



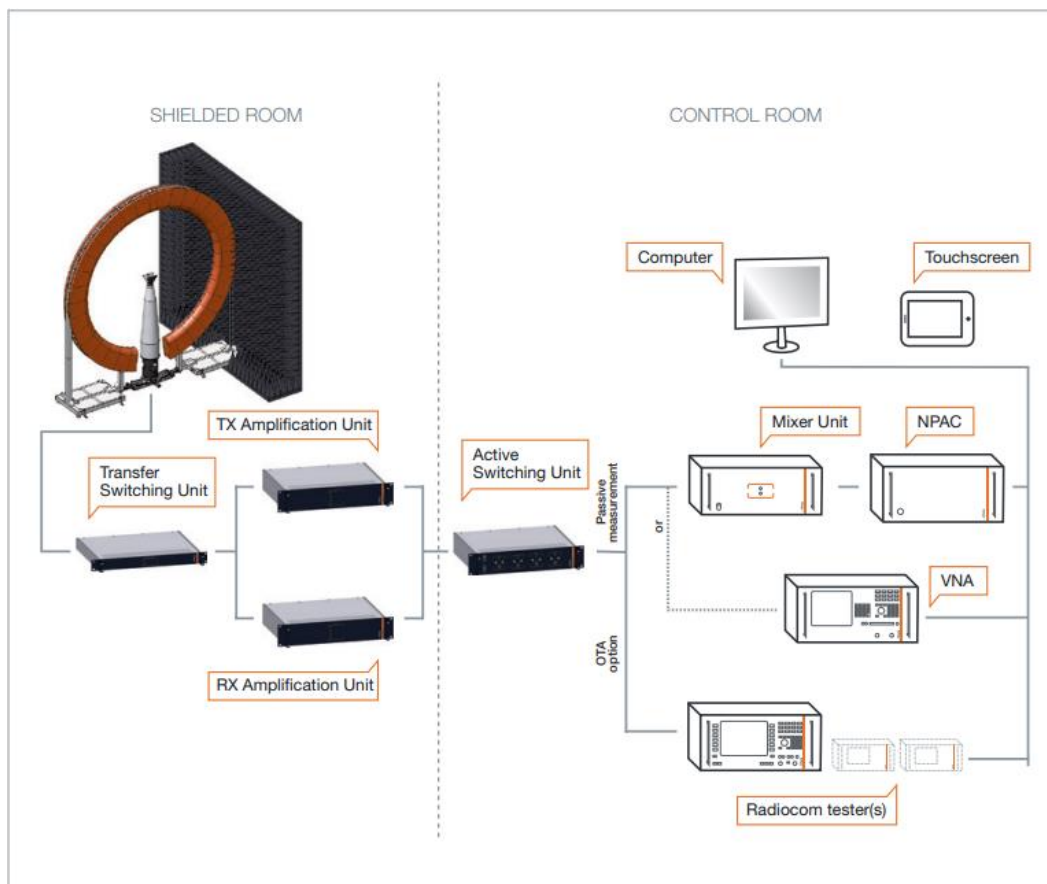
# 6G RN Antenna Test Report

Model: G1RN6AHB012

For Tarana Part Number: 31-0181-200

## 1. Antenna Test Lab Information

- Lab Name: MVG, Inc.
- Address: 450 Franklin Gateway, Suite 100, Marietta, GA, 30067.
- [Certification](#): MVG is ISO 9001 and 17025 certified, and A2LA accredited, and offers NIST traceable antenna measurements. MVG is also a CTIA Authorized Test Laboratory (CATL) for Over the Air (OTA) active measurements.
- Test system: SG 64-S spherical near-field measurement system
- Frequency measurement range: SG64 frequency range of operation is from 400MHz to 6.0 GHz. The frequency range from 6.0 to 18.0 GHz is covered via an indoor far-field chamber.
- EUT measurement method: Gain-transfer or Substitution Method.
- For more detailed information about the test system, please refer to this [link](#).
- Equipment List / System Overview:





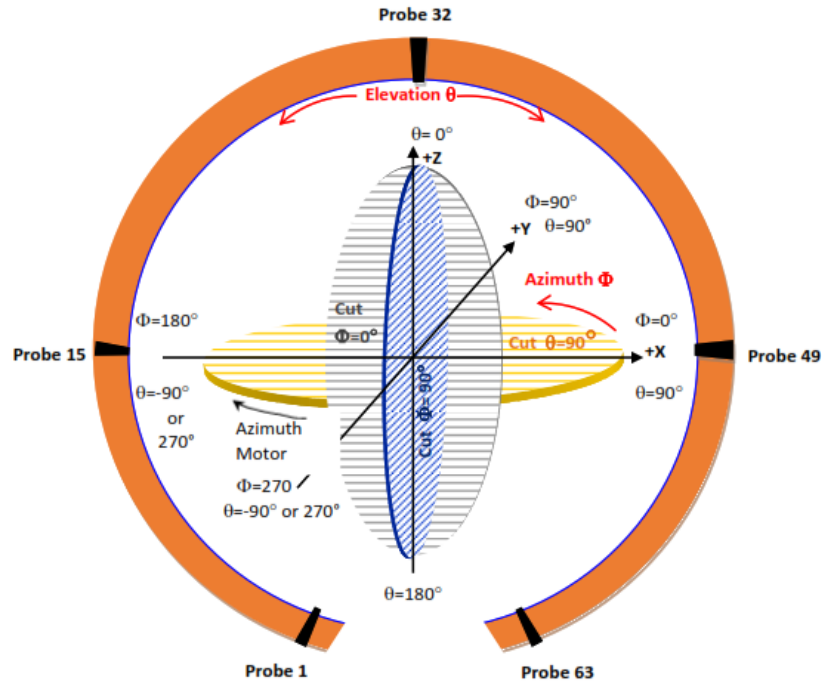
## 2. Equipment/System Calibration and Test Information

<b>Equipment Name</b>	<b>Mode</b>	<b>Manufacturer</b>	<b>Calibration Date</b>	<b>Calibration Due Date</b>
SG-64 Measurement System	Spherical Near- Field Measurement	MVG, Inc	September 2022	September 2023

<b>Test Personnel</b>	Gunar Gray
<b>Test Date</b>	Feb 8, 2023

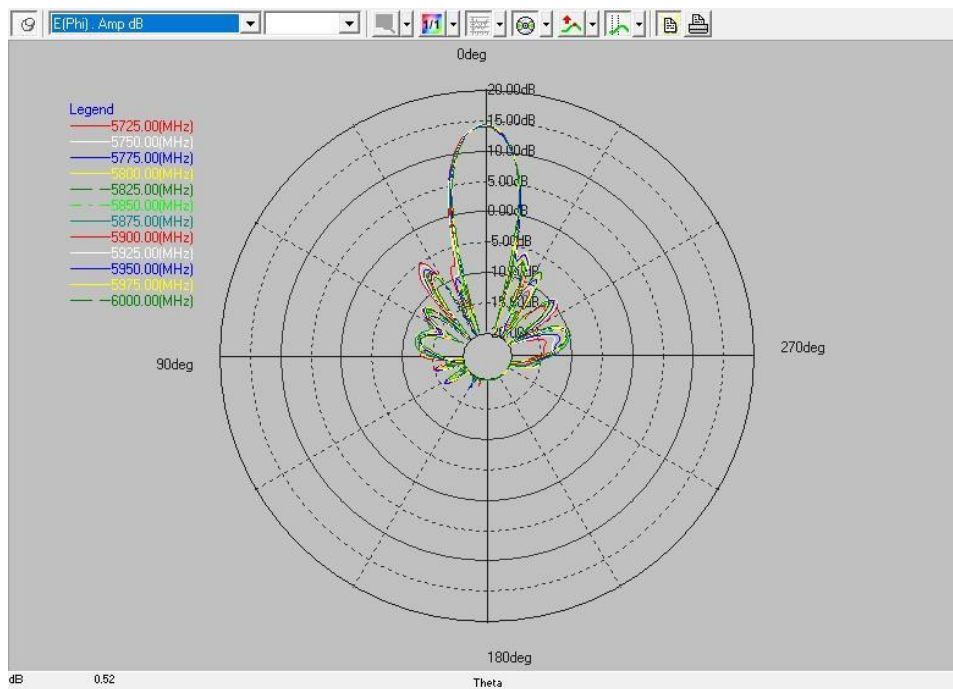
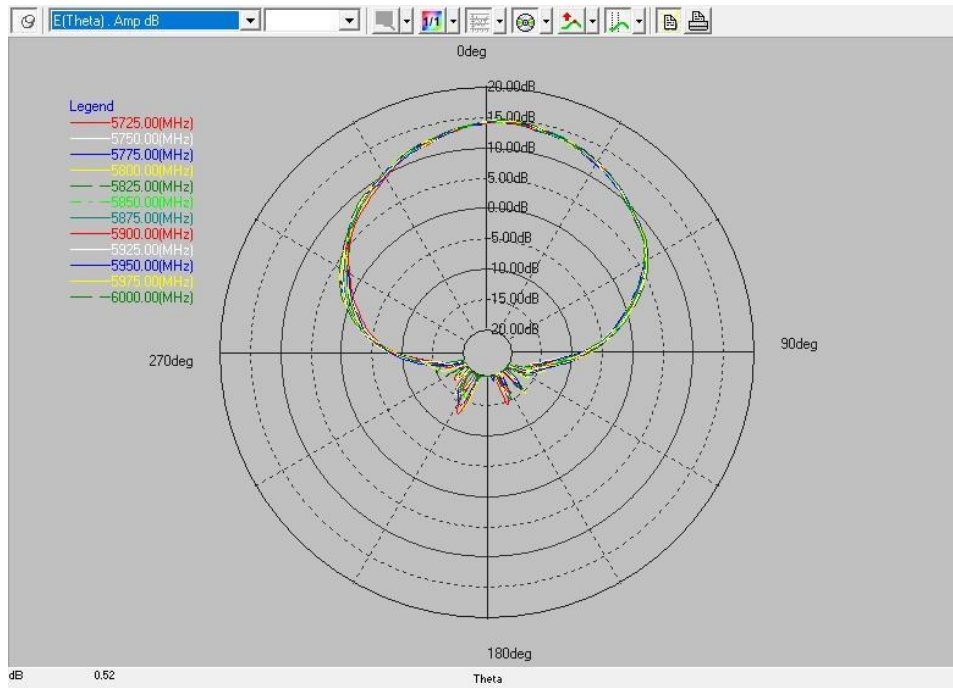
## 4. Measurement setting – MVG SG64 Coordinate System

