



**Product Name:** EG-16W Series\_ External One Port GNSS Antenna

**Part Number:** EG-16W-AC-B01

**Features:**

- GPS 1.5GHz Supporting
- Cable Length & Connector are customizable
- Robust Enclosure, IP67 Waterproof Resistant
- RoHS & REACH Compliant

**Applications:**

- Automotive Navigation
- For all GPS applications with networking such as sensor, sonar multi-function gauge, etc.



# External One Port GNSS Antenna

## MODEL: EG-16W-AC-B01

WI-RD-D-264 V1.0

### I. Specifications:

Category	Specifications
<b>Passive Antenna performance</b>	
Application Band	GPS
Frequency (MHz)	1575.42
Efficiency (%)	69.66
Average Gain (dBi)	-1.57
Peak Gain (dBi)	1.63
Polarization	R.H.C.P. (Right Handed Circular Polarization)
V.S.W.R	< 2
Return Loss (dB)	< -10
Impedance ( $\Omega$ )	50
Dimension (mm)	25 x 25 x 4
Connector	TNC (SBJ)
<b>Active Antenna Performance</b>	
Application Band	GPS
Frequency (MHz)	1575.42 $\pm$ 1.023
Gain (dB)	28
Noise (dB)	1.22
Current Consumption (mA)	10.56 $\pm$ 2
Output Impedance ( $\Omega$ )	50

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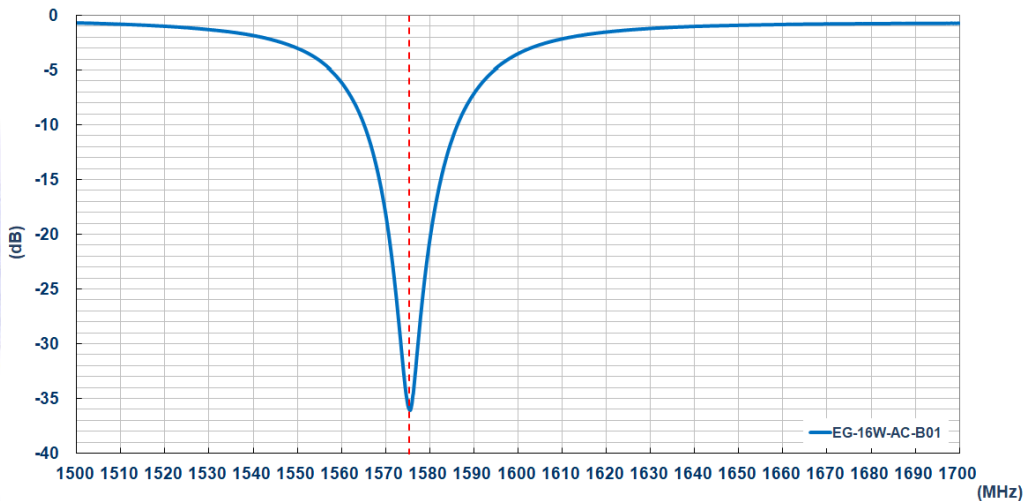


GNSS _Out Of Band Rejection			
Frequency (MHz)	600 ~ 1350	1350 ~ 1520	1650 ~ 3000
Gain (dB)	50	34	45
ESD Protection			
Contact (KV)	± 8		
Air (KV)	± 15		
Environmental Conditions			
Operation Temperature	-40 ~ +85 °C		
Storage Temperature	-40 ~ +85 °C		
Waterproof Resistant	IP67		
Relative Humidity	95% non-condensing		

