Model Name：VES-N0303

3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Revision History

Date	Revision	Page	Content	By
2026/9/30	0.1	All	Preliminary draft	Devin

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Preliminary

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VES-N0303

3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Features

- 1x 5G NR FR1 (Sub 6G)
- 1x Wi-Fi 2.4G / 5GHz
- 1x GPS (L1 / L5)
- IP67

Application

- Police car
- Ambulance
- Fire truck
- Public transportation
- Utility Vehicle

Appearance



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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Sub-6G Antenna Characteristics

Frequency	617 - 960	1427- 1700	1710 - 2690	3300 - 5000	5150 - 5895	MHz
VSWR	6.0 : 1 Max.	3.5 : 1 Max.	3.5 : 1 Max.	2.5 : 1 Max.	2.5 : 1 Max.	
Peak Gain	5.9	2.3	4.2	3.5	3.1	dBi
Average Gain	-2.3	-4	-3.2	-3.1	-4.3	
Efficiency	59	40	49	49	38	%
Impedance	50 Ω					
Connector	SMA PLUG					
Cable / Length	ULA100/ L=1M					

Wi-Fi Antenna Characteristics

Frequency	2400 - 2500	4900 - 5825	MHz
VSWR	2.0 : 1 Max.	3.0 Max.	
Peak Gain	4.1	2.3	dBi
Average Gain	-2.4	-4.1	
Efficiency	57	39	%
Impedance	50 Ω		
Connector	RP SMA PLUG		
Cable / Length	ULA100/ L=1M		

GNSS Antenna Characteristics

Frequency	L1			L5	MHz
	1561 ±2	1575.42 ±1	1602 ±8	1176.45 ±10	
	Beidou	GPS / Galileo	GLONASS		
Gain @3.3V	30	30.5	27	29	dBi(At 90°)
Polarization	RHCP				
Impedance	50 Ω				
Connector	SMA PLUG				
Cable / Length	RG174 / L=1M				

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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Environment

Operating Temperature	-40°C - +85°C
Color	Black
Humidity	95% @ 25°C
IP rating	IP67

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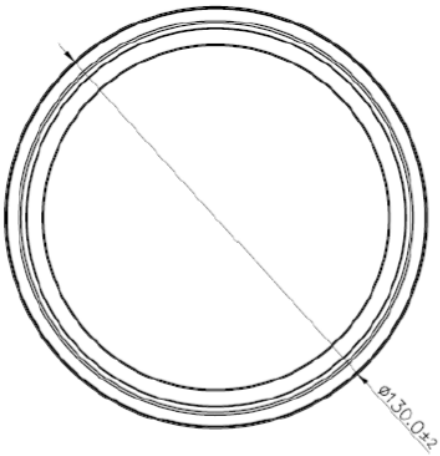
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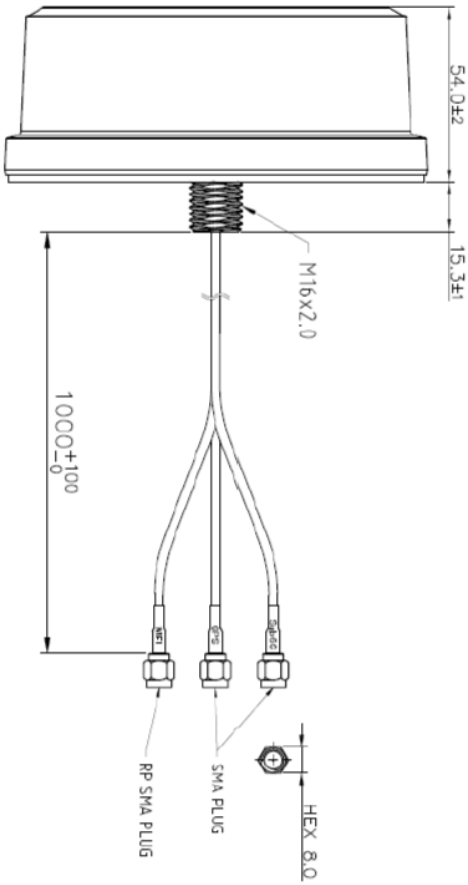
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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Drawing







