

DATASHEET

DENEBSZA-N-4G34 | Active Multi GNSS Self-Adhesive Antenna

Features:

1164 - 1249; 1559-1609MHz
L1, L2, L5

Dual band integrated antenna and RF front end with Dual SAW and LNA

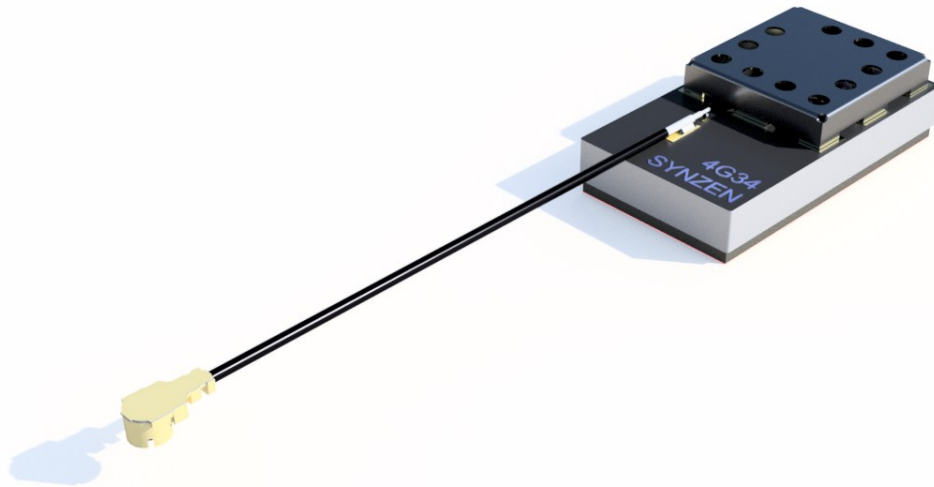
Dimensions: 25.0 x 14.0 x 6.4 mm
Cable Length: 50mm, 1.13mm Ø
Connector: MHF1 (U.FL Compatible)
RoHs compliant

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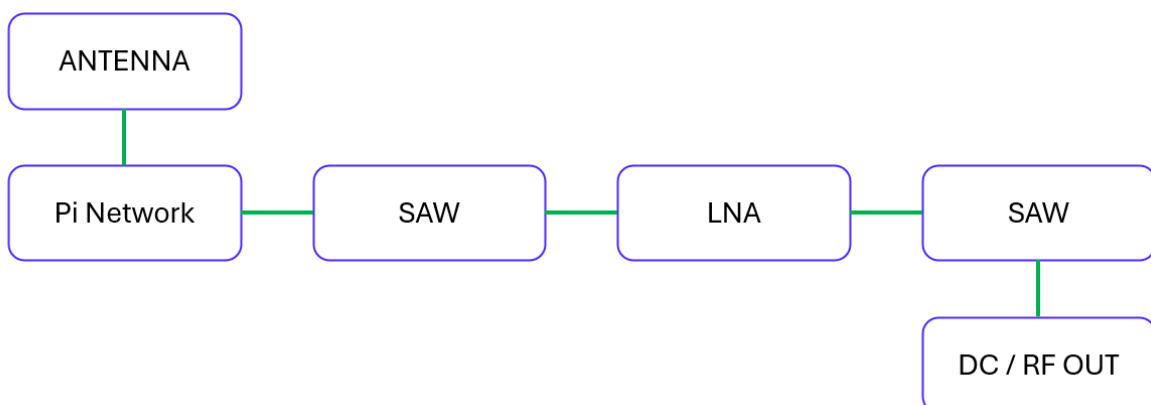
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Introduction

Introducing DENEb: a versatile multi-GNSS solution supporting L1, L2, and L5 bands. Designed for simplicity and efficiency, this lightweight and compact solution features an integrated antenna that requires no tuning. Just adhere DENEb inside your enclosure, and it's ready to perform, delivering seamless functionality in any device.



Block Diagram:



Specifications:

Mechanical:

Parameter	
Part Number	SZA-N-4G34
Name	DENEB
Dimensions (mm)	25.0 x 14.0 x 6.4
Weight	<6g
Antenna Type	Active antenna + Cable
Cable Length (mm)	50.0 , 1.13 ϕ^*
Connector	MHF1 (U. FL Compatible)
Part Number with Cable and Connector	SZA-N-4G34-050-01
Adhesive backing	3M 5952

*Alternate cable length and connectors available upon request

Antenna:

Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBi)	VSWR	Impedance
1164-1249	>40	0.50	<3.3:1	50 Ω
1559-1609	>50	1.00	<3.0:1	

LNA:

