

Antenna measurement report for project Espresso2-M

Pegatron BU6

2025/05/27

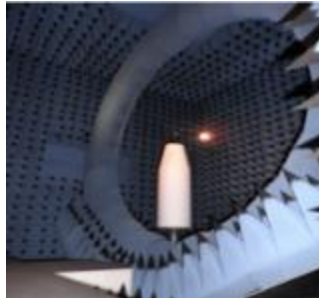
Introduction

- This report is based on Espresso2-M to verify antenna performance.

Antenna solution:

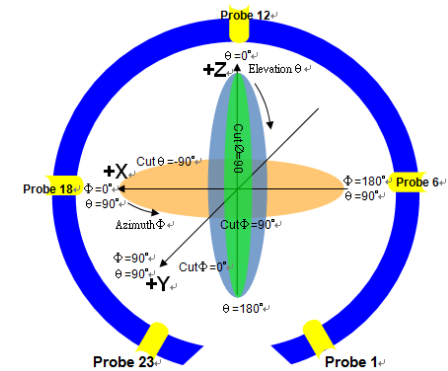
- 2G off board antenna * 2
- 5G off board antenna * 2
- 6G off board antenna * 2

- This report provides Passive Measurement results .(Gain, Radiation Pattern)
 - The radiation pattern, antenna gain and efficiency are measured by Pegatron's SATIMO SG24 chamber as below picture.
 - The equipment calibration data : 2025.03.24



