



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=100MM

CUSTOMER P/N: 1290-00282

Ren Feng P/N: 3010101179 REV:A

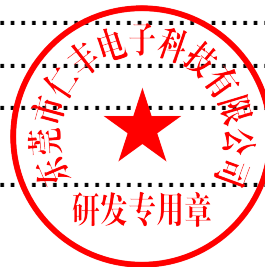
National invention patent No

	MANUFACTURER SIGNATURE
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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



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	100mm
Cable color	Black
Operating temperature	-40°C to +80 °C
Operating humidity	0 ~ 95%

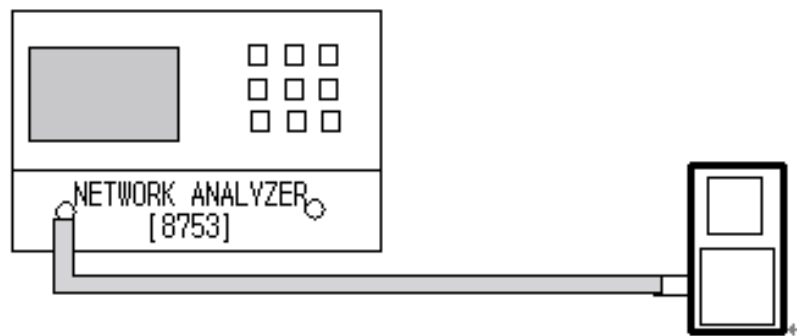
3.3 Packaging specifications

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

4. Electrical test environment

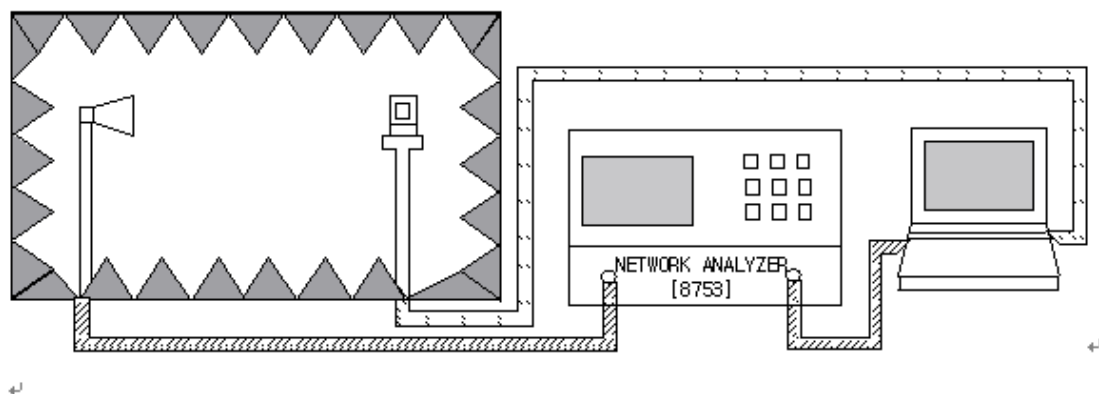
4.1 VSWR

- 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.