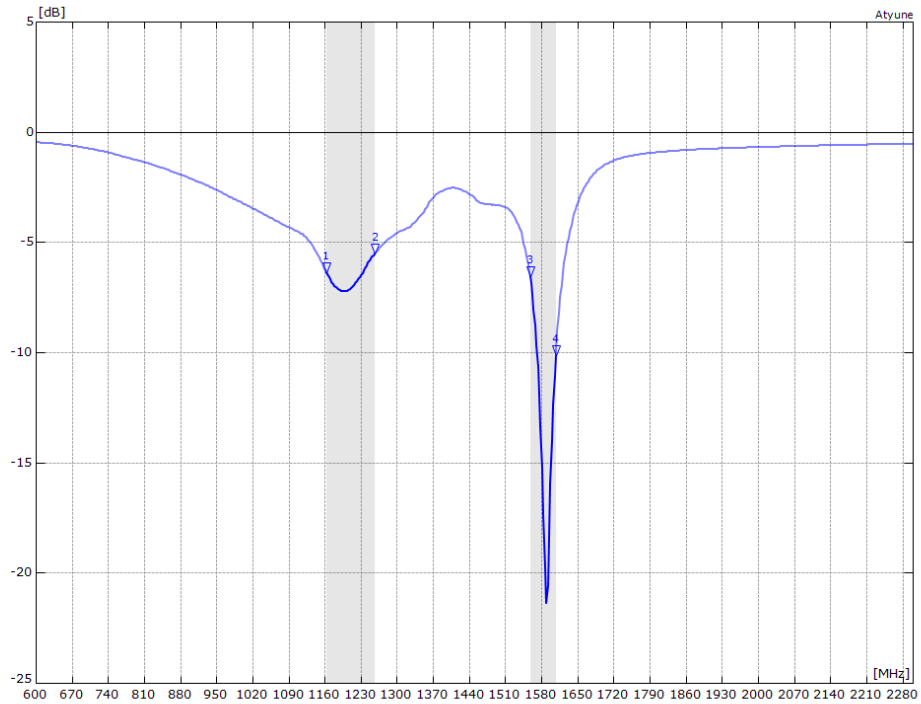
Frequency Range (MHz)	DC Voltage (V)	Current consumption (mA) Typ.	Gain (dB)	VSWR	Noise Figure
1164-1249	1.1 -3.3	4.8	17.6	<2.0:1	1.10
1559-1609			18.3		

Environmental

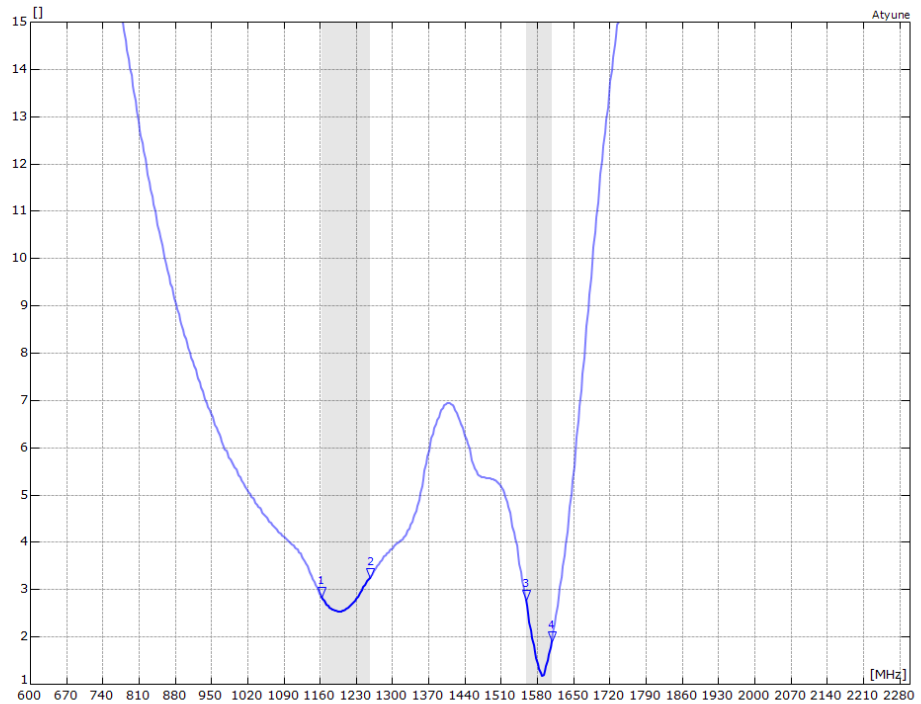
Parameter	
Operational Temperature	-40 to +85
Storage Temperature	-40 to +85
Relative Humidity (Storage)	65 \pm 20% RH
Moisture Sensitivity	1
RoHs and REACH compliant	Yes

