Antenna Test Result of Tooling

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- 2D Radiation Pattern Results

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Revised History

REV.	Date	Revised Record	Prepared by
V01	09/18/2023	EAP111 External T0 Antenna Test report	Kent

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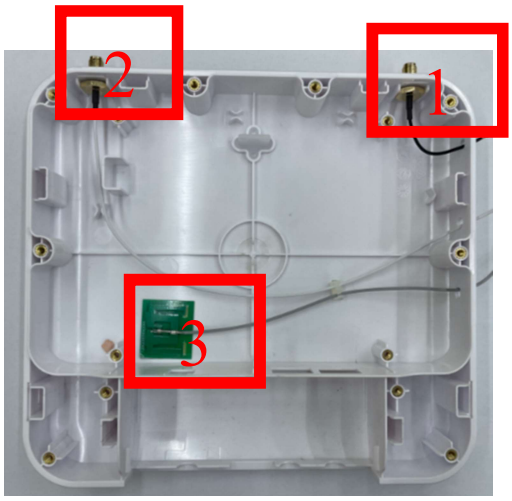
Antenna Location



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

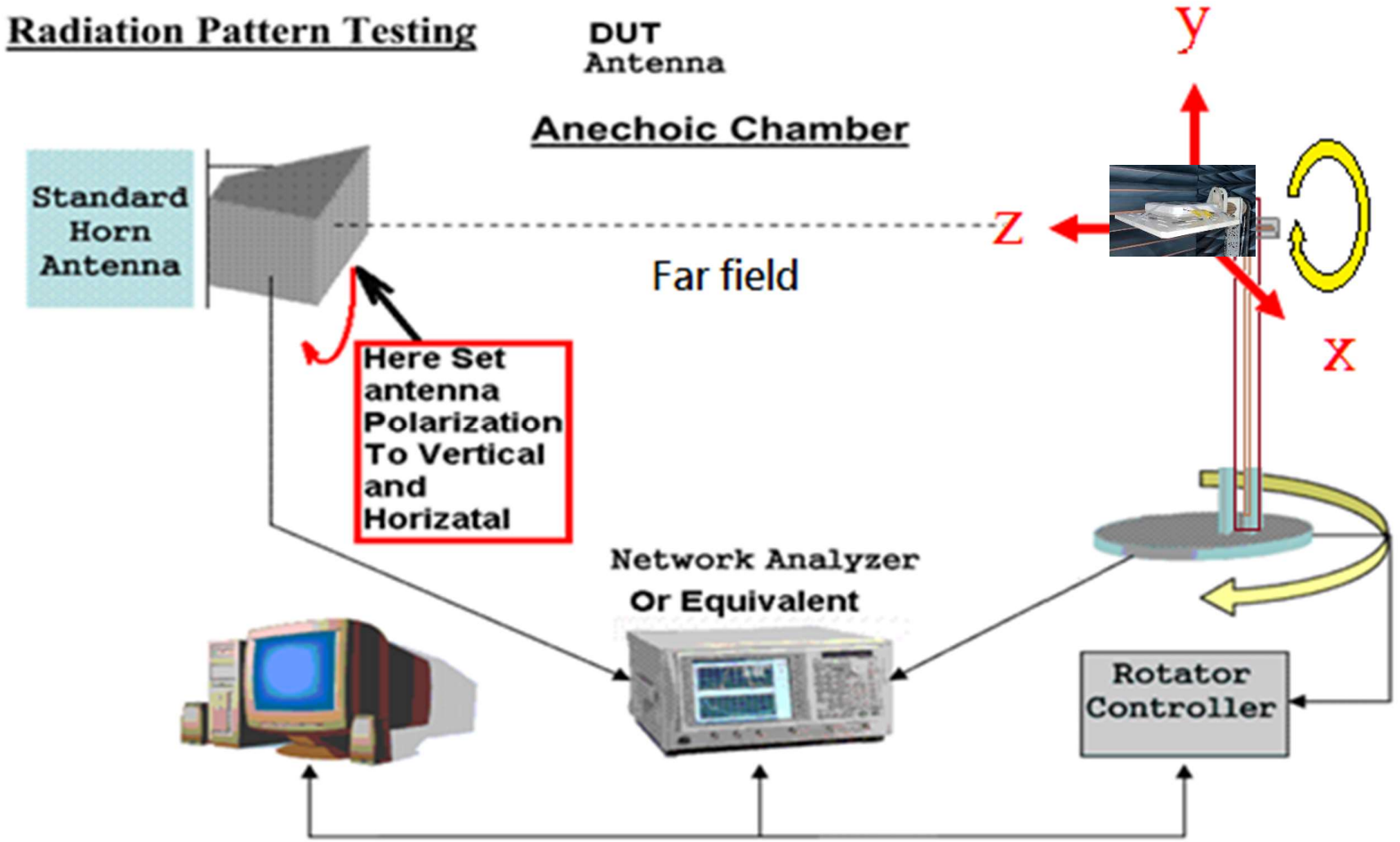
Antenna Description

item	Antenna Model	Antenna Application	Material	Antenna Type	Peak Gain
1	98623PRSX001	WiFi Dual Band 1	PCB	Dipole	2.4G 4.67dBi 5G 5.08dBi
2	98623PRSX001	WiFi Dual Band 2	PCB	Dipole	2.4G 4.2Bi 5G 5.02dBi
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



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Efficiency & Gain

Dual Band Antenna 1						
Frequency (GHz)	2.412	2.447	2.4835	5.15	5.50	5.85
Efficiency (%)	56.3	56.7	55	45.6	50.5	50.1
