

Regulatory WWAN Antenna Information

(English Language Required for Intel Regulatory Review / Approval)

(OEM/ODM or antenna vendor is required to complete this document with platform antenna information.
Remove Intel references and make this your own document)

Platform	
Platform Owner	DELL
Brand Name	DELL
Model Name	Arches13
ODM	Wistron Corporation
Target Launch Date	
Antenna	
Manufacturer	Wistron Corp
Part Number	■ Tx1/Rx1 Antenna WWAN Main: 77H24
	■ Rx2 Antenna WWAN Aux: 77HC0
	■ Tx2/Rx3 Antenna MIMO2: 77HC0
	■ Rx4 Antenna MIMO3: 77H24
Module	
With WWAN Module	
(Check Box)	

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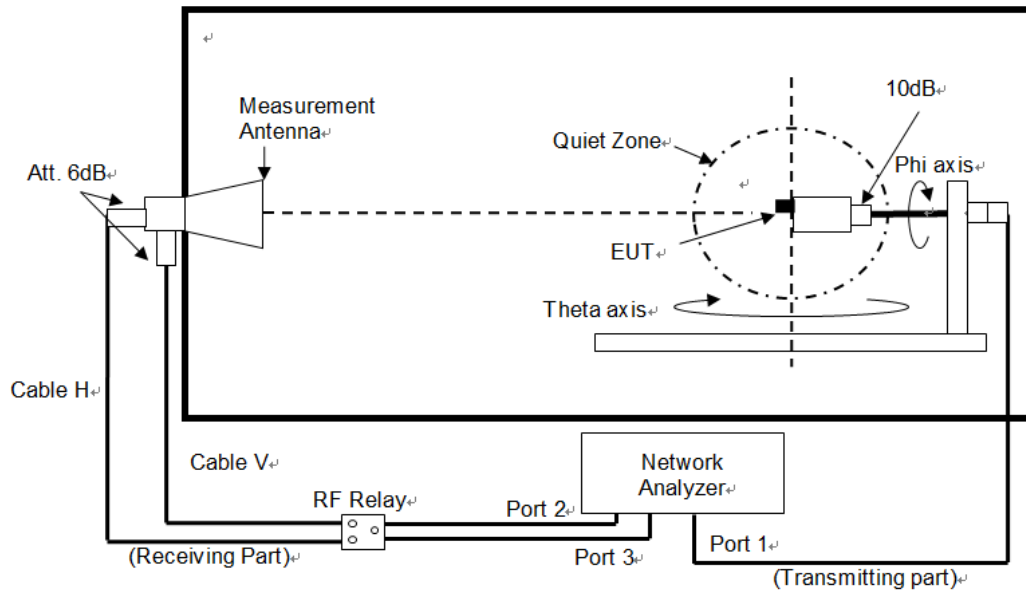
1. Applicable test methods

This test report is prepared for host antenna testing under a Full Anechoic Chamber.

2. Test & System Description

c. Test setup

<insert test diagram here for test site utilized>



b. Equipment list

<insert test diagram here for test site utilized>

Huaya-Sporton OTA03					
Name	Manufacturer	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
ENA Series Network Analyzer	Keysight	E5080B	MY59101211	2022/5/23	2023/5/22
RF Switch	Keysight	3499A	MY42000955	NCR	NCR
Multi-Axis Positioner Controller	ETS-Lindgren	2090	N/A	NCR	NCR
Medium-Duty Positioner	ETS-Lindgren	2015	N/A	NCR	NCR
Measurement Horn Antenna	EMCO	3164-08	00086722	NCR	NCR
Anechoic chamber	ETS-Lindgren	AMS-8500	N/A	2022/1/6	2023/1/5
12GHz SMA(M)-SMA(M)+20core for 60cm RG316DS Cable Assembly	Woken Technology Inc.	RG316DS	N/A	N/A	N/A
12GHz SMA(M)-SMA(M)+30core for 300cm RG316DS Cable Assembly	Woken Technology Inc.	RG316DS	N/A	N/A	N/A
Note: Chamber calibration included full set of implement.					

Antenna Information

Section 1. Antenna Assembly Specifications

NB mode

1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E *Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
Tx1/Rx1 Antenna P/N: 77H24	Wistron Corp	Monopole coupling	50 ohm Coaxial length: 276mm diameter: 1.13mm Connector : IPEX	617-698MHz -2.84 dBi (peak)	617-698MHz -2.53 dBi (peak)	617-698MHz 4.5 max	617-698MHz 0.31 dBi (peak)
				698-821MHz -1.7 dBi (peak)	698-821MHz -1.33 dBi (peak)	698-821MHz 4 max	698-821MHz 0.37 dBi (peak)
				824-960MHz -2.01 dBi (peak)	824-960MHz -1.58 dBi (peak)	824-960MHz 3.5 max	824-960MHz 0.43 dBi (peak)
				1452-1515MHz -2.44 dBi (peak)	1452-1515MHz -1.98 dBi (peak)	1452-1515MHz 4 max	1452-1515MHz 0.46 dBi (peak)
				1710-2200MHz 2.61 dBi (peak)	1710-2200MHz 3.22 dBi (peak)	1710-2200MHz 3 max	1710-2200MHz 0.61 dBi (peak)
				2300-2690MHz -0.08 dBi (peak)	2300-2690MHz 0.58 dBi (peak)	2300-2690MHz 3 max	2300-2690MHz 0.66 dBi (peak)
				3300-3800MHz -0.83 dBi (peak)	3300-3800MHz 0.01 dBi (peak)	3300-3800MHz 4 max	3300-3800MHz 0.84 dBi (peak)
				4200-5000MHz 0.26 dBi (peak)	4200-5000MHz 1.2 dBi (peak)	4200-5000MHz 3.5 max	4200-5000MHz 0.94 dBi (peak)
				5150-5925MHz -2.53 dBi (peak)	5150-5925MHz -1.43 dBi (peak)	5150-5925MHz 3 max	5150-5925MHz 1.1 dBi (peak)
Rx2 Antenna P/N: 77HC0	Wistron Corp	Monopole coupling	50 ohm Coaxial length: 476mm diameter: 1.13mm Connector : IPEX	617-698MHz -5.39 dBi (peak)	617-698MHz -4.85 dBi (peak)	617-698MHz 5.5 max	617-698MHz 0.54 dBi (peak)
				698-821MHz -2.82 dBi (peak)	698-821MHz -2.19 dBi (peak)	698-821MHz 5.5 max	698-821MHz 0.63 dBi (peak)
				716-821MHz -2.82 dBi (peak)	716-821MHz -2.19 dBi (peak)	716-821MHz 5.5 max	716-821MHz 0.63 dBi (peak)
				824-960MHz -2.34 dBi (peak)	824-960MHz -1.6 dBi (peak)	824-960MHz 4.5 max	824-960MHz 0.74 dBi (peak)
				1452-1515MHz -1.37 dBi (peak)	1452-1515MHz -0.58 dBi (peak)	1452-1515MHz 3.5 max	1452-1515MHz 0.79 dBi (peak)
				1557-1610 MHz -1.41 dBi (peak)	1557-1610 MHz -0.57 dBi (peak)	1557-1610 MHz 3 max	1557-1610 MHz 0.84 dBi (peak)
				1805-2200MHz 1.92 dBi (peak)	1805-2200MHz 2.96 dBi (peak)	1805-2200MHz 3 max	1805-2200MHz 1.04 dBi (peak)
				2300-2690MHzzz -0.33 dBi (peak)	2300-2690MHzzz 0.8 dBi (peak)	2300-2690MHzzz 3.5 max	2300-2690MHzzz 1.13 dBi (peak)
				3300-3800MHz -0.36 dBi (peak)	3300-3800MHz 1.09 dBi (peak)	3300-3800MHz 3 max	3300-3800MHz 1.45 dBi (peak)
				4200-5000MHz -0.65 dBi (peak)	4200-5000MHz 0.97 dBi (peak)	4200-5000MHz 3 max	4200-5000MHz 1.62 dBi (peak)
				5150-5925MHz -2.46 dBi (peak)	5150-5925MHz -0.57 dBi (peak)	5150-5925MHz 4 max	5150-5925MHz 1.89 dBi (peak)

1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E *Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
Tx2/Rx3 Antenna P/N:77HC0	Wistron Corp	Monopole coupling	50 ohm Coaxial length: 461mm diameter: 1.13mm Connector : IPEX	1710-2200MHz 0.67 dBi (peak)	1710-2200MHz 1.68 dBi (peak)	1710-2200MHz 3 max	1710-2200MHz 1.01 dBi (peak)
				2300-2690MHz 0.64 dBi (peak)	2300-2690MHz 1.74 dBi (peak)	2300-2690MHz 3 max	2300-2690MHz 1.1 dBi (peak)
				3300-3800MHz -0.14 dBi (peak)	3300-3800MHz 1.26 dBi (peak)	3300-3800MHz 4 max	3300-3800MHz 1.4 dBi (peak)
				4200-5000MHz 0.78 dBi (peak)	4200-5000MHz 2.34 dBi (peak)	4200-5000MHz 3.5 max	4200-5000MHz 1.56 dBi (peak)
Rx4 Antenna P/N: 77H24	Wistron Corp	Monopole coupling	50 ohm Coaxial length: 276mm diameter: 1.13mm Connector : IPEX	1805-2200MHz 0.72 dBi (peak)	1805-2200MHz 1.33 dBi (peak)	1805-2200MHz 3 max	1805-2200MHz 0.61 dBi (peak)
				2300-2690MHz 1.59 dBi (peak)	2300-2690MHz 2.25 dBi (peak)	2300-2690MHz 3.5 max	2300-2690MHz 0.66 dBi (peak)
				3300-3800MHz -2.38 dBi (peak)	3300-3800MHz -1.54 dBi (peak)	3300-3800MHz 3 max	3300-3800MHz 0.84 dBi (peak)
				4200-5000MHz -0.2 dBi (peak)	4200-5000MHz 0.74 dBi (peak)	4200-5000MHz 3 max	4200-5000MHz 0.94 dBi (peak)

- Antenna Peak Gain required being test in system basis.
- 1E frame contend absolutely peak antenna gain include H/V

1A	1B	1C	1D	1E	1F	1G	1H
Antenna Part Number	Manufacture	Antenna Type	Cable Assembly Part Number and Information	*Peak Gain W/ Cable loss (dBi)	Peak Gain w/o Cable Loss (dBi)	VSWR	Cable Loss (dBi)
Tx1/Rx1 Antenna P/N: 77H24	Wistron Corp	Monopole coupling	50 ohm Coaxial length: 276mm diameter: 1.13mm Connector : IPEX	617-698MHz	617-698MHz	617-698MHz	617-698MHz
				-3.35 dBi (peak)	-3.04 dBi (peak)	4.5 max	0.31 dBi (peak)
				698-821MHz	698-821MHz	698-821MHz	698-821MHz
				-2.99 dBi (peak)	-2.62 dBi (peak)	4 max	0.37 dBi (peak)
				824-960MHz	824-960MHz	824-960MHz	824-960MHz
				-3.32 dBi (peak)	-2.89 dBi (peak)	3.5 max	0.43 dBi (peak)
				1452-1515MHz	1452-1515MHz	1452-1515MHz	1452-1515MHz
				-2.53 dBi (peak)	-2.07 dBi (peak)	4 max	0.46 dBi (peak)
				1710-2200MHz	1710-2200MHz	1710-2200MHz	1710-2200MHz
				0.79 dBi (peak)	1.4 dBi (peak)	3 max	0.61 dBi (peak)
Rx2 Antenna P/N:77HC0	Wistron Corp	Monopole coupling	50 ohm Coaxial length: 476mm diameter: 1.13mm Connector : IPEX	2300-2690MHz	2300-2690MHz	2300-2690MHz	2300-2690MHz
				-2.04 dBi (peak)	-1.38 dBi (peak)	3 max	0.66 dBi (peak)
				3300-3800MHz	3300-3800MHz	3300-3800MHz	3300-3800MHz
				-2.72 dBi (peak)	-1.88 dBi (peak)	4 max	0.84 dBi (peak)
				4200-5000MHz	4200-5000MHz	4200-5000MHz	4200-5000MHz
				-0.87 dBi (peak)	0.07 dBi (peak)	3.5 max	0.94 dBi (peak)
				5150-5925MHz	5150-5925MHz	5150-5925MHz	5150-5925MHz
				0.32 dBi (peak)	1.42 dBi (peak)	3 max	1.1 dBi (peak)
				617-698MHz	617-698MHz	617-698MHz	617-698MHz
				-5.47 dBi (peak)	-4.93 dBi (peak)	5.5 max	0.54 dBi (peak)
				698-821MHz	698-821MHz	698-821MHz	698-821MHz
				-4.3 dBi (peak)	-3.67 dBi (peak)	5.5 max	0.63 dBi (peak)
				716-821MHz	716-821MHz	716-821MHz	716-821MHz
				-4.3 dBi (peak)	-3.67 dBi (peak)	5.5 max	0.63 dBi (peak)
				824-960MHz	824-960MHz	824-960MHz	824-960MHz
				-4.15 dBi (peak)	-3.41 dBi (peak)	4.5 max	0.74 dBi (peak)
				1452-1515MHz	1452-1515MHz	1452-1515MHz	1452-1515MHz
				-4.6 dBi (peak)	-3.81 dBi (peak)	3.5 max	0.79 dBi (peak)
				1557-1610 MHz	1557-1610 MHz	1557-1610 MHz	1557-1610 MHz
				-2.61 dBi (peak)	-1.77 dBi (peak)	3 max	0.84 dBi (peak)
				1805-2200MHz	1805-2200MHz	1805-2200MHz	1805-2200MHz
				0.98 dBi (peak)	2.02 dBi (peak)	3 max	1.04 dBi (peak)
				2300-2690MHzzz	2300-2690MHzzz	2300-2690MHzzz	2300-2690MHzzz
				-0.43 dBi (peak)	0.7 dBi (peak)	3.5 max	1.13 dBi (peak)
				3300-3800MHz	3300-3800MHz	3300-3800MHz	3300-3800MHz
				-0.76 dBi (peak)	0.69 dBi (peak)	3 max	1.45 dBi (peak)
				4200-5000MHz	4200-5000MHz	4200-5000MHz	4200-5000MHz
				-2.45 dBi (peak)	-0.83 dBi (peak)	3 max	1.62 dBi (peak)
				5150-5925MHz	5150-5925MHz	5150-5925MHz	5150-5925MHz
				-2.21 dBi (peak)	-0.32 dBi (peak)	4 max	1.89 dBi (peak)

1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E *Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
Tx2/Rx3 Antenna P/N: 77HC0	Wistron Corp	Monopole coupling	50 ohm Coaxial length: 461mm diameter: 1.13mm Connector : IPEX	1710-2200MHz -1.63 dBi (peak)	1710-2200MHz -0.62 dBi (peak)	1710-2200MHz 3 max	1710-2200MHz 1.01 dBi (peak)
				2300-2690MHz -1.37 dBi (peak)	2300-2690MHz -0.27 dBi (peak)	2300-2690MHz 3 max	2300-2690MHz 1.1 dBi (peak)
				3300-3800MHz -2.9 dBi (peak)	3300-3800MHz -1.5 dBi (peak)	3300-3800MHz 4 max	3300-3800MHz 1.4 dBi (peak)
				4200-5000MHz -1.16 dBi (peak)	4200-5000MHz 0.4 dBi (peak)	4200-5000MHz 3.5 max	4200-5000MHz 1.56 dBi (peak)
Rx4 Antenna P/N: 77H24	Wistron Corp	Monopole coupling	50 ohm Coaxial length: 276mm diameter: 1.13mm Connector : IPEX	1805-2200MHz -1.25 dBi (peak)	1805-2200MHz -0.64 dBi (peak)	1805-2200MHz 3 max	1805-2200MHz 0.61 dBi (peak)
				2300-2690MHzzz -3.01 dBi (peak)	2300-2690MHzzz -2.35 dBi (peak)	2300-2690MHzzz 3.5 max	2300-2690MHzzz 0.66 dBi (peak)
				3300-3800MHz -5.35 dBi (peak)	3300-3800MHz -4.51 dBi (peak)	3300-3800MHz 3 max	3300-3800MHz 0.84 dBi (peak)
				4200-5000MHz -2.54 dBi (peak)	4200-5000MHz -1.6 dBi (peak)	4200-5000MHz 3 max	4200-5000MHz 0.94 dBi (peak)

- Antenna Peak Gain required being test in system basis.
- 1E frame contend absolutely peak antenna gain include H/V

Antenna Peak Gain Table(I):
NB mode
Low and middle band

Frequency (MHz)	Tx1/Rx1 antenna		Rx2 antenna	
	Horizontal	Vertical	Horizontal	Vertical
	(dBi)	(dBi)	(dBi)	(dBi)
617	-4.47	-5.10	-5.42	-6.09
634.5	-4.18	-4.16	-5.45	-5.76
652	-4.29	-3.66	-5.69	-5.39
663	-4.22	-3.48		
680.5	-3.74	-3.21		
698	-3.05	-2.84		
703	-3.03	-2.41		
707.5	-3.11	-2.45		
716	-2.96	-2.48		
717	-2.94	-2.46	-4.50	-4.04
722.5	-2.75	-2.33	-4.53	-3.78
725.5	-2.66	-2.27		
728	-2.64	-2.23	-4.54	-3.54
729	-2.63	-2.21	-4.61	-3.50
737.5	-2.47	-1.94	-4.58	-3.14
746	-2.31	-1.82	-4.25	-2.91
748	-2.27	-1.76		
751	-2.23	-1.70	-4.09	-2.88
756	-2.23	-1.71	-4.04	-2.92
758	-2.23	-1.73	-3.92	-2.94
763	-2.20	-1.70	-3.74	-2.92
768	-2.31	-1.84	-3.68	-2.94
777	-2.55	-1.99		
780.5	-2.73	-2.12	-4.02	-2.95
782	-2.82	-2.18		
787	-3.03	-2.20		
788	-3.05	-2.18		
791	-3.12	-2.23	-4.46	-2.82
793	-3.16	-2.27		
798	-3.30	-2.35		
803	-3.28	-2.57	-4.66	-3.21
806	-3.36	-2.64	-4.76	-3.28
814	-3.50	-2.72		
815	-3.53	-2.73		
821	-3.67	-2.81	-4.80	-3.43
823	-3.73	-2.82		
824	-3.77	-2.83		
830	-3.92	-2.81		
831.5	-3.90	-2.78		
832	-3.92	-2.78		
835	-3.92	-2.76		

836.5	-3.93	-2.75		
838	-3.96	-2.74		
840	-3.96	-2.71		
845	-3.95	-2.60		
847	-3.92	-2.57		
849	-3.87	-2.56		
859	-3.86	-2.32	-4.30	-3.09
860	-3.85	-2.29	-4.28	-3.05
862	-3.88	-2.22		
868	-3.85	-2.13	-4.11	-2.81
869	-3.81	-2.10	-4.08	-2.76
875	-3.70	-2.01	-4.07	-2.65
876.5	-3.69	-2.03	-4.03	-2.66
880	-4.31	-2.43	-4.66	-2.98
881.5	-4.33	-2.44	-4.68	-2.93
883	-4.33	-2.48	-4.70	-2.88
885	-4.34	-2.50	-4.76	-2.84
890	-4.42	-2.55	-4.78	-2.83
894	-4.43	-2.59	-4.72	-2.87
897.5	-4.43	-2.62		
915	-4.44	-2.44		
925	-4.33	-2.35	-4.25	-2.42
942.5	-3.58	-2.08	-4.42	-2.34
960	-3.66	-2.25	-5.04	-2.54
1427.9				
1447.9				
1452	-2.44	-3.04	-5.15	-3.84
1455.4				
1462.9				
1474	-2.87	-2.78	-3.65	-2.44
1496	-4.06	-2.64	-2.76	-1.37
1510.9				
1557			-2.24	-1.41
1561			-2.12	-1.45
1565			-2.03	-1.55
1573			-1.95	-1.77
1575			-1.91	-1.83
1577			-1.89	-1.90
1594			-1.84	-2.47
1602			-1.90	-2.69
1610			-1.99	-2.87

High band

Frequency (MHz)	Tx1/Rx1 antenna		Rx2 antenna	
	Horizontal (dBi)	Vertical (dBi)	Horizontal (dBi)	Vertical (dBi)
1710	-0.69	-1.53		
1732.5	-1.05	-1.47		
1745	-1.15	-1.42		
1747.5	-1.05	-1.37		
1749.9	-0.97	-1.36		
1755	-0.80	-1.30		
1767.4	-0.46	-1.17		
1780	-0.16	-1.02		
1784.9	-0.10	-0.94		
1805	0.33	-0.66	-3.24	-1.11
1842.5	1.09	-0.28	-2.66	-1.19
1844.9	1.15	-0.24	-2.54	-1.13
1850	1.25	-0.20		
1862.4	1.52	-0.01	-1.69	-0.64
1880	1.99	0.28	-0.80	-0.16
1882.5	2.07	0.36		
1900	2.49	0.71	0.00	0.36
1910	2.61	0.90		
1915	2.61	0.99		
1920	2.59	1.09	0.54	0.89
1930	2.59	1.11	0.72	1.07
1950	2.60	1.07		
1960	2.55	0.93	1.01	1.59
1962.5	2.57	0.93	1.05	1.64
1980	2.60	0.87		
1990	2.61	0.87	1.29	1.89
1995	2.59	0.89	1.31	1.92
2010	2.27	0.61	1.07	1.69
2018	2.17	0.60	1.02	1.65
2025	2.16	0.68	1.05	1.68
2110	1.35	-0.26	0.70	1.28
2132.5	1.31	-0.69	0.72	1.14
2140	1.22	-0.86	0.68	1.06
2155	1.16	-1.15	0.65	0.95
2170	1.07	-1.53	0.61	0.80
2200	0.63	-2.89	0.61	0.26
2300	-0.12	-0.96	-2.15	-1.67
2305	-0.10	-0.86		
2310	-0.11	-0.81		
2315	-0.08	-0.78		
2350	-0.21	-1.07	-4.73	-3.03
2355	-0.19	-1.06	-4.62	-3.14
2360	-0.27	-1.11	-4.59	-3.33

2400	-0.45	-1.42	-3.59	-2.82
2496	-0.96	-0.55	-0.93	-1.29
2500	-1.01	-0.55		
2535	-1.62	-1.00		
2570	-2.11	-1.37	-1.04	-0.42
2593	-2.20	-1.86	-1.16	-0.33
2595	-2.14	-1.92	-1.20	-0.33
2620	-1.61	-2.58	-1.66	-0.77
2655	-0.84	-3.79	-2.34	-2.14
2690	-0.44	-3.84	-3.16	-3.36
3300	-1.02	-2.46	-2.03	-2.60
3400	-1.03	-2.00	-0.36	-3.45
3500	-1.49	-0.83	-2.38	-2.70
3550	-2.86	-1.70	-3.94	-4.03
3600	-2.77	-1.58	-4.00	-3.72
3625	-2.31	-1.36	-3.49	-3.79
3700	-1.70	-1.24	-4.07	-3.65
3750	-2.70	-1.65	-4.06	-2.95
3800	-3.80	-2.24	-3.12	-0.82
4200	-6.20	-4.73	-1.79	-0.90
4400	-6.11	-3.22	-4.76	-2.08
4700	-1.03	-2.31	-3.94	-1.25
5000	0.26	-0.24	-2.30	-0.65
5150	-2.70	-3.05	-2.46	-3.95
5537.5	-3.81	-2.53	-3.66	-5.30
5925	-3.83	-2.66	-3.99	-3.74

Frequency (MHz)	Tx2/Rx3 antenna		Rx4 antenna	
	Horizontal	Vertical	Horizontal	Vertical
	(dBi)	(dBi)	(dBi)	(dBi)
1710	0.38	-1.91		
1732.5	0.67	-1.48		
1745	0.38	-1.63		
1747.5	0.28	-1.66		
1749.9	0.24	-1.72		
1755	0.08	-1.79		
1767.4	-0.41	-2.10		
1780	-0.65	-2.37		
1784.9	-0.75	-2.50		
1805	-0.90	-2.93	-0.06	-2.78
1842.5	-1.03	-3.51	-0.26	-2.90
1844.9	-1.05	-3.51	-0.26	-2.89
1850	-1.07	-3.53		
1862.4	-0.96	-3.37	-0.16	-2.92
1880	-0.62	-3.09	0.20	-2.91
1882.5	-0.58	-3.04		
1900	-0.22	-2.69	0.62	-2.85
1910	-0.10	-2.49		
1915	-0.09	-2.47		
1920	-0.05	-2.38	0.72	-2.71
1930	-0.04	-2.36	0.69	-2.73
1950	-0.02	-2.35		
1960	-0.06	-2.44	0.36	-2.28
1962.5	-0.06	-2.47	0.39	-2.20
1980	0.08	-2.37		
1990	0.08	-2.35	0.28	-2.00
1995	0.13	-2.37	0.26	-1.98
2010	-0.15	-2.89	-0.06	-2.23
2018	-0.22	-3.08	-0.06	-2.22
2025	-0.28	-3.07	0.03	-2.18
2110	-1.05	-2.94	-0.27	-2.43
2132.5	-0.74	-3.06	-0.17	-2.25
2140	-0.72	-3.17	-0.18	-2.21
2155	-0.68	-3.37	-0.09	-2.13
2170	-0.74	-3.58	-0.04	-2.21
2200	-0.55	-3.76	0.33	-2.45
2300	0.64	-2.73	1.59	-1.19
2305	0.49	-2.81		
2310	0.33	-2.83		
2315	0.22	-2.89		
2350	-0.29	-3.62	0.19	-1.97
2355	-0.31	-3.62	0.09	-2.05
2360	-0.37	-3.70	-0.03	-2.20

2400	-0.34	-4.04	-0.25	-2.37
2496	0.18	-3.27	0.45	-3.39
2500	0.09	-3.26		
2535	-0.93	-3.78		
2570	-1.59	-3.82	-0.99	-4.42
2593	-2.52	-3.72	-1.31	-4.49
2595	-2.55	-3.72	-1.32	-4.56
2620	-3.17	-3.24	-1.14	-4.38
2655	-2.81	-2.72	-0.57	-4.40
2690	-2.84	-2.20	-0.23	-4.29
3300	-2.06	-2.21	-3.08	-3.39
3400	-0.46	-1.93	-3.68	-2.97
3500	-0.14	-2.72	-4.74	-3.13
3550	-0.14	-2.64	-4.63	-3.38
3600	-0.66	-3.14	-4.47	-2.91
3625	-1.04	-3.47	-4.29	-2.87
3700	-1.76	-3.63	-5.45	-3.23
3750	-1.88	-3.47	-5.88	-2.90
3800	-2.70	-2.75	-5.51	-2.38
4200	-0.82	-3.30	-4.47	-1.60
4400	-0.95	-3.34	-3.09	-3.47
4700	-2.22	-2.46	-3.54	-2.18
5000	-0.56	0.78	-2.65	-0.20

Tablet mode
Low and middle band

Frequency (MHz)	Tx1/Rx1 antenna		Rx2 antenna	
	Horizontal	Vertical	Horizontal	Vertical
	(dBi)	(dBi)	(dBi)	(dBi)
617	-4.23	-6.87	-6.01	-7.88
634.5	-3.68	-6.11	-5.50	-7.35
652	-3.35	-5.35	-5.47	-6.67
663	-3.40	-5.03		
680.5	-3.78	-4.70		
698	-3.64	-4.32		
703	-3.37	-4.05		
707.5	-3.38	-4.10		
716	-3.59	-4.20		
717	-3.63	-4.18	-4.81	-4.82
722.5	-3.69	-4.21	-4.83	-4.89
725.5	-3.75	-4.29		
728	-3.86	-4.42	-4.83	-5.00
729	-3.90	-4.45	-4.85	-5.02
737.5	-4.03	-4.21	-4.71	-4.84
746	-4.10	-4.08	-4.75	-4.82
748	-4.11	-4.05		
751	-4.05	-3.97	-4.42	-4.86
756	-4.03	-3.91	-4.42	-4.90
758	-4.04	-3.92	-4.46	-4.96
763	-3.86	-3.76	-4.30	-4.90
768	-3.96	-3.62	-4.52	-4.81
777	-3.85	-3.53		
780.5	-3.85	-3.43	-4.32	-4.76
782	-3.97	-3.40		
787	-4.17	-3.30		
788	-4.16	-3.24		
791	-4.09	-3.17	-4.72	-4.80
793	-4.05	-3.10		
798	-4.05	-2.99		
803	-3.94	-3.07	-5.14	-5.13
806	-3.76	-3.08	-5.14	-5.25
814	-3.85	-3.14		
815	-3.80	-3.15		
821	-3.83	-3.26	-5.51	-5.55
823	-3.79	-3.30		
824	-3.74	-3.32		
830	-3.54	-3.38		
831.5	-3.56	-3.42		
832	-3.60	-3.46		
835	-3.62	-3.49		
836.5	-3.49	-3.58		

838	-3.41	-3.59		
840	-3.40	-3.62		
845	-3.50	-3.66		
847	-3.60	-3.69		
849	-3.67	-3.72		
859	-3.59	-4.00	-4.71	-5.62
860	-3.68	-4.07	-4.64	-5.60
862	-3.69	-4.05		
868	-3.85	-4.11	-4.46	-5.34
869	-3.88	-4.14	-4.48	-5.38
875	-3.77	-4.24	-4.32	-5.27
876.5	-3.76	-4.28	-4.24	-5.25
880	-3.70	-4.34	-4.19	-5.30
881.5	-3.71	-4.33	-4.15	-5.29
883	-3.73	-4.35	-4.16	-5.23
885	-3.75	-4.27	-4.28	-5.19
890	-4.12	-4.37	-4.31	-5.17
894	-4.09	-4.40	-4.30	-5.19
897.5	-4.19	-4.42		
915	-4.67	-4.84		
925	-4.82	-5.08	-5.47	-5.75
942.5	-4.26	-5.38	-5.46	-6.57
960	-4.15	-5.81	-5.49	-7.31
1427.9				
1447.9				
1452	-2.74	-5.29	-7.48	-7.73
1455.4				
1462.9				
1474	-2.53	-5.65	-6.09	-6.22
1496	-3.52	-5.55	-4.60	-5.27
1510.9				
1557			-3.82	-4.17
1561			-3.73	-4.24
1565			-3.60	-4.24
1573			-3.51	-4.12
1575			-3.62	-4.05
1577			-3.79	-4.16
1594			-3.36	-4.07
1602			-2.71	-3.77
1610			-2.61	-3.63

High band

Frequency (MHz)	Tx1/Rx1 antenna		Rx2 antenna	
	Horizontal (dBi)	Vertical (dBi)	Horizontal (dBi)	Vertical (dBi)
1710	-0.41	-3.74		
1732.5	-0.29	-3.01		
1745	-0.07	-2.64		
1747.5	0.11	-2.47		
1749.9	0.21	-2.41		
1755	0.31	-2.19		
1767.4	0.66	-2.00		
1780	0.72	-1.70		
1784.9	0.74	-1.65		
1805	0.70	-1.47	-1.70	-3.74
1842.5	0.47	-0.90	-1.86	-2.70
1844.9	0.44	-1.01	-1.90	-2.62
1850	0.27	-0.98		
1862.4	0.27	-0.93	-1.38	-2.02
1880	0.02	-0.89	-1.20	-1.24
1882.5	0.00	-0.90		
1900	-0.13	-0.69	-0.97	-0.57
1910	-0.05	-0.53		
1915	0.00	-0.52		
1920	-0.02	-0.60	-0.69	-0.20
1930	0.22	-0.30	-0.43	0.11
1950	0.26	-0.16		
1960	0.31	-0.19	-0.78	0.13
1962.5	0.20	-0.20	-0.87	0.09
1980	0.09	0.16		
1990	-0.06	0.19	-1.21	0.51
1995	-0.02	0.26	-1.14	0.59
2010	0.27	0.71	-0.61	0.91
2018	0.37	0.74	-0.51	0.91
2025	0.45	0.79	-0.30	0.98
2110	0.57	0.44	0.55	0.80
2132.5	0.75	0.21	0.68	0.38
2140	0.69	0.13	0.76	0.28
2155	0.73	0.10	0.88	-0.08
2170	0.65	0.16	0.77	-0.49
2200	-0.15	-0.69	0.33	-1.19
2300	-4.50	-3.68	-1.81	-7.00
2305	-4.57	-3.63		
2310	-4.63	-3.45		
2315	-4.67	-3.48		
2350	-3.90	-3.56	-4.22	-8.21
2355	-3.98	-3.79	-4.64	-8.52
2360	-3.96	-3.99	-4.68	-8.32

2400	-3.34	-3.78	-4.40	-6.54
2496	-2.04	-4.26	-1.88	-4.79
2500	-2.12	-4.25		
2535	-2.37	-4.05		
2570	-2.96	-4.74	-0.43	-3.11
2593	-3.02	-4.62	-0.68	-3.45
2595	-3.05	-4.70	-0.86	-3.59
2620	-3.35	-4.19	-1.49	-4.16
2655	-3.39	-3.87	-2.30	-4.48
2690	-3.05	-3.87	-3.79	-5.35
3300	-2.92	-2.96	-2.56	-3.68
3400	-2.72	-3.45	-0.76	-3.67
3500	-4.05	-2.96	-3.97	-5.85
3550	-5.07	-3.64	-4.74	-5.64
3600	-5.09	-3.64	-3.43	-4.39
3625	-5.48	-3.59	-3.42	-4.08
3700	-5.58	-4.62	-3.96	-4.76
3750	-4.88	-5.10	-4.08	-4.28
3800	-4.18	-5.34	-4.08	-3.48
4200	-6.26	-5.35	-4.63	-6.27
4400	-4.17	-5.88	-3.94	-5.99
4700	-2.80	-3.92	-4.04	-4.74
5000	-0.87	-2.26	-2.45	-4.62
5150	0.32	-3.62	-2.21	-5.58
5537.5	-1.65	-3.31	-4.89	-6.99
5925	-5.15	-3.94	-3.58	-5.76

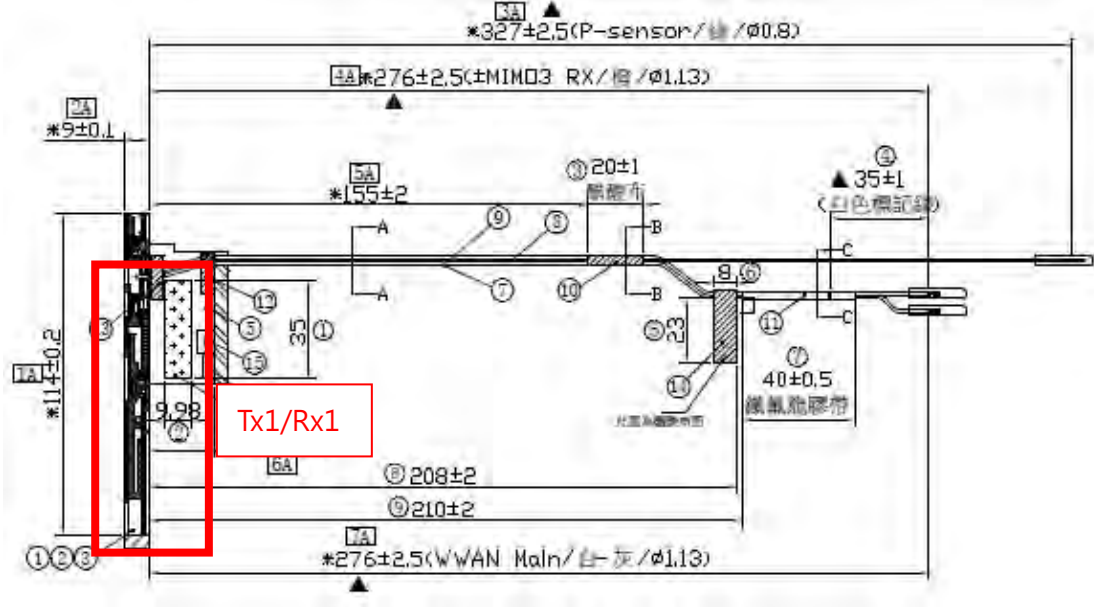
Frequency (MHz)	Tx2/Rx3 antenna		Rx4 antenna	
	Horizontal	Vertical	Horizontal	Vertical
	(dBi)	(dBi)	(dBi)	(dBi)
1710	-1.63	-5.27		
1732.5	-1.67	-4.04		
1745	-2.17	-3.71		
1747.5	-2.31	-3.71		
1749.9	-2.33	-3.65		
1755	-2.66	-3.67		
1767.4	-3.30	-3.95		
1780	-3.62	-4.01		
1784.9	-3.91	-3.83		
1805	-3.85	-3.48	-3.02	-2.73
1842.5	-3.19	-3.08	-2.67	-2.63
1844.9	-3.29	-3.03	-2.62	-2.62
1850	-3.28	-3.04		
1862.4	-3.28	-3.06	-2.62	-2.73
1880	-3.63	-2.99	-2.79	-2.64
1882.5	-3.68	-3.01		
1900	-3.73	-2.53	-2.83	-2.36
1910	-3.77	-2.46		
1915	-3.79	-2.49		
1920	-3.78	-2.53	-2.73	-2.25
1930	-3.73	-2.37	-2.61	-2.14
1950	-3.83	-2.34		
1960	-3.84	-2.55	-2.66	-2.20
1962.5	-3.88	-2.51	-2.64	-2.15
1980	-4.10	-2.47		
1990	-4.30	-2.43	-3.09	-1.76
1995	-4.28	-2.39	-3.10	-1.77
2010	-4.07	-1.92	-2.82	-1.33
2018	-4.06	-1.95	-2.81	-1.40
2025	-3.97	-1.82	-2.56	-1.25
2110	-3.32	-2.02	-3.24	-1.89
2132.5	-3.45	-2.34	-3.41	-2.37
2140	-3.34	-2.44	-3.41	-2.47
2155	-3.41	-2.65	-3.20	-2.96
2170	-3.87	-2.77	-3.42	-3.00
2200	-4.15	-2.50	-3.30	-3.00
2300	-5.29	-1.44	-3.01	-3.93
2305	-5.13	-1.52		
2310	-5.12	-1.37		
2315	-5.06	-1.44		
2350	-4.92	-2.22	-3.05	-4.05
2355	-4.99	-2.36	-3.17	-4.11
2360	-5.23	-2.55	-3.56	-4.50

2400	-5.27	-1.80	-4.02	-4.54
2496	-4.23	-2.45	-4.72	-5.47
2500	-3.94	-2.41		
2535	-3.50	-2.90		
2570	-3.42	-2.69	-4.90	-5.01
2593	-3.37	-2.70	-5.26	-5.37
2595	-3.36	-2.80	-5.28	-5.37
2620	-3.12	-2.91	-5.68	-5.52
2655	-2.63	-4.08	-6.34	-5.88
2690	-2.72	-5.68	-5.95	-6.16
3300	-2.90	-4.72	-5.48	-6.08
3400	-3.99	-5.29	-5.35	-6.61
3500	-3.76	-5.79	-5.76	-7.42
3550	-3.99	-5.87	-6.14	-7.33
3600	-3.85	-6.29	-7.00	-6.87
3625	-3.79	-6.84	-6.81	-6.91
3700	-3.78	-7.07	-7.97	-6.70
3750	-4.02	-6.98	-7.03	-6.30
3800	-4.54	-6.52	-6.53	-5.80
4200	-3.01	-7.50	-4.18	-6.15
4400	-3.38	-9.20	-4.47	-6.45
4700	-1.16	-8.85	-2.94	-8.49
5000	-1.48	-6.69	-2.54	-8.04

Section 2. Dimensioned Photos or Drawings of Antennas

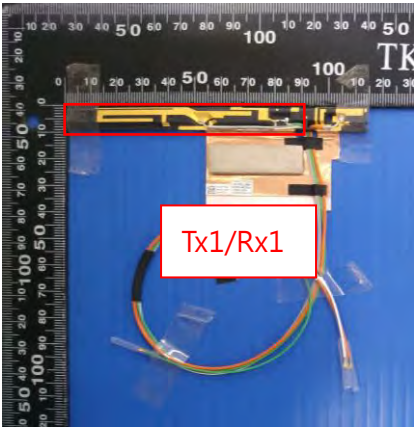
Include a dimensioned photo and dimensioned drawing of Tx1/Rx1 antenna here.

Tx1/Rx1 Antenna Dimensioned Drawing:

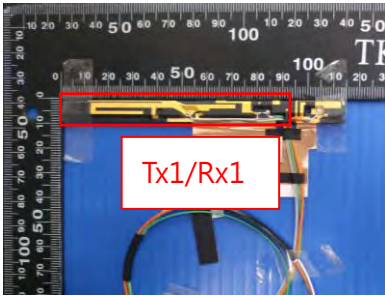


Tx1/Rx1 Antenna Photo:

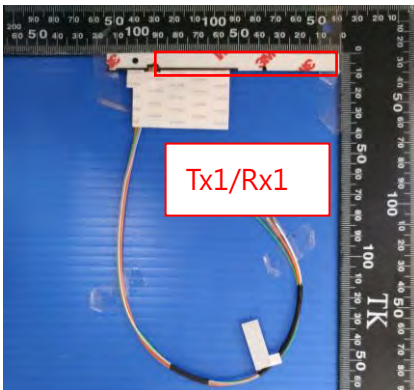
Tx1/Rx1(Front)-Far



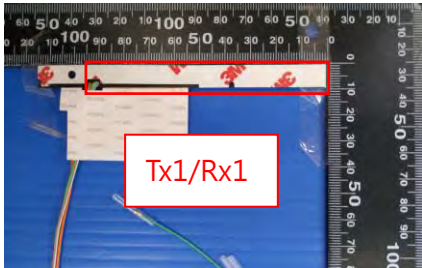
Tx1/Rx1 (Front)-Near



Tx1/Rx1 (Back)-Far

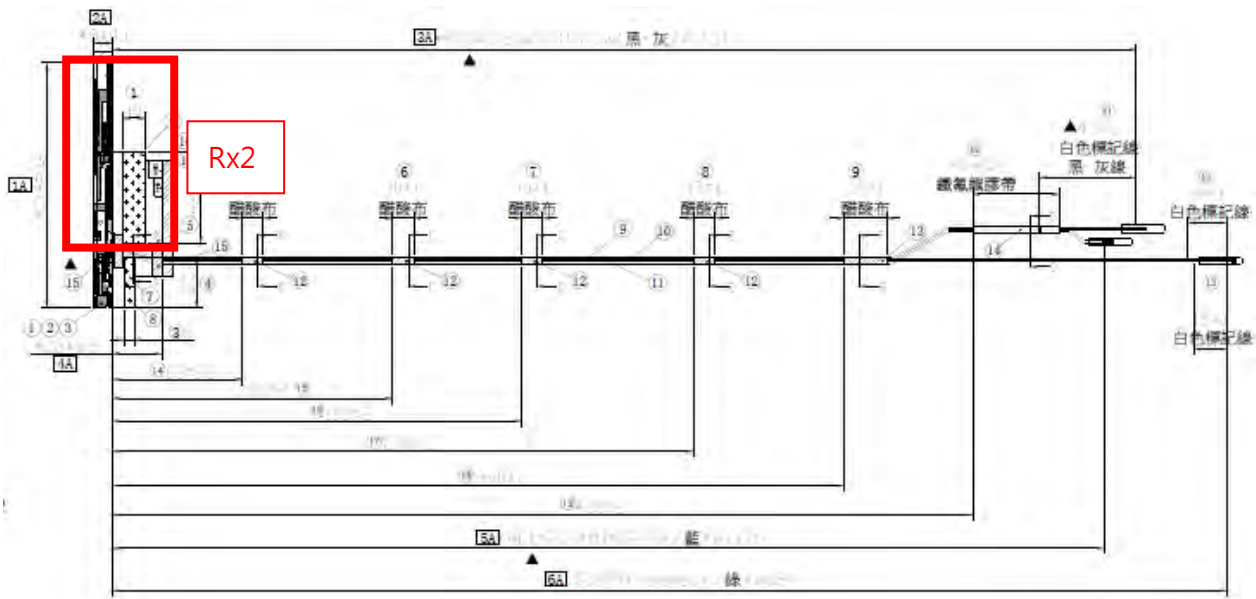


Tx1/Rx1 (Front)-Near



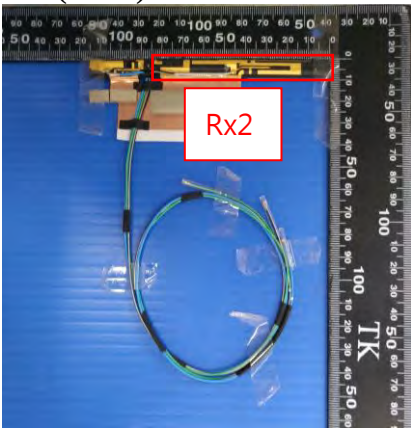
Include a dimensioned photo and dimensioned drawing of Rx2 antenna here.

Rx2 Antenna Dimensioned Drawing:

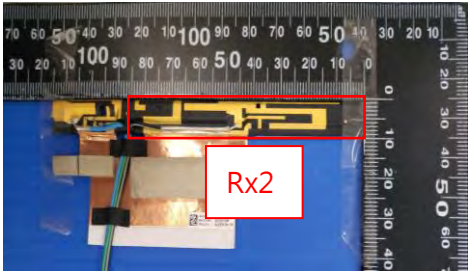


Rx2 Antenna Photo:

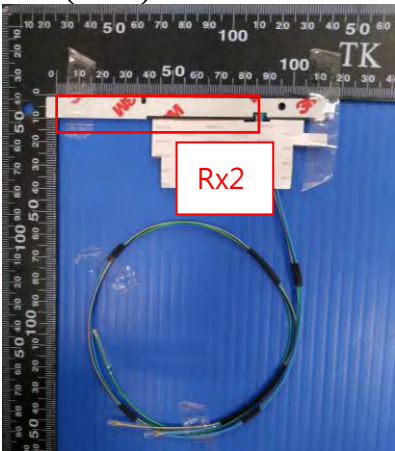
Rx2(Front)-Far



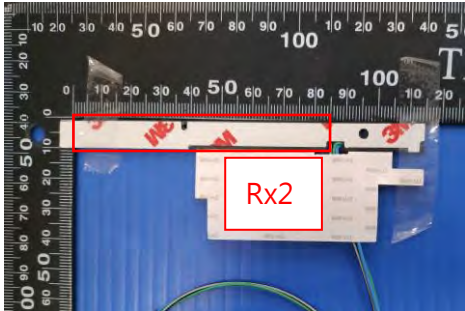
Rx2 (Front)-Near



Rx2 (Back)-Far

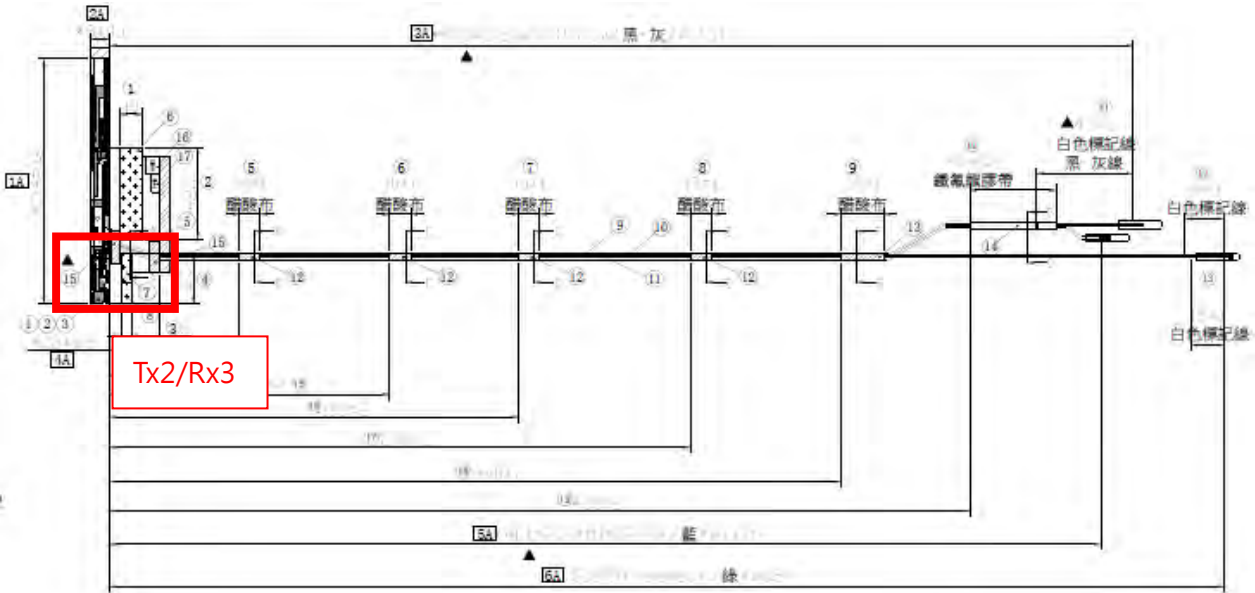


Rx2 (Back)-Near



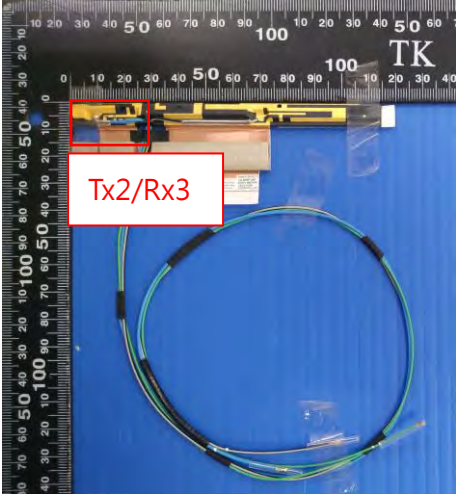
Include a dimensioned photo and dimensioned drawing of Tx2/Rx3 antenna here.

Tx2/Rx3 Antenna Dimensioned Drawing:

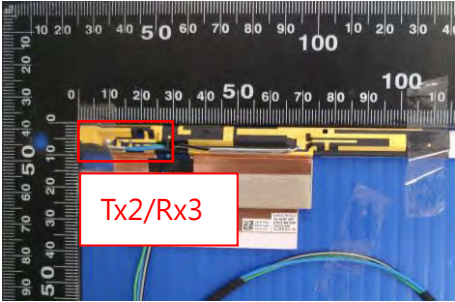


Tx2/Rx3 Antenna Photo:

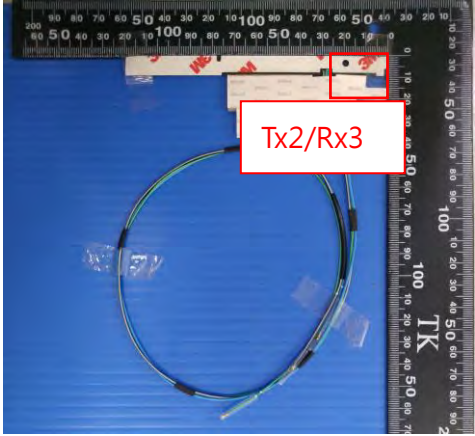
Tx2/Rx3 (Front)-Far



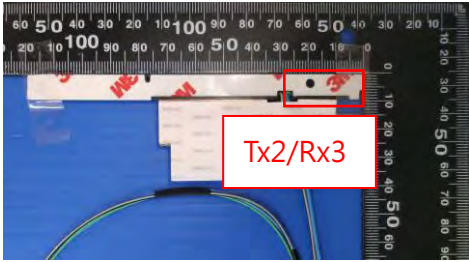
Tx2/Rx3 (Front)-Near



Tx2/Rx3 (Back)-Far

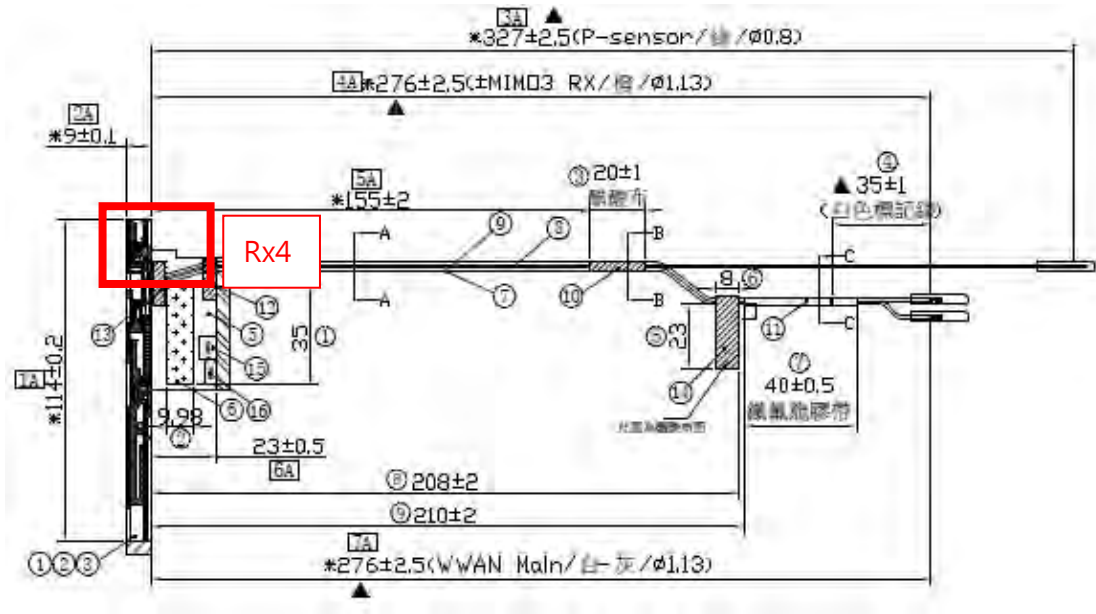


Tx2/Rx3 (Back)-Near



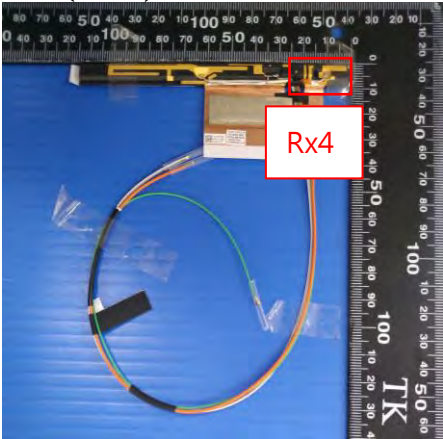
Include a dimensioned photo and dimensioned drawing of Rx4 antenna here.

Rx4 Antenna Dimensioned Drawing:

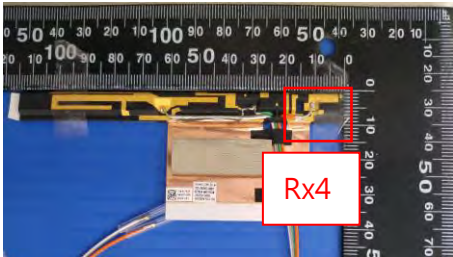


Rx4 Antenna Photo:

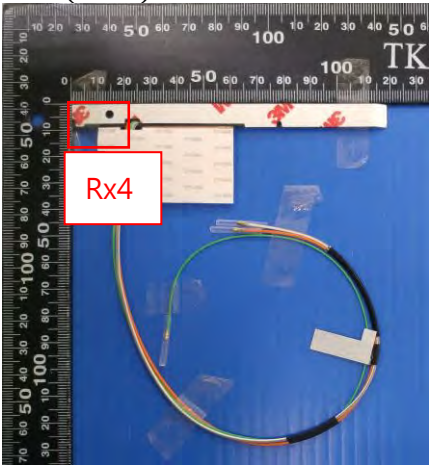
Rx4 (Front)-Far



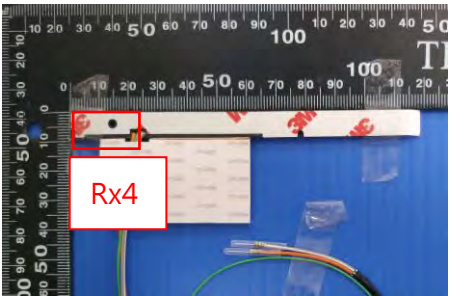
Rx4 (Front)-Near



Rx4 (Back)-Far



Rx4 (Back)-Near



Include front view photo of all 2 antennas here.

Antenna Manufacturer: Auden Techno Corp.

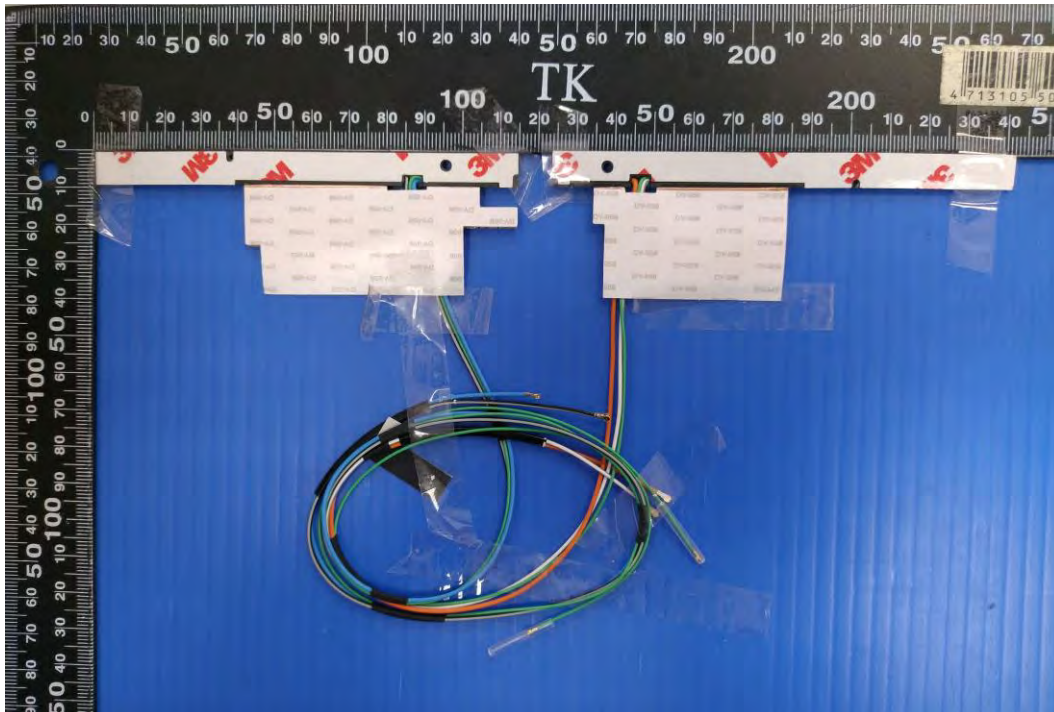
Antenna Part Number: 025.9026O.0001 (A22754-60) (Tx1/Rx1+Rx4), 025.9026P.0001 (A22755-60) (Rx2+Tx3/Rx3)



Include back view photo of all 2 antennas here.

Antenna Manufacturer: Auden Techno Corp.