Antenna Characteristics

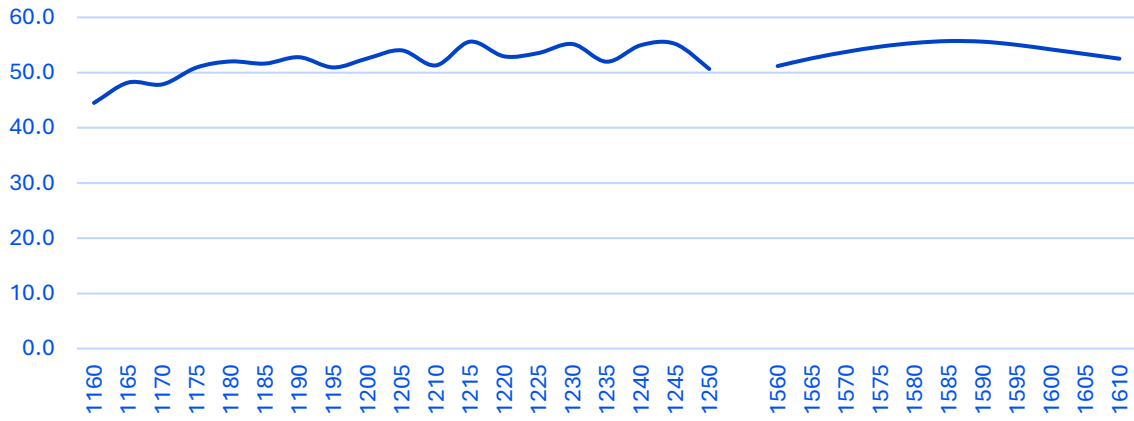
Return loss



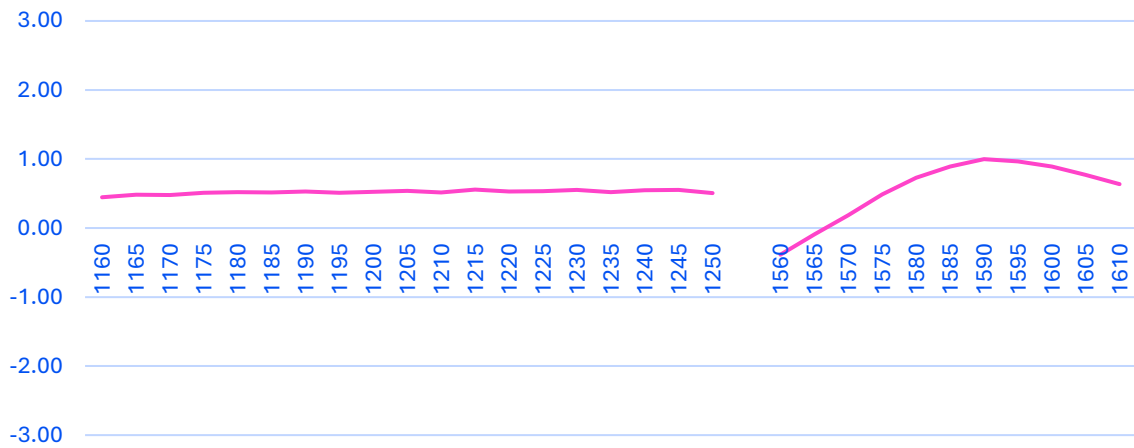
VSWR



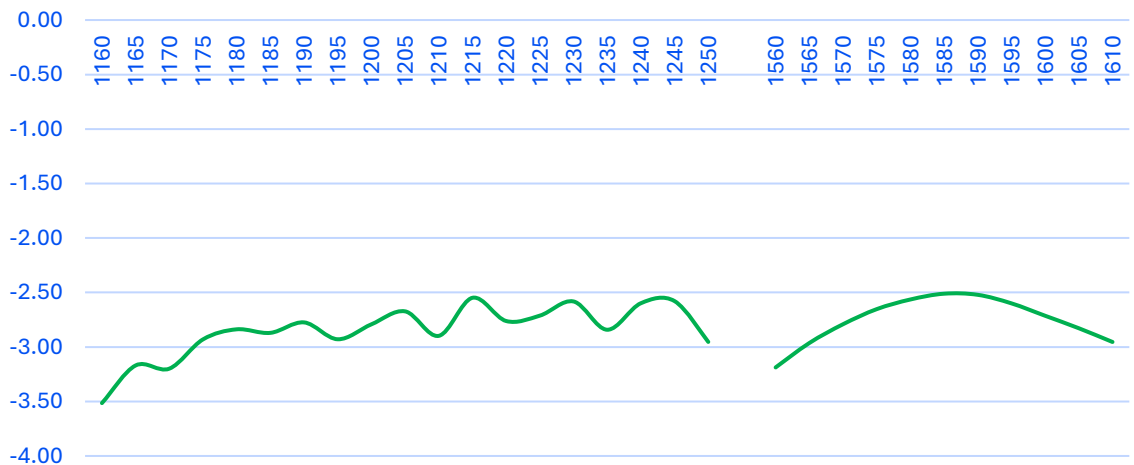
Efficiency



Peak Gain

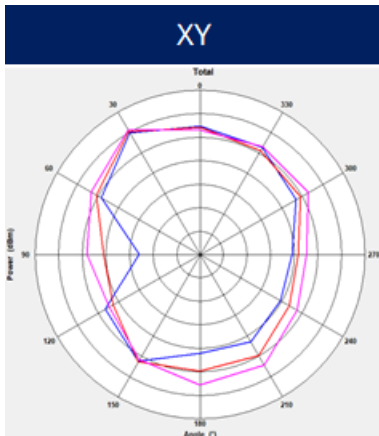
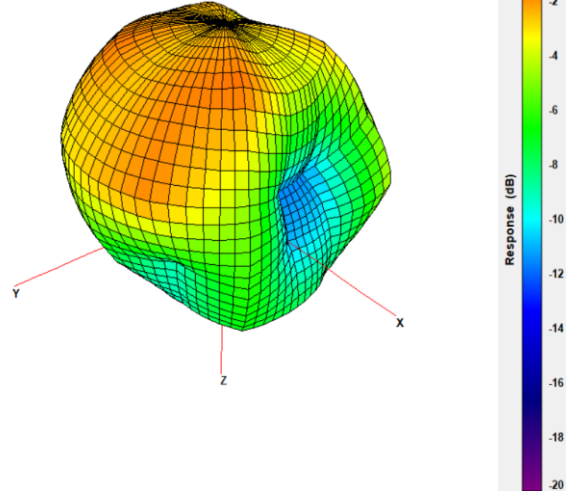
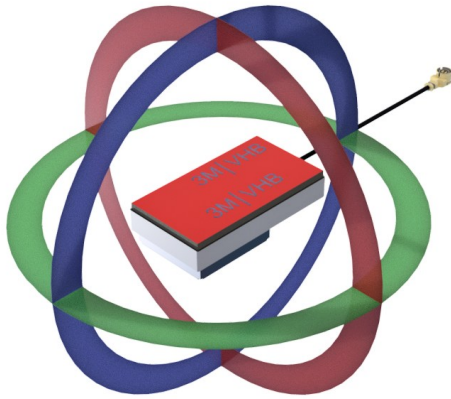


