

The Main Antenna Sample Confirmation

Customer			
Project Name	B201		Date 2022-12-12
Project NO.	SN0870	Notes	FPC
Frequency Range	BT		
Designed By	RF Engineer	Structural Engineer	
Checked By	Engineering Manager		
Client' s Approval			

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

Add: 712-717, Block A Jinfulai Building,49-1 Dabao Road,Xinan 28th area,Baoan District,Shenzhen,China

Specification Overview

The specification describes the TT32B built-in antenna + touch in the BT frequency band.

1. Antenna Appearance

2. Electrical Property

2.1. Antenna Band

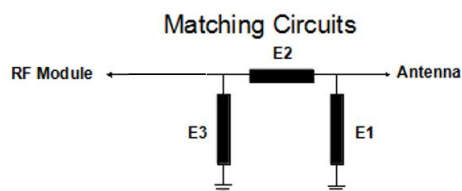
	BT
Transmitting band(MHz)	2400MHz-2500MHz

2.2. Matching Circuit

The test point is behind the antenna connector (RF test port), see the figure below

1. BT Antenna matching.

Element	Value
E1(0201)	2.7pf
E2(0201)	0R
E3(0201)	NC

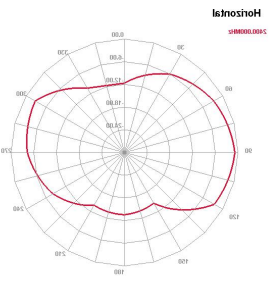
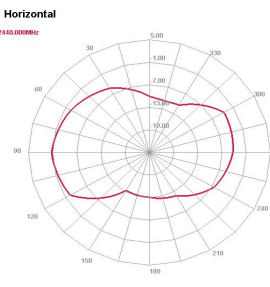
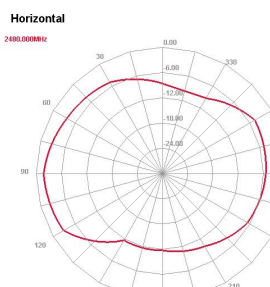


2.3. Return Loss

BT VSWR+ Return

	Resonant point range(MHz)	Frequency point (MHz)/ Max return loss (dB)		
	2400-2500		2400	2500
		VSWR	1.6	1.7
		Return loss	-11.0	-11.2

2.4. Antenna Gain

Channel	0	39	78
Gain	-1.08dBi	-0.35dBi	-0.5dBi
Gain diagram			

Passive Test For BT										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenuat Hor	Attenuat Ver
2400	26.87	-5.71	-1.08	-3.23	14.072	12.803	-1.08	-15.46	49.5	48.85
2410	31.14	-5.07	-1.1	-3.25	16.36	14.781	-1.1	-14.99	49.61	49.05
2420	32.62	-4.87	-1.31	-3.46	17.124	15.492	-1.31	-16.42	49.59	49.17
2430	34.16	-4.66	-0.69	-2.84	17.999	16.159	-0.69	-16.92	49.77	49.14
2440	33.83	-4.71	-0.35	-2.5	17.892	15.936	-0.35	-17.67	49.79	48.97
2450	32.67	-4.86	-0.37	-2.52	17.372	15.298	-0.37	-18.49	49.58	48.82
2460	32.04	-4.94	-0.46	-2.61	17.118	14.926	-0.46	-19.17	49.74	48.97
2470	32.04	-4.94	-0.38	-2.53	17.097	14.943	-0.38	-19.48	49.54	48.98
2480	30.72	-5.13	-0.5	-2.65	16.206	14.516	-0.5	-19.05	49.48	49.46

