Model Name：VES-N0304

3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Revision History

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

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VES-N0304

3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Features

- 1x LTE
- 1x Wi-Fi 2.4G / 5GHz
- 1x GPS
- IP66

Application

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

Appearance



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3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Specification

LTE Antenna Characteristics

Frequency	698 - 791	824- 960	1710 - 2170	2300 - 2700	MHz
VSWR	2.5 : 1 Max.	2.5 : 1 Max.	3.0 : 1 Max.	4.0 : 1 Max.	
Peak Gain	3	3.5	3.6	3.3	dBi
Average Gain	-1.5	-1.44	-1.17	-2.41	
Efficiency	59	40	49	49	%
Polarization	Linear, vertical				
Impedance	50 Ω				
Connector	SMA PLUG				
Cable / Length	ULA100/ L=1M				

Wi-Fi Antenna Characteristics

Frequency	2400 - 2500	5150 - 5875	MHz
VSWR	2.5 : 1 Max.		
Peak Gain	2.6	3.2	dBi
Average Gain	-0.69	-1.4	
Polarization	Linear, vertical		
Impedance	50 Ω		
Connector	SMA PLUG		
Cable / Length	ULA100/ L=1M		

GPS Antenna Characteristics

Frequency	1575.42 ±1		MHz
Gain @3.3V	28 ±3		dBi(At 90°)
Polarization	RHCP		
Impedance	50 Ω		
Input Voltage	Min:1.8 V Typ.: 3.0V Max:5.5V		
Connector	SMA PLUG		
Cable / Length	RG174 / L=1M		
LNA Gain, Power Consumption and Noise Figure			
Voltage	LNA Gain	Power Consumption(mA)	Noise Figure(Typ.)
Min 1.8V	23dB	MIN:3mA MAX:10mA	2.5dB
Typ. 3.0V	28dB	MIN:5mA MAX:20mA	2.7dB
Max 5.5V	30dB	MIN:15mA MAX:40mA	3.5dB

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Environment

Operating Temperature	-40°C - +85°C
Color	Black
Humidity	95% @ 25°C
IP rating	IP66

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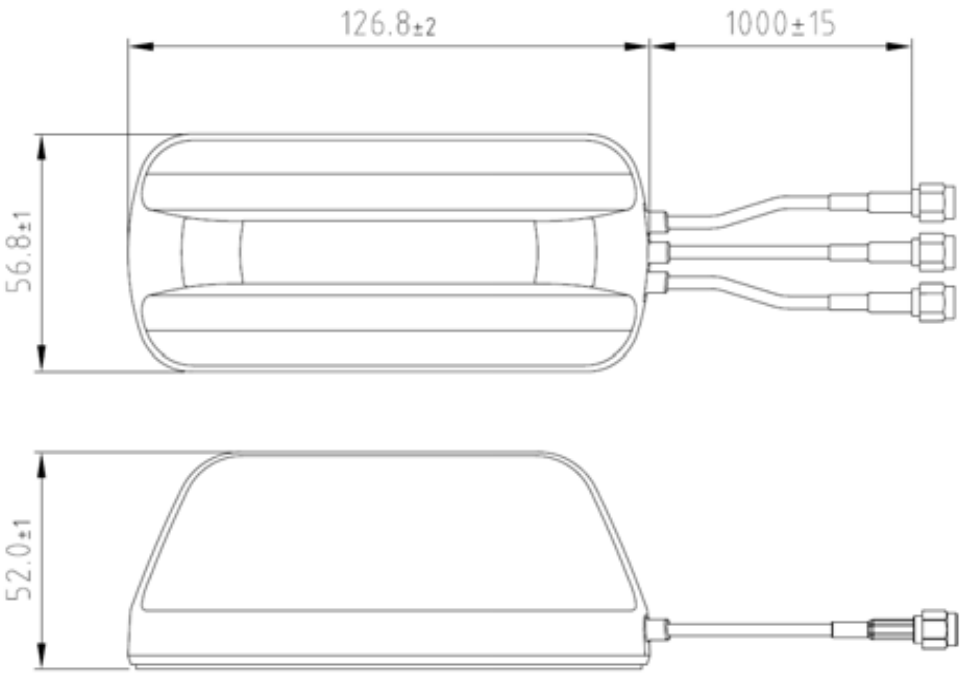
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3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Drawing