Average Gain

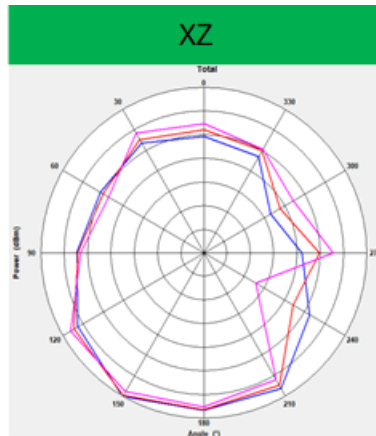


RF Radiation Patterns

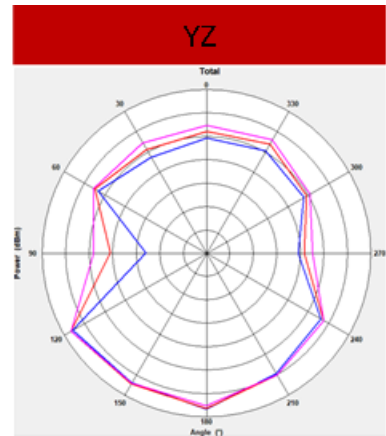
RF Radiation Patterns at 1200MHz



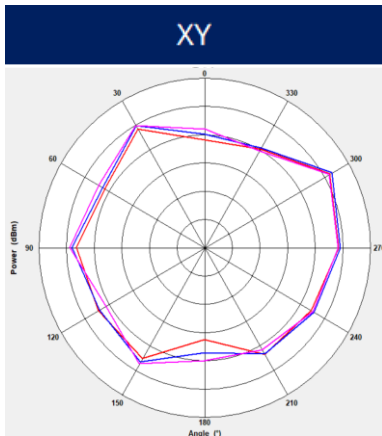
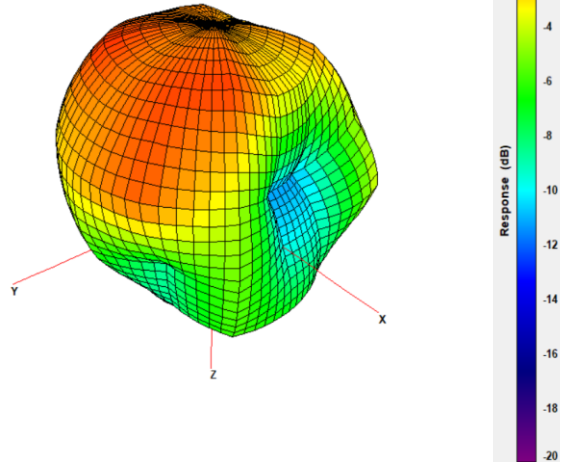
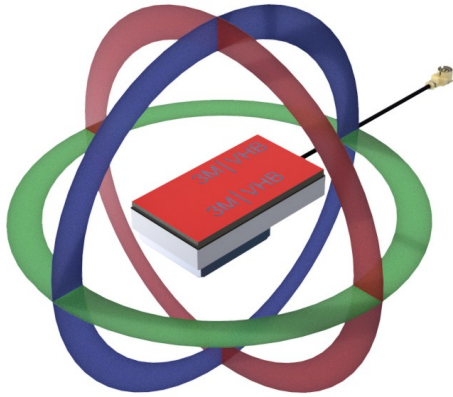
Max: 0
Min: -30
Scale: 5/div



