

# Antenna Test Result of Tooling



**ACCTON**

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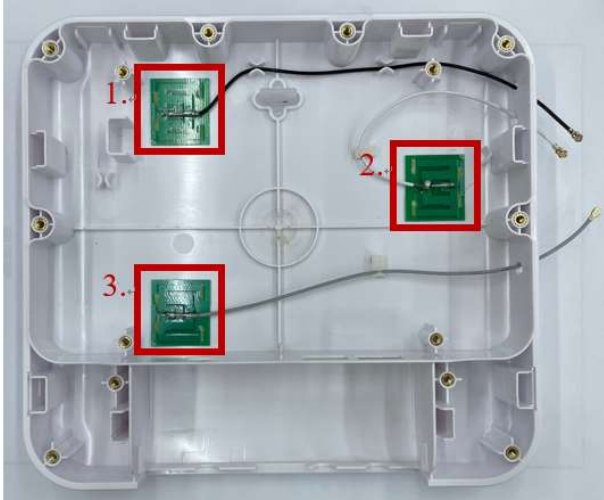
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# Revised History

<b>REV.</b>	<b>Date</b>	<b>Revised Record</b>	<b>Prepared by</b>
V01	09/13/2023	EAP111 T0 Antenna Test report	Kent
V02	09/20/2023	Update for FCC	Kent

# Antenna Location



Antenna location(天線位置)



Antenna test diagram(天線測試圖)

Company name(製造商公司名稱)	Address(製造商地址)
ACCTON Technology Corporation	No.1, Creation Road3, Hsinchu Science Park, Hsinchu 30077, Taiwan, R.O.C

## Antenna Description

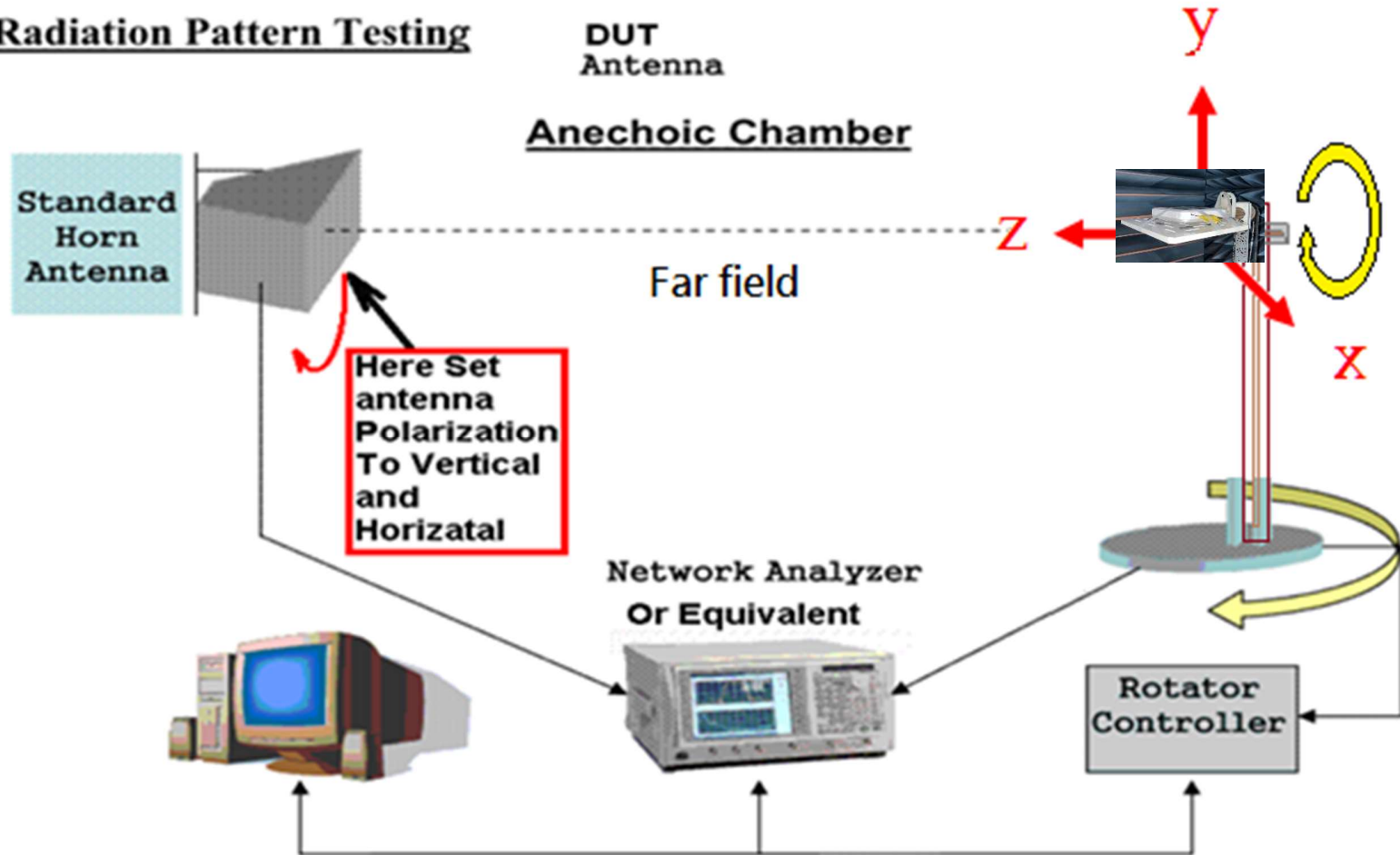
item	Antenna Model	Antenna Application	Material	Antenna Type	Peak Gain
1	KG568-T4-175B17U7S	WiFi Dual Band 1	PCB	Dipole	2.4G 4.90dBi 5G 5.53dBi
2	KG568-T4-105W17U7S	WiFi Dual Band 2	PCB	Dipole	2.4G 4.81dBi 5G 5.53dBi
3	KG568-T4-175G17U7S	WiFi Dual Band 3	PCB	Dipole	2.4G 5.21dBi 5G 5.82dBi