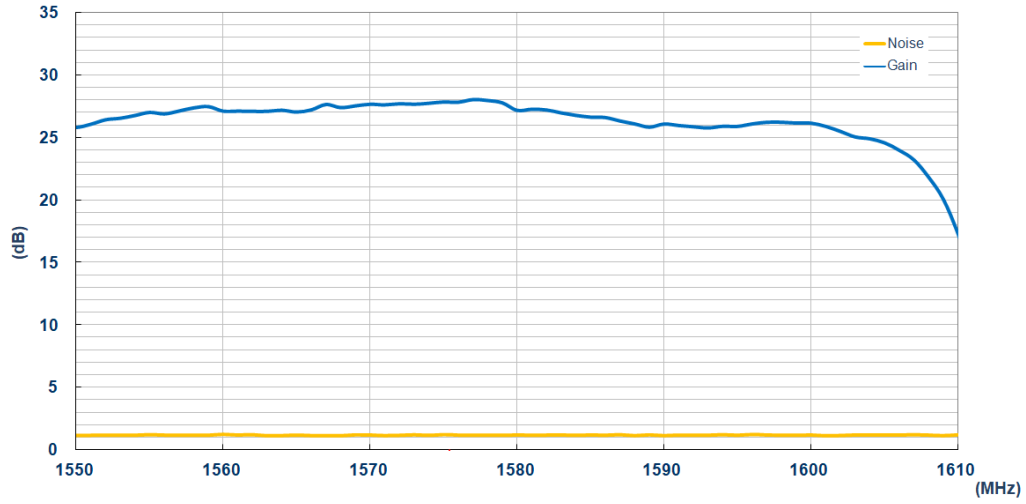
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## II. Antenna Technical Parameters:

S11 (dB) - GNSS

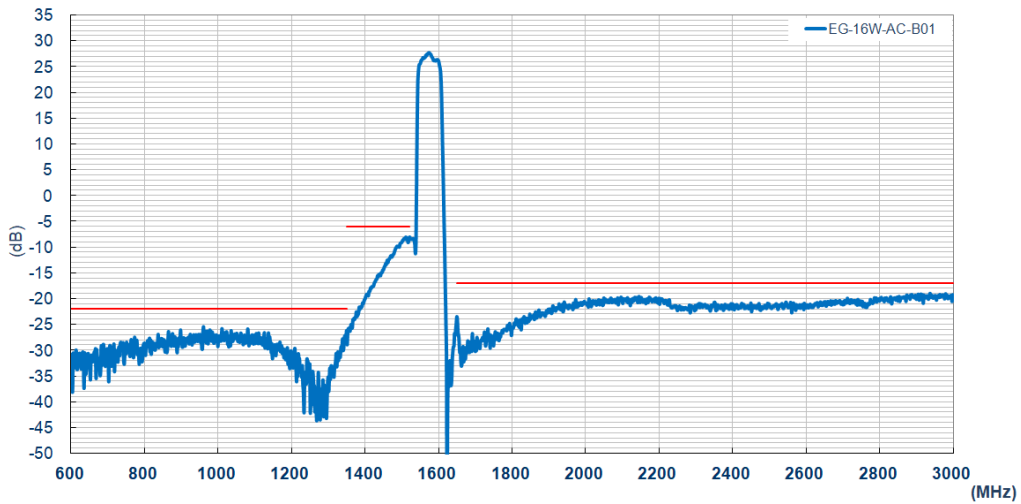


### Noise & Gain (dB) – GNSS



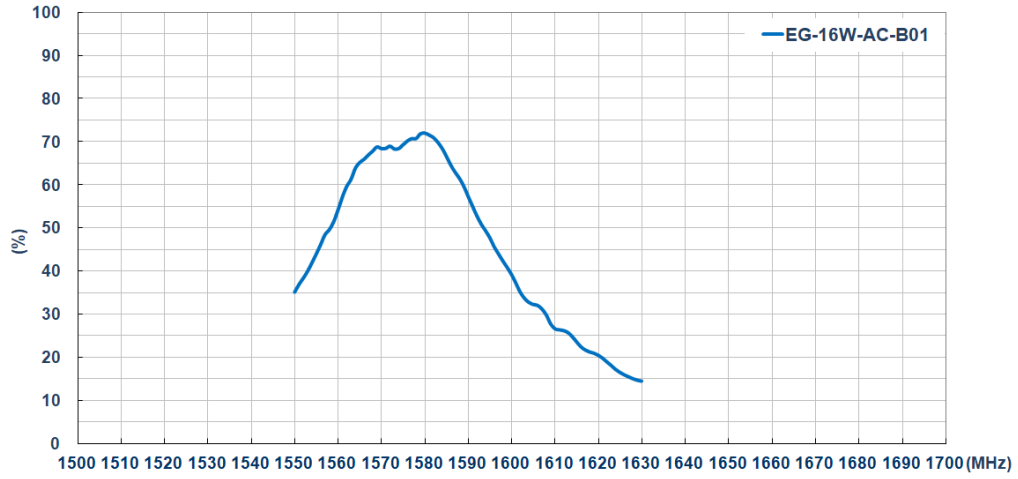
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### Out of Band Rejection (dB) – GNSS

