



G2 BN Antenna Test Report

For Tarana Part Number: 31-0252-301

**Kaishuo
Wang**

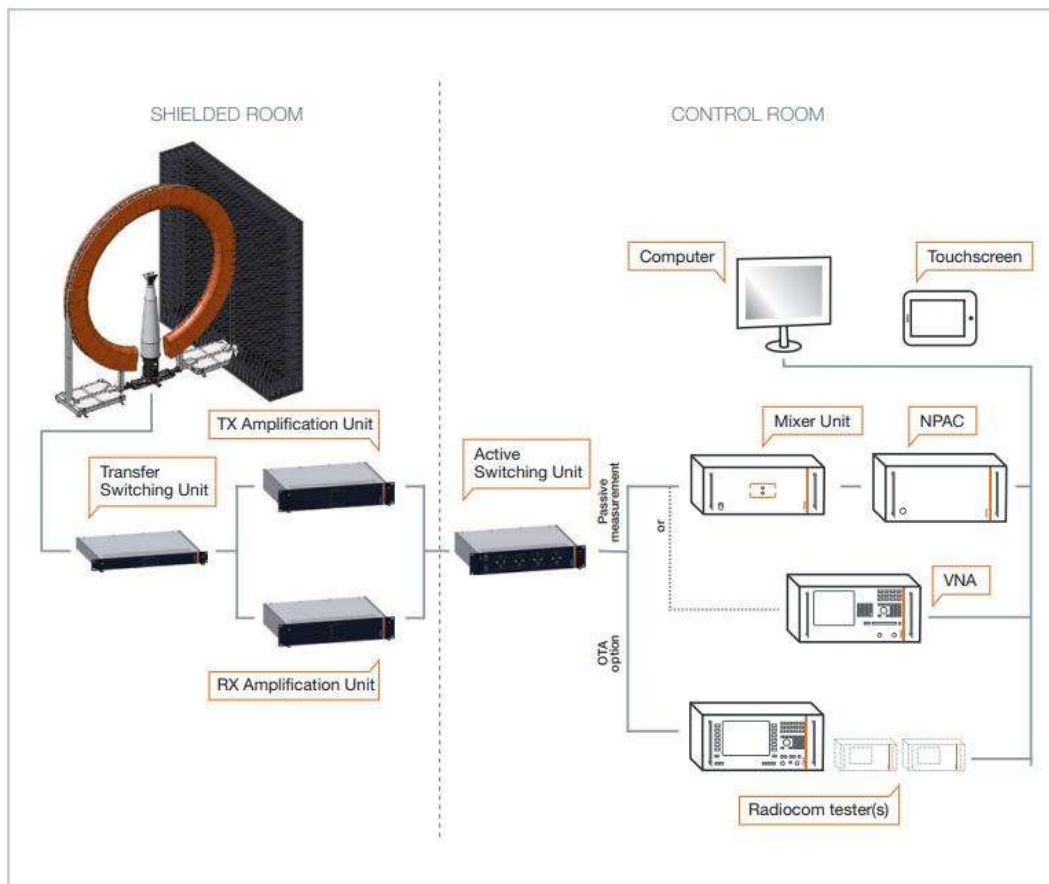
Digitally signed by Kaishuo Wang
DN: cn=Kaishuo Wang, gn=Kaishuo Wang,
o=US United States, l=US United States,
c=US United States, email=kaishuo@taranawireless.com
Reason: I am the author of this document
Location:
Date: 2025-05-01 13:21-07:00

Prepared by: Kaishuo Wang

Report Date: 2025-05-01

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

Equipment Name	Model	Manufacturer	Calibration Date	Calibration Due Date
SG-64 Measurement System	Spherical Near Field Measurement	MVG, Inc	February 2025	February 2026
Vector Network Analyzer	Keysight P5008A SN: WO-00835984	Keysight	11 July 2024	11 July 2026

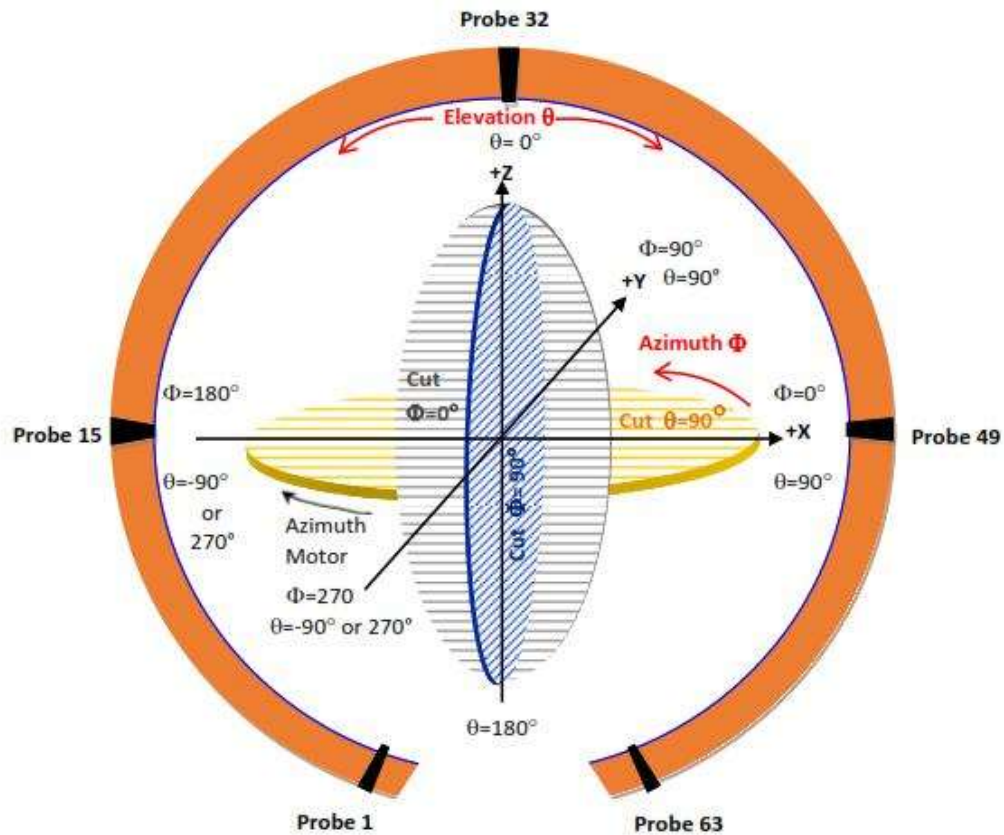
Test Personnel	Kyle Davis
Test Date	March 24, 2025

3. EUT(Antenna) Information

Name	Model Number	Antenna Type
G2 BN Antenna, CBRS and 6GHz	31-0252-301	Array Antenna

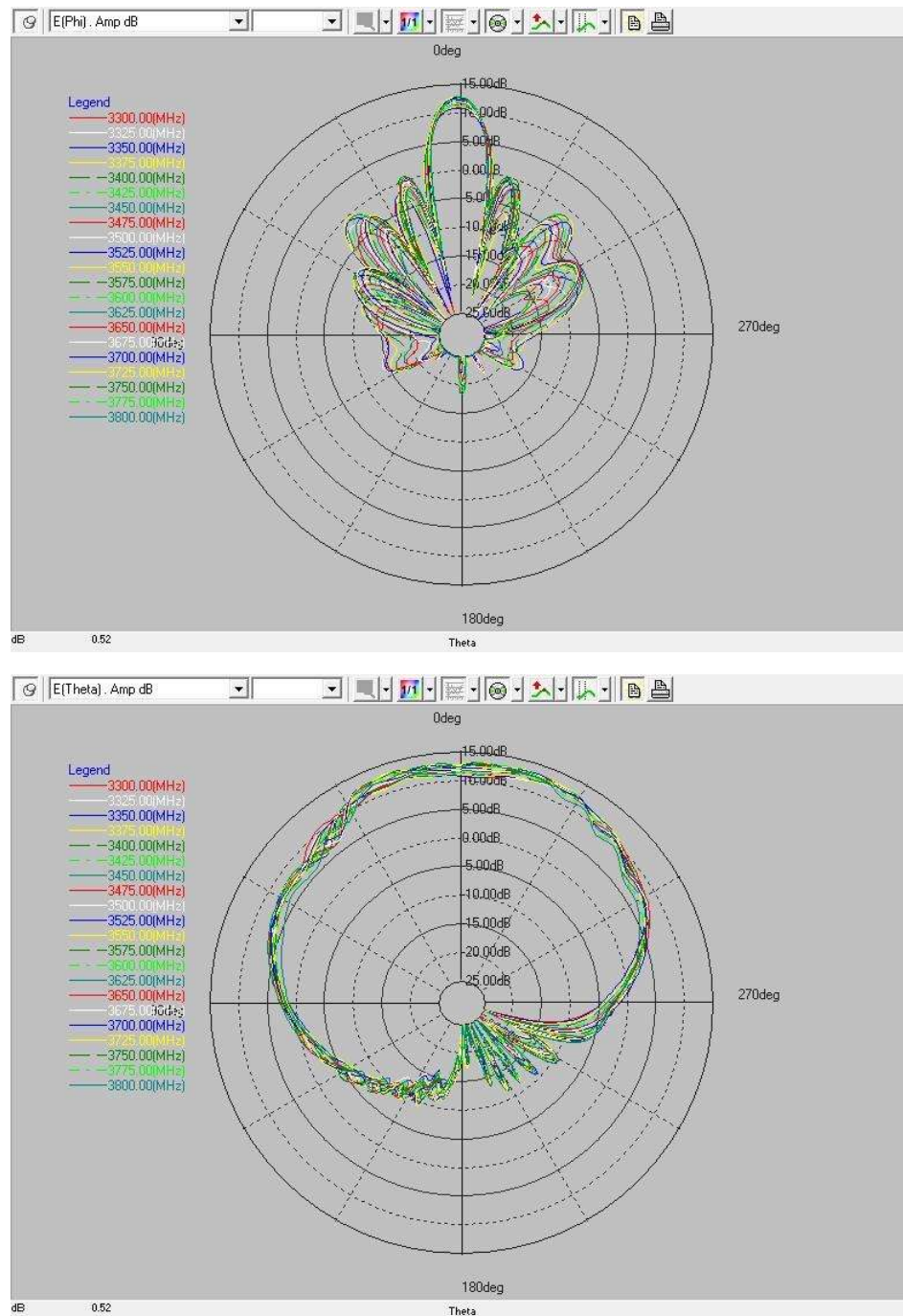
5. Measurement setting – MVG SG64 Coordinate System

MVG SG64 Coordinate System

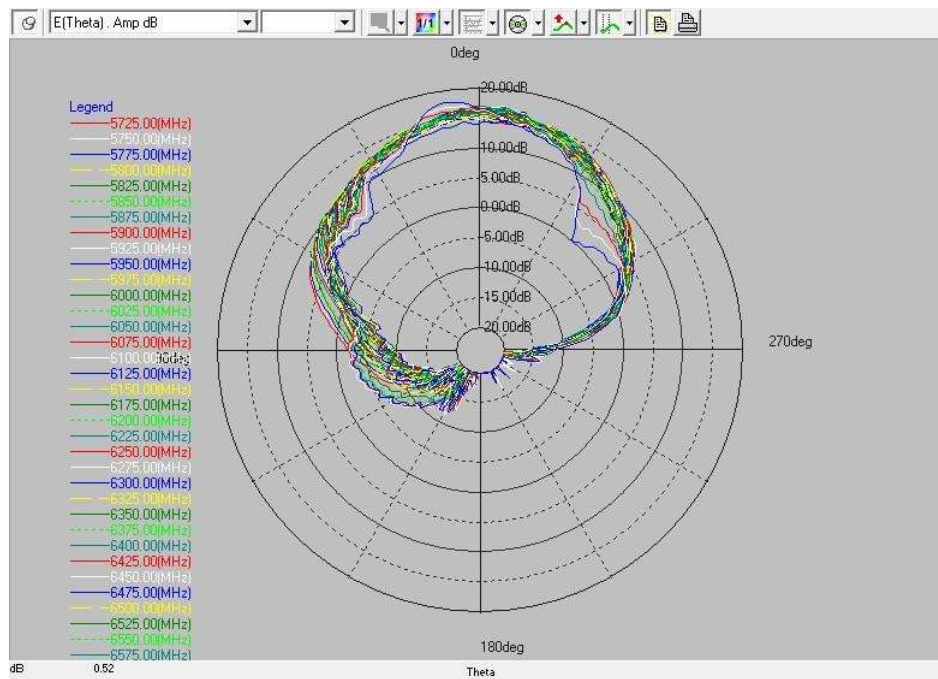
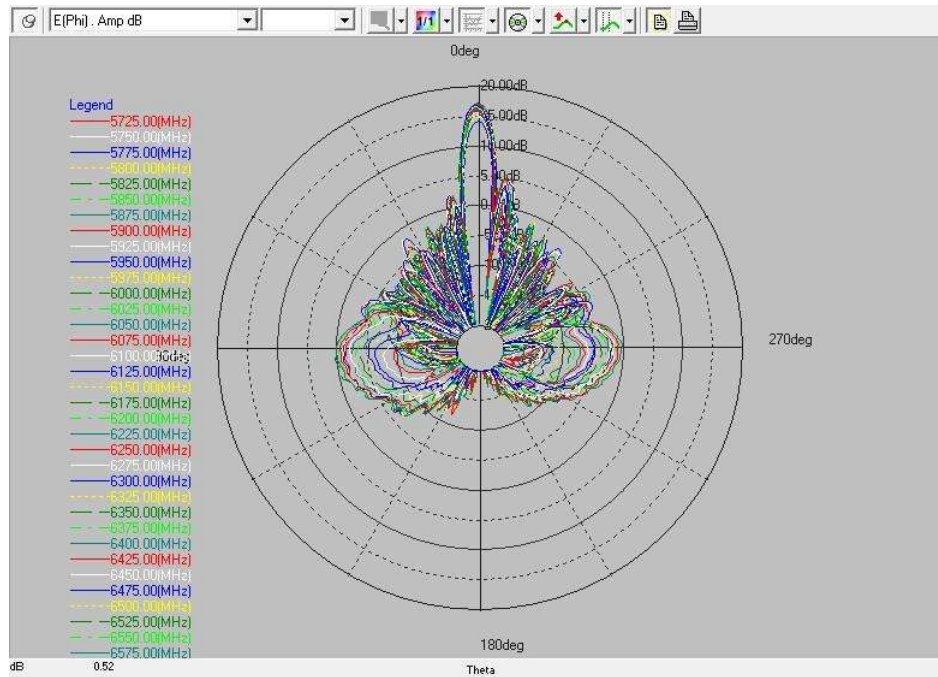


6. 2D Patterns

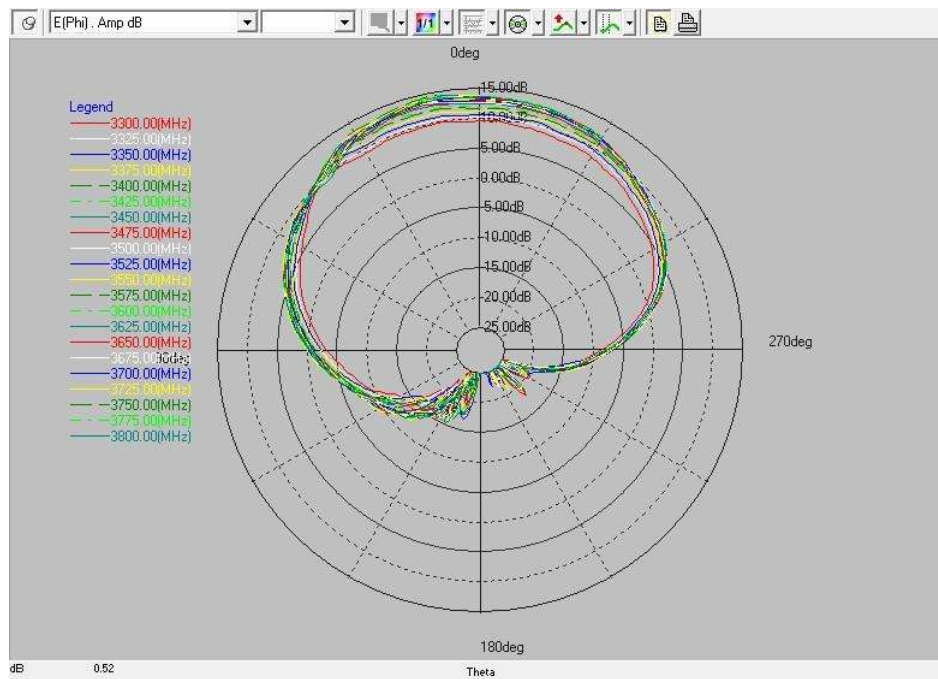
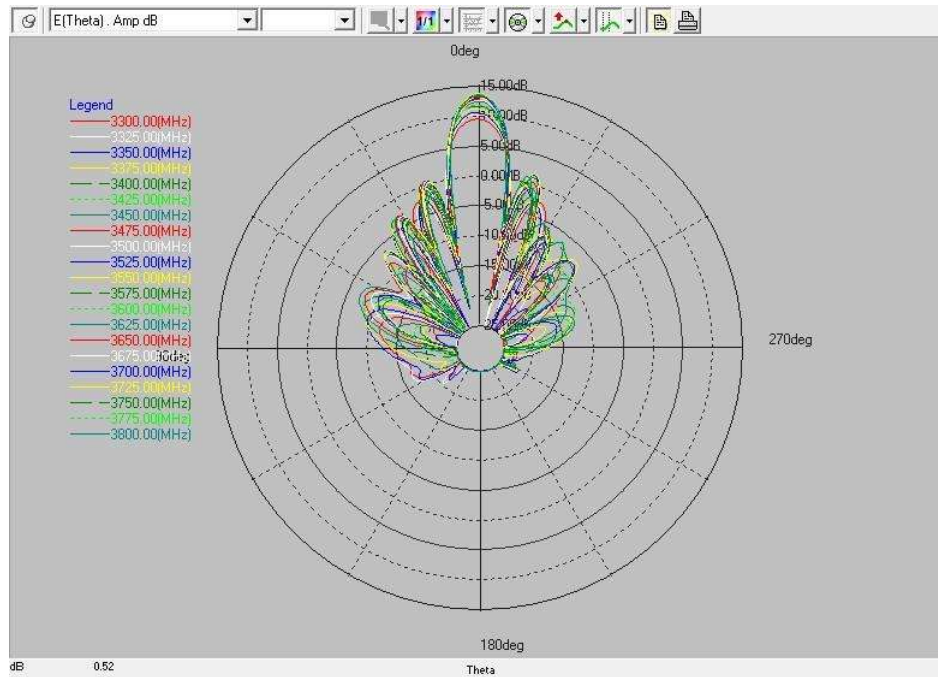
6.1. Antenna 0H Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