### MVG SG64 Coordinate System

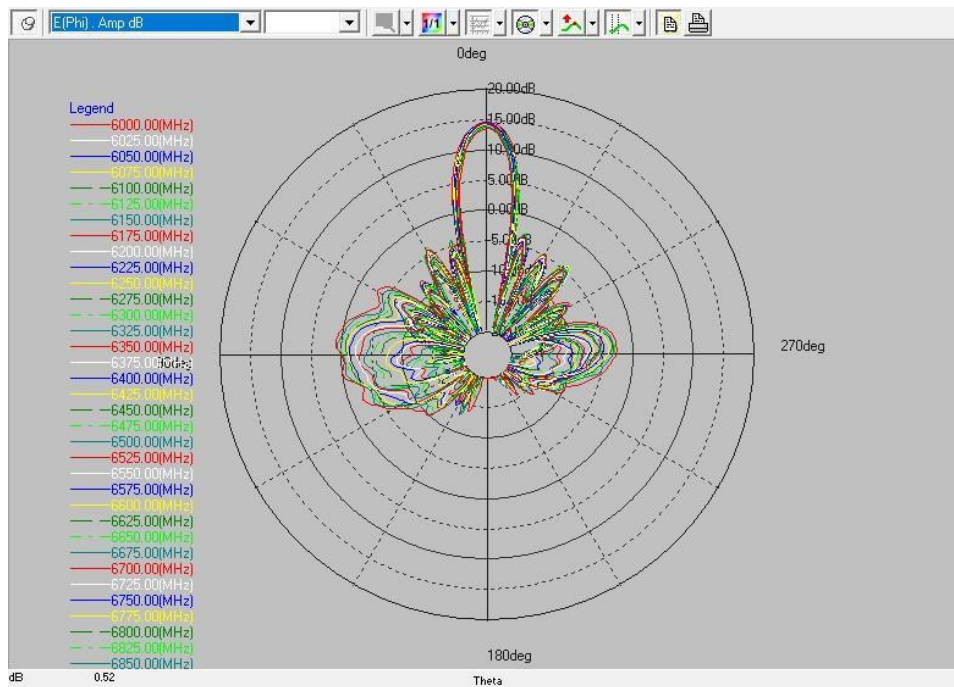
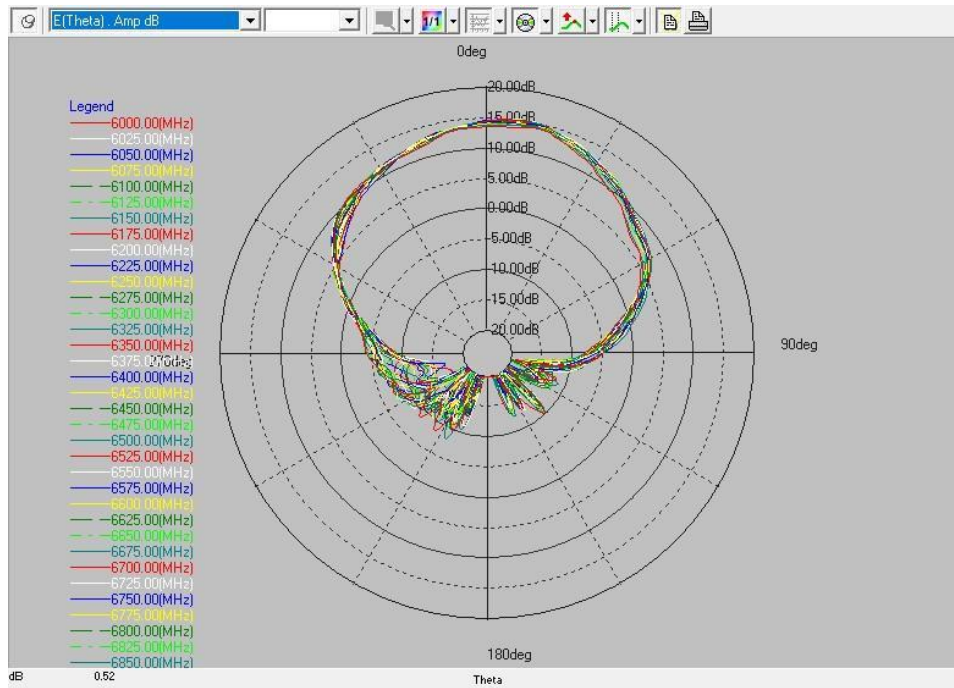


## 5. 2D Patterns

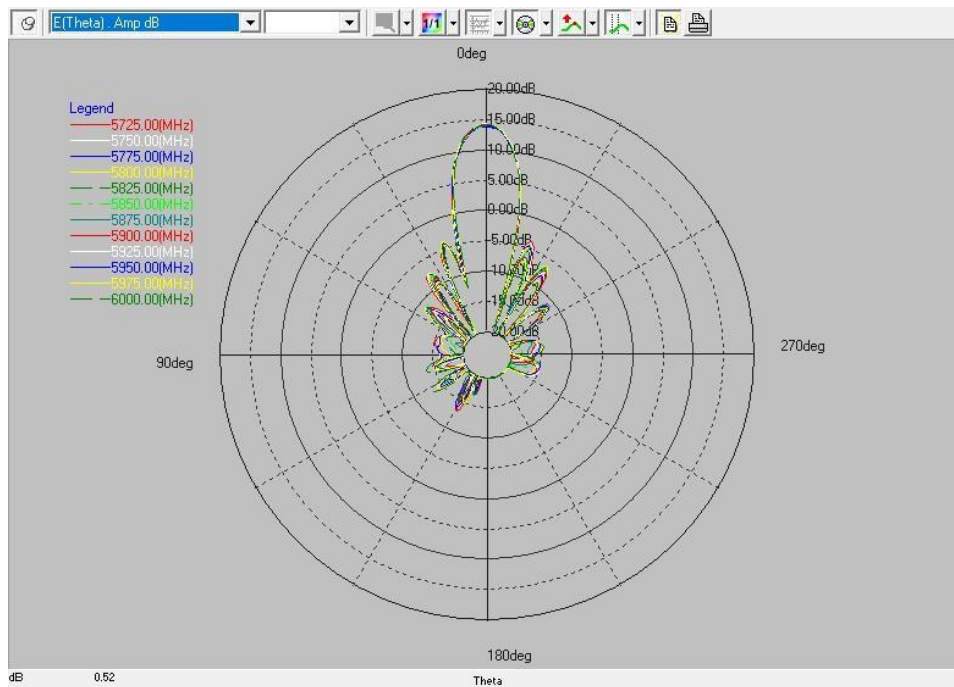
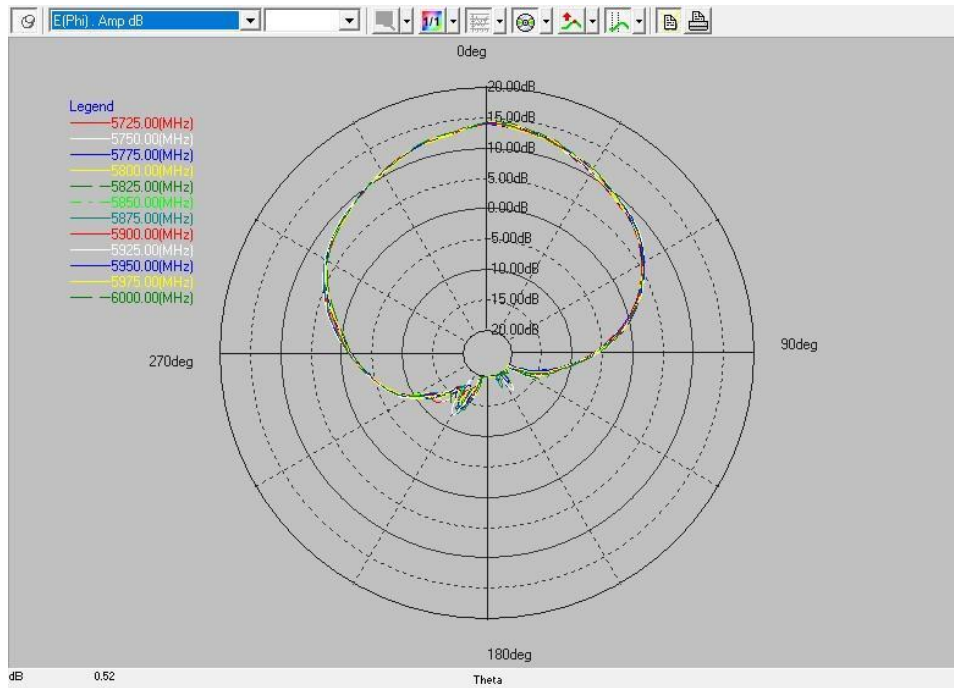
### 5.1. Antenna 0H Azimuth and Elevation Patterns, 5725GHz to 6GHz



