

DATASHEET

DENEb SZA-N-4G33 | Active GNSS Self-Adhesive Antenna

Features:

1559-1609MHz

L1

Integrated antenna and RF front end with Dual SAW and LNA

Dimensions: 25.0 x 14.0 x 6.4 mm

Cable Length: 50mm, 1.13mm Ø

Connector: MHF1 (U.FL Compatible)

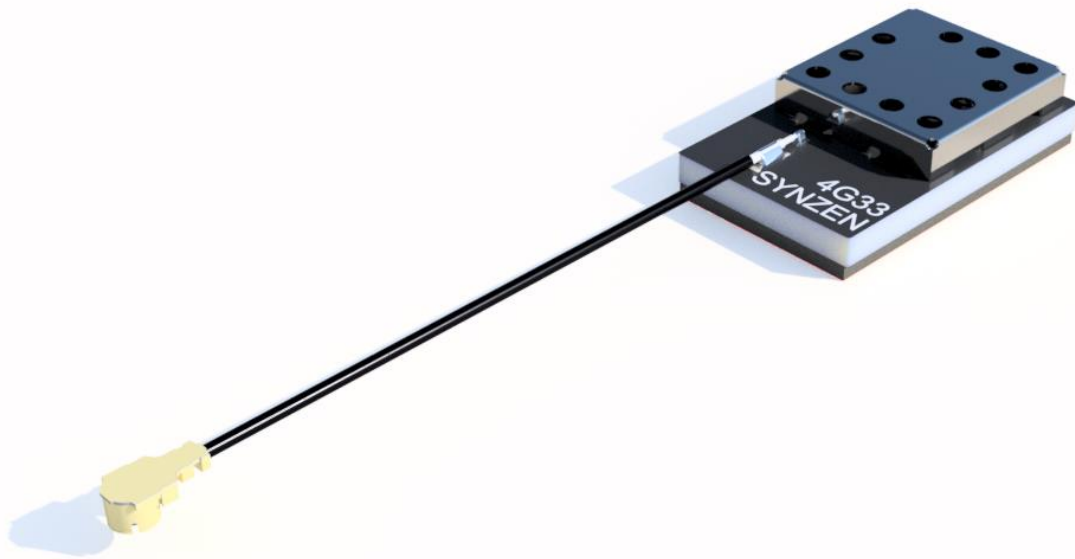
RoHs compliant

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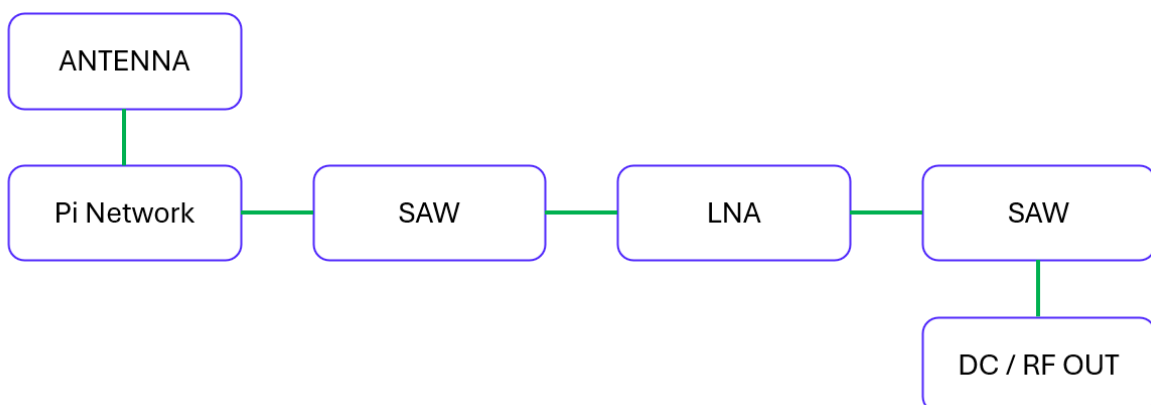
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Introduction

CERVANTES: a sleek and streamlined multi-GNSS solution designed for the L1 GNSS band. With its ultra-slim profile and integrated antenna, CERVANTES requires no tuning to deliver optimal performance. Simply adhere it to the inside of your enclosure, and it's ready to go—providing effortless integration and reliable functionality.



