



Dongguan Lingdu Electronic
Technology Co., Ltd.
Components Acknowledgment

File No.		Version		
Part number	1124-0005090-011	Component Name	WIFI antenna	
Supplier Name	Sinan Microelectronics (Shenzhen) Co., Ltd	Agent Name	SINAWELL Electronics (Shenzhen) Co., LTD	
Supplier Part No				
Description	WiFi antenna coaxial line length: 50 (mm), wire diameter: 0.81 (mm), with third-generation IPEX plug, silk screen: SN-LS09-V2			
Sample Qty		Sample No.		
Type of Approval	☒ New Component ☐ New Supplier ☐ Update Approval sheet	Type of component	☐ universal component ☒ (Proprietary component)	
S/N	Inspection Item	Test Result	Operator	Inspection item of IQC
1	Size	☐ pass ☐ fail		☐
2	Function	☐ pass ☐ fail		☐
3	Silk screen	☐ pass ☐ fail		☐
4		☐ pass ☐ fail		☐
5		☐ pass ☐ fail		☐
6		☐ pass ☐ fail		☐
7		☐ pass ☐ fail		☐
8		☐ pass ☐ fail		☐
9		☐ pass ☐ fail		☐
10		☐ pass ☐ fail		☐
11		☐ pass ☐ fail		☐
12		☐ pass ☐ fail		☐

Approve Result:		
☒ Qualify ☐ can use in pre-pilot run sample production _____ pcs ☐ Unqualify		
☐ re-send sample ☐ no need to re-send sample		
Remark:		
Prepared By:	Checked By:	Approved By:

Distribution Dept.: ☒ Purchasing Dept. 1 Protion ☒ Quality Dept. 1 Protion

The Main Antenna Sample Confirmation

Customer	Shenzhen Lingdu Auto Electronics Co., Ltd.		
Project Name	LS09		2022-3-08
Project NO.	SN0875	Notes	FPC
Frequency Range	WIFI2.4G (2400MHz-2500MHz)		
Designed By	RF Engineer	Structural Engineer	
Checked By	Engineering Manager		
Client's Approval			

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1. Specifications overview

This specification describes the condition of the LS09 built-in antenna with a frequency band of 2.4G.

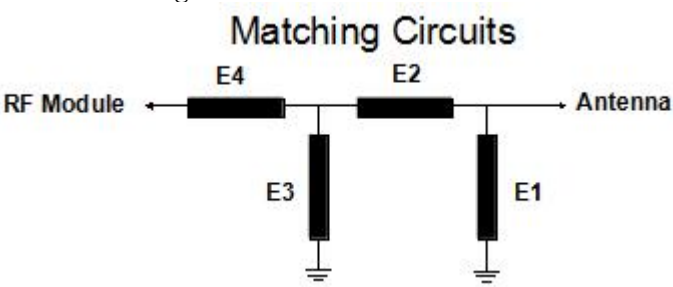
2. Electrical performance

2.1. Antenna band

	2.4G
Transmitting frequency band (MHz)	2400MHz-2500MHz

2.2. Matching circuit

The test point is behind the antenna connector (RF test port), see 2.4G antenna matching in the figure below, and the original motherboard antenna matching circuit remains unchanged.



