

Datasheet

Combination Antenna

Wi-Fi & GNSS

Features:

The combination antenna can achieve different levels of gain as specified in spec.. Also, it features compatible with various types of connector and is certified with IP65.

Applications:

- Smart metering application
- Transportation device
- Remote Monitoring equipment



Combination Antenna



Electrical Specifications

Combination Antenna Characteristics

Antenna Type	Radiation Pattern	Polarization	Max. Input Power	Impedance
GNSS	Directivity	Linear	N/A	50Ω
Wi-Fi	Omni	Linear	1W	50Ω

GNSS Antenna Electrical Specifications

Antenna Characteristics By Range Of Receiving Frequency

Frequency (MHz)	1561 ± 2	1575.42 ± 1	1602 ± 4
Return Loss (dB)	< -6	< -6	< -6
Gain (dBi) @Zenith	0.5 Typ.	1.0 Typ.	3.0 Typ.
Bandwidth (MHz)	5	3	9
Efficiency (%) @Center Frequency	49	68	62

LNA Characteristics

Frequency (MHz)	1559~1606
Gain (dB)	28 Typ.
Output Impedance (Ω)	50
Output Return Loss (dB)	< -9.5
Operation Voltage (V)	3.3
Current Consumption (mA) @3.3V	9
Noise Figure (dB)	1.5 Typ.

Total Characteristics

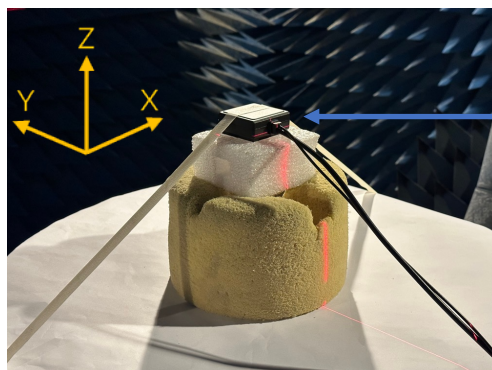
Frequency (MHz)	1561 ± 2	1575.42 ± 1	1602 ± 4
Gain (dBi) @Zenith	28.5 ± 3	29 ± 3	31 ± 3
Return Loss (dB)	< -9.5		
Impedance (Ω)	50		
Operation Voltage (V)	3.3		
Current Consumption (mA) @3.3V	9		
Noise Figure (dB)	1.5 Typ.		

Wi-Fi Antenna Electrical Specifications

Antenna Characteristics

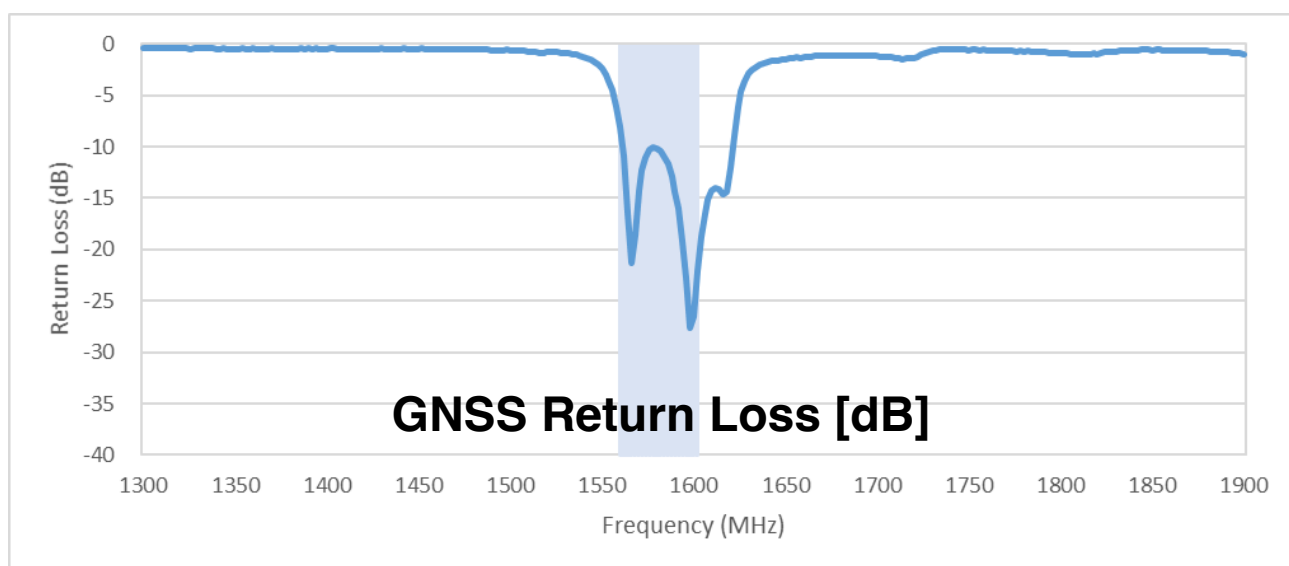
Frequency (GHz)	2.4~2.5	5.15~5.825
Return Loss (dB)	-9.5	-9.5
Peak Gain (dBi)	3.5	4.2
Average Gain (dB)	-2.5	-3.4
Efficiency (%)	56	46

