

The Main Antenna Sample Confirmation

File number: SNW-QR-D-007/A.0

Customer	SHENZHEN ALONG ELECTRONICS CO., LTD.		
Project Name	5510-A		2025-7-2
		Date	
Project NO.	SN1233		FPC
		Notes	
Frequency Range	2G: GSM850/PCS1900 3G: W2/W5 4G: B1/2/3/4/5/7/8/12/17/20/25/26/34/38/39/40/41/66/71		
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

Catalogue

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1. Overview of specifications

This specification describes the status of 5510-A built-in antenna, and its frequency band is 4G.

2. Antenna appearance



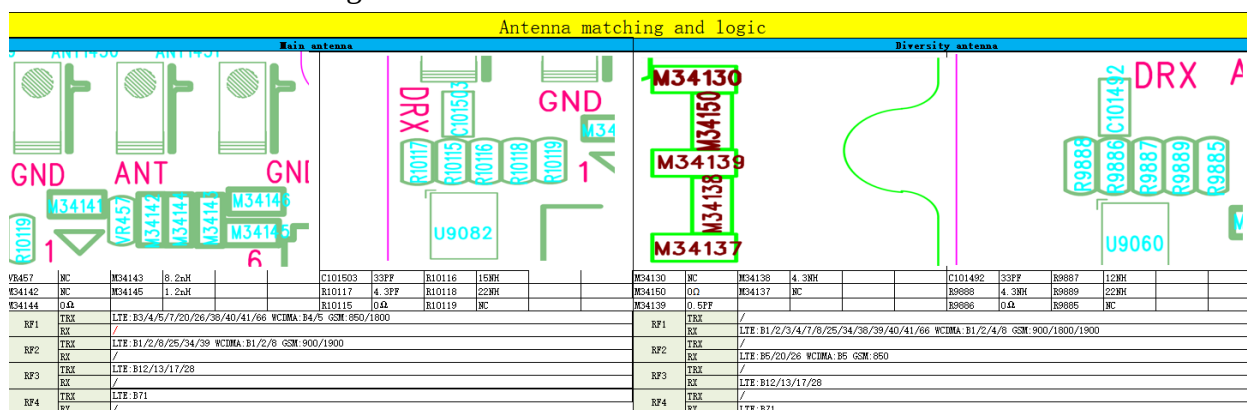
3. Electrical performance

3.1. Antenna frequency band

	Main antenna
Transmitting frequency band(MHz)	2G:GSM850/PCS1900 3G:W2/W5 4G:B1/2/3/4/5/7/8/12/17/20/25/26/34/38/39/40/41/6 6/71

3.2. Matching circuit

The test point is behind the antenna connector (RF test port), as shown in the figure below. Note: the antenna matching electronic material should be 1% accurate.



4. Appearance structure

4.1. Antenna material

FPC

Remarks

The following table format

Appendix I: structural drawings

BT Antenna structure drawing

Appendix 1: Structural Drawings

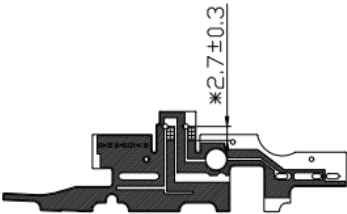
Appendix II: Electrical Performance Test Report

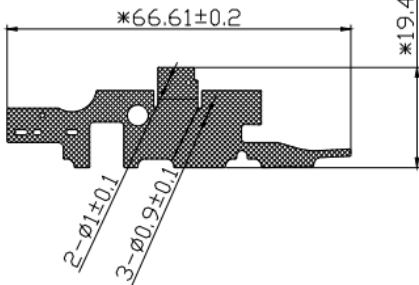
Appendix 1: FPC structural drawings

1	2	3	4	5	6	7	8
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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°





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.
- 4.This drawing is an internal controlled document and is strictly prohibited from being disseminated in any form without our company's permission