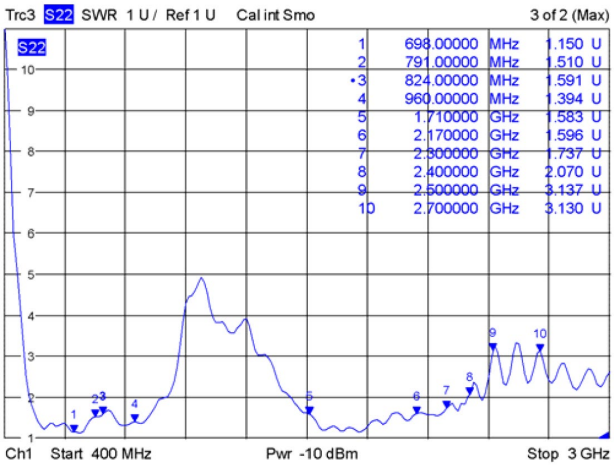
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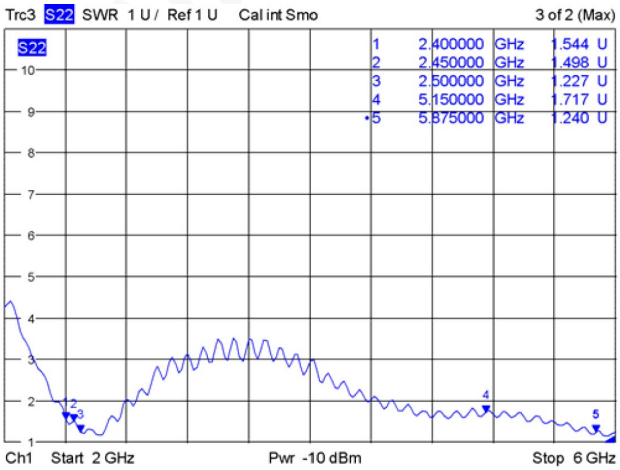
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VSWR TEST REPORT

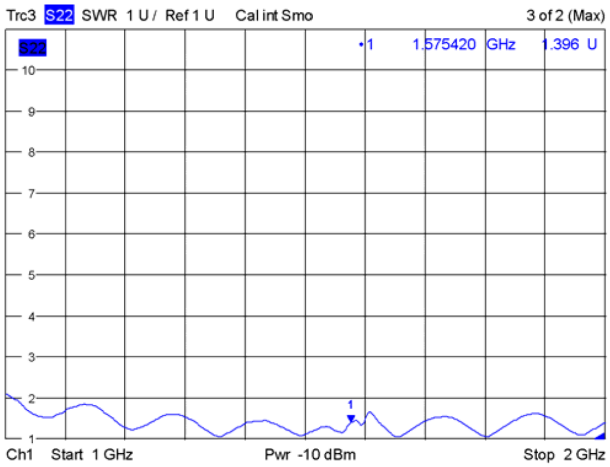
LTE



Wi-Fi



GPS



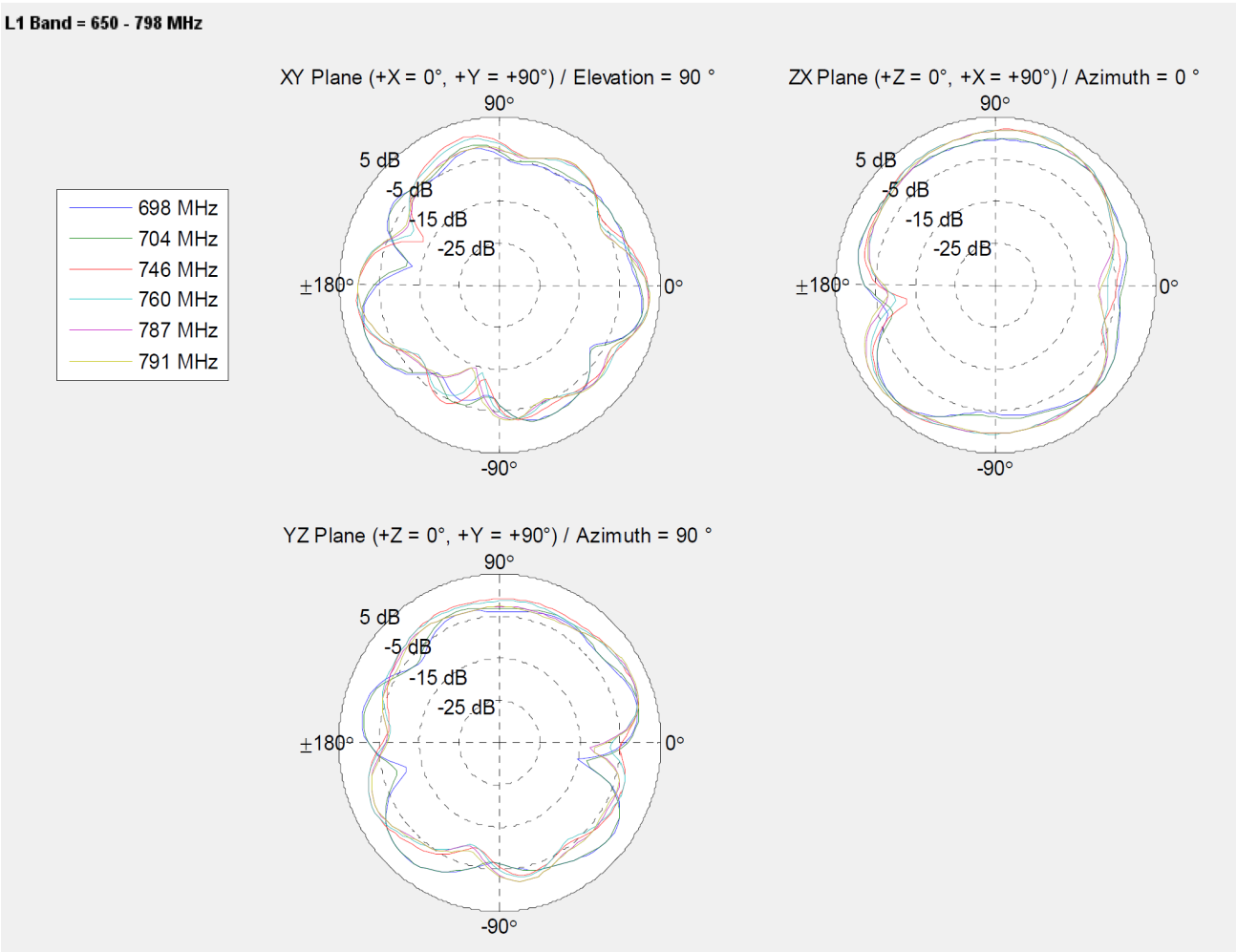
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3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Radiation Pattern

