

Part No. 9001157

GPS / GLONASS SMT Patch Antenna

1575 MHz, 1610 MHz

Supports: Tracking, Smart Home, Agriculture, Healthcare, Wearables, Industrial Devices



KYOCERA AVX series of GPS / GLONASS SMT Patch Antennas deliver on the key needs of device designers for higher functionality and performance in embedded designs. These innovative antennas provide compelling advantages for GPS / GLONASS applications such as vehicle tracking.

Best in Class Performance

SMT patch antennas are designed to maintain high efficiency in a variety of device configurations while allowing automation during the assembly process. High selectivity eliminates the need for additional filters and frees up board space.

Electrical Specifications

Typical Characteristics, on 70 x 70 mm ground plane

Frequency (MHz)	1563-1587	1593-1610
Peak Gain	3.8 dBi	4.3 dBi
Efficiency	65%	71%
VSWR	< 3.2:1	< 5.8:1
Gain @ Zenith	3.5 dBic	4.2 dBic
Polarization	Elliptical	
Power Handling	2 Watt	
Feed Point Impedance	50 Ω unbalanced	
Radiation Pattern	Directional	

GPS / GLONASS SMT Patch Antenna

1563-1587 MHz
1593-1610 MHz

KEY BENEFITS

Reduced Costs and Time-to-Market

Standard antenna eliminates design fees and cycle time associated with a custom solution; getting products to market faster.

Quicker Time-to-Market

By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met.

Environmental Compliance

Products are the latest RoHS version compliant.

APPLICATIONS

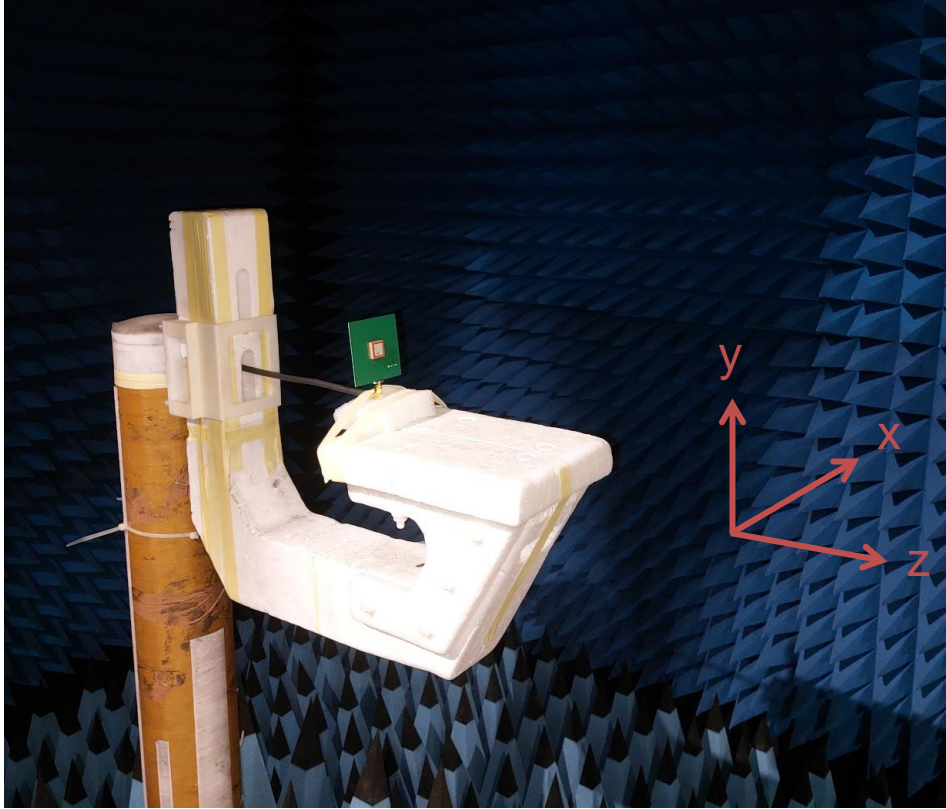
- Embedded design
- Telematics
- Tracking
- Healthcare
- M2M, Industrial
- devices
- Smart Grid
- Navigation
- OBD-II