Charts In Free Space

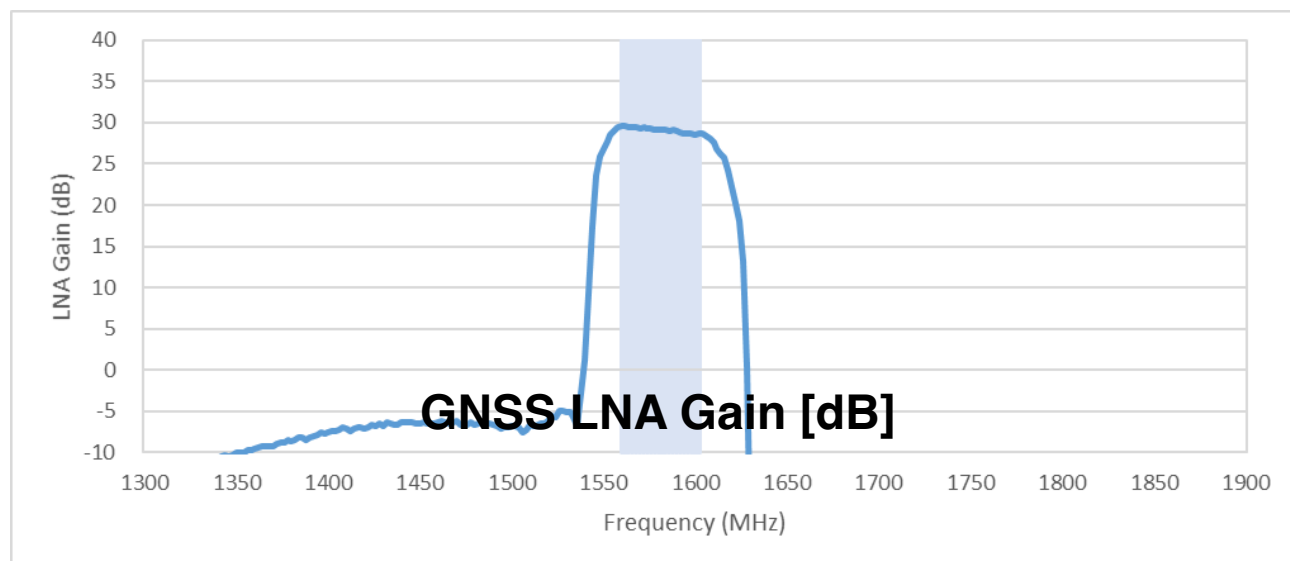


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Test setup, measurement performed in 3D anechoic chamber.

