

Datasheet

GNSS

GNSS Active Timing Antenna

Features

This antenna is designed with high gain, Low Noise Amplifier (LNA) offers precision timing reference, with an industrial grade compact size weather-proof housing, certified with IP67.

Applications

- Beidou, GPS, Galileo, Glonass, GPS, GLBNA
- Military & security
- Asset tracking
- Navigation devices
- Location based services
- Fleet management
- Network synchronization and timing



GNSS Antenna



Electrical Specifications

Antenna Characteristics By Range Of Receiving Frequency

Frequency (MHz)	1176 ± 10	1561 ± 2	1575.42 ± 1	1602 ± 8
Return Loss (dB) @1176M / 1575M	< -10			
Gain (dBic) @Zenith at 70mm × 70mm ground	0 Typ.	1 Typ.	2 Typ.	3.5 Typ.
Efficiency (%) @Center Frequency	59	27	68	69
Axial Ration (dB) @1176M / 1575M	3 Typ.			
Polarization	RHCP			
Impedance (Ω)	50			

LNA Characteristics

Frequency (MHz)	1176 ± 10	1561 ± 2	1575 ± 1	1602 ± 8
Gain (dB) (+ 25 °C± 5°C)	27 ± 3	28 ± 3	28 ± 3	27 ± 3
Output Impedance (Ω)	50			
Output Return Loss (dB)	< -9.5			
Operation Voltage (V)	2.7~5 ; 3.3 Typ.			
Current Consumption (mA)@3.3v	Max:15 ; 10 Typ.			
Noise Figure (dB) (+ 25 °C± 5°C)	1 Typ.			

Total Characteristics

Frequency (MHz)	1176 ± 10	1561 ± 2	1575 ± 1	1602 ± 8
Gain (dBic) @Zenith	27 ± 3	29 ± 3	30 ± 3	30.5 ± 3
Return Loss (dB)	< -9.5			
Output Impedance (Ω)	50			

Mechanical Specifications

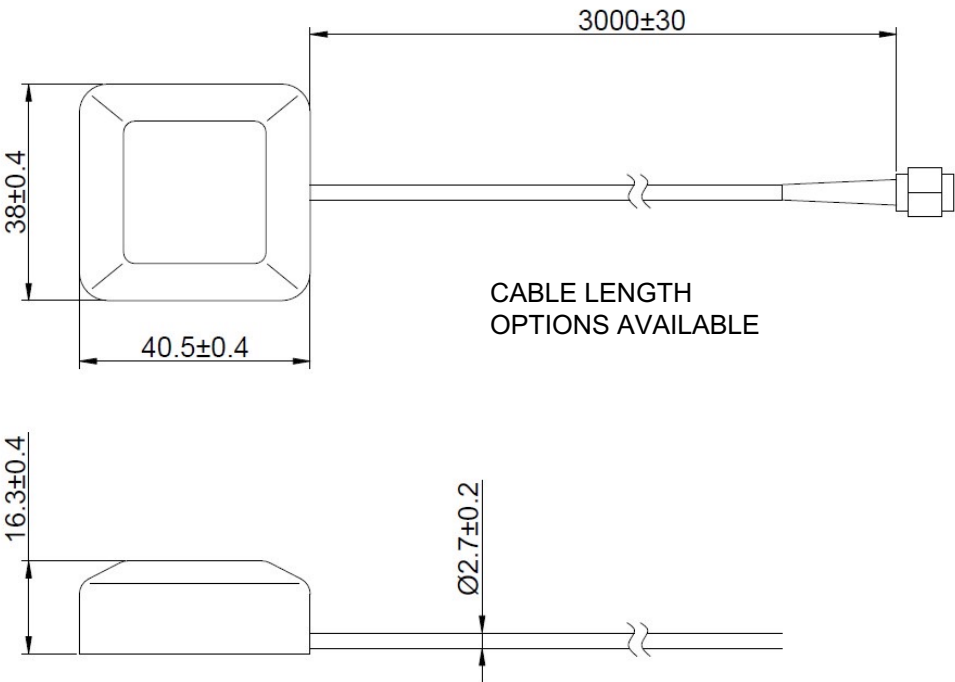
Mechanical	
Dimension (mm)	40.5 × 38.0 × 16.3
Material	PC+ABS
Connector Type	SMA (Plug)
Cable Type	RG-174
Mounting Type	Magnetic mount
Antenna Weight (g)	72.7