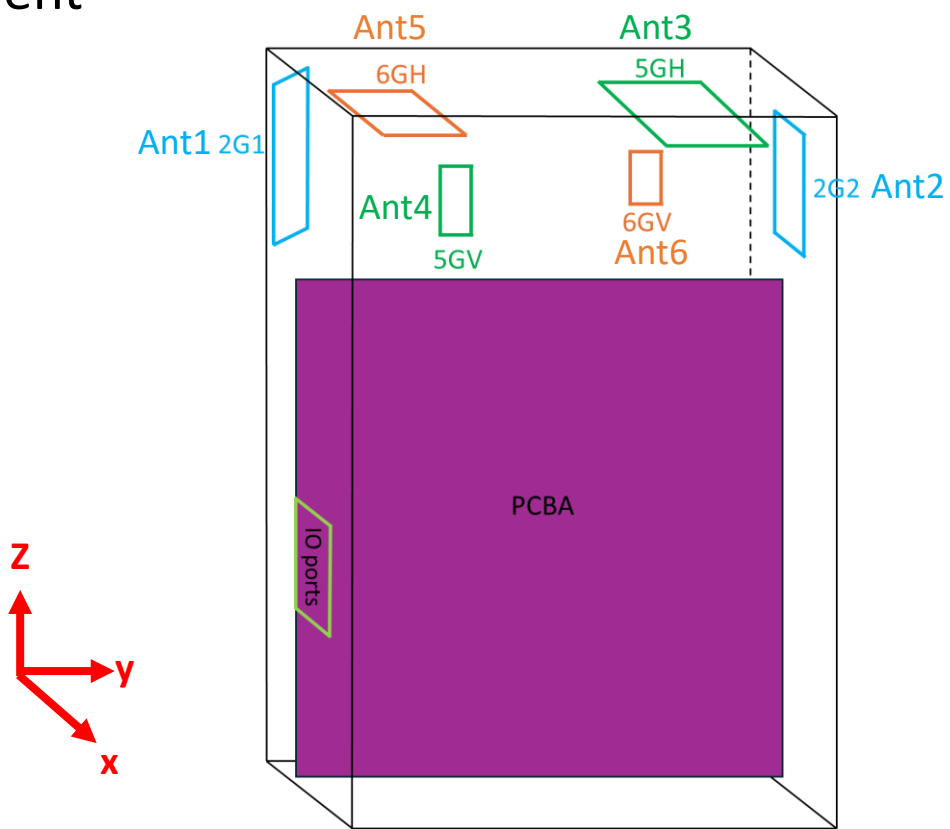
Pegatron's SATIMO SG24 chamber

- Test Item
 1. Antenna passive test 500MHz~7.5GHz



DUT Information

- Antenna Placement

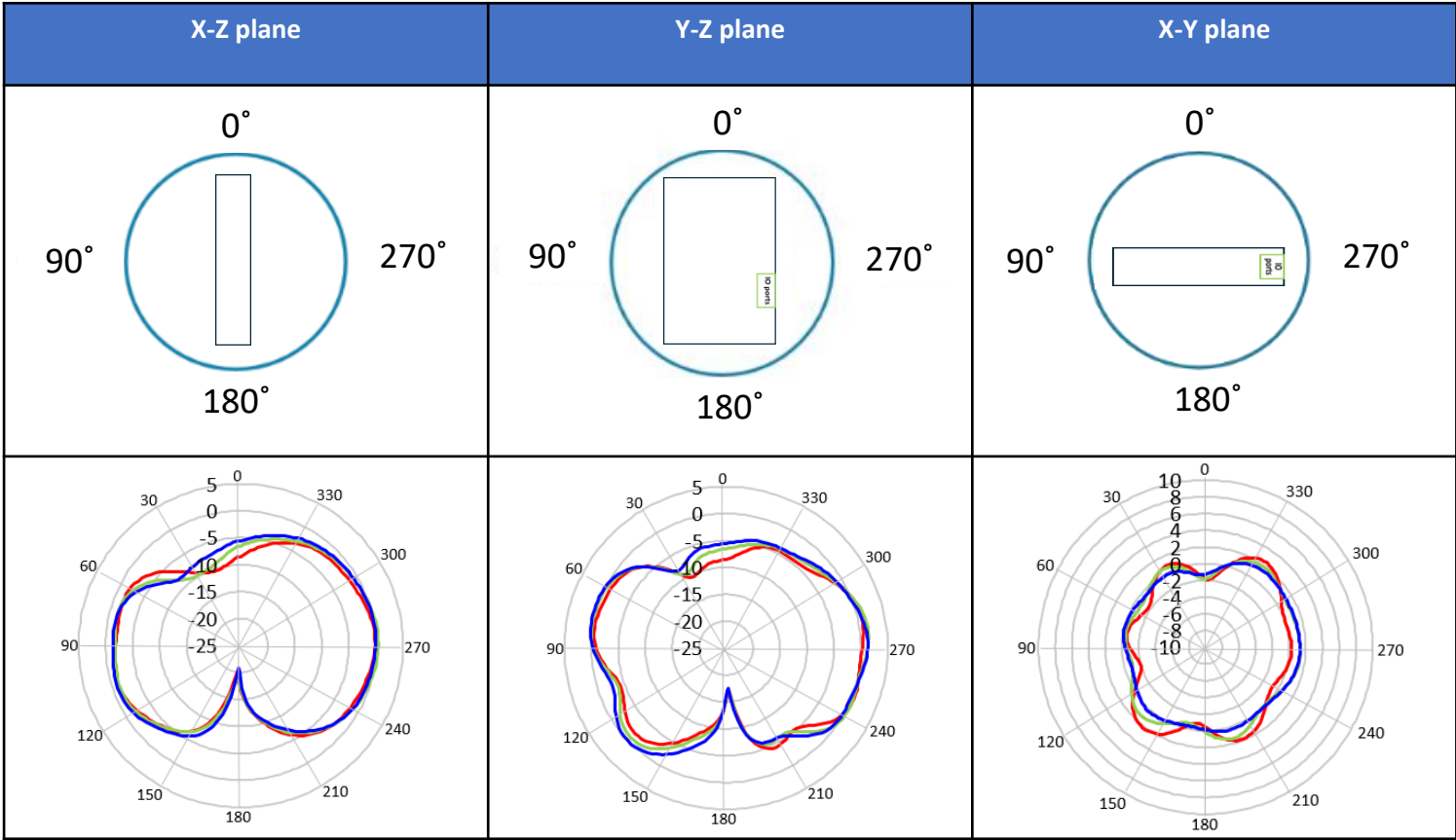


Antenna Information

Ant.	2.4G port	5G port	6G port	Brand Name	Model Name	Ant. Type	Connector	Support	Radio
1(2G1)	1	--	--	Pegatron	2G1	dipole	I-Pex	2.4G	Radio 1
