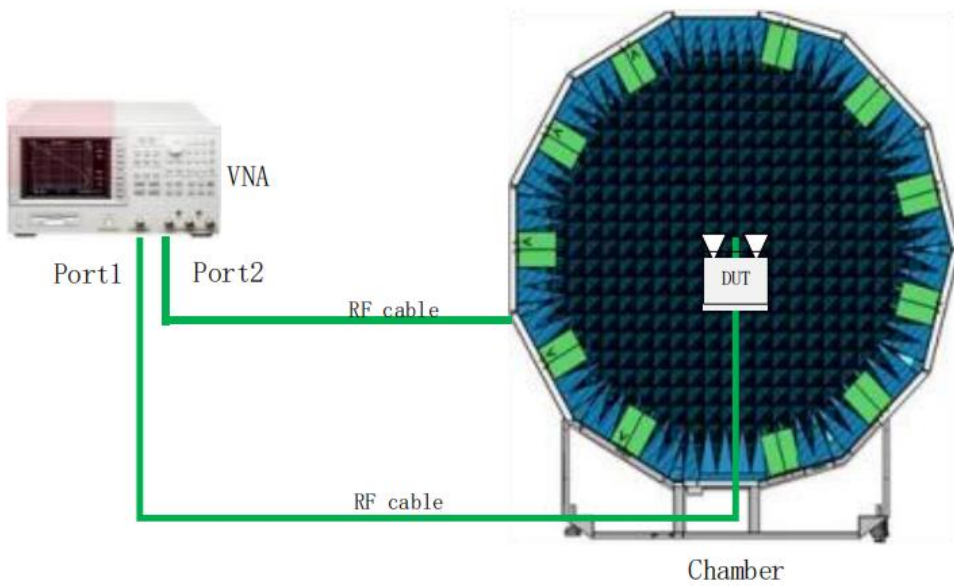


Type and shape of antenna	IFA Antenna/LOOP Antenna
Directional characteristics	Omni-directional
Deflection Characteristics of Antenna	Linear
Type of connection with transmitter	antenna shrapnel
Manufacturer	Huizhou Speed Wireless Technology Co.Limited Kunshan Innowave Communication Technology Co., LTD
Measuring Organization	Huizhou Speed Wireless Technology Co.Limited Kunshan Innowave Communication Technology Co., LTD

## 1.EUT Reference Setup

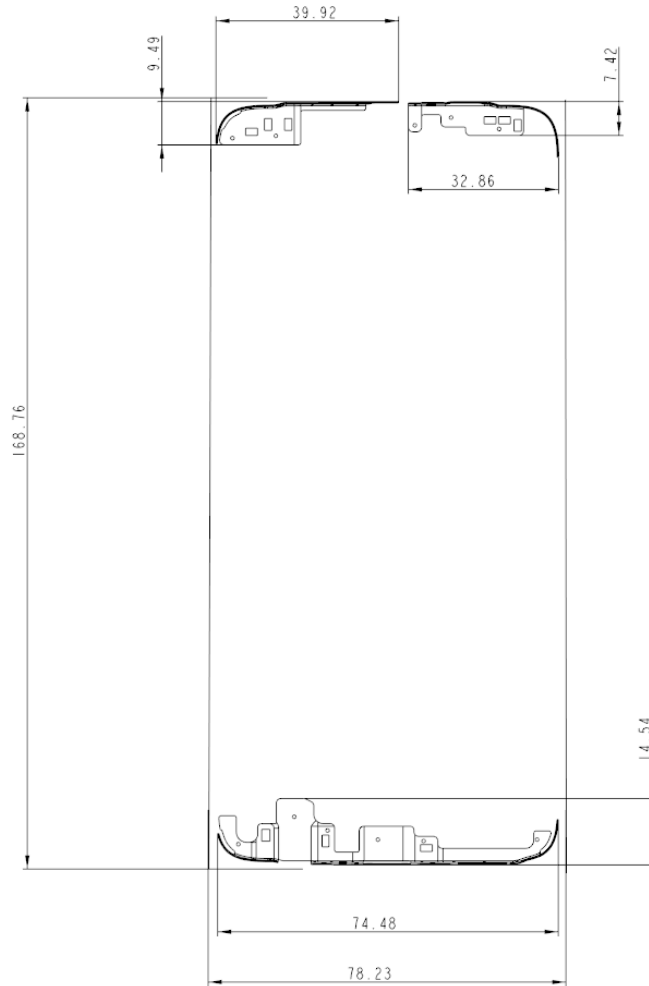


<b>Tester</b>	Zhangkanning/Hufabo
<b>Actual date of testing</b>	2023-07-05
<b>Test description</b>	Use an anechoic chamber to measure the radiation pattern and antenna gain. The GTS laboratory operates at 0.6-5.9GHz. The chamber's reflection level in the range of 0.6GHz to 5.9 GHz is typically $\leq 25$ 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

