Antenna Part Specification

Project name：	Irobot
Material category：	WIFI Antenna
Version：	V1.0
Date：	2024.06.26

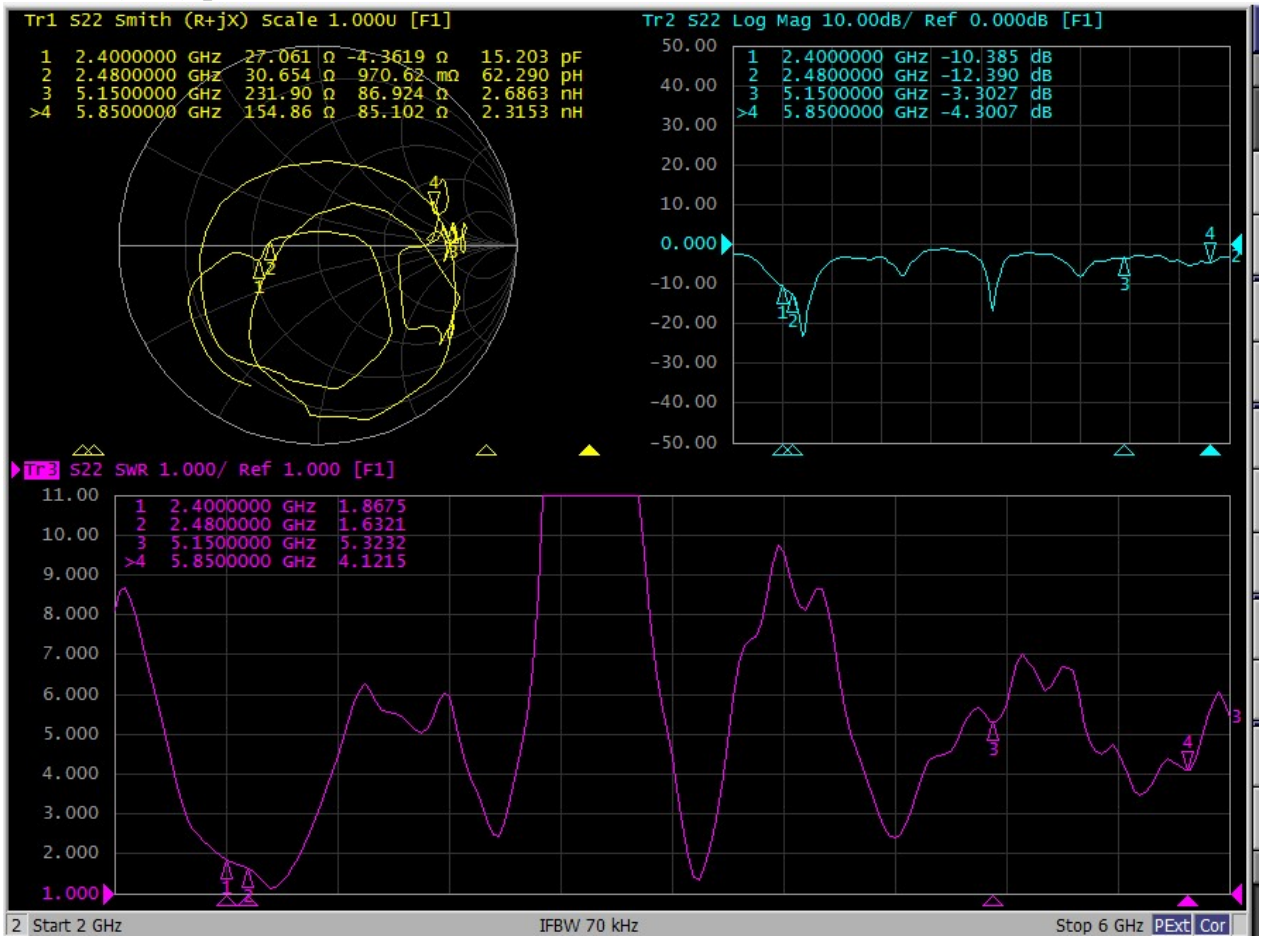
Contents

Change record			
Compile / change date	Reason for change	Changed content	Version
2024.06.26	First edition	First edition	V1.0

