INPAQ
INPAQ TECHNOLOGY CO., LTD

品名: WAG-F-LTE12-00-162 Specification **History List**

版本 REV.	修訂者 EDITOR	修訂頁次 PAGE	修訂內容 ITEMS OF CHANGE	申請日期 DATE	生效日期 VALID DATE	ECN 編號 ECN NO.
A0	Eason	ALL	正式发行	2024/06/11	2024/06/11	N/A

WAG-F-LTE12-00-162 Specification

1. Explanation of part number :

WAG	_	F	_	LTE12	_	00	_	162
(1)		(2)		(3)		(4)		(5)

(1) Product Type: Wireless Antenna

(2) Material: FPC

(3) Frequency 617~960/1710~2690 MHz

(4) Coaxial Cable Type : 00

(5) Suffix : 162

2. Storage Condition:

Temperature -40 to +85℃
Humidity 20 to 65 %RH
Recommended storage condition:

Store in room condition as listed below: Temperature -20℃~+45ºC, Humidity 80% Max.

3. Operating Condition:

Temperature -40 to +85℃
Humidity 10 to 85 %RH

4. Electrical Specification :

Those specifications were specially defined for WLAN model, and all characteristics were measured in the customer's machine. .

4-1. Frequency Band:

Frequency Band	MHz
LTE	617~960/1710~2690 MHz

4-2. Impedance

50 ohm nominal

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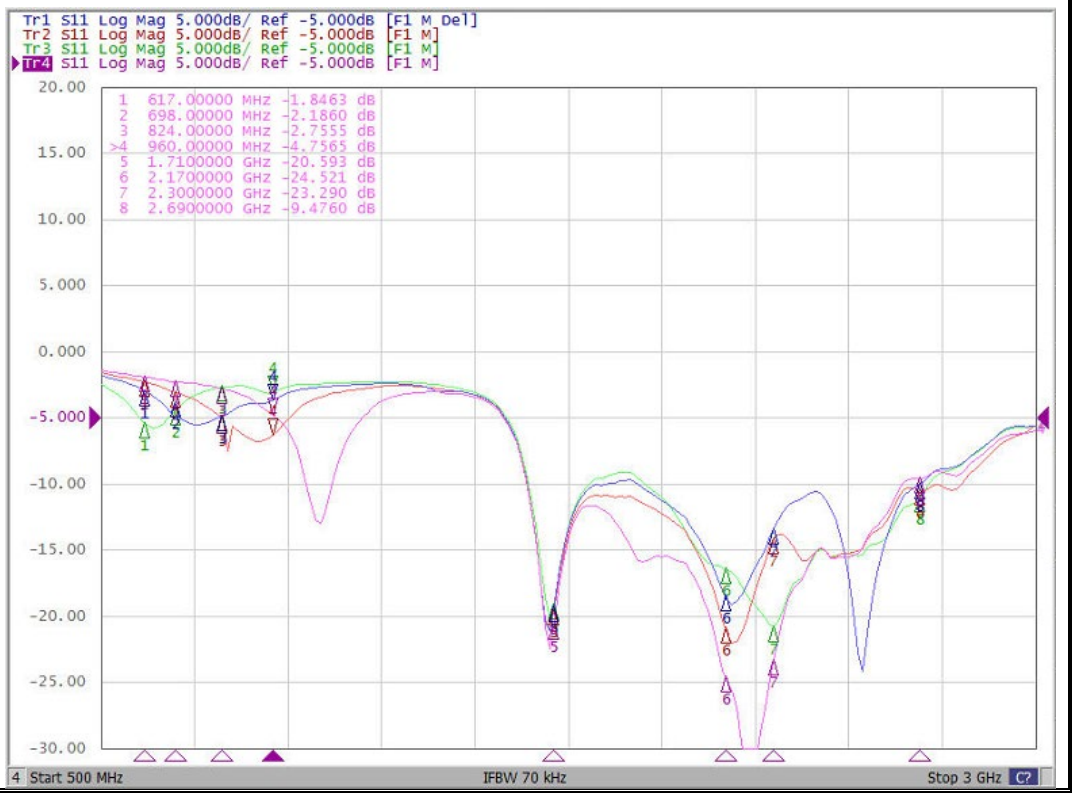
4-3. Matching circuit

None

4-4. VSWR

Frequency Band	617	960	1710	2690
4-4-1.Typical Value:	≦ 8.0	≦ 8.0	≦ 3	≦ 3
4-4-2.Measuring Method	1. A 50Ωcoaxial cable is connected to the pcb antenna. Then this cable is connected to a network analyzer to measure the VSWR. 2. Keeping this jig away from metal at least 20 cm.			
4-4-3.Picture				

4-5. Efficiency and Gain

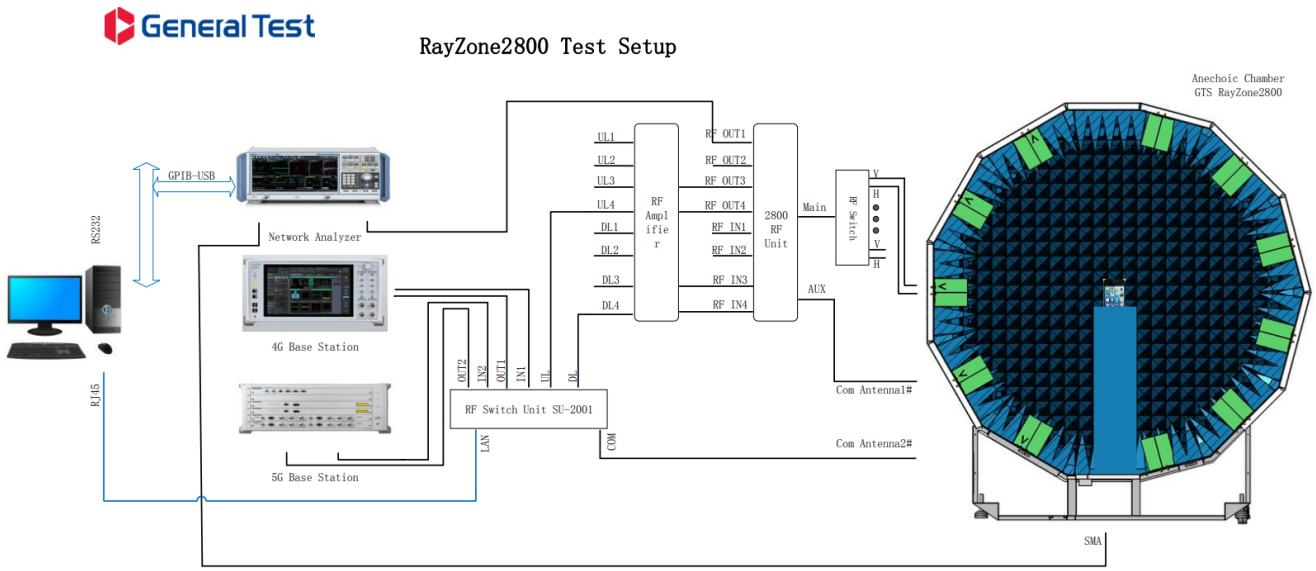
4-5.1 Measuring equipment

Measuring instrument：

Microwave chamber, Network analyzer, and standard antenna.

Instructions for microwave chamber：

This is a microwave chamber set up by our company in Suzhou，This microwave chamber belongs to a set of near-field measurement system. The size of the chamber is 2.95M * 3M * 3M.



The microware chamber, shown above, using a unique multi-probe technique，The aim is to reduce the measurement time of the whole measurement system. The measuring system use multi-probe array instead of single probe to scan the measured surface of the antenna under test, a single probe has the capability of measuring orthogonal polarization amplitude and phase, it also has a wide frequency range, the corresponding multi-probe array is switched quickly by electronic switch, greatly improved the measurement efficiency.

The probe model：MA186960A(400MHz～7.5GHz) . Because of its capability of broadband frequency and the orthogonal polarization function, the number of probes needed to be equipped with the system is reduced; The small size of the probe reduces the coupling between the probes, make it is possible to insert probes of other frequency bands between probes, then a single system can support a wider frequency range.

4-5.2 Efficiency and Gain

LTE

Frequency (MHz)	Main ANT Gain(dBi)	Main ANT Eff.(dB)	Main ANT Eff.(%)	Frequency (MHz)	Main ANT Gain(dBi)	Main ANT Eff.(dB)	Main ANT Eff.(%)
617	-12.68	-17.01	1.99	**1710**	-0.13	-4.58	34.84
663	-11.92	-16.71	2.13	**1755**	-0.35	-4.65	34.27
704	-11.09	-15.97	2.53	**1805**	-0.63	-4.79	33.21
729	-10.8	-15.27	2.97	**1850**	-0.3	-5.09	31.01
746	-10.36	-14.37	3.66	**1880**	-1.14	-5.27	29.69
751	-10.03	-13.86	4.11	**1920**	-0.45	-5.38	28.95
756	-8.42	-13.01	5	**1960**	-0.96	-5.63	27.38
777	-7.74	-12.71	5.36	**1990**	-0.88	-5.56	27.77
791	-7.54	-12.54	5.58	**2010**	-0.79	-5.45	28.48
806	-7.55	-12.6	5.5	**2040**	-0.69	-5.28	29.65
815	-8.03	-12.92	5.1	**2070**	0.05	-5.02	31.47
821	-8.3	-13.14	4.86	**2110**	-0.12	-5.08	31.02
824	-8.15	-13.03	4.98	**2140**	-0.56	-5.19	30.25
836	-7.9	-12.8	5.25	**2155**	-0.28	-5.28	29.62
847	-7.59	-12.42	5.72	**2170**	-0.63	-5.53	27.97
849	-7.07	-12.33	5.85	**2300**	-1.14	-6.01	25.06
862	-6.51	-12.15	6.1	**2350**	-1.2	-6.19	24.04
869	-5.59	-11.65	6.83	**2400**	-1.08	-6.33	23.3
880	-5.14	-11.15	7.67	**2450**	-1.54	-6.77	21.02
894	-4.82	-10.48	8.96	**2500**	-0.03	-5.31	29.45
897	-4.66	-10.04	9.9	**2535**	-1.67	-6.97	20.08
915	-4.55	-9.77	10.53	**2570**	-2.07	-7.2	19.04
925	-3.8	-9.42	11.44	**2620**	-2.11	-7.24	18.9
942	-2.95	-9.11	12.27	**2655**	-2.35	-7.38	18.27
960	-2.63	-8.98	12.66	**2690**	-2.43	-7.51	17.74

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4-5.3 OTA And Data 3D

BAND	CH	TRP	TIS	TRP	TIS
B2(10M)	18650	19.63		19.45	
	18900	20.01		19.77	
	19150	19.74	-98.12	19.56	-98.23
B4(10M)	20000	20.47		20.34	
	20175	20.18		20.02	
	20350	19.94	-96.57	19.82	-96.92
B66(10M)	132022	20.36		20.25	
	132322	20.22		20.09	
	132622	20.03	-95.46	19.97	-95.72
B5(10M)	20450	16.14		16.46	
	20525	16.23		16.55	
	20600	15.91	-94.27	16.28	-94.46
B12(10M)	23060	15.99		15.96	
	23095	16.59		16.81	
	23130	16.43	-91.65	16.59	-91.88
B13(10M)				16.2	
	23230	16.34	-93.94	16.26	-94.14
				15.81	
B25(10M)	26090	19.94		19.66	
	26365	20		19.71	
	26640	19.54	-97.58	19.22	-97.33
B26(10M)	26740	16.06		16.01	
	26865	16.15		16.18	
	26990	16.03	-93.37	16.01	-93.28
B41(20M)	40340	16.83		16.73	
	40620	16.67		16.57	
	41140	15.45	-91.46	15.29	-91.53
B71(10M)	133172	17.16		17.37	
	133297	17.1		17.28	
	133422	16.83	-92.76	17.1	-92.93
GSM					
GSM850	128	25.76		25.68	
	190	25.93		25.95	
	251	25.46	-100.11	25.58	-99.75
GSM900	975	25.98		26.08	
	38	25.5		25.63	
	124	25.09	-102.81	25.21	-102.53
GSM1800	512	26.8		26.63	
	699	26.69		26.58	
	885	26.61	-106.36	26.53	-106.45
GSM1900	512	25.74		25.51	
	661	25.6		25.5	
	810	25.56	-106.41	25.57	-106.23
WCDMA					