LTE



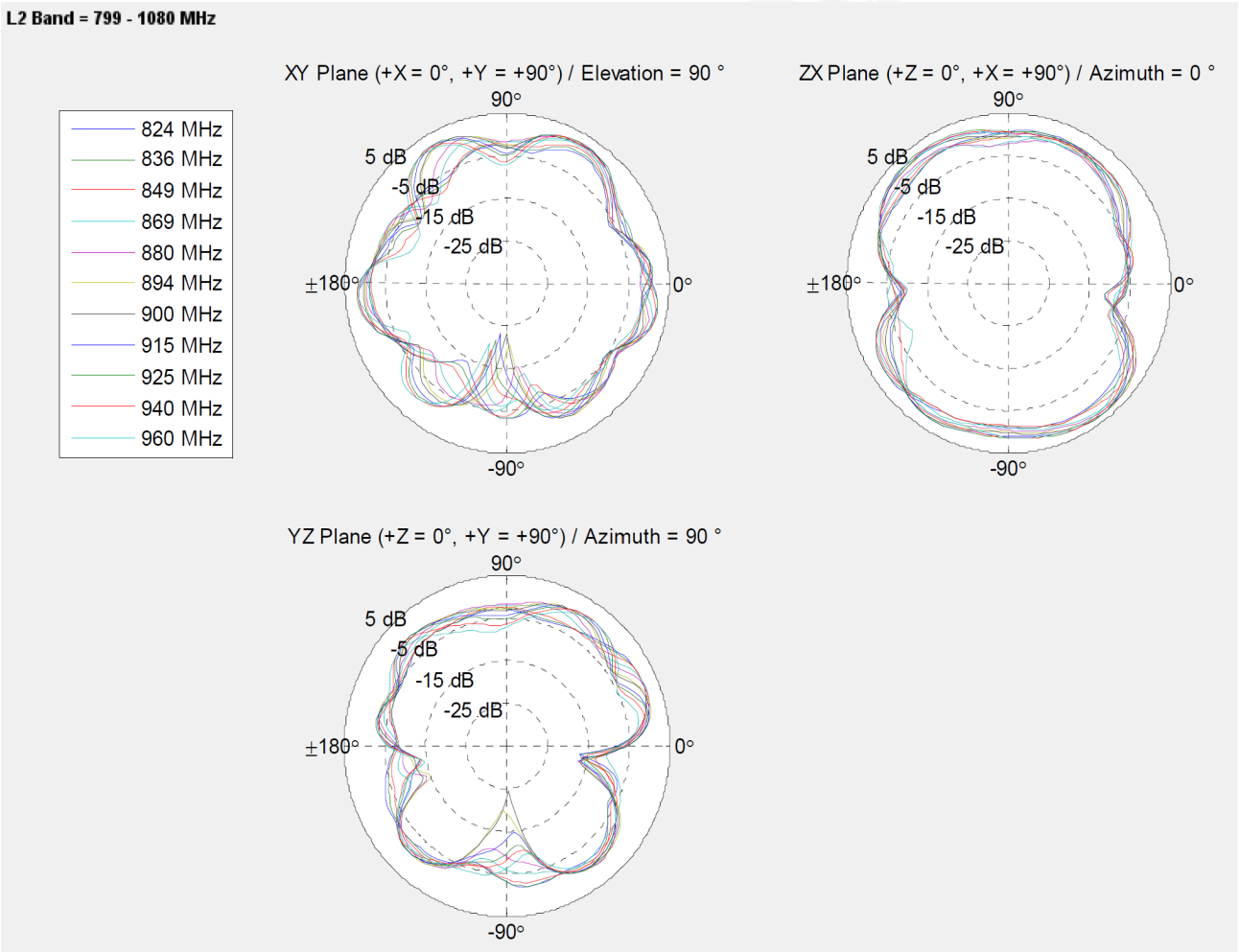
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3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Radiation Pattern