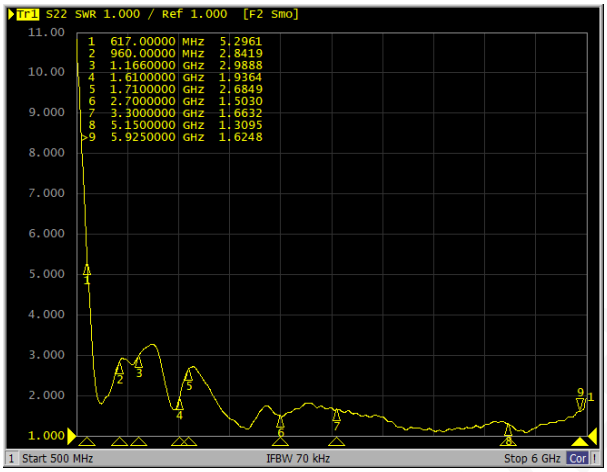
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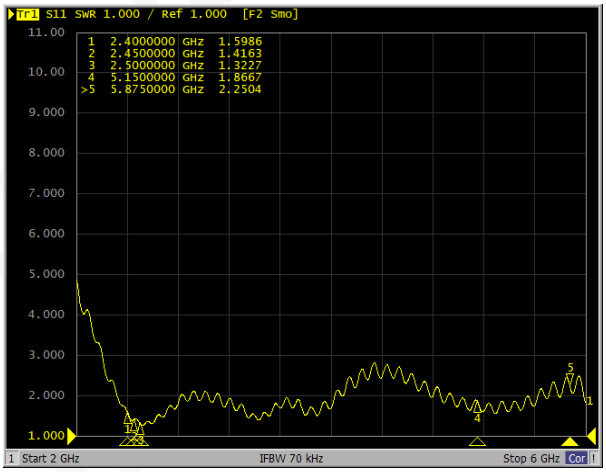
3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

VSWR TEST REPORT

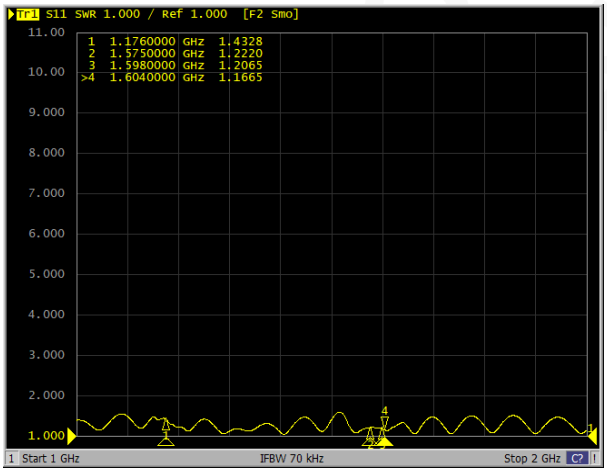
Sub-6G



Wi-Fi



GNSS



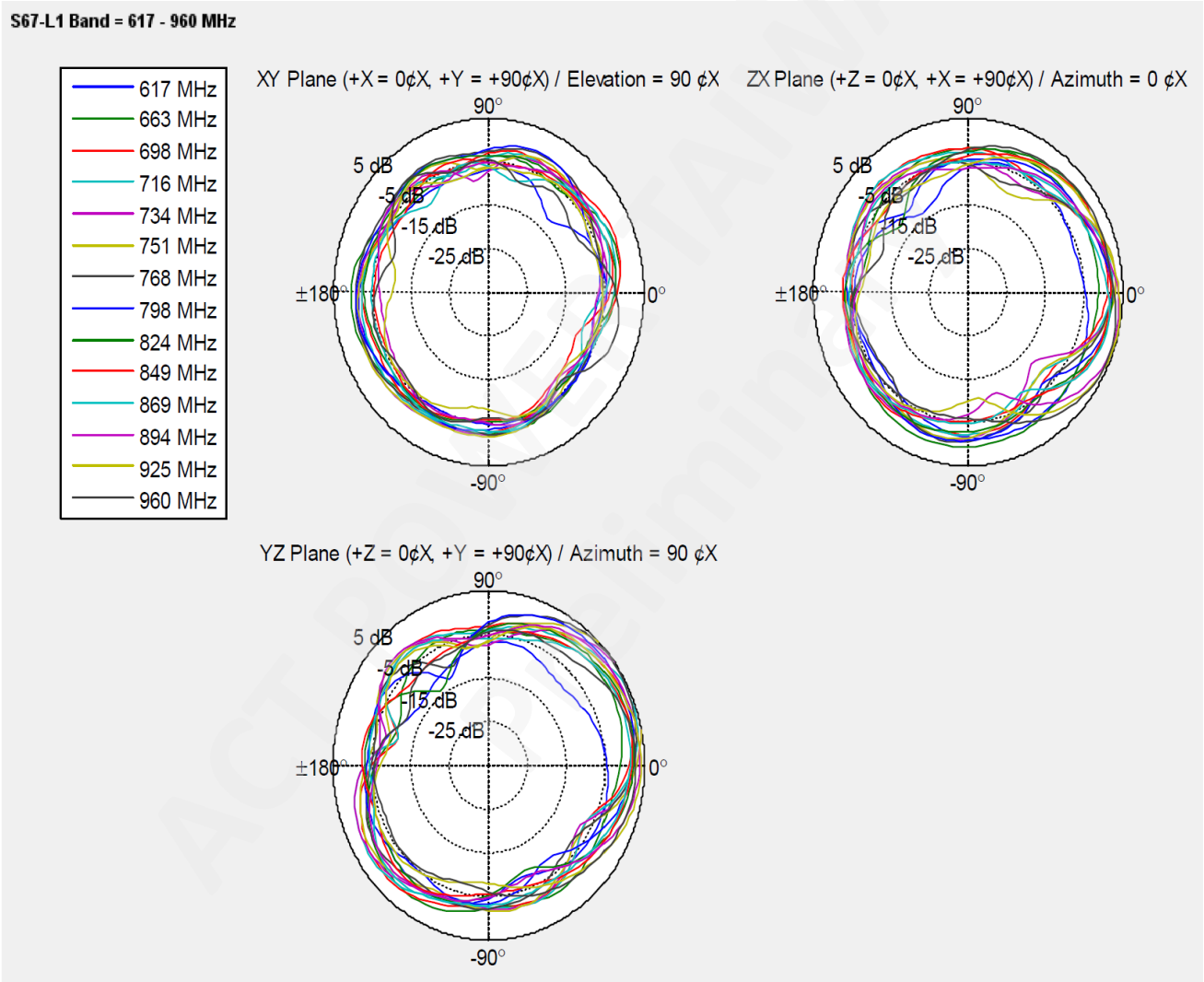
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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Radiation Pattern