Mechanical Specifications & Ordering Part Number

Ordering Part Number	9001157
Size (mm)	18.0 x 18.0 x 4.0
Mounting (mm)	SMT
Weight (grams)	6
Packaging	Packing in T&R
Demo Board	9001157-01

GPS / GLONASS SMT Patch KYOCERA AVX Antenna Specifications.
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

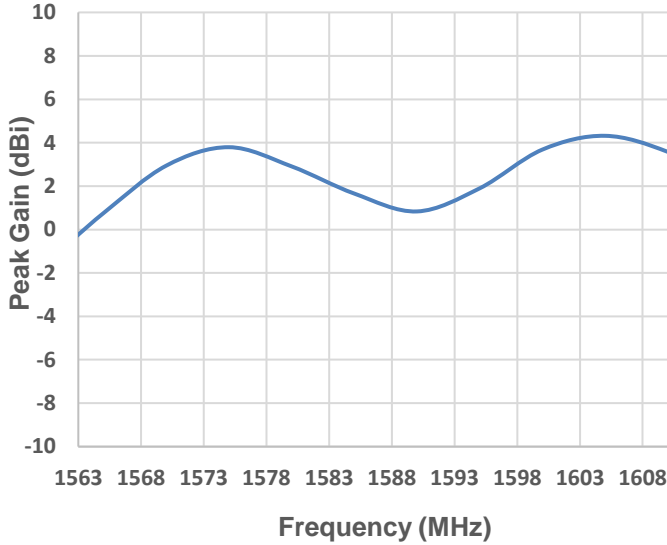
Test Setup



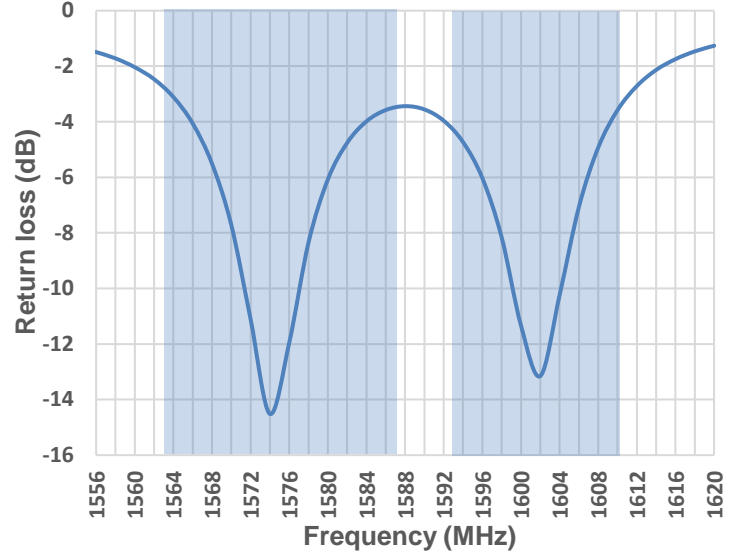
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Peak Gain, VSWR, Efficiency and Gain @ Zenith Plots
 Typical Characteristics, on 70 x 70 mm ground plane

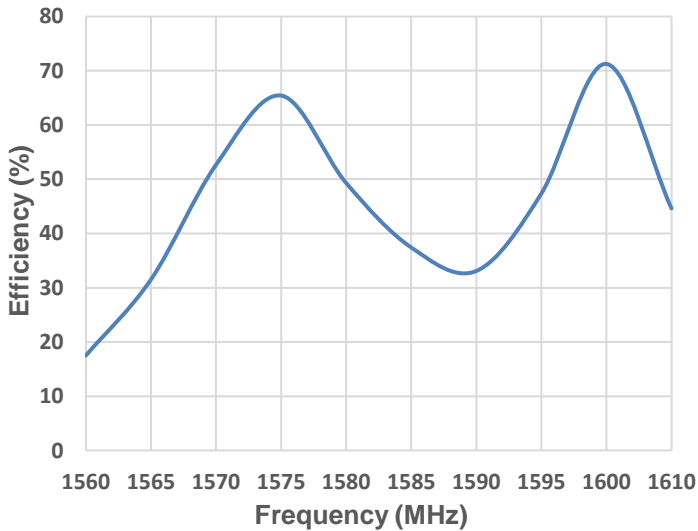
Peak Gain (1563 – 1610 MHz)



