Antenna

連騰科技股份有限公司

The Most Appropriate Antenna for Your Design!

Advanced Wireless & Antenna Inc.

ELO WLAN Antenna Test Report

ADVANCED-CONNECTEK INC.

Wireless Communications BU.

2020.06.11

ACON-HOLDING INC.

Executive Summary

- **Purpose**

  Antenna study for I-series 15.6. Result as following.

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

    Test Result : Antenna VSWR&Return Loss

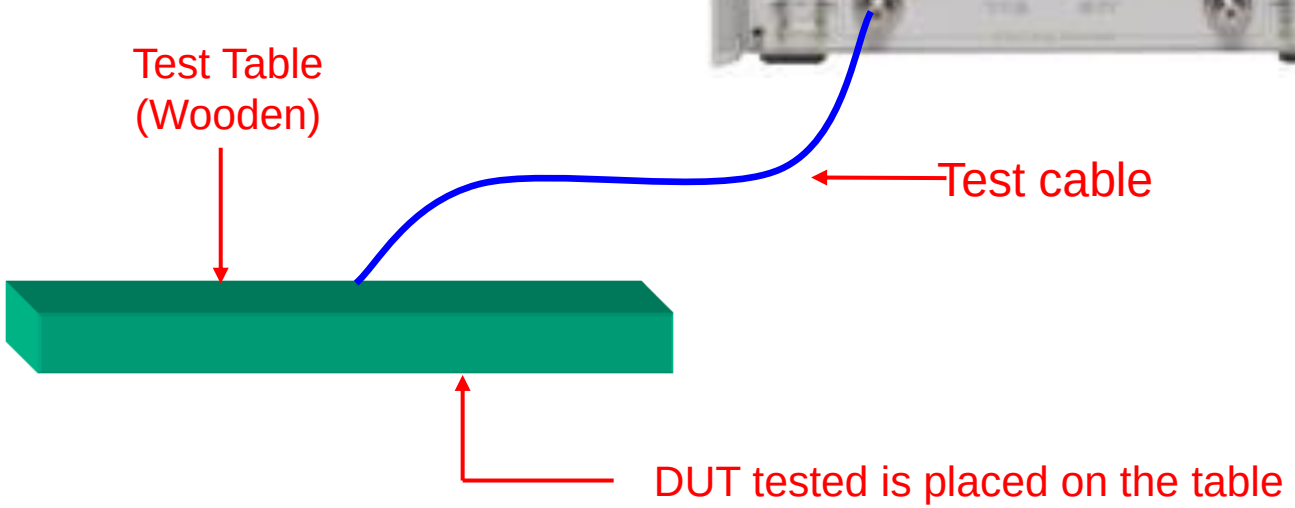
    Test Result : Antenna Efficiency & Peak Gain

    Test Result : Antenna 2D Radiation Patternn

Test Environment and Equipments

S-Parameter test

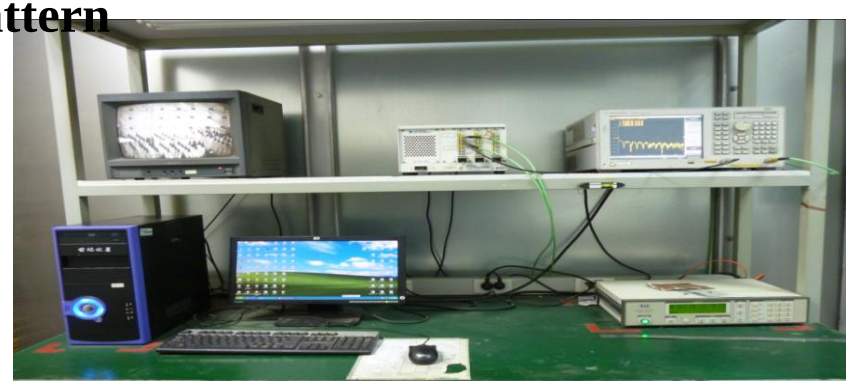
- Network Analyzer(Agilent-E5071C)
- Testing range from 9KHz to 8.5GHz