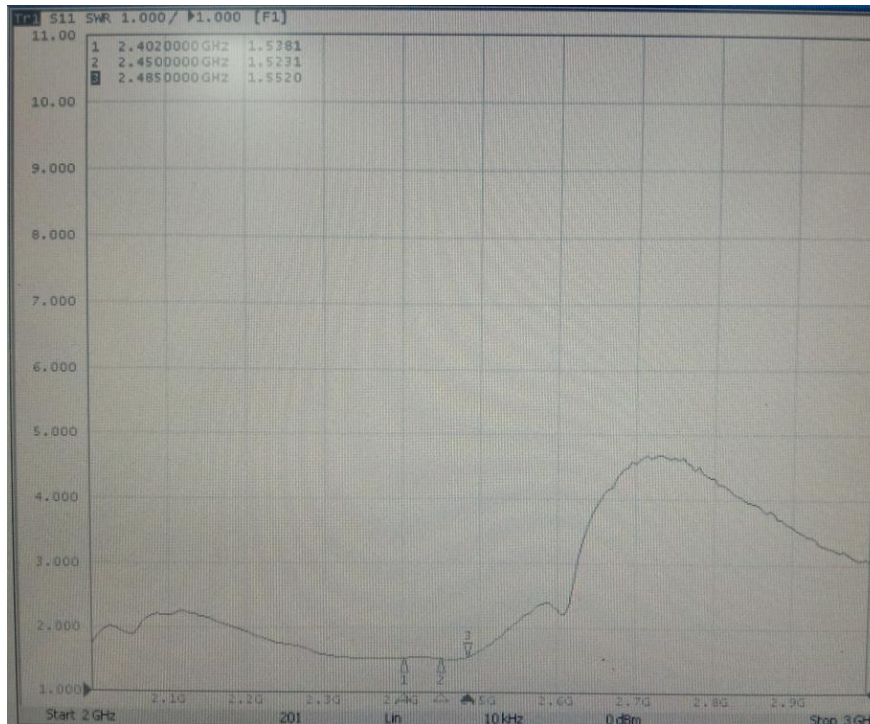
3. Appearance structure

3.1. Antenna material
FPC

- Appendix I (Structural Drawing)
- Appendix II (Performance Report)

Test report (Annex II)

