

The Main Antenna Sample Confirmation

Project Name	Cam1		Date	2024-07-11
Project NO.	SN1231	Notes	Steel sheet	
Frequency Range	WIFI			
Designed By	RF Engineer		Structural Engineer	
Checked By	Engineering Manager			
Client' s Approval				

Designer: SINAWELL Electronics(Shenzhen) Co., Ltd.

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1. Specification description

This specification describes the status of the KG125 internal antenna with a frequency band of WIFI.

2. Antenna appearance



3. Electrical performance

3.1. Antenna band

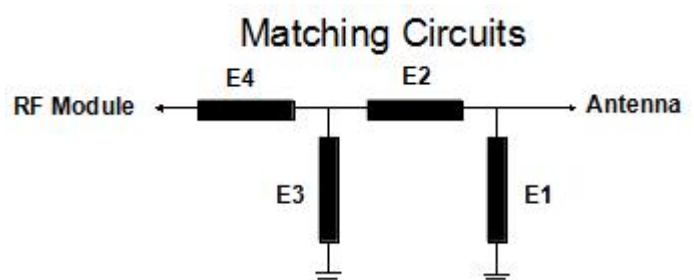
	WIFI
Transmitting band(MHz)	2400MHz-2500MHz

3.2. Matching Circuit

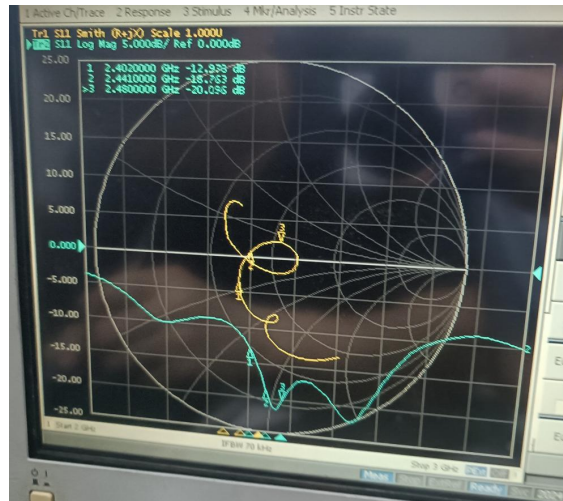
After the test point is at the antenna connector (RF test port), see the figure below.

1. WIFI antenna matching。

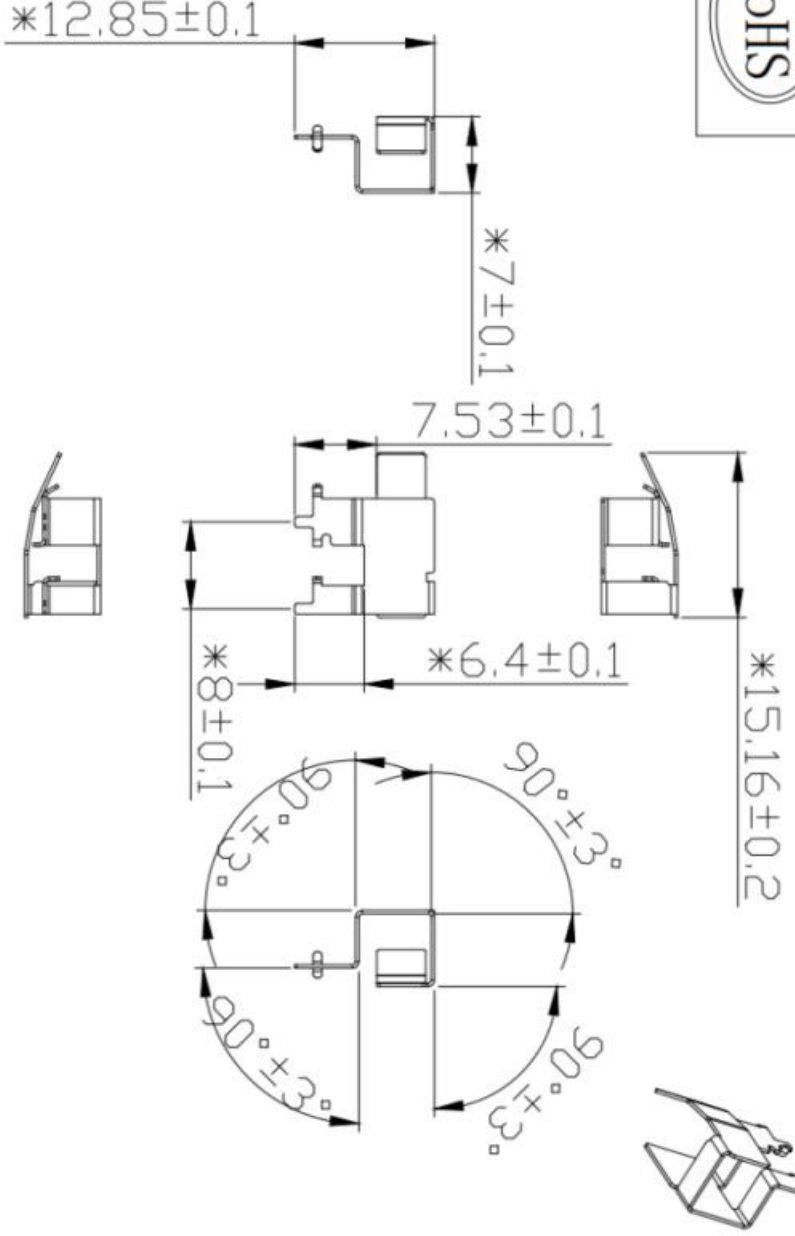
Element	Value
E1(0201)	4.3nH
E2(0201)	0.75pF
E3(0201)	NC
E4	0 Ω



3.3. Return Loss



Appendix 1: Structural Drawing

A		B		C		D																																													
1	2	3	4	5	6	7	8																																												
																																																			
																																																			
																																																			
Notes: 1. "*" is the key dimension ; 2. Please refer to the drawing if no dimension is indicated; 3. Meet rohs2.0, reach environmental protection requirements.																																																			
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The third person	
0~10	±0.05
10~18	±0.10
18~30	±0.12
30~40	±0.15
40~	±0.20

Angle	
±0.5°	±0.04

Appendix 2: 3D Test Report

WIFI antenna passive test data

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	45.56	-3.42	-0.19
2410	45.66	-3.41	-0.19
2420	44.4	-3.53	-0.21
2430	45.02	-3.47	-0.45
2440	45.83	-3.43	-0.51
2450	46.66	-3.31	-0.21
2460	46.47	-3.33	-0.18
2470	47.37	-3.24	-0.05
2480	48.22	-3.17	0.04
2490	48.84	-3.11	0.1
2500	46.01	-3.37	-0.06

WIFI antenna active test data

Band	channel	TRP	TIS
11B	1	15.71	-80.2
	7	15.21	-82.09
	13	14.27	-80.08

Field intensity pattern