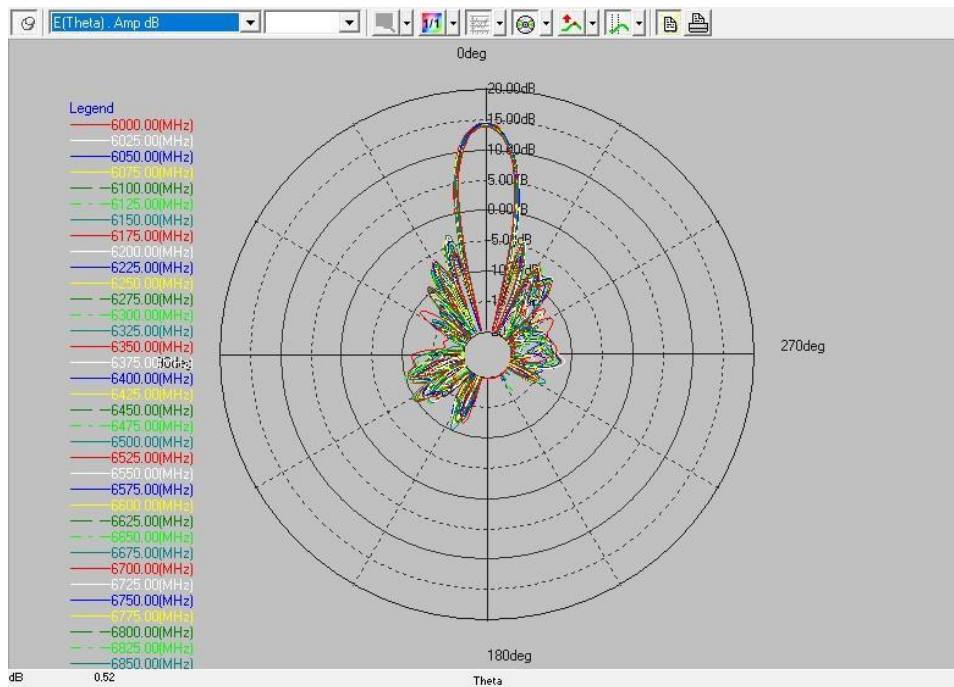
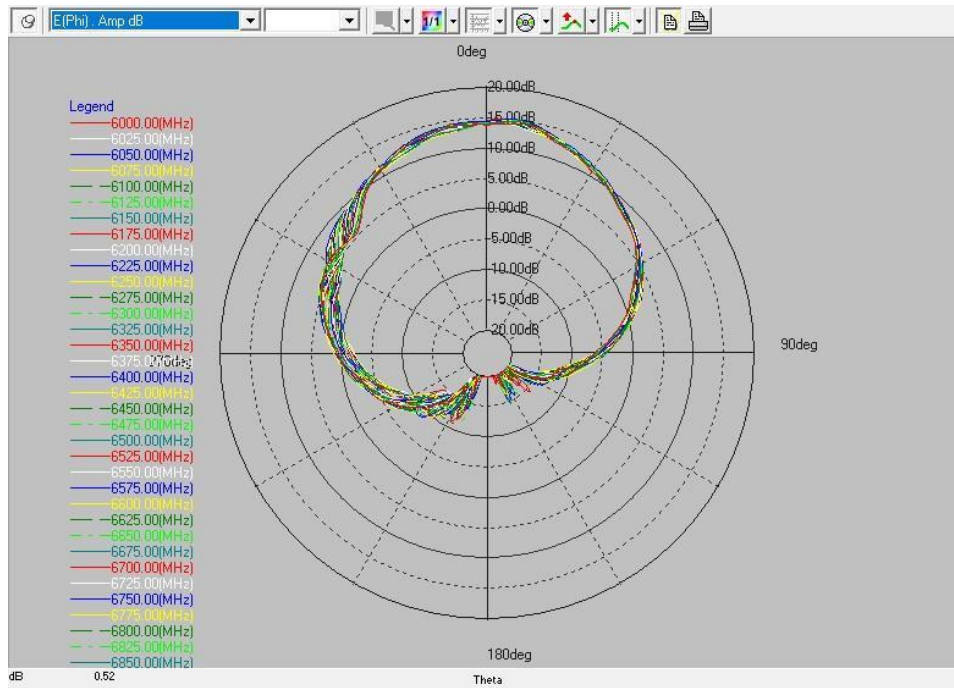
## 5.2. Antenna 0H Azimuth and Elevation Patterns, 6GHz to 6.85GHz



### 5.3. Antenna 1V Azimuth and Elevation Patterns, 5725GHz to 6GHz

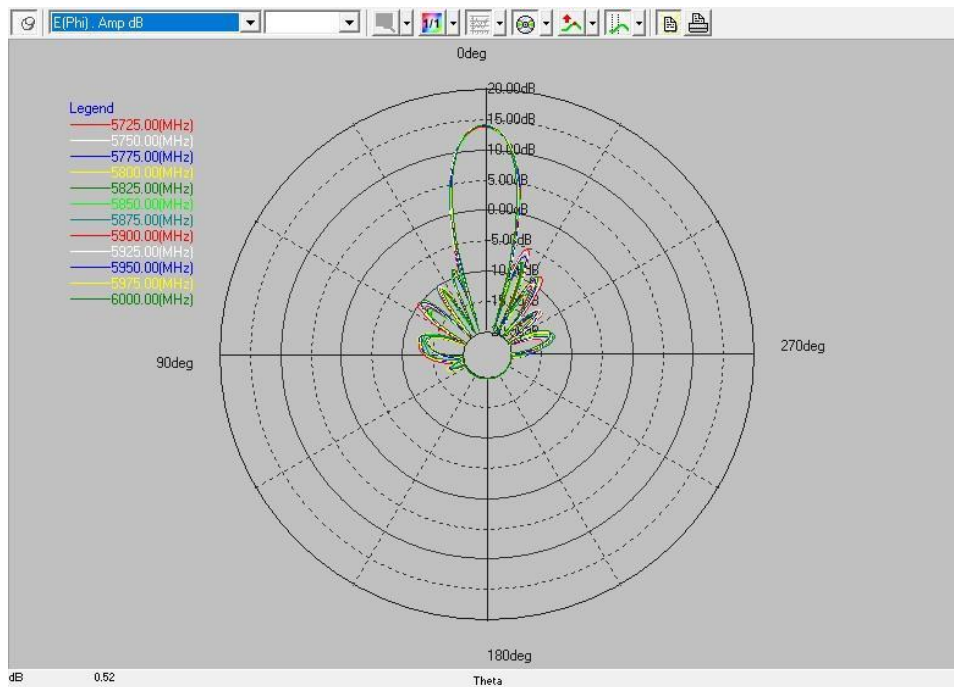
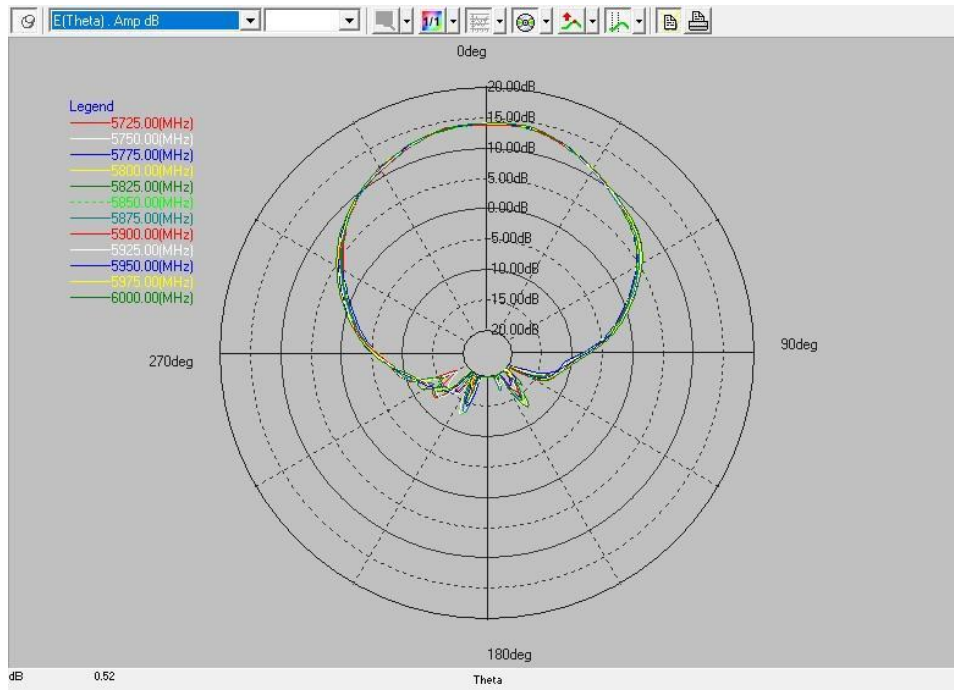


### 5.4. Antenna 1V Azimuth and Elevation Patterns, 6GHz to 6.85GHz

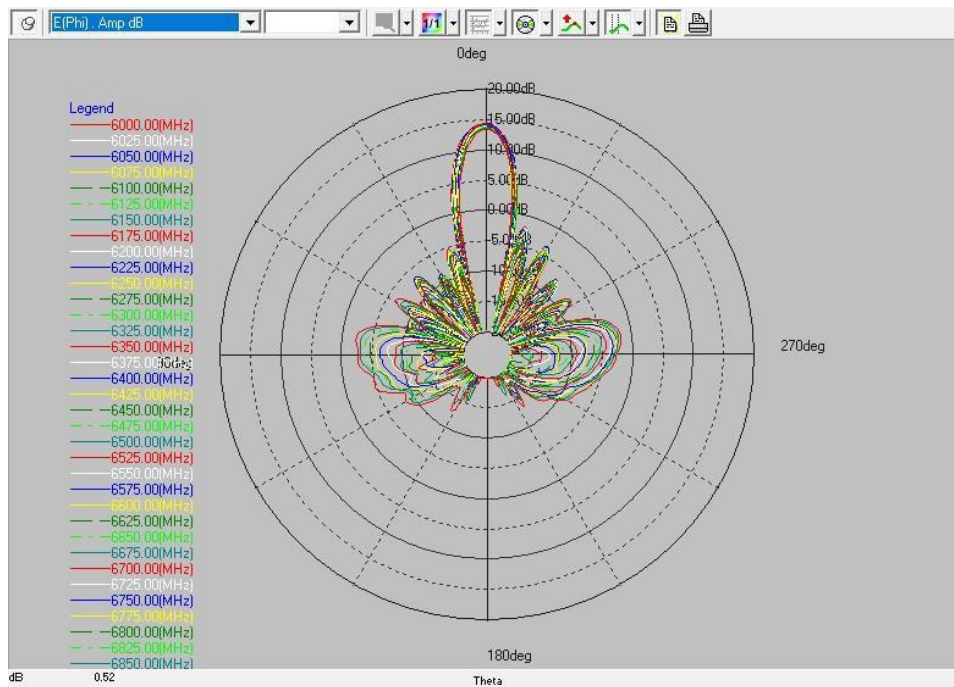
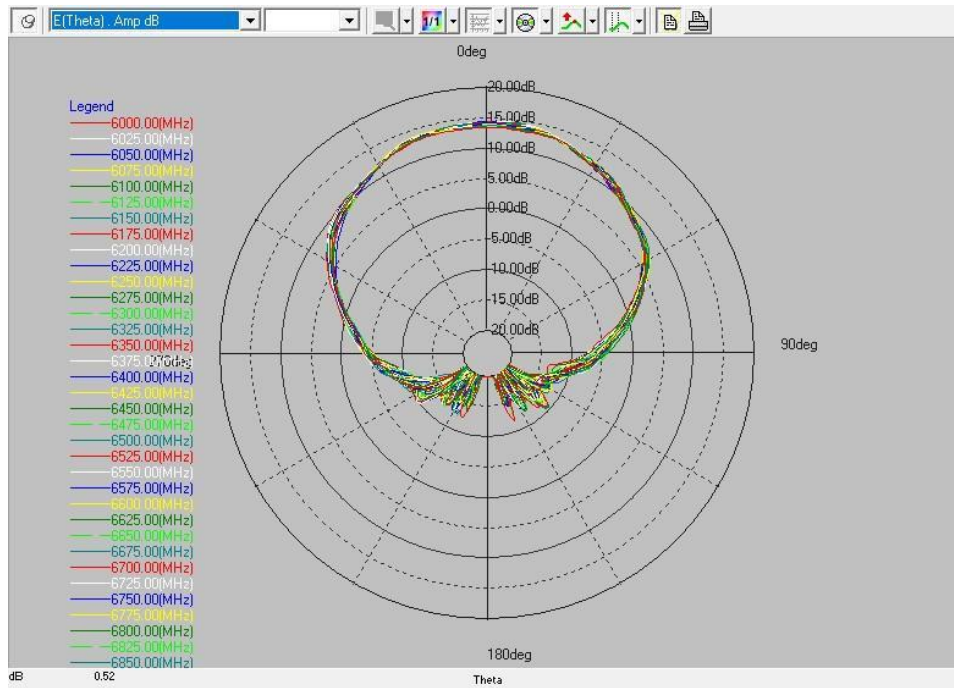