LTE



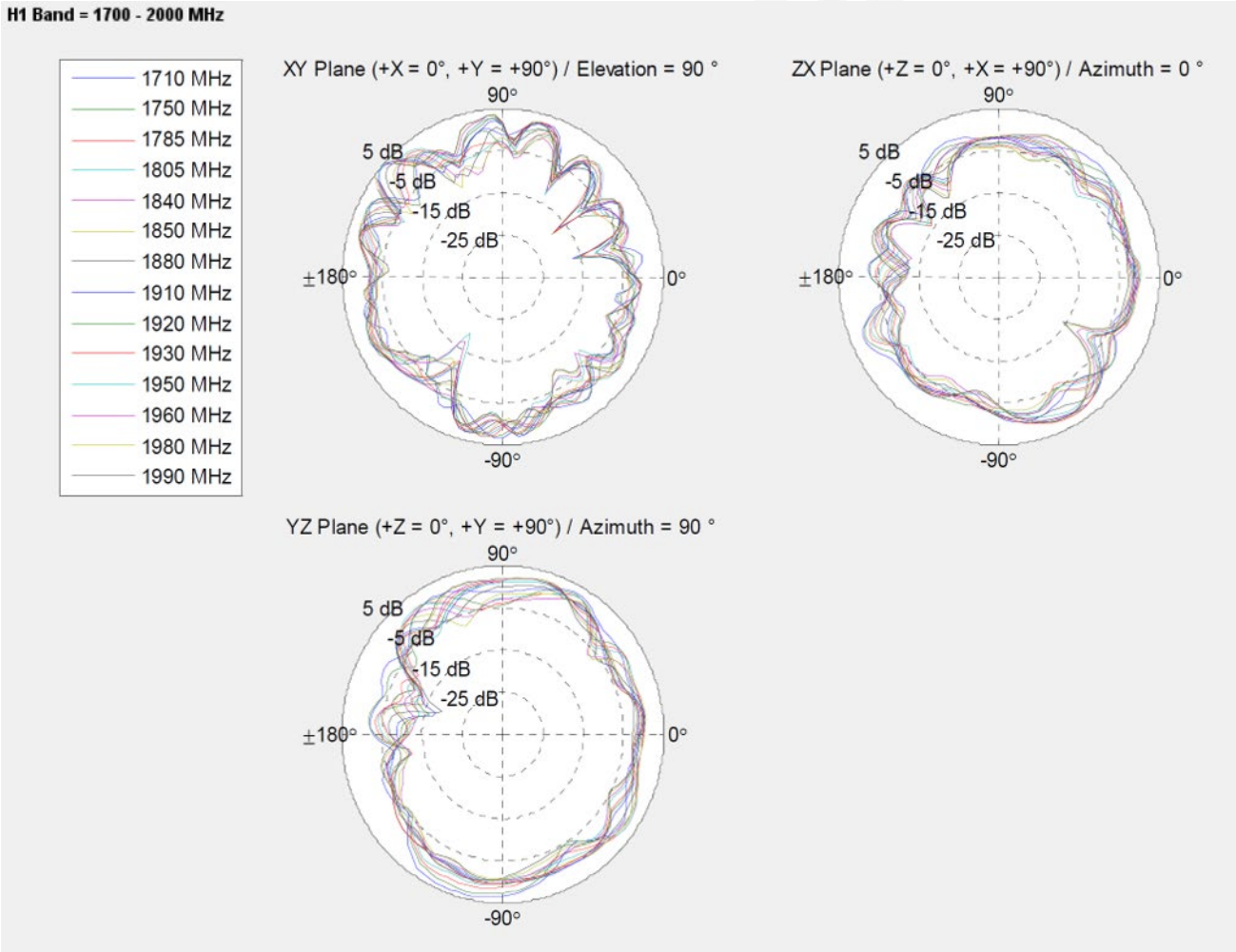
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3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Radiation Pattern

