

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



35.0 × 35.0 × 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) @Center Frequency	< -10			
Gain (dBic) @Zenith at 70mm × 70mm ground	0.8	1.4	3.6	0.6
Efficiency (%) @Center Frequency	40	50	70	30
Axial Ration (dB) @Center Frequency	3 Typ.			
Polarization	RHCP			
Impedance (Ω)	50			

Mechanical Specifications

Mechanical

Dimension (mm)	35.0 × 35.0 × 8.0
Material	Ceramic
Weight (g)	28.0

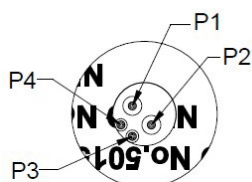
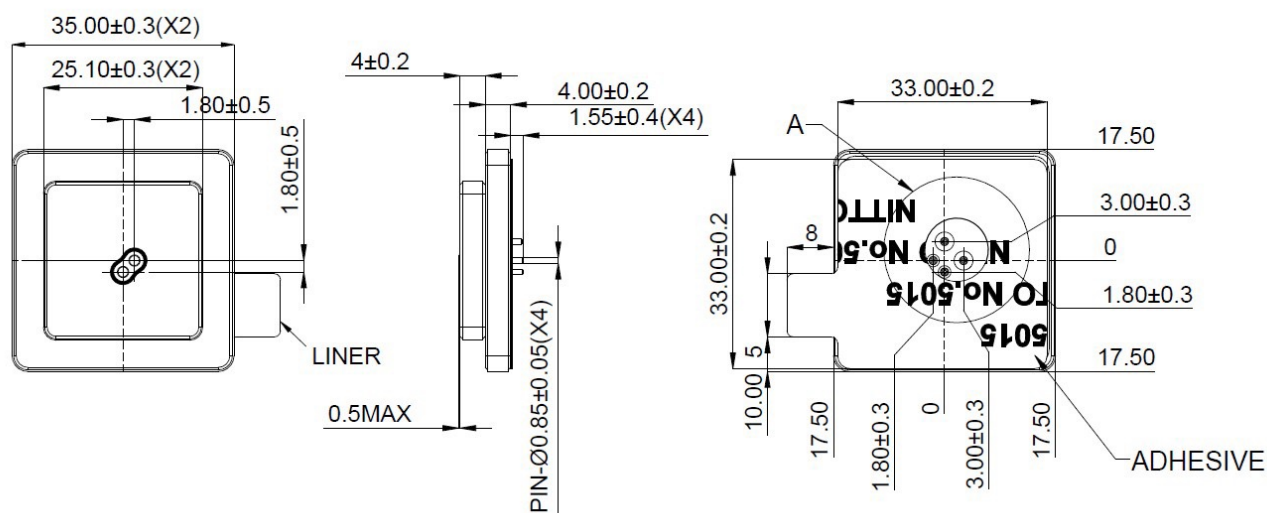
Environmental

