

Product Name: High Gain GNSS Active Antenna Module

Part Number: AM-4-A-B01

Features:

- 18 x 18 x 7.9 mm Compact Form Factor
- Dual Satellite Navigation System, GPS/GLONASS
- 29dB LNA Gain, Exceptionally Low Noise Figure
- Up to 50dB Out-of-Band Suppression

Application:

- GNSS Navigation or Tracking Devices

GNSS Active Antenna Module

MODEL: AM-4-A-B01

WI-RD-D-238 V1.0

I. Specifications:

Category	Specification		
Patch Specification			
Application Band	GPS	GLONASS	
Frequency Range	1575.42 ± 1.023MHz	1602 ± 5MHz	
Efficiency(%)	29.85	42.36	
Average Gain (dBi)	-5.25	-3.73	
Gain (zenith) (dBi)	0.29	1.95	
Polarization	R.H.C.P		
Test Condition	Without housing 18 x 18 mm ² (Ground Plane Dimension)		
VSWR	< 2		
Return loss	< -10		
Impedance	50 Ω		
Filter / LNA Specification			
Frequency Range	1575.42 ± 1.023MHz	1602 ± 5MHz	
Gain	29±2 dB	29±2 dB	
Noise Figure	1.5dB typ.		
Output V.S.W.R	< 2		
Operation Voltage	3.0~5.0 V		
Current	10±2 mA		
GNSS _Out of Band Rejection			
Frequency(MHz)	600~1350	1350~1460	1720~3000
Gain(dB)	57	41	39

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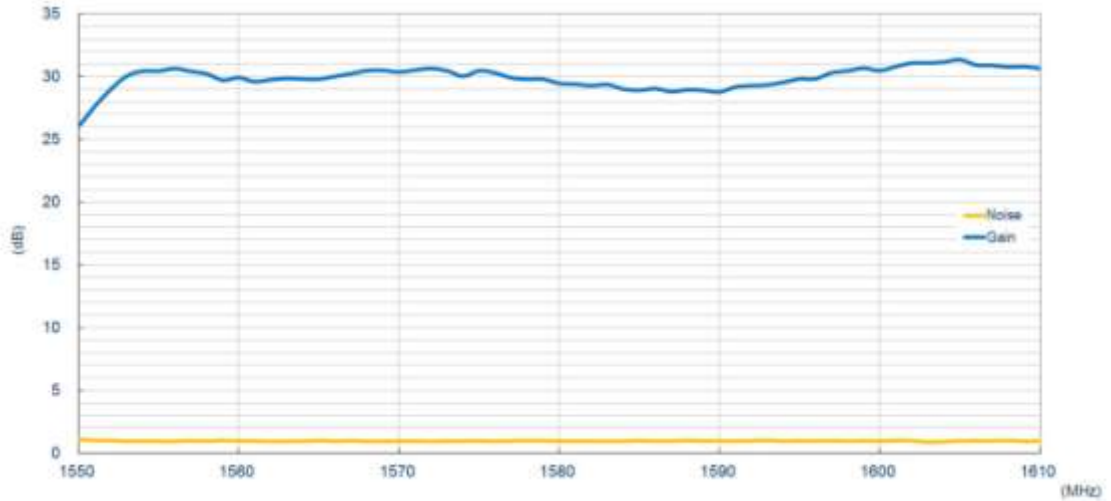
Overall Specification (Through Antenna , LNA , without cable loss)		
Frequency Range	1575.42 ± 1.023MHz	1602 ± 5MHz
Zenith Gain	29.4±2 dB	29.2±2 dB
Output Impedance	50 Ω	
Output V.S.W.R	< 2	
Operation Voltage	3.0~5.0 V	
Current	10±2 mA	
Dimension	18 x 18 x 7.9 mm	
ESD Protection	±8 KV (direct discharge) ±15KV (air discharge)	
Operation Temperature	-40 ~ +85 °C	
Storage Temperature	-40 ~ +85 °C	

