

The Main Antenna Sample Confirmation

Customer	Dongguan Yinqu Technology Co., LTD		
Project Name	B204-L		Date 2025-4-11
Project NO.	SN1204	Notes	FPC antenna + touch
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

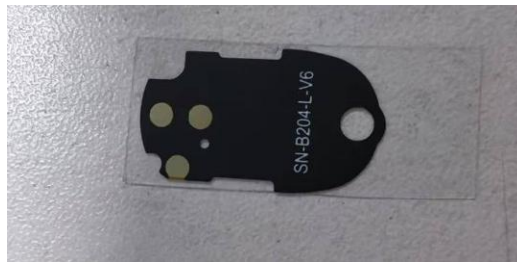
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1. Specification description

This specification describes the status of the B204-L internal antenna with a frequency band of BT.

2. Antenna appearance



3. Electrical performance

3.1. Antenna band

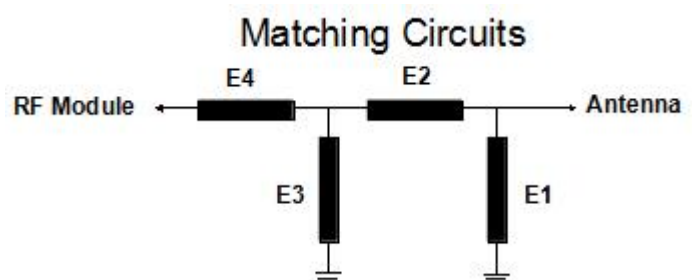
	BT
Transmitting band(MHz)	2400MHz-2500MHz

3.2. Matching Circuit

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

1. WiFi antenna matching。

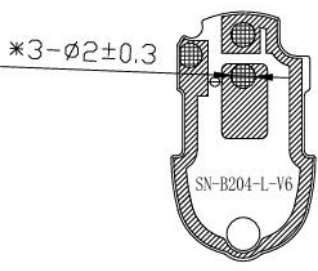
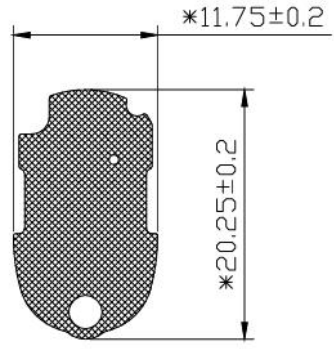
Element	Value
E1(0402)	2.4PF
E2(0402)	0 Ohm
E3(0402)	NC
E4(0402)	NC



3.3. Return Loss



Appendix 1: Structural Drawing

1	2	3	4	5	6	7	8																										
		<table border="1" style="float: right; font-size: 8px;"> <tr> <th colspan="4">The third person</th> </tr> <tr> <td>0~10</td> <td>±0.05</td> <td>○</td> <td>0.02</td> </tr> <tr> <td>10~18</td> <td>±0.10</td> <td>⊙</td> <td>0.03</td> </tr> <tr> <td>18~30</td> <td>±0.12</td> <td>⊥</td> <td>0.02</td> </tr> <tr> <td>30~40</td> <td>±0.15</td> <td>∠</td> <td>0.04</td> </tr> <tr> <td>40~</td> <td>±0.20</td> <td>Angle</td> <td>±0.5°</td> </tr> </table>						The third person				0~10	±0.05	○	0.02	10~18	±0.10	⊙	0.03	18~30	±0.12	⊥	0.02	30~40	±0.15	∠	0.04	40~	±0.20	Angle	±0.5°		
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A							A																										
B							B																										
C	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. <table border="1" style="font-size: 8px;"> <tr> <td>1</td> <td>BT antenna</td> <td>Electrolytic copper One and a half substrate</td> <td>Black</td> <td>T=0.12±0.03mm</td> </tr> <tr> <th>No.</th> <th>Part name</th> <th>Material</th> <th>Color</th> <th>Thickness</th> </tr> </table>  司南微电子(深圳)有限公司 SINAWELL Electronics (Shenzhen) Co., LTD <table border="1" style="font-size: 8px;"> <tr> <td>Project name</td> <td>B204(SN1204)</td> <td>Date</td> <td>2025-03-07</td> </tr> <tr> <td>Product name</td> <td>BT antenna</td> <td>ME</td> <td></td> </tr> <tr> <td>Material no.</td> <td>SN1204-BT-L</td> <td>RF</td> <td></td> </tr> <tr> <td>Material</td> <td></td> <td>Project</td> <td></td> </tr> </table>						1	BT antenna	Electrolytic copper One and a half substrate	Black	T=0.12±0.03mm	No.	Part name	Material	Color	Thickness	Project name	B204(SN1204)	Date	2025-03-07	Product name	BT antenna	ME		Material no.	SN1204-BT-L	RF		Material		Project		C
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Appendix 2: 3D Test Report