# Experimental Setup & Coordinate System

Chamber name: ETS AMS-8500 Rectangular CTIA-Compliant Test Lab

Describe	Manufacturer	Model No.	Serial No.	Cal.Date	Cal. Due Date
Network Analyzer	Agilent	E5071B	MY42402996	Dec.-2022	Dec. -2024

## Radiation Pattern Testing



# Efficiency & Gain

Dual Band Antenna 1						
Frequency (GHz)	2.412	2.447	2.4835	5.15	5.50	5.85
Efficiency (%)	63	67	65	67	63	65
Peak Gain (dBi)	4.16	4.90	4.51	5.53	5.08	5.36
Peak gain at polarization	(Φ)120° (Θ)60°	(Φ)105° (Θ)60°	(Φ)135° (Θ)75°	(Φ)90° (Θ)105°	(Φ)90° (Θ)105°	(Φ)75° (Θ)120°

Dual Band Antenna 2						
Frequency (GHz)	2.412	2.447	2.4835	5.15	5.50	5.85
Efficiency (%)	66	61	65	75	75	75
Peak Gain (dBi)	4.81	4.16	4.78	5.53	5.48	5.52
Peak gain at polarization	(Φ)90° (Θ)90°	(Φ)90° (Θ)90°	(Φ)90° (Θ)90°	(Φ)45° (Θ)90°	(Φ)45° (Θ)105°	(Φ)45° (Θ)105°

Dual Band Antenna 3						
Frequency (GHz)	2.412	2.447	2.4835	5.15	5.50	5.85
Efficiency (%)	63	65	62	68	65	65
Peak Gain (dBi)	4.32	5.21	4.52	5.82	5.25	5.15
Peak gain at polarization	(Φ)120° (Θ)105°	(Φ)120° (Θ)105°	(Φ)120° (Θ)105°	(Φ)90° (Θ)60°	(Φ)90° (Θ)60°	(Φ)90° (Θ)60°