Block Diagram:



Specifications:

Mechanical:

Parameter	
Part Number	SZA-N-4G33
Name	CERVANTES
Dimensions (mm)	23.0 x 14.0 x 6.4
Weight	<5g
Antenna Type	Active antenna + Cable
Cable Length (mm)	50.0, 1.13 \varnothing^*
Connector	MHF1 (U. FL Compatible)
Part Number with Cable and Connector	SZA-N-4G33-050-01
Adhesive backing	3M 5952

*Alternate cable length and connectors available upon request

Antenna:

Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBi)	VSWR	Impedance
15591609	>45	0.95	<2.7:1	50

LNA:

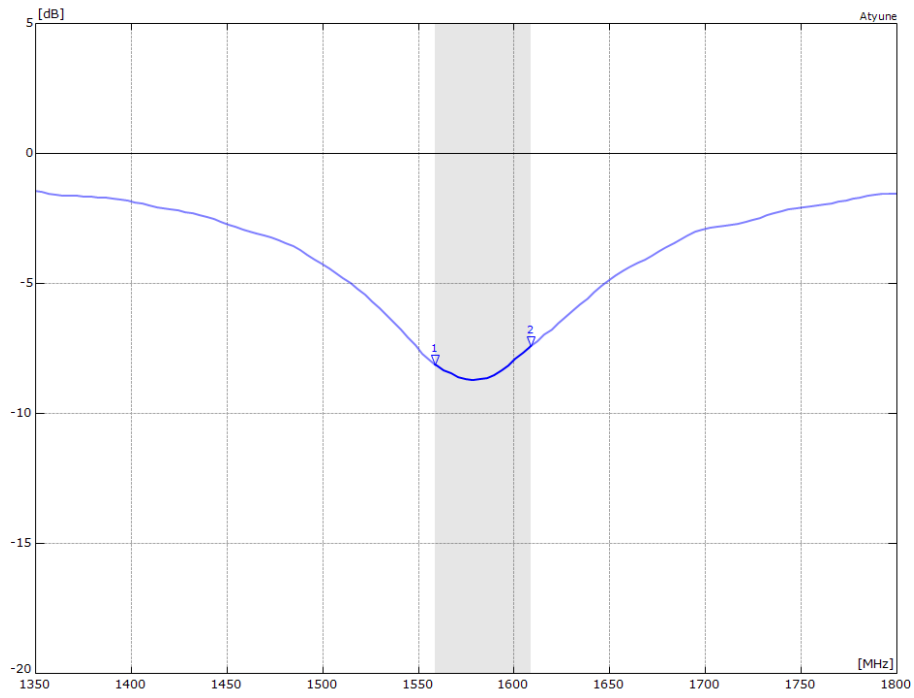
Frequency Range (MHz)	DC Voltage (V)	Current consumption (mA) Typ.	Gain (dB)	VSWR	Noise Figure
1559-1609	1.1 to 3.3	4.4mA	17.8	<2.0:1	<0.6

Environmental

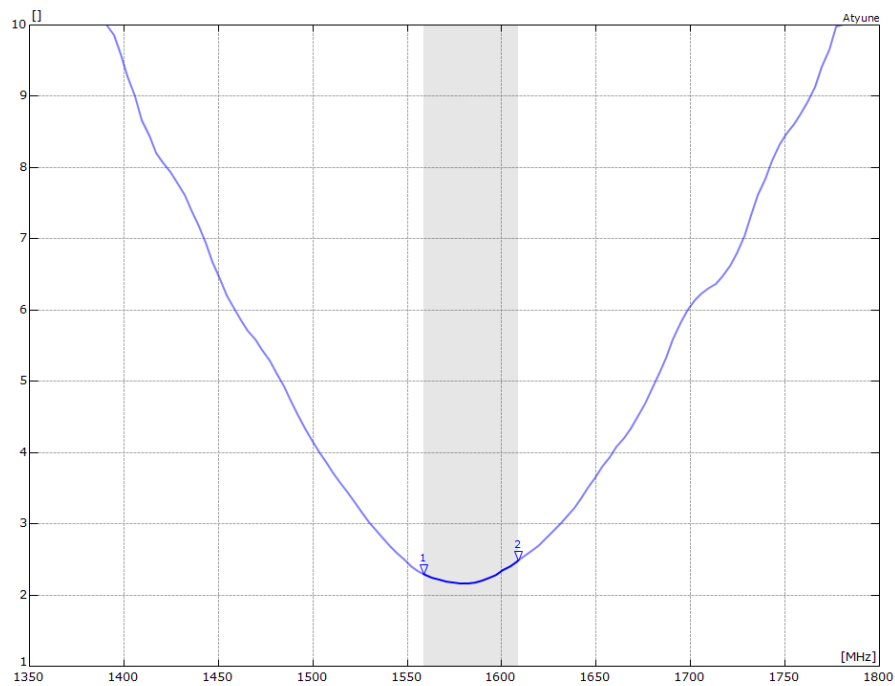
Parameter	
Operational Temperature	-40 to +85
Storage Temperature	-40 to +85
Relative Humidity (Storage)	65 \pm 20% RH
Moisture Sensitivity	1
RoHs and REACH compliant	Yes