Peak Gain (dBi)	4.42	4.67	4.50	4.91	4.92	5.08
Peak gain at polarization	(Φ)60° (Θ)90°	(Φ)60° (Θ)90°	(Φ)60° (Θ)90°	(Φ)260° (Θ)90°	(Φ)260° (Θ)90°	(Φ)260° (Θ)90°

Dual Band Antenna 2						
Frequency (GHz)	2.412	2.447	2.4835	5.15	5.50	5.85
Efficiency (%)	51.9	50.3	51.9	43.8	44.5	49.1
Peak Gain (dBi)	3.99	3.97	4.19	5.02	4.96	4.95
Peak gain at polarization	(Φ)60° (Θ)90°	(Φ)60° (Θ)90°	(Φ)60° (Θ)90°	(Φ)260° (Θ)90°	(Φ)260° (Θ)90°	(Φ)260° (Θ)90°

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°

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※Φ(Phi) ; Θ(Theta)

※Peak Gain (G) and directivity (D) are linked by the formula G = k x D, where the antenna effective factor k ($0 \le k \le 1$) 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.

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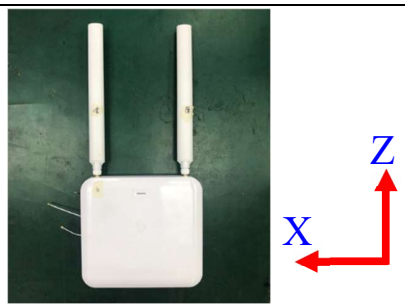
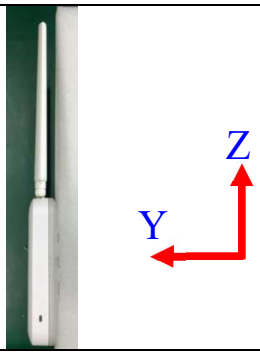
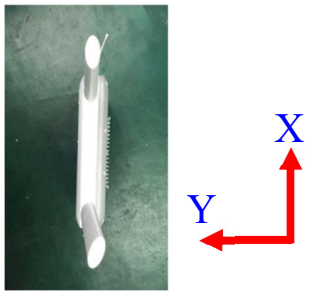
2D Radiation Pattern