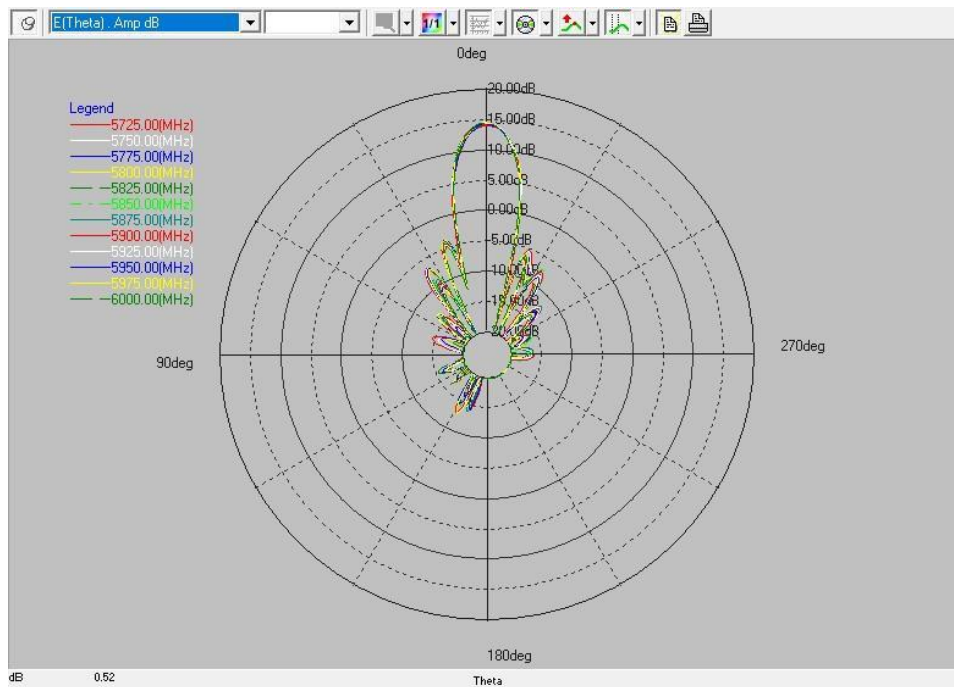
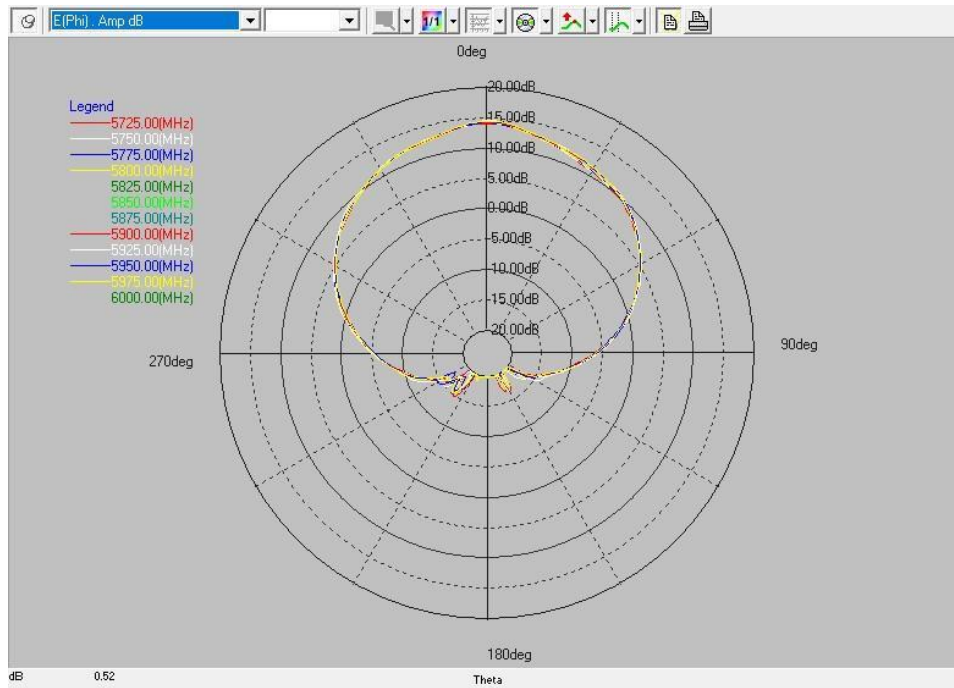
### 5.5. Antenna 2H Azimuth and Elevation Patterns, 5725GHz to 6GHz



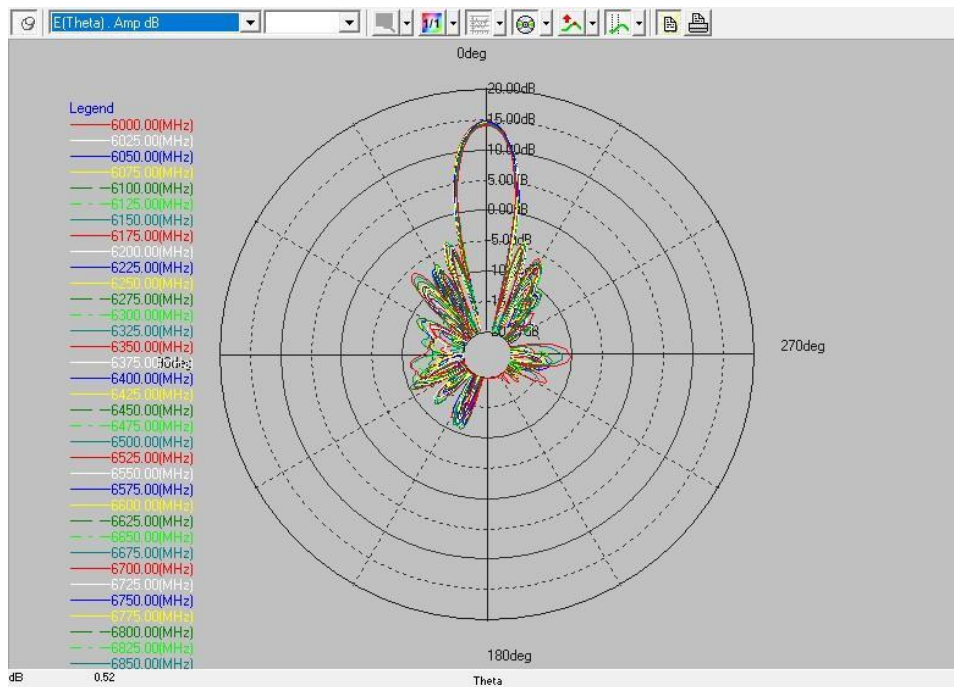
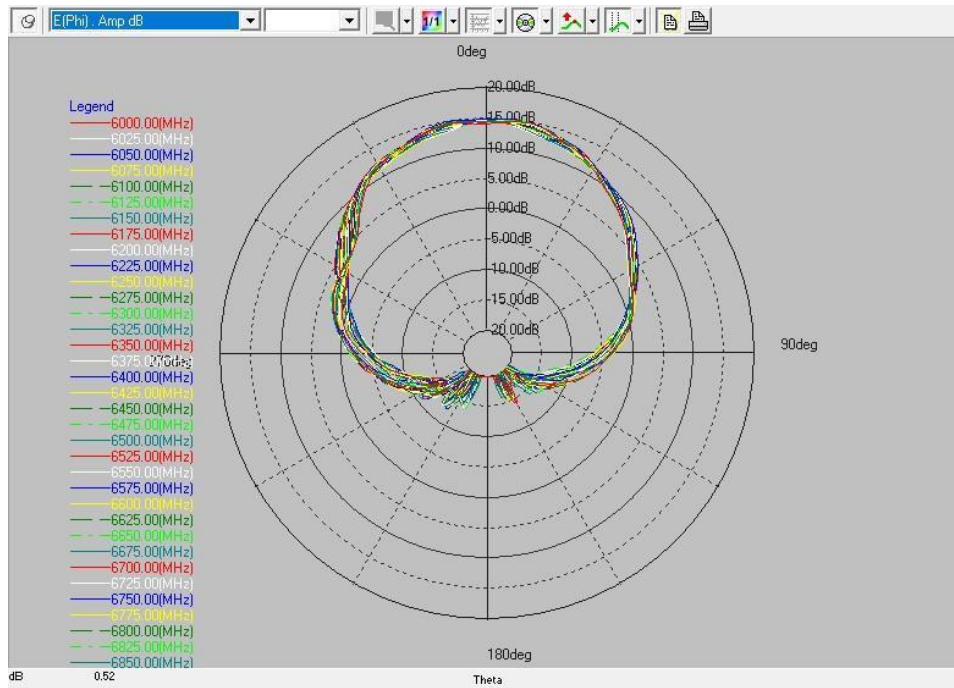
### 5.6. Antenna 2H Azimuth and Elevation Patterns, 6GHz to 6.85GHz