Antenna Characteristics

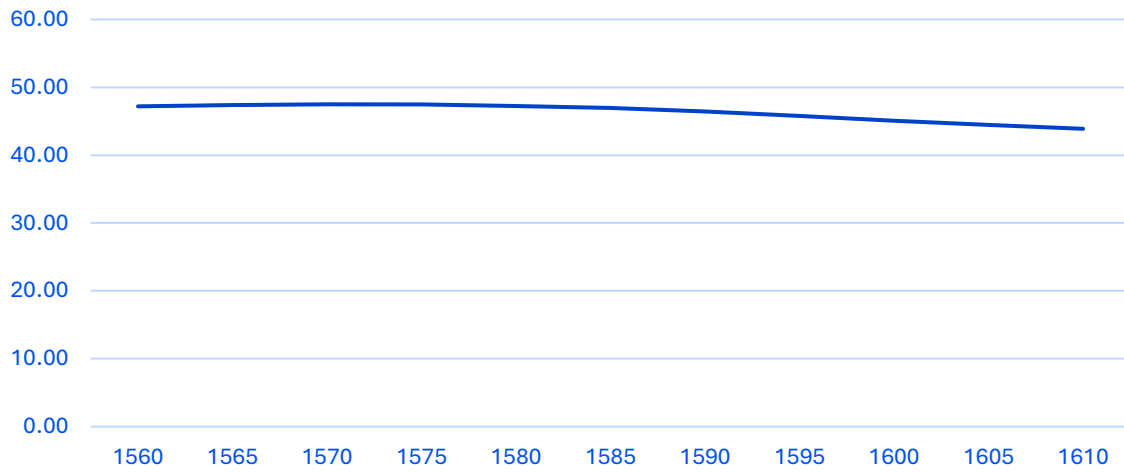
Return loss



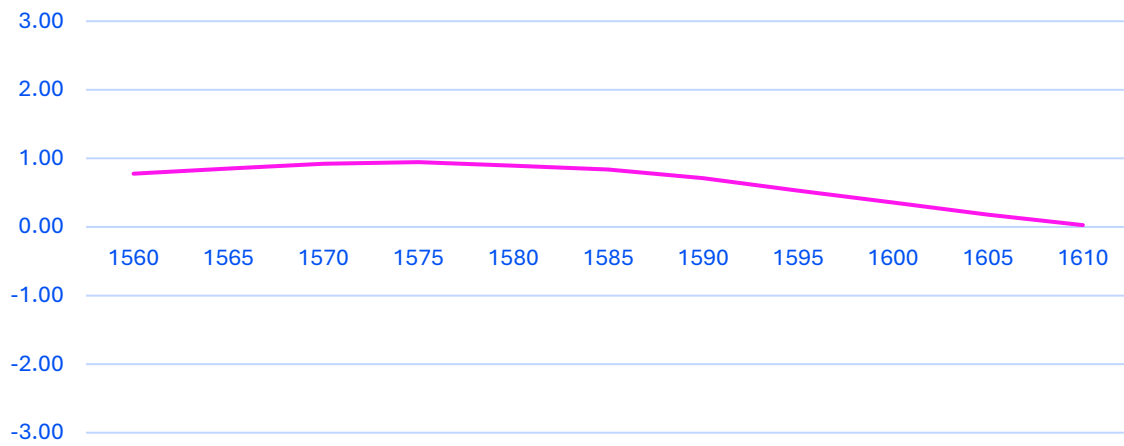
VSWR



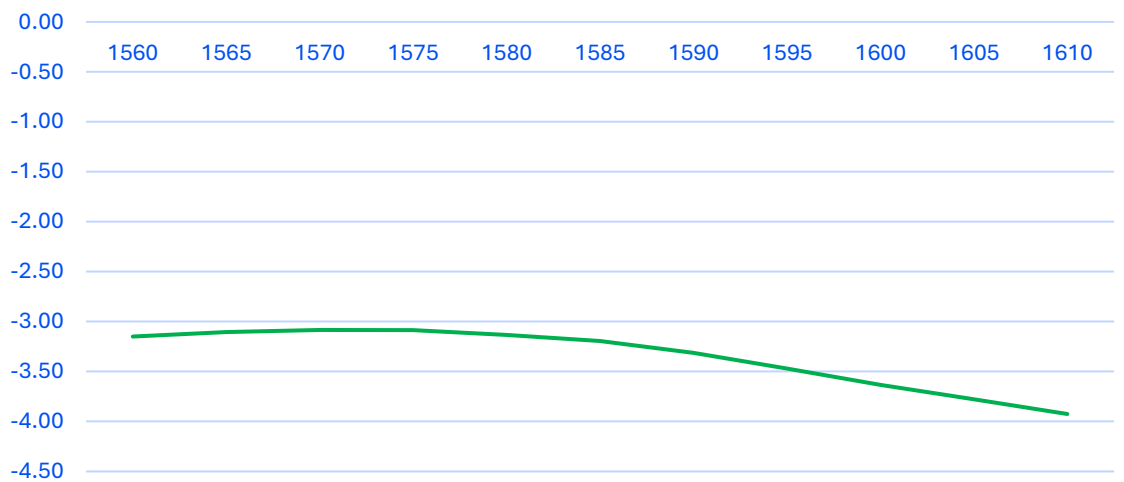
Efficiency



