

Product Name: AM-1 Series_ High gain GNSS Active Antenna Module

Part Number: AM-1-B-B01

Features:

- 25.2*25.0*7.7mm Compact Form Factor
- GPS & GLONASS L1 Bands Supported
- 29dB LNA Gain, Exceptionally Low Noise Figure
- Up to 60dB Out-of-Band Suppression
- RoHS & REACH Compliant

Applications:

- GNSS Navigation or Tracking Device

High gain GNSS Active Antenna Module

MODEL: AM-1-B-B01

WI-RD-D-240 V1.0

I. Specifications:

Category	Specification	
Patch Specification		
Application Band	L1(GPS)	GLONASS
Frequency Range	1575.42±1.023MHz	1602 ±5MHz
Efficiency(%)	48.42	50.82
Average Gain (dBi)	-3.15	-2.94
Gain (zenith) (dBi)	1.91	1.11
Polarization	R.H.C.P	
Test Condition	With housing With metal plane (305 * 225 mm)	
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	2.5 dB typ.	
Current	10±2 mA	
Output Impedance	50Ω	
GNSS_ Out of Band Rejection		
Frequency(MHz)	600~1500	1660~3000
Gain(dB)	60	60
Overall Specification (Through Antenna , LNA , without cable loss)		
Frequency Range	1575.42 ± 1.023MHz	1602 ± 5MHz
Zenith Gain	30.7±2 dB	30.2±2 dB

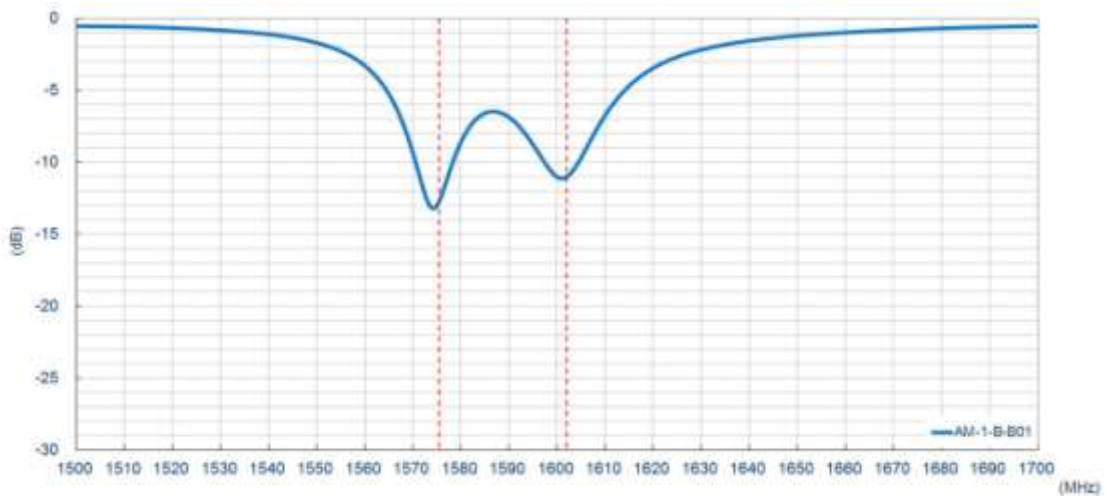
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Output Impedance	50 Ω
Output V.S.W.R	< 2
Operation Voltage	3.0~5.0 V
Current	10±2 mA
Dimension	25 x 25 x 7.7 mm
ESD Protection	±8 KV (direct discharge) ±15KV (air discharge)
Operation Temperature	-40 ~ +85 °C
Storage Temperature	-40 ~ +85 °C