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

RoHS Compliant

Mechanical Drawing

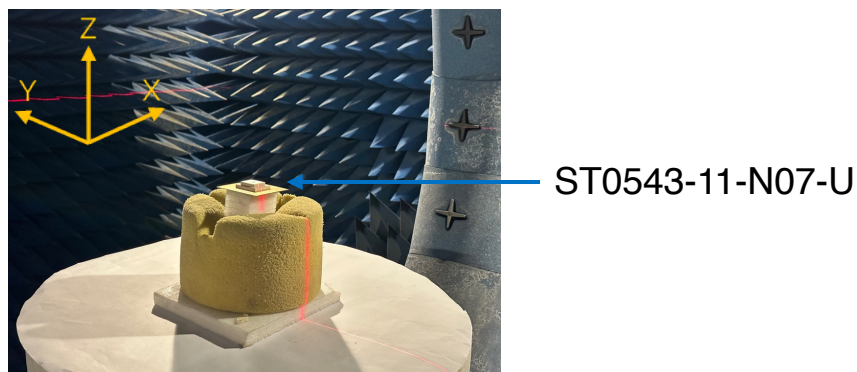
Unit : mm



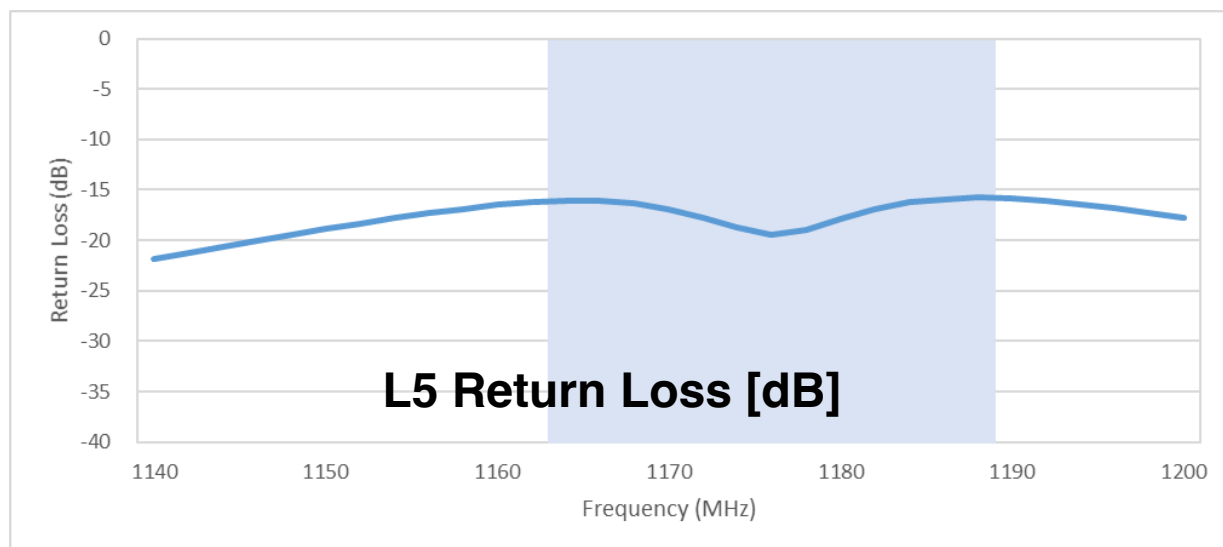
DETAIL "A"

P1	L5 $\angle 0^\circ$
P2	L5 $\angle -90^\circ$
P3	L1 $\angle 0^\circ$
P4	L1 $\angle -90^\circ$

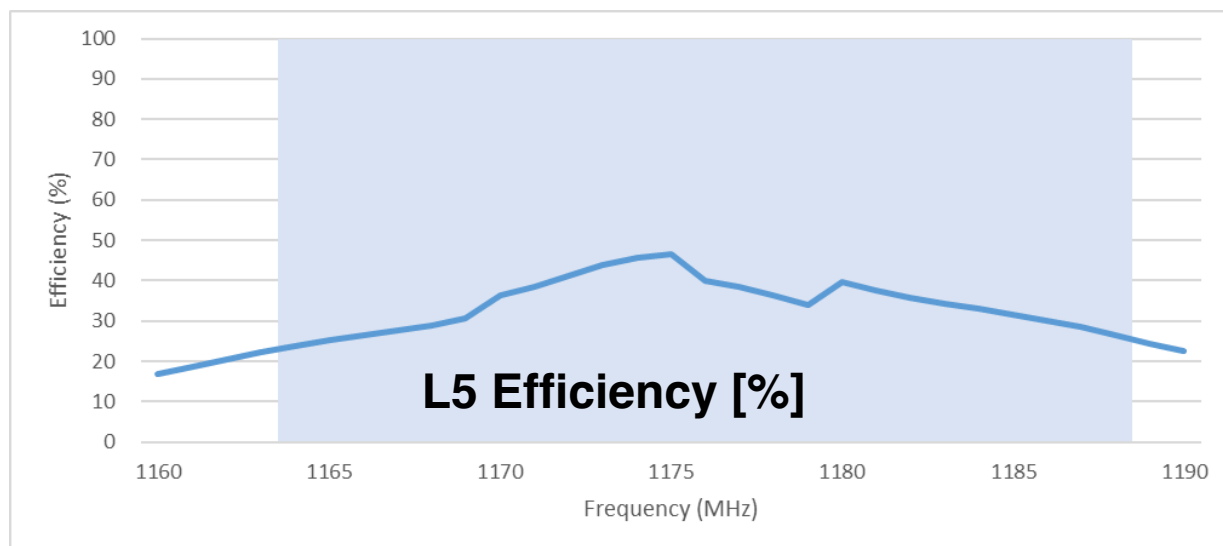
Antenna Testing Includes Evaluation Board



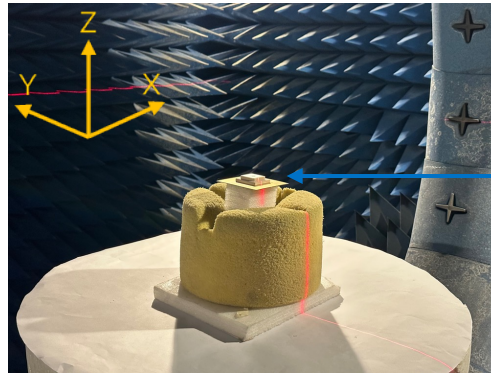
Test setup, measurement performed in 3D anechoic chamber.