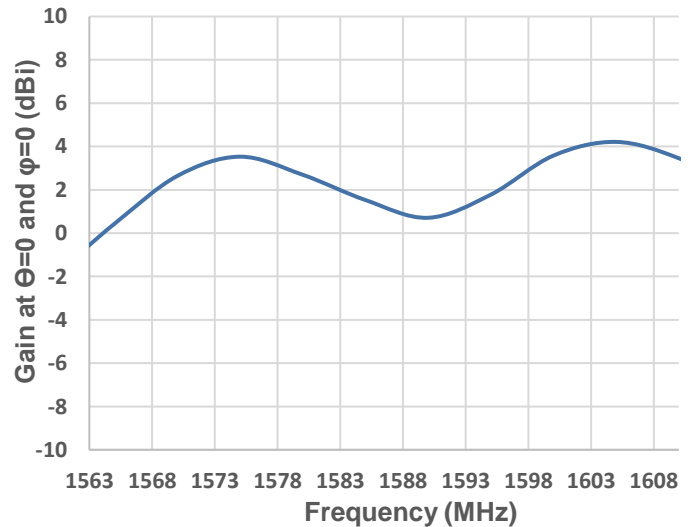
Return Loss (1563 - 1610MHz)



Efficiency (1563 – 1610 MHz)

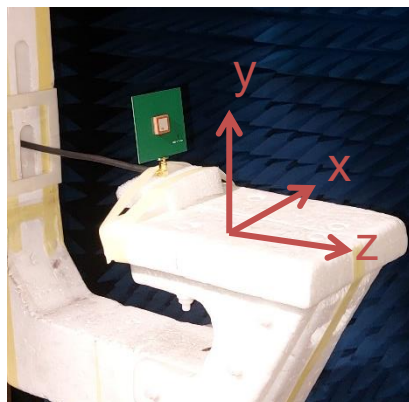


Gain at Zenith (1563 – 1610 MHz)