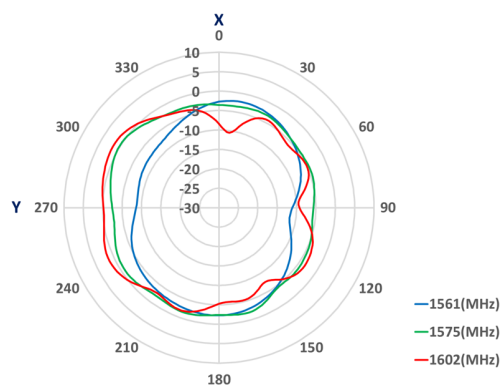


Blue background represents frequency response.

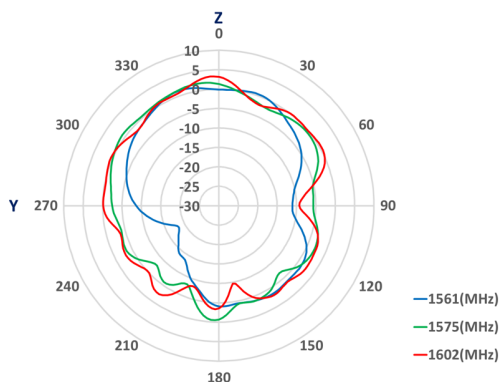


Radiation Pattern - Free Space

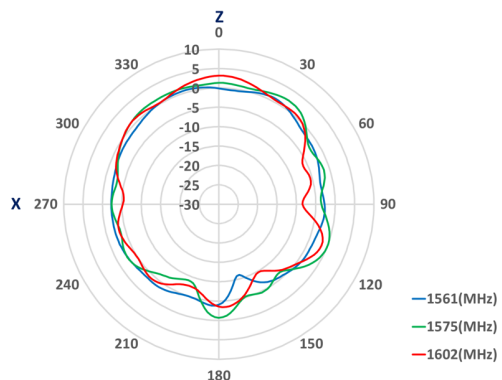
XY - Plane



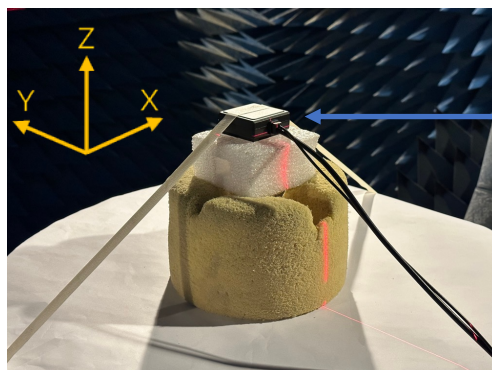