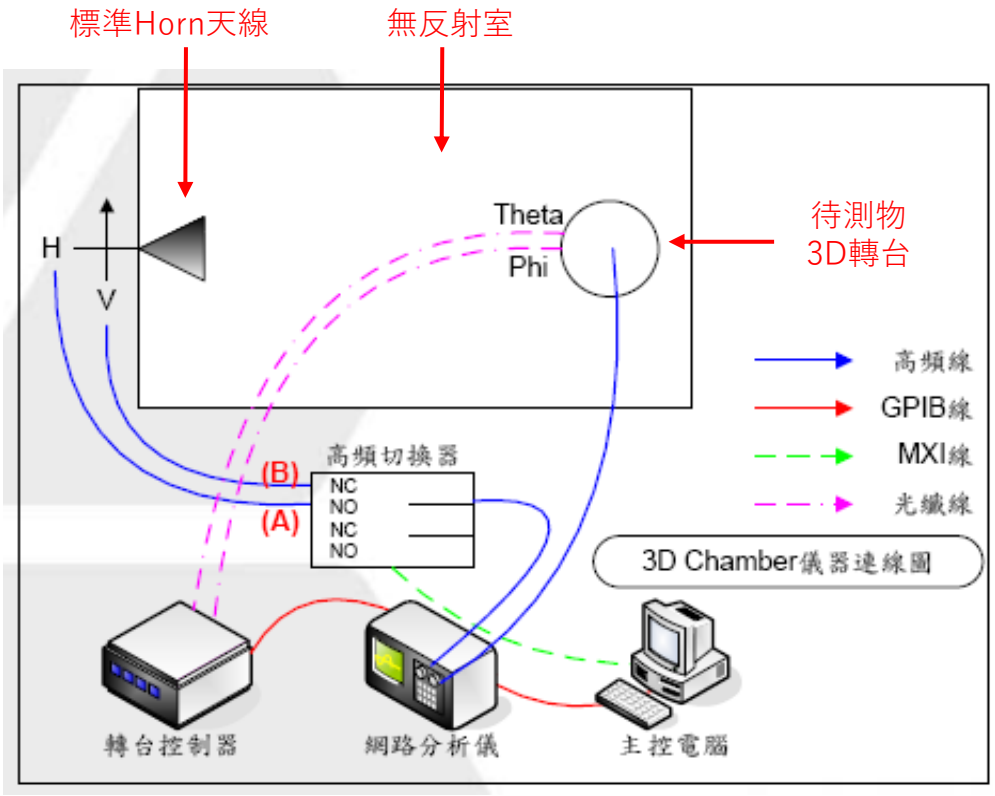


Test Environment and Equipments

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

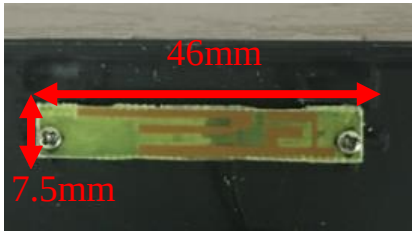
- ACON 3D Anechoic Chamber
- Chamber Room Size: L*W*H=9*4.7*4.7 M



