

Part No. 9003212

GPS L1/L5 Patch Antenna (Active)

1164 MHz - 1214 MHz , 1559 MHz – 1610 MHz

Supports: GNSS systems, Global antenna embedded systems, Satellite positioning systems



KYOCERA AVX series of Patch Antennas deliver on the key needs of device designers for higher functionality and performance in IoT environment.

This Stacked Patch Active GPS Antenna covers L1/L5 bands. This antenna can easily be mounted into devices via its cable with MHF connector.

GPS L1/L5 Patch Antenna (Active)

1164 MHz -1189 MHz (GPS L5)
1559 MHz – 1610 MHz (GPS L1)

KEY BENEFITS

Quicker Time-to-Market

Standard part means fewer design changes with, simple implementation

Best in Class Performance

External antennas are designed to maintain high efficiency in a variety of device configurations

Great Flexibility

Standard connector to makes easy set-up

Environmental Compliance

Products are the latest RoHS version compliant.

APPLICATIONS

- Telematics
- M2M / IoT
- Industrial devices
- Security (Defense, Marine)
- Geo-tracking
- Autonomous Vehicles
- Agriculture
- Metering
- RTK
- Navigation Devices
- Vehicle tracking/fleet management system

Electrical Specifications

Typical Characteristics antenna measured in Free Space with a cable of 100 mm

Frequency (MHz)	1164 – 1189	1559 – 1610
VSWR	2	2
Peak Gain	27 dBi	32 dBi
Gain Zenith	27 dBi	32 dBi
Axial Ratio	10 dB	7 dB

Mechanical Specifications & Ordering Part Number

Ordering Part Number	9003212
Dimensions (mm)	25 x 25 x 12.12
Mounting Type	Adhesive (TESA 4965)
Connector Type	IPEX MHFI
Cable length	100
Weight (grams)	23
Packaging	Tray

GPS L1/L5 KYOCERA AVX Active Patch Antenna Specifications.
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

Filter/ LNA Electrical Summary

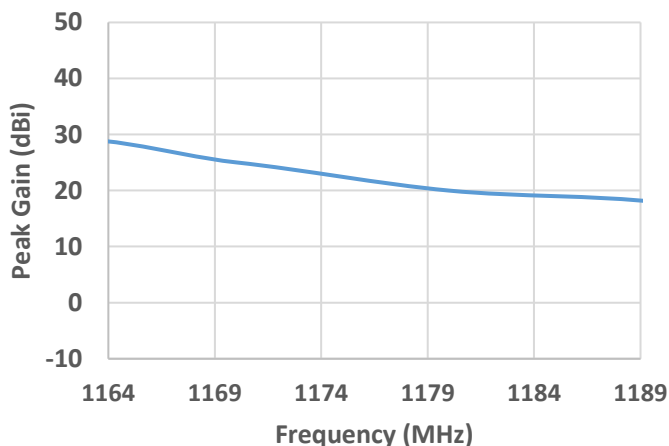
Typical performance measured in Free Space

Bands (MHz)	1164 - 1189	1559 – 1610
LNA/ Filter Gain	30.0 ± 3.0 dB	30.0 ± 3.0 dB
Operation Voltage (Vcc)	3.0 ~ 5.0 V	3.0 ~ 5.0 V
Current (lin)	24.0 ± 3.0 nA	24.0 ± 3.0 nA
Output VSWR	2.0 typ	2.0 typ
Operation Temperature	-40~ +85 °C	-40~ +85 °C

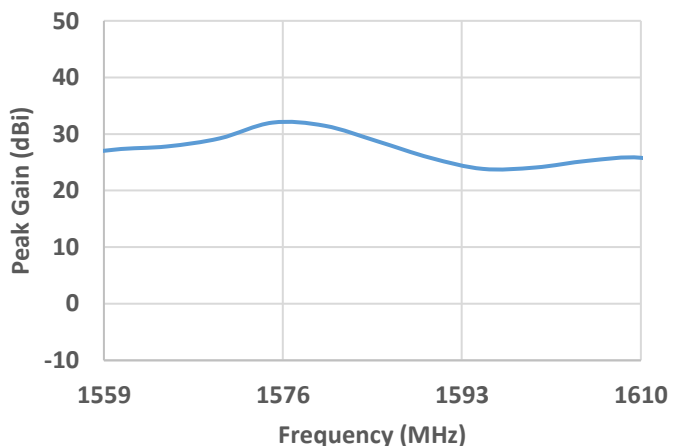
Peak Gain and Efficiency

Typical performance measured in Free Space

Peak Gain (1164-1189 MHz)