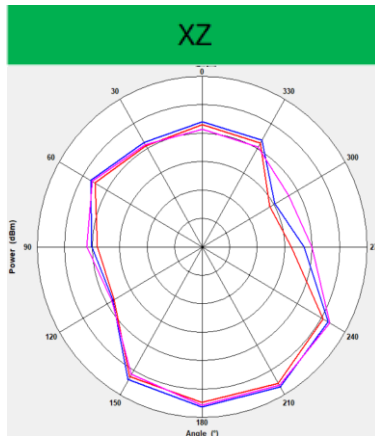
1165
1200
1248



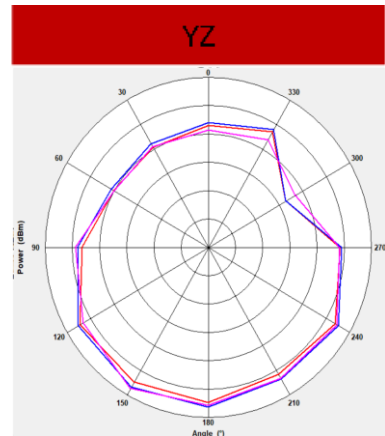
RF Radiation Patterns at 1575MHz



Max: 0
Min: -30
Scale: 5/div

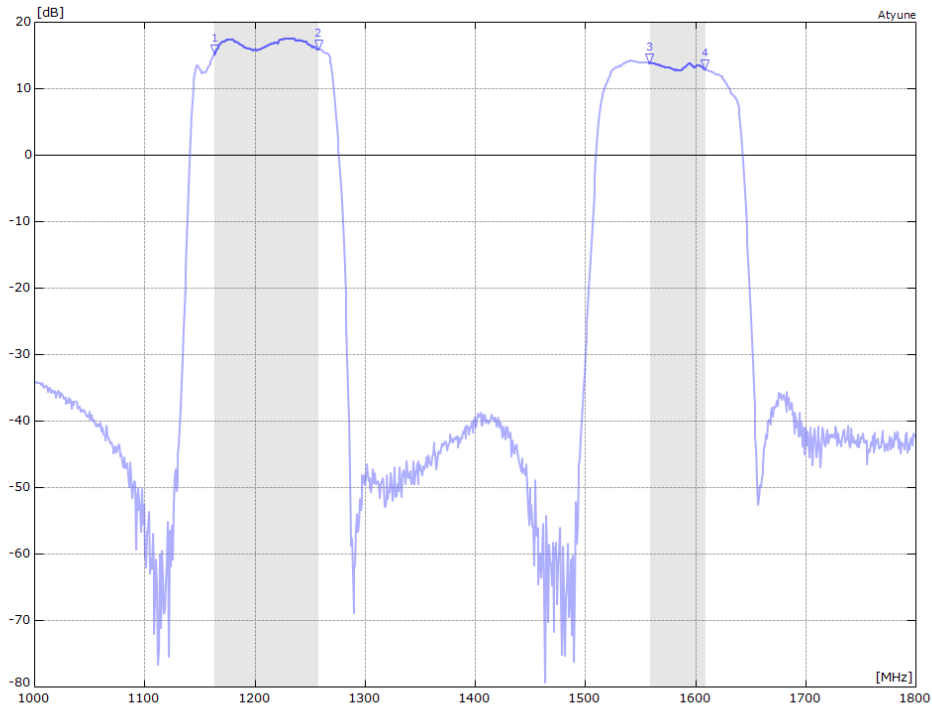


1560
1575
1610

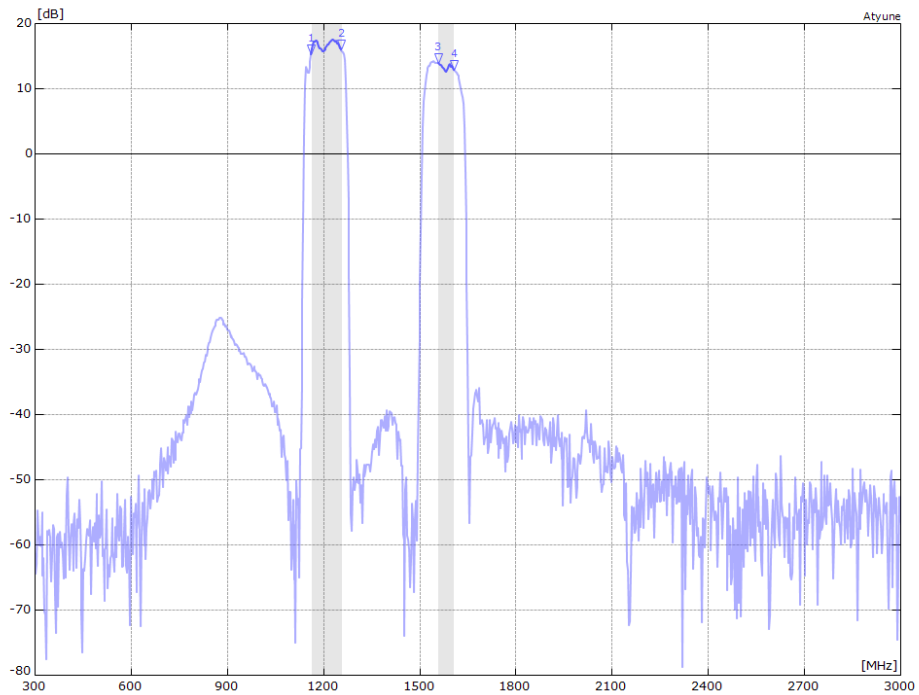


RF System Characteristics

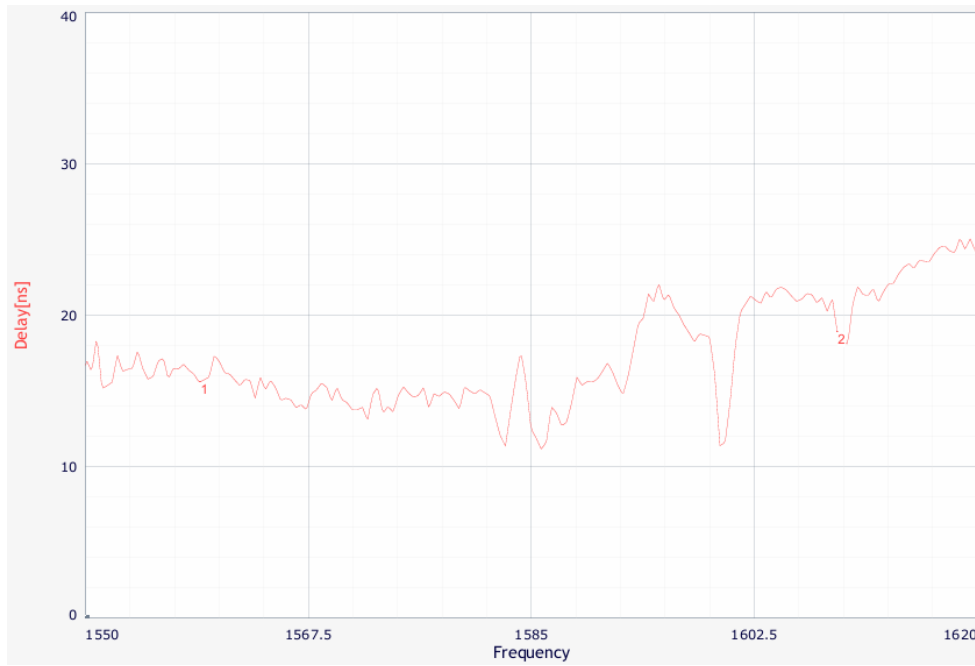
Full system Gain with SAW filters