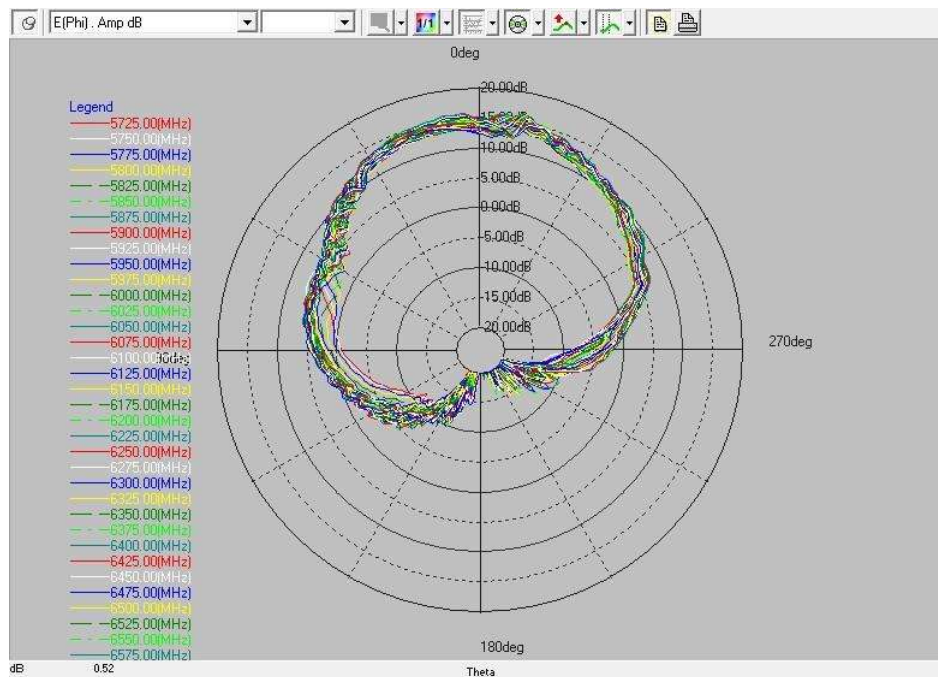
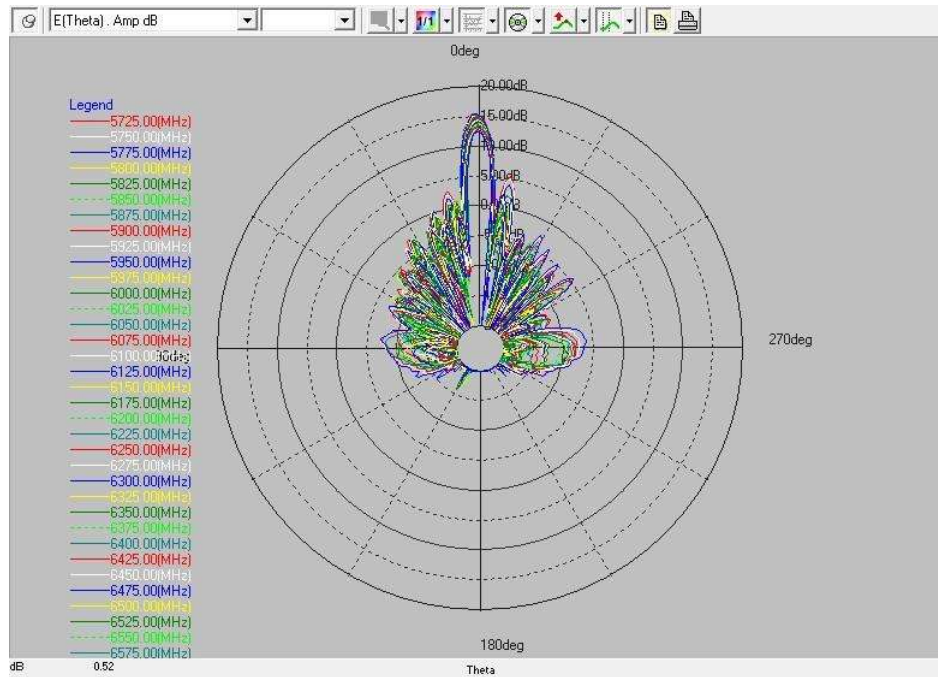
6.2. Antenna 0H Elevation and Azimuth Patterns, 5725MHz to 7000MHz



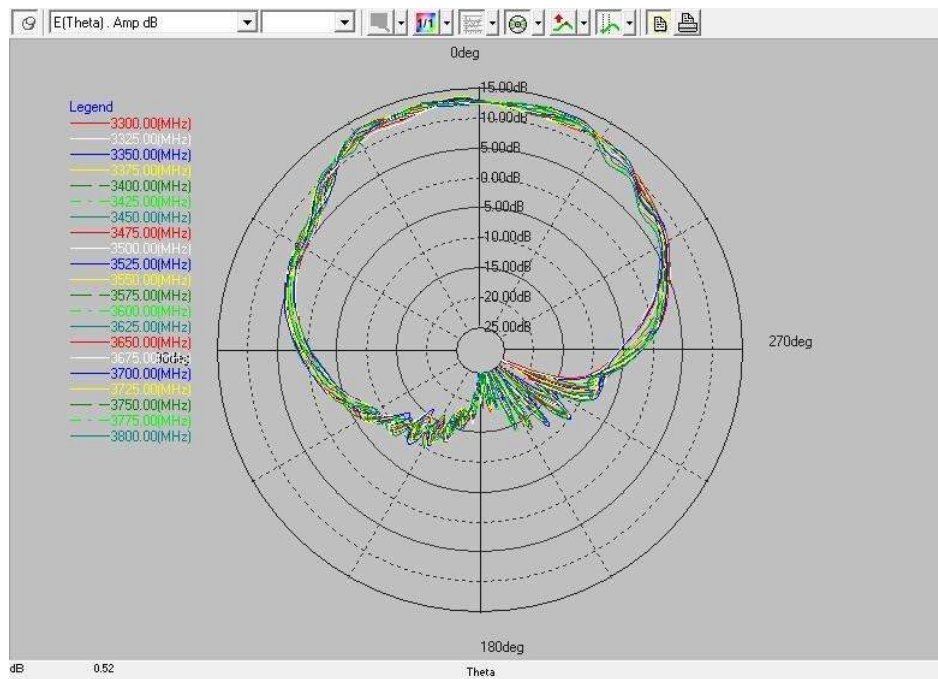
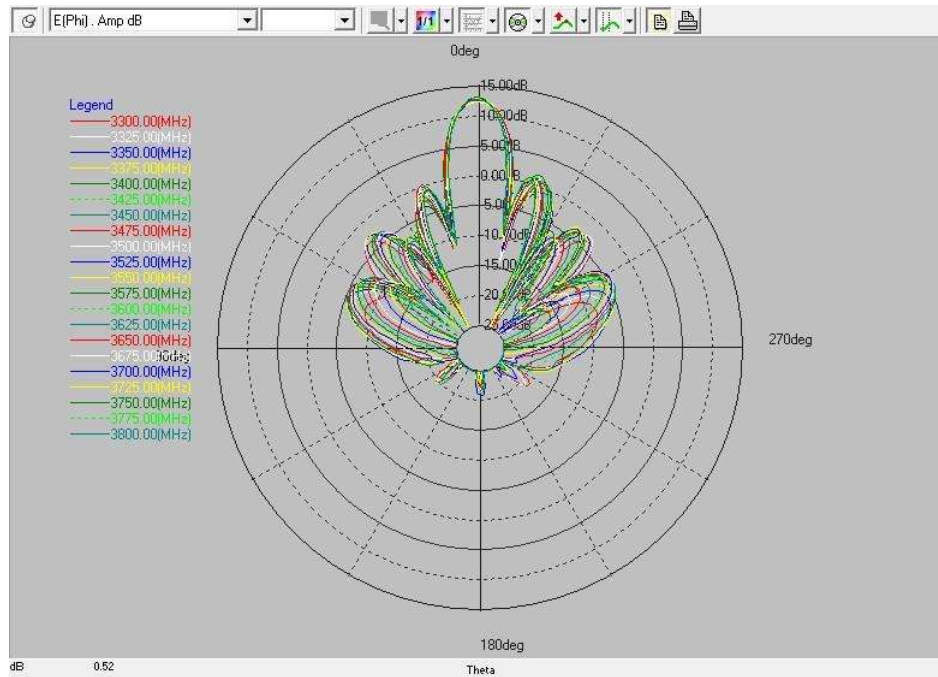
6.3. Antenna 1V Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



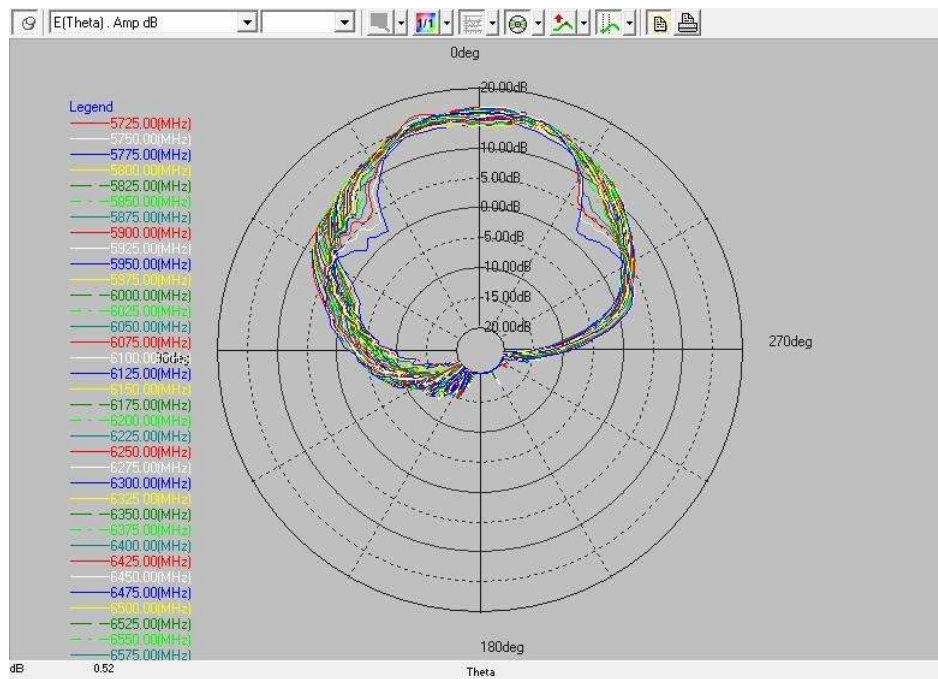
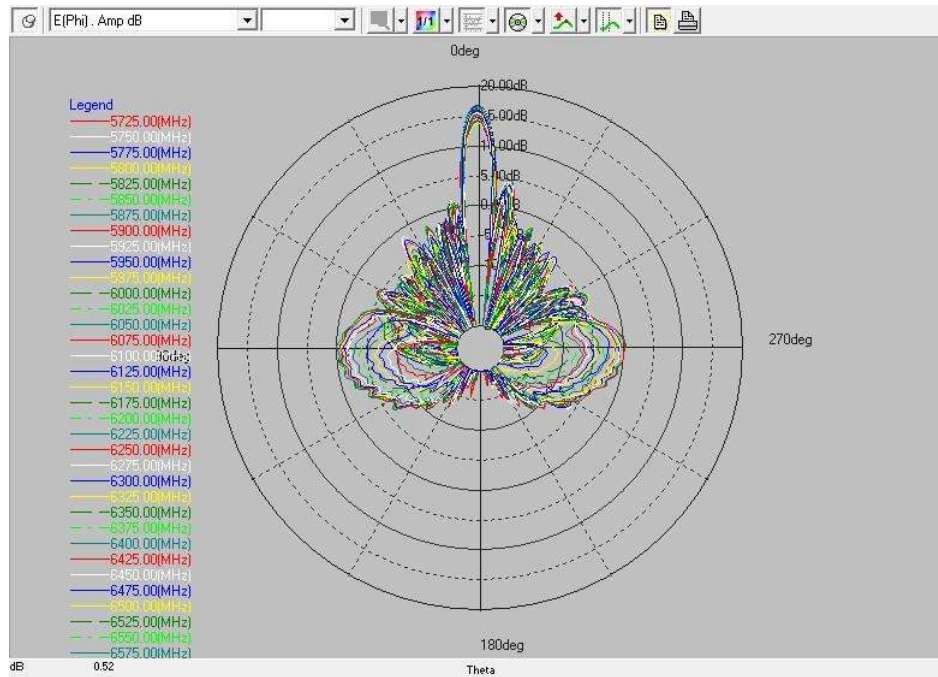
6.4. Antenna 1V Elevation and Azimuth Patterns, 5725MHz to 7000MHz



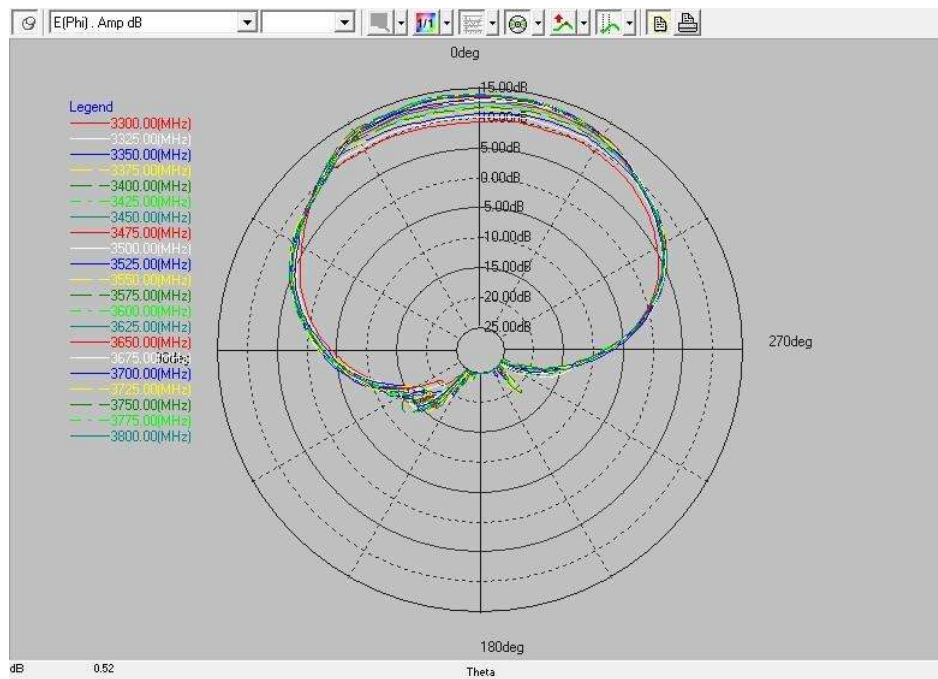
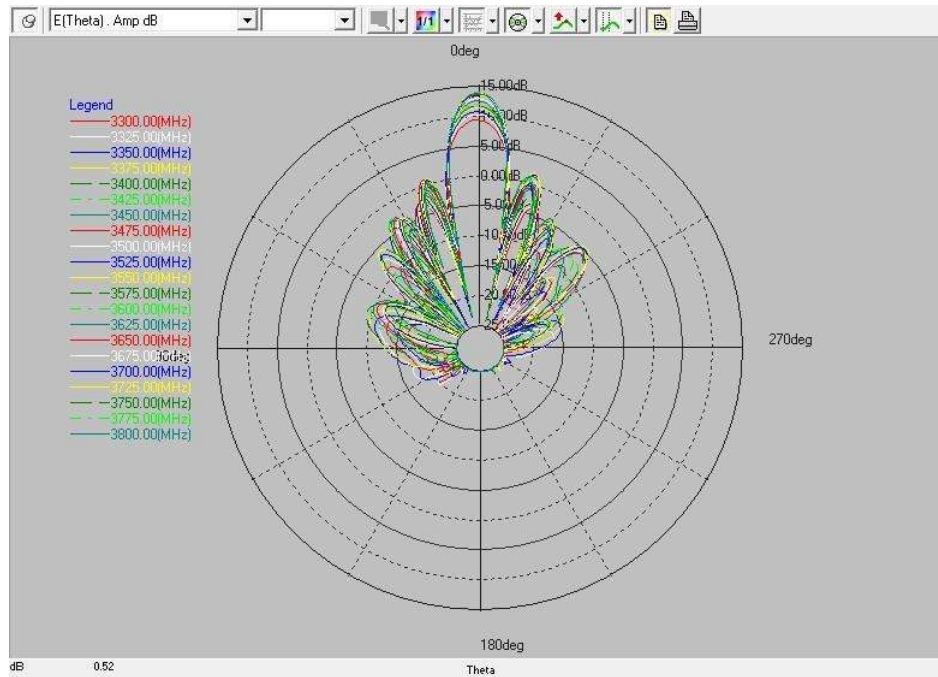
6.5. Antenna 2H Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