YZ - Plane



XZ - Plane

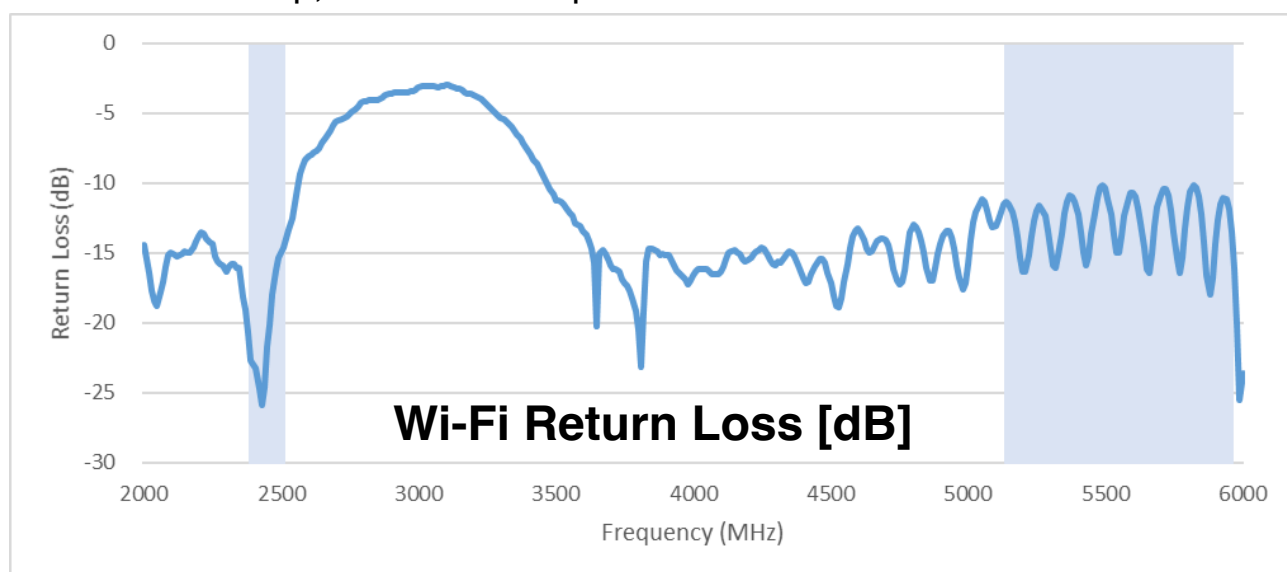


Charts In Free Space

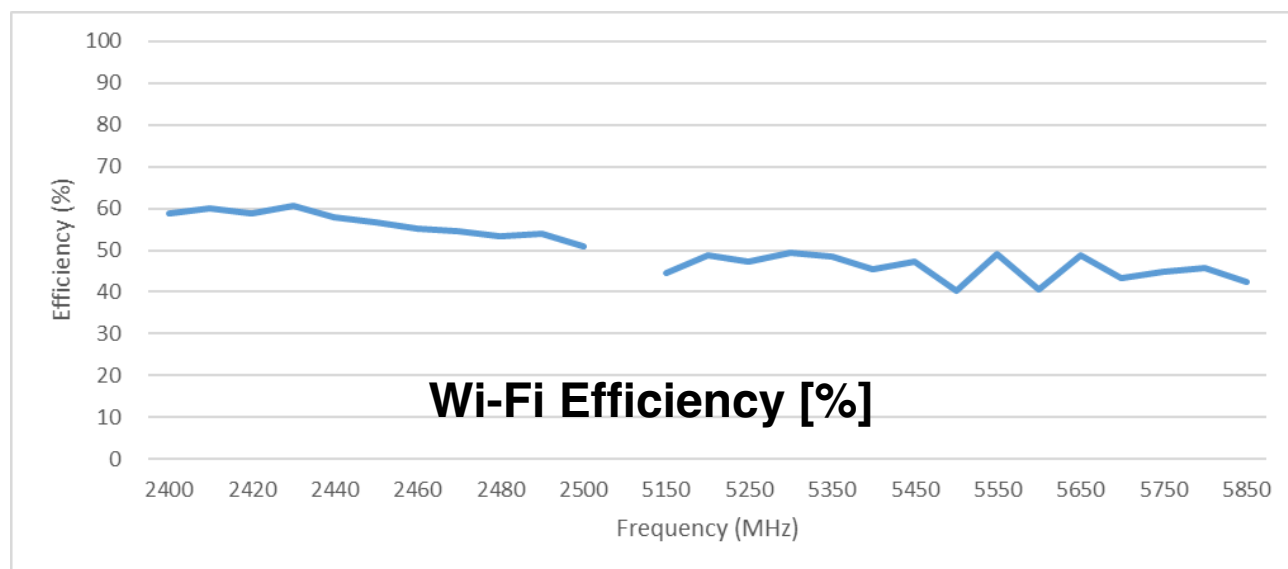


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Test setup, measurement performed in 3D anechoic chamber.

