

Antenna Composite Gain Test Report

1. Test Information

Equipment	Campus Access Points
Brand Name	Aruba
Model Name	AP615
Applicant	Aruba
Manufacturer	Aruba

2. Testing Location

Testing Location	
WNC	ADD : 20 Park Ave. II, Hsinchu Science Park, Hsinchu 308 Taiwan

Test Condition	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	Lucien Hsieh	20-24 / 45-60	08.23.2021~09.06.2021

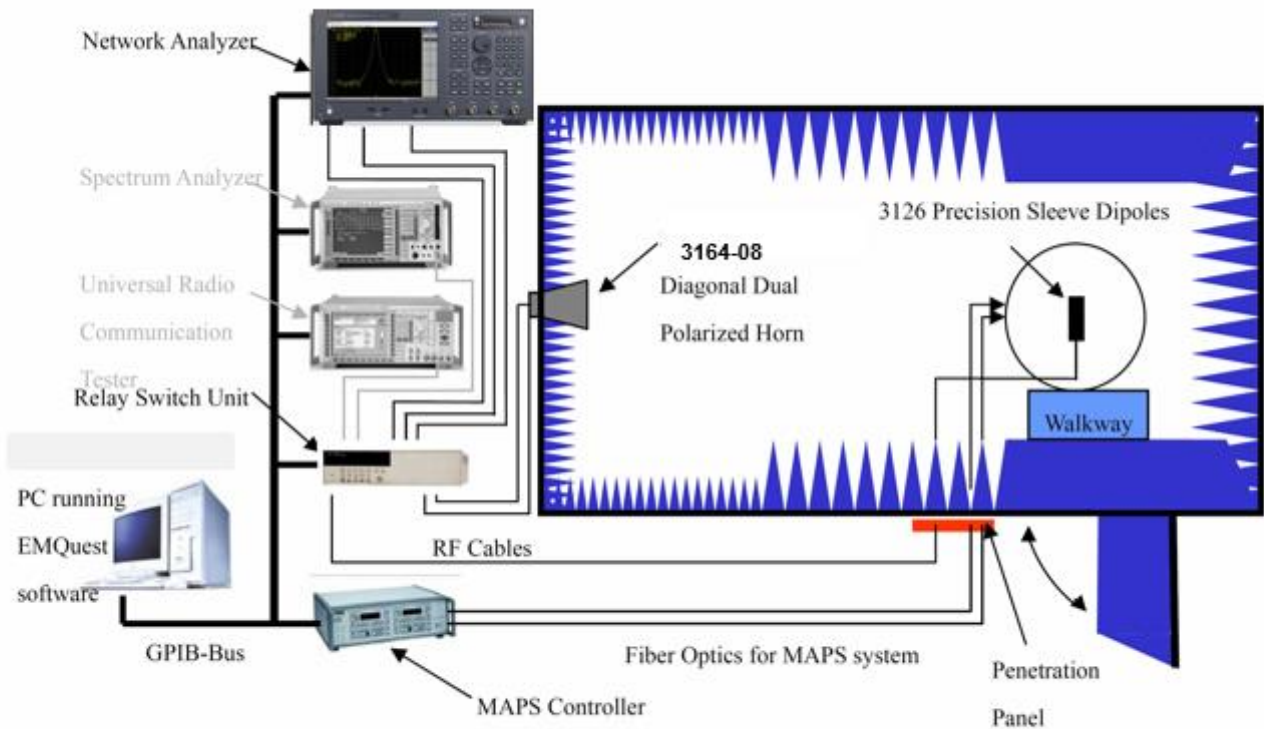
3. Test Frequency

Band (MHz)	Test Frequency (MHz)
1560-1590	1575
2400-2480	2450
5150-5250	5150
5470-5725	5550
5725-5850	5850
5925-6425	5925
6425-6525	6500
6875-7125	7000

4. Antenna Information

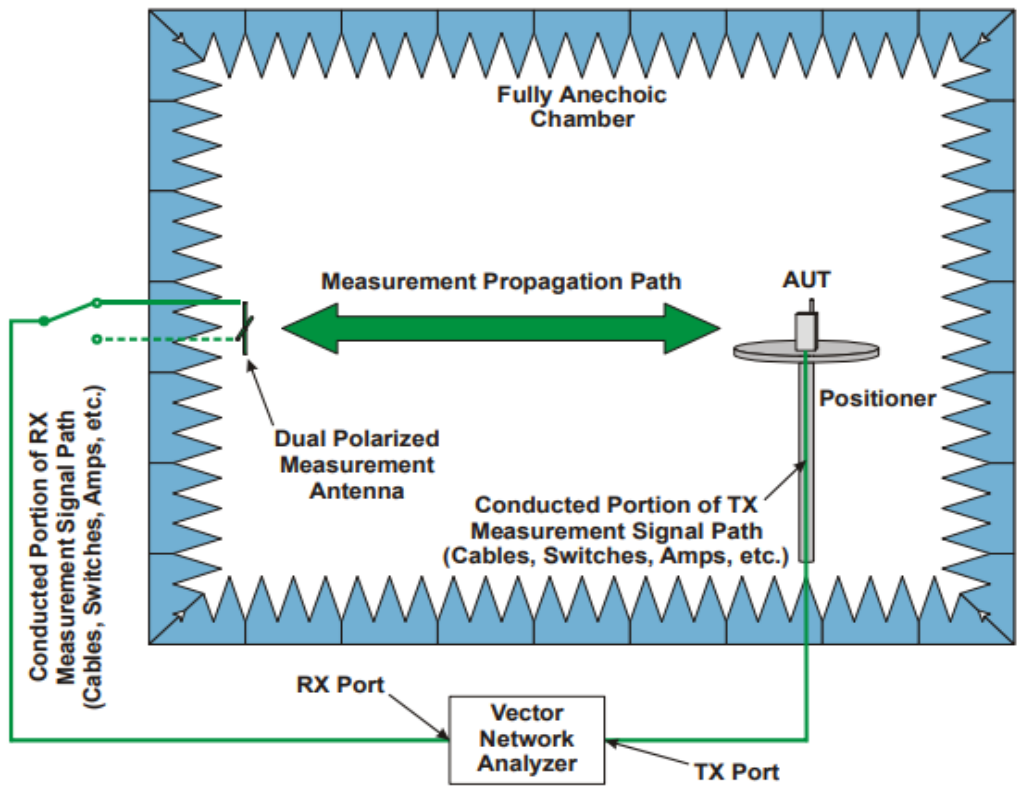
Ant. Position	Brand Name	Model Name	Ant. Type	Connector
Antenna 1 (2G/5G)	Aruba	95XKAN15.G92	PIFA	I-PEX
Antenna 2 (2G/5G)	Aruba	95XKAN15.G93	PIFA	I-PEX
Antenna 3 (2G/6G)	Aruba	95XKAN15.G94	PIFA	I-PEX
Antenna 4 (2G/6G)	Aruba	95XKAN15.G95	PIFA	I-PEX
Antenna 5 (BLE)	Aruba	95XKAN15.G96	PIFA	I-PEX
Antenna 6 (GPS)	Aruba	95XKAN15.G97	PIFA	I-PEX

5. Test Configuration



6. Reference Calibration

Range Calibration Configuration (Passive)



7. Test Method

The “great circle” cut method, whereby the Measurement Antenna remains fixed and the EUT is rotated about two axes in sequential order. The radiated RF performance of the Equipment Under Test (EUT) is measured by sampling the radiated transmit power of the mobile at various locations surrounding the device. A three-dimensional characterization of the 'transmit' performance of the EUT is pieced together by analyzing the data from the spatially distributed measurements.

Data points taken every 15 degrees in the theta and in the phi axes are deemed sufficient to fully characterize the EUT's Far-Field radiation pattern and total radiated power. All of the measured power values will be integrated.

8. Measured Values and Calculation of Correlated / Uncorrelated Gains

Antenna Peak Gain Table (Ant. Position : 2G/5G Ant.1~2)

Band (MHz)	2400-2480
Frequency (MHz)	2450
Ant.1 Max Gain (dBi)	1.7
Ant.2 Max Gain (dBi)	1.0
Max Gain (dBi)	1.7

Band (MHz)	5150-5470	5470-5725	5725-5850
Frequency (MHz)	5150	5550	5850
Ant.1 Max Gain (dBi)	4.4	3.9	4.5
Ant.2 Max Gain (dBi)	4.0	4.3	3.8
Max Gain (dBi)	4.4	4.3	4.5

Antenna Peak Gain Table (Ant. Position : 2G/6G Ant.3~4)

Band (MHz)	2400-2480
Frequency (MHz)	2450
Ant.3 Max Gain (dBi)	1.6
Ant.4 Max Gain (dBi)	2.8
Max Gain (dBi)	2.8

Band (MHz)	5925-6425	6425-6525	6525-7125
Frequency (MHz)	5925	6500	7000
Ant.3 Max Gain (dBi)	3.9	3.6	4.3
Ant.4 Max Gain (dBi)	3.4	3.6	4.0
Max Gain (dBi)	3.9	3.6	4.3

Antenna Peak Gain Table (Ant. Position : BLE Ant.5)

Band (MHz)	2400-2480
Frequency (MHz)	2450
Ant.5 Max Gain (dBi)	2.6

Antenna Peak Gain Table (Ant. Position : GPS Ant.6)

Band (MHz)	1560-1590
Frequency (MHz)	1575
Ant.6 Max Gain (dBi)	2.3

Antenna Correlated / Uncorrelated Gain Table (Ant. Position : 2G/5G Ant.1~2)

Frequency (MHz)	Correlated Gain (dBi)	Uncorrelated Gain (dBi)
2450	3.5	0.6
5150	5.7	2.9
5550	6.7	3.7
5850	6.8	3.8

Antenna Correlated / Uncorrelated Gain Table (Ant. Position : 2G/6G Ant.3~4)

Frequency (MHz)	Correlated Gain (dBi)	Uncorrelated Gain (dBi)
2450	5.0	2.0
5925	5.9	2.9
6500	6.0	3.0
7000	6.4	3.5

Because the antennas are fixed in location within the device the directional antenna gain for MIMO is calculated over a sphere using the raw spatial data taken at 5 degree steps of theta and phi for each antenna using the equations from KDB 662911 D01. The raw antenna data is located in the appendix of this report.

The correlated antenna gain was calculated using KDB 662611 D01, F(2)(d)(i). The uncorrelated antenna gain was calculated using KDB 662911 D01, F(2)(d)(ii).

The uncorrelated and correlated gains were calculated for each point in the spatial data, and the highest values reported.

Note :

KDB 662611 D01, F(2)(d)(i)

$$\text{Correlated Gain} = 10 \log \left[\left(10^{\frac{G_1}{20}} + 10^{\frac{G_2}{20}} + \dots + 10^{\frac{G_n}{20}} \right)^2 / N_{Ant.} \right] \text{ dBi}$$

KDB 662611 D01, F(2)(d)(ii)

$$\text{Uncorrelated Gain} = 10 \log \left[\left(10^{\frac{G_1}{10}} + 10^{\frac{G_2}{10}} + \dots + 10^{\frac{G_n}{10}} \right) / N_{Ant.} \right] \text{ dBi}$$

$N_{Ant.}$: Number of antenna

G_n : Gain of antenna

Maximum Correlated / Uncorrelated Gain Calculation

(Ant. Position : 2G/5G Ant.1~2)

Frequency (MHz)	2450	5850
Ant.1 Gain (dBi)	1.49	4.15
Ant.2 Gain (dBi)	-0.66	3.40
Phi (°)	205	35
Theta(°)	50	50
Corr. Ant. Gain (dBi) [10 ^{^(G₁/20)} +10 ^{^(G₂/20)}] ² /N _{ANT.}	2.23	4.78
Uncor. Ant. Gain (dBi) [10 ^{^(G₁/10)} +10 ^{^(G₂/10)}]/N _{ANT.}	1.13	2.40
Corr. Gain (dBi) 10*log(Corr. Ant. Gain)	3.5	6.8
Uncor. Gain (dBi) 10*log(Uncor. Ant. Gain)	0.6	3.8

(Ant. Position : 2G/6G Ant.3~4)

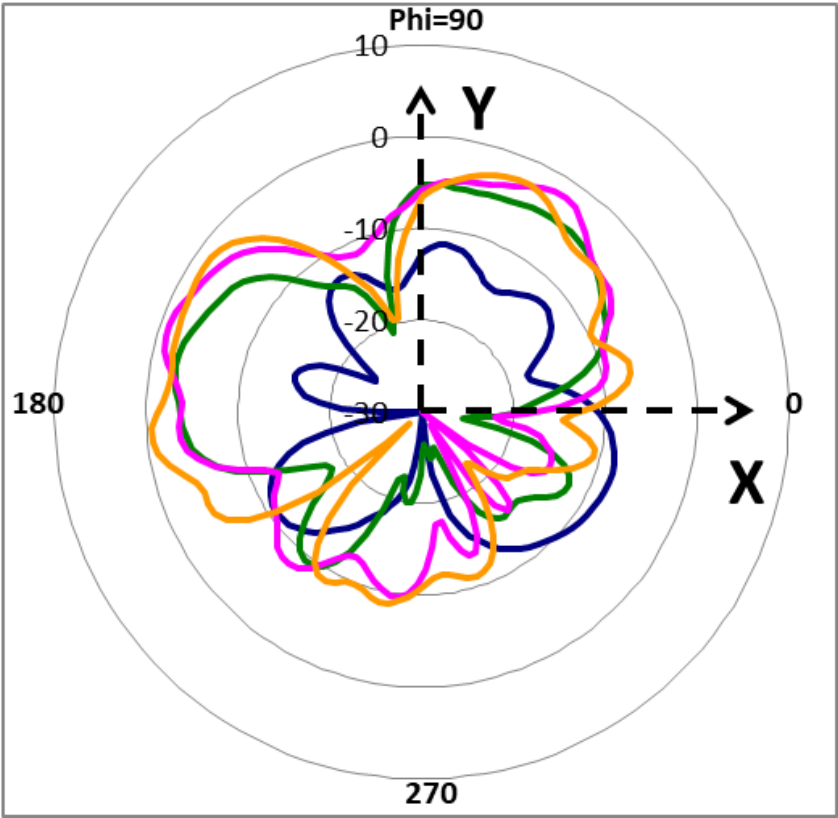
Frequency (MHz)	2450	7000
Ant.3 Gain (dBi)	1.24	4.12
Ant.4 Gain (dBi)	2.66	2.67
Phi (°)	110	145
Theta(°)	55	60
Corr. Ant. Gain (dBi) [10 ^{^(G₁/20)} +10 ^{^(G₂/20)}] ² /N _{ANT.}	3.16	4.40
Uncor. Ant. Gain (dBi) [10 ^{^(G₁/10)} +10 ^{^(G₂/10)}]/N _{ANT.}	1.59	2.22
Corr. Gain (dBi) 10*log(Corr. Ant. Gain)	5.0	6.4
Uncor. Gain (dBi) 10*log(Uncor. Ant. Gain)	2.0	3.5

Note : Antenna gain is the correlated / uncorrelated gain position in the appendix gain table.

10. Radiation Pattern

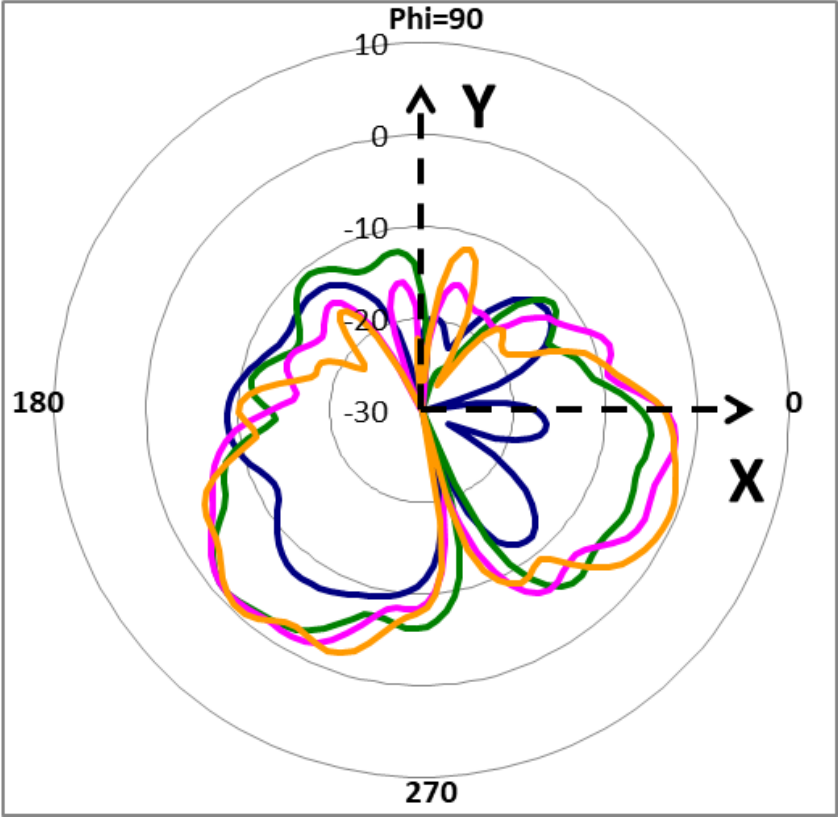
Ant. Position : 2G/5G Ant.1~2

XY_Pol._Phi_Ant.1



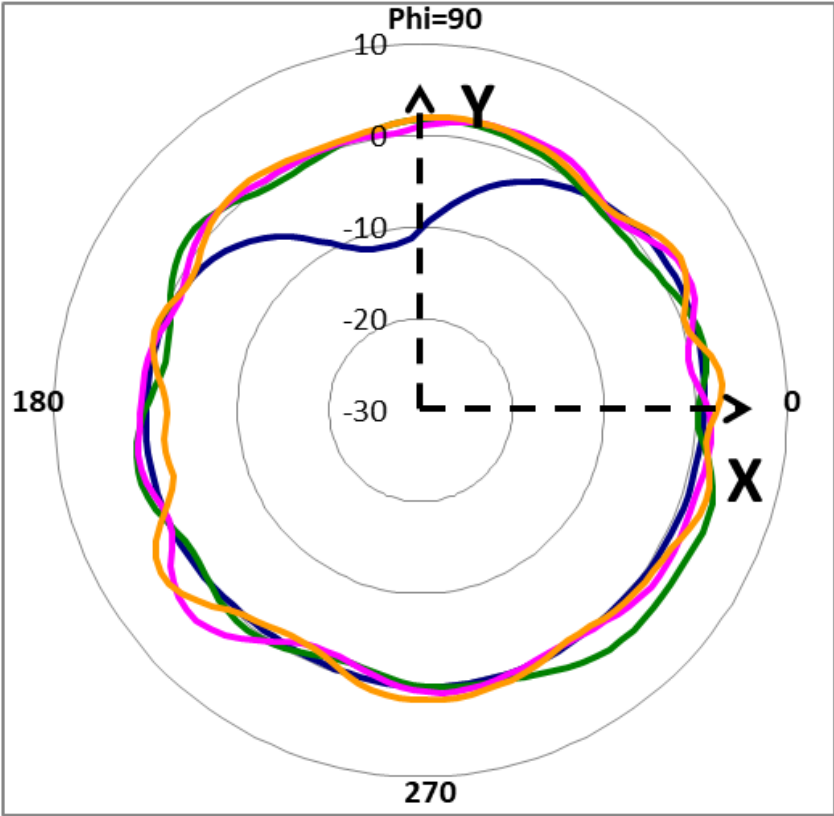
- 2450 MHz_Gain_-8.23
- 5150 MHz_Gain_-2.79
- 5550 MHz_Gain_-0.94
- 5850 MHz_Gain_-0.48

XY_Pol._Phi_Ant.2



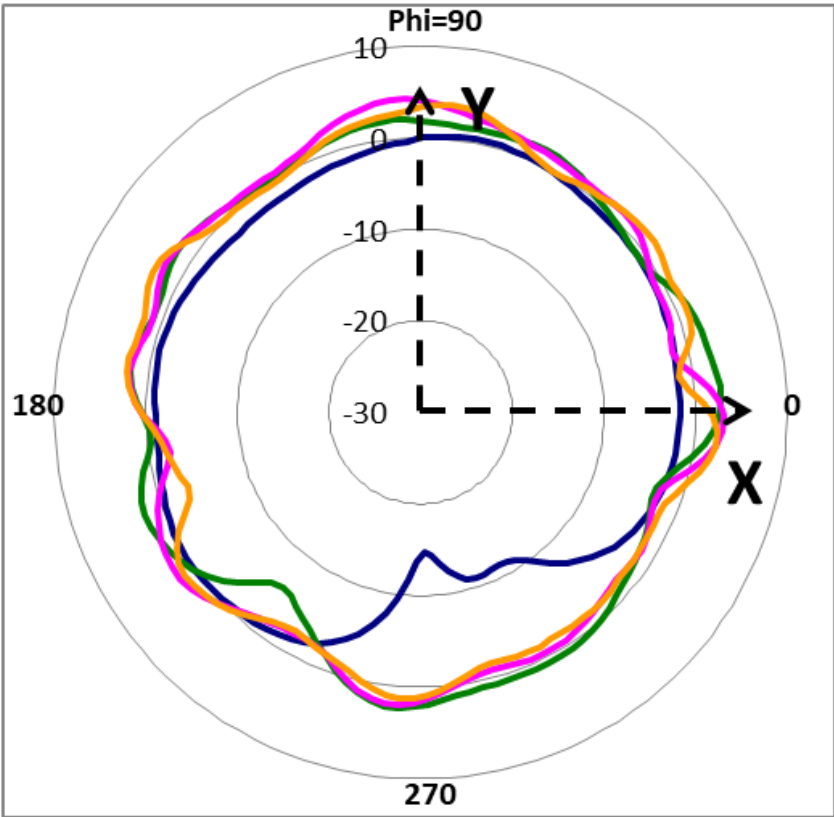
- 2450 MHz_Gain_-7.47
- 5150 MHz_Gain_-1.04
- 5550 MHz_Gain_-0.95
- 5850 MHz_Gain_-0.59

