



**Product Name:** AM-1 Series\_ Active GPS/GLONASS/BeiDou L1 Antenna Module

**Part Number:** AM-1-A-B03

**Features:**

- 25.2\*25.0\*7.8mm Compact Form Factor
- GPS & GLONASS & BeiDou L1 Bands Supporting
- 27dB LNA Gain, Exceptionally Low Noise Figure
- Up to 50dB Out-of-Band Suppression
- RoHS & REACH Compliant

**Applications:**

- GNSS Navigation or Tracking Device

# Active GPS/GLONASS/BeiDou L1 Antenna Module

**MODEL: AM-1-A-B03**

WI-RD-D-253 V1.1

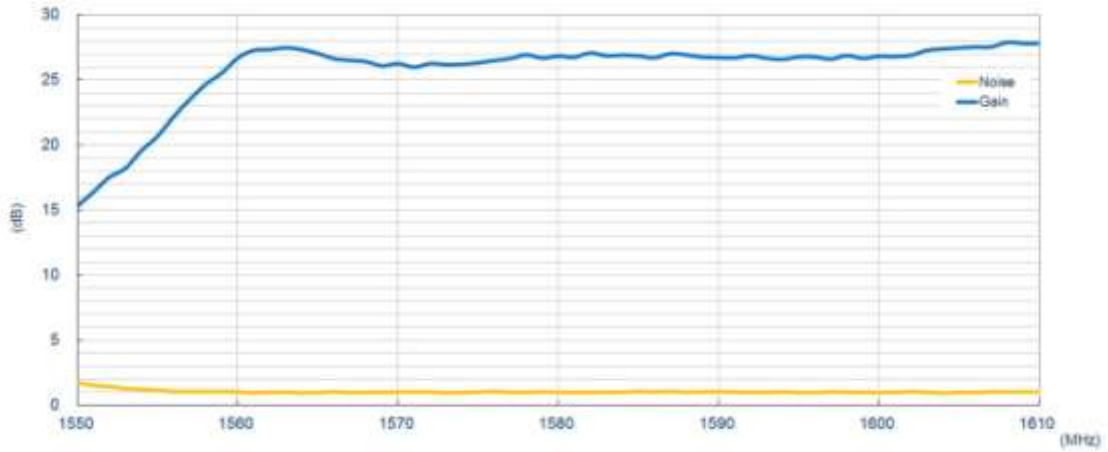
## I. Specifications:

Category	Specifications		
<b>Application Band</b>	BeiDou	GPS	GLONASS
<b>Frequency (MHz)</b>	1561	1575.42	1602
<b>Efficiency (%)</b>	49.89	42.76	58.61
<b>Average Gain (dBi)</b>	-3.02	-3.69	-2.32
<b>Peak Gain (dBi)</b>	1.21	1.21	1.44
<b>Active Antenna Performance</b>			
<b>Application band</b>	BeiDou	GPS	GLONASS
<b>Frequency (MHz)</b>	1561±2.046MHz	1575.42±1.023MHz	1602 ±5MHz
<b>Gain (dB)</b>	27	27	27
<b>Noise Figure (dB)</b>	0.98	0.98	0.92
<b>Current Consumption</b>	9.0mA(typical)		
<b>Output Impedance</b>	50Ω		
<b>GNSS_ Out of Band Rejection</b>			
<b>Frequency (MHz)</b>	600~1300	1300~1530	1650~3000
<b>Rejection (dB)</b>	55	30	30
<b>Passive Antenna Performance</b>			
<b>VSWR</b>	< 2		
<b>Return loss (dB)</b>	< -10		
<b>Impedance</b>	50Ω		
<b>Cable &amp; Connector</b>	H100 20Cm, SMA Male		
<b>Dimension</b>	25.2 x 25.0 x 7.8 mm		
<b>Polarization</b>	RHCP		
<b>ESD Protection</b>	+/- 8 KV (direct discharge) +/- 15 KV (air discharge)		
<b>Operation Temperature</b>	-40 ~ +85 °C		
<b>Storage Temperature</b>	-40 ~ +85 °C		