LTE



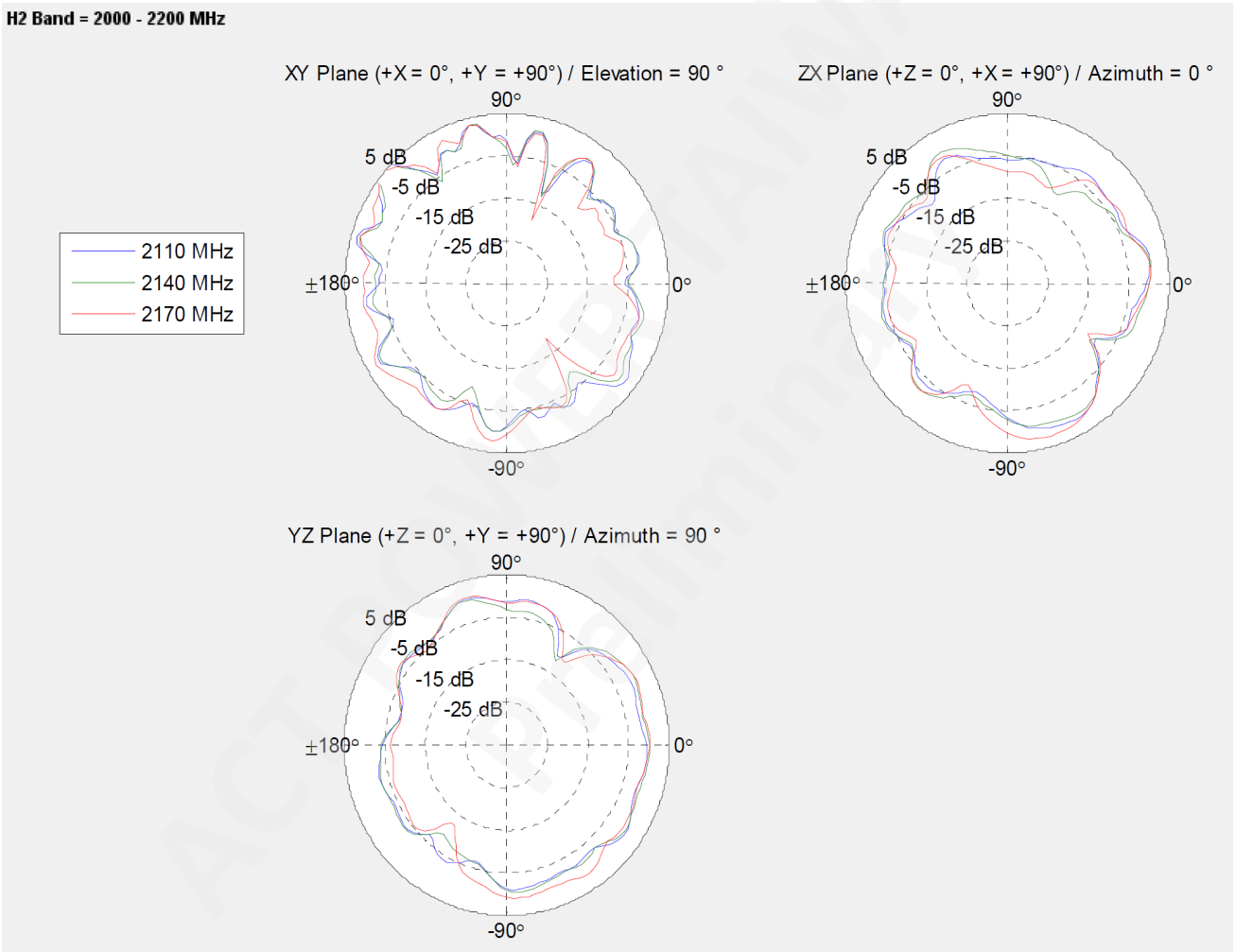
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Radiation Pattern

