



Shenzhen Jianhaitong Antenna Technology Co., Ltd.



Antenna

Test Report

2025- 9-23

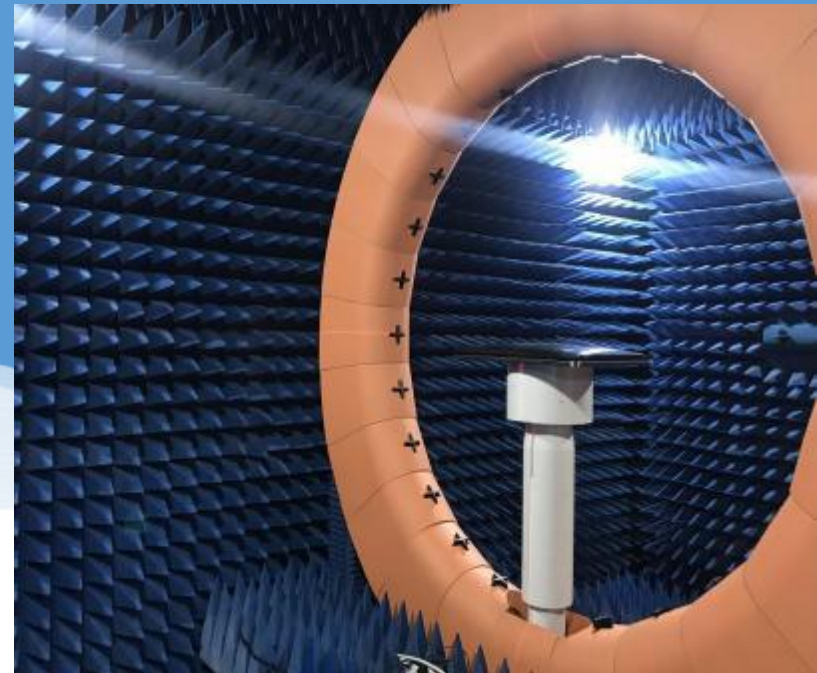
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Guangdong Jianbotong
Stock Code **831958**

catalogue:



1. Model Information
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1、Model Information

Manufacturer	IMOE	RF	FengWengHeng
Model Name	LQQ-1001	Email	
Antenna Type		Band	WIFI
Model pictures :			

2、company profile



the leading antenna manufacturers in China.

Honors & Qualifications

- ◆ Guangdong Famous Trademark
 - ◆ National High-Tech Enterprise
 - ◆ Guangdong Contract-Honoring Enterprise for 20 Consecutive Years
 - ◆ Top 10 Antenna Manufacturers
 - ◆ Guangdong Engineering Technology Center
 - ◆ Listed on China's New Third Board
- Code: 831958



Founded in **1995**, the company has grown over **23 years** into an enterprise with approximately **500 employees** and a **registered capital of RMB 67.65 million**.

The company occupies an area of **60 mu** (approximately **40,000 square meters**), with a total construction area of **55,000 square meters**, including **36,000 square meters of manufacturing facilities** and **13,000 square meters of warehouse space**.

With an annual production capacity of **24 million antennas**, the company offers **more than 4,000 product models**, making it one of

3、Passive and Matching

3.1 Passive Test Diagram

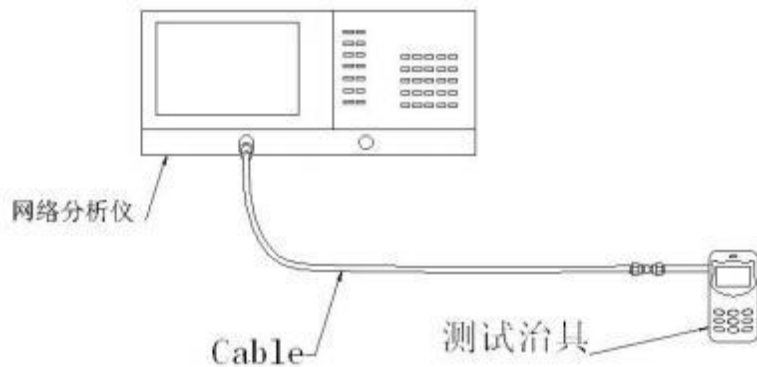
S11 Test Method Description

Test Equipment:

Network Analyzer (**E5071C**, 30 kHz – 8.5 GHz)

Test Method:

A **50-ohm cable** is connected from the test port of the instrument. After calibration using a calibration kit, the cable is connected to the **SMA connector** of the sample fixture. The **return loss** and **VSWR (Voltage Standing Wave Ratio)** at the relevant frequency points are then recorded.



3.2 Active Test Diagram

3D Test System: Shielded Anechoic Chamber

Test Environment:

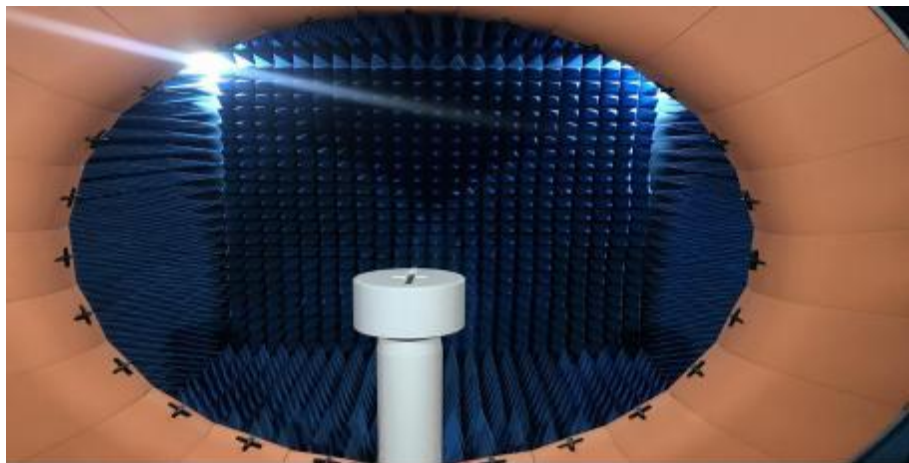
Temperature: $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$

Humidity: $50\% \pm 15\%$

Test Equipment:

For **passive data testing**, a **Network Analyzer (Agilent E5071C)** is used.

For **active data testing**, a **Communication Test Set (8960 / CMW500)** is used.

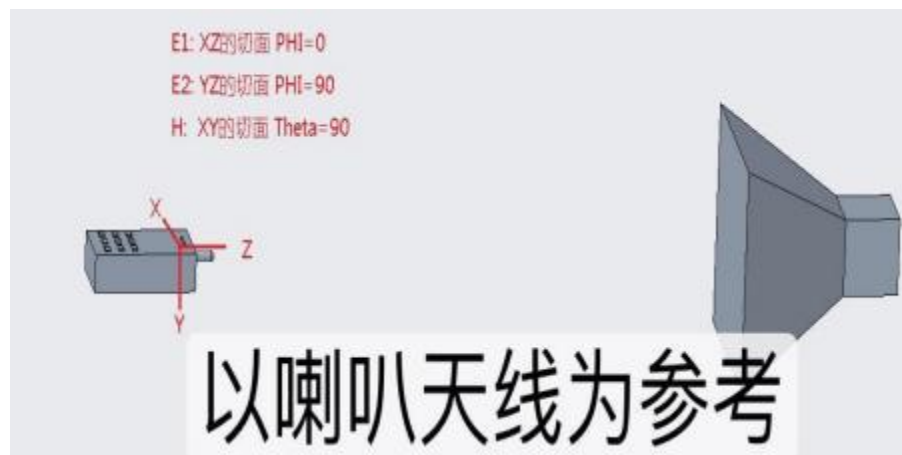


总全向辐射功率 (TIRP)