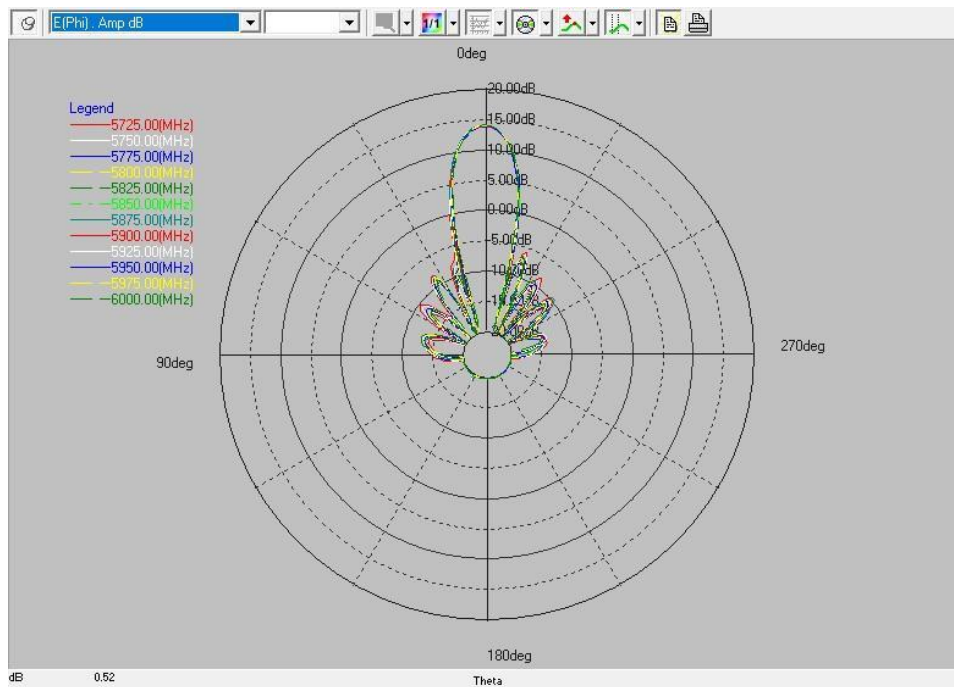
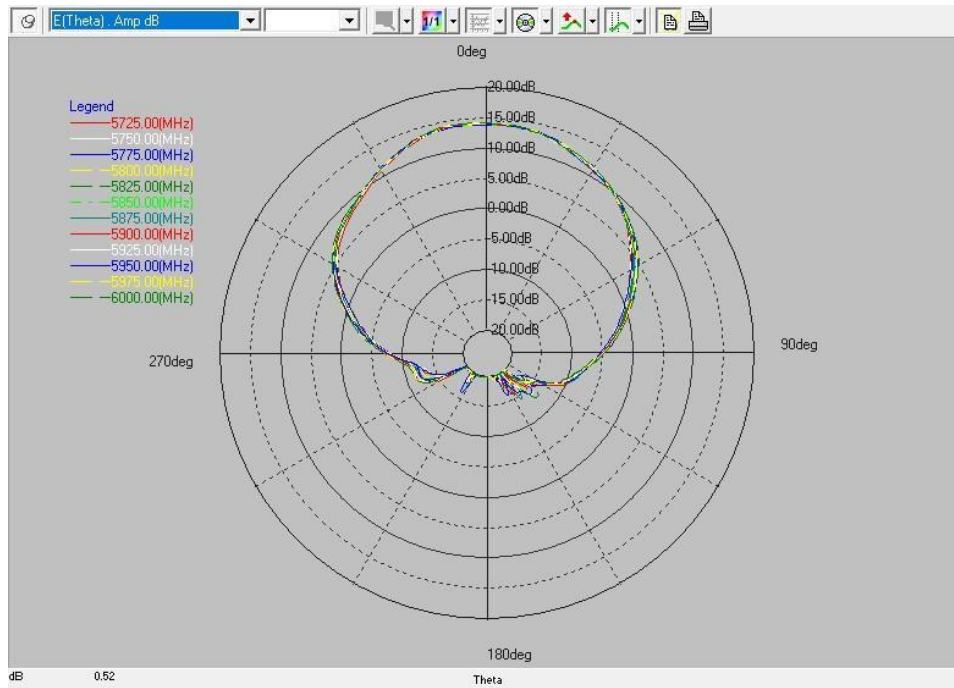
### 5.7. Antenna 3V Azimuth and Elevation Patterns, 5725GHz to 6GHz



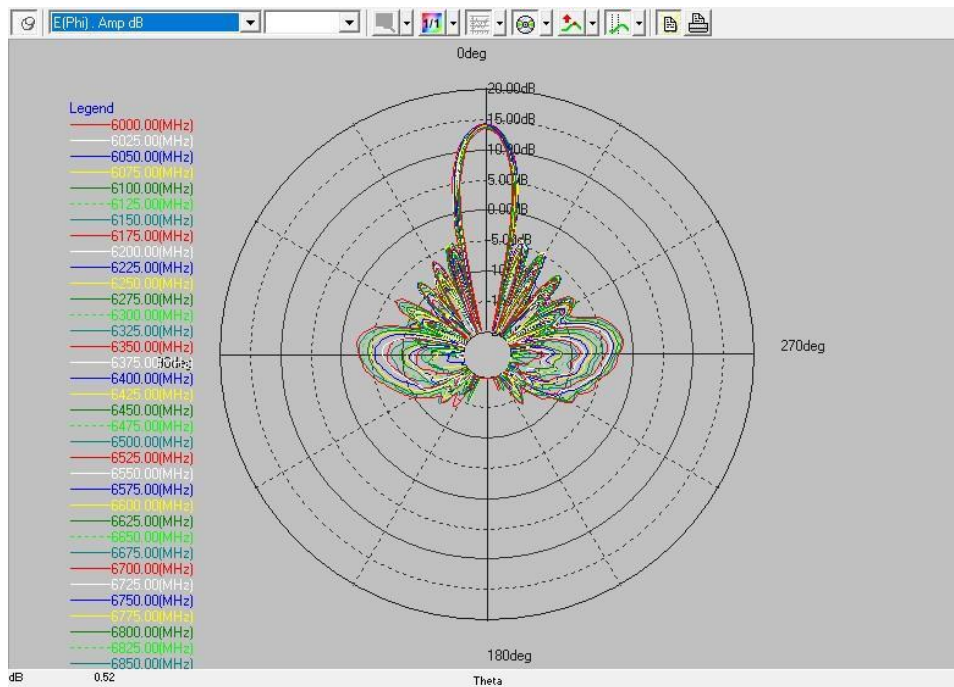
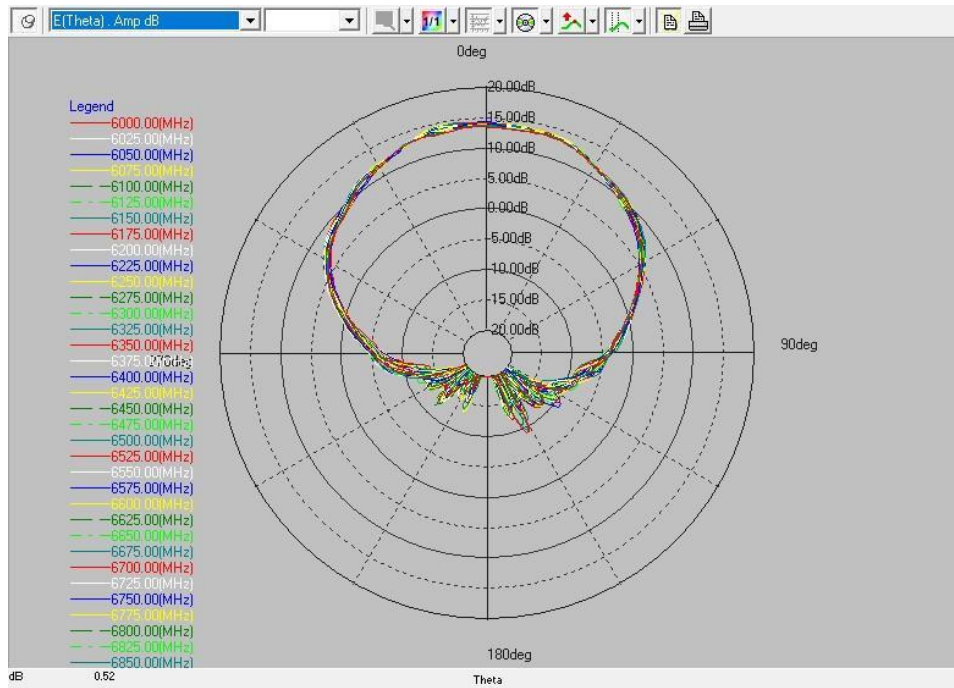
### 5.8. Antenna 3V Azimuth and Elevation Patterns, 6GHz to 6.85GHz