1	MAIN FPC	PI Electrolytic Copper Half to one-third	Black	
No.	Part name	Material	Color	Thickness

 司 南 微 电 子 (深圳) 有 限 公 司 SINAWELL Electronics (Shenzhen) Co., LTD			
Project name	5510 (SN1233)	Date	2025-03-27
Product name	MAIN Antenna	ME	
Material no.	SN1233-01	RF	
material		Project	
		Unit	mm
		Scale	1:1
		Rev.	B

Rev.	New drawing	Date	Remarks
1	2	3	4

Confirmation of Sample

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RoHS	<table border="1" style="float: right; border-collapse: collapse;"> <tr> <td colspan="3">The third person</td> </tr> <tr> <td>0~10</td> <td>±0.05</td> <td>○ 0.02</td> </tr> <tr> <td>10~18</td> <td>±0.10</td> <td>⊙ 0.03</td> </tr> <tr> <td>18~30</td> <td>±0.12</td> <td>⊥ 0.02</td> </tr> <tr> <td>30~40</td> <td>±0.15</td> <td>∠ 0.04</td> </tr> <tr> <td>40~</td> <td>±0.20</td> <td>角度 ±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	角度 ±0.5°																														
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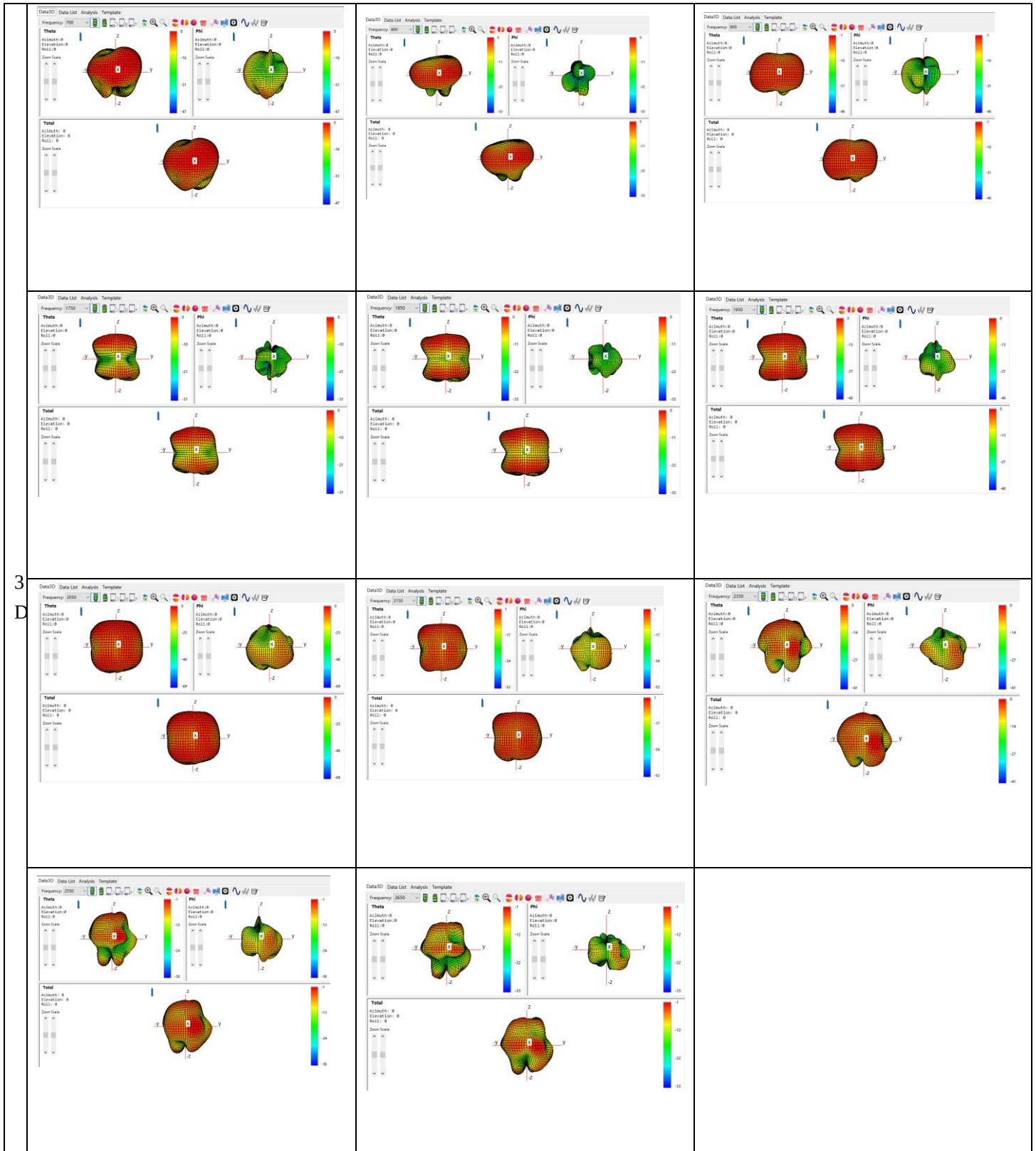
Appendix II: 3D Test Report