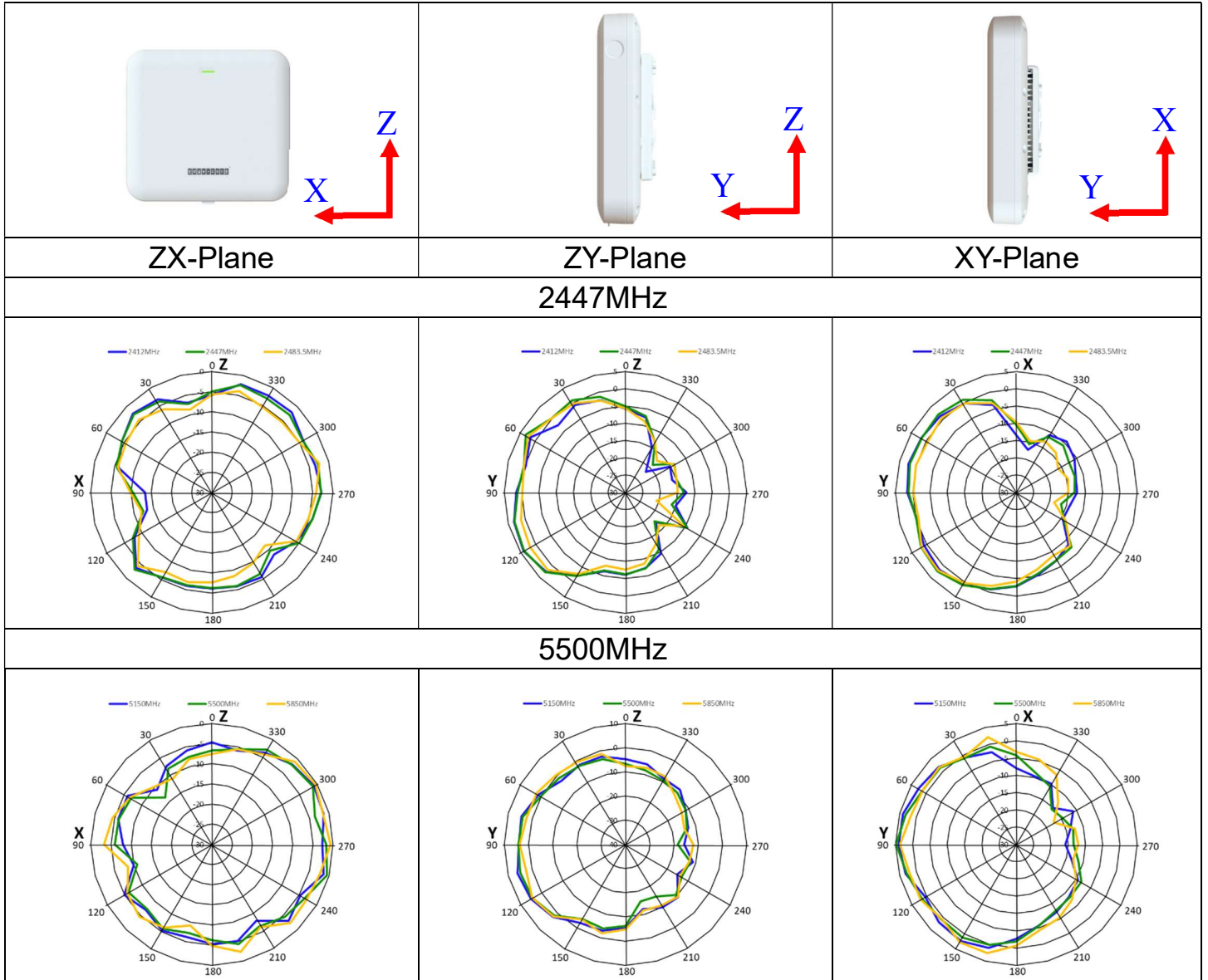
Test date: 2023/09/14

※Φ(Phi) ; Θ(Theta)

※Peak Gain (G) and directivity (D) are linked by the formula  $G = k \times D$ , where the antenna effective factor  $k$  ( $0 \leq k \leq 1$ ) corresponds to the overall losses of the antenna. Accordingly antenna gain can be calculated by the following formula, where represents antenna losses comprising of all ohm and dielectric losses between the input connector and the outer surface of the radome and the loss due to the impedance mismatch.