Peak Gain (1559-1610 MHz)

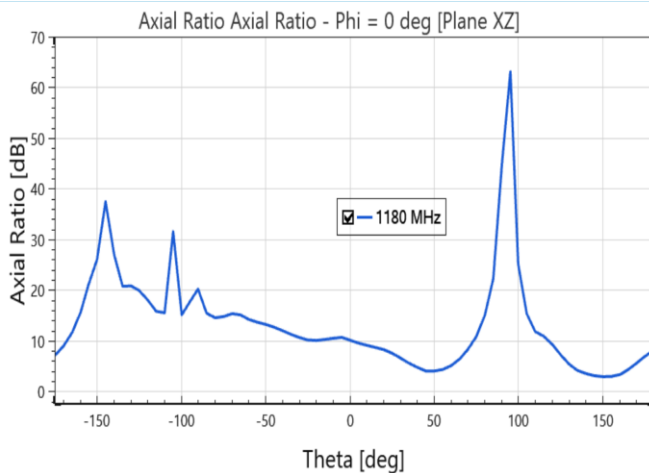


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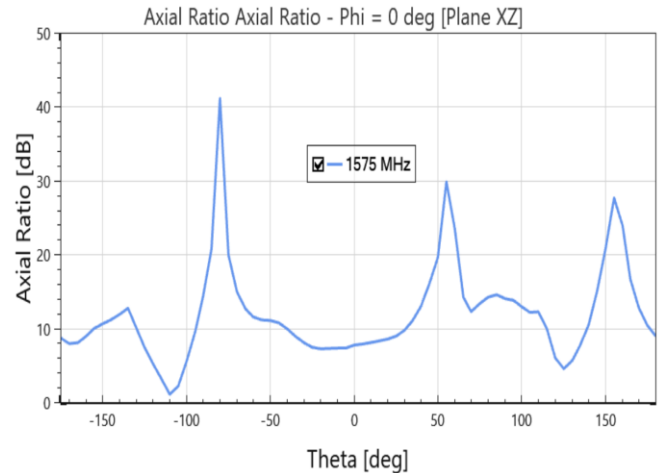
Gain Zenith Data, Axial Ratio Data

Typical performance measured in Free Space

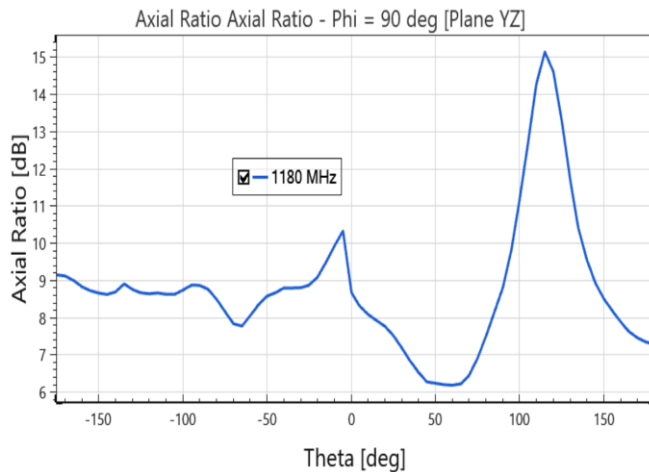
Axial Ratio Data (1164 -1189 MHz) - 0 deg



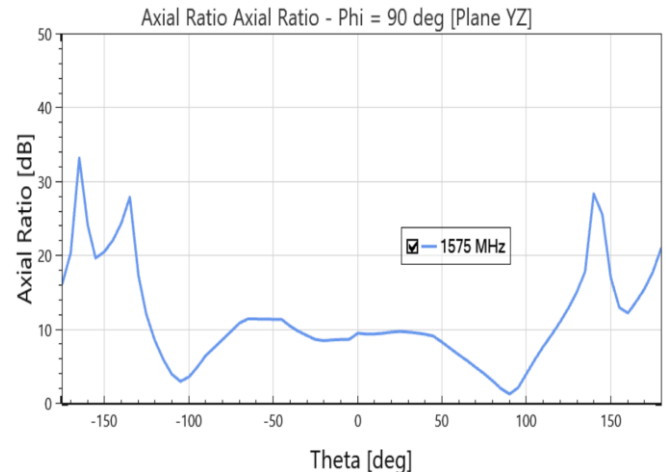
Axial Ratio Data (1559 -1610 MHz) - 0 deg