WIFI antenna passive test data

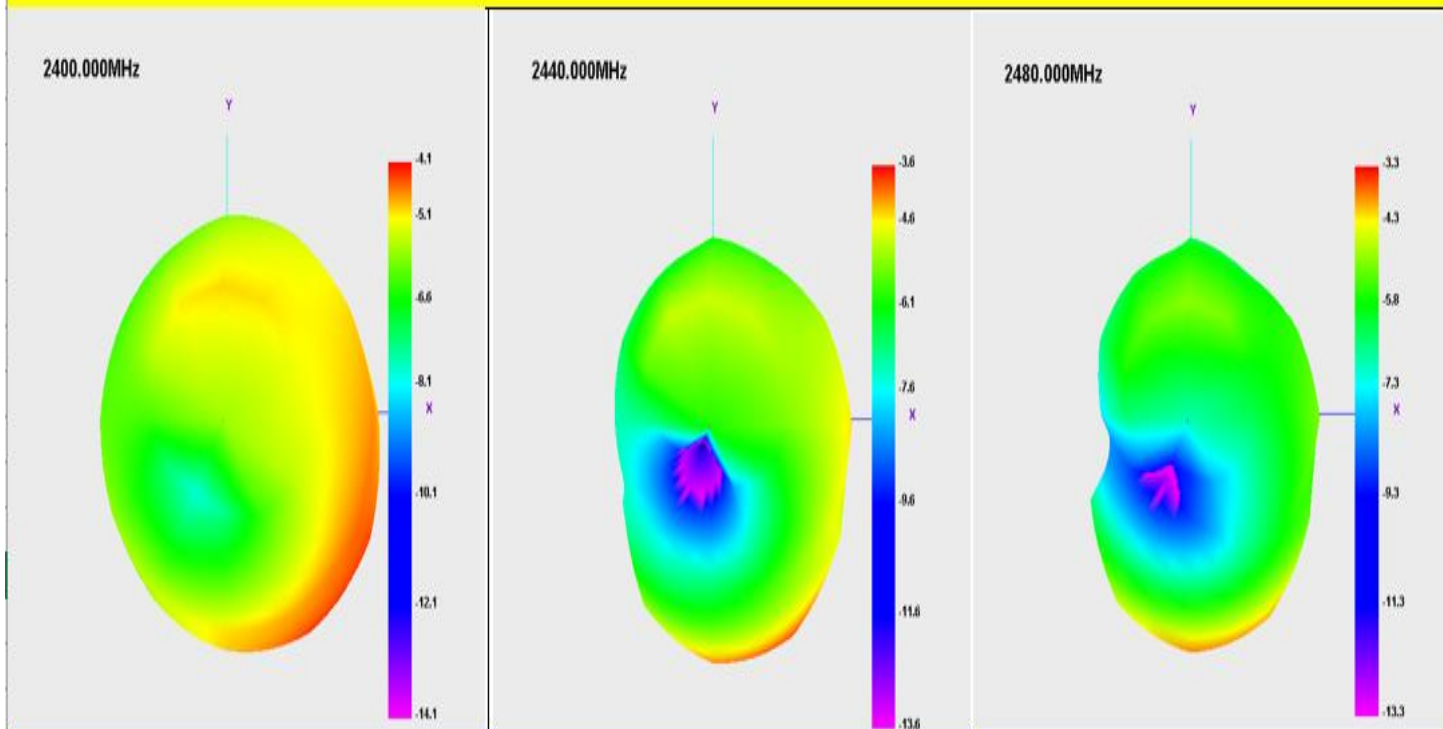
L			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	17.26	-7.63	-3.83
2410	18.77	-7.26	-3.29
2420	19.11	-7.19	-3.08
2430	20.08	-6.97	-2.64
2440	19.51	-7.1	-2.54
2450	18	-7.45	-2.77
2460	17.74	-7.51	-2.72
2470	17.59	-7.55	-2.77
2480	17.31	-7.62	-3.02
2490	16.03	-7.95	-3.5
2500	14.61	-8.35	-3.94

WIFI antenna active test data

BAND	CHANNEL	TRP	TIS
BT	0	3.37	-84
	39	5.24	-86.97
	78	5.78	-87.39

Field intensity pattern

3D图



2D图

