

## Datasheet

## GNSS Patch Antenna

Embedded

Features:

The patch antenna has much higher efficiency and small form factor, easy mounting with pin-connector, suitable for mounting inside device.

Applications:

GNSS enabled devices  
Portable Handsets  
Automotive Navigation  
Marine buoys  
Tracking and Positioning



47.7 × 47.7 × 8.0 mm

GNSS Antenna



## Electrical Specifications

## Antenna Characteristics By Range Of Receiving Frequency

Frequency (MHz)	1176 ± 12	1561 ± 2	1575.42 ± 1	1602 ± 5
Return Loss (dB)	< -10			
Gain (dBic) @Zenith at 70mm × 70mm ground	3.3	-2.4	3.0	4.2
Efficiency (%) @Center Frequency	47	30	73	54
Axial Ration (dB) @Center Frequency	3 Typ.			
Polarization	RHCP			
Impedance (Ω)	50			

## Mechanical Specifications

## Mechanical

Dimension (mm)	47.7 × 47.7 × 8.0
Material	Ceramic
Weight (g)	57.0

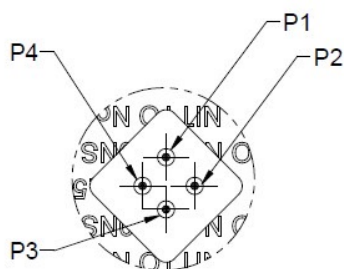
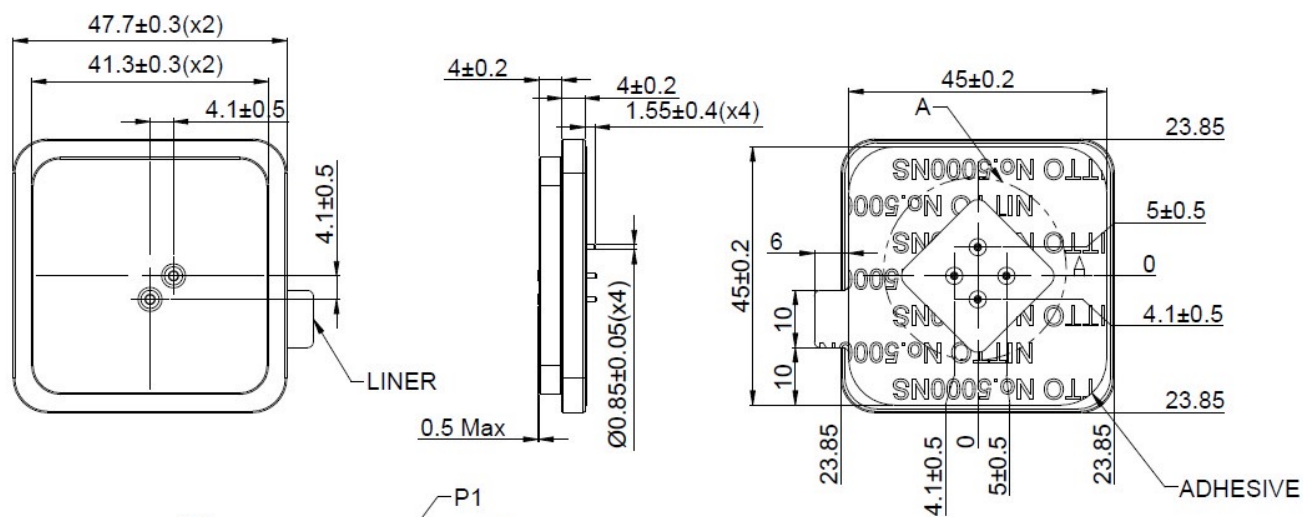
## Environmental

Temperature Range (°C)	-40 to 105
Humidity	Non-condensing 40°C 95% RH

RoHS Compliant

## Mechanical Drawing

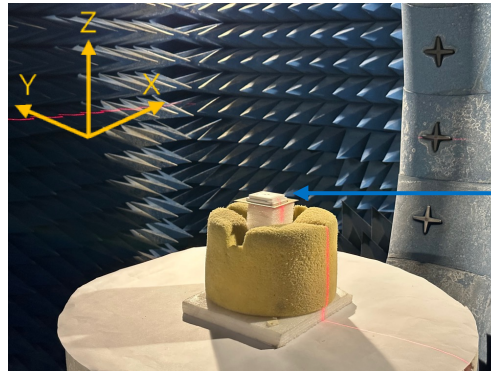
Unit : mm



DETAIL "A"