5G NR FR1 (Sub 6G)



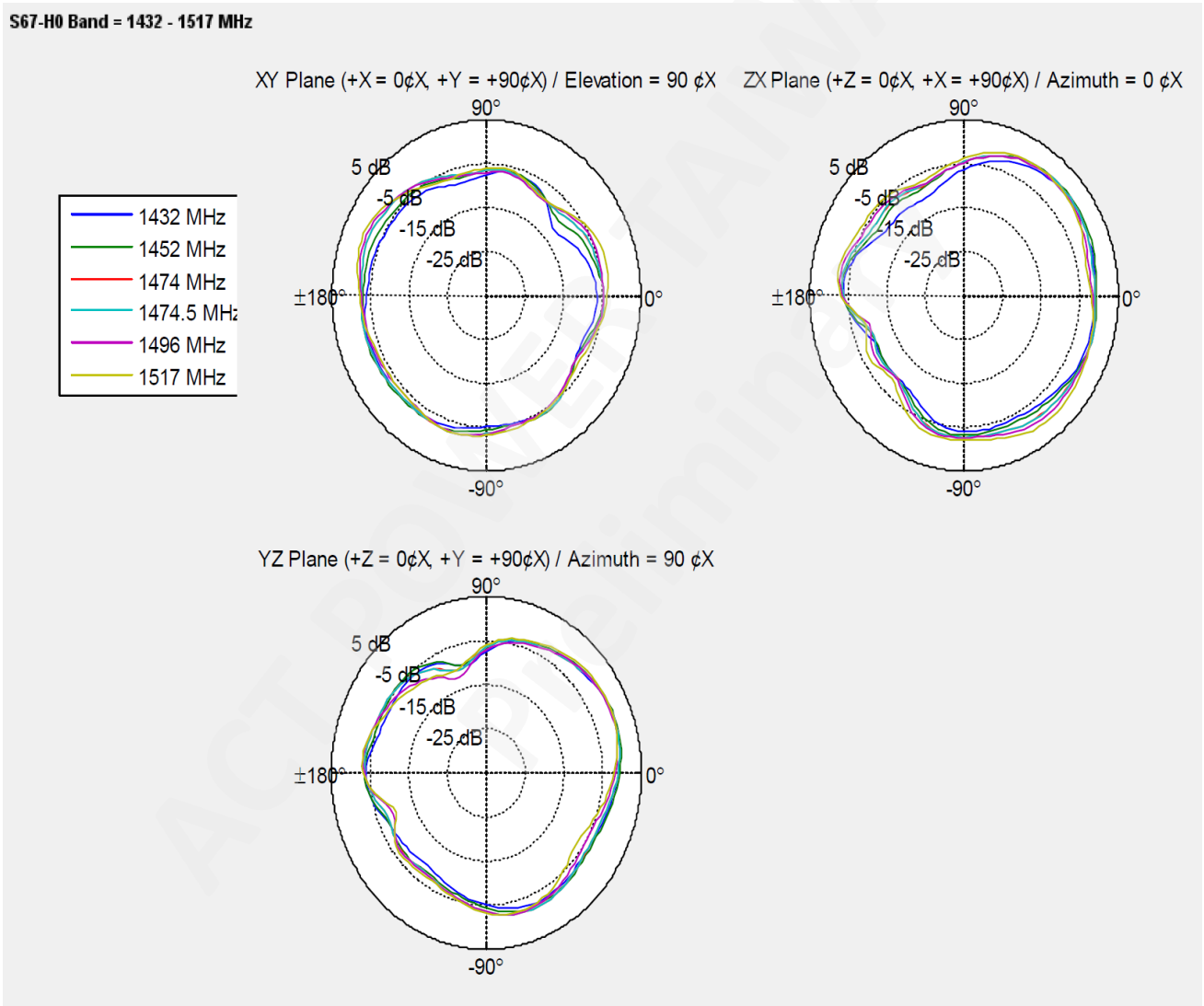
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Radiation Pattern