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W B2	9262	19.79		19.65	
	9400	19.89		19.7	
	9538	19.67	-110.55	19.48	-110.72
W B4	1312	20.25		20.05	
	1413	20.1		19.86	
	1513	19.93	-110.05	19.73	-110.24
W B5	4132	15.74		15.88	
	4183	15.84		15.99	
	4233	15.94	-107.75	16.12	-107.85

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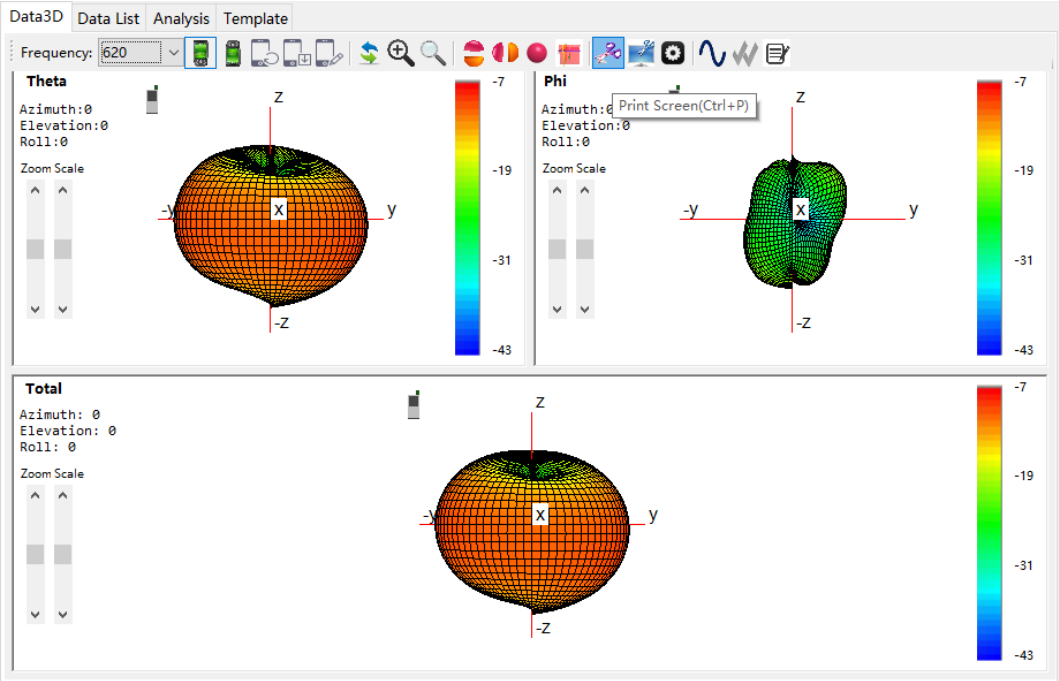
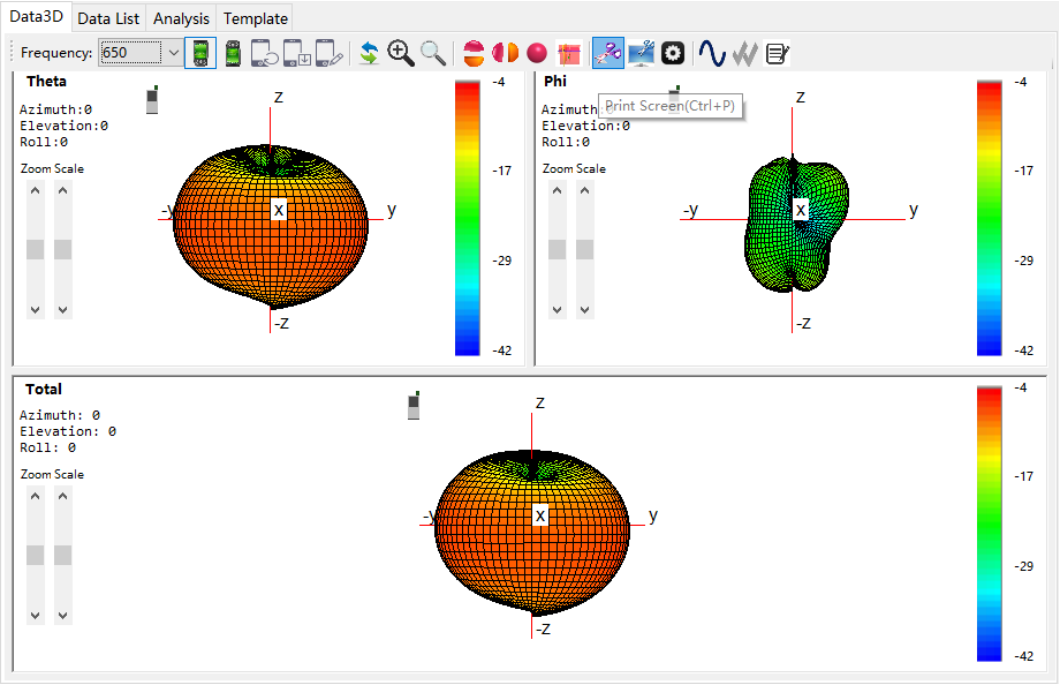
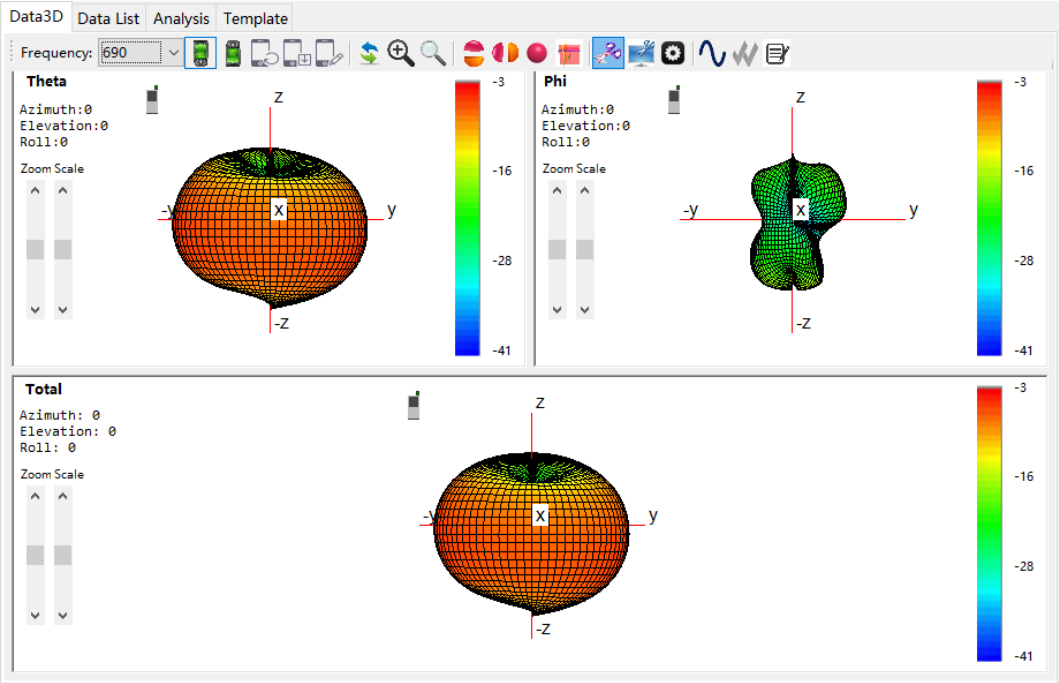
4-5.4 Data 3D