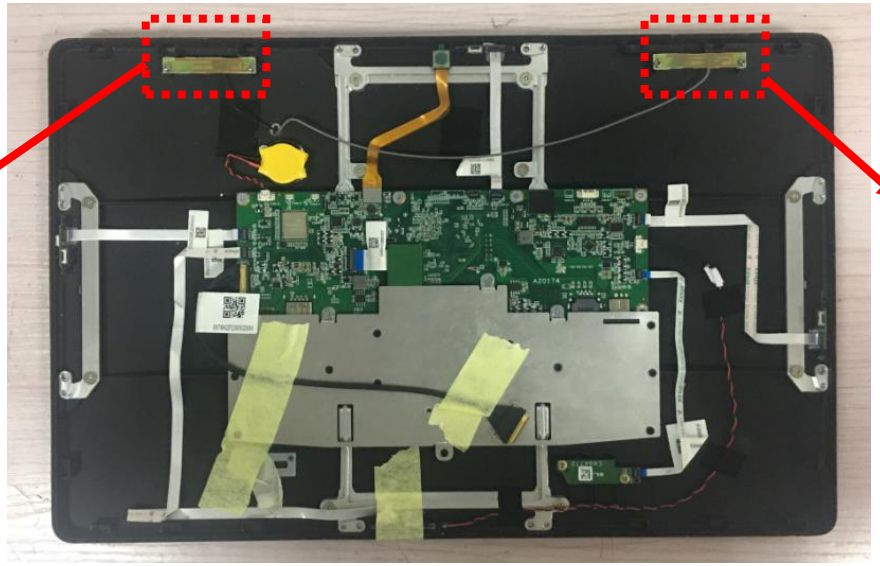


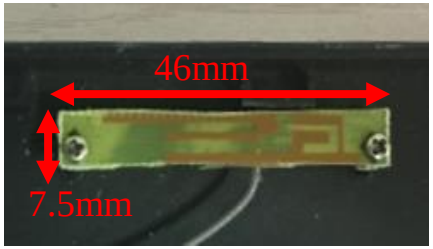
Antenna Positions and Dimensions

1.Antenna PCB:46*7.5*0.8mm
2.Cable length
Main:75mm Aux:280mm
3.OD:1.37



MAIN

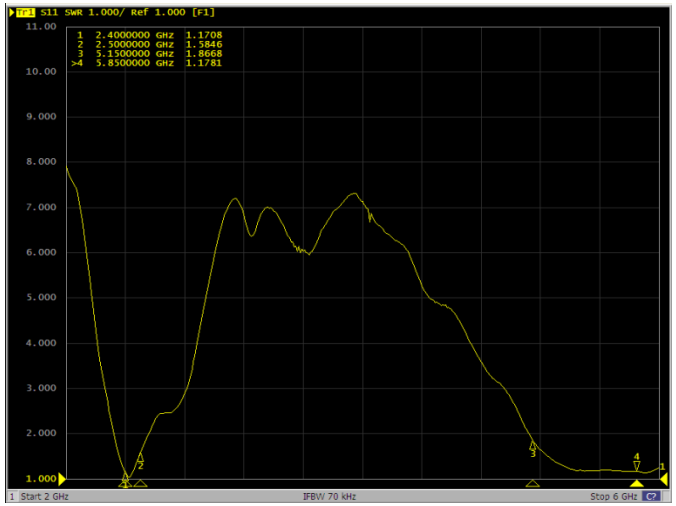


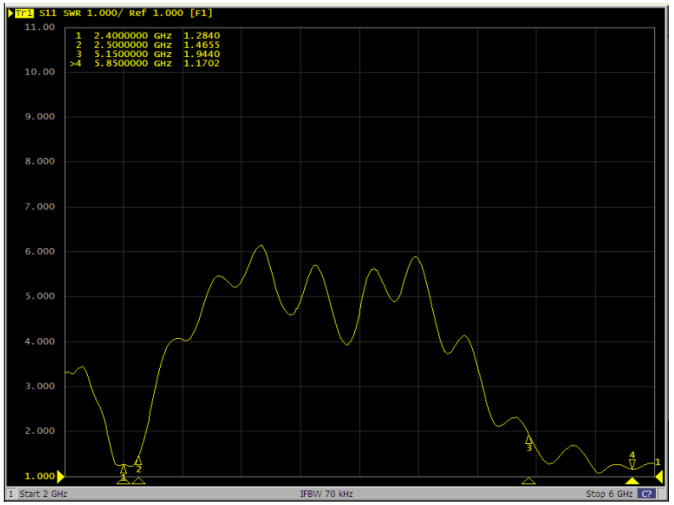


AUX

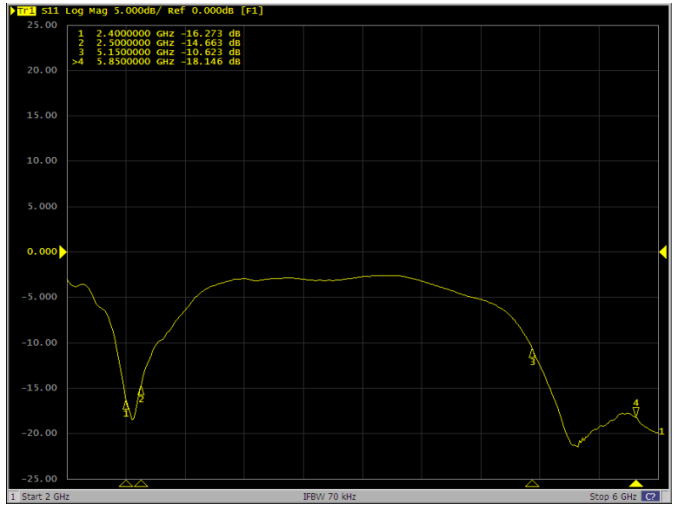
Test Result:Antenna VSWR &Return Loss

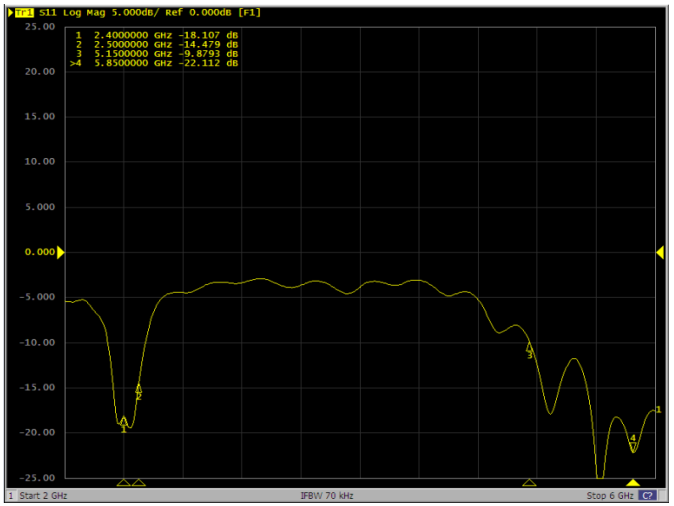
VSWR





RL