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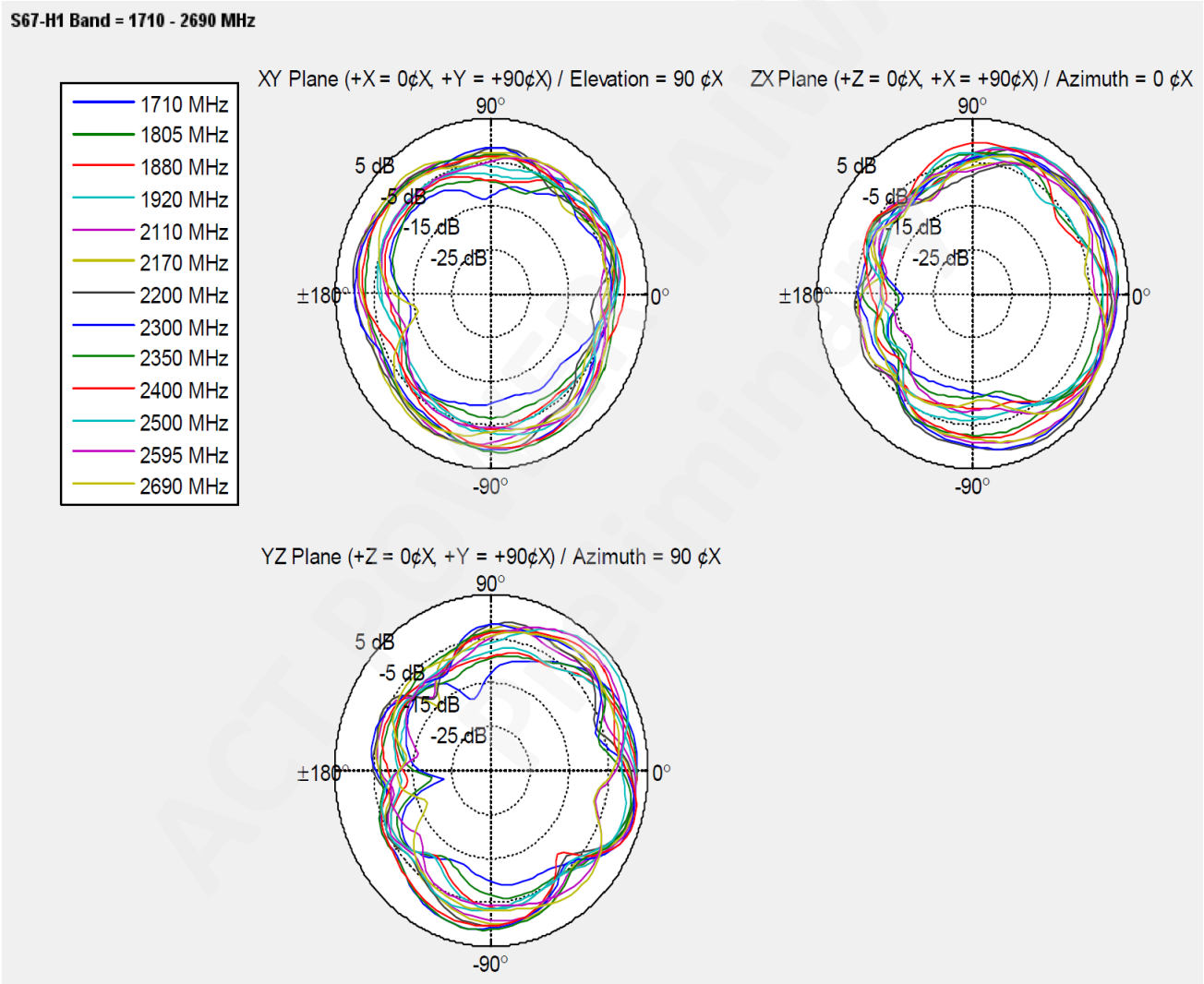
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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Radiation Pattern