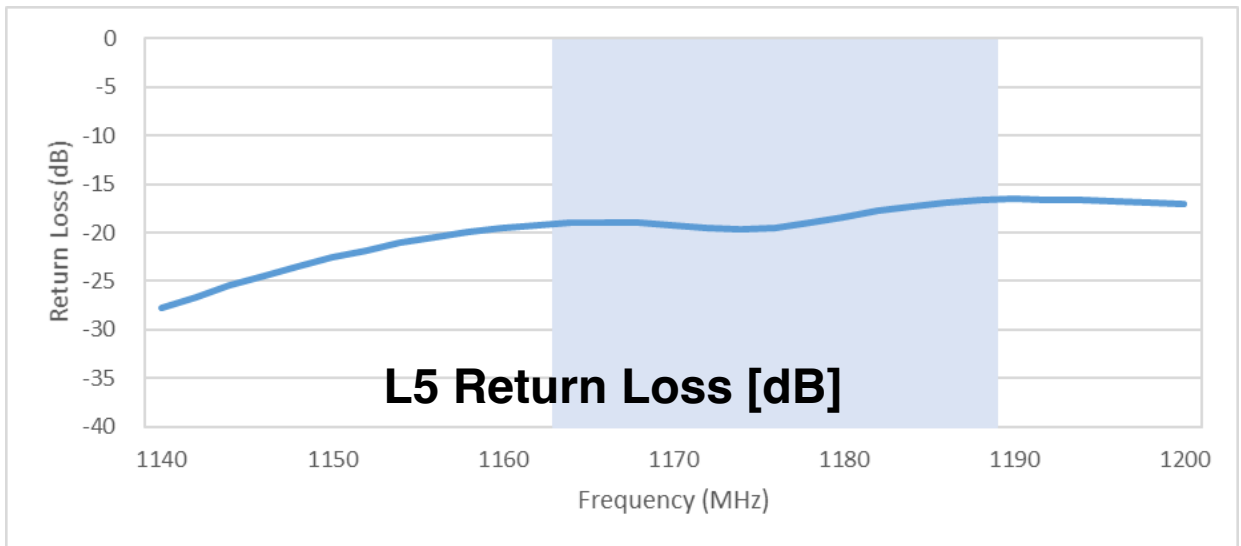
P1	L5 ∠0°
P2	L5 ∠-90°
P3	L1 ∠0°
P4	L1 ∠-90°

## Antenna Testing Includes Evaluation Board

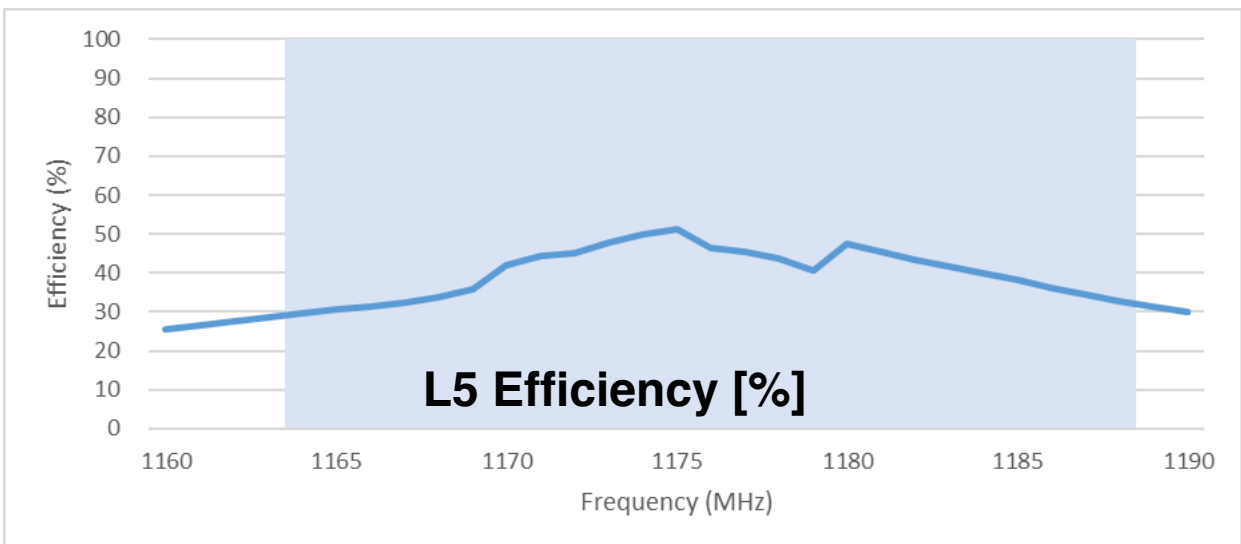


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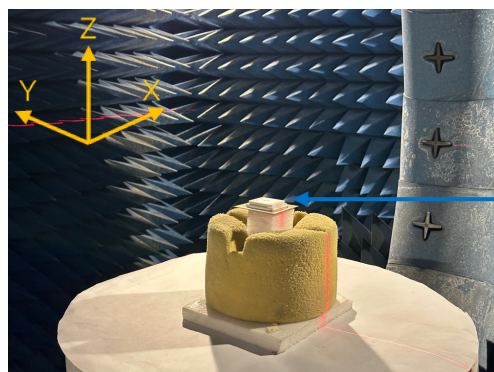
Test setup, measurement performed in 3D anechoic chamber.