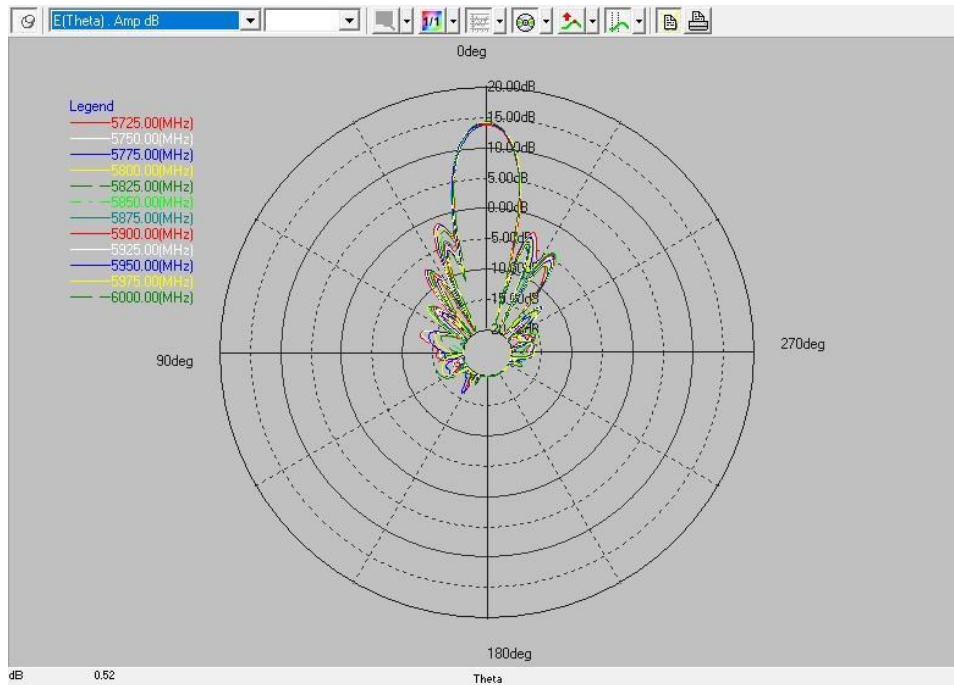
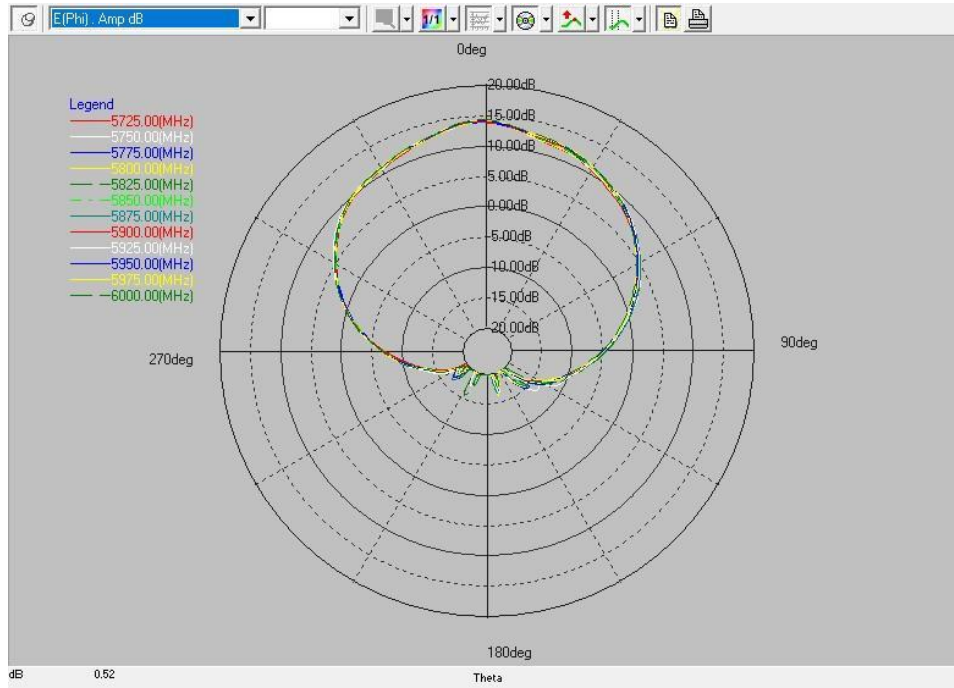
### 5.9. Antenna 4H Azimuth and Elevation Patterns, 5725GHz to 6GHz



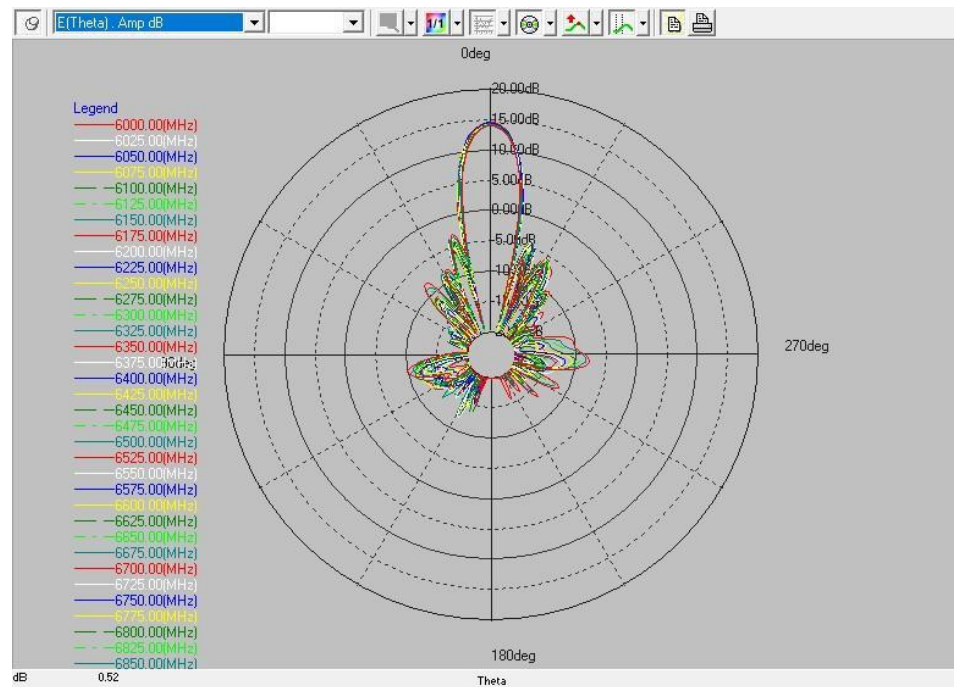
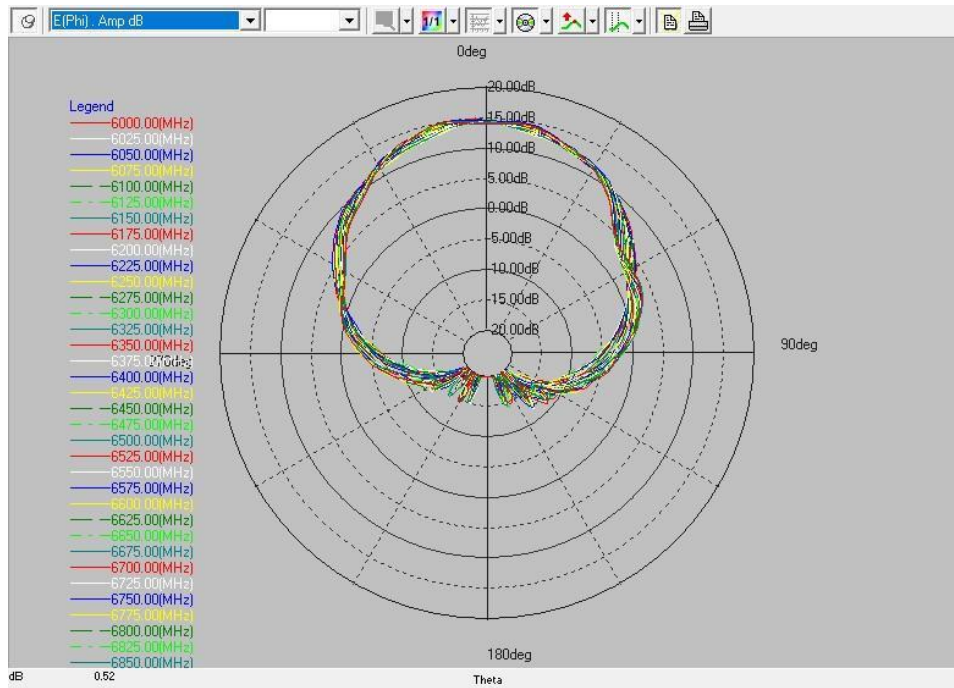
5.10. Antenna 4H Azimuth and Elevation Patterns, 6GHz to 6.85GHz