Axial Ratio Data (1164 -1189 MHz) - 90 deg



Axial Ratio Data (1559 -1610 MHz) - 90 deg

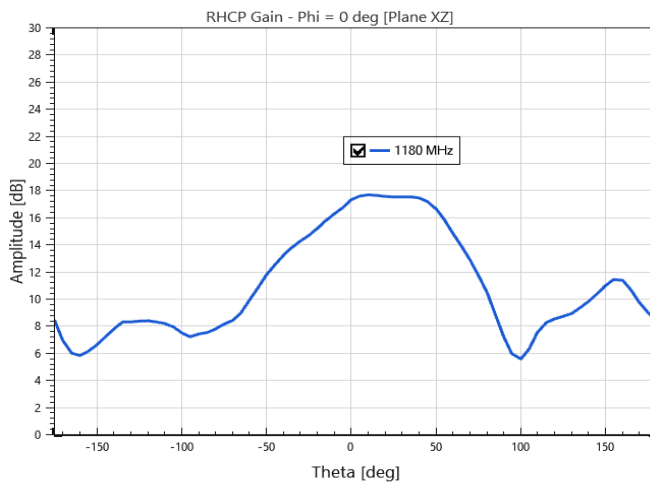


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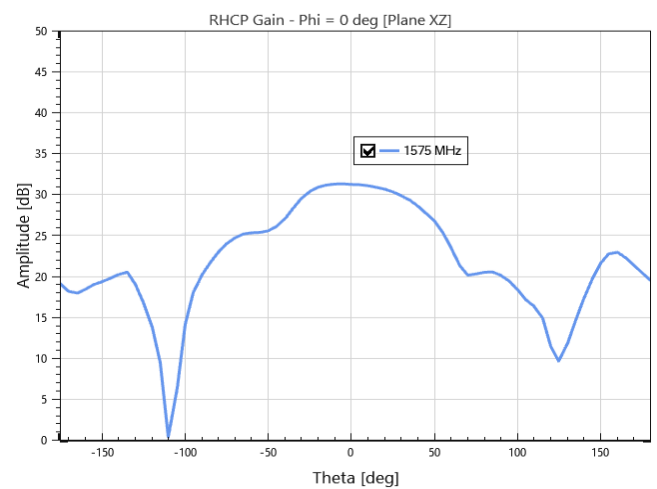
Gain Zenith

Typical performance measured in Free Space

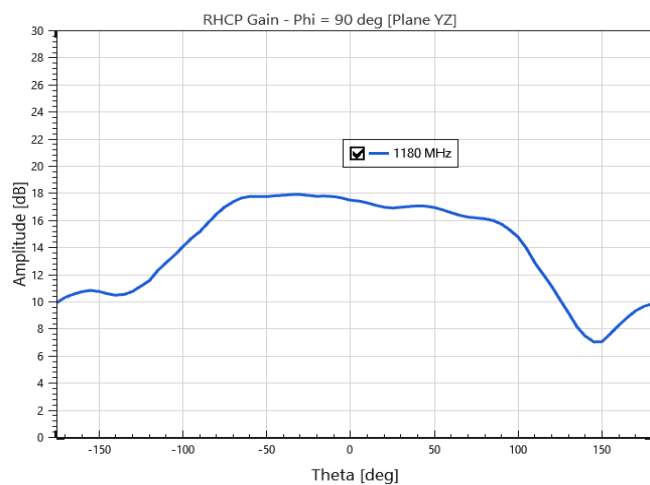
Gain Zenith Data (1164 -1189 MHz)- 0 deg