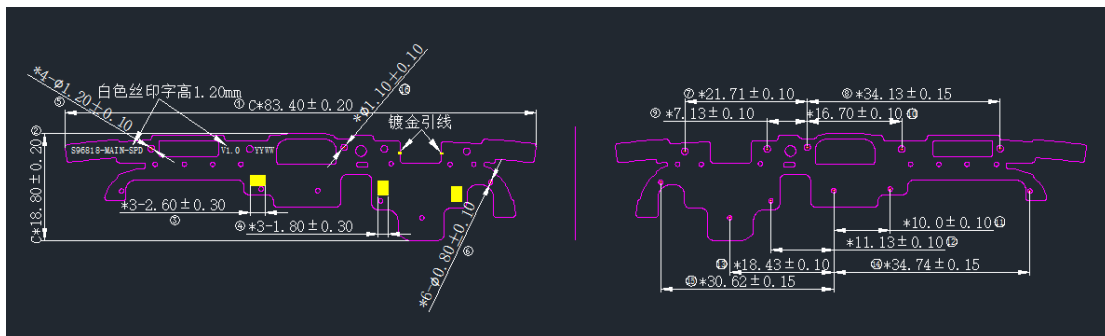
Name of test equipment	Model	Manufacturer	Cal.Due Date	Calibration Interval
Pattern Measurement Software	General Test	Ray Zone 1800	NA	NA
Network Analyzer	Agilent	E5071B	2023-07-05	One year

## 2. Antenna distribution



## 3. Antenna Pattern

### MAIN





740	-3.79	1780	-1.01	2300	-1.97
750	-3.41	1800	-1.24	2320	-1.94
760	-3.23	1820	-1.06	2340	-1.92
770	-3.32	1840	-1.04	2360	-2.11
780	-3.36	1860	-1.34	2380	-2.16
790	-3.38	1880	-1.13	2400	-2.15
800	-3.39	1900	-1.17	2500	-1.95
810	-3.83	1920	-1.19	2520	-1.19
820	-4.07	1940	-1.28	2540	-1.26
830	-3.88	1960	-1.19	2560	-1.21
840	-3.85	1980	-1.37	2580	-1.22
850	-3.88	2000	-1.74	2600	-1.19
860	-3.65	2020	-1.81	2620	-1.33
870	-3.8	2040	-1.82	2640	-1.37
880	-3.44	2060	-1.75	2660	-1.29
890	-3.25	2080	-1.45	2680	-1.24
900	-3.11	2100	-1.43	2700	-1.45
910	-3.58				
920	-1.77				
930	-1.89				
940	-2.27				
950	-3.19				
960	-4.22				

DIV

Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
700	-10.08	1710	-3.49	1990	-1.01	2300	-0.77
710	-9.22	1720	-3.03	2000	-0.97	2310	-0.74
720	-8.47	1730	-3.11	2010	-0.93	2320	-0.70
730	-7.50	1740	-2.89	2020	-0.90	2330	-0.71
740	-6.98	1750	-2.91	2030	-0.97	2340	-0.75
750	-6.68	1760	-2.94	2040	-1.00	2350	-0.78
760	-6.49	1770	-2.77	2050	-1.02	2360	-0.75
770	-6.59	1780	-2.48	2060	-0.90	2370	-0.74
780	-6.66	1790	-2.14	2070	-0.82	2380	-0.73
790	-6.72	1800	-1.88	2080	-0.82	2390	-0.62
800	-6.73	1810	-1.64	2090	-0.84	2400	-0.60
810	-7.08	1820	-1.42	2100	-0.85	2500	1.52
820	-6.90	1830	-1.26	2110	-0.87	2510	1.54
830	-6.70	1840	-1.03	2120	-0.93	2520	1.55
840	-6.69	1850	-0.90	2130	-0.80	2530	1.54
850	-6.40	1860	-0.81	2140	-0.72	2540	1.44
860	-6.16	1870	-0.78	2150	-0.57	2550	1.38
870	-5.98	1880	-0.84	2160	-0.40	2560	1.31
880	-5.85	1890	-0.87	2170	-0.38	2570	1.21
890	-5.89	1900	-0.91	2180	-0.33	2580	1.24
900	-5.89	1910	-0.98	2190	-0.41	2590	1.16
910	-5.62	1920	-1.18	2200	-0.66	2600	1.18
920	-5.83	1930	-1.07			2610	1.25
930	-5.44	1940	-1.07			2620	1.23
940	-5.00	1950	-0.96			2630	1.22
950	-4.70	1960	-0.91			2640	1.15
960	-4.60	1970	-0.89			2650	1.03
		1980	-0.97			2660	0.90
						2670	0.82
						2680	0.79
						2690	0.82

GPS/WIFI/BT

Frequency (MHz)	Gain (dBi)
1560	-0.6
1570	-0.5
1580	-0.6
1590	-0.7

Frequency (MHz)	Gain (dBi)
5150	-2.75
5200	-2.73
5250	-2.64
5300	-3.1

1600	-0.8
1610	-1.3
1620	-0.7
2400	-1.91
2410	-1.96
2420	-1.9
2430	-2.4
2440	-2.4
2450	-2.1
2460	-1.89
2470	-1.96
2480	-1.93
2490	-2.15
2500	-2.16

