

The Main Antenna Sample Confirmation

Customer			
Project Name	CS-HB1-B		Date 2025-11-04
Project NO.	SN1492-02	Notes	coaxial line+ FPC
Frequency Range	2400MHz-2500MHz		
Designed By	RF Engineer	Structural Engineer	
Checked By	Engineering Manager		
Client' s Approval			

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

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1. Specification description

This specification describes the status of the CS-HB1-B internal antenna with a frequency band of 2400MHz-2500MHz.

2. Antenna appearance



3. Electrical performance

3.1. Antenna band

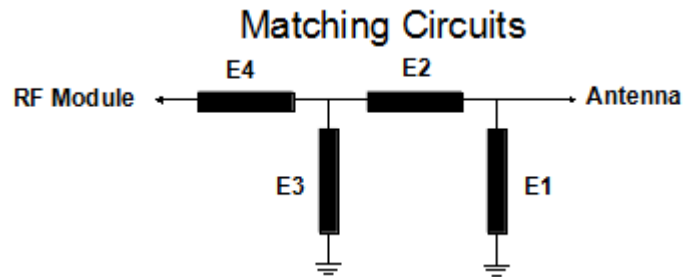
	BT/WIFI
Transmitting band(MHz)	2400MHz-2500MHz

3.2. Matching Circuit

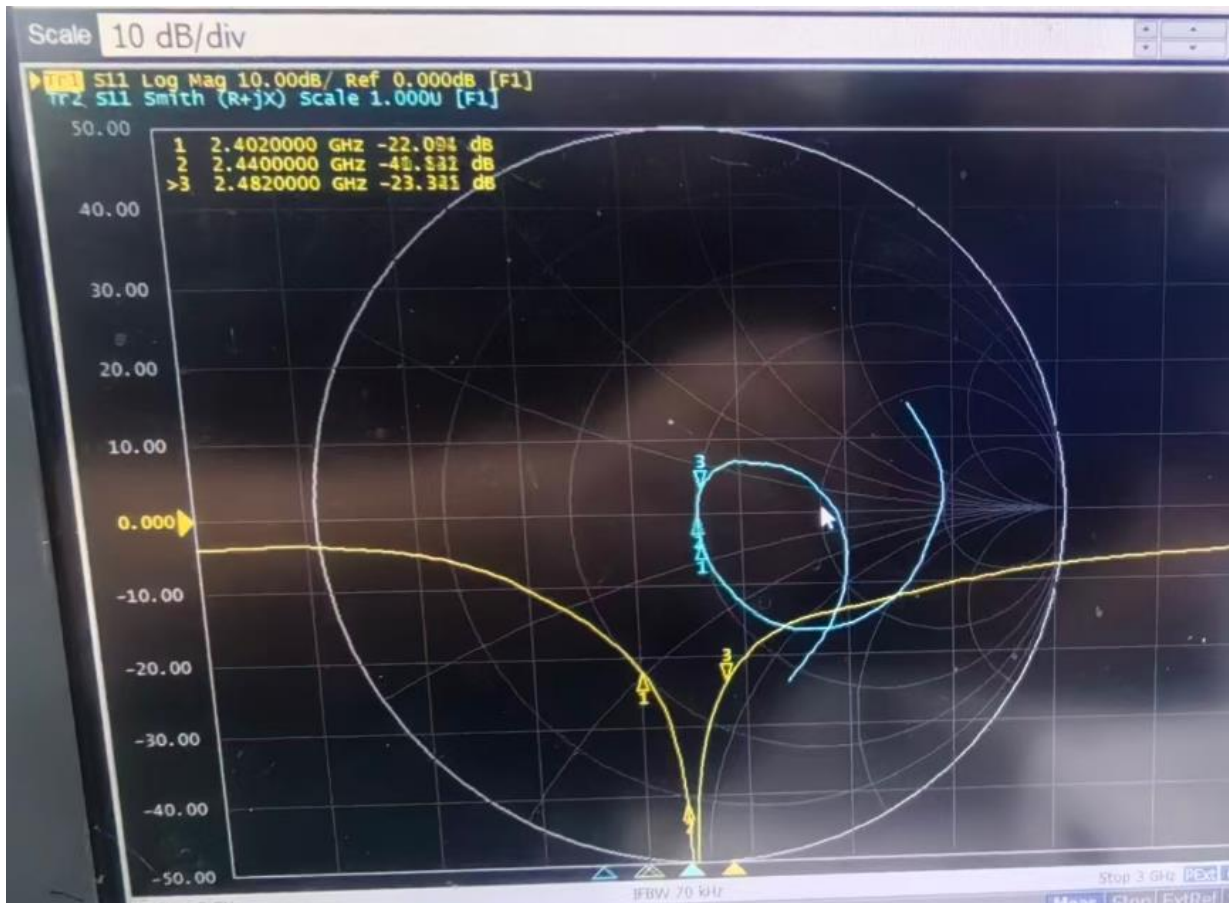
After the test point is at the antenna connector (RF test port), see the figure below.