Blue background represents frequency response.

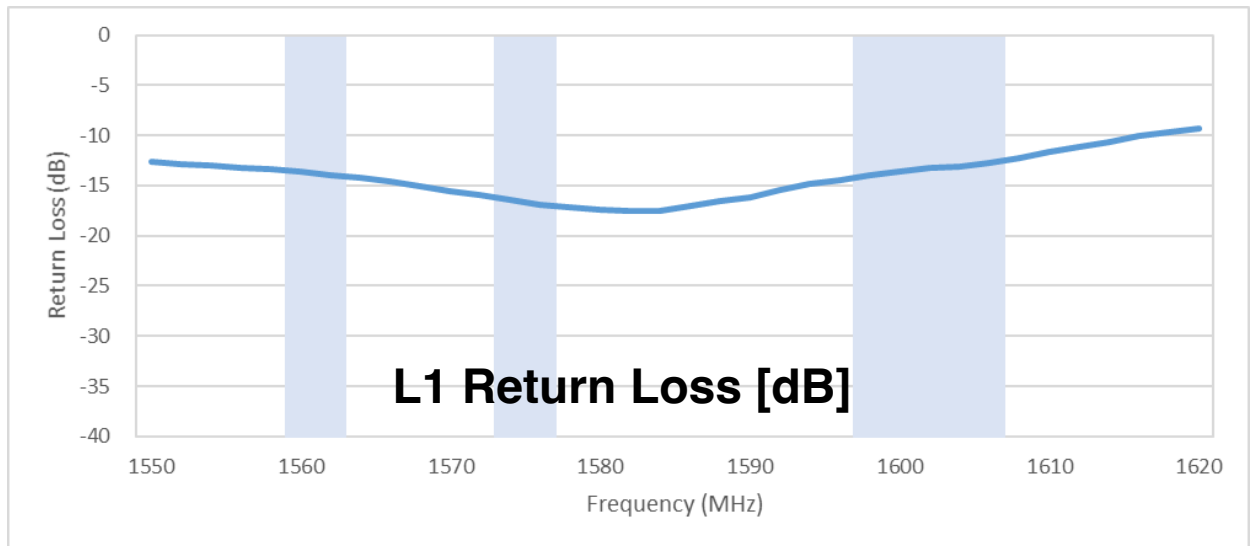


Antenna Testing Includes Evaluation Board

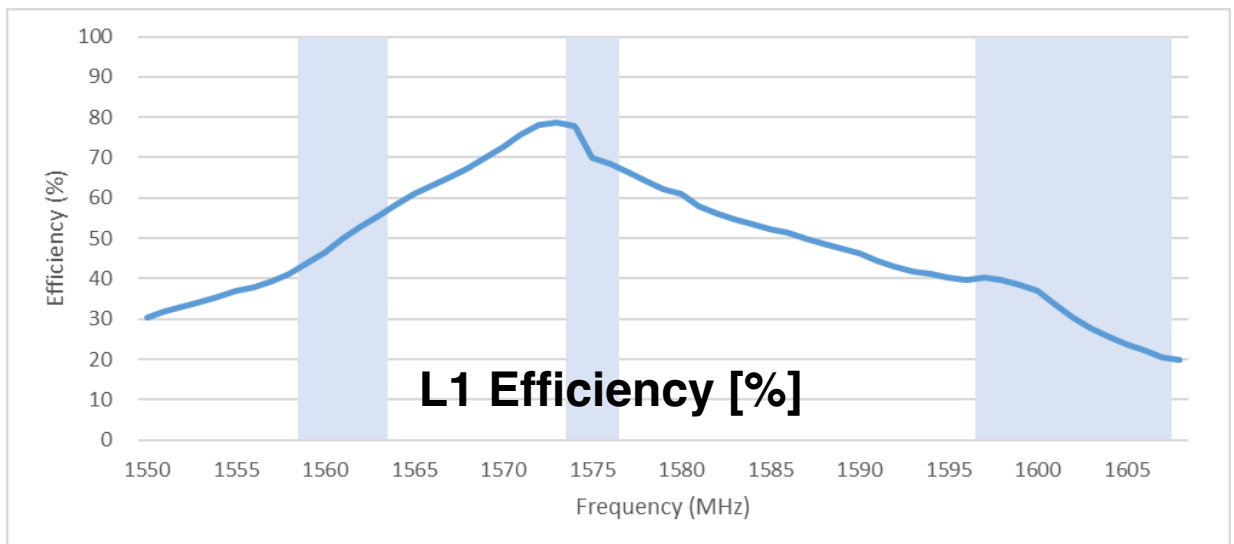


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Test setup, measurement performed in 3D anechoic chamber.