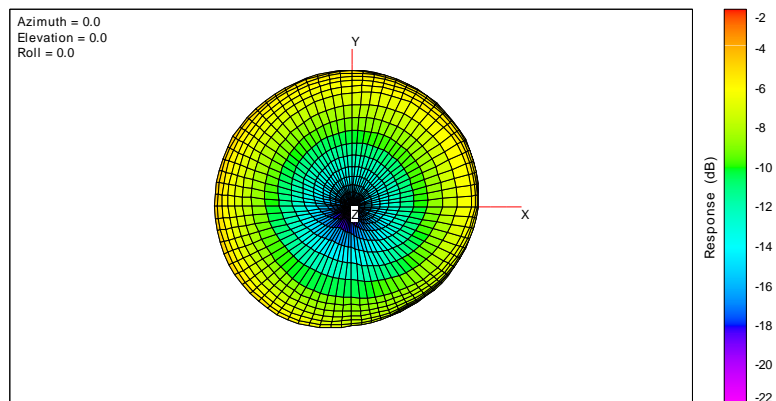
5350	-3.2
5400	-3.2
5450	-3.3
5500	-3.3
5550	-3.1
5600	-2.86
5650	-2.92
5700	-2.91
5750	-2.81
5800	-2.77
5850	-2.86

## 5.3D map

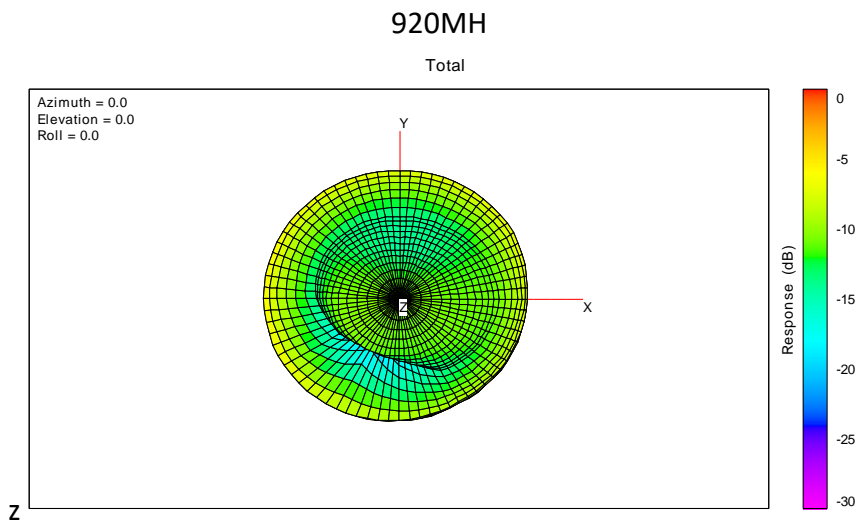
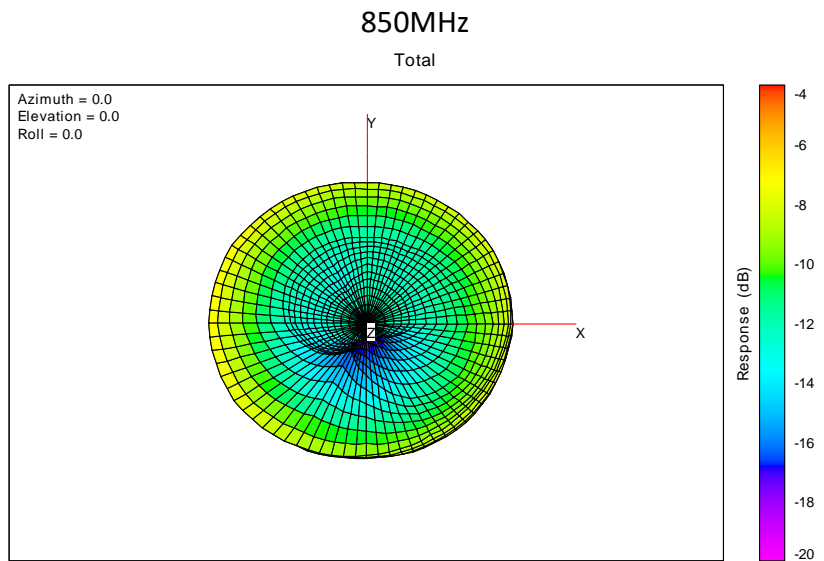
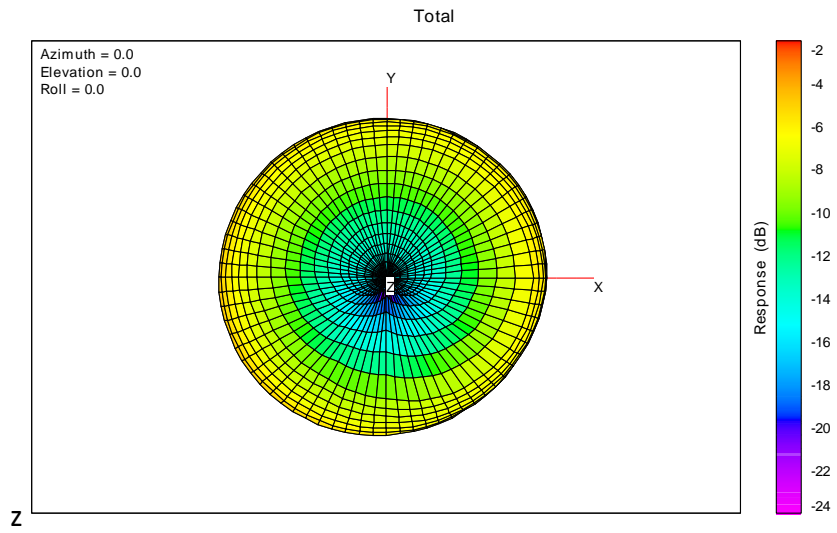
### MAIN