Environmental	
Temperature Range (°C)	-40 to 85
IP Rating	IP67

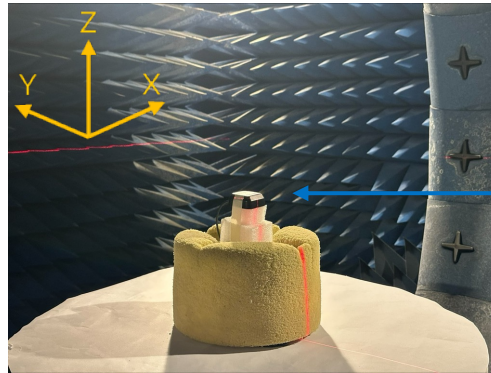
RoHS Compliant

Mechanical Drawing

Unit : mm

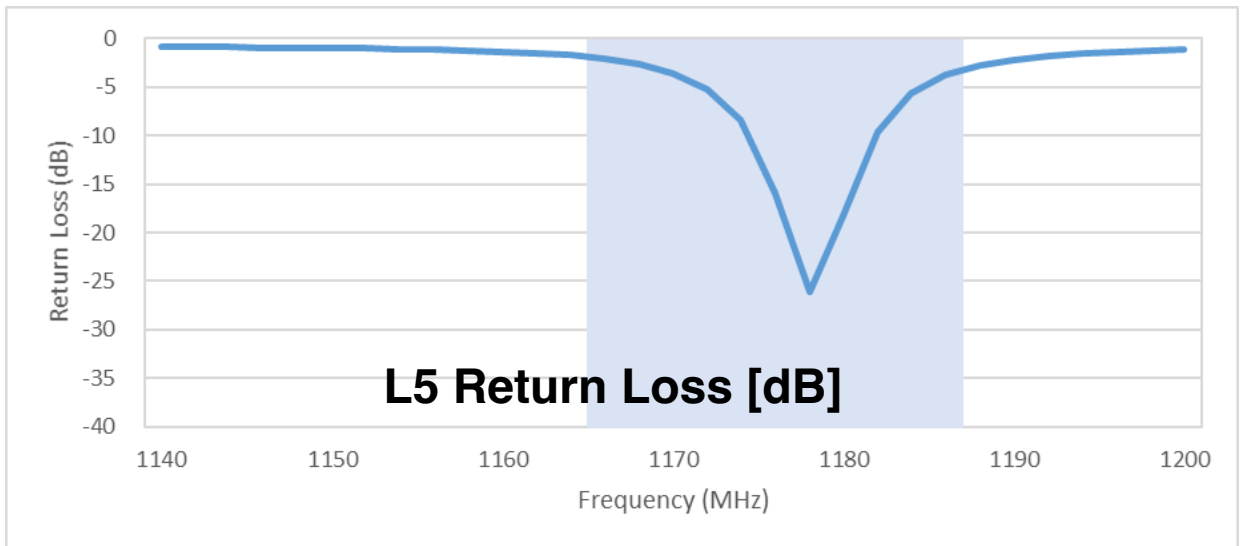


Charts In Free Space

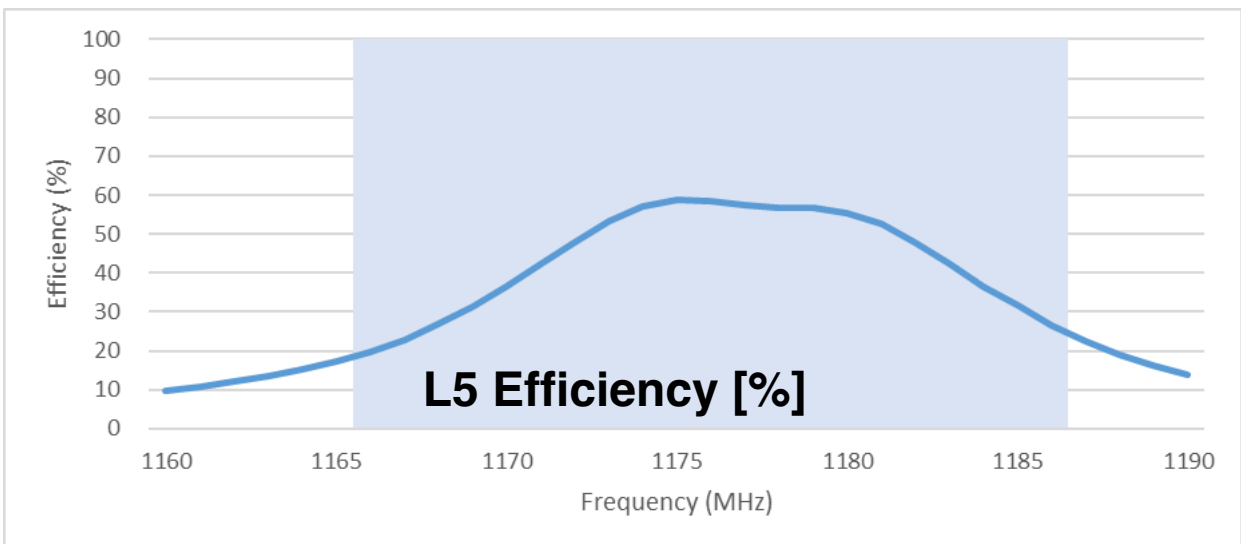


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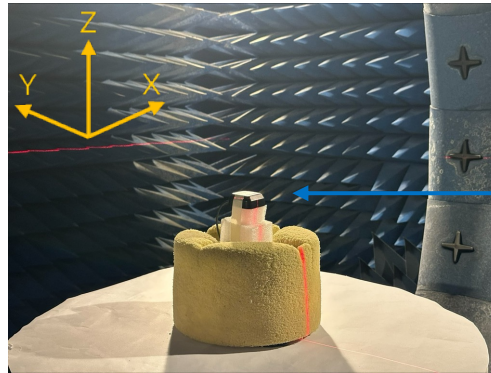
Test setup, measurement performed in 3D anechoic chamber.



Blue background represents frequency response.