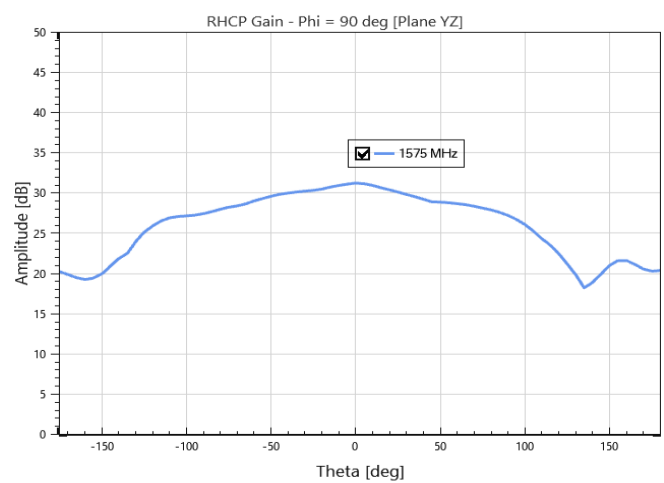
Gain Zenith Data (1559-1610 MHz)- 0 deg



Gain Zenith Data (1164 -1189 MHz)- 90 deg



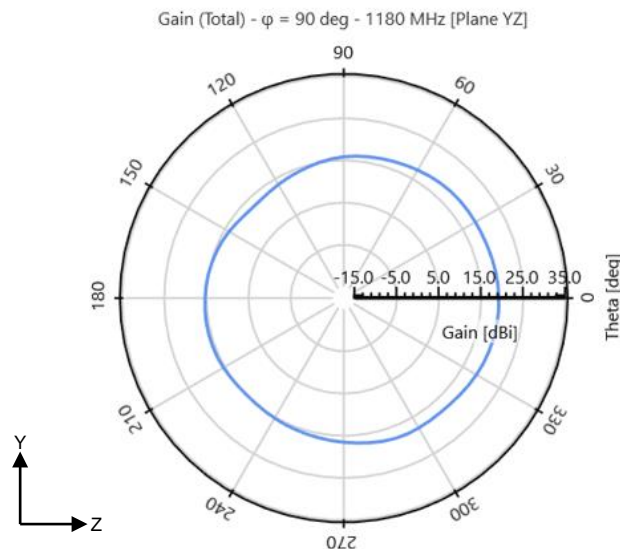
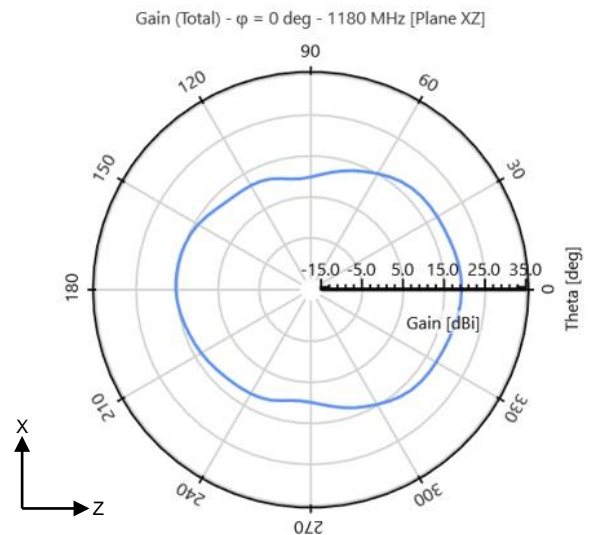
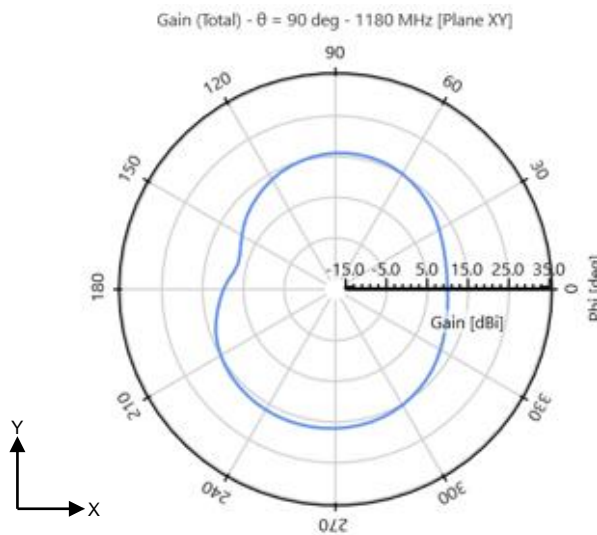
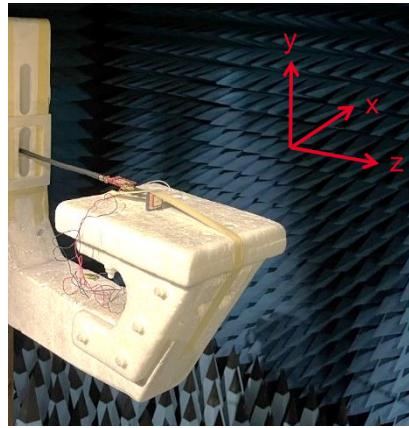
Gain Zenith Data (1559-1610 MHz)- 90 deg



GPS L1/L5 KYOCERA AVX Active Patch Antenna Specifications.
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Antenna Radiation Patterns – L5 Band