I：The report of passive data

Angilent E5071C

VSWR(S11) parameter：



Efficiency（2.4G）：

2.4G			
Frequency （MHz）	Gain (dBi)	Efficiency (dB)	Efficiency
2400	0.90	-1.80	66.10
2405	1.00	-1.80	66.20
2410	1.10	-1.80	66.60
2415	1.30	-1.80	66.80
2420	1.30	-1.70	66.90
2425	1.20	-1.80	66.50
2430	1.10	-1.80	65.50
2435	1.10	-1.90	64.20
2440	1.10	-1.90	64.10
2445	1.40	-1.90	65.00
2450	1.60	-1.90	65.30
2455	1.70	-1.90	64.30
2460	1.70	-2.00	63.20
2465	1.70	-1.90	64.60
2470	1.90	-1.60	68.60
2475	2.10	-1.40	73.00
2480	2.10	-1.30	74.70
2485	2.10	-1.30	73.50
2490	2.20	-1.50	71.60
2495	2.30	-1.60	70.00
2500	2.30	-1.60	69.60
AVG	1.60	-1.70	67.40

Efficiency（5150-5250MHz）：

5150-5250MHz			
Frequency （MHz）	Gain (dBi)	Efficiency (dB)	Efficiency
5150	0.6	-5.5	28.4
5155	0.5	-5.6	27.8
5160	0.4	-5.7	26.8
5165	0.2	-5.9	25.9
5170	0.2	-6.0	25.3
5175	0.2	-6.1	24.8
5180	0.2	-6.2	24.2
5185	0.0	-6.3	23.6
5190	0.0	-6.3	23.6
5195	0.1	-6.1	24.4
5200	0.3	-5.9	25.4
5205	0.6	-5.7	26.7
5210	0.6	-5.6	27.6
5215	0.8	-5.5	28.2
5220	0.9	-5.5	28.4
5225	0.9	-5.5	28.1
5230	0.8	-5.6	27.8
5235	0.8	-5.6	27.7
5240	0.8	-5.6	27.6
5245	0.8	-5.6	27.8
5250	0.9	-5.4	28.7
AVG	0.5	-5.8	26.6

Efficiency（5250-5350MHz）：

5250-5350MHz			
Frequency （MHz）	Gain (dBi)	Efficiency (dB)	Efficiency
5250	0.9	-5.4	28.7
5255	1.0	-5.3	29.7
5260	1.1	-5.1	30.7
5265	1.1	-5.1	31.0
5270	1.1	-5.2	30.1
5275	1.0	-5.4	28.9
5280	0.9	-5.5	28.0
5285	0.9	-5.6	27.7
5290	0.9	-5.6	27.5
5295	0.9	-5.6	27.8
5300	1.0	-5.5	28.3
5305	1.2	-5.3	29.3
5310	1.3	-5.2	30.0
5315	1.5	-5.2	30.4
5320	1.5	-5.2	30.0
5325	1.4	-5.4	29.1
5330	1.3	-5.6	27.8
5335	1.3	-5.7	26.8
5340	1.1	-5.9	25.7
5345	1.0	-6.0	25.0
5350	1.1	-6.0	25.2
AVG	1.1	-5.5	28.5