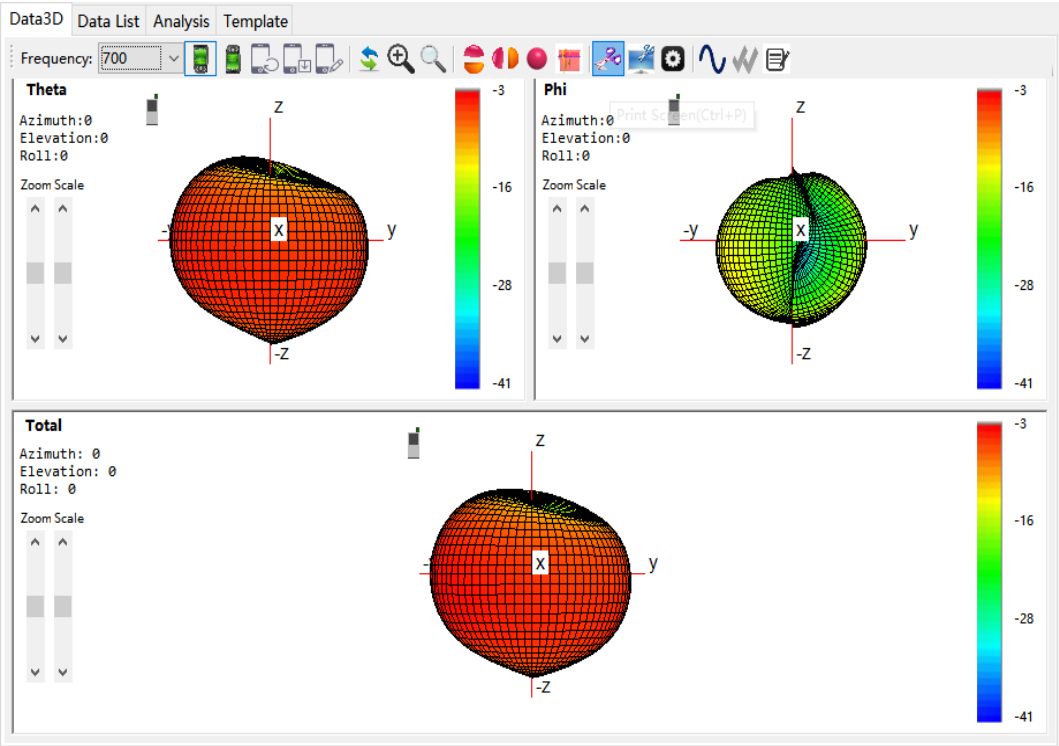
620MHz



650MHz



690MHz



700MHz

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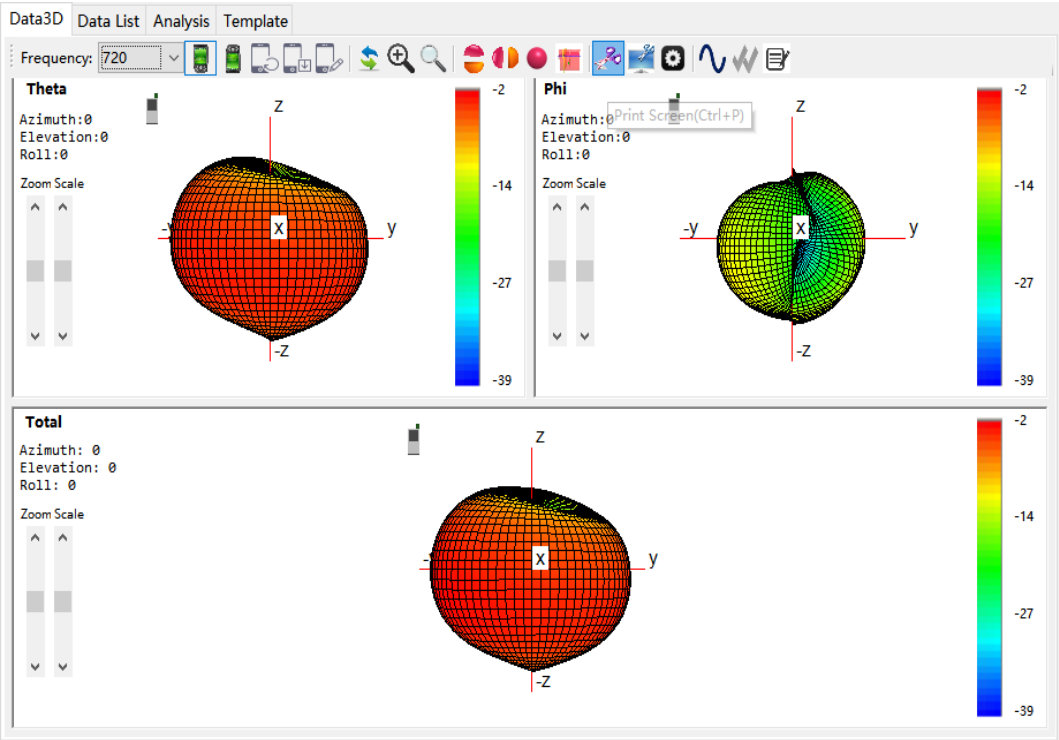
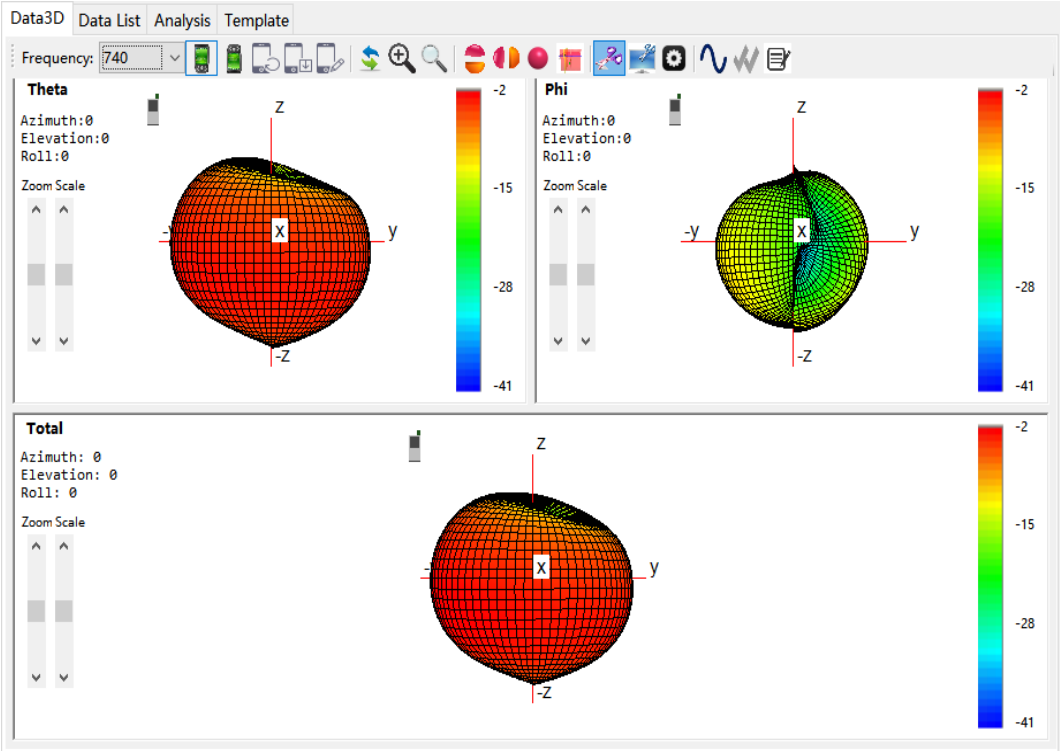


720MHz



740MHz

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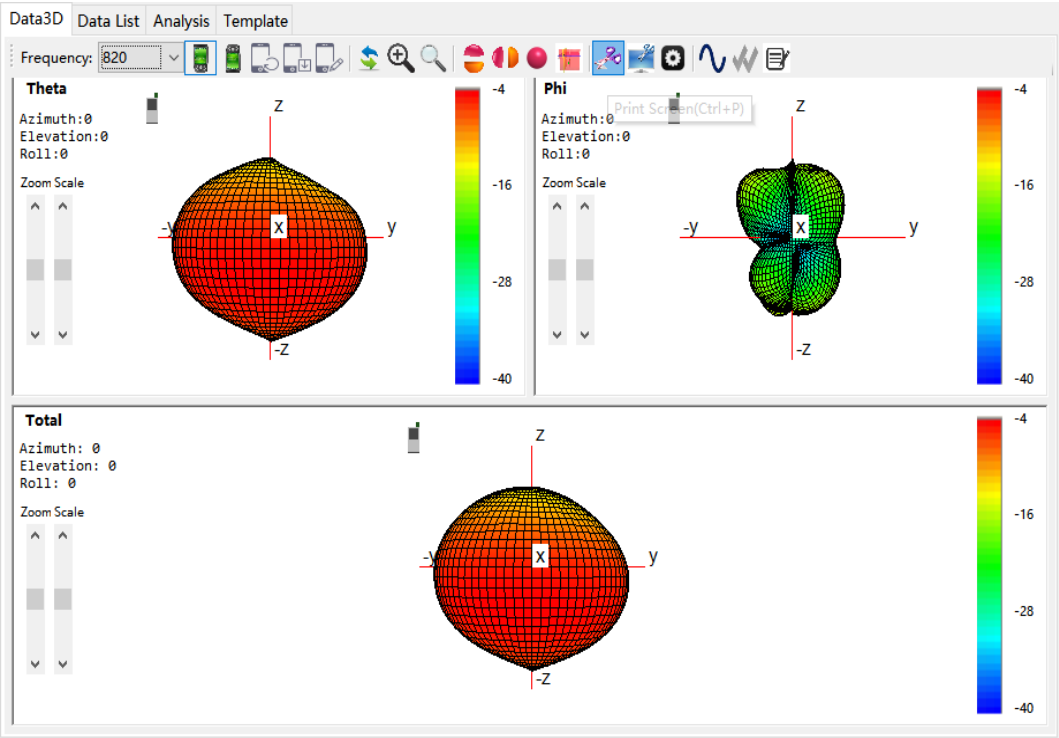
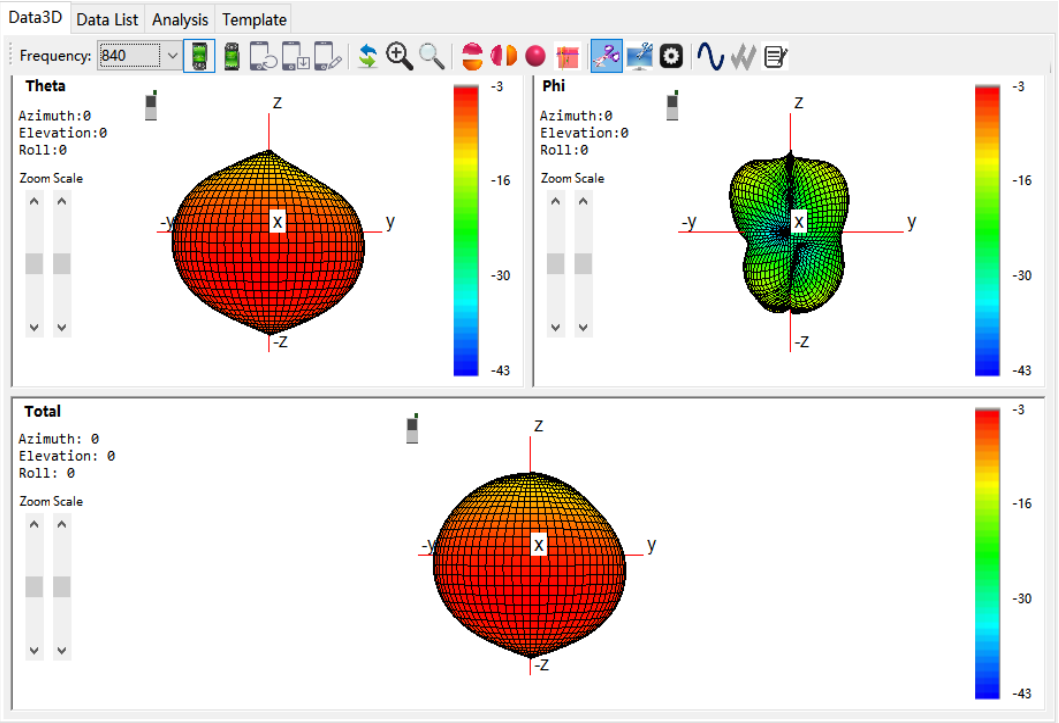


820MHz



840MHz

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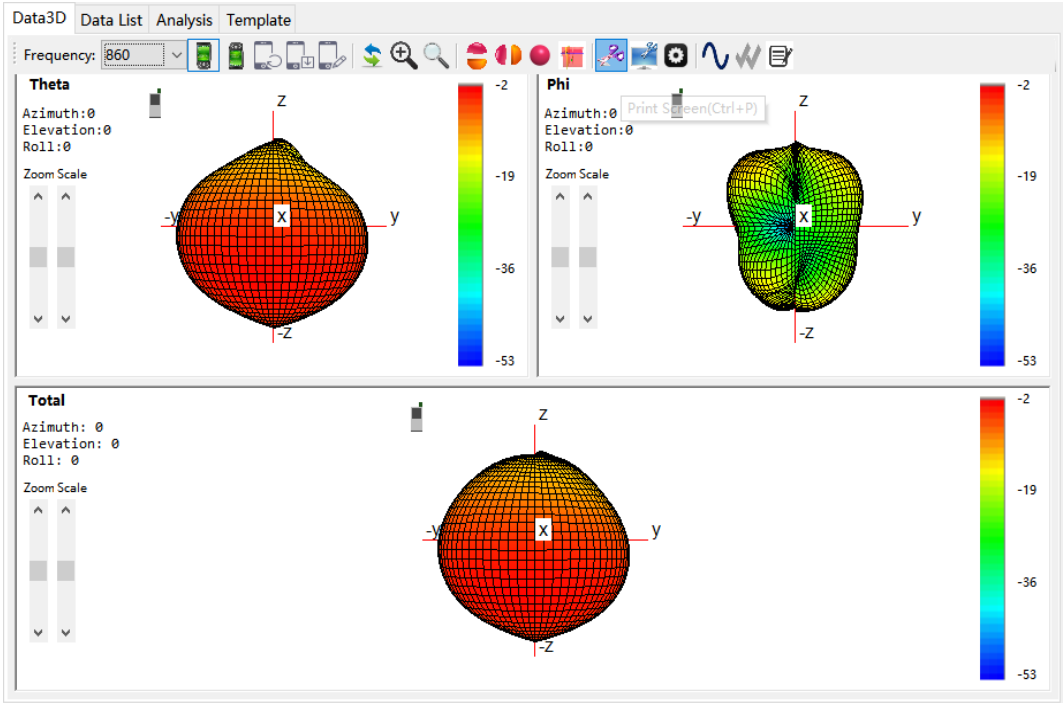
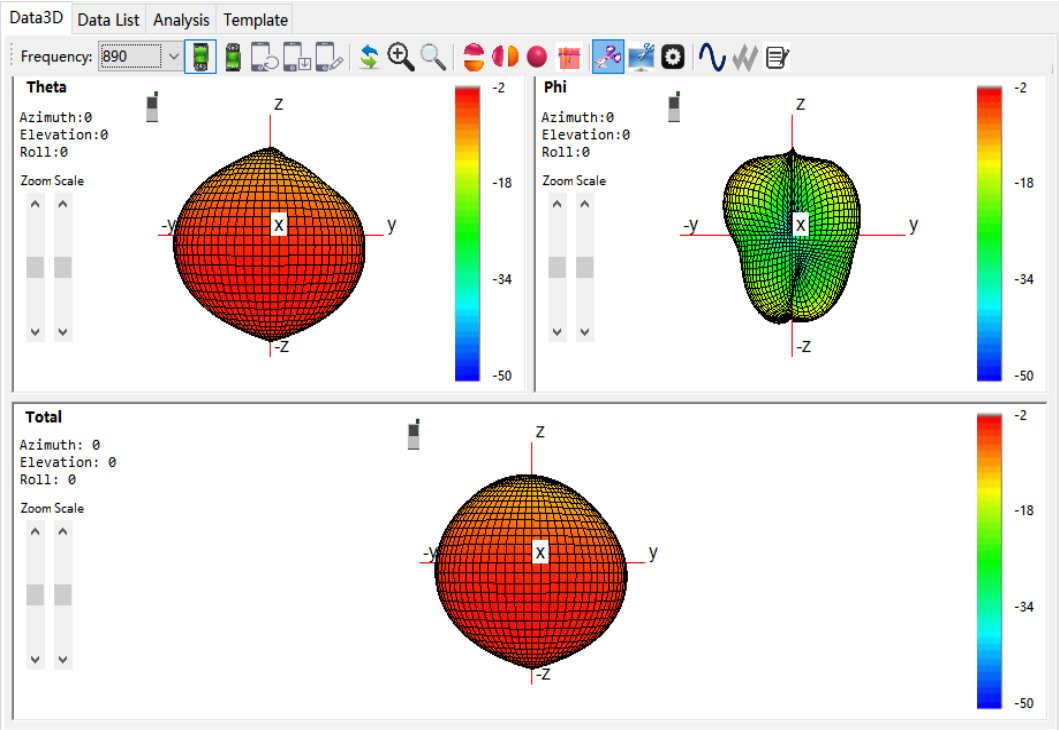