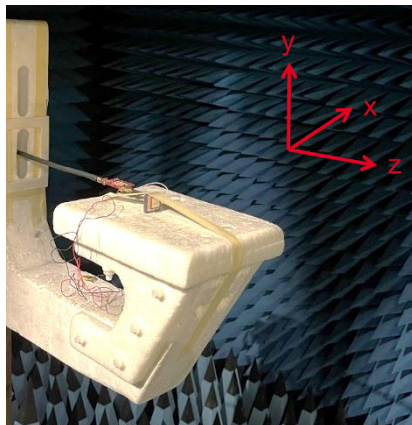
Typical performance 9003212 performance in Free Space at 1180 MHz



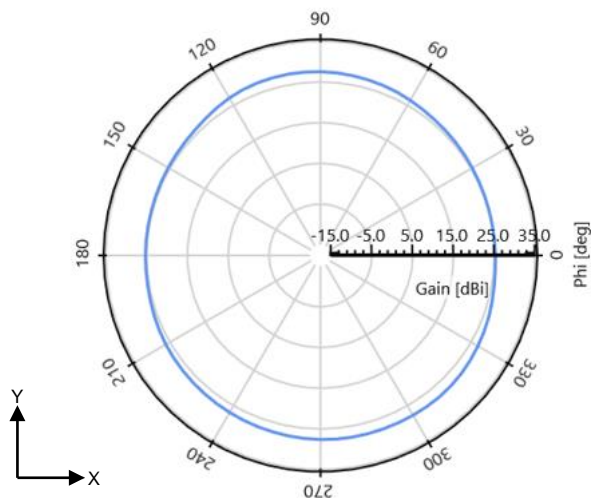
GPS L1/L5 KYOCERA AVX Active Patch Antenna Specifications.
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Antenna Radiation Patterns – L1 Band

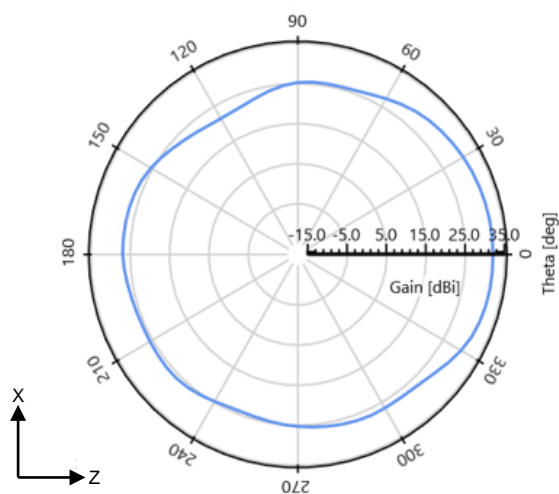
Typical performance 9003212 performance in Free Space at 1575 MHz



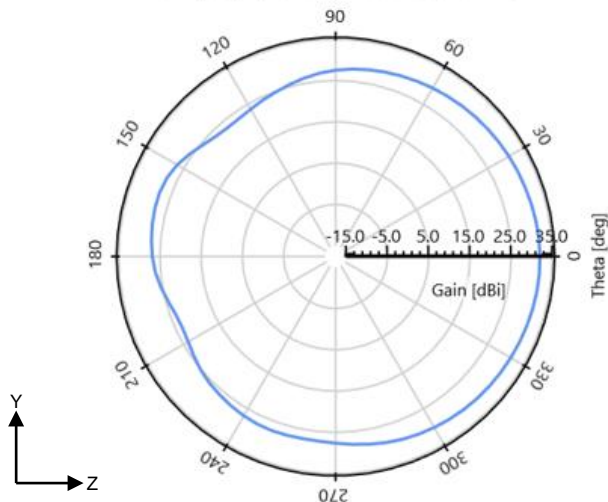
Gain (Total) - $\theta = 90$ deg - 1575 MHz [Plane XY]



Gain (Total) - $\phi = 0$ deg - 1575 MHz [Plane XZ]



Gain (Total) - $\phi = 90$ deg - 1575 MHz [Plane YZ]