1. WiFi antenna matching.

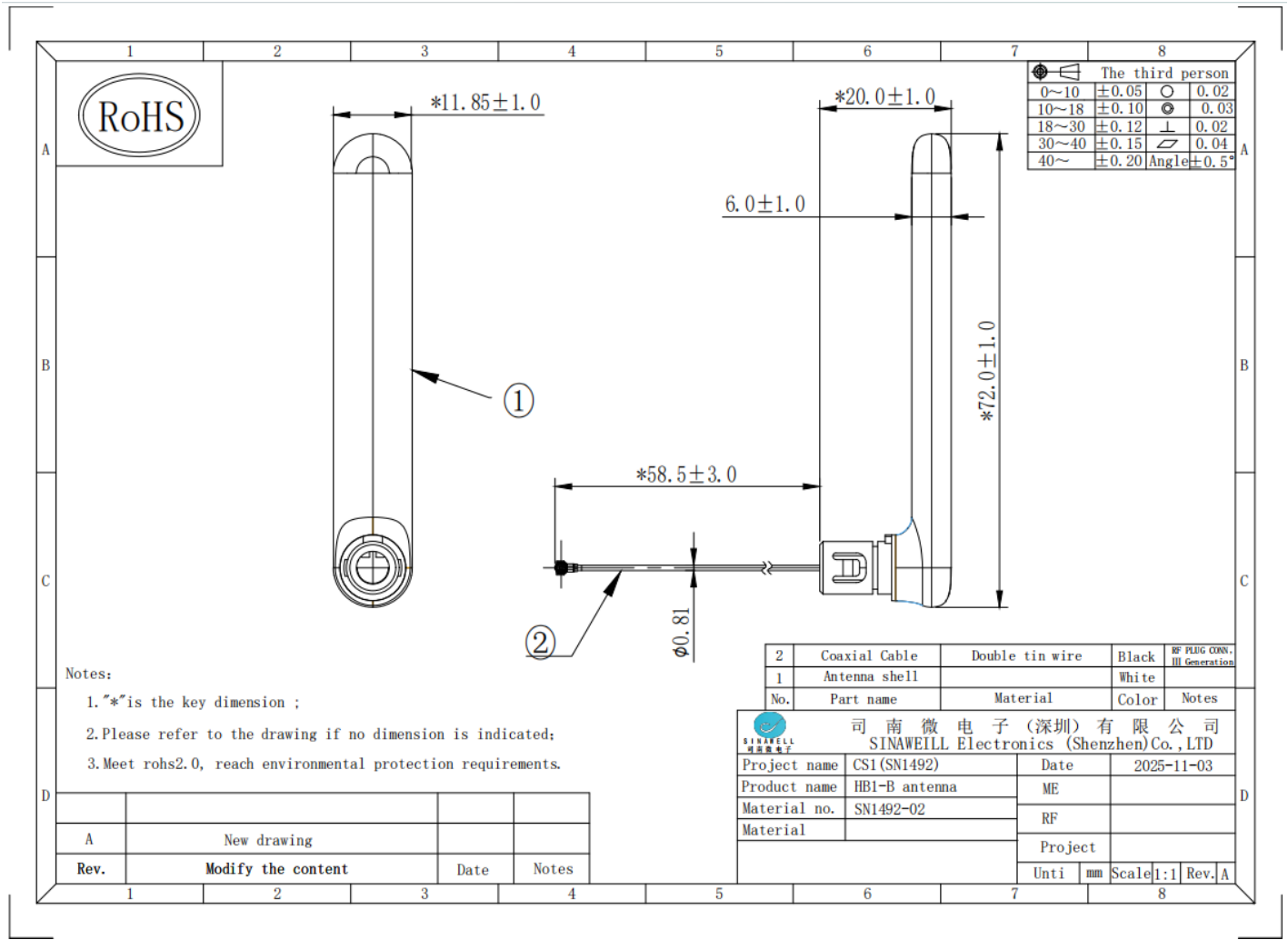
Element	Value
E1(0201)	NC
E2(0201)	0 Ω
E3(0201)	NC
E4	0 Ω