Dual Band antenna 1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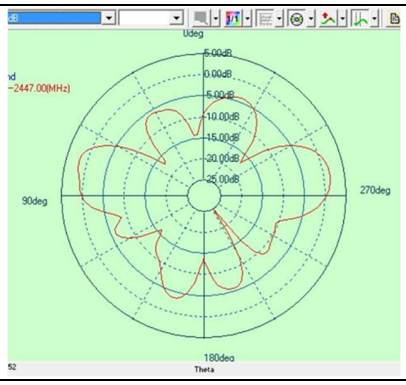	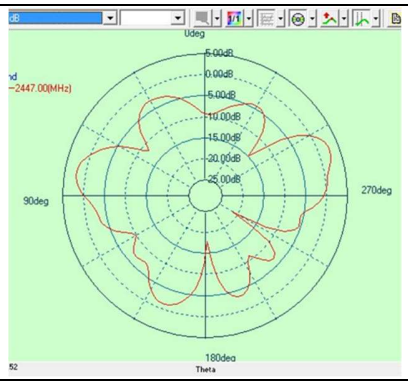	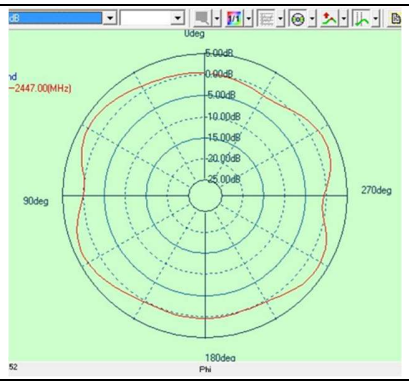
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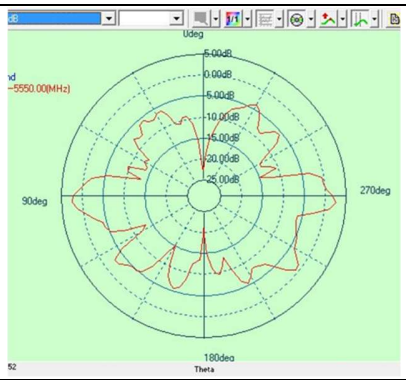	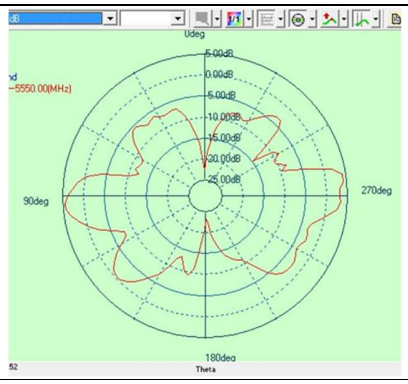	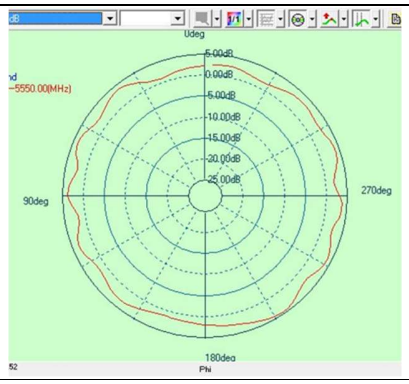

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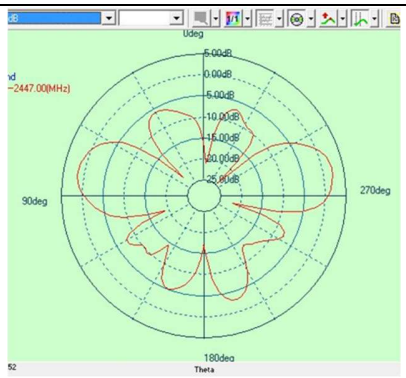
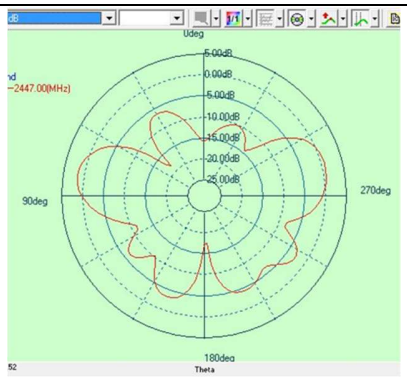
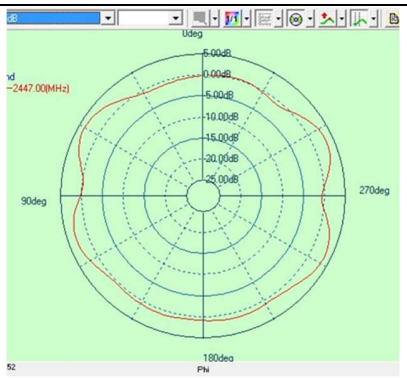
Dual Band antenna 2