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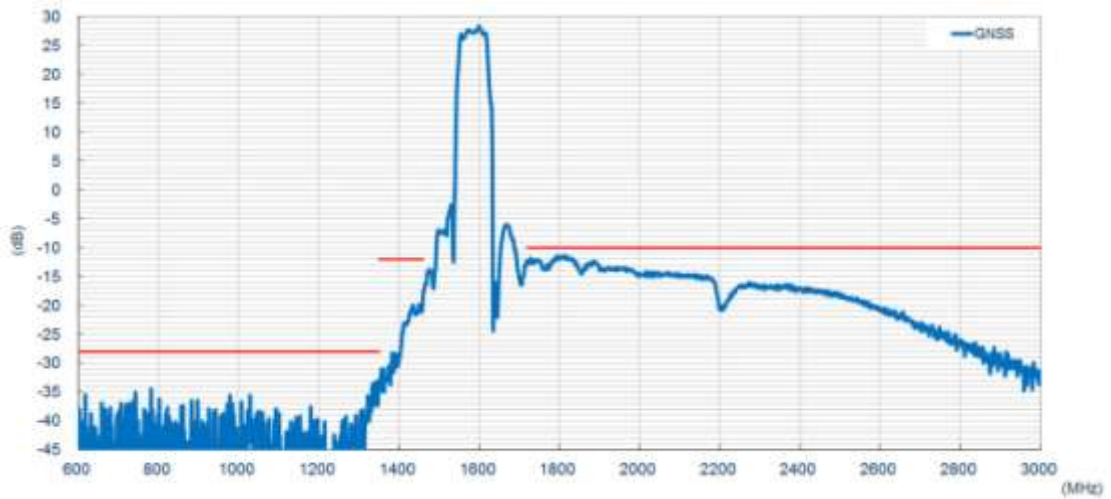
II. Analysis Antenna Performance:

- Active antenna performance

GNSS_Noise & gain:

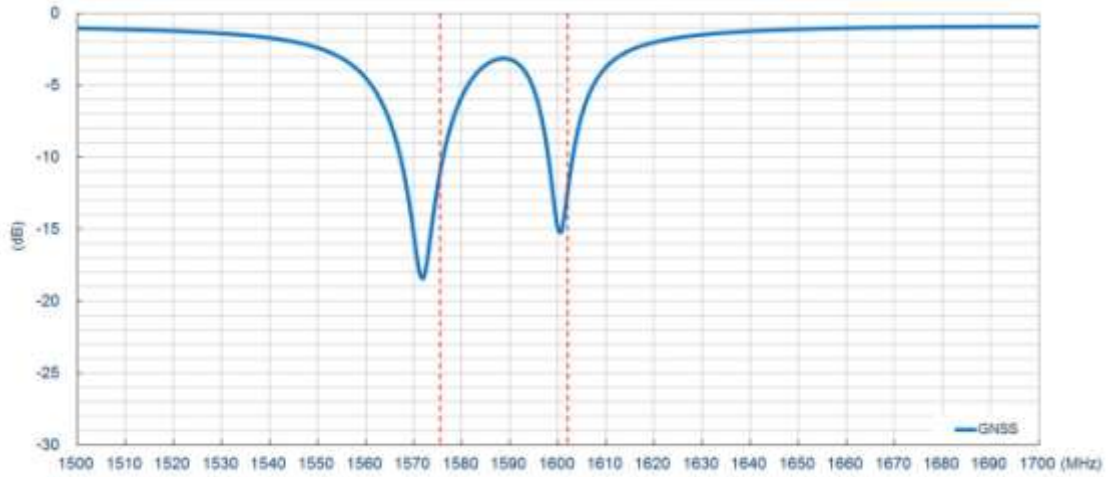


GNSS _Out of Band Rejection:

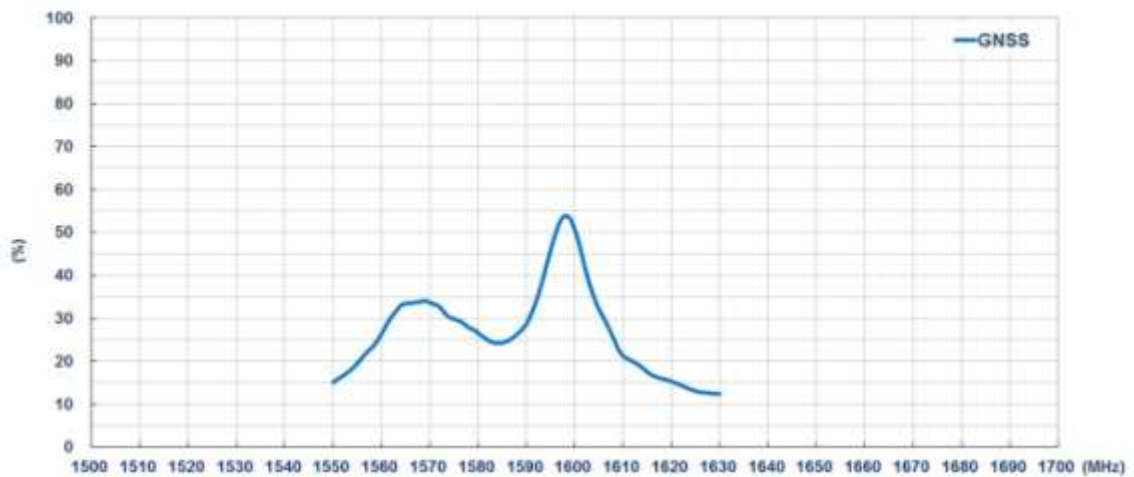


- **Passive antenna performance**

S-parameters:

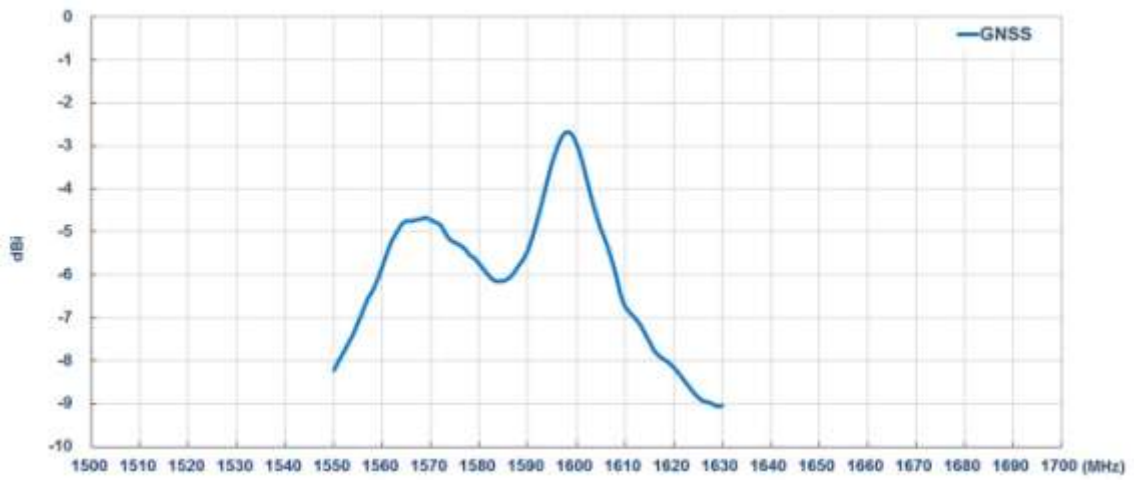


Efficiency:



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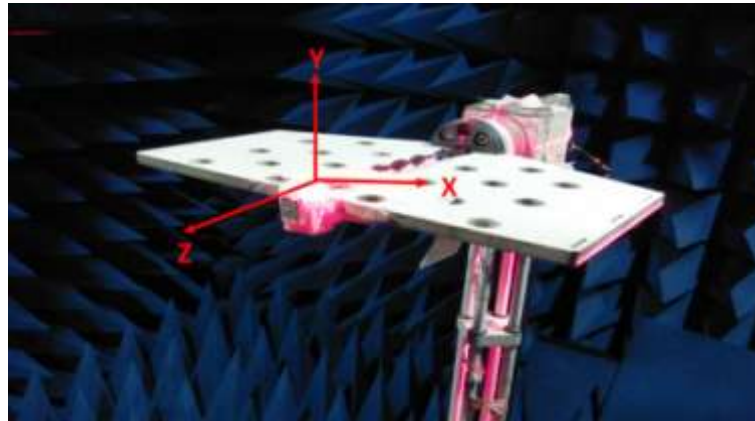
Average Gain:



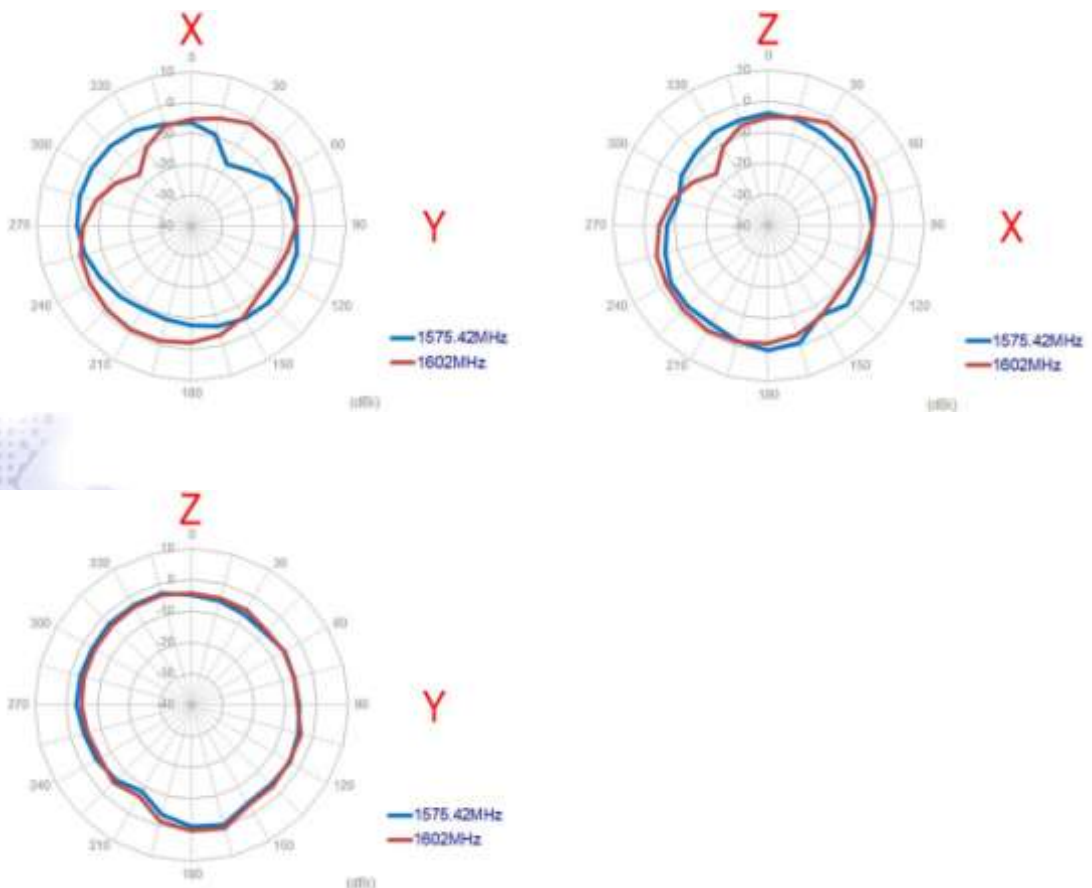
Peak Gain



III. Antenna Radiation Pattern Measurement:

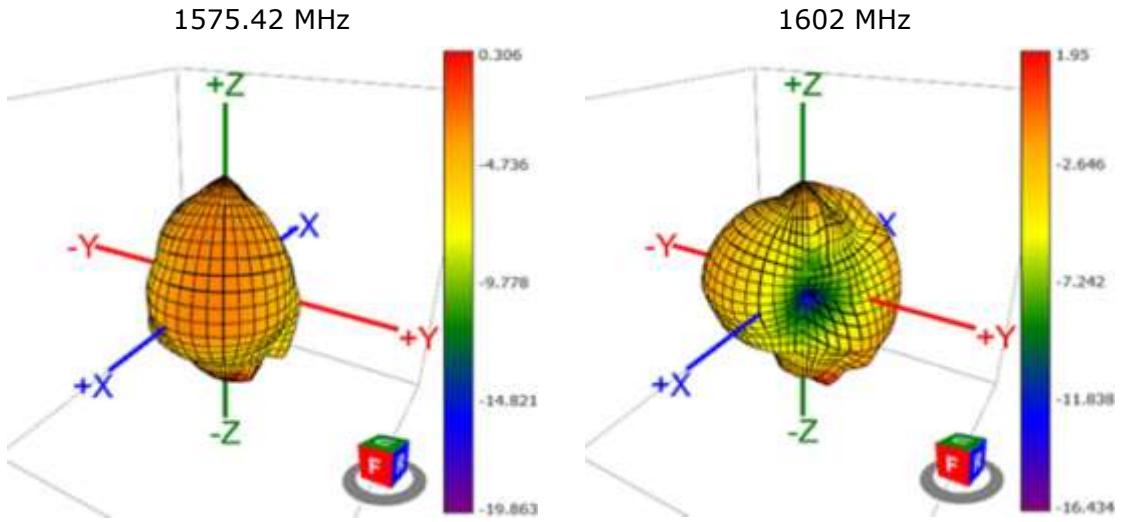


2D radiation pattern :



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3D radiation pattern :



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IV. Mechanical Drawing (Unit:mm):