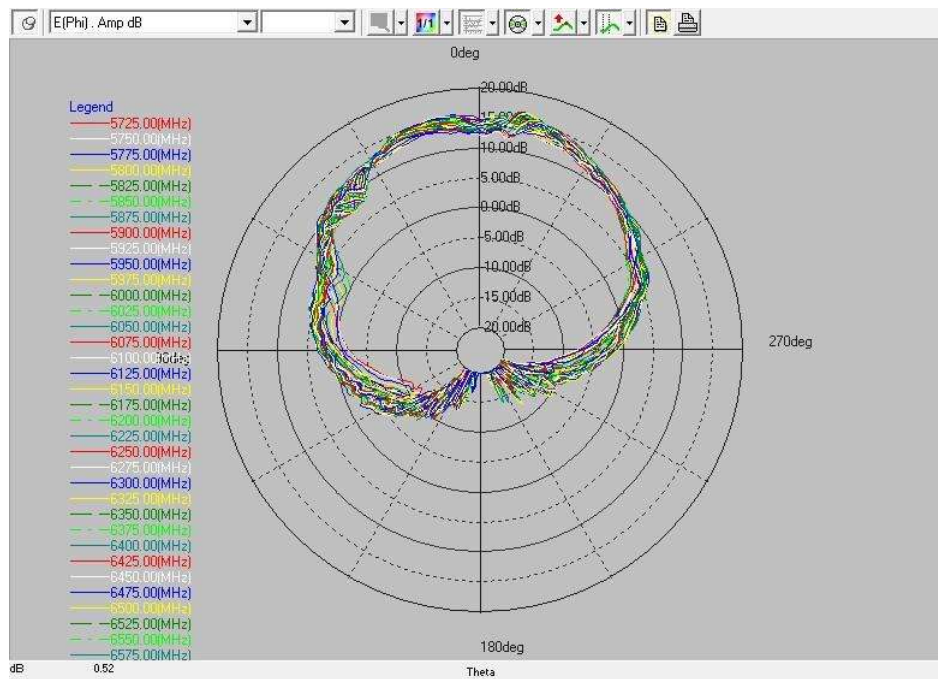
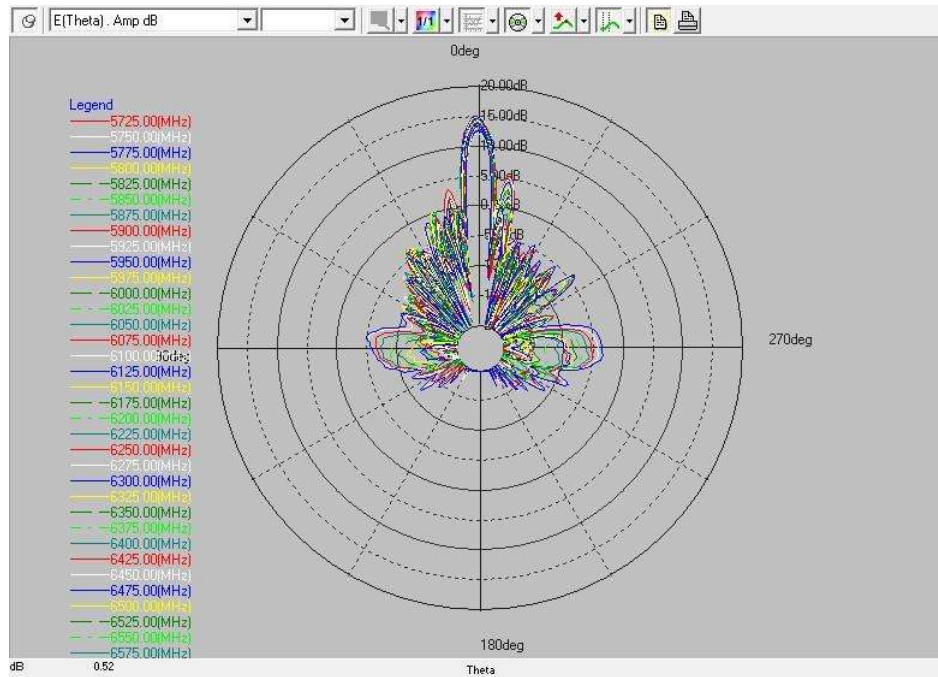
6.6. Antenna 2H Elevation and Azimuth Patterns, 5725MHz to 7000MHz



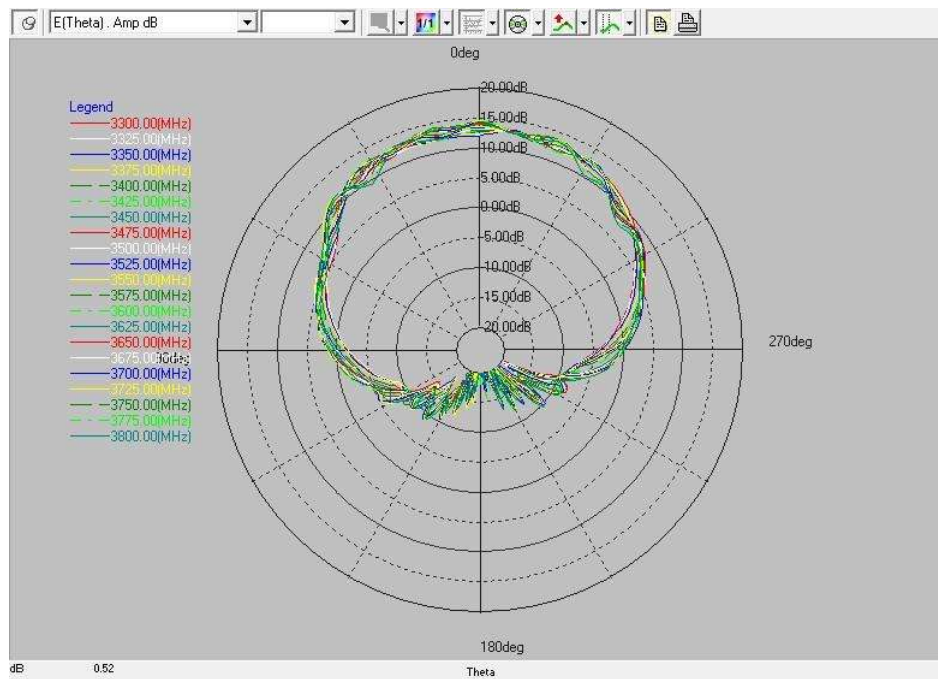
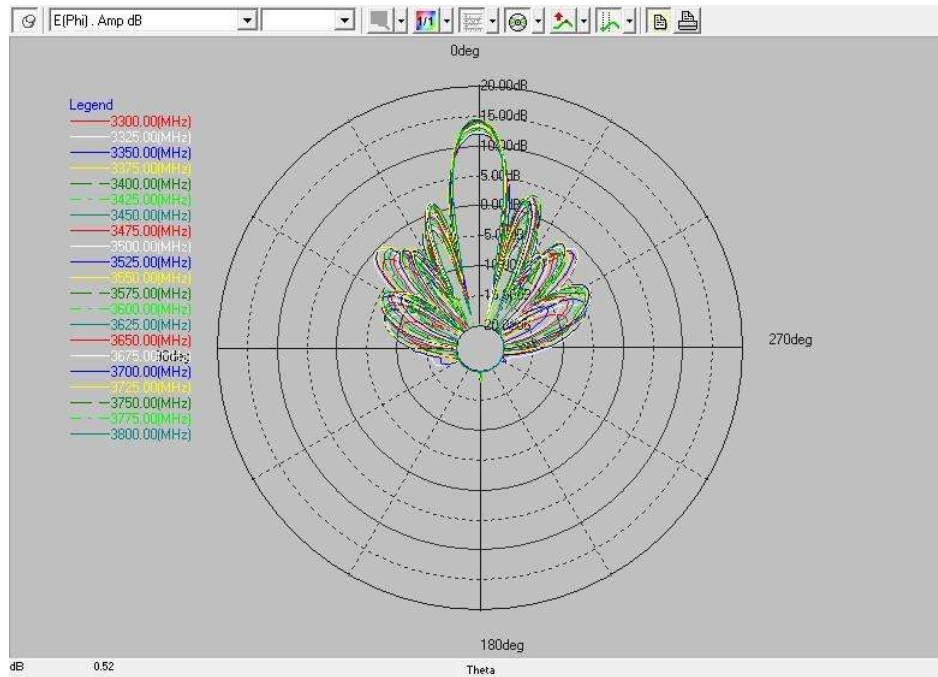
6.7. Antenna 3V Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



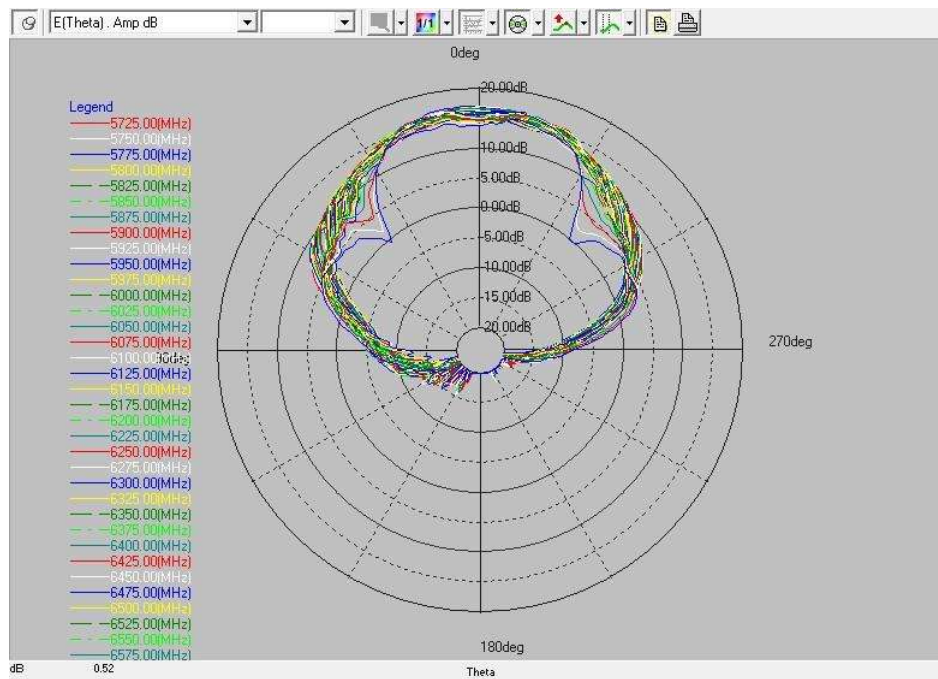
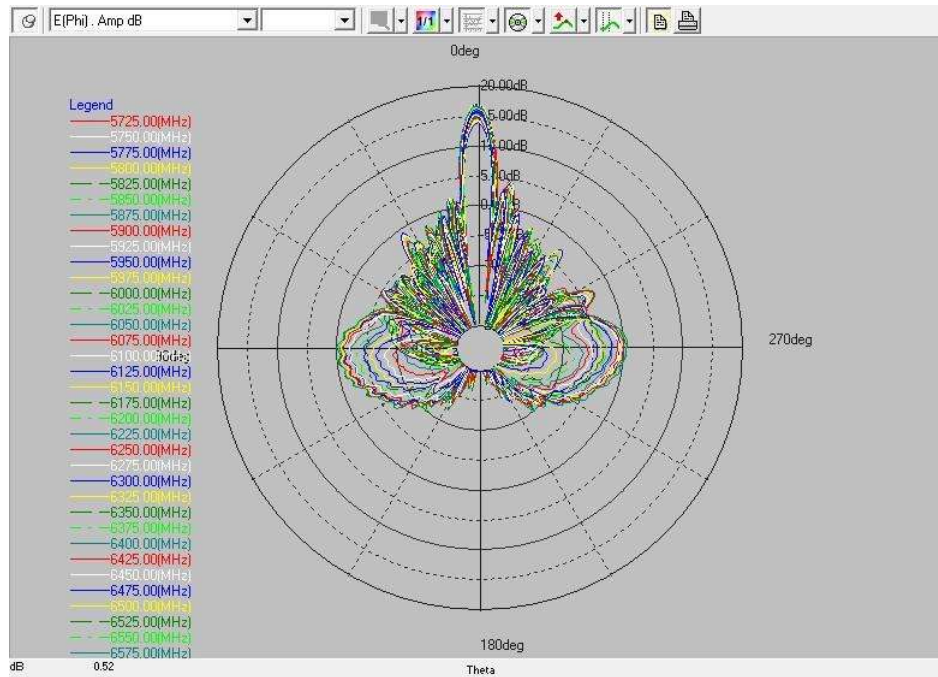
6.8. Antenna 3V Elevation and Azimuth Patterns, 5725MHz to 7000MHz



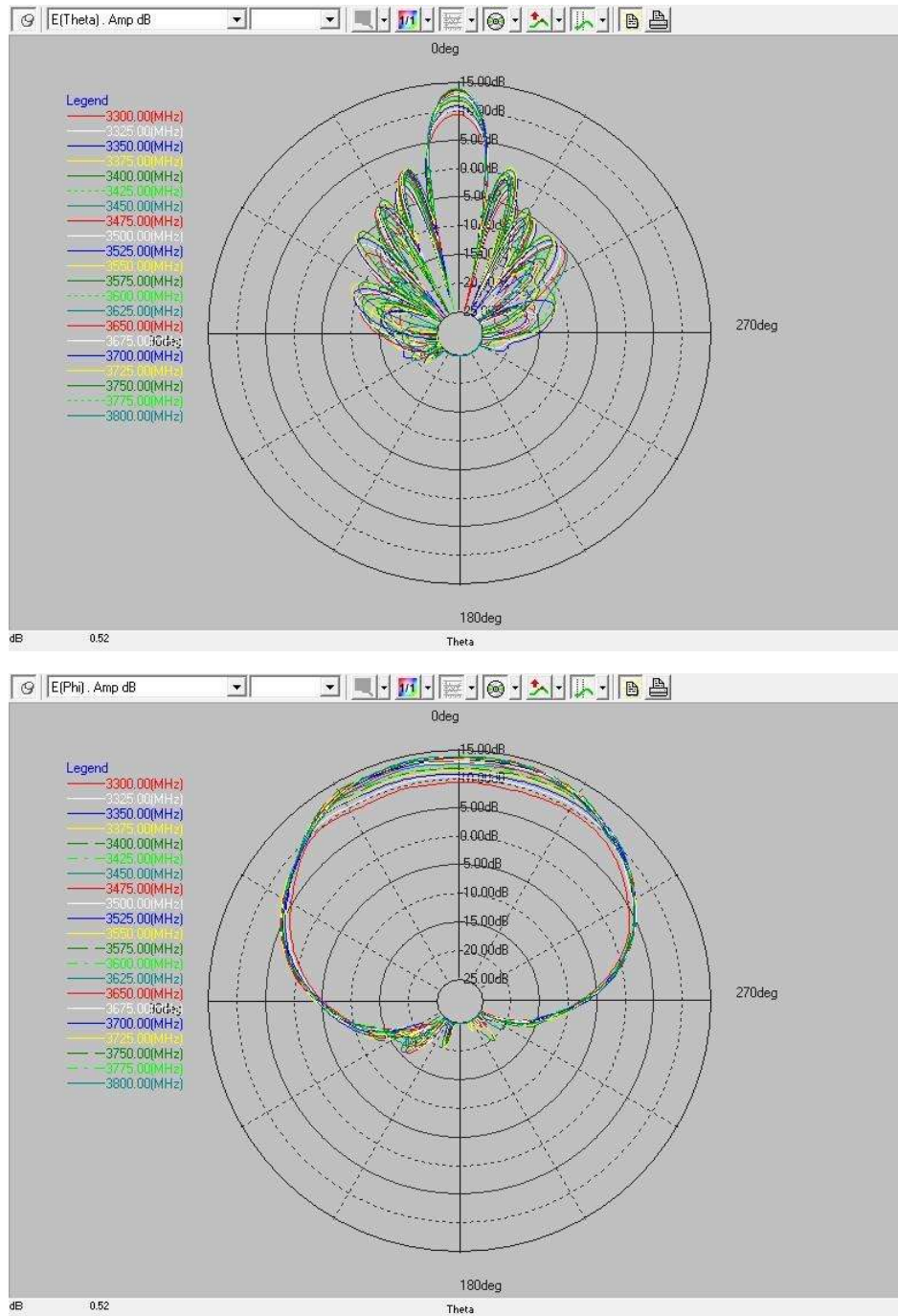
6.9. Antenna 4H Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