B1 (10M)	18050	18.45			B38 (20M)	37850	16.29		
	18300	18.59				38000	16.55		
	18550	18.49	550	-91.72		38150	16.63	38150	-91.17
B2 (10M)	18650	17.58			B39 (20M)	38350	16.47		
	18900	17.34				38450	16.76		
	19150	17.49	1150	-95.01		38550	16.64	38550	-92.36
B3 (10M)	19250	17.04			B40 (20M)	38750	16.01		
	19575	17.43				39150	16.12		
	19900	17.97	1850	-93.05		39550	16.37	38750	-91.36
B4 (10M)	20000	17.02			B41 (20M)	40340	16.13		
	20175	17.1				40620	16.97		
	20350	17.7	2350	-93.86		41140	17.34	40620	-91.03
B5	20450	17.8			B66 (10M)	132022	16.45		
	20525	18.31				132322	17.35		
	20600	18.2	2600	-93.17		132622	17.92	67086	-93.97
B7 (10M)	20850	16.03			B71 (10M)	133172	17.03		
	21100	17.05				133297	18.33		
	21350	17.19	3350	-93.39		133422	17.97	68886	-90.65
B8 (10M)	21500	17.34							
	21625	17.02							
	21750	17.93	3750	-90.47					
B12 (5M)	23035	16.8			850	128	25.23		
	23095	17.5				190	25.68		
	23155	17.42	5155	-93.08		251	25.47	251	-96.09
B17 (5M)	23780	17.04			1900	512	23.87		
	23790	17.19				661	23.34		
	23800	16.81	5800	-93.12		810	23.52	810	-103.57
B20 (10M)	24200	17.03							
	24300	17.29							
	24400	17.19	6400	-90.1					
B25 (10M)	26065	16.45			W2	9262	16.18		
	26365	16.43				9400	16.93		
	26665	16.93	8365	-94.15		9538	16.2	9938	-105.24
B26 (10M)	26740	16.92			W5	4132	17.18		
	26865	17.15				4183	17.14		
	26990	17.13	8865	-93.66		4233	16.47	4458	-106.02
B34 (10M)	36275	18.89							
	36250	18.85							
	36300	18.9	36300	-95.82					