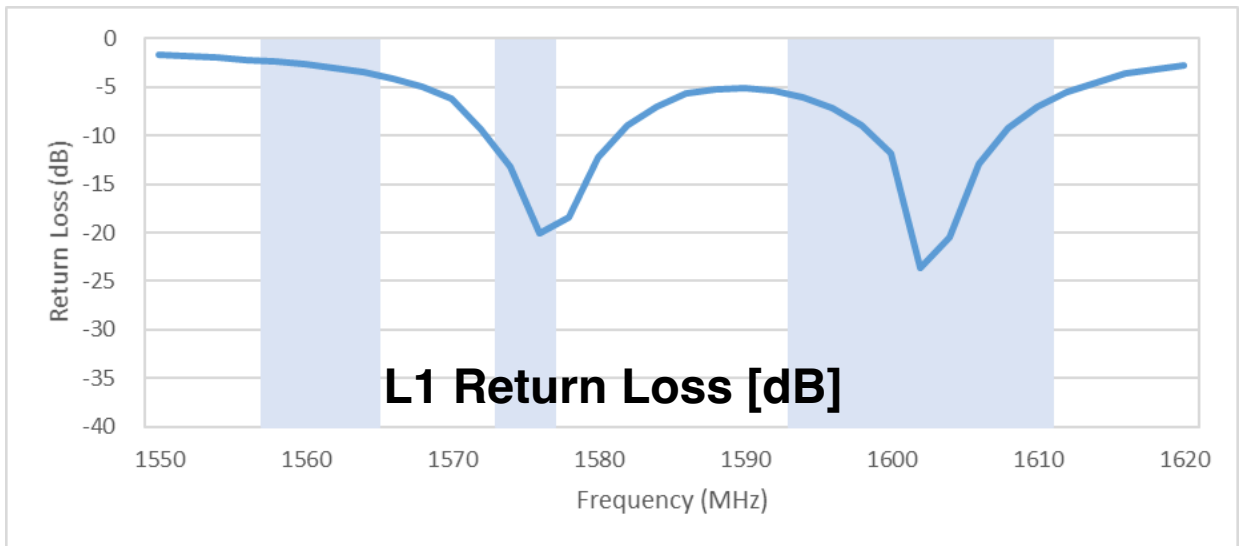


Charts In Free Space

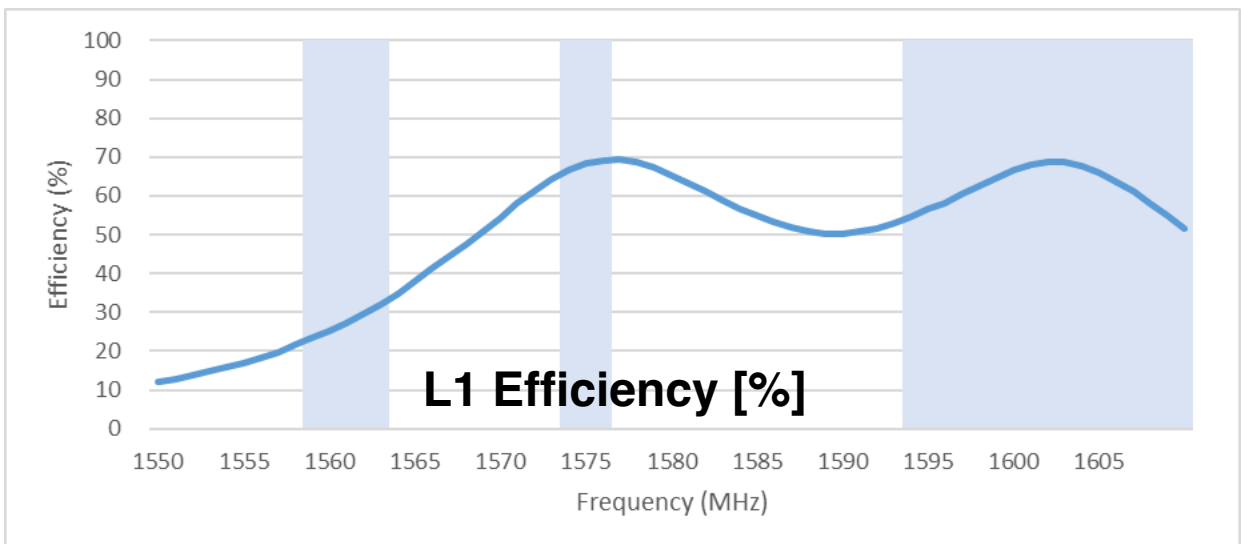


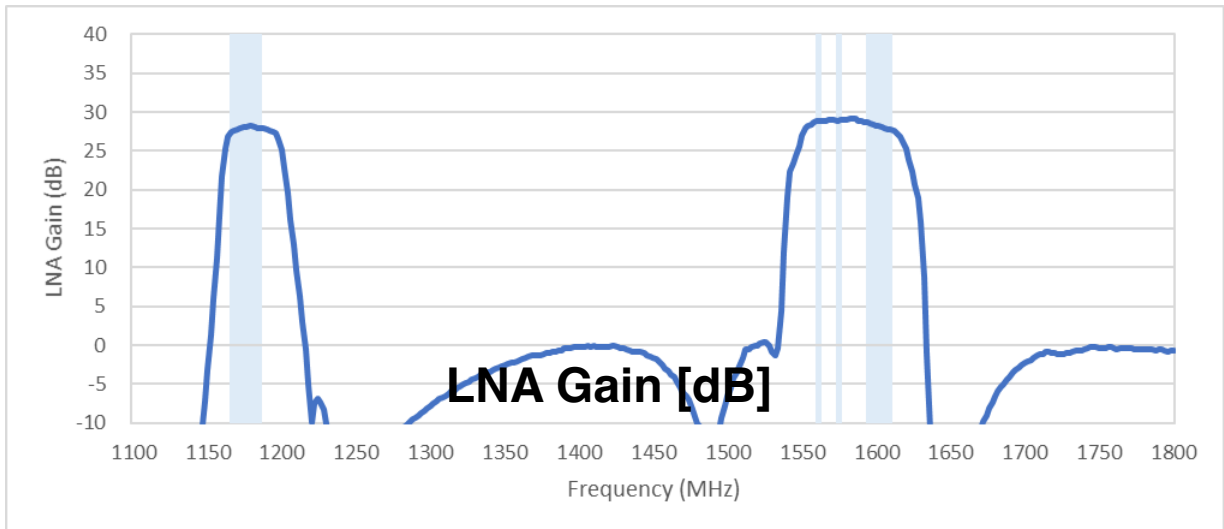
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Test setup, measurement performed in 3D anechoic chamber.