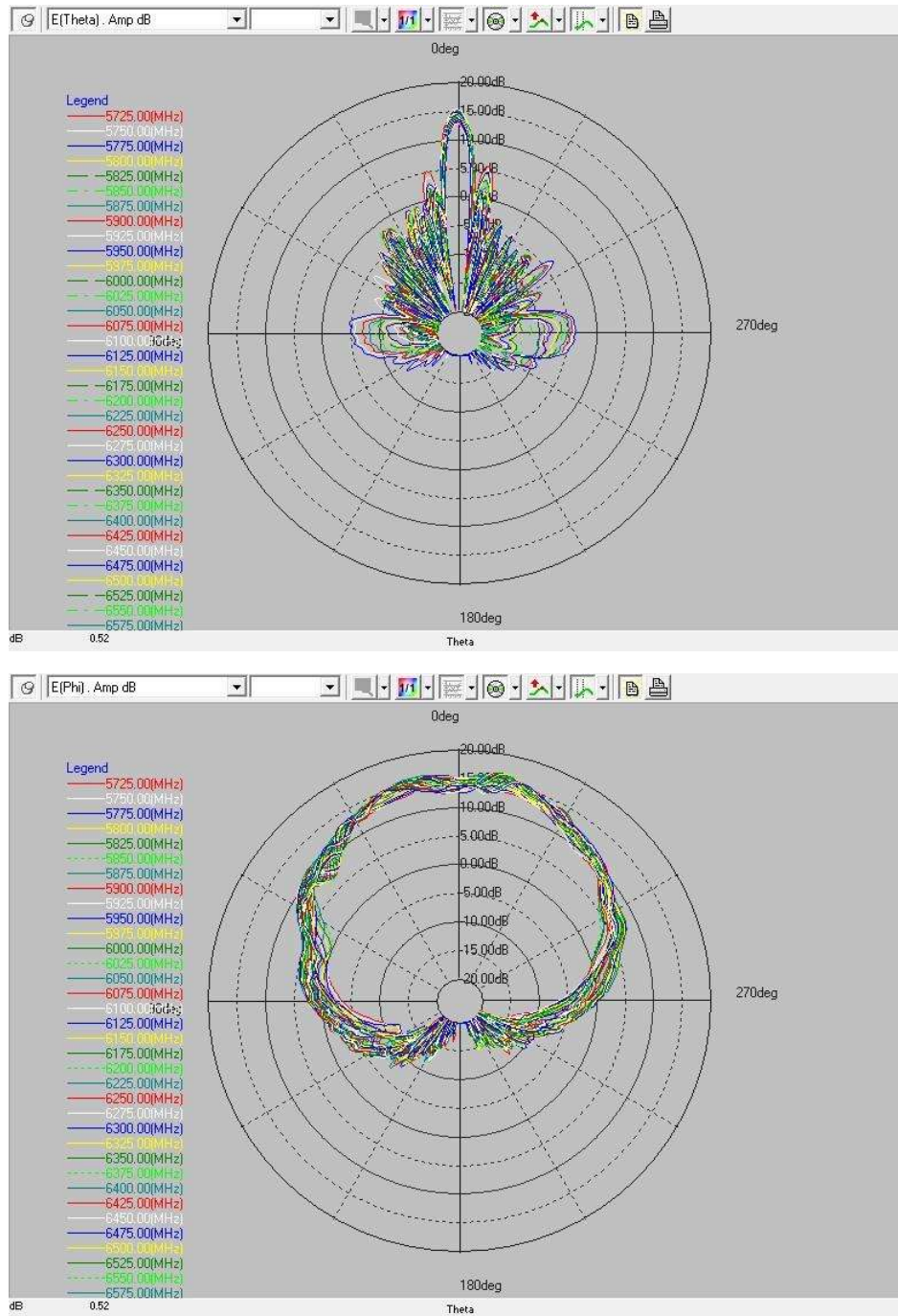
6.10. Antenna 4H Elevation and Azimuth Patterns, 5725MHz to 7000MHz



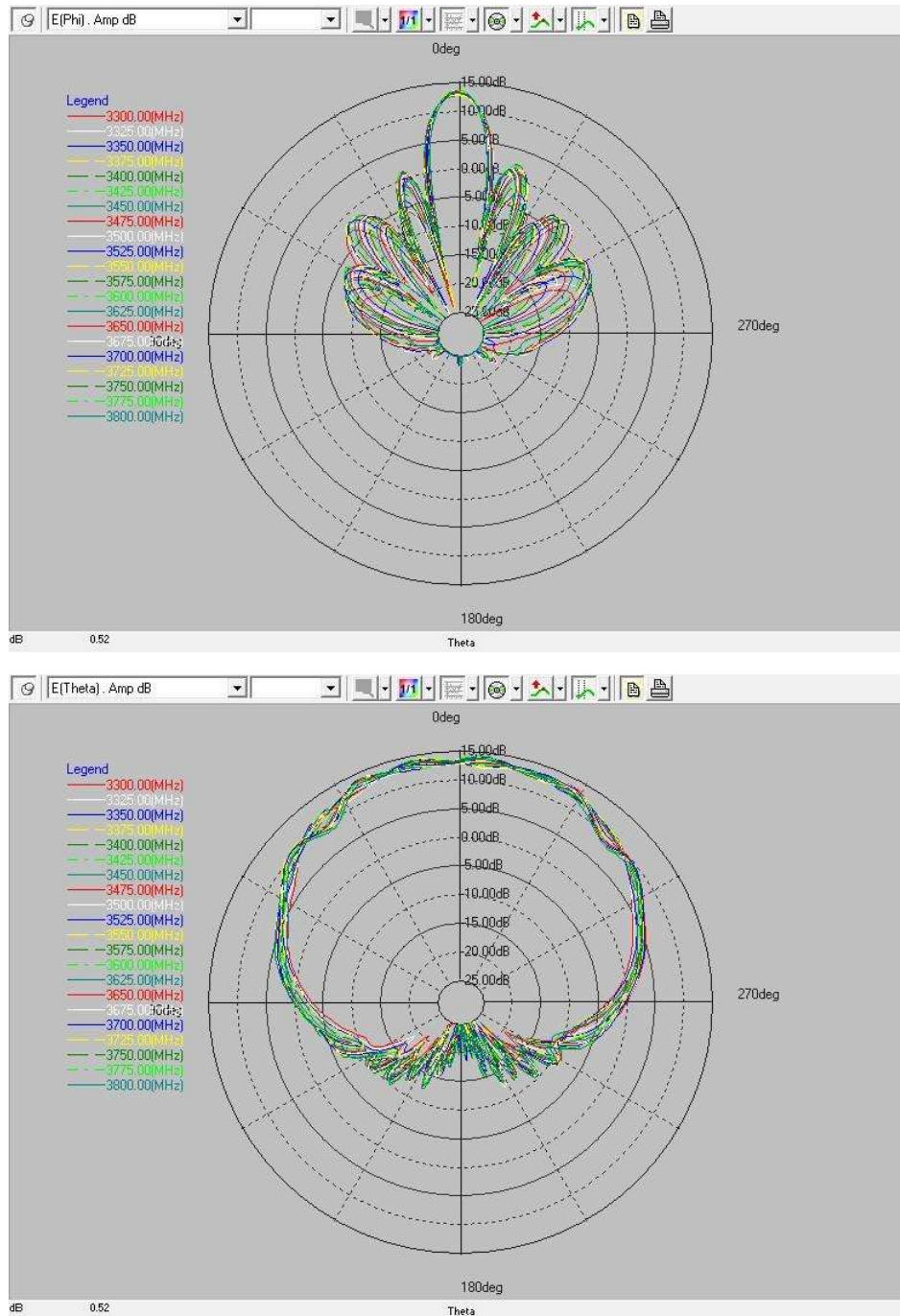
6.11. Antenna 5V Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



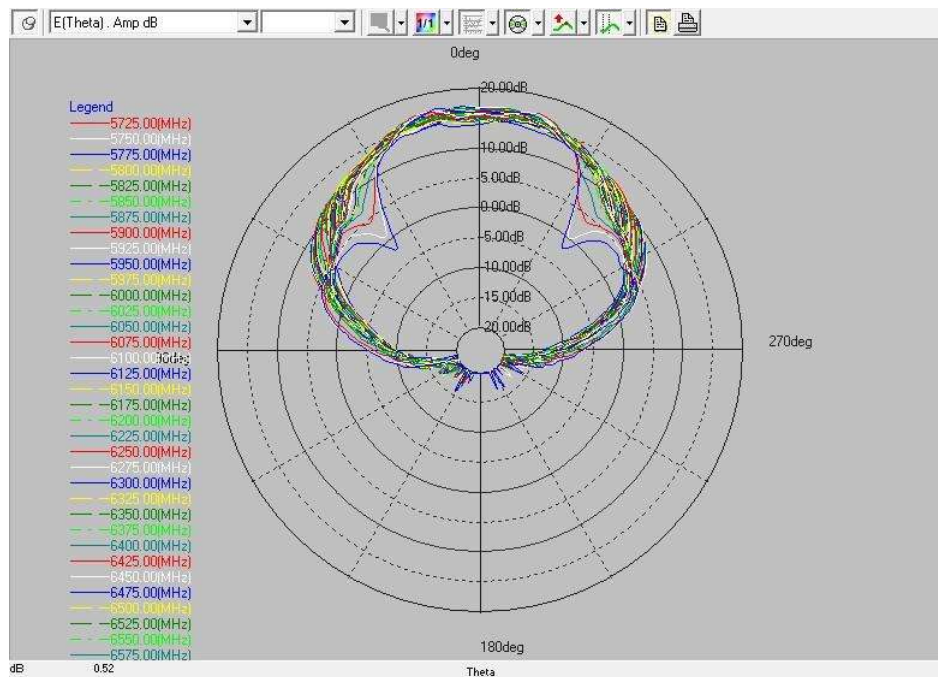
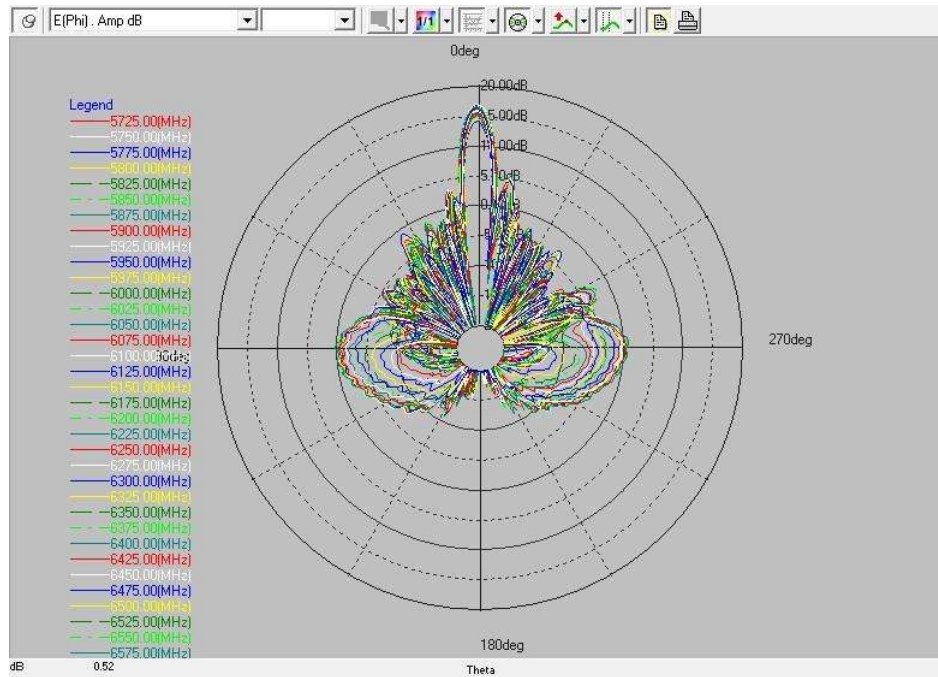
6.12. Antenna 5V Elevation and Azimuth Patterns, 5725MHz to 7000MHz



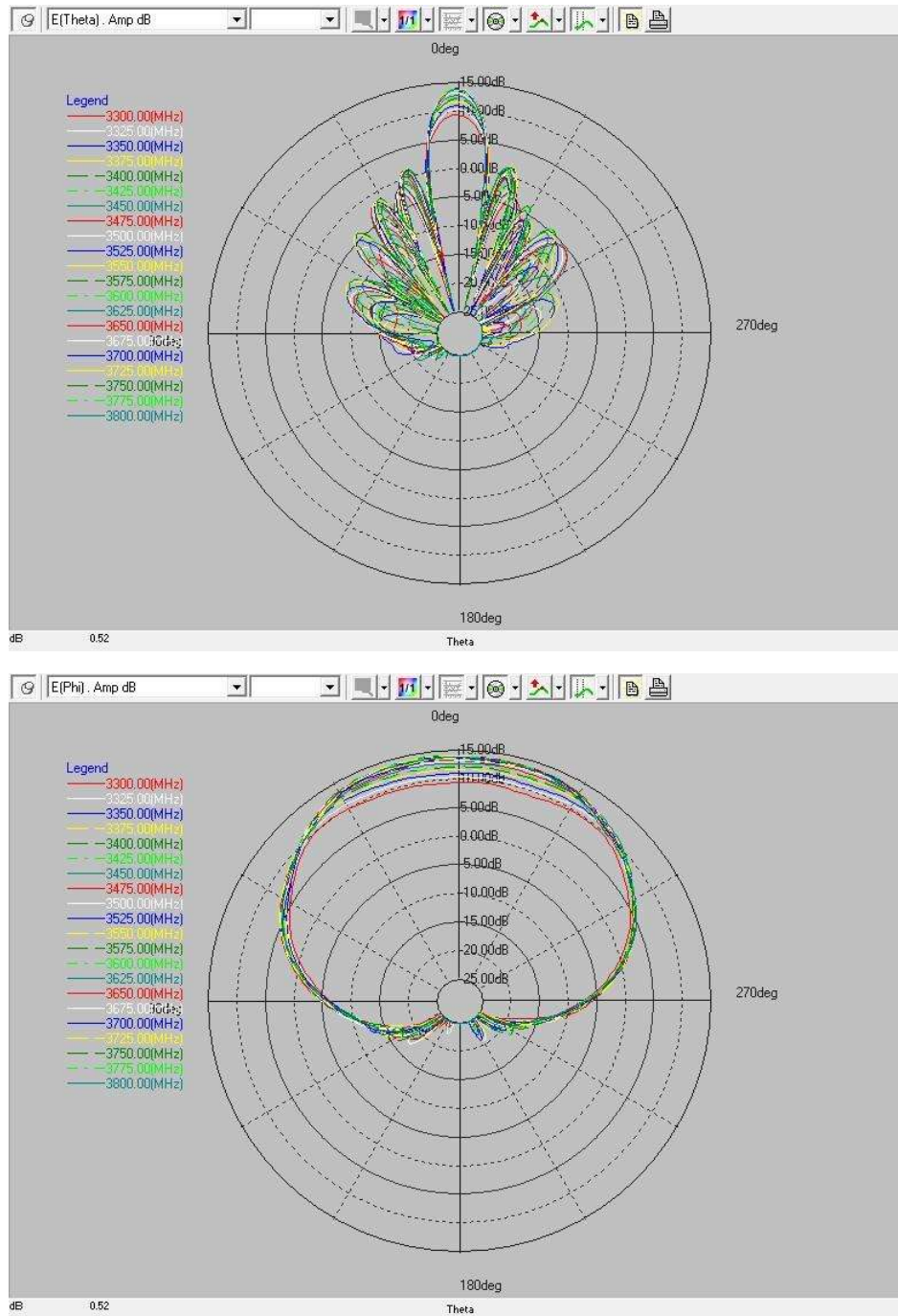
6.13. Antenna 6H Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



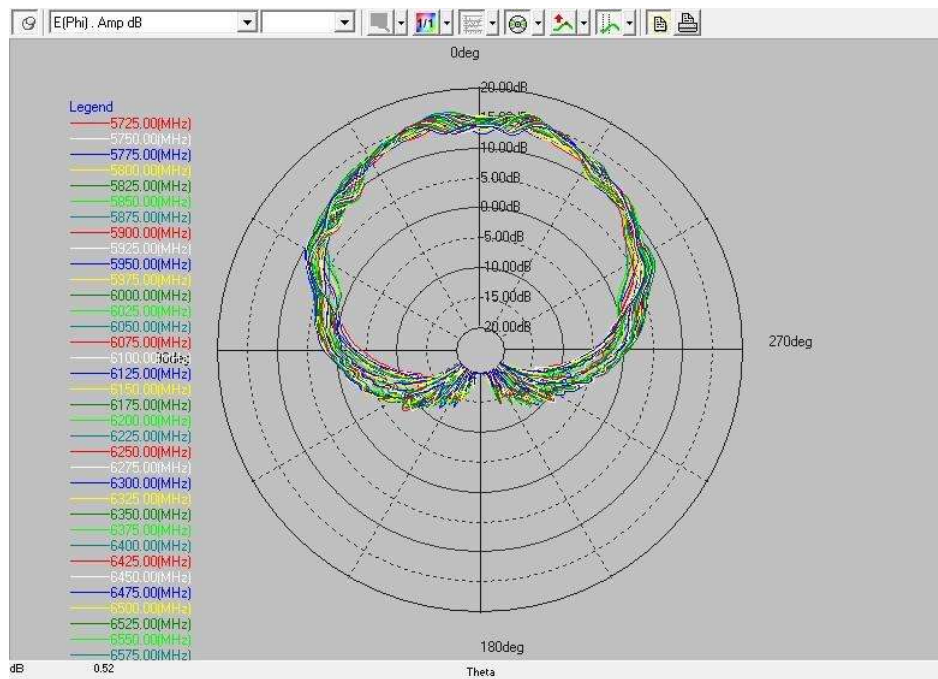
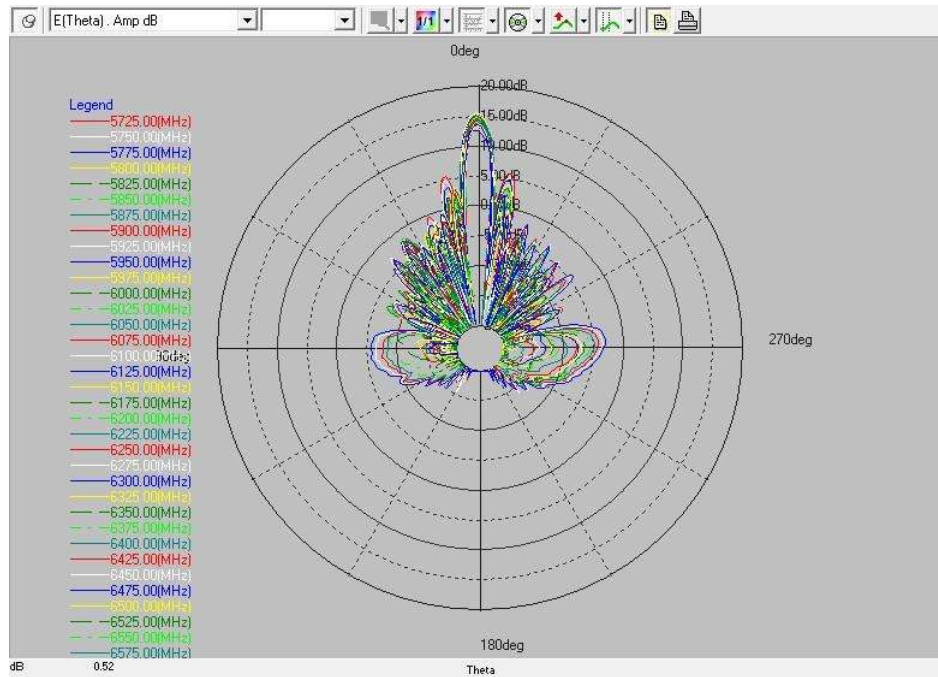
6.14. Antenna 6H Elevation and Azimuth Patterns, 5725MHz to 7000MHz



