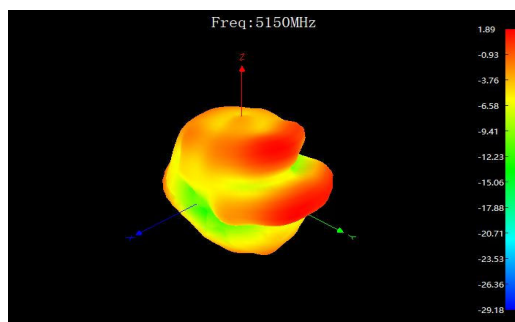


2500 MHZ

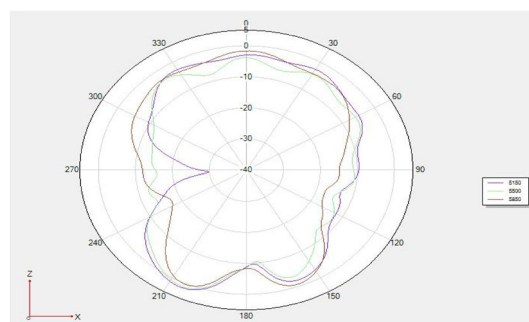
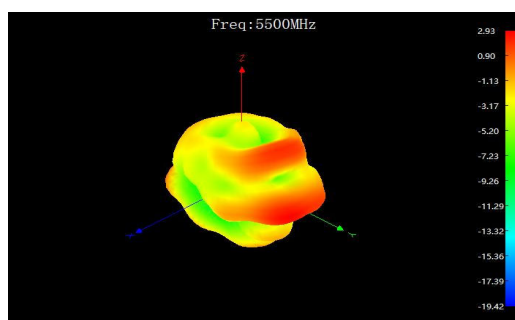


5.3.2 5G

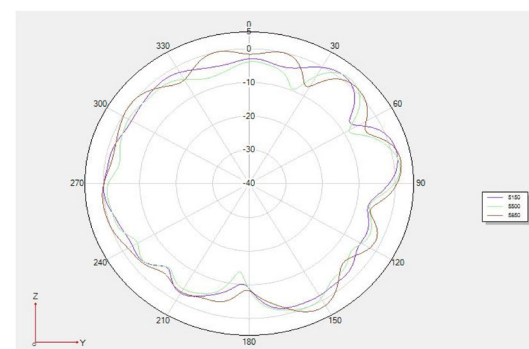
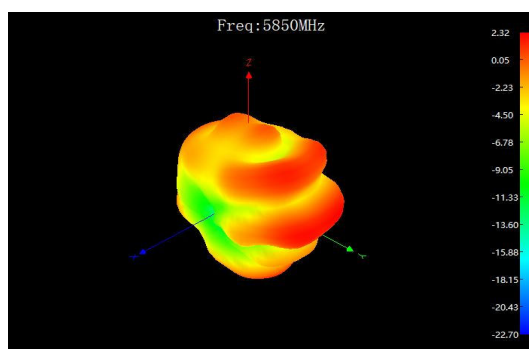
5150 MHZ



5500 MHZ



5850 MHZ





6. Environmental reliability test

Test item	Test method	Test Standard	Test result	Number of samples
High temperature and Humidity	1. Check the test surface to keep it clean and dry without bubbles and scratches. 2. $T=60\pm2^{\circ}\text{C}$, $\text{RH}=93\pm3\%$, test time 48 hours. After 48 hours, recover at room temperature for 2 hours, take out the product and inspect the appearance of the sample, check the mechanical properties, and test the electrical properties.	- No cracks, obvious deformation, falling off, RF test pass is qualified; - When the tape is peeled off, the coating cannot be peeled off, otherwise it is judged NG.	Pass	10pcs
High temperature storage	1. Check the test surface to keep it clean and dry without bubbles and scratches. 2. The sample was placed in a precision constant temperature and humidity test chamber, and stored at $70^{\circ}\text{C}\pm2^{\circ}\text{C}$ for 72h. After the test, it was placed in room temperature for 2h to check the appearance of the product.	- Parts without cracks, obvious deformation, falling off, paint adhesion test OK, RF test qualified; - When the tape is peeled off, the coating cannot be peeled off, otherwise it is judged NG.	Pass	10pcs
Low temperature storage	1. Check the test surface to keep it clean and dry without bubbles and scratches. 2. The sample was placed in a precision constant temperature and humidity test chamber and stored at $-40^{\circ}\text{C}\pm2^{\circ}\text{C}$ for 72h. After the test, it was placed in room temperature for 2 hours to check the appearance of the product.	- Parts without cracks, obvious deformation, falling off, paint adhesion test OK, RF test qualified; - When the tape is peeled off, the coating cannot be peeled off, otherwise it is judged NG.	Pass	10pcs