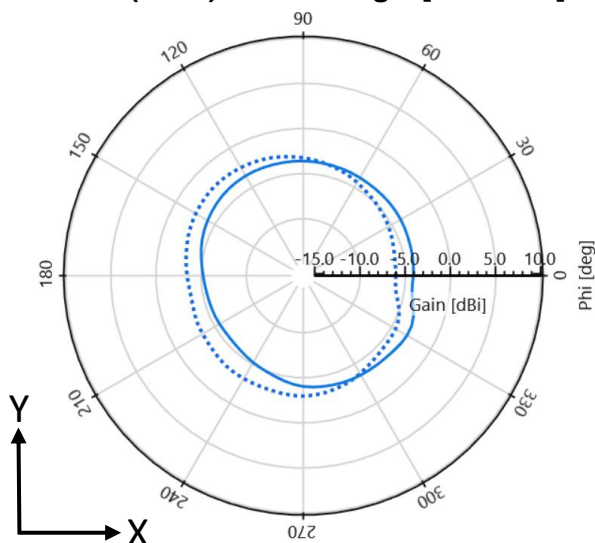


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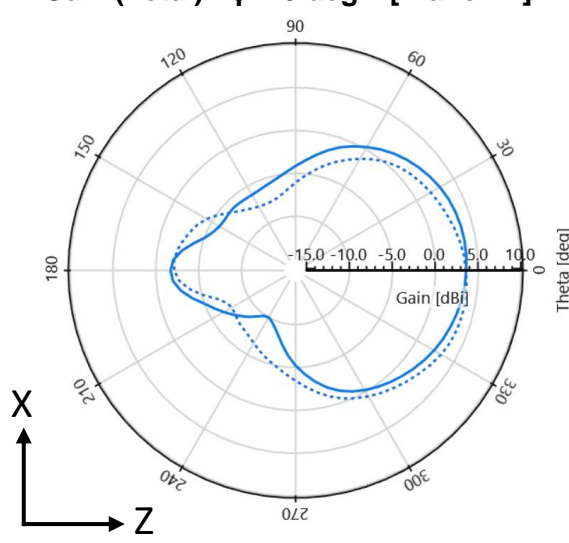
Antenna Radiation Patterns
 Measured at 1575-1600 MHz



Gain (Total) - $\Theta = 90$ deg - [Plane XY]

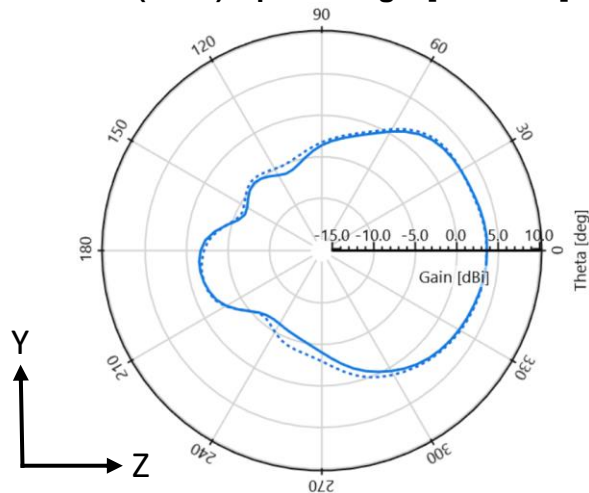


Gain (Total) - $\phi = 0$ deg - [Plane XZ]



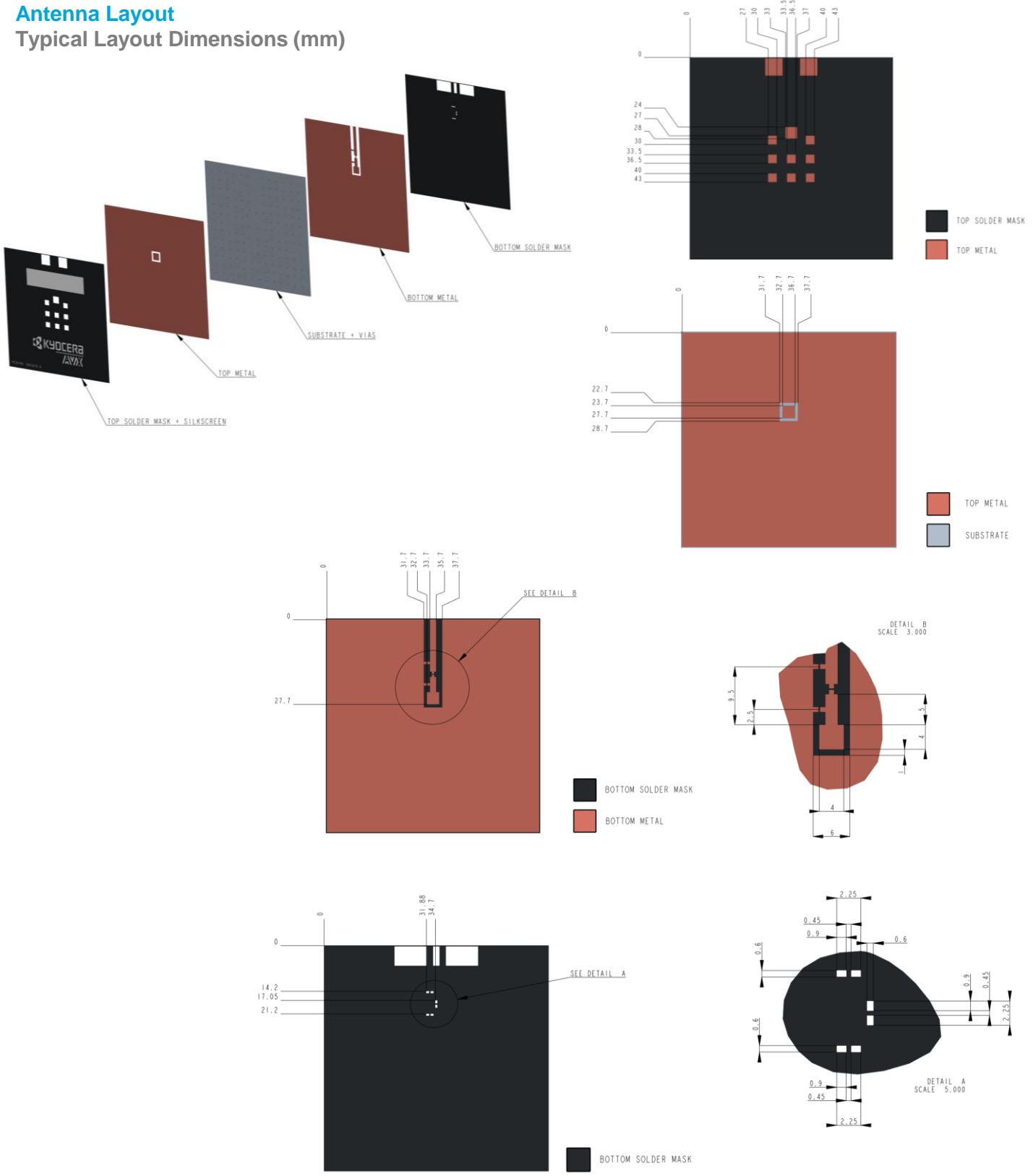
Gain (Total) - $\phi = 90$ deg - [Plane YZ]