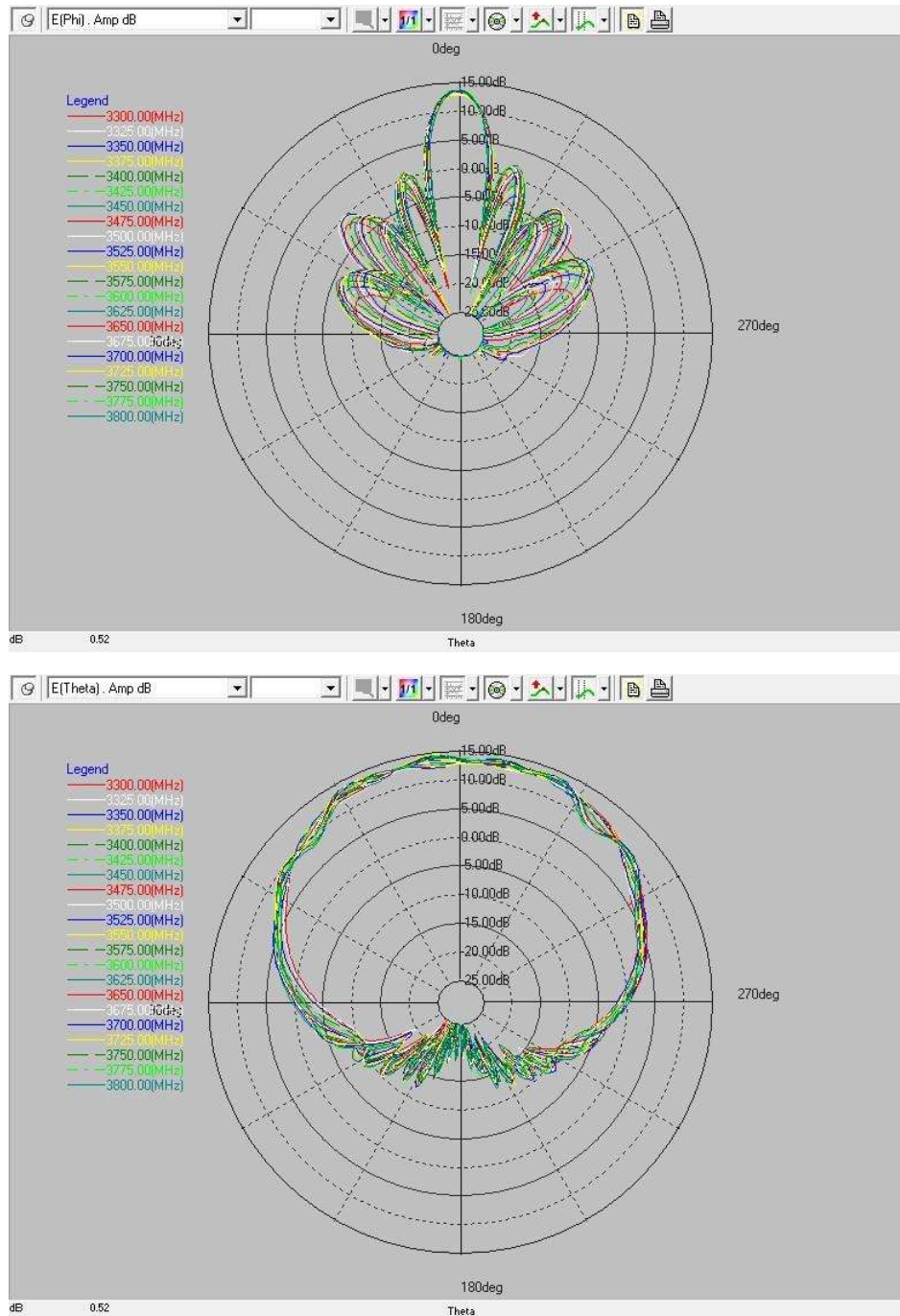
6.15. Antenna 7V Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



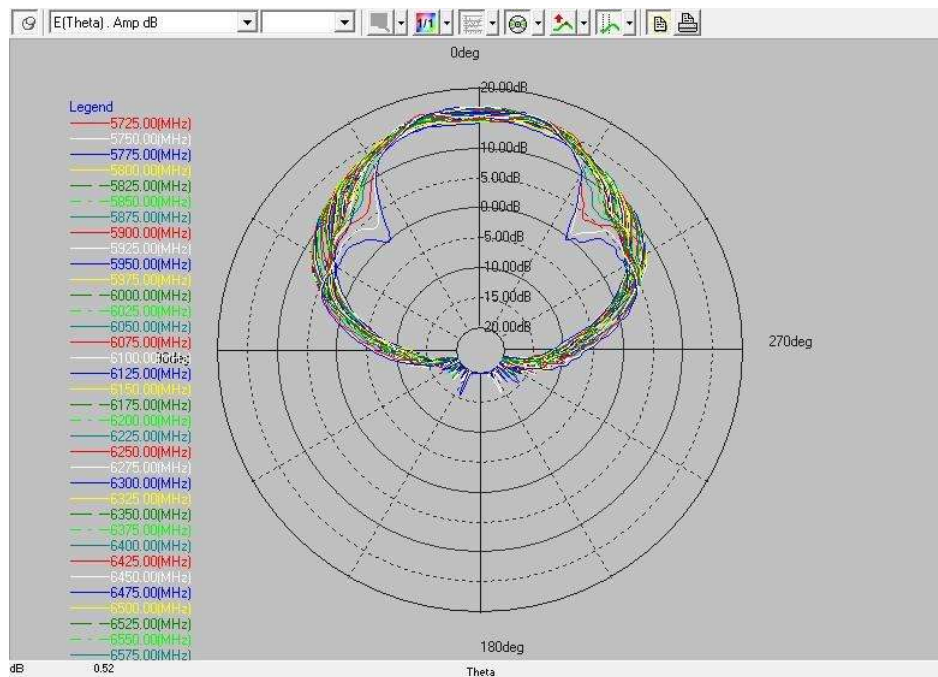
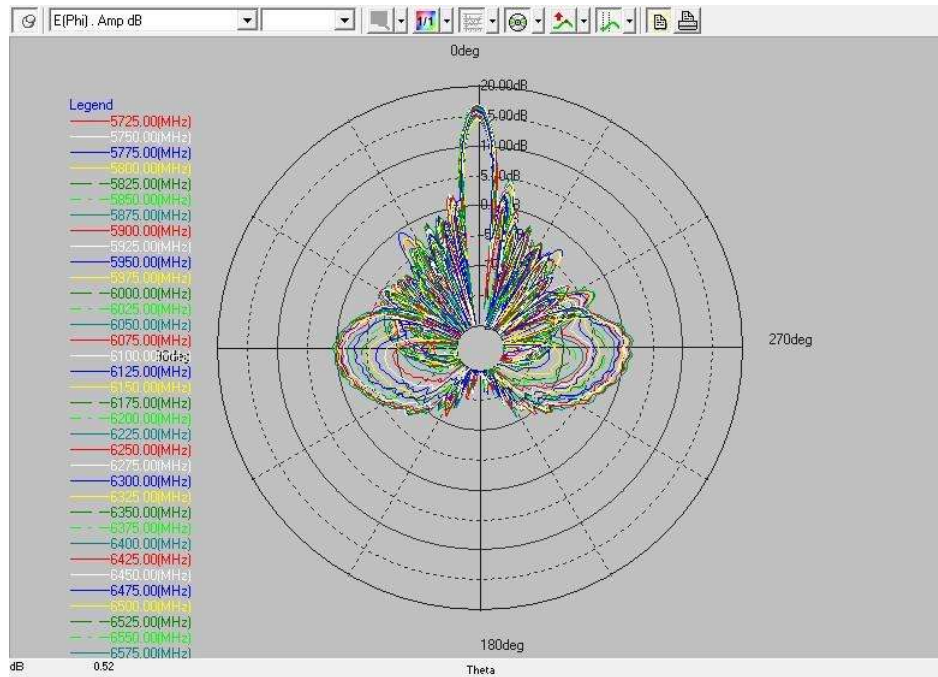
6.16. Antenna 7V Elevation and Azimuth Patterns, 5725MHz to 7000MHz



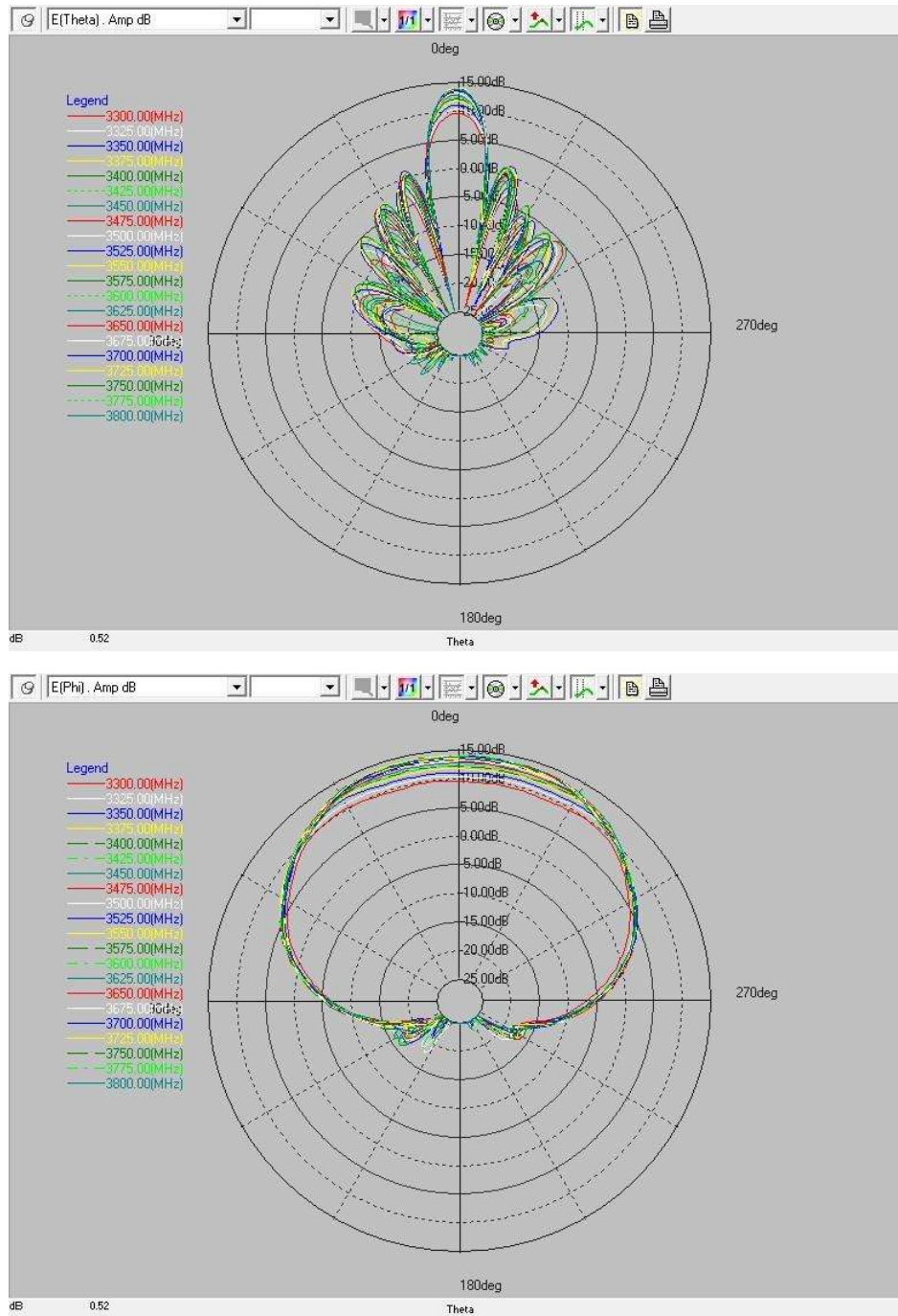
6.17. Antenna 8H Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



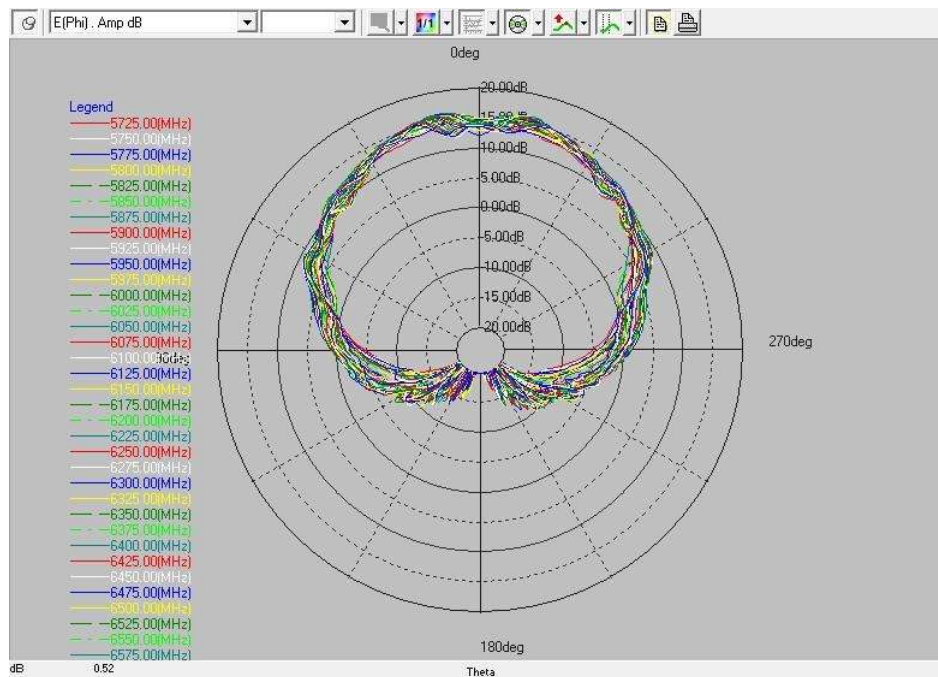
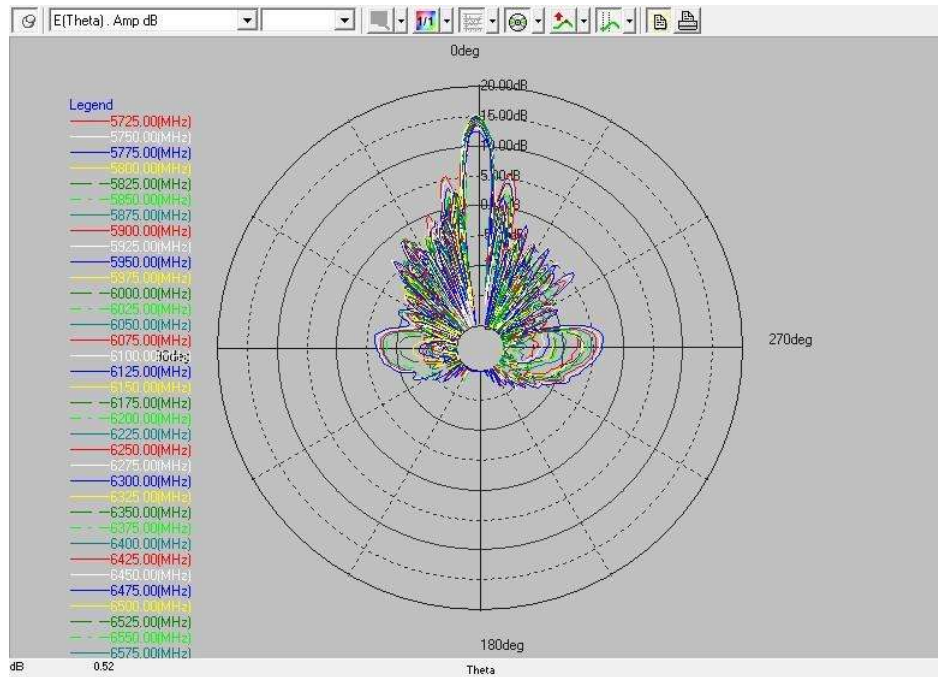
6.18. Antenna 8H Elevation and Azimuth Patterns, 5725MHz to 7000MHz