Peak Gain

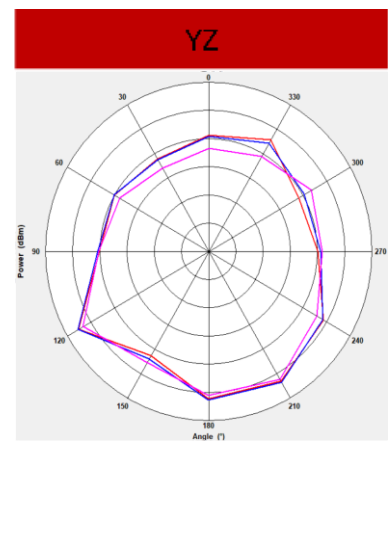
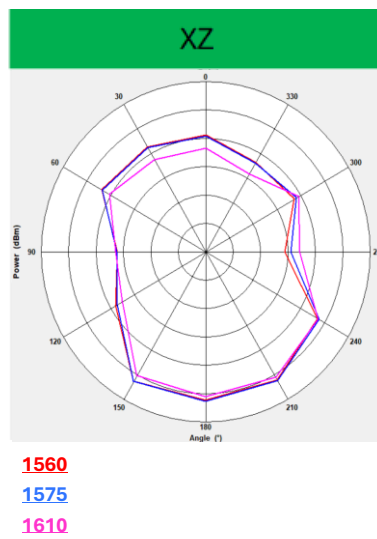
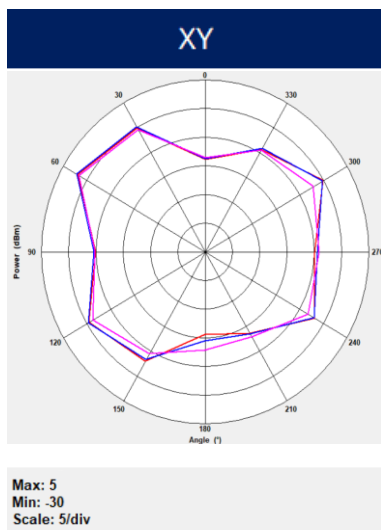
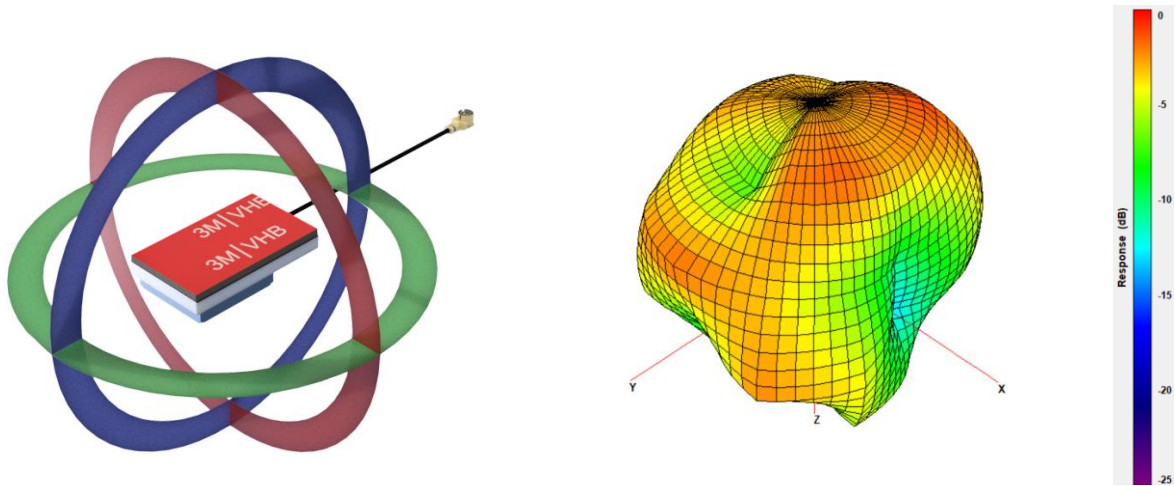


