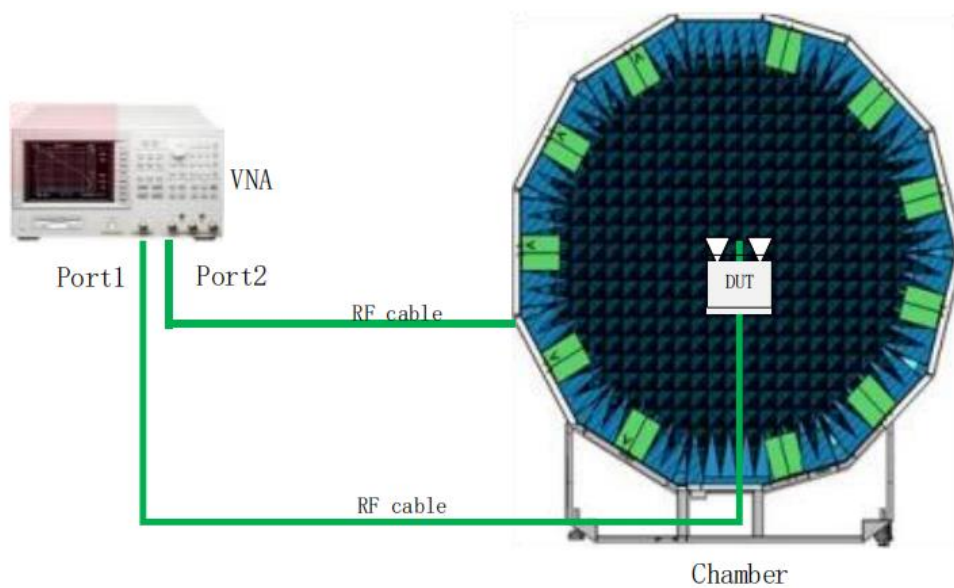


Type and shape of antenna	IFA Antenna
Directional characteristics	Omni-directional
Deflection Characteristics of Antenna	Linear
Type of connection with transmitter	antenna shrapnel
Manufacturer	ShangHai Weierchuang Communication Technology Co., LTD Kunshan Innowave Communication Technology Co., LTD
Measuring Organization	ShangHai Weierchuang Communication Technology Co., LTD Kunshan Innowave Communication Technology Co., LTD