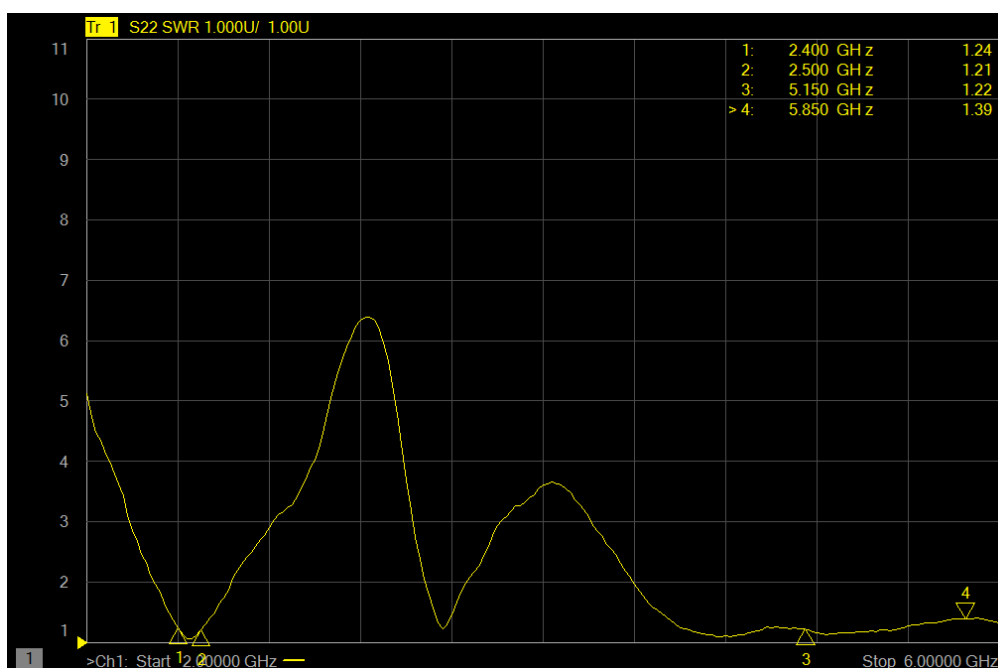


5. Electrical characteristic

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.

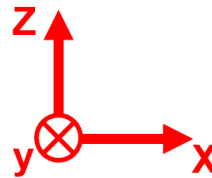
Frequency	2400~2500MHz	5150~5875MHz
Peak gain	1.9dBi	2.0dBi

Frequency / MHz	Efficiency / %	Gain/ dBi
2400	38.19	1.85
2410	41.11	1.66
2420	41.88	1.88
2430	41.3	1.84
2440	40.36	1.68
2450	41.02	1.45
2460	42.36	1.68
2470	43.45	1.85
2480	42.17	1.90
2490	41.69	1.73
2500	45.81	1.46

Frequency / MHz	Efficiency / %	Gain/ dBi
5150	52.97	1.89
5200	52.6	1.76
5250	51.88	1.87
5300	52	1.96
5350	62.81	2.00
5400	52.97	1.95
5450	54.2	1.94
5500	51.05	1.93
5550	50.7	1.83
5600	46.45	1.87
5650	50	1.75
5700	54.2	1.89
5750	51.29	1.65
5800	57.28	1.87
5850	59.7	1.97

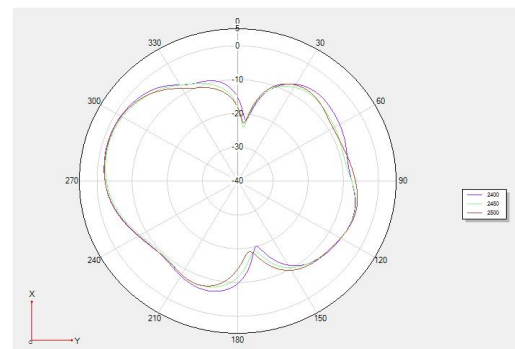
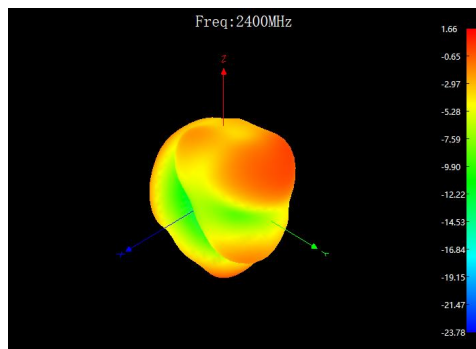
5.3 Radiation pattern

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

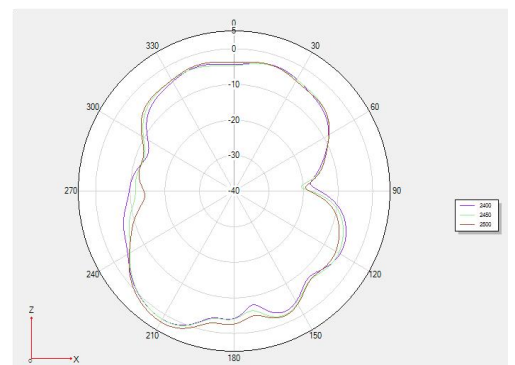
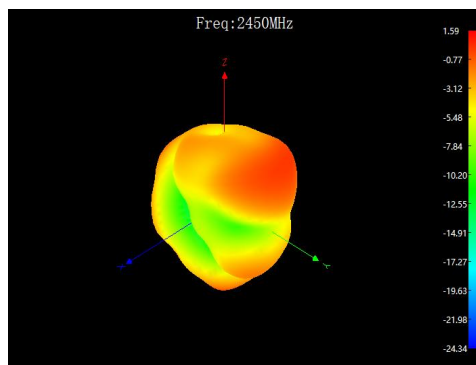