XY_Pol._Theta_Ant.1



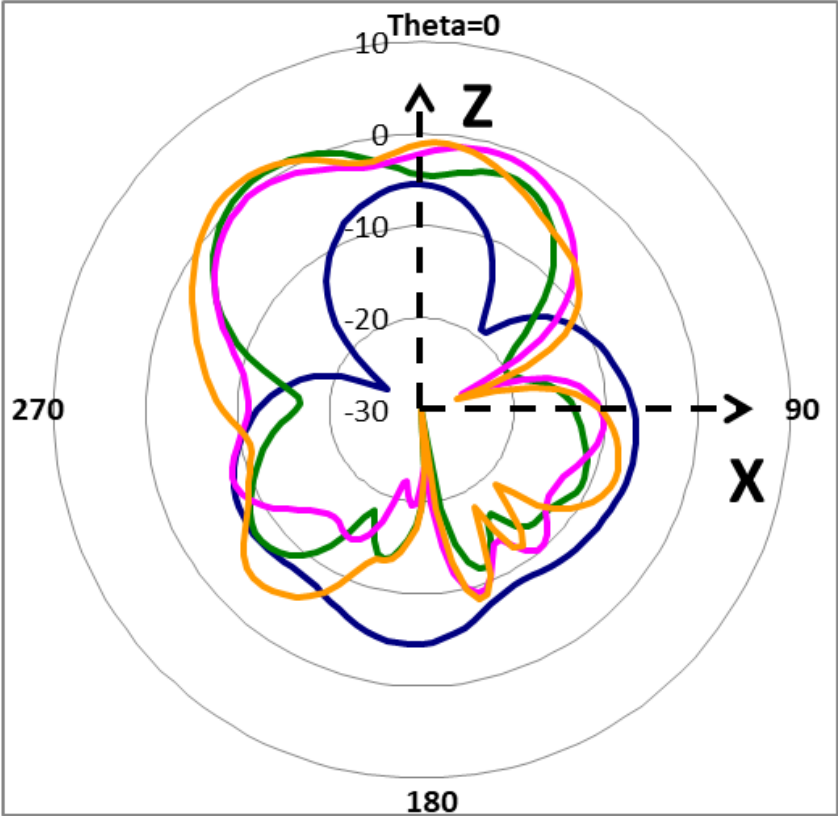
- 2450 MHz_Gain_1.37
- 5150 MHz_Gain_3.53
- 5550 MHz_Gain_3.62
- 5850 MHz_Gain_3.47

XY_Pol._Theta_Ant.2



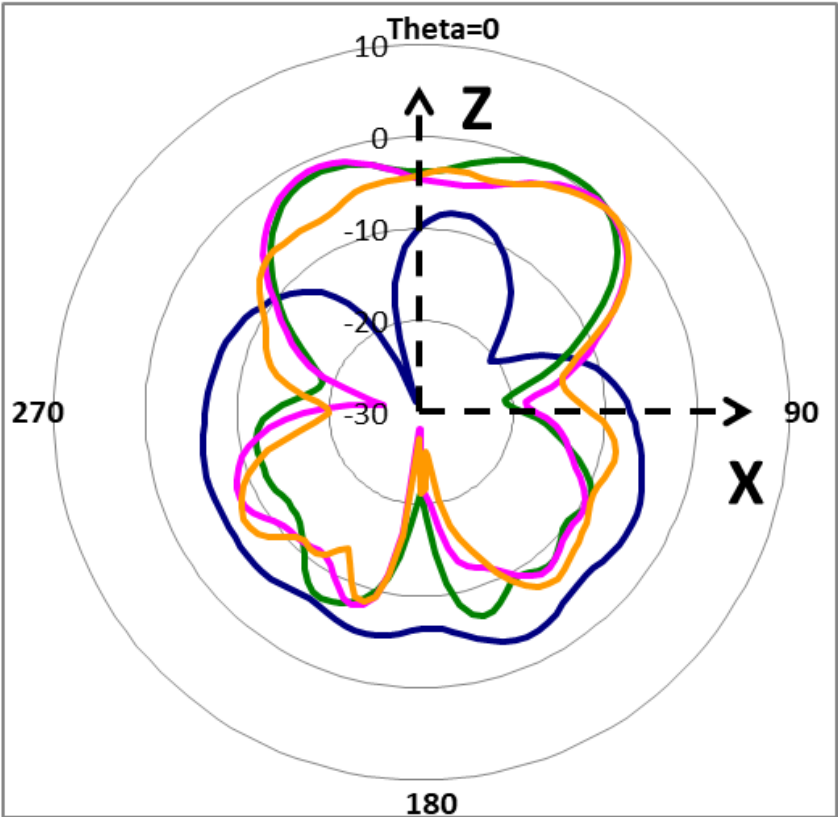
- 2450 MHz_Gain_0.44
- 5150 MHz_Gain_2.80
- 5550 MHz_Gain_4.24
- 5850 MHz_Gain_3.69

XZ_Pol._Phi_Ant.1



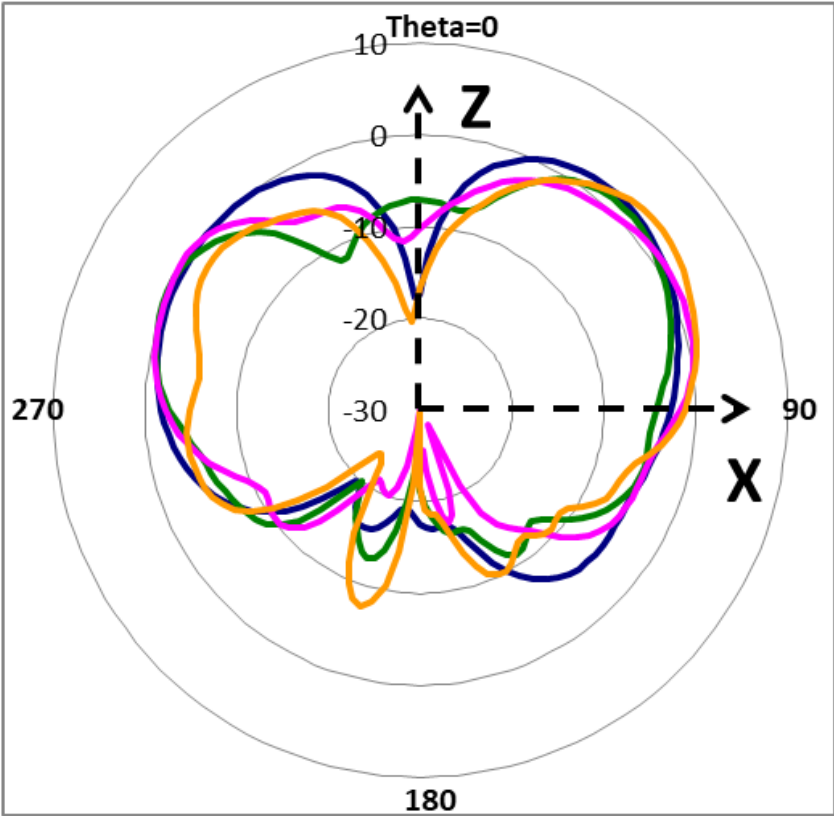
- 2450 MHz_Gain_-4.51
- 5150 MHz_Gain_0.99
- 5550 MHz_Gain_-0.17
- 5850 MHz_Gain_1.67

XZ_Pol._Phi_Ant.2



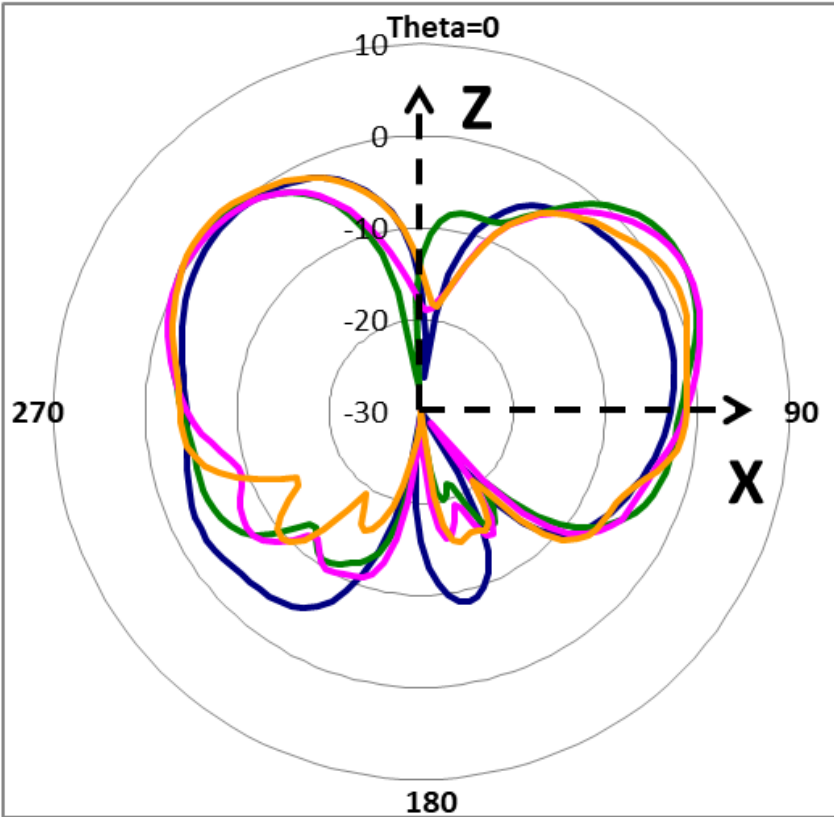
- 2450 MHz_Gain_-3.03
- 5150 MHz_Gain_0.53
- 5550 MHz_Gain_-0.01
- 5850 MHz_Gain_-0.13

XZ_Pol._Theta_Ant.1



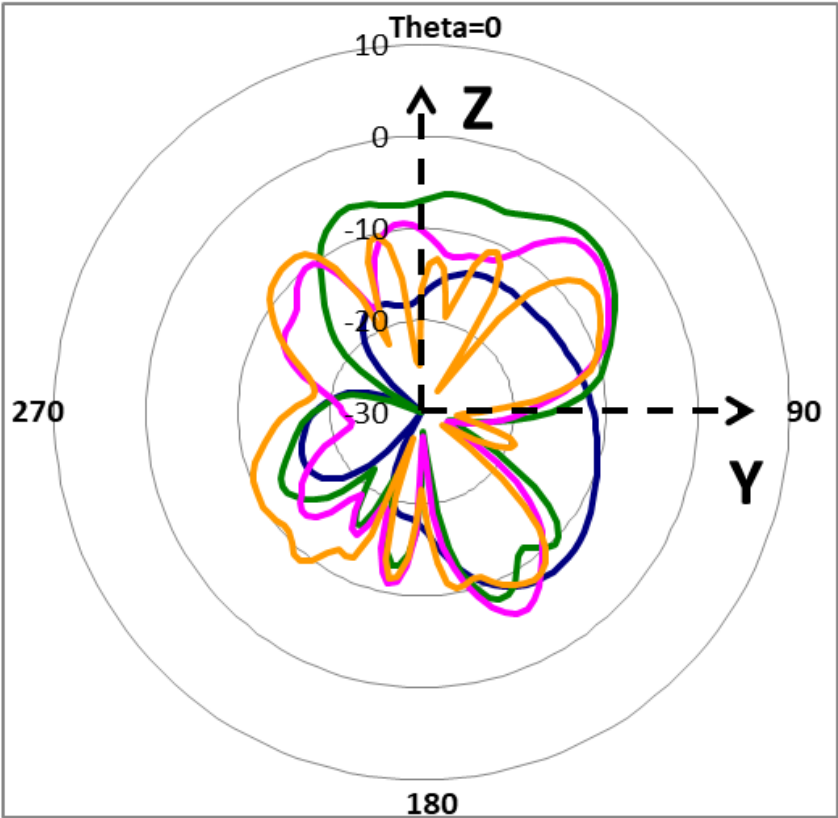
- 2450 MHz_Gain_1.83
- 5150 MHz_Gain_1.28
- 5550 MHz_Gain_1.05
- 5850 MHz_Gain_2.98

XZ_Pol._Theta_Ant.2



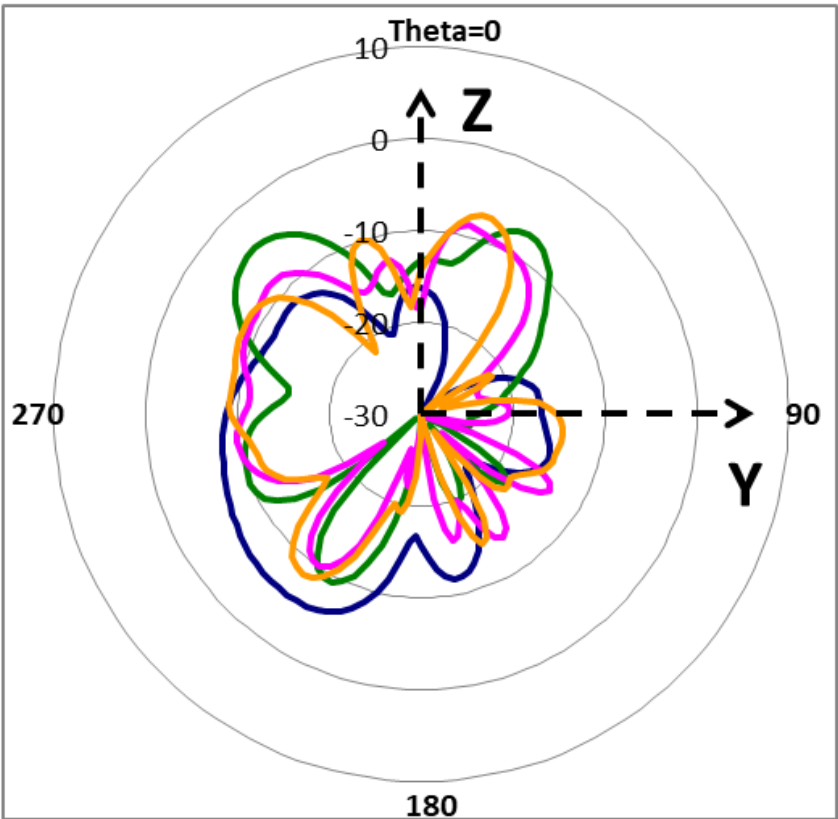
- 2450 MHz_Gain_-0.45
- 5150 MHz_Gain_2.80
- 5550 MHz_Gain_2.70
- 5850 MHz_Gain_1.03

YZ_Pol._Phi_Ant.1



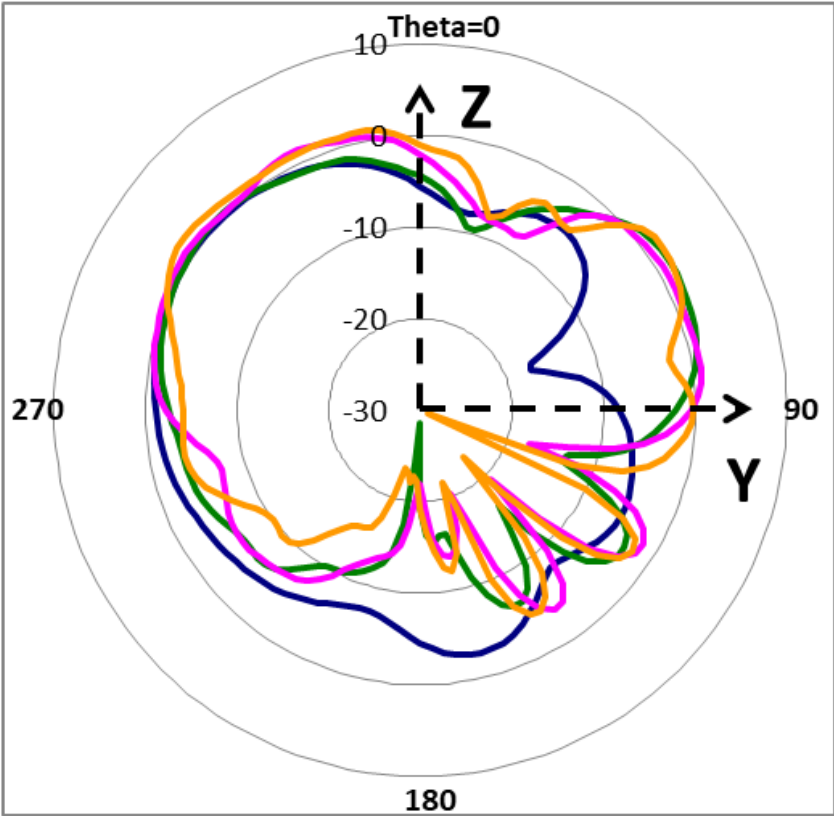
- 2450 MHz_Gain_-7.51
- 5150 MHz_Gain_-3.71
- 5550 MHz_Gain_-4.66
- 5850 MHz_Gain_-7.17

YZ_Pol._Phi_Ant.2



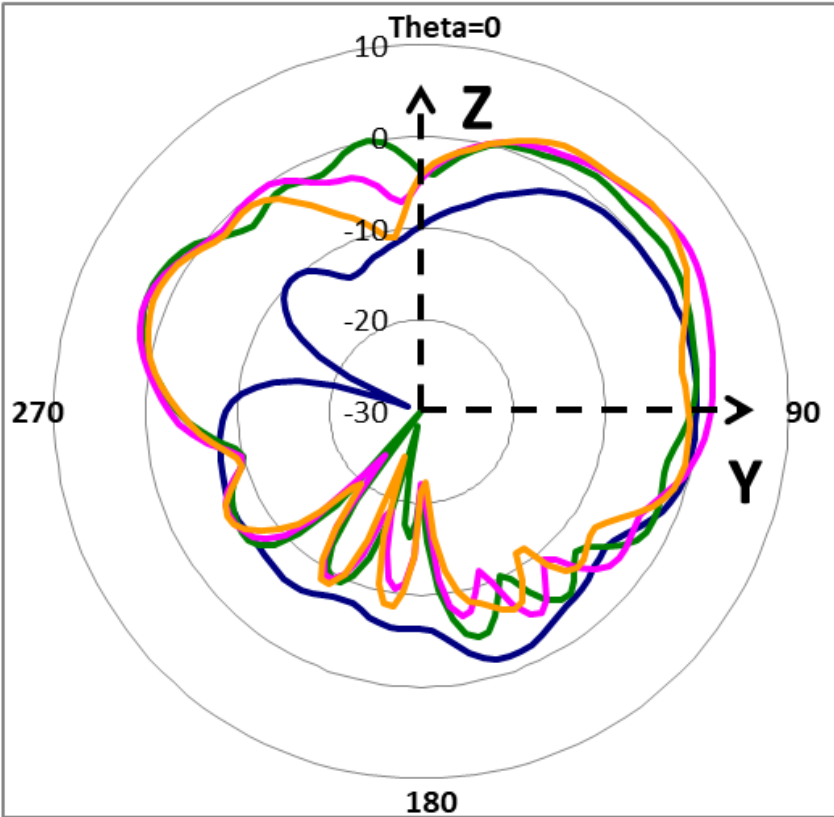
- 2450 MHz_Gain_-5.50
- 5150 MHz_Gain_-4.33
- 5550 MHz_Gain_-8.38
- 5850 MHz_Gain_-7.38

YZ_Pol._Theta_Ant.1



- 2450 MHz_Gain_0.25
- 5150 MHz_Gain_1.73
- 5550 MHz_Gain_1.41
- 5850 MHz_Gain_1.96

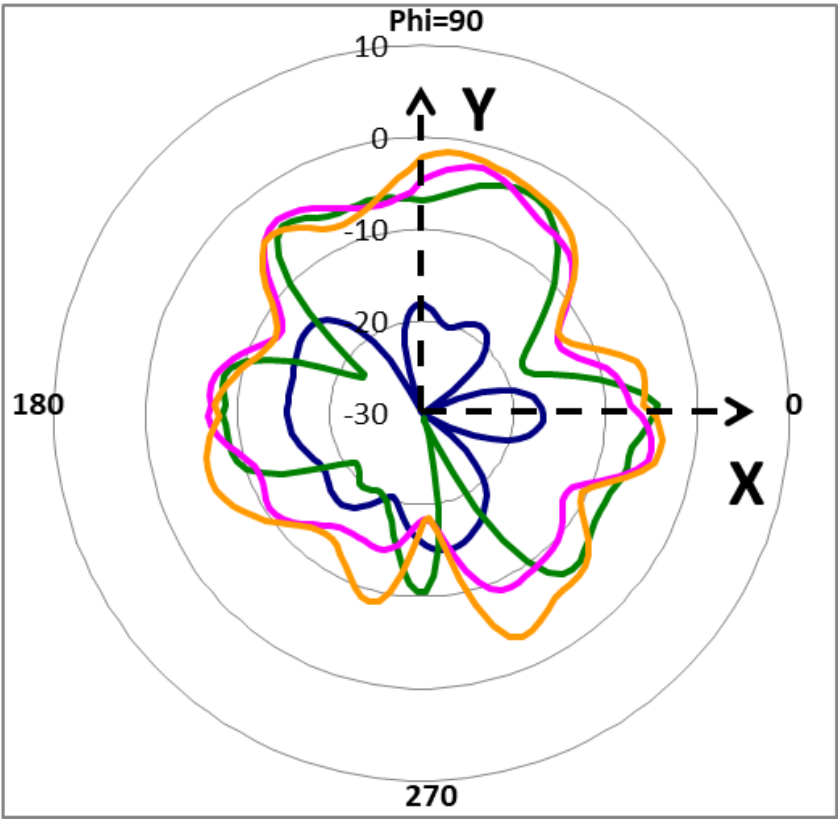
YZ_Pol._Theta_Ant.2



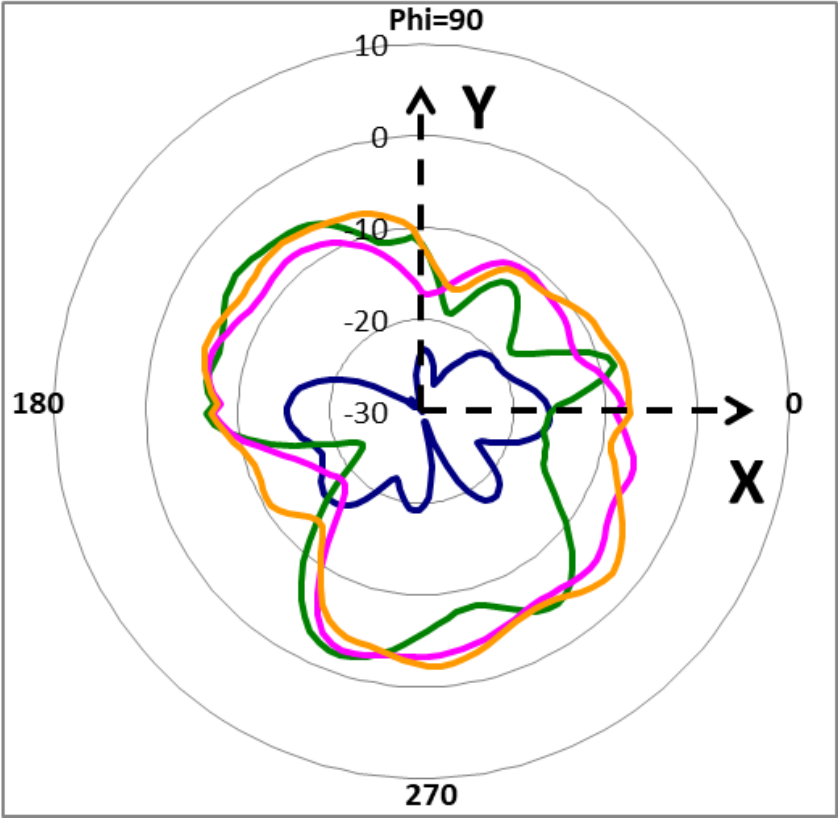
- 2450 MHz_Gain_0.14
- 5150 MHz_Gain_2.34
- 5550 MHz_Gain_4.19
- 5850 MHz_Gain_3.76

