



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	<input checked="" type="checkbox"/> New Component <input type="checkbox"/> New Supplier <input type="checkbox"/> Update Approval sheet	Type of component	<input type="checkbox"/> universal component <input checked="" type="checkbox"/> (Proprietary component)	
S/N	Inspection Item	Test Result	Operator	Inspection item of IQC
1	Size	<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
2	Function	<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
3	Silk screen	<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
4		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
5		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
6		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
7		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
8		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
9		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
10		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
11		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>
12		<input type="checkbox"/> pass <input type="checkbox"/> fail		<input type="checkbox"/>

Approve Result:		
<input checked="" type="checkbox"/> Qualify <input type="checkbox"/> can use in pre-pilot run sample production _____ pcs <input type="checkbox"/> Unqualify		
<input type="checkbox"/> re-send sample <input type="checkbox"/> no need to re-send sample		
Remark:		
Prepared By:	Checked By:	Approved By:

The Main Antenna Sample Confirmation

Customer	Shenzhen Lingdu Auto Electronics Co., Ltd.		
Project Name	LS09	Date	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			

Catalogue

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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.

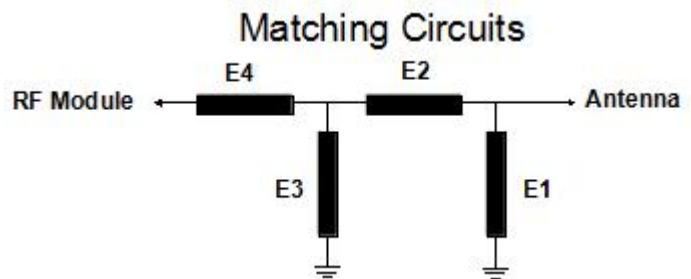
2. Electrical performance

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

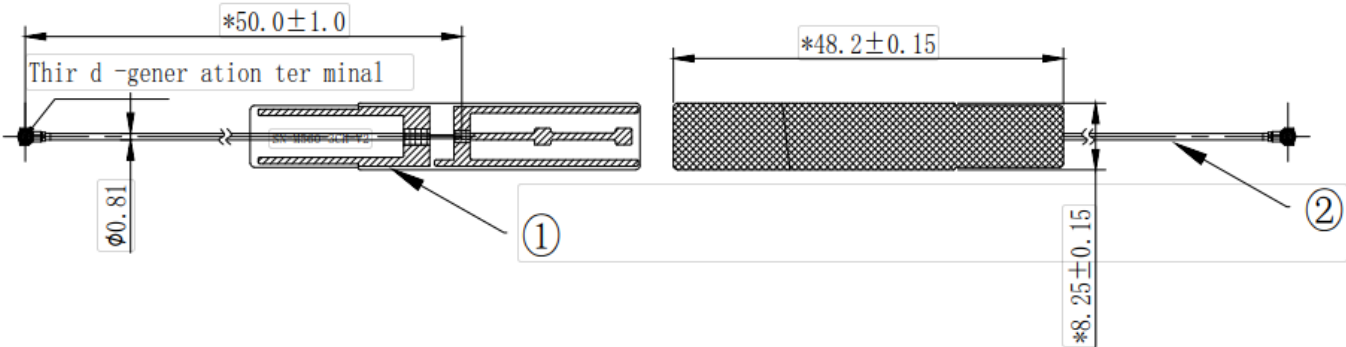
Appendix I (Structural Drawing)

Appendix II (Performance Report)

Structural drawing (Annex I)



		Third person	
0~10	±0.05	○	0.02
10~18	±0.10	◎	0.03
18~30	±0.12	⊥	0.02
30~40	±0.15	∕	0.04
40~	±0.20	Angle	±0.5



The terminal port shall be welded downwards

Remark:
 1. "*"mean key size ;
 2. Please refer to the drawing for dimensions not indicated;
 3. Comply with ROHS2.0, REACH, halogen-free and other environmental requirements.