2(2G2)	2	--	--	Pegatron	2G2	dipole	I-Pex	2.4G	Radio 1
3(5GH)	--	2	--	Pegatron	5GH	dipole	I-Pex	5G	Radio 2
4(5GV)	--	1	--	Pegatron	5GV	dipole	I-Pex	5G	Radio 2
5(6GH)	--	--	1	Pegatron	6GH	dipole	I-Pex	6G	Radio 3
6(6GV)	--	--	2	Pegatron	6GV	dipole	I-Pex	6G	Radio 3

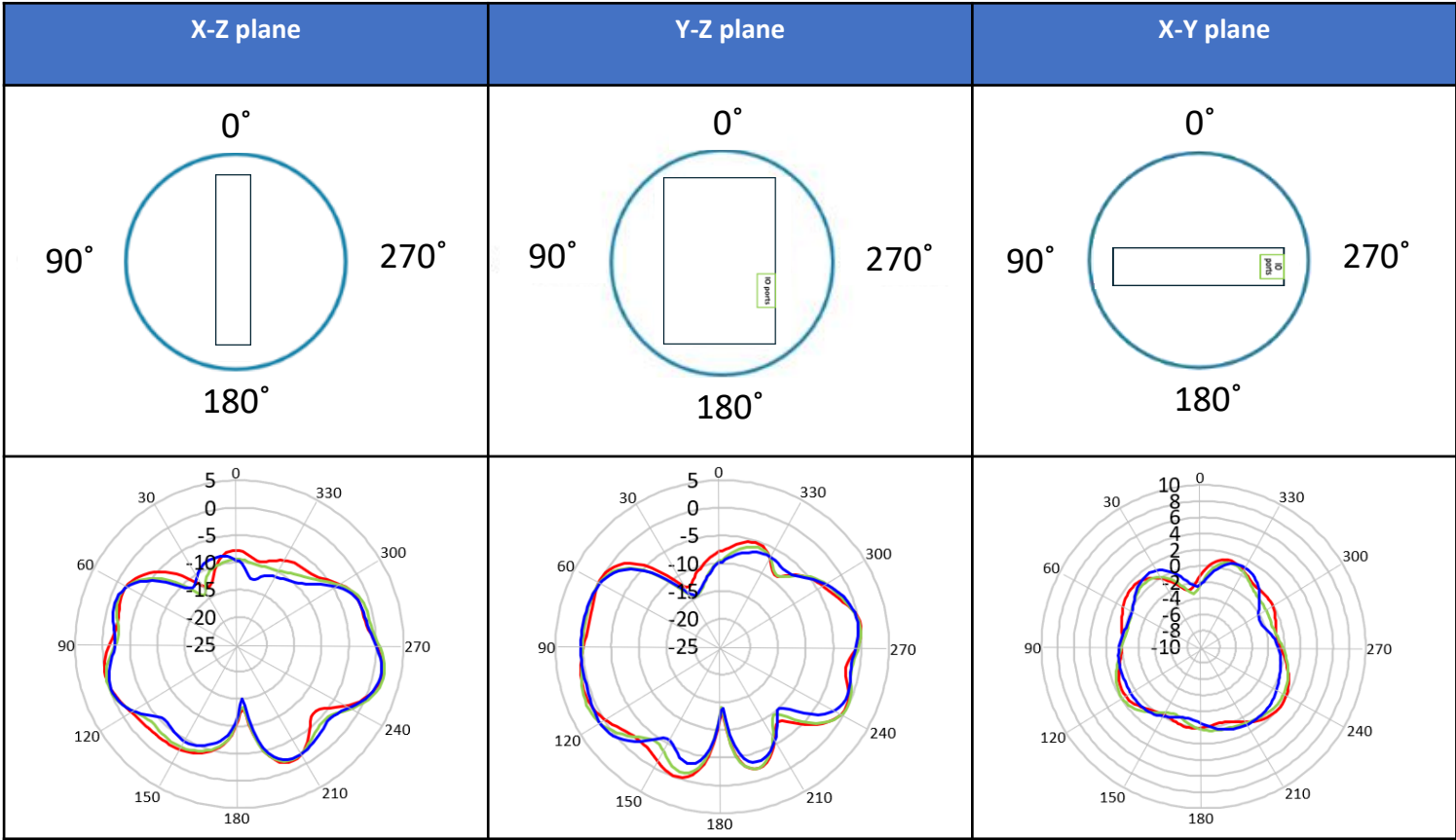
Test Result 2D Radiation Pattern and 3D Raw Data