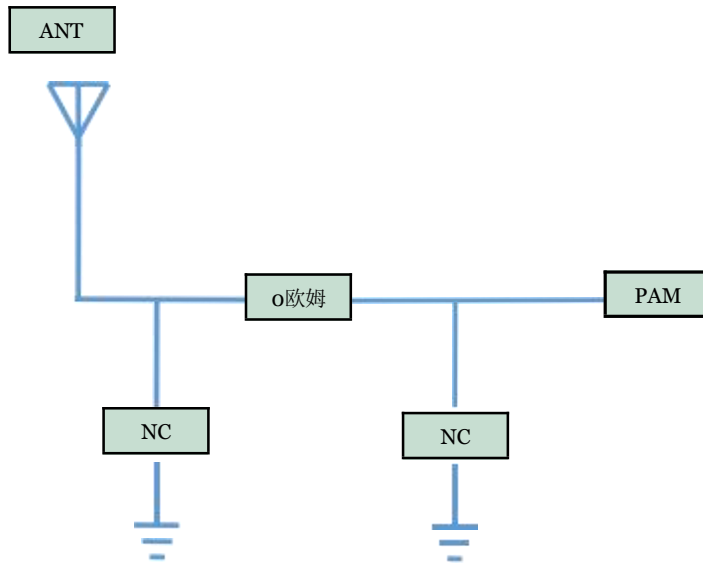
$$TIRP \equiv \frac{\pi}{2NM} \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} [Eirp_{\theta}(\theta_i, \phi_j) + Eirp_{\phi}(\theta_i, \phi_j)] \sin(\theta_i)$$

总全向辐射灵敏度 (TIRS)

$$TIRS \equiv \frac{2NM}{\pi \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} \left[\frac{1}{EIS_{\theta}(\theta_i, \phi_j)} + \frac{1}{EIS_{\phi}(\theta_i, \phi_j)} \right] \sin(\theta_i)}$$



3. 3Matching Circuit



No changes were made to the mainboard matching circuit. ●

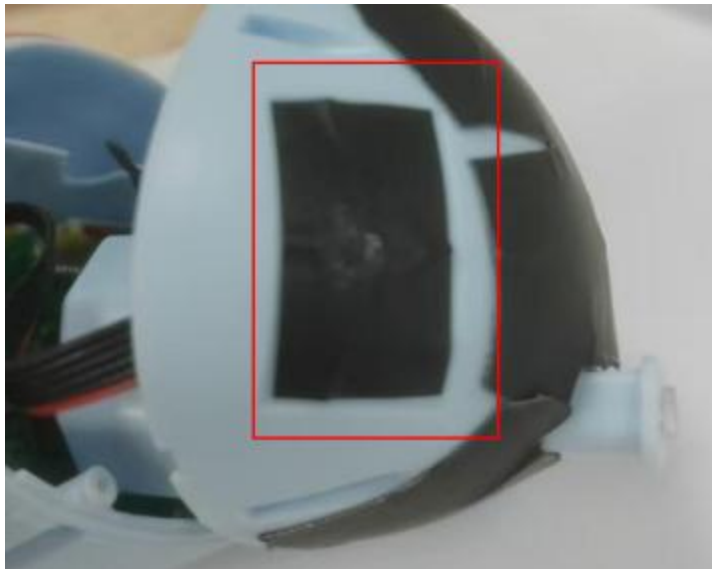
Note: Original series 0-ohm resistor, from Antenna ———