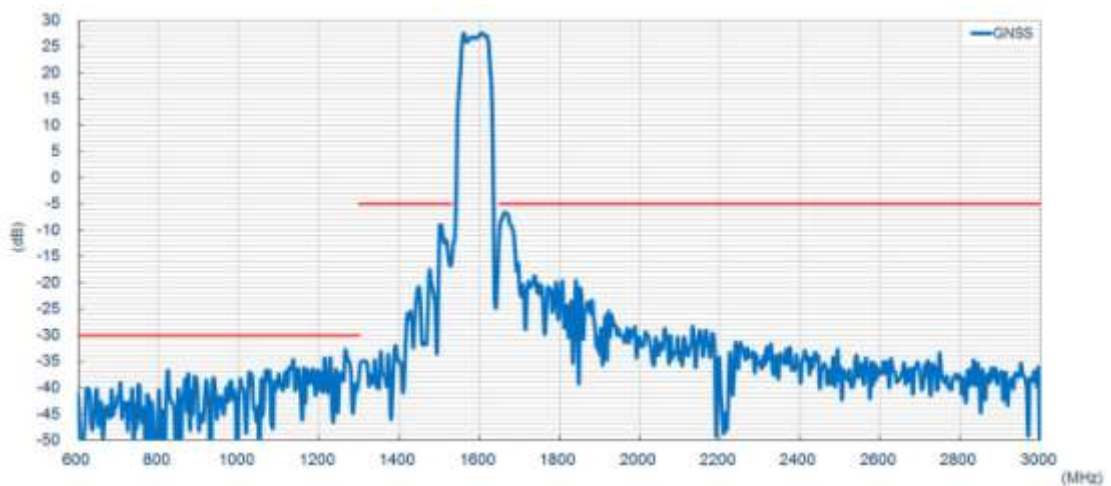
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## II. Analysis Antenna Performance:

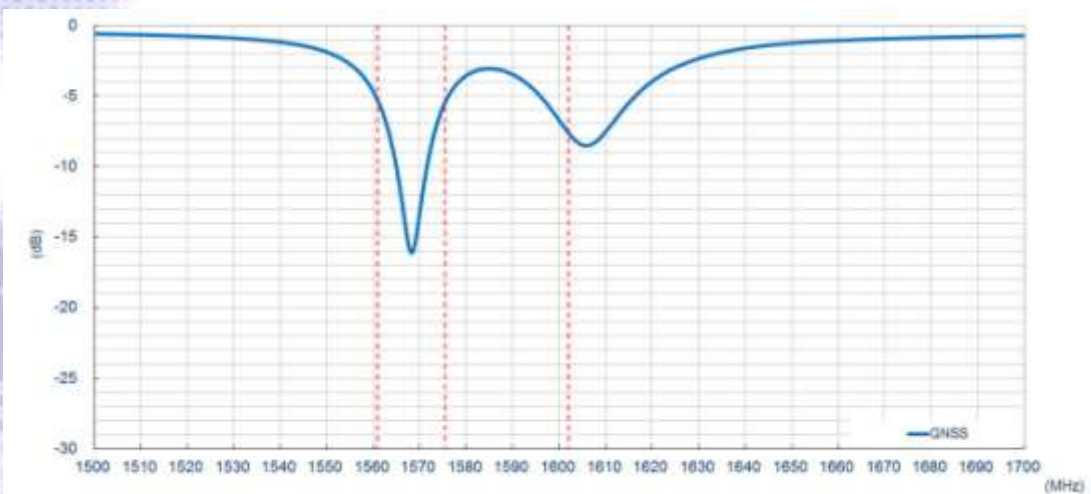
GNSS\_LNA Noise Figure & Gain :



GNSS\_Out of Band Rejection :

