Antenna Part Specification

Customers：	Cosonic Intelligent Technologies Co.， Ltd.
Project name：	CE-2202B
Antenna type：	L-FPC Antenna
Antenna model：	SX230910-151E
Antenna morphology：	PIFA
Version：	V1.0
Date：	2024.06.25
Manufacturer：	Shenzhen Cicent Communication Technology Co., Ltd.
Manufacturer Address：	505-506 ,ABlock,Donglian Building,Chuangye 2 road,Baoan District,Shenzhen,Guangdong,P.R china

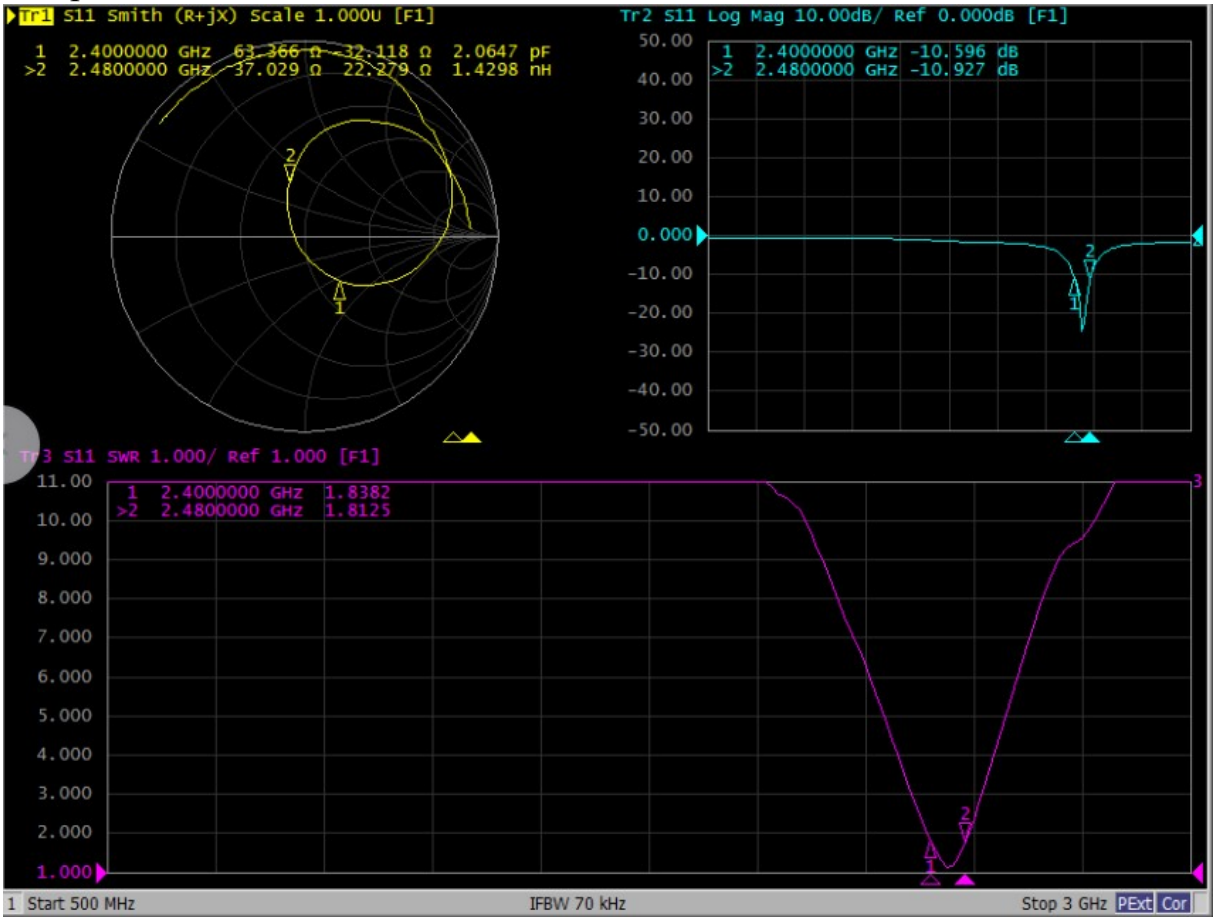
Contents

Change record			
Compile / change date	Reason for change	Changed content	Version
2024.06.25	First edition	First edition	V1.0