- Ant No.: Ant1
- Model No.:
1415-OB62000



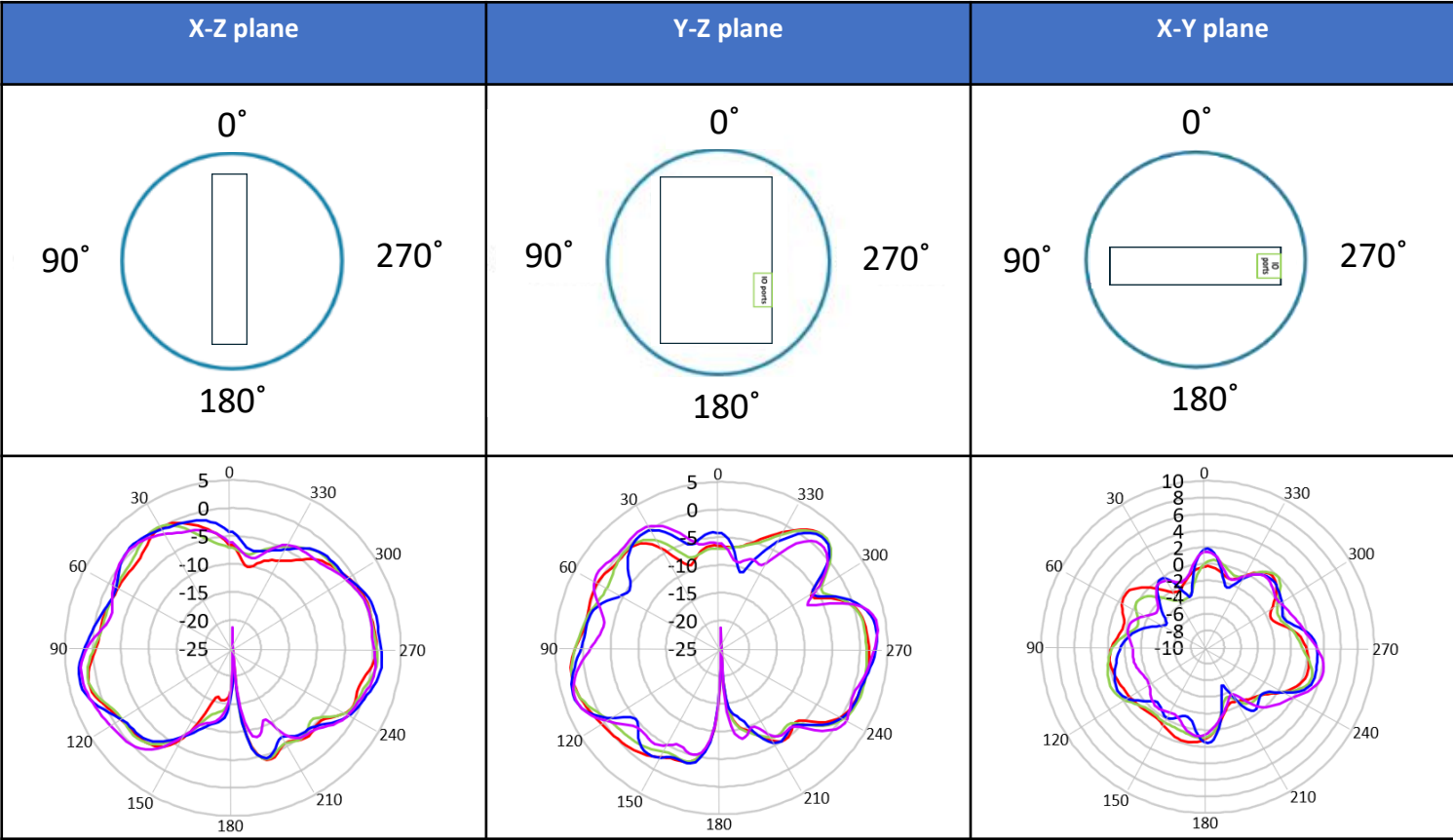
Test Result 2D Radiation Pattern and 3D Raw Data