1.EUT Reference Setup

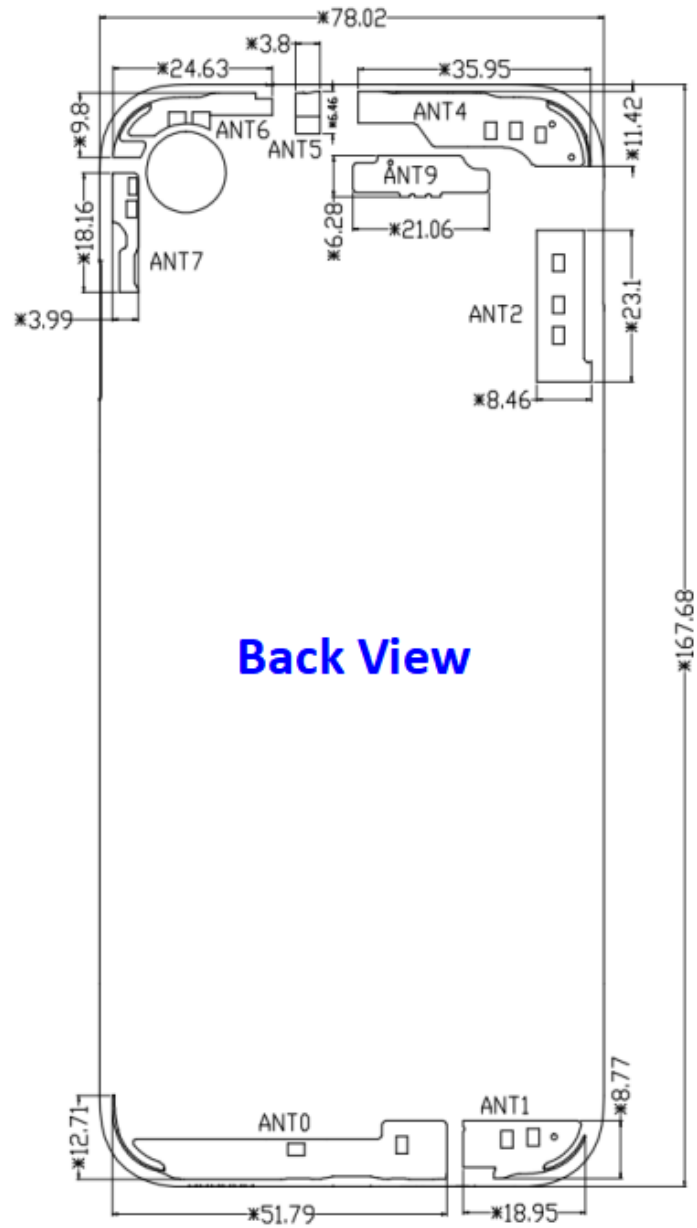


Tester	Lichunyang/Yaoqiang
Actual date of testing	2022-09-28
Test description	Use an anechoic chamber to measure the radiation pattern and antenna gain. The GTS laboratory operates at 0.6-5.9GHz. The chamber's reflection level in the range of 0.6GHz to 5.9 GHz is typically ≤ 25 dB. Standard dipoles are used to calibrate for path loss and magnetic ring lines are used to suppress feeder emissions, so we can measure antenna gain.

Test Equipment List

Name of test equipment	Model	Manufacturer	Cal.Due Date	Calibration Interval
Pattern Measurement Software	General Test	Ray Zone 1800	NA	NA
Network Analyzer	Agilent	E5071B	2023-03-05	One year

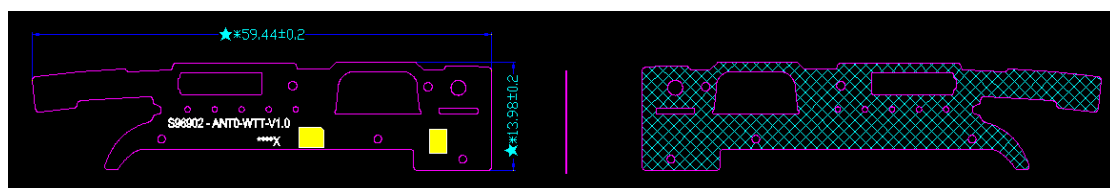
2. Antenna distribution



Back View

3. Antenna Pattern

ANT0



Front

Back

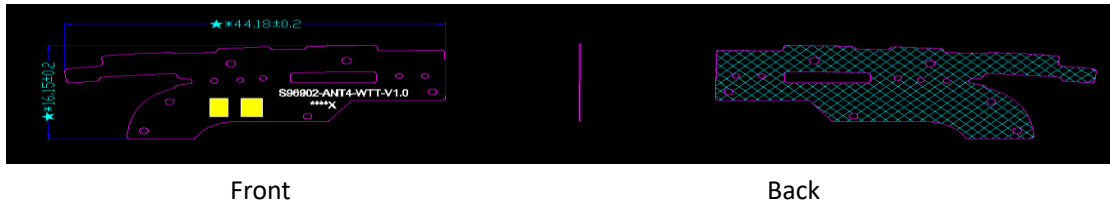
ANT1



ANT2



ANT4



ANT5+6



ANT7



ANT9



Front

Back

ANT0.Antenna Gain:

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
610	-5.72	800	-1.66	2300	-0.55
630	-4.58	820	-1.15	2340	-0.34
650	-2.72	840	-1.31	2380	-0.19
670	-1.24	860	-1.44	2400	-0.02
690	-0.95	880	-0.55	2500	1.05
700	-0.86	900	-0.65	2540	0.64
720	-1.16	920	-3.27	2580	-0.4
740	-2.01	940	-1.69	2620	-1.47
760	-1.98	960	-3.29	2660	-1.27
780	-1.3			2700	-1.05

ANT1.Antenna Gain:

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
1710	-1.2	1990	-0.1
1750	-1.3	2010	-0.2
1780	-0.6	2050	-0.5
1810	0.3	2090	-0.4
1850	0.2	2110	-0.3
1880	0.4	2130	-0.3
1920	-0.6	2150	-0.6
1960	-0.1	2170	-0.7
		2200	-0.1