LTE



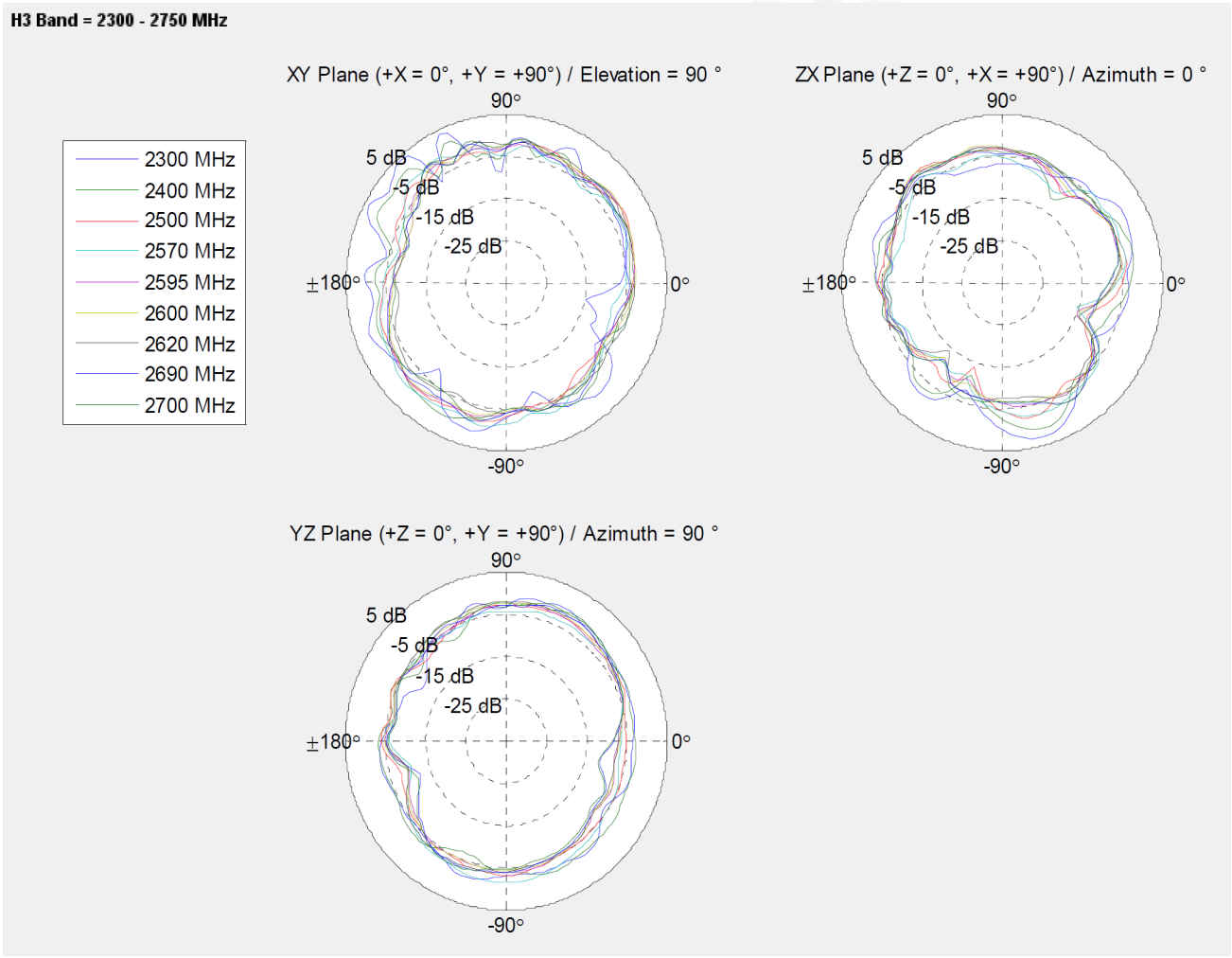
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Radiation Pattern

LTE



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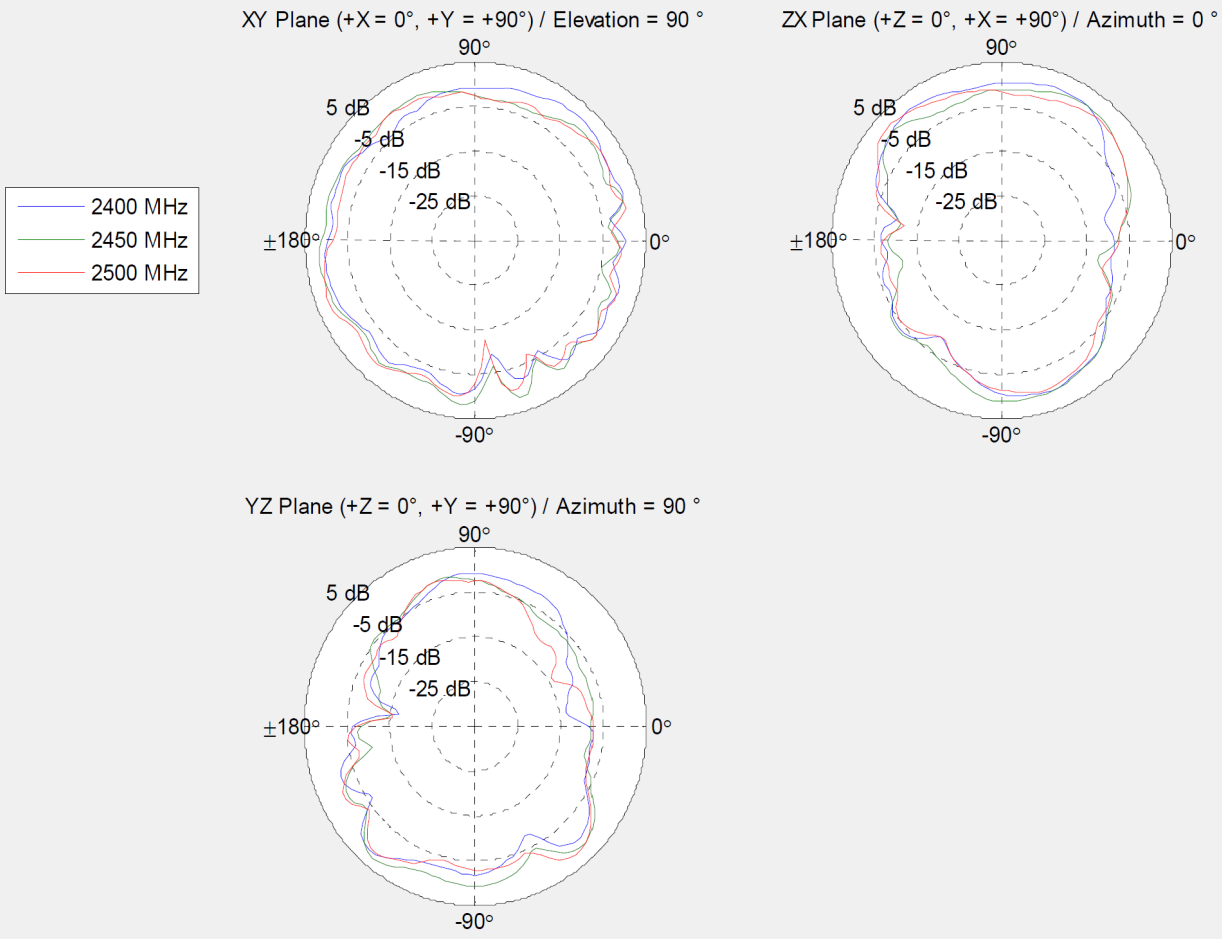
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Radiation Pattern