Average Gain



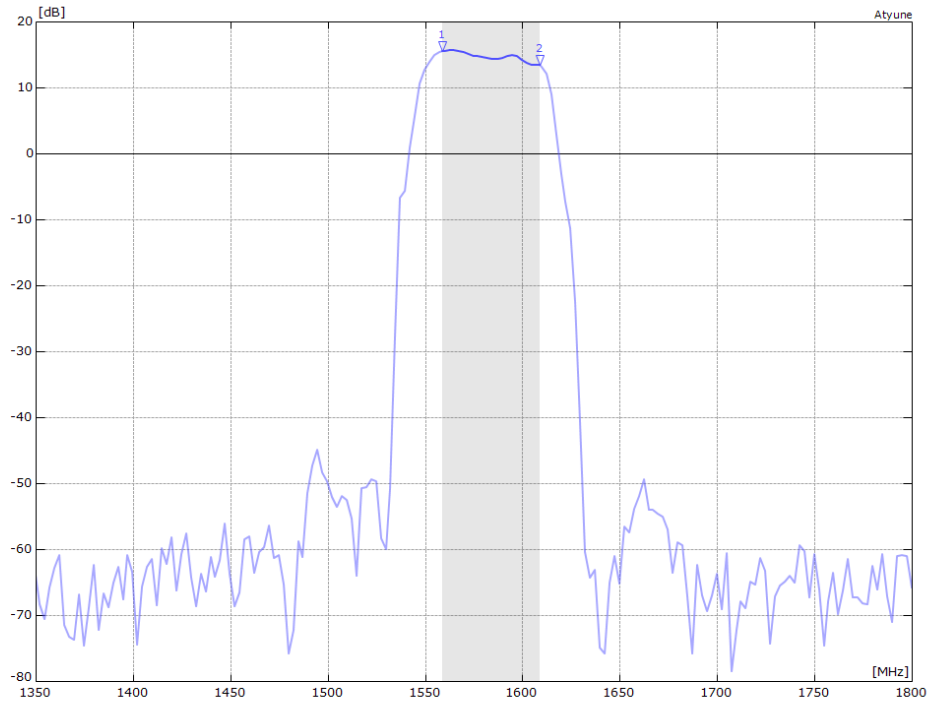
RF Radiation Patterns

RF Radiation Patterns at 1575MHz