ANT2.Antenna Gain:

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
1930	-4.64	2500	-1.81	3300	-3.21
1960	-4.42	2540	-2.06	3450	-0.94
1990	-5.07	2580	-2.22	3600	-0.87
2110	-3.69	2620	-1.76	3750	-0.91
2150	-2.11	2660	-0.26	3900	-0.23
2170	-2.52	2690	0.56	4050	-1.62

2200	-2.74	2700	0.11	4200	-4.68
2300	-3.73				
2320	-3.17				
2360	-3				
2400	-2.95				

ANT4.Antenna Gain:

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
610	-6.23	1710	-1.34	2300	-0.39
630	-6.4	1750	-1.15	2340	-0.61
650	-5.98	1780	-1.14	2380	-1.31
670	-5.85	1810	-0.94	2400	-1.87
690	-6.18	1850	-0.86	2500	-0.68
700	-5.31	1880	-1.17	2540	-1.03
720	-4.36	1920	-1.03	2580	-0.58
740	-3.12	1960	-1.08	2620	0.06
760	-3.41	1990	-1.61	2660	0.38
780	-3.07	2010	-1.31	2700	0.91
800	-3.93	2050	-1.47		
820	-2.9	2090	-0.78		
840	-2.85	2110	-1.03		
860	-2.9	2130	-0.37		
880	-2.74	2150	-0.61		
900	-4.51	2170	-1.1		
920	-4.42	2200	0.09		
940	-1.34				
960	-1.1				

ANT5.Antenna Gain:

Frequency (MHz)	Gain (dBi)
3300	-1.31
3450	-2.07
3600	-1.73
3750	-0.99
3900	-2.14
4050	-1.97
4200	-1.47

ANT6.Antenna Gain:

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
1515	0.14	5150	-1.51
1545	0.86	5250	-1.88
1575	2.06	5350	-2.2
1605	1.06	5450	-1.91
2400	-2.71	5550	-1.81
2420	-2.42	5650	-1.62
2440	-1.81	5750	-1.45
2460	-1.59	5850	-1.55
2480	-1.37		
2500	-0.97		

ANT7.Antenna Gain:

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
1930	-1.17	2500	0.3	3300	-2.59
1960	-0.97	2540	-0.99	3450	-2.33
1990	-0.48	2580	-1.82	3600	-1.96
2110	-0.33	2620	-2.66	3750	-1.16
2150	-0.35	2660	-3.06	3900	-1.32
2170	-0.53	2690	-2.75	4050	-1.02
2200	-1.09	2700	-2.84	4200	-1.49

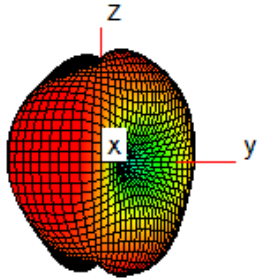
ANT9.Antenna Gain:

Frequency (MHz)	Gain (dBi)
3300	-5.88
3450	-4.07
3600	-4.54
3750	-3.63
3900	-3.52
4050	-4.39
4200	-4.38