series 0-ohm resistor ——— PA

3.4 Debug Log

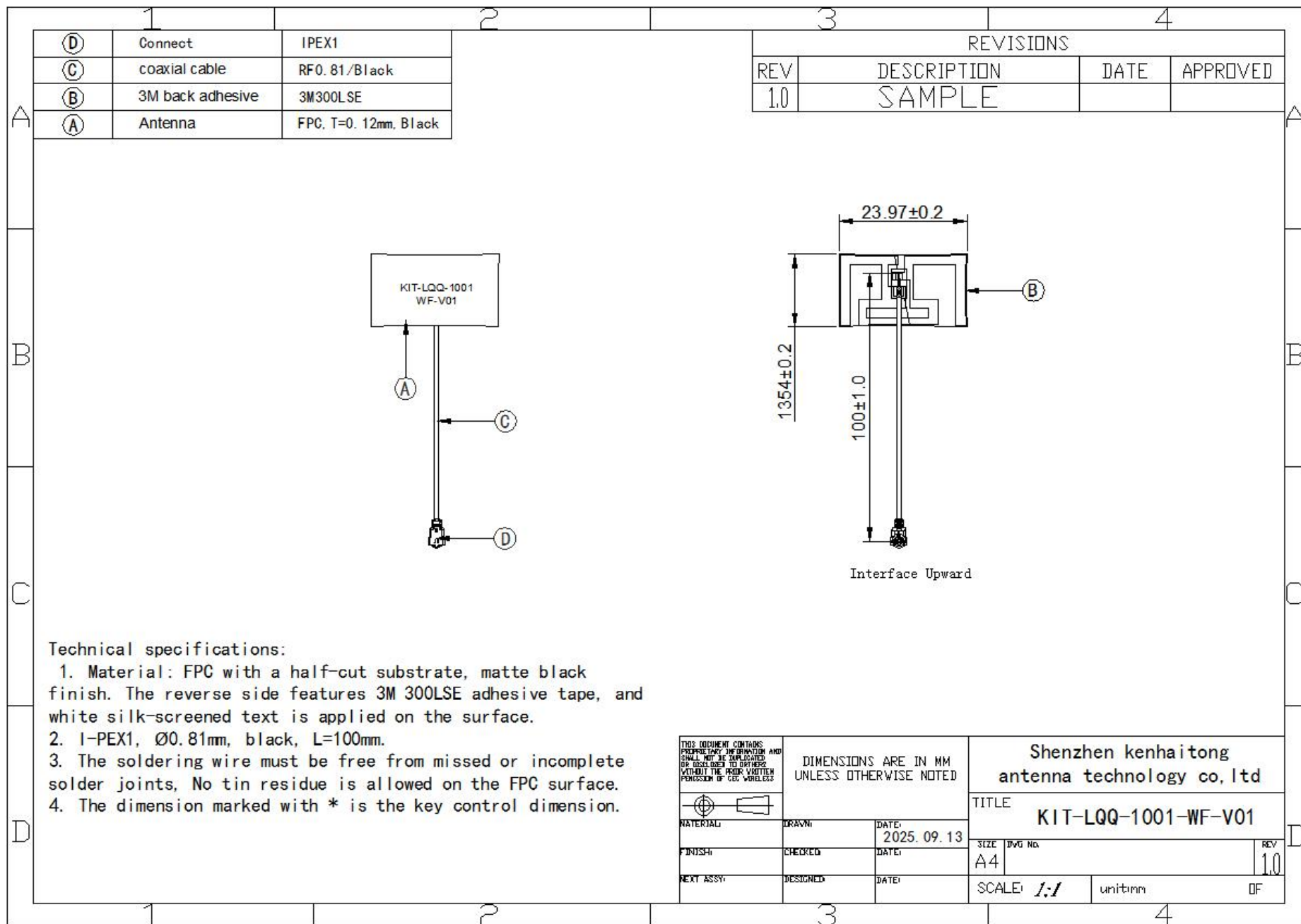
1. LQQ-1001
2. Sep 12, 2025 — Prototype received; antenna R&D debugging and testing initiated.
3. Sep 13, 2025 — Antenna debugging completed; prototype samples sent out.
4. Jun 15, 2025 — Antenna samples returned; test data consistent with results at time of debugging completion. Sample confirmed.