Wi-Fi

2GHz Band = 2400 - 2500 MHz



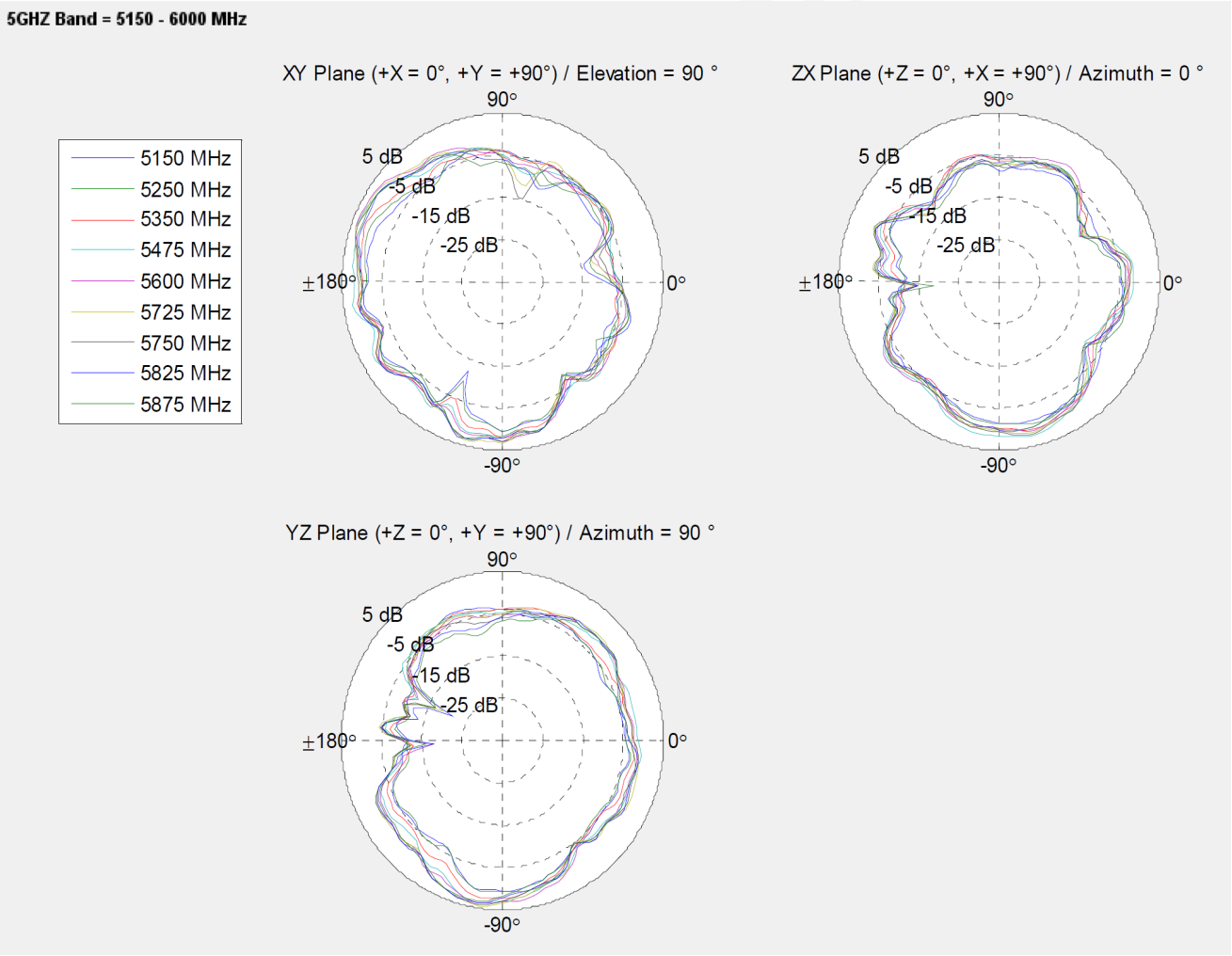
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Radiation Pattern