- Ant No.: Ant2
- Model No.:
1415-OB63000



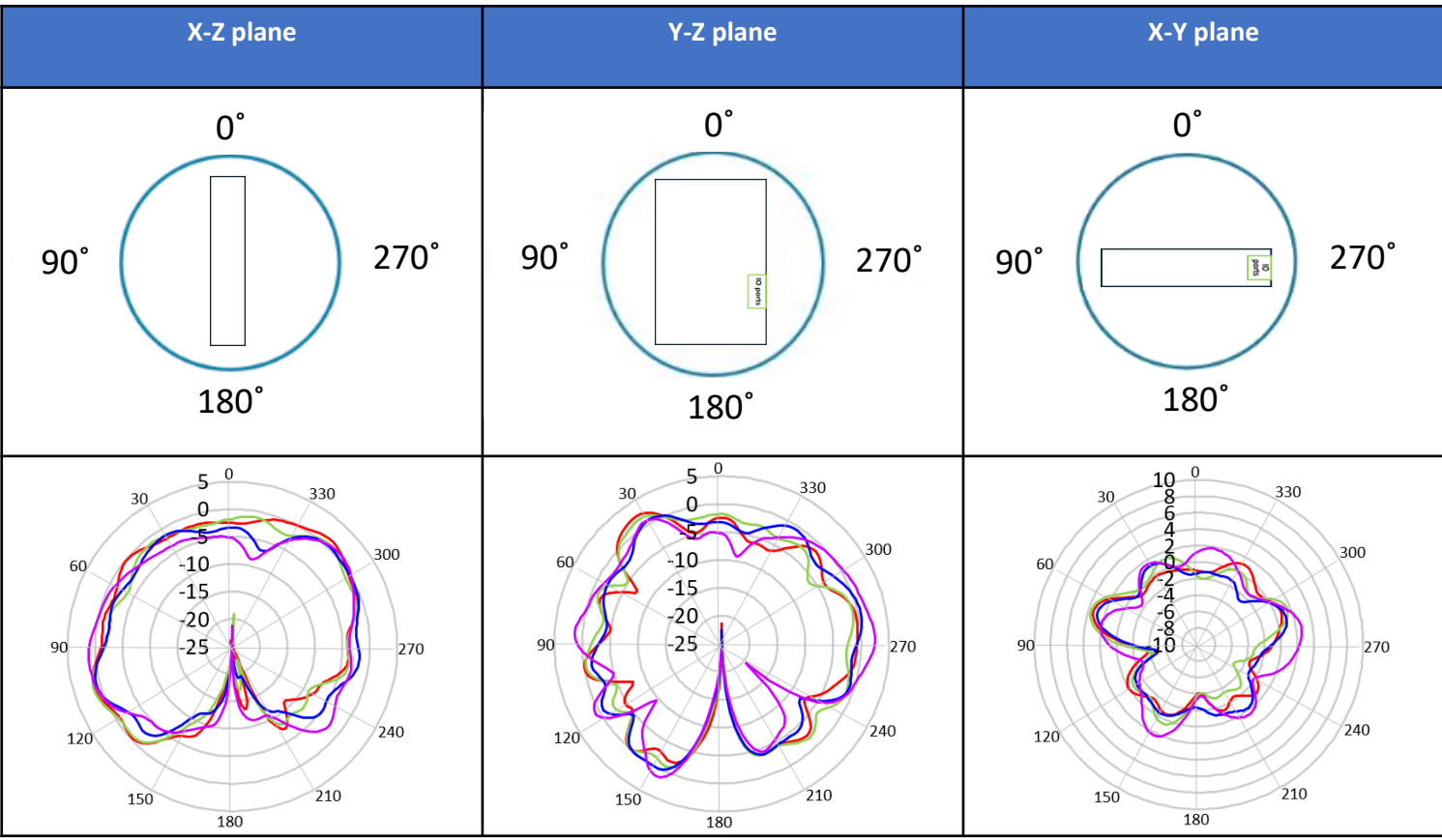
Test Result 2D Radiation Pattern and 3D Raw Data