Passive efficiency

Freq (MHz)	Effi (dB)	Gain (dBi)	Effi (%)	Freq (MHz)	Effi (dB)	Gain (dBi)	Effi (%)	Freq (MHz)	Effi (dB)	Gain (dBi)	Effi (%)
650	-5.92	-1.33	25.58	1700	-5.09	-0.78	30.96	2100	-4.13	-0.04	38.68
660	-5.86	-1.36	25.94	1710	-5.15	-0.78	30.57	2110	-3.93	0.26	40.47
670	-5.63	-1.42	27.34	1720	-5.11	-1.2	30.81	2120	-3.86	0.14	41.11
680	-5.38	-1.27	28.95	1730	-4.95	-1.37	31.97	2130	-4.12	-0.13	38.74
690	-5.16	-1.14	30.51	1740	-5.03	-1.37	31.37	2140	-4.21	0.24	37.89
700	-4.09	-0.05	38.97	1750	-5.22	-0.93	30.05	2150	-4.07	0.53	39.21
710	-3.64	1.18	43.27	1760	-5.07	-0.76	31.12	2160	-3.99	0.48	39.94
720	-4.09	1.06	39.02	1770	-5	-0.97	31.64	2170	-4.18	0.3	38.18
730	-4.15	0.18	38.49	1780	-4.95	-0.8	32	2180	-4.4	0.07	36.33
740	-4.3	-0.4	37.11	1790	-5.04	-0.58	31.3	2190	-4.28	0.35	37.31
750	-4.48	-0.63	35.64	1800	-4.98	-0.58	31.8	2200	-4.03	0.68	39.57
760	-4.2	-0.43	38.06	1810	-4.73	-0.68	33.66	2300	-4.98	-0.28	31.75
770	-4.42	-0.86	36.14	1820	-4.76	-0.92	33.44	2310	-5.29	-0.36	29.55
780	-4.63	-1.06	34.42	1830	-4.93	-0.61	32.12	2320	-5.42	-0.55	28.68
790	-4.47	-0.83	35.71	1840	-5.01	-0.68	31.52	2330	-5.42	-0.83	28.69
800	-4.41	-0.67	36.24	1850	-4.65	-0.83	34.28	2340	-5.49	-0.73	28.26
810	-4.21	-0.53	37.9	1860	-4.65	-0.68	34.29	2350	-5.32	-0.45	29.35
820	-4.63	-1.02	34.43	1870	-4.8	-1.33	33.15	2360	-5.22	-0.75	30.06
830	-4.23	-0.34	37.78	1880	-4.89	-1.16	32.41	2370	-5.42	-0.86	28.71
840	-4.46	-0.18	35.82	1890	-4.9	-1.11	32.34	2380	-5.45	-0.29	28.54
850	-4.84	-0.81	32.79	1900	-4.32	-0.3	36.95	2390	-5.66	-0.44	27.17
860	-4.78	-1.28	33.3	1910	-4.21	-0.53	37.94	2400	-5.43	-0.77	28.64
870	-4.9	-1.66	32.35	1920	-4.56	-1.29	35	2500	-6.06	-1.56	24.75
880	-4.95	-1.62	31.96	1930	-4.47	-1.15	35.74	2510	-5.98	-1.47	25.22
890	-5.01	-1.27	31.56	1940	-4.19	-0.4	38.14	2520	-5.93	-1.32	25.51
900	-5.13	-1.51	30.66	1950	-4.16	-0.58	38.38	2530	-5.8	-1.35	26.31
910	-4.86	-1.31	32.68	1960	-4.32	-1.31	37	2540	-5.66	-1.33	27.19
920	-5.27	-1.44	29.72	1970	-4.2	-0.95	38.04	2550	-5.73	-1.19	26.76
930	-4.85	-0.96	32.76	1980	-3.86	-0.08	41.13	2560	-5.84	-1.19	26.04
940	-5.01	-1.38	31.52	1990	-3.81	-0.18	41.57	2570	-5.54	-1.24	27.93
950	-5.41	-1.69	28.78	2000	-3.91	-0.57	40.65	2580	-6.05	-1.96	24.82
960	-5.12	-1.43	30.79	2010	-4.07	-0.95	39.19	2590	-6.36	-1.89	23.14
				2020	-3.96	-0.2	40.22	2600	-6.01	-1.12	25.07
				2030	-3.68	-0.05	42.88	2610	-5.92	-1.26	25.6
				2040	-3.82	-0.4	41.51	2620	-5.98	-1.7	25.24
				2050	-4.14	-0.81	38.55	2630	-6.28	-2.2	23.57
				2060	-4.13	-0.46	38.61	2640	-6.55	-2.14	22.15
				2070	-3.84	-0.25	41.34	2650	-6.34	-1.94	23.23
				2080	-3.74	-0.14	42.24	2660	-6.05	-2.15	24.82
				2090	-4.03	-0.13	39.58	2670	-6.14	-2.53	24.34
								2680	-6.01	-2.46	25.08
								2690	-6.17	-2.54	24.14
								2700	-5.78	-1.93	26.45

Antenna pattern



Confirmation of Sample