Ant. Position : 2G/6G Ant.3~4

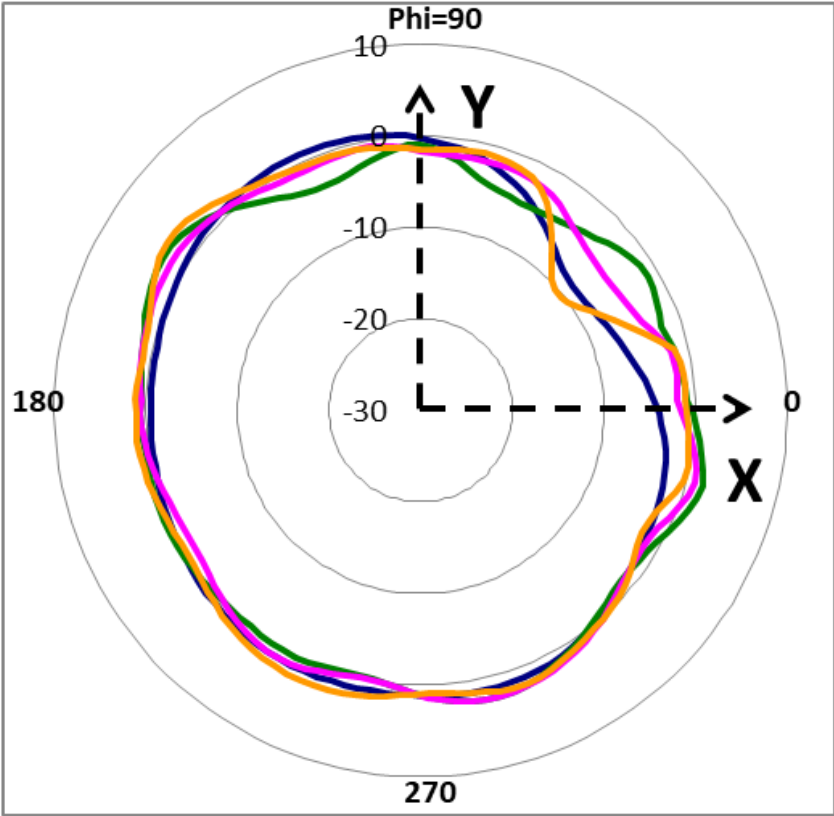
XY_Pol._Phi_Ant.3



XY_Pol._Phi_Ant.4

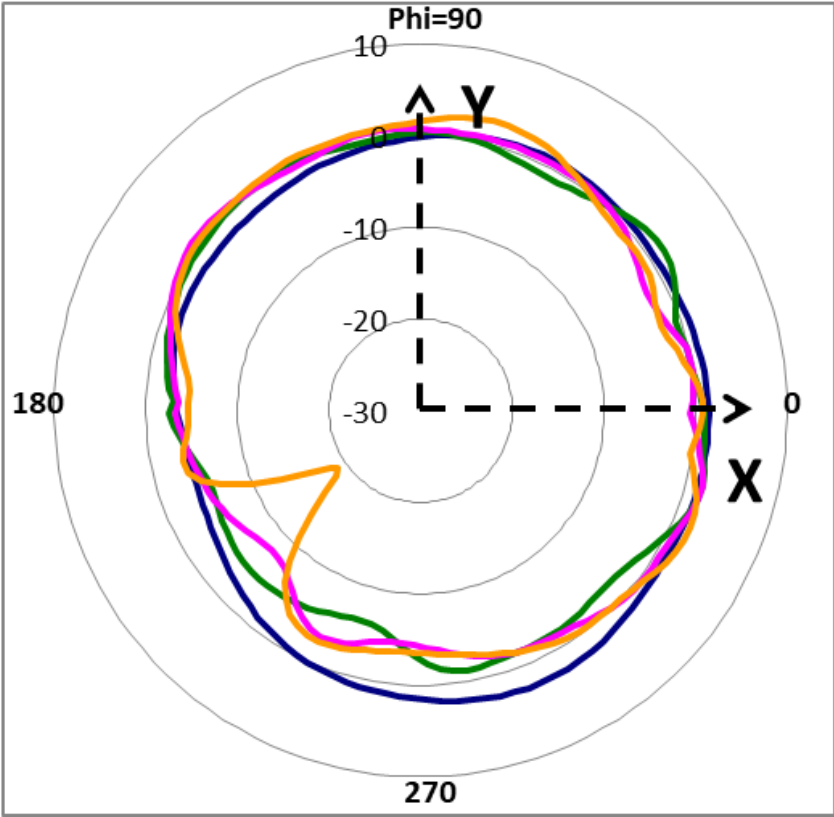


XY_Pol._Theta_Ant.3



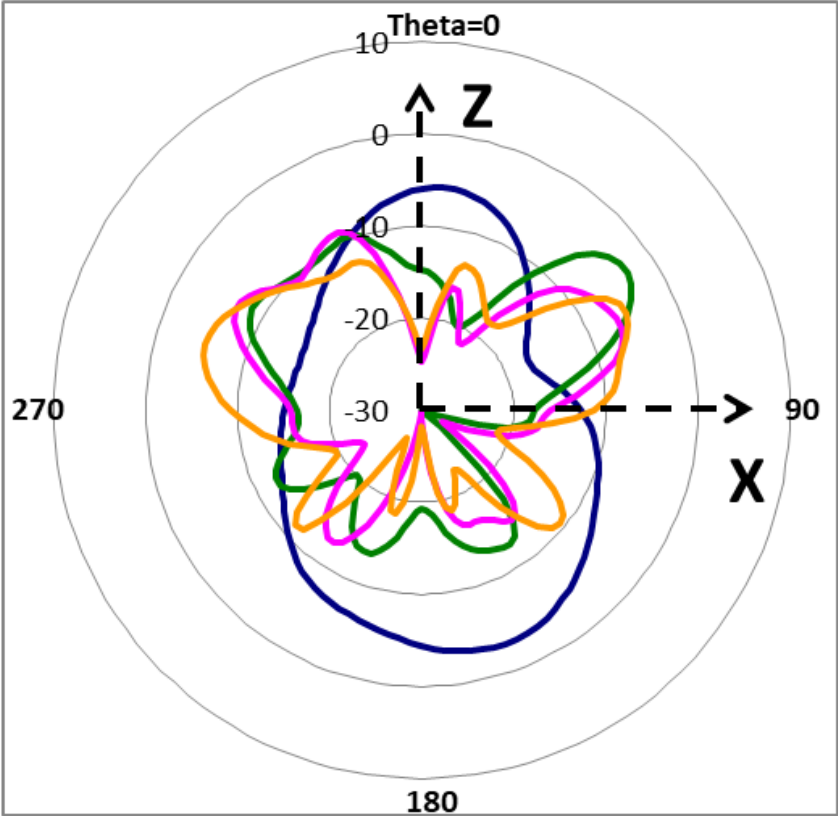
- 2450 MHz_Gain_1.35
- 5925 MHz_Gain_2.72
- 6500 MHz_Gain_2.40
- 7000 MHz_Gain_3.19

XY_Pol._Theta_Ant.4

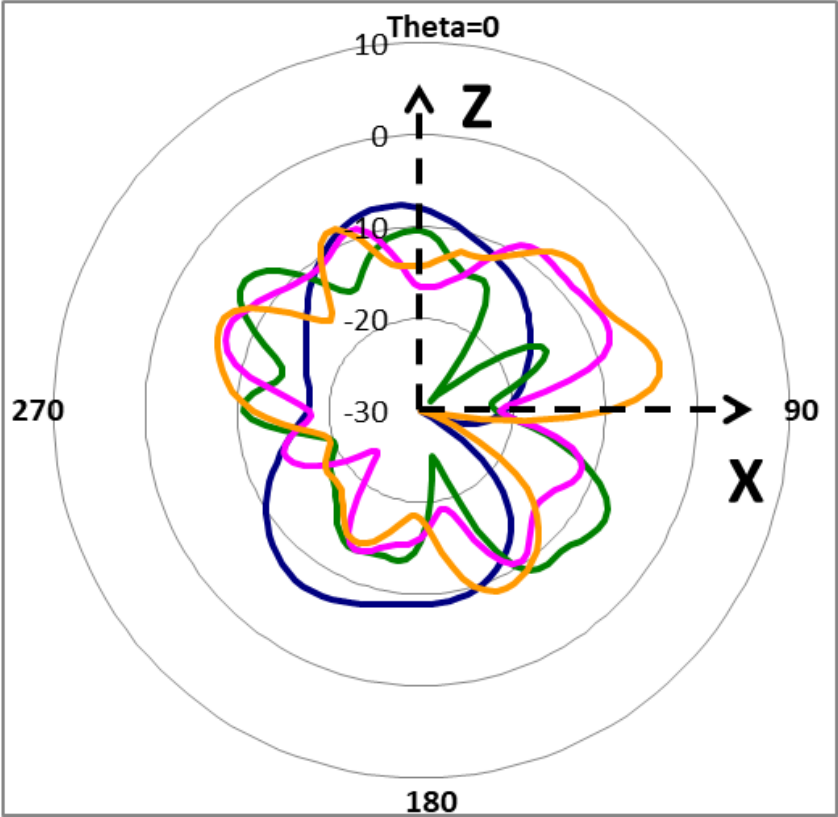


- 2450 MHz_Gain_2.50
- 5925 MHz_Gain_1.92
- 6500 MHz_Gain_1.85
- 7000 MHz_Gain_2.55

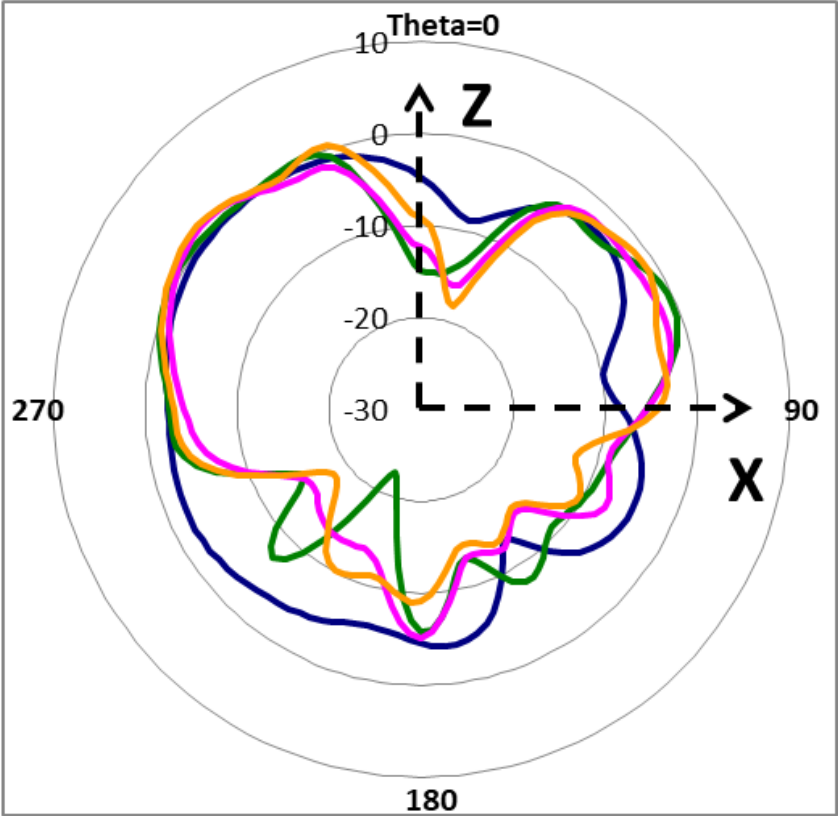
XZ_Pol._Phi_Ant.3



XZ_Pol._Phi_Ant.4

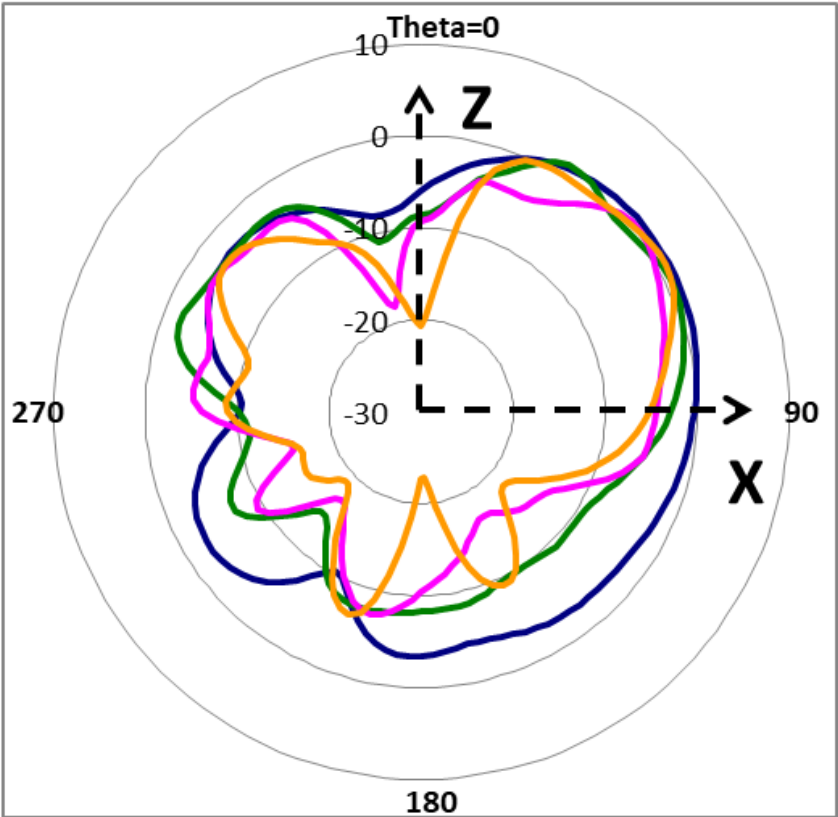


XZ_Pol._Theta_Ant.3



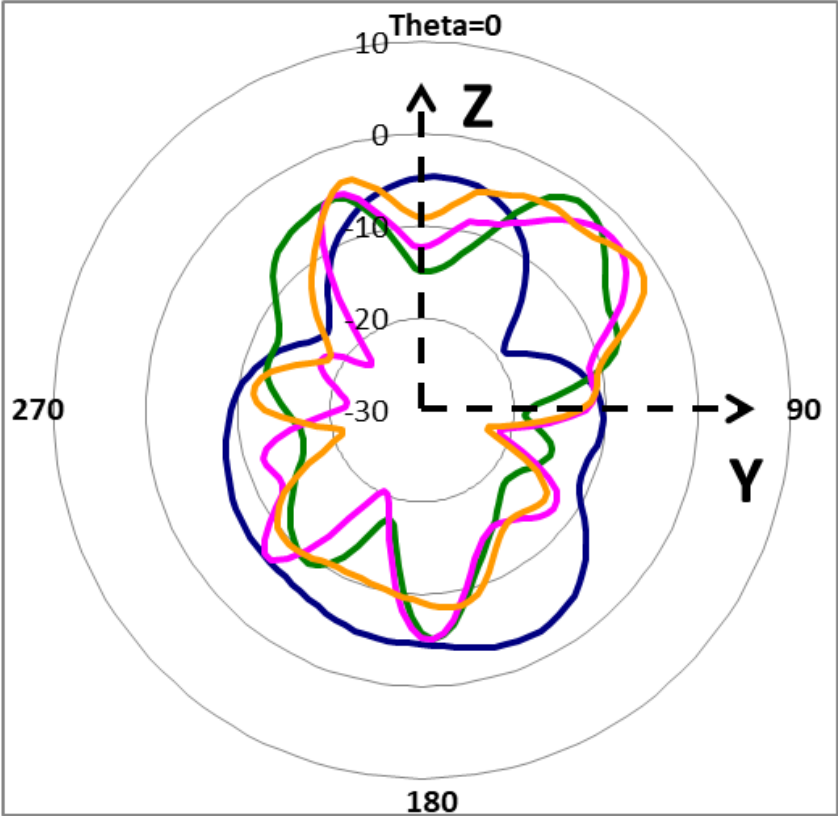
- 2450 MHz_Gain_-0.34
- 5925 MHz_Gain_0.48
- 6500 MHz_Gain_1.22
- 7000 MHz_Gain_1.49

XZ_Pol._Theta_Ant.4



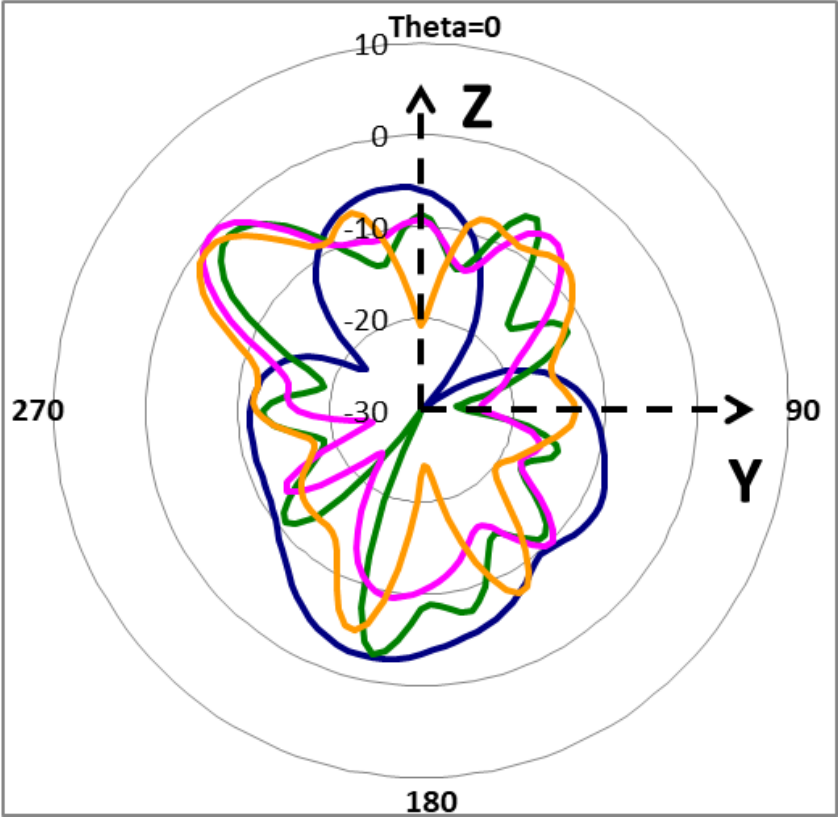
- 2450 MHz_Gain_1.53
- 5925 MHz_Gain_1.26
- 6500 MHz_Gain_0.88
- 7000 MHz_Gain_1.12

YZ_Pol._Phi_Ant.3



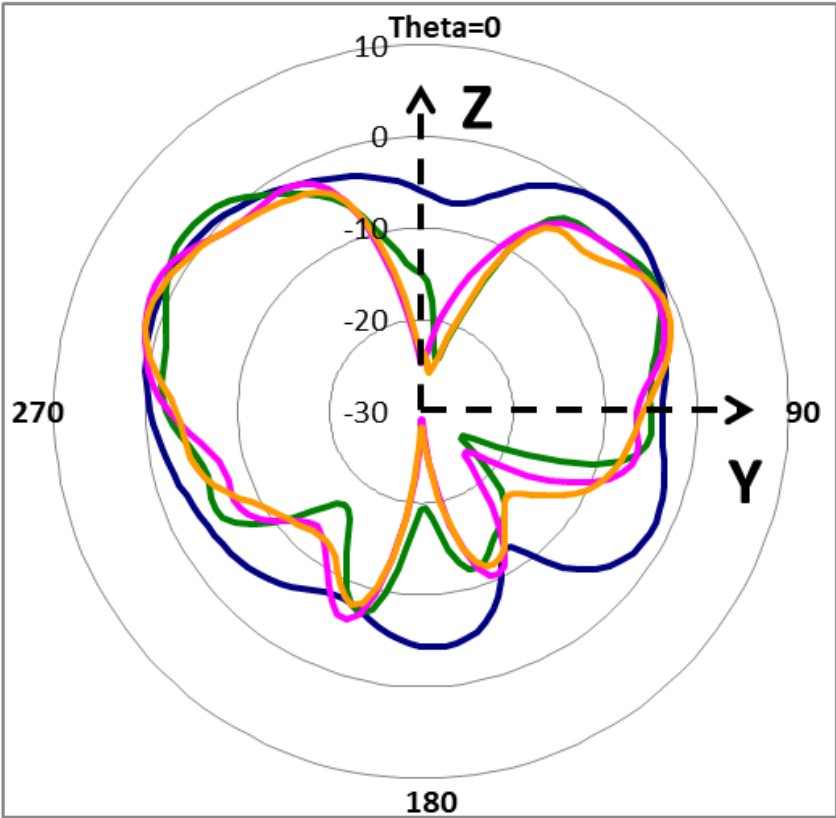
- 2450 MHz_Gain_-2.76
- 5925 MHz_Gain_-1.56
- 6500 MHz_Gain_-2.11
- 7000 MHz_Gain_-1.65

