

The Main Antenna Sample Confirmation

Customer			
Project Name	CS1-HB1-A		Date2025-11-03
Project NO.	SN1492-01	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-A internal antenna with a frequency band of 2400MHz-2500MHz.

2. Antenna appearance



3. Electrical performance

3.1. Antenna band

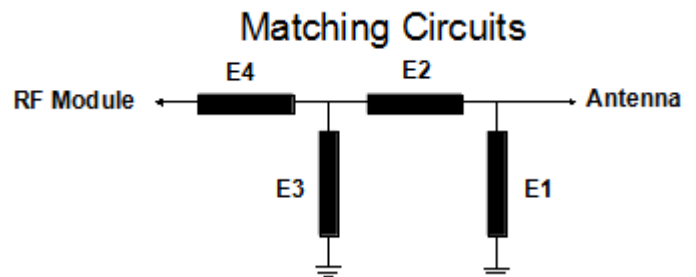
	Thread
Transmitting band(MHz)	2400MHz-2500MHz

3.2. Matching Circuit

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

1. WiFi antenna matching.

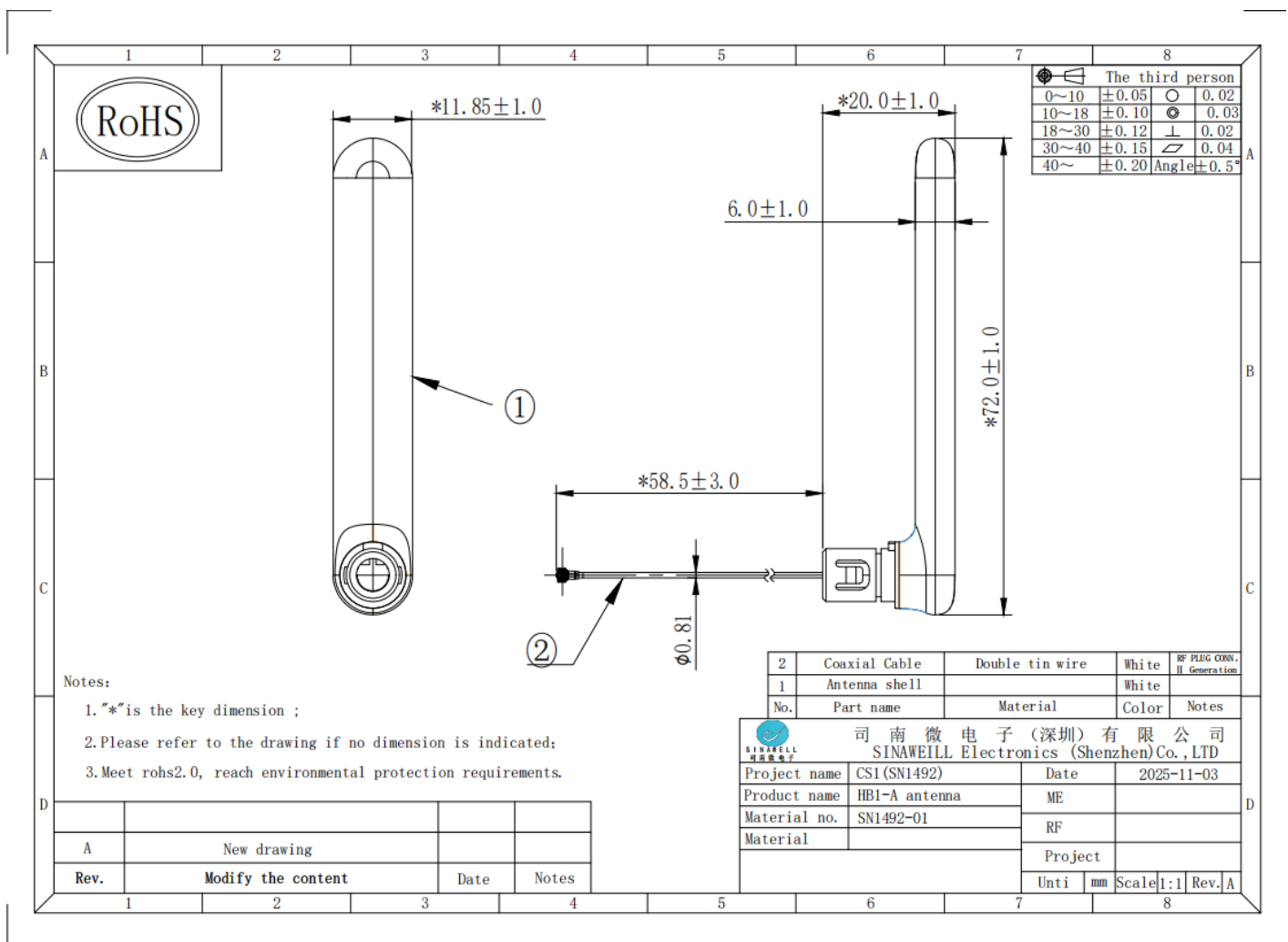
Element	Value
E1(0201)	NC
E2(0201)	0 Ω
E3(0201)	NC
E4	0 Ω