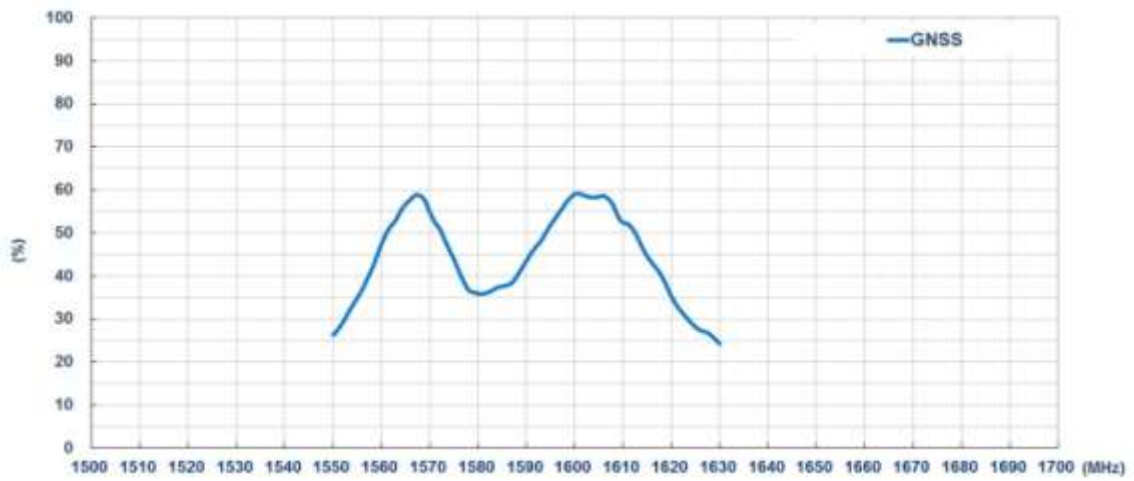


S-parameters :