ZX-Plane	ZY-Plane	XY-Plane
2447MHz		
		
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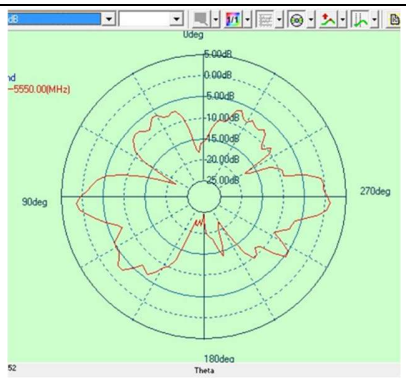	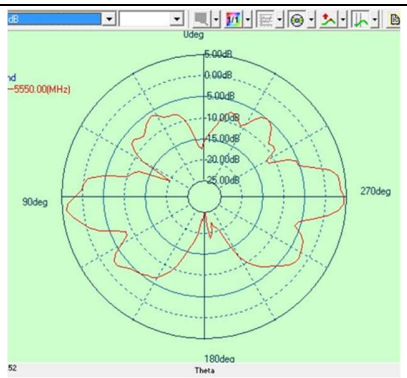	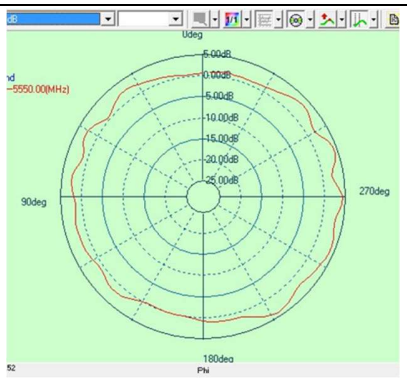

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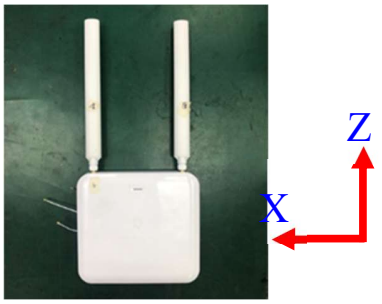
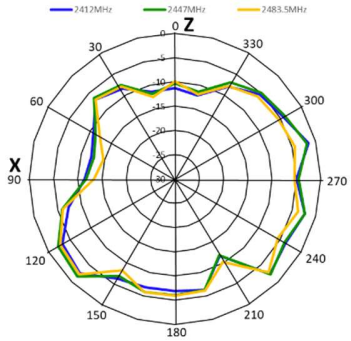
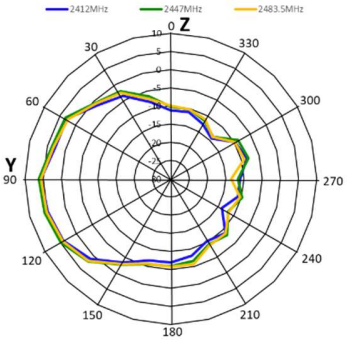
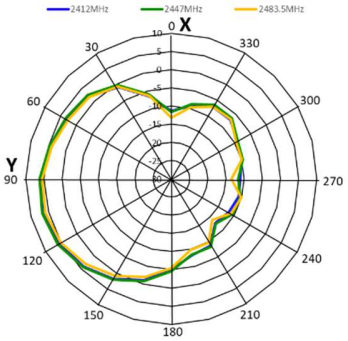
Dual Band antenna 3

		
ZX-Plane	ZY-Plane	XY-Plane
2447MHz		
		
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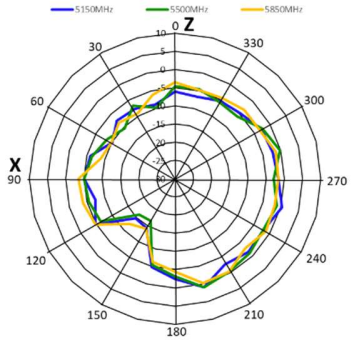	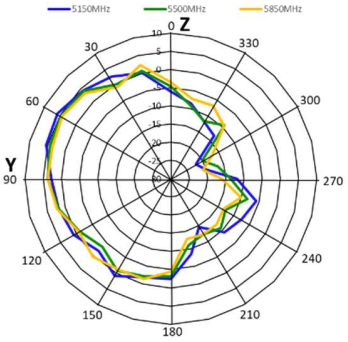	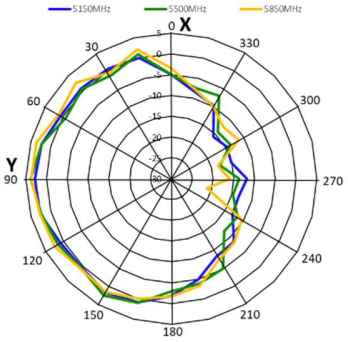

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