Antenna Part Number: 025.9026O.0001 (A22754-60) (Tx1/Rx1+Rx4), 025.9026P.0001 (A22755-60) (Rx2+Tx3/Rx3)

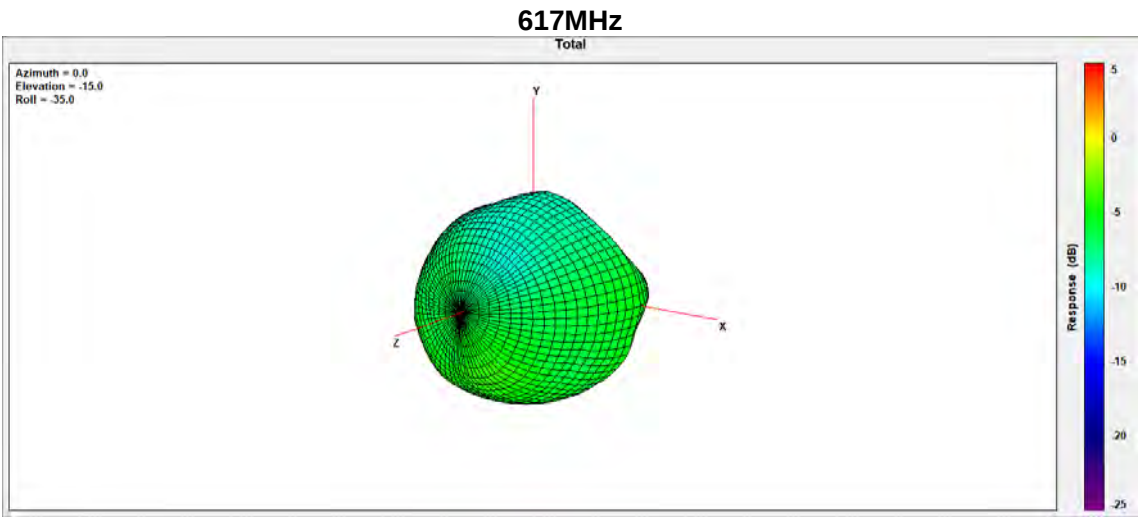


Note: antenna photo should include L type ruler

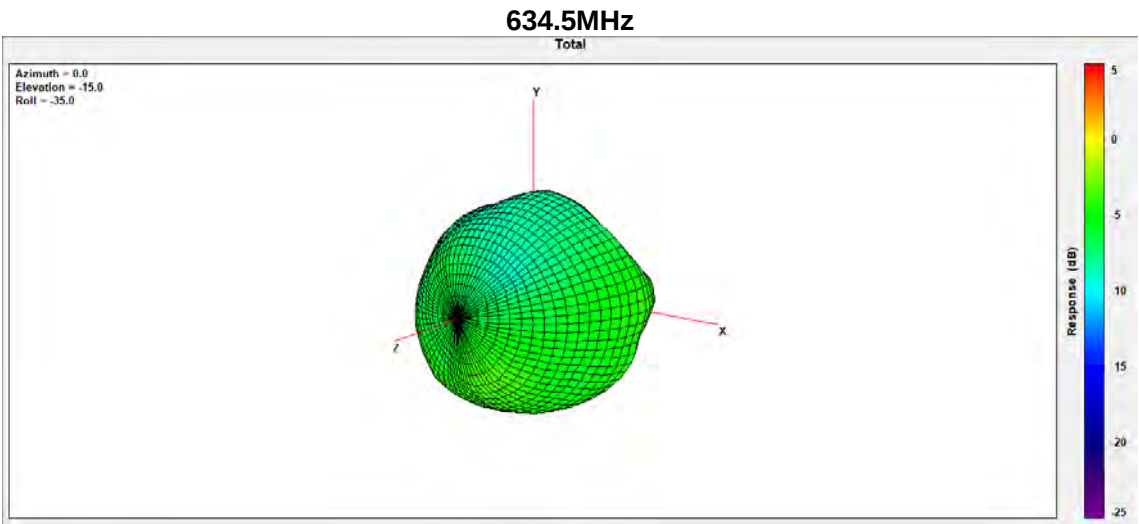
Section 3. Radiation characteristics of antennae Loaded in Host Platform

NB mode

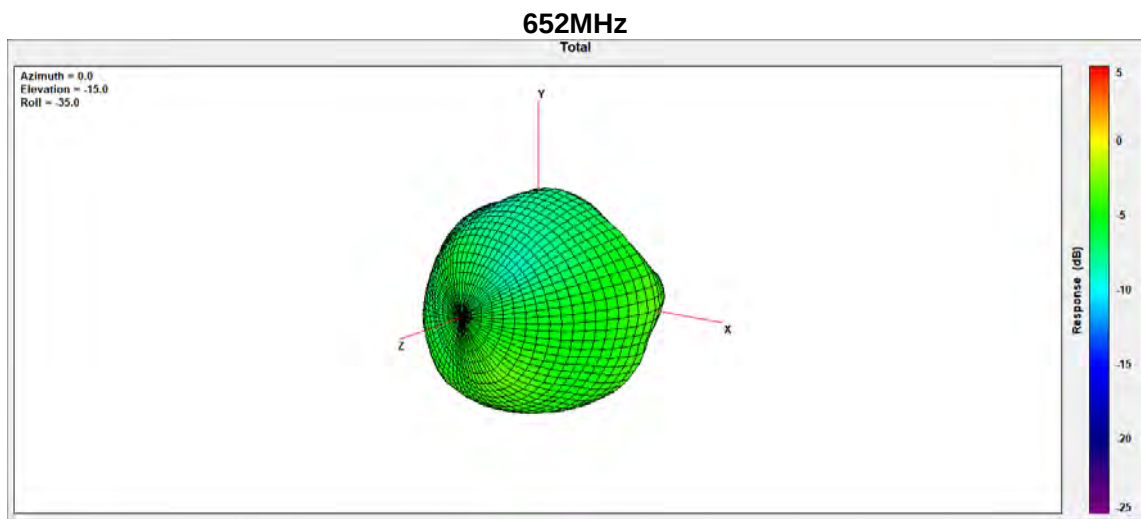
WWAN Main Antenna (Tx1/Rx1)