750MHz

Total

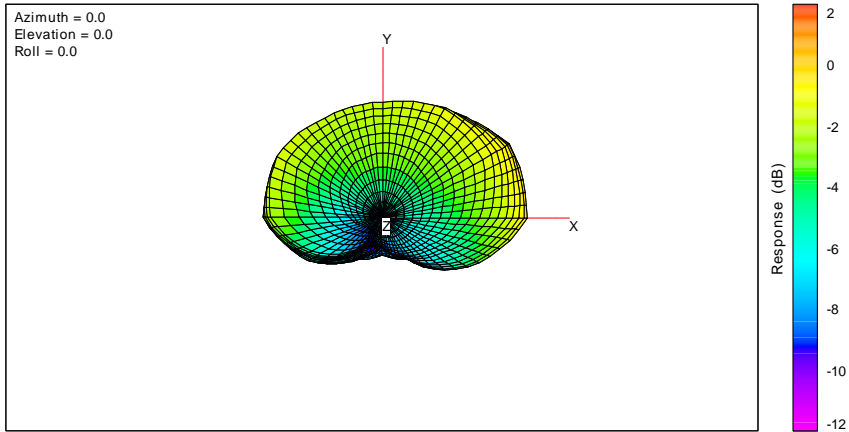


790MH



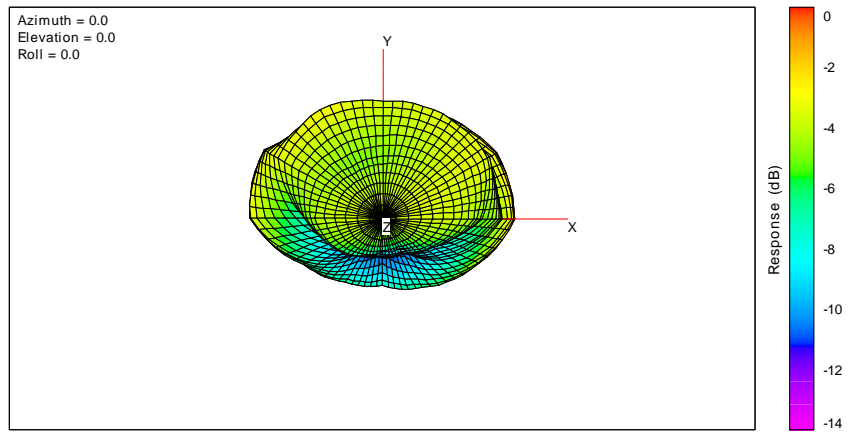
# 1750MHz

Total



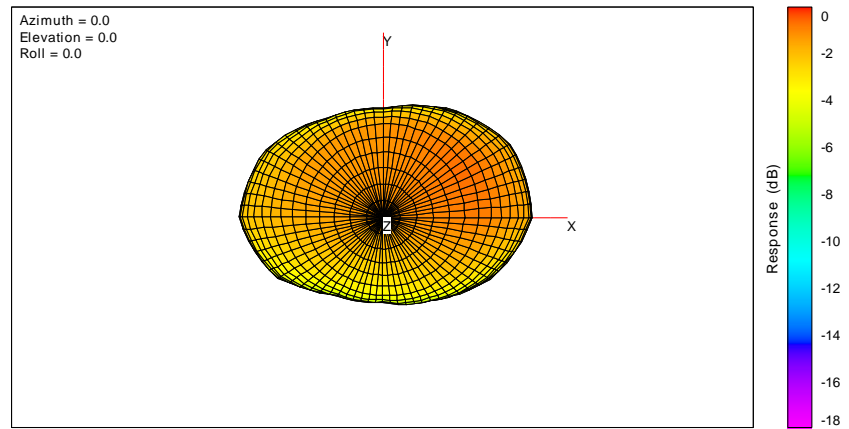
# 1900MHz

Total



# 2140MHz

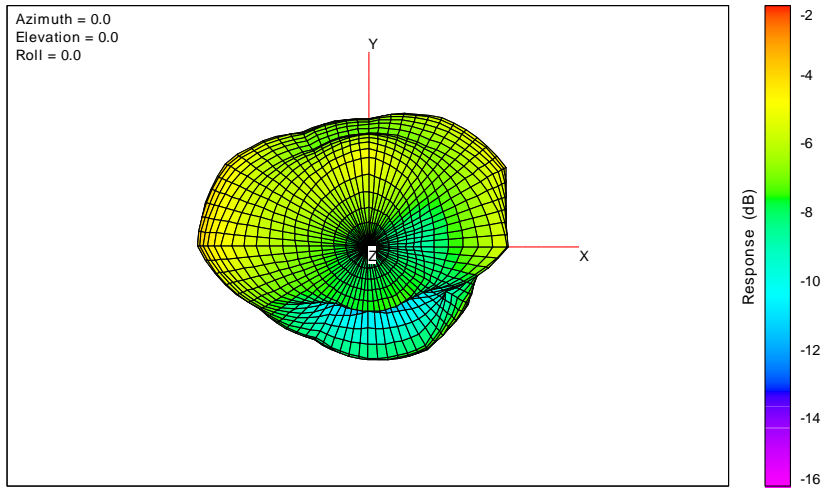
