

The Main Antenna Sample Confirmation

Customer	Dongguan Yinqu Technology Co., LTD		
Project Name	B204-R		Date 2025-4-11
Project NO.	SN1219	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.

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1. Specification description

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

2. Antenna appearance



3. Electrical performance

3.1. Antenna band

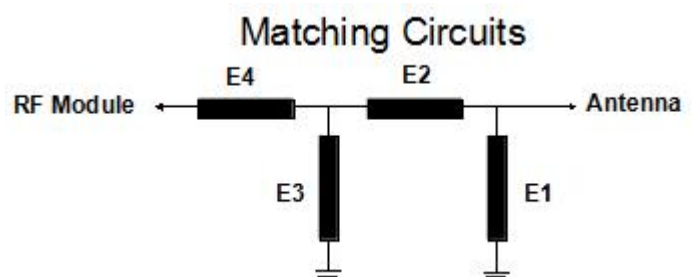
	BT
Transmitting band(MHz)	2400MHz-2500MHz

3.2. Matching Circuit

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

1. WiFi antenna matching。

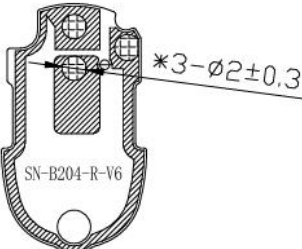
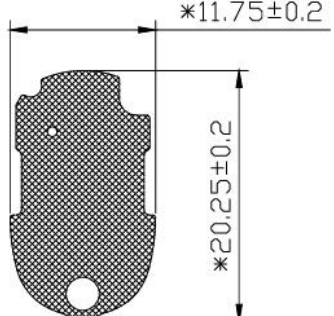
Element	Value
E1(0402)	2.4PF
E2(0402)	0 Ohm
E3(0402)	NC
E4(0402)	NC



3.3. Return Loss



Appendix 1: Structural Drawing

1	2	3	4	5	6	7	8																														
A	RoHS  *3-$\varnothing 2 \pm 0.3$ SN-B204-R-V6  *11.75± 0.2 *20.25± 0.2						A																														
B																																					
C																																					
D																																					
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="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 20%;">BT antenna</td> <td style="width: 30%;">Electrolytic copper One and a half substrate</td> <td style="width: 15%;">Black</td> <td style="width: 30%;">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="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Project name</td> <td style="width: 20%;">B204(SN1204)</td> <td style="width: 20%;">Date</td> <td style="width: 30%;">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-R</td> <td>RF</td> <td></td> </tr> <tr> <td>Material</td> <td></td> <td>Project</td> <td></td> </tr> <tr> <td colspan="2"></td> <td>Company</td> <td>mm Scale 1:1 Rev. A</td> </tr> </table>								1	BT antenna	Electrolytic copper One and a half substrate	Black	T=0.12 ± 0.03 mm	No.	Part name	Material	Color	Thickness	Project name	B204(SN1204)	Date	2025-03-07	Product name	BT antenna	ME		Material no.	SN1204-BT-R	RF		Material		Project				Company	mm Scale 1:1 Rev. A
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Appendix 2: 3D Test Report

WIFI antenna passive test data

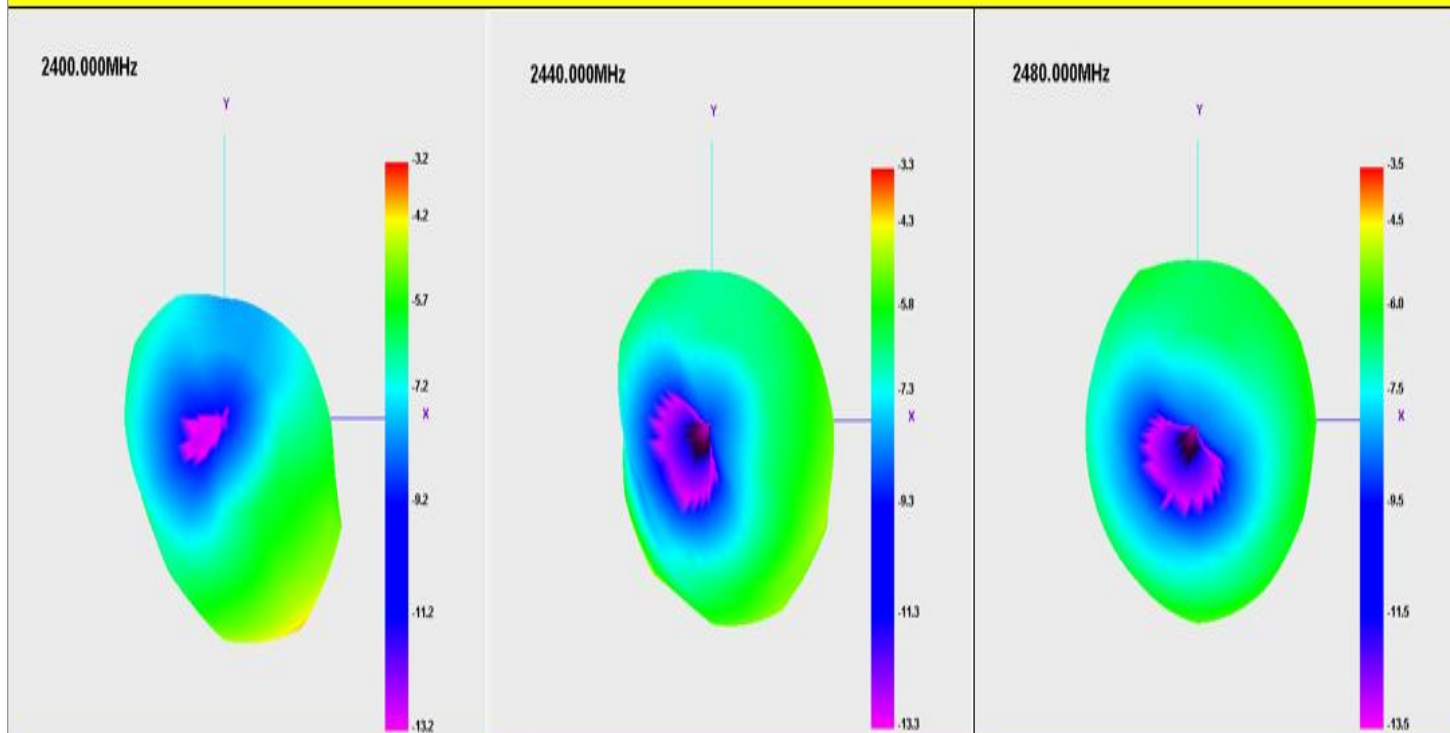
R			
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	20.28	-6.93	-3.66
2410	20.8	-6.82	-3.61
2420	21.05	-6.77	-3.7
2430	21.64	-6.65	-3.81
2440	20.31	-6.92	-4.04
2450	17.63	-7.54	-4.73
2460	16.79	-7.75	-5.06
2470	15.99	-7.96	-5.1
2480	15.41	-8.12	-4.89
2490	14.38	-8.42	-4.94
2500	12.74	-8.95	-5.6

WIFI antenna active test data

BAND	CHANNEL	TRP	TIS
BT	0	5.35	-84.29
	39	6.25	-86.32
	78	6.02	-87.08

Field intensity pattern

3D图



2D图