3.5 Antenna Assembly Diagram



Antenna Dimensions: $23 \times 14 \text{ mm}$





4. Antenna Passive Test Data

Wi-Fi S11 Parameters

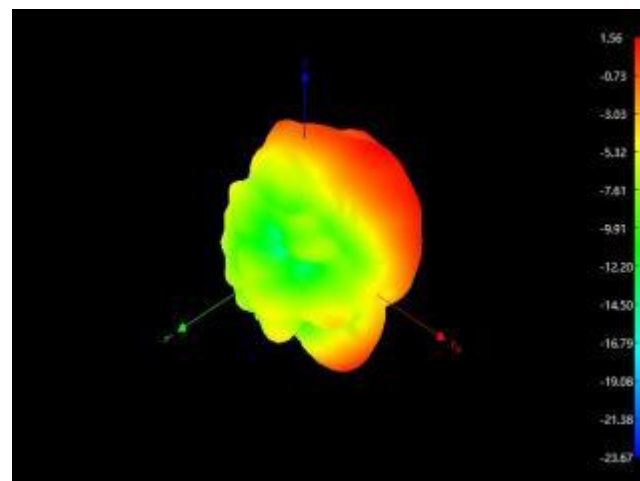
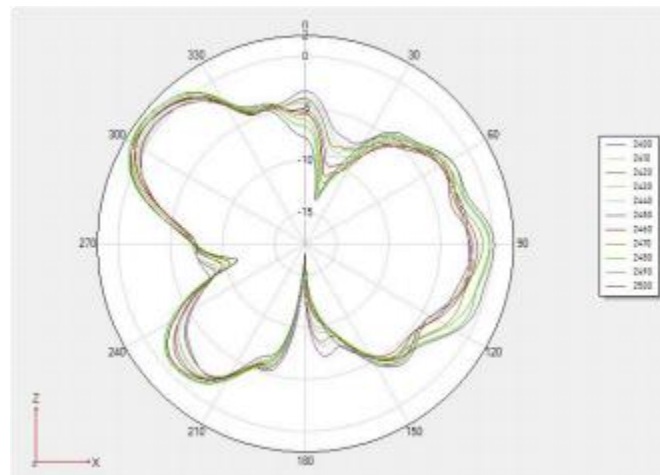


频率 (MHz)	2400	2450	2500
驻波比	1.2	1.5	1.5

4.1 Antenna Passive Test Data

Wi-Fi 2.4G Antenna Passive Parameters.

Frequency / MHz	Efficiency / %	Gain/ dB
2400	56.49	1.93
2410	53.83	1.9
2420	55.72	1.87
2430	53.33	1.78
2440	55.59	1.8
2450	53.95	1.56
2460	53.09	1.76
2470	50.35	1.98
2480	52.24	1.82
2490	52.36	1.72
2500	51.76	1.68





5、 Environmental handling and assembly instructions

Mainboard accessories grounded the same as the trial production unit.



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Note:

1. This report is based on the actual debugging and testing of the prototype. The environmental handling, antenna position, and all component assembly positions must not be arbitrarily changed.
2. If any materials used in the prototype are changed, please notify us promptly for re-verification.
3. Sensitive components list: TP (material, coating, routing, etc.) Screen (amplification circuit, LED, flex cable design, etc.) Housing (antenna assembly method, structural interference, housing material, antenna position height and area, etc.) Mainboard (conduction, RF circuit matching, PA diplexer, filter, LNA, power circuit, etc.) Camera, battery, motor, MIC, fingerprint recognition module, etc.
4. Due to the limited number of debugging prototypes (sometimes only one unit), some intermittent issues may not be fully identified. It is recommended to conduct a small pilot production run before mass production to troubleshoot issues (e.g., screen flickering, display artifacts, speaker noise, TP jitter, black screen/freeze, signal drop, etc.)

Thank you

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