860MHz



890MHz

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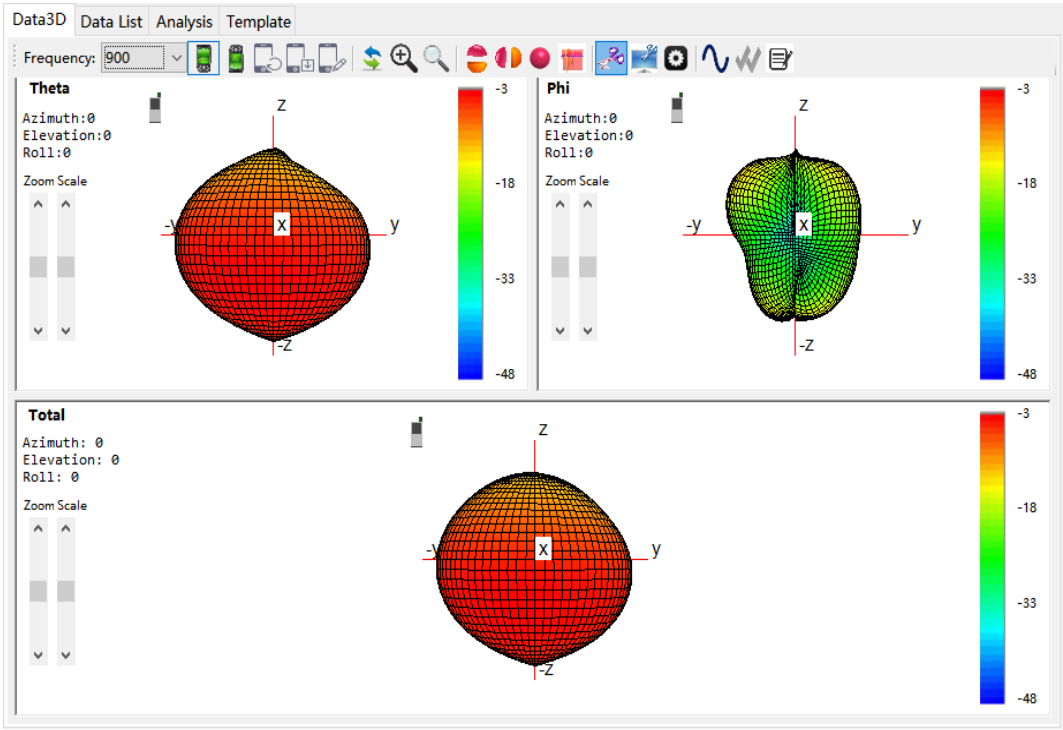

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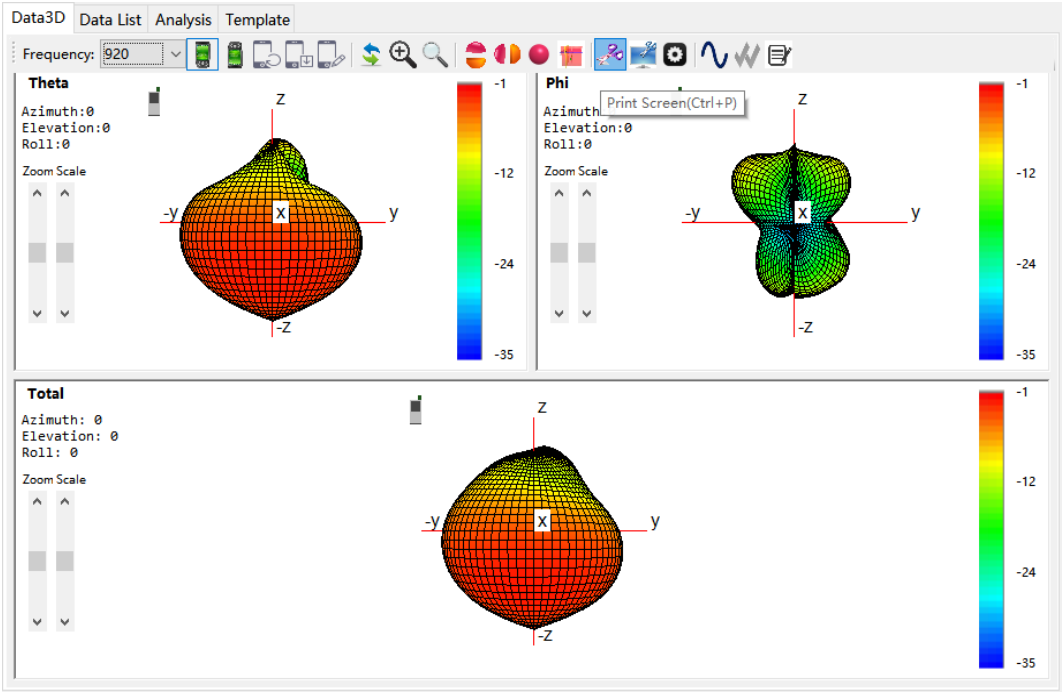

920MHz

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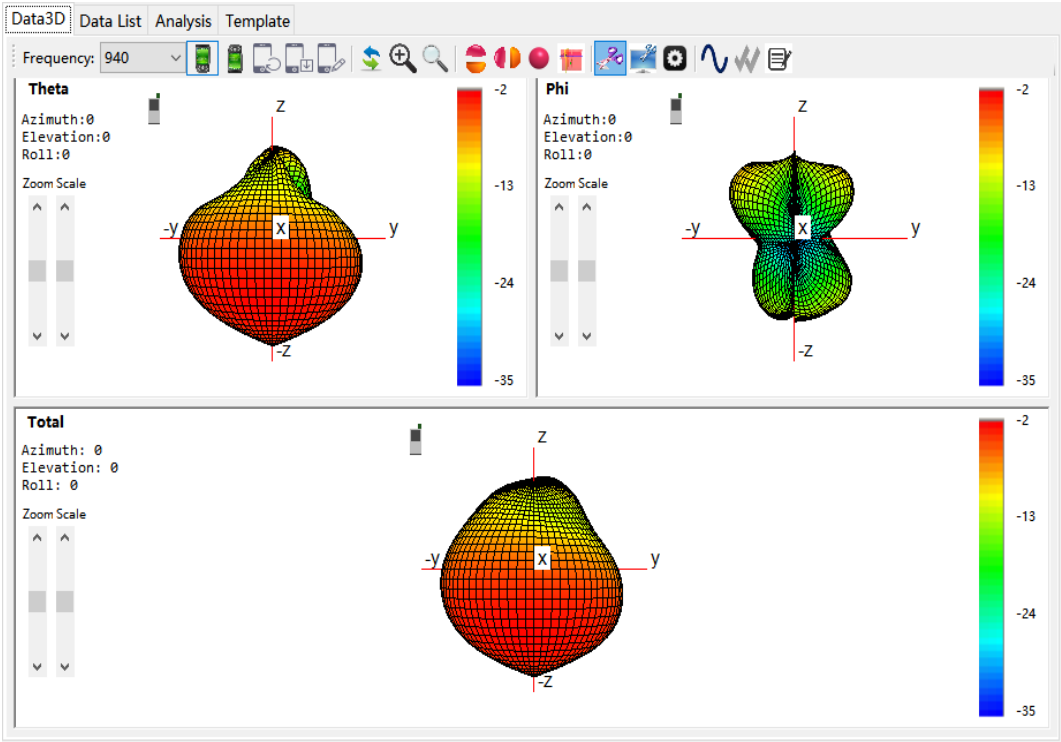
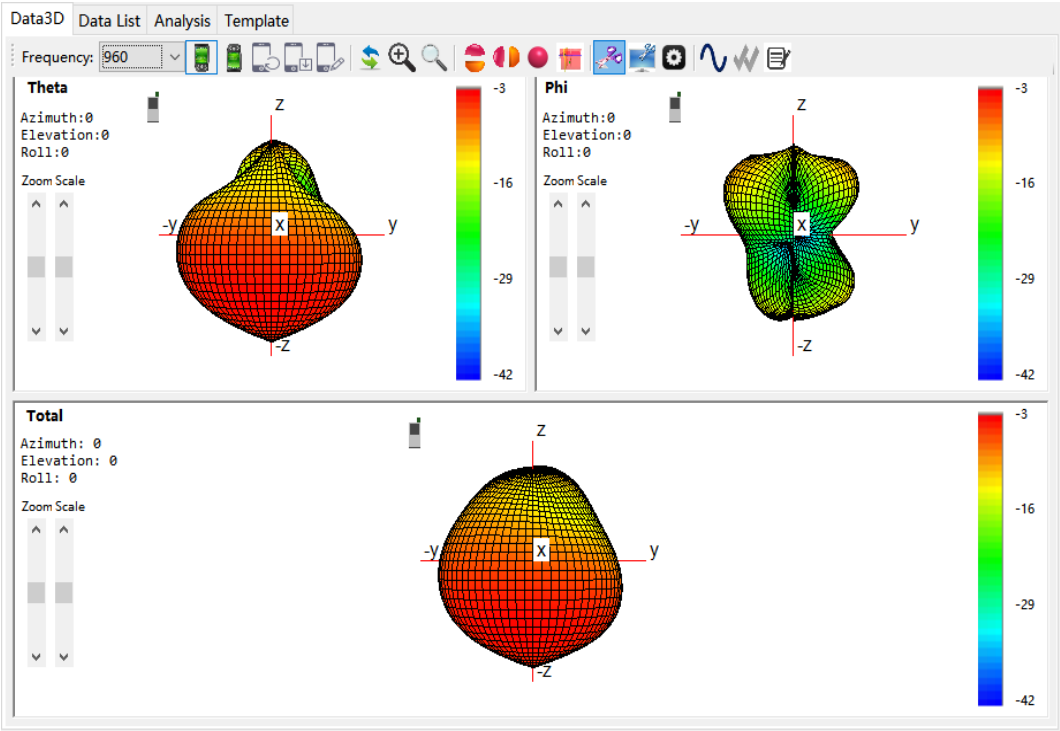