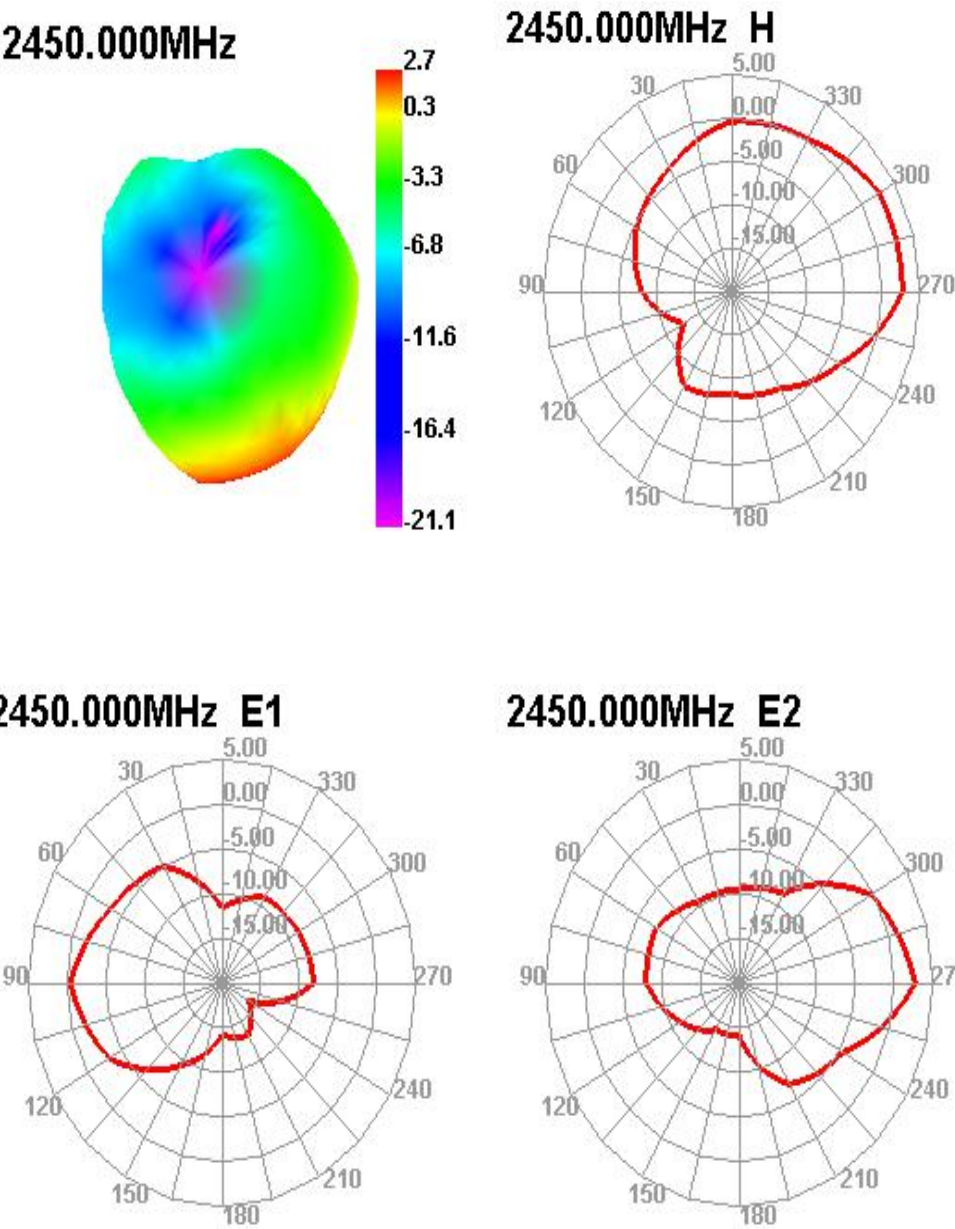
Return loss



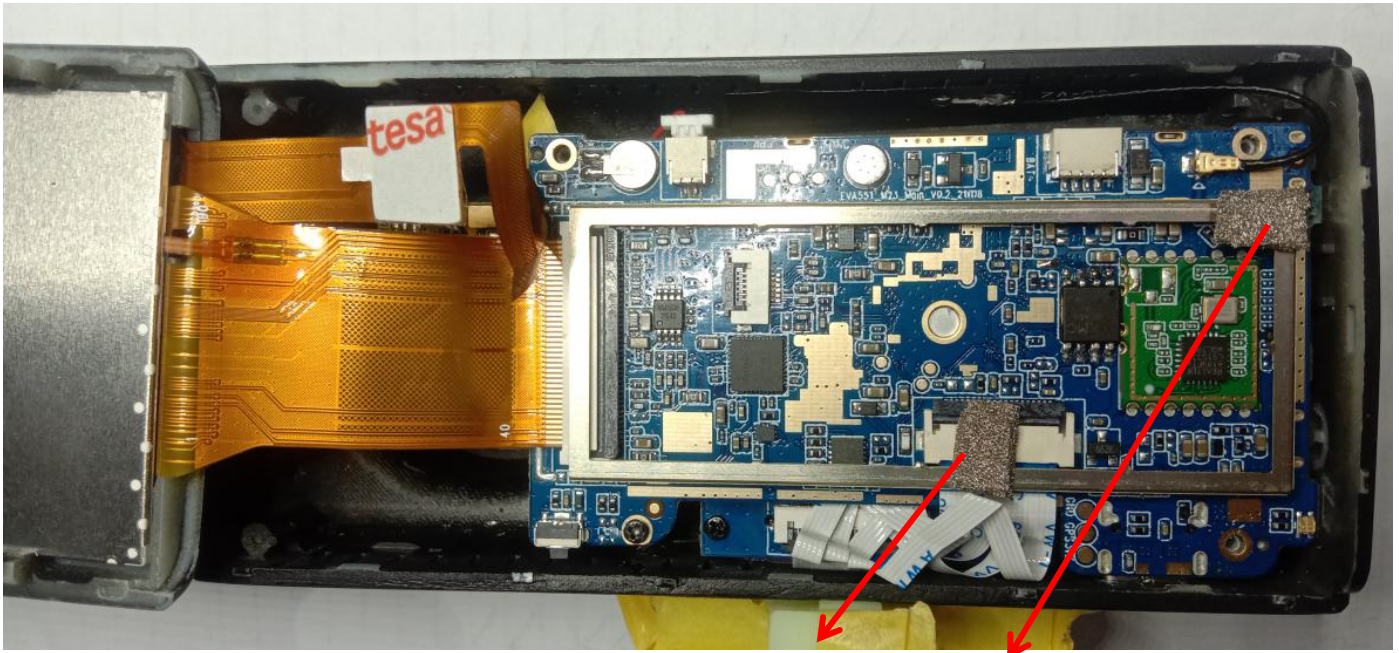
Efficiency test data

Freq (MHz)	Effi (%)	Gain (dBi)
2400	45.04	2.5
2410	44.43	2.43
2420	43.68	2.24
2430	44.73	2.29
2440	45.09	2.16
2450	45.6	2.66
2460	47.57	2.49
2470	47.09	2.35
2480	48.54	2.37
2490	49.53	2.38
2500	49.73	2.12