I: The report of passive data

Angilent E5071C

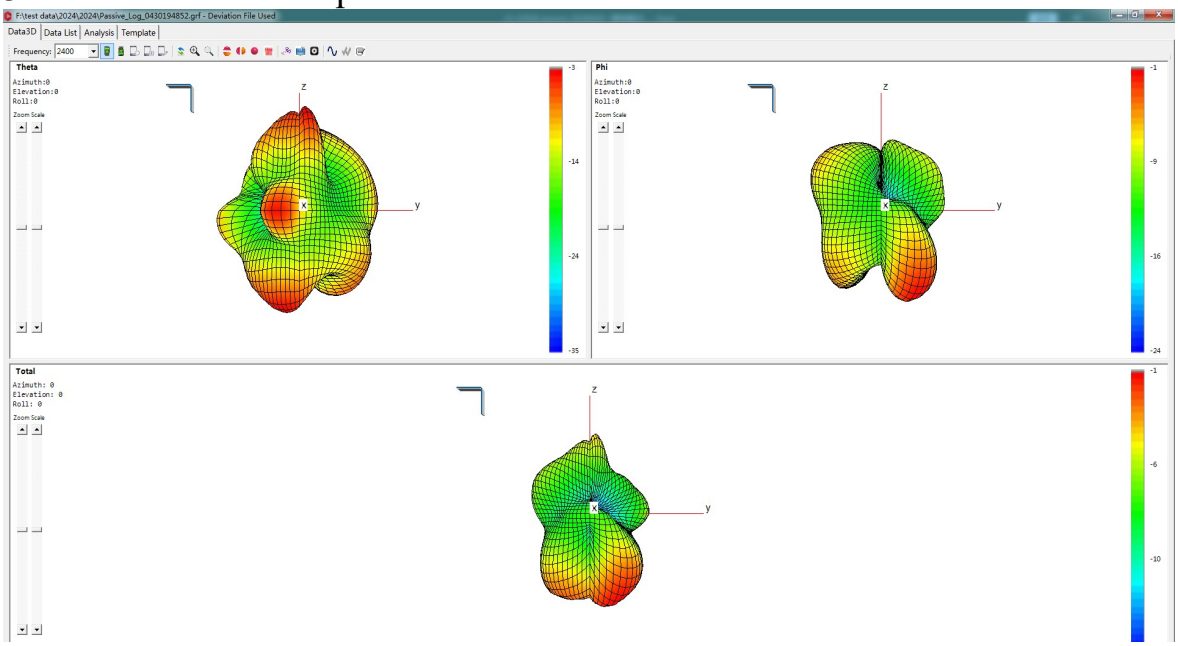
S11 parameter：



Efficiency：

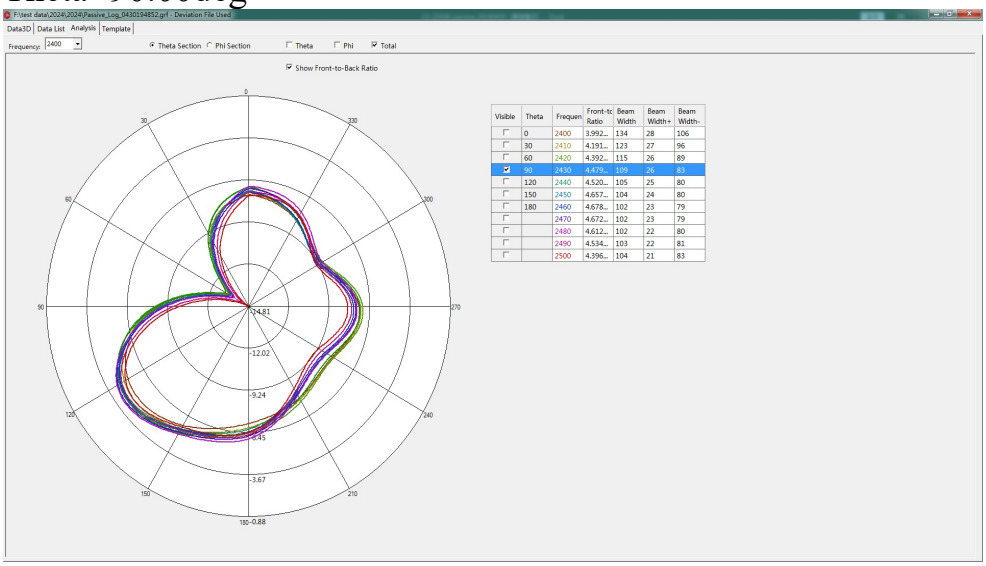
L			
Frequency（MHz）	Efficiency	Efficiency (dB)	Gain (dBi)
2400	22.1%	-6.57	-0.91
2410	21.9%	-6.60	-0.89
2420	21.2%	-6.75	-0.98