Total





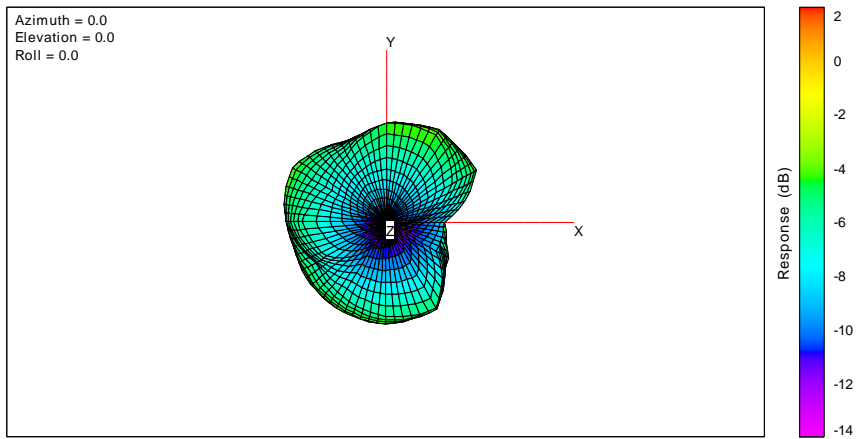
## 2300MHz

Total

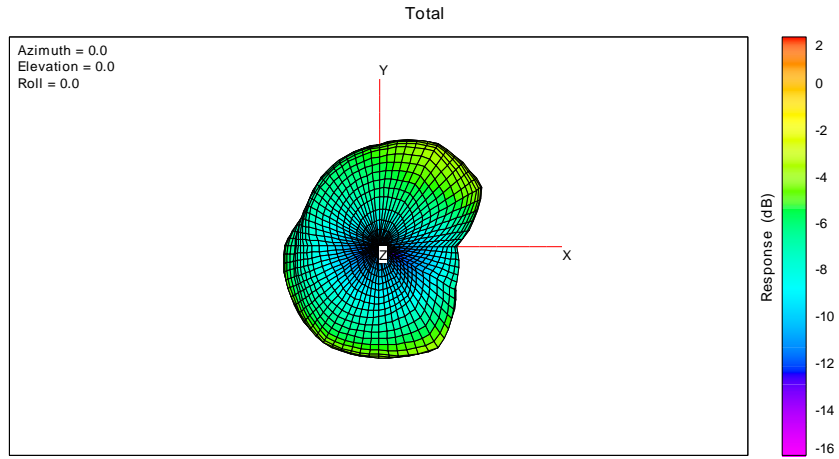


## 2500MHz

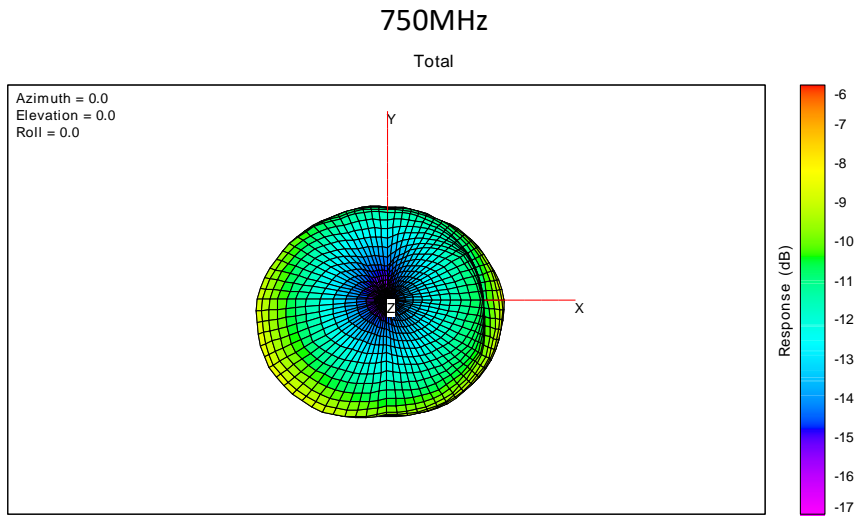
Total



## 2600MHz

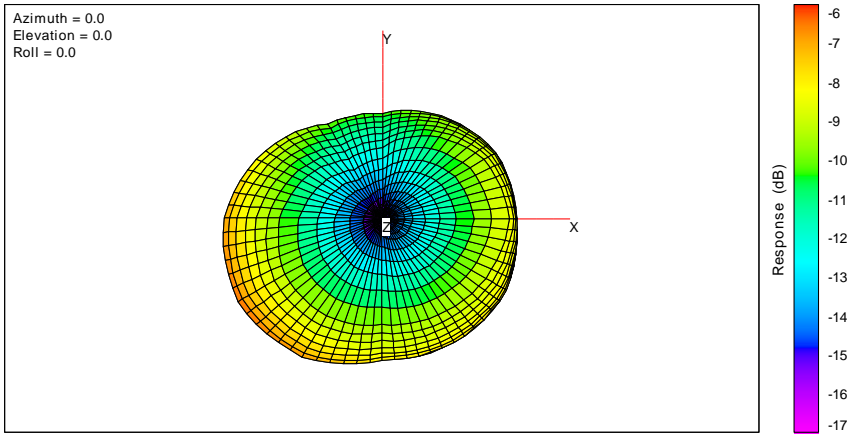