- Ant No.: Ant3
- Model No.:
1415-OB64000



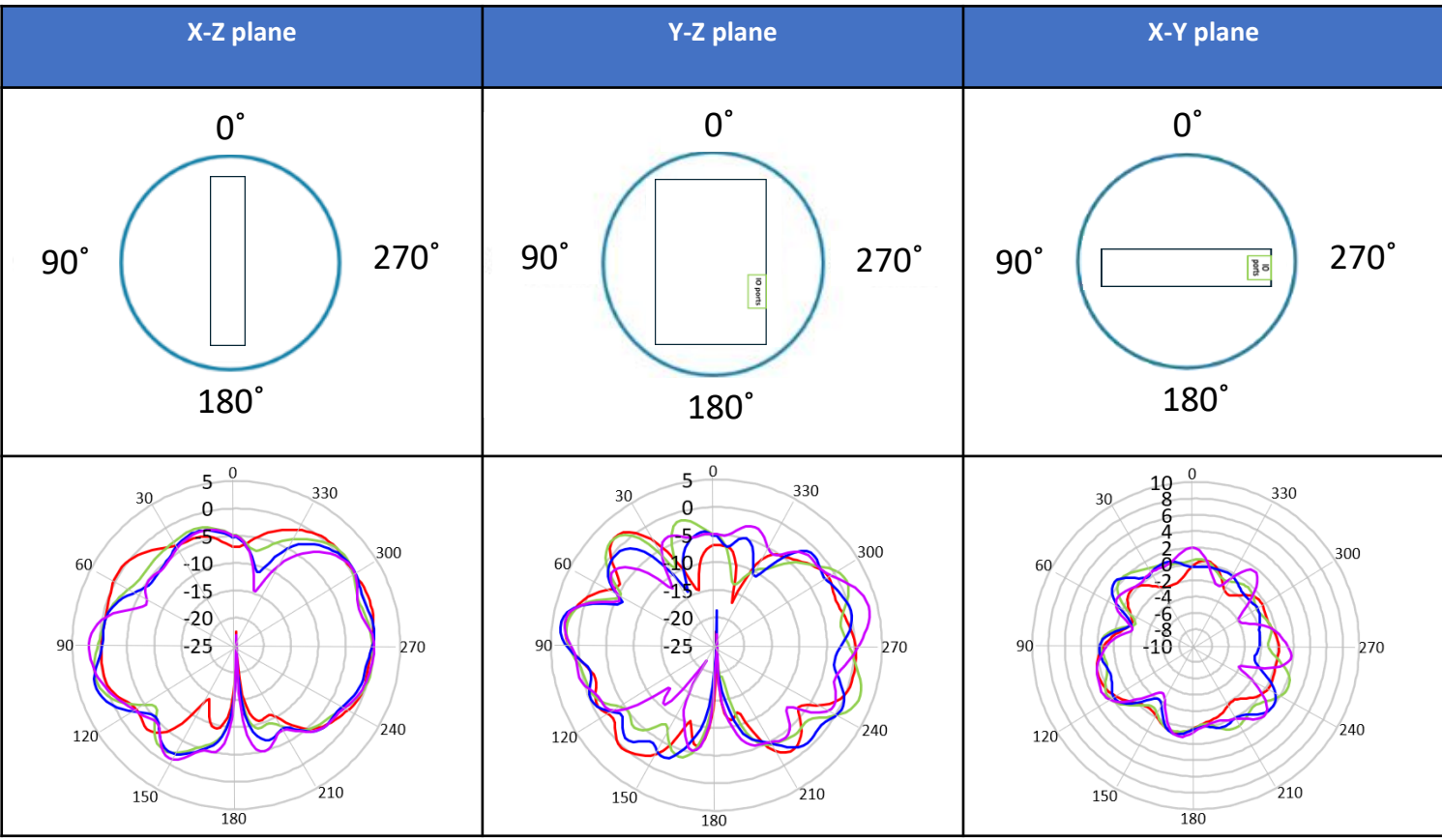
Test Result 2D Radiation Pattern and 3D Raw Data