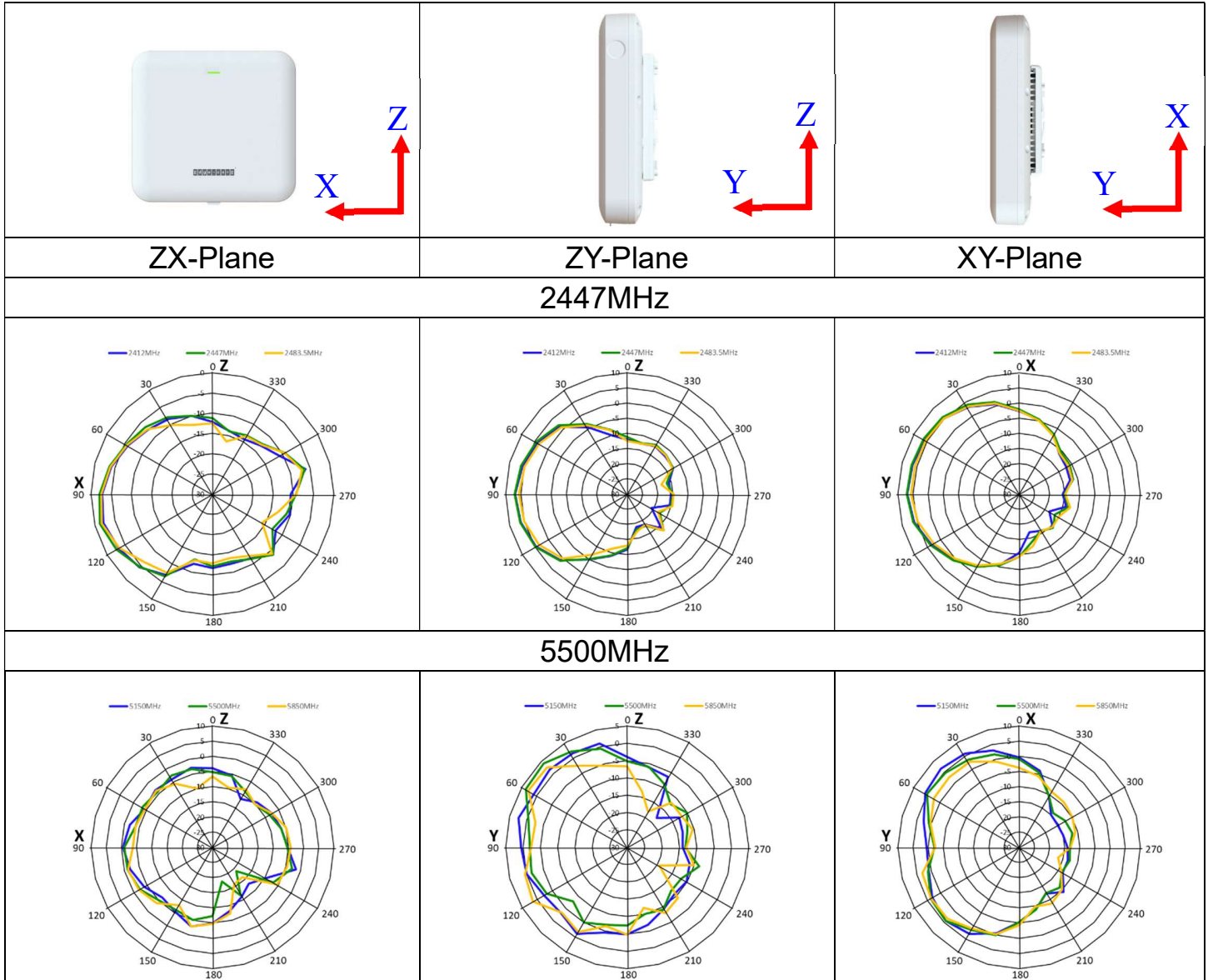
# 2D Radiation Pattern

## Dual Band antenna 1



Test date: 2023/09/14