**DIV**



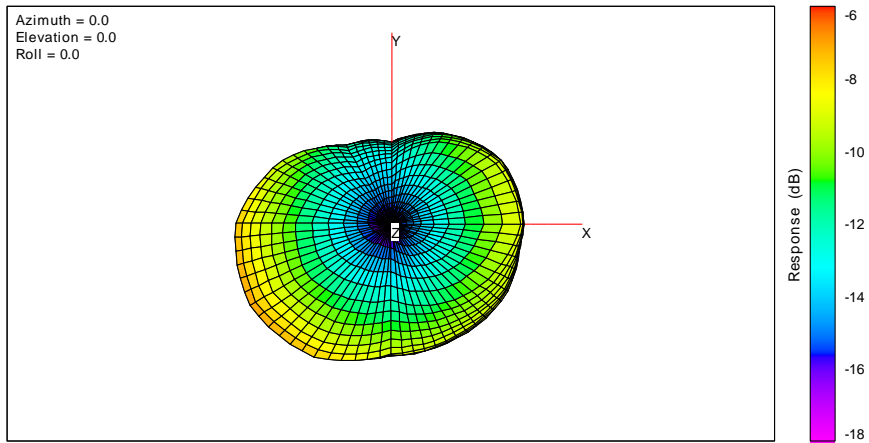
790MHz

Total



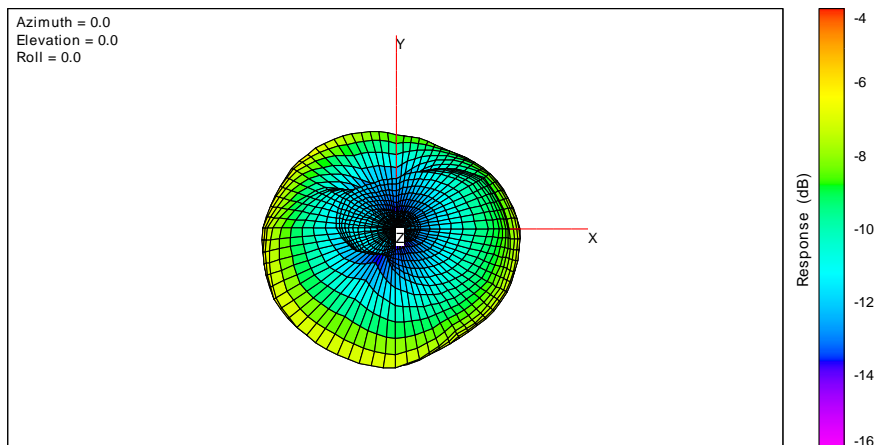
850MHz

Total



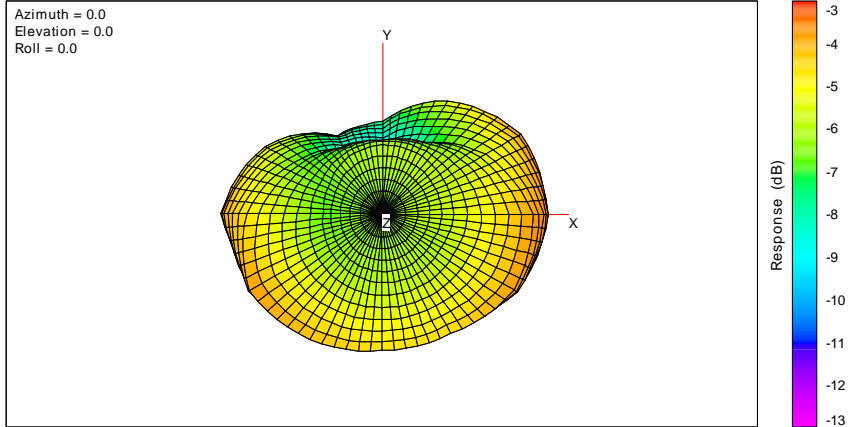
920MHz

Total



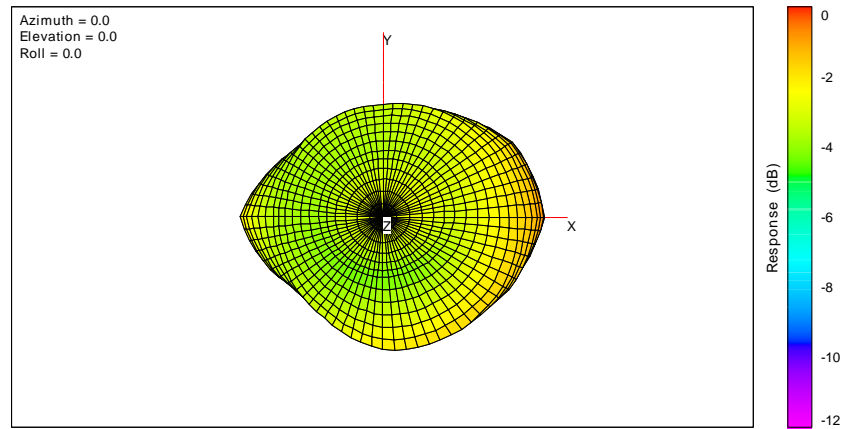
# 1750MHz

Total