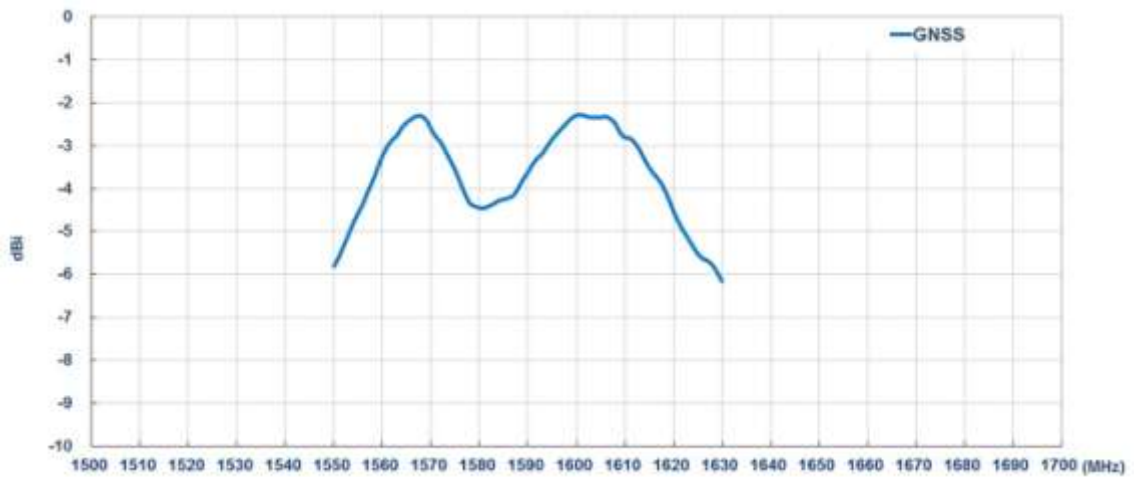


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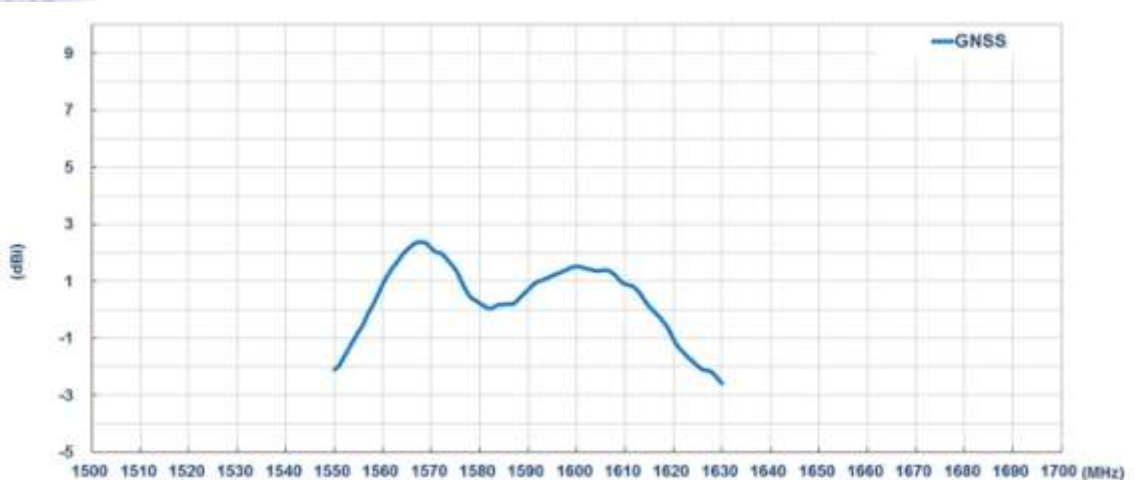
Efficiency :



Average gain :

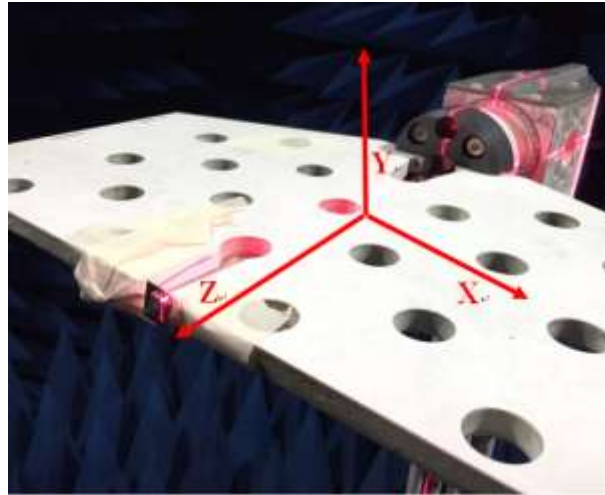


Peak gain :



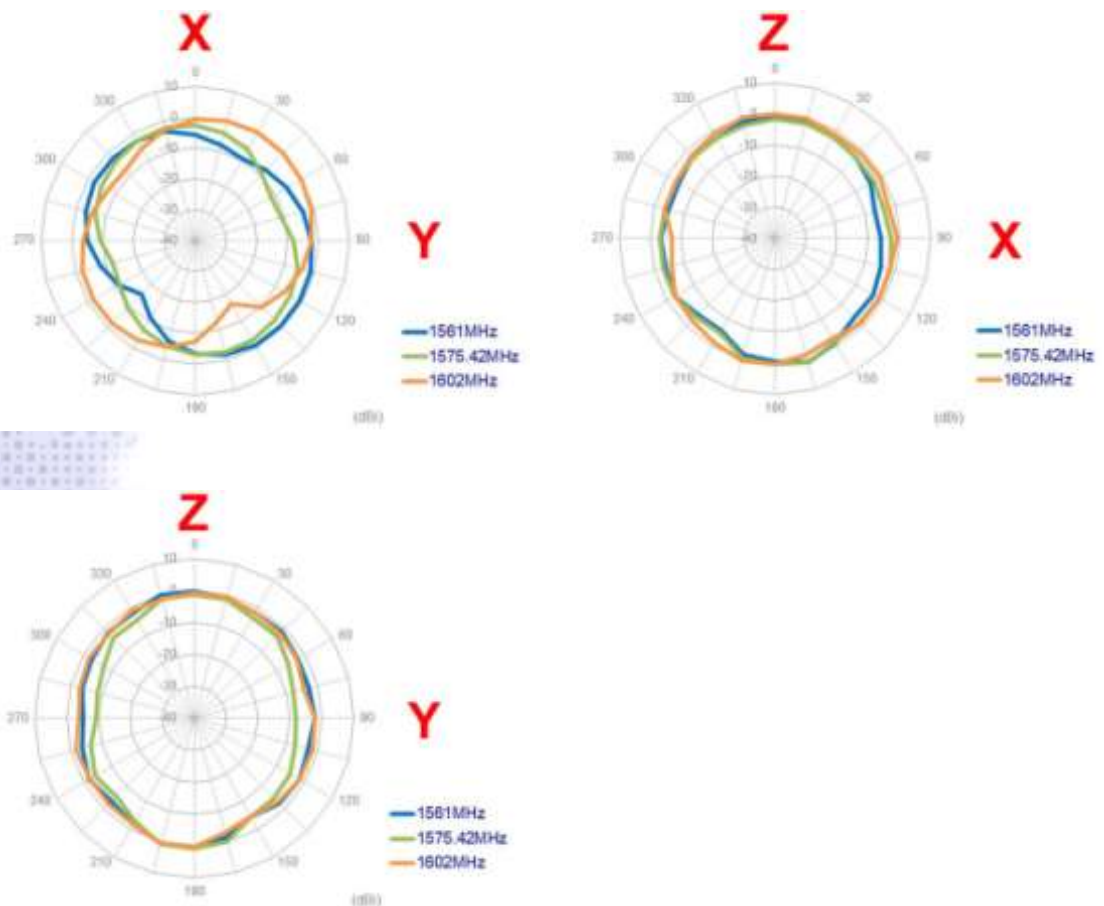
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### III. Antenna Radiation Pattern Measurement:

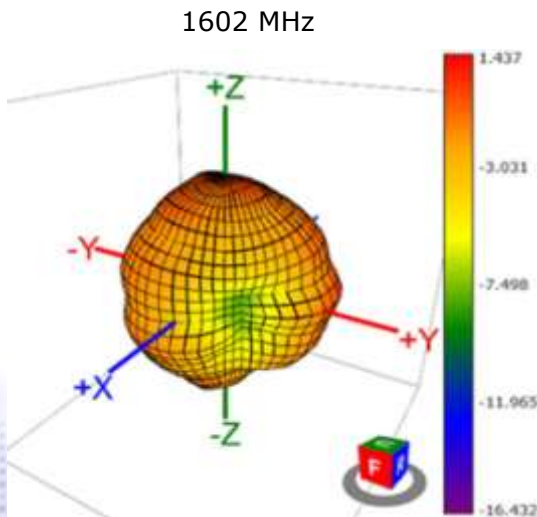
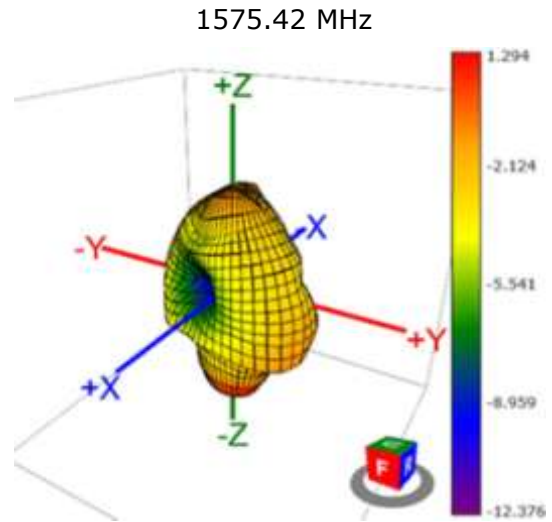
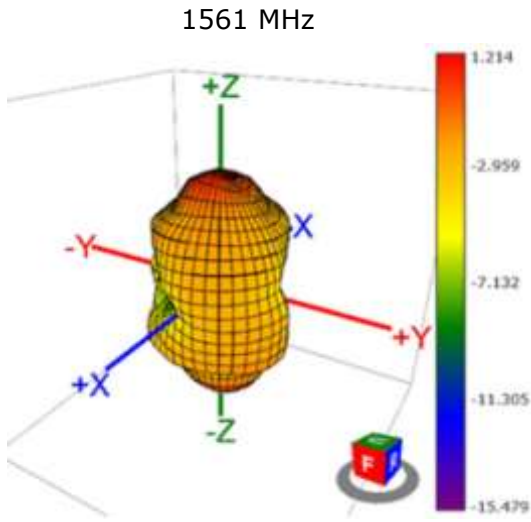