5.11. Antenna 5V Azimuth and Elevation Patterns, 5725GHz to 6GHz

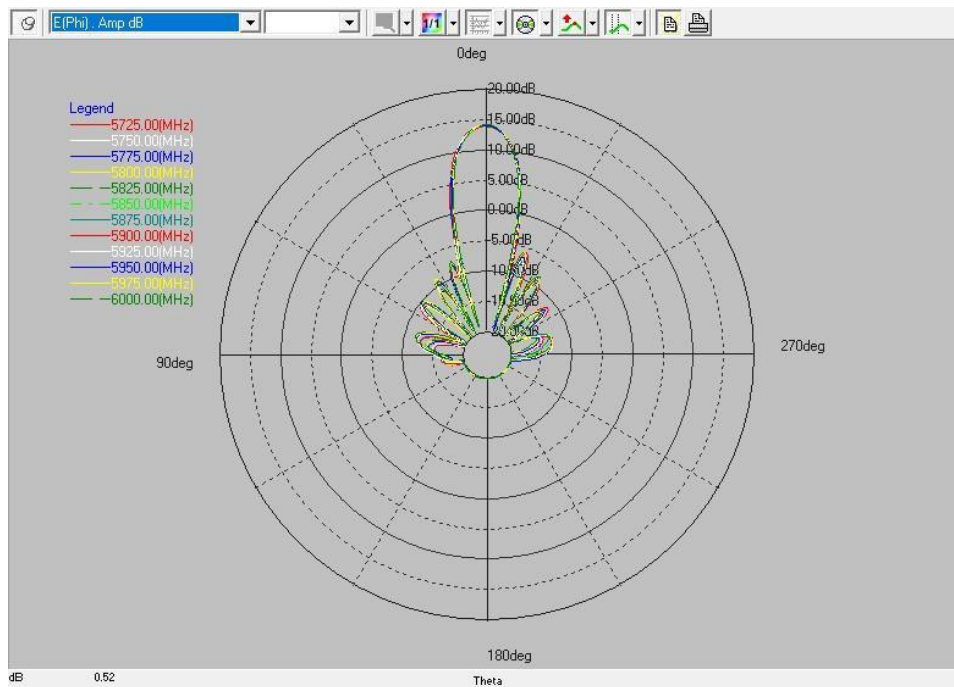
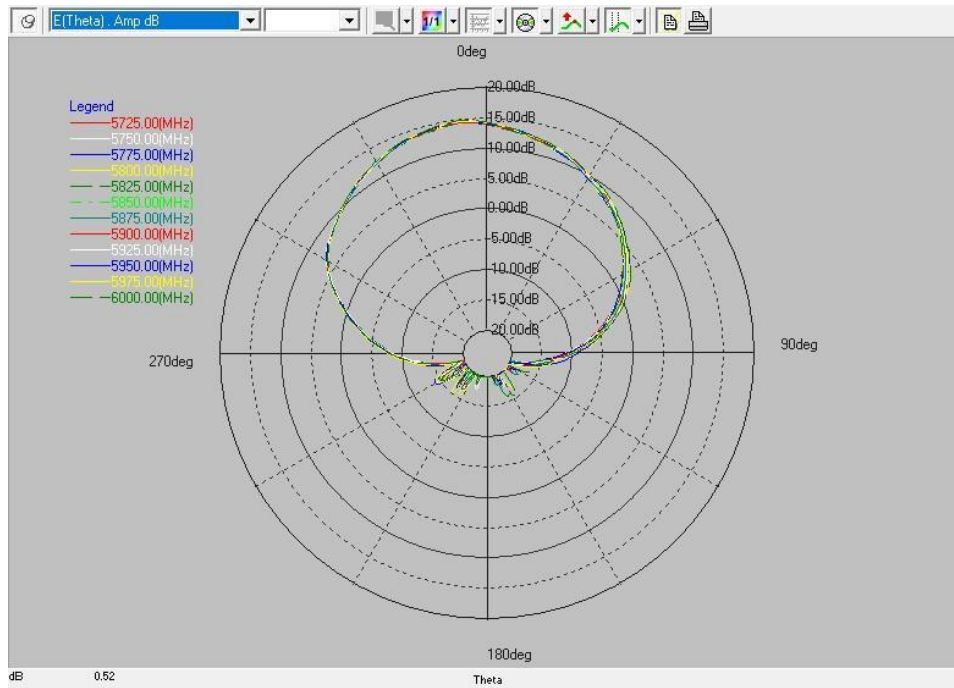


5.12. Antenna 5V Azimuth and Elevation Patterns, 6GHz to 6.85GHz

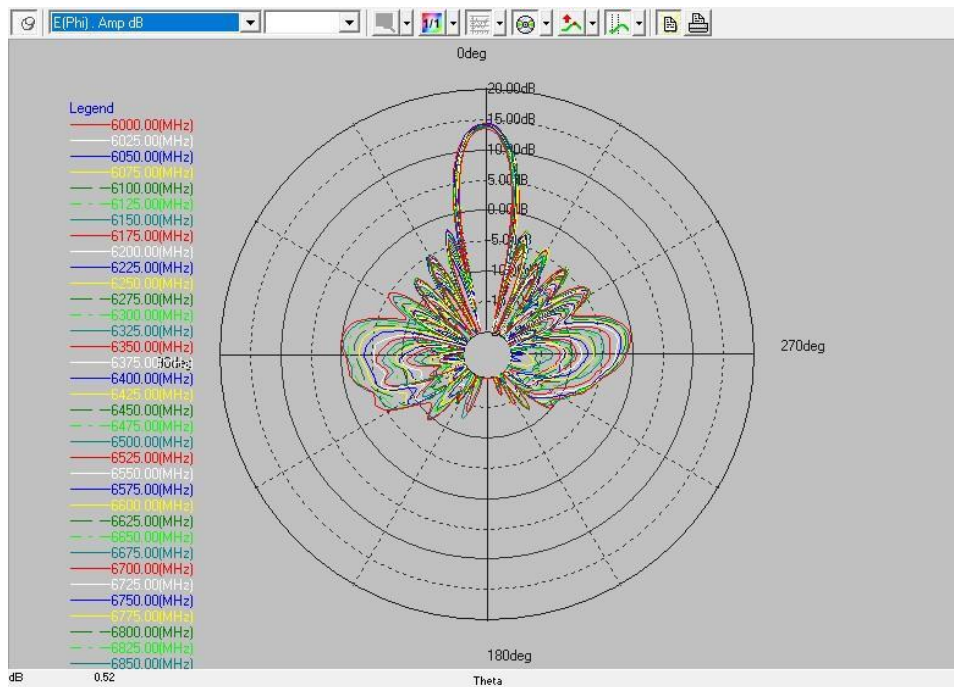
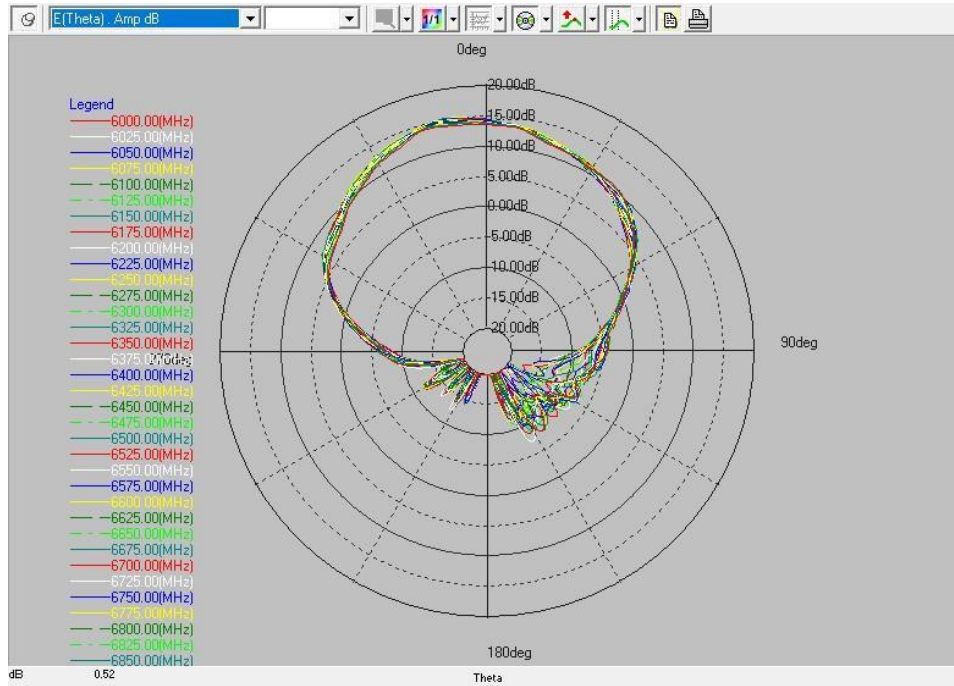




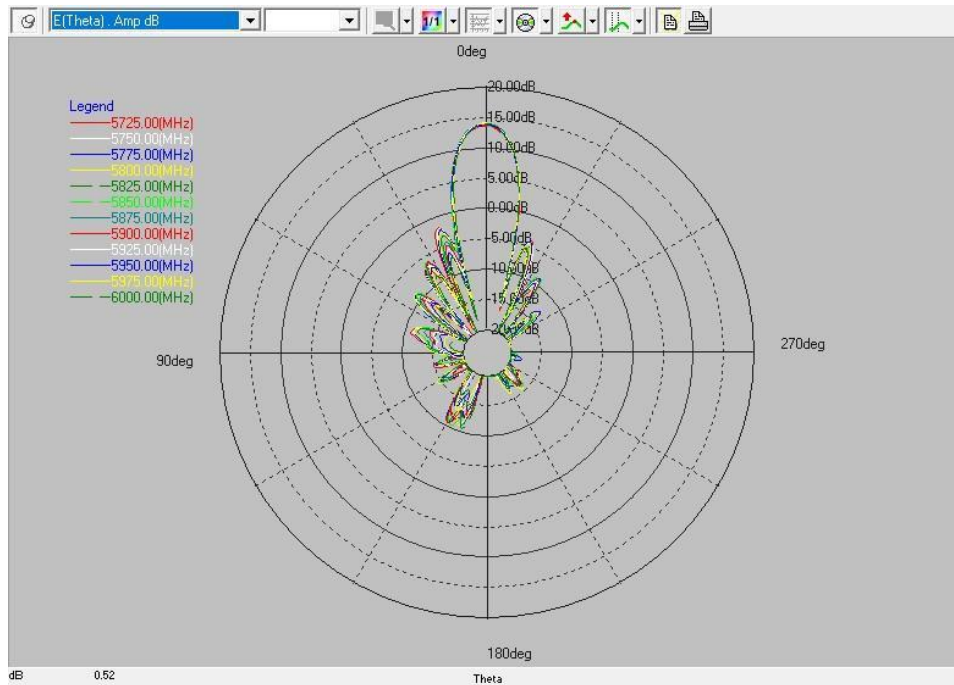
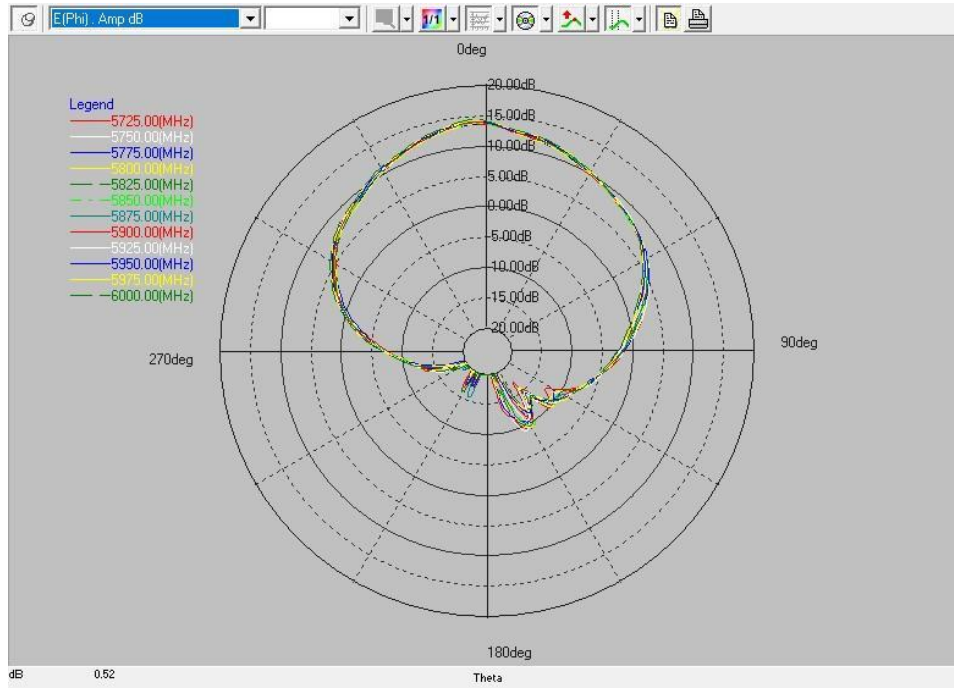
5.13. Antenna 6H Azimuth and Elevation Patterns, 5725GHz to 6GHz