Blue background represents frequency response.

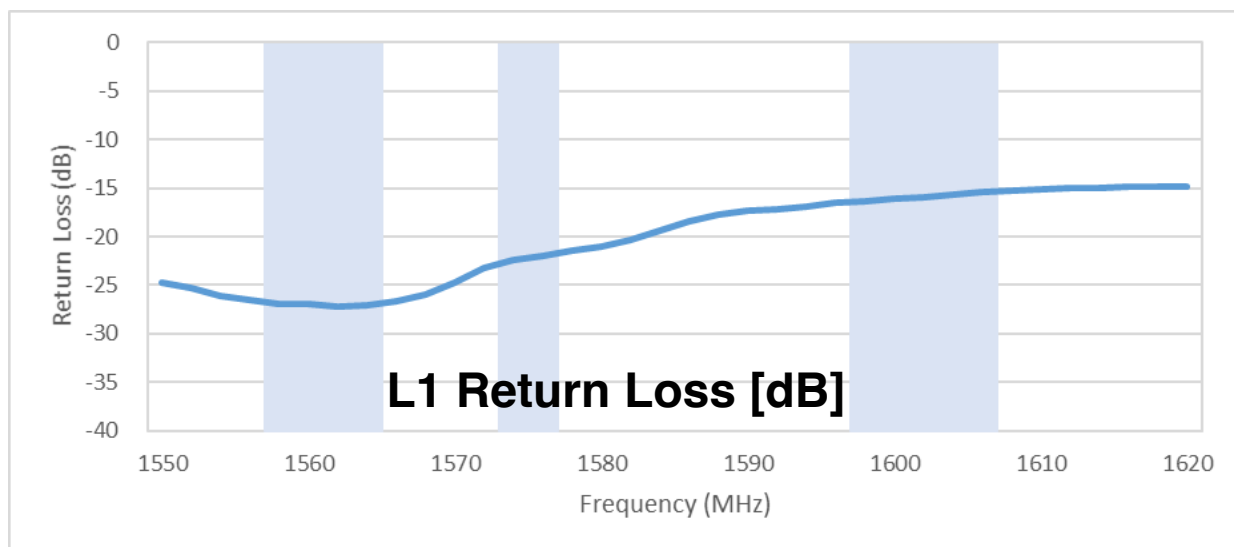


## Antenna Testing Includes Evaluation Board

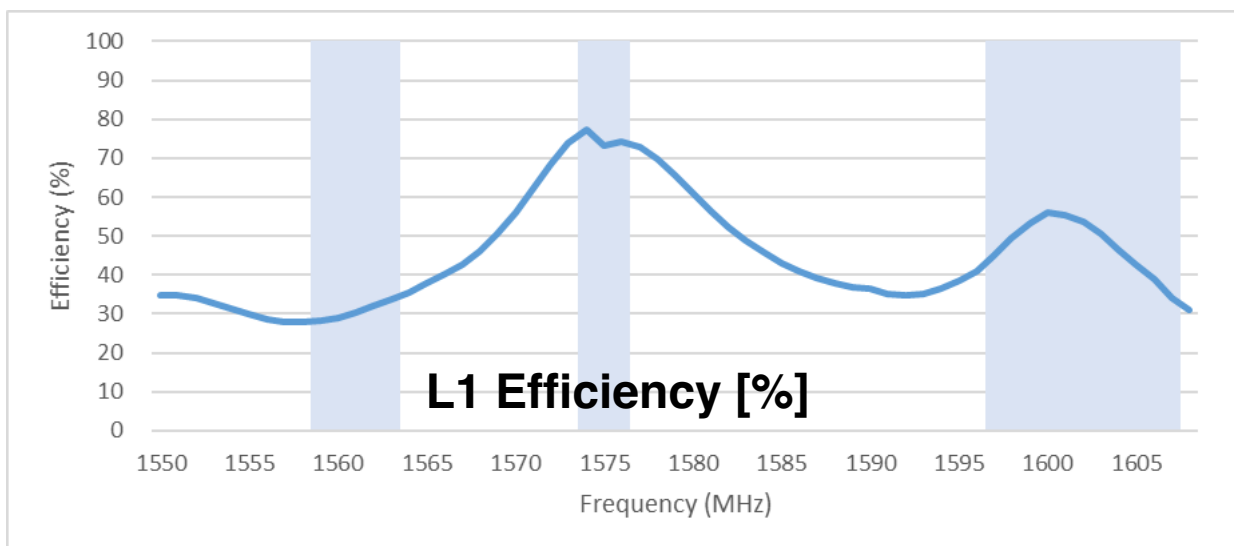


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Test setup, measurement performed in 3D anechoic chamber.