2430	21.5%	-6.67	-0.96
2440	20.8%	-6.82	-1.10
2450	21.6%	-6.66	-1.03
2460	21.6%	-6.66	-1.23
2470	19.7%	-7.06	-1.71
2480	18.5%	-7.33	-2.07
Average value	21.0%	-6.79	-1.21

3D Antenna radiation pattern:



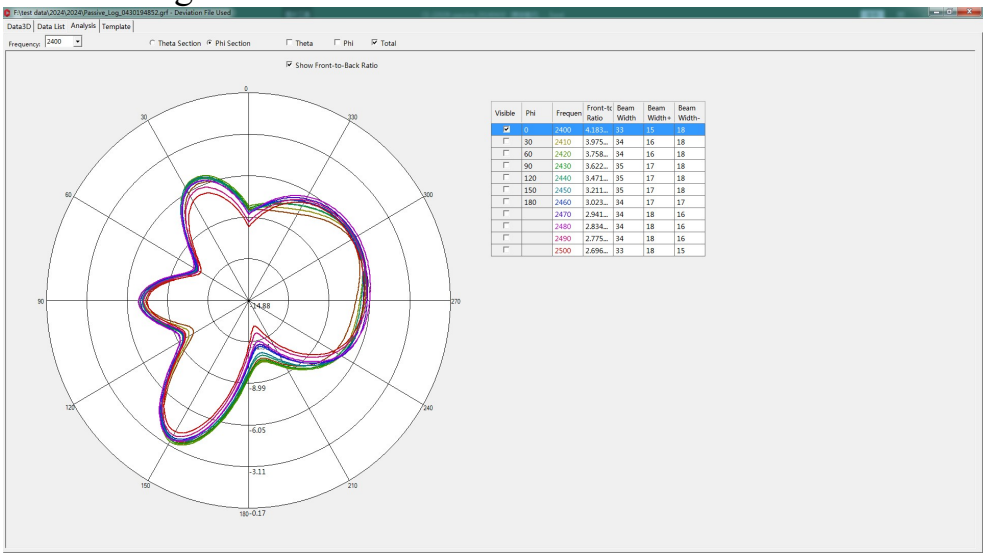
Antenna radiation pattern:

Theta=90.00deg



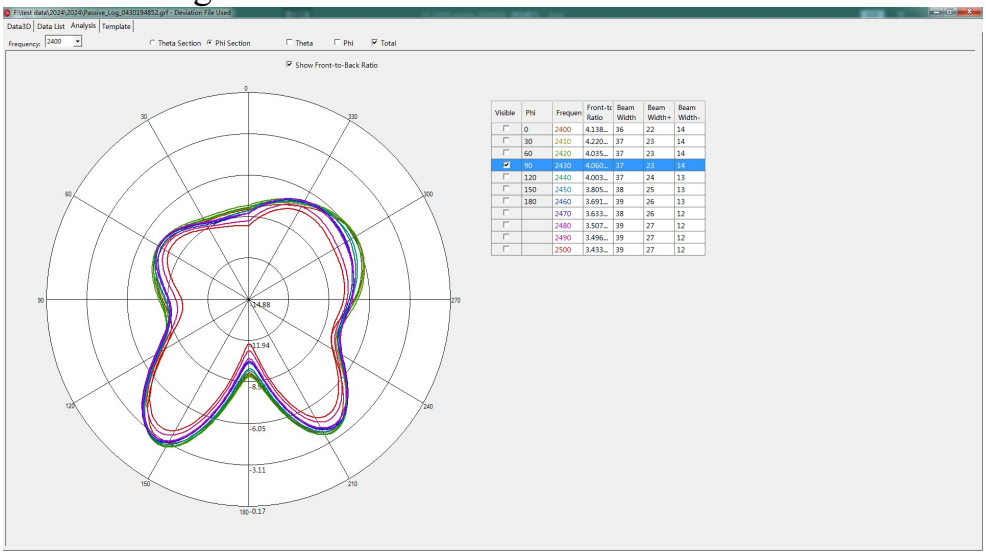
Visible	Theta	Frequen	Front-to Ratio	Beam Width	Beam Width+	Beam Width-
☐	0	2400	3.992...	134	28	106
☐	30	2410	4.191...	123	27	96
☐	60	2420	4.392...	115	26	89
☑	90	2430	4.479...	109	26	83
☐	120	2440	4.520...	105	25	80
☐	150	2450	4.657...	104	24	80
☐	180	2460	4.678...	102	23	79
☐		2470	4.672...	102	23	79
☐		2480	4.612...	102	22	80
☐		2490	4.534...	103	22	81
☐		2500	4.396...	104	21	83

Phi=0.00deg



Visible	Phi	Frequen	Front-to Ratio	Beam Width	Beam Width+	Beam Width-
☑	0	2400	4.183...	33	15	18
☐	30	2410	3.975...	34	16	18
☐	60	2420	3.758...	34	16	18
☐	90	2430	3.622...	35	17	18
☐	120	2440	3.471...	35	17	18
☐	150	2450	3.211...	35	17	18
☐	180	2460	3.023...	34	17	17
☐		2470	2.941...	34	18	16
☐		2480	2.834...	34	18	16
☐		2490	2.775...	34	18	16
☐		2500	2.696...	33	18	15

Phi=90.00deg



Visible	Phi	Frequen	Front-to Ratio	Beam Width	Beam Width+	Beam Width-
☐	0	2400	4.138...	36	22	14
☐	30	2410	4.220...	37	23	14
☐	60	2420	4.035...	37	23	14
☑	90	2430	4.060...	37	23	14
☐	120	2440	4.003...	37	24	13
☐	150	2450	3.805...	38	25	13
☐	180	2460	3.691...	39	26	13
☐		2470	3.633...	38	26	12
☐		2480	3.507...	39	27	12
☐		2490	3.496...	39	27	12
☐		2500	3.433...	39	27	12

II：3D Active test report of antenna

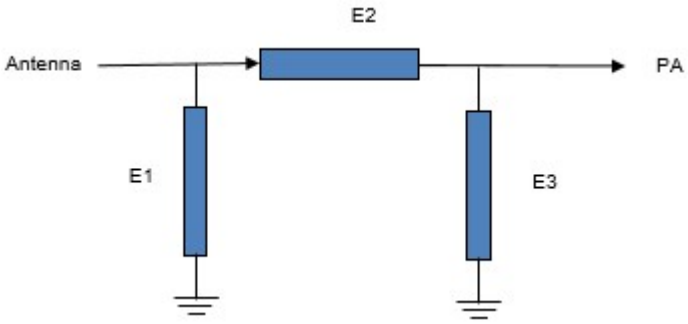
Free space	Channel	TRP（dBm）	TIS（dBm）
L	CH 0	1.6	-87.7
	CH 39	3.1	-88.5
	CH 78	2.8	-88.9