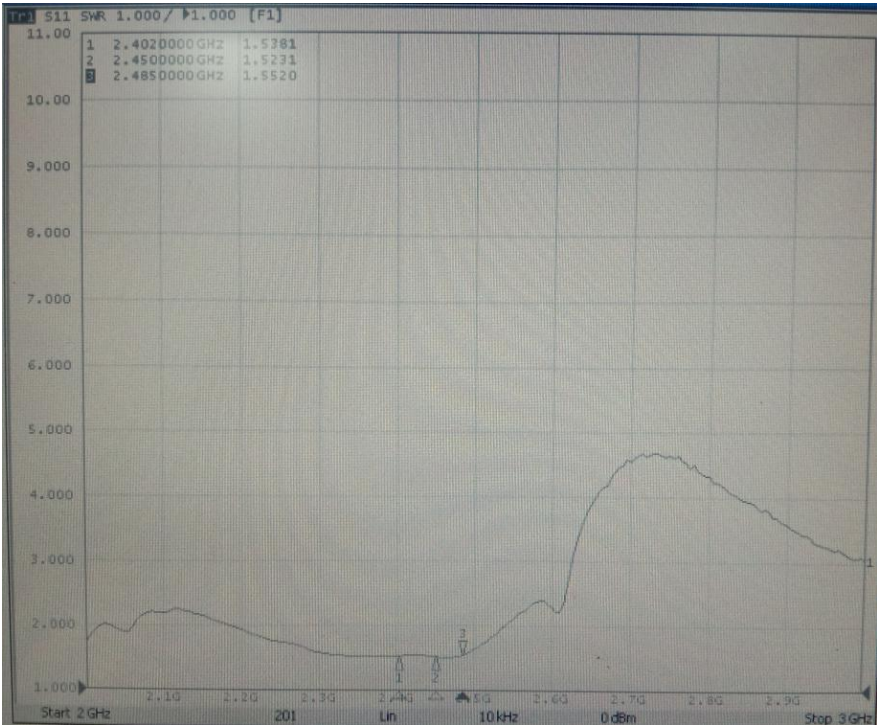
No	Part name	Material	Color	Remark
2	Coaxial line	Silver-plated copper wire	Black	Third-generation terminal
1	WIFI antenna FPC	Electrolytic copper one-half	Black	Adhesive3M9471

SINAWELL Electronics (Shenzhen) Co., LTD			
Project Name	LS09(SN0875)	Date	2022-06-14
Product Name	WIFI antenna	Structure	
Prat No.	SN0875-01	Radio frequency	
Material		Project	
Unit	mm	Ratio	1:1
Version	A		

Version	Modify content	Date	Remark
A	New drawing		

Test report (Annex II)

Return loss

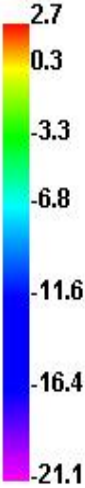
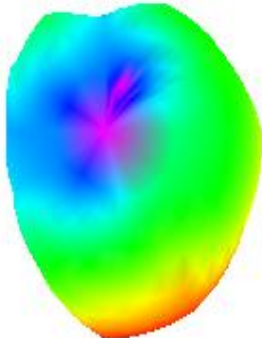


Efficiency test data

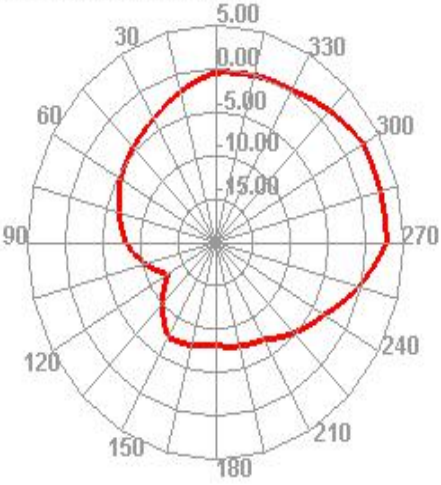
Freq (MHz)	Effi (%)	Gain (dBi)
2400	45.04	2.5
2410	44.43	2.43
2420	43.68	2.24
2430	44.73	2.29
2440	45.09	2.16
2450	45.6	2.66
2460	47.57	2.49
2470	47.09	2.35
2480	48.54	2.37
2490	49.53	2.38
2500	49.73	2.12

