

Antenna

ELO ULC WLAN Antenna Test Report

ADVANCED-CONNECTEK INC.

Wireless Communications BU.

2026.06.11



Executive Summary

Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

- **Purpose**

Antenna study for ULC. Result as following.

- **Agenda**

- Test Environment and Equipment
- Antenna Positions and Dimensions
- Antenna Test Data

Test Result : Antenna VSWR

Test Result : Antenna Efficiency & Peak Gain

Test Result : Antenna 2D Radiation Patternn

Test Environment and Equipments

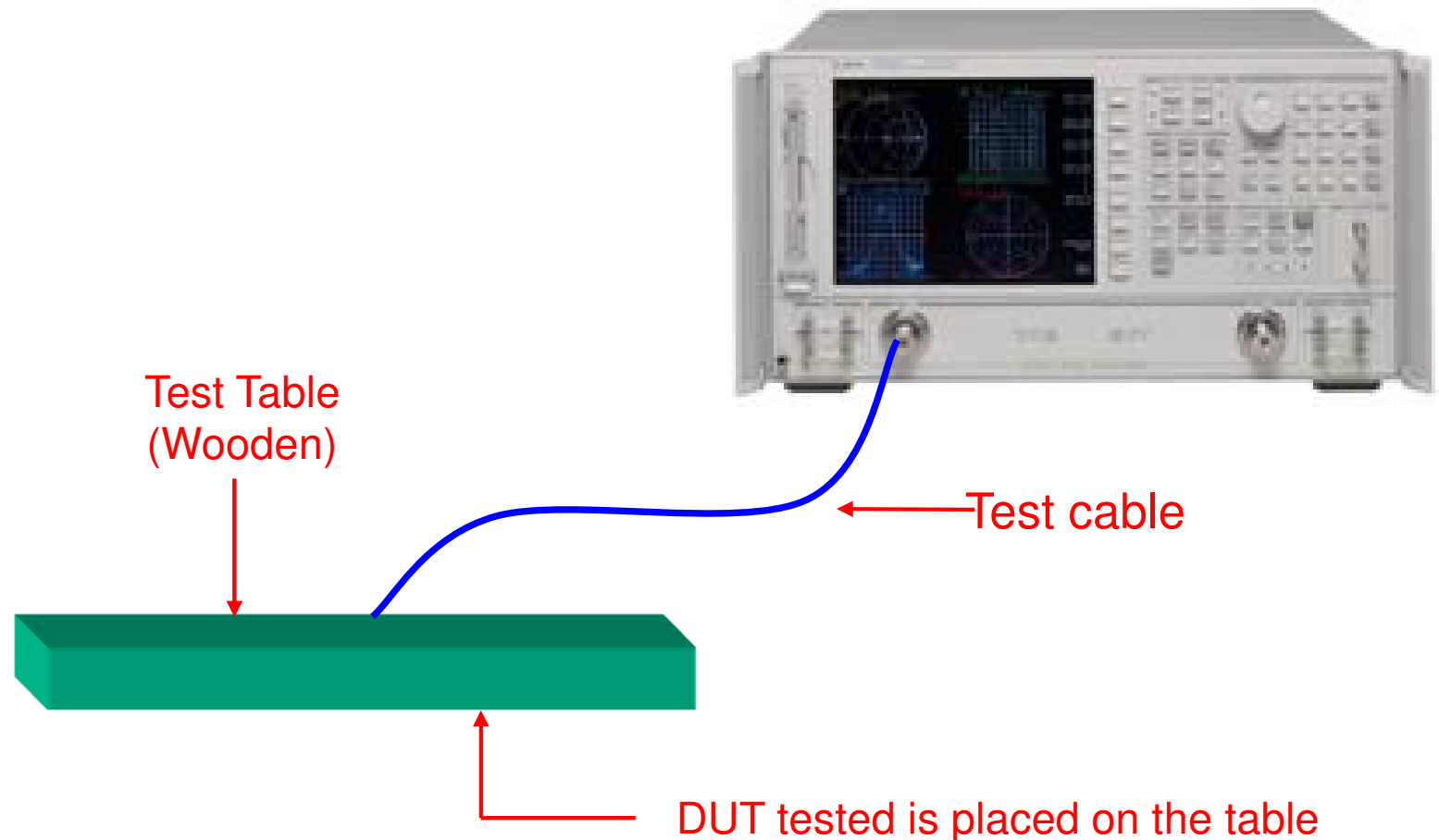
Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