940MHz



960MHz

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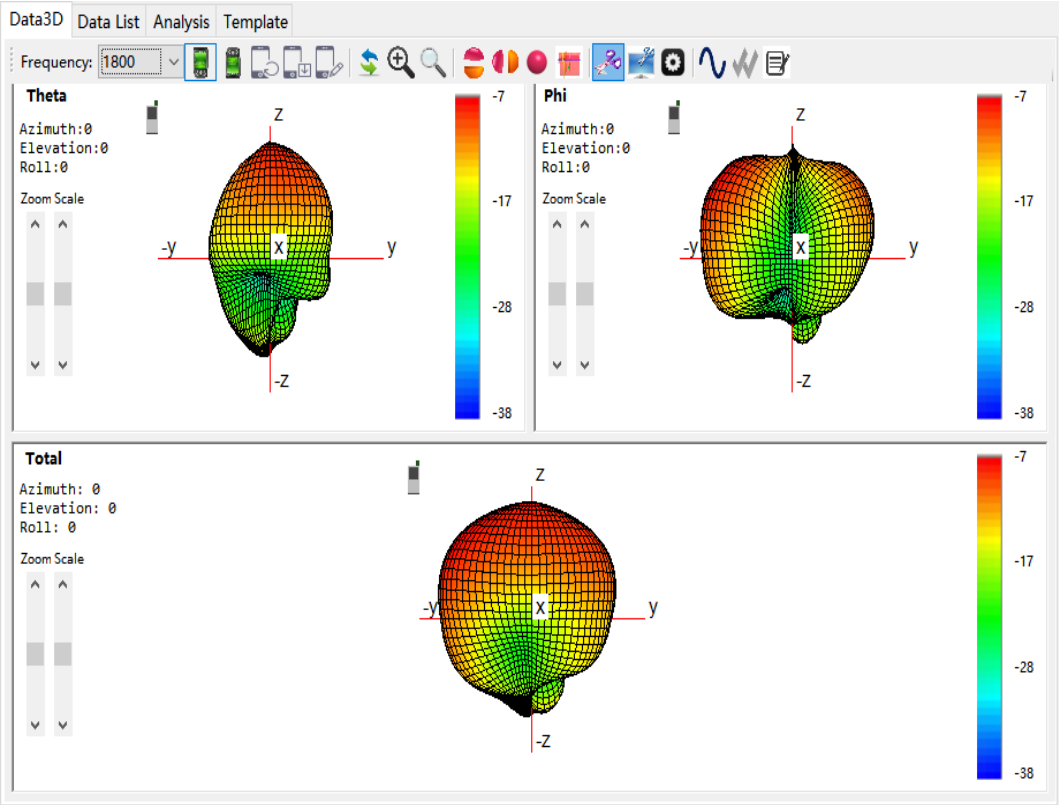
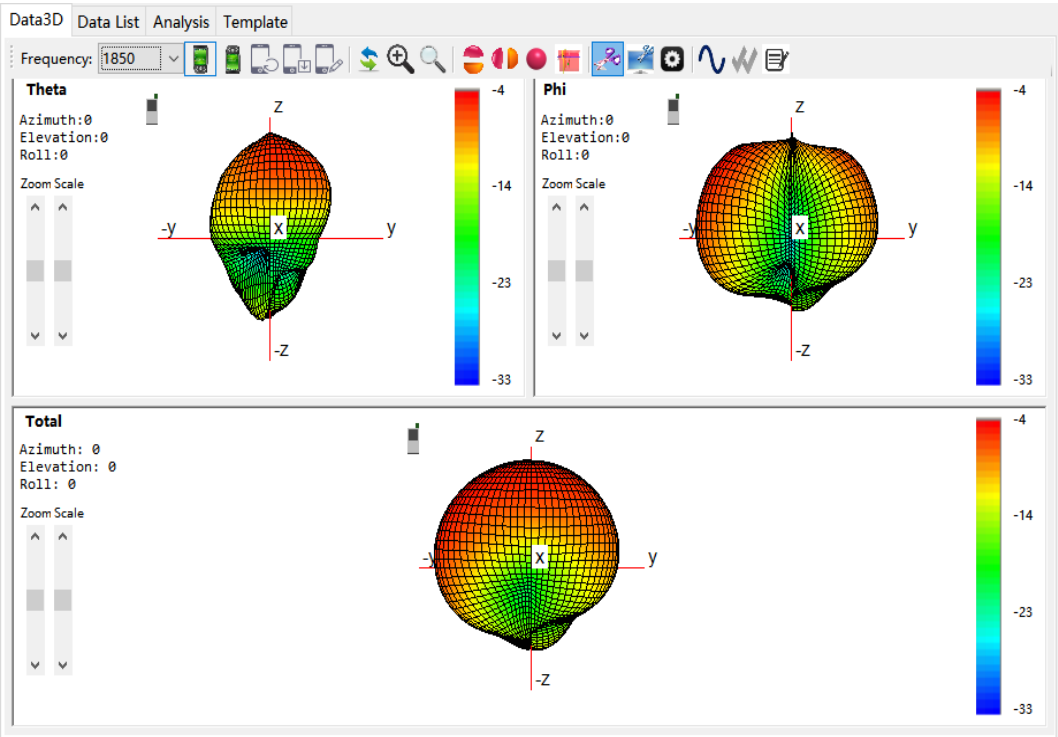


1710MHz



1850MHz

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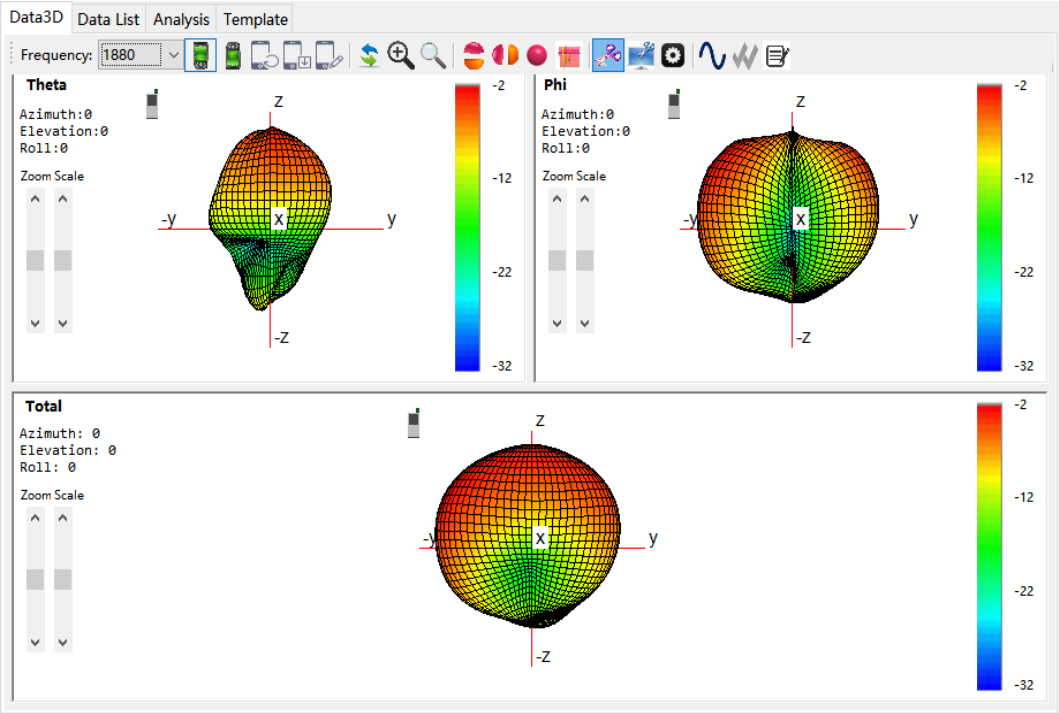
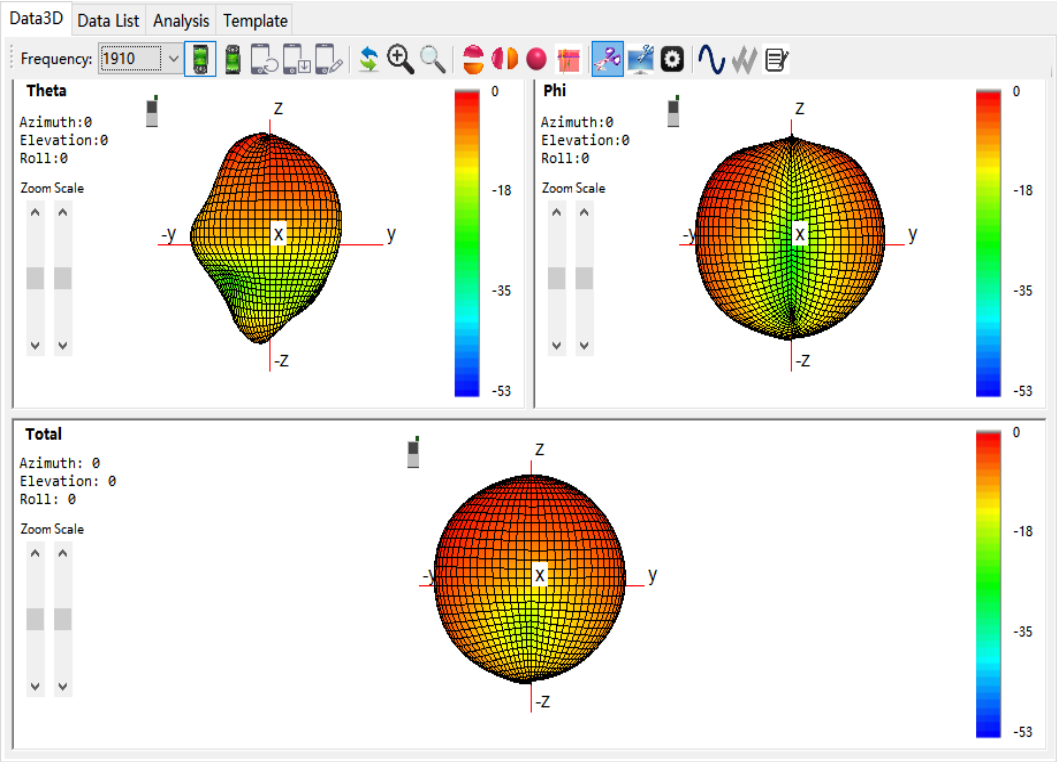