YZ_Pol._Phi_Ant.4



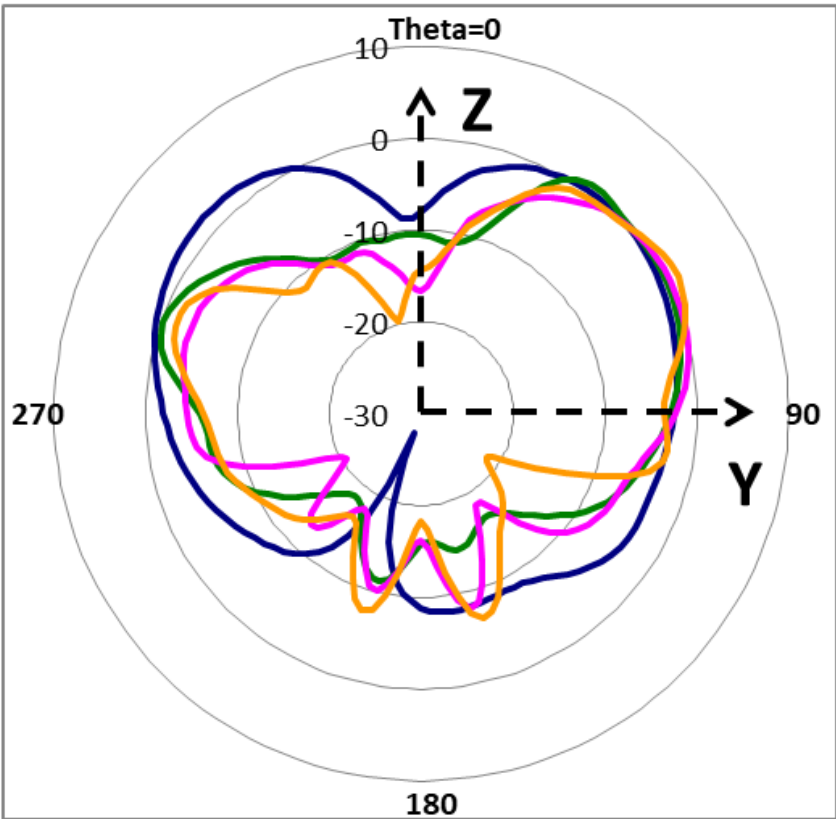
- 2450 MHz_Gain_-2.50
- 5925 MHz_Gain_-1.68
- 6500 MHz_Gain_-0.17
- 7000 MHz_Gain_-0.79

YZ_Pol._Theta_Ant.3



- 2450 MHz_Gain_1.20
- 5925 MHz_Gain_2.26
- 6500 MHz_Gain_2.10
- 7000 MHz_Gain_1.60

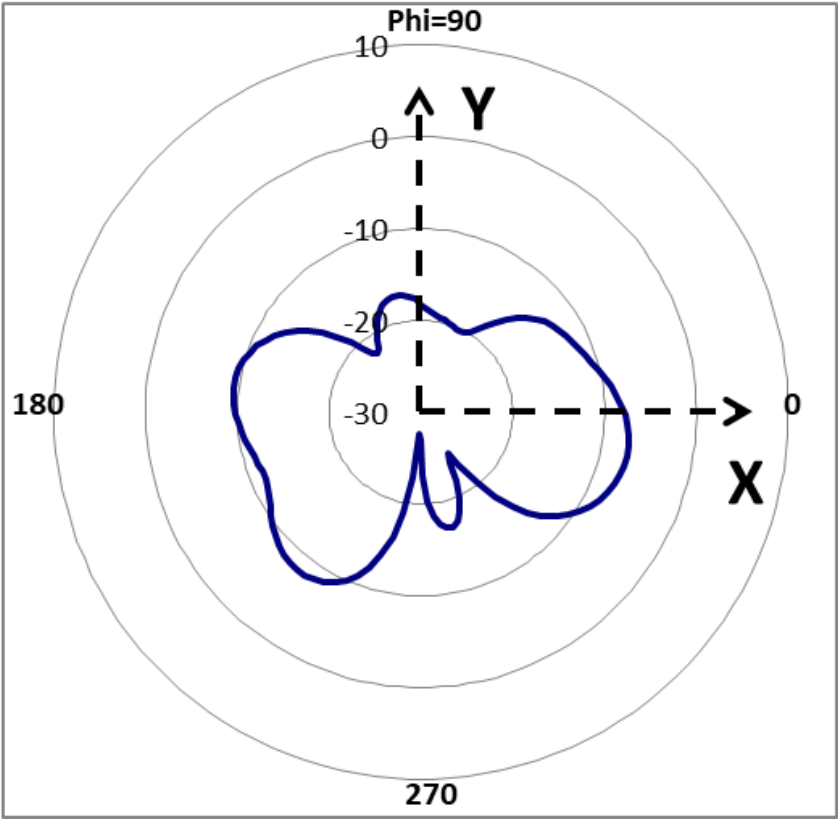
YZ_Pol._Theta_Ant.4



- 2450 MHz_Gain_1.98
- 5925 MHz_Gain_1.06
- 6500 MHz_Gain_0.75
- 7000 MHz_Gain_1.69