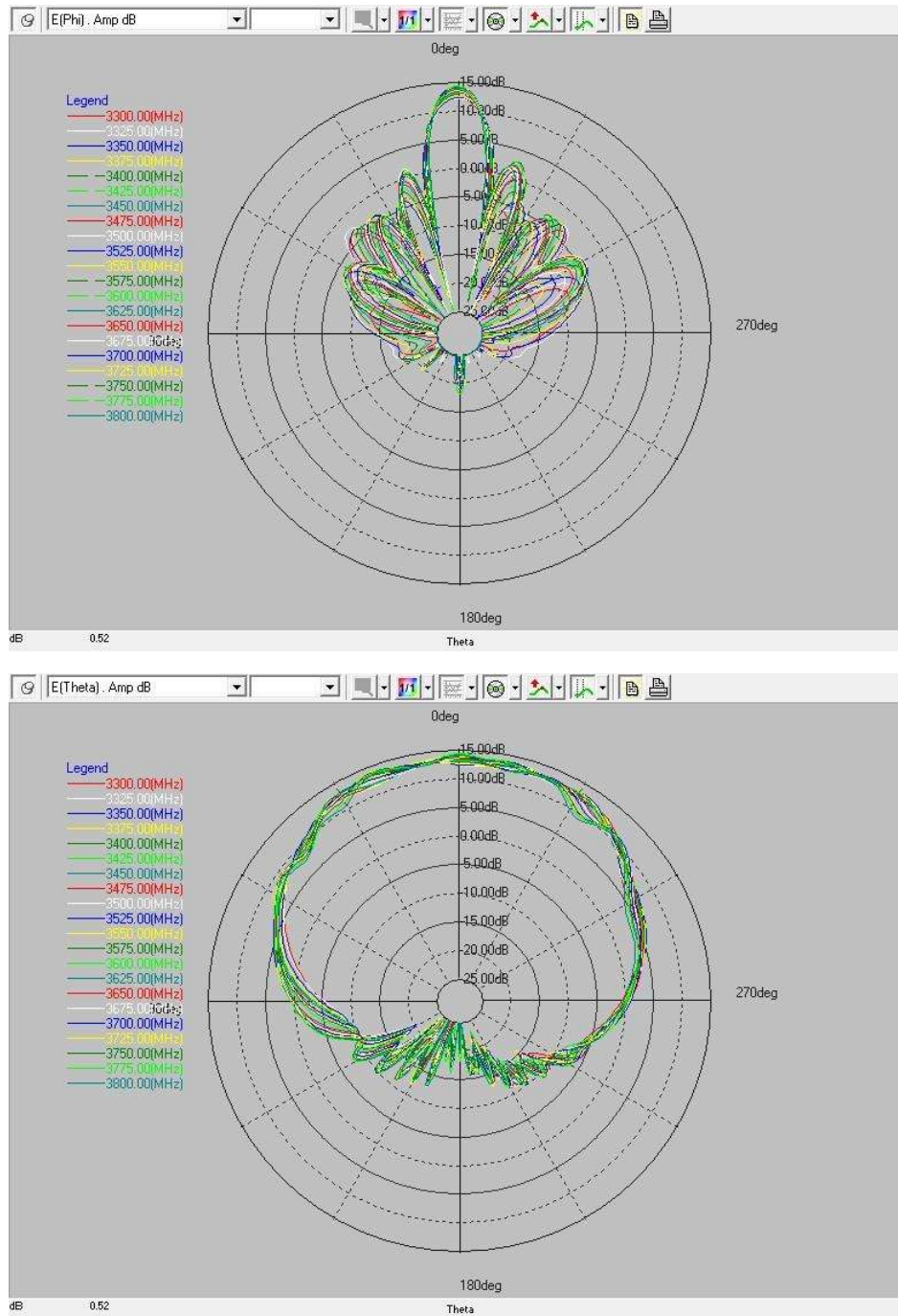
6.19. Antenna 9V Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



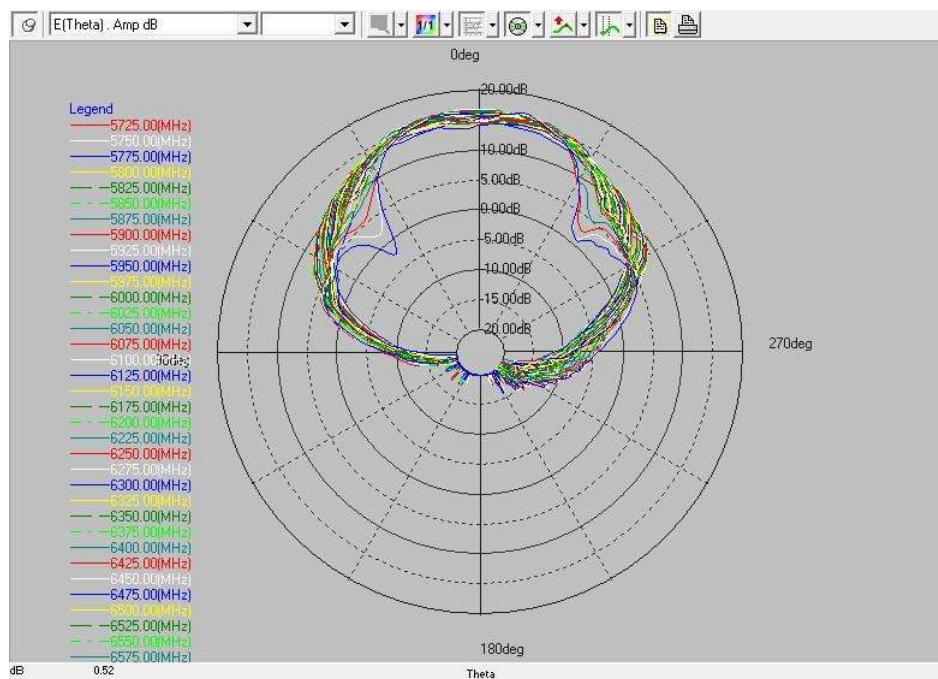
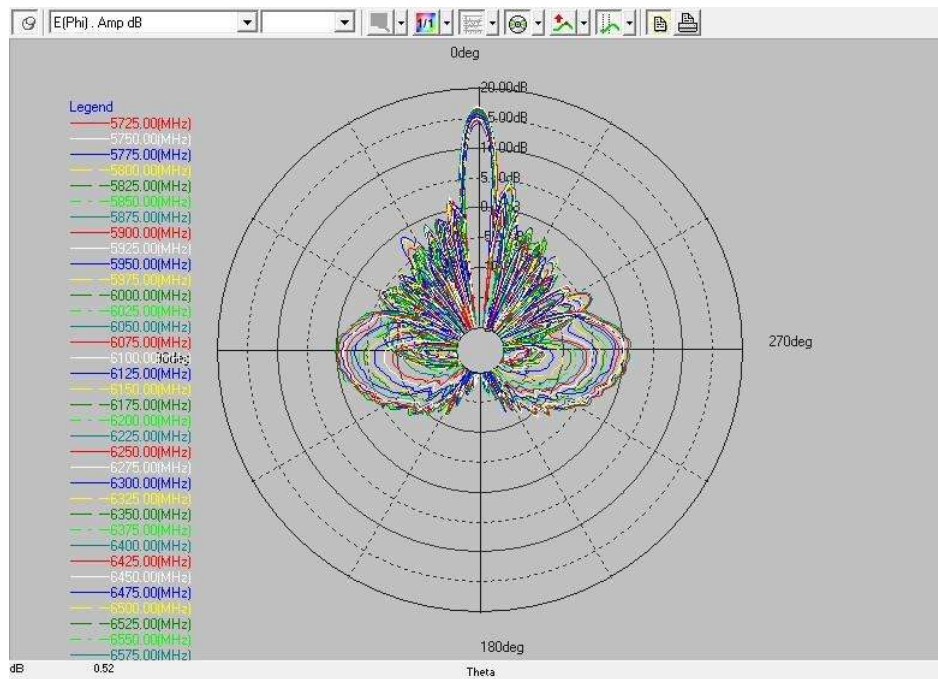
6.20. Antenna 9V Elevation and Azimuth Patterns, 5725MHz to 7000MHz



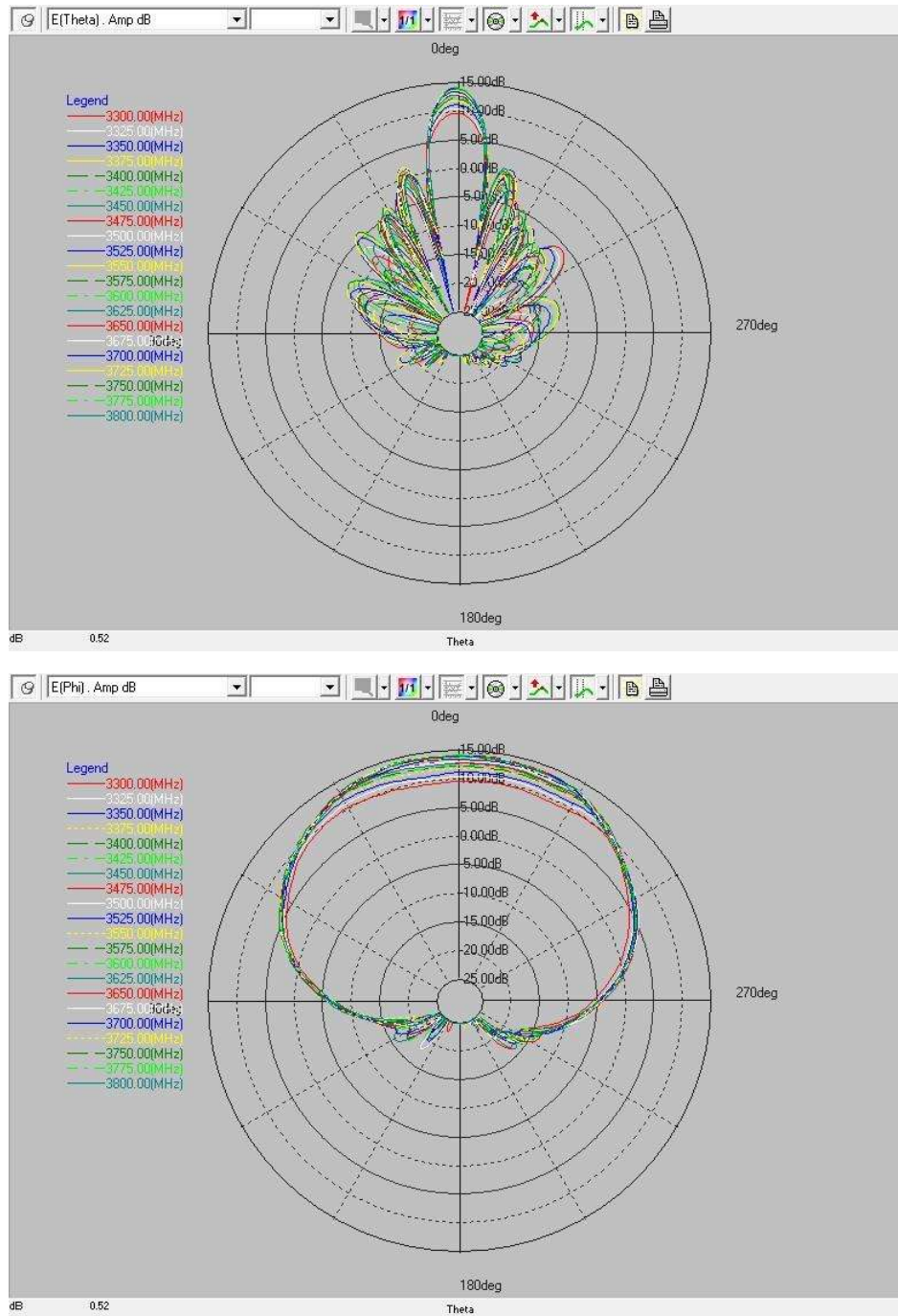
6.21. Antenna 10H Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



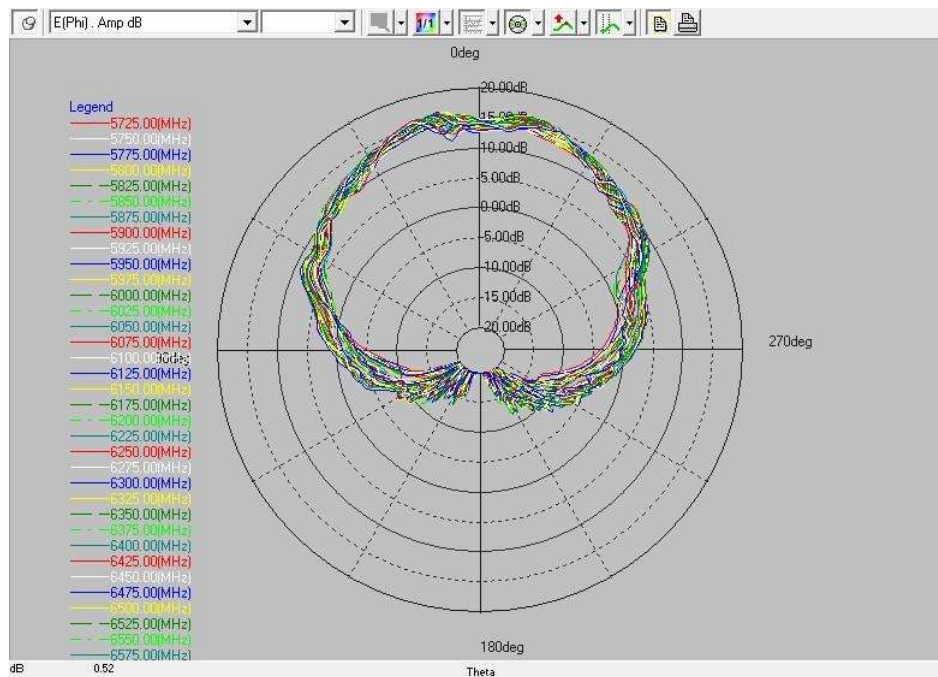
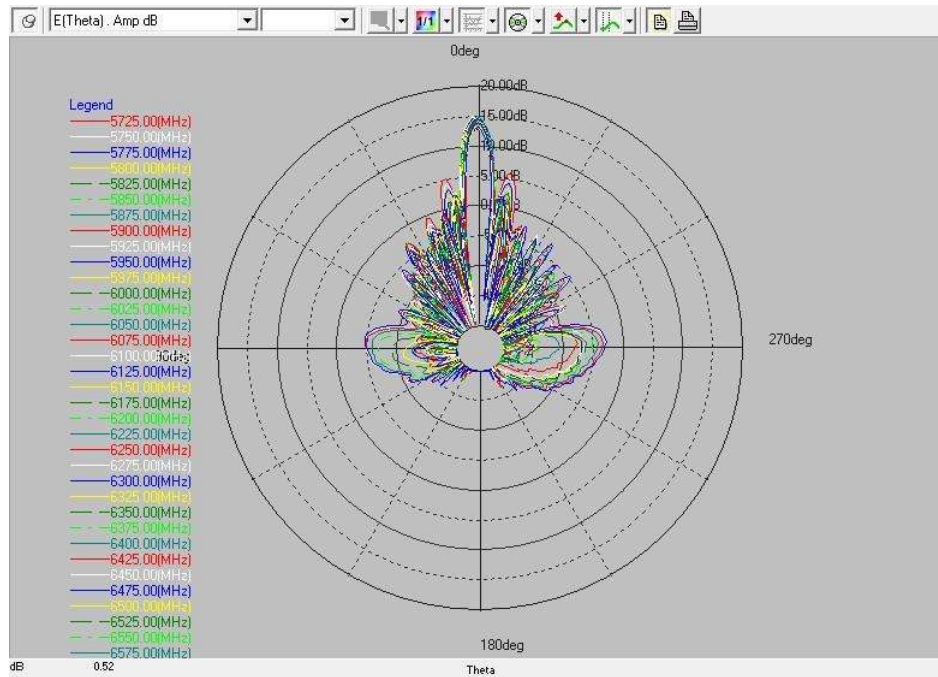
6.22. Antenna 10H Elevation and Azimuth Patterns, 5725MHz to 7000MHz