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Salt spray tester	1. Put the test sample into the salt spray tester. 2. Close the test chamber door and set the spray parameters. At $35^{\circ}\text{C} \pm 2^{\circ}\text{C}$, humidity $>85\%$, pH value in the range of 6.5-7.2, with $5\% \pm 1\%$ NaCl solution continuously sprayed 48h salt water, 3. After the above cycle, take out the product, rinse it with tap water, dry it at room temperature, and test the test surface.	- Inspect the surface of the specimen without any cracks, corrosion, foaming, obvious deformation, discoloration, wrinkling or poor overall shedding.	Pass	10pcs
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Specification:
Frequency Range: 2.4/5GHz

Technical Drawing:

The drawing shows a cross-section of a component with the following dimensions and features:

- Overall width: 33.50 ± 0.2
- Pin spacing: 9.00 ± 0.2
- Pin diameter: 1.00 ± 0.1
- Pin length: 150 ± 3
- Pin 1 is marked with a triangle and the number 1.
- The component is labeled "S" and "DUAL".

Table 1: Component Specifications

NO.	DESCRIPTION	QTY	REMARK
1	Terminal	1	Domestic-made JPEX 1 generation.
2	Wire	1	φ1.13 Black
3	POB	1	International FR-4:

Table 2: Inspection and Approval

NO.	DESCRIPTION	QTY	REMARK
1	Terminal	1	Domestic-made JPEX 1 generation.
2	Wire	1	φ1.13 Black
3	POB	1	International FR-4:

Table 3: Customer Information

CUSTOMER	PART NO.	PARTNAME	R.F.P/NO.	SCALE	SIZE	SHEET
RenFeng Electronic technology Co., LTD.			3070107180	1:1	A4	10/1

Table 4: Drawing Information

NO.	DESCRIPTION	QTY	REMARK
1	Terminal	1	Domestic-made JPEX 1 generation.
2	Wire	1	φ1.13 Black
3	POB	1	International FR-4:

Table 5: Inspection and Approval

NO.	DESCRIPTION	QTY	REMARK
1	Terminal	1	Domestic-made JPEX 1 generation.
2	Wire	1	φ1.13 Black
3	POB	1	International FR-4:

Table 6: Customer Information

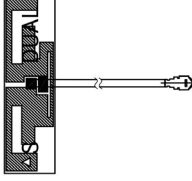
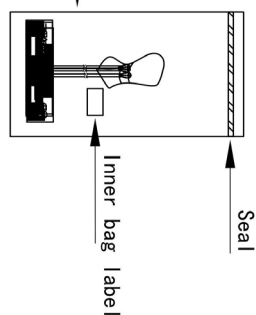
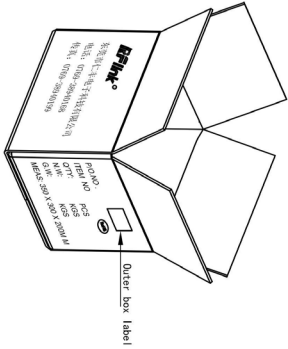
CUSTOMER	PART NO.	PARTNAME	R.F.P/NO.	SCALE	SIZE	SHEET
RenFeng Electronic technology Co., LTD.			3070107180	1:1	A4	10/1

Table 7: Drawing Information

NO.	DESCRIPTION	QTY	REMARK
1	Terminal	1	Domestic-made JPEX 1 generation.
2	Wire	1	φ1.13 Black
3	POB	1	International FR-4:



8. Packaging Specification

Product packaging			REV			DATE			DESCRIPTION			Change the code		
			A			2025-09-17			NEW ISSUE					
Single product												Inner bag packaging		
														
Inner bag packaging instructions: 1. Each bag contains 100pcs of the product, and 100pcs are bundled together. 2. Secure the wires with pearl cotton bags or rubber bands 3. Each bag should be labeled accordingly												Seal		
Outer box packaging instructions: 1. The outer box must be marked with RoHS and affixed with a 1pc outer box label. 2. Each box contains 40 bags /4000 PCS of the product.												Outer box packaging		
												Outer box label		
The product complies with the environmental protection requirements of RoHS2.0/FF														
APPROVED												COSTOMER		
CHECKED												PART NO :		
DRAWING												R.F P/NO : 3010101180		
mm												REV UNIT SCALE SIZE SHEET		
1:1												A4 10F1		
RF link												RenFeng E]electronic technology Co., LTD.		