

SX5 Antenna Report

Item	Description
Model Name	SX5
Test Engineer	Peter Chou
Manufacturer	FIH Mobile Limited
Manufacturer Address	No. 4, Minsheng St., Tucheng Dist., New Taipei City , Taiwan (R.O.C.)
Test Environment	ETS-Lindgren AMS-8500 Antenna Measurement System
Test Equipment	Keysight E5071C (SER: MY46631936)
Test Software	ETS-Lindgren EMQuest Data Acquisition and Analysis Software V1.12 build 1470
Calibration date	Feb. 02 2025
Calibration due date	Feb. 02 2026
Test date	Feb. 13 2025 ~ Feb. 27 2025
Test Temperature / Humidity	21 °C / 45%
Chamber name	FIH Antenna Chamber-02
Chamber address	No. 4, Minsheng St., Tucheng Dist., New Taipei City , Taiwan (R.O.C.)

Outline

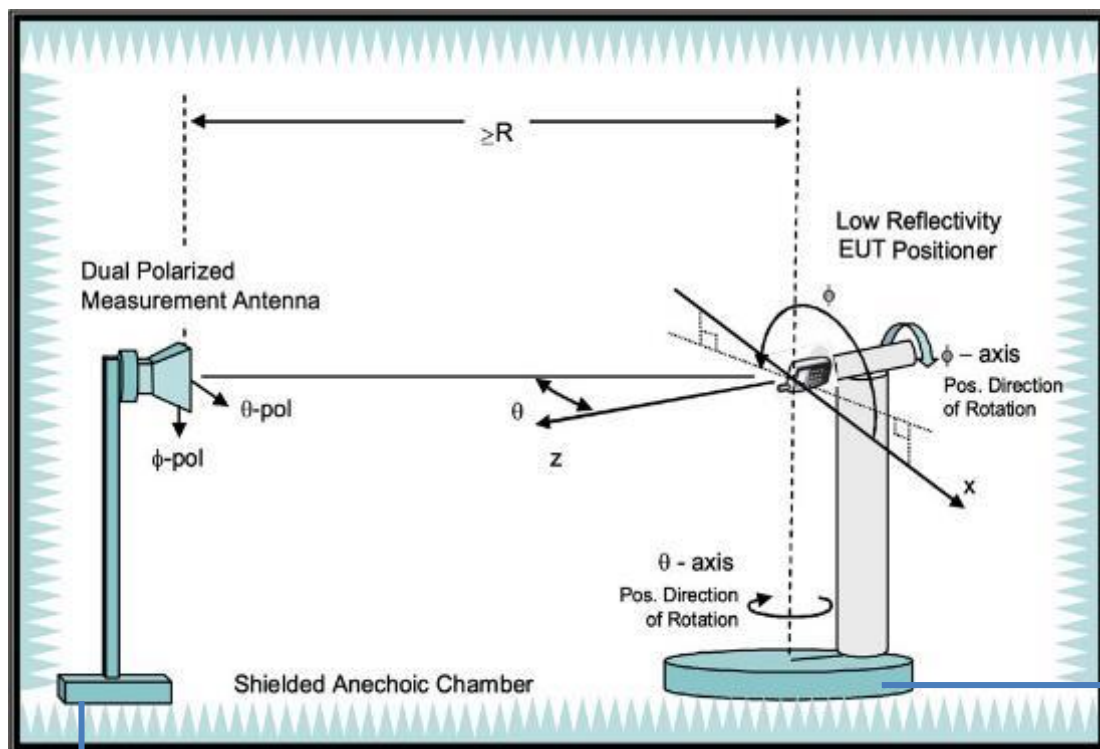
1. Test Method
2. Test Setup
3. Antenna Placement
4. Antenna Gain
5. Radiation pattern
6. Calibration Information

1. Test Method

The antenna gains are obtained through measurements in a fully anechoic OTA chamber ([ETS-Lindgren AMS-8500](#)) with a 3D positioner.

Measurements are taken in discreet steps in theta and phi direction, data is being recorded using the spectrum analyzer (active) or network analyzer (passive) for both theta and phi polarizations at each position resulting in a 3D gain pattern. Step size is <30deg along both axes.

