

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

Part Number: AM-1-A-B04

Features:

- 25.2*25.0*7.7mm Compact Form Factor
- GPS & GLONASS L1 Bands Supported
- 29dB LNA Gain, Exceptionally Low Noise Figure
- Up to 59dB Out-of-Band Suppression
- RoHS & REACH Compliant

Applications:

- GNSS Navigation or Tracking Device

GNSS Active Antenna Module

MODEL: AM-1-A-B04

WI-RD-D-241 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	1.5dB typ.		
Current	10±2 mA		
Output Impedance	50Ω		
GNSS _out of Band Rejection			
Frequency(MHz)	600~1350	1350~1460	1730~3000
Gain(dB)	59	40	43
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	
Output Impedance	50 Ω		

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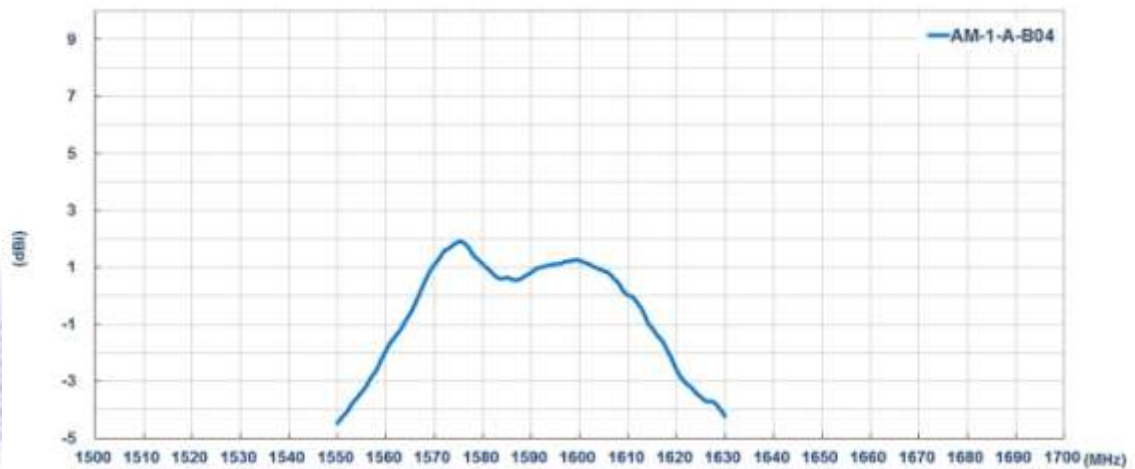
Output V.S.W.R	< 2
Operation Voltage	3.0~5.0 V
Current	10±2 mA
Dimension	25 x 25 x 7.7 mm
ESD Protection	±8 KV (direct discharge) ±15KV (air discharge)
Operation Temperature	-40 ~ +85 °C
Storage Temperature	-40 ~ +85 °C

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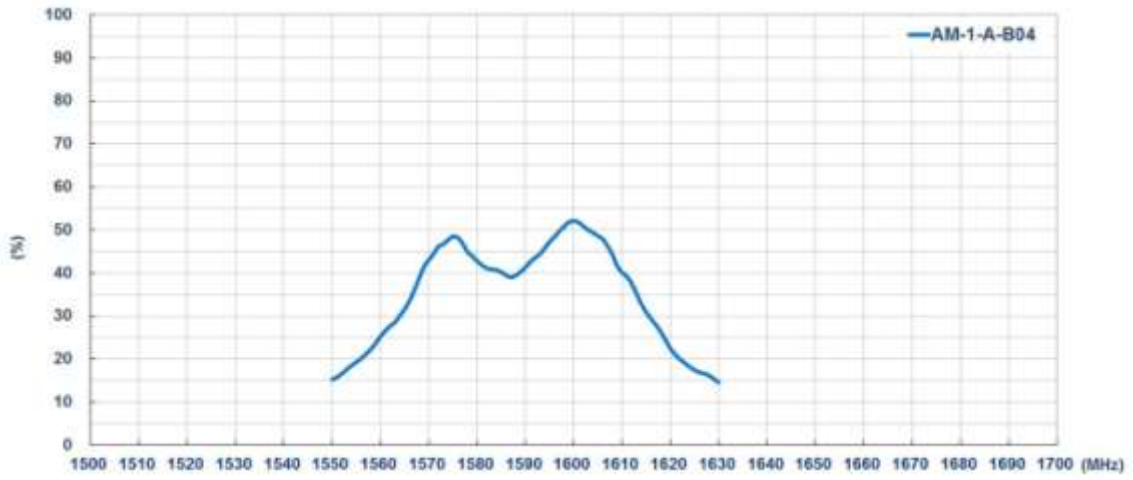
II. Analysis Antenna Performance:

- **Passive antenna performance**

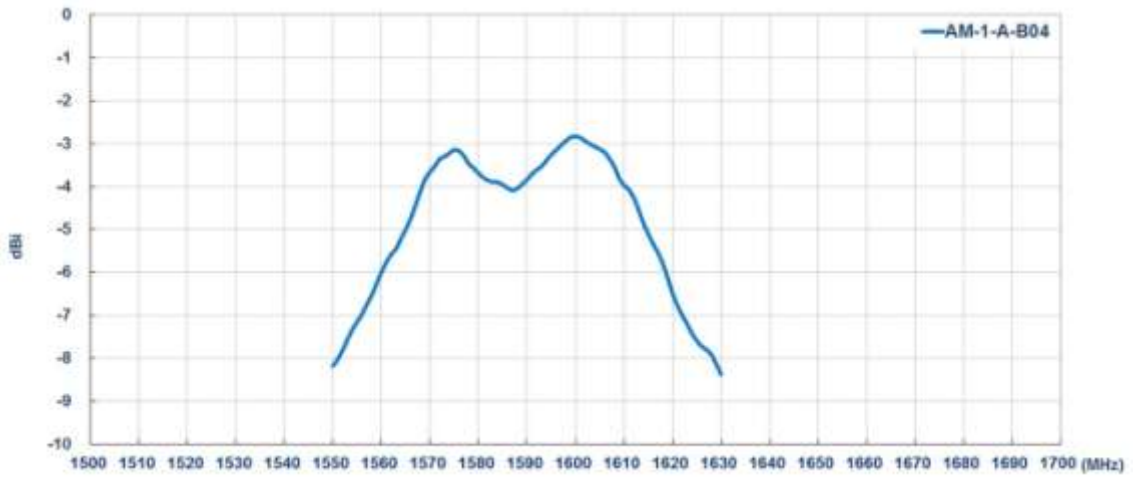
S-parameters:



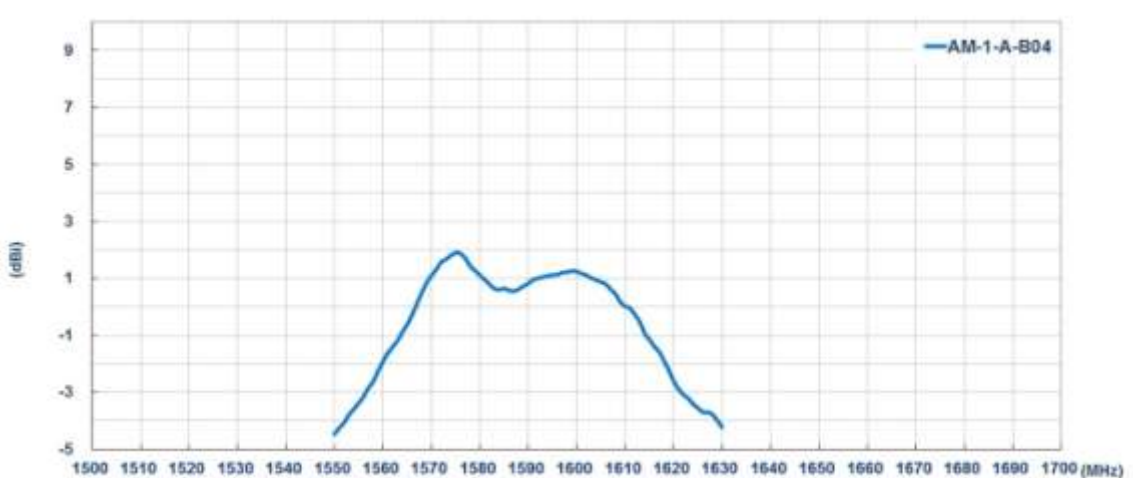
Efficiency:



Average Gain:



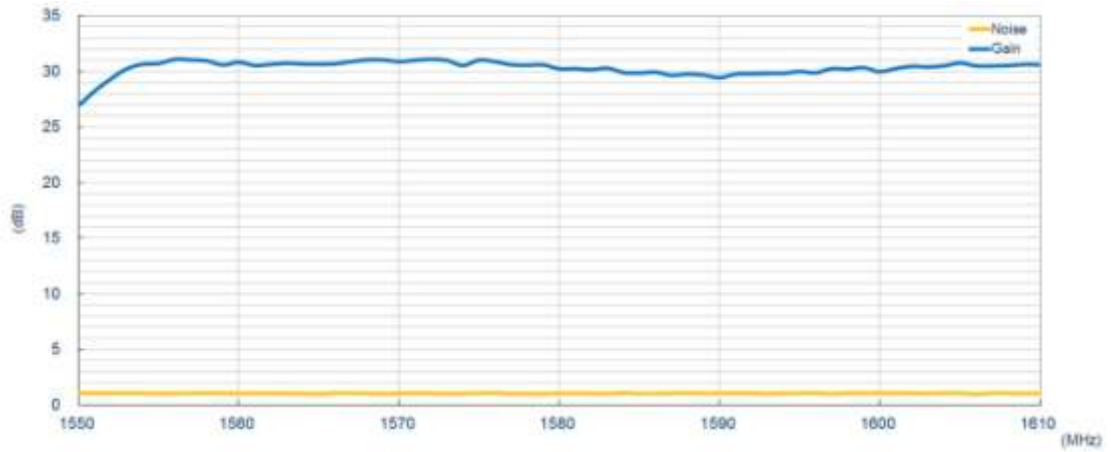
Peak Gain



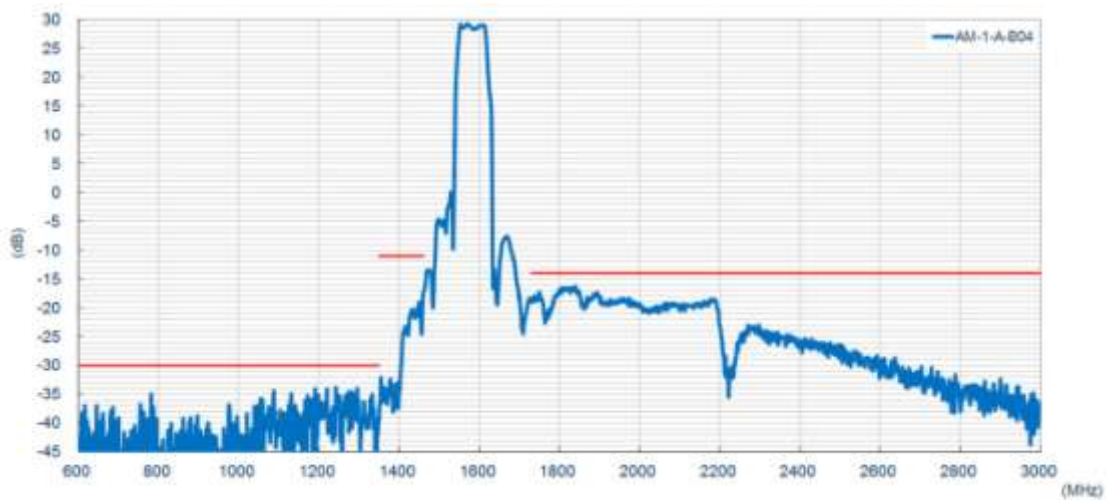
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- Active antenna performance

GNSS_Noise & Gain :

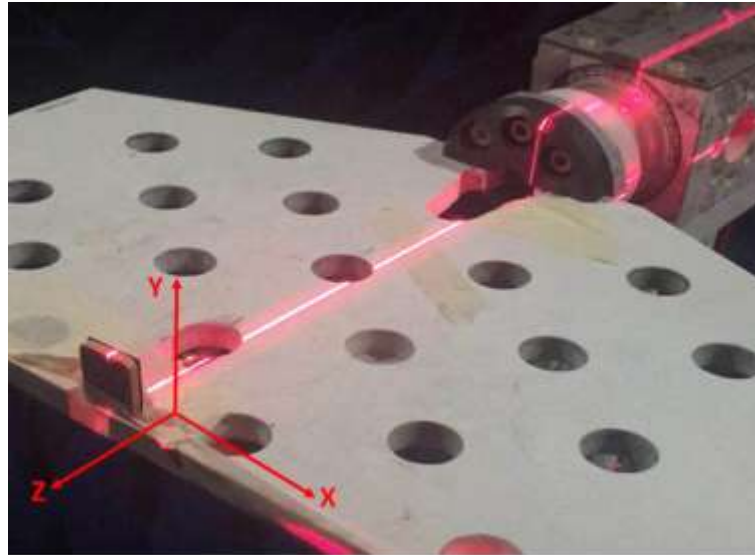


GNSS_Out of Band Rejection :