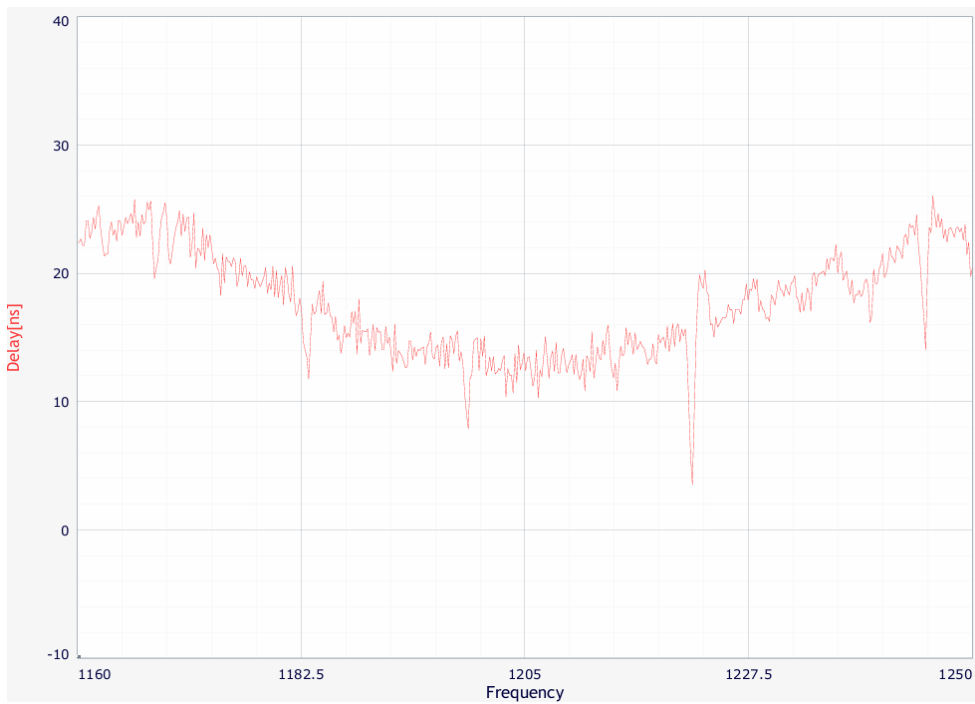
Out of Band Rejection



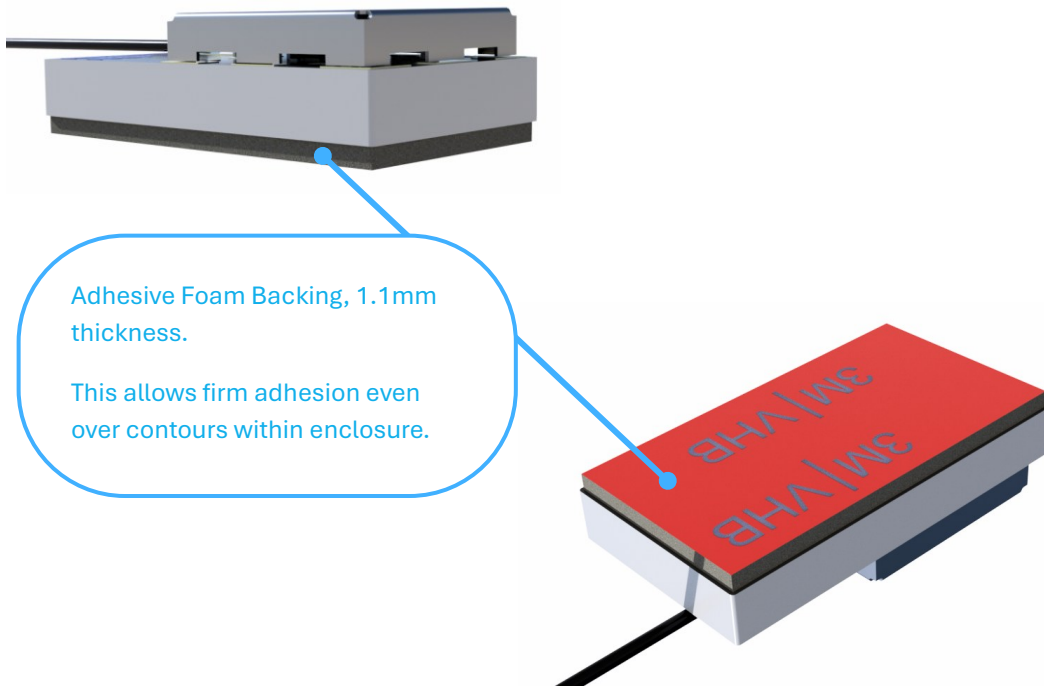
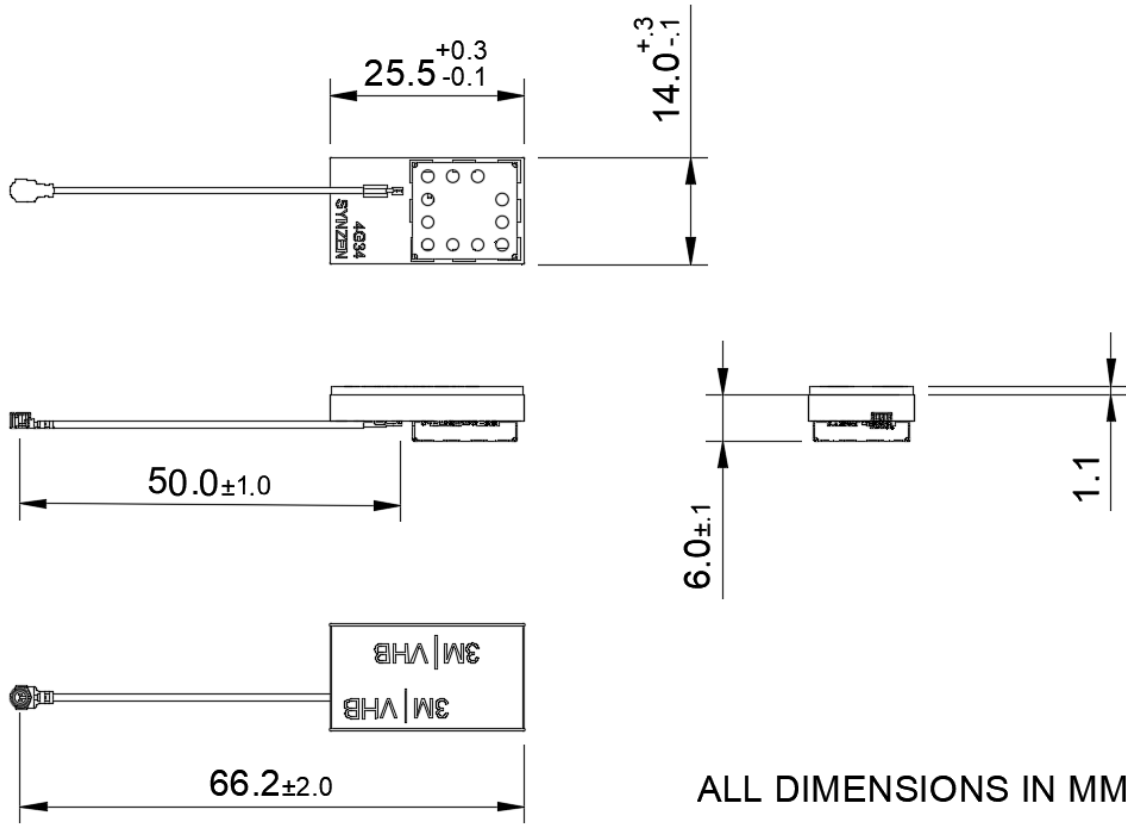
Group Delay L1