Gain is either derived directly through spatial averaging of VNA S21 measurements (passive measurement) or by the ratio of spatial averaging of 3D EIRP/TRP measurements vs the conducted power (active measurement).



SER: MY46631936



4. Antenna Gain

ANT0

Type: Monopole

Main ANT 0

	Status 1	Status 2	Status 3	Status 4	Status 5
Frequency (MHz)	peak gain (dBi)	peak gain (dBi)	peak gain (dBi)	peak gain (dBi)	peak gain (dBi)
600					
620					
640					
660					
680					
703	-7.75				
710	-6.27				
720	-5.38				
730	-3.84	-4.46			
740	-3.30	-4.25			
750	-2.55	-3.39			
760	-2.38	-2.56			
770	-2.73	-2.29			
780	-3.98	-3.18			
790	-5.11	-3.94			
804	-6.07	-5.10	-5.00		
810	-6.41	-5.16	-4.94		
820			-4.82		
830			-4.60	-5.70	
840			-4.18	-4.64	
850			-4.43	-4.15	
860			-4.74	-3.95	
870			-4.67	-3.32	
880			-5.68	-4.16	-3.50
890			-6.62	-4.93	-3.42
900					-4.03
910					-4.24
920					-4.66
930					-5.62
940					-5.91
950					-6.32
960					-7.03
980					
1000					

3200	-4.32
3250	-3.32
3300	-2.13
3350	-1.76
3400	0.45
3450	-0.31
3500	-0.95
3550	-0.68
3600	-1.32
3650	-1.57
3700	-1.26
3750	-1.39
3800	-1.38
3850	-1.66
3900	-0.91
4000	-0.71
4020	0.11
4040	-0.02
4060	-0.21
4080	-0.15
4100	-0.48
4120	0.13
4140	-0.04
4160	-0.44
4180	-1.05
4200	-1.83
4220	-1.38
4240	-1.23
4260	-1.01
4280	-0.62
4300	-1.32
4320	-0.58
4340	-0.36
4360	-0.45
4380	-0.18
4400	-1.00

4420	-1.34
4440	-1.33
4460	-1.24
4480	-0.14
4500	-1.51
4520	-1.81
4540	-2.84
4560	-2.93
4580	-1.88
4600	-1.88
4620	-2.32
4640	-4.36
4660	-4.63
4680	-4.65
4700	-2.24
4720	-1.67
4740	-0.77
4760	-2.93
4780	-3.14
4800	-3.84
4820	-3.54
4840	-2.17
4860	-2.59
4880	-2.76
4900	-3.33
4920	-3.49
4940	-4.18
4960	-3.58
4980	-2.77
5000	-2.95
5020	-2.24
5040	-2.31
5060	-2.20
5080	-2.67
5100	-2.46

Main ANT 1	
Frequency (MHz)	peak gain (dBi)
1690	-1.97
1710	-2.30
1725	-2.09
1740	-1.38
1755	-0.60
1770	-0.32
1785	-0.77
1800	-1.05
1815	-0.91
1830	-1.22
1845	-1.48
1860	-1.12
1875	-1.17
1890	-1.40
1905	-1.74
1920	-2.05
1935	-2.05
1950	-2.19
1965	-2.26
1980	-1.95
1990	-2.08
2010	-1.79
2030	-1.11
2050	-1.93
2070	-1.63
2090	-2.32