3. Appearance Structure

3.1. Antenna Material

FPC

4. Remark

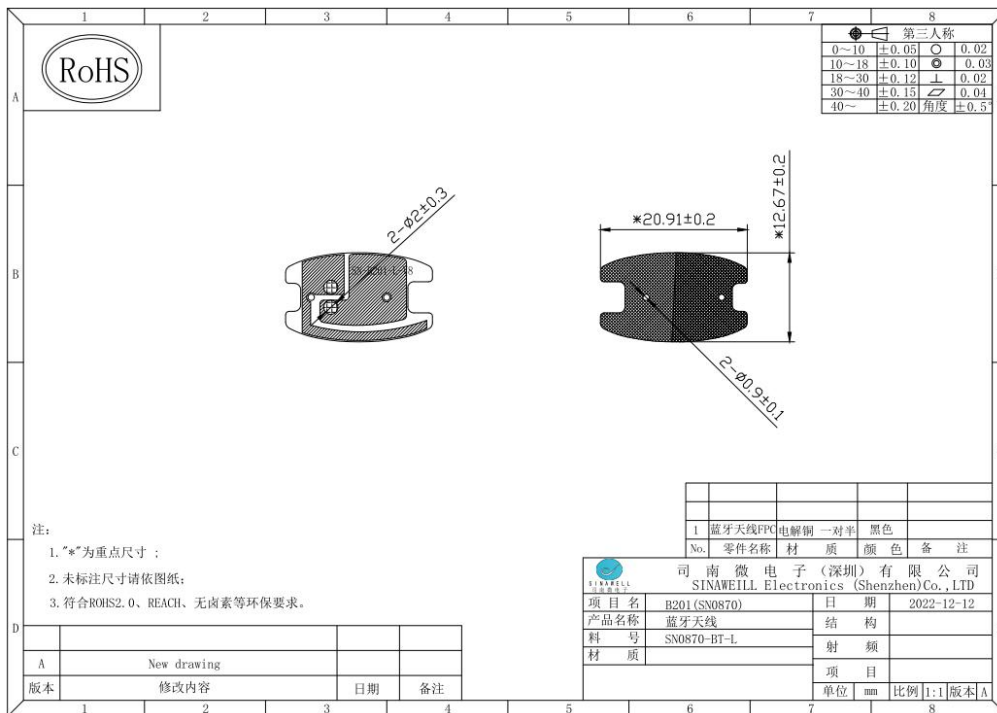
(Electrical Performance test report)

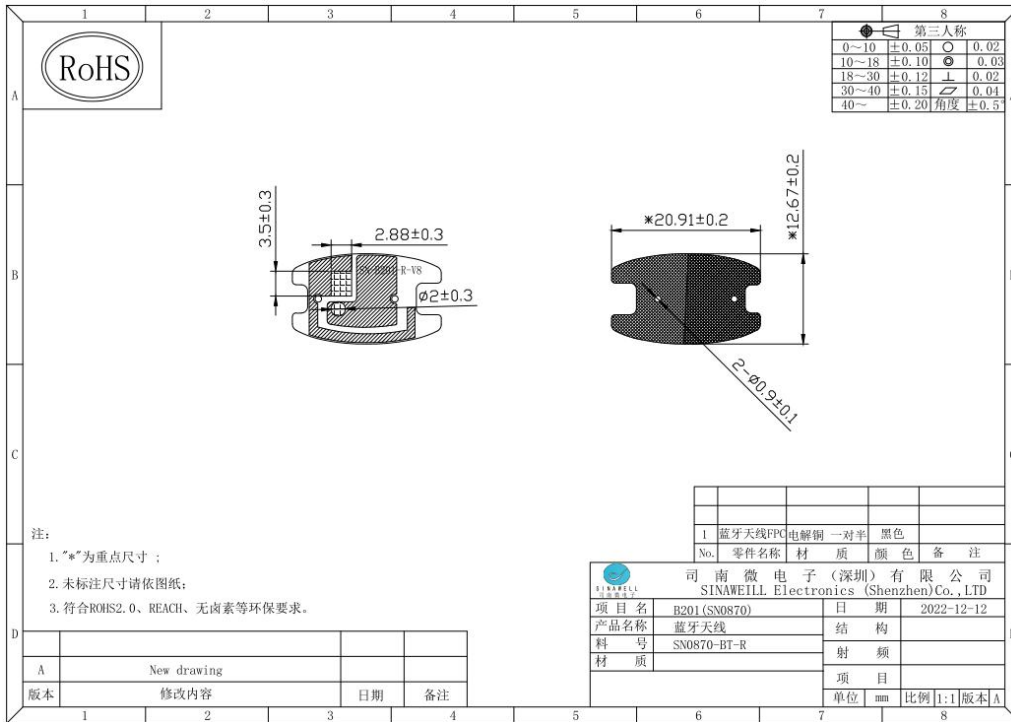
In the electrical performance test report, 3D darkroom data provided by the manufacturer,
The following table format

Appendix I: Structural Drawings

Appendix II: 3D Data

LDS Structural Drawing

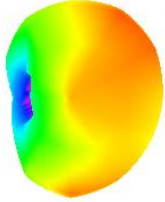
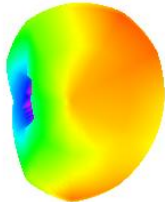
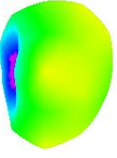




3D Test Report

BT	Channel	3D 耦合测试	场强图
TRP	0	5.96	Bluetooth 0 TRP
TIS	0	-91.08	Bluetooth 0 TIS

Confirmation of Sample

TRP	39	7.49	Bluetooth 39 TRP 
TIS	39	-90.11	Bluetooth 39 TIS 
TRP	78	8.14	Bluetooth 78 TRP 
TIS	78	-89.81	Bluetooth 78 TIS 