

The Main Antenna Sample Confirmation

Customer			
Project Name	CB160		Date2023-04-21
Project NO.	SN1045	Notes	Metal
Frequency Range	2400MHz-2500MHz		
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 **CB160** internal antenna with a frequency band of WIFI.

2. Antenna appearance



3. Electrical performance

3.1. Antenna band

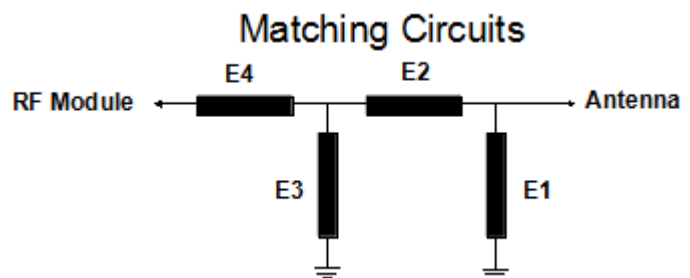
	wifi
Transmitting band(MHz)	2400MHz-2500MHz

3.2. Matching Circuit

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

1. BT antenna matching。

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



4. Appearance structure

4.1. Antenna Material

Metal

5. Notes

(Electrical Performance Test Report)

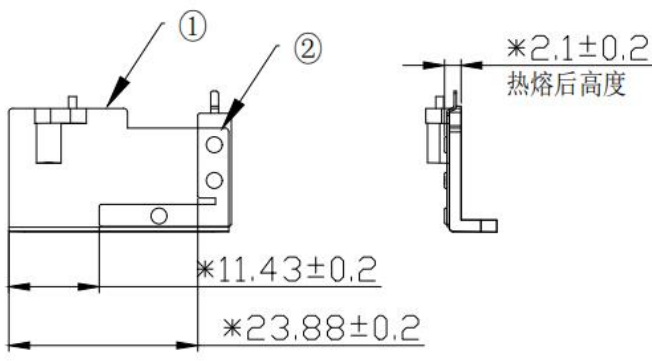
In the electrical performance test report, the 3D darkroom data for manufacturers are provided.

The following table format

Appendix 1: (Mechanical drawing)

Appendix II (Performance report)

FPC Mechanical drawing(Annex I)

1	2	3	4	5	6	7	8																																											
		 第三人称 <table border="1" style="margin-left: 5px;"> <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>角度</td><td>±0.5°</td></tr> </table>						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	角度	±0.5°																							
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C							C																																											
注： 1. “*”为重点尺寸； 2. 未标注尺寸请依图纸； 3. 符合ROHS2.0、REACH、无卤素等环保要求。						<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">2</td> <td style="width:35%;">WIFI钢片天线</td> <td style="width:20%;">SUS301 T=0.3mm 3/4h</td> <td style="width:10%;">1</td> <td style="width:30%;">表面镀镍40u”</td> </tr> <tr> <td>1</td> <td>天线支架</td> <td></td> <td>1</td> <td>客供</td> </tr> <tr> <td>No.</td> <td>零件名称</td> <td>材 质</td> <td>数 量</td> <td>备 注</td> </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%;">项 目 名</td> <td style="width:30%;">SN1045</td> <td style="width:20%;">日 期</td> <td style="width:20%;">2023-04-08</td> </tr> <tr> <td>产 品 名 称</td> <td>热熔</td> <td>结 构</td> <td></td> </tr> <tr> <td>料 号</td> <td>SN1045-01</td> <td>射 频</td> <td></td> </tr> <tr> <td>材 质</td> <td></td> <td>项 目</td> <td></td> </tr> <tr> <td colspan="2"></td> <td>单 位</td> <td>mm</td> </tr> <tr> <td colspan="2"></td> <td>比 例</td> <td>1:1</td> </tr> <tr> <td colspan="2"></td> <td>版 本</td> <td>A</td> </tr> </table>		2	WIFI钢片天线	SUS301 T=0.3mm 3/4h	1	表面镀镍40u”	1	天线支架		1	客供	No.	零件名称	材 质	数 量	备 注	项 目 名	SN1045	日 期	2023-04-08	产 品 名 称	热熔	结 构		料 号	SN1045-01	射 频		材 质		项 目				单 位	mm			比 例	1:1			版 本	A
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3D Test Report (Annex II)