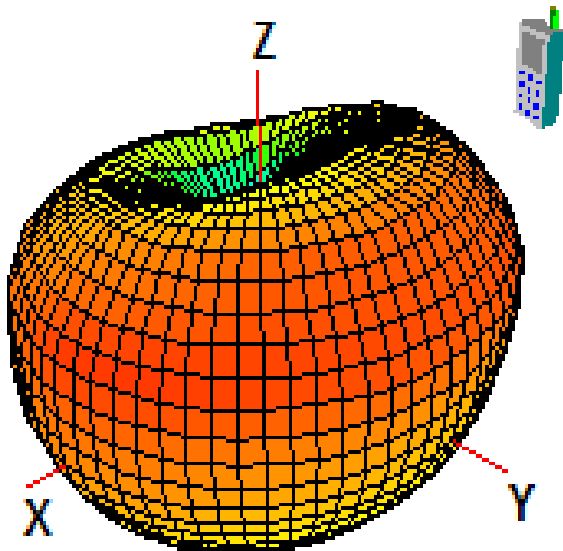
2110	-3.22
2120	-3.13
2130	-3.32
2140	-3.62
2150	-3.54
2160	-3.60
2170	-3.60
2200	-3.15
2240	-3.37
2280	-2.98
2300	-2.96
2320	-3.47
2340	-4.03
2360	-4.86
2380	-4.68
2400	-3.95
2420	-3.38
2440	-3.14
2460	-2.98
2480	-3.22
2500	-2.97
2520	-2.05
2540	-1.47
2560	-0.71
2580	-1.02
2600	-2.18
2620	-3.30
2640	-3.12
2660	-2.72
2680	-2.31
2690	-1.91
2720	-2.14
2740	-3.29
2760	-3.99
2780	-3.96
2800	-4.13

Main ANT 2					
Frequency (MHz)	peak gain (dBi)	peak gain (dBi)	peak gain (dBi)	peak gain (dBi)	peak gain (dBi)
600					
620					
640					
660					
680					
703	-16.20	-16.81			
710	-14.95	-15.62			
720	-14.81	-15.67			
730	-13.01	-13.99			
740	-11.38	-12.56			
750	-9.78	-11.07			
760	-8.36	-9.75			
770	-6.94	-8.02			
780	-7.20	-7.63			
790	-8.11	-7.28			
804	-10.58	-9.04			
810			-14.18		
820			-12.59		
830			-10.69	-14.15	
840			-9.51	-13.21	
850			-7.64	-11.23	
860			-6.63	-9.15	
870			-6.22	-7.19	
880			-8.08	-6.52	-16.33
890				-6.73	-15.38
900					-14.85
910					-12.88
920					-10.72
930					-9.13
940					-8.12
950					-6.82
960					-6.51

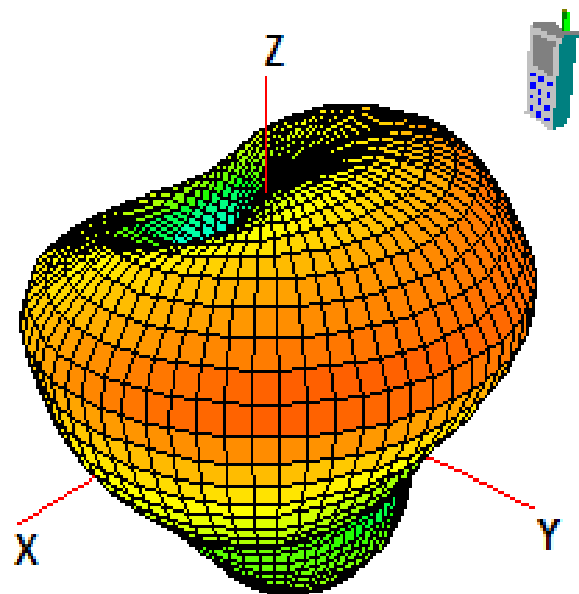
Main ANT 4	
Frequency (MHz)	peak gain (dBi)
2400	-3.58
2410	-3.49
2420	-3.19
2430	-3.04
2440	-2.85
2450	-2.53
2460	-2.51
2470	-2.68
2480	-2.82
2490	-2.79
2500	-3.18
5150	0.74
5175	0.58
5200	0.45
5225	0.43
5250	0.03
5275	0.13
5300	0.28
5325	0.77
5350	0.79
5375	0.88
5400	0.96
5425	1.21
5450	1.15
5475	1.38
5500	1.69
5525	2.17
5550	2.38
5575	2.47
5600	1.90
5625	1.77
5650	1.60
5675	1.42
5700	1.70
5725	1.11
5750	0.66
5775	0.70
5800	1.19
5825	1.08
5850	0.85
5875	0.12
5900	-0.43