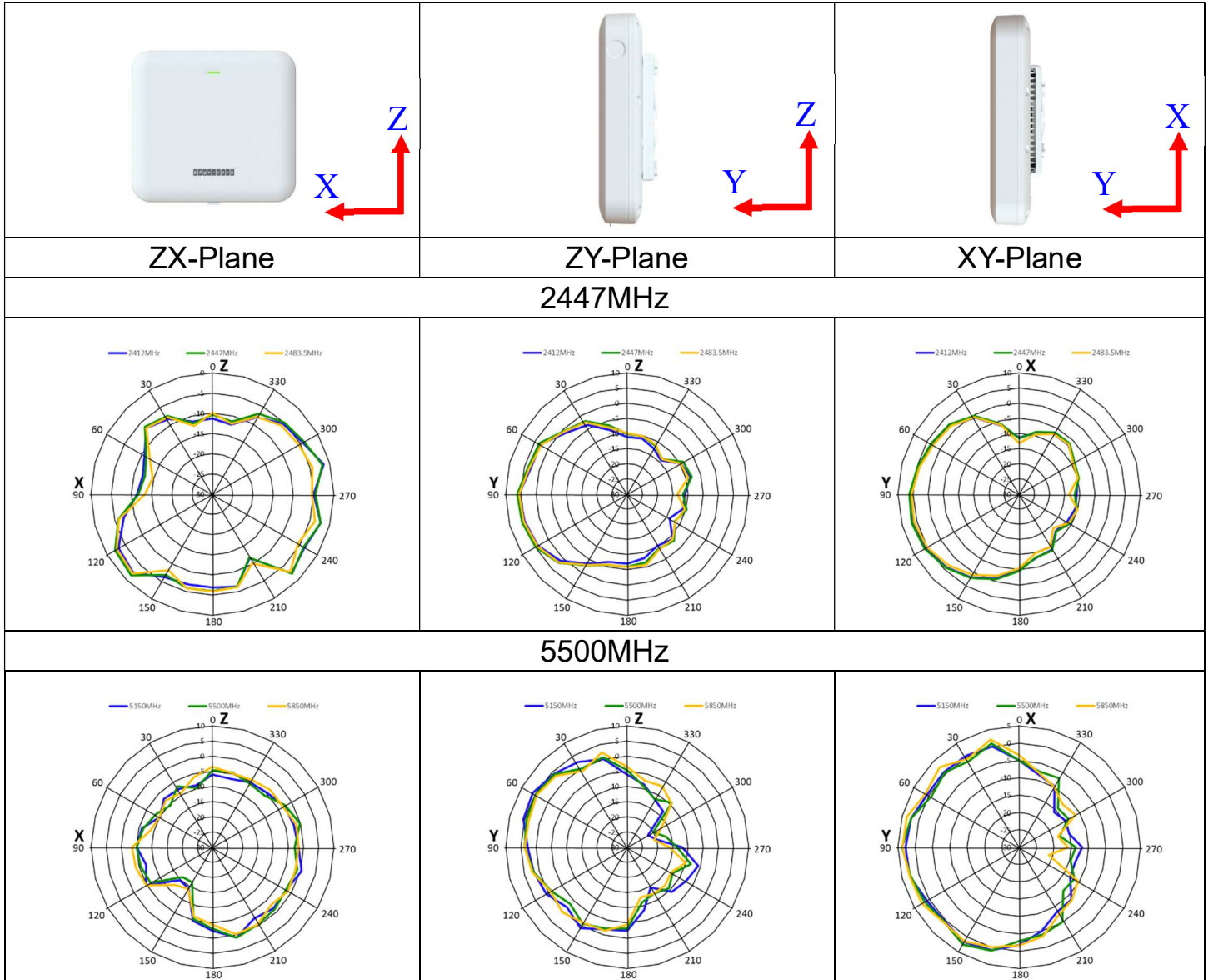
## Dual Band antenna 2



Test date: 2023/09/14



## Dual Band antenna 3



Test date: 2023/09/14