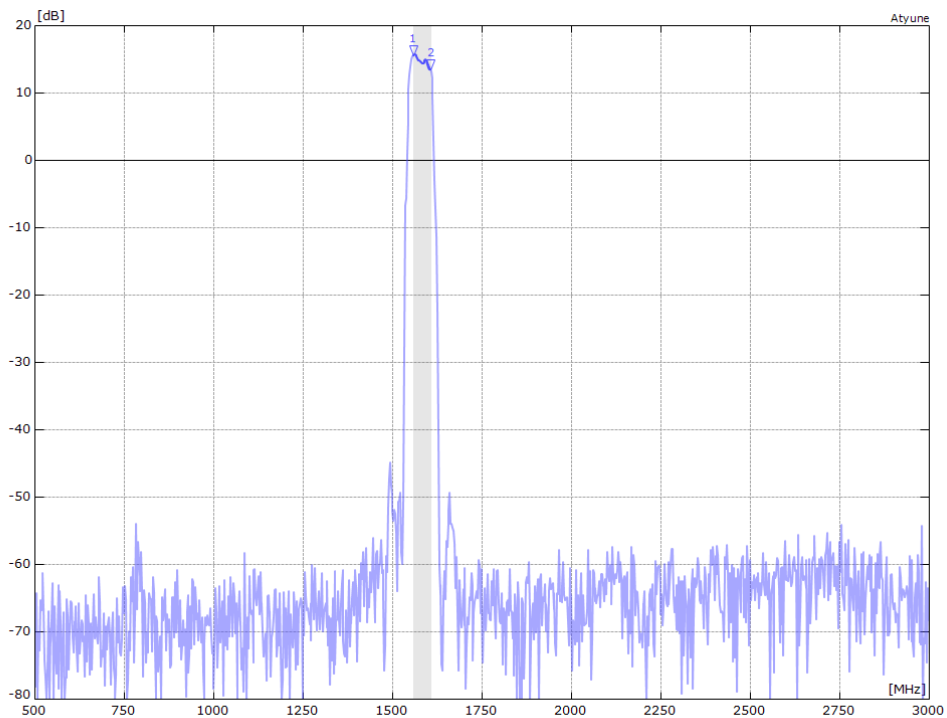


RF System Characteristics

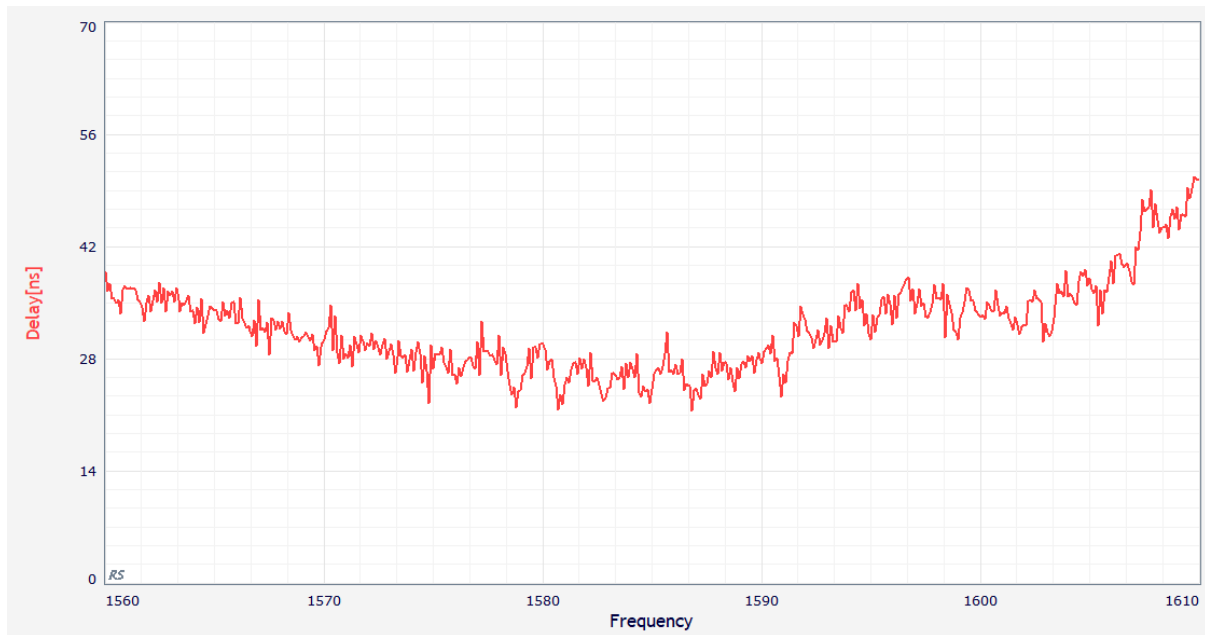
Full system Gain with SAW filters