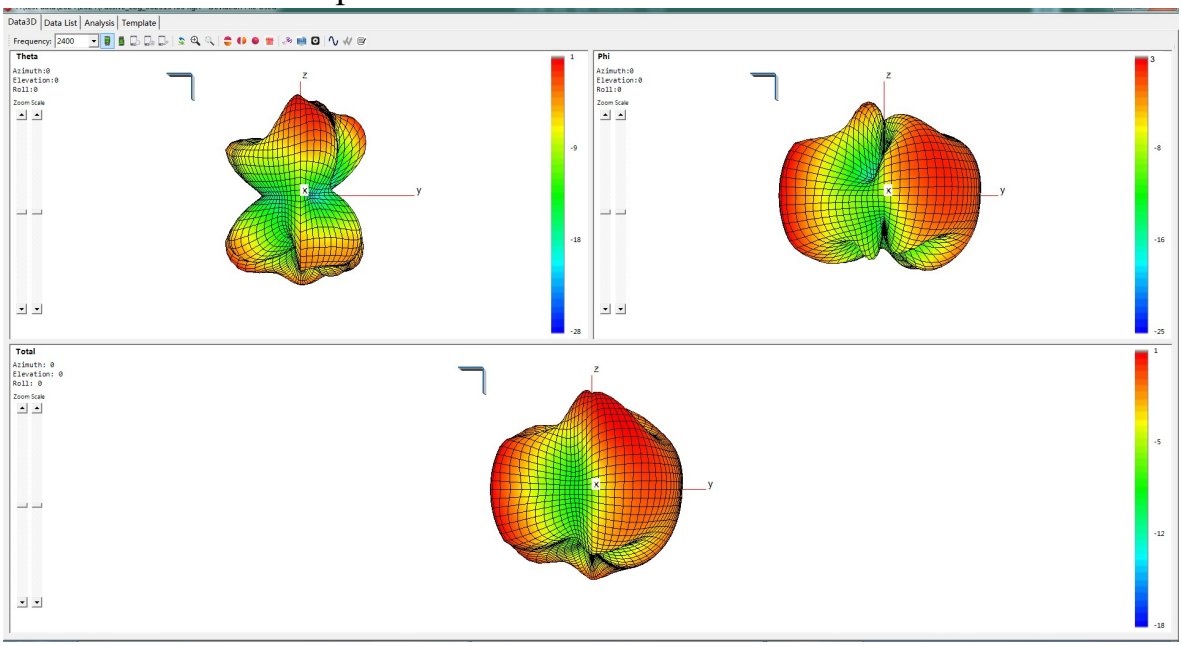
Efficiency（5470-5725MHz）：

5470-5725MHz			
Frequency（MHz）	Gain (dBi)	Efficiency (dB)	Efficiency
5470	1.8	-4.8	33.3
5475	2.0	-4.7	33.7
5480	1.7	-5.0	31.9
5485	1.5	-5.3	29.7
5490	1.4	-5.4	28.7
5495	1.5	-5.4	29.2
5500	1.7	-5.3	29.8
5505	1.6	-5.3	29.4
5510	1.4	-5.5	28.5
5515	1.5	-5.4	29.1
5520	1.8	-5.1	31.2
5525	2.1	-4.8	32.8
5530	2.3	-4.7	33.5
5535	2.1	-4.9	32.5
5540	1.9	-5.2	30.5
5545	1.8	-5.2	30.3
5550	1.9	-5.1	31.1
5555	2.0	-4.9	32.2
5560	2.2	-4.8	33.2
5565	2.3	-4.7	33.7
5570	2.5	-4.5	35.1
5575	2.7	-4.3	36.8
5580	2.8	-4.3	37.2
5585	2.7	-4.4	35.9
5590	2.4	-4.7	33.8
5595	2.0	-5.0	31.8
5600	1.8	-5.1	30.8
5605	1.7	-5.1	31.2
5610	1.5	-5.0	31.3
5615	1.5	-5.2	30.5
5620	1.4	-5.3	29.4
5625	1.3	-5.3	29.5
5630	1.7	-5.0	31.5
5635	2.0	-4.7	33.9
5640	2.1	-4.7	33.7
5645	1.8	-5.1	30.9
5650	1.6	-5.3	29.2
5655	1.7	-5.2	30.4
5660	2.0	-4.7	33.6
5665	2.1	-4.6	35.0
5670	1.9	-4.8	33.1
5675	1.6	-5.1	30.8
5680	1.5	-5.1	30.6
5685	1.6	-5.0	31.5
5690	1.7	-4.9	32.3
5695	1.8	-4.9	32.4
5700	1.8	-4.8	32.8
5705	1.7	-4.8	33.0
5710	1.7	-4.8	33.0
5715	1.5	-4.9	32.6
5720	1.5	-4.9	32.5
5725	1.7	-4.7	33.7
AVG	1.8	-5.0	32.0