Blue background represents frequency response.

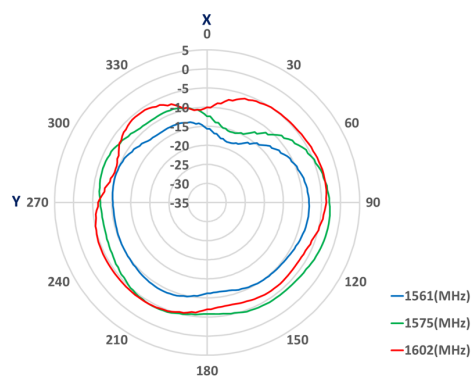
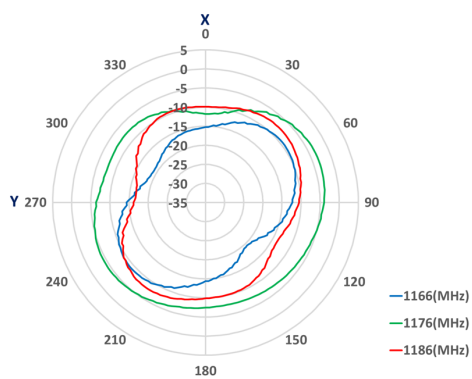




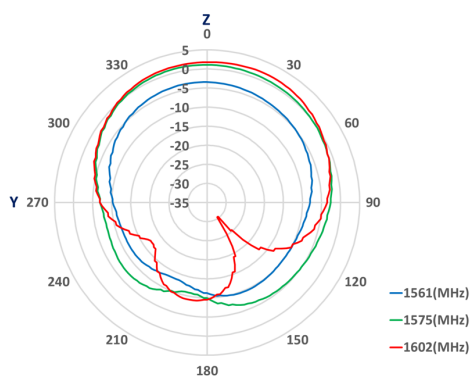
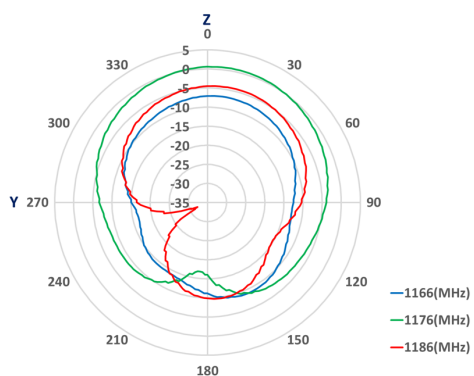
Blue background represents frequency response.

Radiation Pattern - Free Space

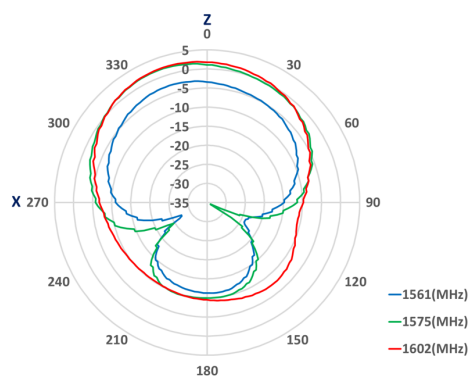
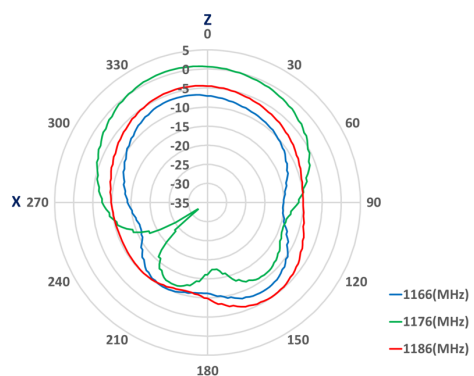
XY - Plane



YZ - Plane



XZ - Plane



Revisions				
Rev.	Description	Date	ECN	Approval
A	Initial Release	2023-12-20	ST0530-11-001-A-RA00	ATC

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