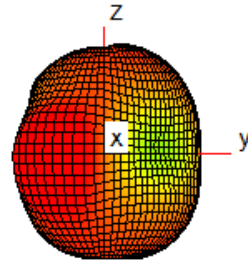
5.3D map

ANT0

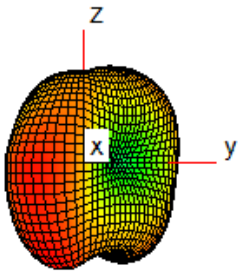
610MHz



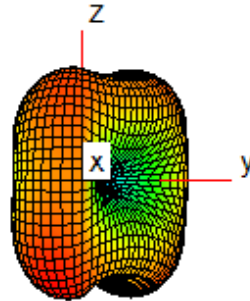
700MHz



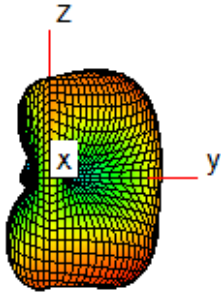
740MHz



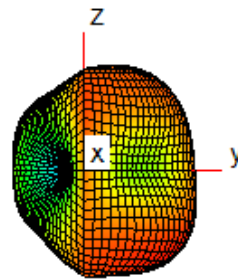
820MHz



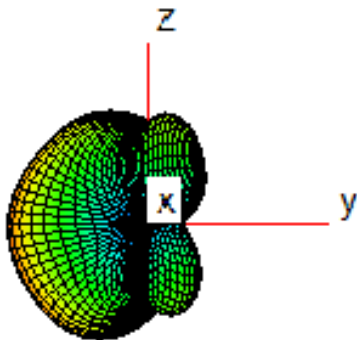
880MHz



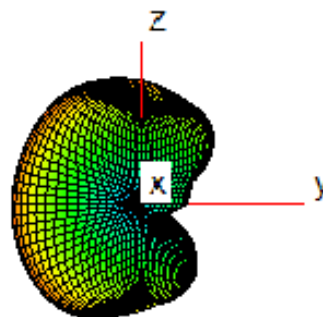
960MHz



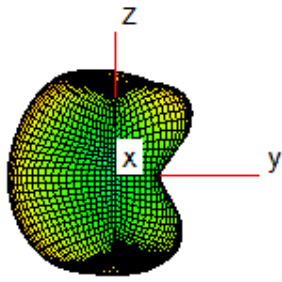
2300MHz



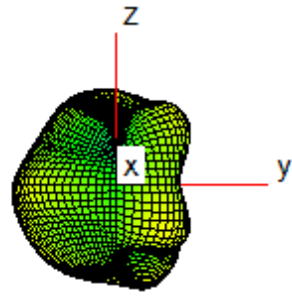
2400MHz



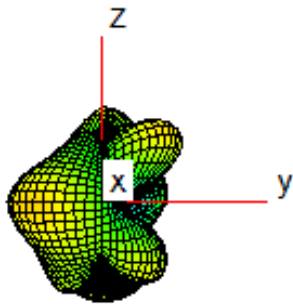
2500MHz



2600MHz

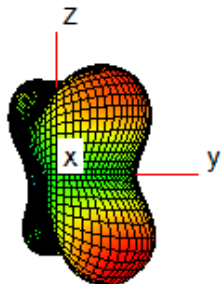


2700MHz

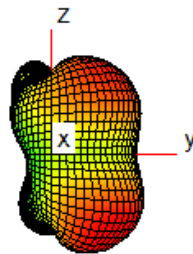


ANT1

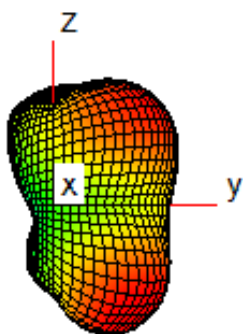
1710MHz



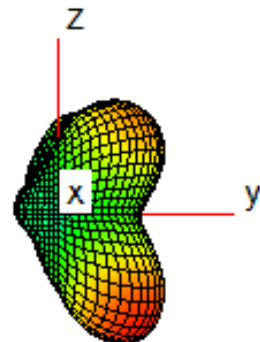
1750MHz