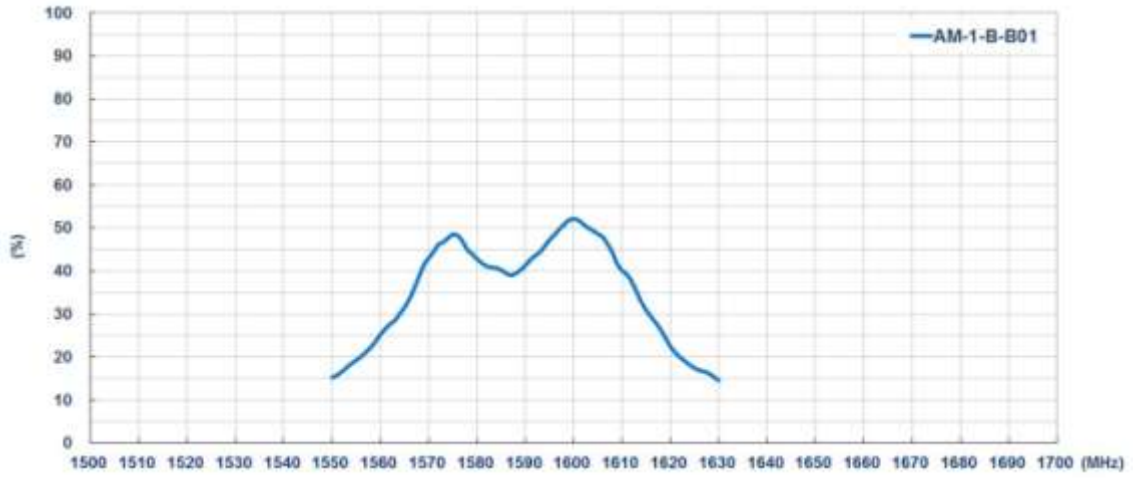
II. Analysis Antenna Performance:

- **Passive antenna performance**

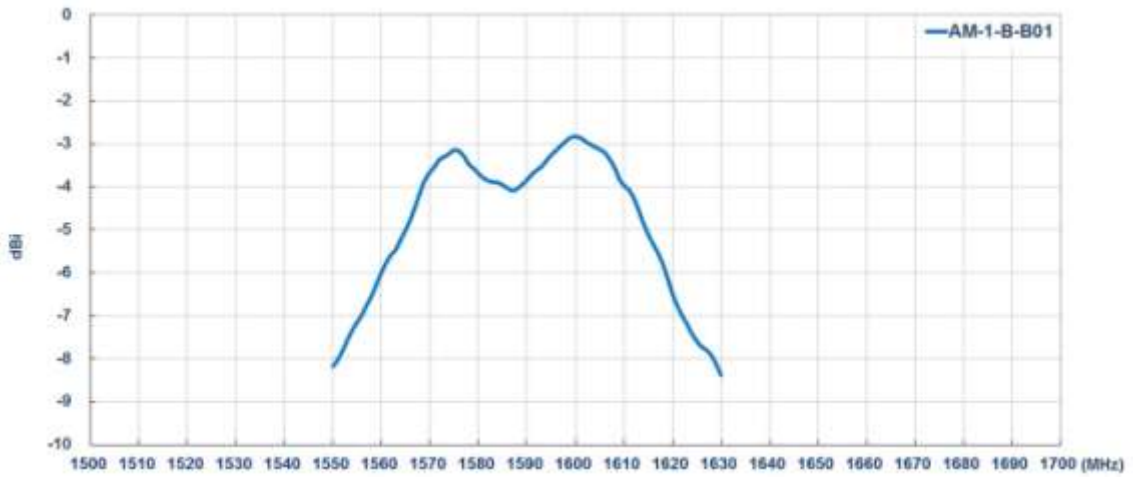
S-parameters:



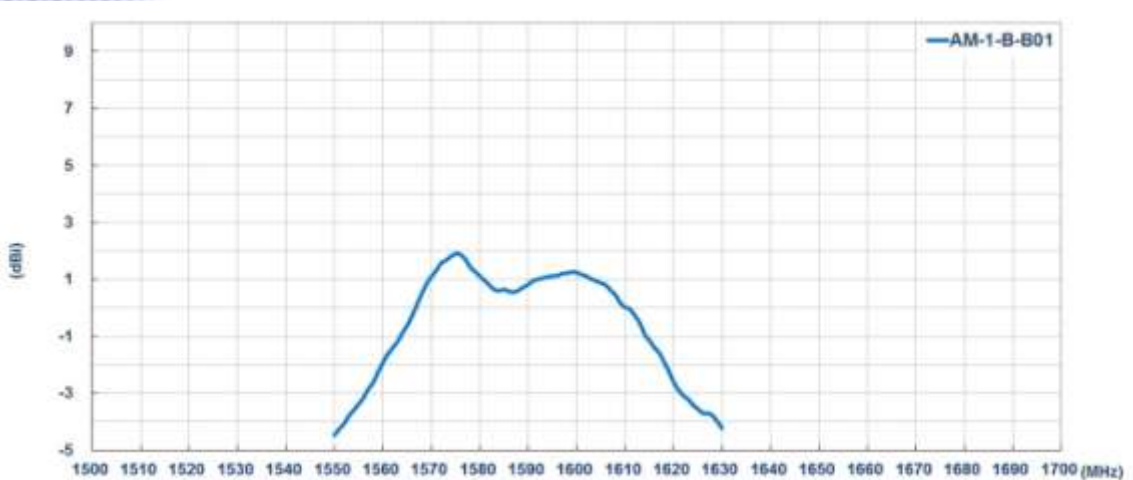
Efficiency:



Average Gain:



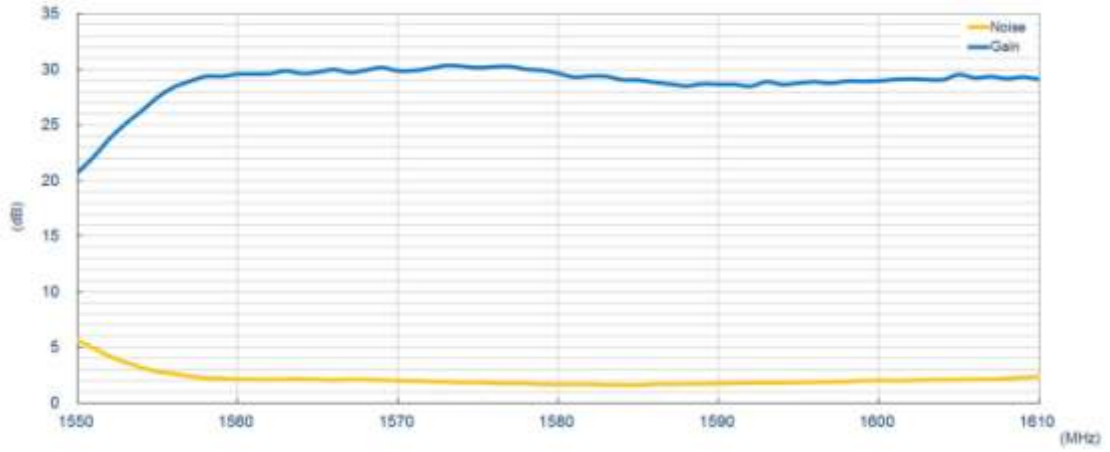
Peak Gain



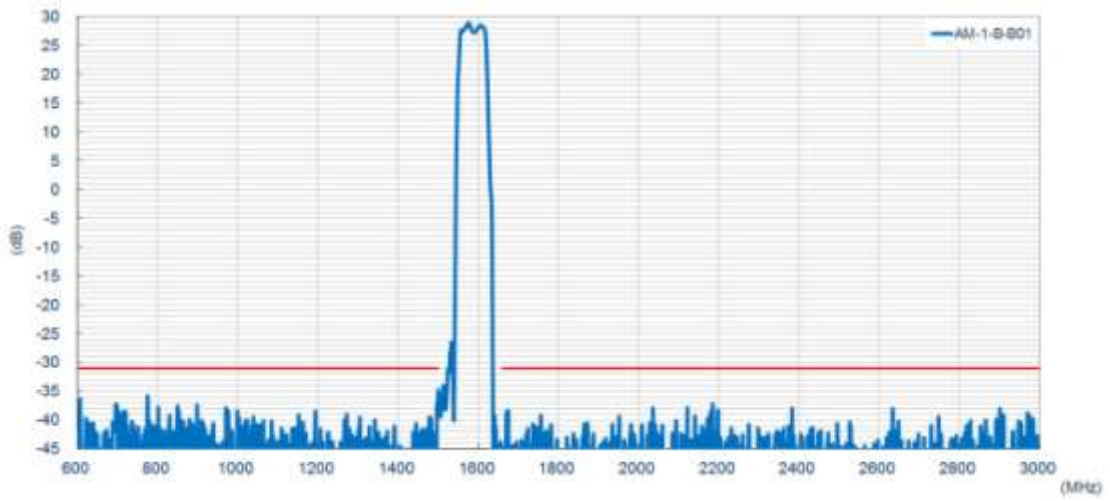
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- Active antenna performance