- Ant No.: Ant4
- Model No.:
1415-OB65000



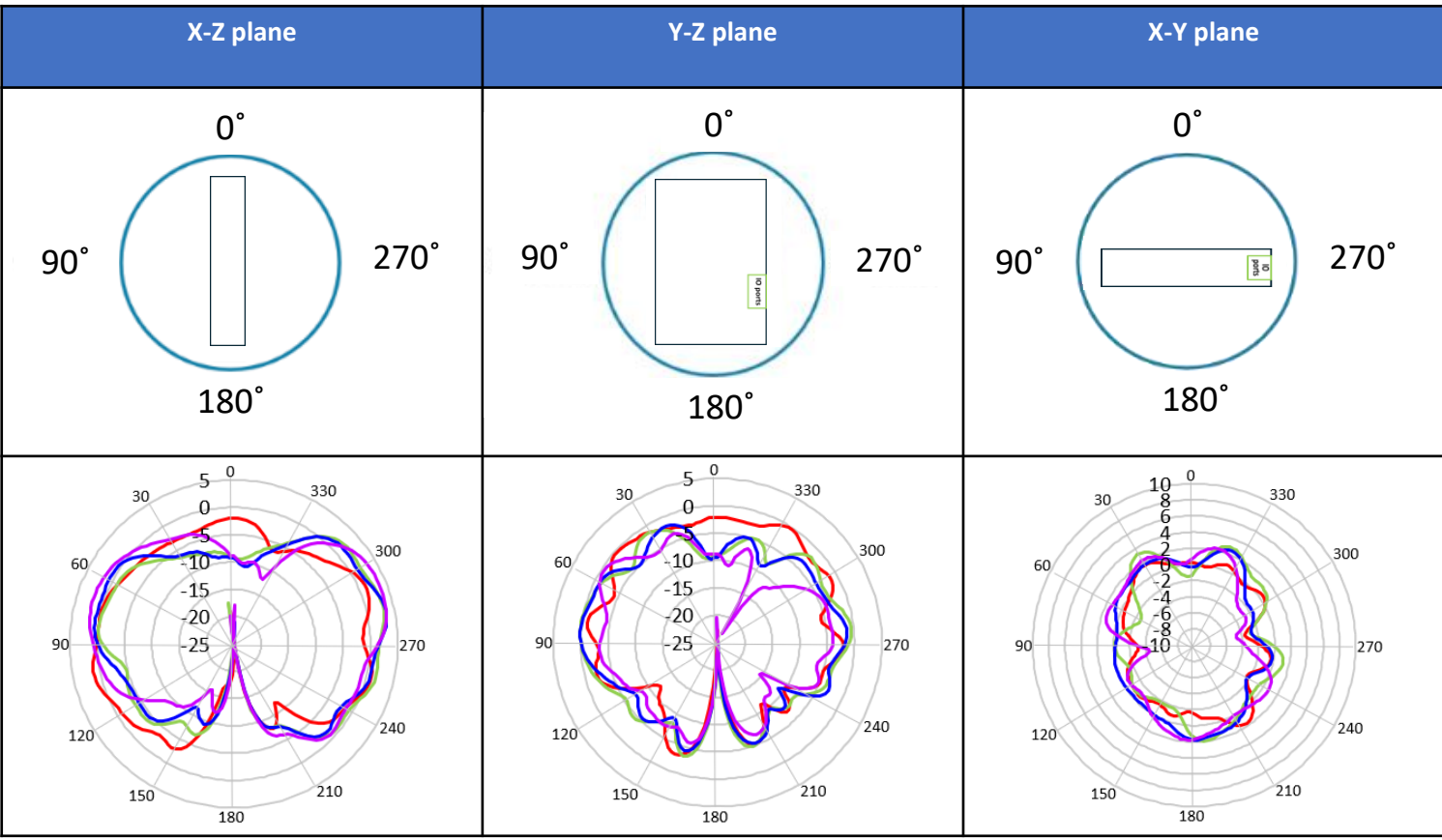
Test Result 2D Radiation Pattern and 3D Raw Data