5. Radiation pattern

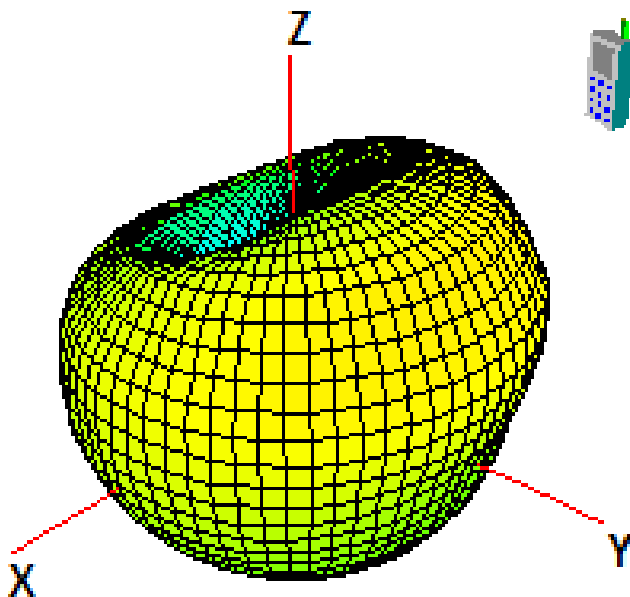
730MHz ANT0



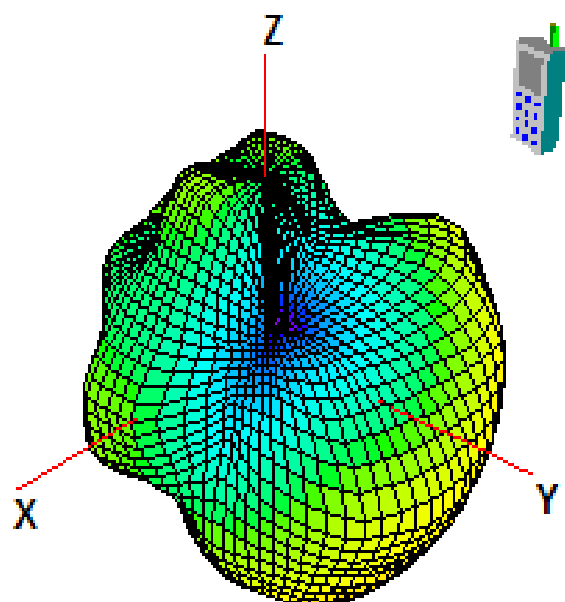
900MHz ANT0



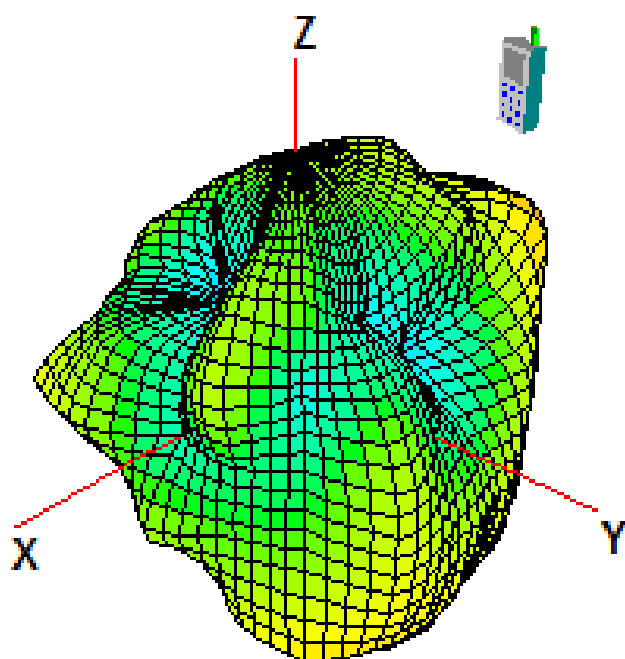
850MHz ANT0



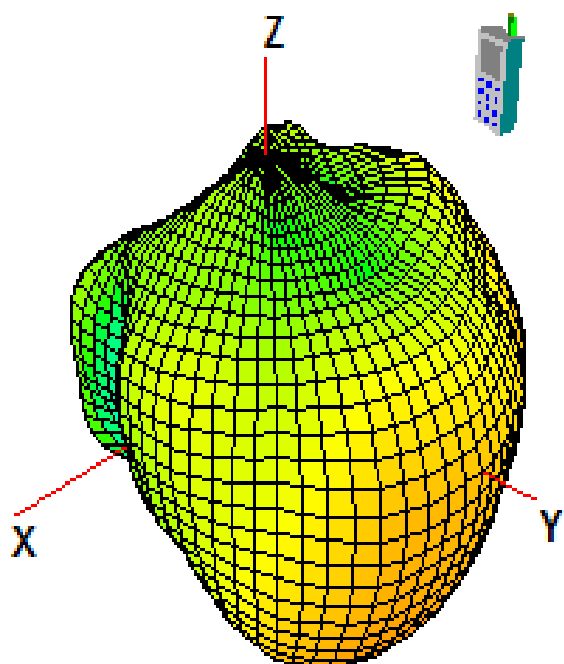
3500MHz ANT0



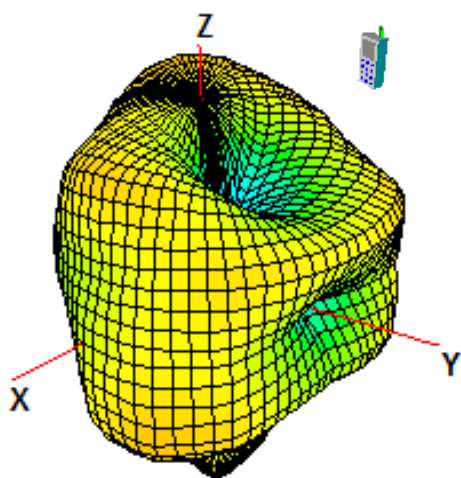
4500MHz ANT0



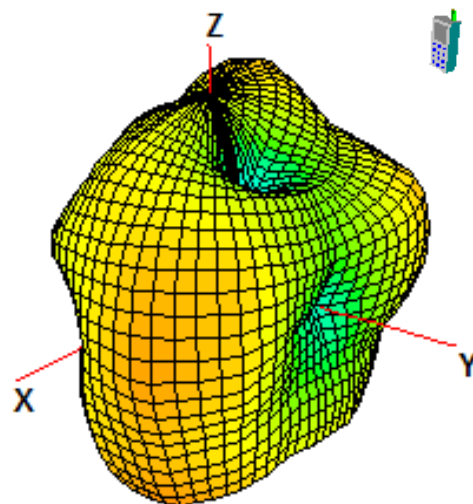
4000MHz ANT0



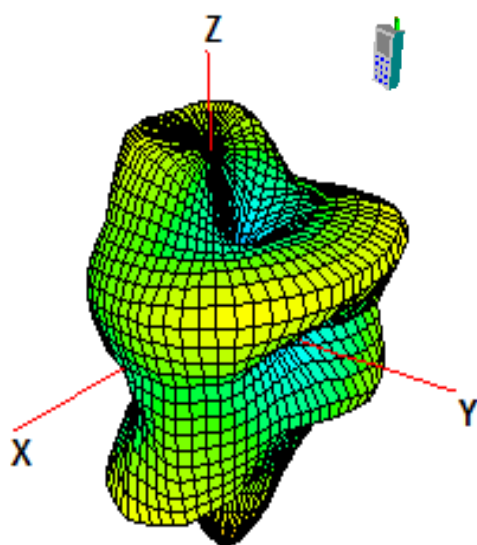
1755MHz ANT1



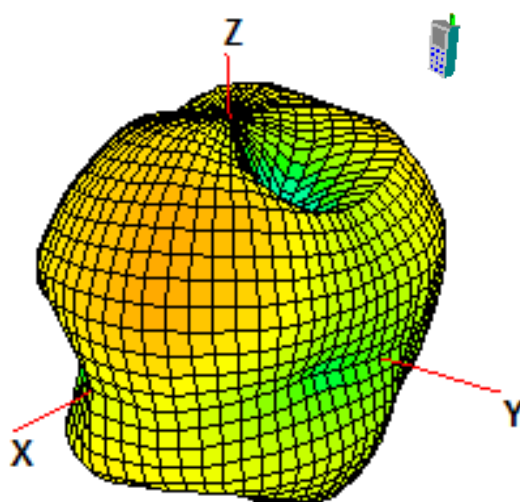
2350MHz ANT1



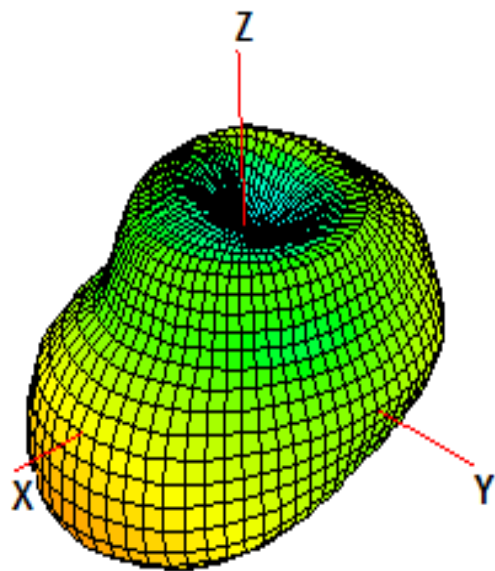