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### IV. 2D Radiation Pattern

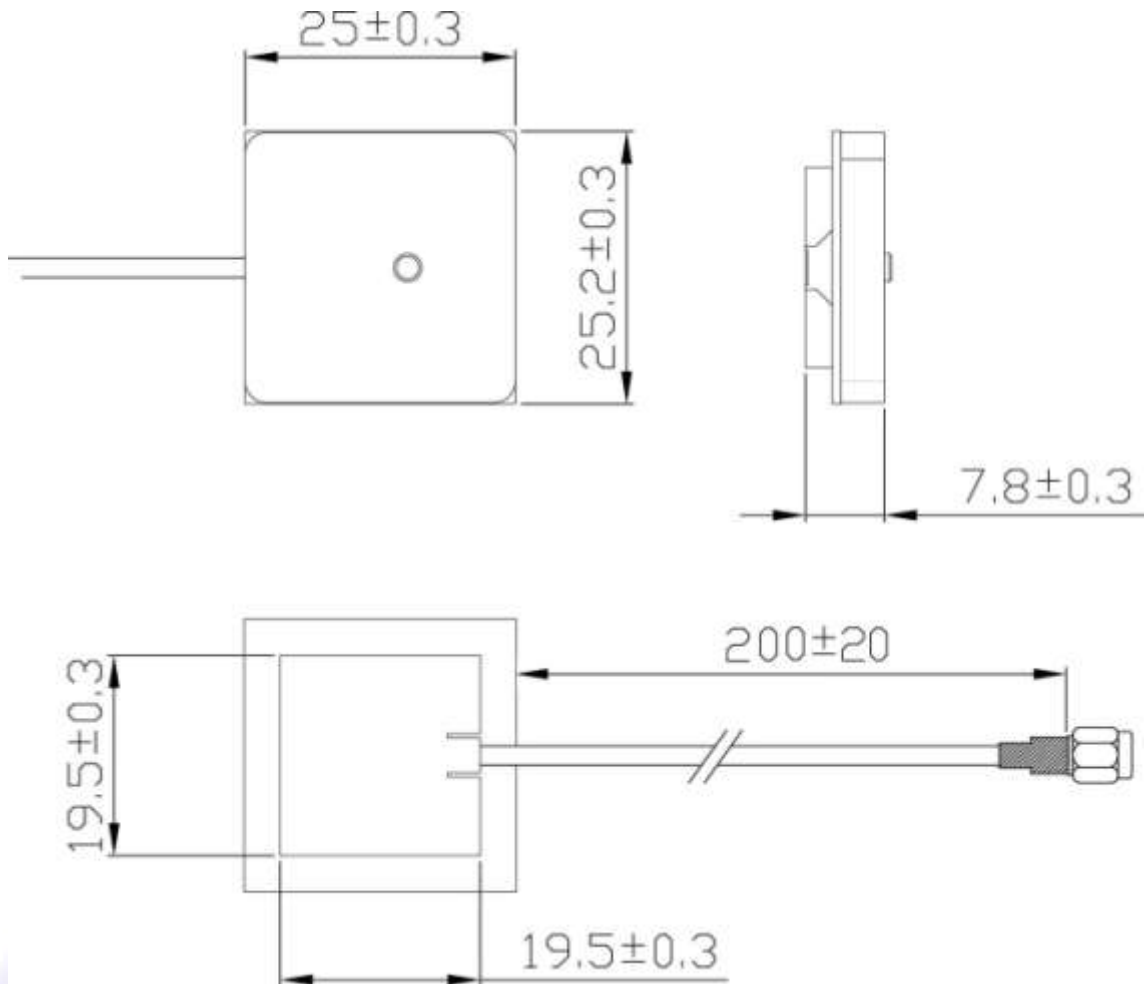


## V. 3D Radiation Pattern



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## VI. Mechanical Drawing (Unit:mm):



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