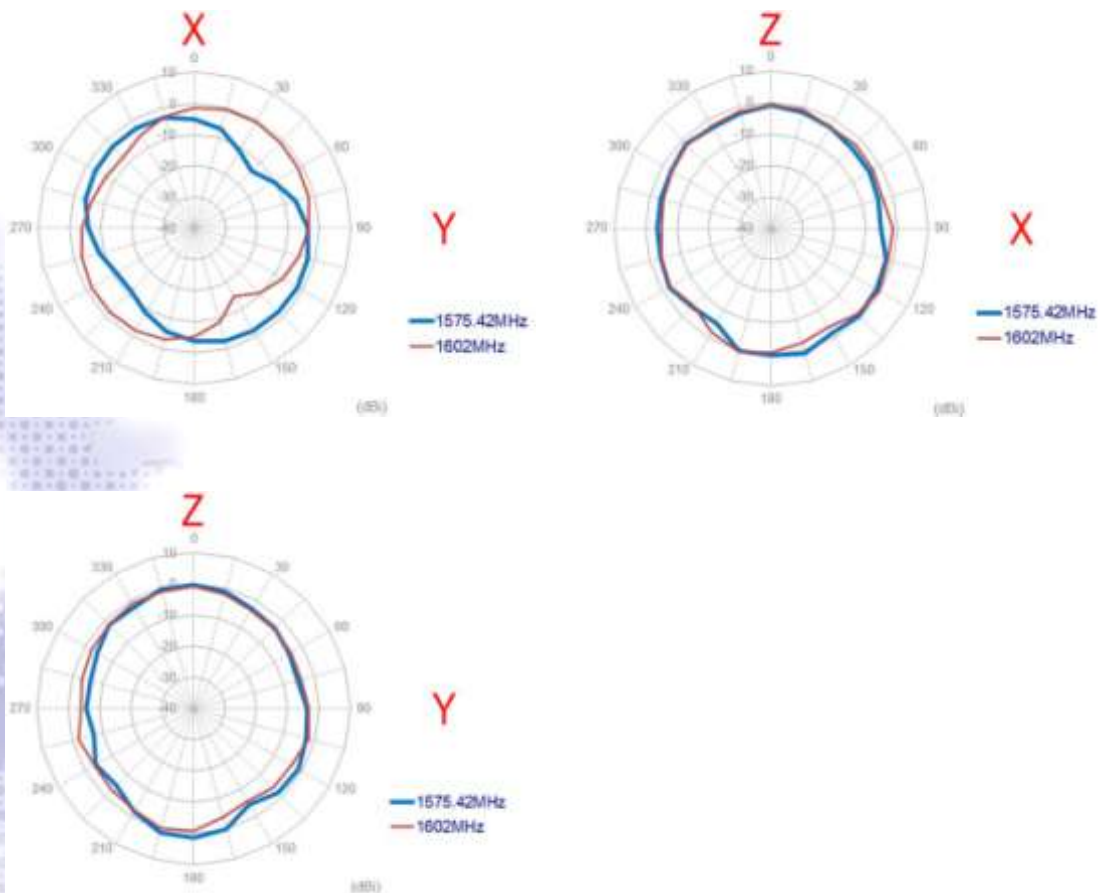
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III. Antenna Radiation Pattern Measurement:

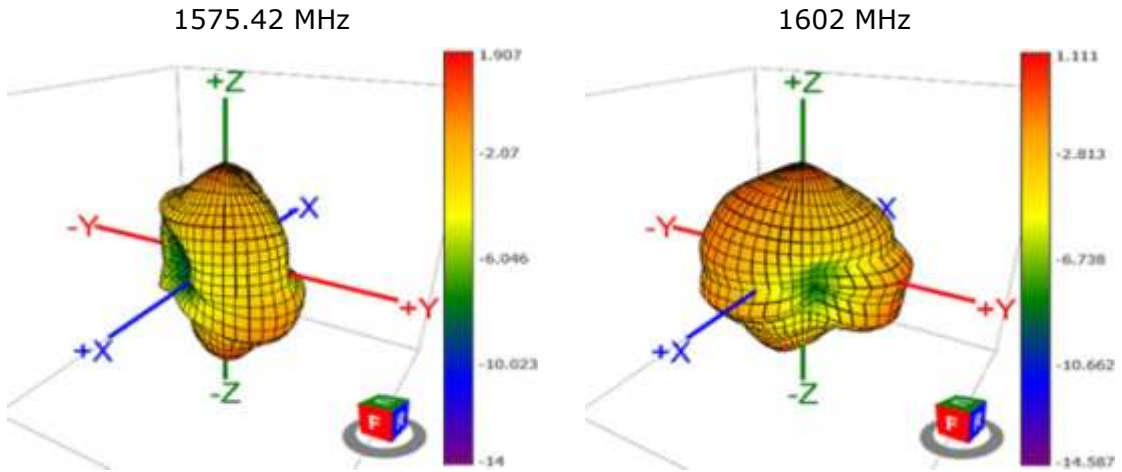


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IV. 2D radiation pattern :



V. 3D radiation pattern :



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VI. Mechanical Drawing (Unit:mm):