Directional pattern

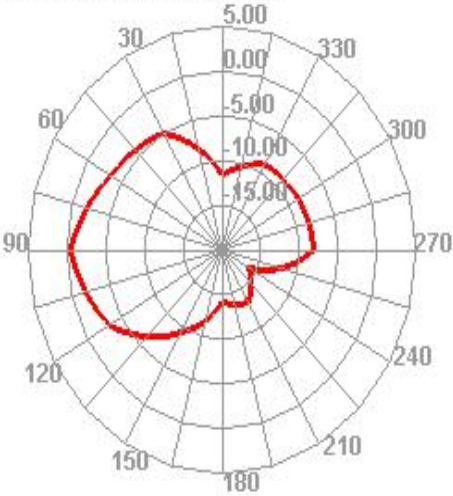
2450.000MHz



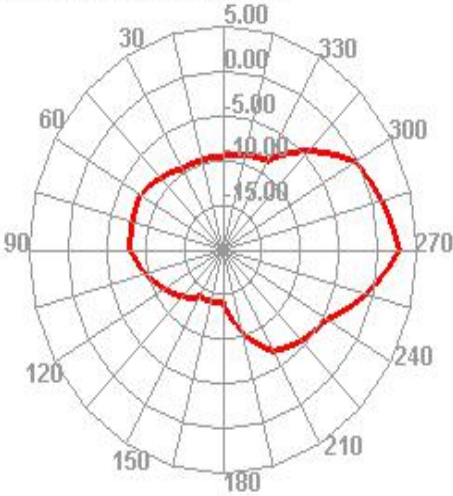
2450.000MHz H