- Ant No.: Ant5
- Model No.:
1415-OB66000



Test Result 2D Radiation Pattern and 3D Raw Data

- Ant No.: Ant6
- Model No.:
1415-OB67000



Peak Gain and Directional Gain Results

- Gain table

Frequency (MHz)	Ant1_2G1		Ant2_2G2		Ant3_5GH		Ant4_5GV		Ant5_6GH		Ant6_6GV	
	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta	Phi	Theta
2400	-0.81	2.38	0.27	1.59	--	--	--	--	--	--	--	--
2450	0.13	1.72	0.94	2.07	--	--	--	--	--	--	--	--
2500	0.54	1.04	1.02	2.49	--	--	--	--	--	--	--	--
5180	--	--	--	--	2.80	-5.18	-1.70	3.09	--	--	--	--
5300	--	--	--	--	3.28	-4.46	-1.04	3.37	--	--	--	--
5500	--	--	--	--	3.46	-3.98	-0.10	3.40	--	--	--	--
5800	--	--	--	--	4.14	-2.95	-1.10	2.87	--	--	--	--
5925	--	--	--	--	--	--	--	--	3.39	-3.64	-1.99	2.46
6500	--	--	--	--	--	--	--	--	3.17	-4.21	-2.44	4.03
6755	--	--	--	--	--	--	--	--	4.09	-3.12	-2.27	3.68
7125	--	--	--	--	--	--	--	--	4.37	-3.51	-2.31	3.91

Peak Gain and Directional Gain Results

- Directional gain table _ **Correlated**

Frequency (MHz)	Peak Gain of 3D Directional pattern					
	2G		5G		6G	
	Phi	Theta	Phi	Theta	Phi	Theta
2400	-0.9	4.7	-	-	-	-
2450	0.8	4.7	-	-	-	-
2500	1.7	4.6	-	-	-	-
5180	-	-	2.6	1.3	-	-
5300	-	-	2.4	2.0	-	-
5500	-	-	2.4	2.3	-	-
5800	-	-	2.5	1.8	-	-
5925	-	-	-	-	2.4	2.0
6500	-	-	-	-	2.1	2.8
6755	-	-	-	-	2.3	2.8
7125	-	-	-	-	2.7	3.3