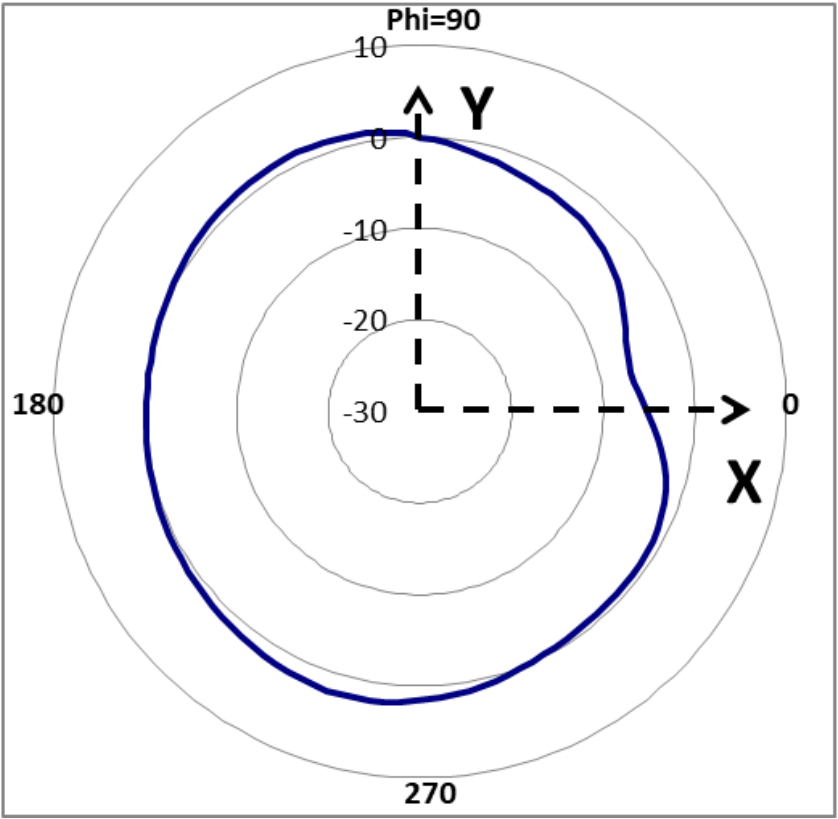
Ant. Position : BLE Ant.5

XY_Pol._Phi_Ant.5



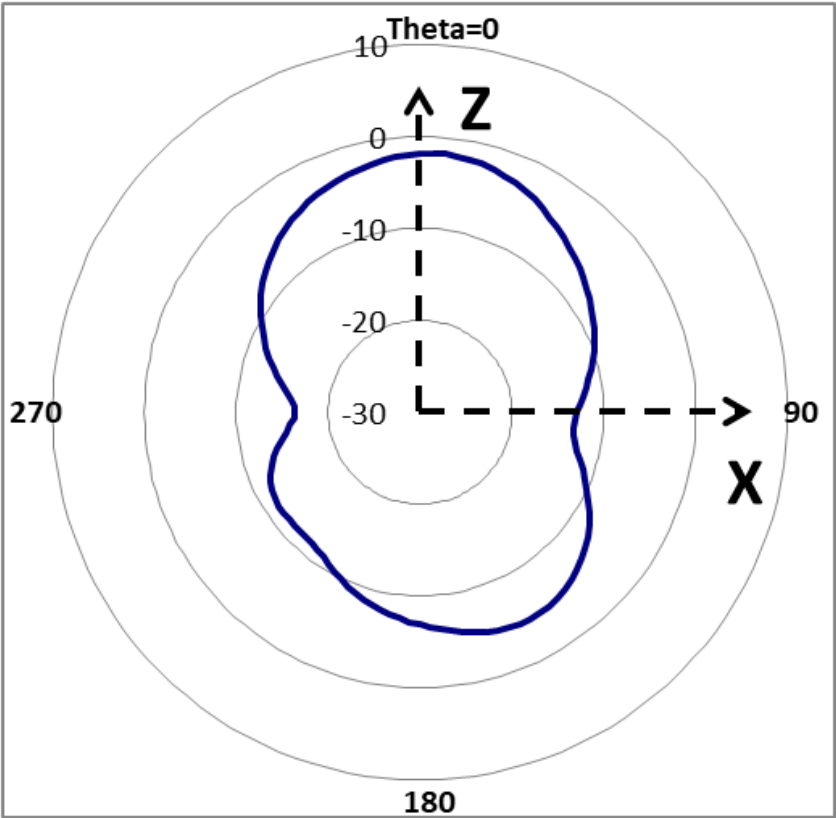
2450 MHz_Gain_-7.08

XY_Pol._Theta_Ant.5



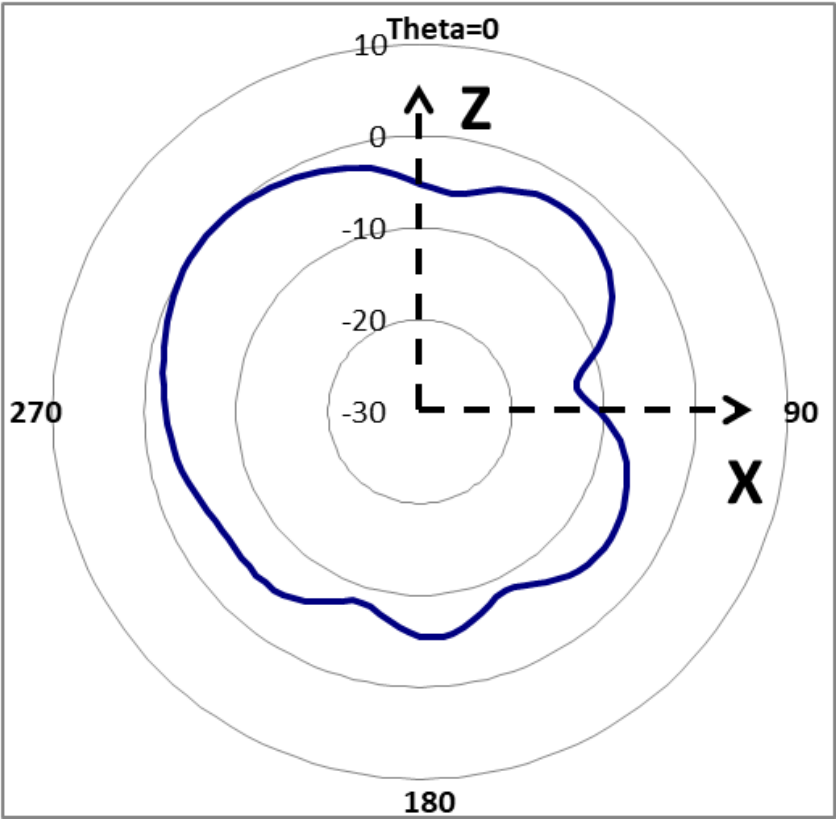
2450 MHz_Gain_2.09

XZ_Pol._Phi_Ant.5



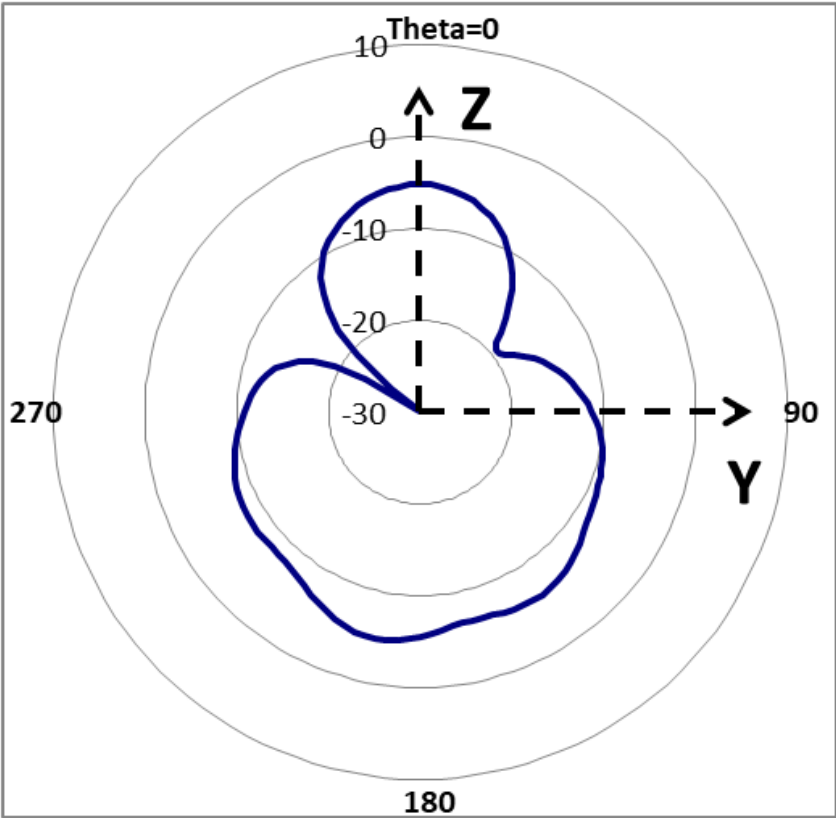
2450 MHz_Gain_-1.79

XZ_Pol._Theta_Ant.5



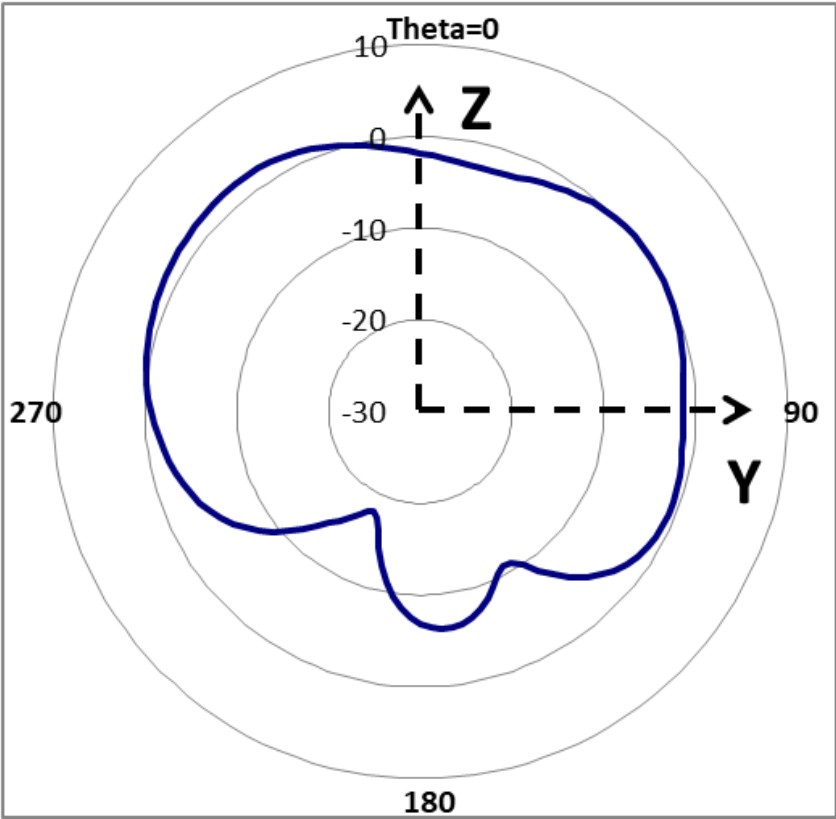
2450 MHz_Gain_0.14

YZ_Pol._Phi_Ant.5



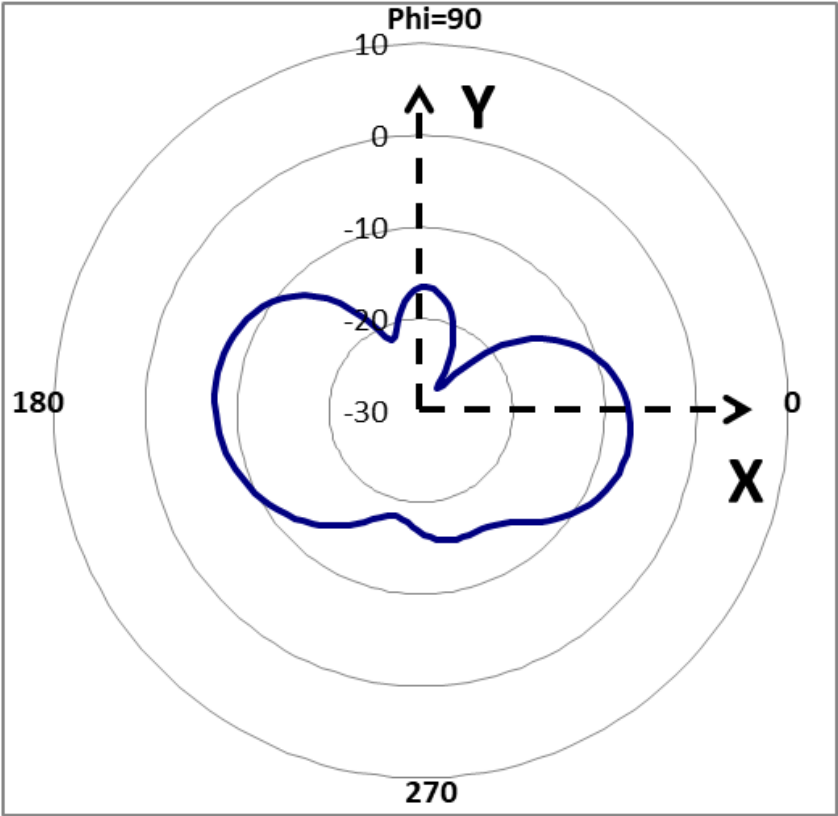
2450 MHz_Gain_-4.85

YZ_Pol._Theta_Ant.5



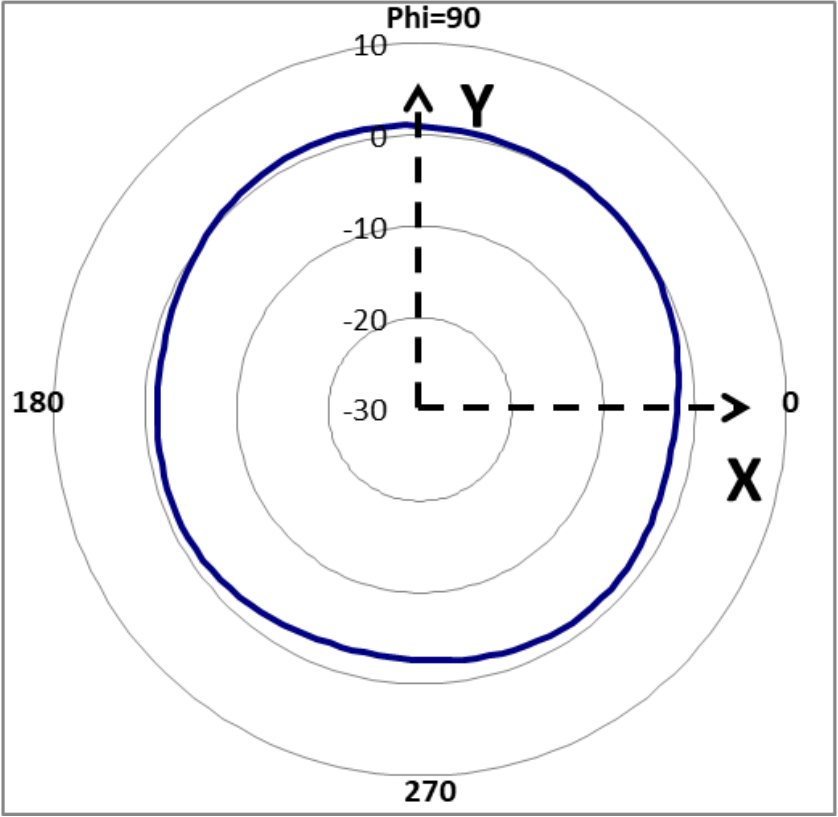
2450 MHz_Gain_1.96

XY_Pol._Phi_Ant.6



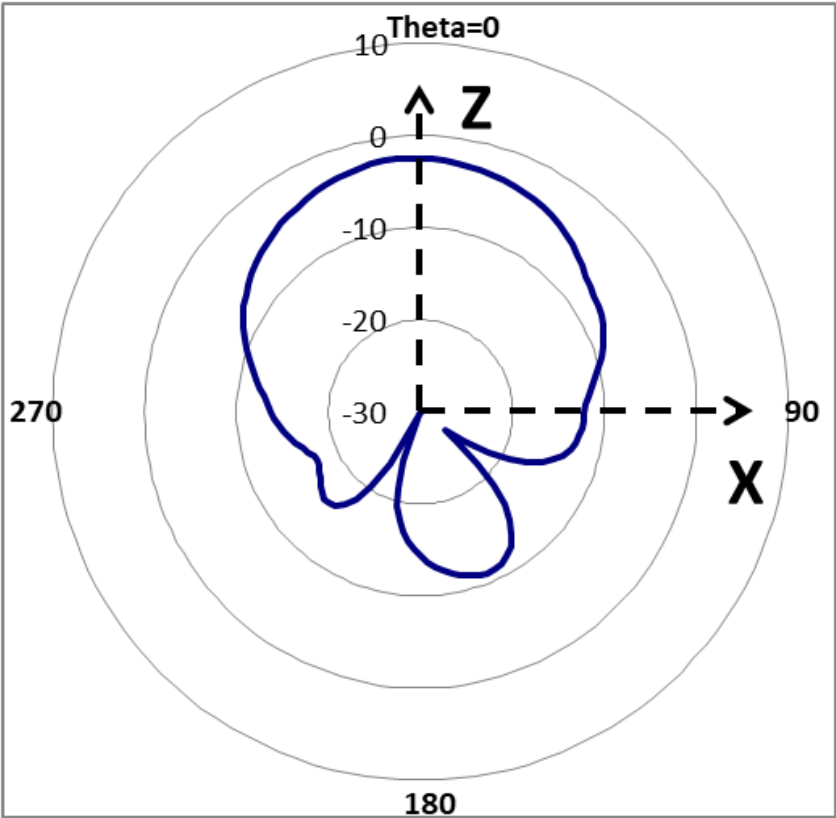
1575 MHz_Gain_-7.04

XY_Pol._Theta_Ant.6



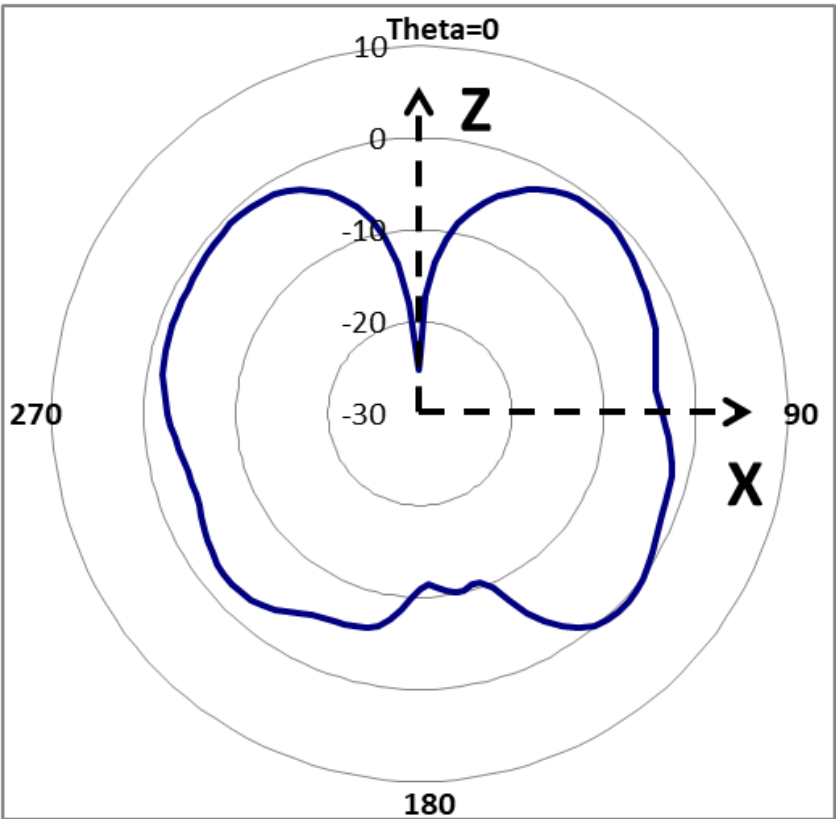
1575 MHz_Gain_1.21

XZ_Pol._Phi_Ant.6



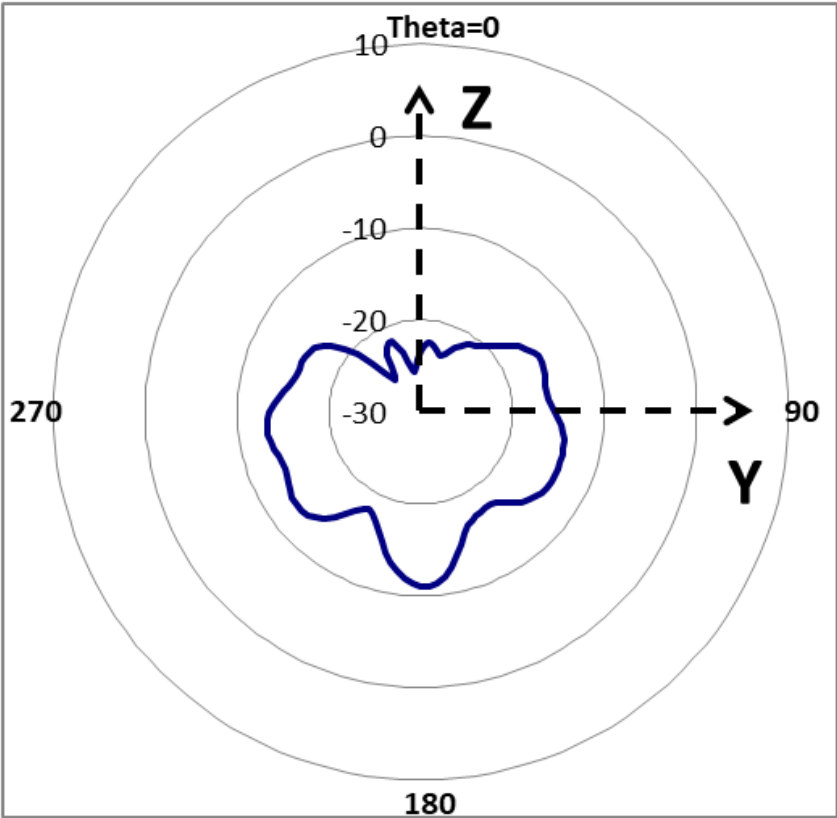
1575 MHz_Gain_-2.38

XZ_Pol._Theta_Ant.6



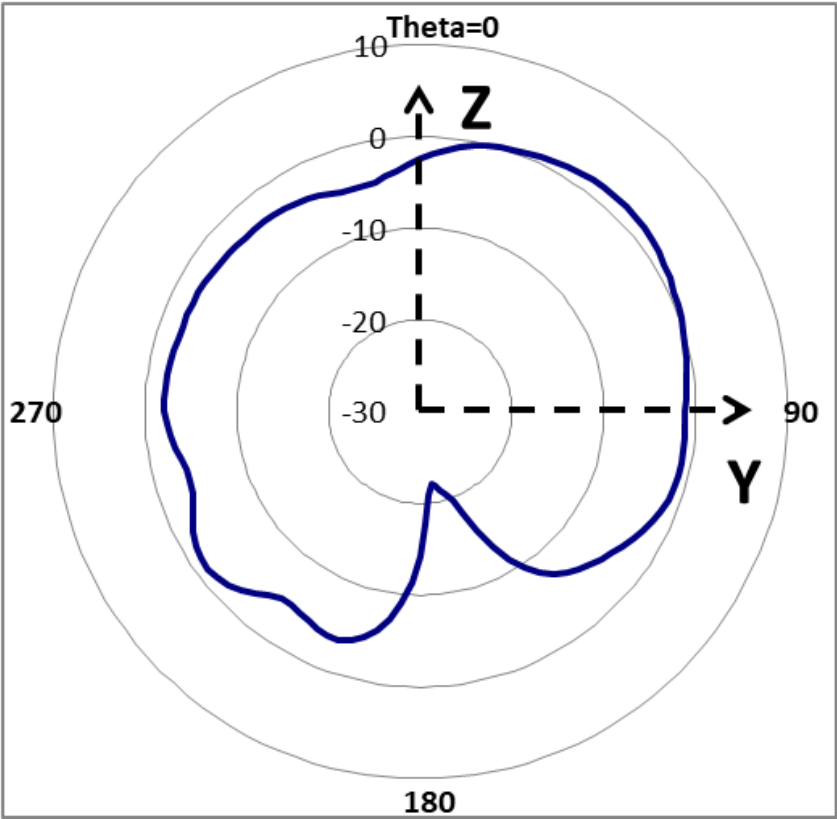
1575 MHz_Gain_0.61

YZ_Pol._Phi_Ant.6



1575 MHz_Gain_-10.96

YZ_Pol._Theta_Ant.6



1575 MHz_Gain_1.65

Ant. Position : 2G/5G Ant

[illegible]

5550 MHz Thru-Angle	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
Ph/Angle (°)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)
0	-4.0	-2.13	-2.24	-1.64	-0.47	0.03	0.53	1.06	1.61	2.19	2.33	2.23	1.84	1.36	0.76	0.03	-0.21	-0.83	-1.66	-2.72	-4.08	-5.68	-7.48	-9.48	-11.68	-14.08	-16.68	-19.48	-22.48	-25.68	-29.08	-32.68	-36.48	-40.48	-44.68	-49.08	-53.68
5	-4.0	-2.13	-2.24	-1.64	-0.47	0.03	0.53	1.06	1.61	2.19	2.33	2.23	1.84	1.36	0.76	0.03	-0.21	-0.83	-1.66	-2.72	-4.08	-5.68	-7.48	-9.48	-11.68	-14.08	-16.68	-19.48	-22.48	-25.68	-29.08	-32.68	-36.48	-40.48	-44.68	-49.08	-53.68
10	-4.0	-1.86	-1.78	-1.46	-0.35	1.20	1.77	2.20	2.56	2.85	2.88	2.64	2.14	1.60	0.93	0.03	-0.64	-1.34	-2.09	-2.76	-3.36	-3.86	-4.26	-4.56	-4.76	-4.86	-4.86	-4.76	-4.56	-4.26	-3.86	-3.36	-2.76	-2.14	-1.46	-0.78	-0.03
15	-4.0	-1.73	-1.40	-1.40	-0.70	1.64	2.16	2.42	2.56	2.54	2.31	1.87	1.31	0.79	0.39	0.11	-0.16	-0.60	-1.14	-1.68	-2.28	-2.88	-3.48	-4.03	-4.53	-5.02	-5.46	-5.86	-6.26	-6.66	-7.06	-7.46	-7.86	-8.26	-8.66	-9.06	-9.46
20	-4.0	-1.58	-1.26	-1.41	1.06	1.87	2.27	2.33	2.14	1.75	1.21	0.64	0.21	0.01	0.02	0.13	0.18	0.09	-0.25	-0.84	-1.53	-2.14	-2.63	-3.13	-3.62	-4.08	-4.50	-4.88	-5.26	-5.64	-6.02	-6.40	-6.78	-7.16	-7.54	-7.92	-8.30
25	-4.0	-1.58	-0.99	-0.90	1.20	1.90	2.13	1.90	1.53	1.03	0.56	0.37	0.40	0.75	1.01	1.21	1.30	1.20	0.78	0.08	-0.82	-1.82	-2.54	-3.08	-3.48	-3.83	-4.01	-4.17	-4.28	-4.36	-4.40	-4.43	-4.47	-4.53	-4.61	-4.73	
30	-4.0	-1.39	-1.07	-0.86	1.26	1.88	1.98	1.68	1.18	0.68	0.36	0.26	0.39	0.74	1.00	1.19	1.26	1.16	0.74	0.04	-0.92	-2.02	-2.84	-3.38	-3.78	-4.08	-4.28	-4.40	-4.45	-4.46	-4.46	-4.46	-4.46	-4.46	-4.46	-4.46	
35	-4.0	-1.26	-0.95	-0.65	1.04	1.36	1.36	1.22	1.06	0.83	0.53	0.40	0.39	0.68	0.94	1.09	1.12	1.08	0.66	-0.11	-1.15	-2.25	-3.07	-3.61	-4.01	-4.26	-4.38	-4.43	-4.44	-4.44	-4.44	-4.44	-4.44	-4.44	-4.44	-4.44	
40	-4.0	-1.07	-0.52	-0.23	0.66	0.89	1.06	0.89	0.66	0.40	0.18	0.13	0.20	0.35	0.39	0.36	0.34	0.28	-0.12	-0.84	-1.68	-2.42	-3.01	-3.47	-3.81	-4.01	-4.08	-4.12	-4.14	-4.15	-4.16	-4.17	-4.18	-4.19	-4.20	-4.21	
45	-4.0	-0.95	-0.40	-0.18	0.51	0.52	0.54	0.40	0.18	0.20	0.30	0.31	0.40	0.30	0.25	0.15	0.14	0.12	0.04	-0.57	-1.20	-2.09	-2.68	-3.16	-3.54	-3.81	-3.94	-4.00	-4.03	-4.05	-4.07	-4.09	-4.11	-4.13	-4.15	-4.17	
50	-4.0	-0.65	-0.23	-0.10	0.31	0.36	0.36	0.23	0.10	0.16	0.23	0.23	0.30	0.23	0.13	0.08	0.07	0.06	-0.10	-0.60	-1.26	-2.04	-2.72	-3.30	-3.78	-4.08	-4.28	-4.38	-4.42	-4.44	-4.46	-4.48	-4.50	-4.52	-4.54	-4.56	
55	-4.0	-0.47	-0.13	-0.05	-0.00	-0.03	0.35	1.06	1.06	0.38	1.04	1.06	0.83	-0.08	-0.45	-0.87	-1.08	-1.40	-1.88	-2.42	-3.06	-3.56	-4.06	-4.56	-5.02	-5.46	-5.86	-6.26	-6.66	-7.06	-7.46	-7.86	-8.26	-8.66	-9.06		
60	-4.0	-0.61	-0.09	0.02	-0.12	-0.05	0.40	1.00	1.37	1.35	0.77	0.83	-0.05	-0.68	-1.36	-1.96	-2.34	-2.67	-3.04	-3.42	-3.80	-4.18	-4.56	-4.94	-5.32	-5.69	-6.06	-6.43	-6.80	-7.17	-7.54	-7.91	-8.28	-8.65	-9.02		
65	-4.0	-0.50	-0.02	0.05	-0.11	-0.09	0.60	1.11	1.09	0.49	0.65	-0.73	-1.59	-2.31	-2.59	-2.42	-2.19	-2.05	-2.26	-2.70	-3.32	-4.08	-4.88	-5.68	-6.48	-7.28	-8.08	-8.88	-9.68	-10.48	-11.28	-12.08	-12.88	-13.68	-14.48		
70	-4.0	-0.40	0.14	0.12	-0.01	0.33	0.90	1.15	0.82	0.40	-0.13	-0.74	-1.42	-2.03	-2.51	-2.71	-2.56	-2.25	-1.78	-1.40	-0.94	-0.50	-0.08	0.31	0.80	1.28	1.76	2.24	2.72	3.20	3.68	4.16	4.64	5.12	5.60	6.08	
75	-4.0	-0.30	0.27	0.26	0.21	0.51	1.10	1.19	0.87	0.46	-0.12	-0.76	-1.37	-1.91	-2.40	-2.76	-2.54	-2.16	-1.68	-1.20	-0.74	-0.30	0.16	0.65	1.14	1.63	2.12	2.61	3.10	3.59	4.08	4.57	5.06	5.55	6.04	6.53	
80	-4.0	-0.22	0.40	0.43	0.47	0.90	1.26	1.21	0.88	0.44	0.52	0.37	0.10	-0.24	-0.55	-0.67	-0.82	-1.07	-1.28	-1.37	-1.36	-1.24	-1.03	-0.74	-0.45	-0.16	0.13	0.44	0.75	1.06	1.37	1.68	2.00	2.31	2.62		
85	-4.0	-0.13	0.54	0.53	0.77	1.17	1.39	1.20	0.88	0.76	0.82	0.83	0.83	0.42	0.12	-0.13	-0.41	-0.66	-0.70	-0.68	-0.58	-0.41	-0.25	-0.10	0.05	0.26	0.48	0.69	0.90	1.11	1.32	1.53	1.74	1.95	2.16		
90	-4.0	-0.08	0.68	0.65	1.06	1.42	1.40	1.12	0.75	0.71	0.89	1.02	0.87	0.73	0.58	0.40	-0.40	-1.01	-1.20	-1.29	-1.27	-1.16	-0.98	-0.74	-0.48	-0.24	0.01	0.26	0.51	0.76	1.01	1.26	1.51	1.76	2.01		
95	-4.0	0.01	0.91	0.90	1.35	1.66	1.55	0.99	0.48	0.45	0.73	0.89	0.89	0.75	0.51	-0.22	-0.77	-1.20	-1.38	-1.39	-1.26	-1.08	-0.87	-0.61	-0.40	-0.20	0.04	0.28	0.52	0.76	1.00	1.24	1.48	1.72	1.96		
100	-4.0	0.07	0.94	1.20	1.63	1.90	1.63	0.86	0.36	0.05	0.40	0.76	0.88	0.85	0.71	-0.53	-1.16	-1.70	-1.88	-1.73	-1.48	-1.20	-0.91	-0.62	-0.33	-0.04	0.21	0.45	0.69	0.93	1.17	1.41	1.65	1.89	2.13		
105	-4.0	0.12	1.06	1.48	1.89	2.14	1.70	0.82	0.11	-0.30	-0.40	0.46	0.71	0.88	0.85	-0.71	-1.40	-2.00	-2.25	-2.02	-1.67	-1.30	-0.90	-0.71	-0.51	-0.30	-0.10	0.21	0.45	0.69	0.93	1.17	1.41	1.65	1.89		
110	-4.0	0.16	1.16	1.65	2.12	2.35	2.00	0.87	-0.14	-0.65	-0.46	0.44	0.65	0.85	0.85	-0.71	-1.46	-2.08	-2.35	-2.02	-1.65	-1.28	-0.88	-0.71	-0.51	-0.30	-0.10	0.21	0.45	0.69	0.93	1.17	1.41	1.65	1.89		
115	-4.0	0.19	1.24	1.80	2.31	2.44	2.21	1.31	0.16	-0.54	-0.43	0.29	0.15	0.32	0.00	-0.72	-1.46	-2.19	-2.42	-2.31	-2.08	-1.84	-1.59	-1.34	-1.09	-0.84	-0.59	-0.34	0.01	0.26	0.51	0.76	1.01	1.26	1.51		
120	-4.0	0.20	1.26	1.88	2.36	2.48	2.36	1.36	0.20	-0.46	-0.36	0.16	0.16	0.32	0.00	-0.72	-1.46	-2.19	-2.42	-2.31	-2.08	-1.84	-1.59	-1.34	-1.09	-0.84	-0.59	-0.34	0.01	0.26	0.51	0.76	1.01	1.26	1.51		
125	-4.0	0.20	1.24	1.88	2.36	2.48	2.36	1.36	0.20	-0.46	-0.36	0.16	0.16	0.32	0.00	-0.72	-1.46	-2.19	-2.42	-2.31	-2.08	-1.84	-1.59	-1.34	-1.09	-0.84	-0.59	-0.34	0.01	0.26	0.51	0.76	1.01	1.26	1.51		
130	-4.0	0.18	1.35	2.02	2.64	2.33	2.39	2.09	0.30	-1.13	0.83	0.79	0.83	0.83	0.83	-1.03	-1.89	-2.57	-3.28	-3.88	-4.48	-5.08	-5.68	-6.28	-6.88	-7.48	-8.08	-8.68	-9.28	-9.88	-10.48	-11.08	-11.68	-12.28			
135	-4.0	0.15	1.33	2.02	2.64	2.30	2.64	2.47	0.25	-1.23	1.29	1.74	1.38	1.25	1.01	0.38	-0.55	-1.39	-2.08	-2.62	-3.11	-3.52	-3.88	-4.23	-4.60	-4.94	-5.28	-5.62	-5.96	-6.30	-6.64	-6.98	-7.32	-7.66	-8.00		
140	-4.0	0.12	1.18	1.88	2.36	2.33	2.37	2.17	0.18	-0.72	0.82	1.26	1.38	1.25	1.01	0.38	-0.55	-1.39	-2.08	-2.62	-3.11	-3.52	-3.88	-4.23	-4.60	-4.94	-5.28	-5.62	-5.96	-6.30	-6.64	-6.98	-7.32	-7.66	-8.00		
145	-4.0	0.08	1.23	1.91	2.47	2.14	2.73	2.38	0.37	-1.32	1.50	2.01	1.74	1.55	1.24	0.73	0.08	-0.65	-1.31	-1.86	-2.33	-2.74	-3.06	-3.31	-3.56	-3.80	-4.04	-4.27	-4.50	-4.74	-4.98	-5.22	-5.46	-5.70	-5.94		
150	-4.0	-0.02	1.13	1.81	2.30	2.91	2.53	2.34	1.72	-1.35	1.63	2.06	1.84	1.30	0.82	0.43	-0.14	-0.77	-1.41	-2.05	-2.53	-2.91	-3.26	-3.60	-3.94	-4.28	-4.62	-4.96	-5.30	-5.64	-5.98	-6.32	-6.66	-7.00	-7.34		
155	-4.0	-0.10	1.10	1.67	2.11	2.67	2.17	2.34	1.54	-1.39	2.01	1.99	1.42	0.90	0.39	-0.42	-0.85	-1.22	-1.68	-2.10	-2.50	-2.89	-3.21	-3.46	-3.70	-3.94	-4.18	-4.42	-4.66	-4.90	-5.14	-5.38	-5.62	-5.86	-6.10		
160	-4.0	-0.20	0.85	1.51	1.89	2.26	2.59	2.06	1.36	-1.76	2.36	2.31	1.60	1.03	0.49	-0.40	-0.90	-1.53	-2.15	-2.63	-3.02	-3.36	-3.66	-3.91	-4.16	-4.41	-4.66	-4.91	-5.16	-5.41	-5.66	-5.91	-6.16	-6.41			
165	-4.0	-0.30	0.67	1.31	1.67	1.91	2.10	2.16	1.46	-2.06	2.40	2.30	1.65	1.06	0.56	-0.10	-0.64	-1.15	-1.66	-2.06	-2.36	-2.66	-2.91	-3.16	-3.41	-3.66	-3.91	-4.16	-4.41	-4.66	-4.91	-5.16	-5.41	-5.66	-5.91		
170	-4.0	-0.44	0.46	1.08	1.44	1.61	1.72	1.84	2.00	-2.13	2.16	2.05	1.79	1.41	0.98	0.37	-0.37	-0.88	-1.39	-1.88	-2.36	-2.84	-3.32	-3.79	-4.27	-4.75	-5.23	-5.71	-6.19	-6.67	-7.15	-7.63	-8.11	-8.59			
175	-4.0	-0.58	0.21	0.82	1.20	1.37	1.38	1.33	1.37	1.52	1.88	1.78	1.72	1.54	1.36	1.03																					