S-Parameter test

- Network Analyzer(Agilent-E5071C)
- Testing range from 9KHz to 8.5GHz



Test Environment and Equipments

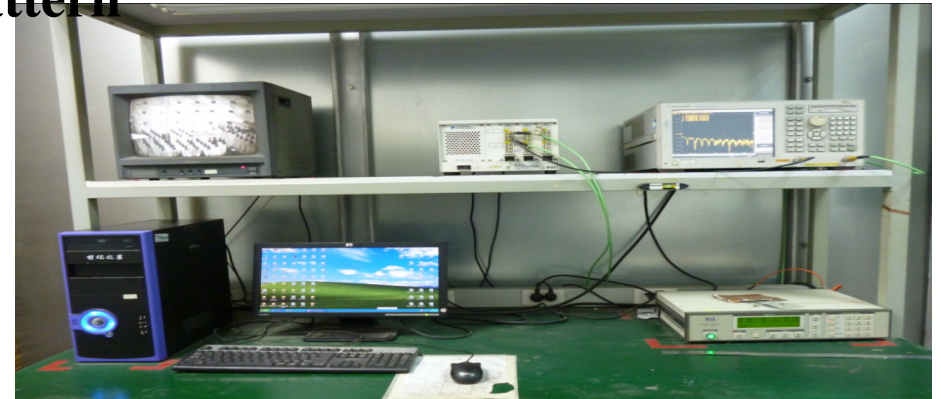
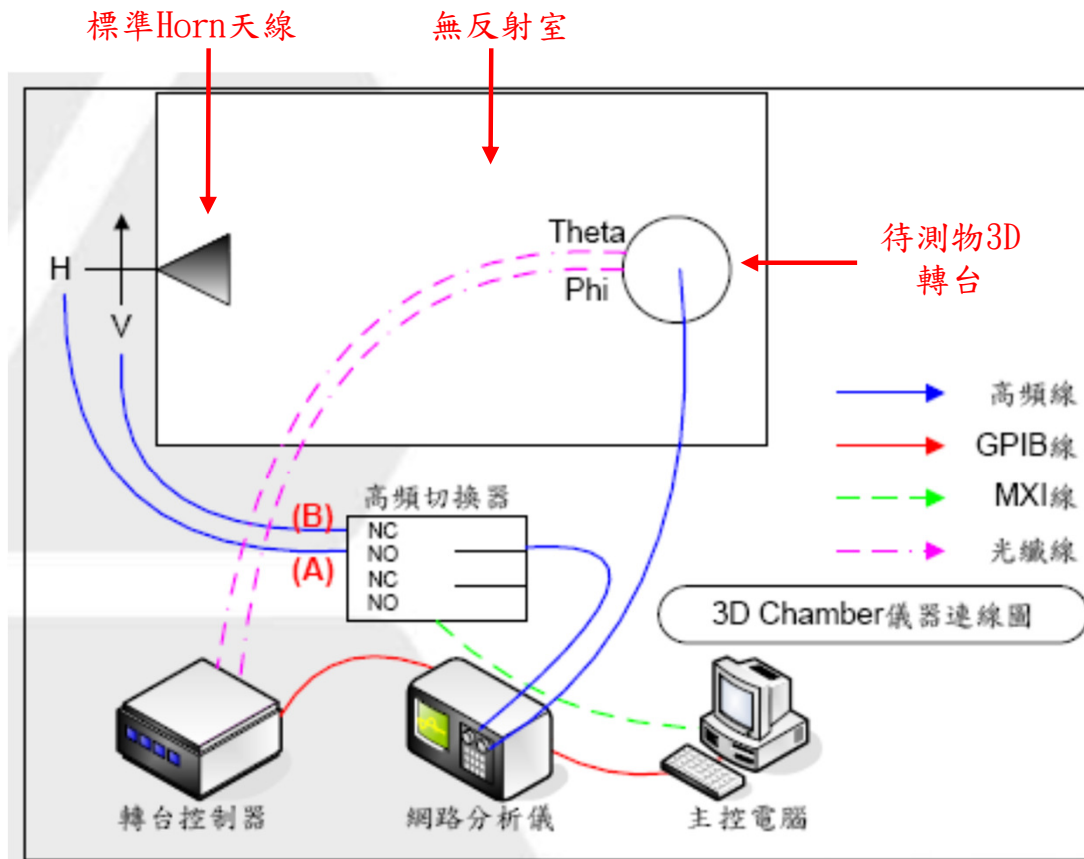
Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