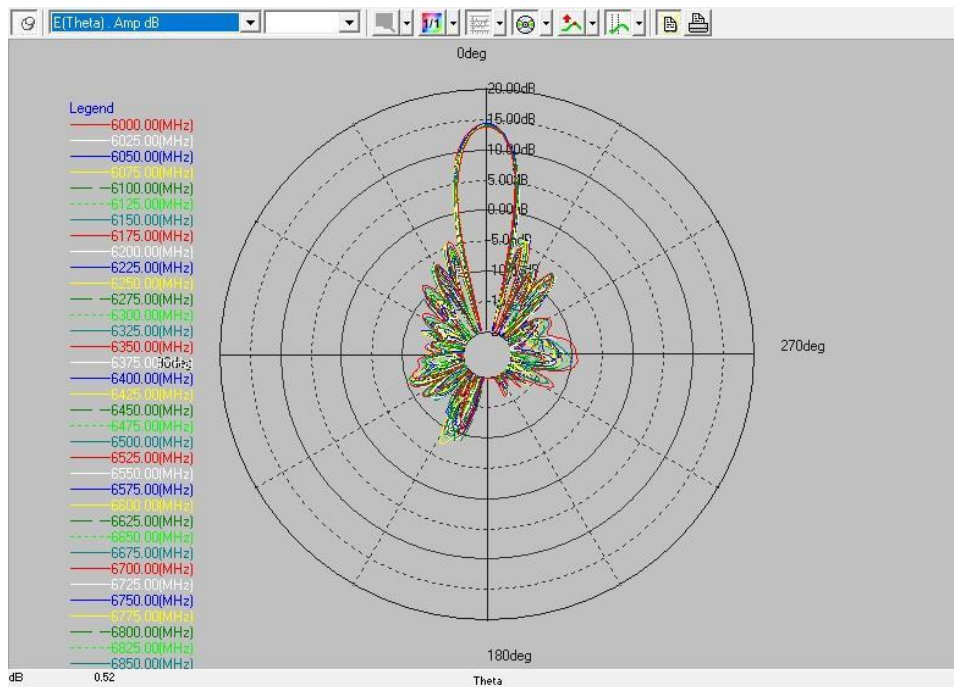
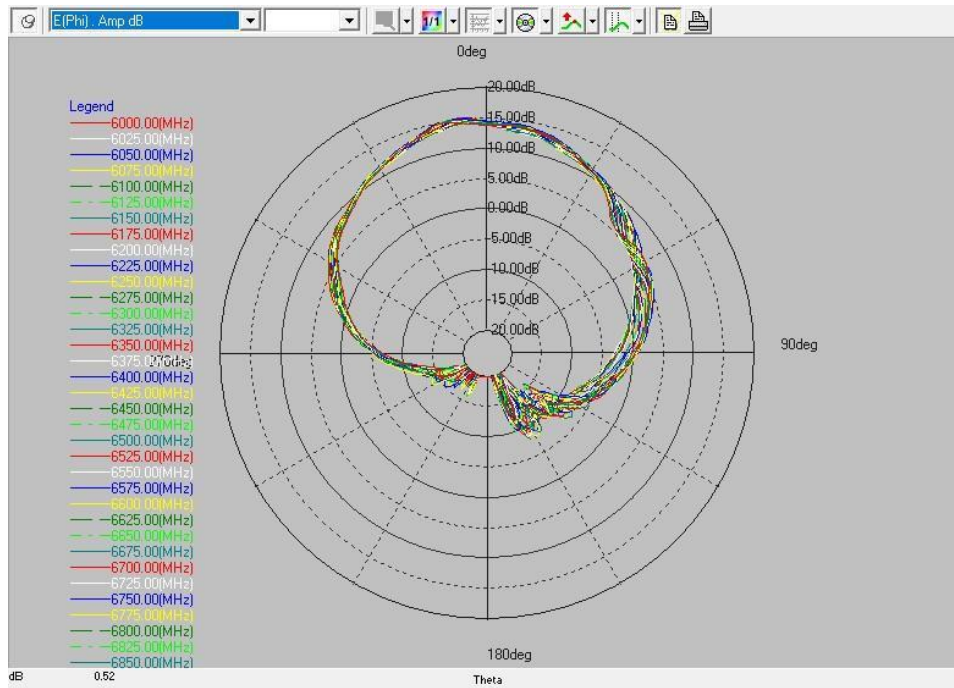
5.14. Antenna 6H Azimuth and Elevation Patterns, 6GHz to 6.85GHz



5.15. Antenna 7V Azimuth and Elevation Patterns, 5725GHz to 6GHz



5.16. Antenna 7V Azimuth and Elevation Patterns, 6GHz to 6.85GHz

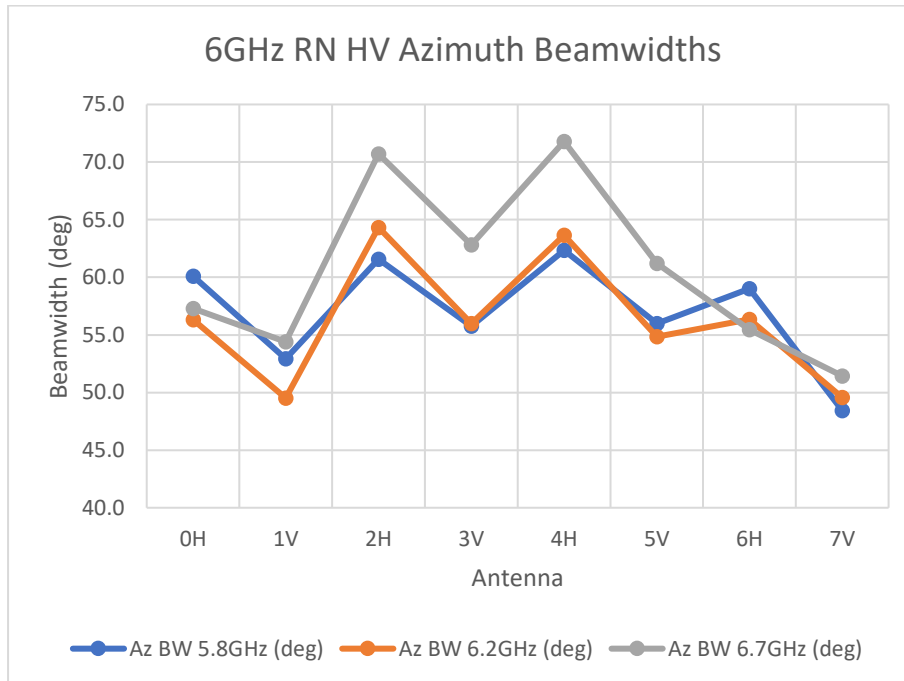


## 6. Summary

### 6.1. Antenna Gain Summary

	Az Gain, 5.8GHz (dBi)	Az Gain, 6.2GHz (dBi)	Az Gain, 6.7GHz (dBi)	Az BW 5.8GHz (deg)	Az BW 6.2GHz (deg)	Az BW 6.7GHz (deg)	EI BW 5.8GHz (deg)	EI BW 6.2GHz (deg)	EI BW 6.7GHz (deg)	Backlobe (dBi)	Upper side lobe (dBi)	+/-90deg lobe (dBi)	Xpol (dBi)	Backlobe (dBc)	+/-90deg lobe (dBc)	Xpol (dBc)
0H	14.1	14.9	14.6	60.1	56.3	57.3	13.7	12.3	10.5	-10.0	0.0	0.0	-9.0	-24.1	-14.1	-23.1
1V	13.8	14.7	14.9	52.9	49.5	54.4	13.9	12.1	11.6	-7.0	-7.0	-12.0	-9.0	-20.8	-25.8	-22.8
2H	13.7	14.3	14.1	61.6	64.3	70.7	13.7	12.2	10.5	-10.0	-3.0	-3.0	-9.0	-23.7	-16.7	-22.7
3V	14.1	14.4	14.7	55.8	56.0	62.8	13.6	12.4	11.5	-12.0	-6.0	-10.0	-12.0	-26.1	-24.1	-26.1
4H	13.8	14.3	14.0	62.3	63.7	71.8	13.6	12.1	10.7	-10.0	-3.0	-2.0	-10.0	-23.8	-15.8	-23.8
5V	13.9	14.4	14.7	56.0	54.9	61.2	13.6	12.4	11.7	-10.0	-8.0	-8.0	-11.0	-23.9	-21.9	-24.9
6H	14.1	14.9	14.6	59.0	56.4	55.5	13.9	12.3	10.9	-8.0	0.0	0.0	-8.0	-22.1	-14.1	-22.1
7V	13.7	14.5	15.0	48.4	49.6	51.4	13.7	12.8	11.4	-7.0	-7.0	-9.0	-10.0	-20.7	-22.7	-23.7
H ave values	13.9	14.6	14.3	60.8	60.2	63.8	13.7	12.2	10.7	-9.5	-1.5	-1.3	-9.0	-23.4	-15.2	-22.9
V ave values	13.9	14.5	14.8	53.3	52.5	57.5	13.7	12.4	11.6	-9.0	-7.0	-9.8	-10.5	-22.9	-23.6	-24.4
max values	14.1	14.9	15.0	62.3	64.3	71.8	13.9	12.8	11.7							

### 6.2. Antenna Azimuth Beamwidths



### 6.3. Antenna Elevation Beamwidths