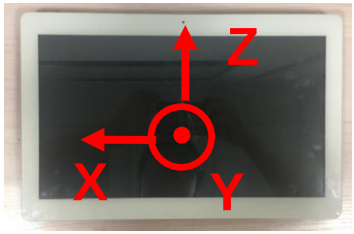


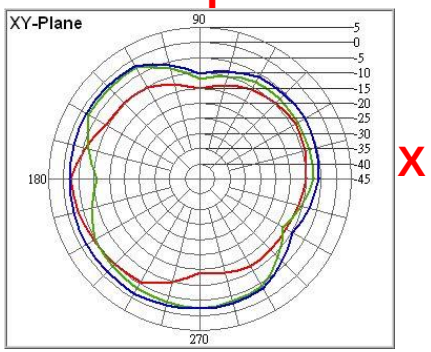
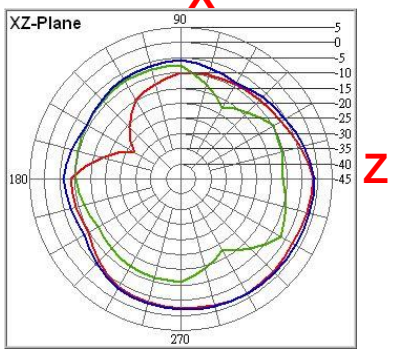
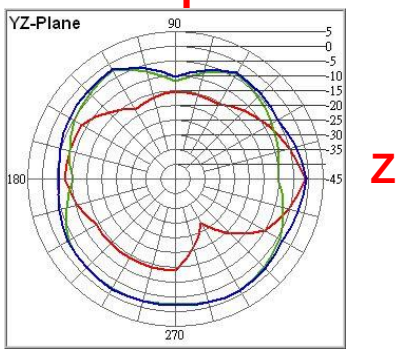
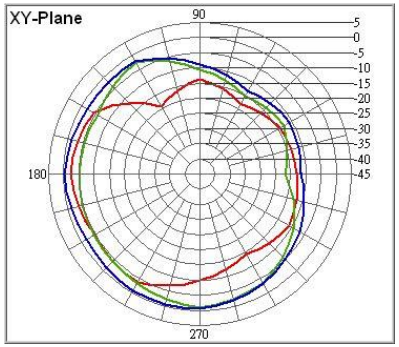
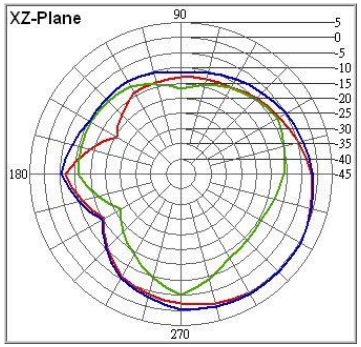
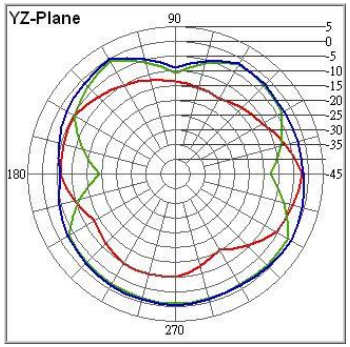
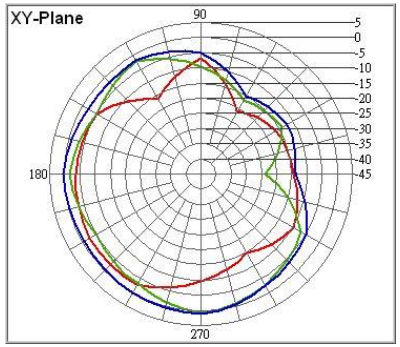
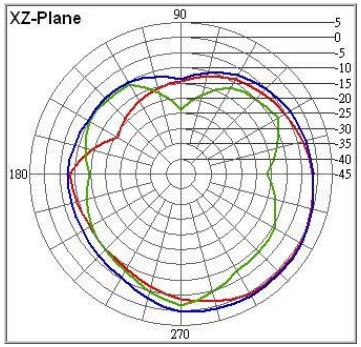
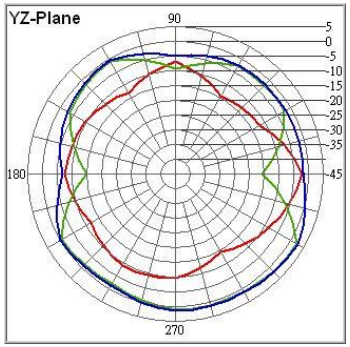
MAIN AUX