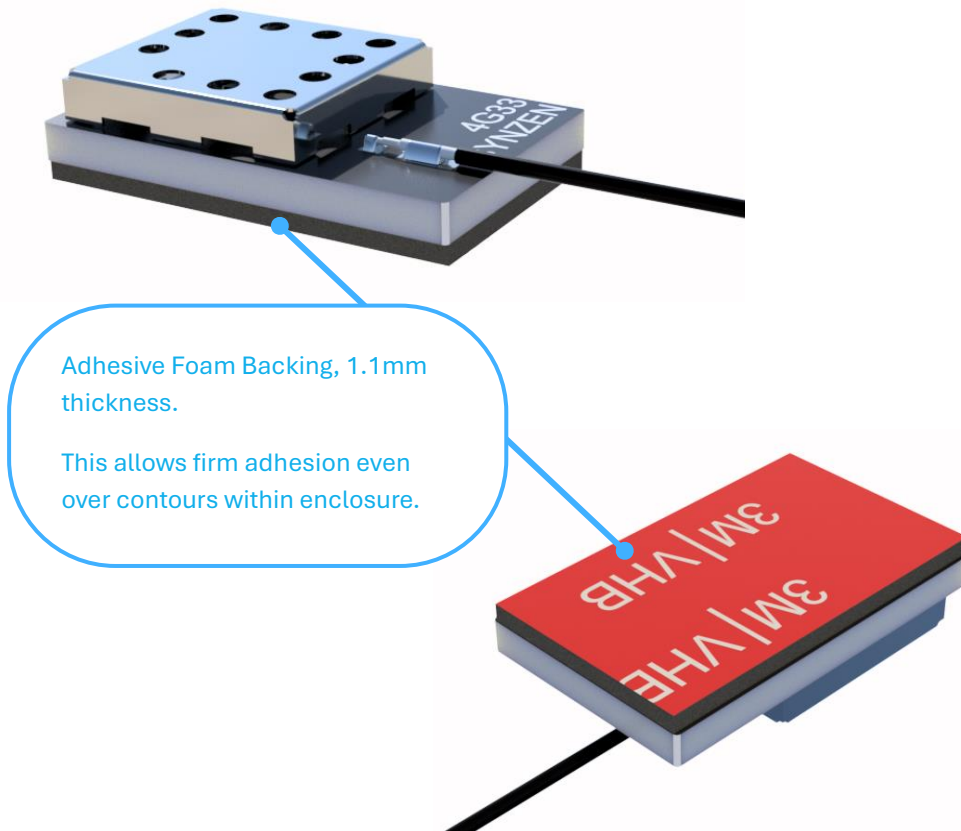
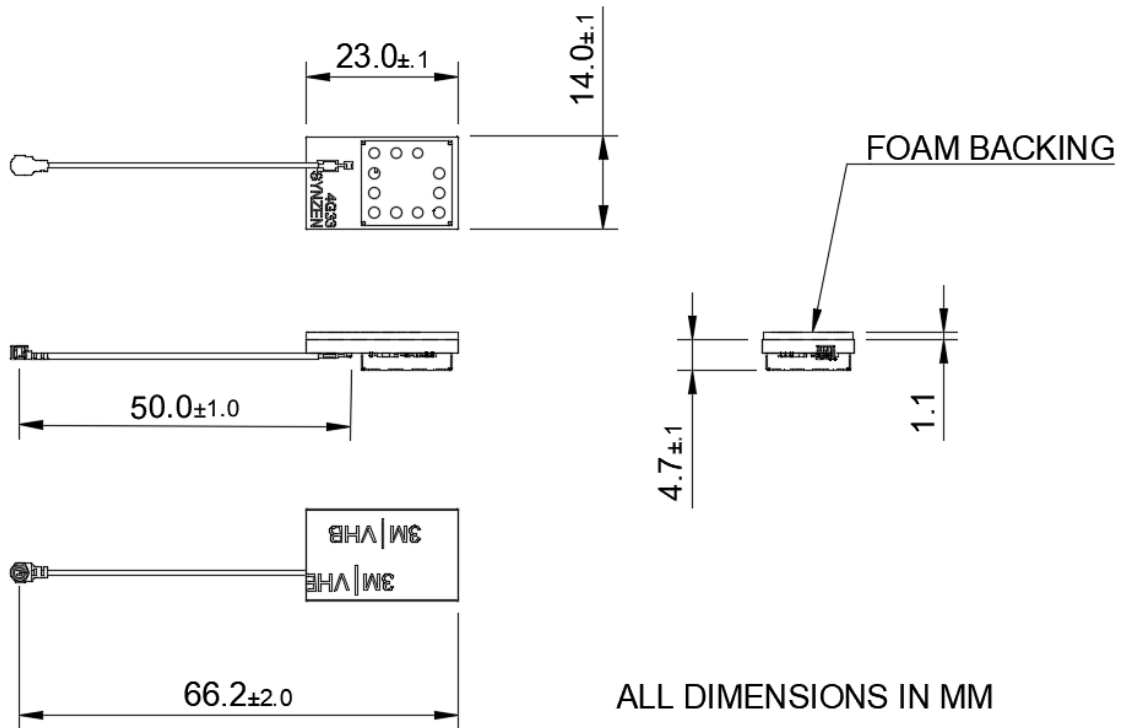
Out of Band Rejection