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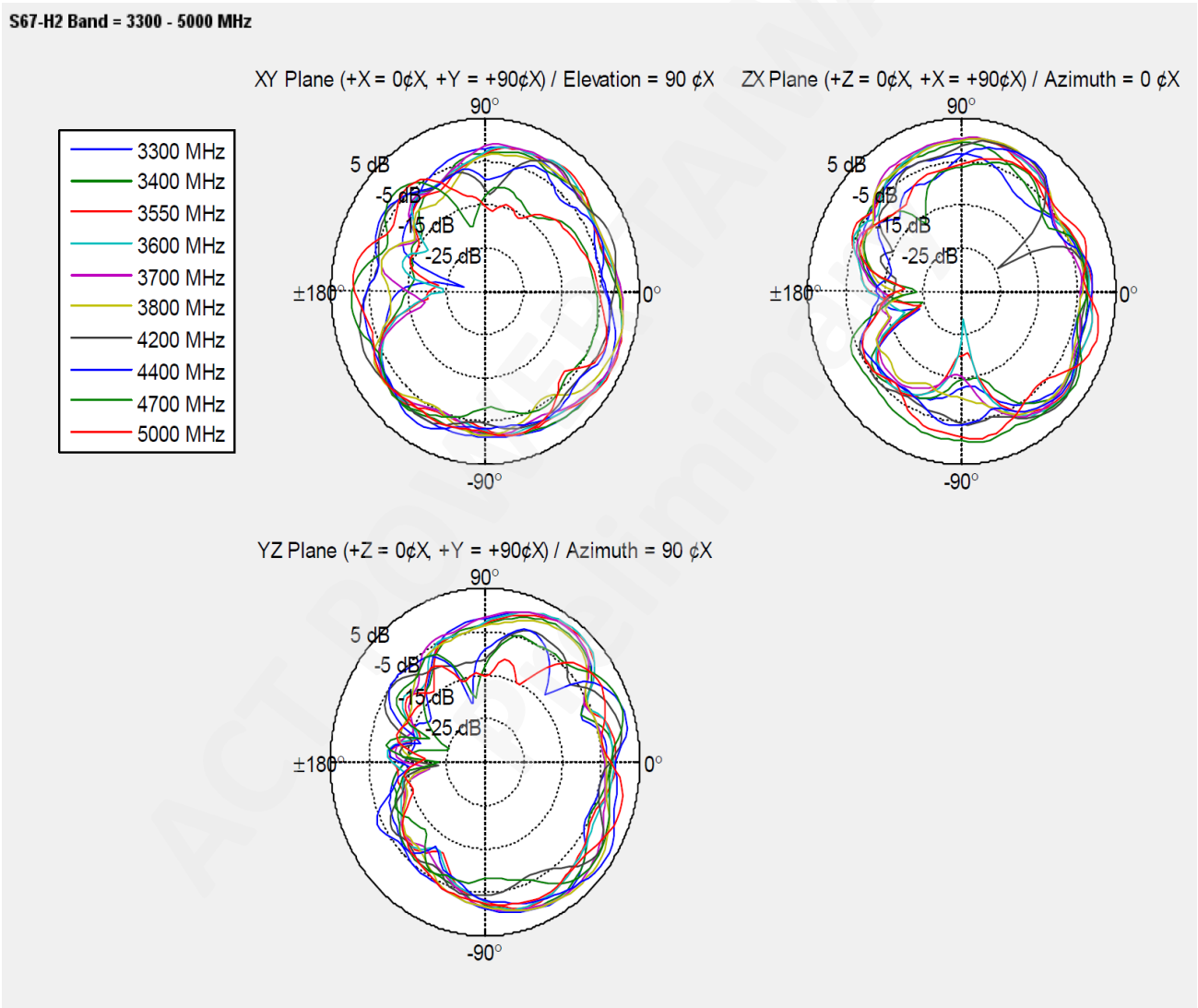
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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Radiation Pattern

5G NR FR1 (Sub 6G)



