

Material acknowledgement

F&D Material name	M-81B
F&D Item No	
Supplier name	SINAWELL
brand&Manufacturer model	SN1064

Supplier acknowledges that				F&D admit	
	engineer	to examine	approval	engineer	approval
sign					
date	2024.01.17	2024.01.17	2024.01.17		
Seal: 					
remarks:					

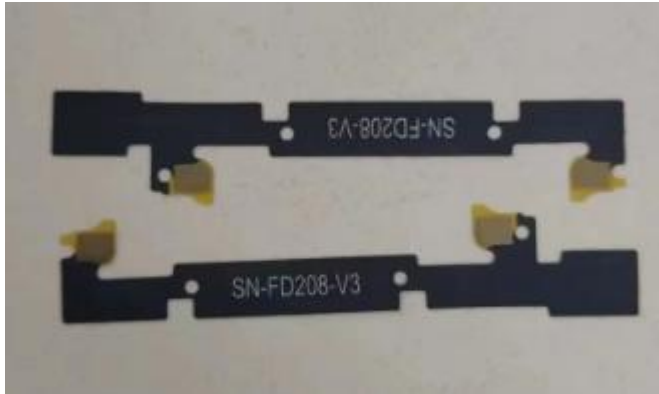
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1. Specification description

This specification describes the status of the FD208 internal antenna with a frequency band of BT.

Antenna appearance



2. Electrical performance

2.1. Antenna band

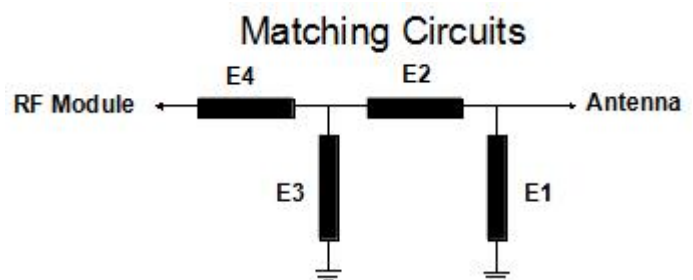
	BT
Transmitting band(MHz)	2400MHz-2500MHz

2.2. Matching circuit

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

1. BT Antenna matching.

Element	Value
E1(0402)	0.75PF
E2(0402)	3.0NH
E3(0402)	NC
E4(0402)	0 Ω

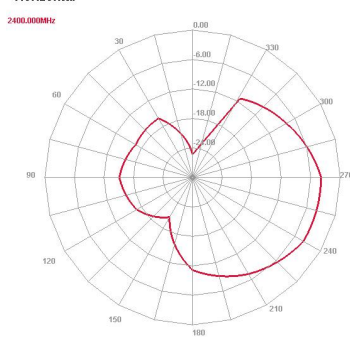
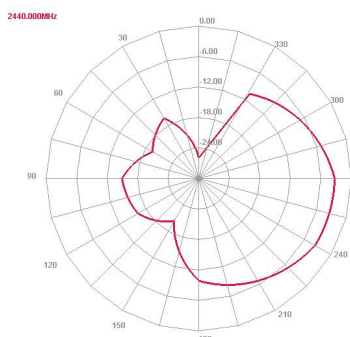
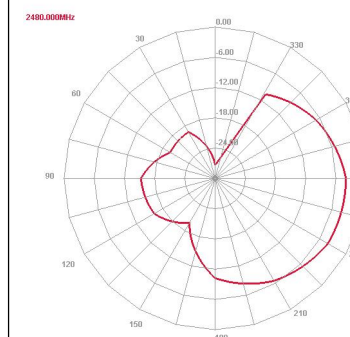


2.3. Return loss

BT VSWR+ Return

	Resonant Point Range(MHz)	Frequency point(MHz)/Maximum Echo Loss(dB)		
	2400-2500		2400	2500
		VSWR	1.71	1.54
		Return loss	-11.634	-13.449

3.4 Antenna gain

Channel	0	39	78
Gain	-0.93dBi	-1.35dBi	-1.25dBi
Gain diagram	Horizontal 2400.000MHz 	Horizontal 2400.000MHz 	Horizontal 2400.000MHz 