GNSS_Noise & Gain

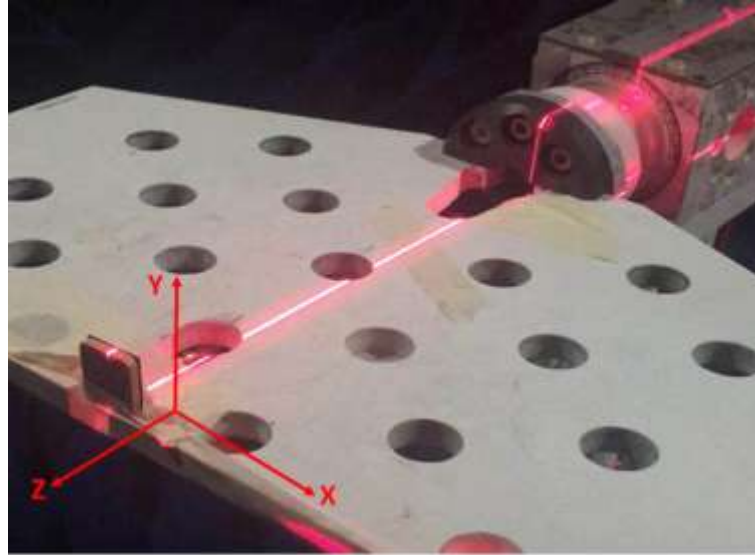


GNSS_ Out of Band Rejection



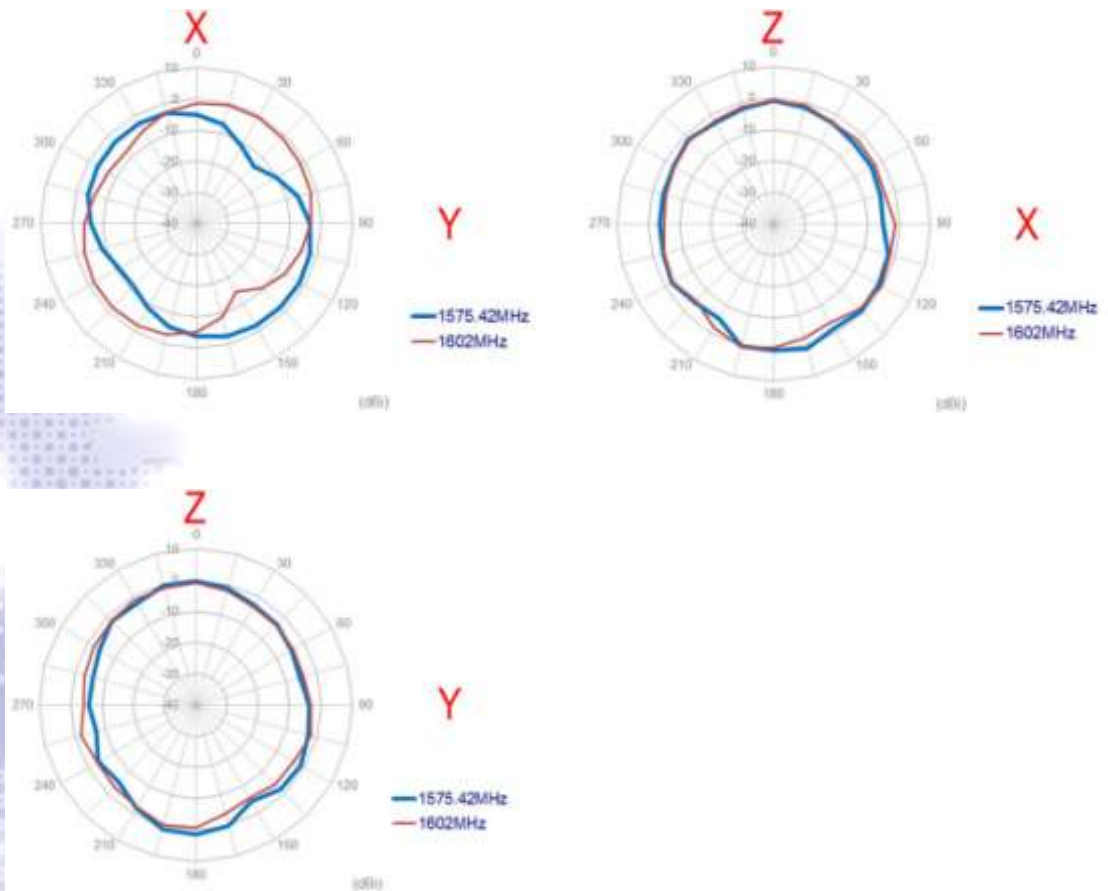
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III. Antenna Radiation Pattern Measurement:

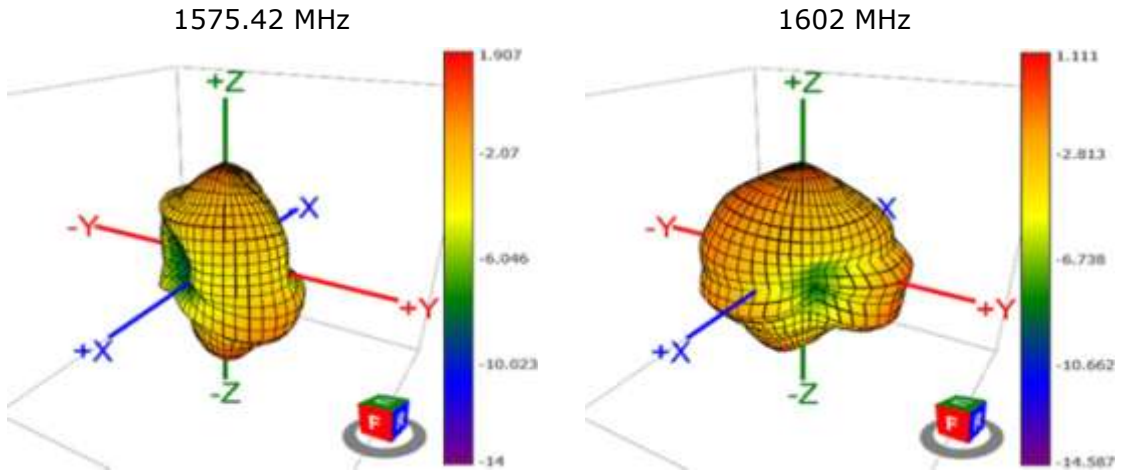


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IV. 2D radiation pattern :



V. 3D radiation pattern :



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VI. Mechanical Drawing (Unit:mm):