The Gain, Efficiency, Directivity and 2D/3D Pattern

- ACON 3D Anechoic Chamber
- Chamber Room Size: $L*W*H=9*4.7*4.7$ M

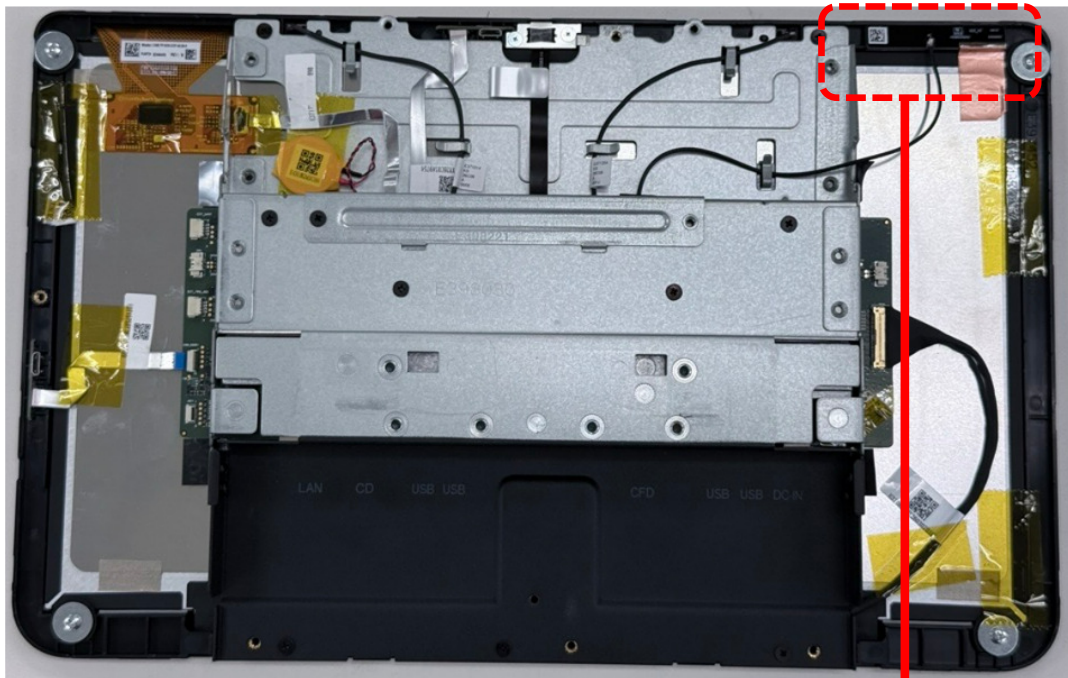


Antenna Positions and Dimensions

Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.