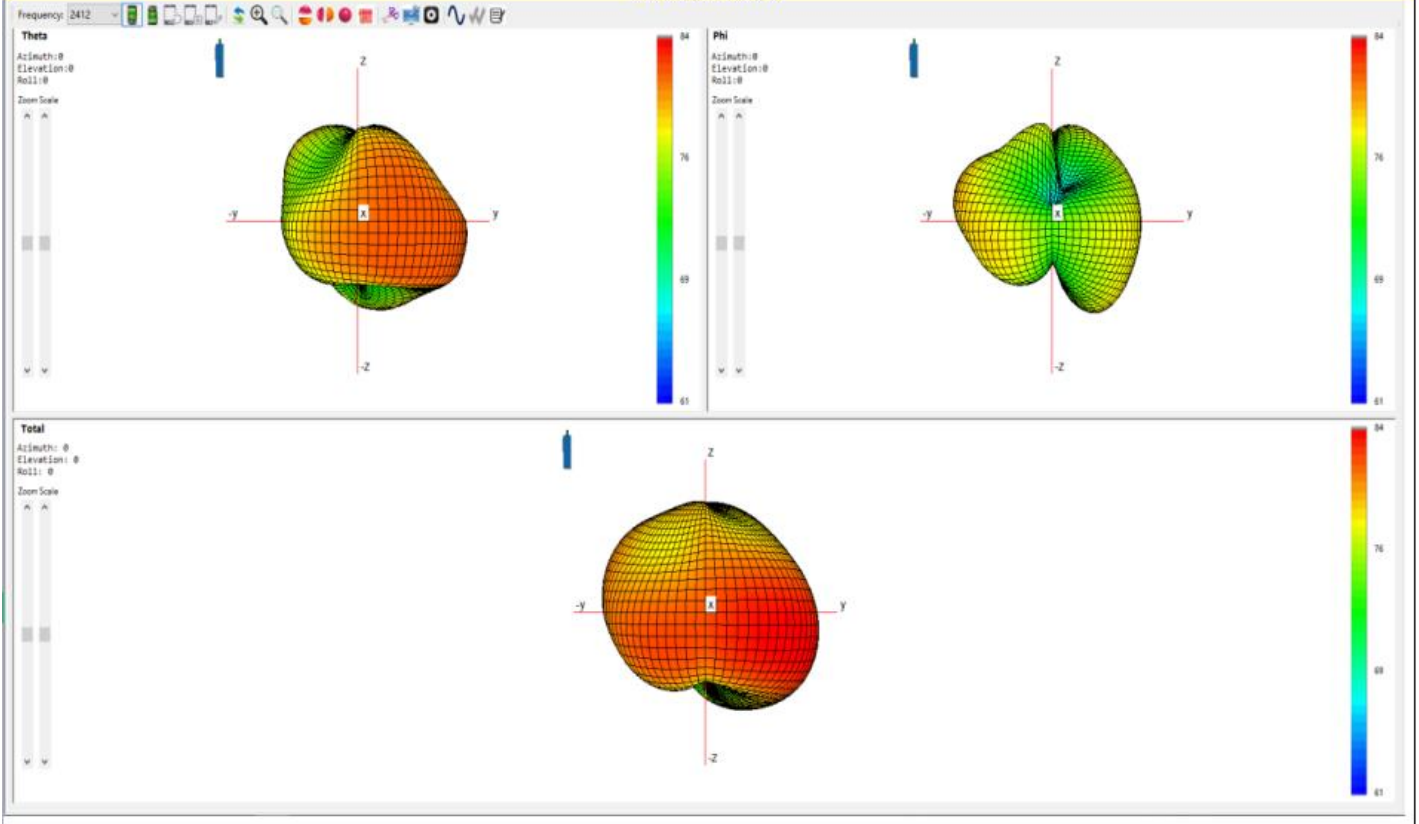
Efficiency test data

Passive Test For wifi			
Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)
2400	48.97	-3.1	0.09
2410	49.56	-3.05	0.16
2420	46.71	-3.31	-0.1
2430	45.65	-3.41	0
2440	44.8	-3.49	-0.01
2450	44.91	-3.48	0.35
2460	43.83	-3.58	0.5
2470	43.62	-3.6	0.73
2480	43.83	-3.58	0.88
2490	44.21	-3.54	0.92
2500	44.56	-3.51	0.9