Regulatory WIFI Antenna Information 26/32

5550 MHz Thru-Ave	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
Ph/Ave (°)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	
0	-4.6	-3.9	-2.4	-1.1	-0.8	0.8	1.12	1.27	1.19	0.97	0.74	0.55	0.42	0.02	-0.48	-1.37	-2.52	-3.48	-4.36	-5.28	-6.14	-6.98	-7.82	-8.69	-9.52	-10.31	-11.12	-11.98	-12.80	-13.60	-14.37	-15.12	-15.86	-16.57	-17.24	-17.88	-18.48
5	-4.6	-3.9	-2.4	-1.1	-0.8	0.8	1.12	1.27	1.19	0.97	0.74	0.55	0.42	0.02	-0.48	-1.37	-2.52	-3.48	-4.36	-5.28	-6.14	-6.98	-7.82	-8.69	-9.52	-10.31	-11.12	-11.98	-12.80	-13.60	-14.37	-15.12	-15.86	-16.57	-17.24	-17.88	-18.48
10	-4.6	-4.0	-3.11	-1.86	-0.82	0.18	0.85	1.14	1.06	0.85	0.67	0.52	-0.13	-0.77	-2.04	-3.00	-4.07	-4.79	-5.72	-6.46	-7.18	-7.88	-8.61	-9.33	-10.05	-10.78	-11.51	-12.24	-12.97	-13.70	-14.43	-15.16	-15.89	-16.62	-17.35	-18.08	-18.81
15	-4.6	-4.24	-3.40	-2.48	-1.30	-0.28	0.62	1.10	1.42	1.4	1.20	0.84	0.34	-0.30	-1.03	-2.77	-3.90	-4.46	-5.07	-5.48	-6.01	-6.42	-6.91	-7.40	-7.89	-8.38	-8.87	-9.36	-9.85	-10.34	-10.83	-11.32	-11.81	-12.30	-12.79	-13.28	-13.77
20	-4.6	-4.47	-3.88	-3.03	-1.80	-0.81	0.36	1.28	1.50	2.25	2.37	2.06	1.48	0.88	-0.32	-1.50	-2.91	-4.48	-5.61	-6.47	-7.10	-7.56	-7.92	-8.40	-8.87	-9.34	-9.81	-10.28	-10.75	-11.22	-11.69	-12.16	-12.63	-13.10	-13.57	-14.04	-14.51
25	-4.6	-4.68	-4.27	-3.52	-2.55	-1.27	0.22	1.82	2.26	3.00	3.27	2.97	2.14	1.33	-0.14	-1.34	-2.98	-4.44	-6.15	-7.45	-8.58	-9.48	-10.28	-10.98	-11.68	-12.38	-13.08	-13.78	-14.48	-15.18	-15.88	-16.58	-17.28	-17.98	-18.68	-19.38	
30	-4.6	-4.89	-4.62	-3.86	-2.89	-1.51	0.27	2.07	2.52	3.27	3.57	3.27	2.34	1.53	0.02	-1.24	-3.09	-4.47	-6.55	-7.95	-9.45	-10.75	-11.85	-12.75	-13.65	-14.55	-15.45	-16.35	-17.25	-18.15	-19.05	-19.95	-20.85	-21.75	-22.65	-23.55	
35	-4.6	-5.12	-4.79	-4.06	-2.99	-1.29	0.70	2.41	3.54	4.11	4.17	3.84	3.22	2.47	1.87	0.85	-0.07	-1.14	-2.46	-4.04	-5.61	-7.40	-8.40	-9.54	-10.48	-11.52	-12.56	-13.60	-14.64	-15.68	-16.72	-17.76	-18.80	-19.84	-20.88	-21.92	
40	-4.6	-5.32	-4.98	-4.01	-2.73	-0.87	1.14	2.74	3.71	4.07	3.96	3.52	2.95	1.46	0.46	-0.44	-2.35	-3.98	-5.57	-7.13	-8.54	-9.40	-10.40	-11.40	-12.40	-13.40	-14.40	-15.40	-16.40	-17.40	-18.40	-19.40	-20.40	-21.40	-22.40	-23.40	
45	-4.6	-5.55	-5.05	-3.95	-2.33	-0.42	1.46	2.81	3.51	3.81	3.30	2.91	2.23	1.55	0.56	-0.78	-2.40	-4.32	-6.43	-8.23	-9.73	-10.48	-11.48	-12.48	-13.48	-14.48	-15.48	-16.48	-17.48	-18.48	-19.48	-20.48	-21.48	-22.48	-23.48	-24.48	
50	-4.6	-5.80	-5.45	-4.05	-2.65	-1.17	1.88	3.23	3.71	4.23	3.62	3.23	2.47	1.73	0.78	-0.38	-2.85	-5.18	-7.29	-9.29	-10.59	-11.59	-12.59	-13.59	-14.59	-15.59	-16.59	-17.59	-18.59	-19.59	-20.59	-21.59	-22.59	-23.59	-24.59	-25.59	
55	-4.6	-5.93	-5.60	-3.38	-1.74	-0.02	1.40	2.23	2.53	2.93	2.27	1.82	1.14	0.28	-0.76	-1.84	-2.79	-3.41	-4.28	-5.37	-6.38	-7.02	-7.98	-8.40	-9.40	-10.40	-11.40	-12.40	-13.40	-14.40	-15.40	-16.40	-17.40	-18.40	-19.40	-20.40	
60	-4.6	-5.97	-5.98	-3.22	-1.70	-0.83	1.68	1.76	2.07	2.30	1.17	0.89	0.13	-0.82	-0.98	-2.23	-4.42	-5.97	-7.17	-8.95	-10.37	-11.80	-13.23	-14.66	-16.09	-17.52	-18.95	-20.38	-21.81	-23.24	-24.67	-26.10	-27.53	-28.96	-30.39	-31.82	
65	-4.6	-6.08	-6.02	-3.13	-1.83	-0.55	0.57	1.23	1.58	1.76	1.88	1.28	0.74	-0.01	-1.04	-2.29	-3.52	-4.05	-4.46	-5.58	-6.82	-8.02	-9.04	-10.04	-11.04	-12.04	-13.04	-14.04	-15.04	-16.04	-17.04	-18.04	-19.04	-20.04	-21.04	-22.04	
70	-4.6	-6.25	-6.06	-3.11	-2.10	-0.88	0.00	0.85	0.86	1.82	0.82	0.86	0.85	0.88	-0.01	-0.82	-1.14	-1.84	-2.75	-3.66	-4.83	-5.48	-6.78	-7.58	-8.58	-9.58	-10.58	-11.58	-12.58	-13.58	-14.58	-15.58	-16.58	-17.58	-18.58		
75	-4.6	-6.30	-6.02	-3.06	-2.89	-1.26	-0.72	0.48	0.82	0.86	1.45	1.01	1.30	1.72	1.56	0.51	-0.81	-1.49	-2.76	-3.95	-4.11	-5.62	-6.41	-7.16	-8.31	-9.06	-10.21	-11.46	-12.71	-13.96	-15.21	-16.46	-17.71	-18.96	-20.21		
80	-4.6	-6.38	-6.01	-3.18	-2.74	-0.22	-0.86	-0.20	-0.13	-0.18	0.25	1.36	2.45	3.08	3.23	3.01	2.38	1.22	-0.33	-1.15	-1.58	-1.55	-2.35	-3.20	-4.08	-5.02	-5.97	-6.91	-7.85	-8.79	-9.73	-10.67	-11.61	-12.55	-13.49	-14.43	
85	-4.6	-6.48	-6.02	-3.24	-2.94	-2.25	-0.48	-0.18	-0.12	-0.10	0.30	1.36	2.53	3.27	3.44	3.01	1.99	0.82	-0.20	-1.23	-1.45	-1.99	-2.47	-3.49	-4.47	-5.45	-6.43	-7.41	-8.39	-9.37	-10.35	-11.33	-12.31	-13.29	-14.27		
90	-4.6	-6.55	-6.05	-3.23	-3.01	-2.25	-0.75	0.10	0.17	0.01	0.14	0.93	1.80	2.52	2.84	2.81	0.78	-0.46	-1.36	-1.58	-1.55	-2.00	-2.38	-2.77	-3.71	-4.71	-5.71	-6.71	-7.71	-8.71	-9.71	-10.71	-11.71	-12.71	-13.71		
95	-4.6	-6.60	-6.08	-3.24	-2.87	-2.03	-0.36	0.05	-0.08	-0.08	-0.58	-0.78	-0.46	0.01	0.13	-0.21	-0.83	-1.60	-2.85	-3.97	-5.18	-6.03	-7.31	-8.26	-9.41	-10.66	-11.91	-13.16	-14.41	-15.66	-16.91	-18.16	-19.41	-20.66	-21.91		
100	-4.6	-6.74	-6.51	-3.27	-2.79	-0.22	-0.38	0.03	0.09	-0.01	-0.67	-0.86	-0.46	-0.30	-0.40	-1.15	-1.53	-2.68	-4.40	-6.00	-7.19	-8.15	-9.15	-10.12	-11.08	-12.04	-13.00	-13.96	-14.92	-15.88	-16.84	-17.80	-18.76	-19.72	-20.68		
105	-4.6	-6.78	-6.33	-3.36	-2.76	-2.15	-0.63	0.53	0.61	-0.02	-0.46	-0.46	-0.30	-0.51	0.07	0.04	-0.33	-1.09	-2.41	-4.74	-5.98	-7.25	-8.45	-9.65	-10.85	-12.05	-13.25	-14.45	-15.65	-16.85	-18.05	-19.25	-20.45	-21.65	-22.85		
110	-4.6	-6.82	-6.55	-3.35	-2.82	-2.47	-1.08	0.14	0.01	-0.10	-0.86	-0.17	-0.07	-0.03	-0.25	-0.81	-1.78	-3.24	-5.48	-6.44	-8.04	-9.18	-10.35	-11.55	-12.75	-13.95	-15.15	-16.35	-17.55	-18.75	-19.95	-21.15	-22.35	-23.55	-24.75		
115	-4.6	-6.90	-6.82	-3.36	-2.87	-2.72	-1.48	0.08	-0.01	-0.48	-0.58	-0.40	-0.18	-0.39	-0.78	-1.48	-2.92	-4.18	-6.08	-7.12	-8.58	-9.48	-10.88	-11.88	-12.88	-13.88	-14.88	-15.88	-16.88	-17.88	-18.88	-19.88	-20.88	-21.88	-22.88		
120	-4.6	-6.93	-6.81	-3.13	-3.23	-3.14	-2.43	-1.11	-0.36	-0.32	-0.25	0.17	0.36	0.08	-0.52	-2.47	-2.47	-4.13	-6.18	-7.18	-8.62	-9.52	-10.92	-11.92	-12.92	-13.92	-14.92	-15.92	-16.92	-17.92	-18.92	-19.92	-20.92	-21.92	-22.92		
125	-4.6	-6.97	-6.48	-4.57	-3.88	-3.03	-1.80	-0.91	-0.74	-0.73	-0.48	-0.16	-0.42	-1.05	-0.93	-2.96	-4.05	-6.05	-7.05	-8.17	-11.12	-12.12	-13.12	-14.12	-15.12	-16.12	-17.12	-18.12	-19.12	-20.12	-21.12	-22.12	-23.12	-24.12	-25.12		
130	-4.6	-7.07	-6.74	-4.57	-4.03	-3.79	-2.80	-2.20	-1.21	-0.95	-1.05	-0.88	-0.67	-0.86	-1.77	-2.65	-3.88	-5.22	-6.88	-10.58	-12.02	-13.05	-14.51	-15.55	-16.73	-17.72	-18.88	-19.88	-20.88	-21.88	-22.88	-23.88	-24.88	-25.88	-26.88		
135	-4.6	-7.29	-6.93	-4.57	-4.18	-3.88	-2.80	-2.20	-1.21	-0.95	-1.05	-0.88	-0.67	-0.86	-1.77	-2.65	-3.88	-5.22	-6.88	-10.58	-12.02	-13.05	-14.51	-15.55	-16.73	-17.72	-18.88	-19.88	-20.88	-21.88	-22.88	-23.88	-24.88	-25.88	-26.88		
140	-4.6	-7.46	-7.16	-4.58	-4.29	-4.01	-3.47	-2.80	-2.20	-1.21	-0.95	-1.05	-0.88	-0.67	-0.86	-1.77	-2.65	-3.88	-5.22	-6.88	-10.58	-12.02	-13.05	-14.51	-15.55	-16.73	-17.72	-18.88	-19.88	-20.88	-21.88	-22.88	-23.88	-24.88	-25.88	-26.88	
145	-4.6	-7.68	-7.36	-4.29	-4.51	-4.31	-3.47	-2.80	-2.20	-1.21	-0.95	-1.05	-0.88	-0.67	-0.86	-1.77	-2.65	-3.88	-5.22	-6.88	-10.58	-12.02	-13.05	-14.51	-15.55	-16.73	-17.72	-18.88	-19.88	-20.88	-21.88	-22.88	-23.88	-24.88	-25.88	-26.88	
150	-4.6	-7.89	-7.58	-4.29	-4.51	-4.31	-3.47	-2.80	-2.20	-1.21	-0.95	-1.05	-0.88	-0.67	-0.86	-1.77	-2.65	-3.88	-5.22	-6.88	-10.58	-12.02	-13.05	-14.51	-15.55	-16.73	-17.72	-18.88	-19.88	-20.88	-21.88	-22.88	-23.88	-24.88	-25.88	-26.88	
155	-4.6	-8.10	-7.80	-4.29	-4.51	-4.31	-3.47	-2.80	-2.20	-1.21	-0.95	-1.05	-0.88	-0.67	-0.86	-1.77	-2.65	-3.88	-5.22	-6.88	-10.58	-12.02	-13.05	-14.51	-15.55	-16.73	-17.72	-18.88	-19.88	-20.88	-21.88	-22.88	-23.88	-24.88	-25.88	-26.88	
160	-4.6	-8.31	-8.01	-4.29	-4.51	-4.31	-3.47	-2.80	-2.20	-1.21	-0.95	-1.05	-0.88	-0.67	-0.86	-1.77	-2.65	-3.88	-5.22	-6.88	-10.58	-12.02	-13.05	-14.51	-15.55	-16.73	-17.72	-18.88	-19.88	-20.88	-21.88	-22.88	-23.88	-24.88	-25.88	-26.88	
165	-4.6	-8.52	-8.22	-4.29	-4.51	-4.31	-3.47	-2.80	-2.20	-1.21	-0.95	-1.05	-0.88	-0.67	-0.86	-1.77	-2.65	-3.88	-5.22	-6.88	-10.58	-12.02	-13.05	-14.51	-15.55	-16.73	-17.72	-18.88	-19.88	-20.88	-21.88	-22.88	-23.88	-24.88	-25.88	-26.88	
170																																					