Group Delay L1



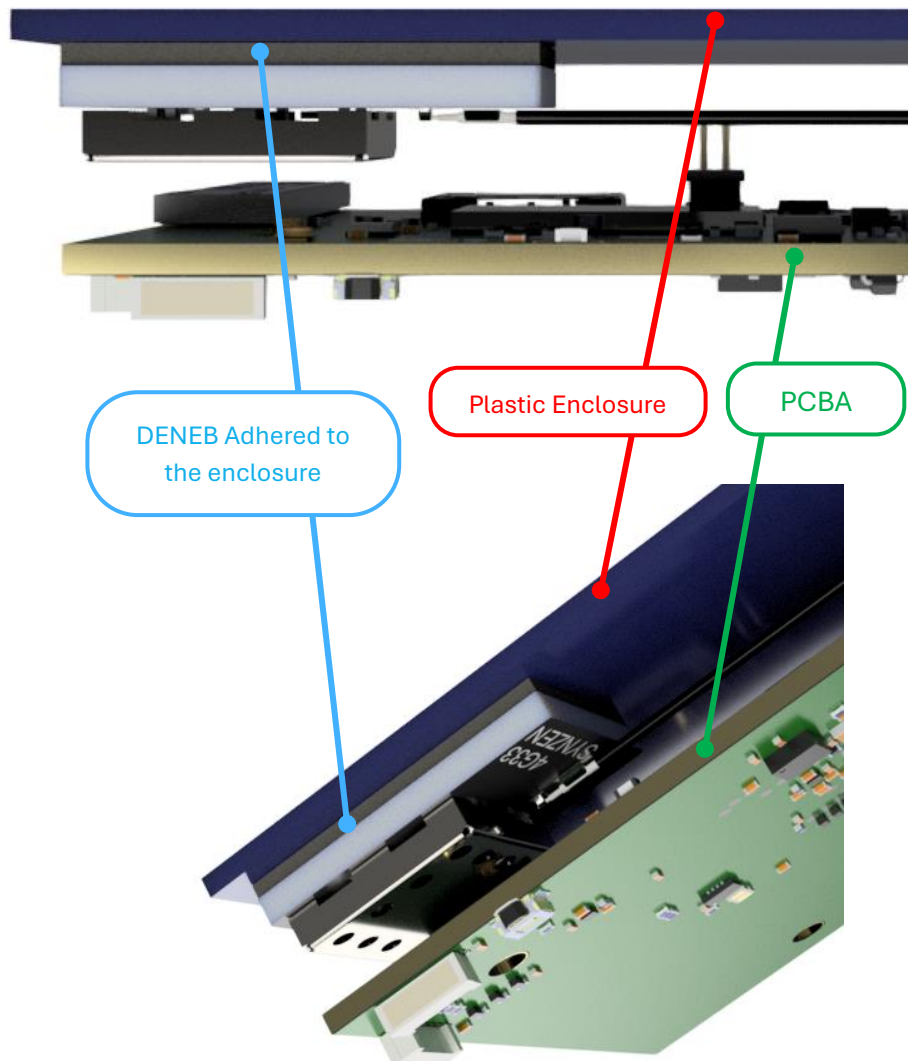
Mechanical Drawing



Placement

Placement for CERVANTES is very simple. Peel and stick onto the inside of your enclosure for the main direction skyward is located. Keep the placement away from any metal that is adjacent to the antenna.

- No need to concern with clearance below the antenna as this is not important.
- Placement above PCBA not critical to CERVANTES but avoid cellular and other antennas which require clearance.
- Keep more than 25mm away from cellular antennas to ensure good isolation.



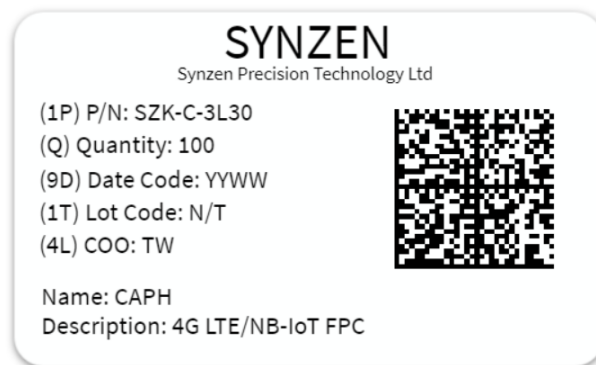
Packaging

Antennas packed in PE bag (1 per bag)

Small bag dimensions: 28.5 x 9.5 (cm)

1000pc per carton

Label



Material Regulation

The antenna has been assessed to conform to RoHS requirements. A certificate of conformance is available upon request.

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