5.3.1 2.4G

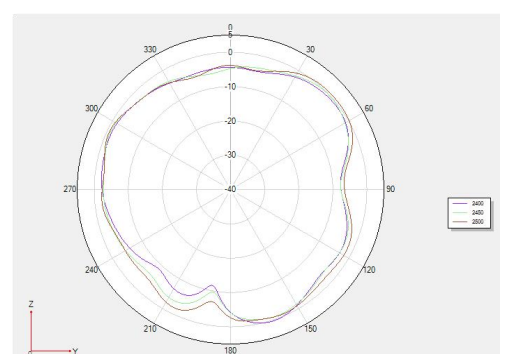
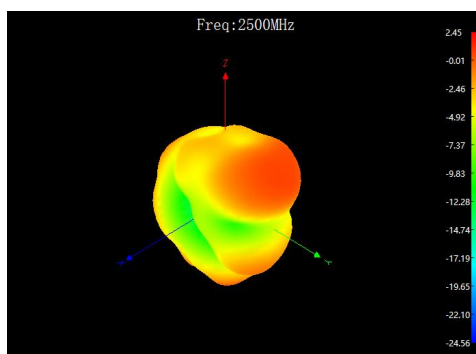
2400 MHZ



2450 MHZ

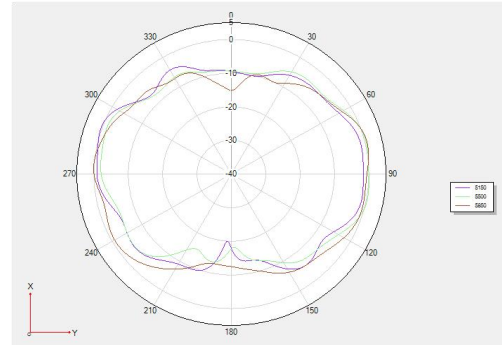
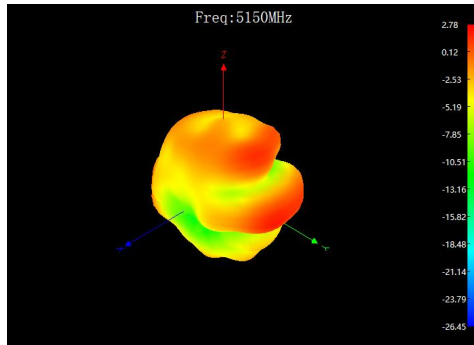


2500 MHZ

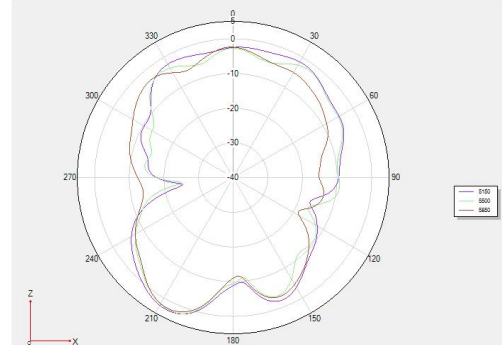
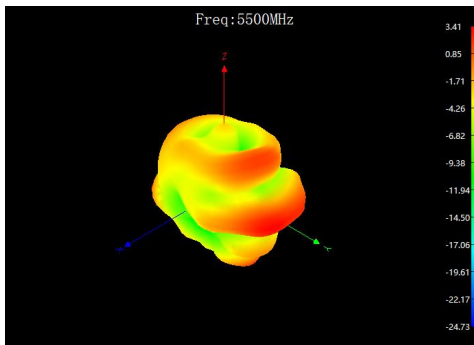


5.3.2 5G

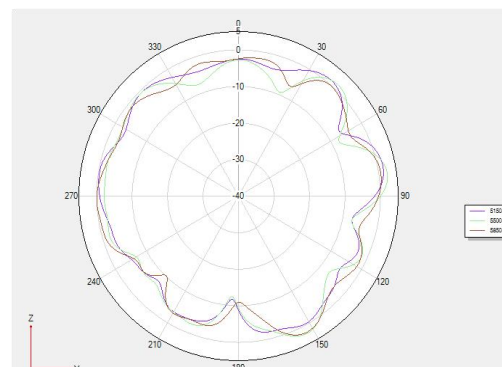
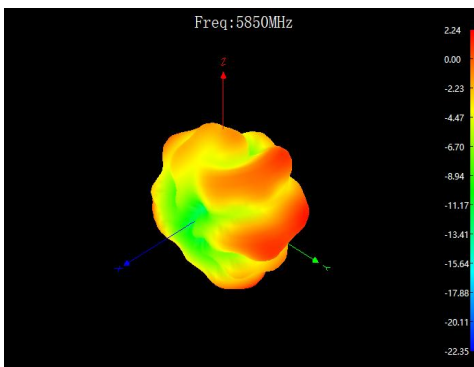
5150 MHZ