Antenna Size : 45*8*0.8mm

Cable Length : 150mm

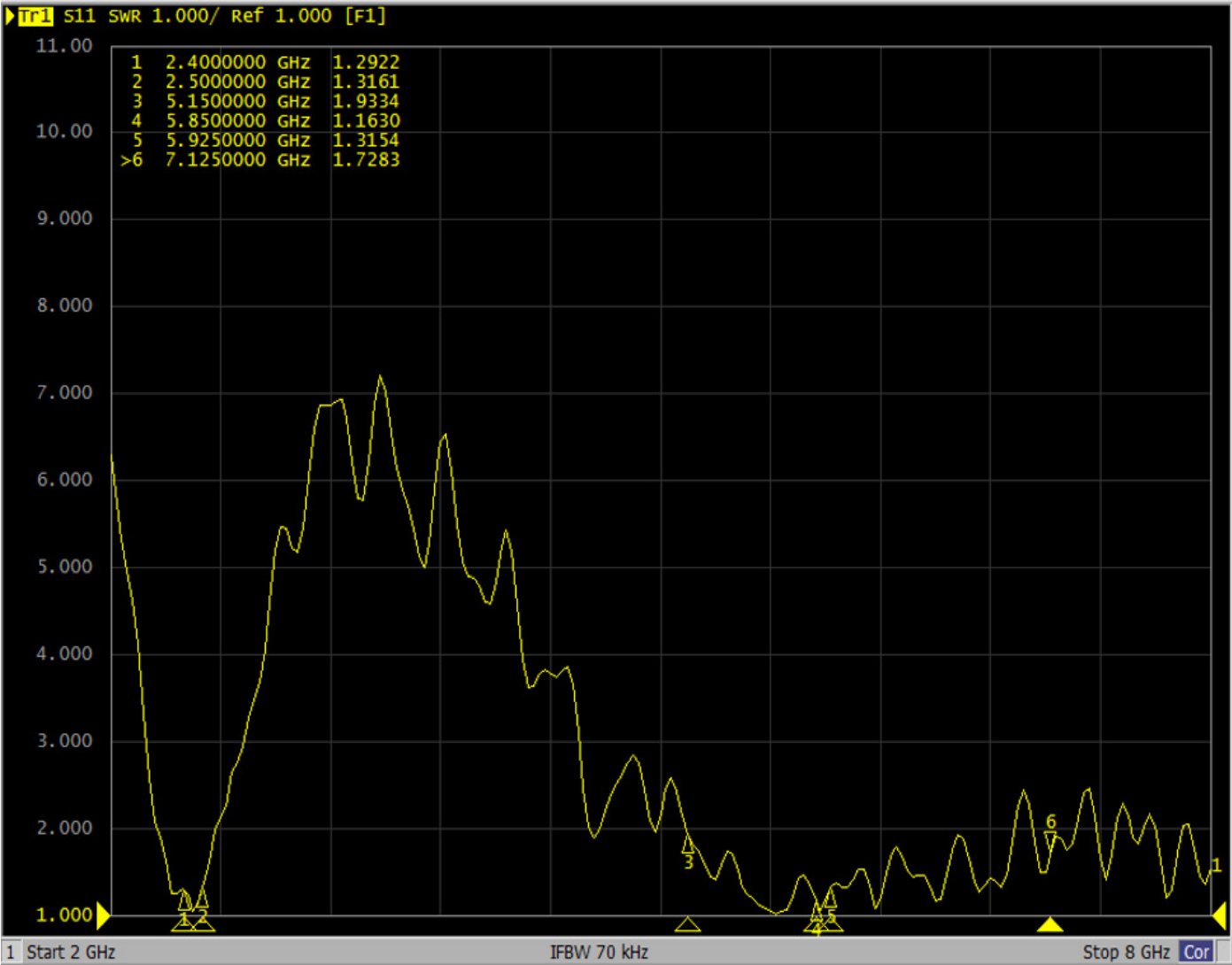
Cable OD:1.37

銅箔尺寸：15*26mm

PIFA Antenna



Test Result:Antenna VSWR



Test Result:Antenna Efficiency

Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Peak Gain(dB)
2400	-2.90	51.29	1.91
2450	-3.06	49.43	2.61
2500	-2.42	57.28	2.91
5150	-3.42	45.50	2.60
5250	-2.72	53.46	1.25
5350	-3.46	45.08	1.56
5470	-3.11	48.87	2.63
5600	-3.30	46.77	2.95
5725	-3.60	43.65	2.04
5750	-3.39	45.81	2.65
5785	-2.88	51.52	2.36
5800	-2.88	51.52	3.08
5850	-3.01	50.00	1.77

Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Peak Gain(dB)
5925	-2.70	53.70	2.31
6000	-3.54	44.26	2.17
6100	-3.20	47.86	2.72
6200	-3.30	46.77	2.78
6300	-2.94	50.82	1.70
6400	-2.70	53.70	1.65
6500	-3.61	43.55	3.59
6600	-3.71	42.56	2.84
6700	-2.99	50.23	2.29
6800	-3.30	46.77	1.52
6900	-3.66	43.05	2.38
7000	-2.96	50.58	2.89
7125	-3.48	44.87	1.89