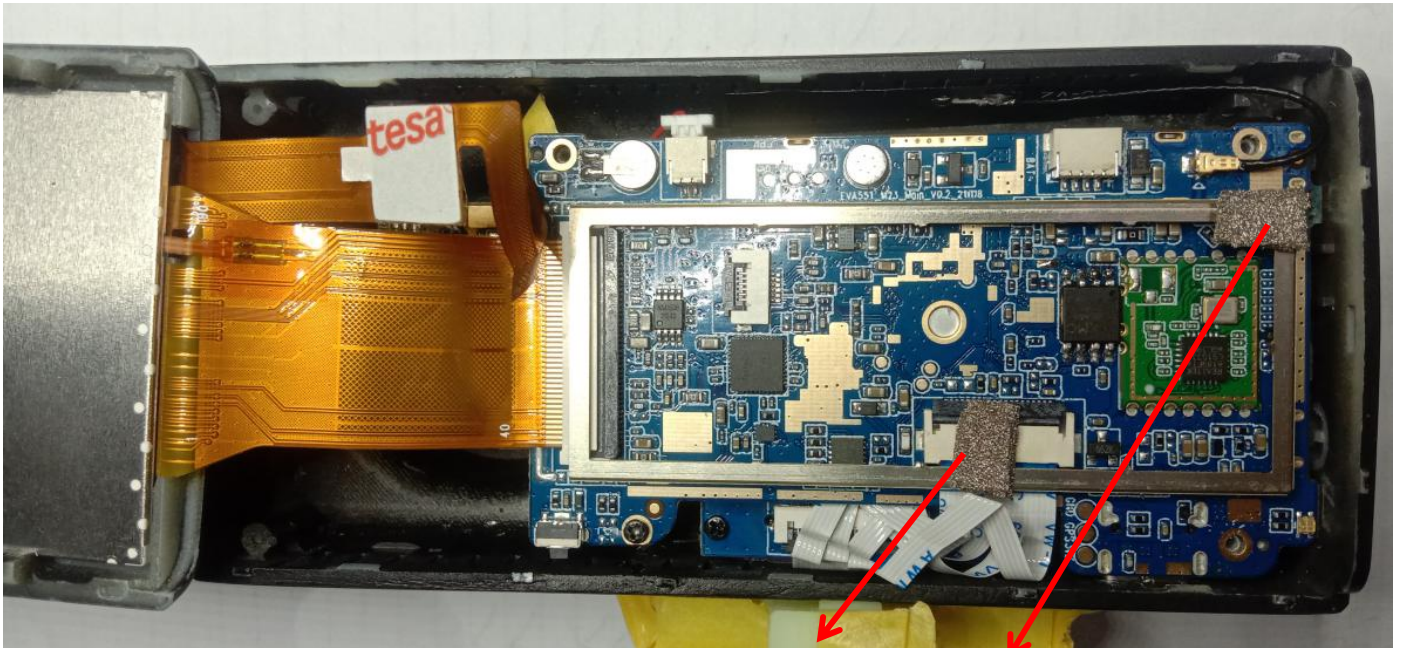
2450.000MHz E1



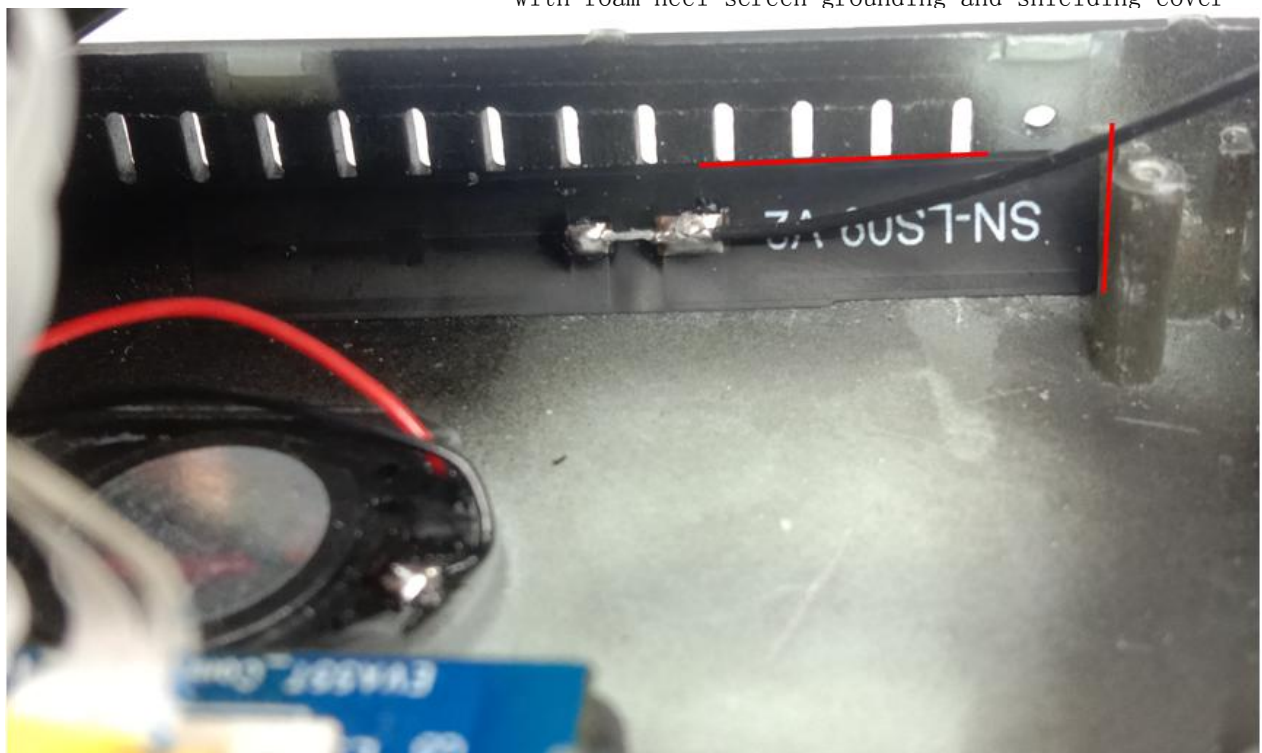
2450.000MHz E2



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