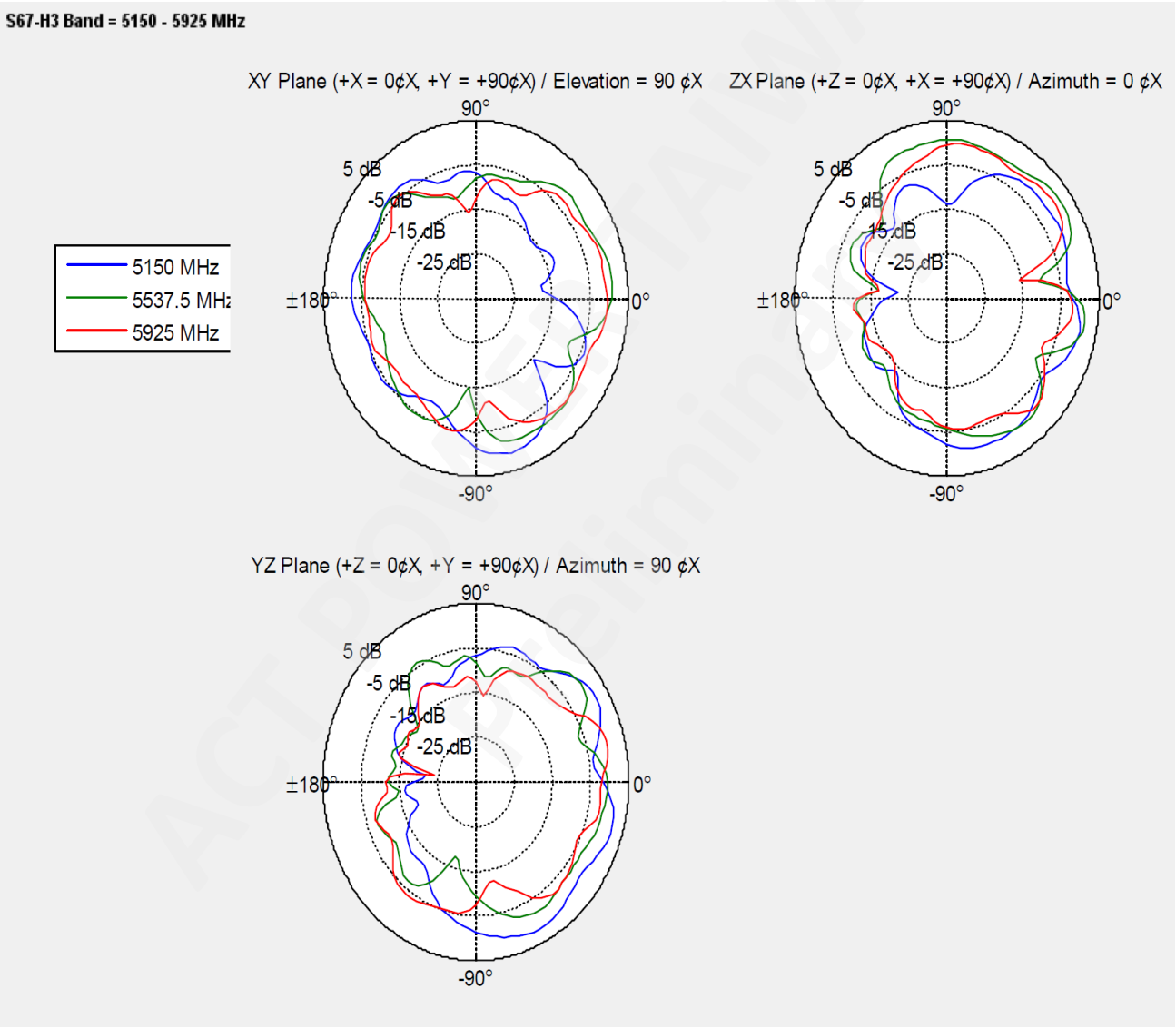
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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Radiation Pattern

5G NR FR1 (Sub 6G)



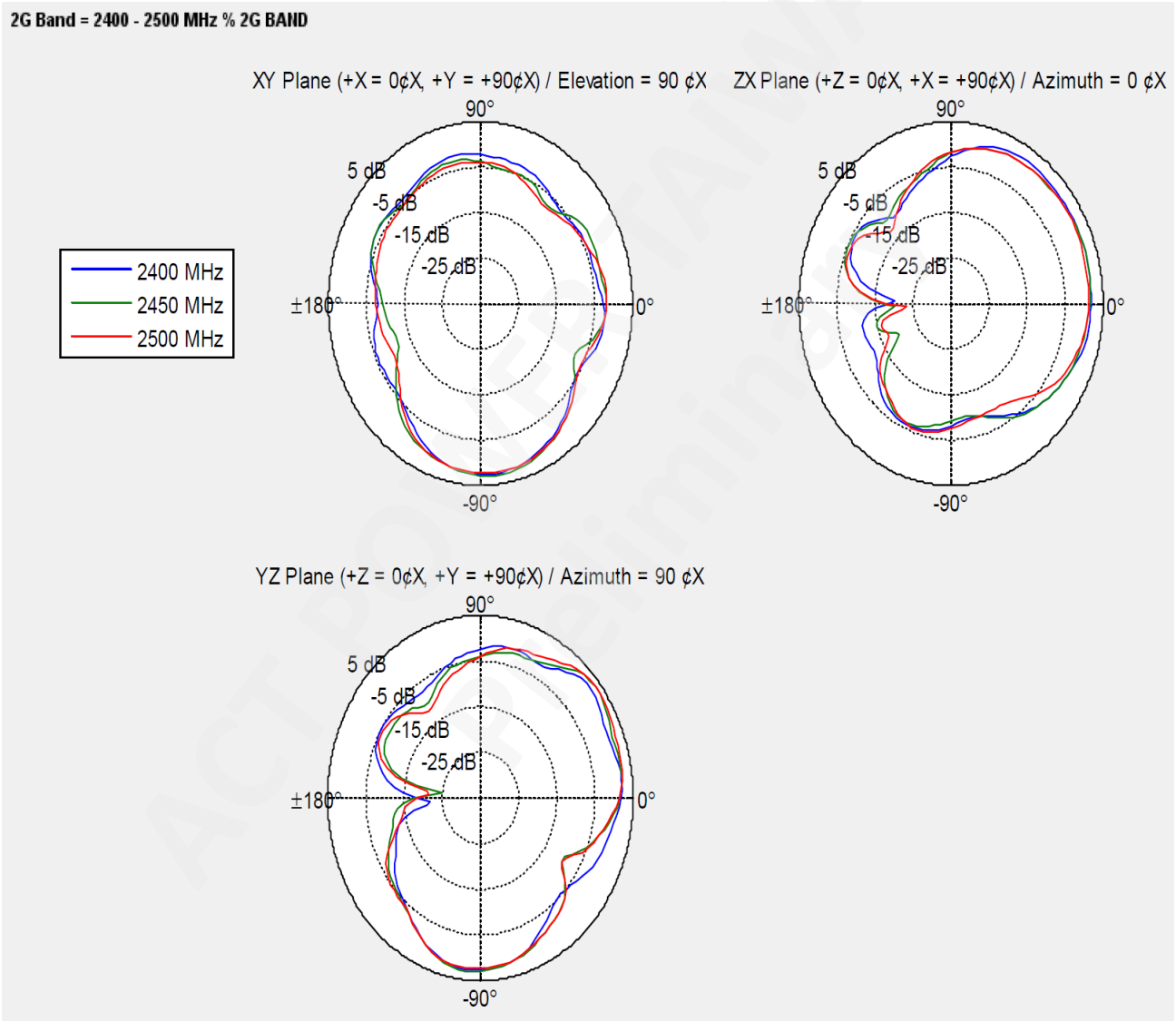
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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Radiation Pattern