1950MHz ANT1



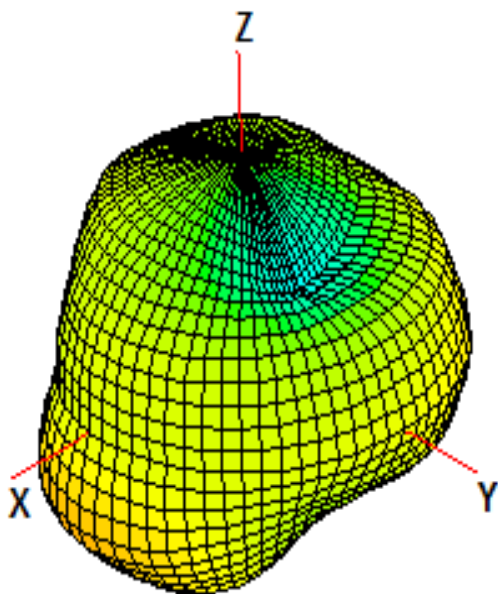
2600MHz ANT1



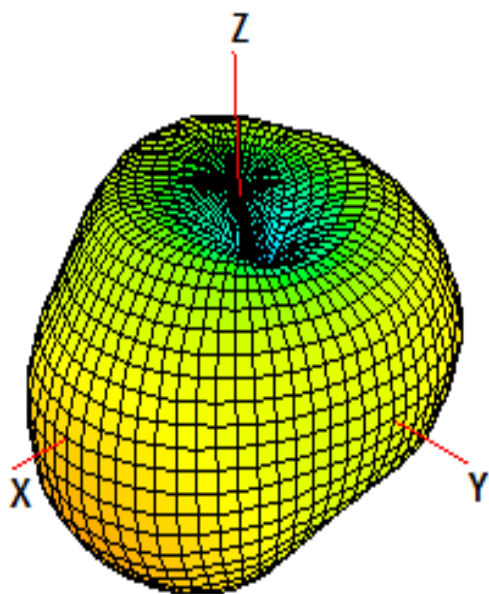
730MHz ANT2



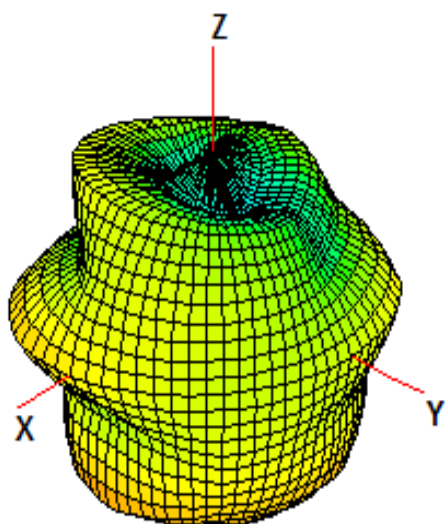
900MHz ANT2



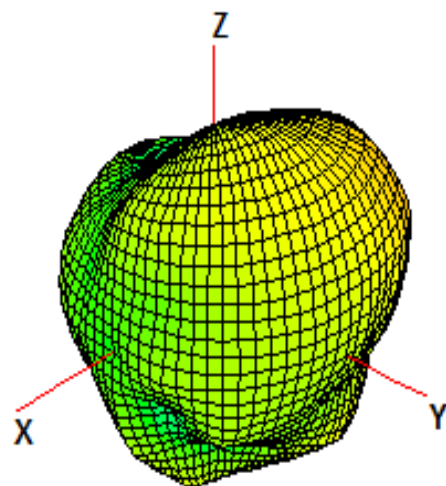
850MHz ANT2



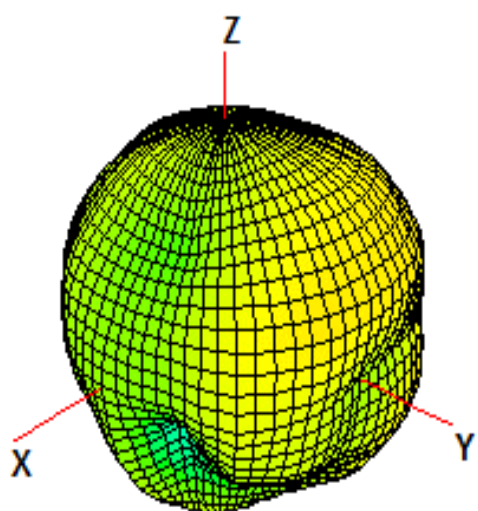
2450MHz ANT4



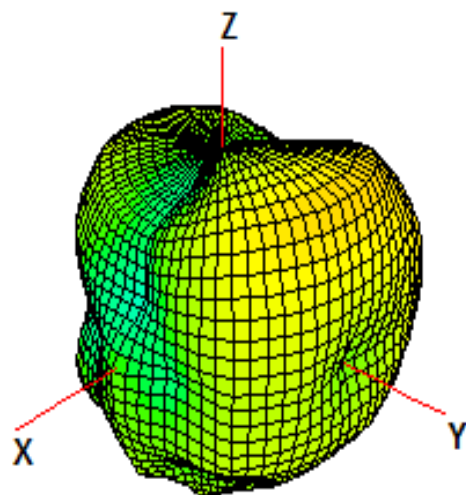
5500MHz ANT4



5150MHz ANT4



5850MHz ANT4



Calibration Information

Chamber No.	Standard Cal. ANT	Frequency Range(MHz)	VNA	Chamber System	Cal. Date	Cal. Enginnear