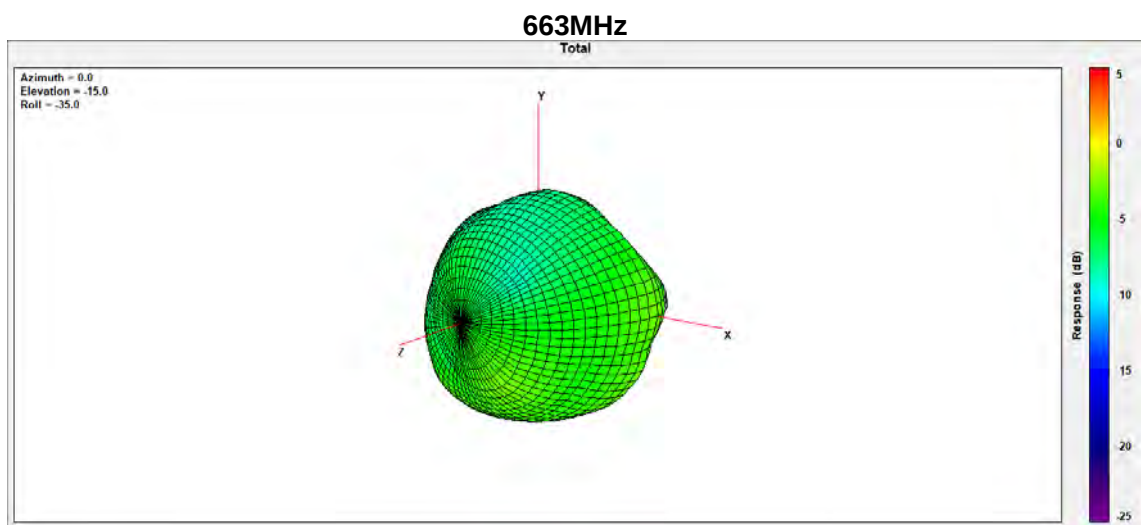
617MHz	H (Peak)	V (Peak)
	-4.47	-5.10



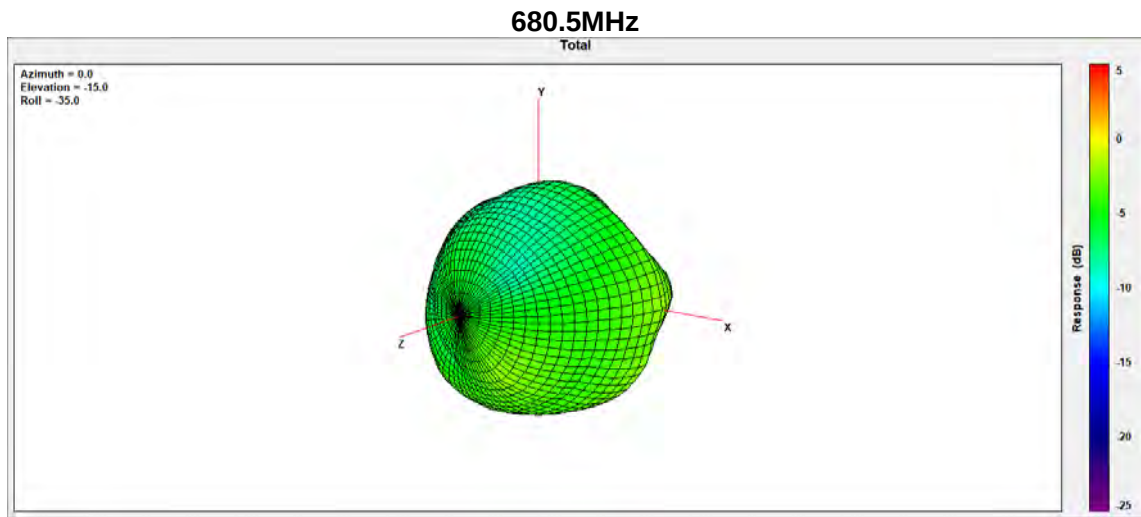
634.5MHz	H (Peak)	V (Peak)
	-4.18	-4.16



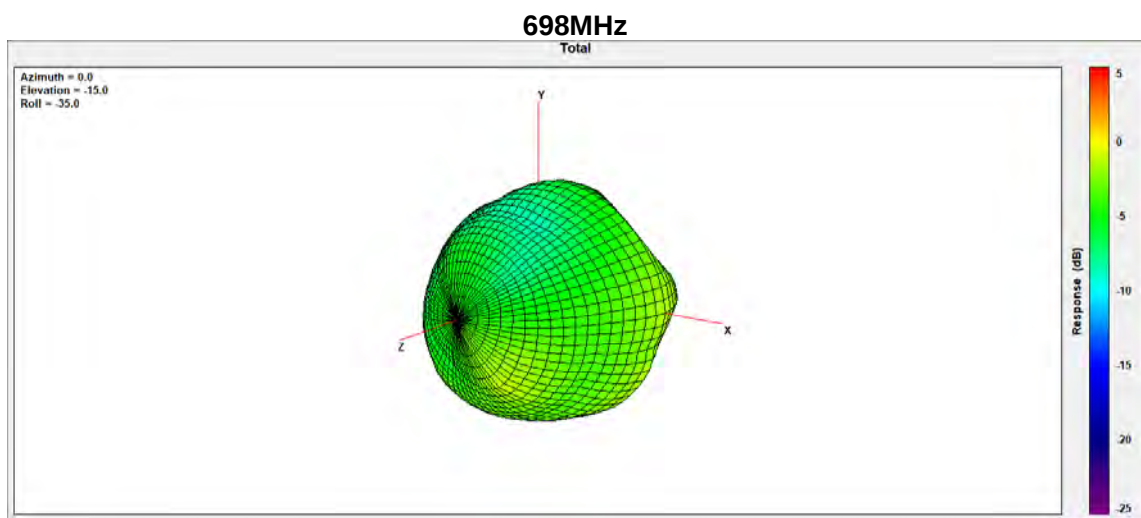
652MHz	H (Peak)	V (Peak)
	-4.29	-3.66



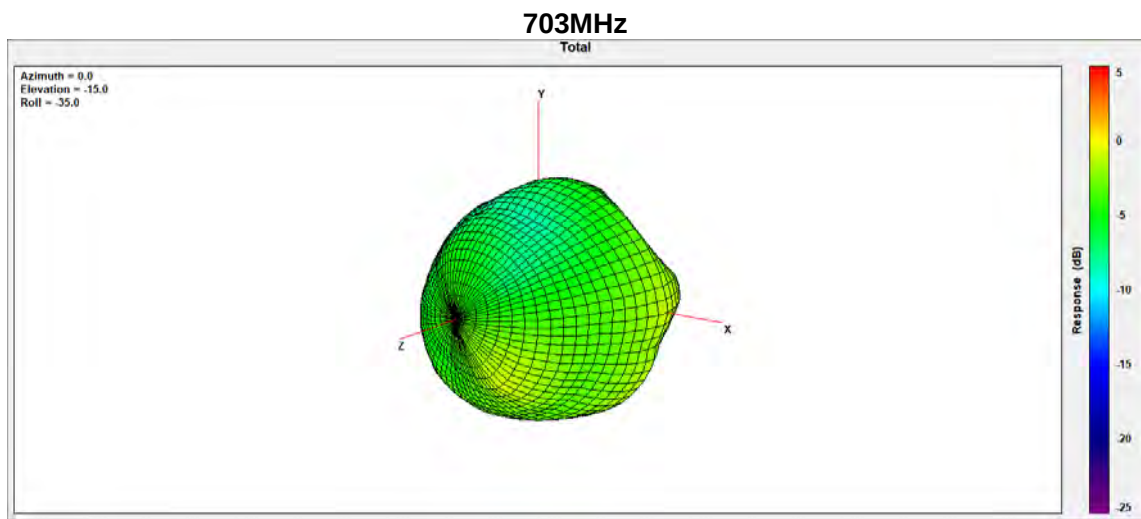
663MHz	H (Peak)	V (Peak)
	-4.22	-3.48



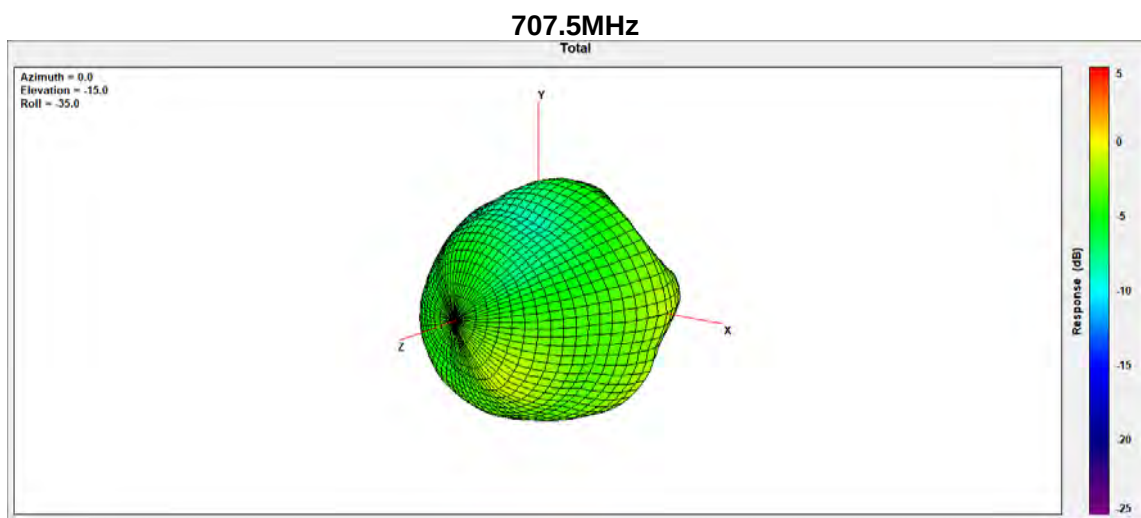
680.5Hz	H (Peak)	V (Peak)
	-3.74	-3.21



698MHz	H (Peak)	V (Peak)
	-3.05	-2.84

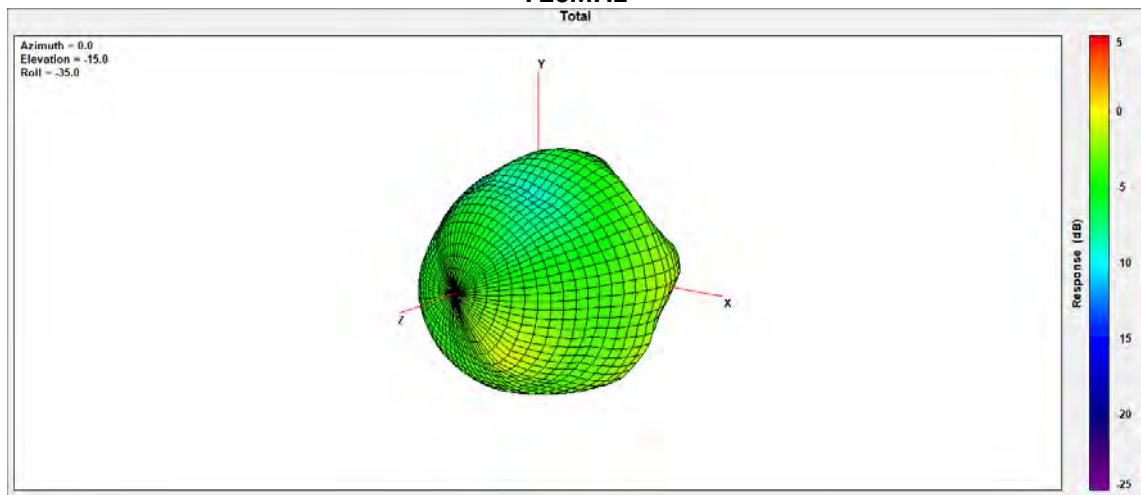


703MHz	H (Peak)	V (Peak)
	-3.03	-2.41



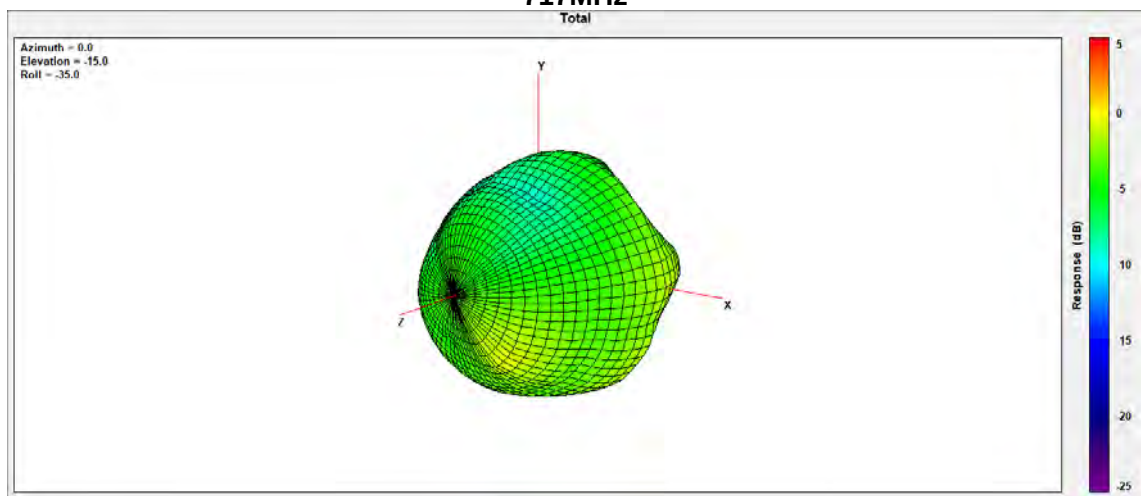
707.5MHz	H (Peak)	V (Peak)
	-3.11	-2.45

716MHz

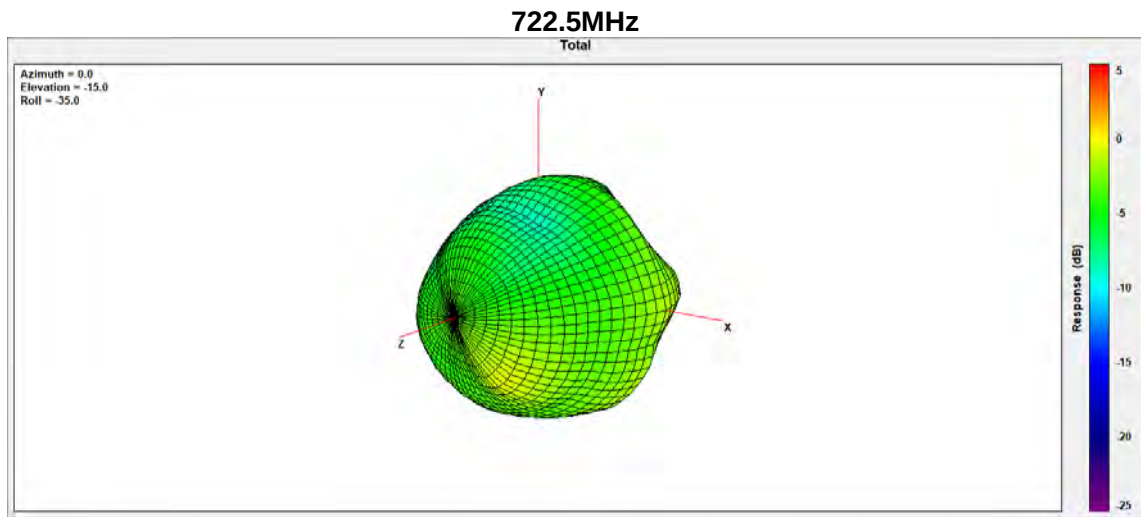


716MHz	H (Peak)	V (Peak)
	-2.96	-2.48

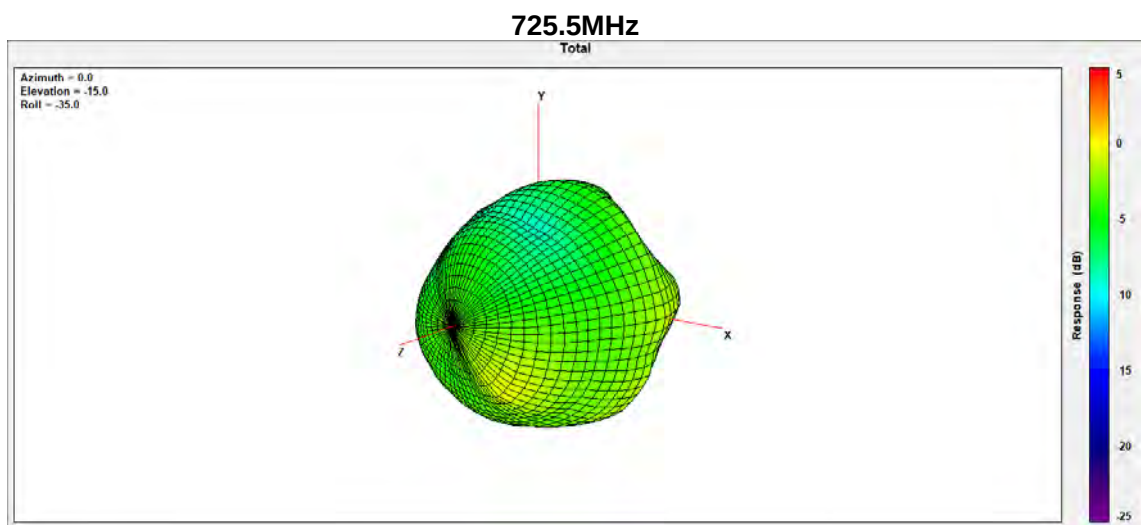
717MHz



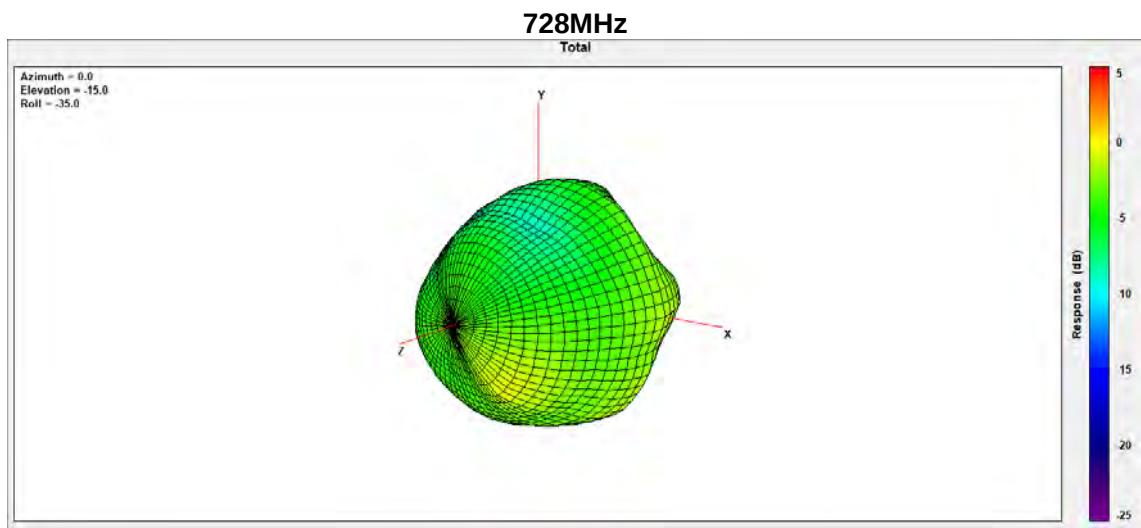
717MHz	H (Peak)	V (Peak)
	-2.94	-2.46



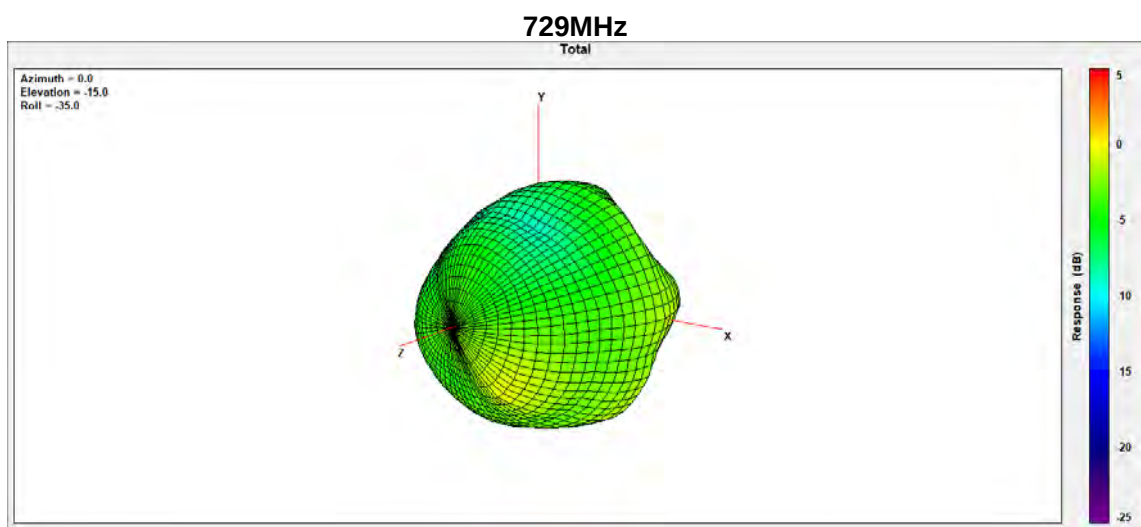
722.5MHz	H (Peak)	V (Peak)
	-2.75	-2.33



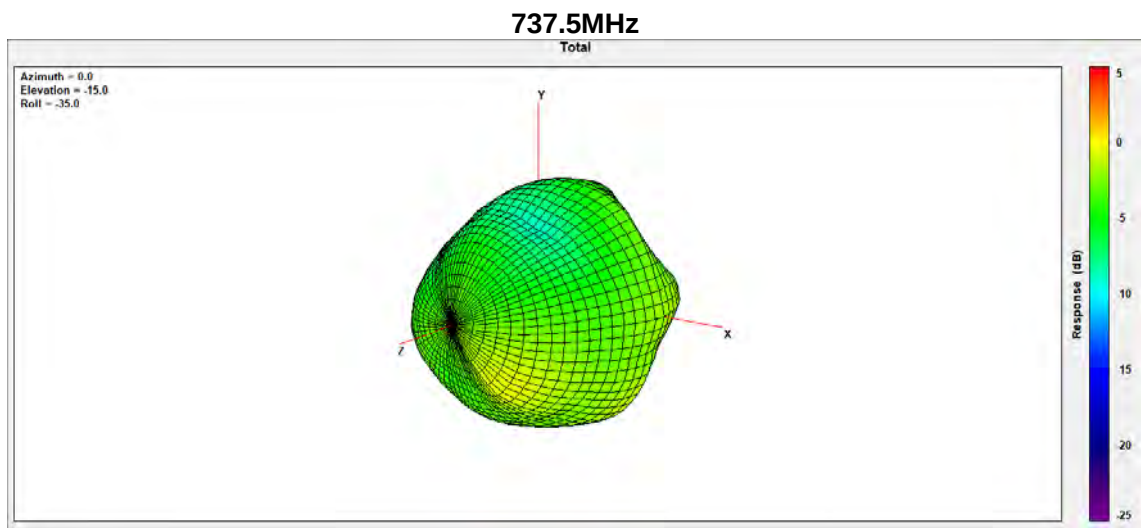
725.5MHz	H (Peak)	V (Peak)
	-2.66	-2.27



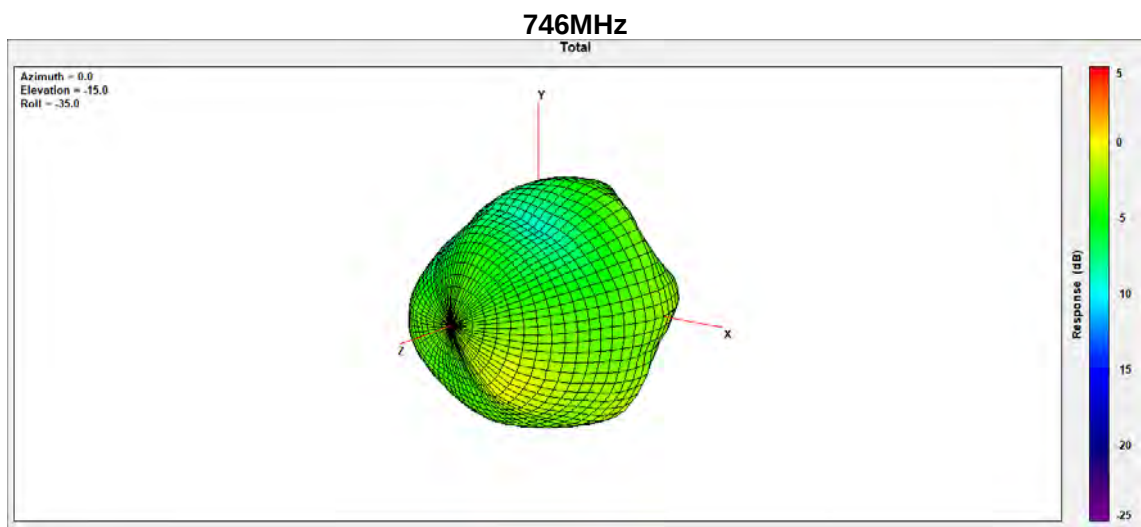
728MHz	H (Peak)	V (Peak)
	-2.64	-2.23



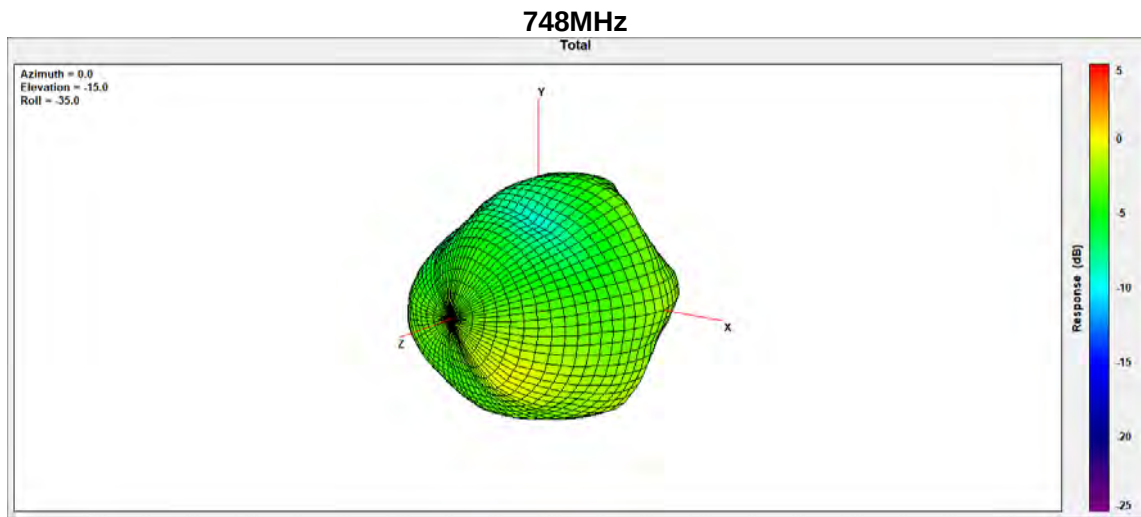
729MHz	H (Peak)	V (Peak)
	-2.63	-2.21



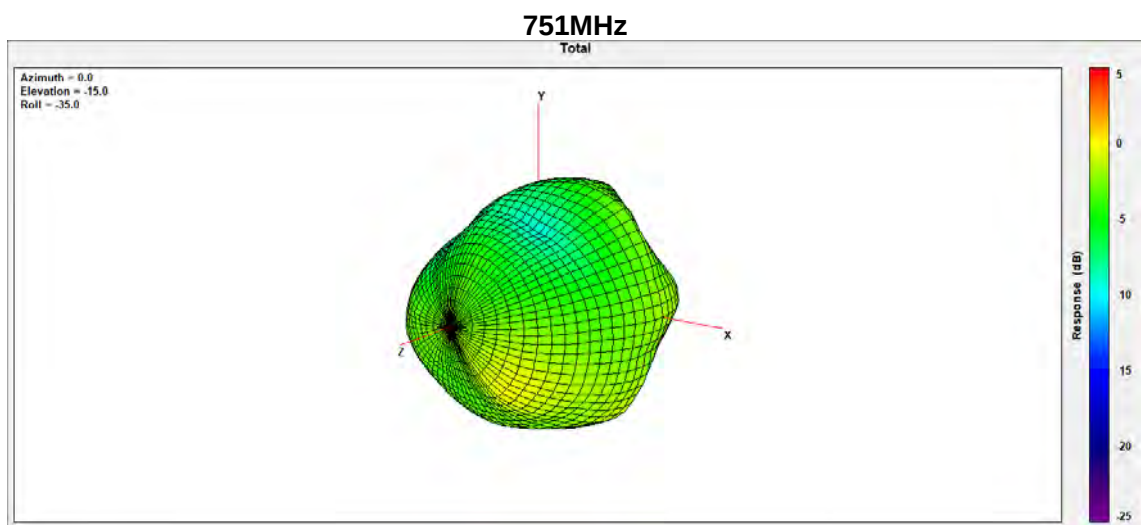
737.5MHz	H (Peak)	V (Peak)
	-2.47	-1.94



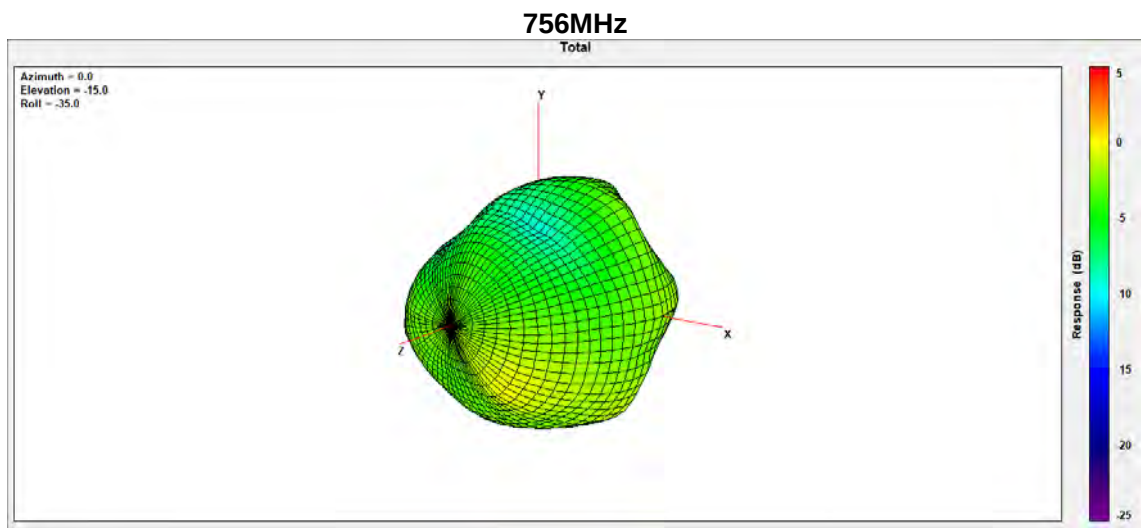
746MHz	H (Peak)	V (Peak)
	-2.31	-1.82



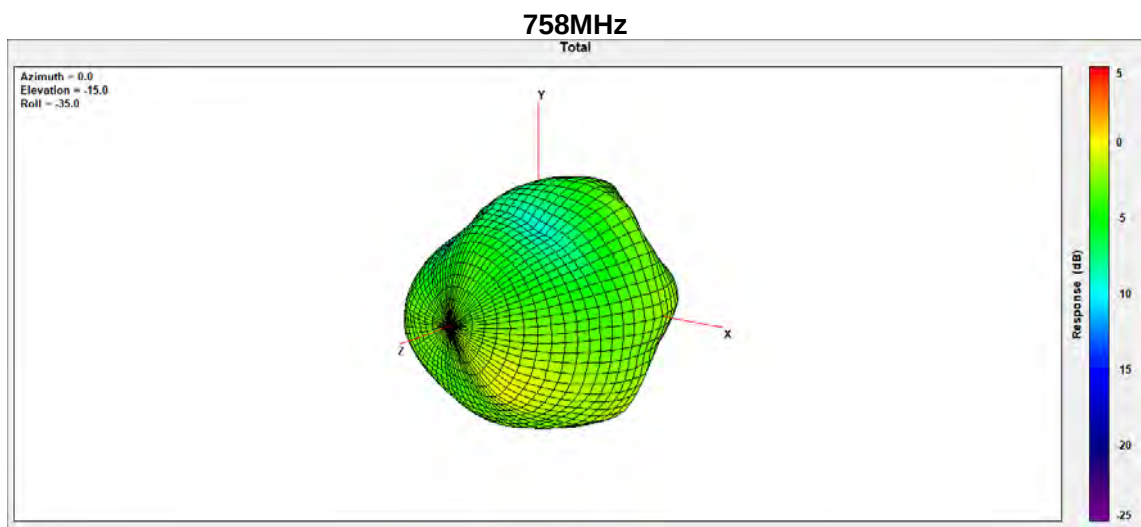
748MHz	H (Peak)	V (Peak)
	-2.27	-1.76



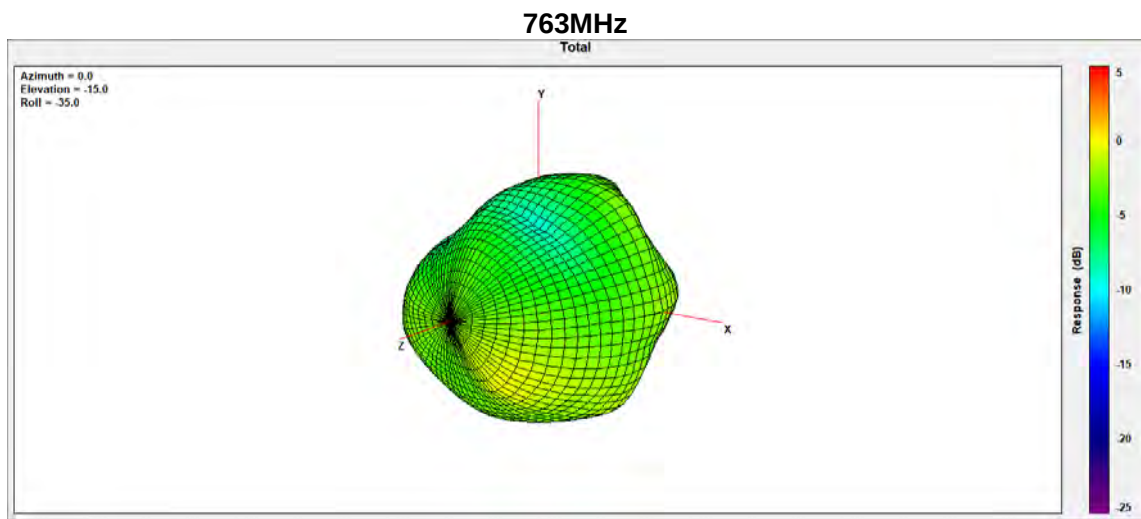
751MHz	H (Peak)	V (Peak)
	-2.23	-1.70



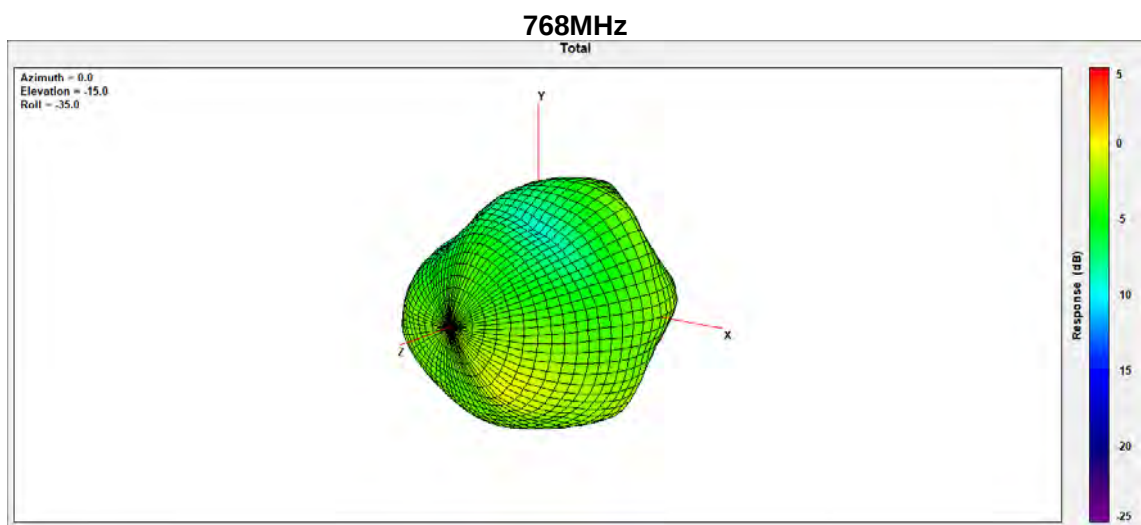
756MHz	H (Peak)	V (Peak)
	-2.23	-1.71



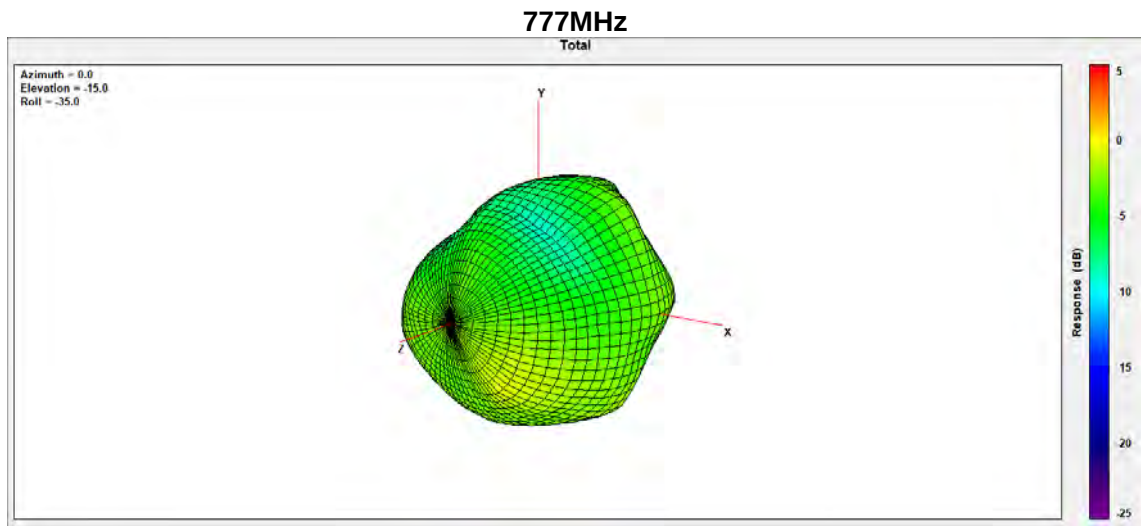
758MHz	H (Peak)	V (Peak)
	-2.23	-1.73



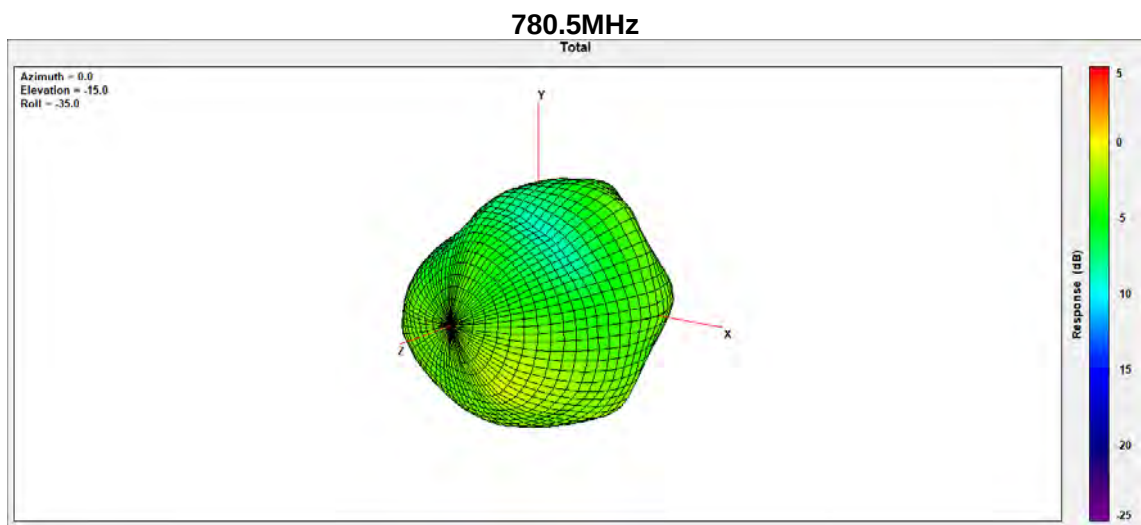
763MHz	H (Peak)	V (Peak)
	-2.20	-1.70



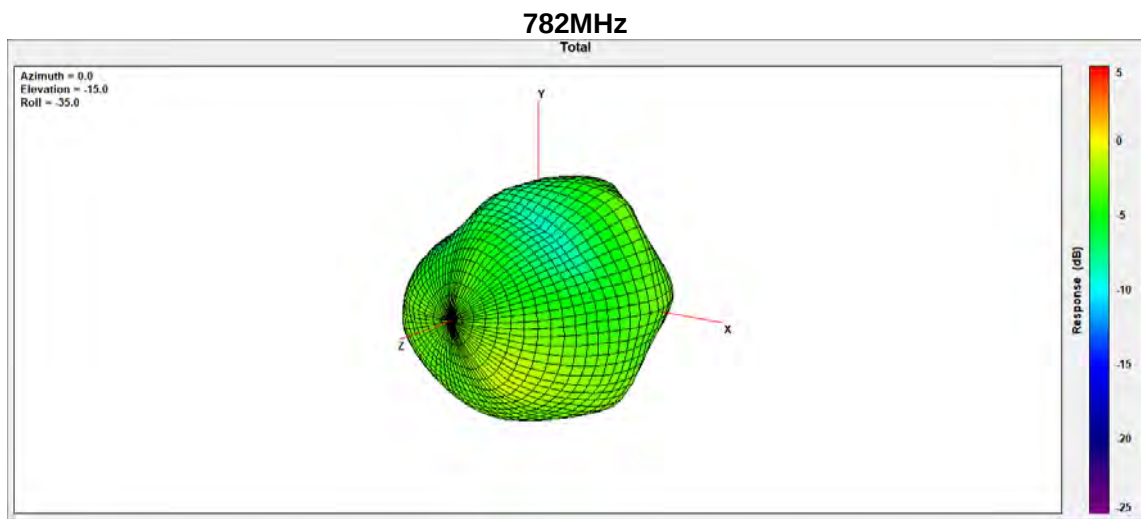
768MHz	H (Peak)	V (Peak)
	-2.31	-1.84



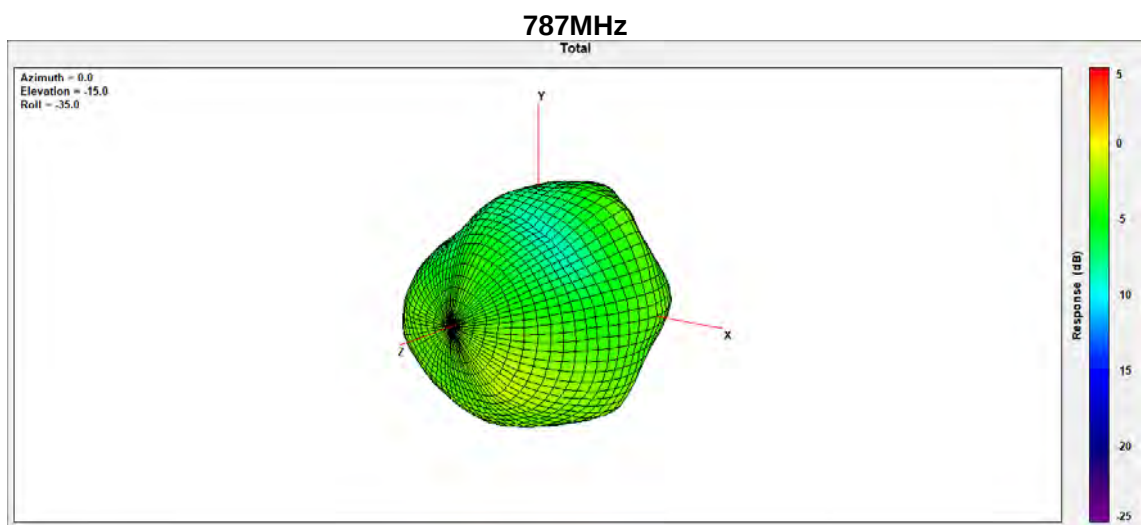
777MHz	H (Peak)	V (Peak)
	-2.55	-1.99



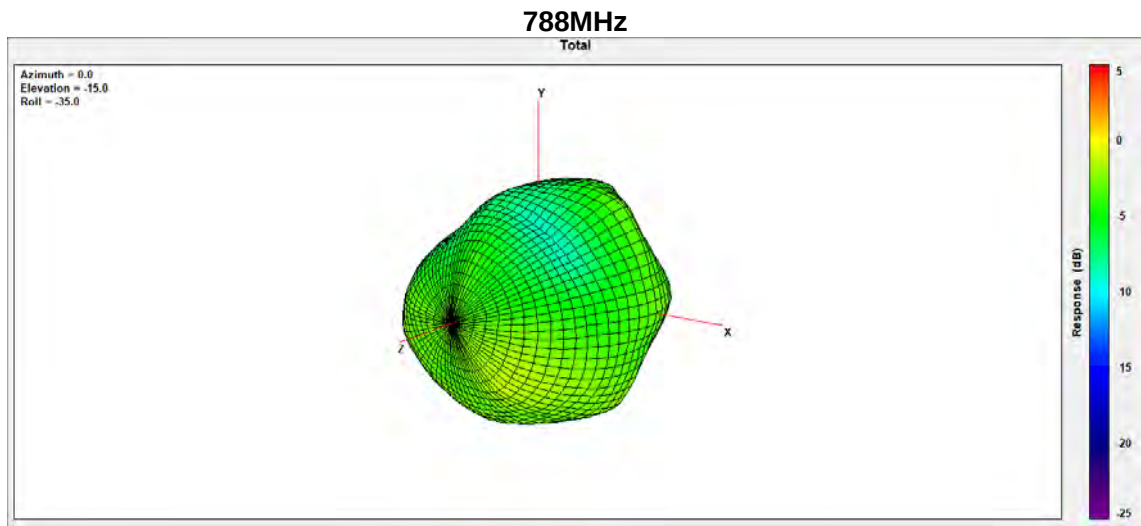
780.5MHz	H (Peak)	V (Peak)
	-2.73	-2.12



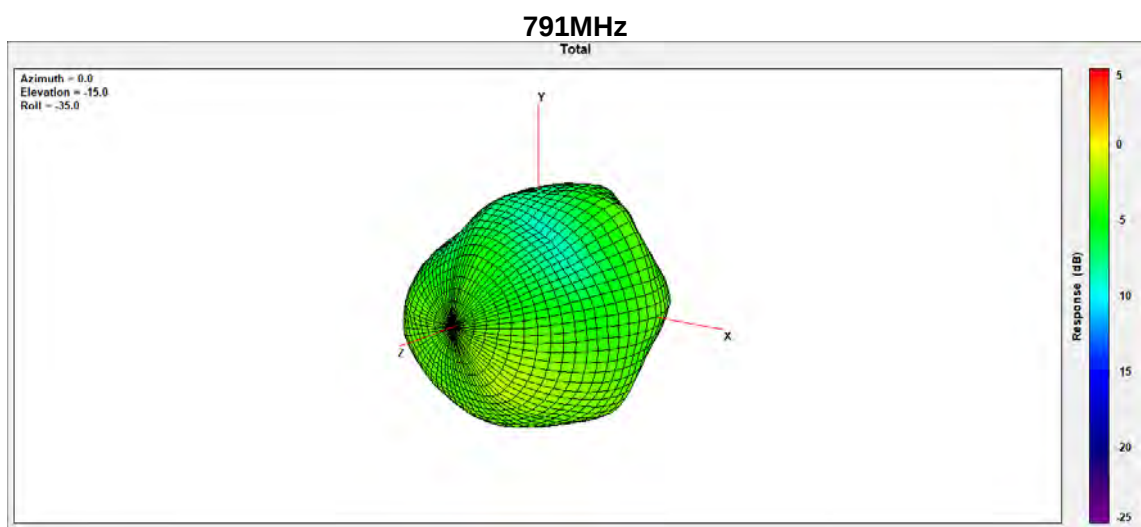
782MHz	H (Peak)	V (Peak)
	-2.82	-2.18



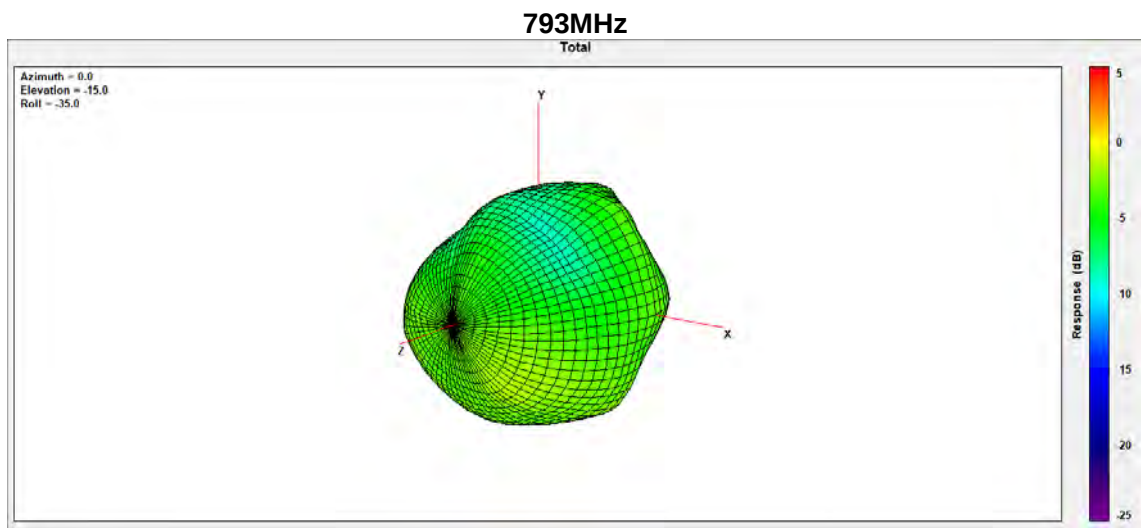
787MHz	H (Peak)	V (Peak)
	-3.03	-2.20



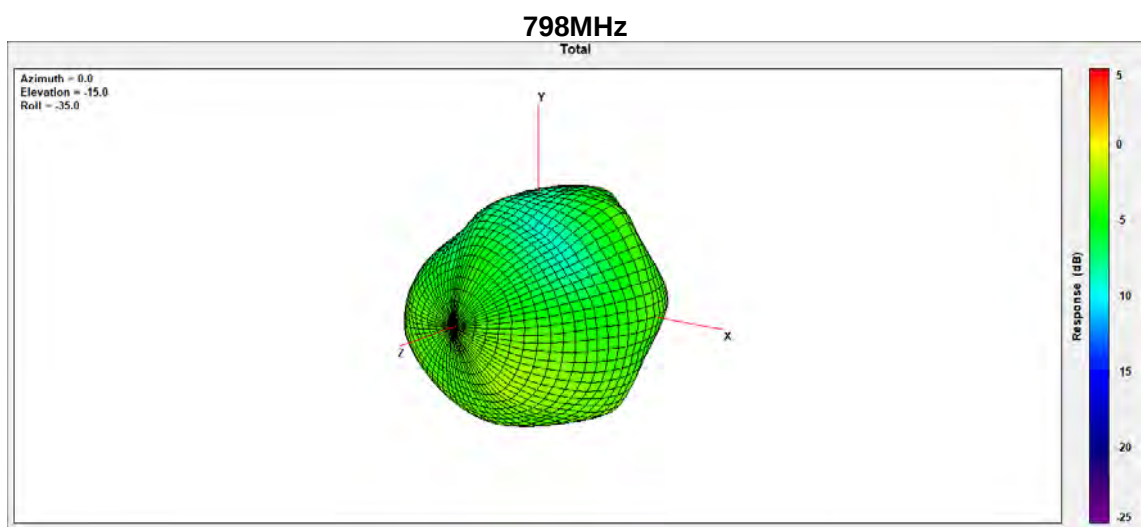
788MHz	H (Peak)	V (Peak)
	-3.05	-2.18



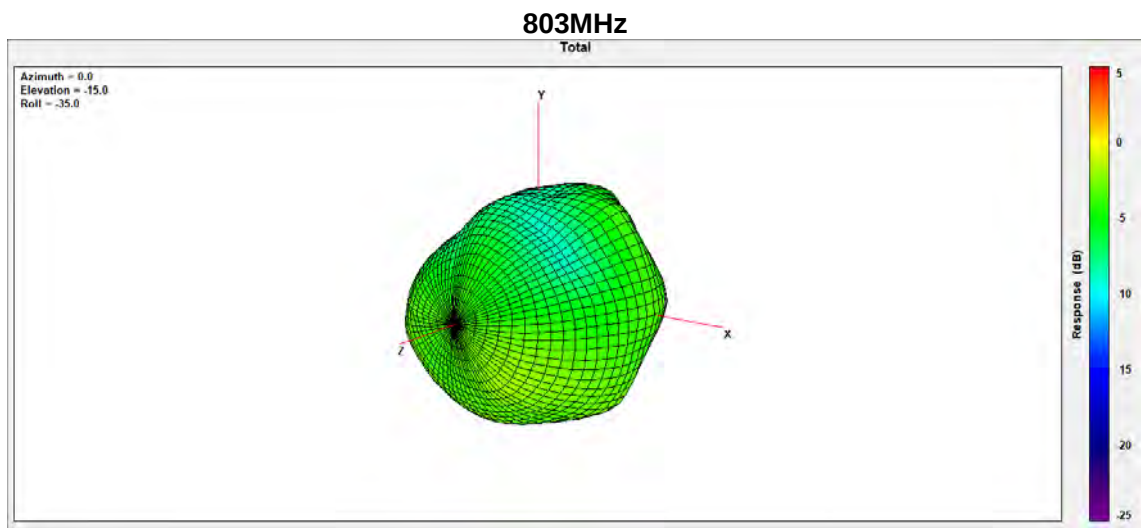
791MHz	H (Peak)	V (Peak)
	-3.12	-2.23



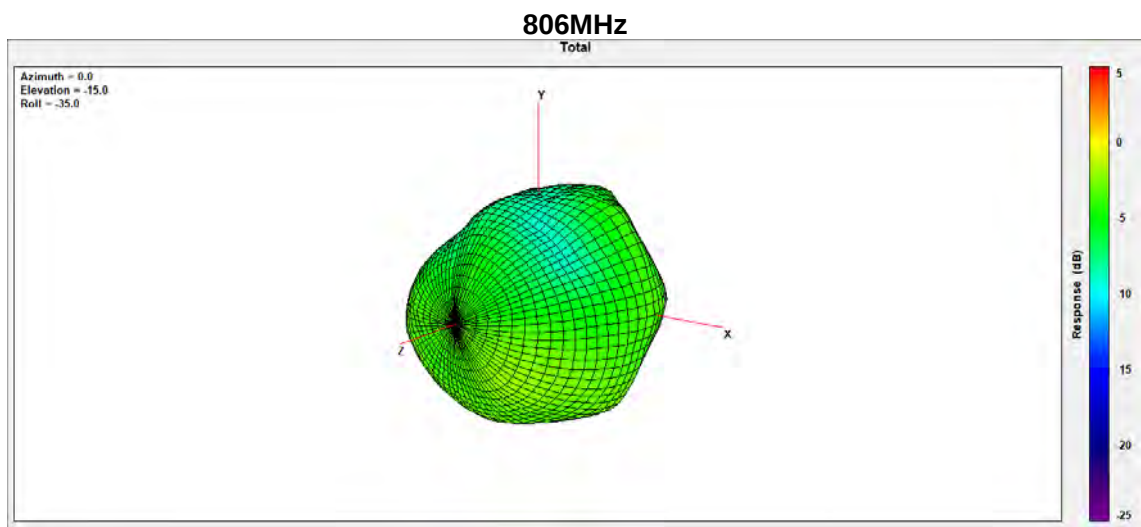
793MHz	H (Peak)	V (Peak)
	-3.16	-2.27



798MHz	H (Peak)	V (Peak)
	-3.30	-2.35

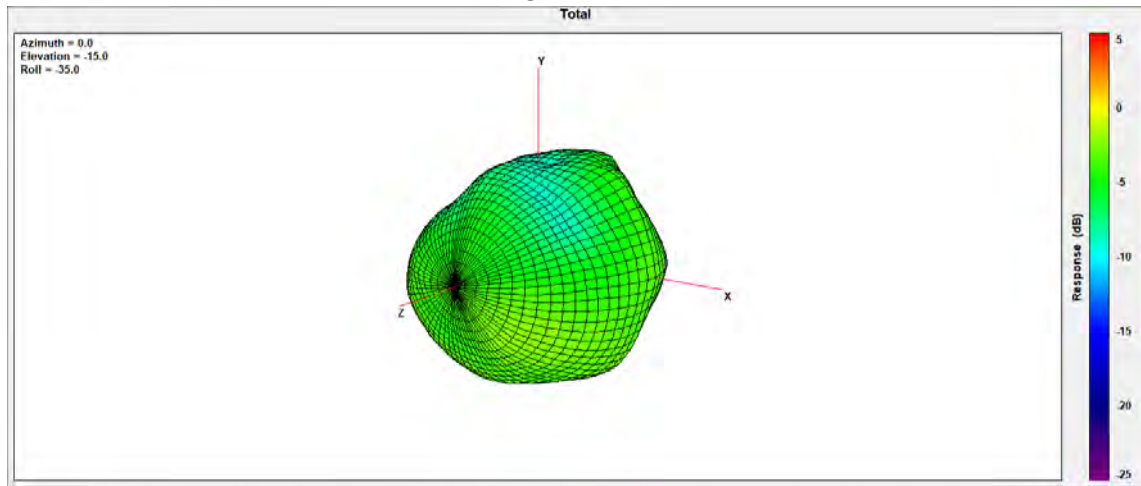


803MHz	H (Peak)	V (Peak)
	-3.28	-2.57



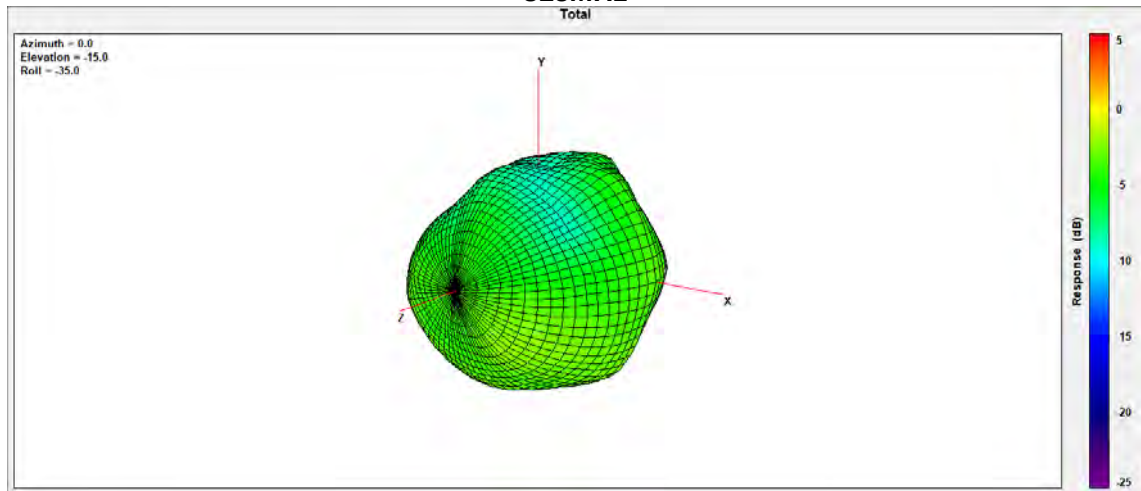
806MHz	H (Peak)	V (Peak)
	-3.36	-2.64

814MHz

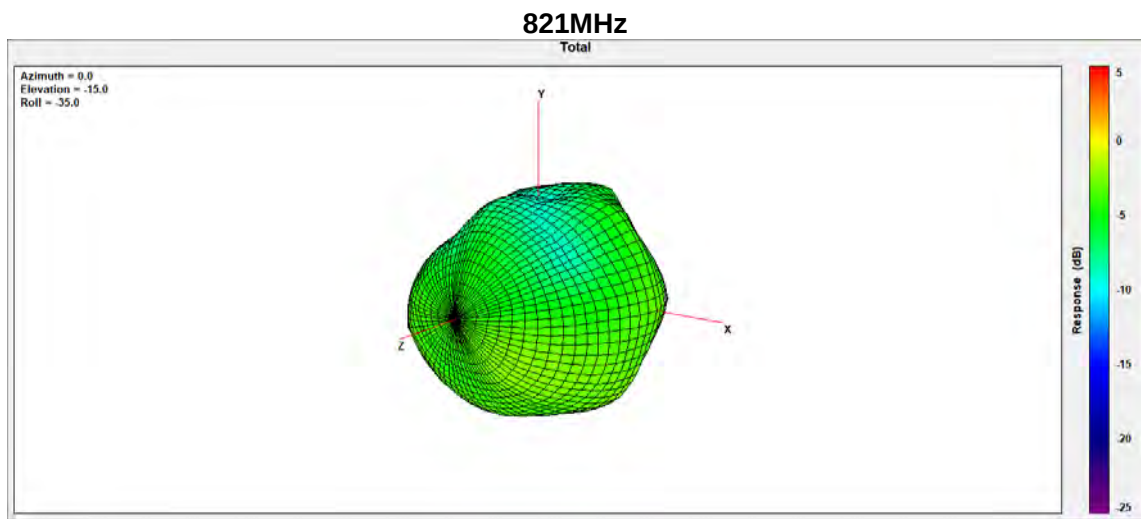


814MHz	H (Peak)	V (Peak)
	-3.50	-2.72

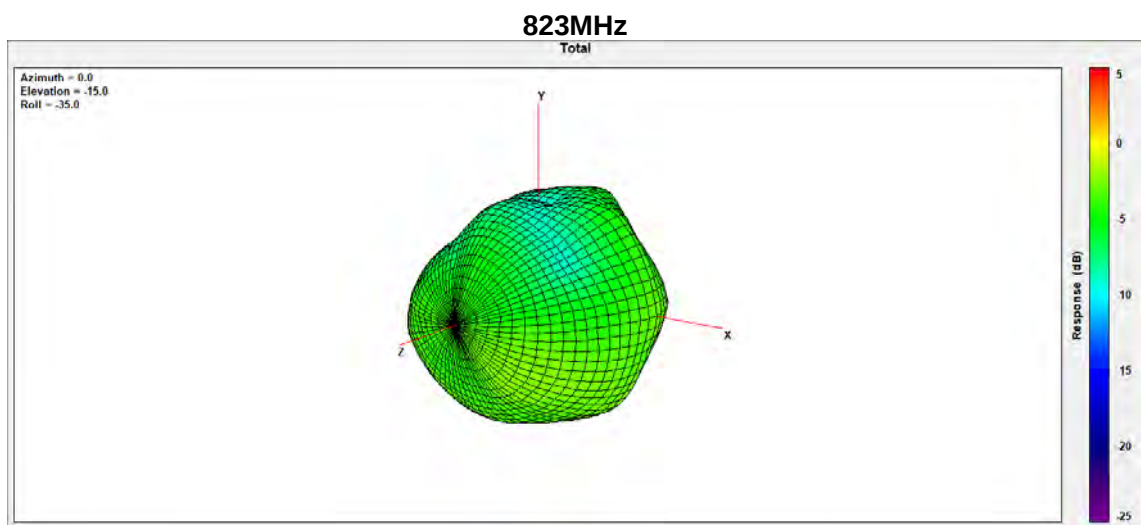
815MHz



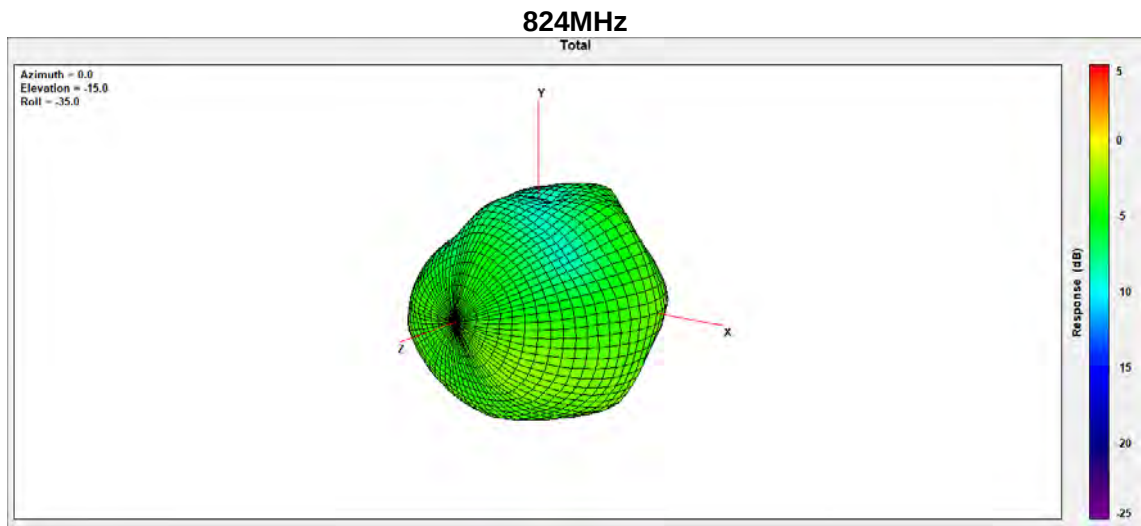
815MHz	H (Peak)	V (Peak)
	-3.53	-2.73



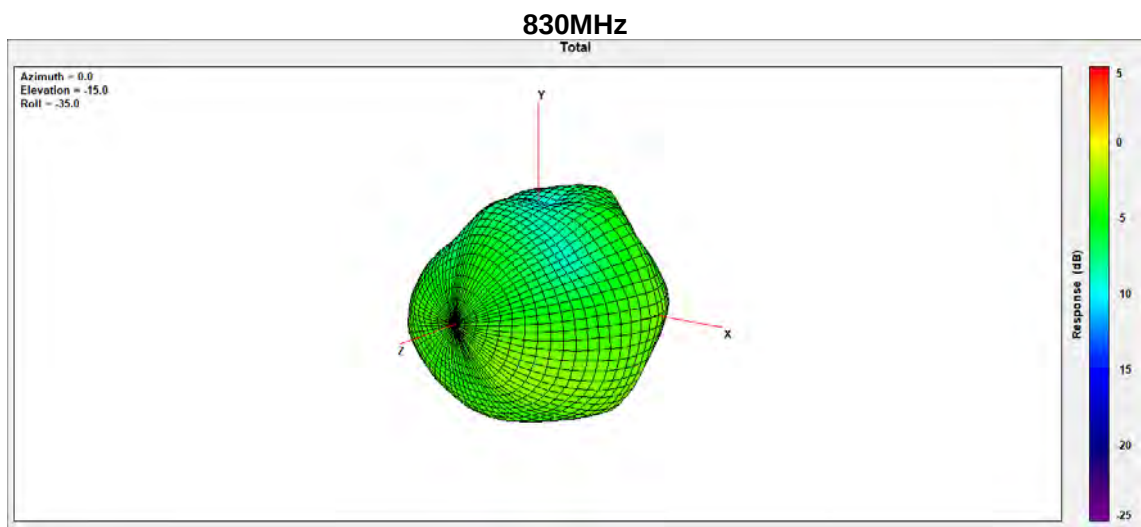
821MHz	H (Peak)	V (Peak)
	-3.67	-2.81



823MHz	H (Peak)	V (Peak)
	-3.73	-2.82

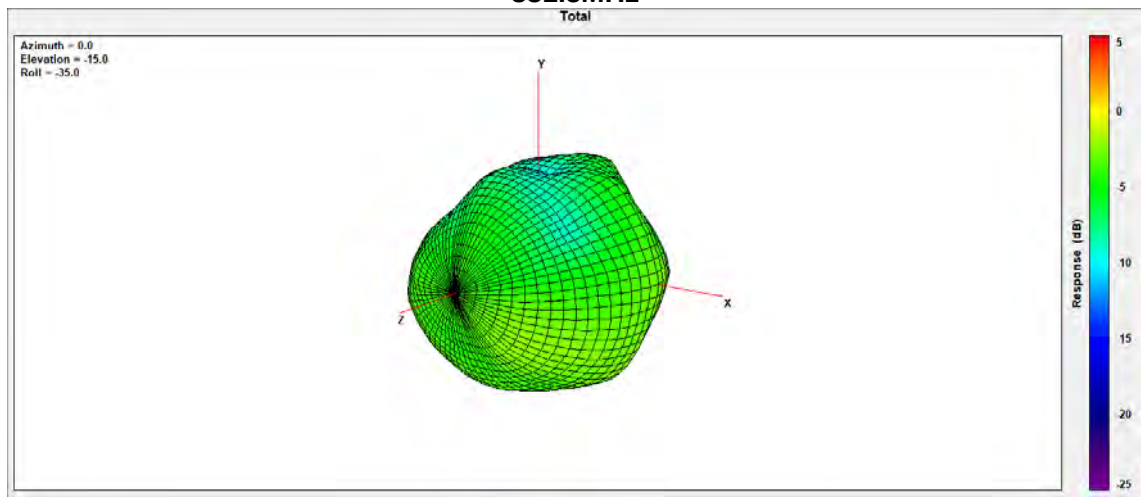


824MHz	H (Peak)	V (Peak)
	-3.77	-2.83



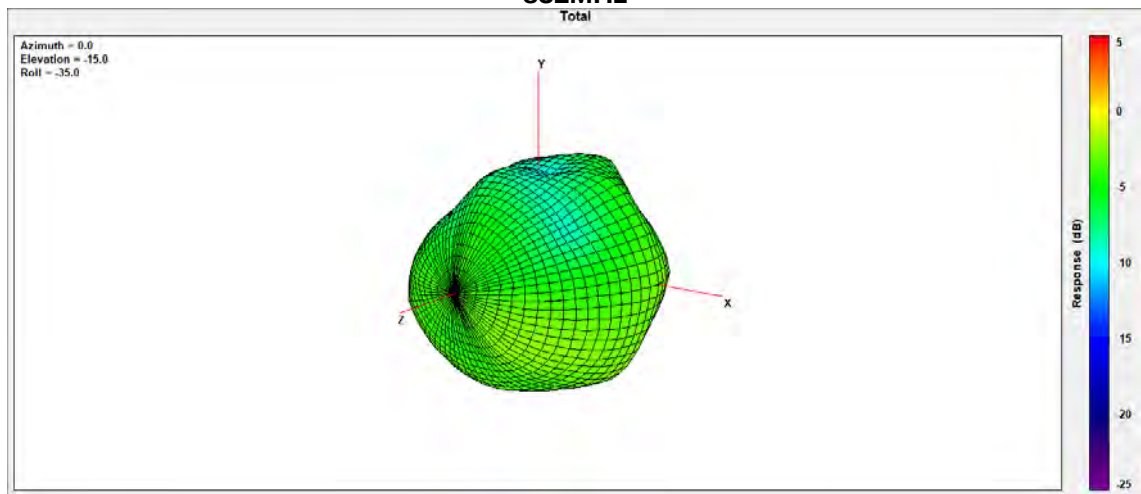
830MHz	H (Peak)	V (Peak)
	-3.92	-2.81

831.5MHz

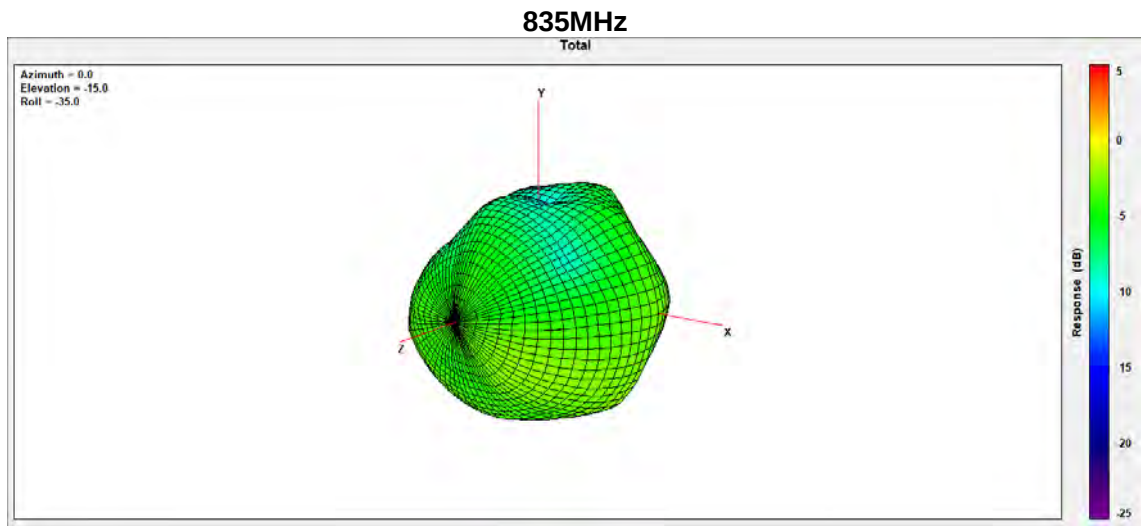


831.5MHz	H (Peak)	V (Peak)
	-3.90	-2.78

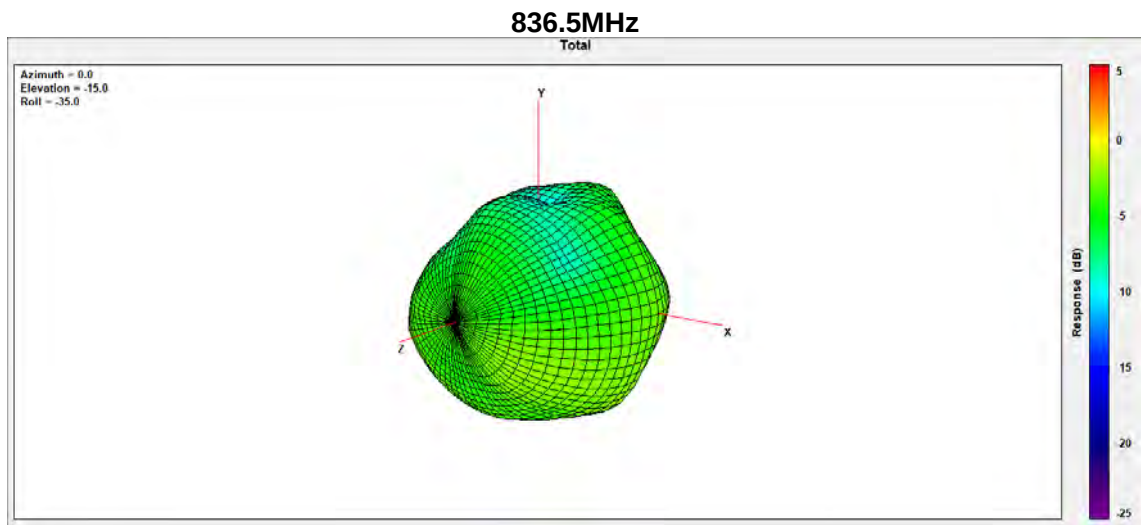
832MHz



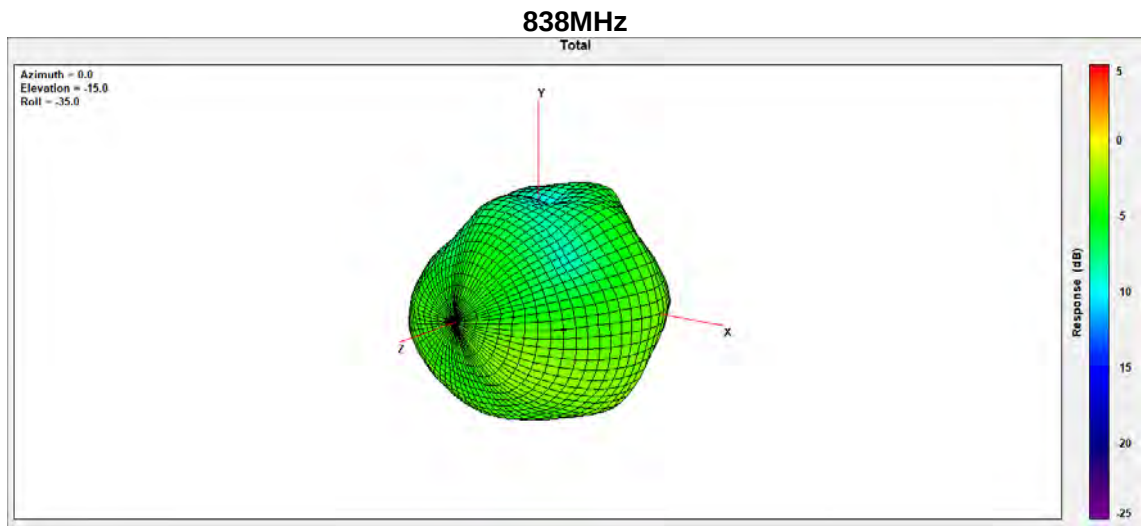
832MHz	H (Peak)	V (Peak)
	-3.92	-2.78



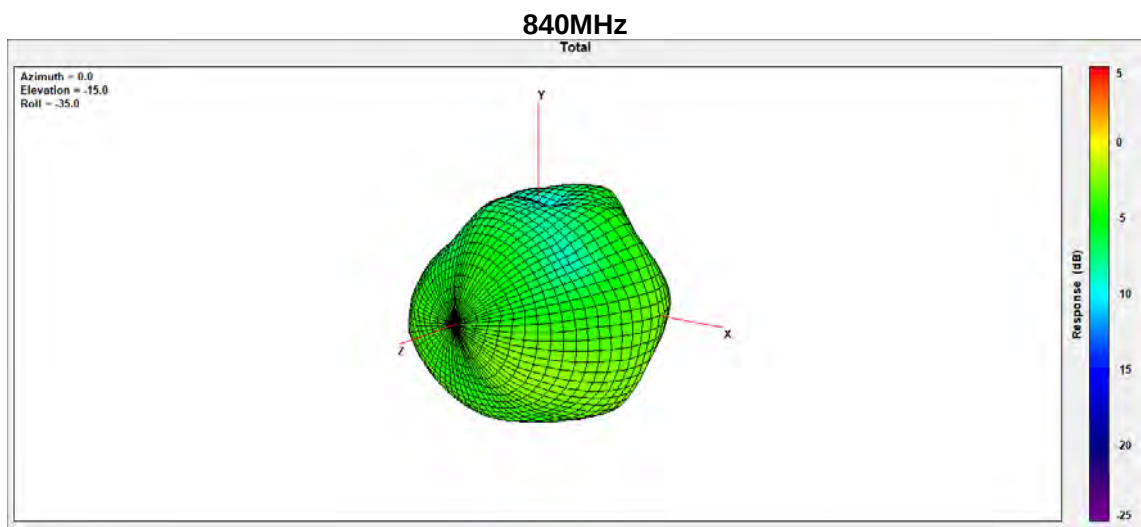
835MHz	H (Peak)	V (Peak)
	-3.92	-2.76



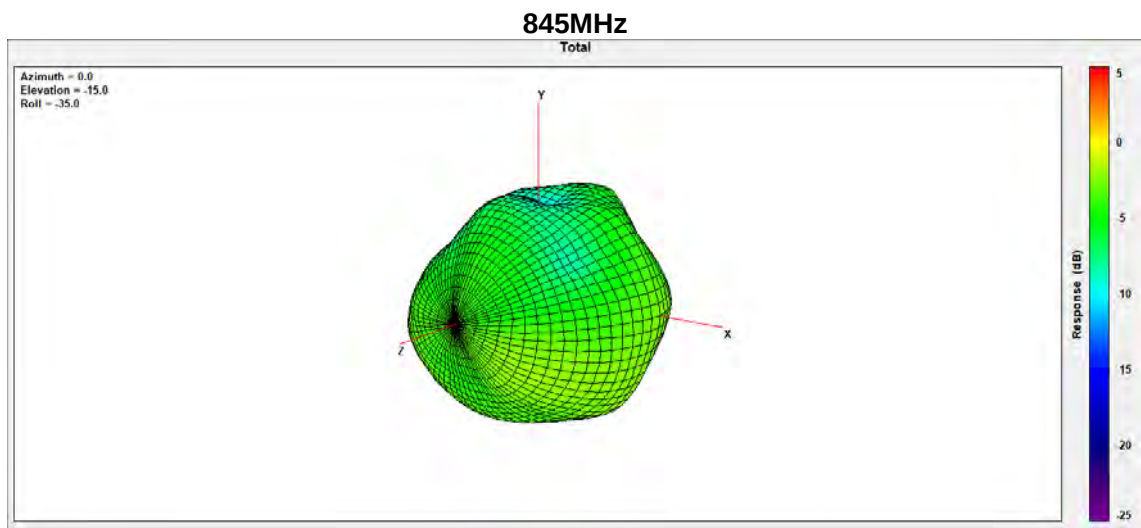
836.5MHz	H (Peak)	V (Peak)
	-3.93	-2.75



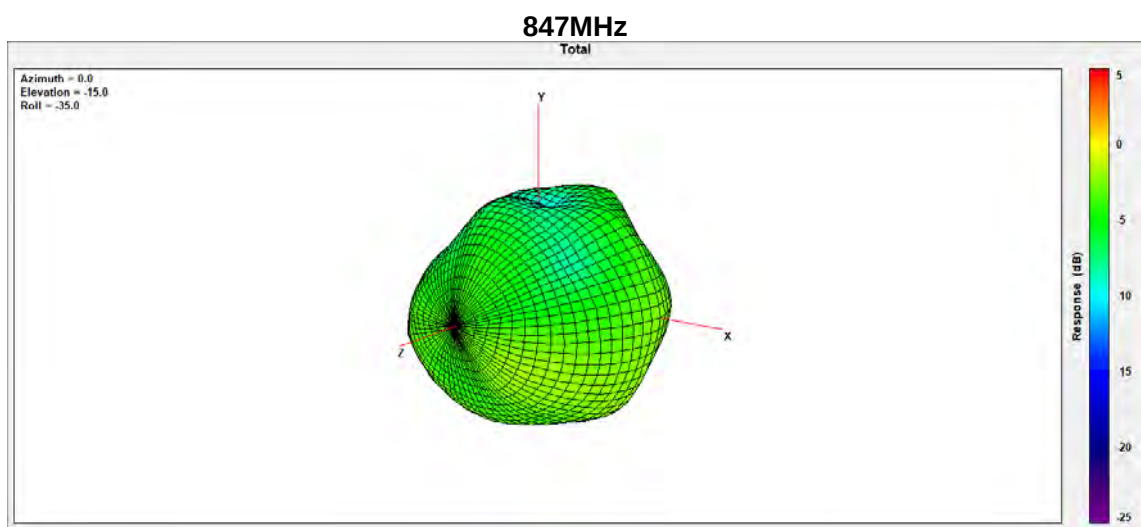
838MHz	H (Peak)	V (Peak)
	-3.96	-2.74



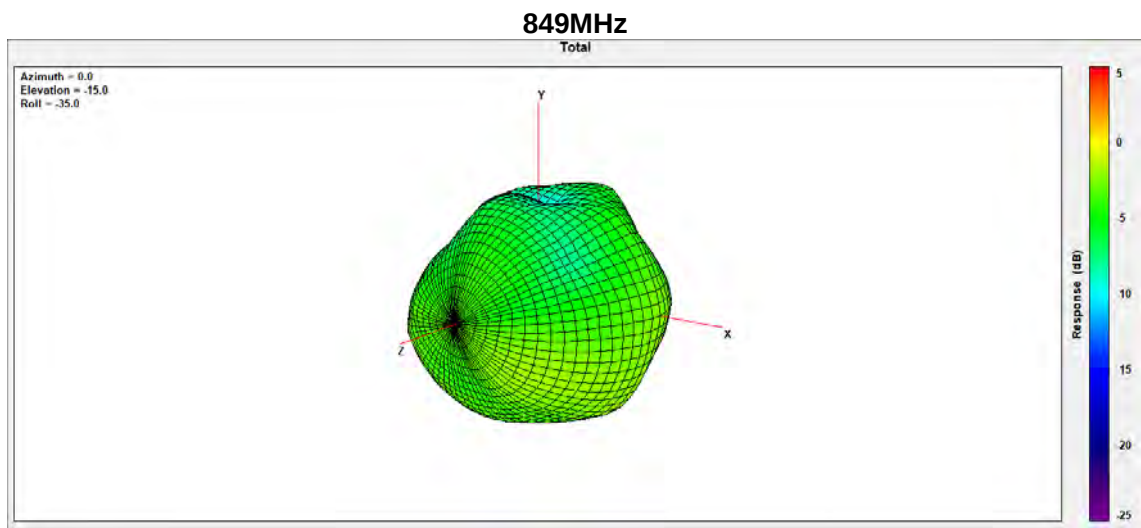
840MHz	H (Peak)	V (Peak)
	-3.96	-2.71



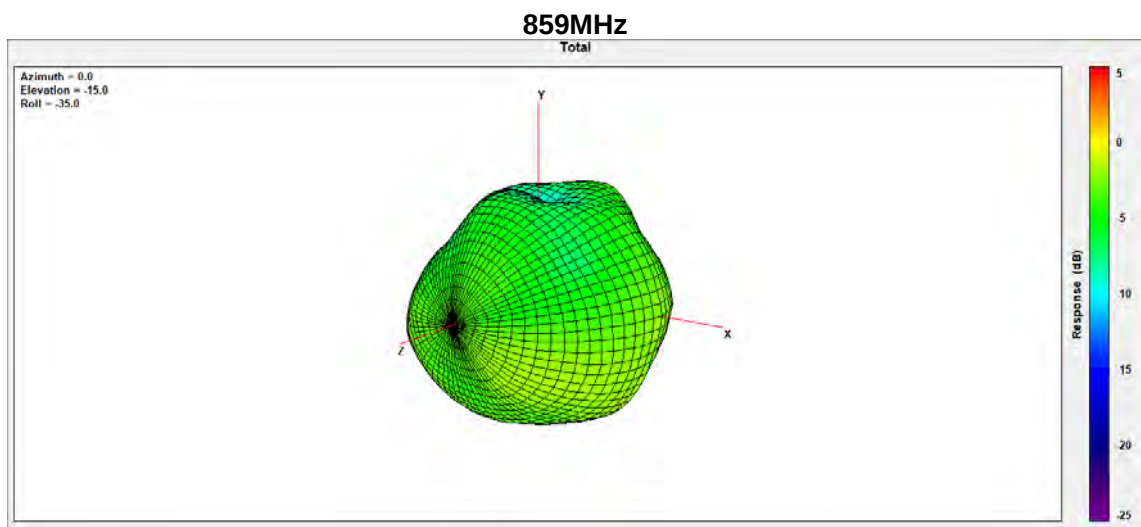
845MHz	H (Peak)	V (Peak)
	-3.95	-2.60



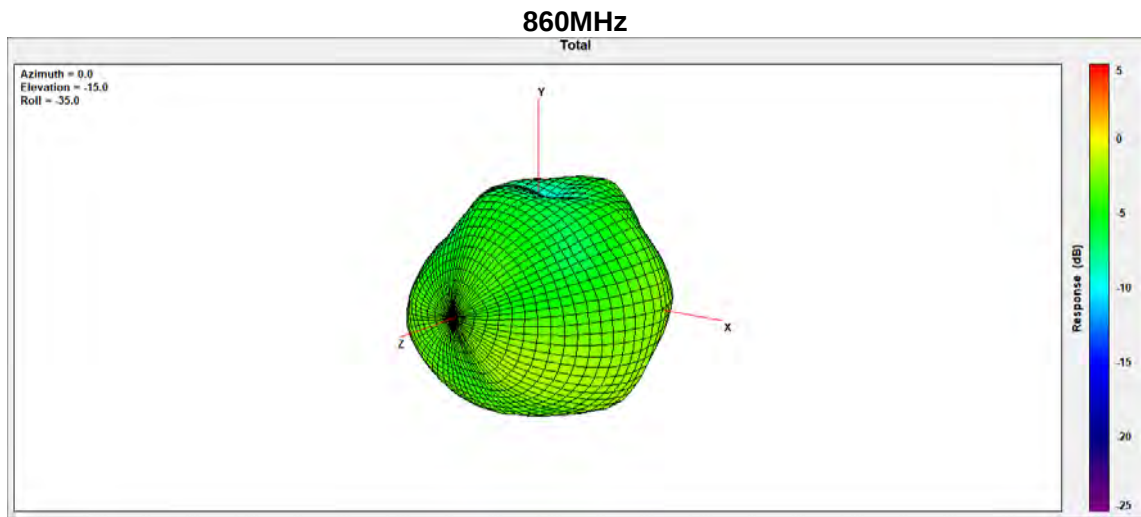
847MHz	H (Peak)	V (Peak)
	-3.92	-2.57



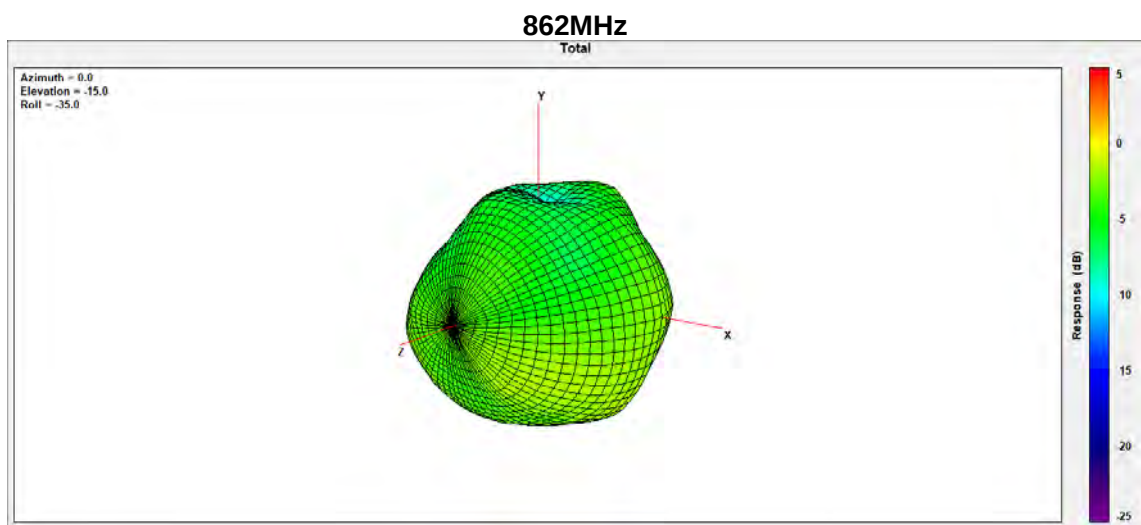
849MHz	H (Peak)	V (Peak)
	-3.87	-2.56



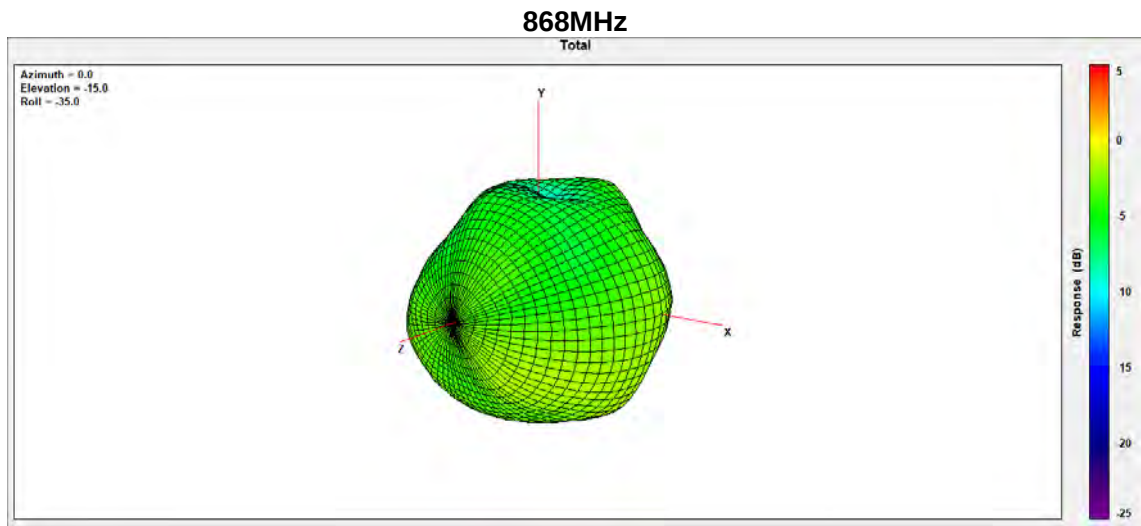
859MHz	H (Peak)	V (Peak)
	-3.86	-2.32



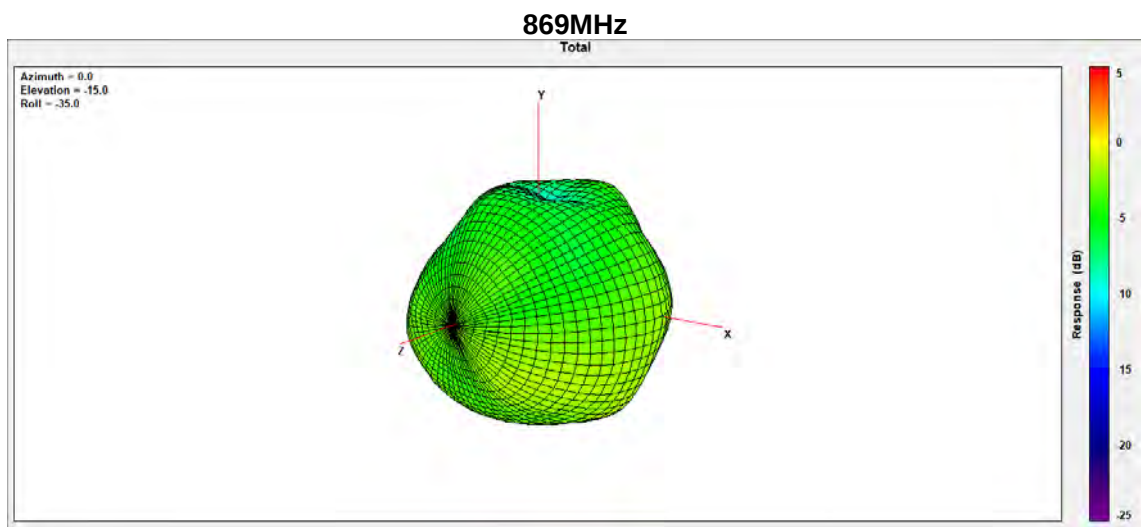
860MHz	H (Peak)	V (Peak)
	-3.85	-2.29



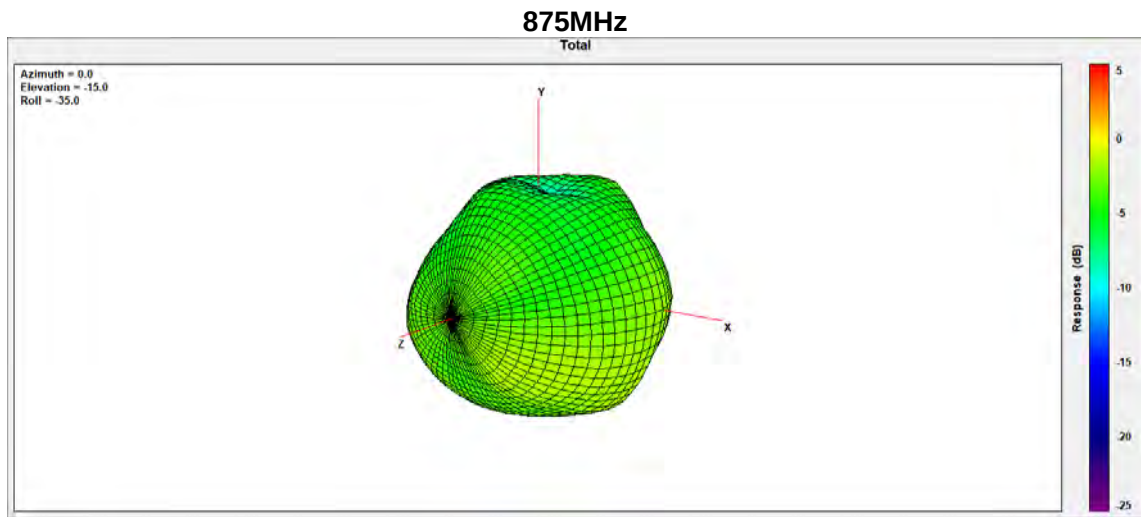
862MHz	H (Peak)	V (Peak)
	-3.88	-2.22



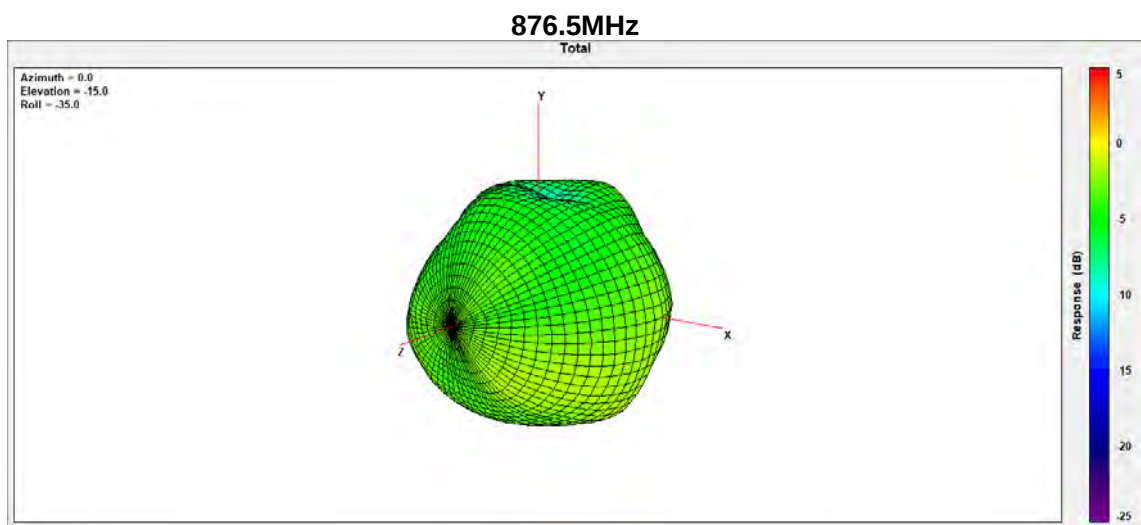
868MHz	H (Peak)	V (Peak)
	-3.85	-2.13



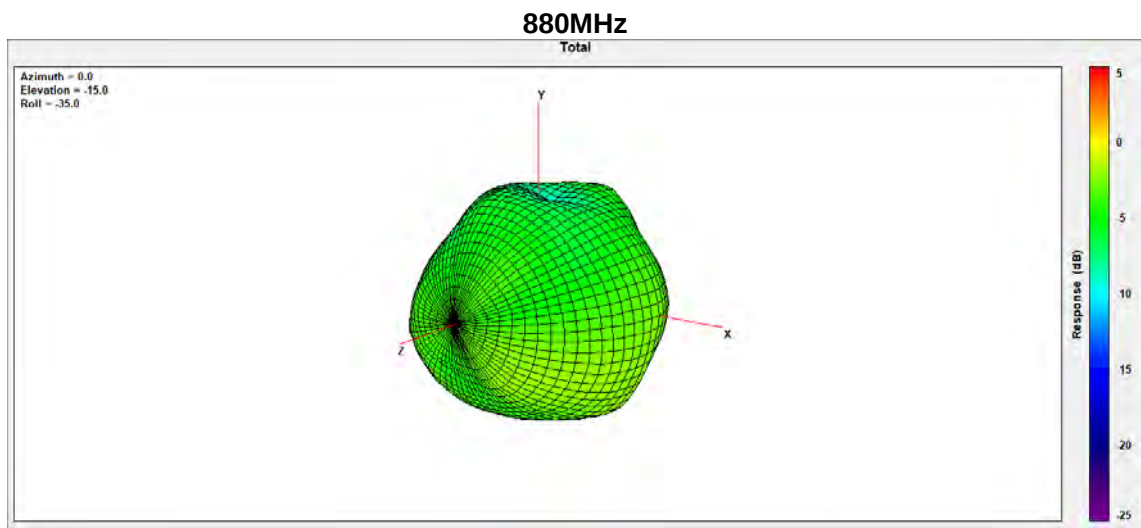
869MHz	H (Peak)	V (Peak)
	-3.81	-2.10



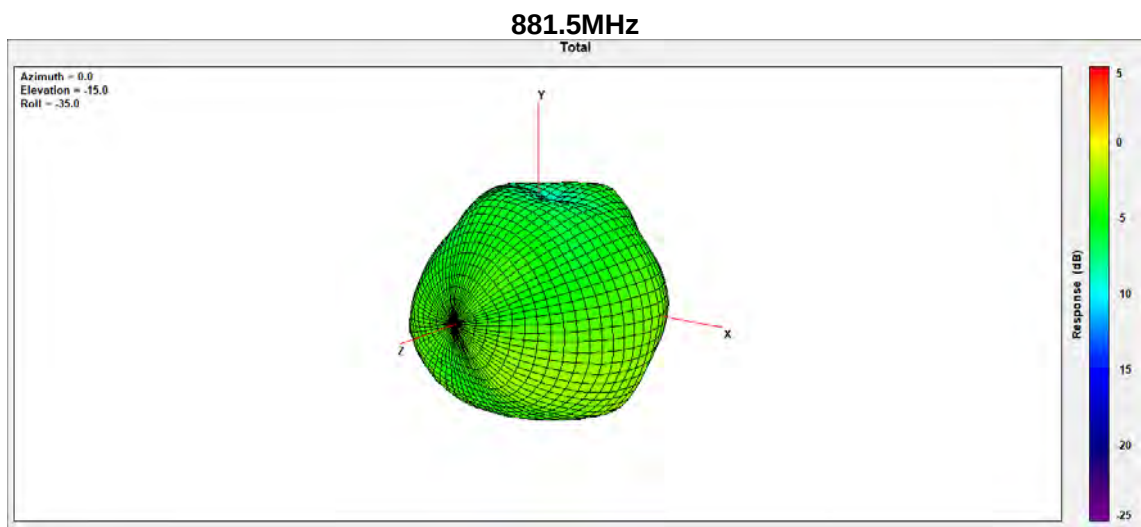
875MHz	H (Peak)	V (Peak)
	-3.70	-2.01



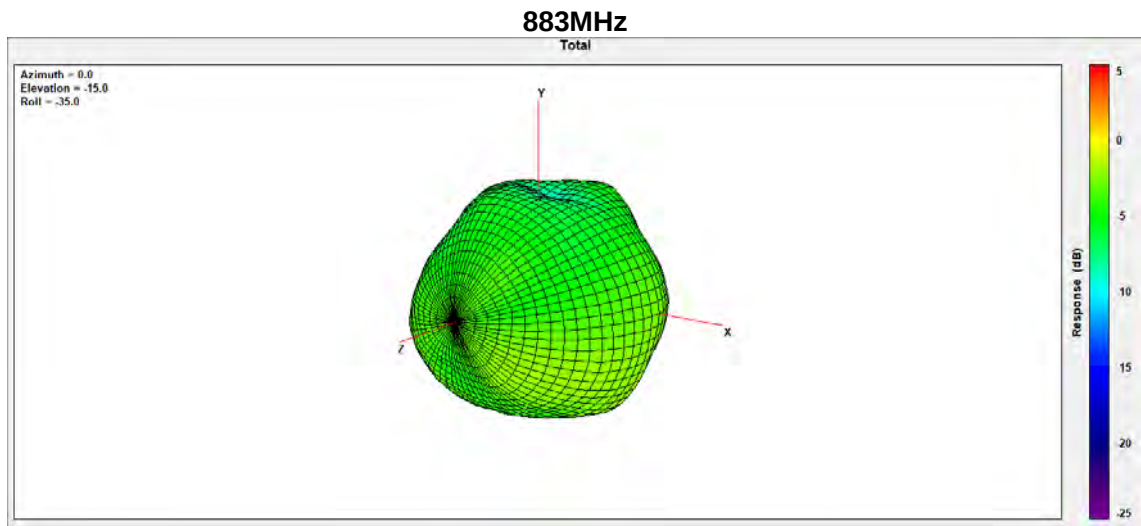
876.5MHz	H (Peak)	V (Peak)
	-3.69	-2.03



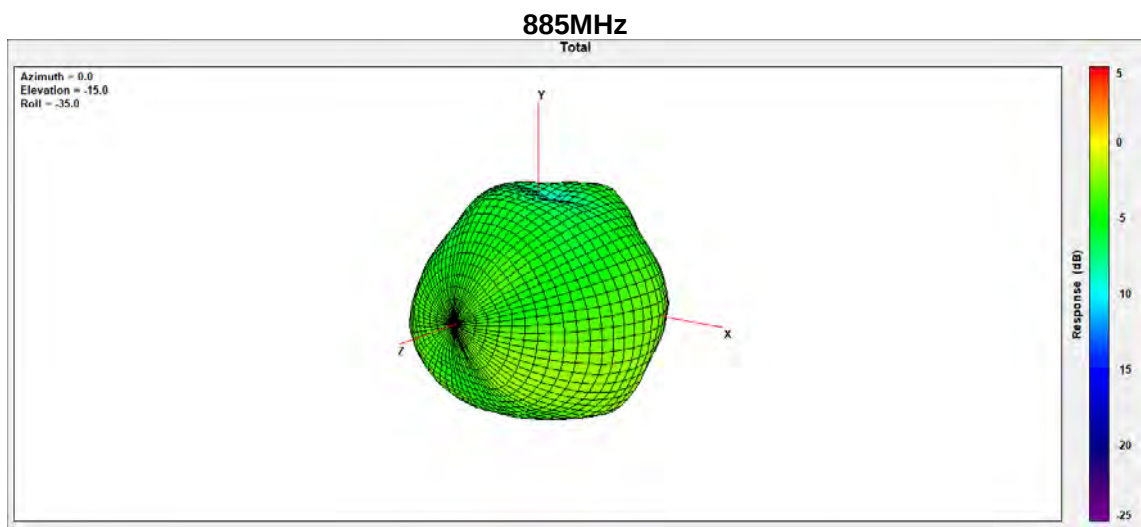
880MHz	H (Peak)	V (Peak)
	-4.31	-2.43



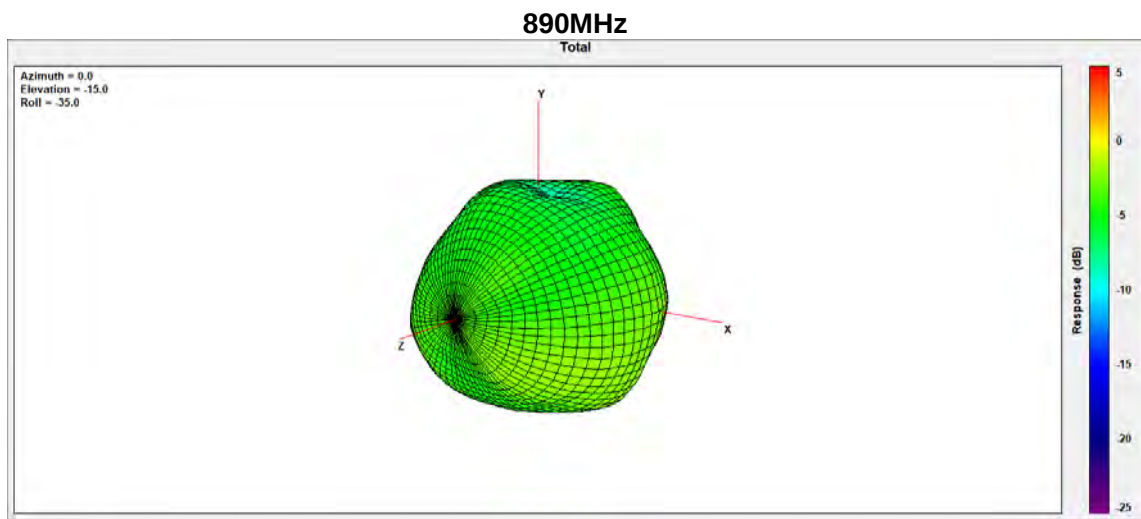
881.5MHz	H (Peak)	V (Peak)
	-4.33	-2.44



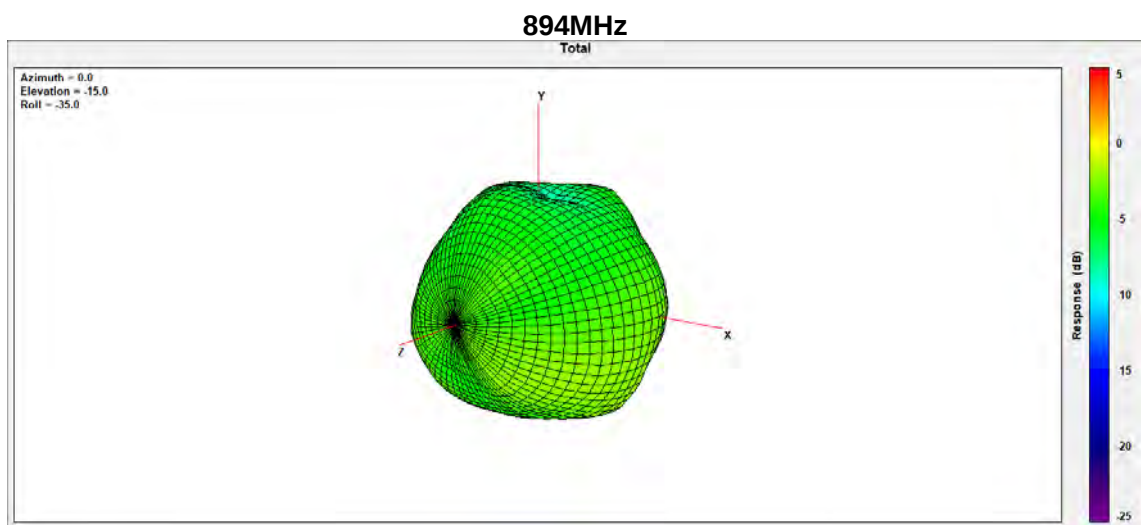
883MHz	H (Peak)	V (Peak)
	-4.33	-2.48



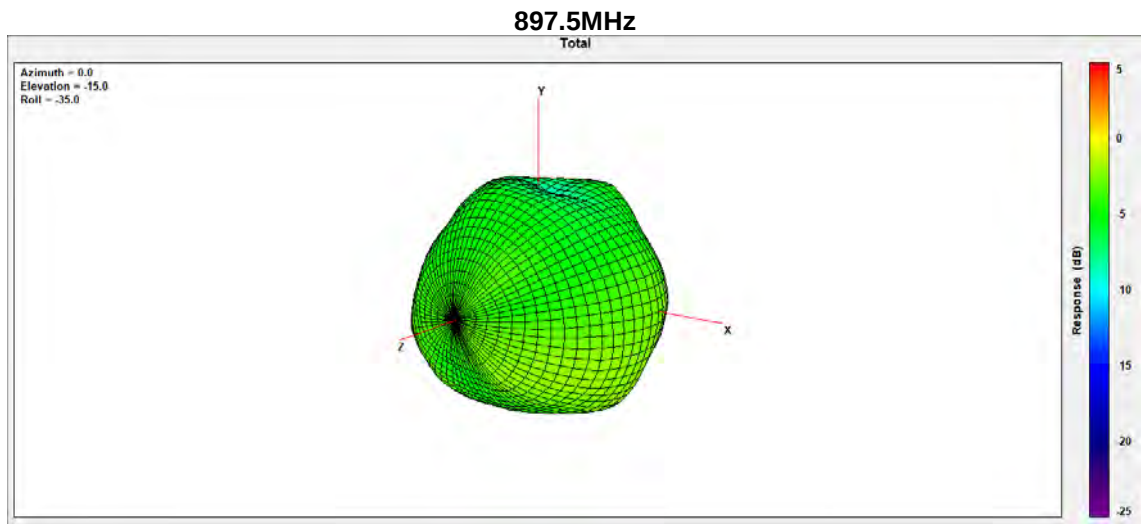
885MHz	H (Peak)	V (Peak)
	-4.34	-2.50



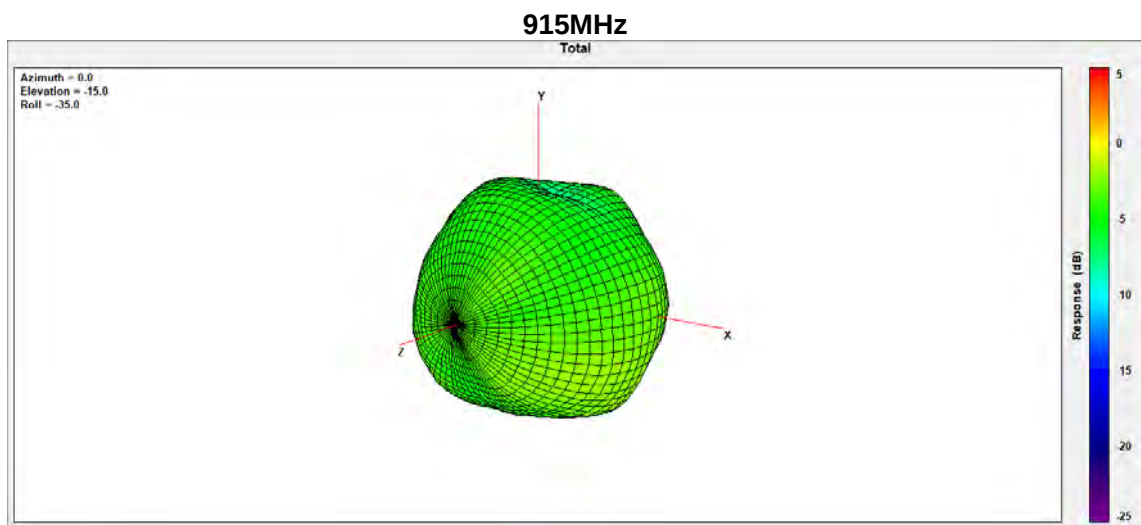
890MHz	H (Peak)	V (Peak)
	-4.42	-2.55



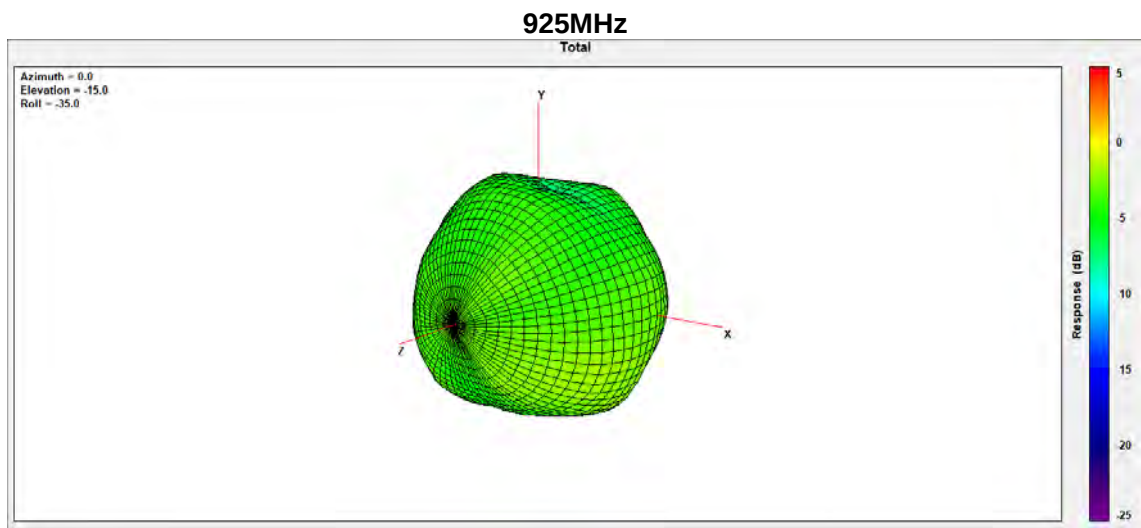
894MHz	H (Peak)	V (Peak)
	-4.43	-2.59



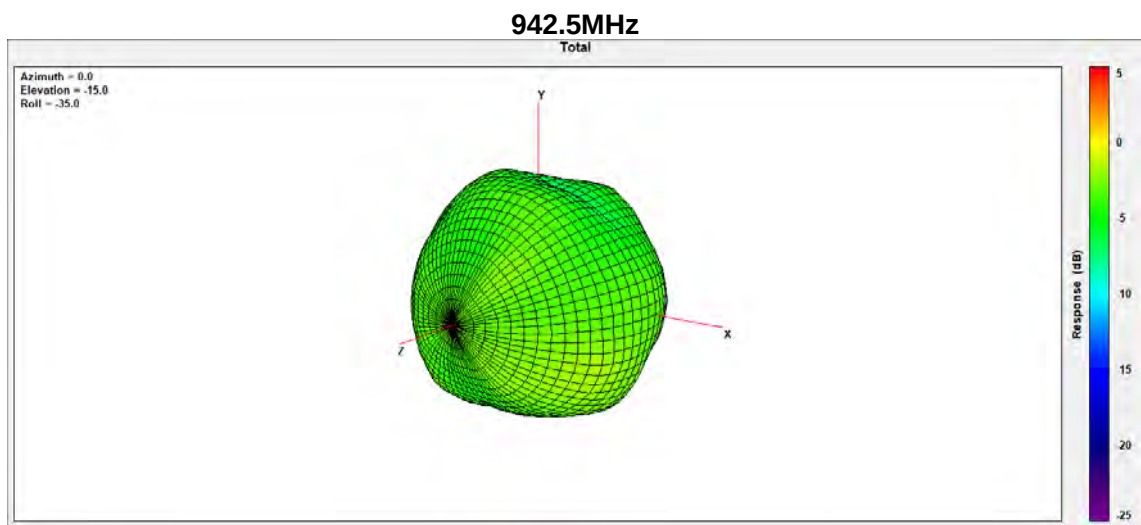
897.5MHz	H (Peak)	V (Peak)
	-4.43	-2.62



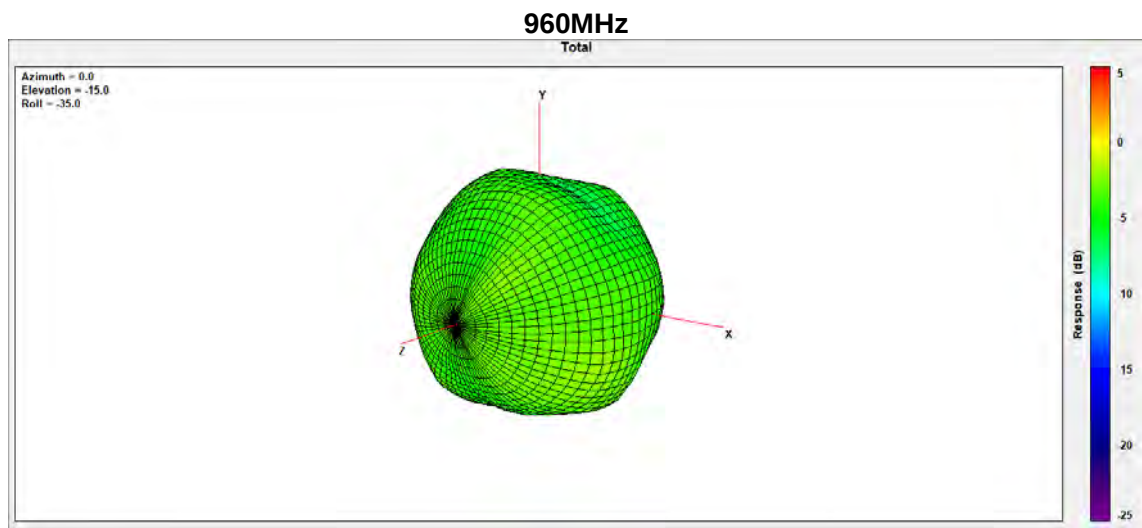
915MHz	H (Peak)	V (Peak)
	-4.44	-2.44



925MHz	H (Peak)	V (Peak)
	-4.33	-2.35

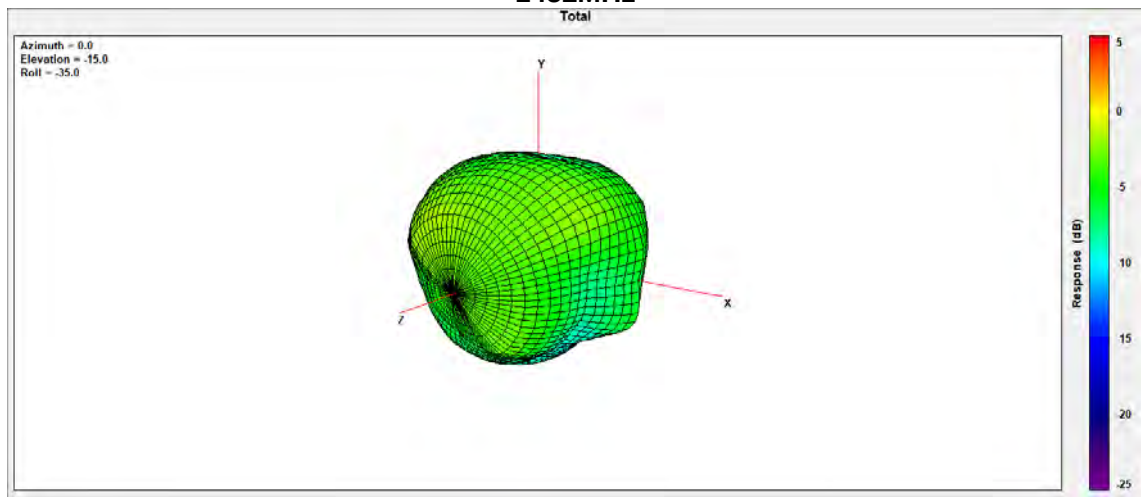


942.5MHz	H (Peak)	V (Peak)
	-3.58	-2.08



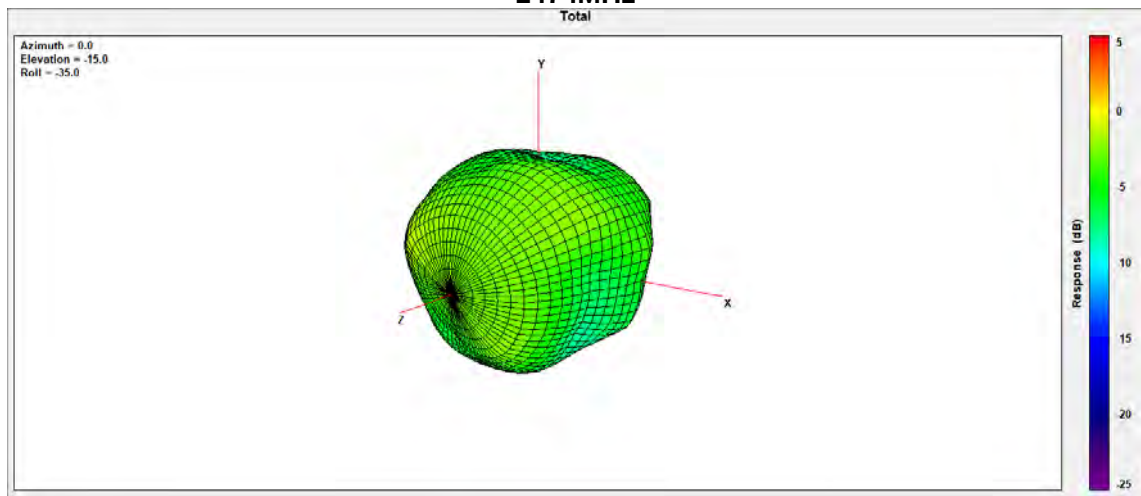
960MHz	H (Peak)	V (Peak)
	-3.66	-2.25

1452MHz



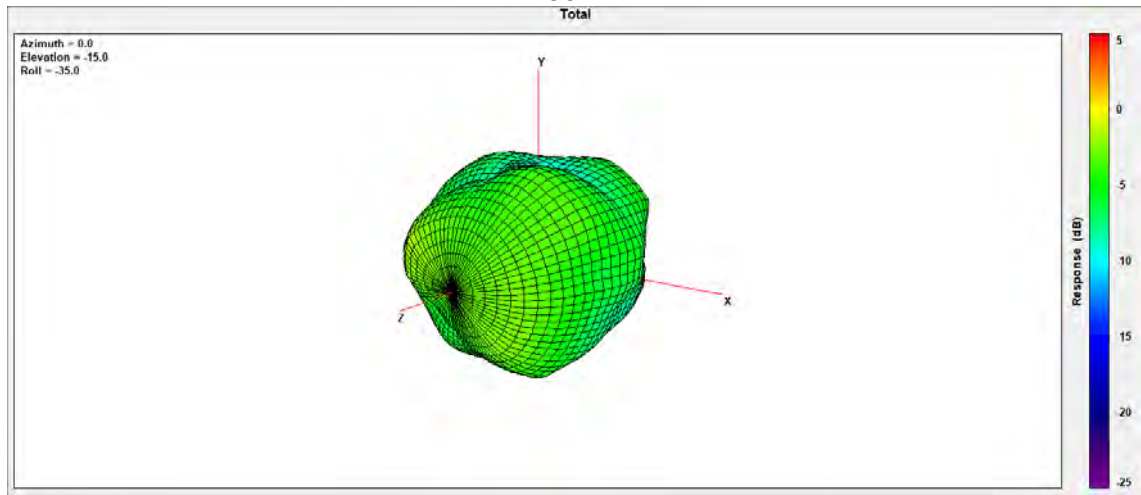
1452MHz	H (Peak)	V (Peak)
	-2.44	-3.04

1474MHz



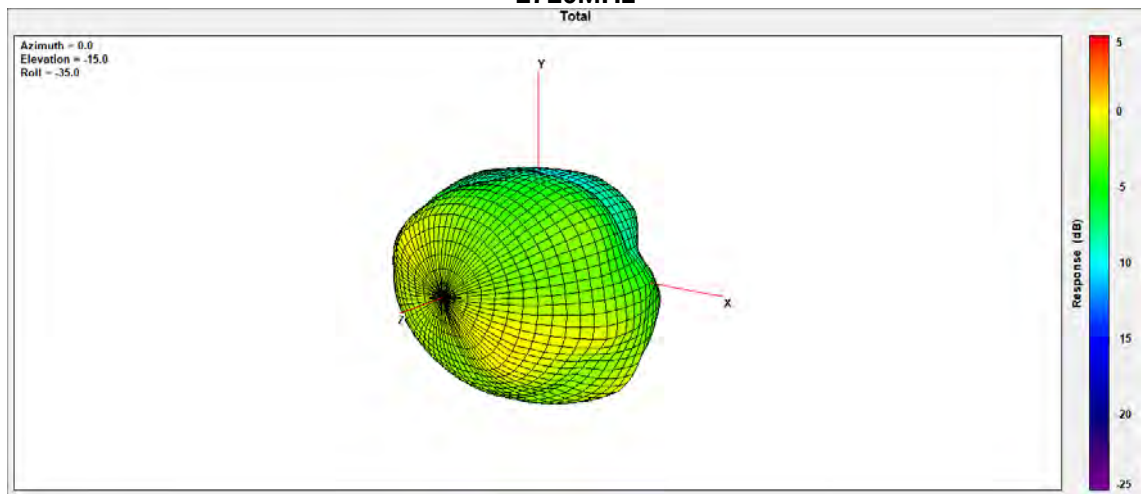
1474MHz	H (Peak)	V (Peak)
	-2.87	-2.78

1496MHz



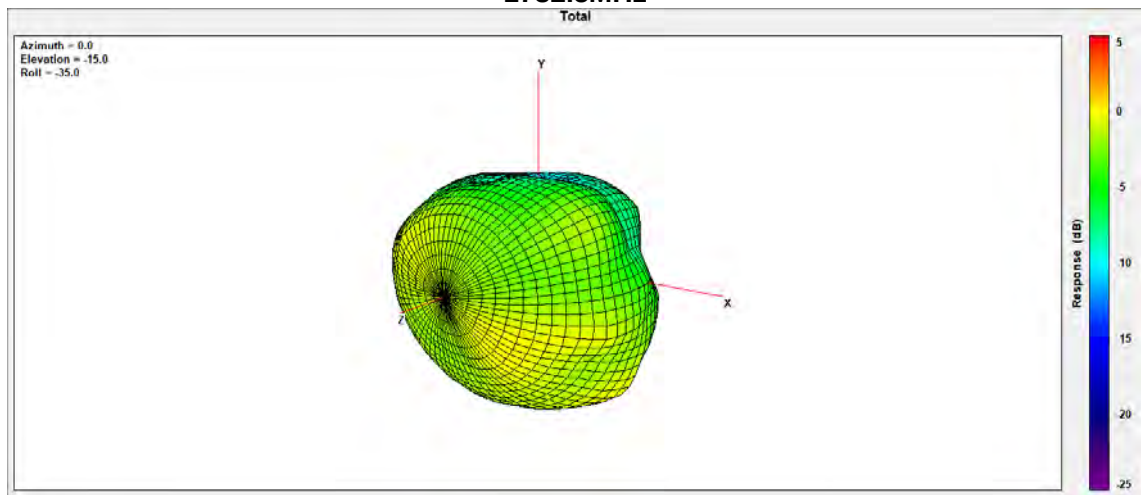
1496MHz	H (Peak)	V (Peak)
	-4.06	-2.64

1710MHz



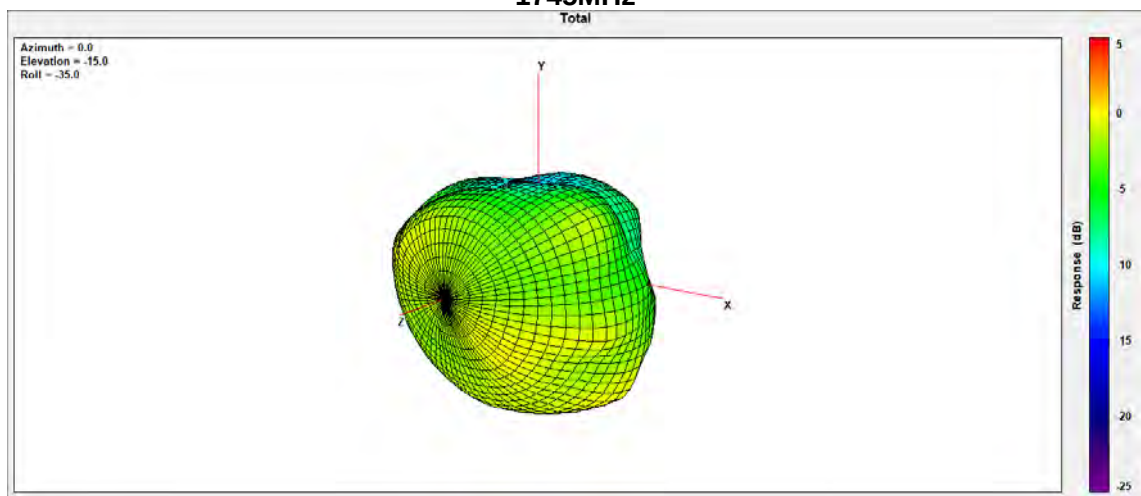
1710MHz	H (Peak)	V (Peak)
	-0.69	-1.53

1732.5MHz



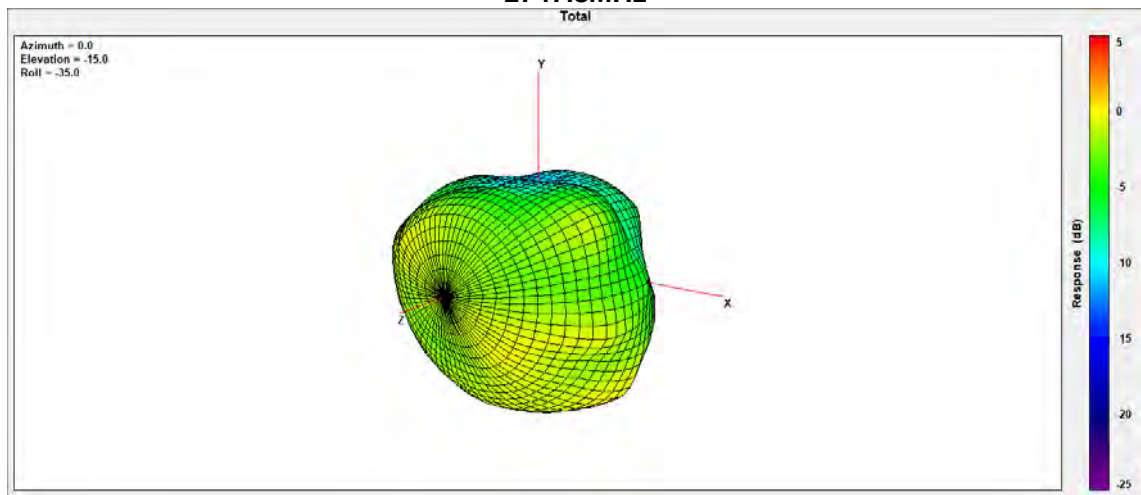
1732.5MHz	H (Peak)	V (Peak)
	-1.05	-1.47