Test Result: 2D/3D Radiation Pattern

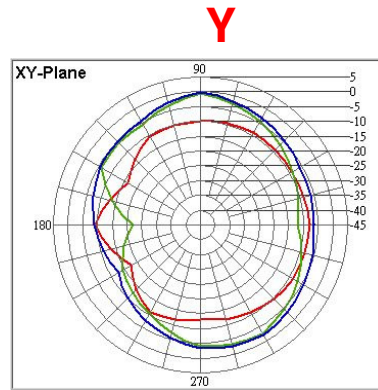
Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

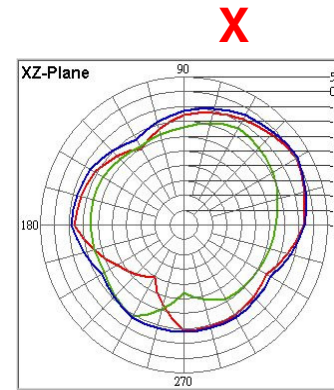
Advanced Wireless & Antenna Inc.



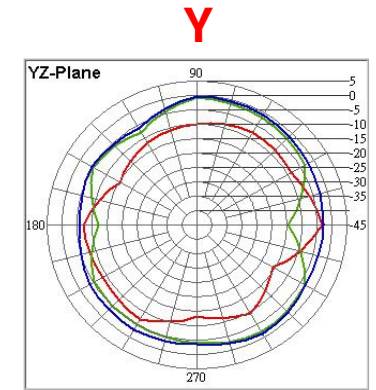
2400MHz



X

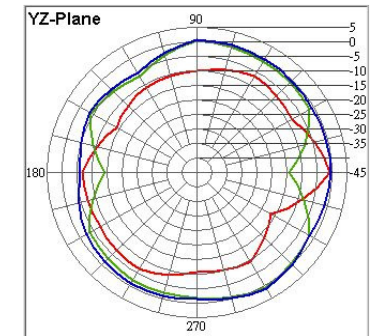
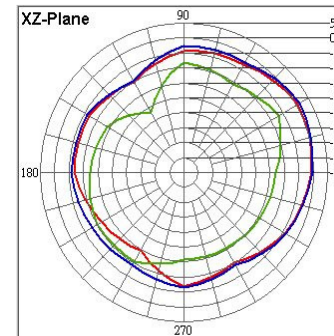
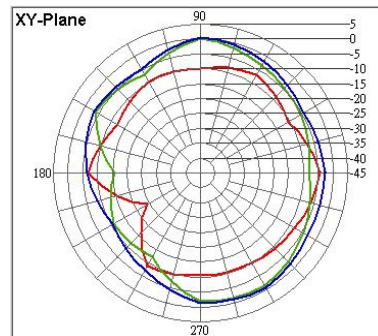


Z

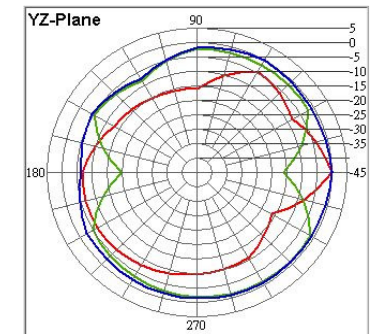
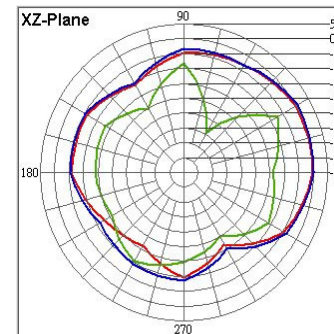
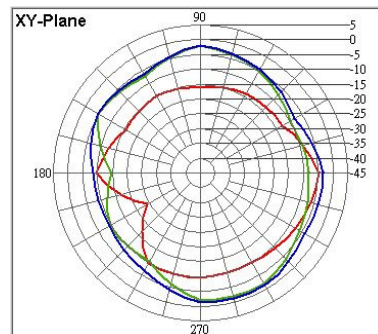