--- 1575 MHz
 — 1600 MHz



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Antenna Layout
 Typical Layout Dimensions (mm)

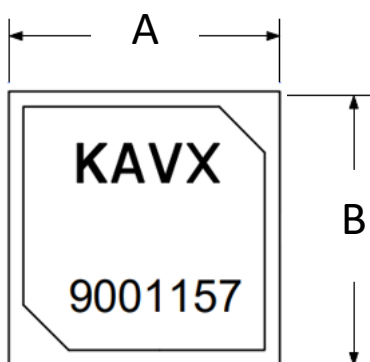


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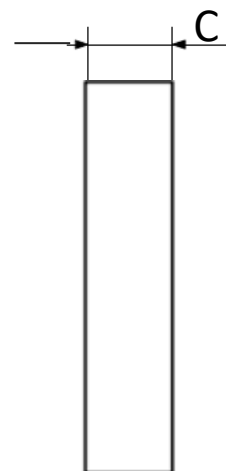
Mechanical Dimensions

Typical antenna dimensions, in mm.

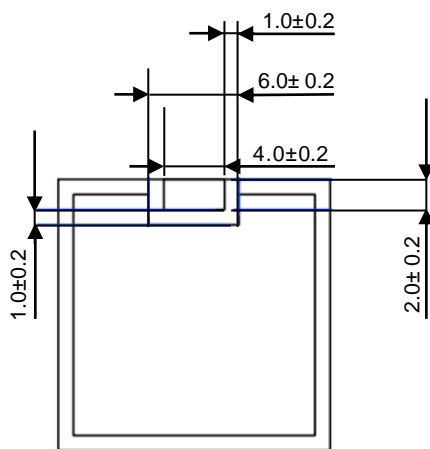
Part Number	A	B	C
9001157	18.0 ± 0.2	18.0 ± 0.2	4.00 ± 0.2



Top View



Side View



Bottom View

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Antenna Demo Board (9001157-01)

Demo Board Front/Back View (mm)