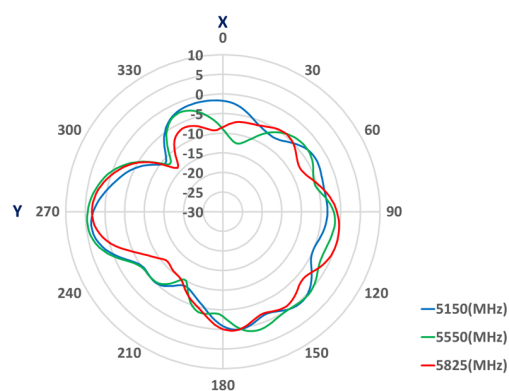
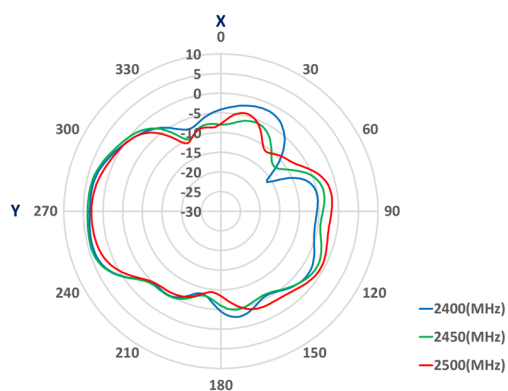


Blue background represents frequency response.

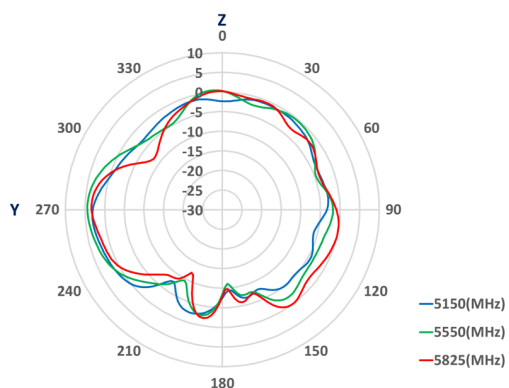
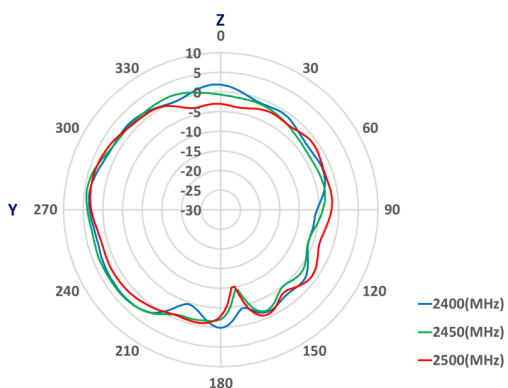


Radiation Pattern - Free Space

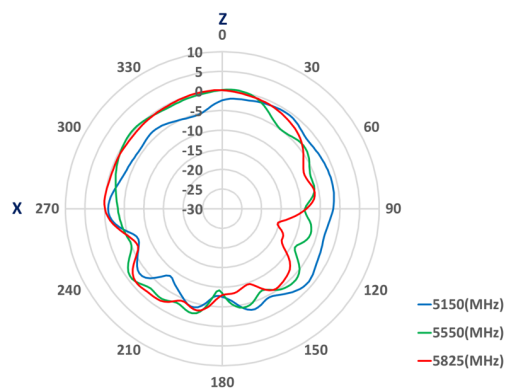
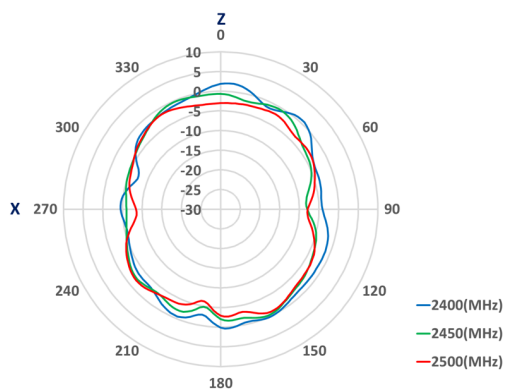
XY - Plane



YZ - Plane



XZ - Plane



Revisions				
Rev.	Description	Date	ECN	Approval
A	Initial Release	2023-05-31	ST0785-22-001-A-RA00	ATC

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