1880MHz



1910MHz

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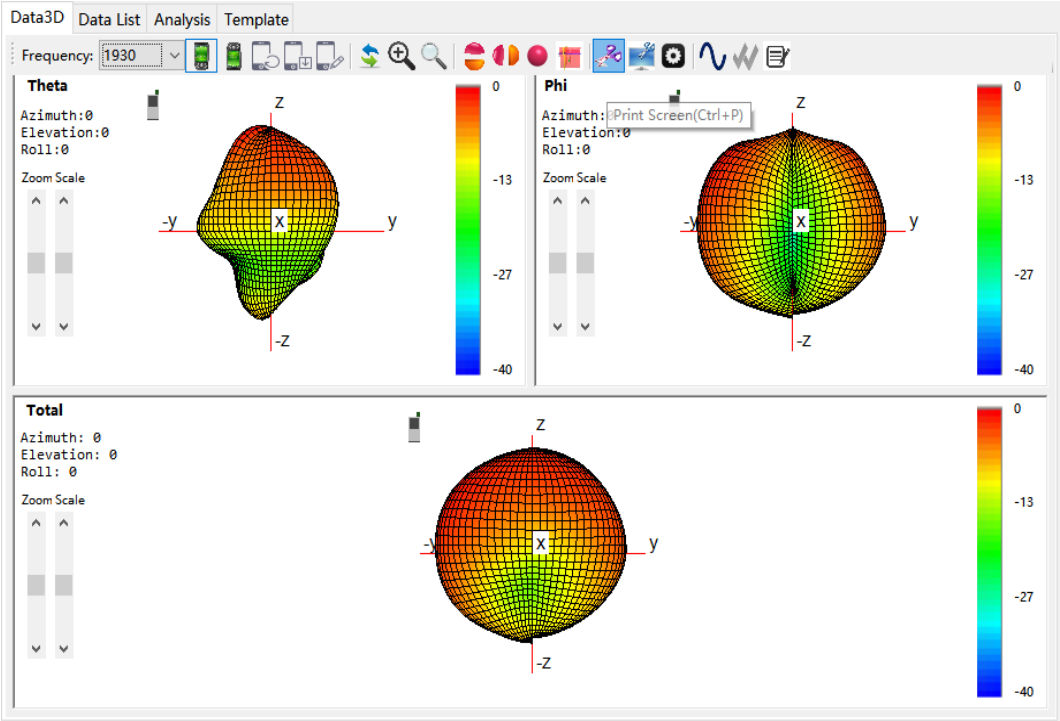
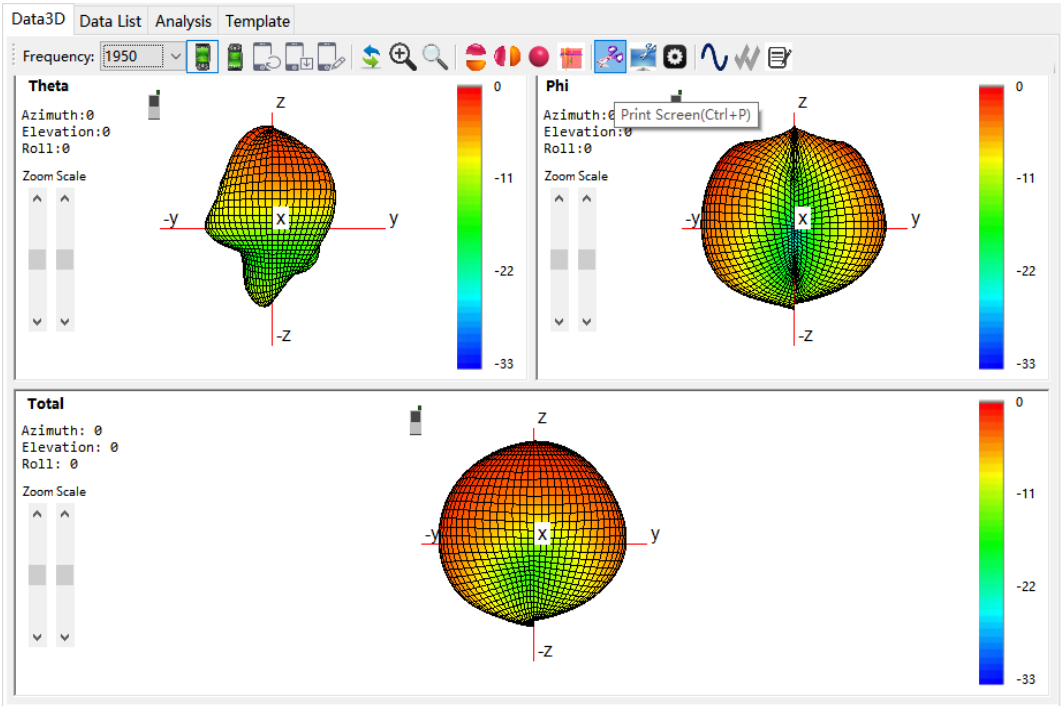
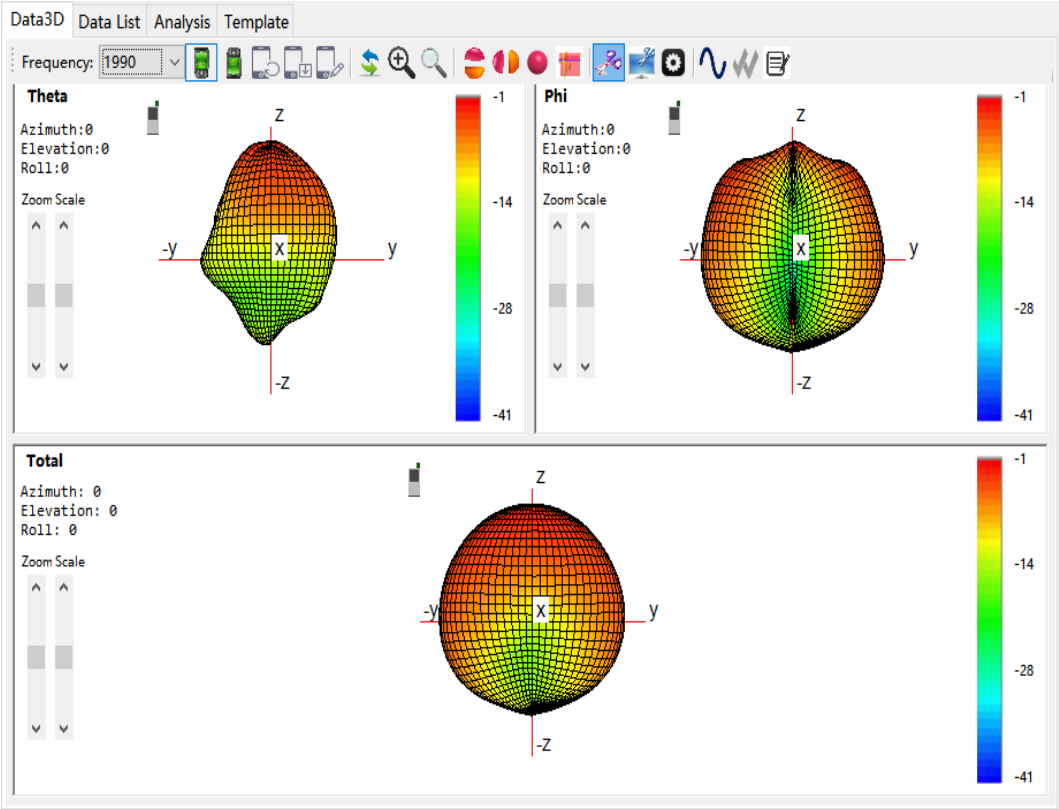


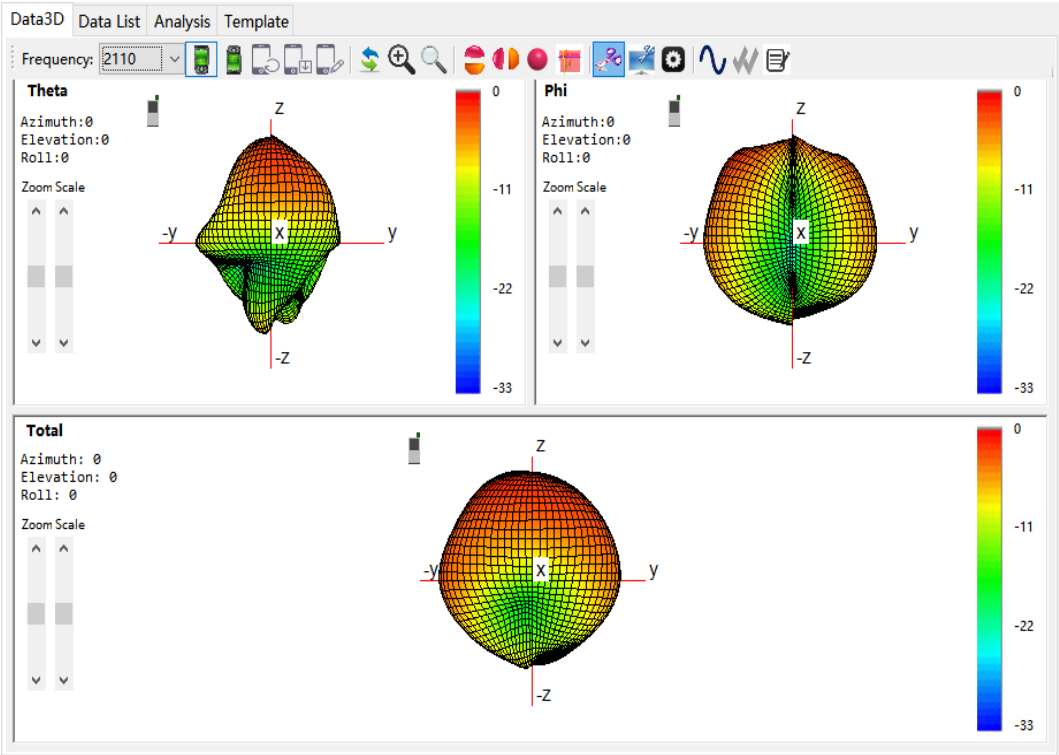
1930MHz



1950MHz



1990MHz



2110MHz

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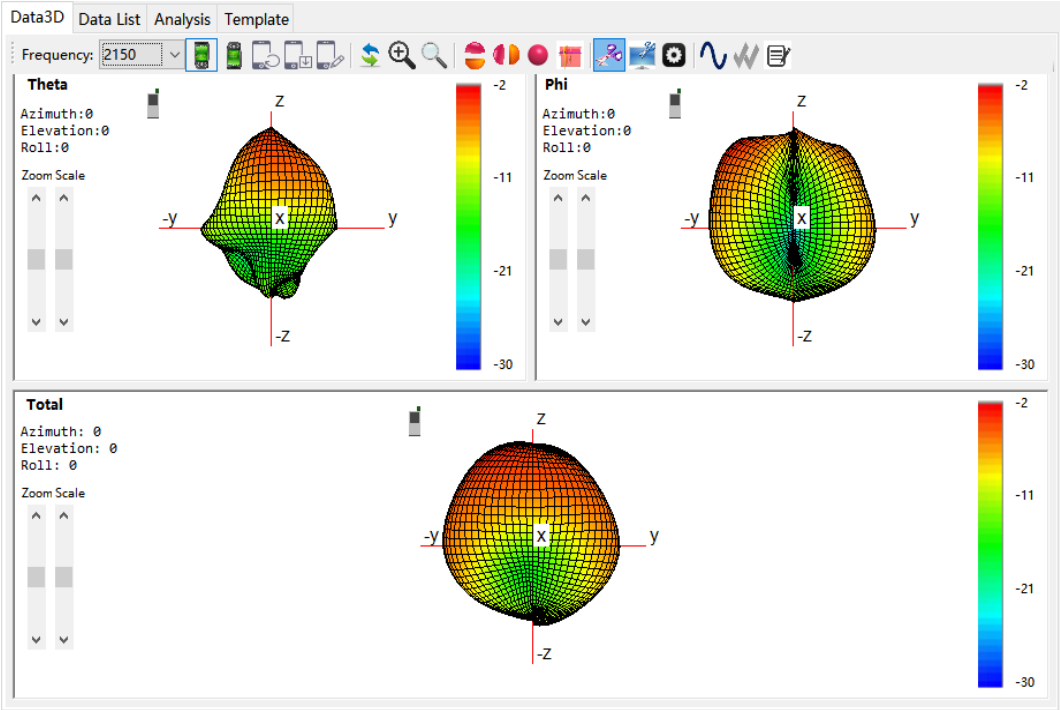
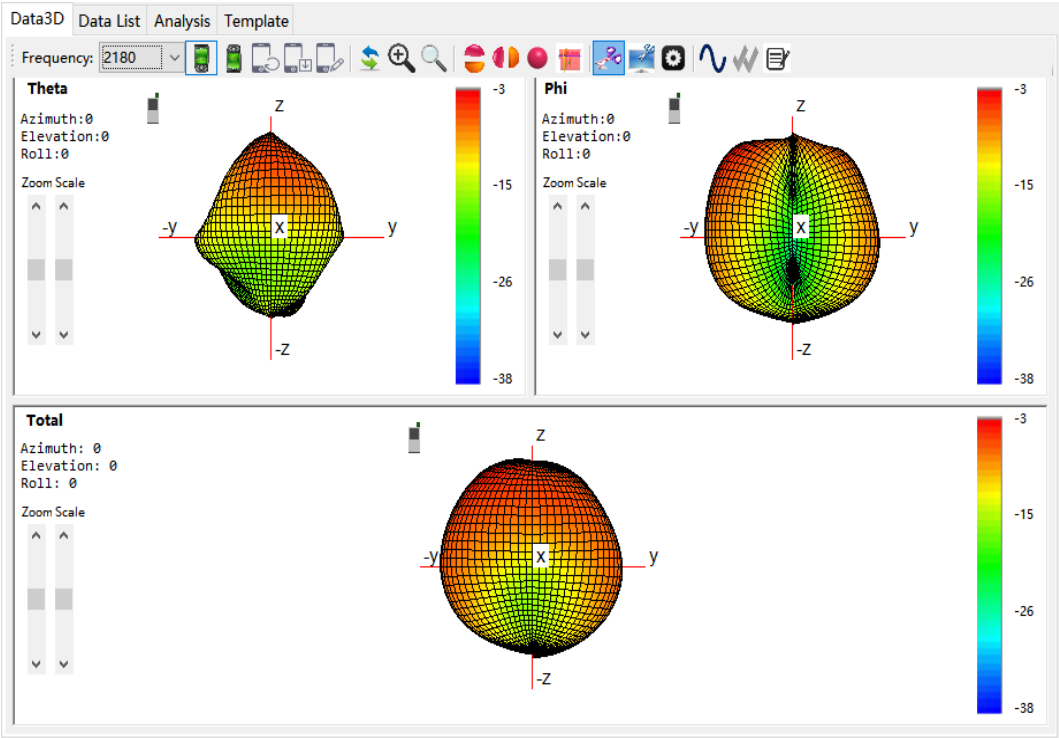
DESIGNED BY:张翔	APPROVED BY : 徐克文	
TITLE: WAG-F-LTE12-00-162 Specification	DOCUMENT NO. ENS000195620	PAGE REV. A0