Wi-Fi



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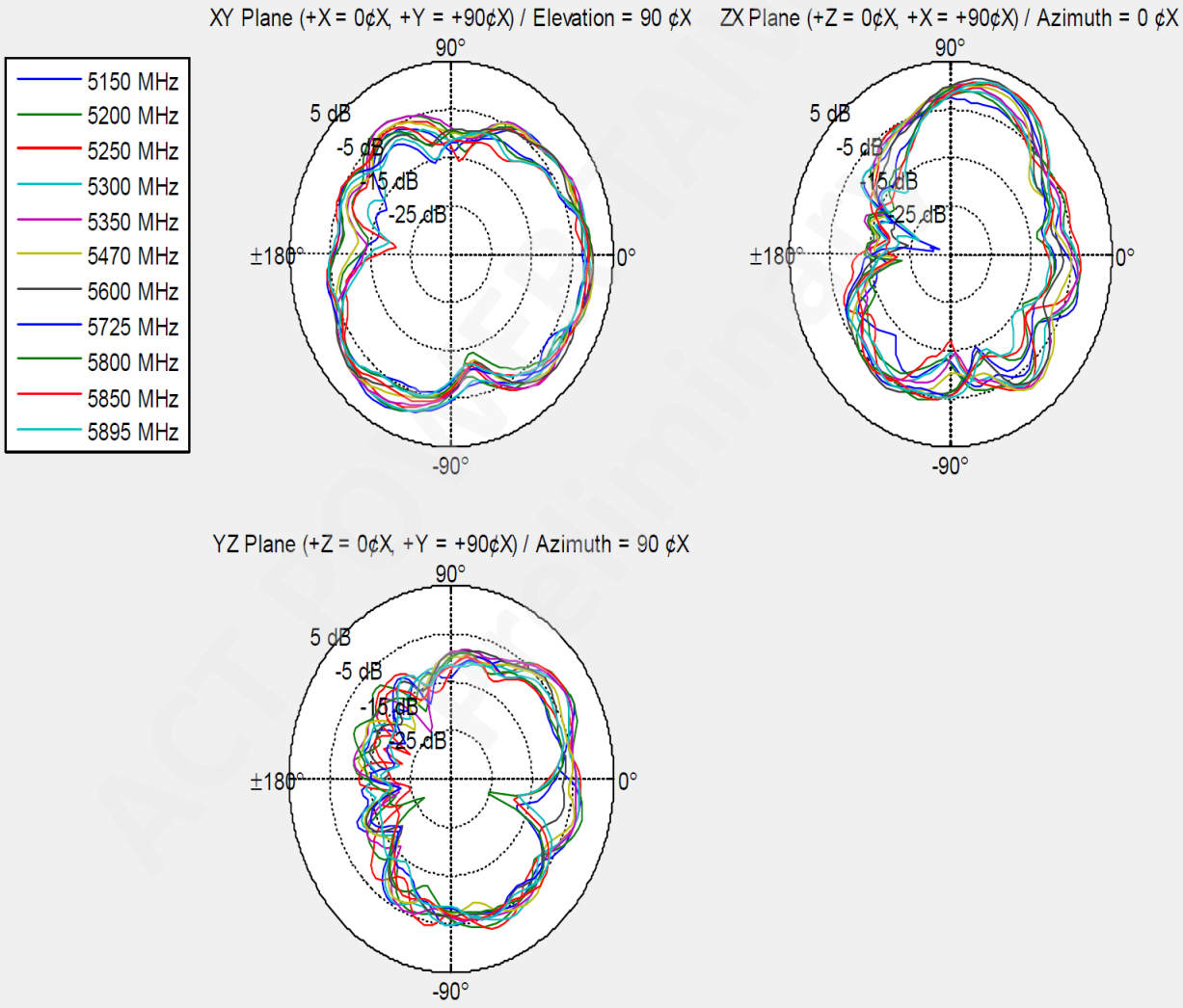
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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Radiation Pattern