Test Result:Antenna Efficiency

Frequency (MHz)	MAIN			AUX		
	Efficiency (dB)	Efficiency (%)	peak gain (dBi)	Efficiency (dB)	Efficiency (%)	peak gain (dBi)
2400	-2.94	50.86	2.14	-3.48	44.92	1.77
2450	-2.76	53.02	2.02	-3.29	46.92	1.90
2500	-2.96	50.56	2.34	-3.42	45.50	1.98
5150	-3.18	48.05	2.17	-3.66	43.02	2.19
5180	-3.02	49.85	2.43	-3.55	44.19	2.04
5250	-2.94	50.80	2.39	-3.42	45.54	2.55
5350	-2.84	51.94	2.64	-3.49	44.74	2.69
5470	-2.72	53.44	2.90	-2.93	50.93	2.55
5600	-2.86	51.77	2.65	-3.47	45.02	2.47
5725	-3.07	49.32	2.49	-3.30	46.75	2.51
5785	-2.82	52.28	2.90	-3.17	48.16	2.33
5800	-2.74	53.23	2.31	-2.95	50.67	2.58
5850	-2.81	52.39	2.19	-2.89	51.39	2.15

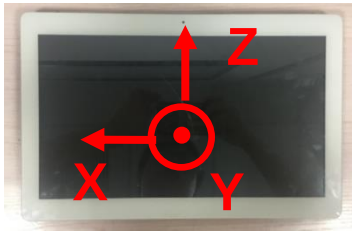
Test Result:2D/3D Radiation Pattern MAIN



2400MHz			
2450MHz			
2500MHz			

H-Pol V-Pol H+V

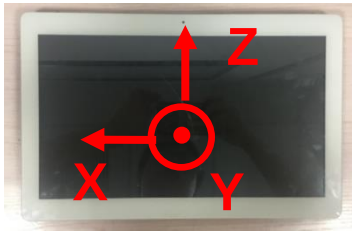
Test Result:2D/3D Radiation Pattern MAIN