2150MHz



2180MHz

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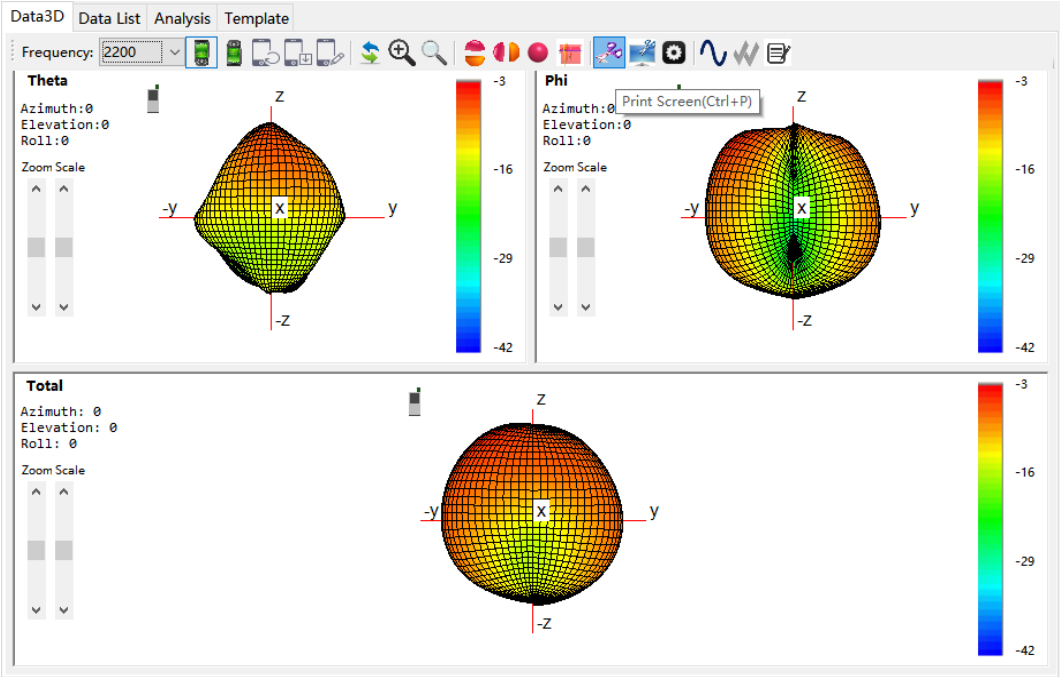
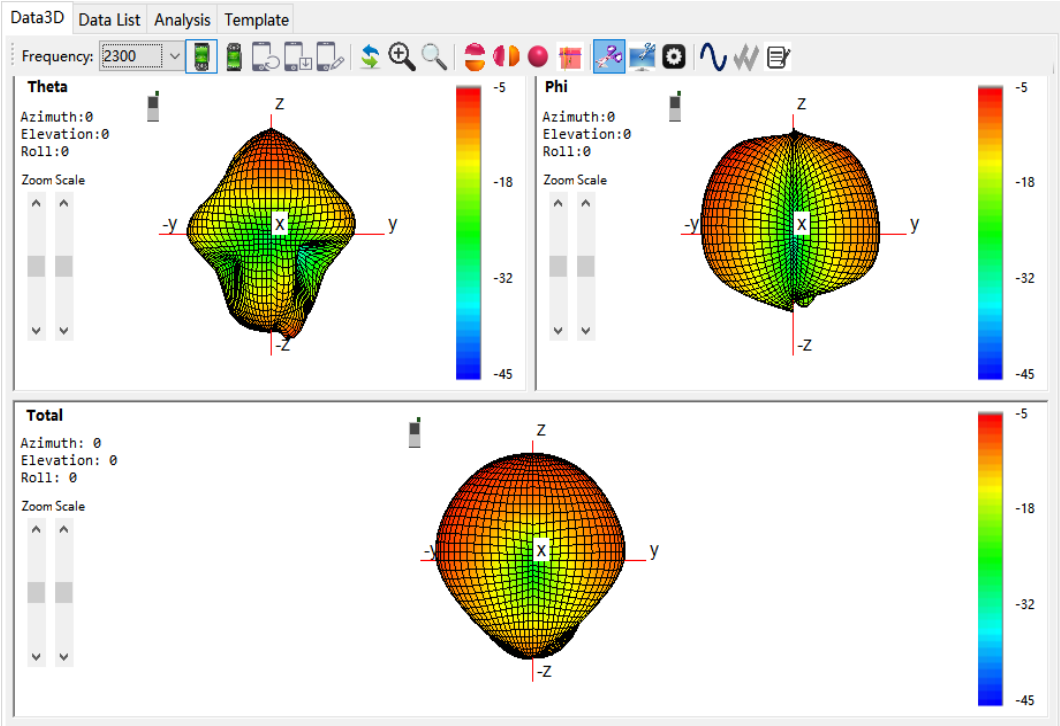


2200MHz



2300MHz

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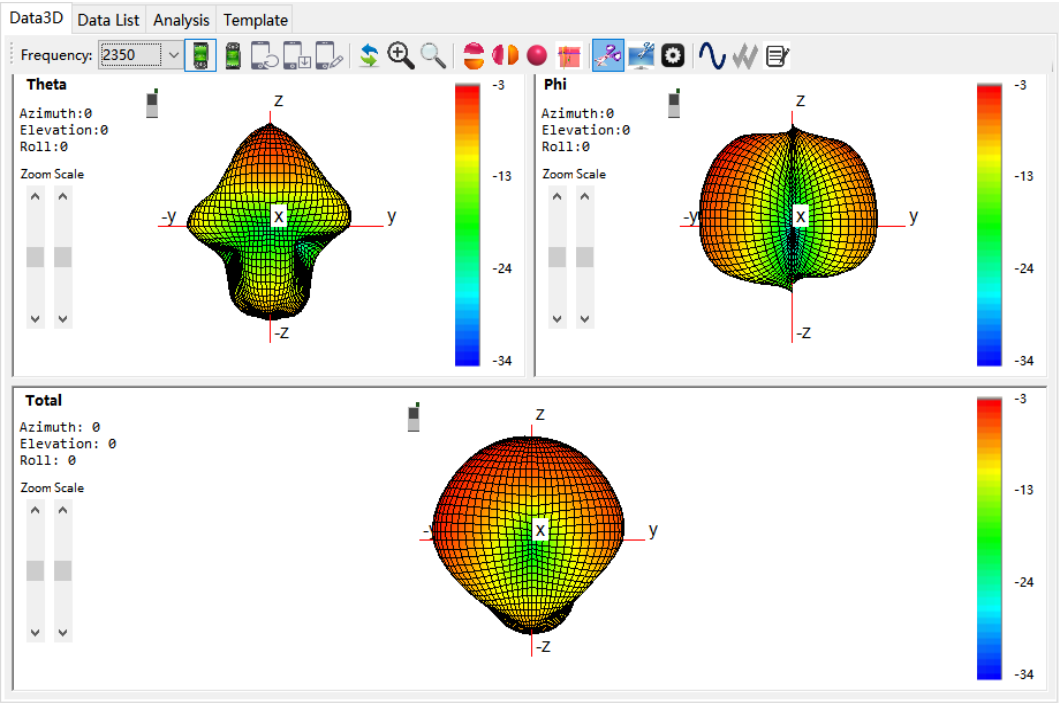
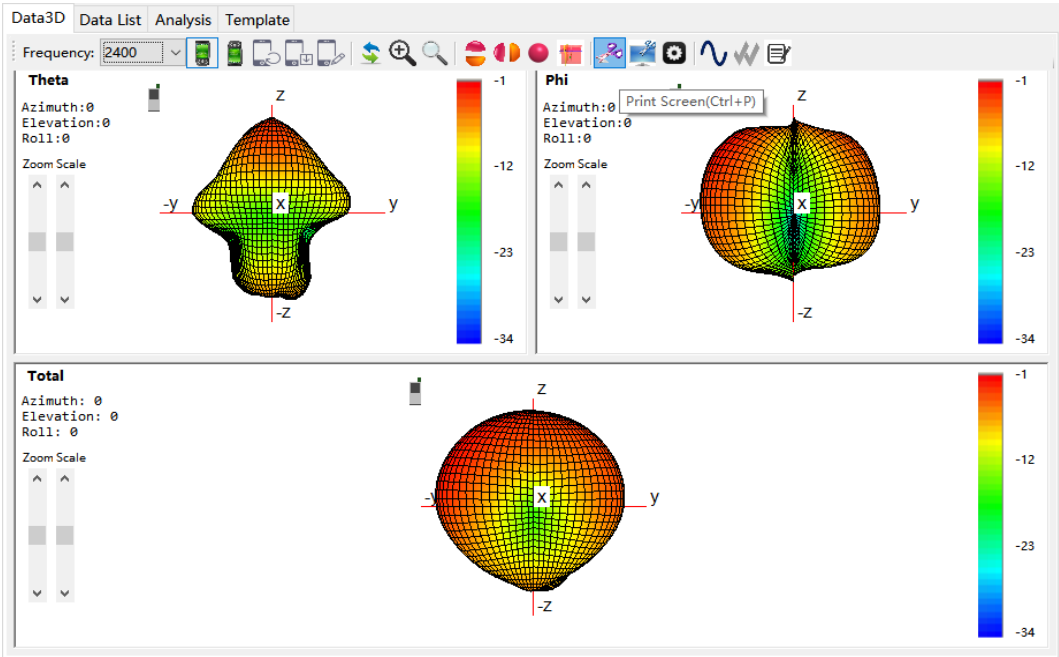