Z

2450MHz



2500MHz



— H-Pol

— V-Pol

— H+V

www.awan-ant.com

Test Result: 2D/3D Radiation Pattern

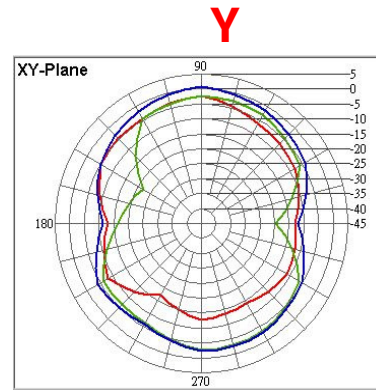
Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

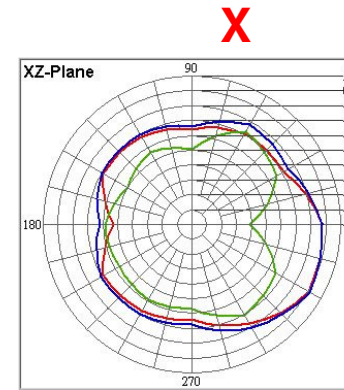
Advanced Wireless & Antenna Inc.



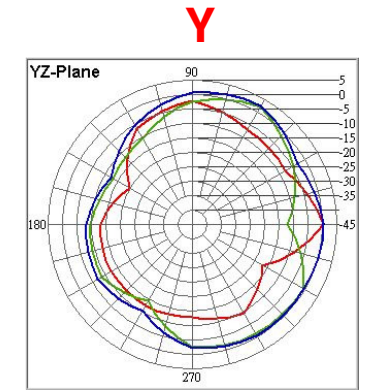
5150MHz



X

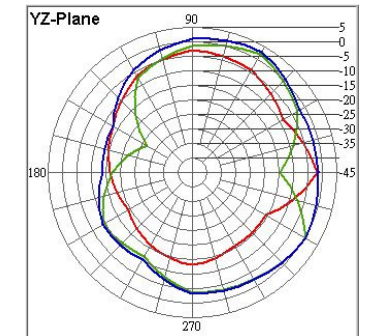
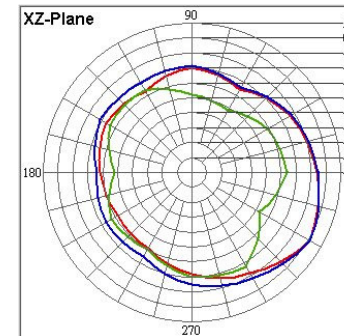
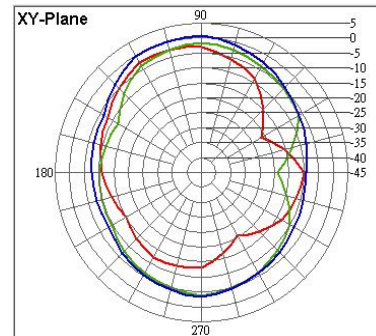


Z

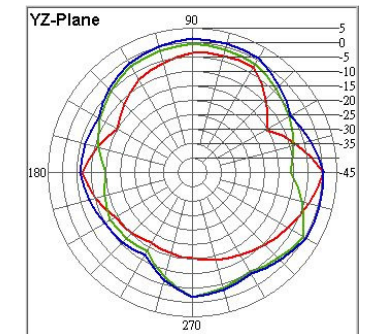
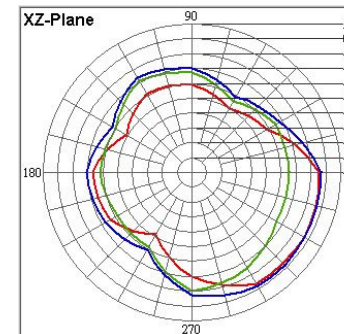
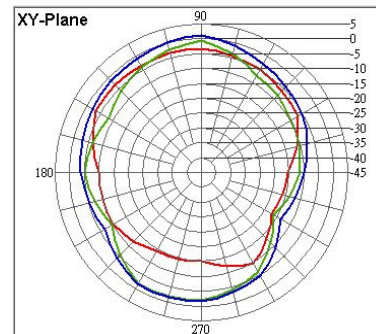


Z

5470MHz



5850MHz



H-Pol



V-Pol



H+V

www.awan-ant.com

Test Result: 2D/3D Radiation Pattern

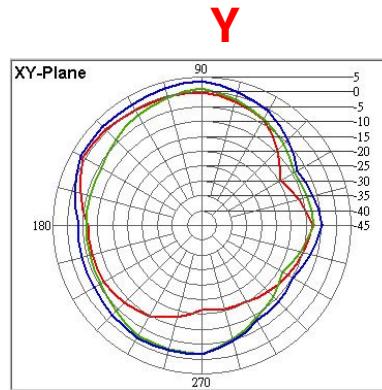
Advanced Wireless & Antenna Inc.