3.3. Return Loss



Appendix 1: Structural Drawing

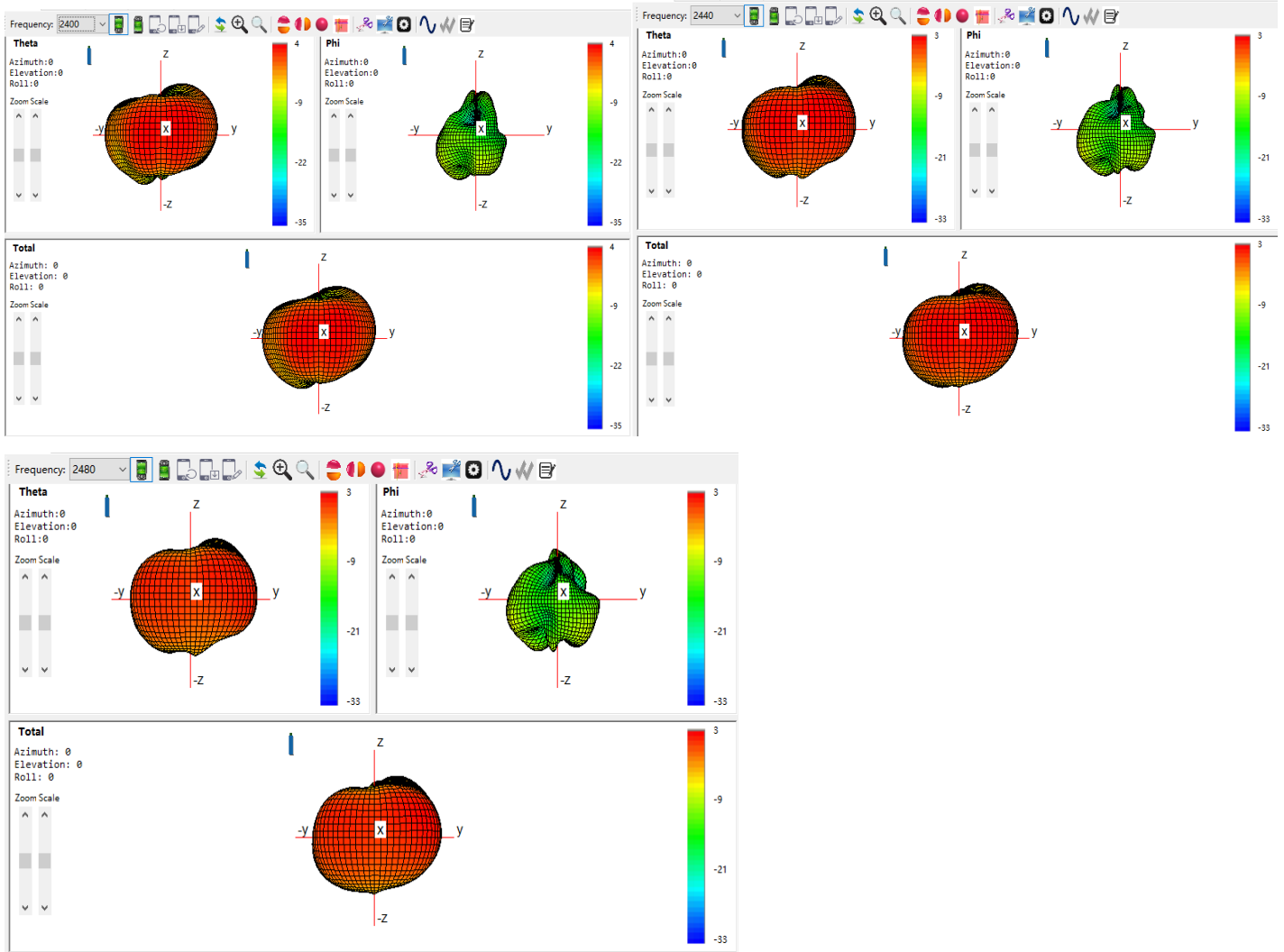


4. Thread antenna passive test data

Freq (MHz)	Gain (dBi)	Effi (dB)	Effi (%)
2400	3.32	-1.29	74.3
2410	3.26	-1.22	75.5
2420	2.94	-1.4	72.44
2430	2.81	-1.42	72.15
2440	2.64	-1.37	72.93
2450	2.53	-1.31	74.04
2460	2.33	-1.39	72.67
2470	2.2	-1.47	71.35
2480	2.07	-1.61	69.07
2490	2.04	-1.72	67.32
2500	1.9	-1.85	65.24

5. Field intensity pattern

3D



2D