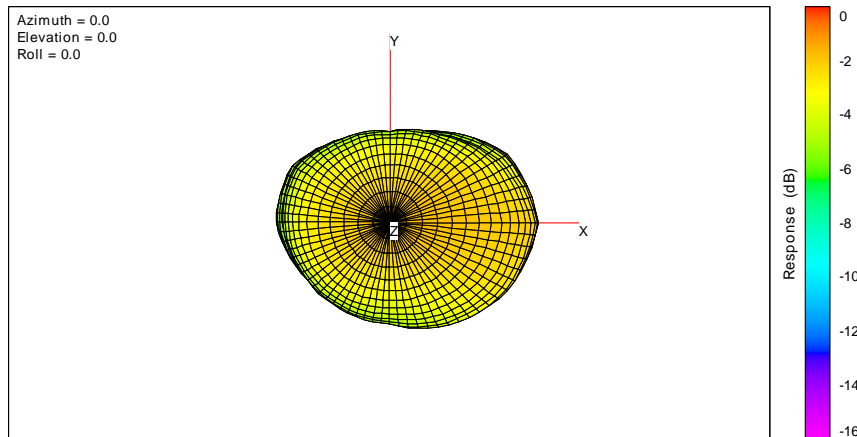
# 1900MHz

Total



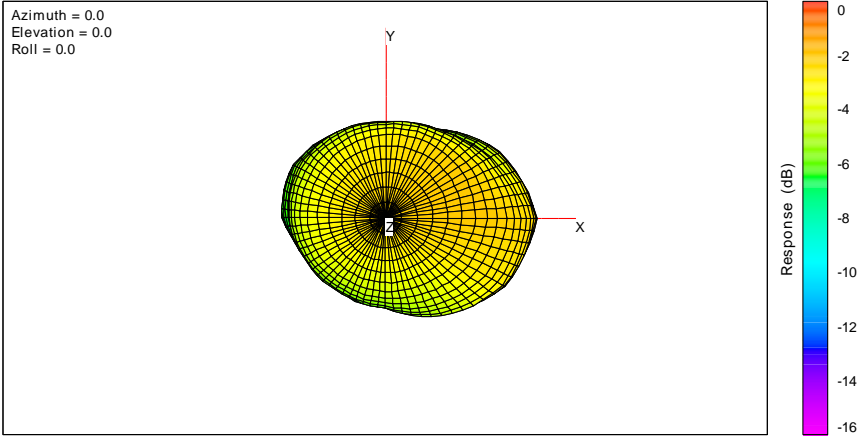
# 2140MHz

Total



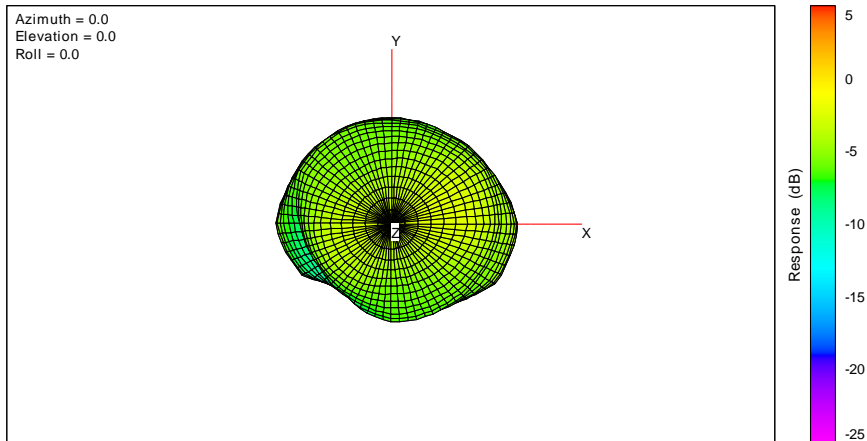
### 2300MHz

Total



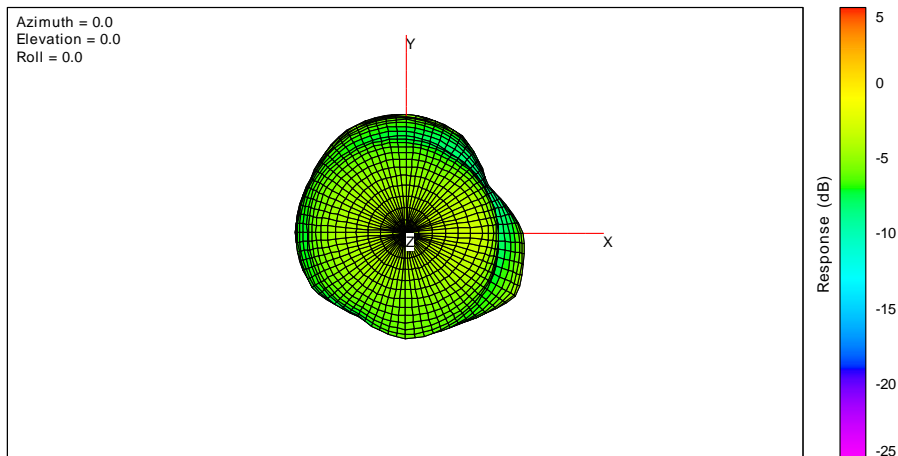