手模无源效率			
Passive Test For			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	9.47	-10.24	-3.9
2410	9.2	-10.36	-4.02
2420	9.22	-10.35	-3.89
2430	10.06	-9.97	-3.4
2440	10.26	-9.89	-3.27
2450	9.63	-10.16	-3.56
2460	9.47	-10.24	-3.6
2470	8.73	-10.59	-3.94
2480	8.73	-10.59	-4.01
2490	9.68	-10.14	-3.66
2500	10.22	-9.91	-3.42

自由场无源效率			
Passive Test For			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	40.94	-3.88	-0.06
2410	41.3	-3.84	0.1
2420	39.25	-4.06	-0.14
2430	38.32	-4.17	-0.15
2440	37.84	-4.22	-0.01
2450	37.83	-4.22	-0.01
2460	36.32	-4.4	-0.01
2470	35.42	-4.51	0
2480	34.27	-4.65	-0.04
2490	32.97	-4.82	-0.08
2500	31.79	-4.98	0.02

3. Appearance structure

3.1. Antenna Material

FPC

4. Notes

(Electrical Performance Test Report)

In the electrical performance test report, the 3D darkroom data for manufacturers are provided.

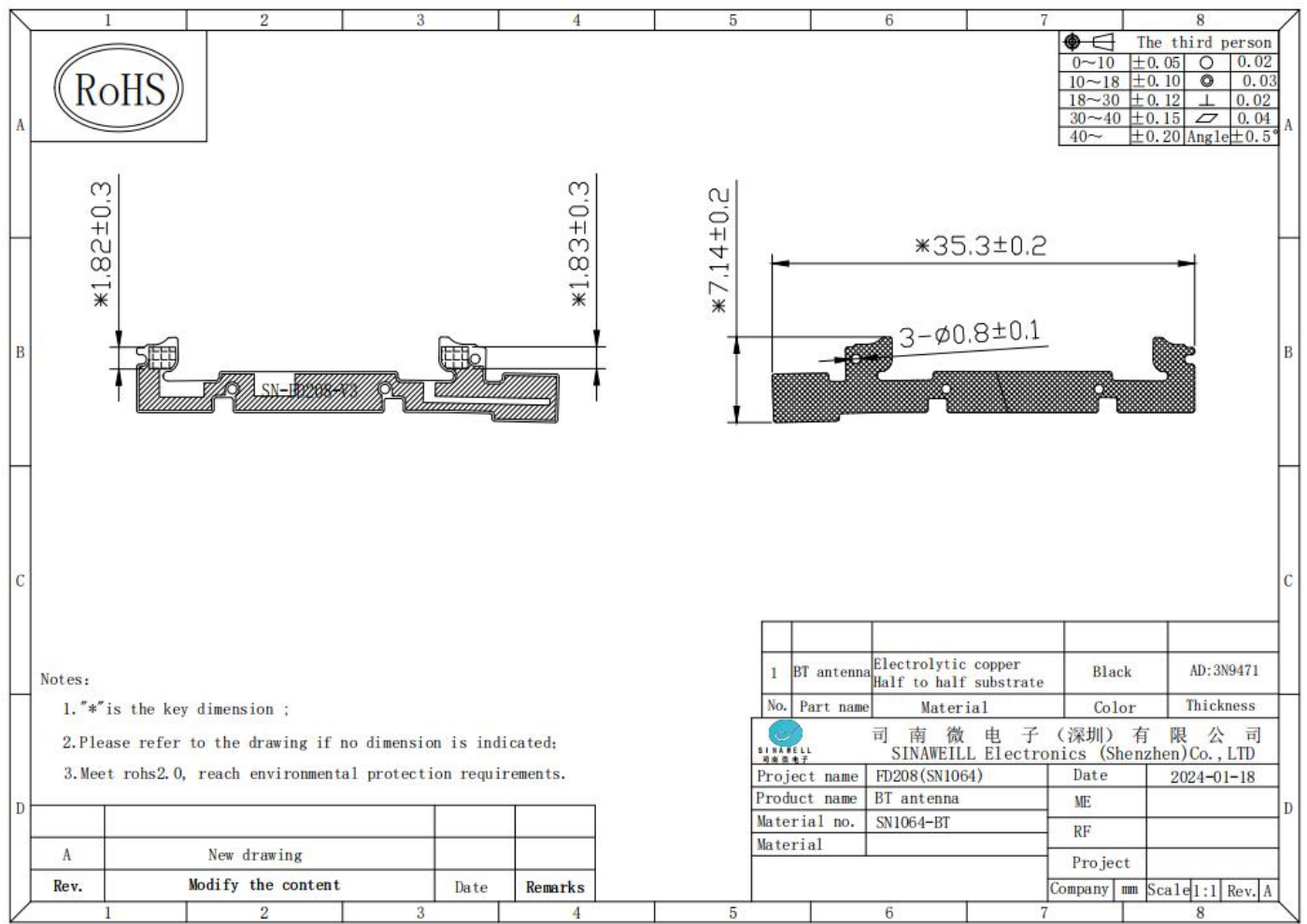
The following table format

Appendix 1: (Mechanical drawing)

Appendix II (Performance report)

FPC Mechanical drawing(Annex I)

FPC Structural drawings



Size Report

	customer	F&D	entry name	FD208		Measurement date	2024-01-17	
	supplier	sinawell	Measuring tools	Quadratic		Unit	mm	
NO	dimension	Tolerance	Measured1	Measured2	Measured3	Measured4	Measured5	determine
1	35.3	±0.2	35.39	35.36	35.36	35.38	35.38	OK
2	7.14	±0.2	7.20	7.17	7.19	7.17	7.18	OK
3	1.83	±0.3	1.93	1.87	1.95	1.83	1.96	OK
4	1.82	±0.3	1.85	1.92	1.90	1.86	1.88	OK
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DRAWN BY: Shimei Yang

APPROVED BY: De Chen

Salt spray Report

Customer Name	F&D	Corax	FD208	Tester	Shimei Yang
Test Quantity	5PCS	Test Item	Salt fog	Test Date	2024-01-17
Test conditions	1.Temperature: 35℃				
	2.Humidity: 98%, PH: 6.5-7.2				
	3.Temperature in the box: 37℃				