1745MHz



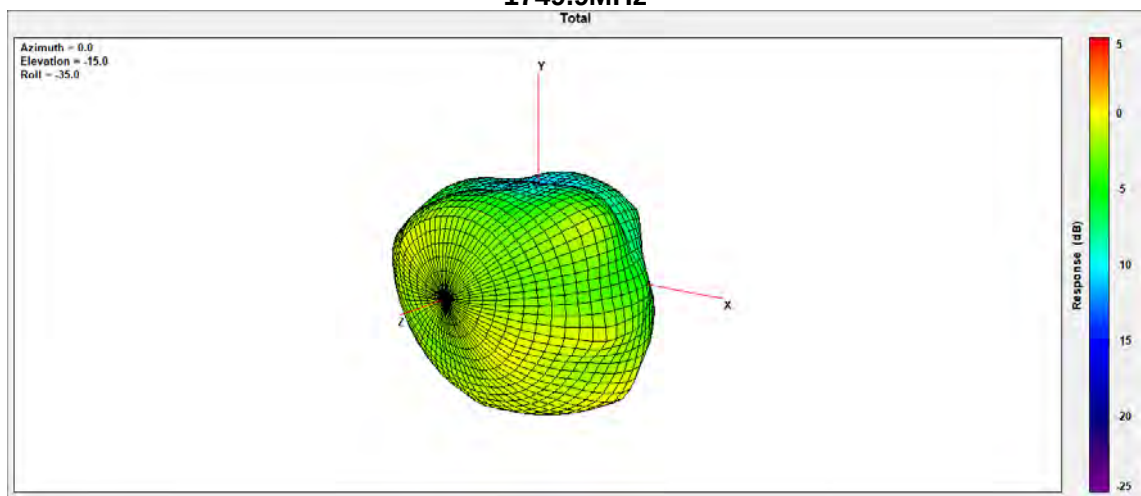
1745MHz	H (Peak)	V (Peak)
	-1.15	-1.42

1747.5MHz



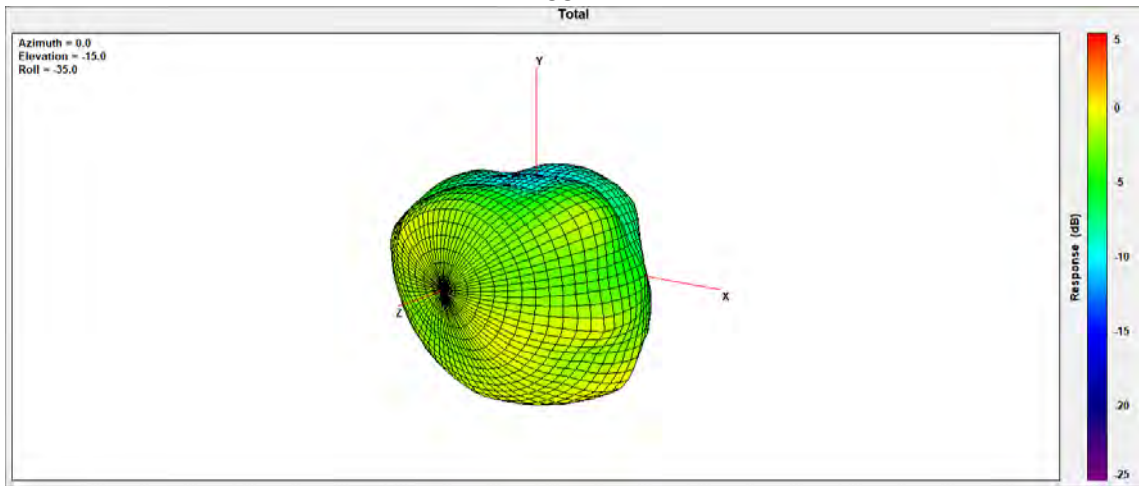
1747.5MHz	H (Peak)	V (Peak)
	-1.05	-1.37

1749.9MHz



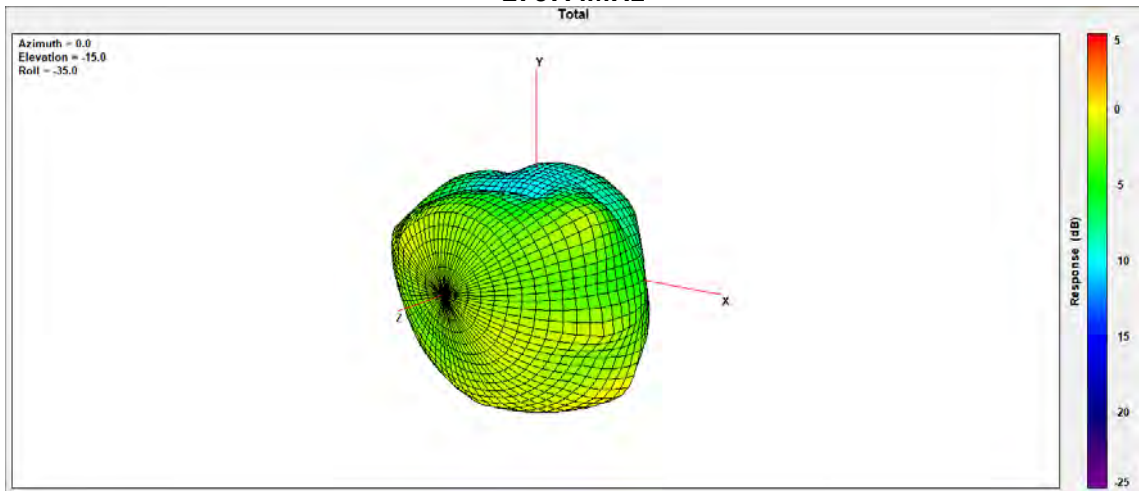
1749.9MHz	H (Peak)	V (Peak)
	-0.97	-1.36

1755MHz



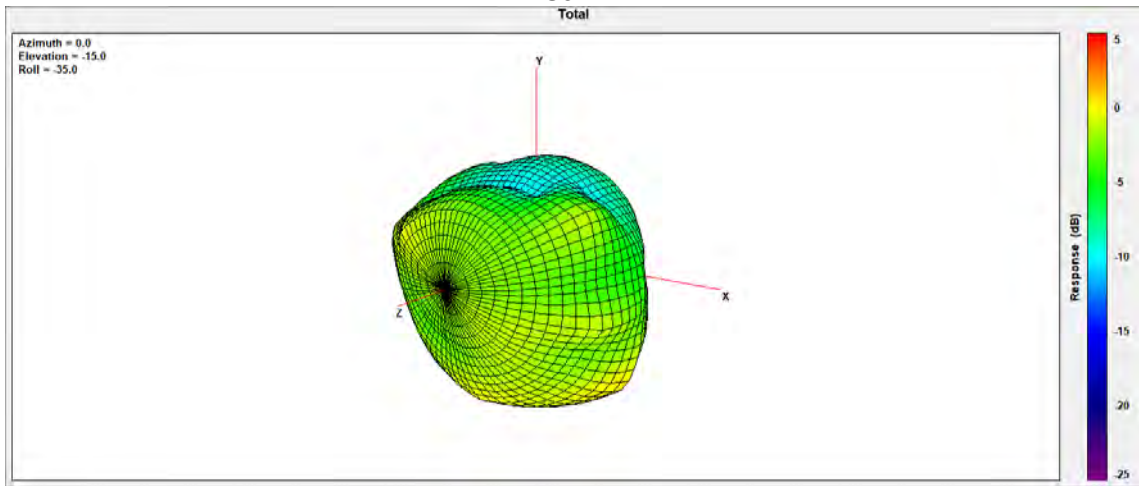
1755MHz	H (Peak)	V (Peak)
	-0.80	-1.30

1767.4MHz



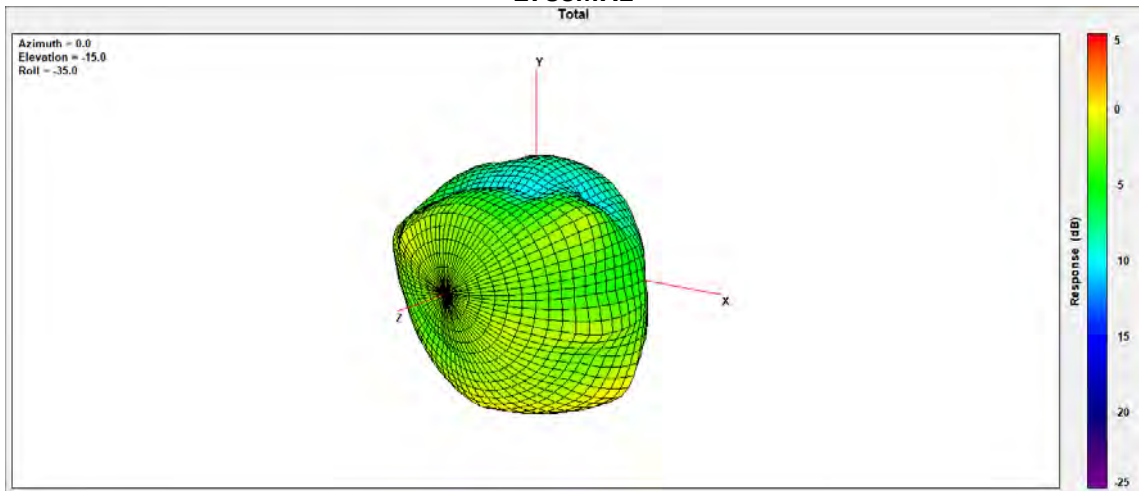
1767.4MHz	H (Peak)	V (Peak)
	-0.46	-1.17