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Total



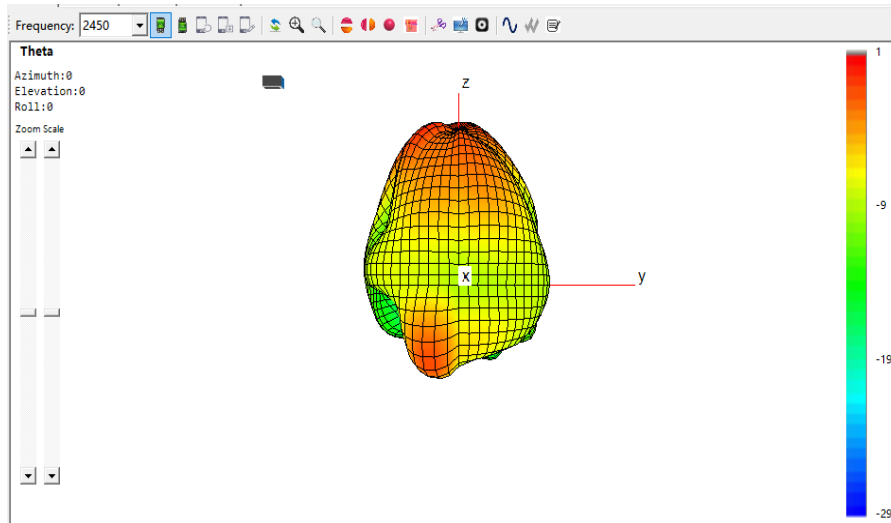
### 2600MHz

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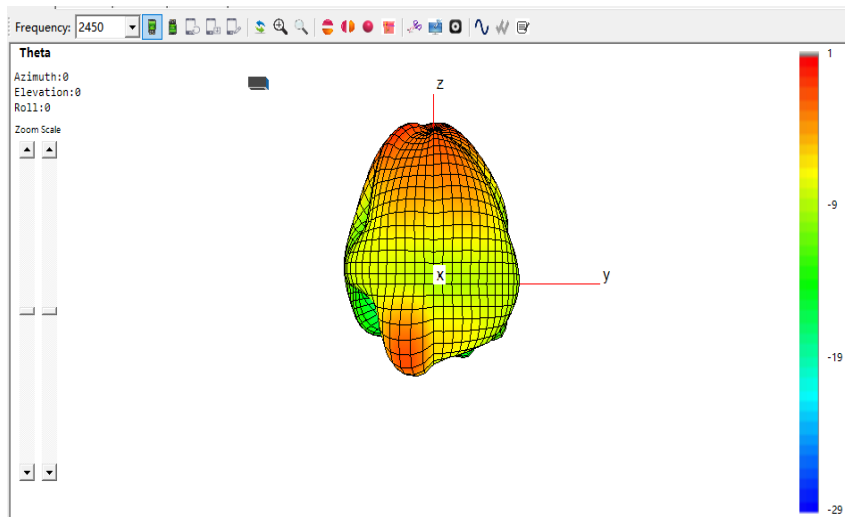


# GPS/WIFI/BT

1575MH



2450MHZ



5550MHZ