5500 MHZ



5850 MHZ



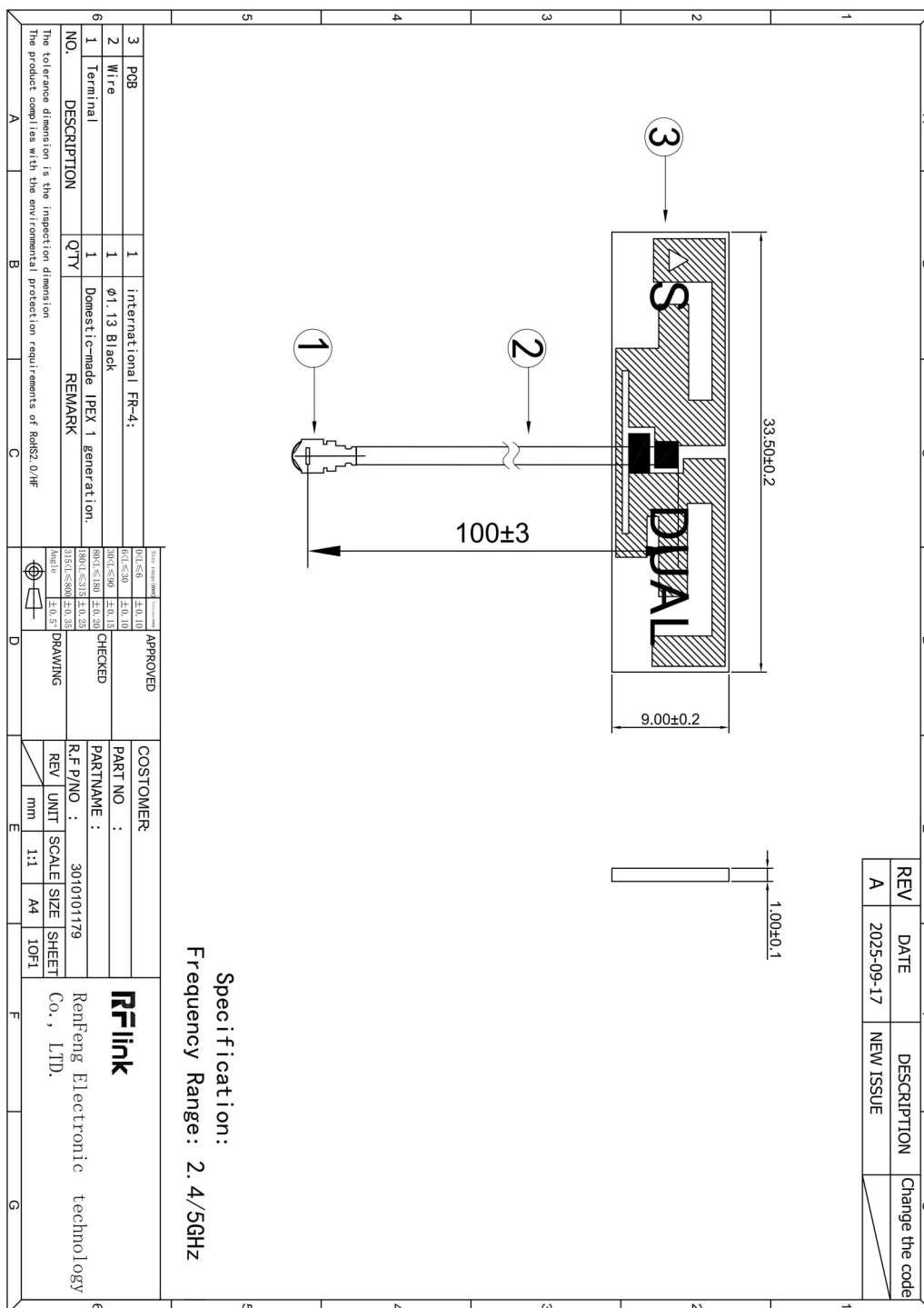
6. Environmental reliability test

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



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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7. Antenna mechanical drawing



8. Packaging Specification