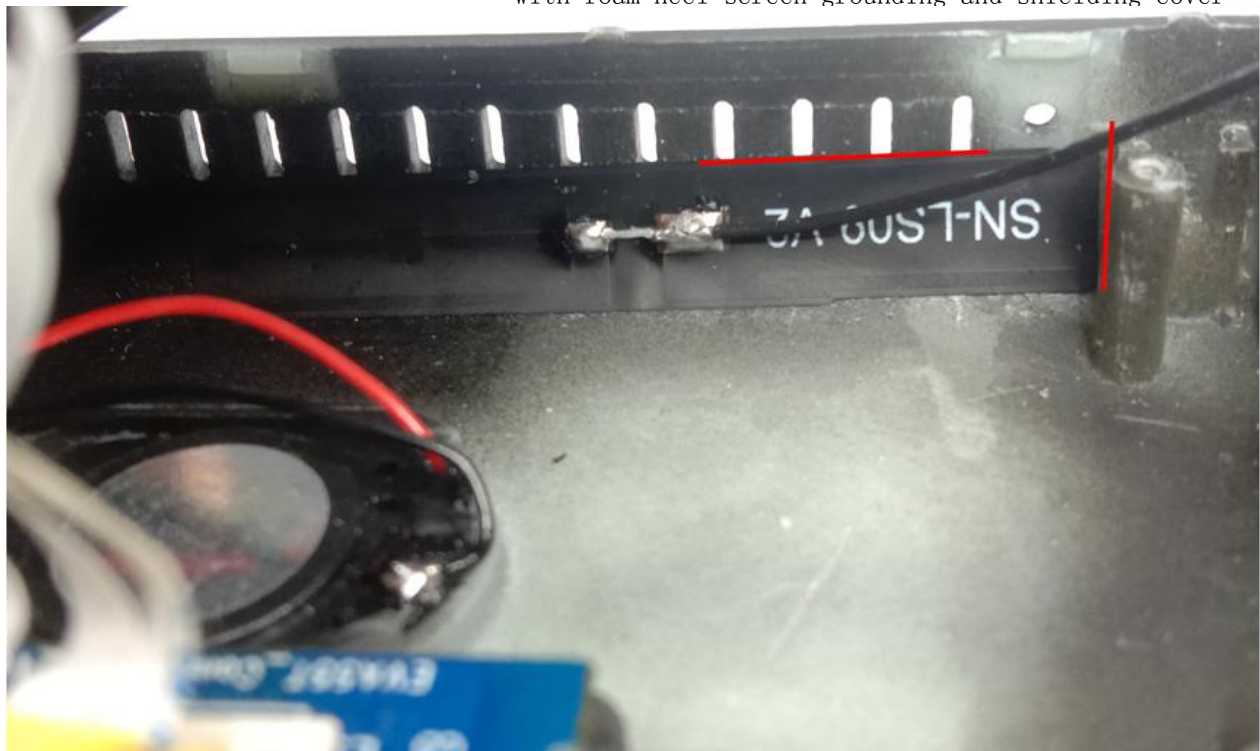
Directional pattern



Antenna assembly drawing (complete machine drawing, detail drawing)



The complete machine is as shown in the figure above, with foam heel screen grounding and shielding cover



The WIFI antenna is pasted at the position indicated by the red line above