Size	Time	Area	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180		
100	100	100	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	Response (ms)	
0	-11.05	-11.11	-11.28	-11.41	-11.54	-11.68	-11.80	-11.94	-12.07	-12.20	-12.34	-12.46	-12.59	-12.71	-12.84	-12.96	-13.08	-13.20	-13.32	-13.44	-13.56	-13.68	-13.80	-13.92	-14.04	-14.16	-14.28	-14.40	-14.52	-14.64	-14.76	-14.88	-15.00	-15.12	-15.24	-15.36	-15.48	-15.60	-15.72	-15.84	-15.96
5	-11.05	-11.25	-11.45	-11.65	-11.85	-12.05	-12.25	-12.45	-12.65	-12.85	-13.05	-13.25	-13.45	-13.65	-13.85	-14.05	-14.25	-14.45	-14.65	-14.85	-15.05	-15.25	-15.45	-15.65	-15.85	-16.05	-16.25	-16.45	-16.65	-16.85	-17.05	-17.25	-17.45	-17.65	-17.85	-18.05	-18.25	-18.45	-18.65	-18.85	
10	-11.05	-11.44	-11.82	-12.20	-12.58	-12.96	-13.34	-13.72	-14.10	-14.48	-14.86	-15.24	-15.62	-16.00	-16.38	-16.76	-17.14	-17.52	-17.90	-18.28	-18.66	-19.04	-19.42	-19.80	-20.18	-20.56	-20.94	-21.32	-21.70	-22.08	-22.46	-22.84	-23.22	-23.60	-23.98	-24.36	-24.74	-25.12	-25.50	-25.88	-26.26
15	-11.05	-11.82	-12.59	-13.36	-14.13	-14.90	-15.67	-16.44	-17.21	-17.98	-18.75	-19.52	-20.29	-21.06	-21.83	-22.60	-23.37	-24.14	-24.91	-25.68	-26.45	-27.22	-27.99	-28.76	-29.53	-30.30	-31.07	-31.84	-32.61	-33.38	-34.15	-34.92	-35.69	-36.46	-37.23	-38.00	-38.77	-39.54	-40.31	-41.08	-41.85
20	-11.05	-13.01	-15.17	-17.32	-19.47	-21.61	-23.76	-25.90	-28.04	-30.18	-32.32	-34.46	-36.60	-38.74	-40.88	-43.02	-45.16	-47.30	-49.44	-51.58	-53.72	-55.86	-57.99	-60.13	-62.27	-64.40	-66.54	-68.67	-70.80	-72.93	-75.06	-77.19	-79.32	-81.45	-83.58	-85.71	-87.84	-89.97	-92.10	-94.23	-96.36
25	-11.05	-15.56	-19.07	-22.58	-26.09	-29.60	-33.11	-36.62	-40.13	-43.64	-47.15	-50.66	-54.17	-57.68	-61.19	-64.70	-68.21	-71.72	-75.23	-78.74	-82.25	-85.76	-89.27	-92.78	-96.29	-99.80	-103.31	-106.82	-110.33	-113.84	-117.35	-120.86	-124.37	-127.88	-131.39	-134.90	-138.41	-141.92	-145.43	-148.94	-152.45
30	-11.05	-18.52	-23.96	-29.39	-34.82	-40.25	-45.68	-51.11	-56.54	-61.97	-67.40	-72.83	-78.26	-83.69	-89.12	-94.55	-99.98	-105.41	-110.84	-116.27	-121.70	-127.13	-132.56	-137.99	-143.42	-148.85	-154.28	-159.71	-165.14	-170.57	-176.00	-181.43	-186.86	-192.29	-197.72	-203.15	-208.58	-214.01	-219.44	-224.87	
35	-11.05	-21.56	-28.49	-35.42	-42.35	-49.28	-56.21	-63.14	-70.07	-76.99	-83.92	-90.85	-97.78	-104.71	-111.64	-118.57	-125.50	-132.43	-139.36	-146.29	-153.22	-160.15	-167.08	-174.01	-180.94	-187.87	-194.80	-201.73	-208.66	-215.59	-222.52	-229.45	-236.38	-243.31	-250.24	-257.17	-264.10	-271.03	-277.96	-284.89	
40	-11.05	-24.56	-32.49	-40.42	-48.35	-56.28	-64.21	-72.14	-80.07	-87.99	-95.92	-103.85	-111.78	-119.71	-127.64	-135.57	-143.50	-151.43	-159.36	-167.29	-175.22	-183.15	-191.08	-198.99	-206.92	-214.85	-222.78	-230.71	-238.64	-246.57	-254.50	-262.43	-270.36	-278.29	-286.22	-294.15	-302.08	-310.01	-317.94	-325.87	
45	-11.05	-27.56	-36.49	-45.42	-54.35	-63.28	-72.21	-81.14	-90.07	-98.99	-107.92	-116.85	-125.78	-134.71	-143.64	-152.57	-161.50	-170.43	-179.36	-188.29	-197.22	-206.15	-215.08	-224.01	-232.94	-241.87	-250.80	-259.73	-268.66	-277.59	-286.52	-295.45	-304.38	-313.31	-322.24	-331.17	-340.10	-349.03	-357.96	-366.89	
50	-11.05	-30.56	-40.49	-50.42	-60.35	-70.28	-80.21	-90.14	-100.07	-110.00	-119.93	-129.86	-139.79	-149.72	-159.65	-169.58	-179.51	-189.44	-199.37	-209.30	-219.23	-229.16	-239.09	-249.02	-258.95	-268.88	-278.81	-288.74	-298.67	-308.60	-318.53	-328.46	-338.39	-348.32	-358.25	-368.18	-378.11	-388.04	-397.97	-407.90	
55	-11.05	-33.56	-44.49	-55.42	-66.35	-77.28	-88.21	-99.14	-110.07	-121.00	-131.93	-142.86	-153.79	-164.72	-175.65	-186.58	-197.51	-208.44	-219.37	-230.30	-241.23	-252.16	-263.09	-274.02	-284.95	-295.88	-306.81	-317.74	-328.67	-339.60	-350.53	-361.46	-372.39	-383.32	-394.25	-405.18	-416.11	-427.04	-437.97	-448.90	
60	-11.05	-36.56	-48.49	-60.42	-72.35	-84.28	-96.21	-108.14	-120.07	-132.00	-143.93	-155.86	-167.79	-179.72	-191.65	-203.58	-215.51	-227.44	-239.37	-251.30	-263.23	-275.16	-287.09	-299.02	-310.95	-322.88	-334.81	-346.74	-358.67	-370.60	-382.53	-394.46	-406.39	-418.32	-430.25	-442.18	-454.11	-466.04	-477.97	-489.90	
65	-11.05	-39.56	-52.49	-65.42	-78.35	-91.28	-104.21	-117.14	-130.07	-143.00	-155.93	-168.86	-181.79	-194.72	-207.65	-220.58	-233.51	-246.44	-259.37	-272.30	-285.23	-298.16	-311.09	-324.02	-336.95	-349.88	-362.81	-375.74	-388.67	-401.60	-414.53	-427.46	-440.39	-453.32	-466.25	-479.18	-492.11	-505.04	-517.97		
70	-11.05	-42.56	-56.49	-70.42	-84.35	-98.28	-112.21	-126.14	-140.07	-154.00	-167.93	-181.86	-195.79	-209.72	-223.65	-237.58	-251.51	-265.44	-279.37	-293.30	-307.23	-321.16	-335.09	-349.02	-362.95	-376.88	-390.81	-404.74	-418.67	-432.60	-446.53	-460.46	-474.39	-488.32	-502.25	-516.18	-530.11	-544.04	-557.97	-571.90	
75	-11.05	-45.56	-60.49	-75.42	-90.35	-105.28	-120.21	-135.14	-150.07	-164.99	-179.92	-194.85	-209.78	-224.71	-239.64	-254.57	-269.50	-284.43	-299.36	-314.29	-329.22	-344.15	-359.08	-374.01	-388.94	-403.87	-418.80	-433.73	-448.66	-463.59	-478.52	-493.45	-508.38	-523.31	-538.24	-553.17	-568.10	-583.03	-597.96	-612.89	
80	-11.05	-48.56	-64.49	-80.42	-96.35	-112.28	-128.21	-144.14	-160.07	-175.99	-191.92	-207.85	-223.78	-239.71	-255.64	-271.57	-287.50	-303.43	-319.36	-335.29	-351.22	-367.15	-383.08	-399.01	-414.94	-430.87	-446.80	-462.73	-478.66	-494.59	-510.52	-526.45	-542.38	-558.31	-574.24	-590.17	-606.10	-622.03	-637.96	-653.89	
85	-11.05	-51.56	-68.49	-85.42	-102.35	-119.28	-136.21	-153.14	-170.07	-186.99	-203.92	-220.85	-237.78	-254.71	-271.64	-288.57	-305.50	-322.43	-339.36	-356.29	-373.22	-390.15	-407.08	-424.01	-440.94	-457.87	-474.80	-491.73	-508.66	-525.59	-542.52	-559.45	-576.38	-593.31	-610.24	-627.17	-644.10	-661.03	-677.96	-694.89	
90	-11.05	-54.56	-72.49	-90.42	-108.35	-126.28	-144.21	-162.14	-180.07	-197.99	-215.92	-233.85	-251.78	-269.71	-287.64	-305.57	-323.50	-341.43	-359.36	-377.29	-395.22	-413.15	-431.08	-449.01	-466.94	-484.87	-502.80	-520.73	-538.66	-556.59	-574.52	-592.45	-610.38	-628.31	-646.24	-664.17	-682.10	-699.99	-717.92	-735.85	
95	-11.05	-57.56	-76.49	-95.42	-114.35	-133.28	-152.21	-171.14	-190.07	-208.99	-227.92	-246.85	-265.78	-284.71	-303.64	-322.57	-341.50	-360.43	-379.36	-398.29	-417.22	-436.15	-455.08	-474.01	-492.94	-511.87	-530.80	-549.73	-568.66	-587.59	-606.52	-625.45	-644.38	-663.31	-682.24	-701.17	-720.10	-739.03	-757.96	-776.89	
100	-11.05	-60.56	-80.49	-100.42	-120.35	-140.28	-160.21	-180.14	-200.07	-219.99	-239.92	-259.85	-279.78	-299.71	-319.64	-339.57	-359.50	-379.43	-399.36	-419.29	-439.22	-459.15	-479.08	-499.01	-518.94	-538.87	-558.80	-578.73	-598.66	-618.59	-638.52	-658.45	-678.38	-698.31	-718.24	-738.17	-758.10	-778.03	-797.96	-817.89	
105	-11.05	-63.56	-84.49	-105.42	-126.35	-147.28	-168.21	-189.14	-210.07	-230.99	-251.92	-272.85	-293.78	-314.71	-335.64	-356.57	-377.50	-398.43	-419.36	-440.29	-461.22	-482.15	-503.08	-524.01	-544.94	-565.87	-586.80	-607.73	-628.66	-649.59	-670.52	-691.45	-712.38	-733.31	-754.24	-775.17	-796.10	-817.03	-837.96	-858.89	
110	-11.05	-66.56	-88.49	-110.42	-132.35	-154.28	-176.21	-198.14	-220.07	-241.99	-263.92	-285.85	-307.78	-329.71	-351.64	-373.57	-395.50	-417.43	-439.36	-461.29	-483.22	-505.15	-527.08	-549.01	-570.94	-592.87	-614.80	-636.73	-658.66	-680.59	-702.52	-724.45	-746.38	-768.31	-790.24	-812.17	-834.10	-856.03	-877.96	-899.89	
115	-11.05	-69.56	-92.49	-114.42	-136.35	-158.28	-180.21	-202.14	-224.07	-245.99	-267.92	-289.85	-311.78	-333.71	-355.64	-377.57	-399.50	-421.43	-443.36	-465.29	-487.22	-509.15	-531.08	-553.01	-574.94	-596.87	-618.80	-640.73	-662.66	-684.59	-706.52	-728.45	-750.38	-772.31	-794.24	-816.17	-838.10	-860.03	-881.96	-903.89	
120	-11.05	-72.56	-96.49	-118.42	-140.35	-162.28	-184.21	-206.14	-228.07	-250.00	-271.92	-293.85	-315.78	-337.71	-359.64	-381.57	-403.50	-425.43	-447.36	-469.29	-491.22	-513.15	-535.08	-557.01	-578.94	-600.87	-622.80	-644.73	-666.66	-688.59	-710.52	-732.45	-754.38	-776.31	-798.24	-820.17	-842.10	-864.03	-885.96	-907.89	
125	-11.05	-75.56	-100.49	-122.42	-144.35	-166.28	-188.21	-210.14	-232.07	-254.00	-275.92	-297.85	-319.78	-341.71	-363.64	-385.57	-407.50	-429.43	-451.36	-473.29	-495.22	-517.15	-539.08	-561.01	-582.94	-604.87	-626.80	-648.73	-670.66	-692.59	-714.52	-736.45	-758.38	-780.31	-802.24	-824.17	-846.10	-868.03	-889.96	-911.89	
130	-11.05	-78.56	-104.49	-126.42	-148.35	-170.28	-192.21	-214.14	-236.07	-258.00	-280.00	-302.00	-324.00	-346.00	-368.00	-390.00	-412.00	-434.00	-456.00	-478.00	-500.00	-522.00	-544.00	-566.00	-588.00	-610.00	-632.00	-654.00	-676.00	-698.00											

7800 MHz Theta Angle	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
Phi/Angle	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)
0	-0.00	-0.13	-0.27	-0.41	-0.49	-0.45	-0.48	-0.38	-0.20	-0.38	-0.30	-0.33	0.08	0.39	-0.23	-0.96	-0.40	-1.09	-2.56	-5.26	-6.01	-0.17	-0.97	-0.79	-0.78	-0.43	0.09	-0.46	-0.10	-0.17	-0.13	-0.17	-0.25	-0.14	-0.79	-0.40	-0.05
5	-0.00	-0.03	-0.07	-0.10	-0.08	-0.07	-0.07	-0.14	-0.20	-0.16	-0.24	-0.28	0.16	0.07	0.15	-0.40	-1.03	-2.71	-5.08	-7.21	-6.08	-0.12	-0.94	-0.72	-0.71	-0.40	0.07	-0.14	-0.04	-0.05	-0.15	-0.10	-0.13	-0.24	-0.76	-0.40	-0.05
10	-0.00	-0.07	-0.17	-0.27	-0.30	-0.19	-0.08	-0.11	-0.28	-0.35	-0.40	-0.38	0.08	0.35	-0.08	-0.85	-2.06	-4.50	-6.78	-8.48	-6.95	-0.10	-0.90	-0.68	-0.67	-0.36	0.04	-0.10	-0.01	-0.02	-0.11	-0.06	-0.10	-0.21	-0.74	-0.36	-0.04
15	-0.00	-0.34	-0.48	-0.62	-0.41	-0.27	-0.39	-0.68	-0.49	-0.50	-0.83	-1.00	0.05	0.06	-0.38	-0.81	-1.78	-2.97	-4.40	-5.50	-4.53	-0.02	-0.50	-0.68	-0.92	-0.40	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
20	0.00	-0.16	-0.32	-0.46	-0.14	-0.59	-0.14	-0.66	-0.06	-0.52	-0.72	-1.03	0.03	0.62	-0.10	-1.59	-2.51	-4.30	-4.36	-3.35	-2.35	-0.12	-0.90	-0.88	-0.92	-0.26	0.30	-0.08	-0.22	0.76	0.30	-0.19	-0.08	-0.16	-0.14	-0.25	-0.05
25	0.00	-0.00	-0.00	-0.00	-0.00	-0.04	-0.60	-0.94	-0.20	-0.82	-0.44	-0.25	-0.07	2.03	-0.29	-0.34	-0.33	-0.30	-0.58	-0.22	-0.10	-0.16	-0.14	-0.14	-0.00	-0.32	-0.56	-0.00	-0.64	-0.40	-0.31	-0.55	-0.08	-0.10	-0.00	-0.33	-0.05
30	0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	
35	0.00	-0.00	-0.17	-0.38	-0.25	-0.10	-0.13	-0.10	-0.09	-0.05	-0.46	-0.35	-0.40	-0.35	-0.54	-0.53	-0.45	-0.38	-0.56	-0.94	-0.71	-0.87	-0.45	-0.90	-0.26	-0.52	-0.46	-0.14	-0.32	-0.20	-0.07	-0.36	-0.03	-0.76	-0.30	-0.27	-0.16
40	0.00	-0.29	-0.58	-0.87	-0.93	-1.00	-1.06	-1.20	-1.02	-1.27	-1.13	-1.00	-0.00	-0.56	-0.79	-0.40	-0.22	-0.50	-0.90	-0.75	-0.65	-0.46	-0.36	-0.59	-0.57	-0.47	-0.00	-0.28	-0.60	-1.10	-0.60	-0.93	-1.02	-0.92	-1.10	-0.47	-0.05
45	0.00	-0.40	-0.80	-0.96	-1.01	-1.15	-1.20	-1.24	-1.27	-1.27	-1.07	-0.79	-0.82	-0.21	-0.61	-0.20	-0.28	-0.63	-0.79	-0.92	-0.45	-0.42	-0.04	-0.37	-0.82	-0.47	-0.00	-0.18	-0.32	-0.26	-0.44	-0.13	-0.23	-0.14	-0.51	-0.70	-0.05
50	0.00	-0.40	-0.37	-0.08	-0.05	-0.14	-0.03	-0.04	-0.00	-0.00	-0.00	-0.00	-0.11	-0.10	-0.72	-1.25	-0.79	-1.06	-1.15	-0.43	-0.60	-0.40	-0.00	-0.00	-0.00	-0.00	-0.00	-0.16	-0.16	-0.13	-0.13	-0.13	-0.13	-0.12	-0.78	-0.40	-0.05
55	0.00	-0.14	-0.26	-0.36	-0.30	-0.20	-0.10	-0.08	-0.07	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	
60	0.00	-0.41	-0.82	-0.93	-0.99	-0.74	-0.56	-0.44	-0.32	-0.24	-0.24	-0.24	-0.23	0.07	0.08	0.03	0.00	-0.07	-0.05	-0.50	-0.12	-0.04	-0.03	-0.00	-0.00	-0.00	-0.00	-0.00	-0.11	-0.20	-0.13	-0.05	-0.04	-0.74	-0.40	-0.05	
65	0.00	-0.07	-0.15	-0.22	-0.34	-0.65	-0.79	-0.57	-0.37	-0.26	-0.21	-0.29	0.62	1.54	1.32	0.82	0.62	-0.46	-1.51	-2.58	-3.86	-5.15	-6.44	-0.06	-0.20	-0.70	-0.84	-1.10	-1.41	-1.62	-1.68	-0.69	-0.40	-0.57	-0.65	-0.40	-0.05
70	0.00	-0.70	-0.40	-0.10	-0.01	-0.52	-0.24	-0.30	-0.26	-0.40	0.40	1.40	2.31	1.57	0.82	0.00	-0.00	-0.12	-0.12	-0.22	-0.16	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	
75	0.00	-0.27	-0.45	-0.53	-0.46	-0.09	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	-0.04	
80	0.00	-0.10	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	
85	0.00	-0.77	-0.55	-0.35	-0.40	-0.16	-0.06	-0.36	-0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
90	0.00	-0.75	-0.51	-0.27	-0.29	-0.32	-0.34	-0.02	-0.01	-0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
95	0.00	-0.71	-0.47	-0.14	-0.14	-0.14	-0.13	-0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100	0.00	-0.42	-0.06	-0.36	-0.30	-0.30	-0.34	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	-0.60	
105	0.00	-0.33	-0.07	-0.39	-0.55	-0.60	-0.62	-0.60	-0.38	-0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
110	0.00	-0.39	-0.79	-1.10	-1.22	-0.77	-0.61	-0.96	-0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
115	0.00	-0.45	-0.60	-0.36	-0.29	-0.14	-0.54	-0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120	0.00	-0.40	-0.07	-0.30	-0.62	-0.14	-0.28	-0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
125	0.00	-0.40	-0.24	-0.00	-0.10	-0.20	-0.40	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
130	0.00	-0.59	-0.98	-1.06	-1.14	-0.30	0.54	-0.14	2.28	0.34	2.34	2.34	2.54	1.65	0.76	0.13	-0.00	-0.66	-0.24	-0.55	-0.48	-0.68	-0.71	-0.57	-0.95	-0.75	-0.48	-1.55	-0.51	-0.47	-0.42	0.07	0.99	-0.77	-0.28	-0.63	-0.05
135	0.00	-0.62	-0.85	-1.46	-0.57	0.36	1.36	1.80	2.54	0.17	3.24	3.37	2.05	1.30	0.21	0.23	0.00	-0.75	-0.74	-0.89	-0.05	-0.28	-0.68	-0.97	-0.36	-0.07	-1.09	-0.31	-0.51	-0.76	-0.80	0.19	-0.48	-0.77	-0.51	-0.05	
140	0.00	-0.76	-0.40	-0.10	-0.42	0.28	0.94	1.60	2.25	0.91	3.22	3.52	3.02	1.80	0.37	0.15	0.00	-0.20	-0.34	-0.47	-0.68	-0.65	-0.85	-1.04	-0.34	-0.04	-0.24	-0.54	-0.62	-0.59	-0.47	0.78	-0.39	-0.00	-0.00	-0.00	
145	0.00	-0.57	-0.27	-0.13	-0.27	0.13	0.30	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	
150	0.00	-0.48	-0.33	-0.44	-0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
155	0.00	-0.38	-0.73	-0.08	-0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
160	0.00	-0.28	-0.52	-0.21	0.07	-0.00	-0.22	0.73	1.69	2.64	2.72	2.80	2.08	0.07	0.20	0.00	0.00	-0.31	-0.90	-0.58	-0.09	-0.78	-0.46	-0.15	-0.46	-0.75	-0.05	-0.26	0.40	0.68	0.00	-0.28	-0.47	-0.46	-0.05		
165	0.00	-0.28	-0.52	-0.21	0.07	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.10	-0.38	-0.52	-0.66	-0.79	-0.48	-0.00	-0.70	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00		
170	0.0																																				