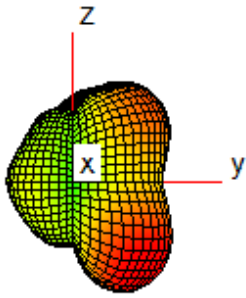
1850MHz



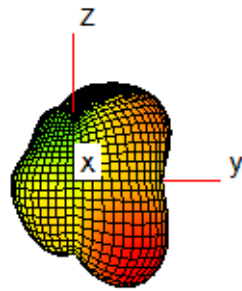
1990MHz



2110MHz

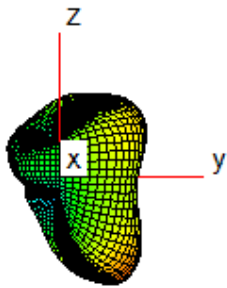


2200MHz

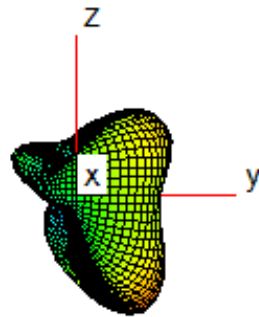


ANT2

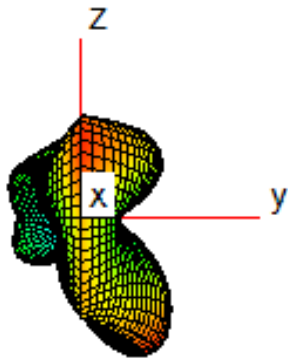
1930MHz



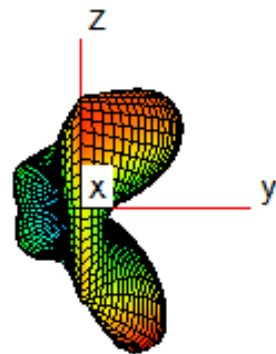
1990MHz



2110MHz

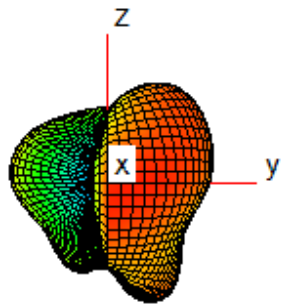


2200MHz

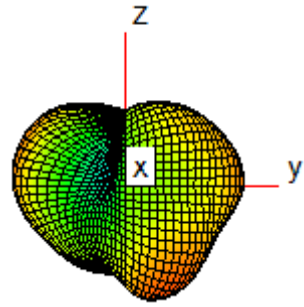


2300MHz

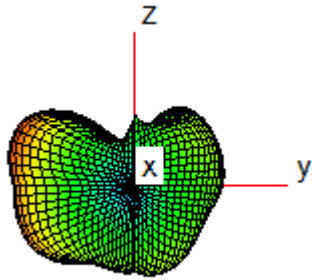
2500MHz



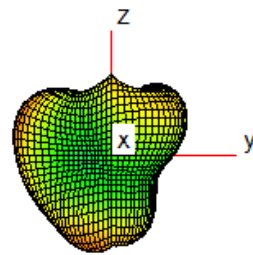
2580MHz



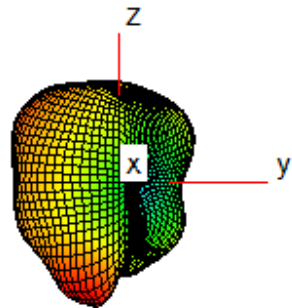
2690MHz



3300MHz

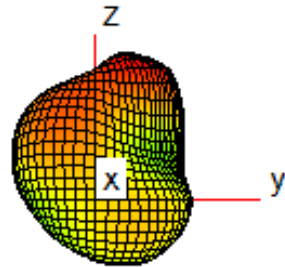


4200MHz

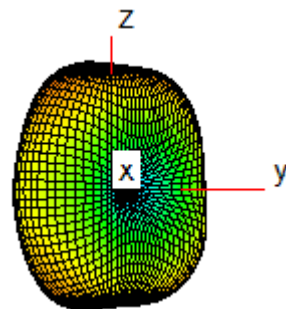
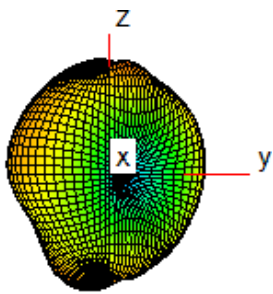