1780MHz



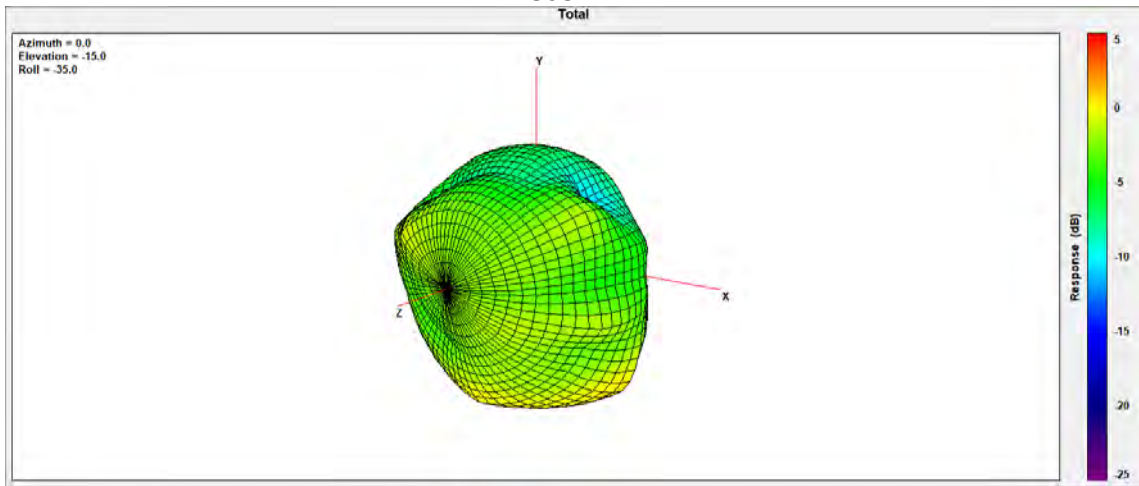
1780MHz	H (Peak)	V (Peak)
	-0.16	-1.02

1785MHz



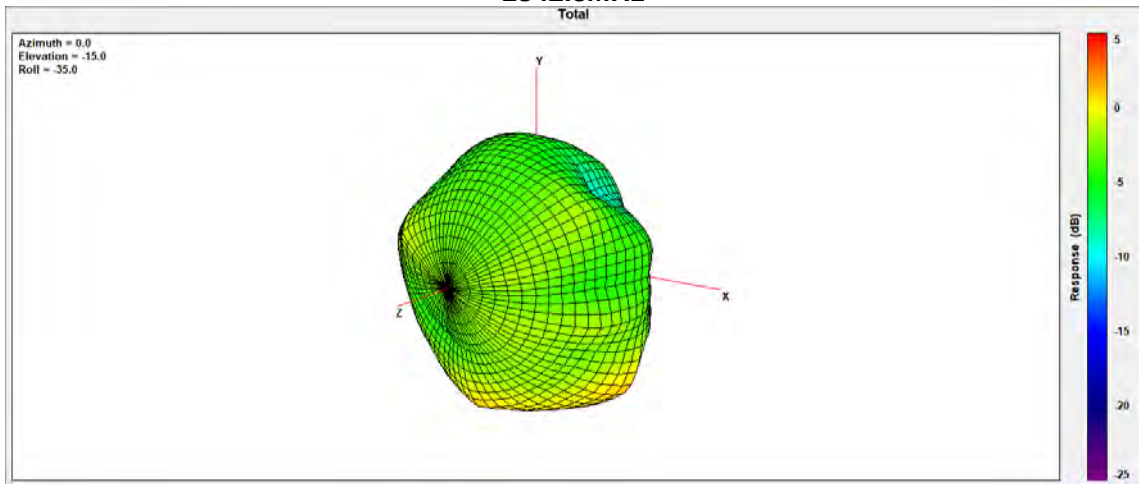
1785MHz	H (Peak)	V (Peak)
	-0.10	-0.94

1805MHz



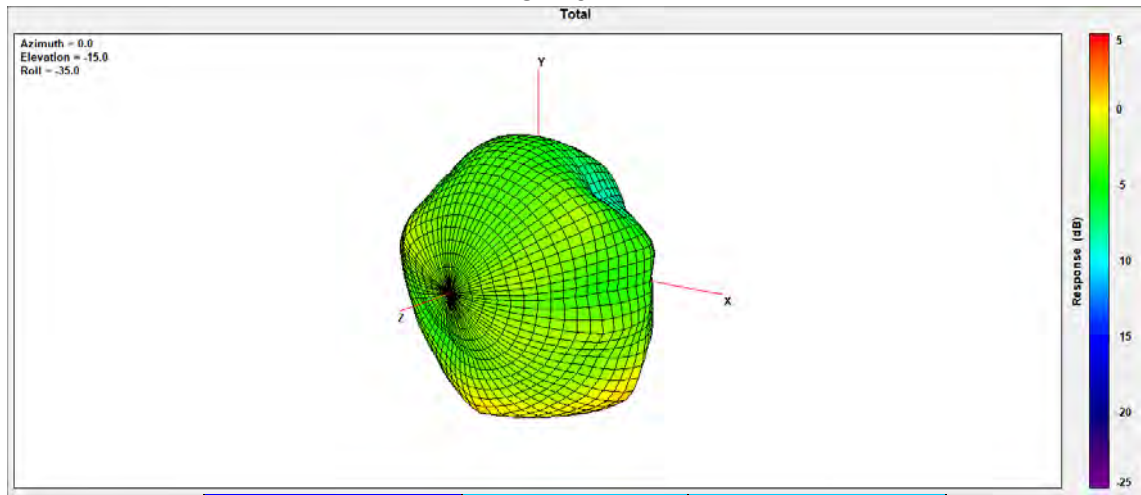
1805MHz	H (Peak)	V (Peak)
	0.33	-0.66

1842.5MHz



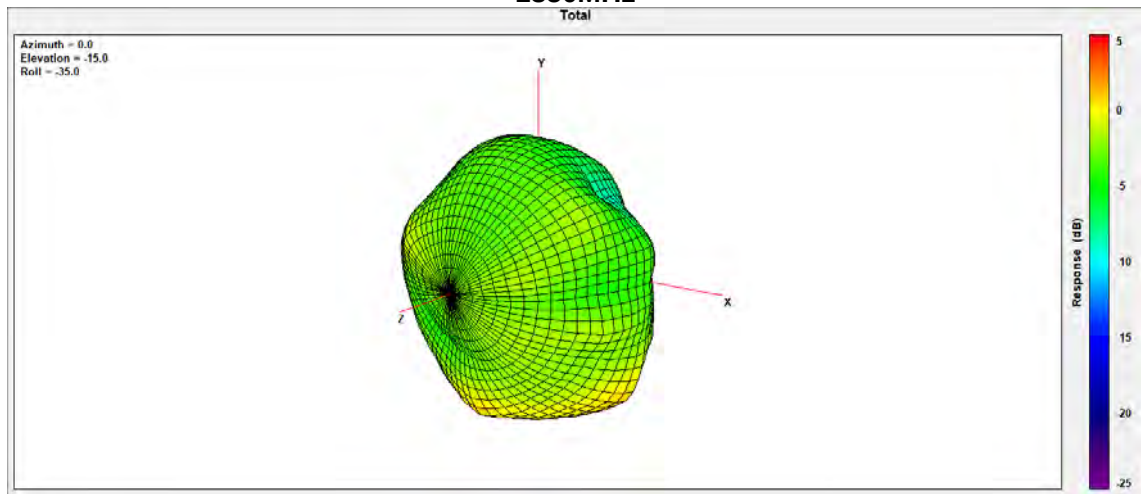
1842.5MHz	H (Peak)	V (Peak)
	1.09	-0.28

1844.9MHz



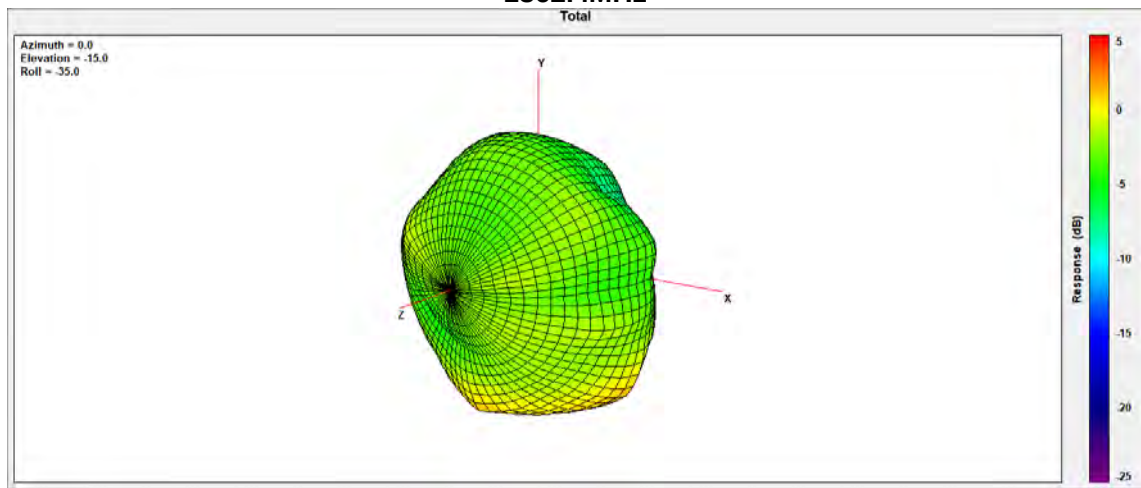
1844.9MHz	H (Peak)	V (Peak)
	1.15	-0.24

1850MHz



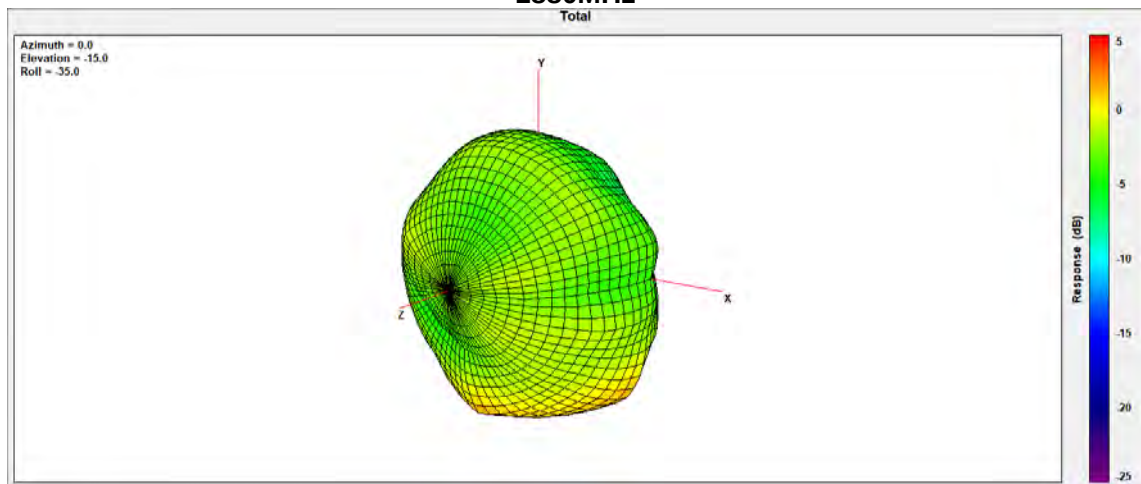
1850MHz	H (Peak)	V (Peak)
	1.25	-0.20

1862.4MHz



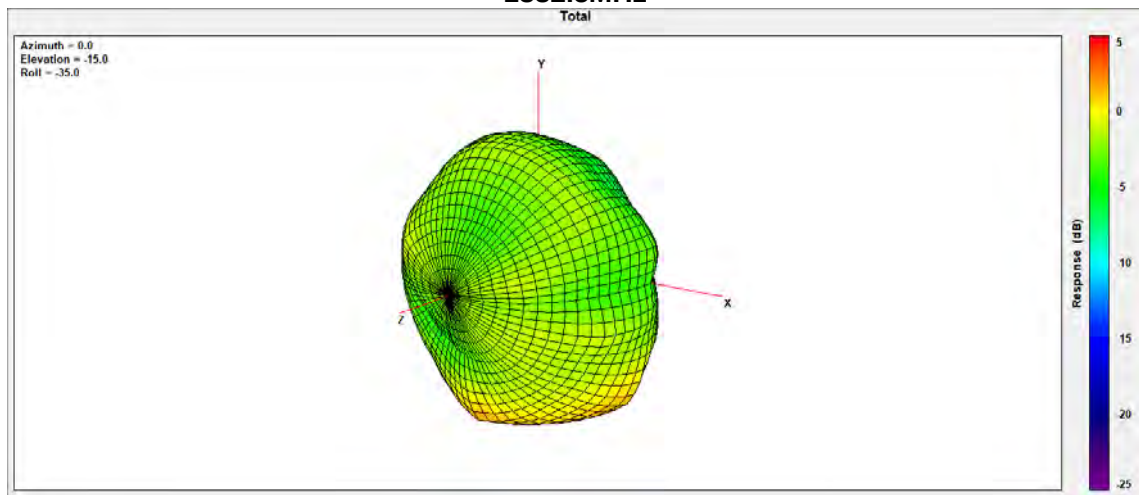
1862.4MHz	H (Peak)	V (Peak)
	1.52	-0.01

1880MHz



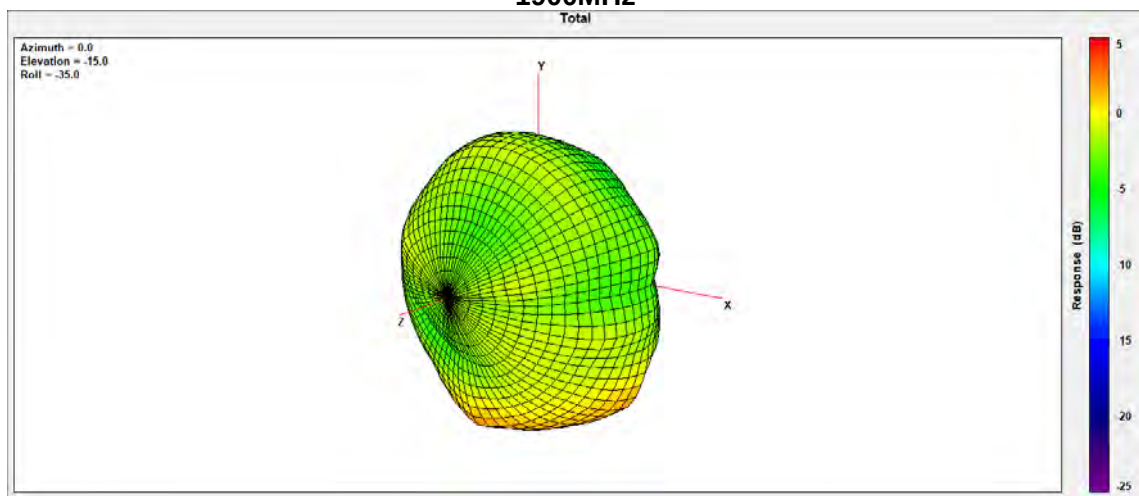
1880MHz	H (Peak)	V (Peak)
	1.99	0.28

1882.5MHz



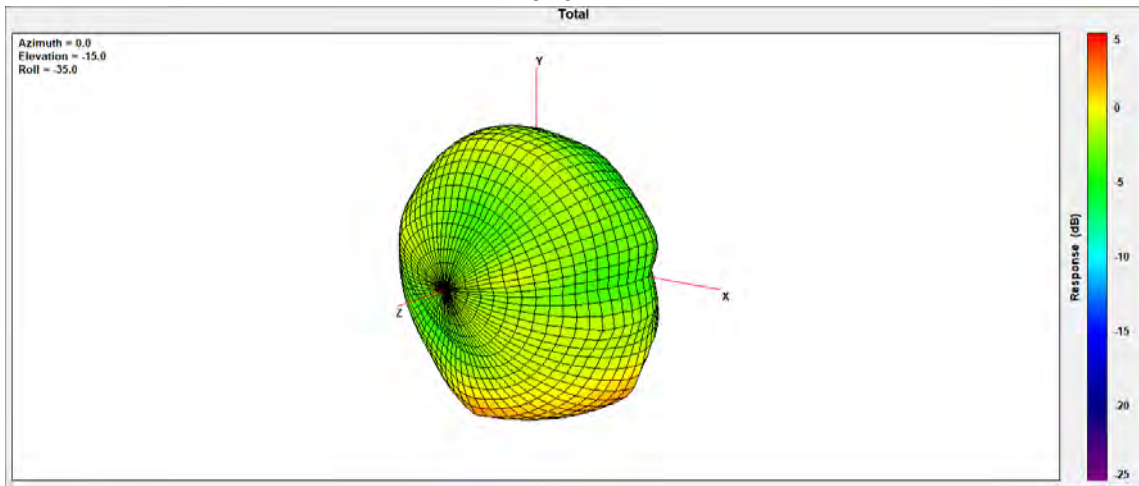
1882.5MHz	H (Peak)	V (Peak)
	2.07	0.36

1900MHz



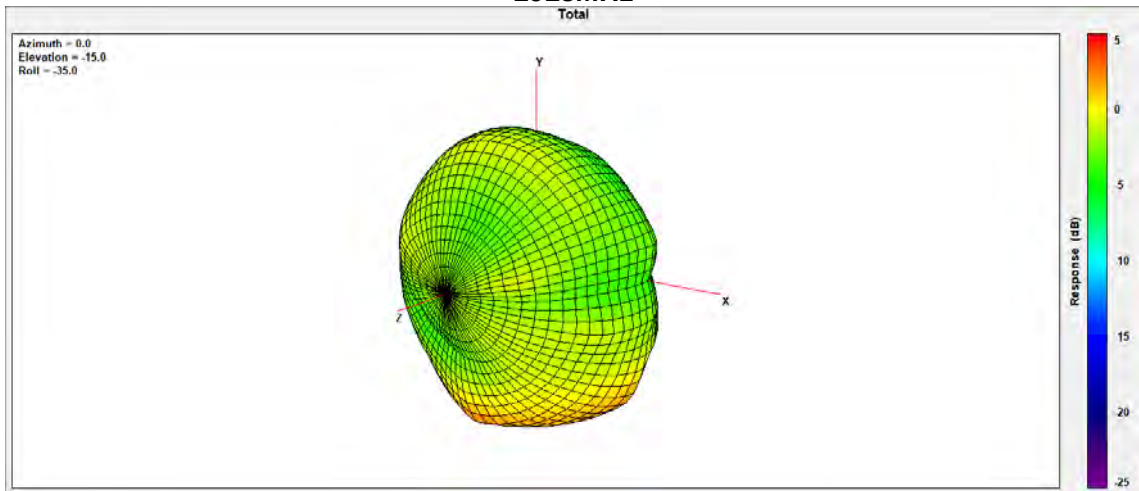
1900MHz	H (Peak)	V (Peak)
	2.49	0.71

1910MHz



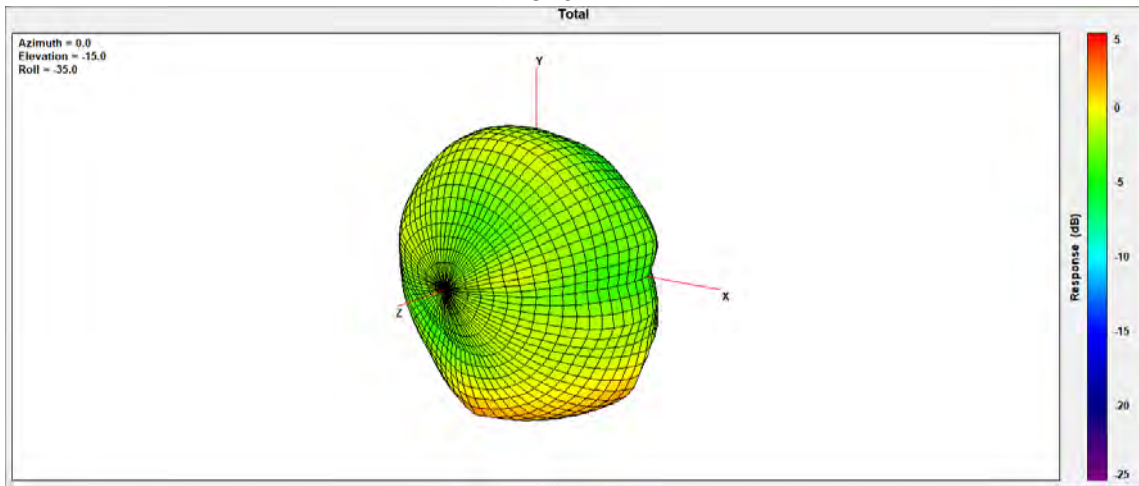
1910MHz	H (Peak)	V (Peak)
	2.61	0.90

1915MHz



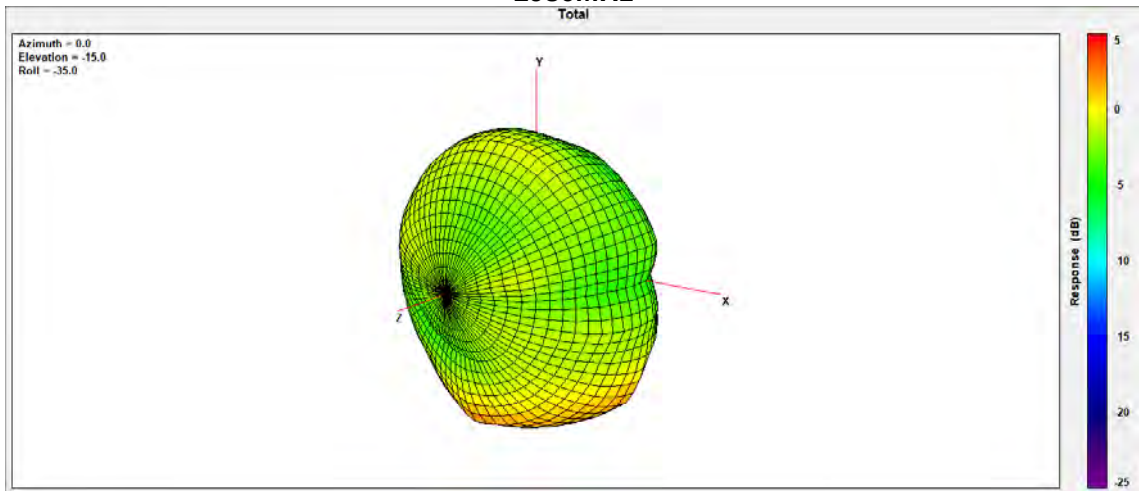
1915MHz	H (Peak)	V (Peak)
	2.61	0.99

1920MHz



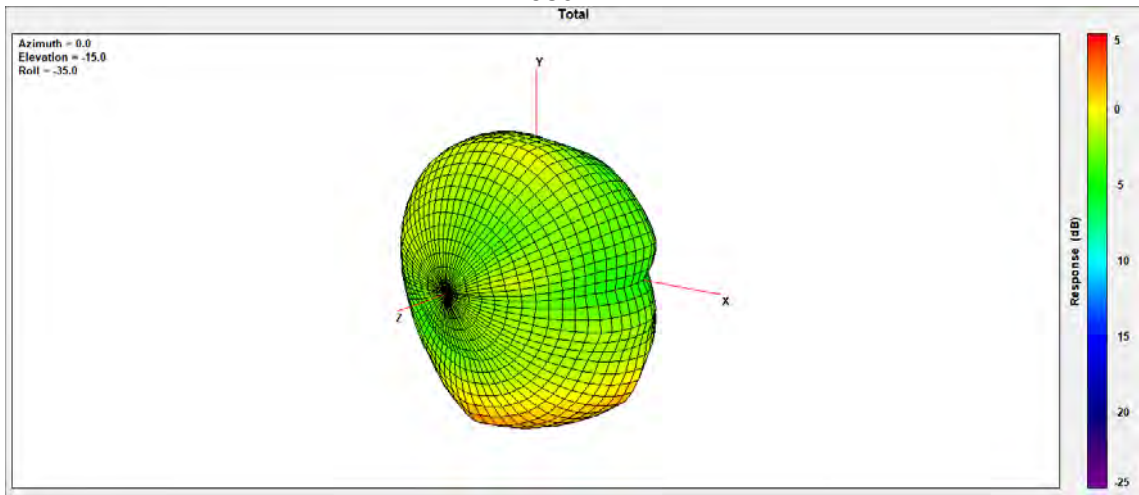
1920MHz	H (Peak)	V (Peak)
	2.59	1.09

1930MHz



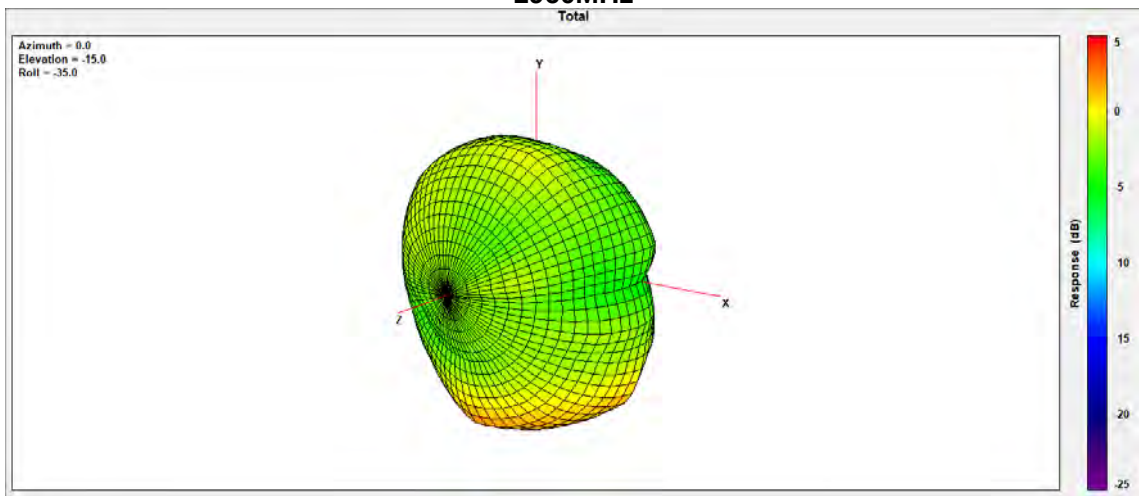
1930MHz	H (Peak)	V (Peak)
	2.59	1.11

1950MHz



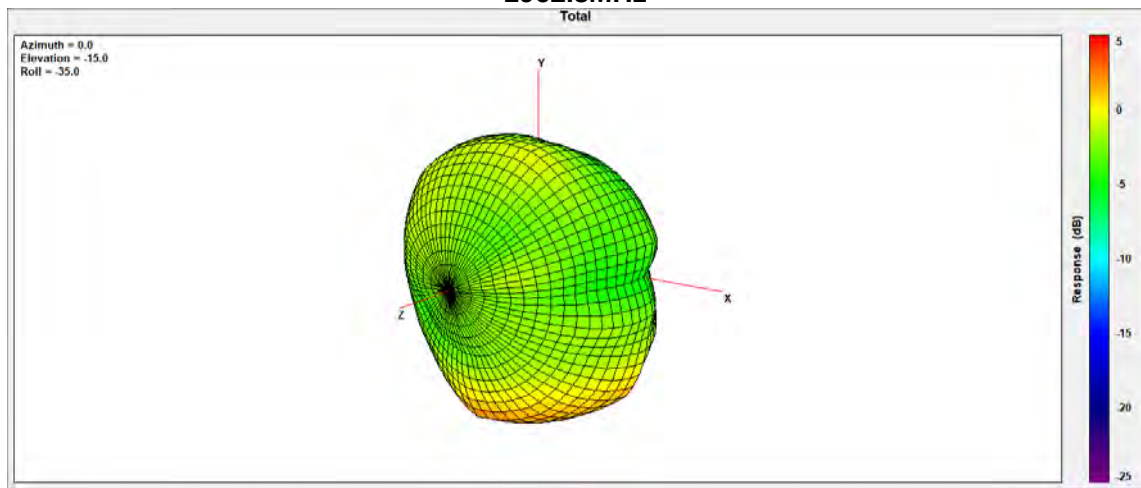
1950MHz	H (Peak)	V (Peak)
	2.60	1.07

1960MHz



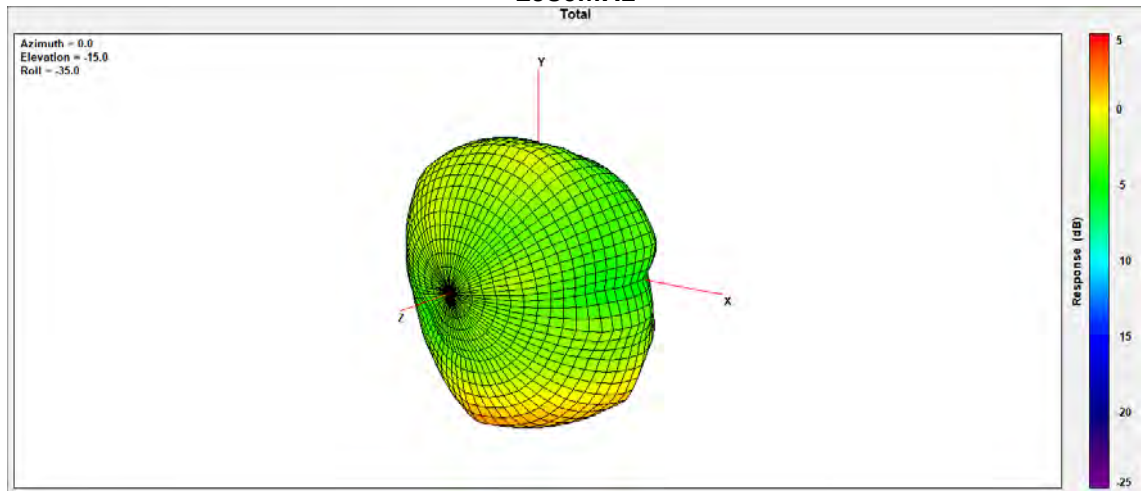
1960MHz	H (Peak)	V (Peak)
	2.55	0.93

1962.5MHz



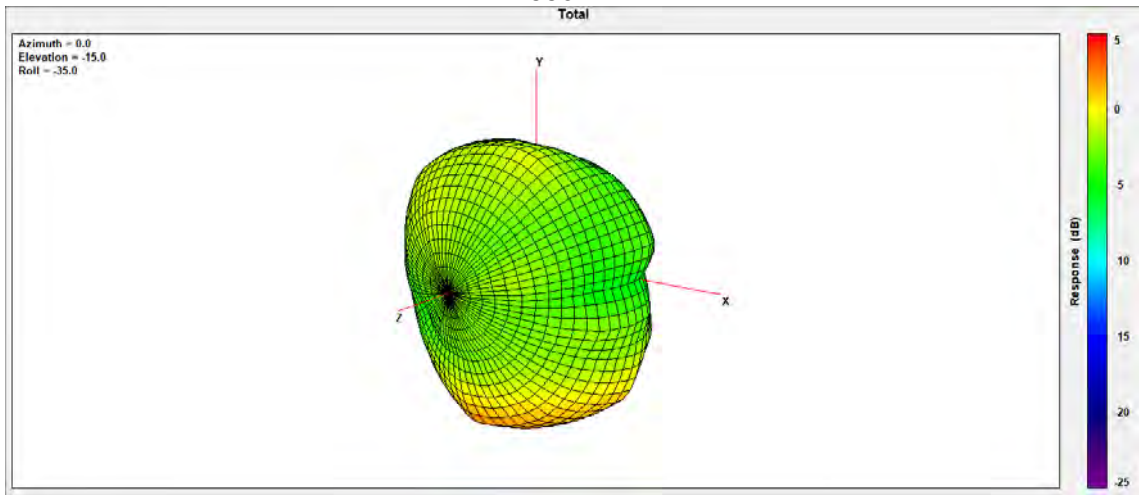
1962.5MHz	H (Peak)	V (Peak)
	2.57	0.93

1980MHz



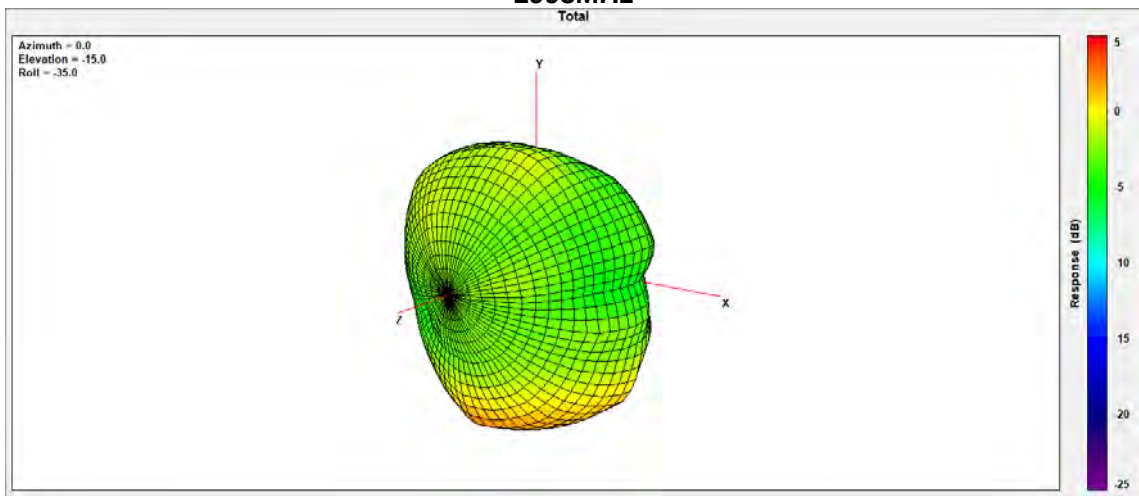
1980MHz	H (Peak)	V (Peak)
	2.60	0.87

1990MHz



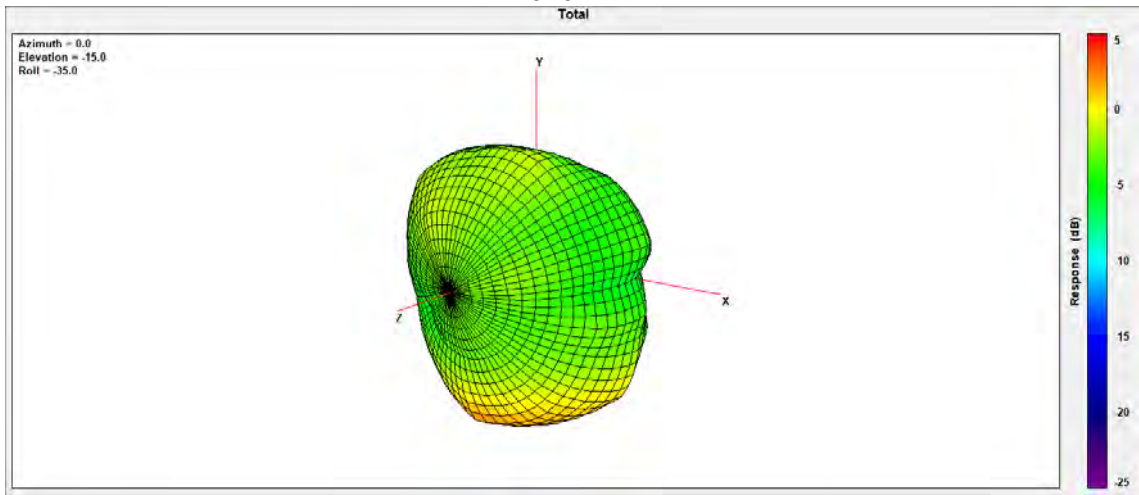
1990MHz	H (Peak)	V (Peak)
	2.61	0.87

1995MHz



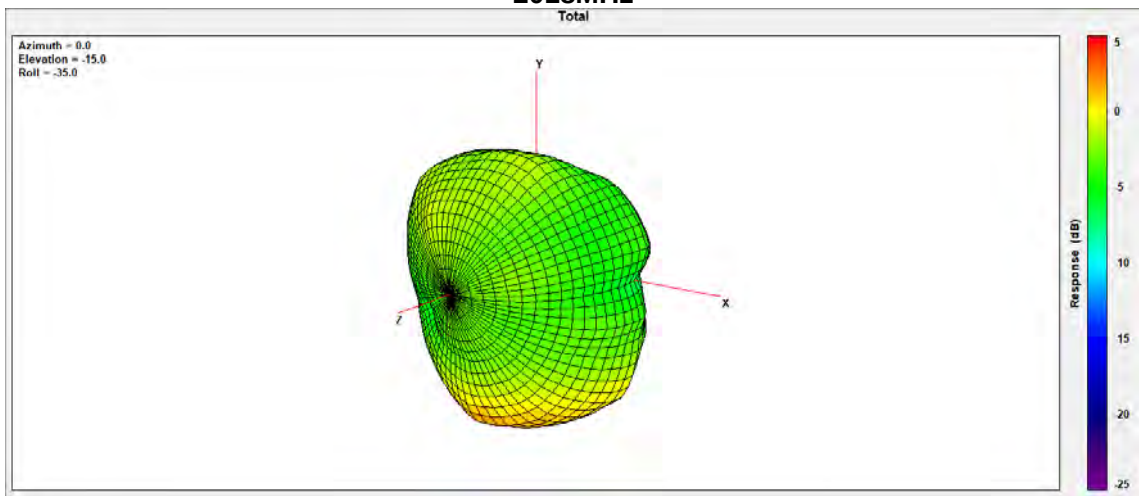
1995MHz	H (Peak)	V (Peak)
	2.59	0.89

2010MHz



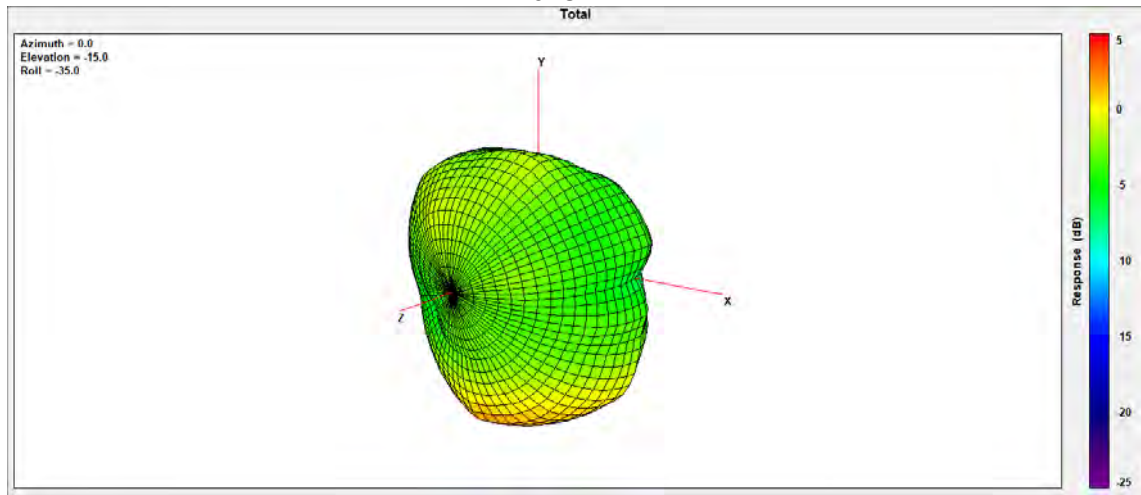
2010MHz	H (Peak)	V (Peak)
	2.27	0.61

2018MHz



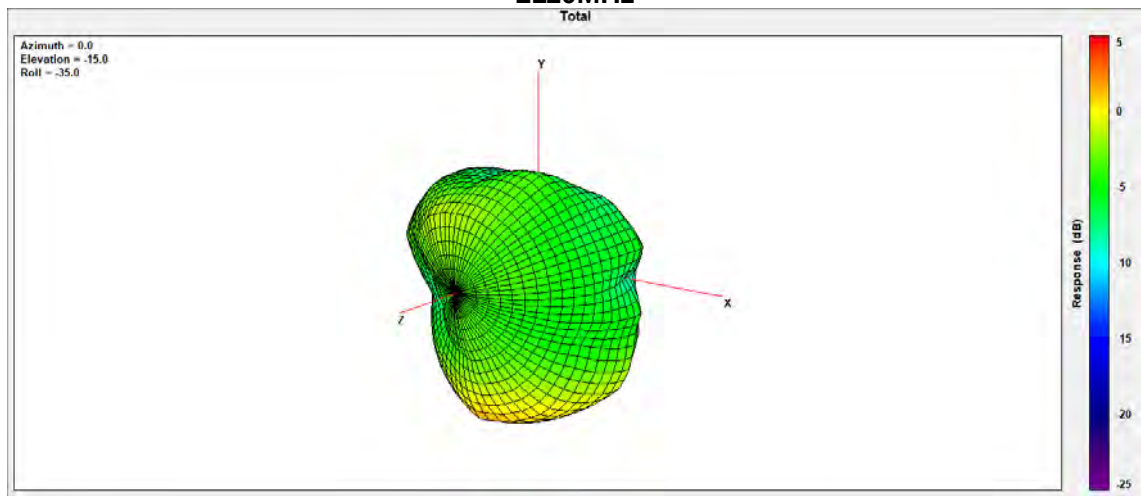
2018MHz	H (Peak)	V (Peak)
	2.17	0.60

2025MHz



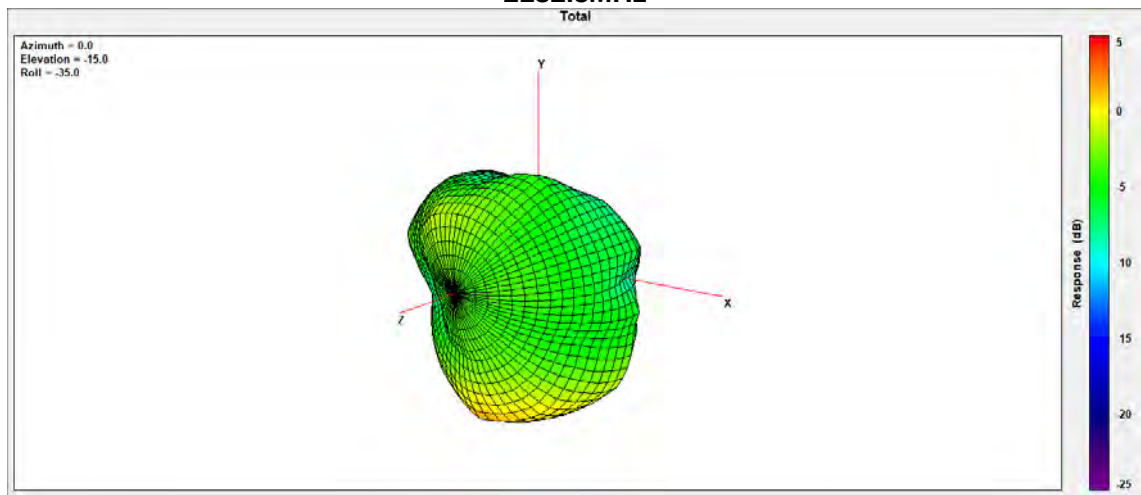
2025MHz	H (Peak)	V (Peak)
	2.16	0.68

2110MHz



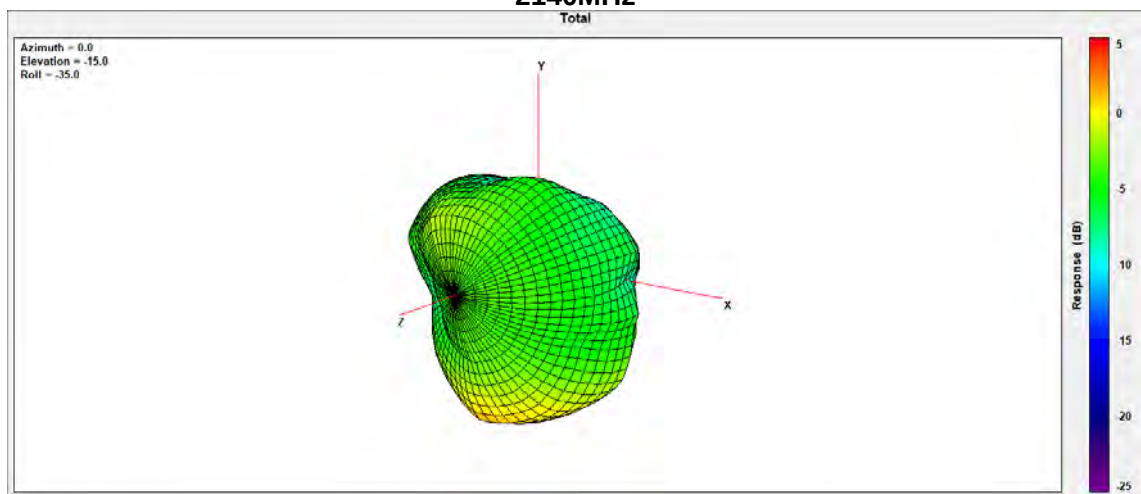
2110MHz	H (Peak)	V (Peak)
	1.35	-0.26

2132.5MHz



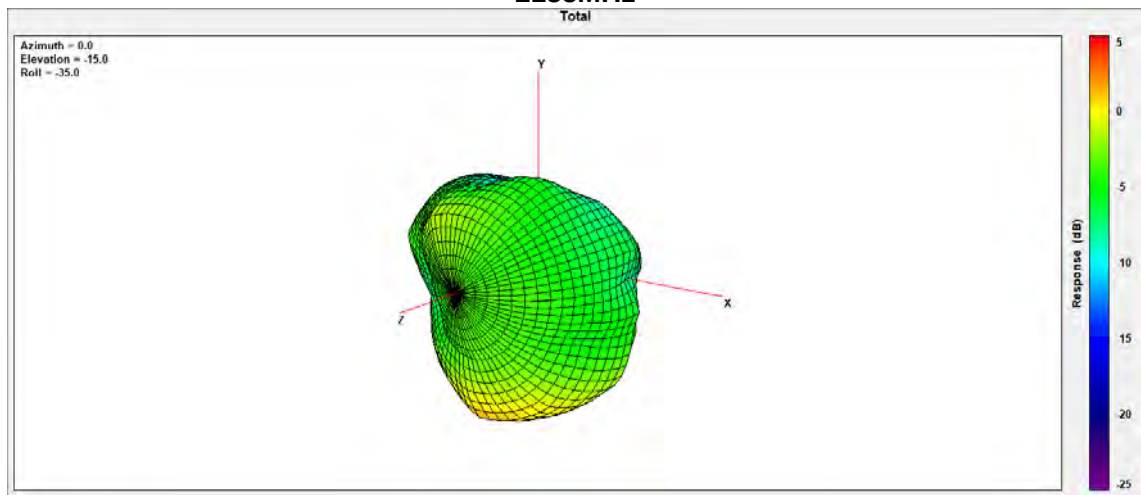
2132.5MHz	H (Peak)	V (Peak)
	1.31	-0.69

2140MHz



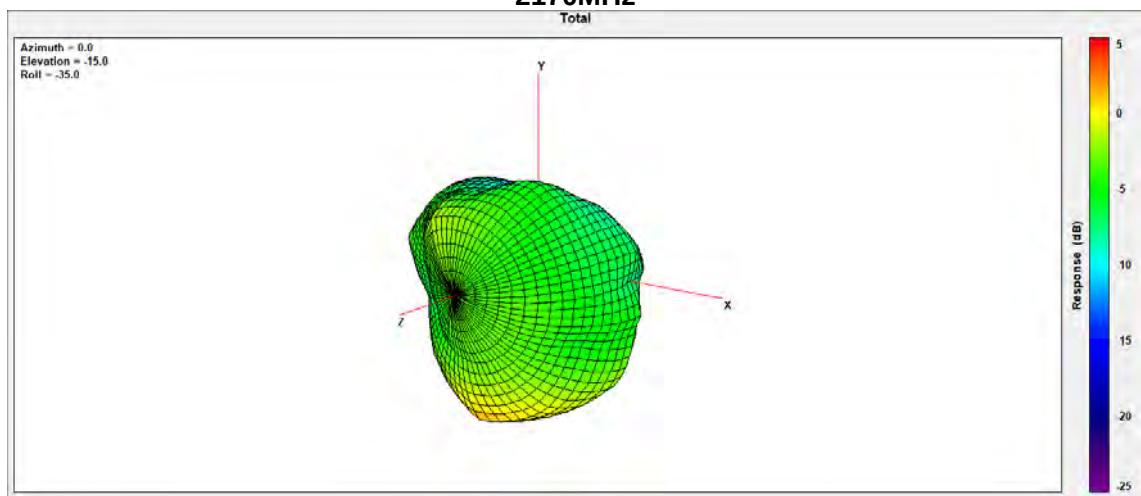
2140MHz	H (Peak)	V (Peak)
	1.22	-0.86

2155MHz



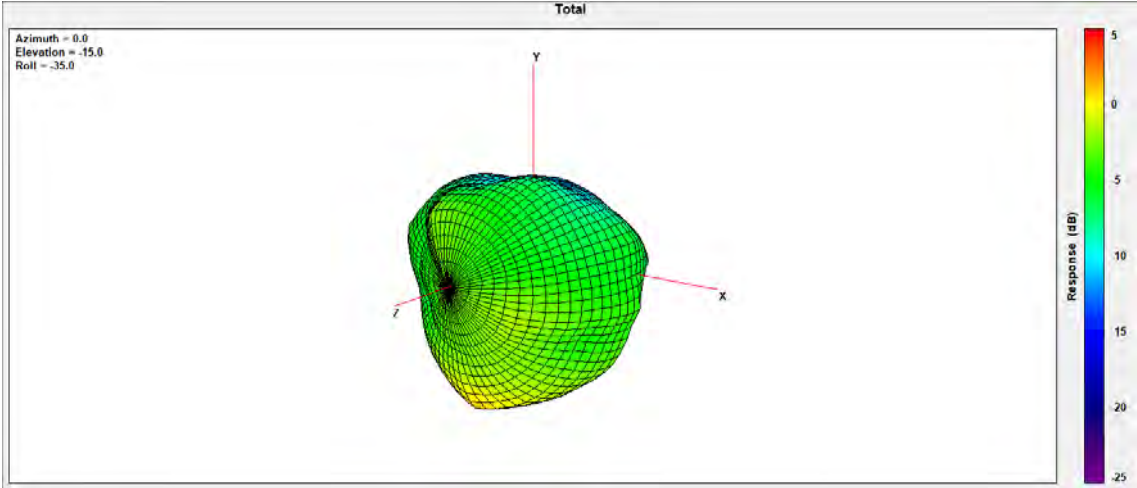
2155MHz	H (Peak)	V (Peak)
	1.16	-1.15

2170MHz



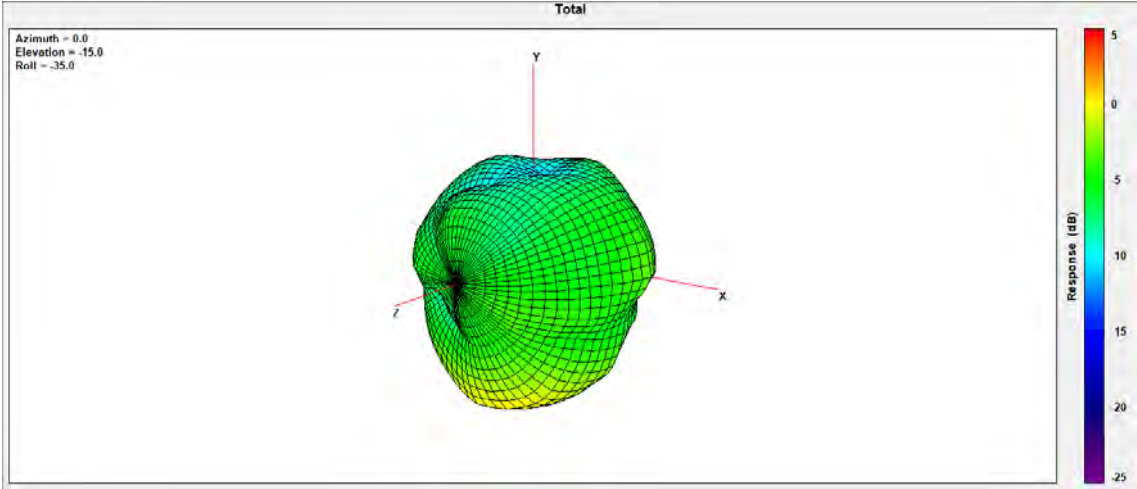
2170MHz	H (Peak)	V (Peak)
	1.07	-1.53

2200MHz



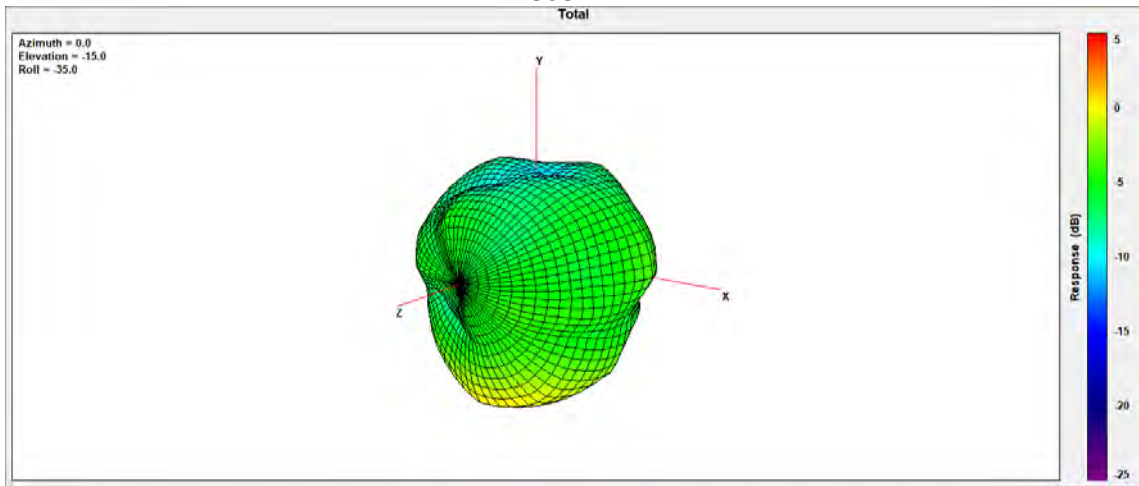
2200MHz	H (Peak)	V (Peak)
	0.63	-2.89

2300MHz



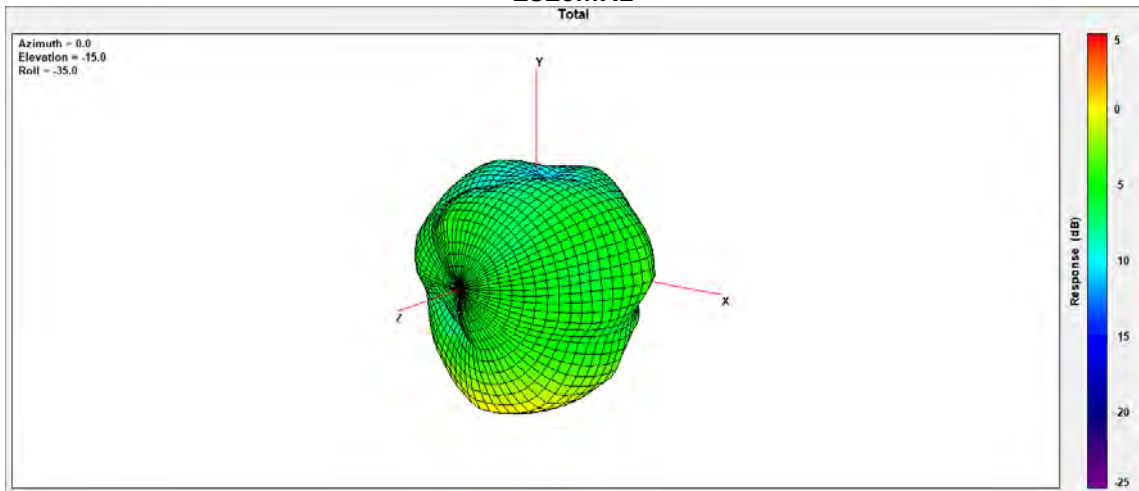
2300MHz	H (Peak)	V (Peak)
	-0.12	-0.96

2305MHz

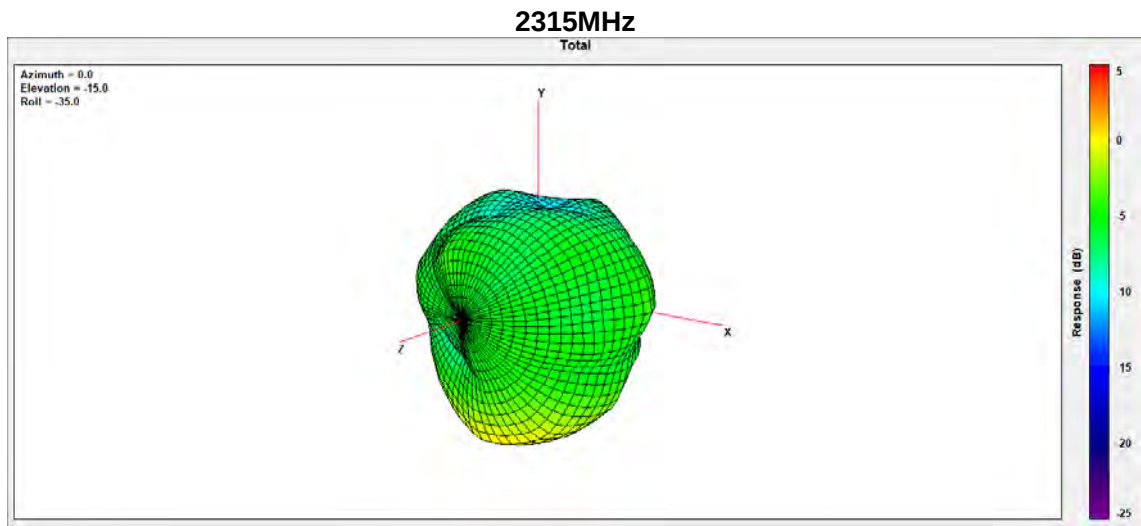


2305MHz	H (Peak)	V (Peak)
	-0.10	-0.86

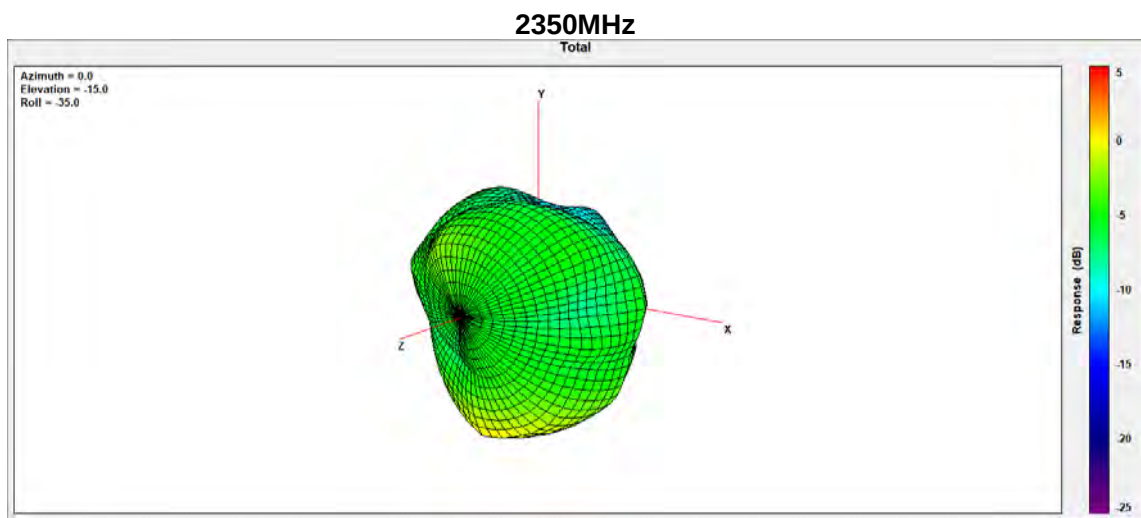
2310MHz



2310MHz	H (Peak)	V (Peak)
	-0.11	-0.81

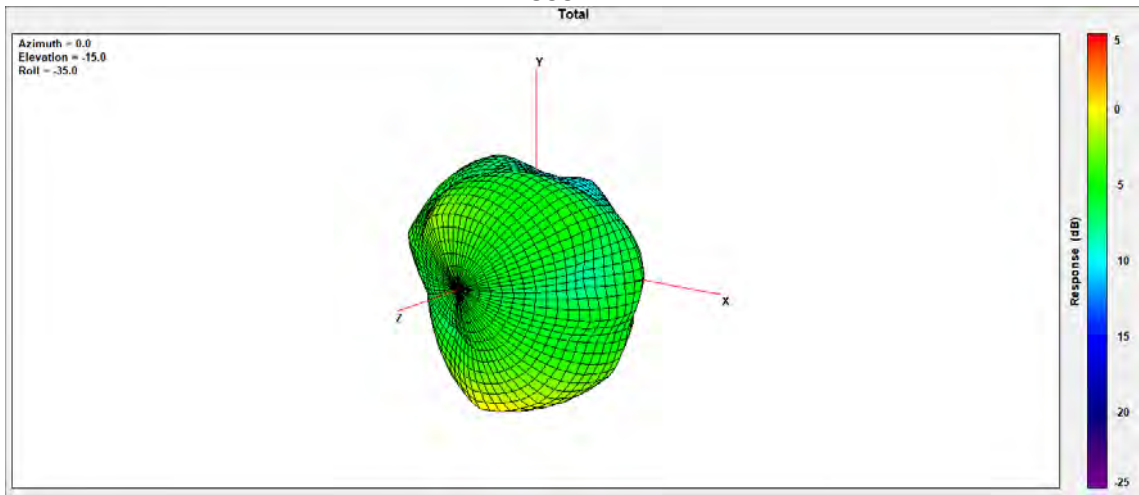


2315MHz	H (Peak)	V (Peak)
	-0.08	-0.78



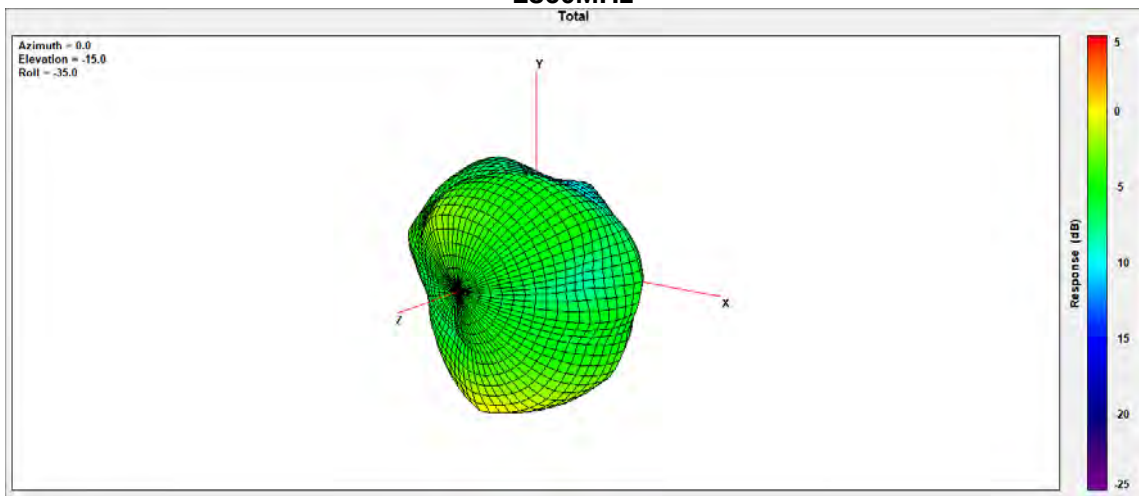
2350MHz	H (Peak)	V (Peak)
	-0.21	-1.07

2355MHz



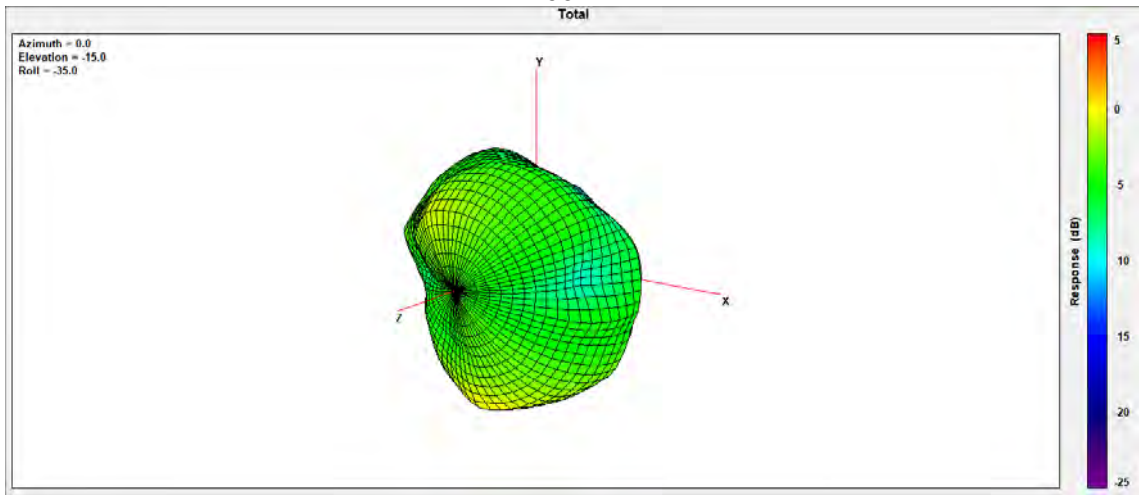
2355MHz	H (Peak)	V (Peak)
	-0.19	-1.06

2360MHz



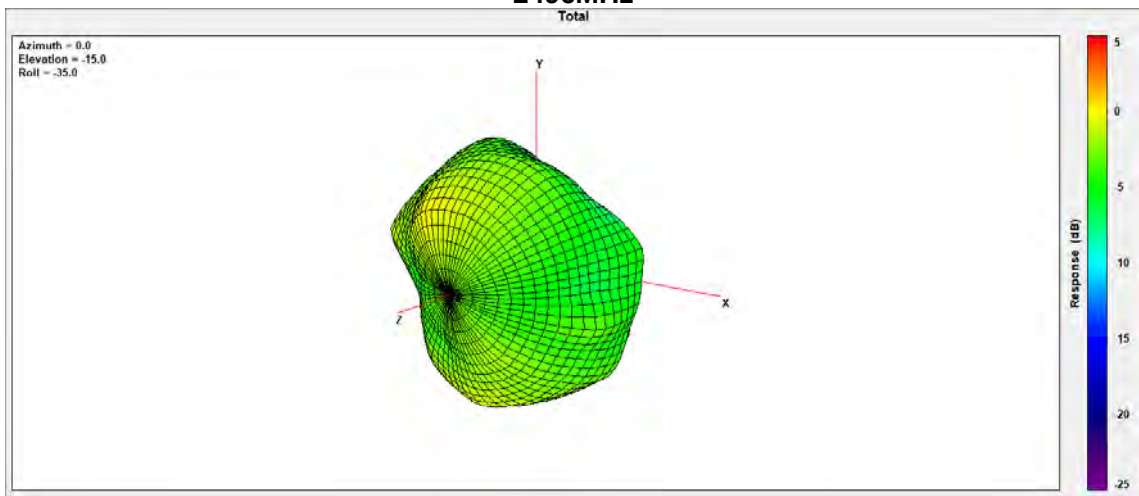
2360MHz	H (Peak)	V (Peak)
	-0.27	-1.11

2400MHz



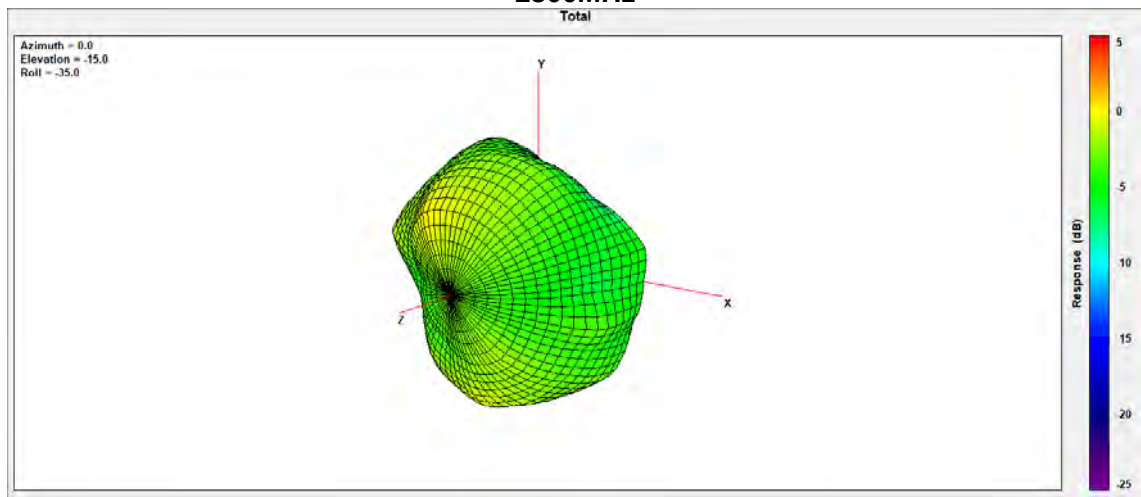
2400MHz	H (Peak)	V (Peak)
	-0.45	-1.42

2496MHz



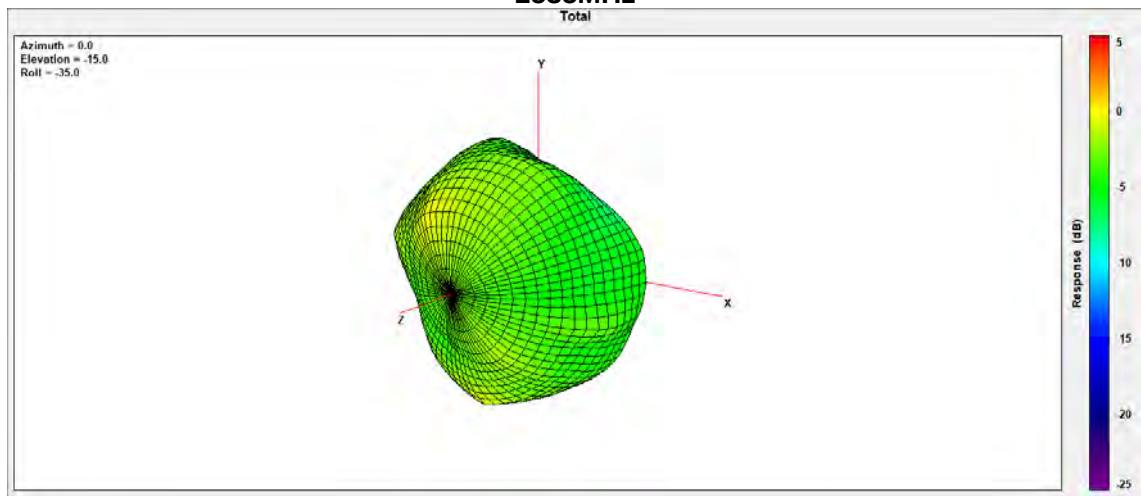
2496MHz	H (Peak)	V (Peak)
	-0.96	-0.55

2500MHz



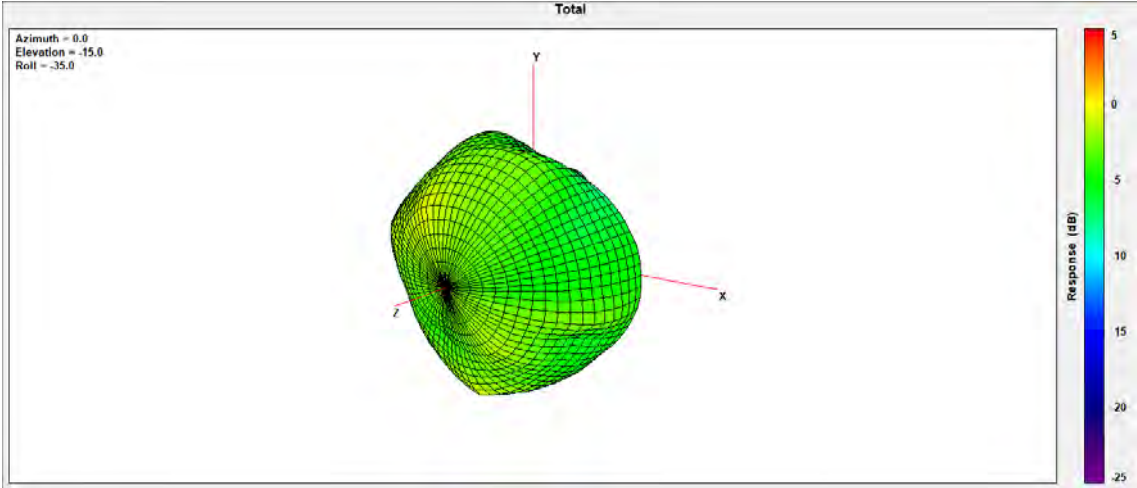
2500MHz	H (Peak)	V (Peak)
	-1.01	-0.55

2535MHz



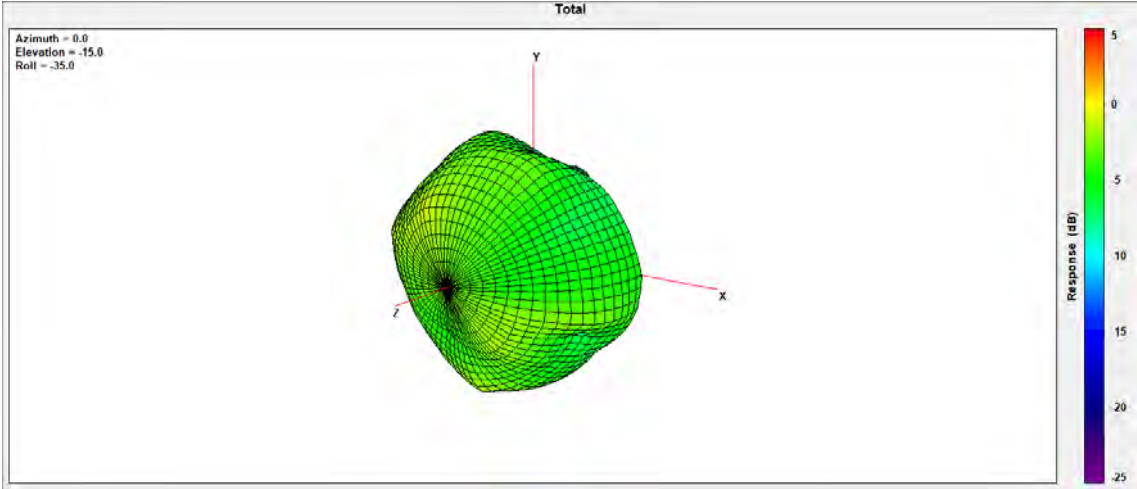
2535MHz	H (Peak)	V (Peak)
	-1.62	-1.00

2570MHz



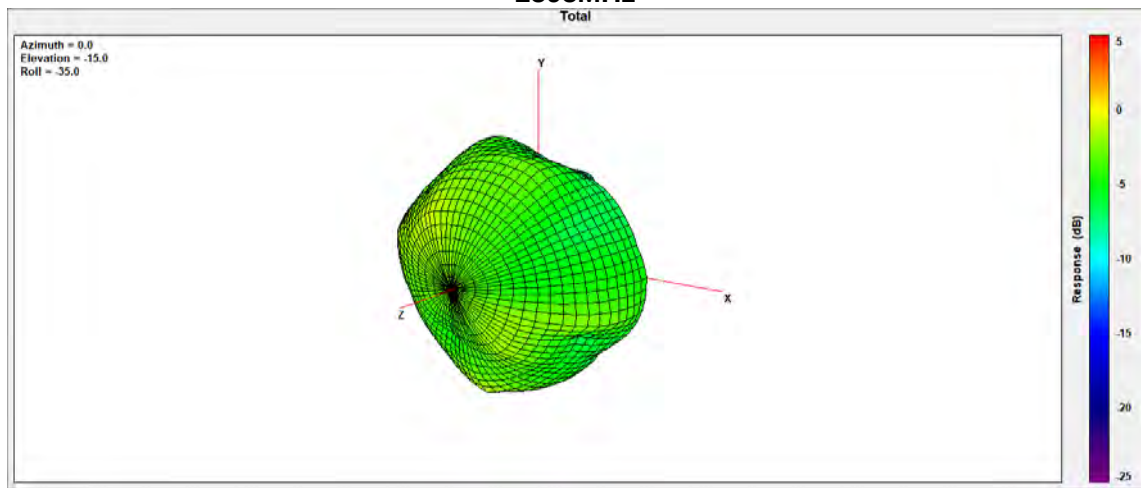
2570MHz	H (Peak)	V (Peak)
	-2.11	-1.37

2593MHz



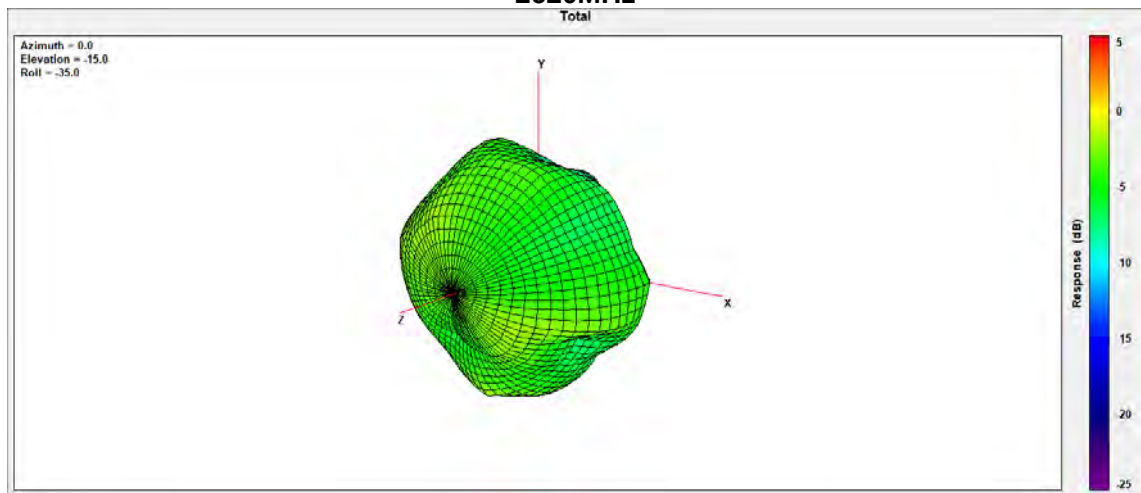
2593MHz	H (Peak)	V (Peak)
	-2.20	-1.86

2595MHz



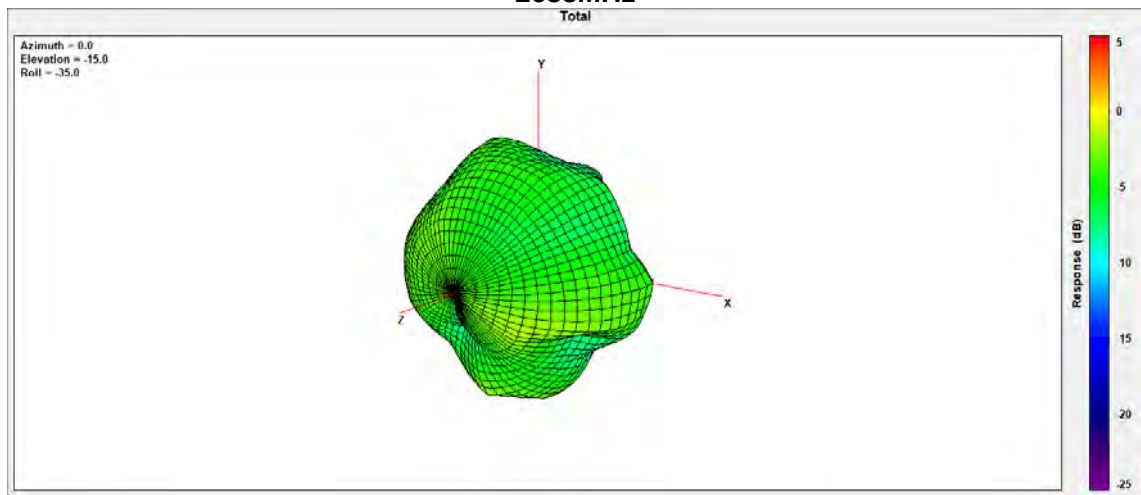
2595MHz	H (Peak)	V (Peak)
	-2.14	-1.92

2620MHz



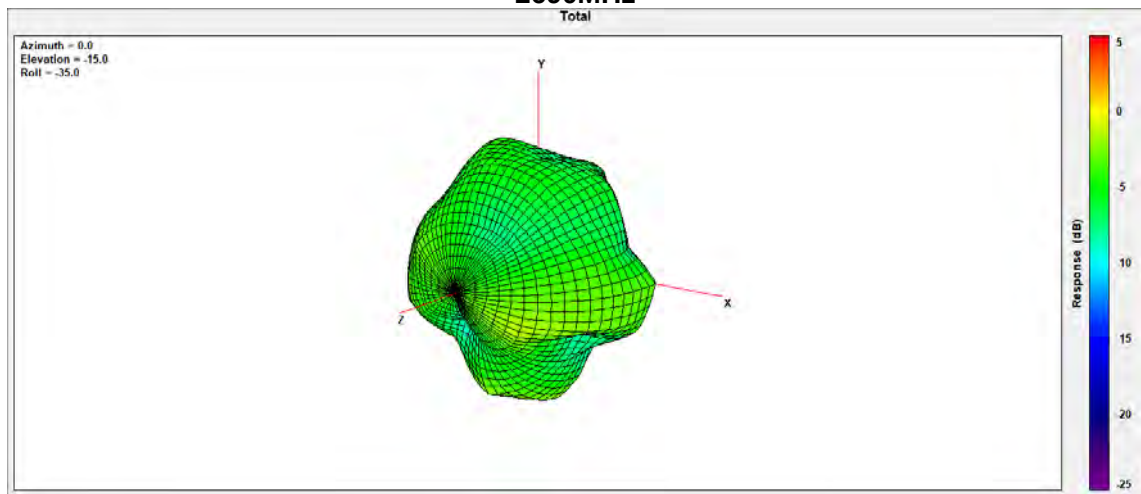
2620MHz	H (Peak)	V (Peak)
	-1.61	-2.58

2655MHz



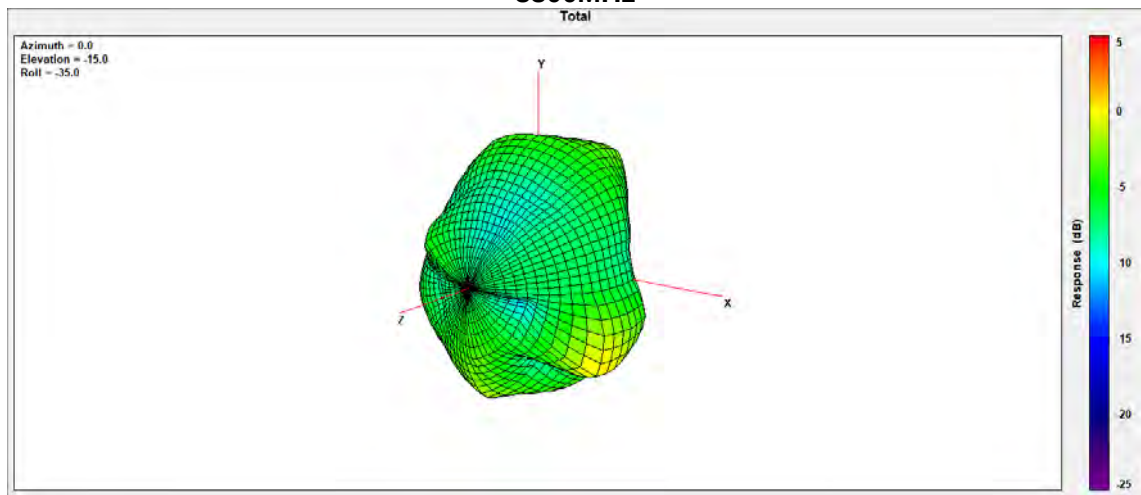
2655MHz	H (Peak)	V (Peak)
	-0.84	-3.79

2690MHz



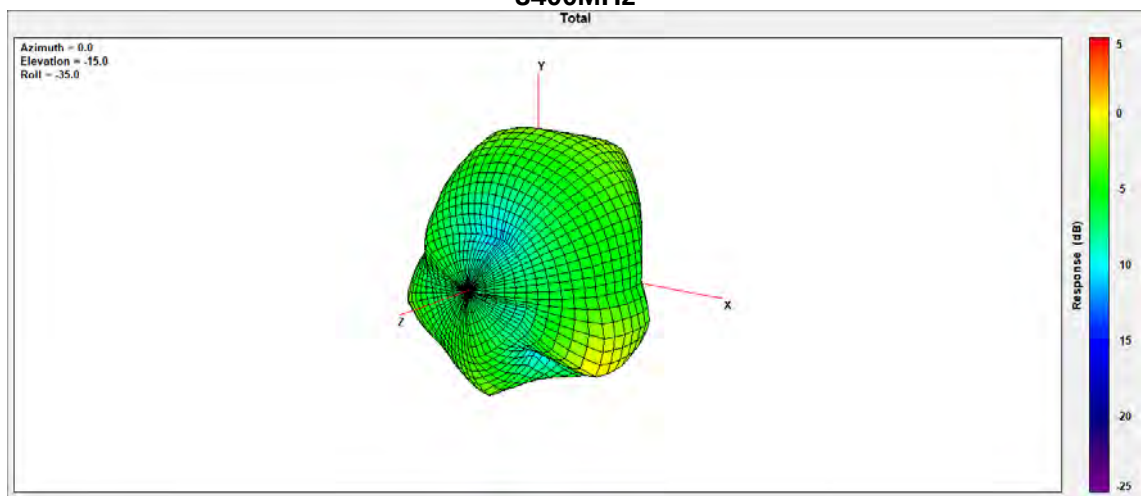
2690MHz	H (Peak)	V (Peak)
	-0.44	-3.84

3300MHz



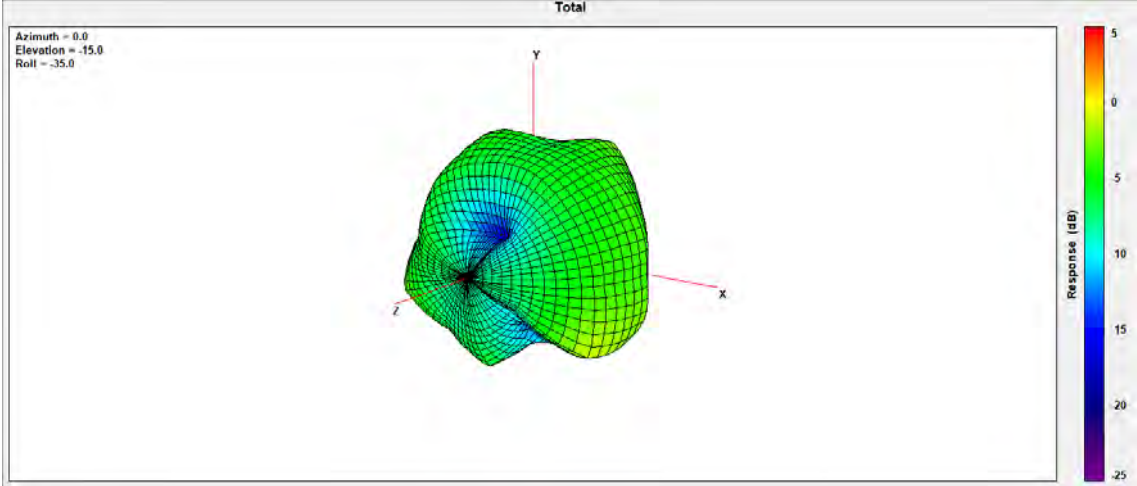
3300MHz	H (Peak)	V (Peak)
	-1.02	-2.46

3400MHz



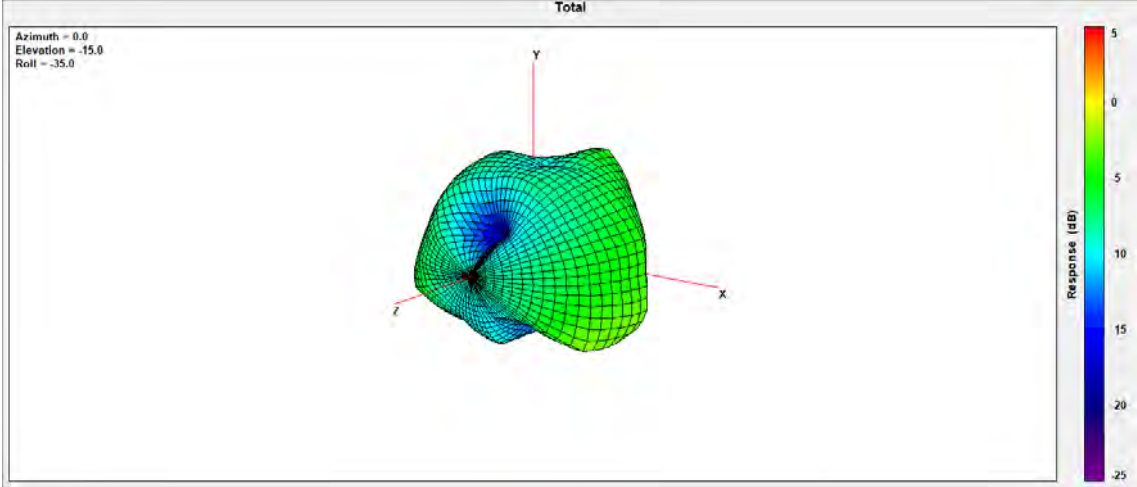
3400MHz	H (Peak)	V (Peak)
	-1.03	-2.00

3500MHz



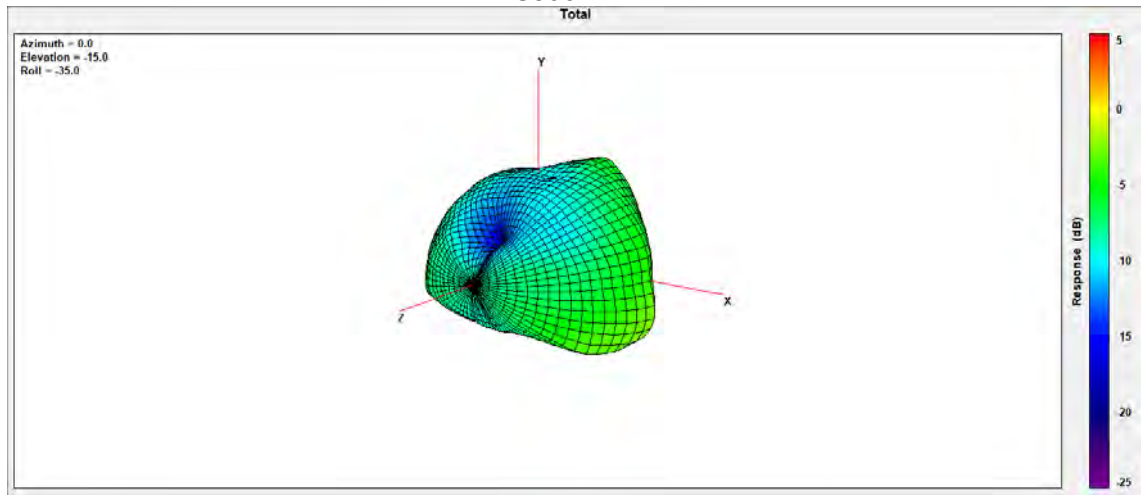
3500MHz	H (Peak)	V (Peak)
	-1.49	-0.83

3550MHz



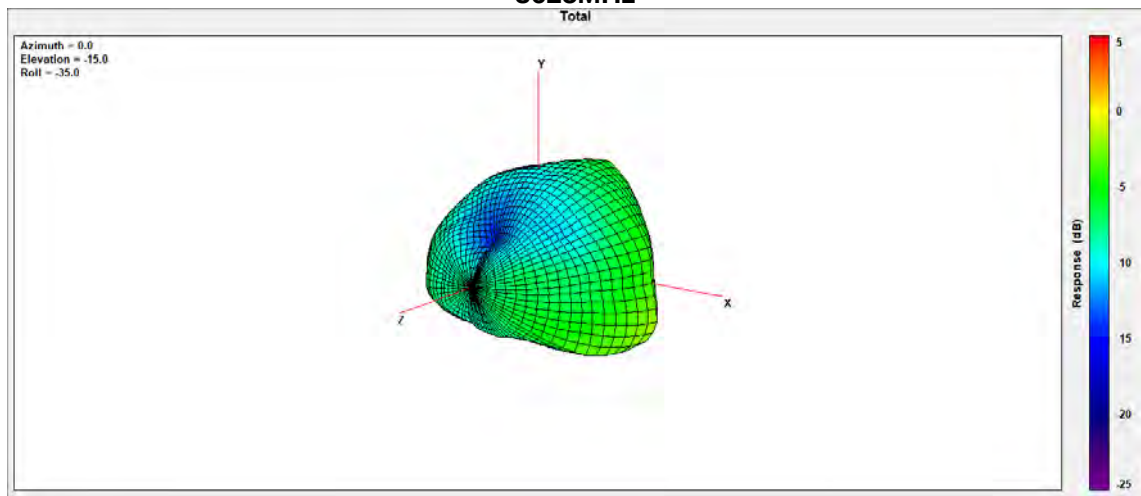
3550MHz	H (Peak)	V (Peak)
	-2.86	-1.70

3600MHz



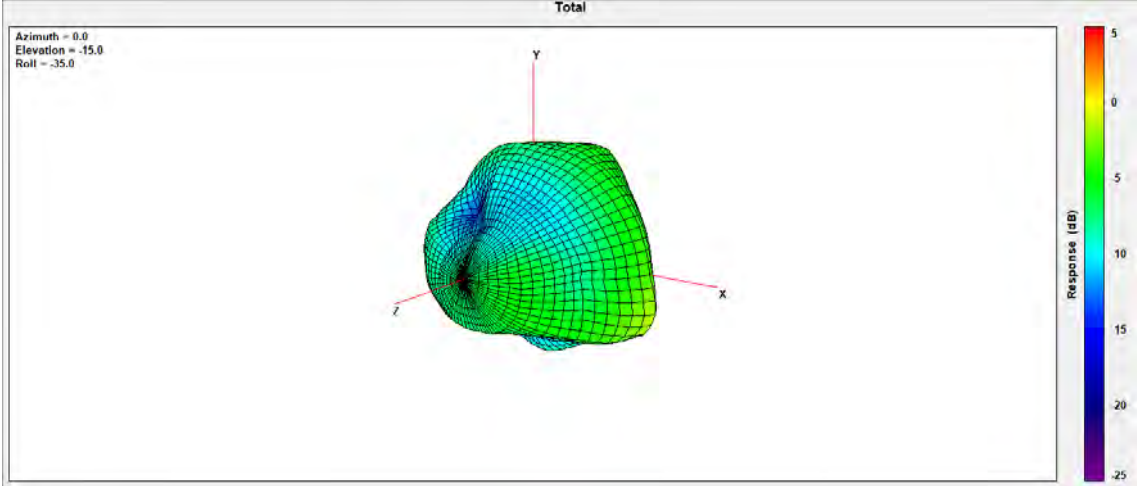
3600MHz	H (Peak)	V (Peak)
	-2.77	-1.58

3625MHz



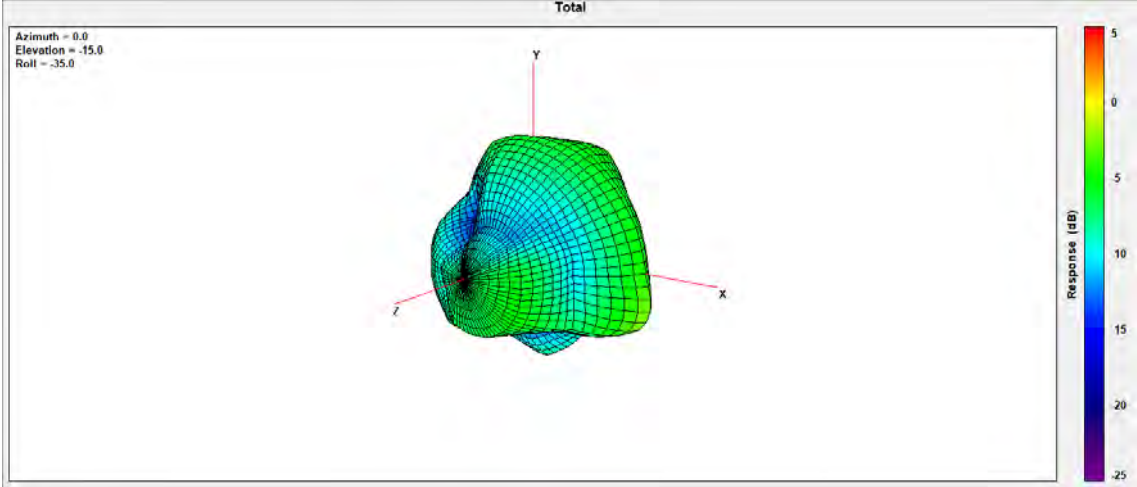
3625MHz	H (Peak)	V (Peak)
	-2.31	-1.36

3700MHz



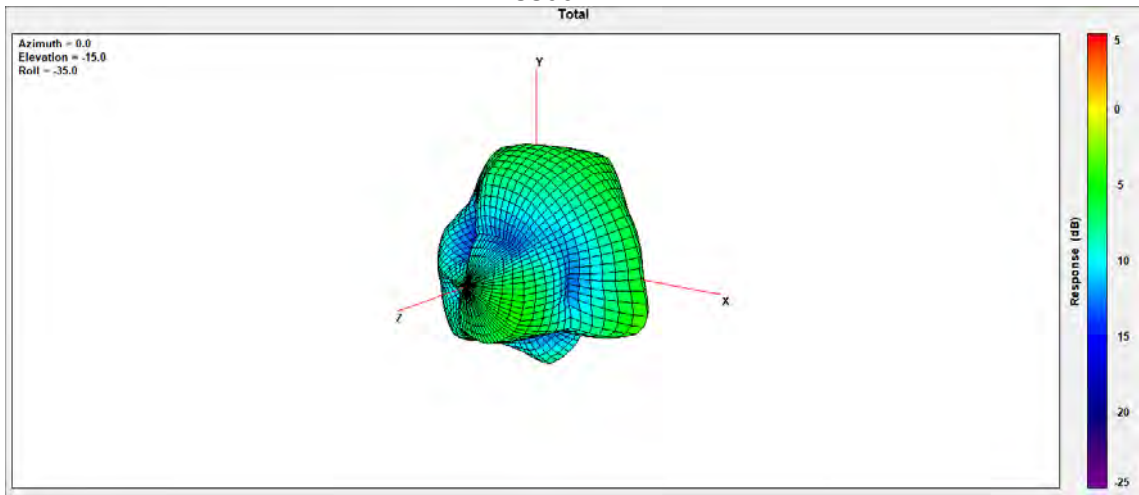
3700MHz	H (Peak)	V (Peak)
	-1.70	-1.24

3750MHz



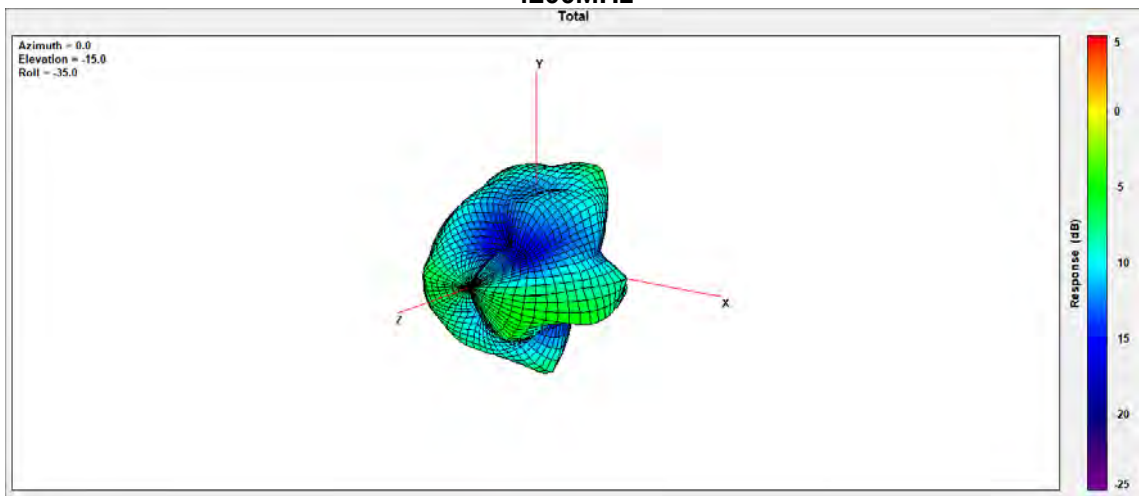
3750MHz	H (Peak)	V (Peak)
	-2.70	-1.65

3800MHz



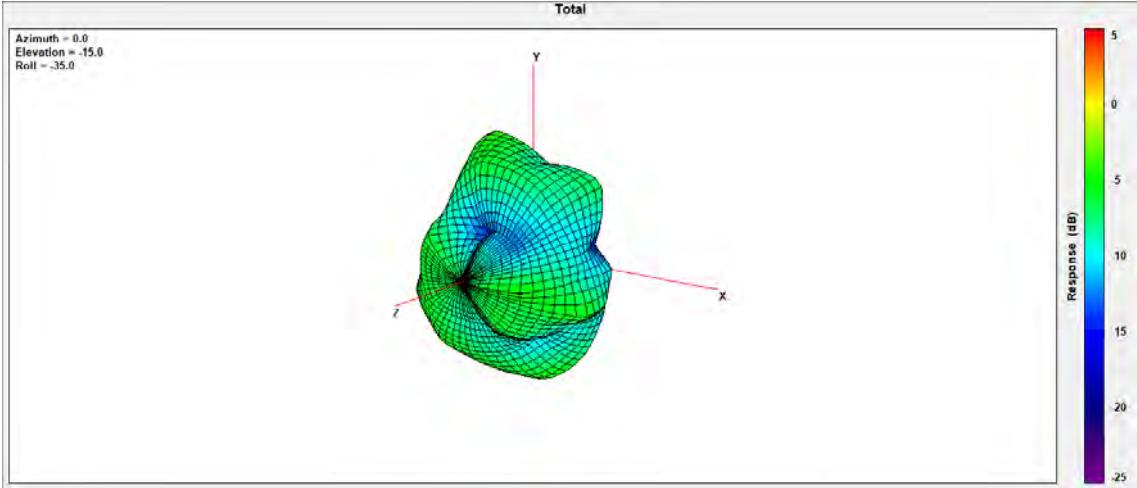
3800MHz	H (Peak)	V (Peak)
	-3.80	-2.24

4200MHz



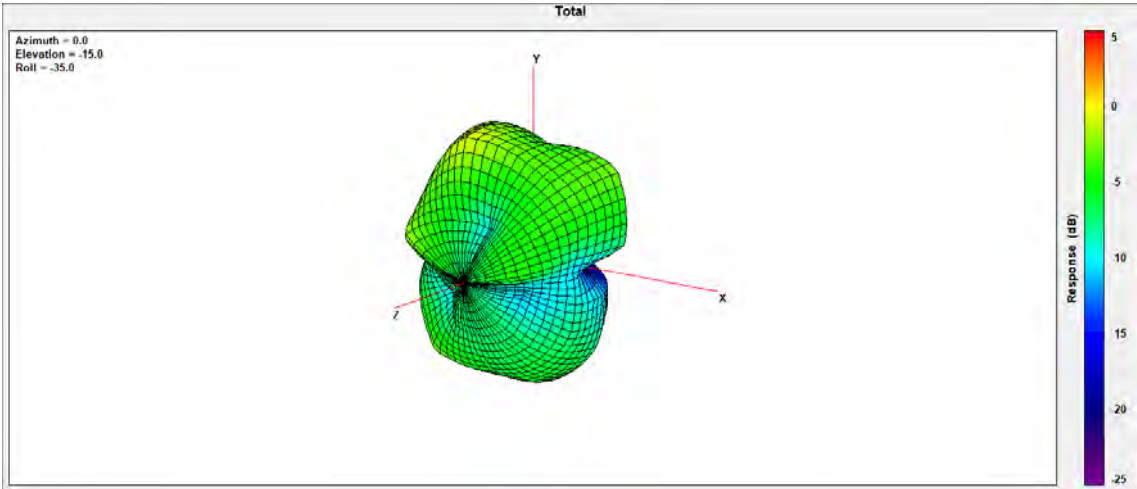
4200MHz	H (Peak)	V (Peak)
	-6.20	-4.73

4400MHz



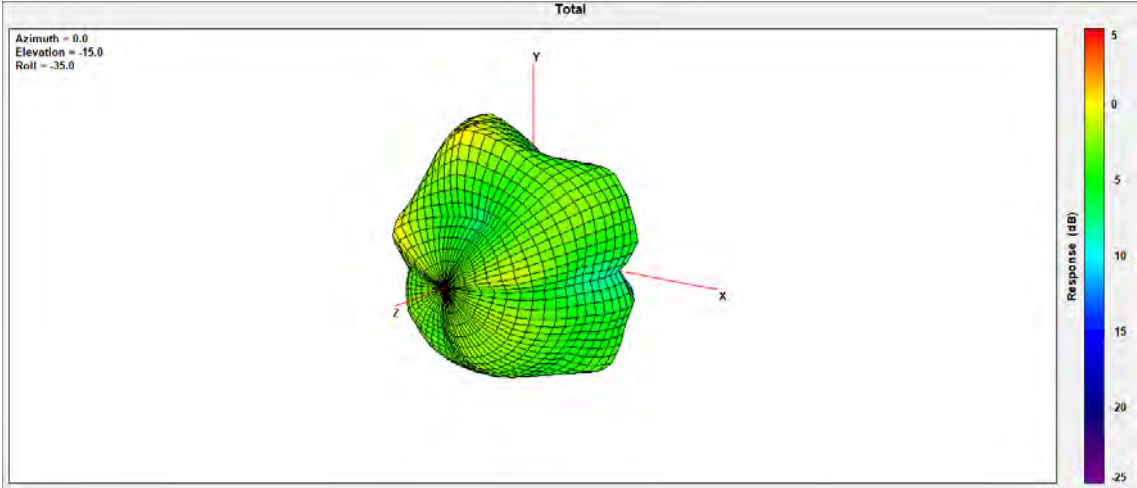
4400MHz	H (Peak)	V (Peak)
	-6.11	-3.22

4700MHz



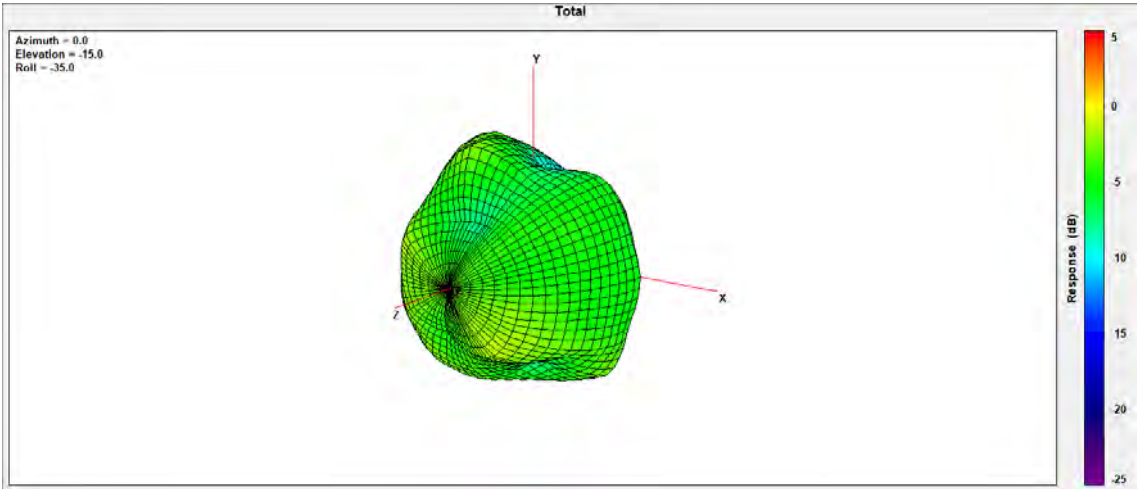
4700MHz	H (Peak)	V (Peak)
	-1.03	-2.31

5000MHz



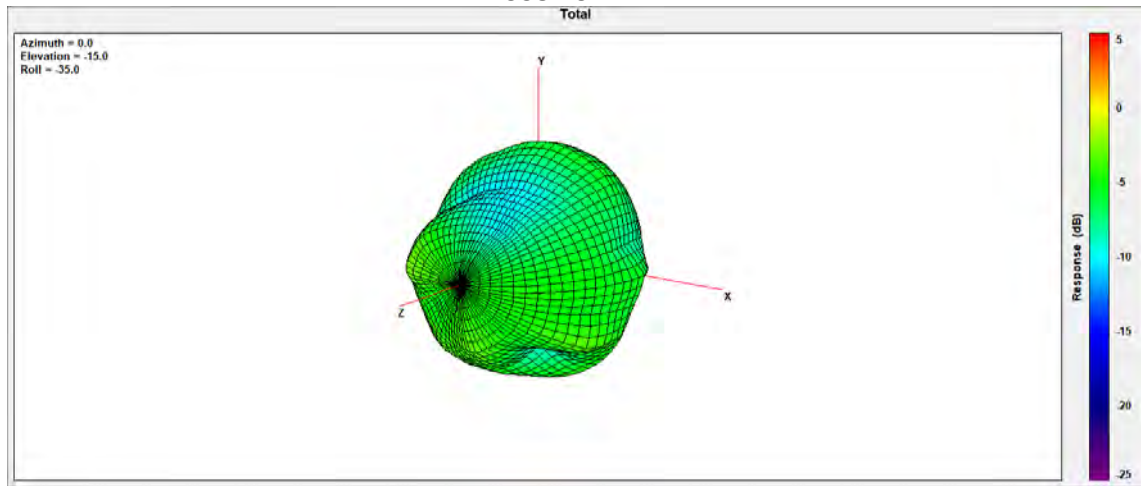
5000MHz	H (Peak)	V (Peak)
	0.26	-0.24

5150MHz



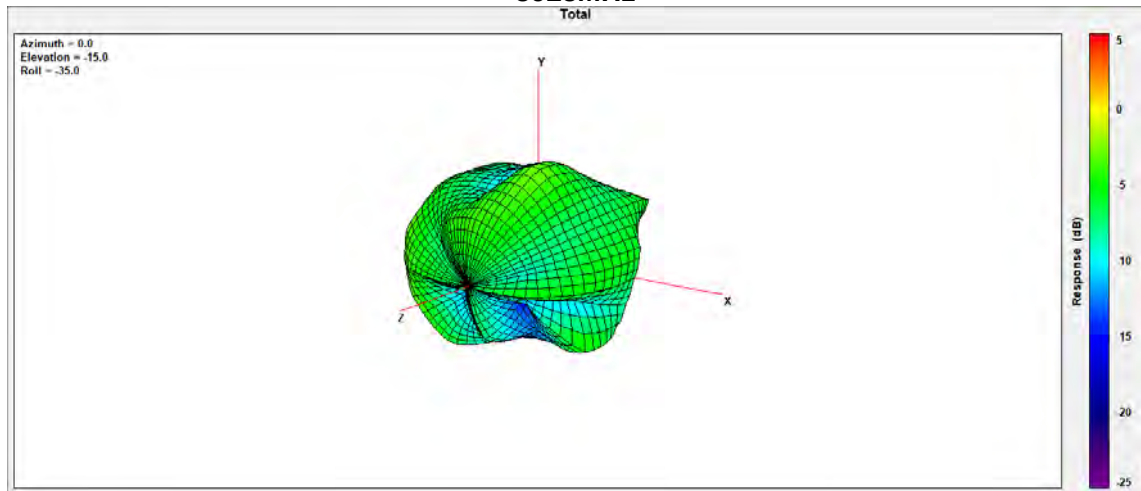
5150MHz	H (Peak)	V (Peak)
	-2.70	-3.05

5537.5MHz



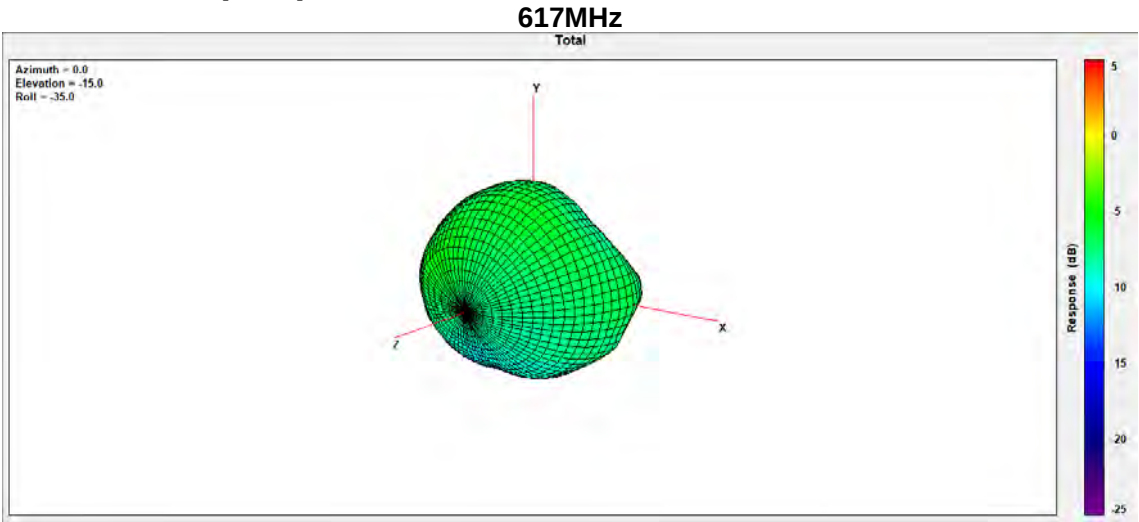
5537.5MHz	H (Peak)	V (Peak)
	-3.81	-2.53