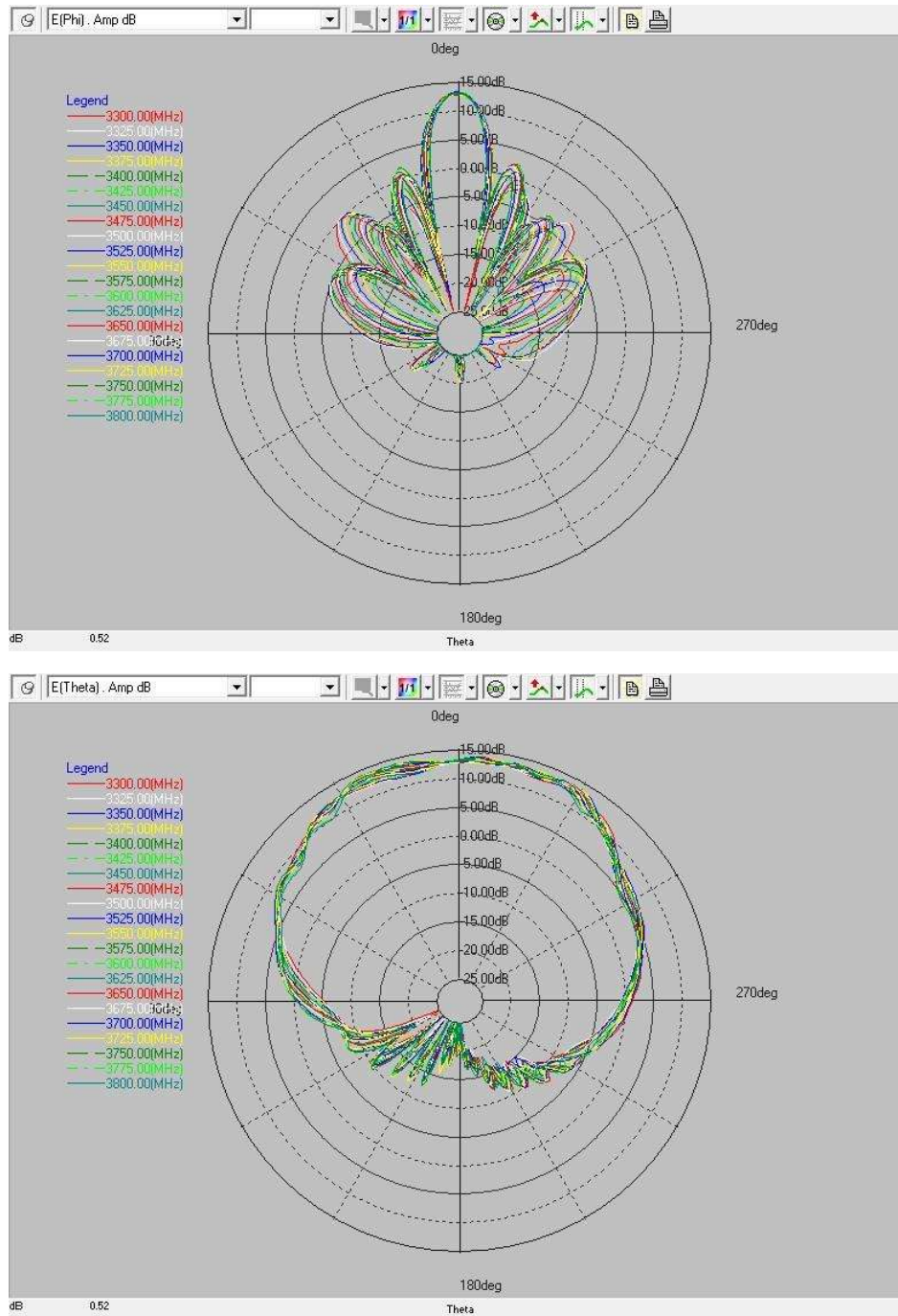
6.23. Antenna 11V Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



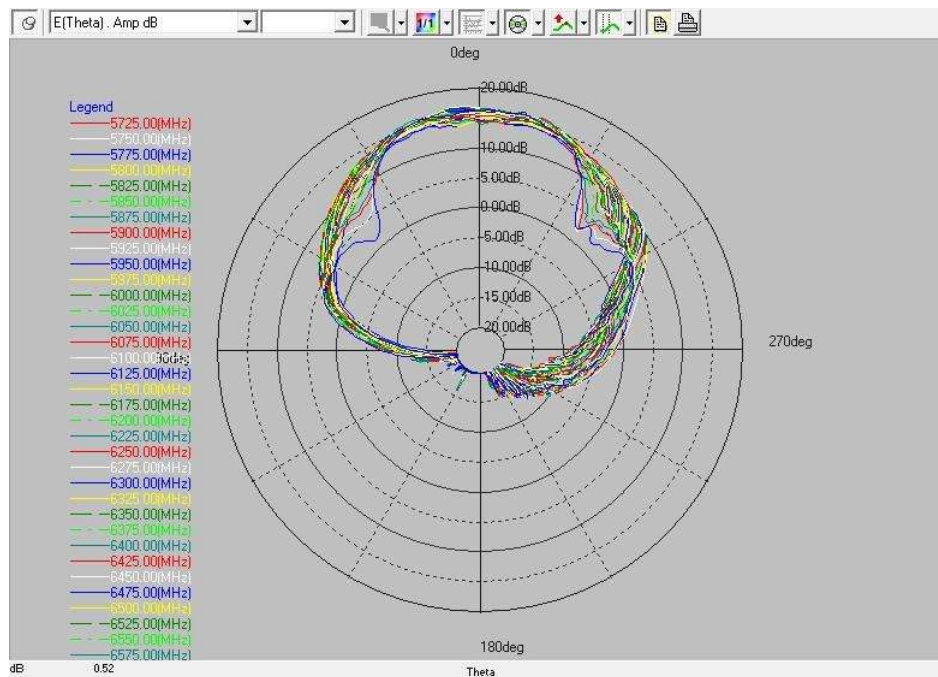
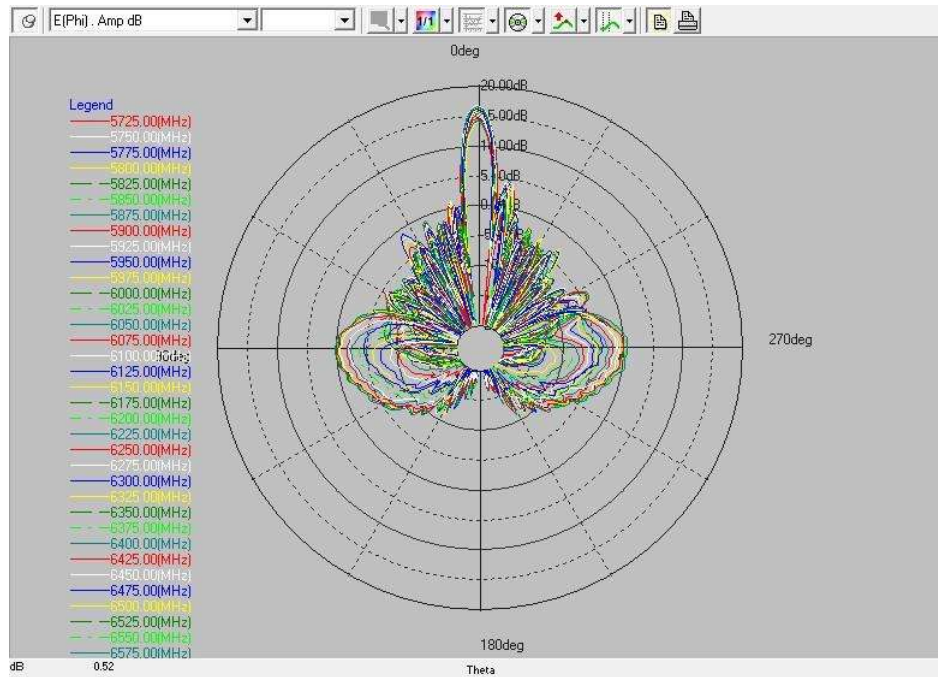
6.24. Antenna 11V Elevation and Azimuth Patterns, 5725MHz to 7000MHz



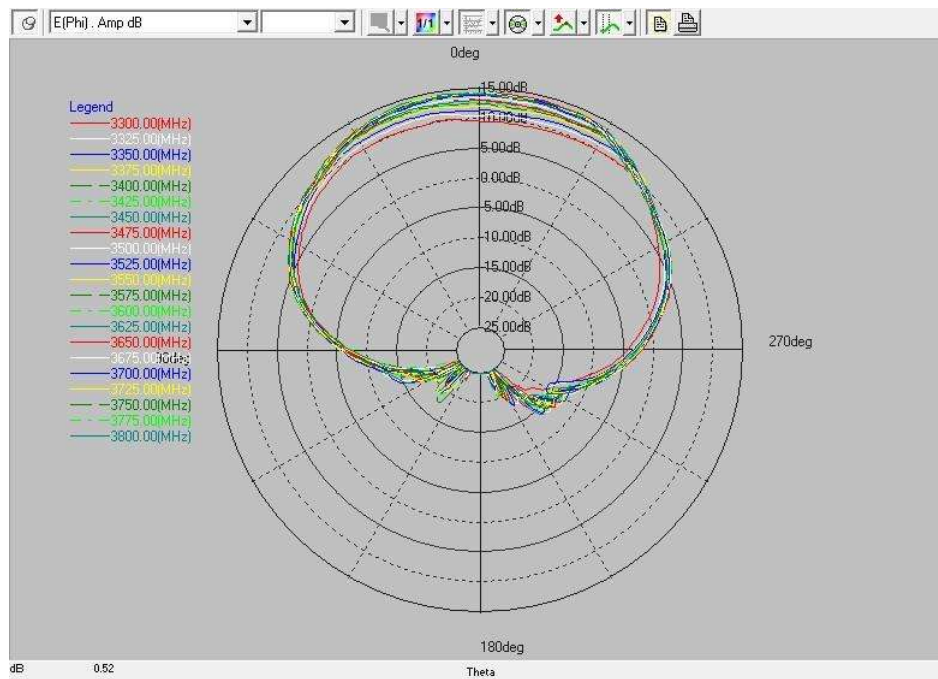
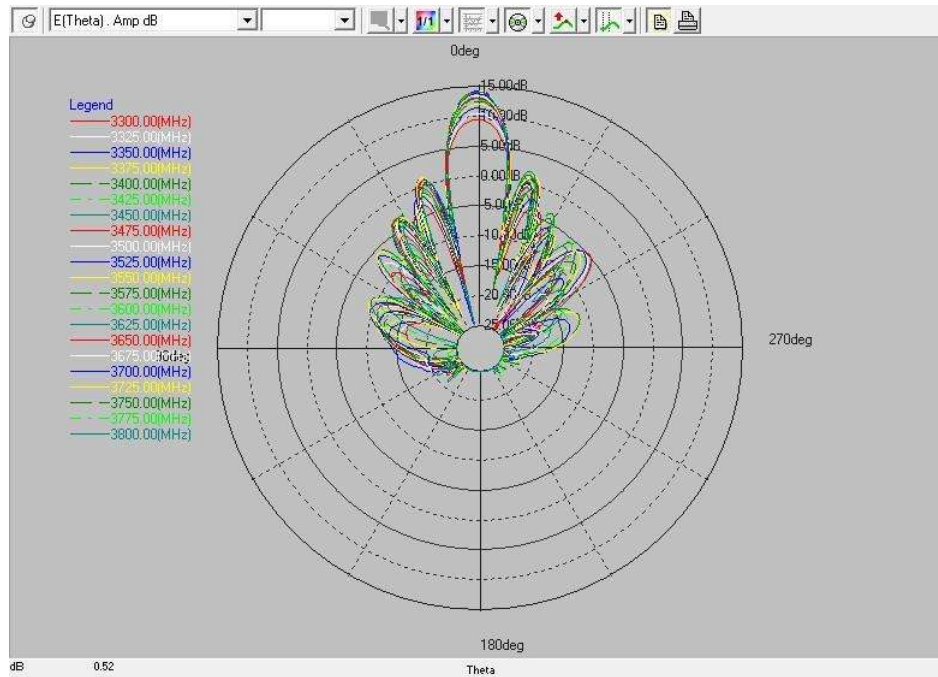
6.25. Antenna 12H Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



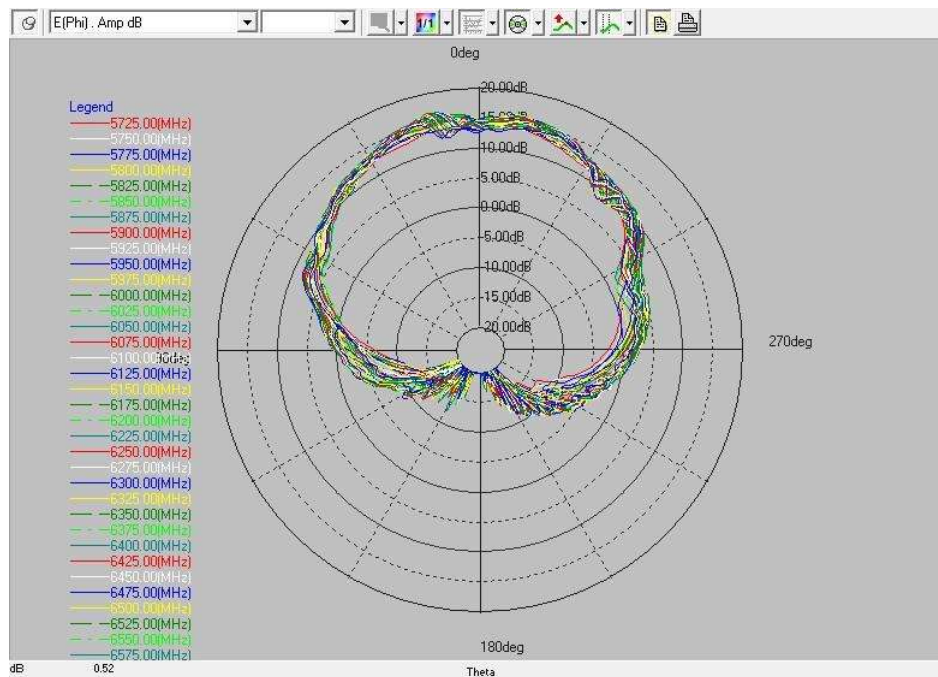
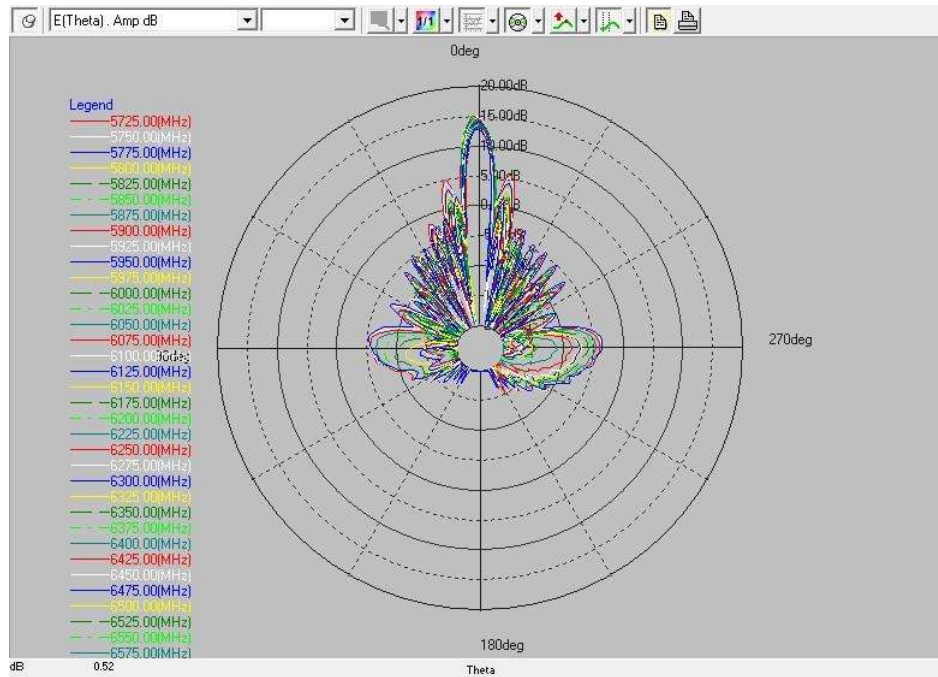
6.26. Antenna 12H Elevation and Azimuth Patterns, 5725MHz to 7000MHz



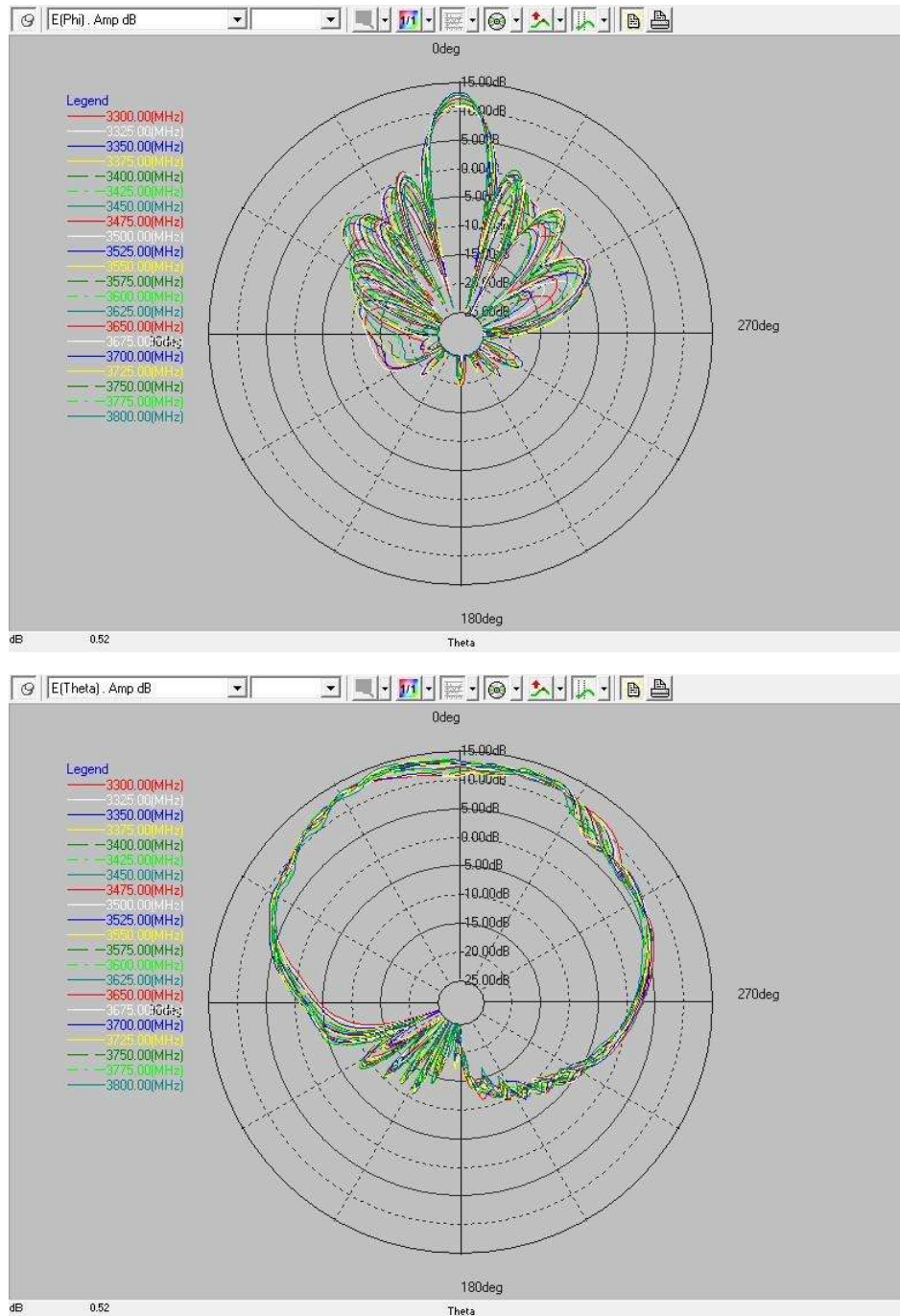
6.27. Antenna 13V Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