Wi-Fi



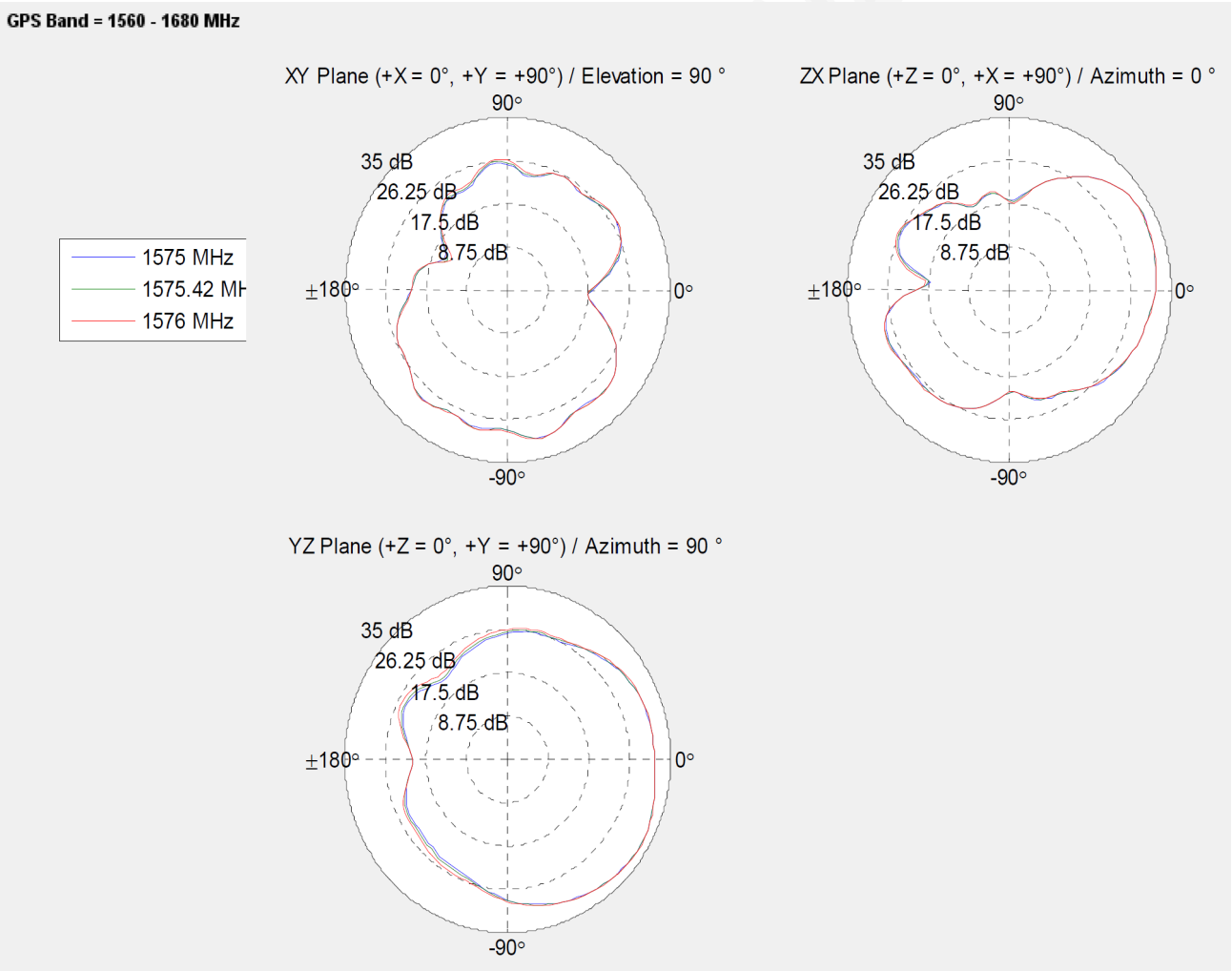
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3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Radiation Pattern

GPS



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3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Deliverables

1	3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1

Ordering Information

Model Name	Description	Unit
VES-N0304	3-in-1 Antenna : LTE x1 Wi-Fi x1 GPS x1	1

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