	4.Test duration: 24hours				
	5.Drug concentration: 5%NaCl				
Testing procedure	1.Put the product in the salt mist box.				
	2.Place the product at the right angle.				
	3.set the relevant parameters and start the spray.				
	4.Complete the removal of the experimental product. Before inspection, wash the product with clear water and place it at room temperature for two hours.				
TEST	Projects	Before testing	After testing	test result	remarks
	Coating	Well	Well	qualified	
	Conductivity	Well	Well	qualified	
	Resistance	Well	Well	qualified	
	Cohesion	Well	Well	qualified	

DRAWN BY: Shimei Yang

APPROVED BY: De Chen

Explanation of FPC Preservation Period

I .Preservation conditions: temperature 21 +4: humidity 60% H +10%.

II . Exit Guarantee

1.Appearance Guarantee: No oxidation occurs during 12 months of storage in original packaging.

2.Functional Assurance

A:One year to ensure good welding continuity.

B:Ensure good conductivity within two years.

III、 Points for Attention in FPC Welding

1. FC itself has hygroscopicity. It is suggested to preheat the three-layer plate (including) for 30 minutes before use, and bake it for 120 minutes at 100 in order to avoid bursting due to hygroscopicity and rapid oxidation during operation.

2. HOT BAR jobs

A: FPC is used for cooked pressing. CVI should be crossed over glass to avoid suspension, resulting in fracture of copper during bending.

B: FPC avoids the use of dead angle and is liable to cause fracture.

3: SMT operation: The plating part should be shielded to prevent atomization in flow welding.

4: Hand welding operation: the working temperature of soldering iron should not exceed 290 C, and the time of soldering iron staying on the plate surface should not exceed 10 seconds.