2350MHz



2400MHz

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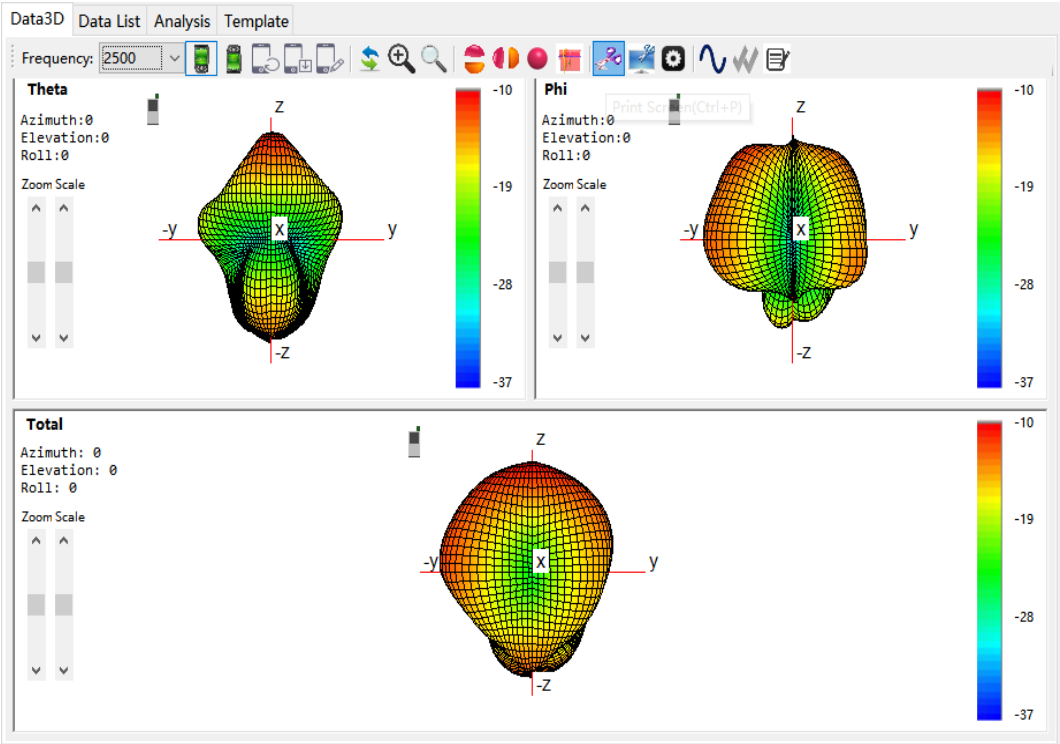
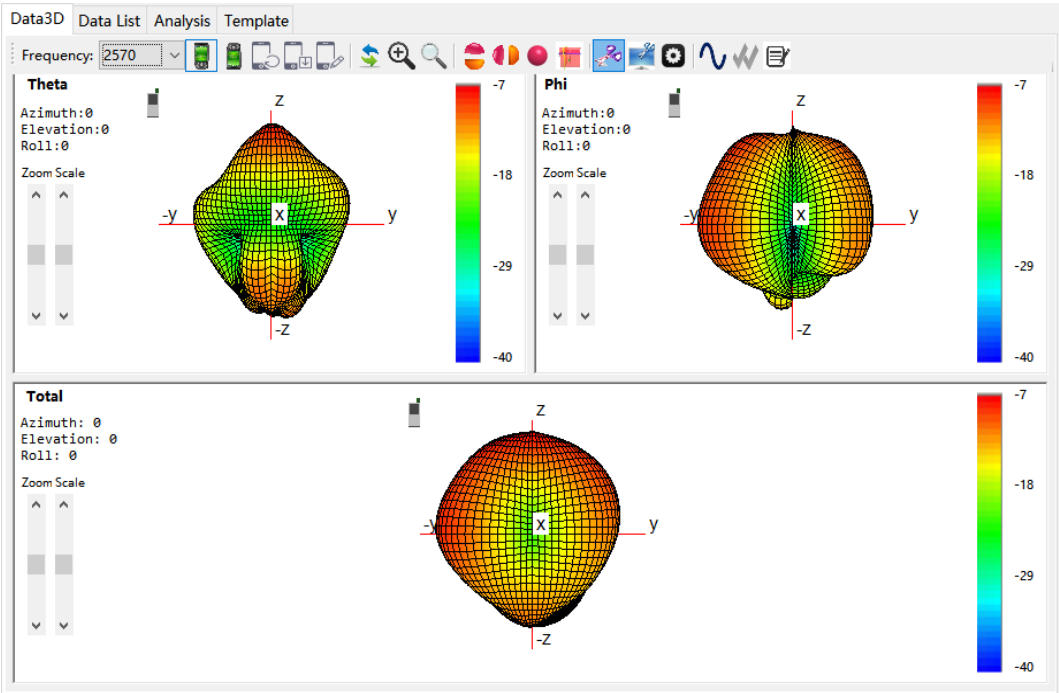


2500MHz



2570MHz

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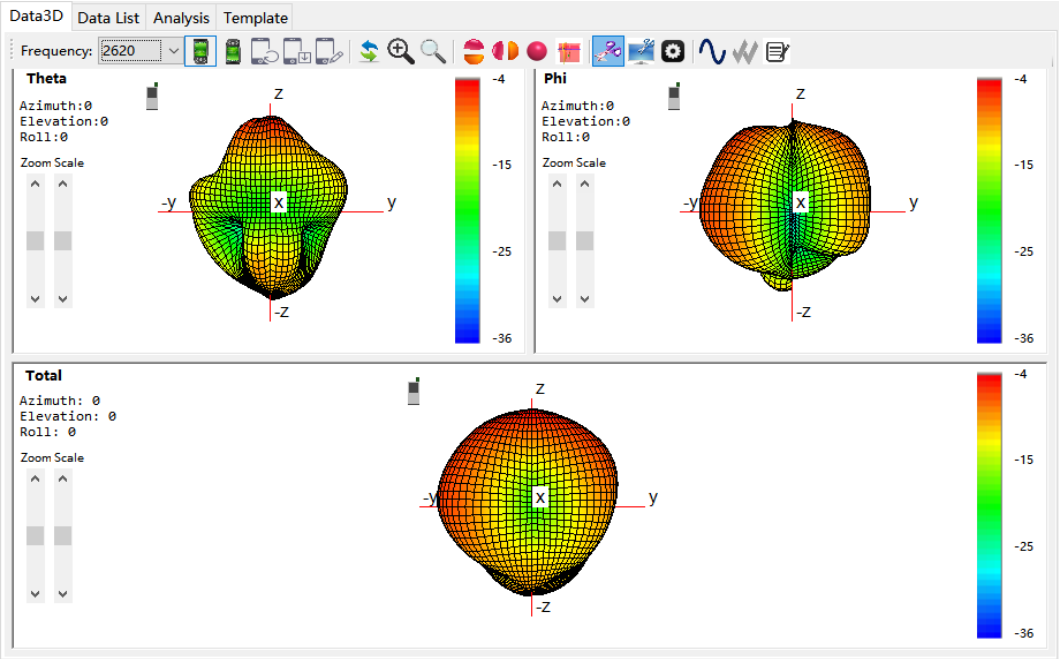
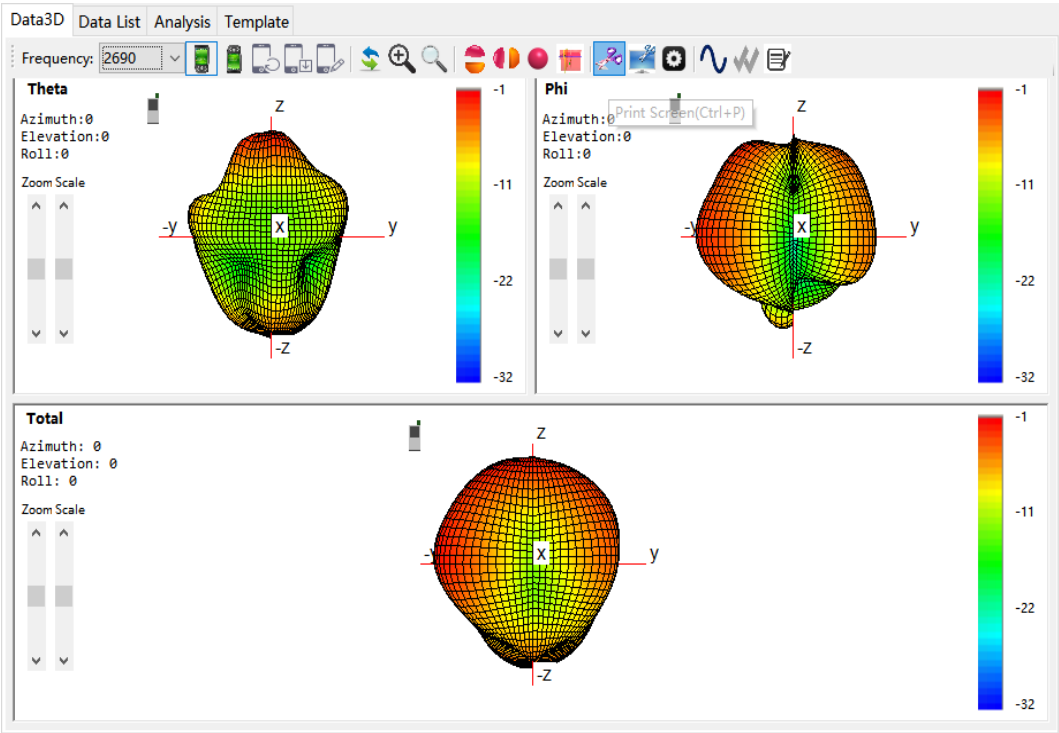


2620MHz



2690MHz

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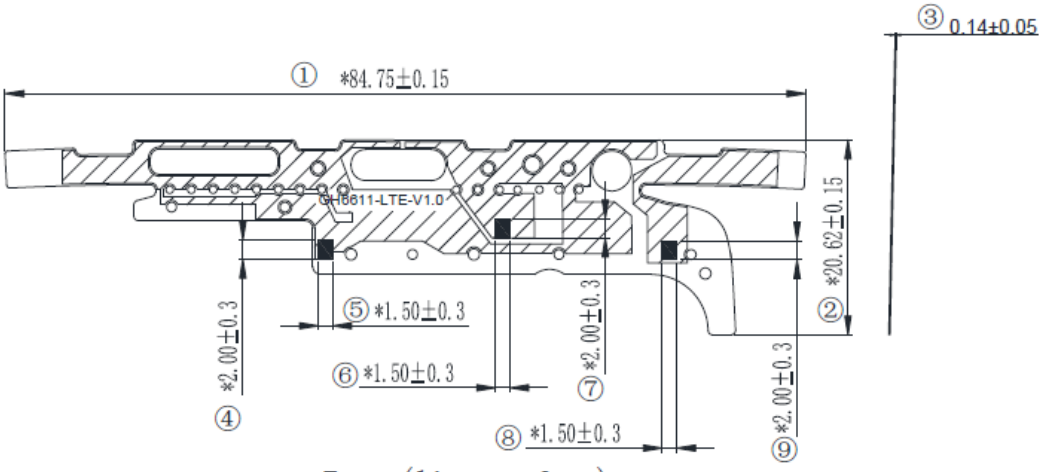
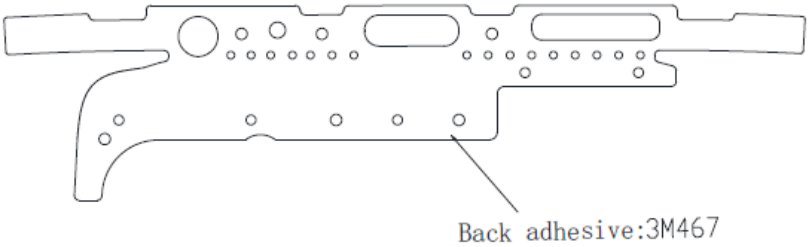
5. Mechanical Specification:



Front(line surface)



reverse

Manufacturers address: huang tai town, xiangcheng district of suzhou in jiangsu province during the spring and autumn road number five

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