Wi-Fi

5G Band = 4900 - 5975 MHz



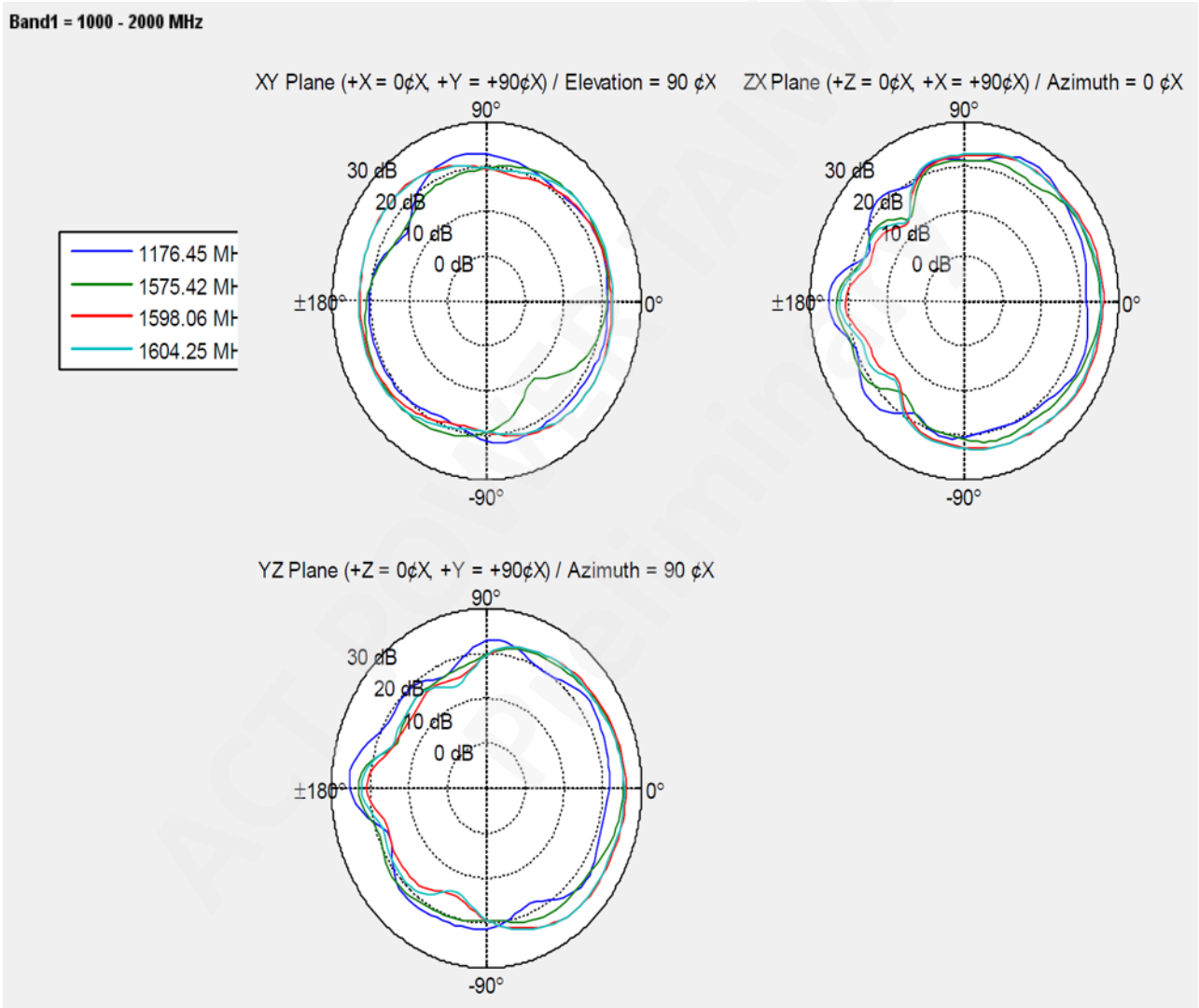
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3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Radiation Pattern

GNSS



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VES-N0303

3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Deliverables

1	3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1

Ordering Information

Model Name	Description	Unit
VES-N0303	3-in-1 Antenna : 5G x1 Wi-Fi x1 GPS L1 / L5 x1	1

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