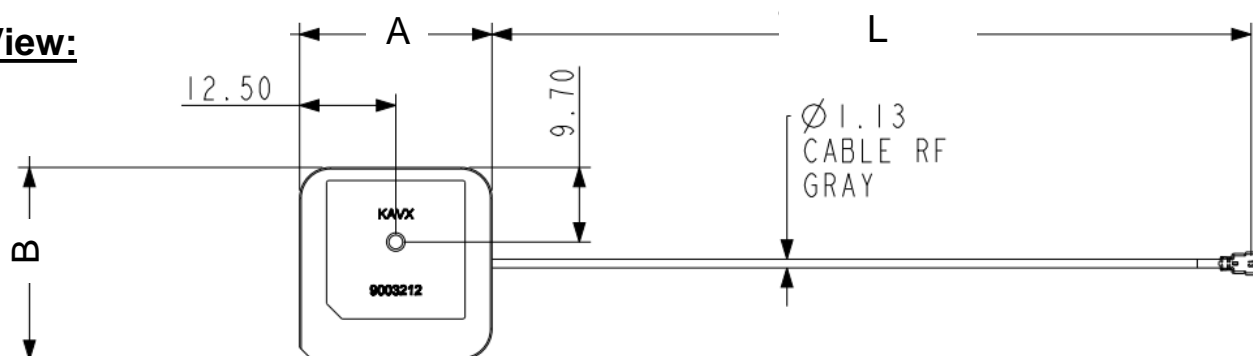
GPS L1/L5 KYOCERA AVX Active Patch Antenna Specifications.
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Mechanical Specifications

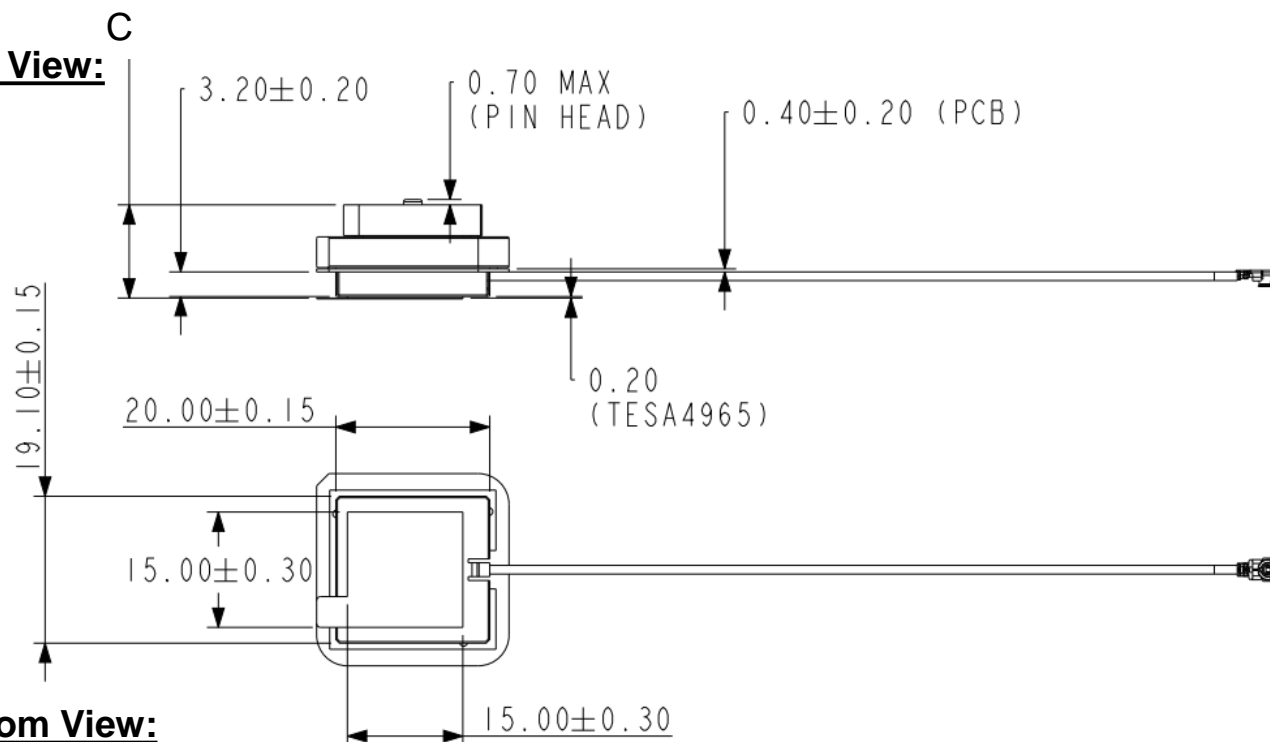
Typical antenna dimensions in mm

Part Number	A	B	C	L (Cable length)	Connector
9003212	25	25	12.12	100 ± 5.0	MHFI

Top View:



Side View:



Bottom View:

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Mechanical Specifications

Typical antenna dimensions in mm