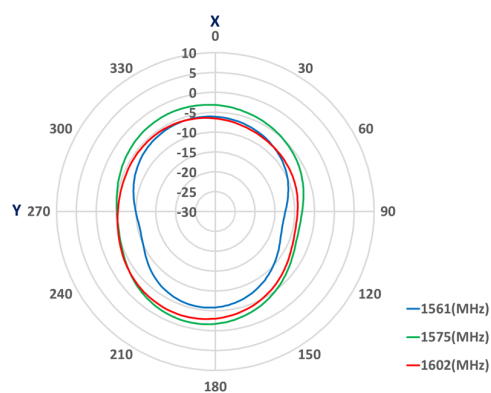
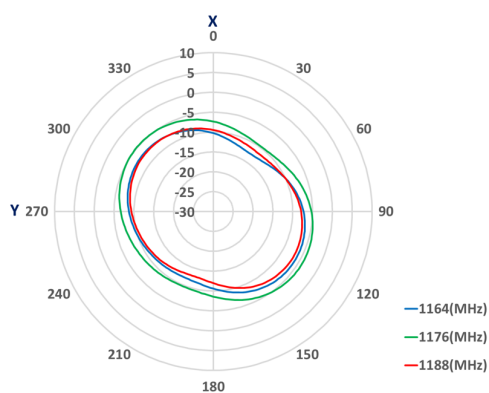


Blue background represents frequency response.

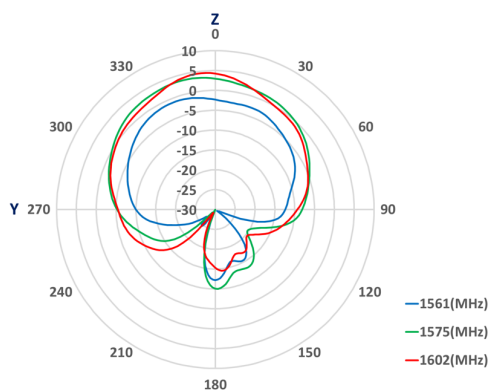
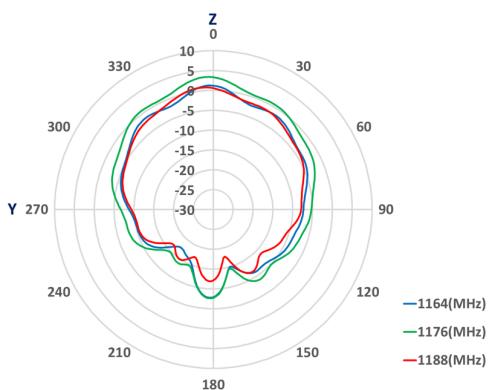


## Radiation Pattern - Free Space

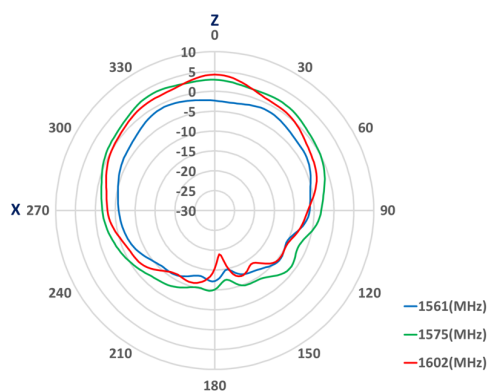
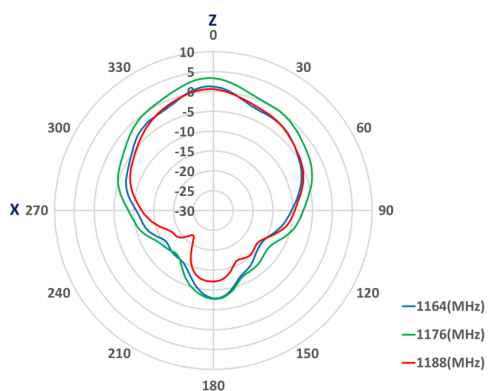
## XY - Plane



## YZ - Plane



## XZ - Plane



Revisions				
Rev.	Description	Date	ECN	Approval
A	Initial Release	2023-09-12	ST0543-11-N05-U-RA00	ATC

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