ANT4

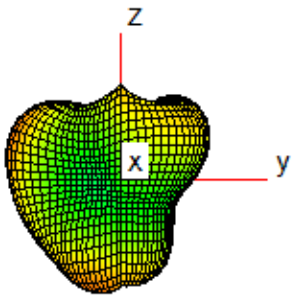
610MHz



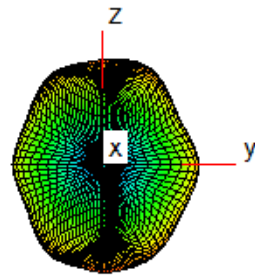
700MHz



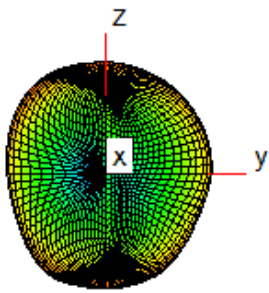
740MHz



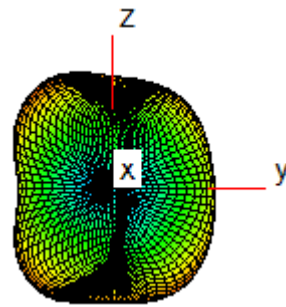
820MHz



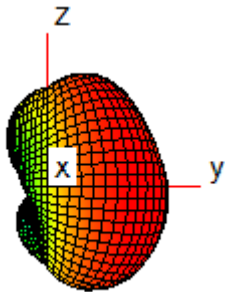
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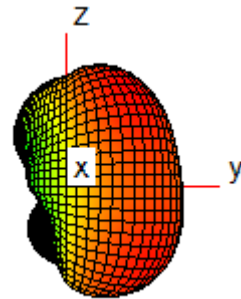
960MHz