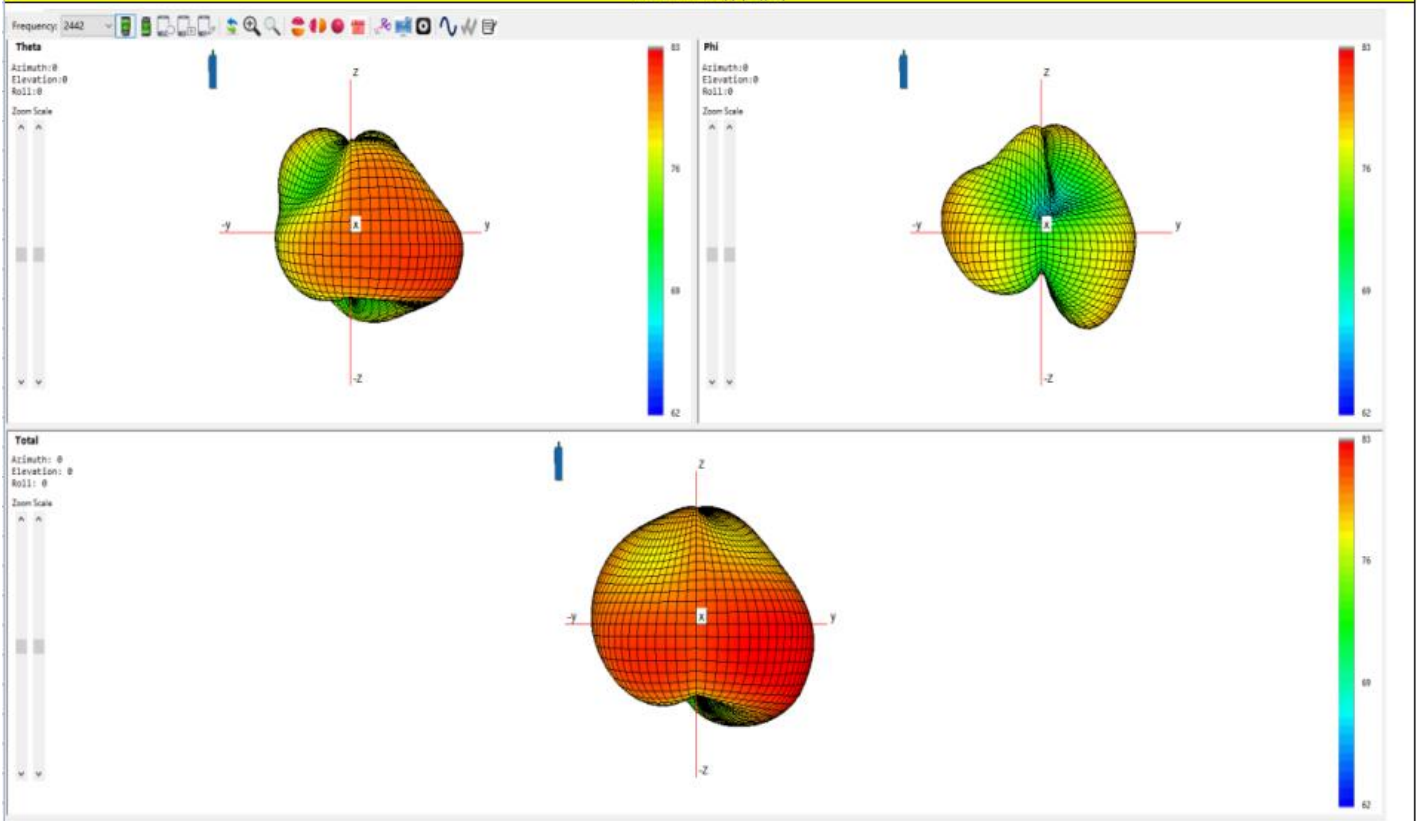
Active testing

Band		CH	TRP	TIS
WIFI	11B	1	15.03	-80.95
		7	14.15	-80.66
		13	15.52	-80.09
	11G	1	13.74	-59.88
		7	12.12	-60.02
		13	12.6	-57.54
	11N	1	12.19	-60.21
		6	10.89	-60.37
		11	11.56	-60.5

2412MHz场强图



2442MHz场强图



Size Report

	Customer		Project Name	CB160		Measurement Date	2023-4-20	
	Supplier	sinawell	Measurement Tool	Quadratic		Unit	mm	
NO	dimension	Tolerance	Measure 1	Measure 2	Measure 3	Measure 4	Measure 5	determine
1	14.43	± 0.2	14.34	14.37	14.36	14.34	14.35	OK
2	23.88	± 0.2	23.81	23.84	23.83	23.83	23.82	OK
3	2.1	± 0.2	2.15	2.13	2.16	2.12	2.14	OK
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DRAWN BY: Shimei Yang

APPROVED BY: De Chen

Salt fog Report

Customer Name		Corax	CB160	Tester	De Chen
Test Quantity	5PCS	Test Item	Salt fog	Test Date	2023-4-20
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 clean water and place it at room temperature for two hours.				
TEST	Projects	Before testing	After testing	test result	remarks
	Coating	/	/	/	
	Conductivity	Well	Well	qualified	
	Resistance	Well	Well	qualified	
	Cohesion	Well	Well	qualified	

DRAWN BY: Shimei Yang

APPROVED BY: De Chen