Group Delay L2/L5



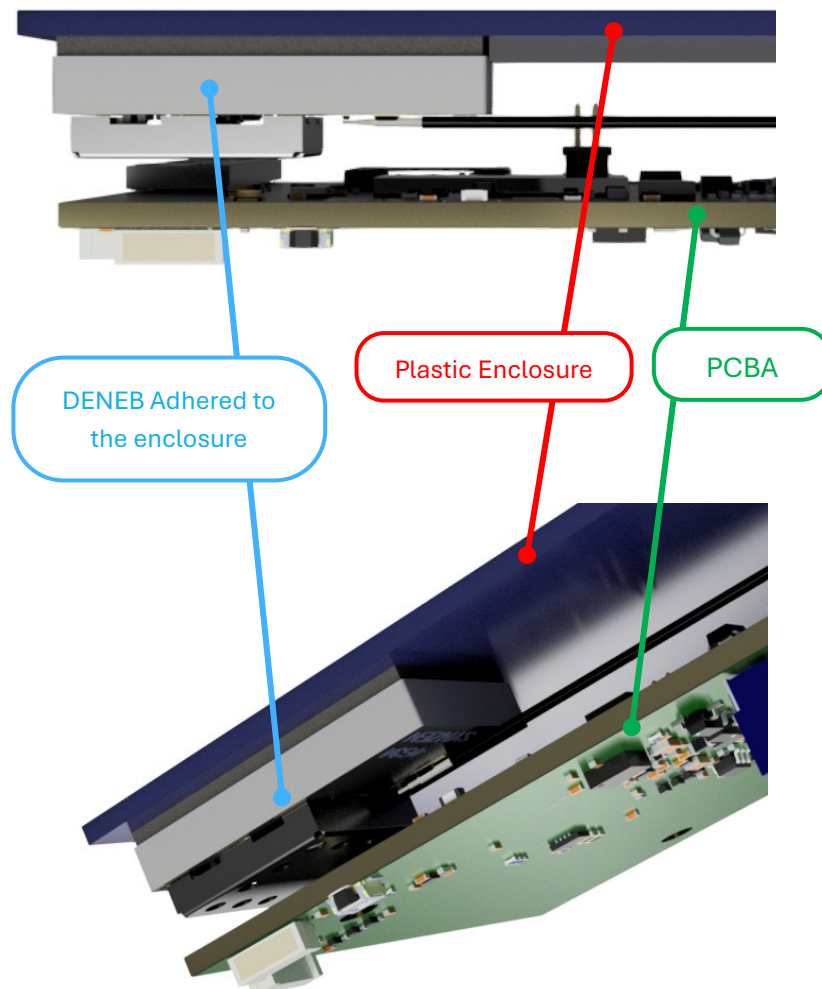
Mechanical Drawing



Placement

Placement for DENEb 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 DENEb but avoid cellular and other antennas which require clearance.
- Keep more than 25mm away from cellular antennas to ensure good isolation.



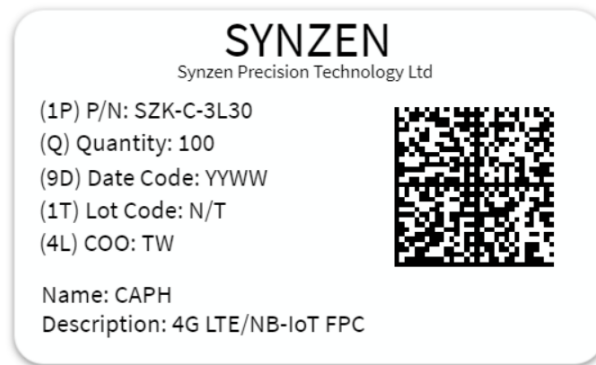
Packaging

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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