5925MHz

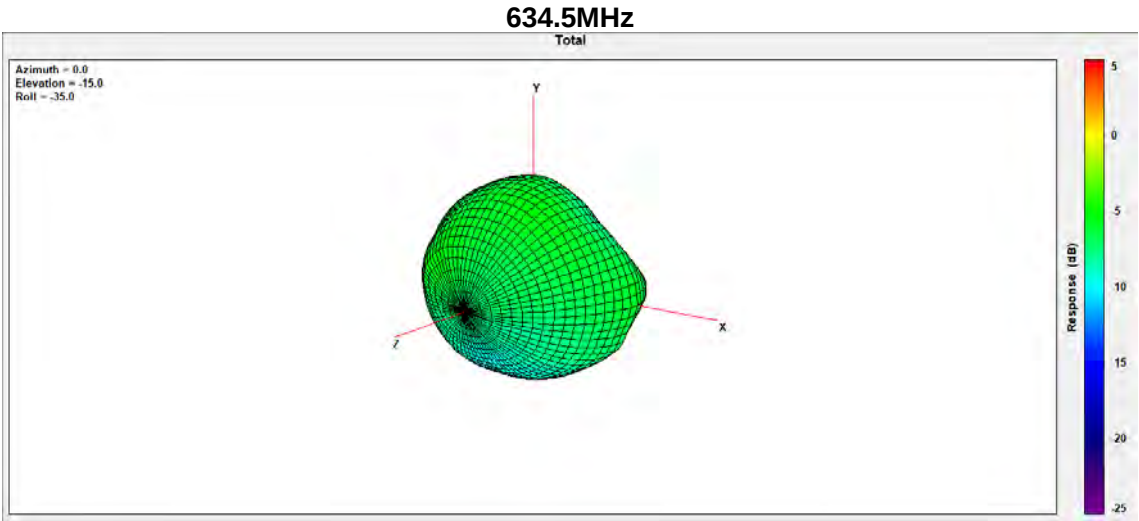


5925MHz	H (Peak)	V (Peak)
	-3.83	-2.66

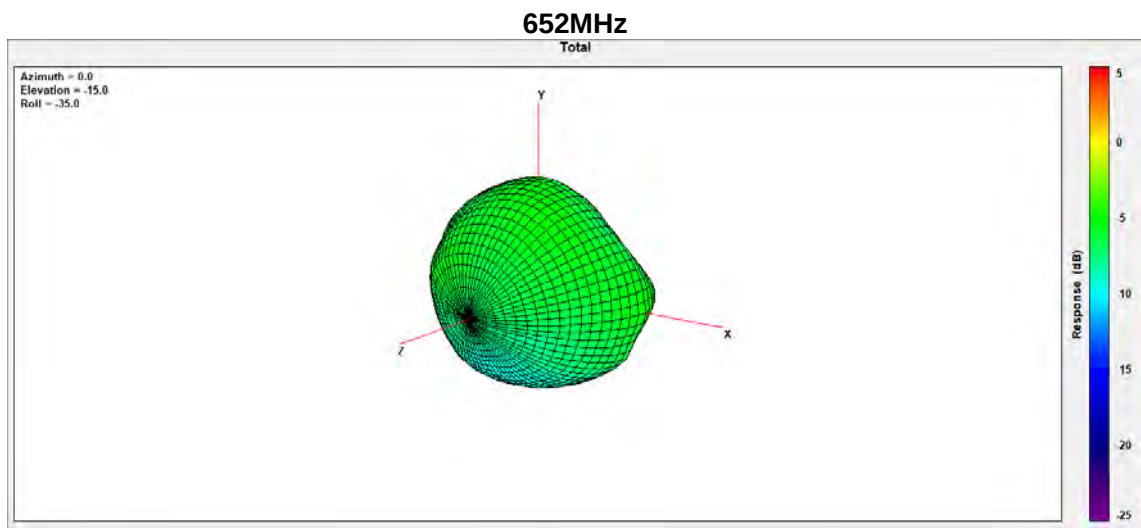
WWAN Aux1 Antenna (Rx2)