FIH-02	Precision Sleeve Dipole	600 -700	Keysight E5071C (SER: MY46631936)	ETS-Lindgren AMS-8500	Feb.02 2025	PeterCHChen
FIH-02	Precision Sleeve Dipole	700 -800	Keysight E5071C (SER: MY46631936)	ETS-Lindgren AMS-8500	Feb.02 2025	PeterCHChen
FIH-02	Precision Sleeve Dipole	800 -980	Keysight E5071C (SER: MY46631936)	ETS-Lindgren AMS-8500	Feb.02 2025	PeterCHChen
FIH-02	Precision Sleeve Dipole	1400-1600	Keysight E5071C (SER: MY46631936)	ETS-Lindgren AMS-8500	Feb.02 2025	PeterCHChen
FIH-02	Precision Sleeve Dipole	1600-2200	Keysight E5071C (SER: MY46631936)	ETS-Lindgren AMS-8500	Feb.02 2025	PeterCHChen
FIH-02	Precision Sleeve Dipole	2200-2695	Keysight E5071C (SER: MY46631936)	ETS-Lindgren AMS-8500	Feb.02 2025	PeterCHChen
FIH-02	Precision Sleeve Dipole	3000-5000	Keysight E5071C (SER: MY46631936)	ETS-Lindgren AMS-8500	Feb.02 2025	PeterCHChen
FIH-02	Precision Sleeve Dipole	5000-5806	Keysight E5071C (SER: MY46631936)	ETS-Lindgren AMS-8500	Feb.02 2025	PeterCHChen



FIH Chamber02
cal