Advanced Wireless & Antenna Inc.

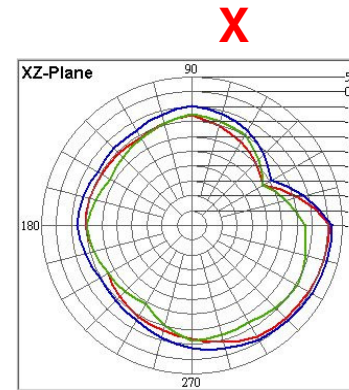
Advanced Wireless & Antenna Inc.



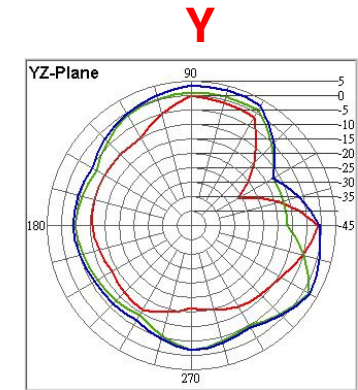
6100MHz



X

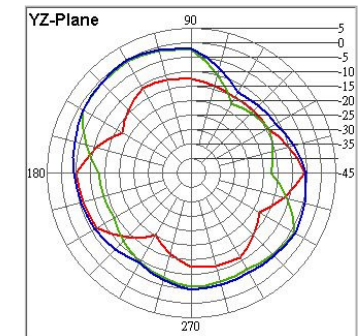
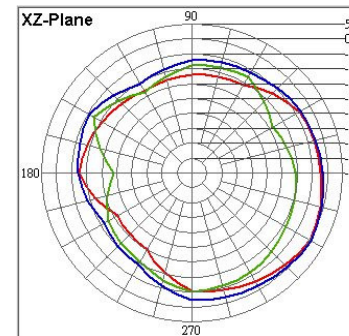
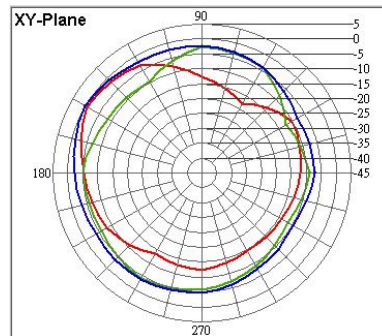


Z

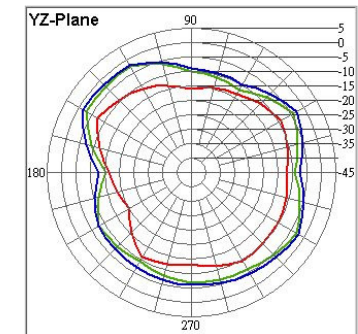
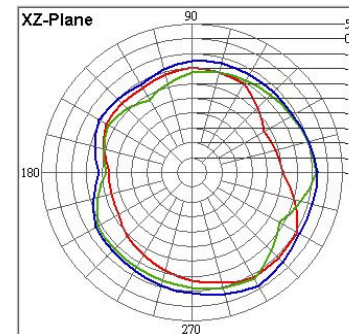
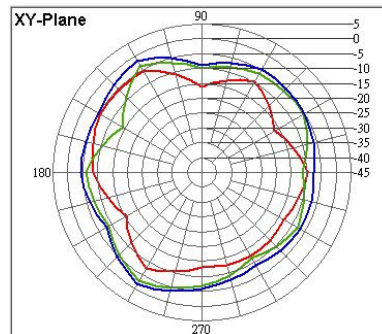


Z

6500MHz



7125MHz



— H-Pol

— V-Pol

— H+V

www.awan-ant.com

Thank you!