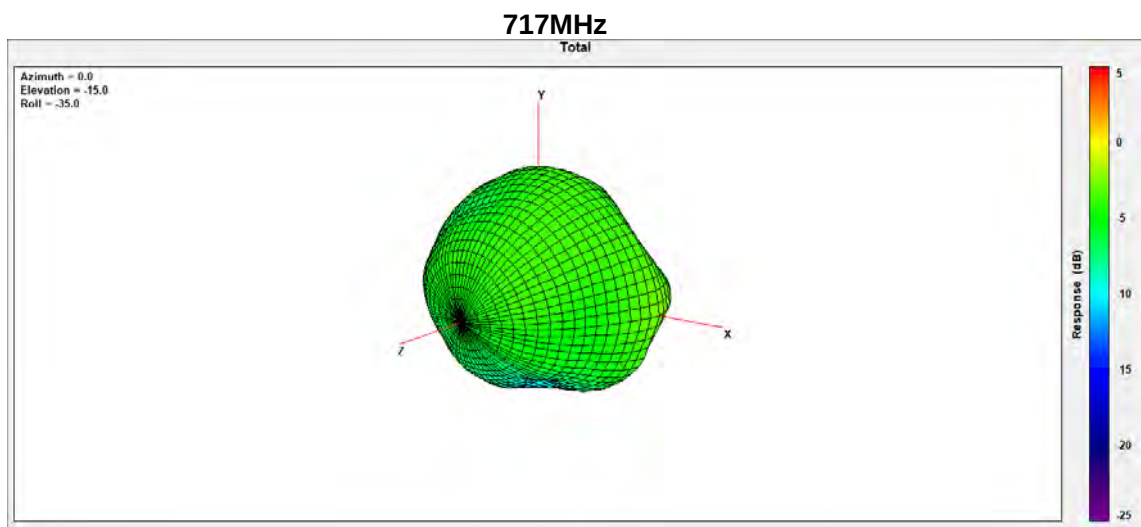
617MHz	H (Peak)	V (Peak)
	-5.42	-6.09



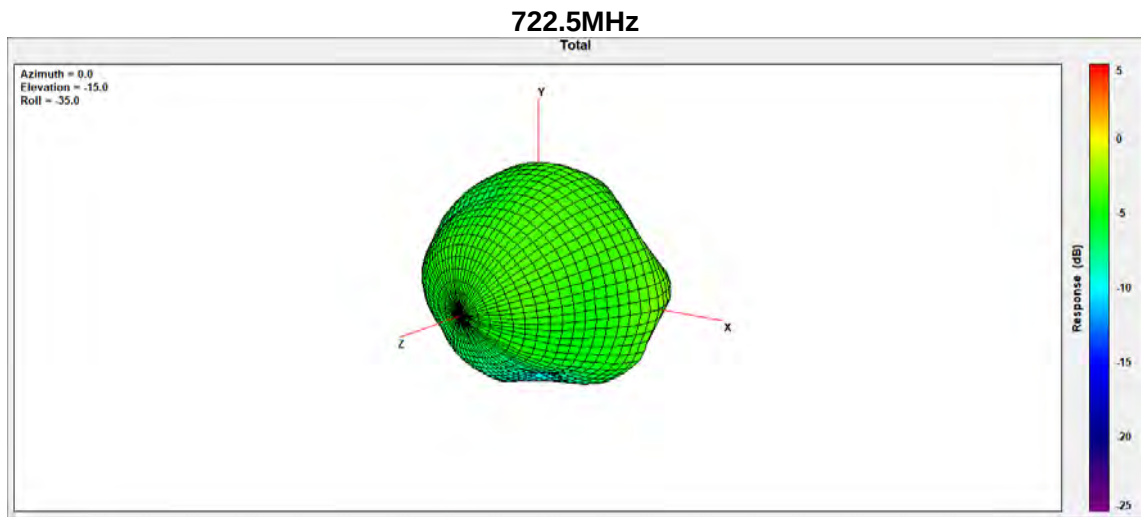
634.5MHz	H (Peak)	V (Peak)
	-5.45	-5.76



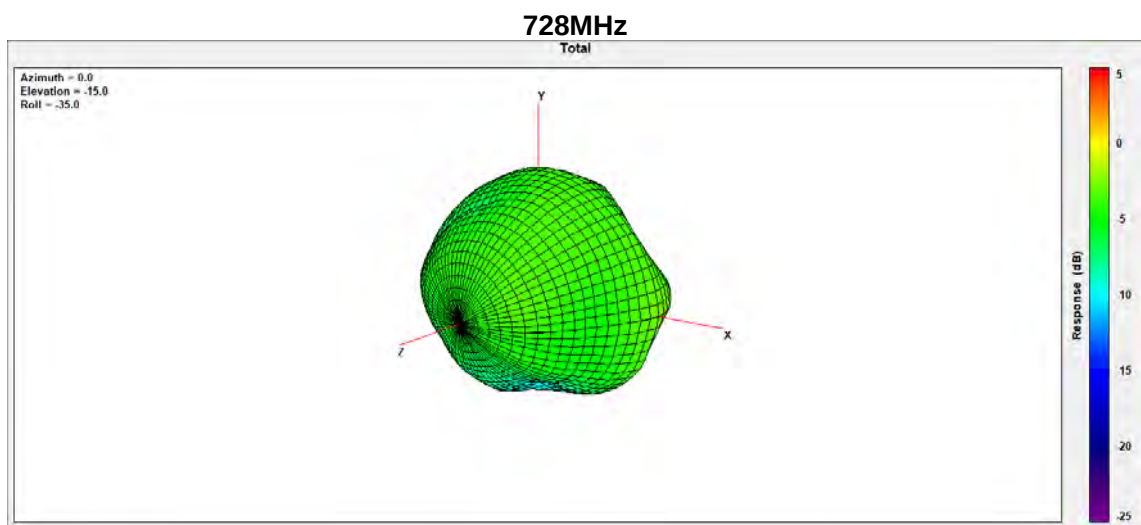
652MHz	H (Peak)	V (Peak)
	-5.69	-5.39



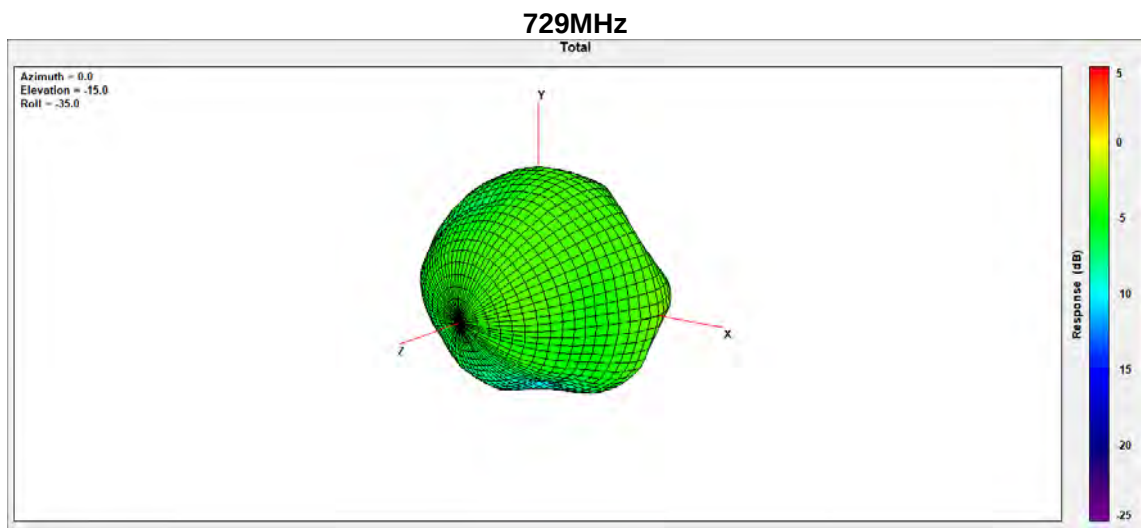
717MHz	H (Peak)	V (Peak)
	-4.50	-4.04



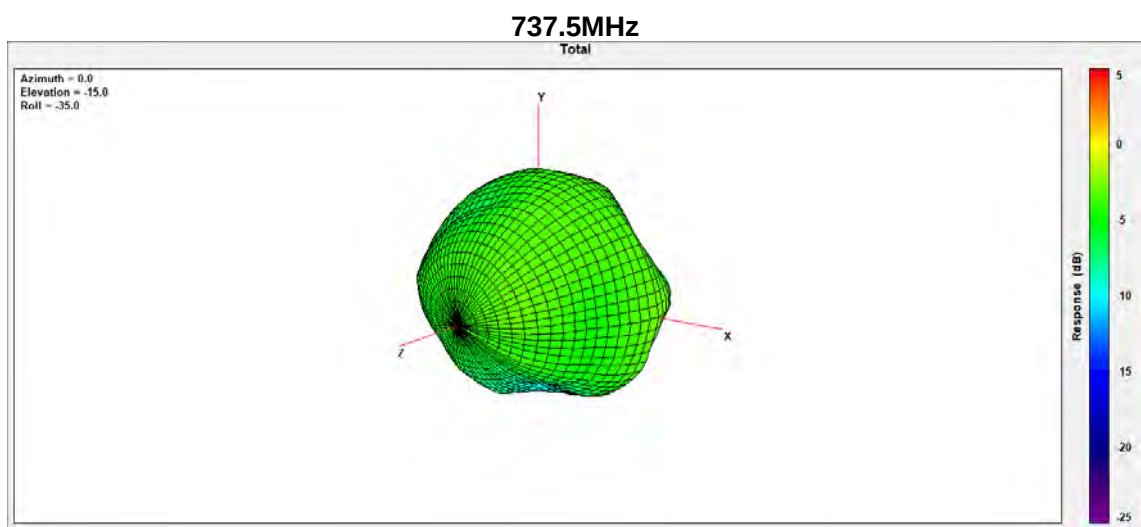
722.5MHz	H (Peak)	V (Peak)
	-4.53	-3.78



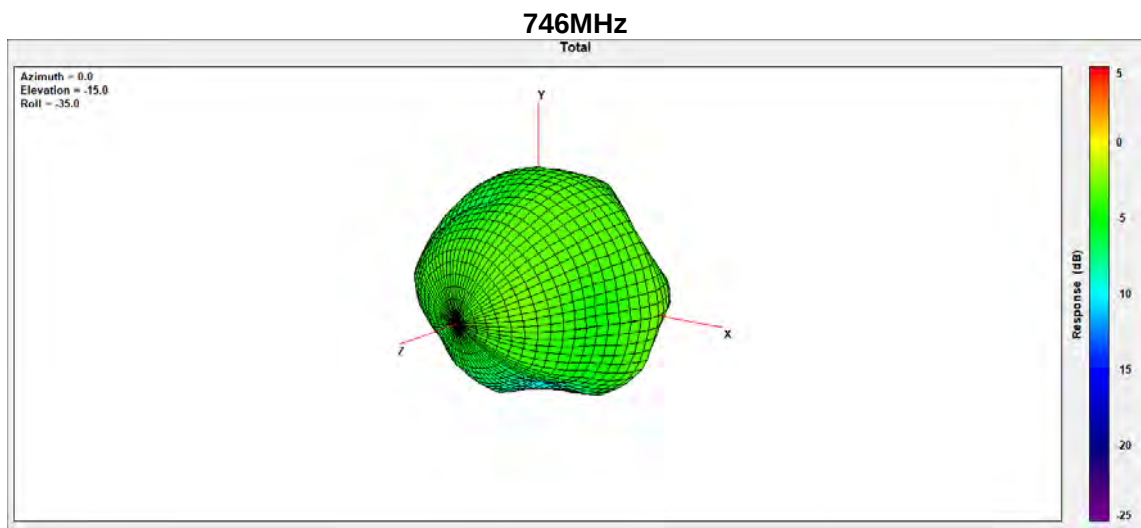
728MHz	H (Peak)	V (Peak)
	-4.54	-3.54



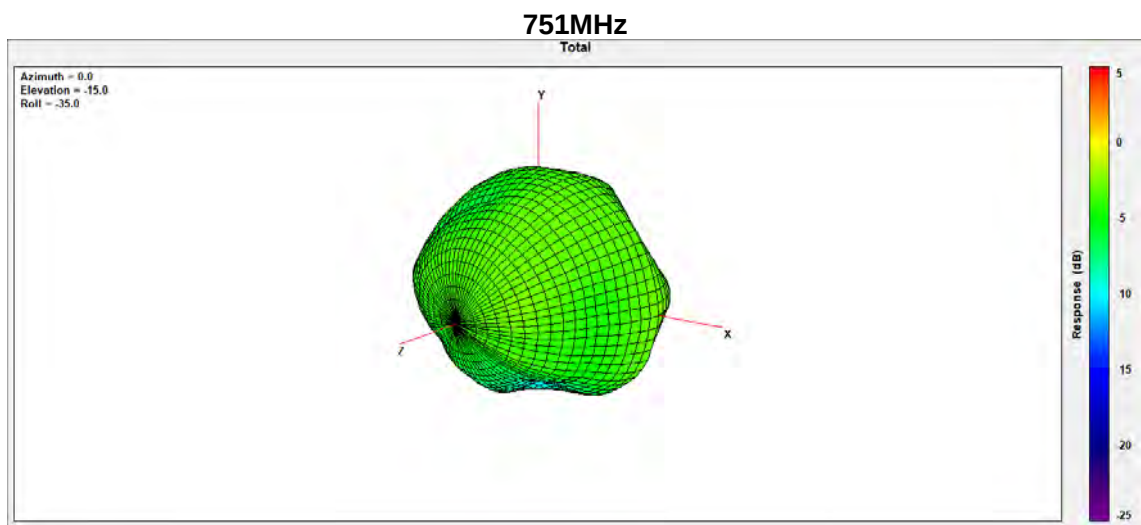
729MHz	H (Peak)	V (Peak)
	-4.61	-3.50



737.5MHz	H (Peak)	V (Peak)
	-4.58	-3.14

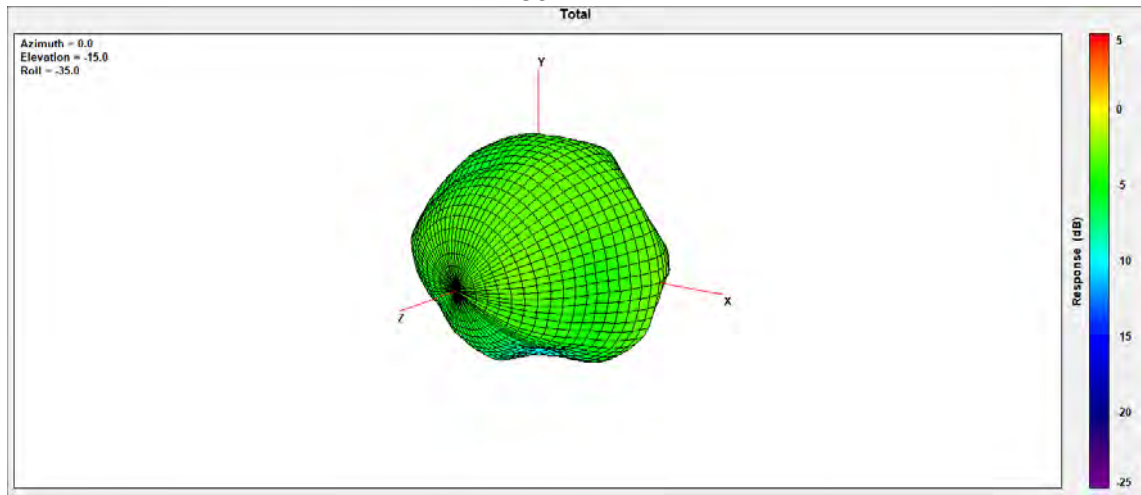


746MHz	H (Peak)	V (Peak)
	-4.25	-2.91



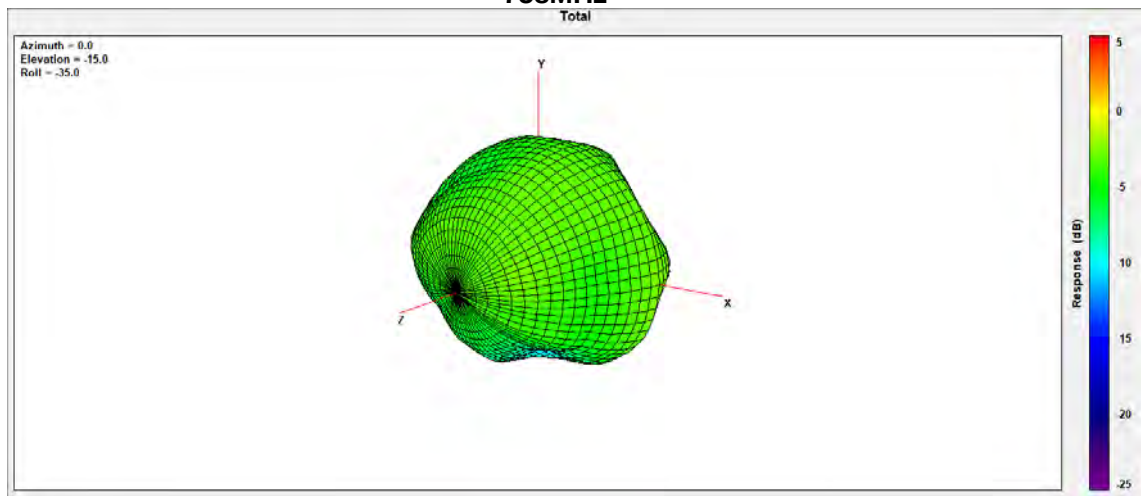
751MHz	H (Peak)	V (Peak)
	-4.09	-2.88

756MHz

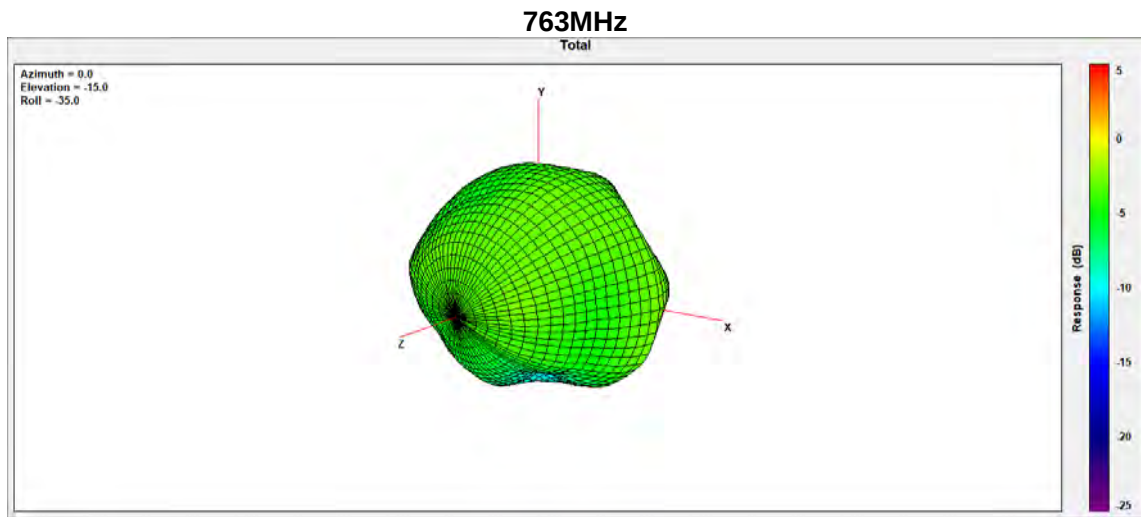


756MHz	H (Peak)	V (Peak)
	-4.04	-2.92

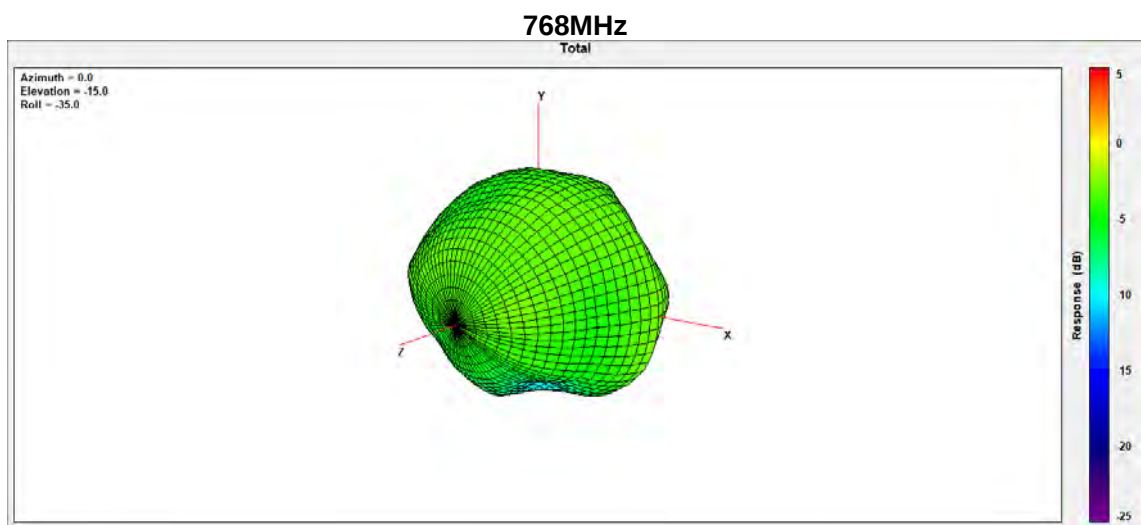
758MHz



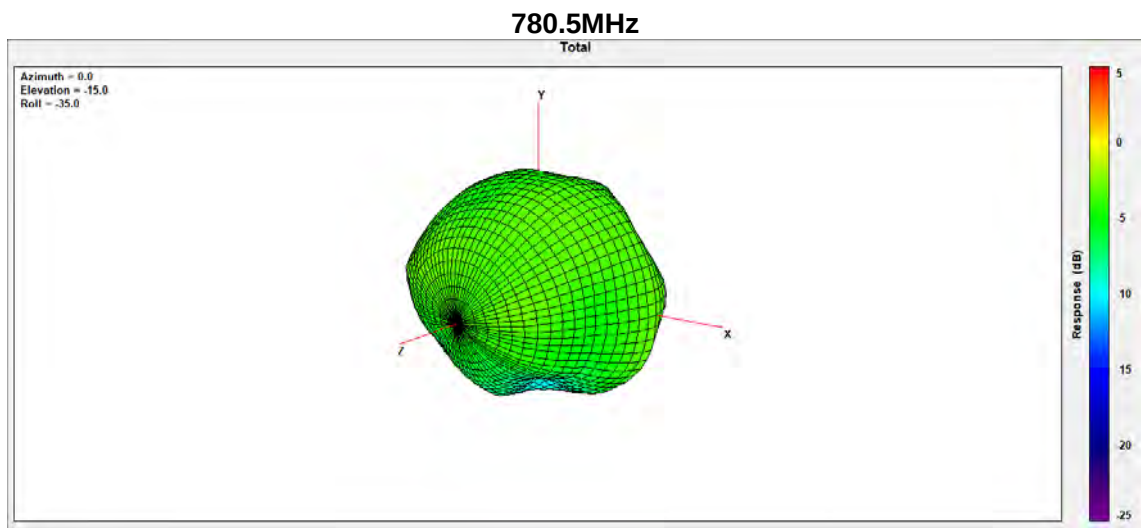
758MHz	H (Peak)	V (Peak)
	-3.92	-2.94



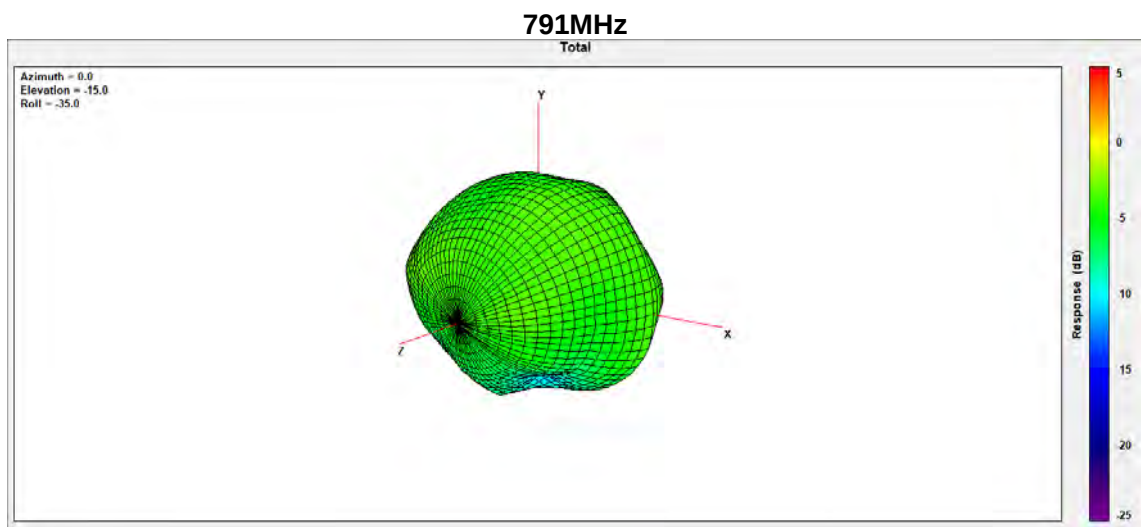
763MHz	H (Peak)	V (Peak)
	-3.74	-2.92



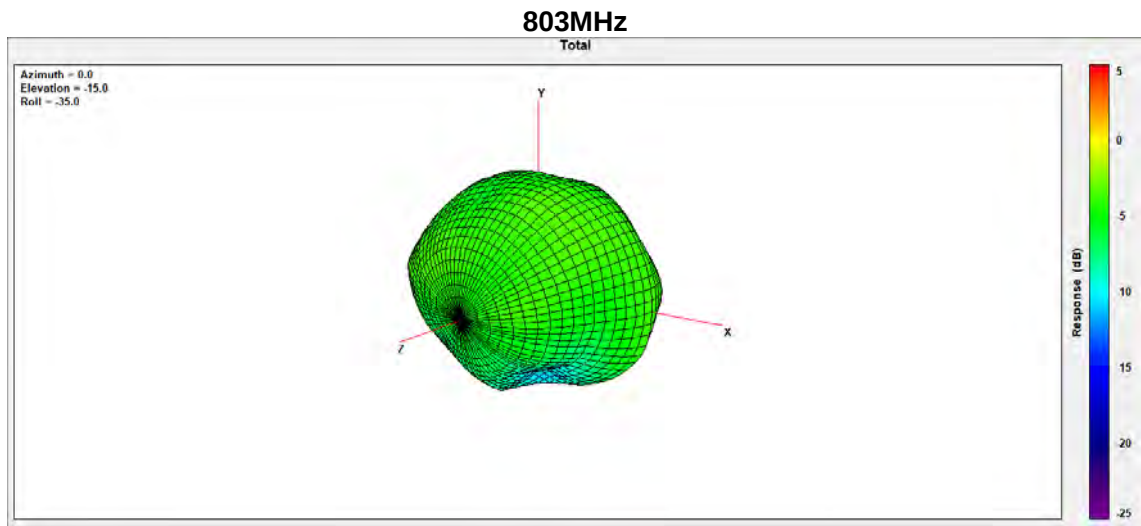
768MHz	H (Peak)	V (Peak)
	-3.68	-2.94



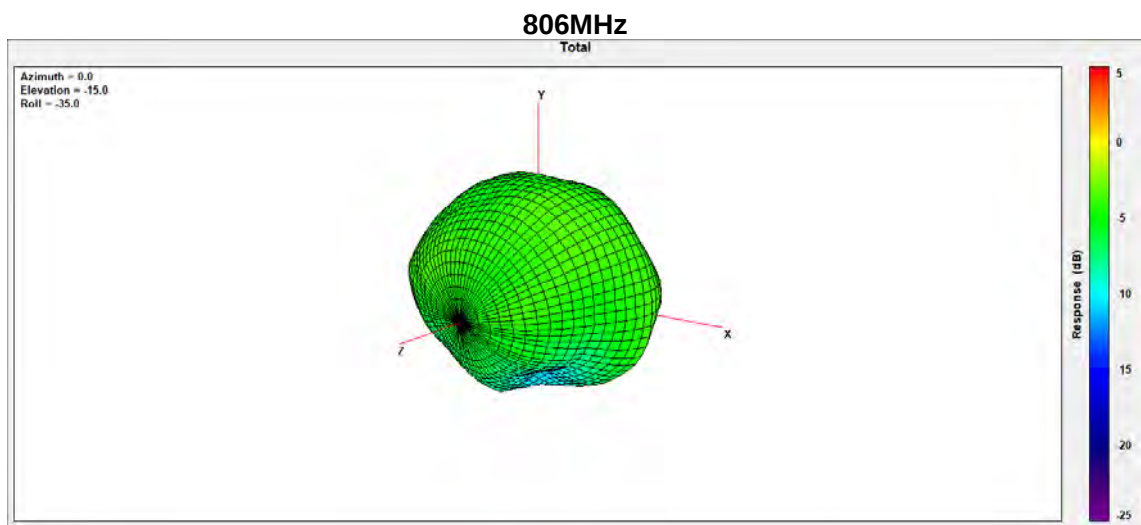
780.5MHz	H (Peak)	V (Peak)
	-4.02	-2.95



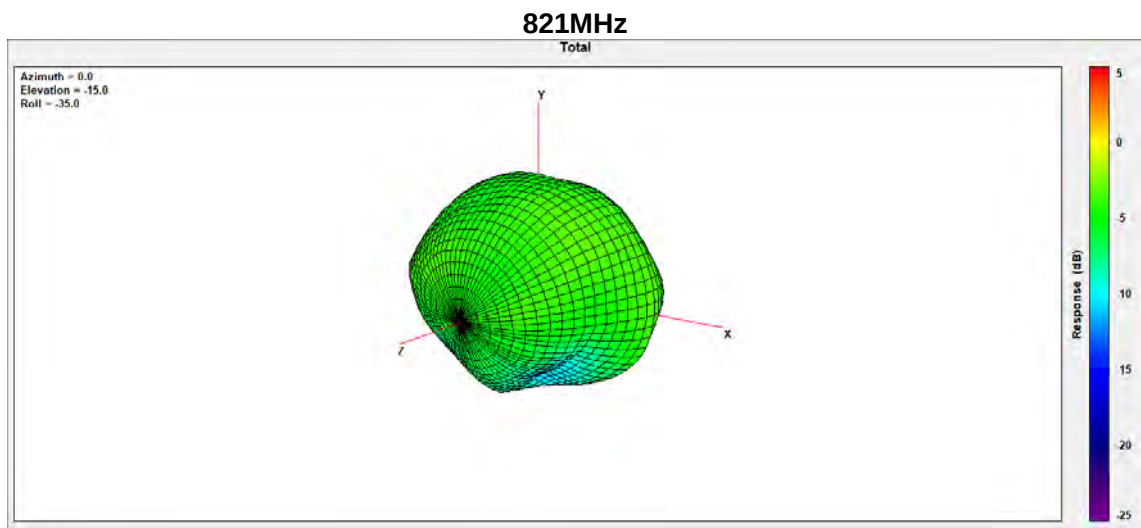
791MHz	H (Peak)	V (Peak)
	-4.46	-2.82



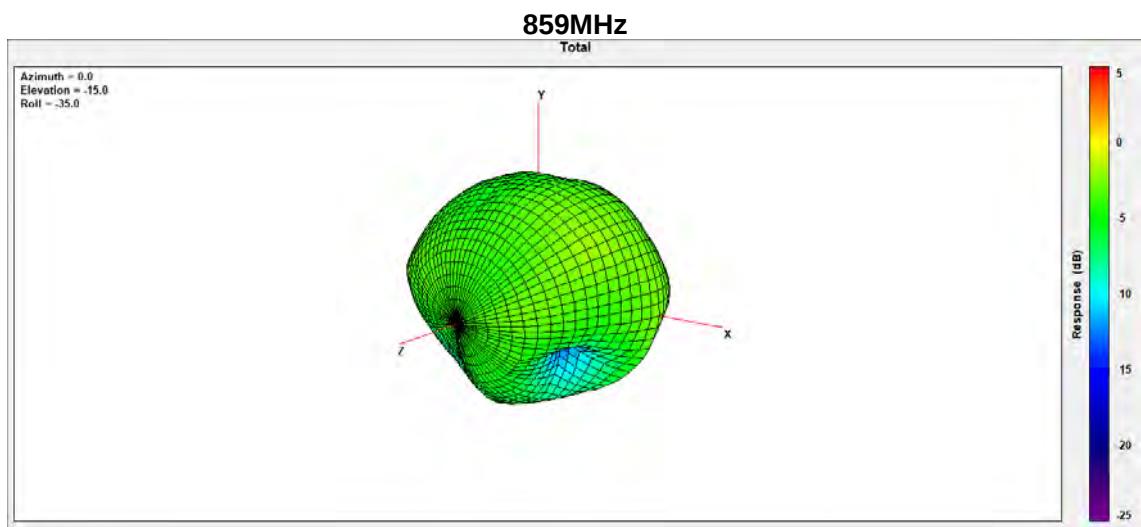
803MHz	H (Peak)	V (Peak)
	-4.66	-3.21



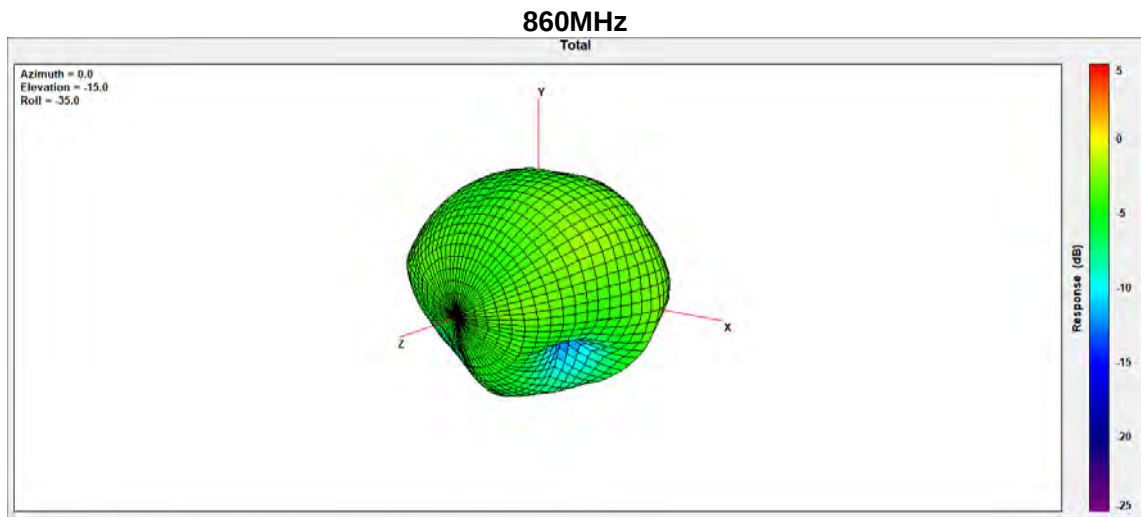
806MHz	H (Peak)	V (Peak)
	-4.76	-3.28



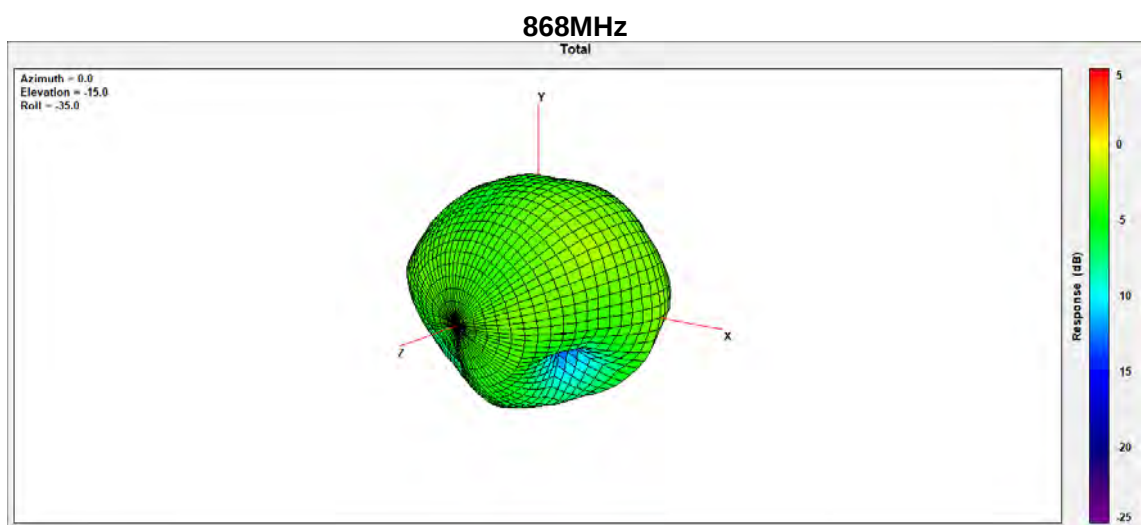
821MHz	H (Peak)	V (Peak)
	-4.80	-3.43



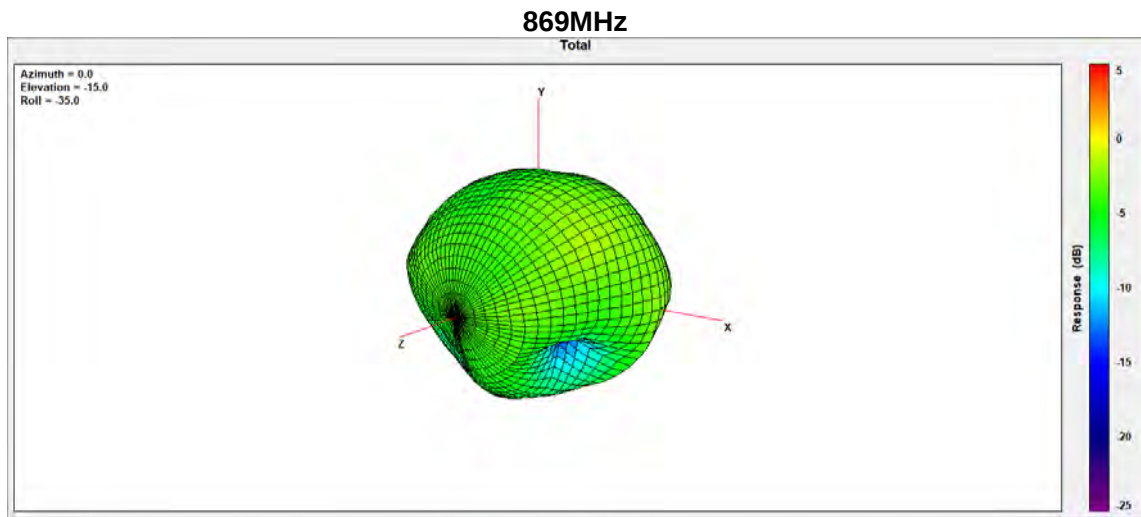
859MHz	H (Peak)	V (Peak)
	-4.30	-3.09



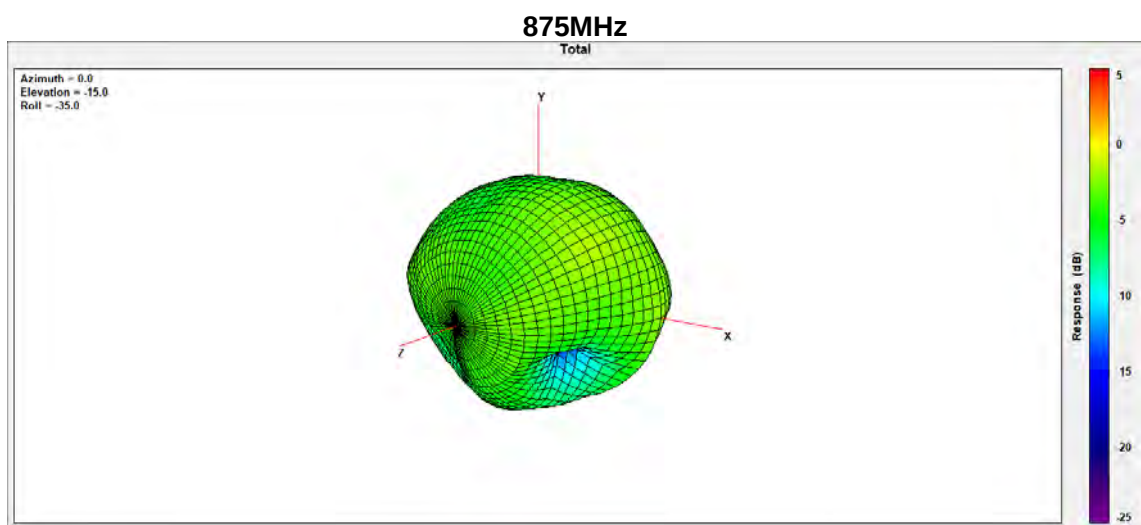
860MHz	H (Peak)	V (Peak)
	-4.28	-3.05



868MHz	H (Peak)	V (Peak)
	-4.11	-2.81

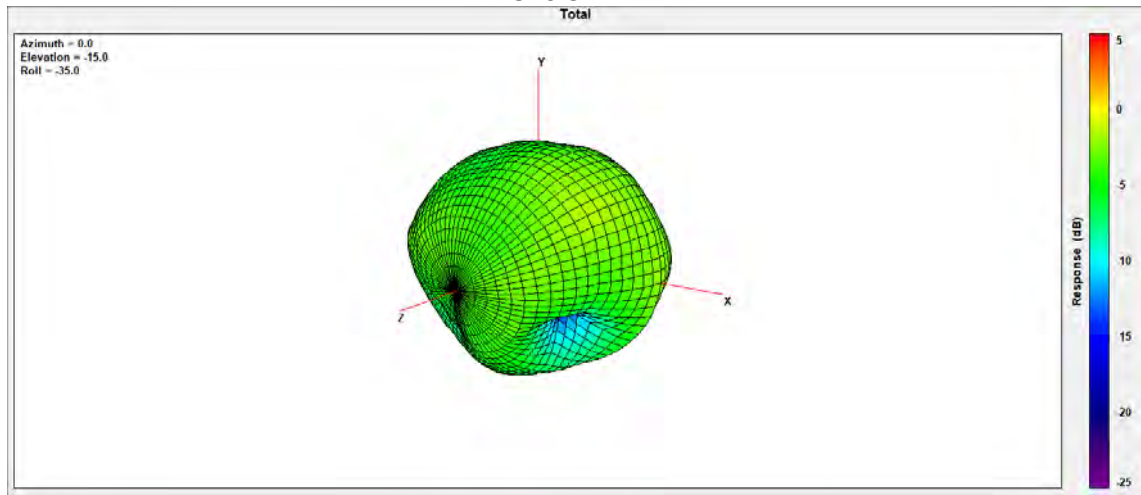


869MHz	H (Peak)	V (Peak)
	-4.08	-2.76



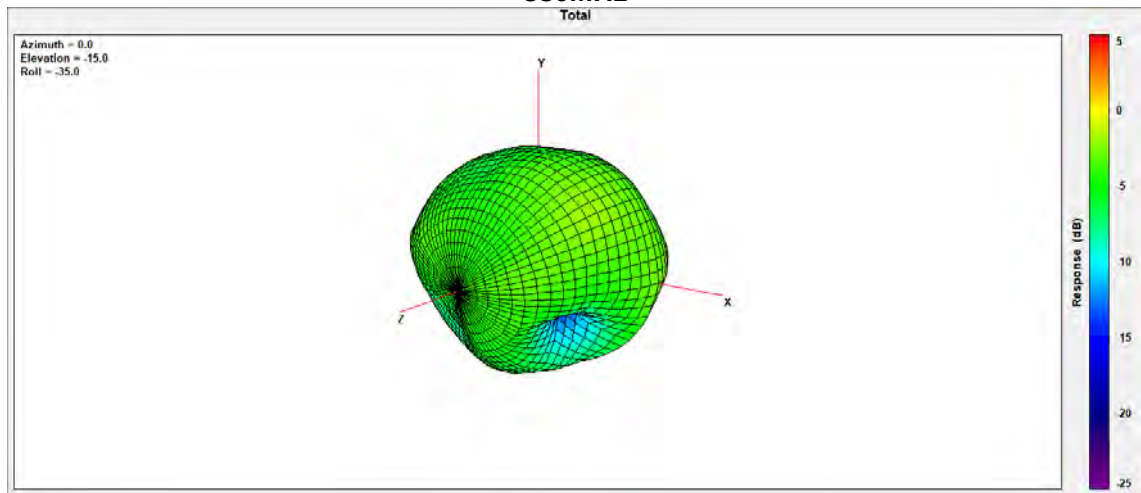
875MHz	H (Peak)	V (Peak)
	-4.07	-2.65

876.5MHz



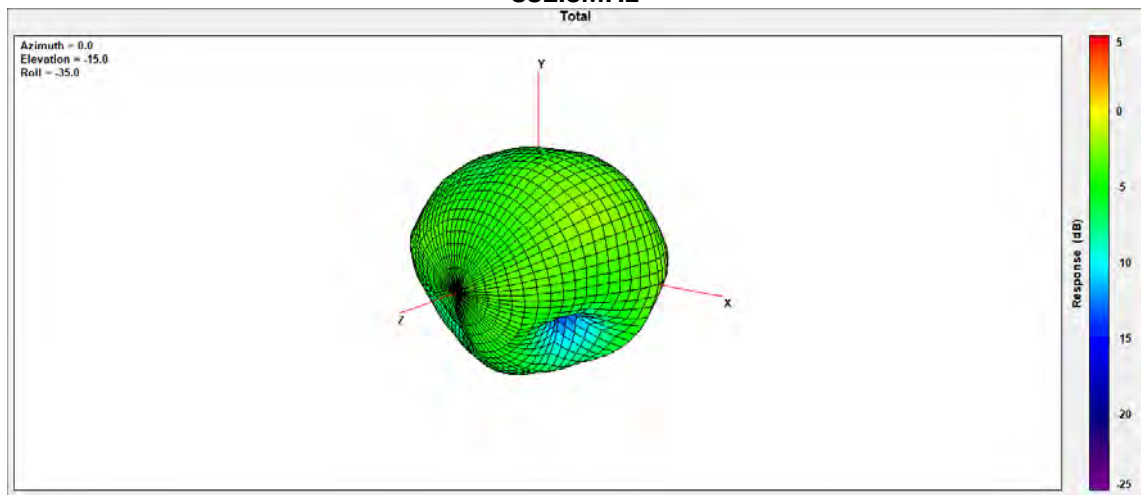
876.5MHz	H (Peak)	V (Peak)
	-4.03	-2.66

880MHz



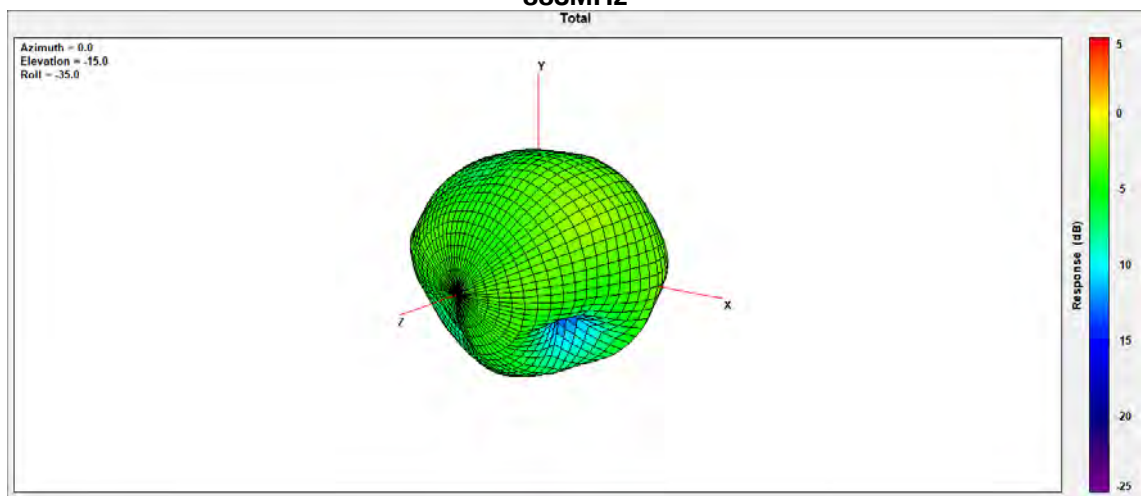
880MHz	H (Peak)	V (Peak)
	-4.66	-2.98

881.5MHz

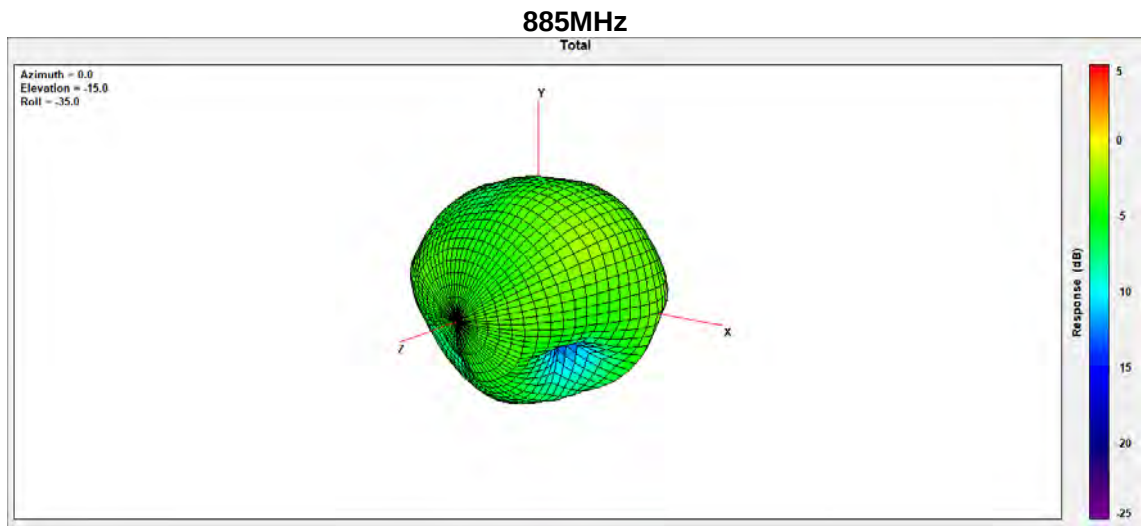


881.5MHz	H (Peak)	V (Peak)
	-4.68	-2.93

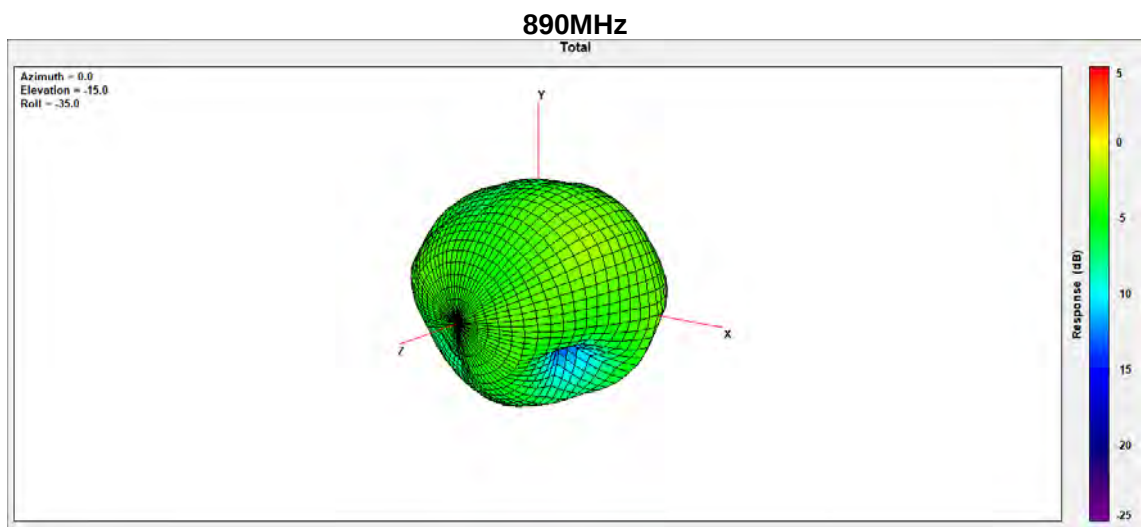
883MHz



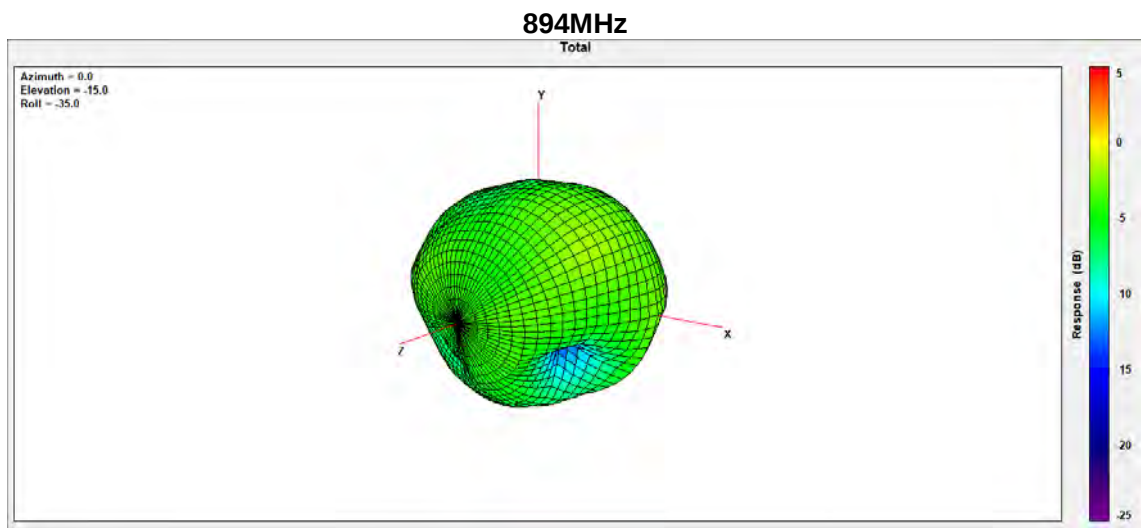
883MHz	H (Peak)	V (Peak)
	-4.70	-2.88



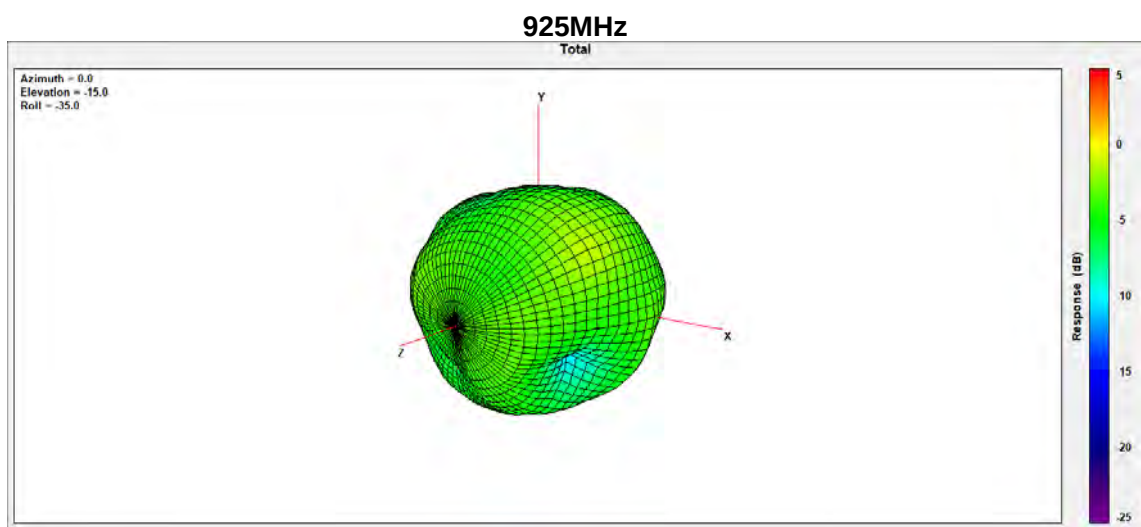
885MHz	H (Peak)	V (Peak)
	-4.76	-2.84



890MHz	H (Peak)	V (Peak)
	-4.78	-2.83

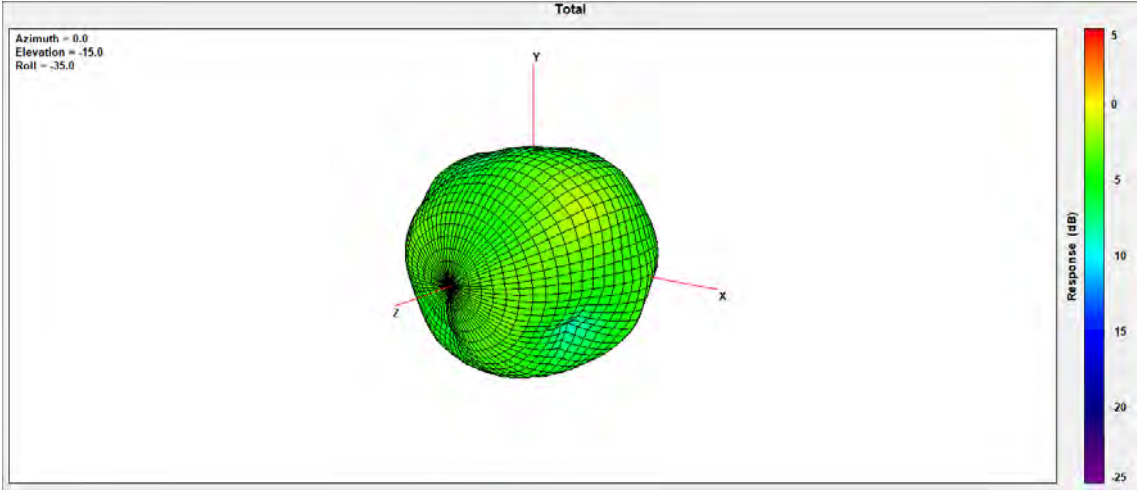


894MHz	H (Peak)	V (Peak)
	-4.72	-2.87



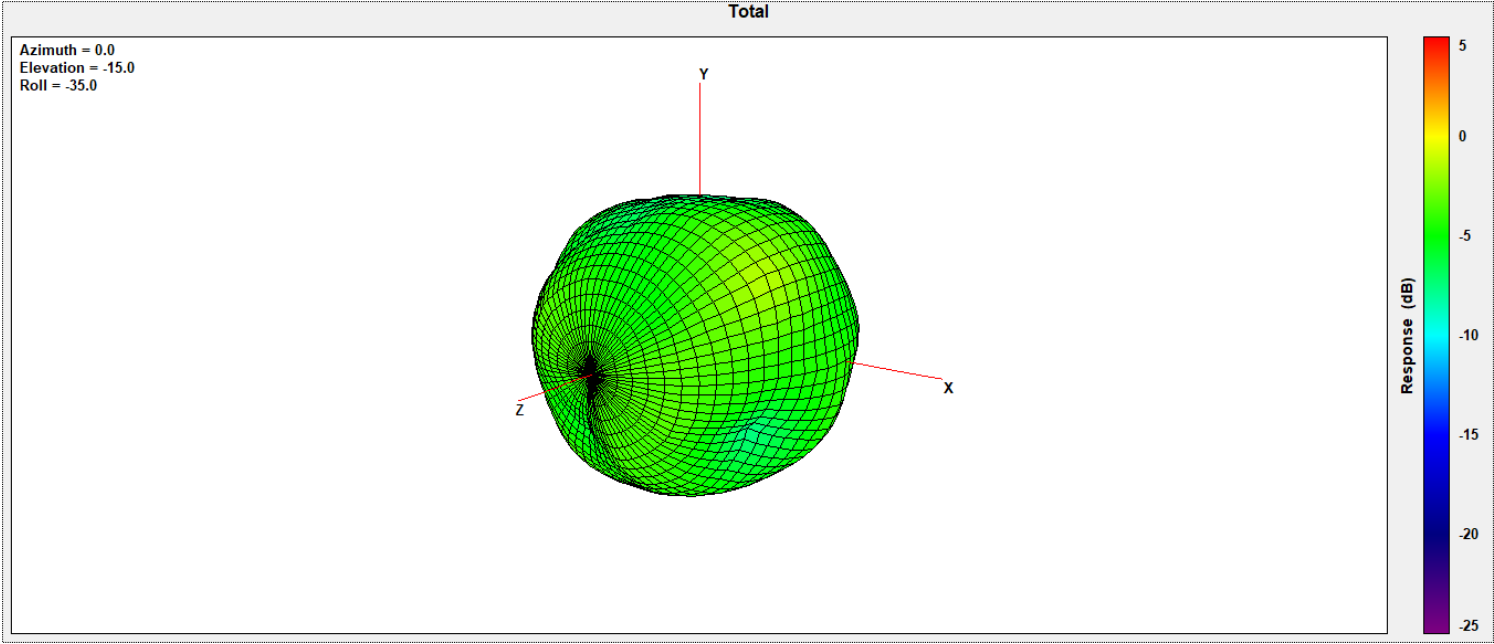
925MHz	H (Peak)	V (Peak)
	-4.25	-2.42

942.5MHz



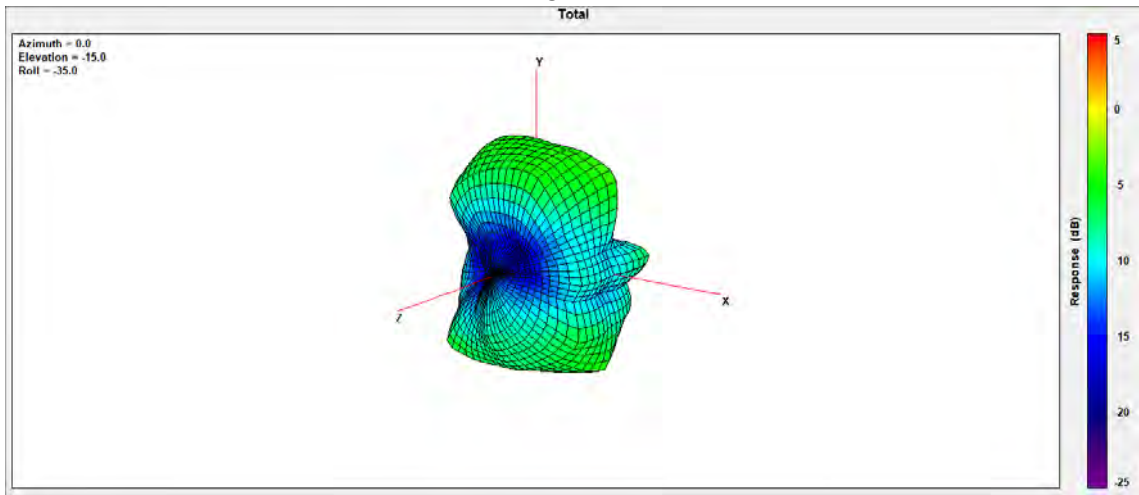
942.5MHz	H (Peak)	V (Peak)
	-4.42	-2.34

960MHz



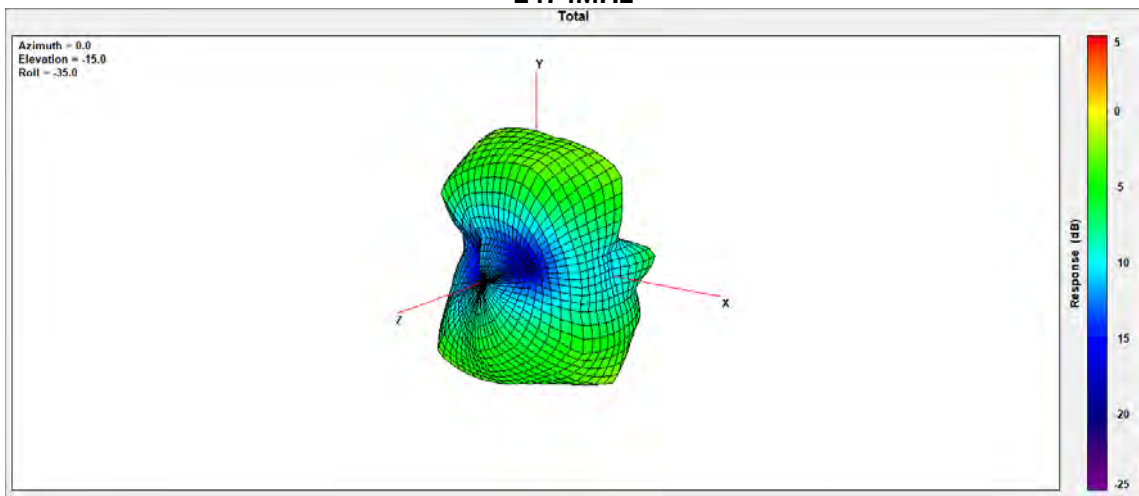
960MHz	H (Peak)	V (Peak)
	-5.04	-2.54

1452MHz



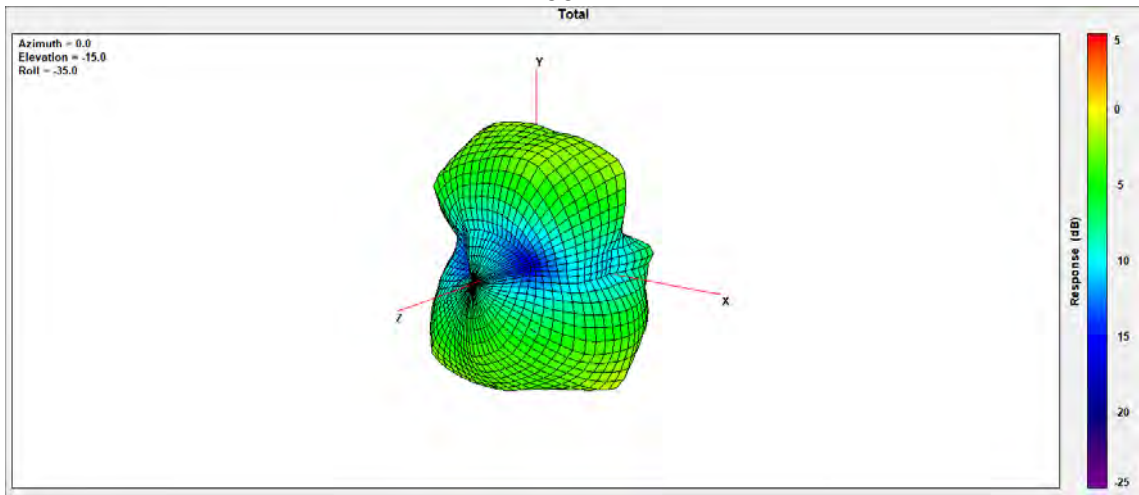
1452MHz	H (Peak)	V (Peak)
	-5.15	-3.84

1474MHz



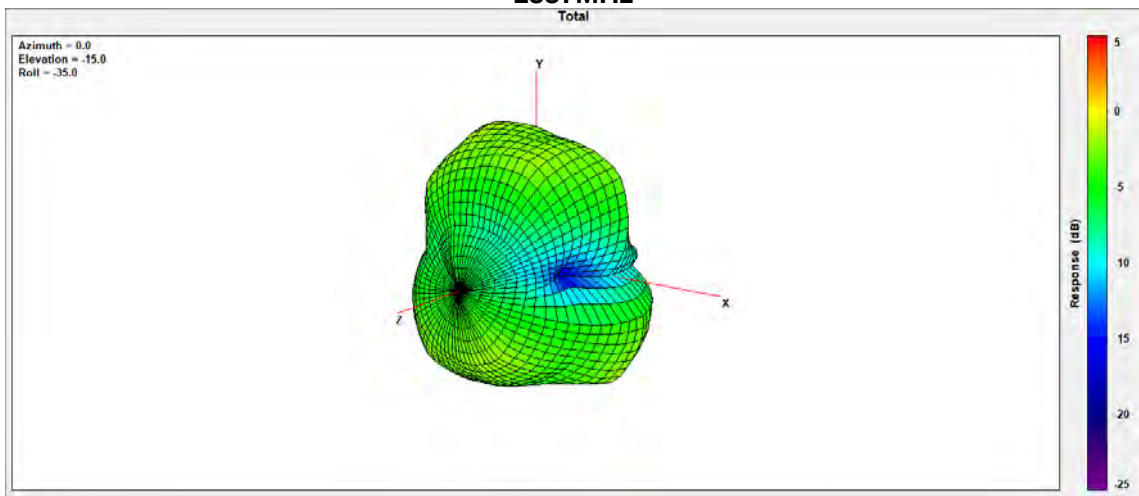
1474MHz	H (Peak)	V (Peak)
	-3.65	-2.44

1496MHz



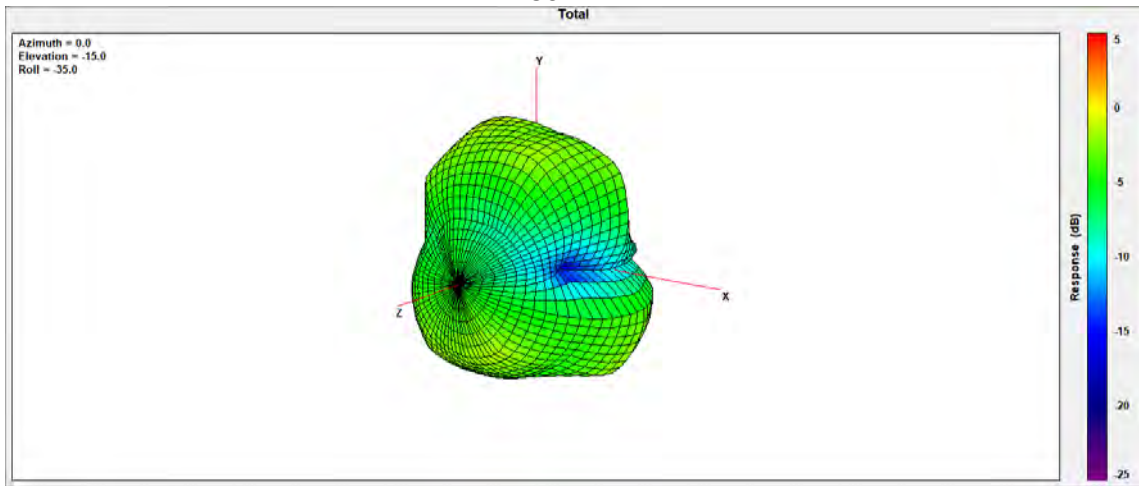
1496MHz	H (Peak)	V (Peak)
	-2.76	-1.37

1557MHz



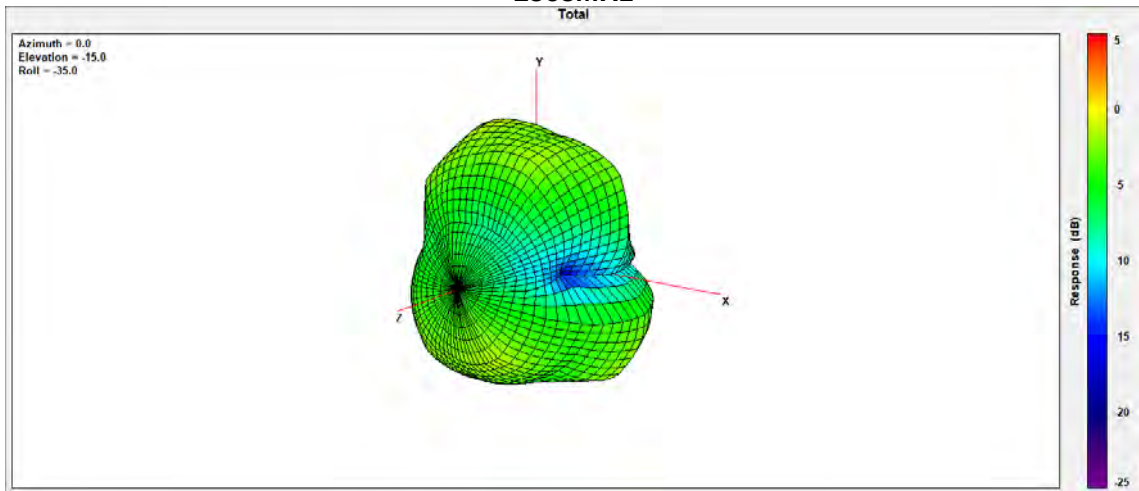
1557MHz	H (Peak)	V (Peak)
	-2.24	-1.41

1561MHz



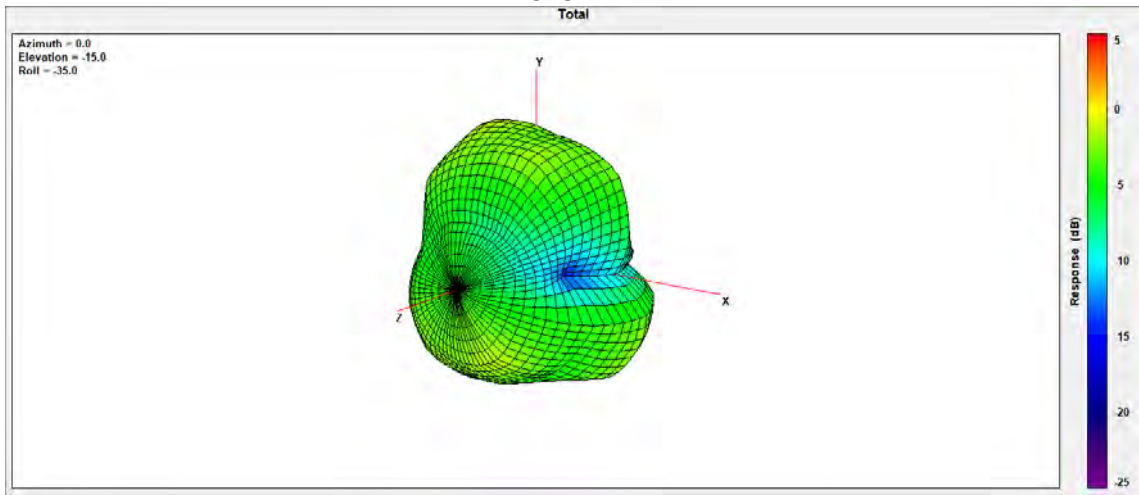
1561MHz	H (Peak)	V (Peak)
	-2.12	-1.45

1565MHz



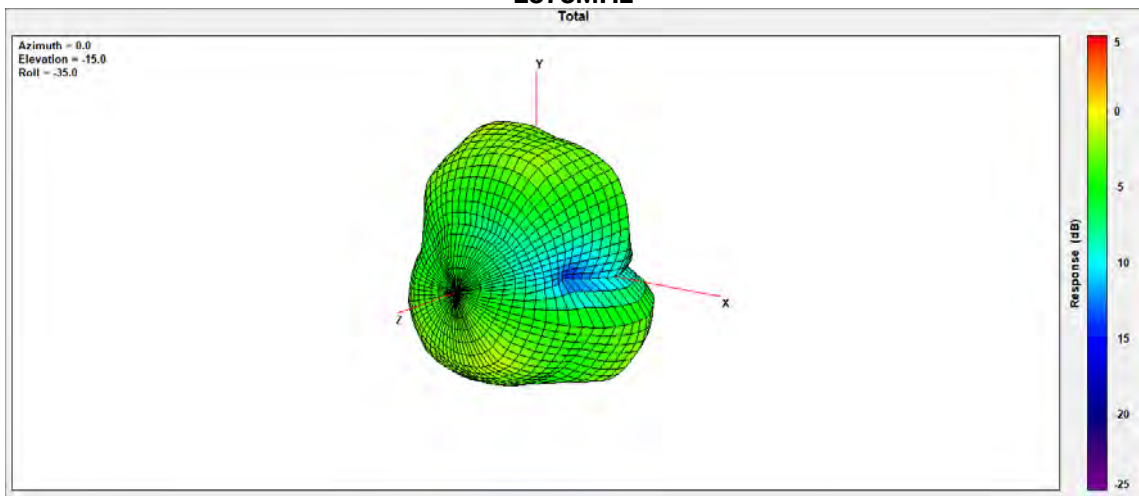
1565MHz	H (Peak)	V (Peak)
	-2.03	-1.55

1573MHz



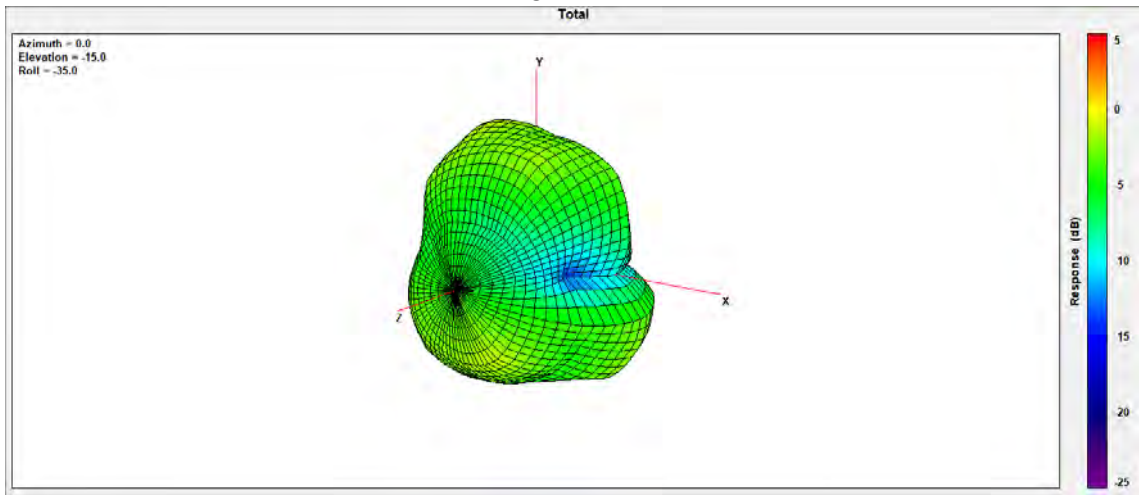
1573MHz	H (Peak)	V (Peak)
	-1.95	-1.77

1575MHz



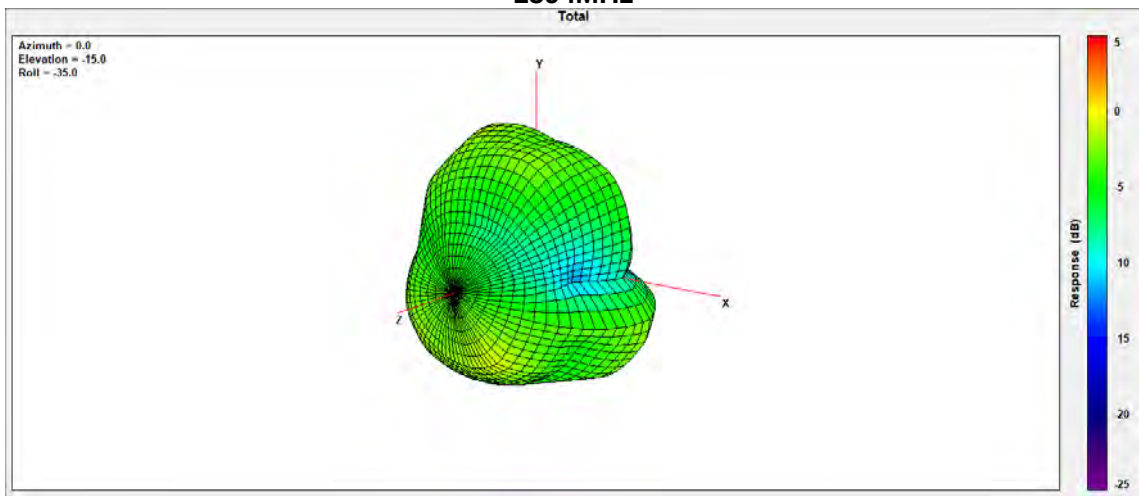
1575MHz	H (Peak)	V (Peak)
	-1.91	-1.83

1577MHz



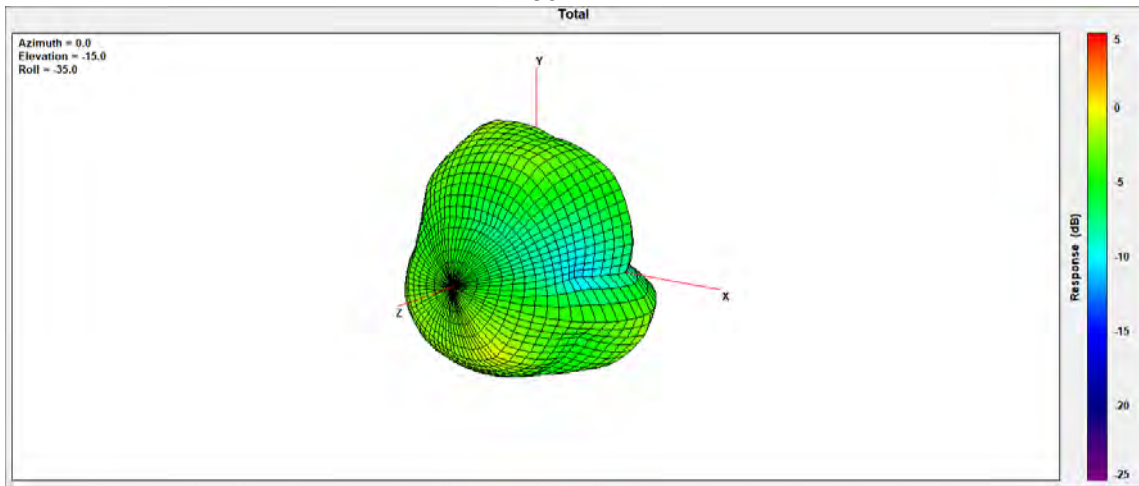
1577MHz	H (Peak)	V (Peak)
	-1.89	-1.90

1594MHz



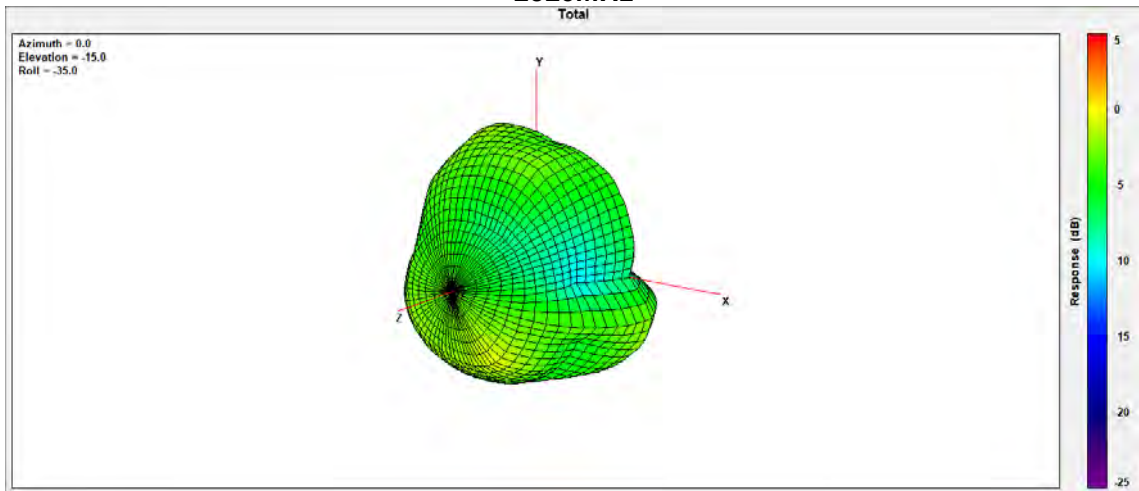
1594MHz	H (Peak)	V (Peak)
	-1.84	-2.47

1602MHz



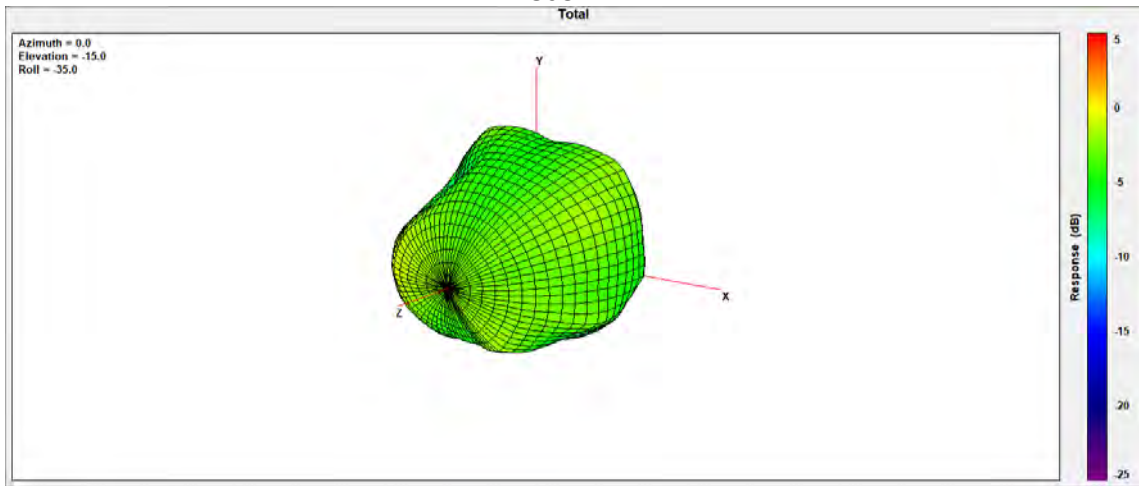
1602MHz	H (Peak)	V (Peak)
	-1.90	-2.69

1610MHz



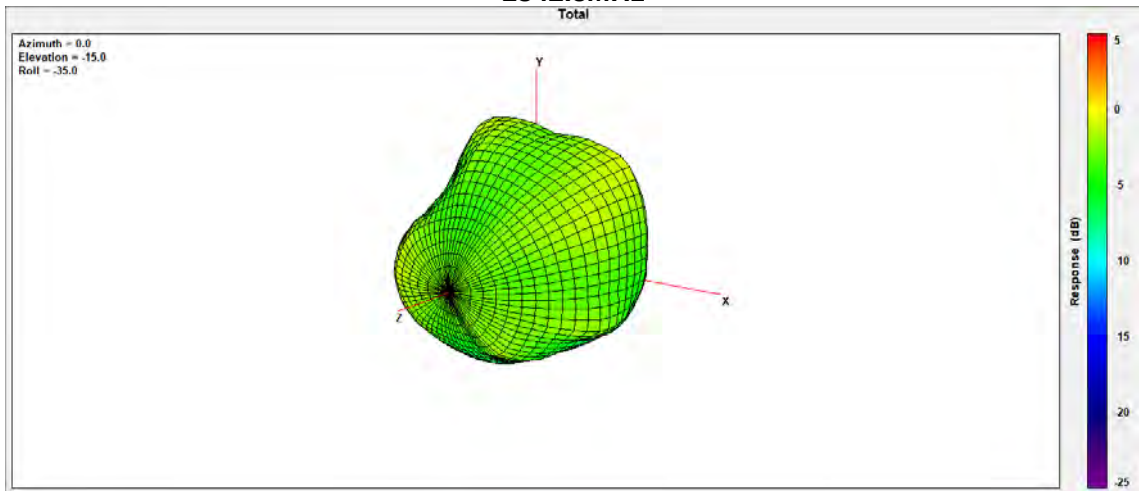
1610MHz	H (Peak)	V (Peak)
	-1.99	-2.87

1805MHz



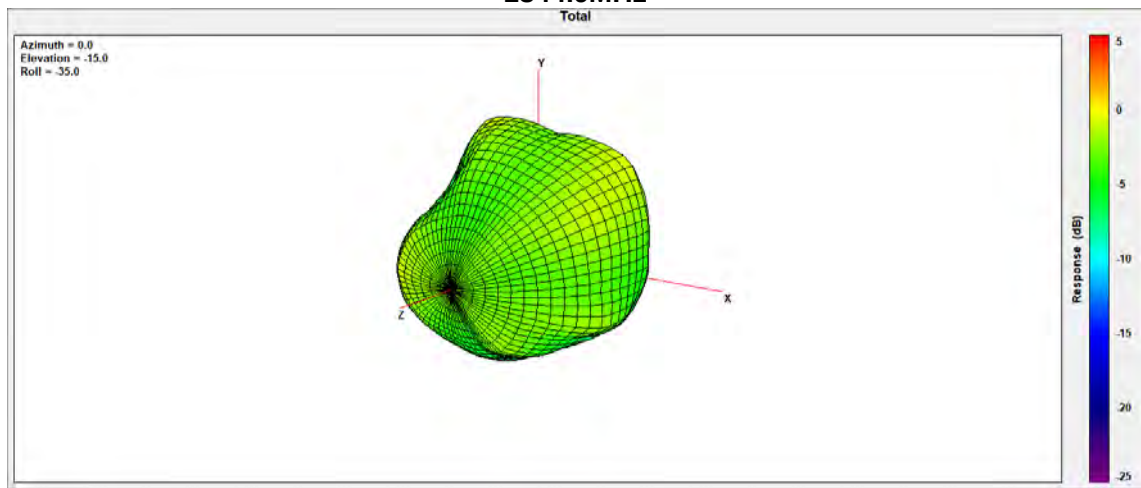
1805MHz	H (Peak)	V (Peak)
	-3.24	-1.11

1842.5MHz



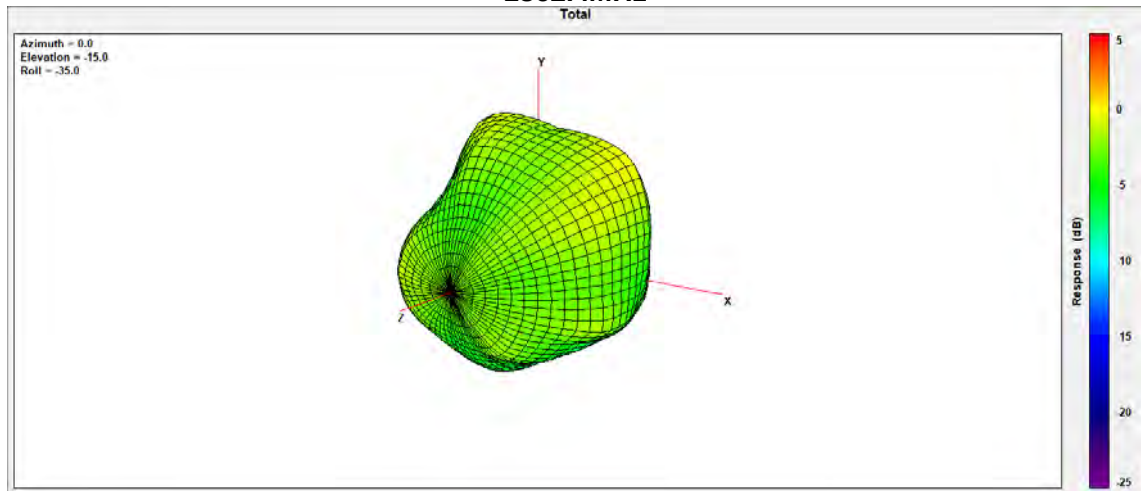
1842.5MHz	H (Peak)	V (Peak)
	-2.66	-1.19

1844.9MHz



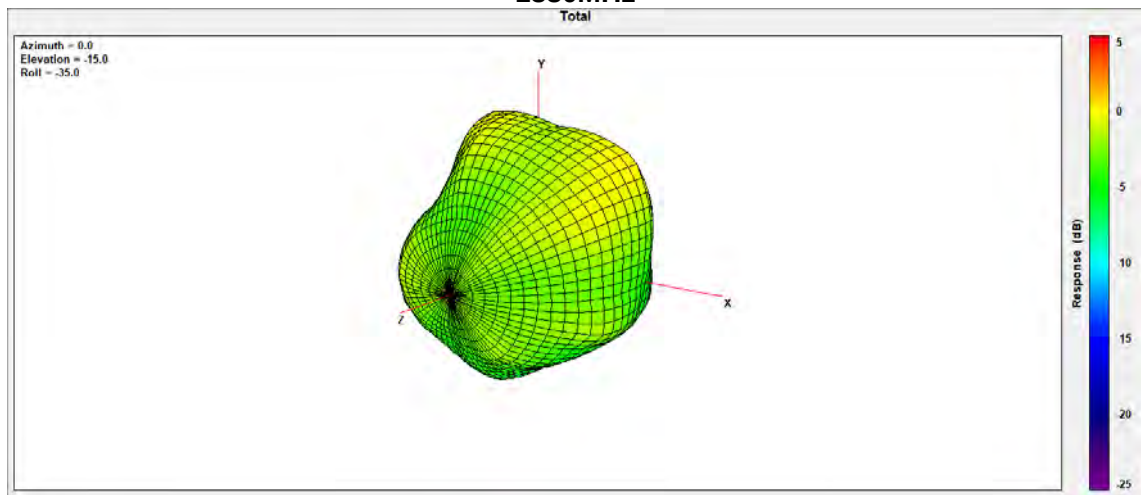
1844.9MHz	H (Peak)	V (Peak)
	-2.54	-1.13

1862.4MHz



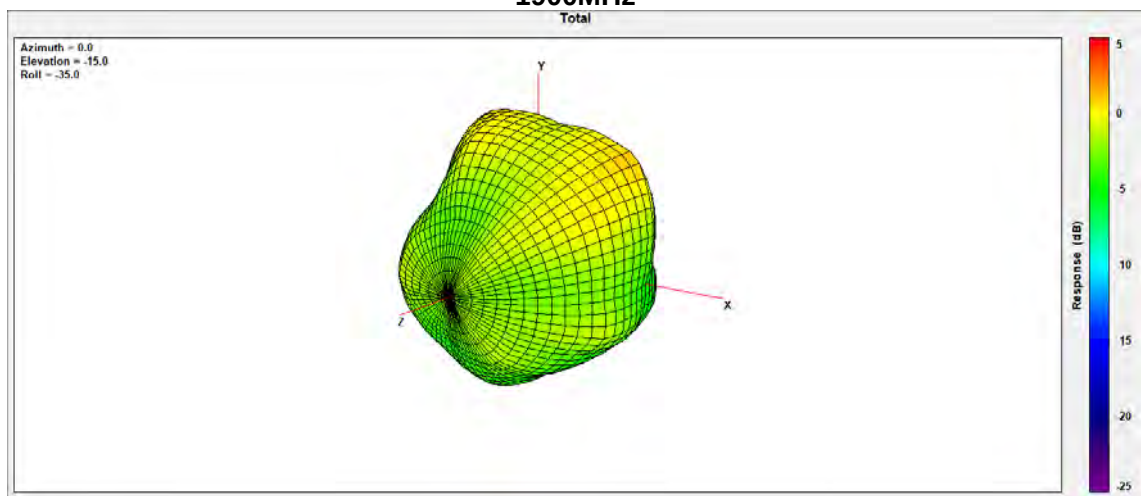
1862.4MHz	H (Peak)	V (Peak)
	-1.69	-0.64