Ant. Position : 2G/6G Ant.2

240MHz Thru-Antenna	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
Ph.Antenna (°)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)
0	-4.50	-4.70	-4.71	-4.40	-4.00	-3.51	-3.10	-2.77	-2.50	-2.30	-2.10	-1.90	-1.70	-1.48	-1.12	-0.85	-0.58	-0.30	-0.02	0.28	0.57	0.85	1.12	1.38	1.62	1.85	2.06	2.26	2.44	2.61	2.76	2.90	3.02	3.14	3.24	3.33	3.40
5	-3.89	-4.54	-4.88	-4.87	-4.56	-4.00	-3.56	-3.10	-2.76	-2.42	-2.10	-1.86	-1.63	-1.40	-1.16	-0.91	-0.66	-0.40	-0.14	0.12	0.39	0.67	0.95	1.22	1.48	1.73	1.97	2.20	2.42	2.63	2.83	3.01	3.18	3.34	3.49	3.62	3.73
10	-3.09	-4.04	-4.66	-4.84	-4.61	-4.00	-3.50	-3.00	-2.60	-2.20	-1.80	-1.40	-1.00	-0.60	-0.20	0.20	0.60	1.00	1.40	1.80	2.20	2.60	3.00	3.40	3.80	4.10	4.30	4.40	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
15	-2.09	-4.59	-4.99	-5.00	-4.82	-4.00	-3.38	-2.80	-2.40	-2.00	-1.60	-1.20	-0.80	-0.40	0.00	0.40	0.80	1.20	1.60	2.00	2.40	2.80	3.20	3.60	4.00	4.30	4.50	4.60	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70
20	-0.89	-4.60	-5.00	-4.80	-4.54	-3.85	-3.19	-2.59	-2.27	-2.04	-1.53	-1.17	-0.80	-0.43	-0.06	0.31	0.68	1.05	1.42	1.79	2.16	2.53	2.90	3.27	3.64	4.01	4.38	4.75	5.12	5.49	5.86	6.23	6.60	6.97	7.34	7.71	8.08
25	-0.09	-4.93	-4.98	-4.91	-4.59	-3.87	-2.92	-2.29	-1.98	-1.87	-1.29	-0.96	-0.64	-0.31	-0.03	0.33	0.60	0.88	1.16	1.44	1.72	2.00	2.28	2.56	2.84	3.12	3.40	3.68	3.96	4.24	4.52	4.80	5.08	5.36	5.64	5.92	
30	-0.89	-4.93	-4.93	-4.78	-4.11	-3.35	-2.56	-1.97	-1.66	-1.50	-0.96	-0.66	-0.30	-0.07	0.20	0.48	0.76	1.04	1.32	1.60	1.88	2.16	2.44	2.72	3.00	3.28	3.56	3.84	4.12	4.40	4.68	4.96	5.24	5.52	5.80	6.08	
35	-3.09	-4.66	-4.86	-4.41	-3.80	-3.00	-2.27	-1.82	-1.50	-1.31	-0.82	-0.54	-0.26	-0.02	0.26	0.54	0.82	1.10	1.38	1.66	1.94	2.22	2.50	2.78	3.06	3.34	3.62	3.90	4.18	4.46	4.74	5.02	5.30	5.58	5.86	6.14	
40	-0.09	-4.52	-4.74	-4.40	-3.83	-2.79	-1.87	-1.29	-0.97	-0.86	-0.23	-0.09	-0.26	-0.54	-0.82	-1.10	-1.38	-1.66	-1.94	-2.22	-2.50	-2.78	-3.06	-3.34	-3.62	-3.90	-4.18	-4.46	-4.74	-5.02	-5.30	-5.58	-5.86	-6.14	-6.42		
45	-0.89	-4.48	-4.61	-4.17	-3.31	-2.35	-1.52	-0.94	-0.63	-0.40	-0.29	-0.02	-0.30	-0.57	-0.83	-1.10	-1.37	-1.64	-1.91	-2.18	-2.45	-2.72	-3.00	-3.27	-3.54	-3.81	-4.08	-4.35	-4.62	-4.89	-5.16	-5.43	-5.70	-5.97	-6.24		
50	-0.89	-4.40	-4.46	-3.91	-2.90	-2.00	-1.18	-0.62	-0.35	-0.25	-0.42	-0.00	-0.28	-0.55	-0.82	-1.10	-1.37	-1.64	-1.91	-2.18	-2.45	-2.72	-3.00	-3.27	-3.54	-3.81	-4.08	-4.35	-4.62	-4.89	-5.16	-5.43	-5.70	-5.97	-6.24		
55	-0.89	-4.20	-4.20	-3.64	-2.63	-1.80	-0.98	-0.42	-0.10	-0.04	-0.24	-0.00	-0.26	-0.53	-0.80	-1.07	-1.34	-1.61	-1.88	-2.15	-2.42	-2.69	-2.96	-3.23	-3.50	-3.77	-4.04	-4.31	-4.58	-4.85	-5.12	-5.39	-5.66	-5.93	-6.20		
60	-0.89	-4.38	-4.12	-3.36	-2.32	-1.32	-0.53	-0.00	0.29	0.38	0.00	0.28	0.58	0.88	1.18	1.47	1.76	2.05	2.34	2.63	2.92	3.21	3.50	3.79	4.08	4.37	4.66	4.95	5.24	5.53	5.82	6.11	6.40	6.69	6.98		
65	-0.89	-4.23	-3.94	-3.08	-2.00	-1.00	-0.22	0.30	0.57	0.68	0.01	0.44	0.75	1.05	1.35	1.65	1.95	2.25	2.55	2.85	3.15	3.45	3.75	4.05	4.35	4.65	4.95	5.25	5.55	5.85	6.15	6.45	6.75	7.05			
70	-0.89	-4.16	-3.77	-2.82	-1.70	-0.68	0.09	0.58	0.85	0.94	0.00	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25			
75	-0.89	-4.08	-3.59	-2.57	-1.41	-0.39	0.38	0.87	1.13	1.21	0.10	1.00	1.40	1.80	2.20	2.60	3.00	3.40	3.80	4.20	4.60	5.00	5.40	5.80	6.20	6.60	7.00	7.40	7.80	8.20	8.60	9.00	9.40	9.80			
80	-0.89	-4.00	-3.40	-2.42	-1.24	-0.22	0.46	0.96	1.15	1.40	1.40	1.30	1.07	0.84	0.58	0.34	0.08	0.16	0.44	0.72	1.00	1.28	1.56	1.84	2.12	2.40	2.68	2.96	3.24	3.52	3.80	4.08	4.36	4.64			
85	-0.89	-3.93	-3.26	-2.12	-0.90	-0.14	0.91	1.41	1.68	1.76	1.71	1.56	1.32	1.08	0.85	0.60	0.35	0.17	0.79	1.24	1.69	2.14	2.59	3.04	3.49	3.94	4.39	4.84	5.29	5.74	6.19	6.64	7.09	7.54			
90	-0.89	-3.86	-3.11	-1.91	-0.68	0.36	1.14	1.64	1.84	1.84	1.68	1.34	1.04	0.82	0.57	0.32	0.08	0.44	1.19	1.64	2.09	2.54	3.00	3.45	3.90	4.35	4.80	5.25	5.70	6.15	6.60	7.05	7.50	7.95			
95	-0.89	-3.78	-2.97	-1.76	-0.51	0.54	1.34	1.84	1.87	1.71	1.29	0.86	0.54	0.30	0.05	0.18	0.43	0.68	1.13	1.58	2.03	2.48	2.93	3.38	3.83	4.28	4.73	5.18	5.63	6.08	6.53	6.98	7.43	7.88			
100	-0.89	-3.70	-2.89	-1.68	-0.43	0.58	1.48	1.94	1.97	1.71	1.29	0.86	0.54	0.30	0.05	0.18	0.43	0.68	1.13	1.58	2.03	2.48	2.93	3.38	3.83	4.28	4.73	5.18	5.63	6.08	6.53	6.98	7.43	7.88			
105	-0.89	-3.64	-2.73	-1.48	-0.25	0.80	1.60	2.15	2.40	2.16	1.67	1.26	0.85	0.54	0.29	0.10	0.34	0.59	1.04	1.49	1.94	2.39	2.84	3.29	3.74	4.19	4.64	5.09	5.54	6.00	6.45	6.90	7.35	7.80			
110	-0.89	-3.57	-2.63	-1.38	-0.17	0.86	1.65	2.21	2.56	2.71	2.76	2.06	1.46	1.12	0.88	0.61	0.32	0.58	1.03	1.48	1.93	2.38	2.83	3.28	3.73	4.18	4.63	5.08	5.53	6.00	6.45	6.90	7.35	7.80			
115	-0.89	-3.51	-2.55	-1.32	-0.12	0.89	1.66	2.21	2.56	2.71	2.76	2.07	1.47	1.13	0.88	0.62	0.37	0.63	1.08	1.53	1.98	2.43	2.88	3.33	3.78	4.23	4.68	5.13	5.58	6.03	6.48	6.93	7.38	7.83			
120	-0.89	-3.45	-2.47	-1.28	-0.01	0.89	1.63	2.16	2.44	2.67	2.67	2.07	1.47	1.13	0.88	0.62	0.37	0.63	1.08	1.53	1.98	2.43	2.88	3.33	3.78	4.23	4.68	5.13	5.58	6.03	6.48	6.93	7.38	7.83			
125	-0.89	-3.40	-2.41	-1.23	-0.04	0.89	1.57	2.06	2.36	2.40	2.37	2.15	1.40	1.06	0.84	0.61	0.33	0.59	1.04	1.49	1.94	2.39	2.84	3.29	3.74	4.19	4.64	5.09	5.54	6.00	6.45	6.90	7.35	7.80			
130	-0.89	-3.36	-2.36	-1.20	-0.01	0.89	1.40	1.96	2.21	2.31	2.28	2.12	1.37	1.03	0.84	0.64	0.36	0.78	1.16	1.44	1.70	1.94	2.21	2.50	2.80	3.10	3.40	3.70	4.00	4.30	4.60	4.90	5.20	5.50			
135	-0.89	-3.30	-2.31	-1.18	-0.13	0.73	1.38	1.82	2.06	2.12	2.06	1.87	1.20	0.77	0.60	0.57	0.63	1.03	1.38	1.62	1.82	2.02	2.24	2.53	2.82	3.12	3.42	3.72	4.02	4.32	4.62	4.92	5.22	5.52			
140	-0.89	-3.28	-2.27	-1.17	-0.06	0.67	1.29	1.81	1.96	1.88	1.64	1.32	0.82	0.40	0.41	0.46	0.49	0.88	1.28	1.58	1.78	1.96	2.12	2.28	2.50	2.79	3.19	3.73	4.28	4.83	5.38	5.93	6.48	7.03			
145	-0.89	-3.24	-2.23	-1.16	-0.07	0.67	1.26	1.81	1.91	1.81	1.61	1.30	0.81	0.40	0.41	0.46	0.49	0.88	1.28	1.58	1.78	1.96	2.12	2.28	2.50	2.79	3.19	3.73	4.28	4.83	5.38	5.93	6.48	7.03			
150	-0.89	-3.18	-2.20	-1.17	-0.22	0.57	1.15	1.54	1.74	1.77	1.46	1.14	0.76	0.32	-0.15	-0.46	-0.76	-1.06	-1.36	-1.66	-2.07	-2.32	-2.57	-2.80	-3.03	-3.26	-3.49	-3.73	-3.96	-4.19	-4.43	-4.66	-4.89				
155	-0.89	-3.15	-2.18	-1.16	-0.24	0.53	1.11	1.50	1.70	1.75	1.47	1.40	1.21	0.87	0.47	0.03	-0.40	-0.70	-1.10	-1.50	-1.90	-2.30	-2.70	-3.10	-3.50	-3.90	-4.30	-4.70	-5.10	-5.50	-5.90	-6.30	-6.70				
160	-0.89	-3.12	-2.14	-1.16	-0.25	0.51	1.09	1.48	1.68	1.76	1.71	1.56	1.33	0.94	0.70	0.30	-0.12	-0.63	-0.98	-1.23	-1.51	-1.77	-2.02	-2.24	-2.48	-2.69	-2.91	-3.15	-3.38	-3.61	-3.84	-4.07	-4.29	-4.52			
165	-0.89	-3.09	-2.10	-1.16	-0.26	0.54	1.07	1.47	1.67	1.71	1.70	1.58	1.35	0.96	0.73	0.31	-0.07	-0.58	-0.94	-1.25	-1.58	-1.84	-2.12	-2.34	-2.48	-2.64	-2.86	-3.09	-3.32	-3.55	-3.78	-4.01	-4.24	-4.47			
170	-0.89	-3.06	-2.12	-1.15	-0.26	0.49	1.06	1.46	1.66	1.70	1.74	1.65	1.42	1.03	0.79	0.37	0.10	-0.36	-0.66	-0.96	-1.26	-1.56	-1.86	-2.16	-2.46	-2.76	-3.06	-3.36	-3.66	-3.96	-4.26	-4.56	-4.86				
175	-0.89	-3.06	-2.14	-1.14	-0.26	0.46	1.05	1.46	1.66	1.72	1.70	1.62	1.50	1.31	1.11	0.82	0.48	0.12	-0.24	-0.58	-0.90	-1.22	-1.54	-1.86	-2.18	-2.50	-2.82	-3.14	-3.46	-3.78	-4.10	-4.42	-4.74				
180	-0.89	-3.04	-2.09	-1.13</																																	

Ant. Position : BLE Ant.5

240 MHz Theta/Az	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	
Phi/Az (°)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	Response (dB)	
0	-0.11	0.03	0.22	0.37	0.46	0.54	0.63	0.73	0.82	0.84	0.88	0.91	0.91	0.89	-0.55	-1.01	-1.41	-1.79	-2.16	-2.58	-2.84	-3.02	-3.40	-3.79	-4.01	-4.12	-4.08	-4.01	-4.08	-4.01	-4.08	-4.29	-4.54	-4.58	-4.58	-3.77	-3.14	
5	-0.11	0.05	0.25	0.46	0.49	0.57	0.64	0.73	0.81	0.83	0.77	0.81	0.81	0.83	-0.77	-1.61	-2.18	-2.44	-2.74	-3.06	-3.35	-3.56	-3.87	-4.07	-4.18	-4.08	-4.01	-4.08	-4.31	-4.88	-4.64	-4.58	-4.58	-4.48	-3.77	-3.14		
10	-0.11	0.09	0.30	0.44	0.53	0.59	0.65	0.72	0.78	0.81	0.76	0.68	0.59	0.25	-0.65	-1.30	-1.71	-2.07	-2.40	-2.69	-2.95	-3.20	-3.45	-3.69	-3.92	-4.15	-4.37	-4.59	-4.84	-5.31	-5.56	-5.98	-6.47	-6.81	-6.87	-6.14		
15	-0.11	0.10	0.31	0.46	0.54	0.60	0.66	0.72	0.78	0.82	0.82	0.75	0.62	0.41	0.15	-0.15	-0.46	-0.76	-1.06	-1.36	-1.61	-1.86	-2.10	-2.30	-2.56	-2.81	-3.05	-3.31	-3.57	-4.11	-4.68	-4.64	-4.14	-3.68	-3.77	-3.14		
20	-0.11	0.11	0.33	0.48	0.56	0.62	0.67	0.74	0.81	0.87	0.89	0.86	0.76	0.58	0.35	0.07	-0.24	-0.54	-0.82	-1.08	-1.28	-1.48	-1.71	-1.96	-2.28	-2.64	-3.04	-3.48	-4.02	-5.25	-4.48	-4.07	-4.27	-4.51	-4.58	-3.74		
25	-0.11	0.12	0.35	0.48	0.58	0.64	0.71	0.79	0.86	0.96	0.91	0.88	0.82	0.76	0.53	0.25	-0.04	-0.34	-0.64	-0.85	-1.07	-1.29	-1.54	-1.86	-2.25	-2.73	-3.32	-4.03	-4.86	-5.74	-6.48	-6.76	-6.58	-5.98	-4.58	-3.74		
30	-0.11	0.13	0.37	0.50	0.61	0.69	0.76	0.84	0.93	1.00	0.98	0.91	0.84	0.76	0.54	0.28	-0.04	-0.34	-0.64	-0.85	-1.07	-1.29	-1.54	-1.86	-2.25	-2.73	-3.32	-4.03	-4.86	-5.74	-6.48	-6.76	-6.58	-5.98	-4.58	-3.74		
35	-0.11	0.14	0.38	0.55	0.66	0.77	0.89	1.03	1.18	1.31	1.39	1.40	1.32	1.18	0.93	0.64	0.35	0.05	-0.22	-0.49	-0.77	-1.10	-1.52	-2.04	-2.68	-3.42	-4.25	-5.16	-6.10	-6.93	-7.37	-7.17	-6.41	-5.48	-4.46	-3.81		
40	-0.11	0.15	0.40	0.58	0.73	0.87	1.00	1.22	1.40	1.55	1.64	1.64	1.55	1.38	1.15	0.87	0.57	0.28	0.02	-0.33	-0.68	-1.12	-1.68	-2.32	-3.10	-3.97	-4.91	-5.88	-6.79	-7.48	-7.87	-7.23	-6.34	-5.31	-4.48	-3.81		
45	-0.11	0.16	0.42	0.62	0.80	0.99	1.20	1.43	1.64	1.80	1.89	1.88	1.79	1.61	1.38	1.11	0.88	0.61	0.31	0.19	-0.13	-0.64	-1.19	-1.80	-2.48	-3.28	-4.26	-5.38	-6.56	-7.59	-7.87	-7.81	-7.17	-6.21	-5.20	-4.32		
50	-0.11	0.16	0.44	0.64	0.84	1.07	1.30	1.54	1.78	1.94	2.00	1.98	1.89	1.71	1.44	1.16	0.94	0.66	0.37	0.20	-0.07	-0.64	-1.24	-1.92	-2.68	-3.54	-4.58	-5.78	-6.96	-7.87	-8.07	-7.81	-7.17	-6.21	-5.20	-4.32		
55	-0.11	0.16	0.44	0.64	0.84	1.07	1.30	1.54	1.78	1.94	2.00	1.98	1.89	1.71	1.44	1.16	0.94	0.66	0.37	0.20	-0.07	-0.64	-1.24	-1.92	-2.68	-3.54	-4.58	-5.78	-6.96	-7.87	-8.07	-7.81	-7.17	-6.21	-5.20	-4.32		
60	-0.11	0.17	0.46	0.72	0.98	1.25	1.56	1.84	2.08	2.23	2.28	2.25	2.15	1.98	1.77	1.53	1.25	0.92	0.61	0.31	-0.63	-1.38	-2.28	-3.27	-4.38	-5.53	-6.83	-8.15	-9.73	-10.88	-10.78	-9.53	-8.44	-7.44	-6.58			
65	-0.11	0.17	0.48	0.77	1.08	1.40	1.72	2.01	2.23	2.36	2.40	2.36	2.23	2.07	1.88	1.65	1.38	1.04	0.61	0.04	-0.62	-1.42	-2.32	-3.28	-4.27	-5.24	-6.15	-6.94	-7.78	-8.68	-10.22	-10.58	-9.64	-8.61	-7.61	-6.54		
70	-0.11	0.17	0.50	0.82	1.16	1.52	1.86	2.13	2.32	2.42	2.42	2.34	2.22	2.07	1.90	1.68	1.41	1.09	0.64	0.08	-0.59	-1.37	-2.21	-3.09	-3.98	-4.90	-5.78	-6.58	-7.13	-7.28	-8.60	-10.23	-10.48	-9.48	-8.48	-7.48	-6.54	
75	-0.11	0.17	0.52	0.87	1.24	1.82	2.16	2.39	2.50	2.50	2.38	2.26	2.14	2.00	1.84	1.65	1.39	1.04	0.60	0.05	-0.50	-1.28	-2.03	-2.82	-3.64	-4.52	-5.42	-6.25	-6.82	-6.96	-8.63	-10.40	-10.27	-9.37	-8.36	-7.40	-6.54	
80	-0.11	0.17	0.52	0.88	1.31	2.00	2.31	2.51	2.51	2.32	2.20	2.10	1.97	1.84	1.68	1.50	1.34	1.06	0.60	-0.55	-1.25	-2.05	-2.82	-3.60	-4.50	-5.24	-6.11	-6.86	-6.79	-8.44	-10.41	-10.27	-9.36	-8.34	-7.44	-6.54		
85	-0.11	0.17	0.54	0.96	1.36	1.74	2.02	2.18	2.22	2.15	2.03	1.89	1.75	1.62	1.46	1.25	0.97	0.61	0.18	-0.38	-0.82	-1.37	-1.97	-2.66	-3.40	-4.26	-5.08	-5.82	-6.24	-6.76	-8.34	-10.31	-10.31	-9.40	-8.40	-7.40	-6.54	
90	-0.11	0.16	0.55	0.98	1.40	1.76	2.01	2.11	2.09	1.99	1.80	1.64	1.49	1.33	1.14	0.98	0.56	0.17	-0.28	-0.74	-1.23	-1.74	-2.32	-3.01	-3.84	-4.61	-5.38	-6.06	-6.42	-6.94	-8.57	-10.48	-10.40	-9.38	-8.38	-7.38	-6.54	
95	-0.11	0.16	0.55	0.98	1.42	1.76	1.97	2.02	1.94	1.76	1.56	1.37	1.18	0.98	0.73	0.60	0.40	-0.47	-0.95	-1.42	-1.90	-2.40	-2.98	-3.72	-4.60	-5.59	-6.55	-7.21	-7.36	-7.92	-9.48	-10.68	-10.29	-9.37	-8.37	-7.37	-6.54	
100	-0.11	0.17	0.57	1.00	1.84	1.70	1.91	1.97	1.88	1.68	1.48	1.29	1.10	0.90	0.74	0.60	0.40	-0.47	-0.95	-1.42	-1.90	-2.40	-2.98	-3.72	-4.60	-5.59	-6.55	-7.21	-7.36	-7.92	-9.48	-10.68	-10.29	-9.37	-8.37	-7.37	-6.54	
105	-0.11	0.13	0.53	0.99	1.47	1.72	1.86	1.82	1.65	1.40	1.12	0.82	0.60	0.40	0.26	-0.10	-0.38	-0.86	-1.35	-1.84	-2.36	-2.93	-3.61	-4.37	-5.18	-6.06	-6.90	-7.49	-7.93	-8.07	-9.74	-12.22	-10.45	-9.62	-8.62	-7.62	-6.57	
110	-0.11	0.11	0.51	0.97	1.39	1.88	1.79	1.73	1.55	1.27	0.95	0.56	0.09	-0.62	-1.27	-1.94	-2.64	-3.06	-3.46	-3.86	-4.26	-4.66	-5.06	-5.46	-5.86	-6.26	-6.66	-7.06	-7.46	-7.86	-8.26	-9.46	-12.45	-10.68	-9.82	-8.82	-7.82	-6.77
115	-0.11	0.09	0.48	0.94	1.35	1.82	1.73	1.67	1.48	1.19	0.83	0.35	-0.29	-1.13	-2.19	-3.38	-4.58	-5.53	-6.27	-6.72	-7.22	-7.72	-8.22	-8.72	-9.22	-9.72	-10.22	-10.72	-11.22	-11.72	-12.68	-13.48	-13.58	-12.68	-11.68	-10.68	-9.68	
120	-0.11	0.07	0.45	0.90	1.30	1.83	1.87	1.82	1.62	1.37	0.97	0.21	-0.60	-1.79	-3.27	-4.77	-6.06	-7.46	-8.68	-9.24	-9.74	-10.24	-10.74	-11.24	-11.74	-12.24	-12.74	-13.24	-13.74	-14.24	-15.18	-16.08	-16.28	-15.18	-14.18	-13.18	-12.18	
125	-0.11	0.04	0.41	0.84	1.23	1.84	1.93	1.84	1.61	1.34	1.11	0.76	0.15	-0.80	-2.13	-3.82	-5.46	-6.84	-7.94	-8.68	-9.28	-9.78	-10.28	-10.78	-11.28	-11.78	-12.28	-12.78	-13.28	-13.78	-14.28	-15.18	-16.08	-16.28	-15.18	-14.18	-13.18	-12.18
130	-0.11	0.01	0.36	0.78	1.16	1.84	2.02	1.95	1.66	1.23	0.83	0.17	-0.85	-2.34	-4.38	-7.07	-9.82	-12.77	-15.78	-18.44	-20.54	-22.44	-24.14	-25.74	-27.34	-28.94	-30.54	-32.14	-33.74	-34.44	-34.94	-35.44	-35.94	-36.44	-36.94	-37.44	-37.94	-38.44
135	-0.11	-0.02	0.30	0.70	1.07	1.33	1.48	1.52	1.46	1.28	0.91	0.24	-0.78	-2.31	-4.46	-7.28	-10.44	-13.86	-17.26	-20.44	-23.14	-25.44	-27.44	-29.14	-30.74	-32.34	-33.94	-35.54	-37.14	-38.44	-39.44	-40.44	-41.44	-42.44	-43.44	-44.44	-45.44	-46.44
140	-0.11	-0.05	0.24	0.61	0.96	1.23	1.39	1.46	1.45	1.31	0.98	0.36	-0.41	-1.73	-4.21	-6.96	-10.17	-13.65	-17.09	-20.41	-23.41	-26.01	-28.21	-30.11	-31.81	-33.41	-35.01	-36.61	-38.21	-39.41	-40.41	-41.41	-42.41	-43.41	-44.41	-45.41	-46.41	-47.41
145	-0.11	-0.09	0.17	0.50	0.81	1.04	1.20	1.27	1.26	1.18	0.84	0.24	-0.53	-1.90	-4.44	-7.44	-10.44	-13.44	-16.44	-19.44	-22.44	-25.44	-28.44	-31.44	-34.44	-37.44	-40.44	-43.44	-46.44	-49.44	-52.44	-55.44	-58.44	-61.44	-64.44	-67.44	-70.44	-73.44
150	-0.11	-0.12	0.09	0.46	0.71	0.95	1.12	1.23	1.26	1.18	0.81	0.30	-0.51	-1.82	-4.36	-7.46	-10.46	-13.46	-16.46	-19.46	-22.46	-25.46	-28.46	-31.46	-34.46	-37.46	-40.46	-43.46	-46.46	-49.46	-52.46	-55.46	-58.46	-61.46	-64.46	-67.46	-70.46	-73.46
155	-0.11	-0.14	0.01	0.28	0.55	0.78	0.93	1.03	1.06	0.98	0.72	0.21	-0.64	-1.97	-4.54	-7.74	-11.04	-14.34	-17.64	-20.94	-24.24	-27.54	-30.84	-34.14	-37.44	-40.74	-44.04	-47.34	-50.64	-53.94	-57.24	-60.54	-63.84	-67.14	-70.44	-73.74	-77.04	-80.34
160	-0.11	-0.20	-0.07	0.19	0.39	0.59	0.71	0.77	0.77	0.66	0.39	-0.13	-0.95	-2.15	-3.75	-5.74	-7.99	-9.44	-10.64	-11.54	-12.24	-12.84	-13.44	-14.04	-14.64	-15.24	-15.84	-16.44	-17.04	-17.64	-18.24	-18.84	-19.44	-20.04	-20.64	-21.24	-21.84	-22.44
165	-0.11	-0.24	-0.10	0.09	0.29	0.38	0.44	0.46	0.48	0.34	-0.04	-0.83	-1.47	-2.65	-4.01	-5.07</																						