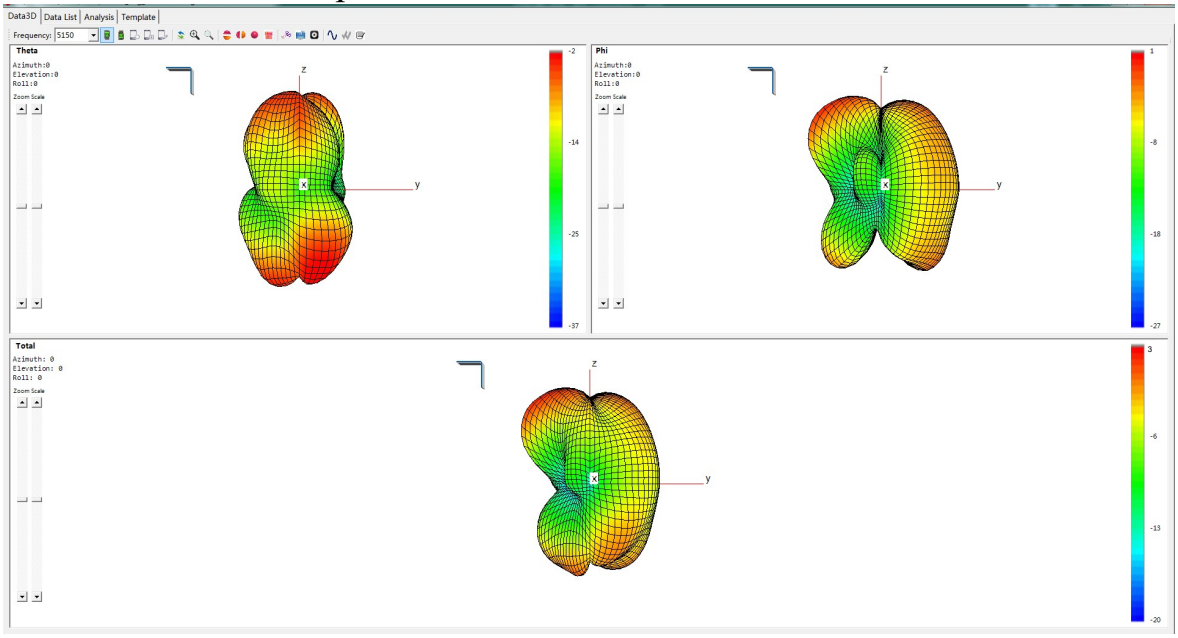
Efficiency（5725-5850MHz）：

5725-5850MHz			
Frequency （MHz）	Gain (dBi)	Efficiency (dB)	Efficiency
5725	1.7	-4.7	33.7
5730	1.8	-4.6	34.8
5735	2.0	-4.5	35.5
5740	2.1	-4.4	36.3
5745	2.1	-4.3	37.0
5750	2.3	-4.2	38.0
5755	2.3	-4.2	37.7
5760	2.1	-4.4	36.1
5765	1.8	-4.7	33.9
5770	1.7	-4.8	32.9
5775	1.6	-4.9	32.0
5780	1.4	-5.0	31.6
5785	1.4	-4.9	32.1
5790	1.4	-4.9	32.5
5795	1.4	-4.9	32.7
5800	1.4	-4.9	32.6
5805	1.4	-4.9	32.4
5810	1.4	-4.9	32.3
5815	1.5	-4.9	32.1
5820	1.5	-4.8	32.9
5825	1.7	-4.7	33.8
5830	1.7	-4.7	33.8
5835	1.9	-4.7	33.8
5840	1.9	-4.6	34.3
5845	2.0	-4.6	34.3
5850	2.0	-4.6	34.9
AVG	1.7	-4.7	34.0

3D Antenna radiation pattern（2.4G）:

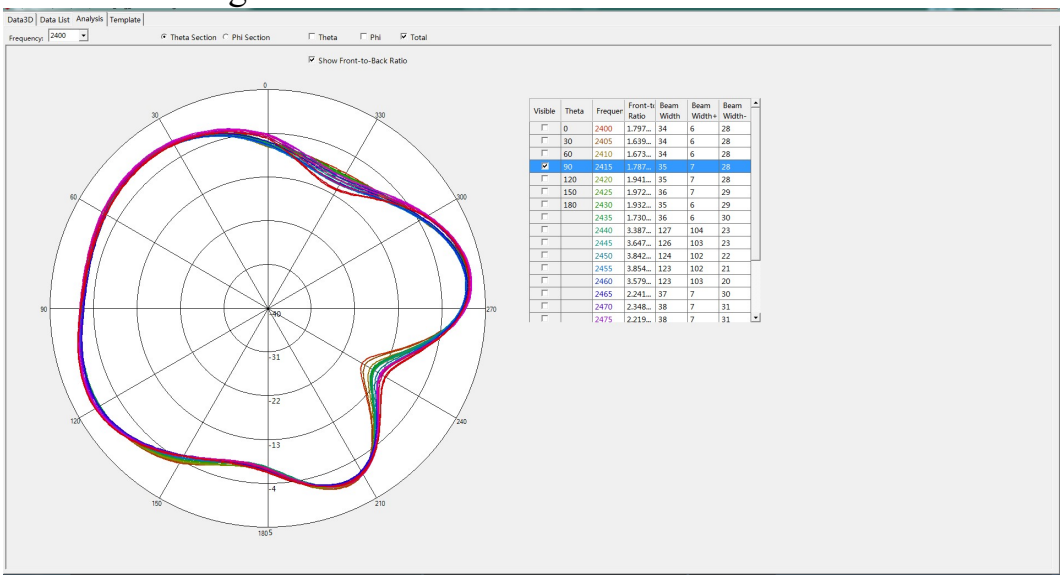


3D Antenna radiation pattern（5G）:

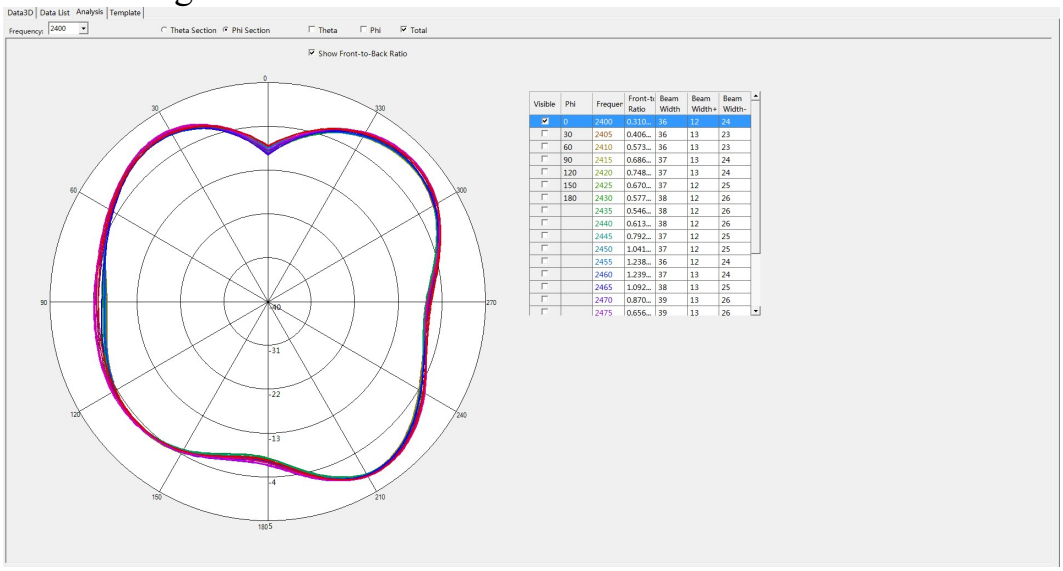


Antenna radiation pattern（2.4G）:

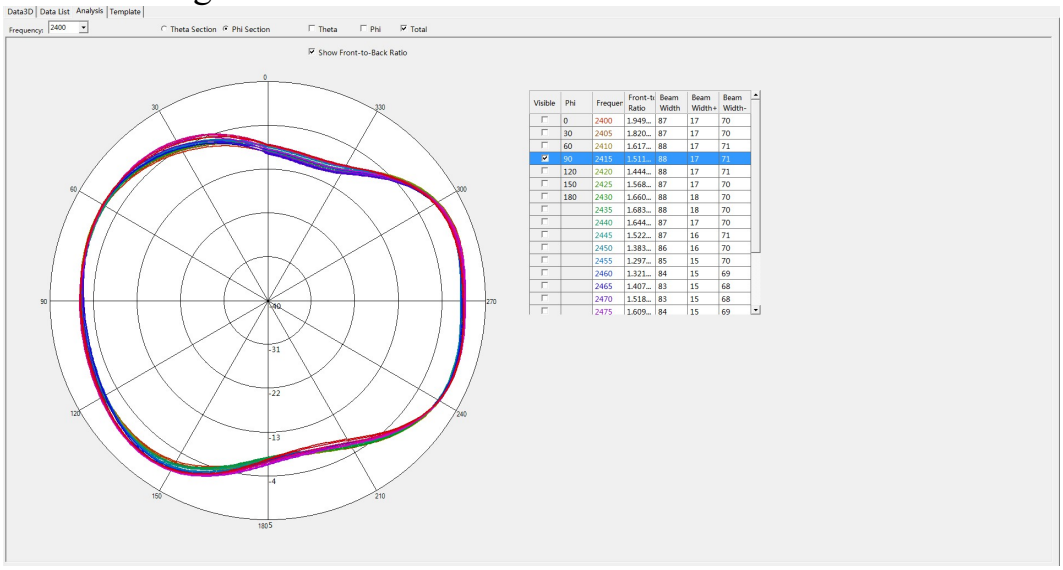
Theta=90.00deg



Phi=0.00deg

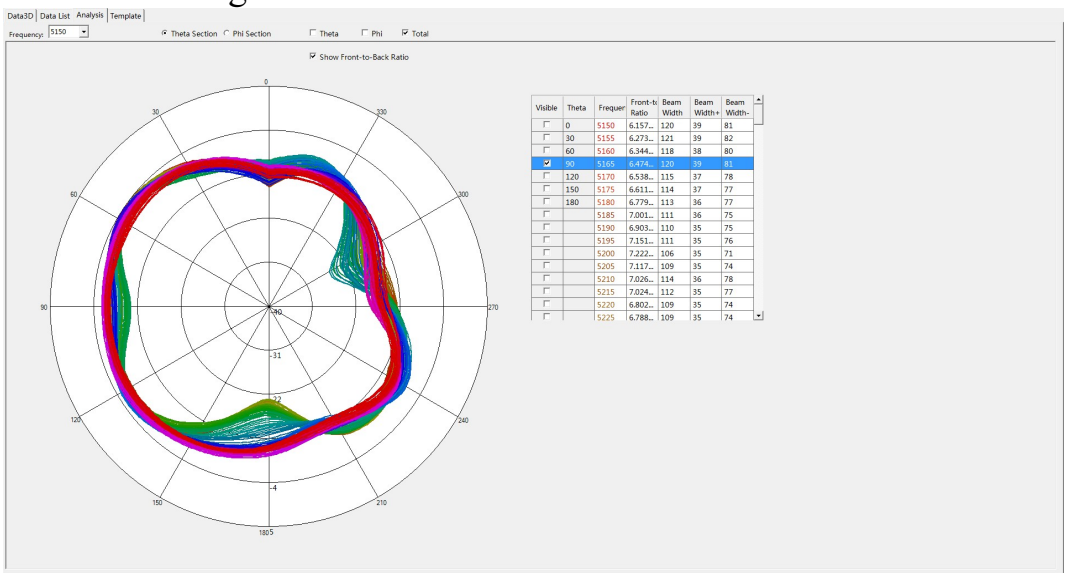


Phi=90.00deg



Antenna radiation pattern（5G）:

Theta=90.00deg



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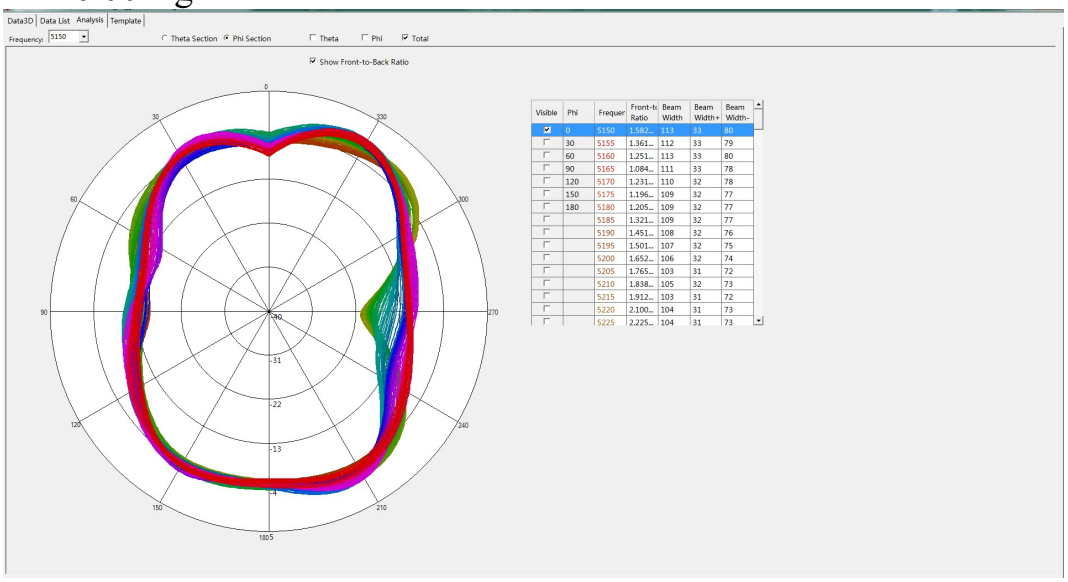
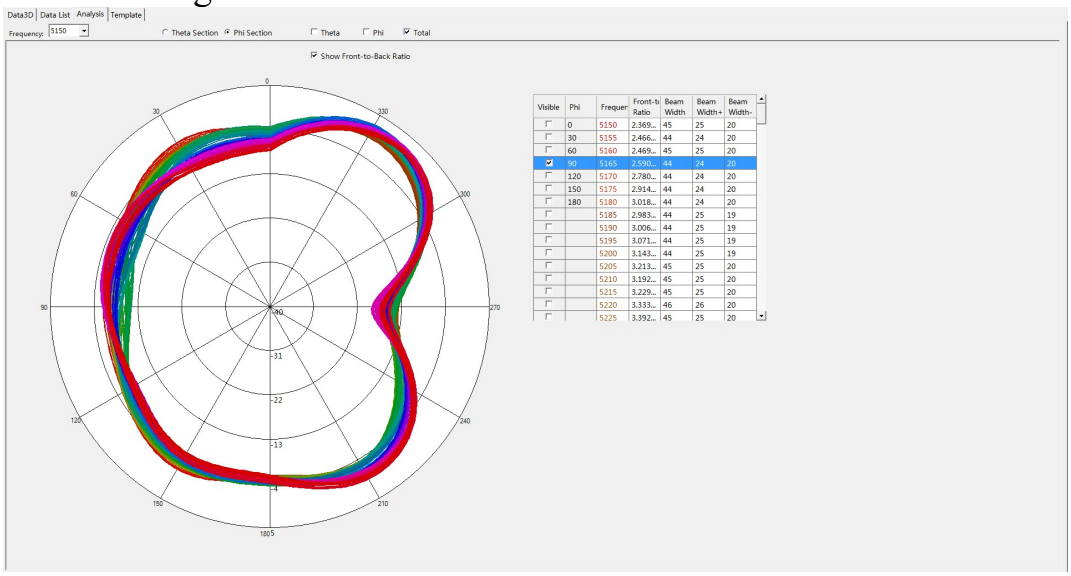


Phi=90.00deg



II：Antenna position

III：Structure file