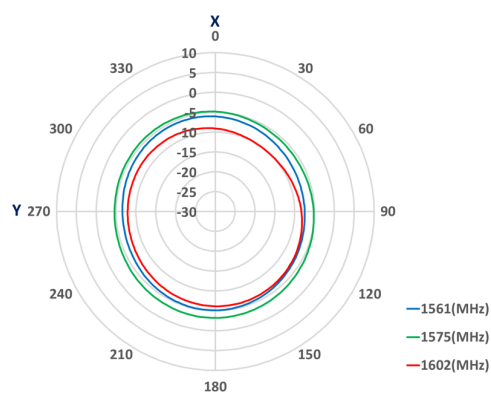
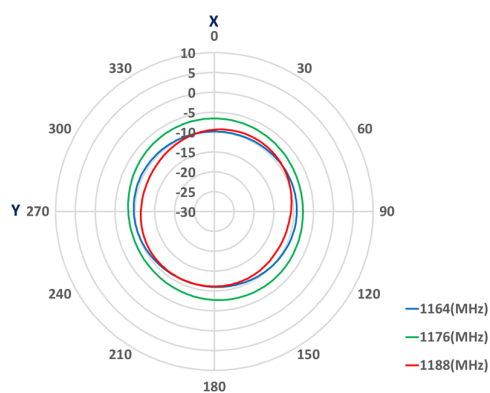


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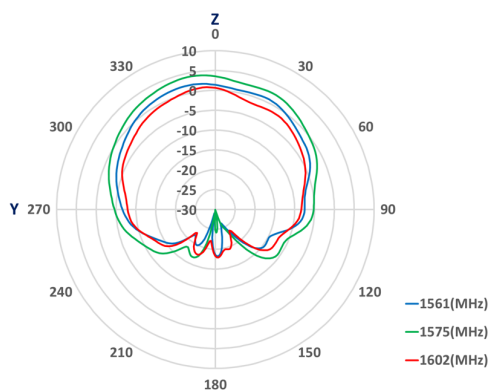
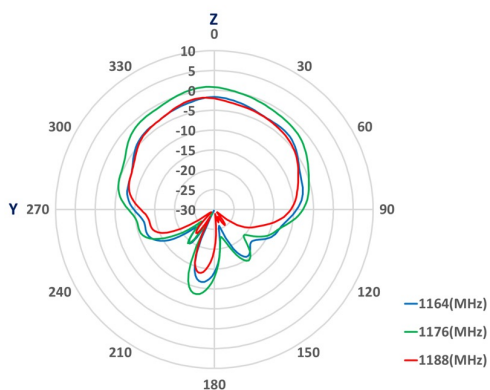


Radiation Pattern - Free Space

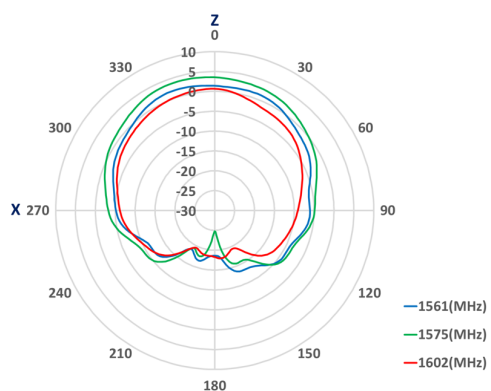
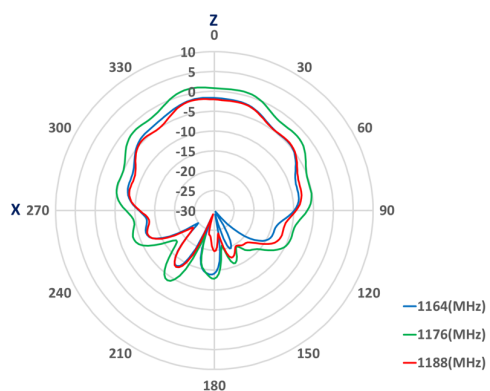
XY - Plane



YZ - Plane



XZ - Plane



Revisions				
Rev.	Description	Date	ECN	Approval
A	Initial Release	2023-09-19	ST0543-11-N07-U-RA00	ATC

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