1880MHz



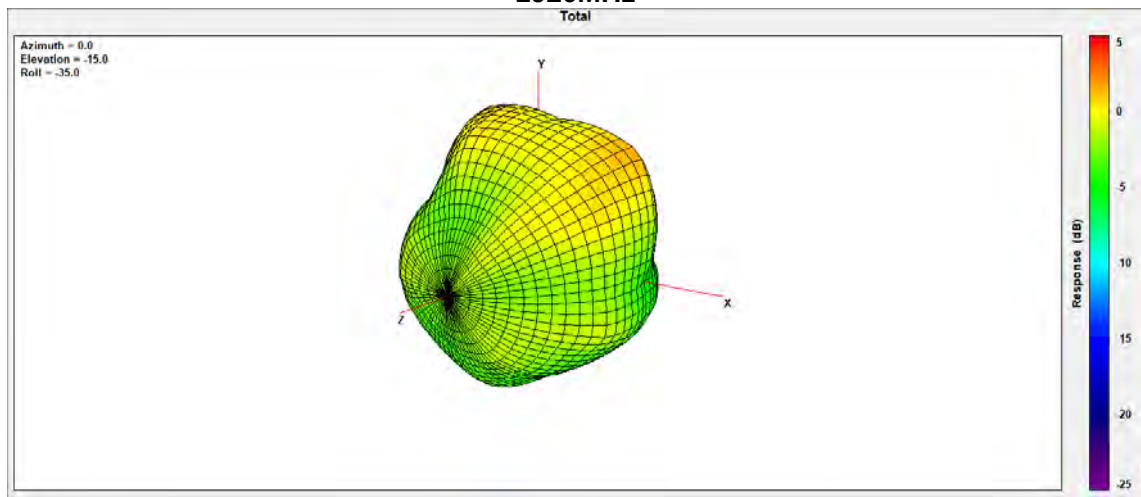
1880MHz	H (Peak)	V (Peak)
	-0.80	-0.16

1900MHz



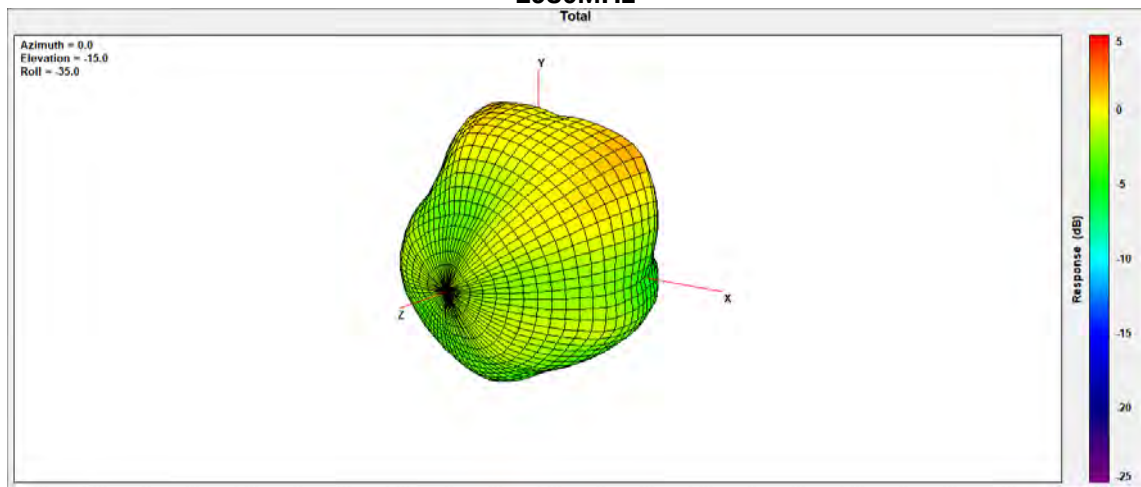
1900MHz	H (Peak)	V (Peak)
	0.00	0.36

1920MHz



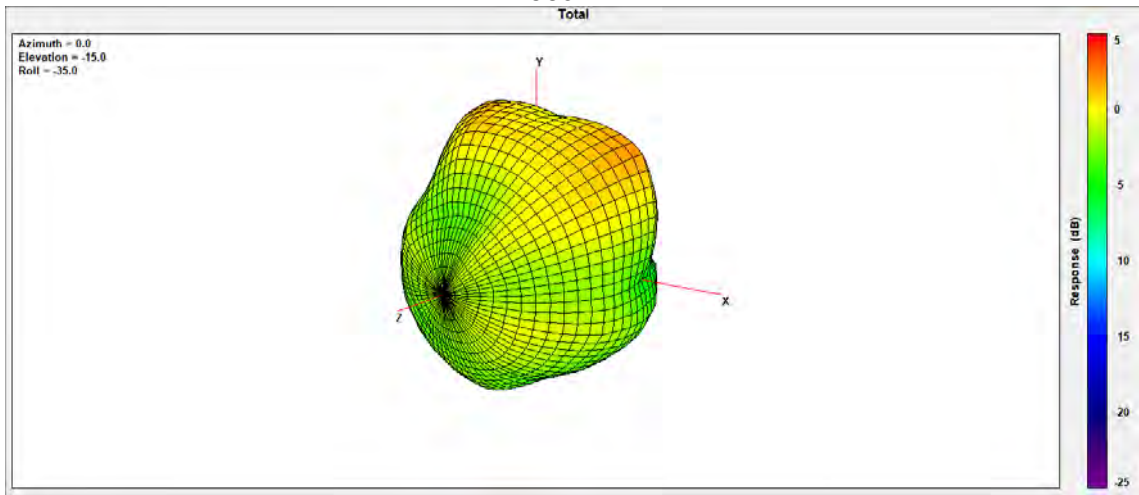
1920MHz	H (Peak)	V (Peak)
	0.54	0.89

1930MHz



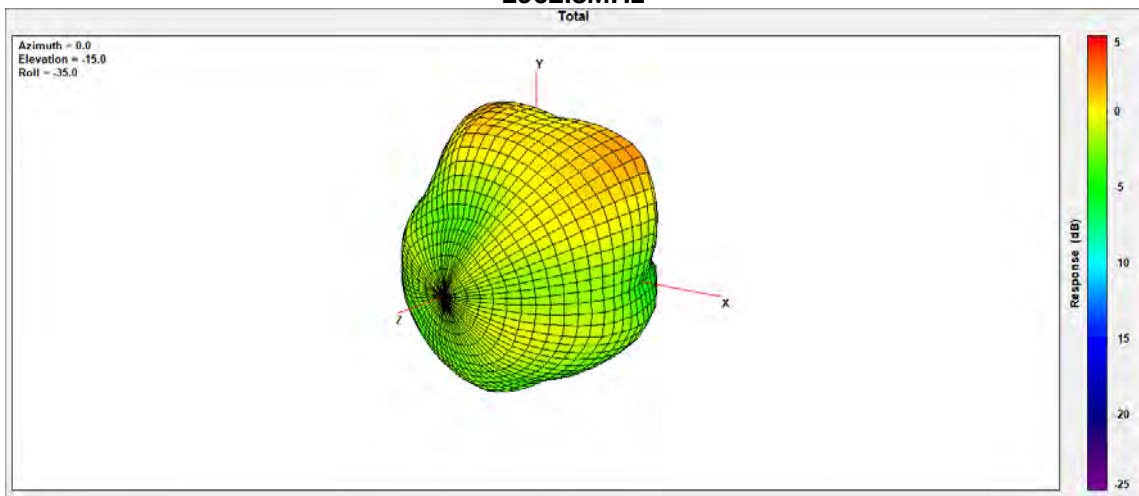
1930MHz	H (Peak)	V (Peak)
	0.72	1.07

1960MHz



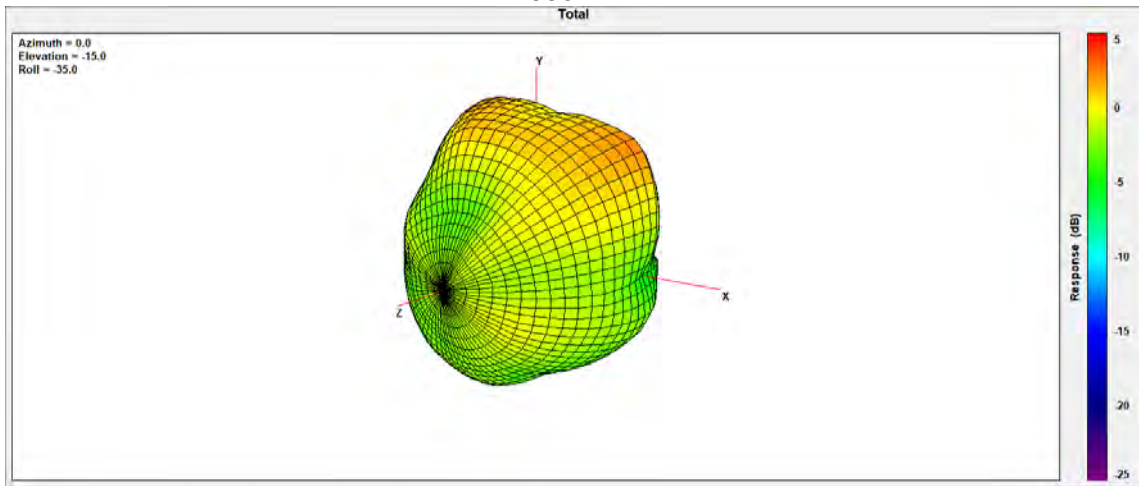
1960MHz	H (Peak)	V (Peak)
	1.01	1.59

1962.5MHz



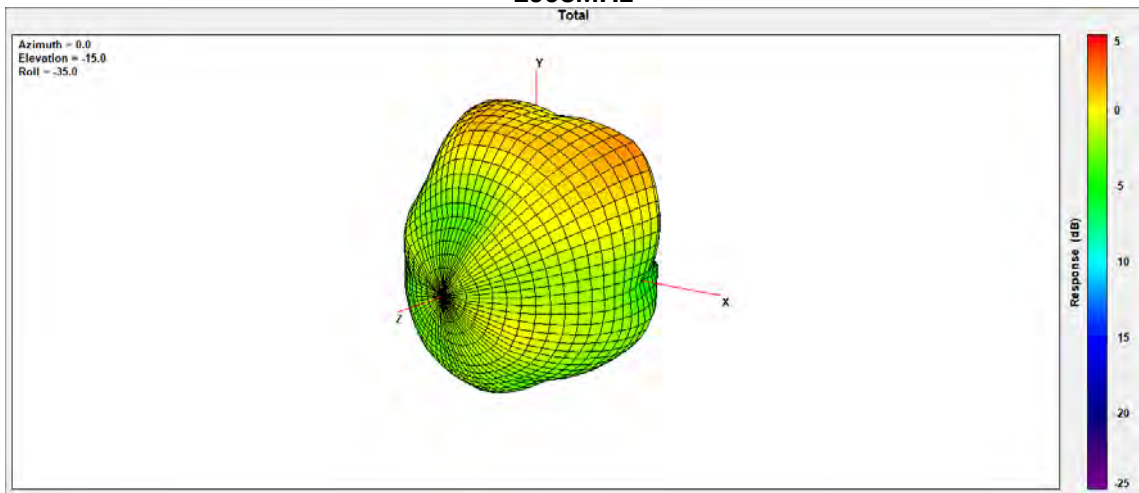
1962.5MHz	H (Peak)	V (Peak)
	1.05	1.64

1990MHz

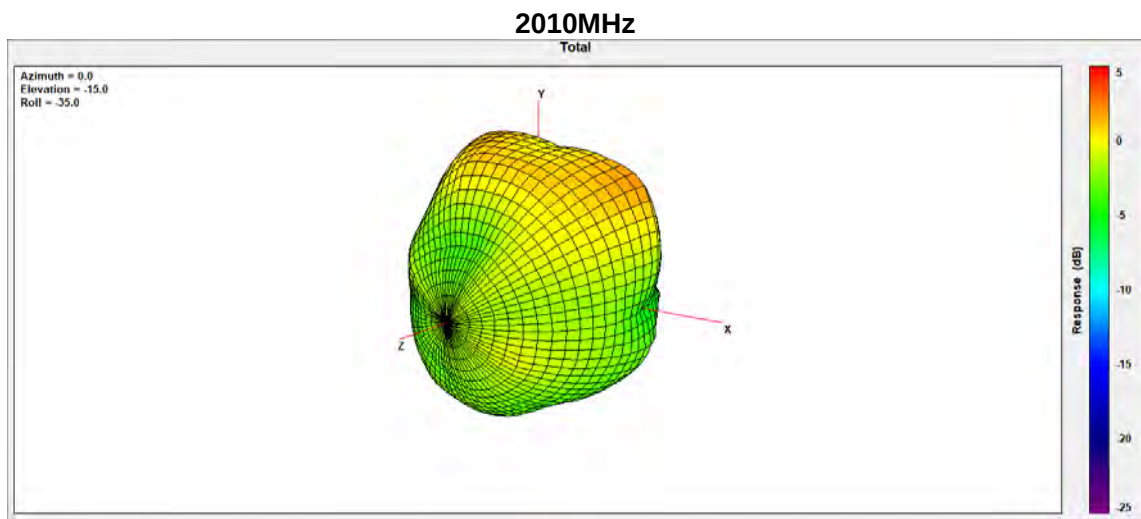


1990MHz	H (Peak)	V (Peak)
	1.29	1.89

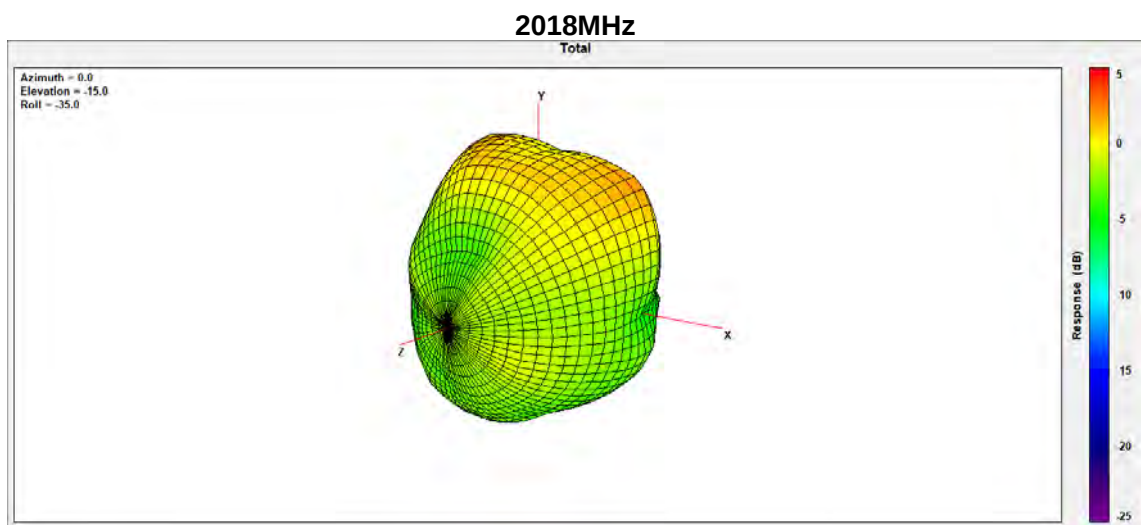
1995MHz



1995MHz	H (Peak)	V (Peak)
	1.31	1.92

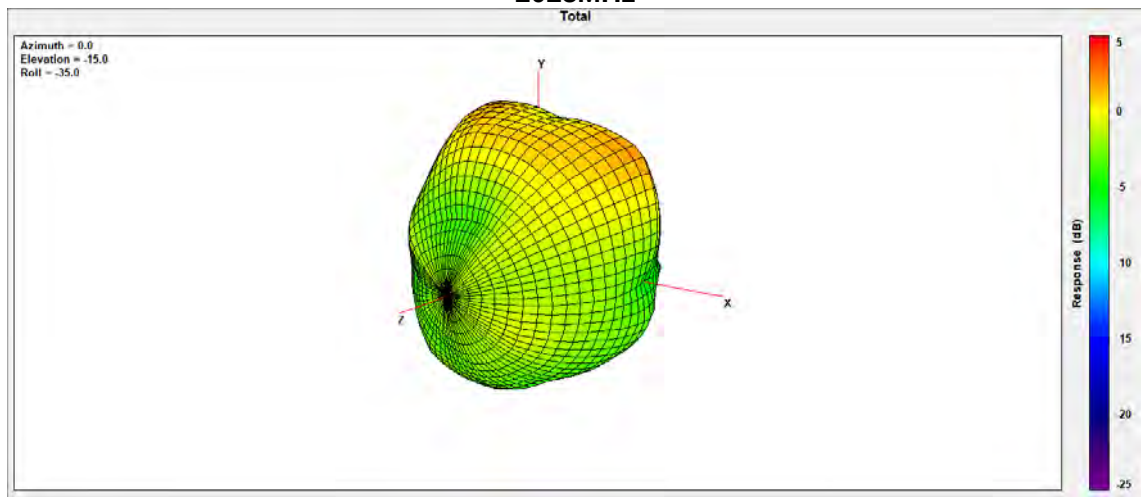


2010MHz	H (Peak)	V (Peak)
	1.07	1.69



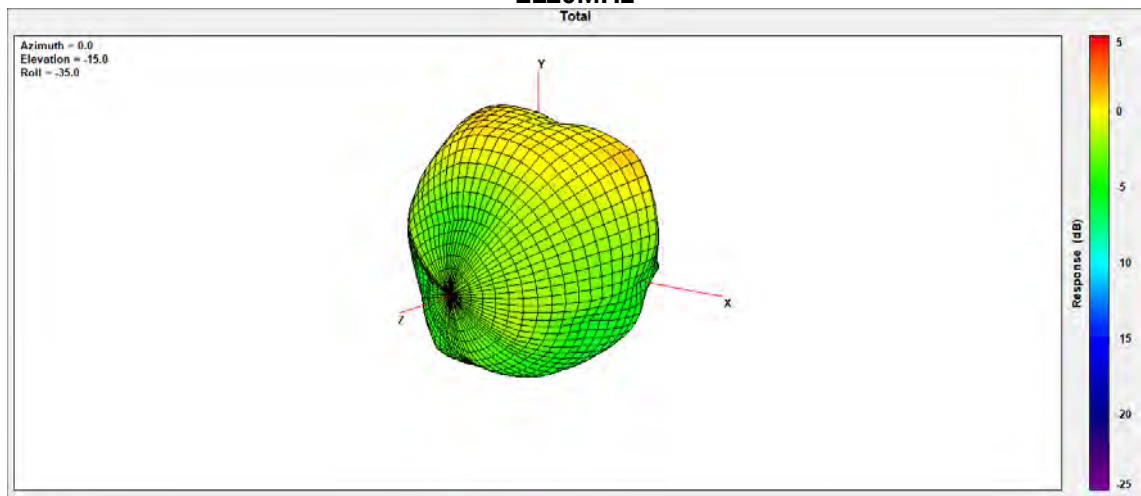
2018MHz	H (Peak)	V (Peak)
	1.02	1.65

2025MHz



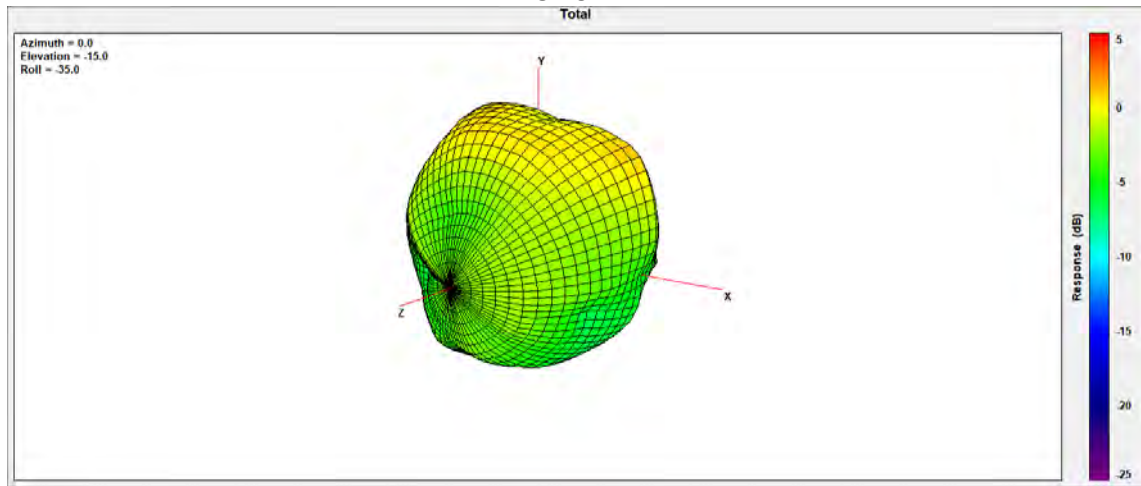
2025MHz	H (Peak)	V (Peak)
	1.05	1.68

2110MHz



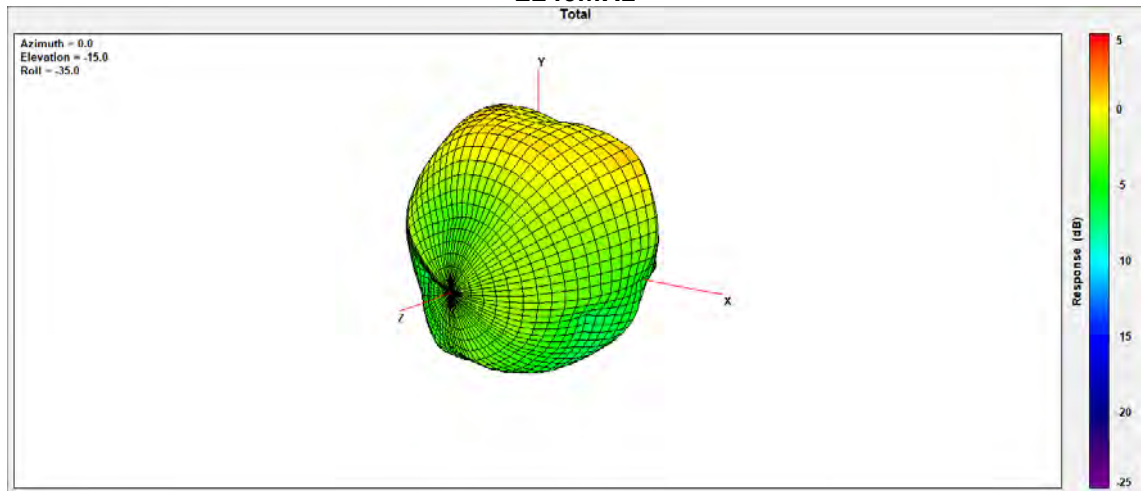
2110MHz	H (Peak)	V (Peak)
	0.70	1.28

2132.5MHz



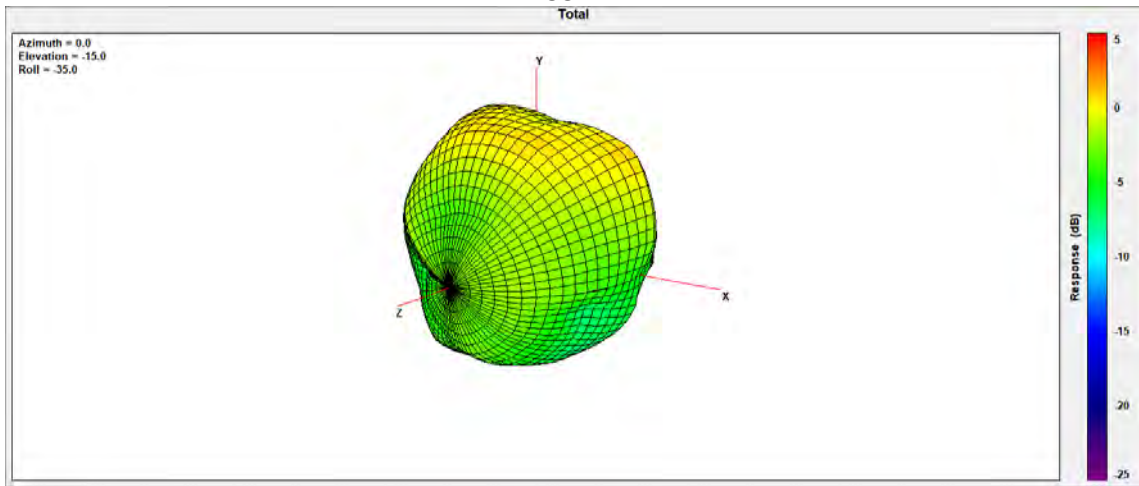
2132.5MHz	H (Peak)	V (Peak)
	0.72	1.14

2140MHz



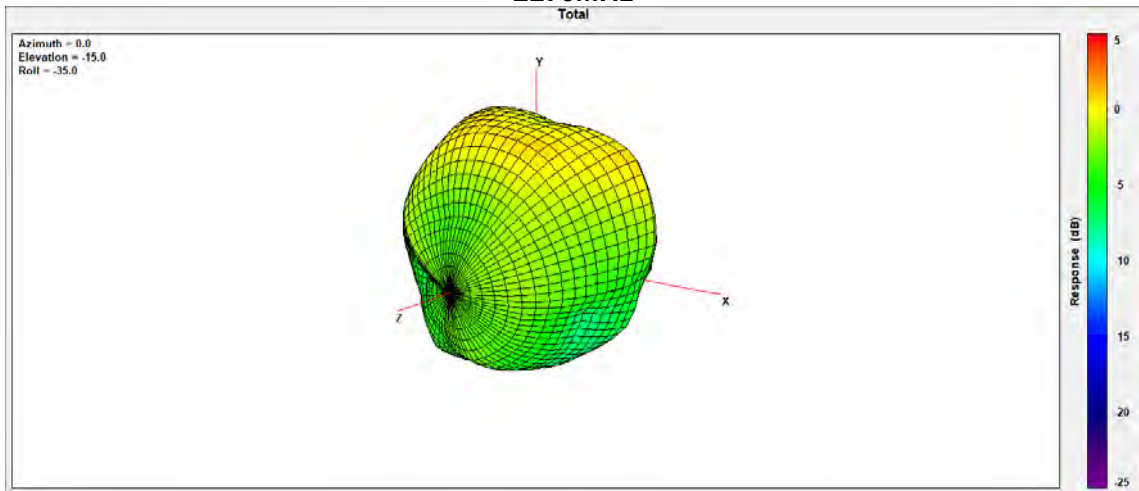
2140MHz	H (Peak)	V (Peak)
	0.68	1.06

2155MHz



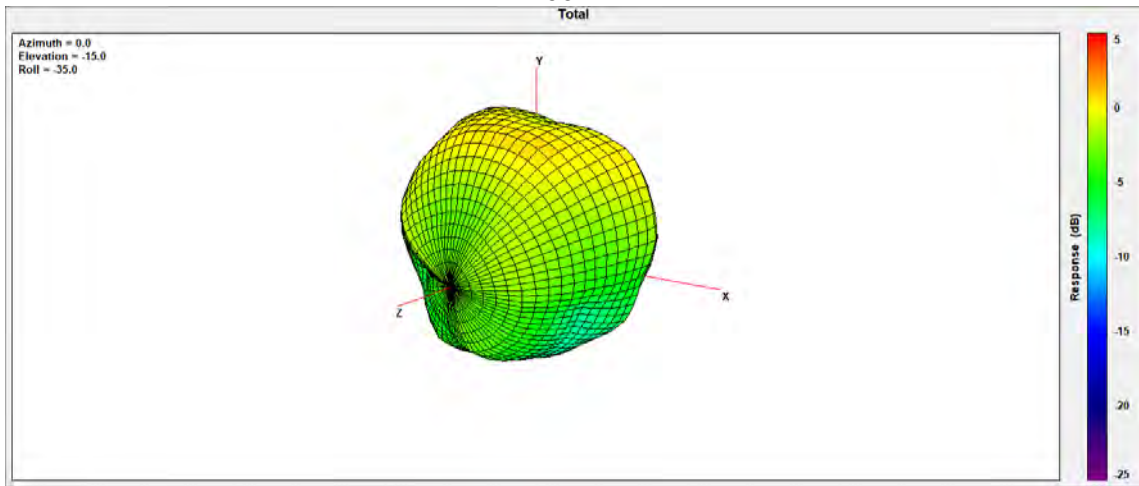
2155MHz	H (Peak)	V (Peak)
	0.65	0.95

2170MHz



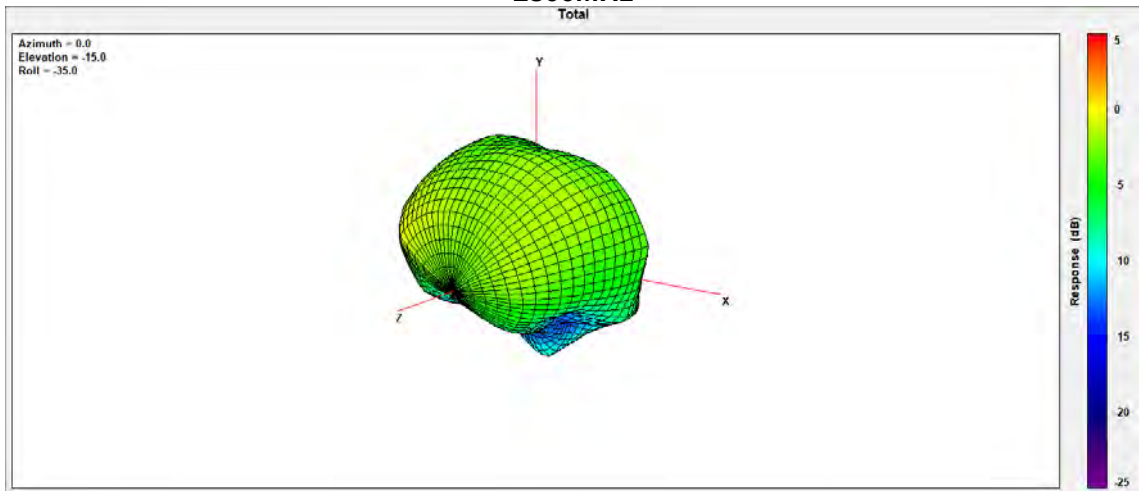
2170MHz	H (Peak)	V (Peak)
	0.61	0.80

2200MHz



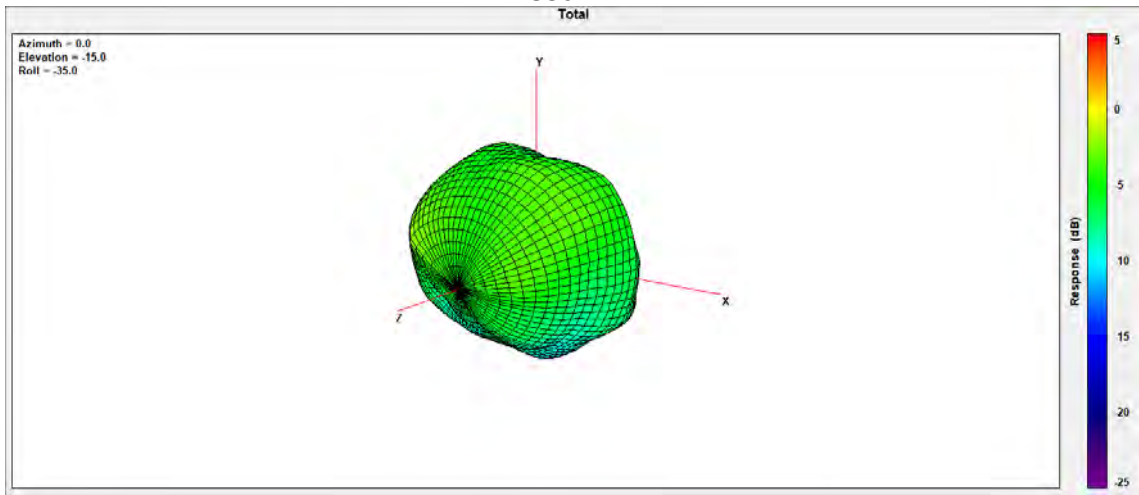
2200MHz	H (Peak)	V (Peak)
	0.61	0.26

2300MHz



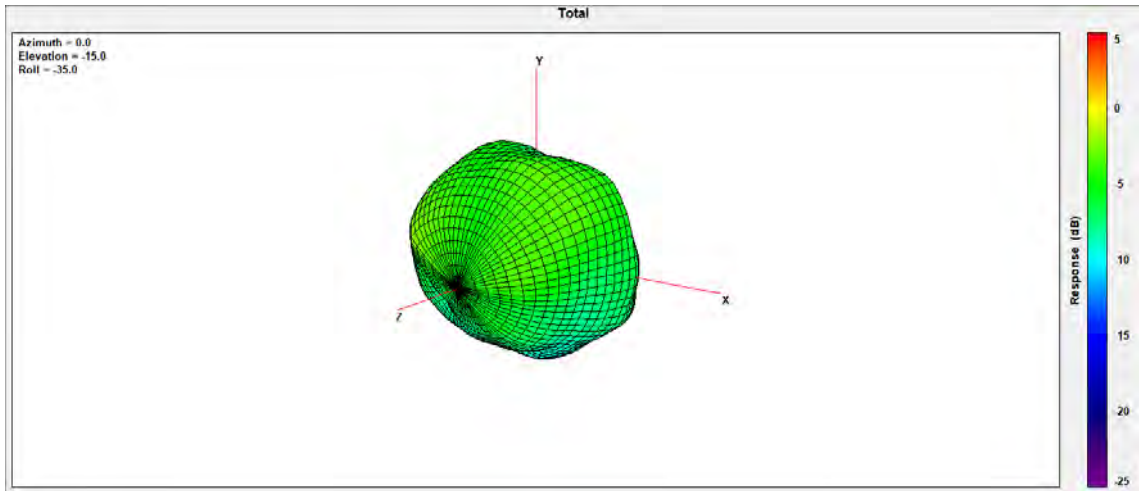
2300MHz	H (Peak)	V (Peak)
	-2.15	-1.67

2350MHz



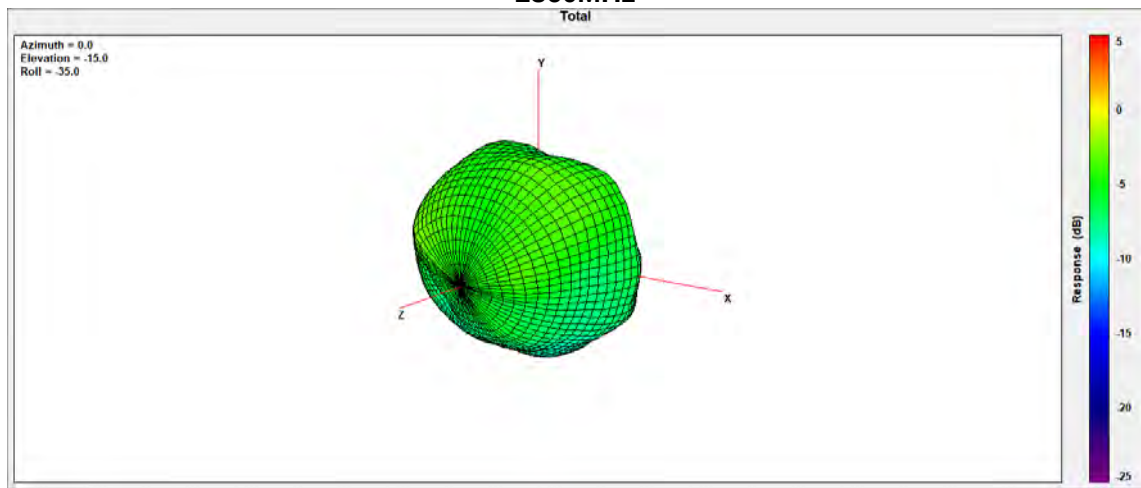
2350MHz	H (Peak)	V (Peak)
	-4.73	-3.03

2355MHz



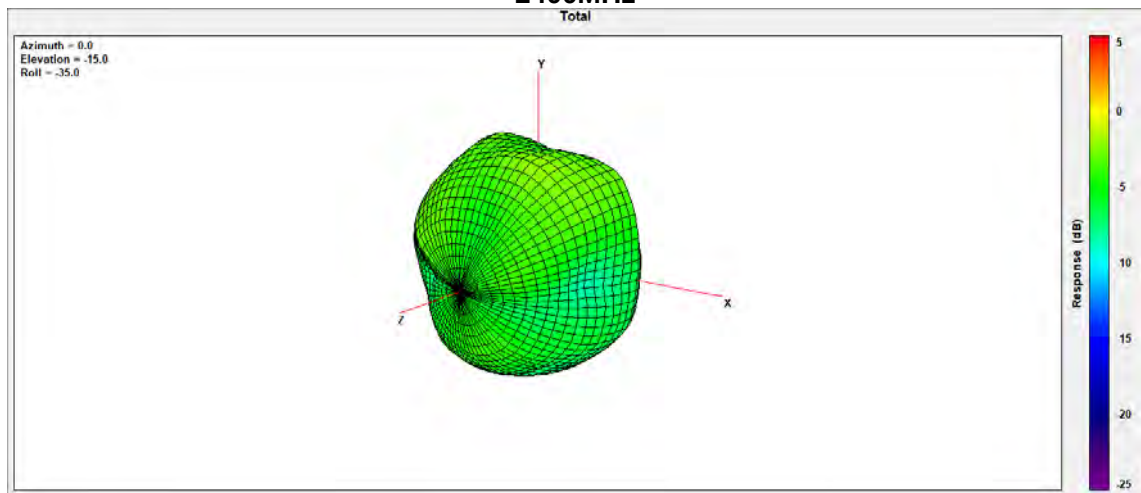
2355MHz	H (Peak)	V (Peak)
	-4.62	-3.14

2360MHz



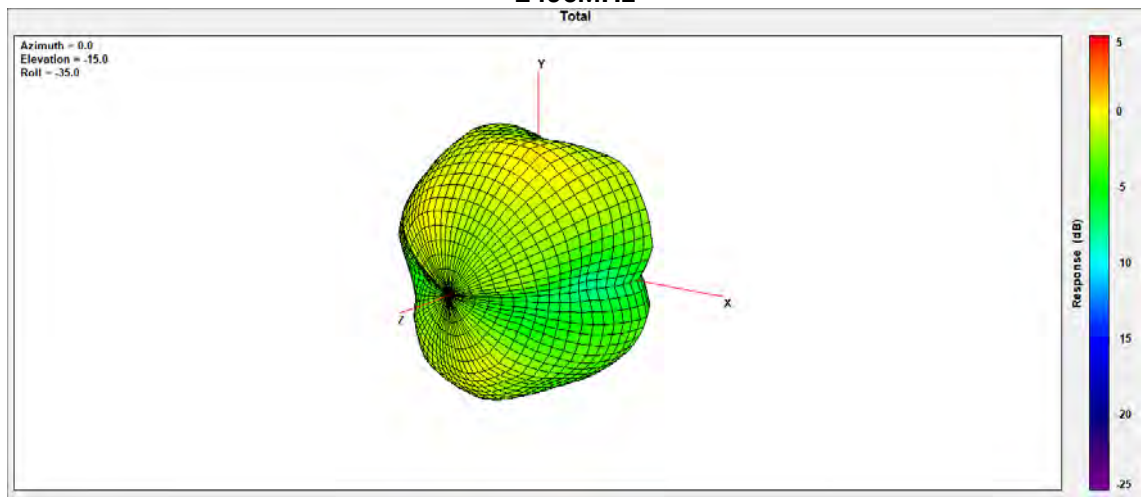
2360MHz	H (Peak)	V (Peak)
	-4.59	-3.33

2400MHz



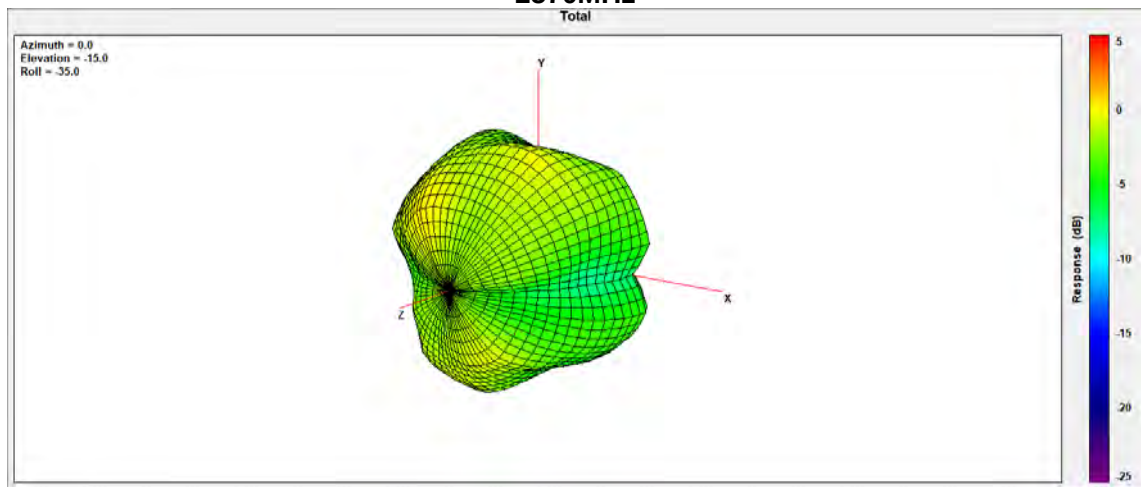
2400MHz	H (Peak)	V (Peak)
	-3.59	-2.82

2496MHz



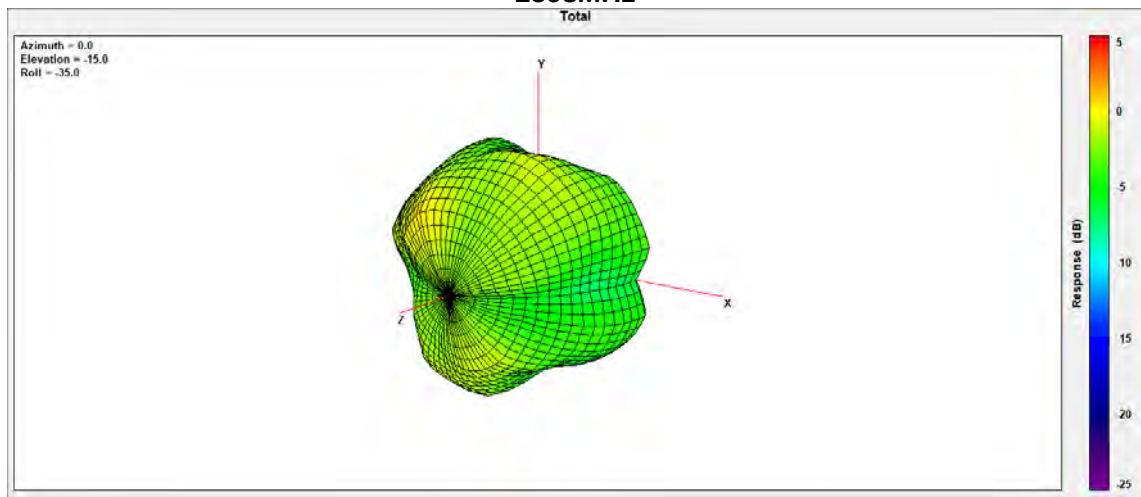
2496MHz	H (Peak)	V (Peak)
	-0.93	-1.29

2570MHz



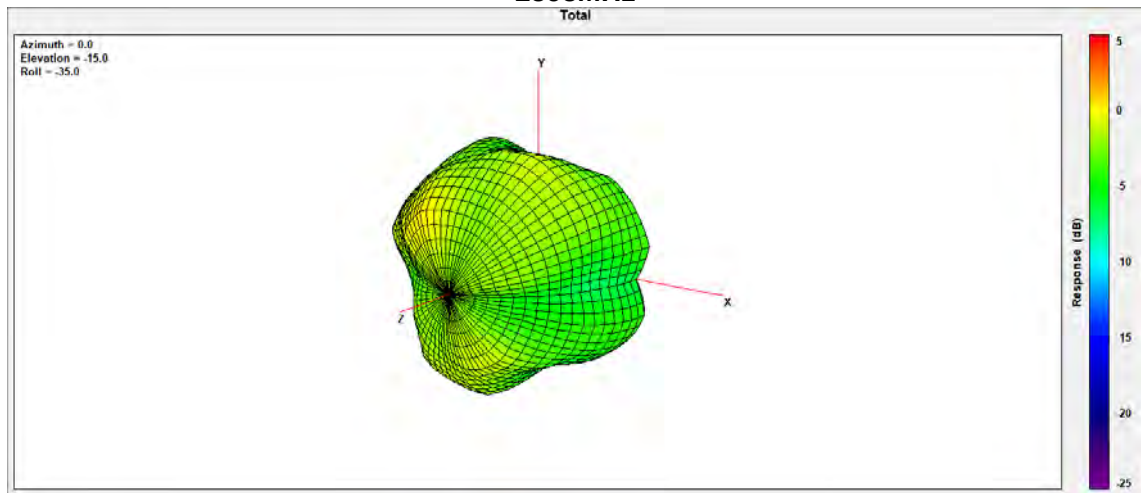
2570MHz	H (Peak)	V (Peak)
	-1.04	-0.42

2593MHz



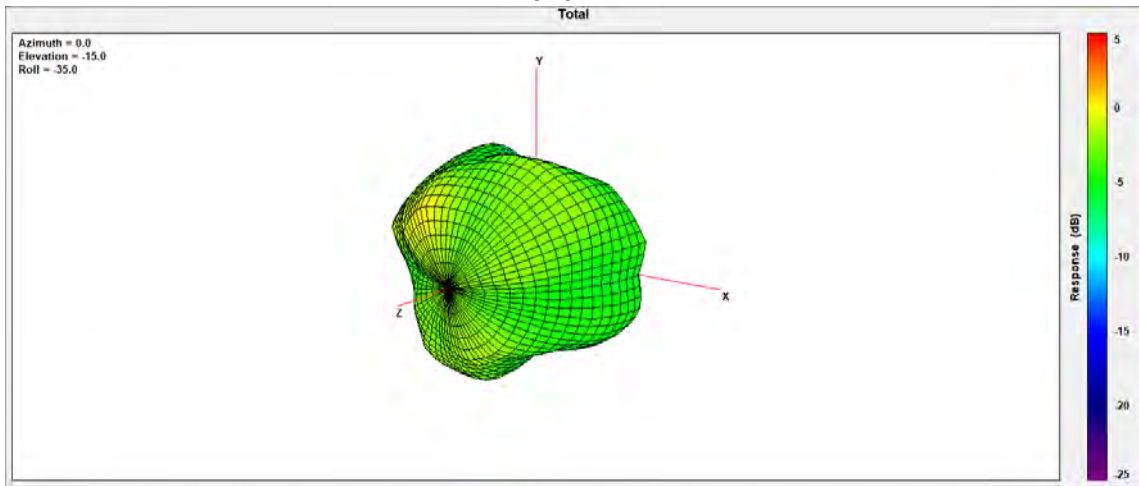
2593MHz	H (Peak)	V (Peak)
	-1.16	-0.33

2595MHz



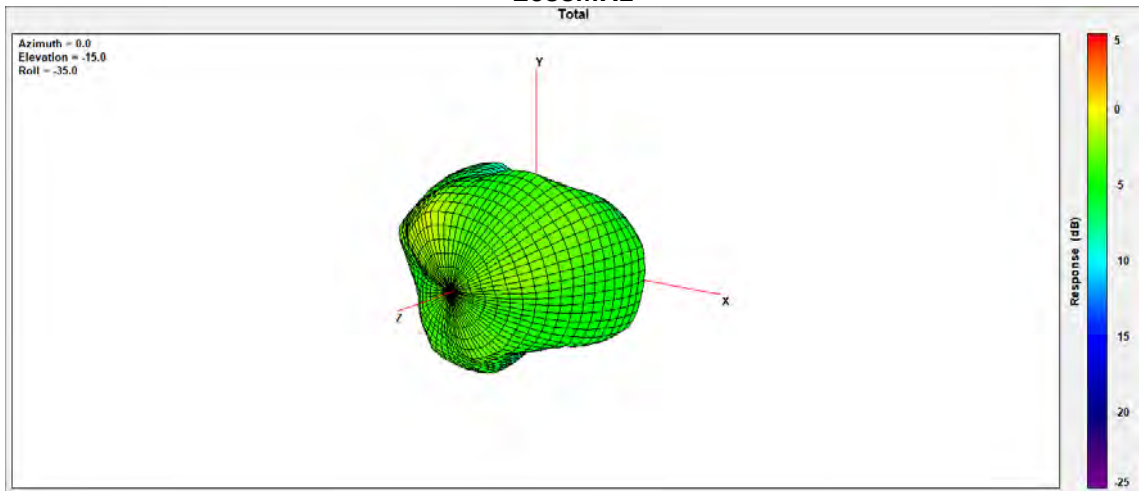
2595MHz	H (Peak)	V (Peak)
	-1.20	-0.33

2620MHz



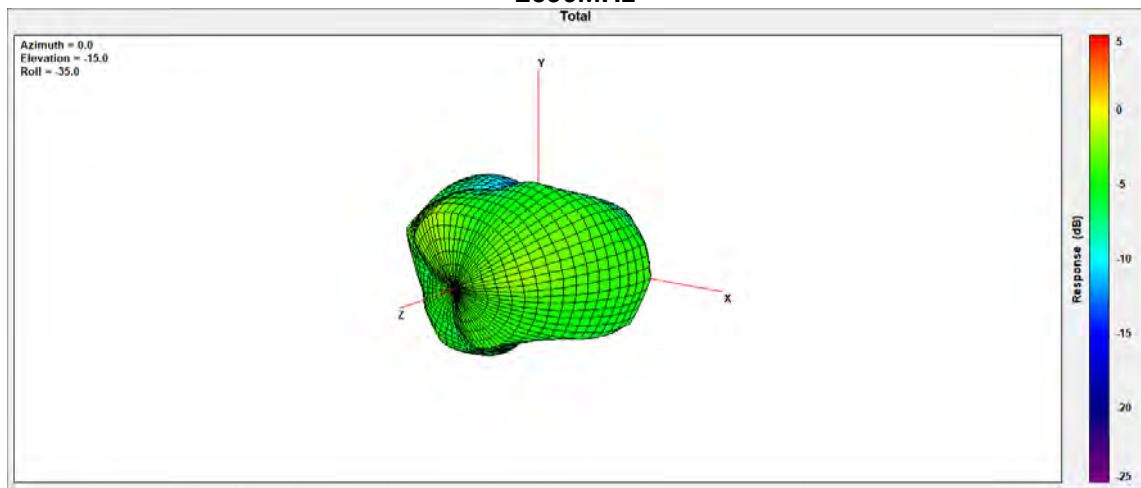
2620MHz	H (Peak)	V (Peak)
	-1.66	-0.77

2655MHz



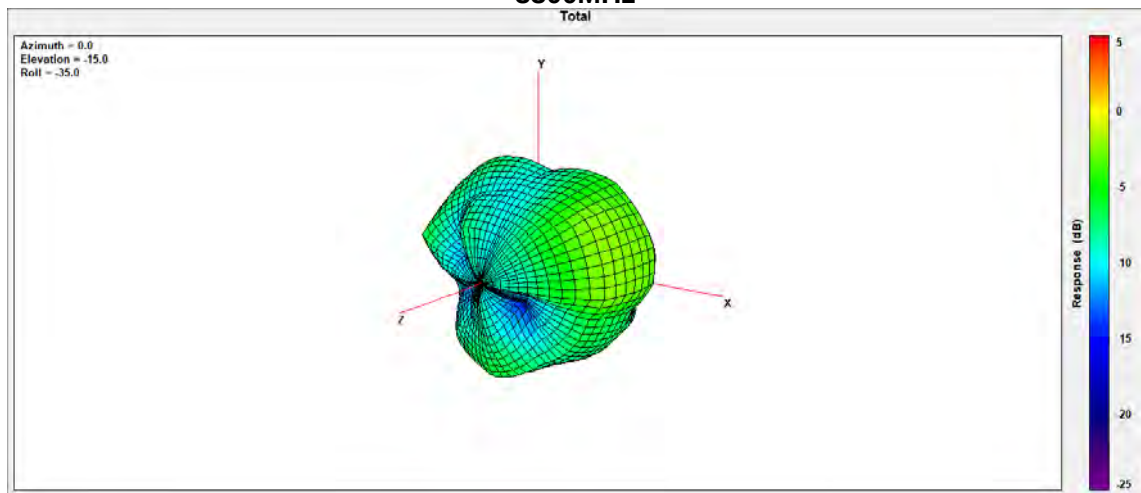
2655MHz	H (Peak)	V (Peak)
	-2.34	-2.14

2690MHz



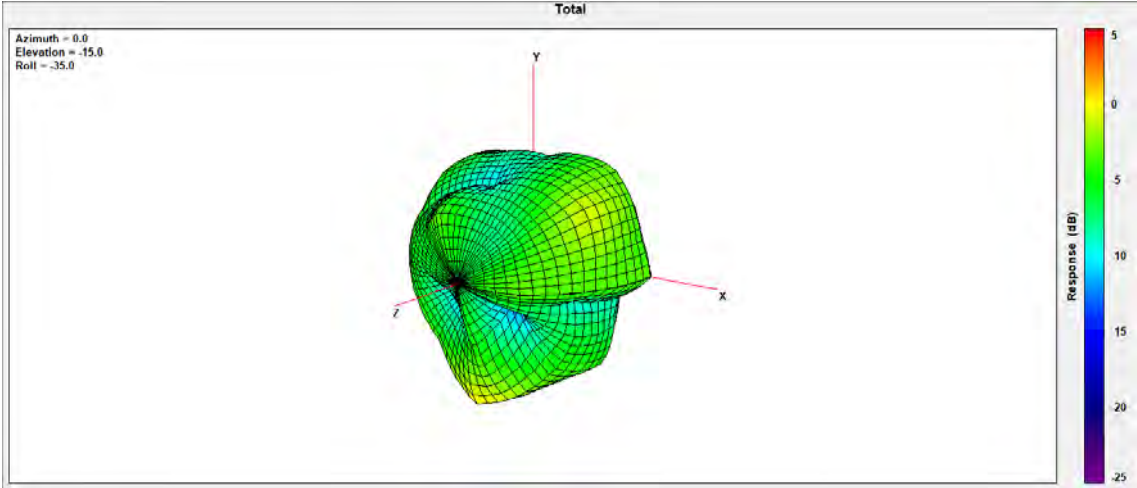
2690MHz	H (Peak)	V (Peak)
	-3.16	-3.36

3300MHz



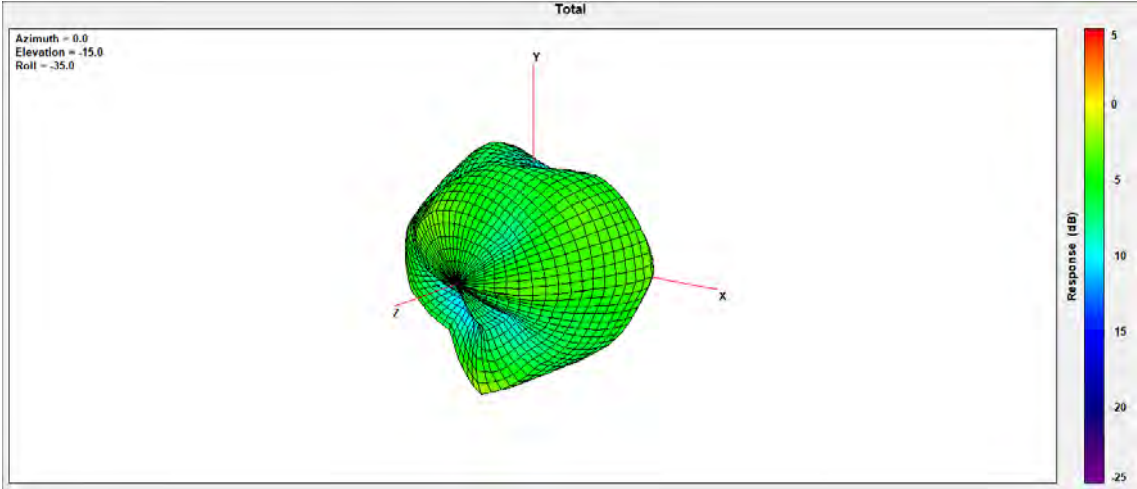
3300MHz	H (Peak)	V (Peak)
	-2.03	-2.60

3400MHz



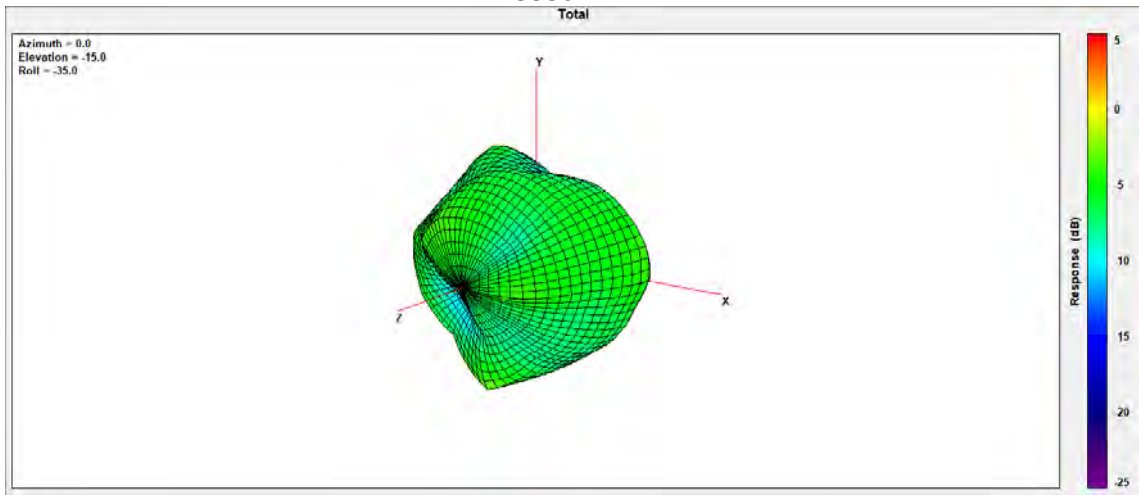
3400MHz	H (Peak)	V (Peak)
	-0.36	-3.45

3500MHz



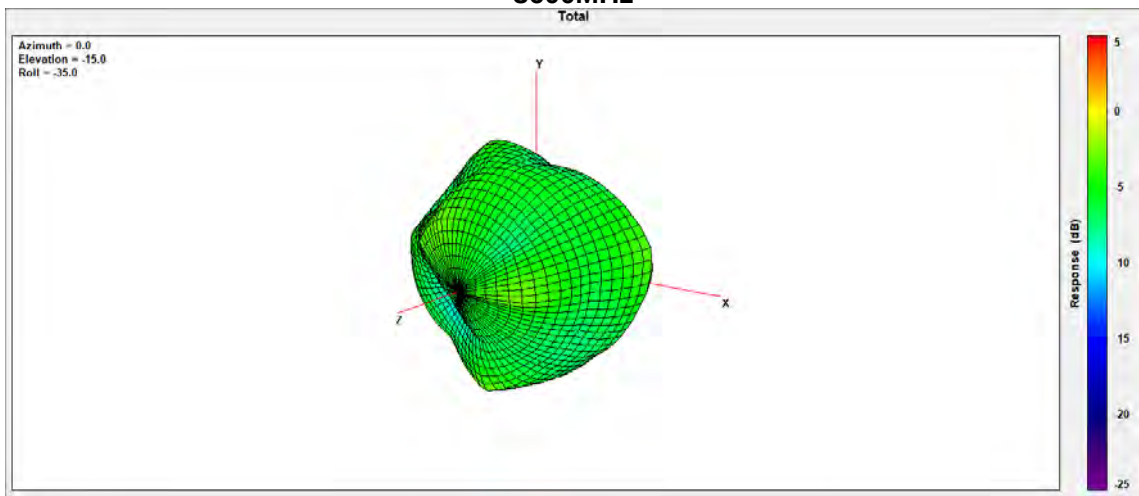
3500MHz	H (Peak)	V (Peak)
	-2.38	-2.70

3550MHz



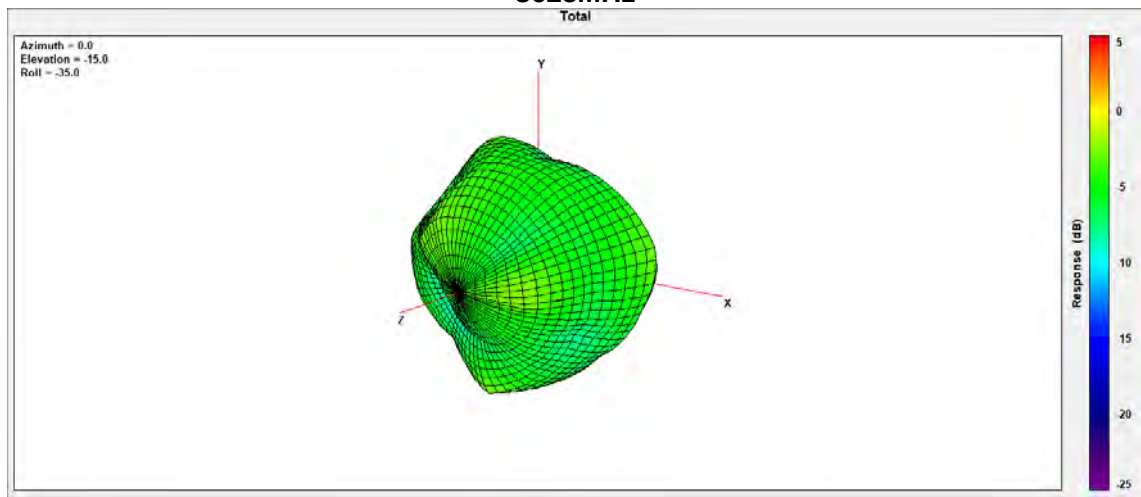
3550MHz	H (Peak)	V (Peak)
	-3.94	-4.03

3600MHz



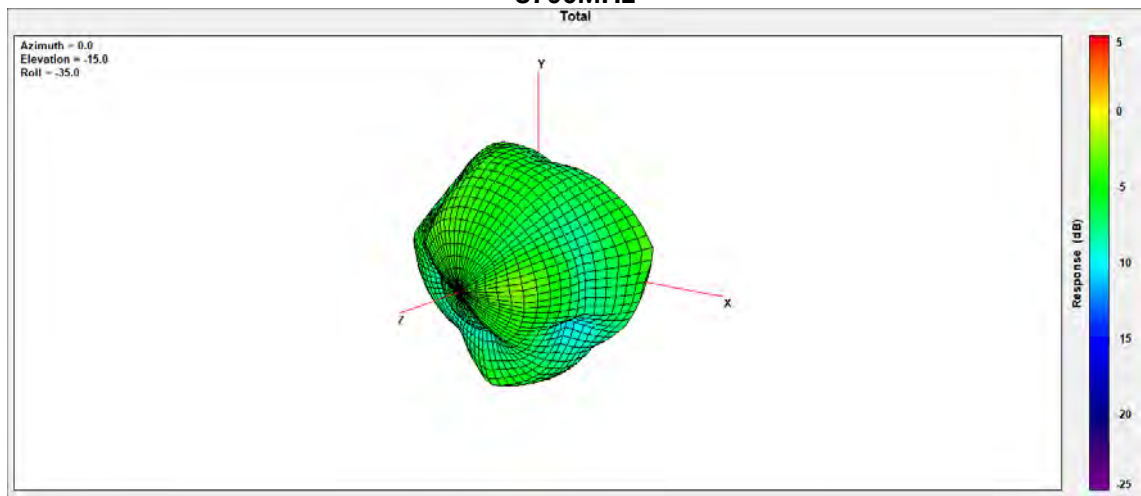
3600MHz	H (Peak)	V (Peak)
	-4.00	-3.72

3625MHz



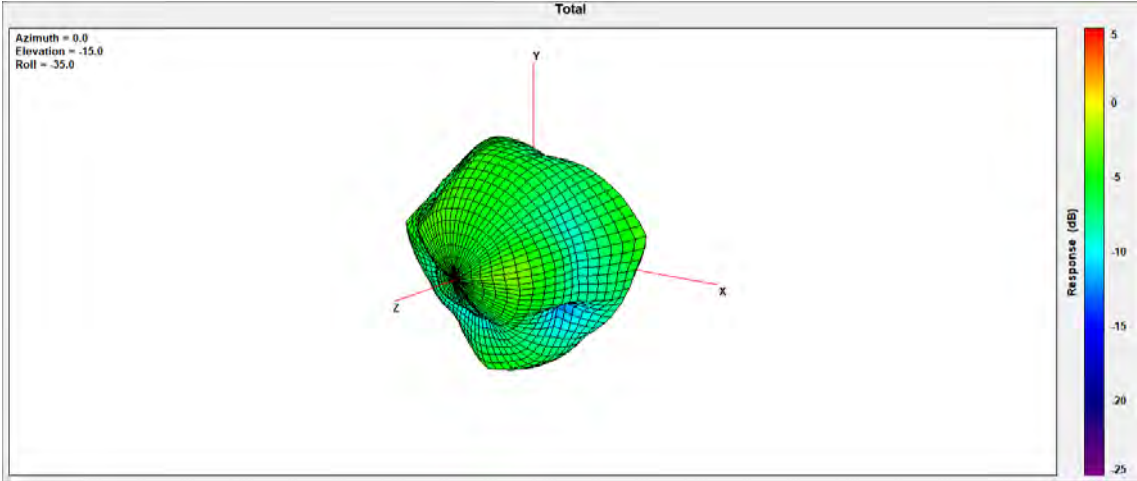
3625MHz	H (Peak)	V (Peak)
	-3.49	-3.79

3700MHz



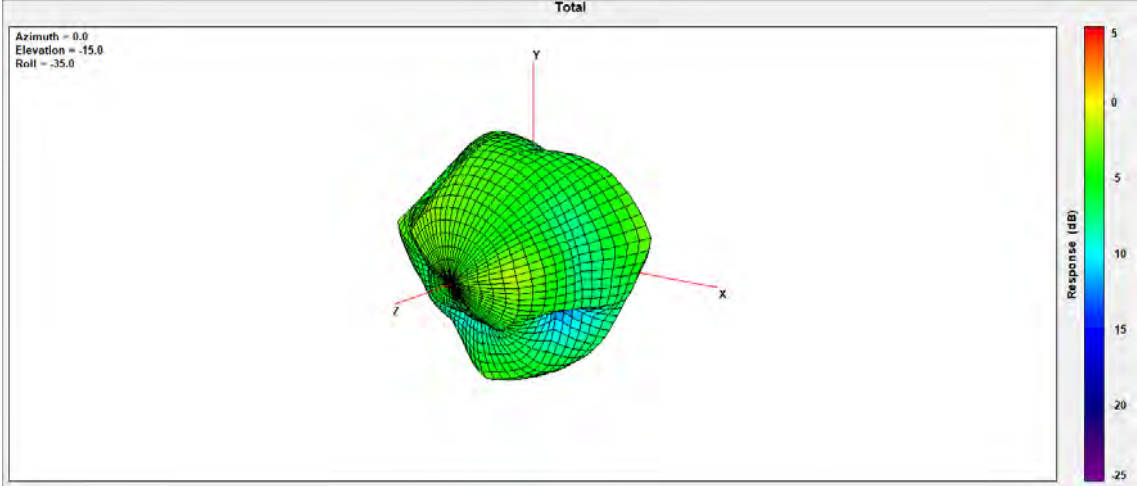
3700MHz	H (Peak)	V (Peak)
	-4.07	-3.65

3750MHz



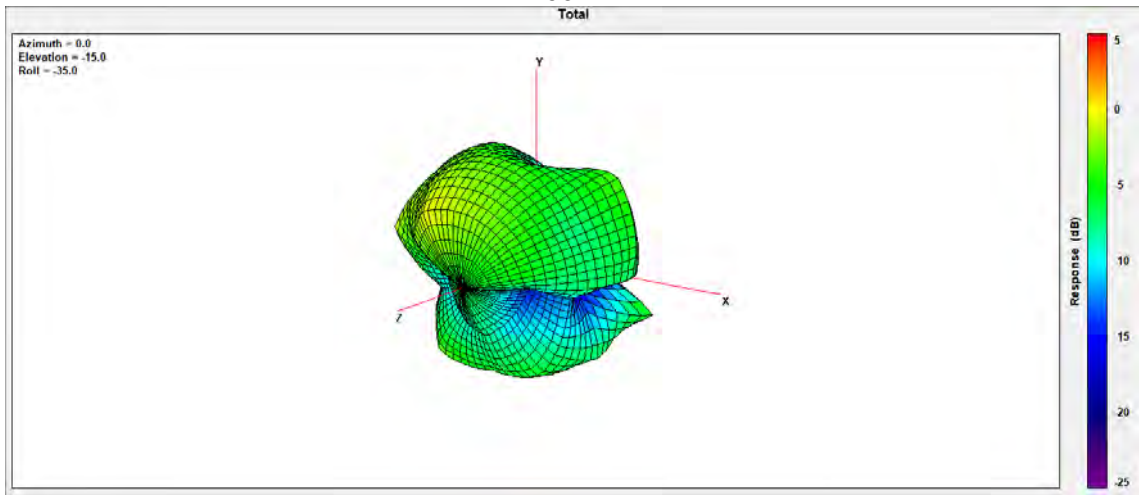
3750MHz	H (Peak)	V (Peak)
	-4.06	-2.95

3800MHz



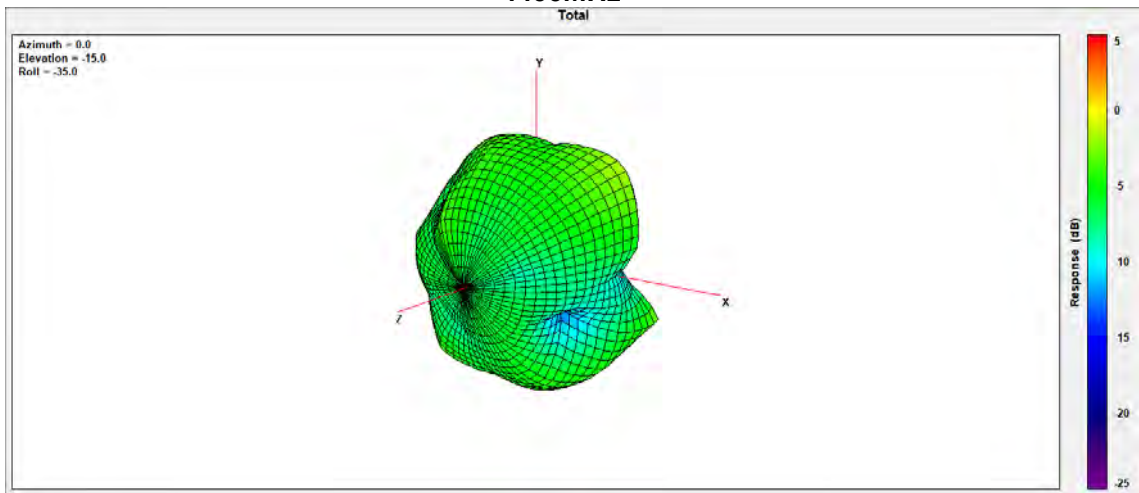
3800MHz	H (Peak)	V (Peak)
	-3.12	-0.82

4200MHz



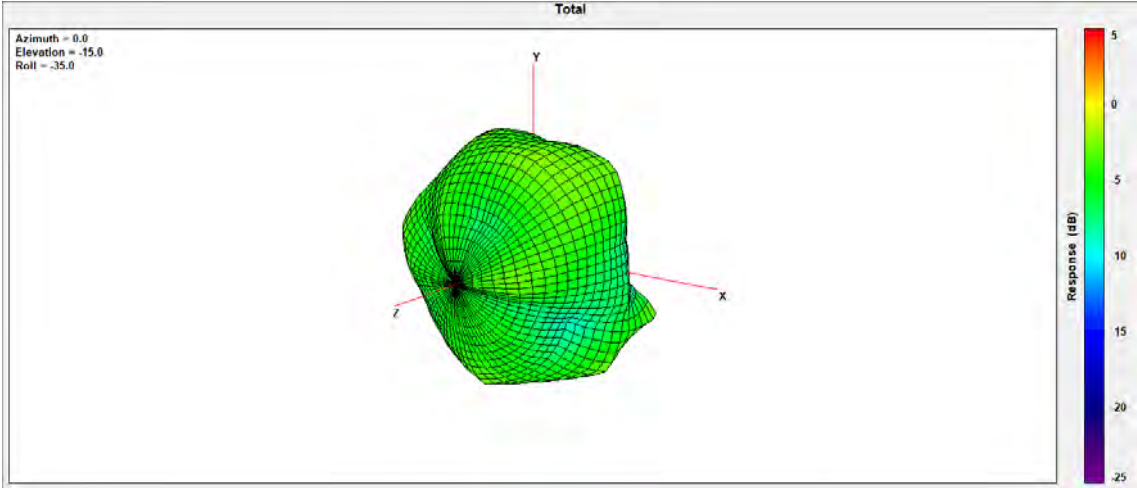
4200MHz	H (Peak)	V (Peak)
	-1.79	-0.90

4400MHz



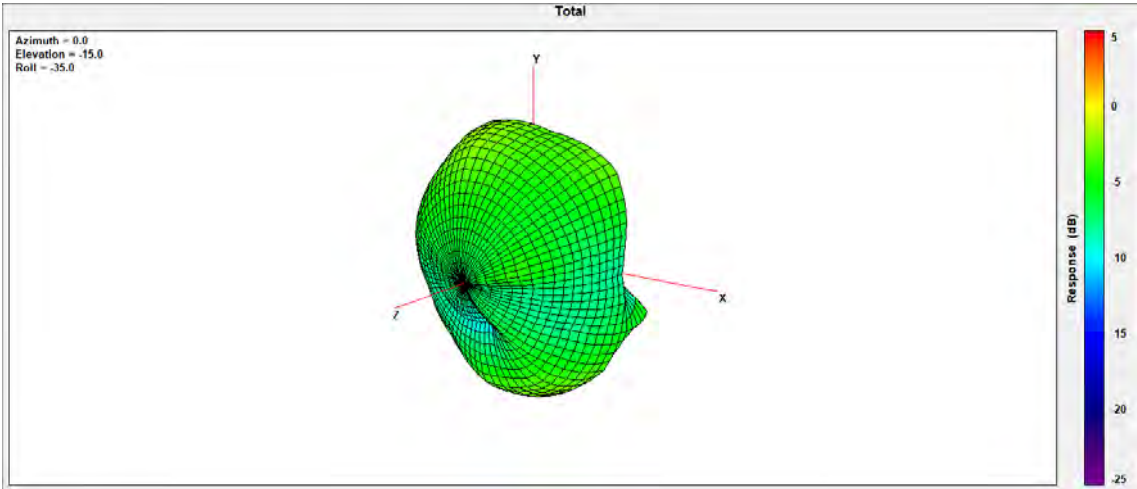
4400MHz	H (Peak)	V (Peak)
	-4.76	-2.08

4700MHz



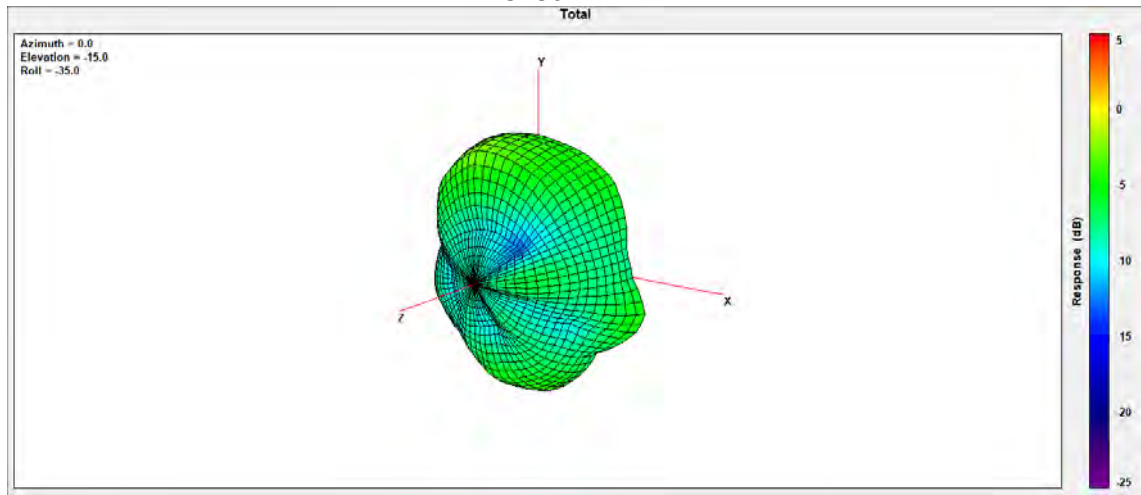
4700MHz	H (Peak)	V (Peak)
	-3.94	-1.25

5000MHz



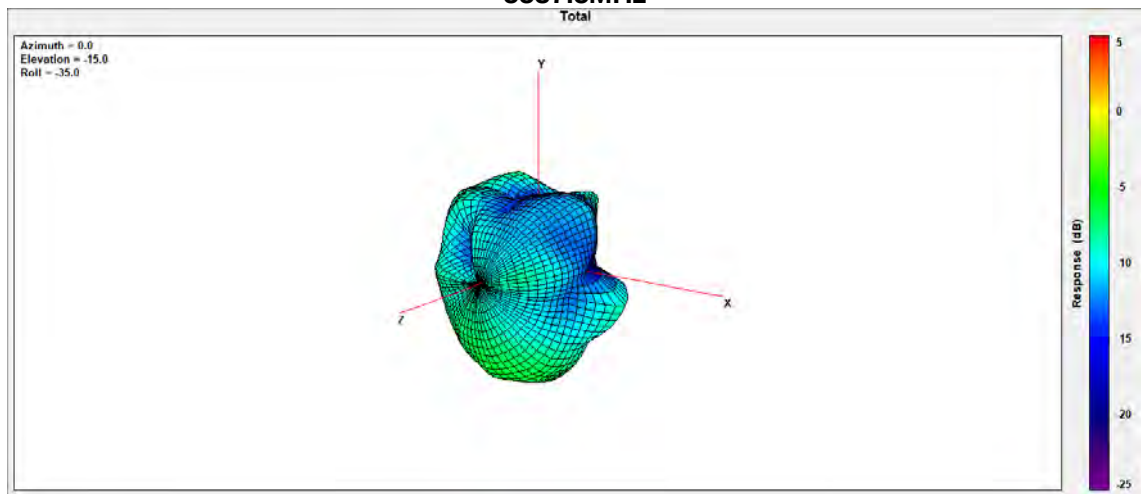
5000MHz	H (Peak)	V (Peak)
	-2.30	-0.65

5150MHz

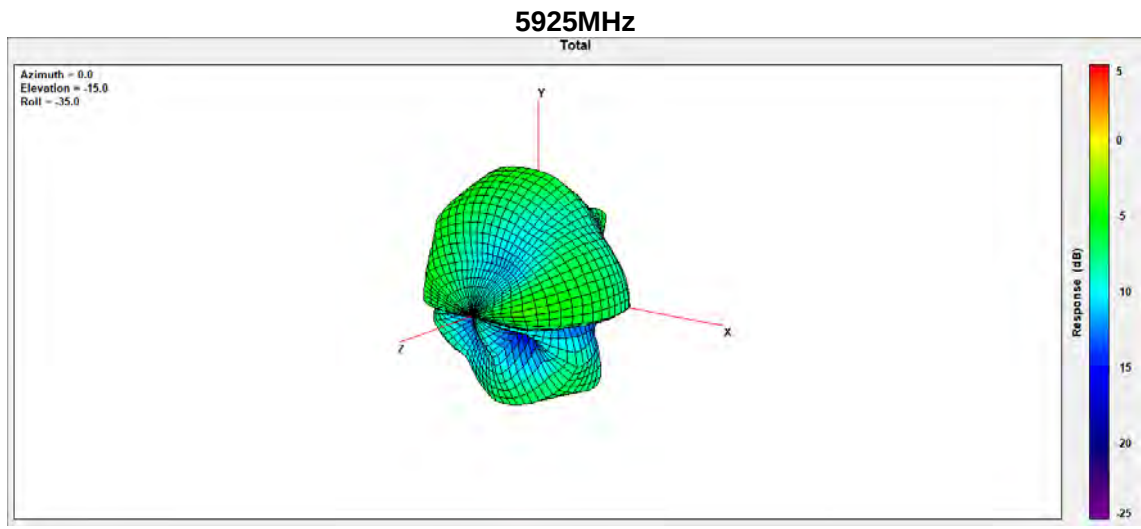


5150MHz	H (Peak)	V (Peak)
	-2.46	-3.95

5537.5MHz

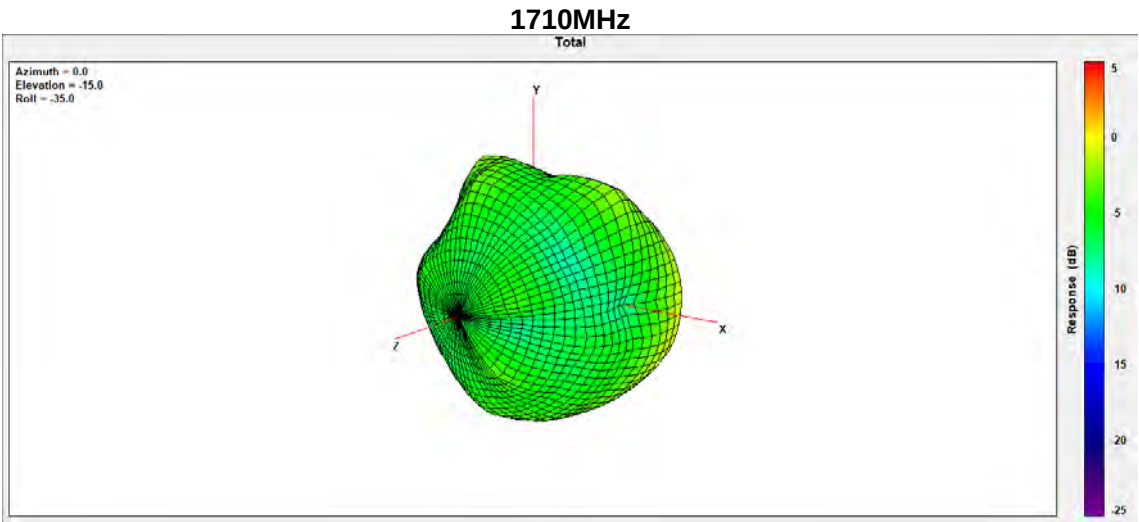


5537.5MHz	H (Peak)	V (Peak)
	-3.66	-5.30

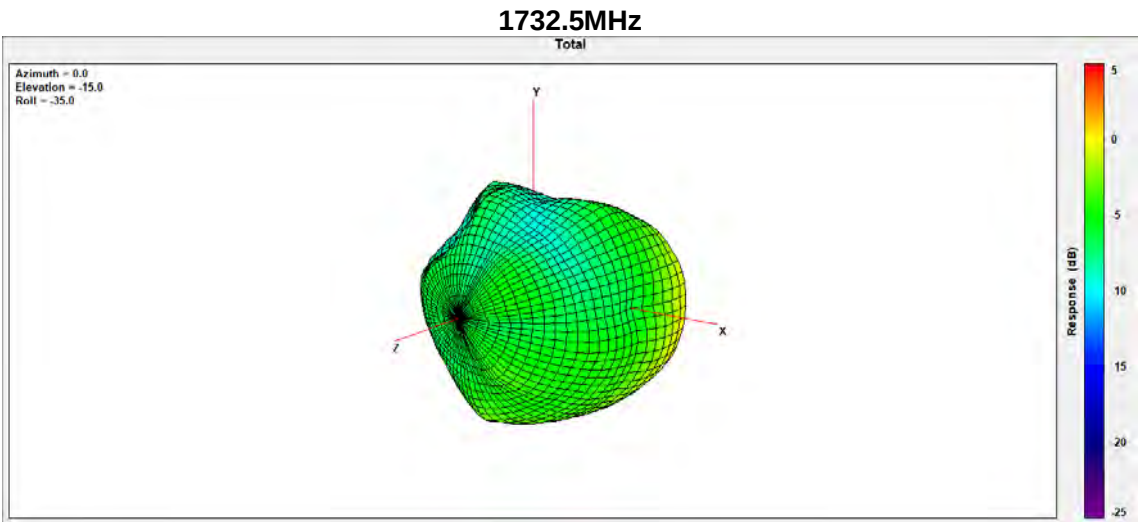


5925MHz	H (Peak)	V (Peak)
	-3.99	-3.74

MIMO2 Antenna(Tx2/Rx2)



1710MHz	H (Peak)	V (Peak)
	0.38	-1.91



1732.5MHz	H (Peak)	V (Peak)
	0.67	-1.48