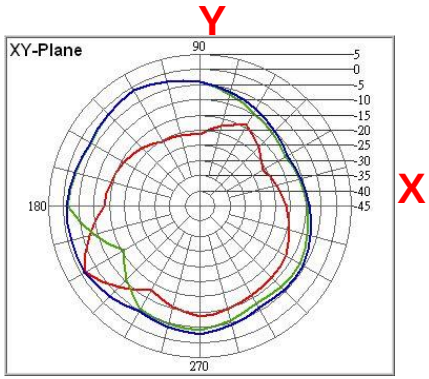
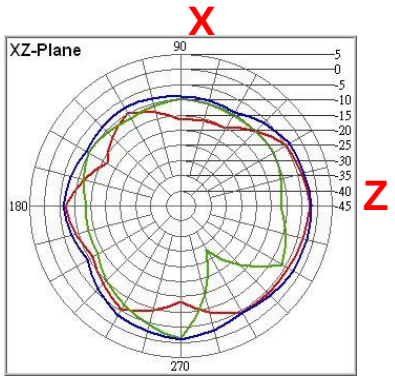
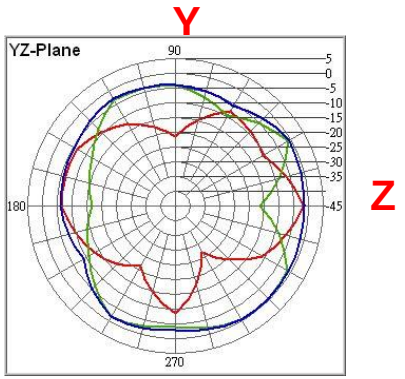
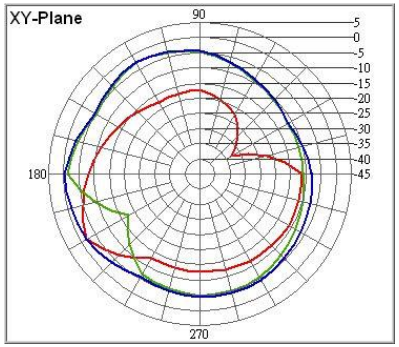
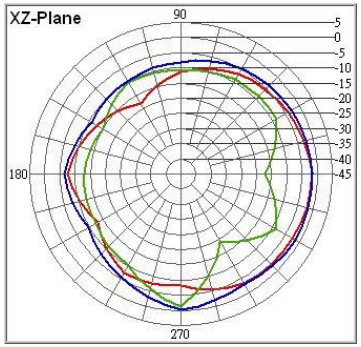
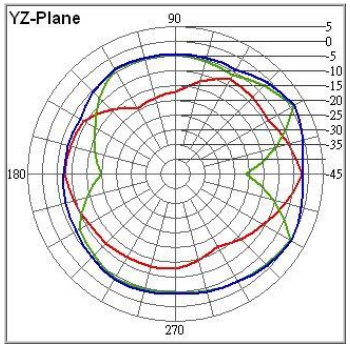
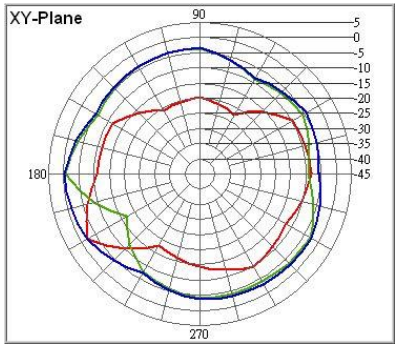
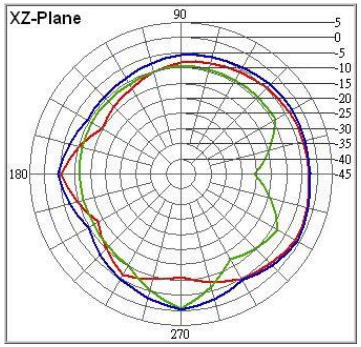
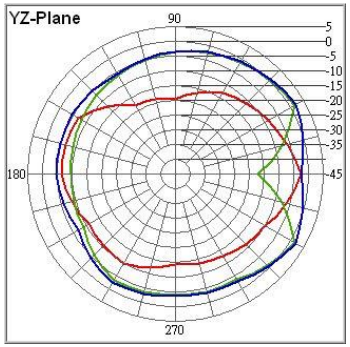


5150MHz	Y XY-Plane X	X XZ-Plane Z	Y YZ-Plane Z
5470MHz	XY-Plane	XZ-Plane	YZ-Plane
5850MHz	XY-Plane	XZ-Plane	YZ-Plane

H-Pol V-Pol H+V

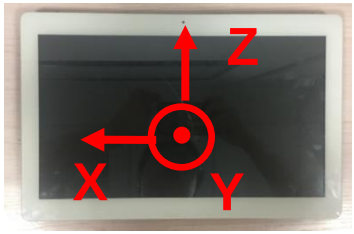
Test Result:2D/3D Radiation Pattern AUX



2400MHz			
2450MHz			
2500MHz			

H-Pol V-Pol H+V

Test Result:2D/3D Radiation Pattern AUX



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H-Pol V-Pol H+V

Thank you!