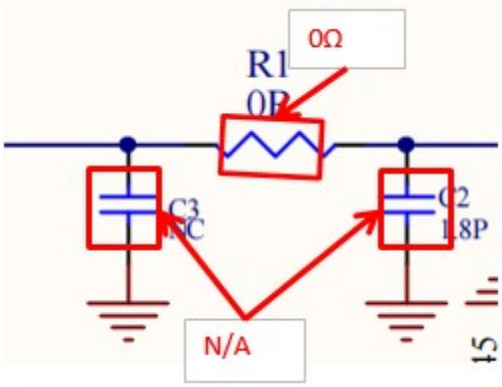
Headform	Channel	TRP（dBm）	TIS（dBm）
L	CH 0	0.9	-86.7
	CH 39	1.9	-87.6
	CH 78	1.7	-88.0

OTA Standard Chamber

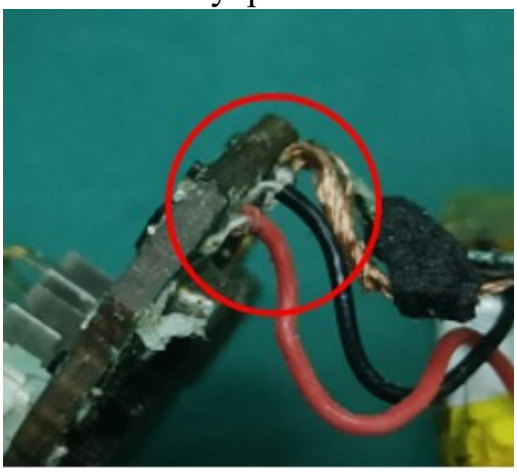
III：Matching circuit

Element	Value
E1(0201)	N/A
E2(0201)	0Ω
E3(0201)	N/A





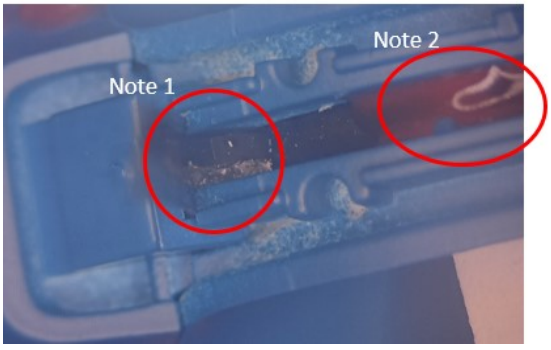
IV：Assembly precautions



1.As shown in the above figure, after welding the speaker wire and battery wire, they need to be bent towards the direction of the board and the wire should not be extended beyond the projection of the board (also pay attention to the wire position during assembly), the left and right ears are the same!

2. As shown in the above figure, the length of the speaker wire and battery wire has not been modified. The battery wire is evenly twisted (can be twisted 2-3 times), and the speaker wire is not processed. The two sets of wires need to be placed separately. The excess part of the battery wire and speaker wire should be placed at the edge of the shell (marked in red circle), and do not put too many speaker wires and battery wires into the wire slot! The left and right ears are the same.

3. As shown in the above figure, stick EV cotton near the speaker line of the battery to fix the speaker line, the left and right ears are the same!



4. As shown in Note 1 of the above figure, the size of the foam plug at the cable slot, the position of the plug, and the degree of downward pressure need to be consistent, otherwise there is a risk of frequency deviation consistency, just like the left and right ears!
5. As shown in Note 2 of the above figure, after pressing the speaker wire to the bottom, fix it with glue, and the left and right ears are the same!

V：Structure file