3.3. Return Loss



Appendix 1: Structural Drawing

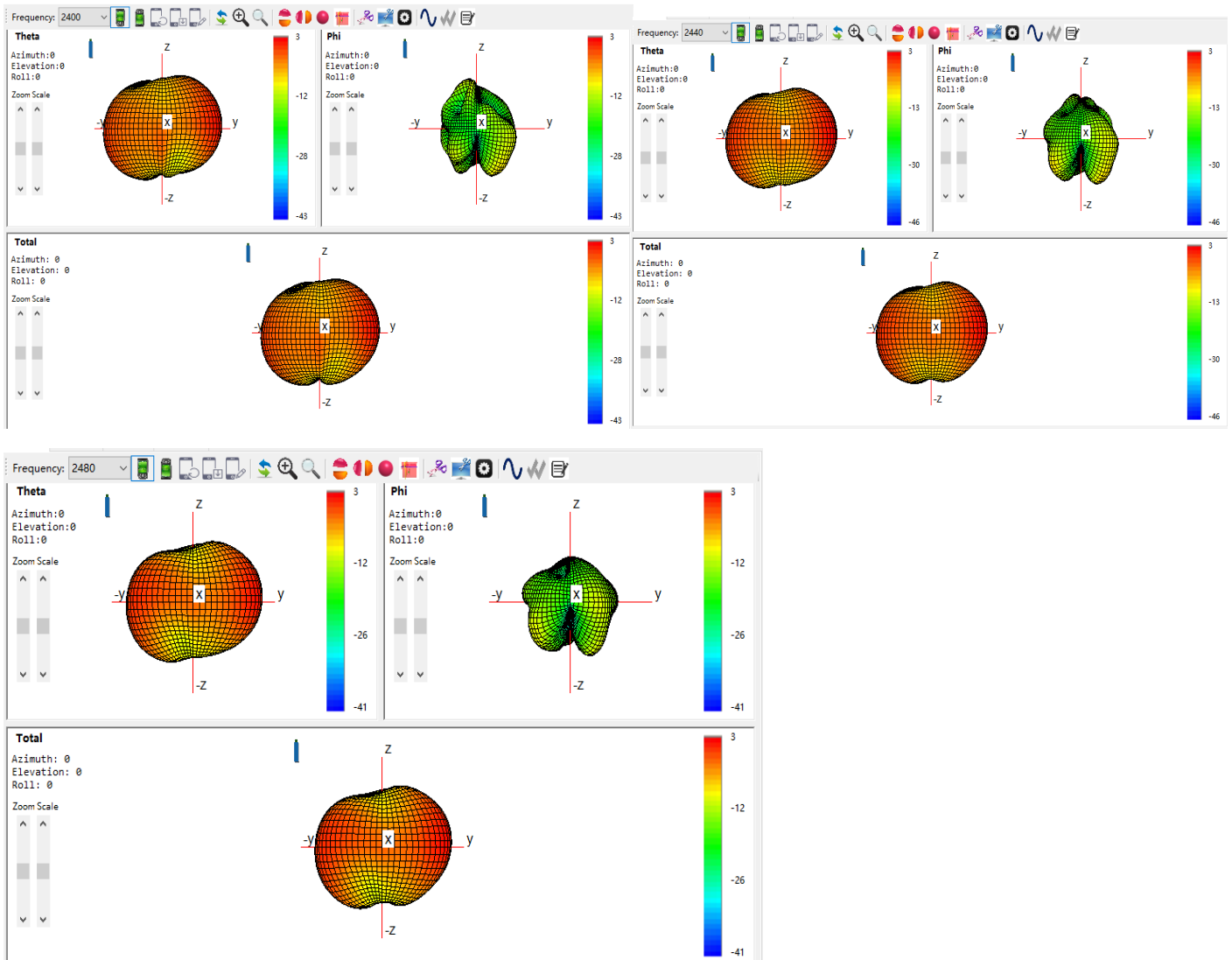


WIFI antenna passive test data

Freq (MHz)	Gain (dBi)	Effi (dB)	Effi (%)
2400	2.62	-1.4	72.49
2410	2.65	-1.33	73.58
2420	2.54	-1.53	70.35
2430	2.67	-1.55	70.03
2440	2.75	-1.5	70.81
2450	2.87	-1.43	71.87
2460	2.76	-1.51	70.57
2470	2.6	-1.6	69.12
2480	2.35	-1.77	66.49
2490	2.2	-1.9	64.59
2500	1.99	-2.07	62.11

Field intensity pattern

3D



2D