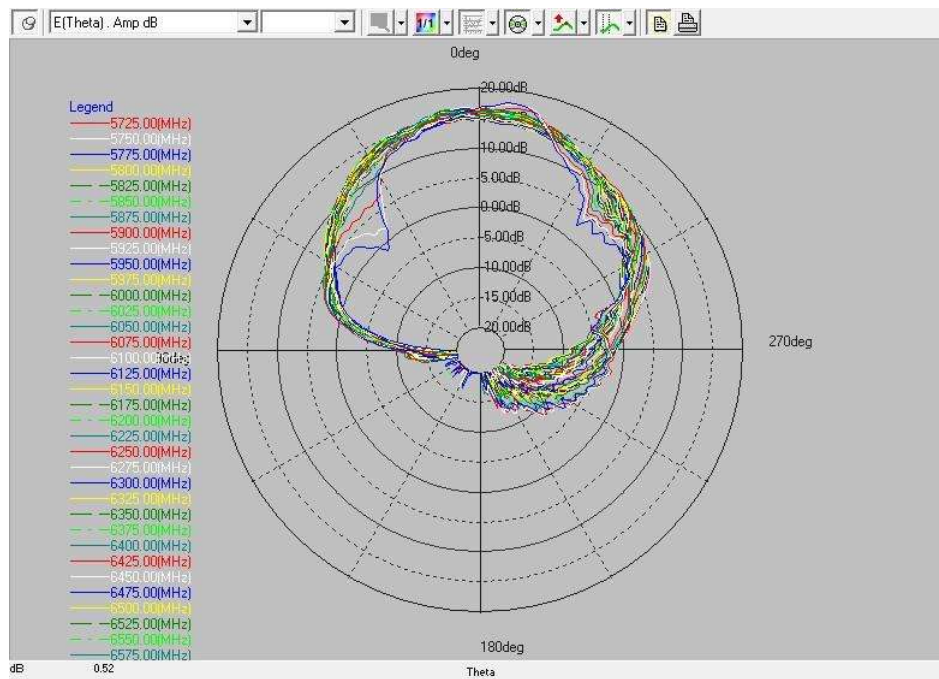
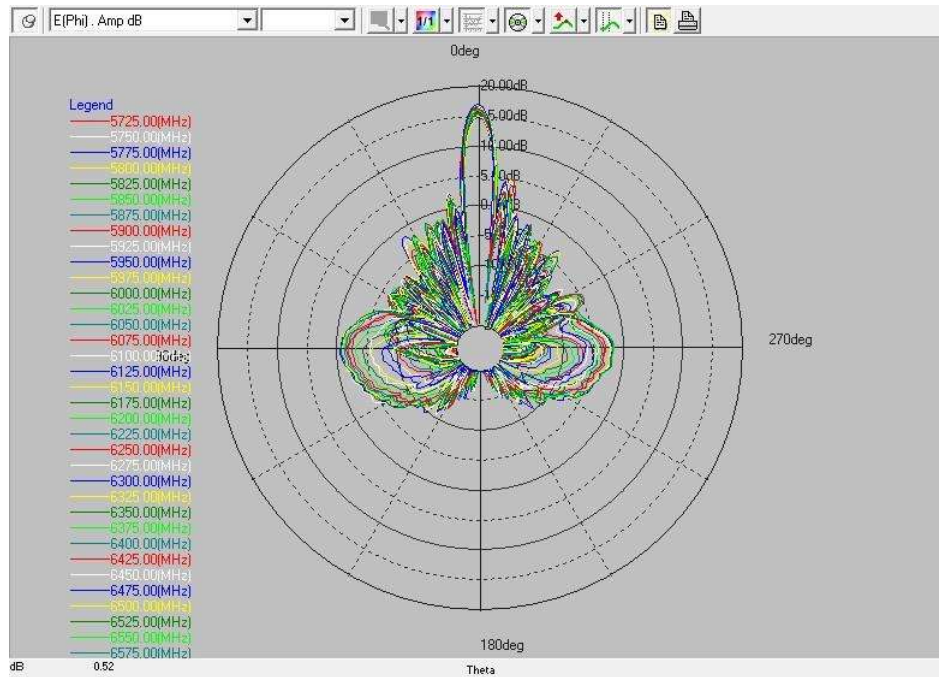
6.28. Antenna 13V Elevation and Azimuth Patterns, 5725MHz to 7000MHz



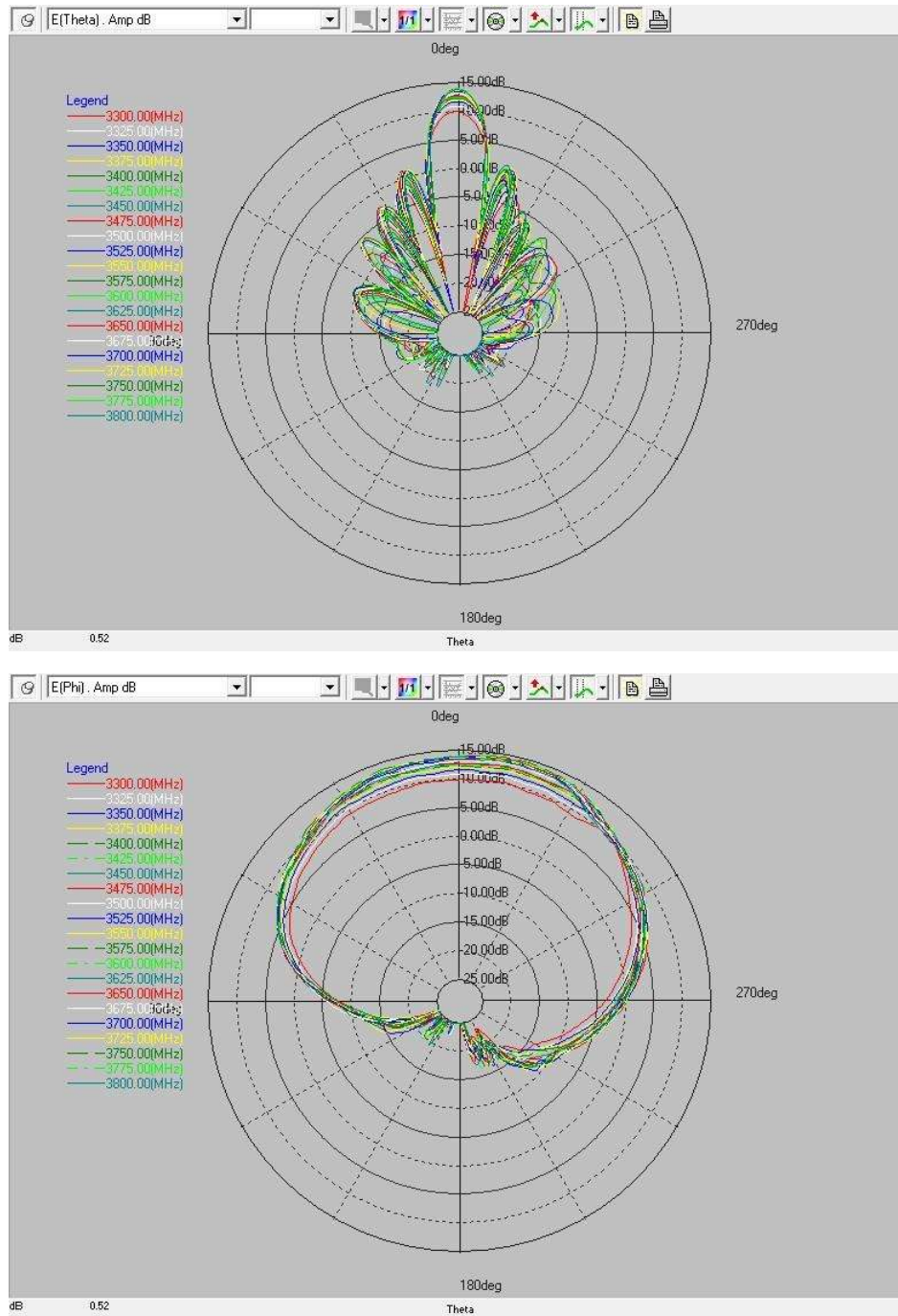
6.29. Antenna 14H Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



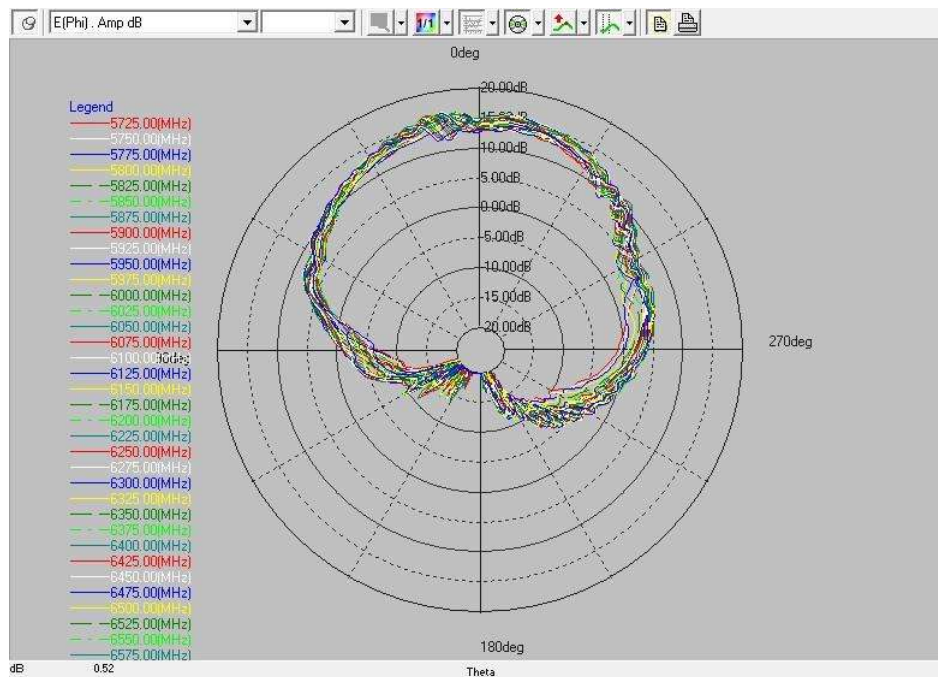
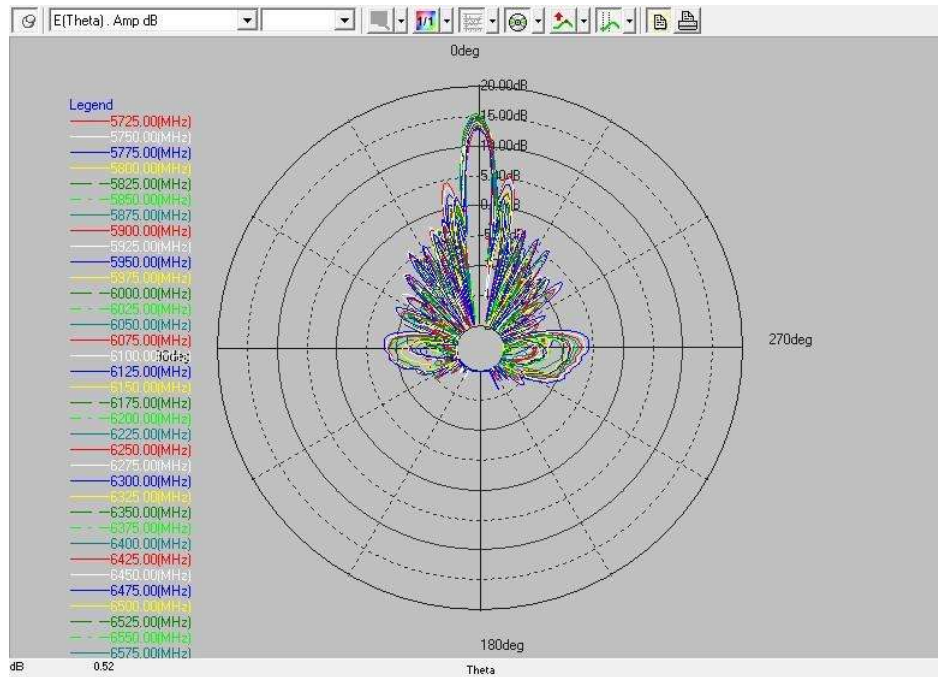
6.30. Antenna 14H Elevation and Azimuth Patterns, 5725MHz to 7000MHz



6.31. Antenna 15V Elevation and Azimuth Patterns, 3300 MHz to 3800MHz



6.32. Antenna 15V Elevation and Azimuth Patterns, 5725MHz to 7000MHz



7. Summary

7.1. Antenna Max Gain Summary

Frequency Range (MHz)	Max Antenna Gain (dBi)																
	0H	1V	2H	3V	4H	5V	6H	7V	8H	9V	10H	11V	12H	13V	14H	15V	Max Gain
3550-3700	13.20	14.22	13.37	13.99	14.01	13.87	14.03	13.95	14.20	13.91	14.07	14.01	13.85	14.14	14.20	14.29	14.29
5725-5850	15.71	15.21	15.64	15.33	15.96	15.32	16.18	15.23	16.27	15.27	16.07	15.02	15.69	15.31	15.90	15.53	16.27
5850-5895	15.98	15.52	15.91	15.44	16.38	15.66	16.53	16.10	16.64	16.01	16.41	15.72	15.93	15.60	15.92	15.89	16.64
5925-6425	16.84	15.65	16.66	15.60	16.83	15.99	16.78	16.11	16.75	15.86	16.66	16.21	16.83	15.99	16.61	16.06	16.84
6425-6525	16.88	16.03	16.71	16.40	16.88	16.38	16.84	16.12	16.75	15.98	16.65	16.42	16.88	16.22	16.68	16.24	16.88
6525-6875	16.75	16.19	16.40	16.49	16.66	16.38	16.65	16.31	16.58	16.01	16.51	16.25	16.51	16.52	16.61	16.19	16.75

7.2. Antenna Elevation Gain Above +30°

Frequency Range (MHz)	+30° to +90° Antenna Gain (dBi)																
	0H	1V	2H	3V	4H	5V	6H	7V	8H	9V	10H	11V	12H	13V	14H	15V	Max Gain
5725-5850	-5.04	-4.23	-5.97	-3.59	-4.87	-2.07	-4.57	-4.20	-4.53	-4.09	-4.44	-4.24	-4.54	-5.00	-5.75	-5.46	-2.07
5850-5895	-5.70	-4.30	-6.68	-3.31	-5.59	-1.42	-4.92	-2.63	-5.27	-2.99	-4.96	-3.91	-5.34	-4.86	-6.42	-7.44	-1.42
5925-6425	-1.74	-2.22	-1.43	-3.75	-0.83	-1.40	-1.01	-1.45	-0.52	-1.58	-1.10	-2.59	-1.06	-5.33	-1.49	-5.79	-0.52
6425-6525	-5.05	-5.44	-4.48	-5.26	-5.52	-3.47	-5.34	-2.97	-5.35	-3.01	-5.68	-6.32	-4.90	-7.48	-6.03	-6.75	-2.97
6525-6875	0.07	-3.16	-0.43	-4.81	-0.30	-4.21	-0.05	-2.97	0.20	-3.09	0.12	-4.57	-0.02	-5.07	-0.62	-3.77	0.20

Note: Compare with the Peak Max Gain, the above +30° elevation gains are all below more than 15dB.

7.3. Antenna Elevation Gain Below -30°

Frequency Range (MHz)	-30° to -90° Antenna Gain (dBi)																
	0H	1V	2H	3V	4H	5V	6H	7V	8H	9V	10H	11V	12H	13V	14H	15V	Max Gain
5725-5850	-5.83	-6.86	-6.30	-7.44	-5.20	-5.70	-5.15	-5.79	-5.68	-5.49	-5.35	-6.07	-4.51	-6.84	-5.15	-7.79	-4.51
5850-5895	-5.66	-6.54	-6.25	-7.51	-4.67	-5.69	-5.06	-9.18	-5.63	-8.22	-4.79	-6.66	-4.92	-8.18	-6.07	-8.45	-4.67
5925-6425	-2.74	-7.01	-3.85	-6.80	-2.74	-5.70	-2.13	-7.27	-2.64	-7.59	-2.59	-7.64	-2.95	-9.56	-3.08	-8.12	-2.13
6425-6525	-5.64	-7.41	-6.51	-6.96	-6.18	-6.13	-5.06	-7.51	-4.95	-6.41	-5.96	-9.30	-5.73	-9.63	-7.70	-11.20	-4.95
6525-6875	-0.93	-6.52	-0.39	-5.21	0.45	-6.00	0.67	-6.39	1.31	-6.01	0.91	-6.24	0.11	-5.82	-1.73	-6.03	1.31

Note: Compare with the Peak Max Gain, the below -30° elevation gains are all below more than 15dB.