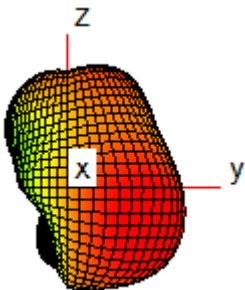
1710MHz



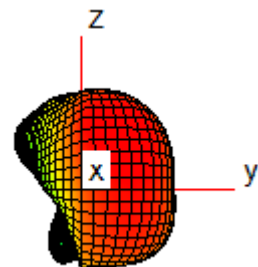
1750MHz



1850MHz

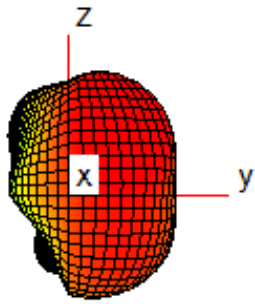


1990MHz

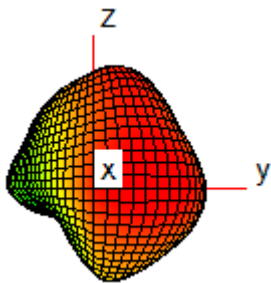


2110MHz

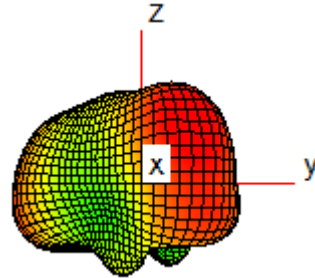
2200MHz



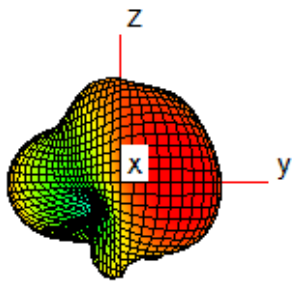
2300MHz



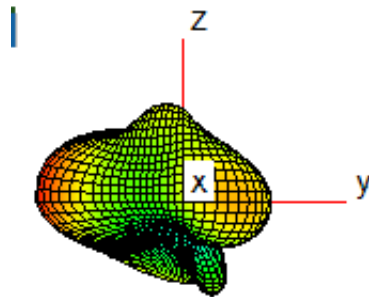
2500MHz



2580MHz



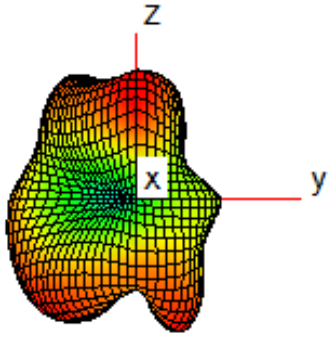
2690MHz



ANT5

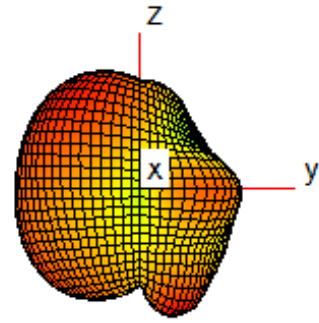
3300MHz

4200MHz

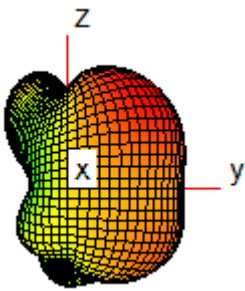


ANT6

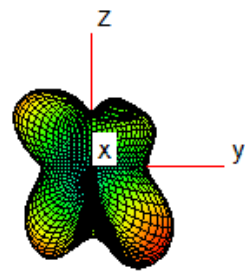
1575MHz



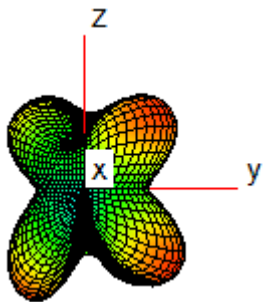
2400MHz



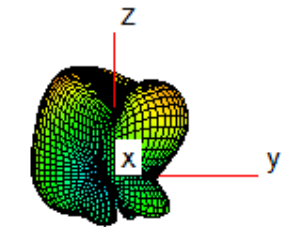
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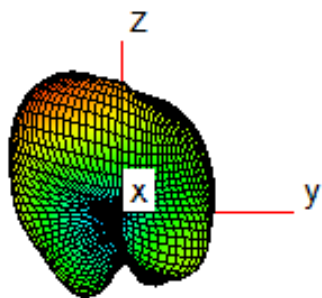
5150MHz



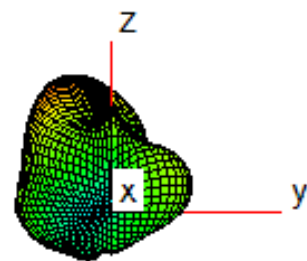
5500MHz



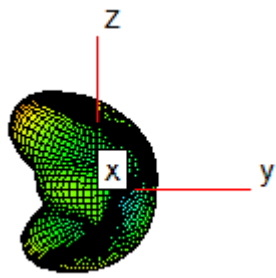
5850MHz



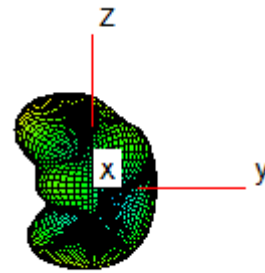
ANT7



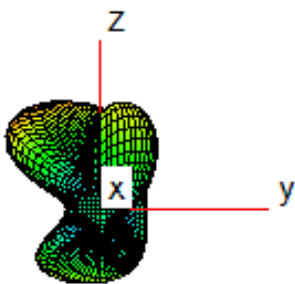
1930MHz



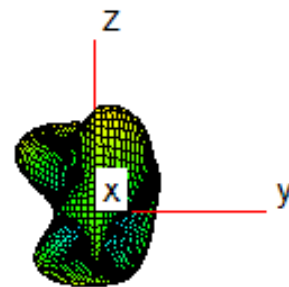
1990MHz



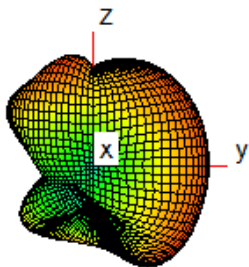
2110MHz



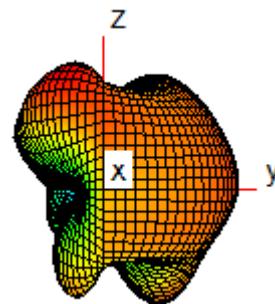
2200MHz



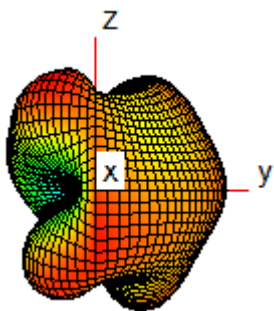
2500MHz



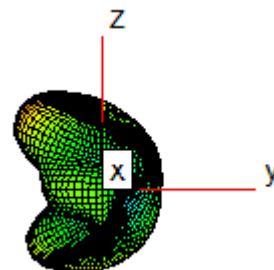
2580MHz



2690MHz

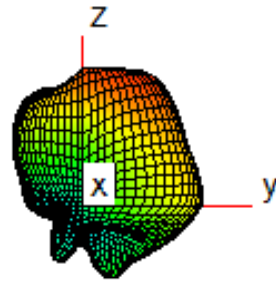
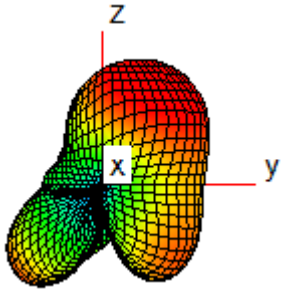


3300MHz



3750MHz

4200MHz



ANT9

3300MHz

4200MHz