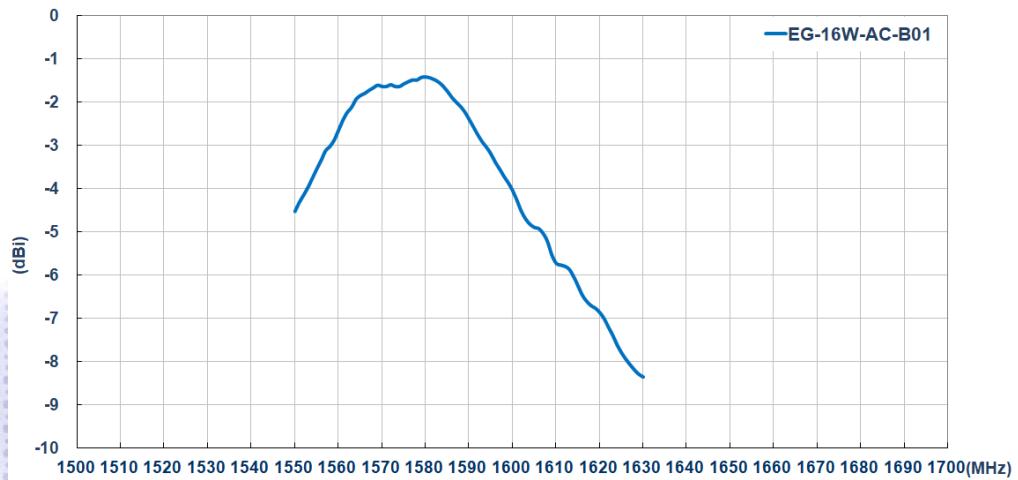


SANAV  
 2019.12.19  
 DCC

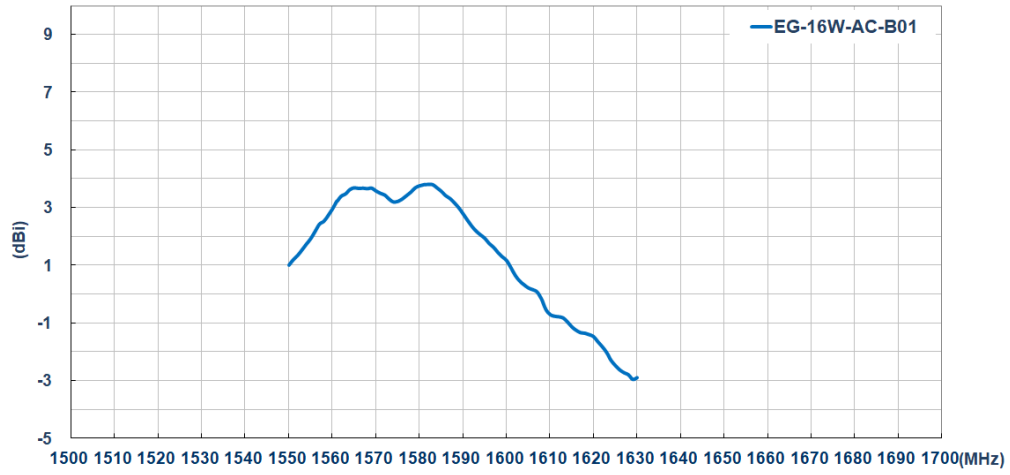
### Efficiency (%) – GNSS



### Average Gain (dBi) – GNSS



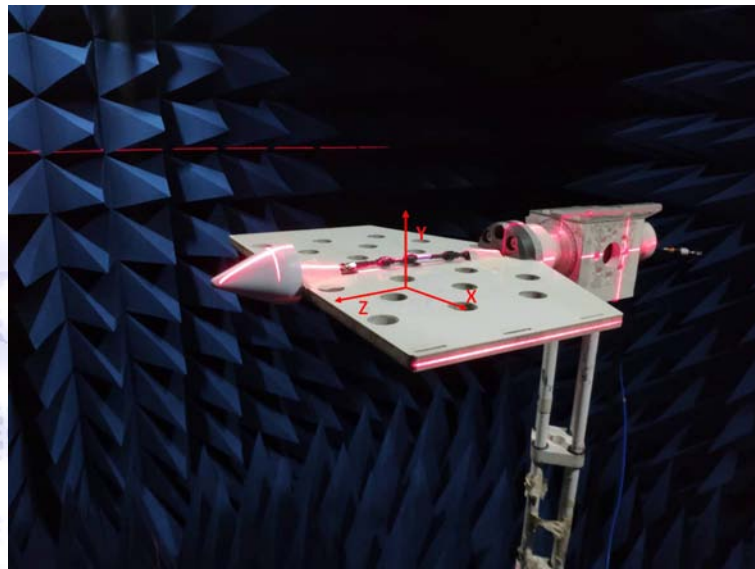
Peak Gain (dBi) – GNSS



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### III. Antenna Radiation Pattern Measurement:

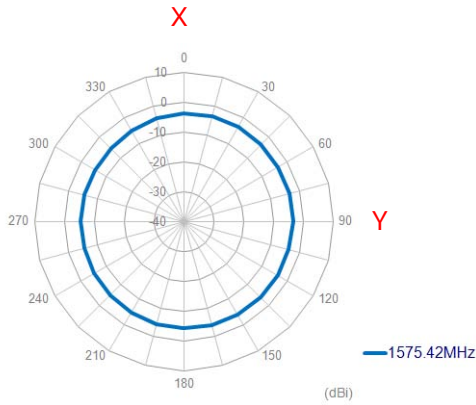
The antenna radiation patterns were measured in Anechoic Chamber.  
The measurement setup as below,



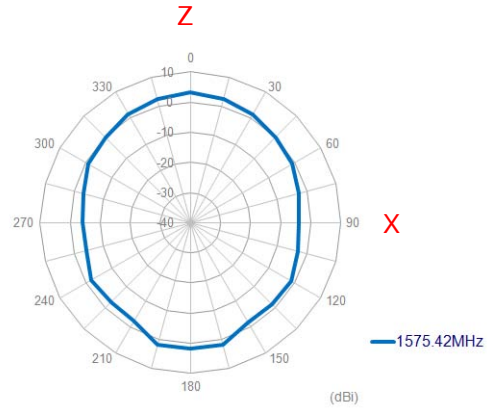


#### IV. 2D Radiation Pattern:

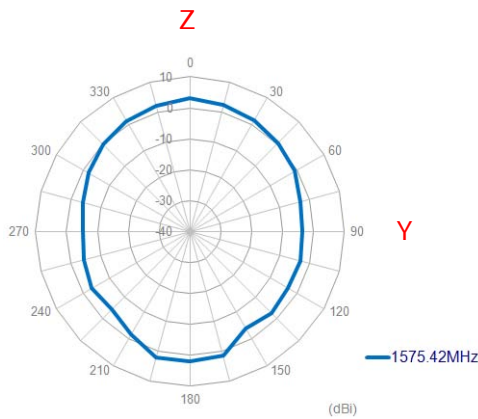
X-Y Plane



X-Z Plane

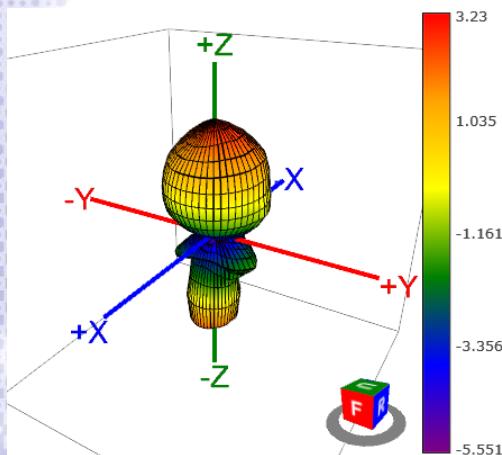


Y-Z Plane



#### V. 3D Radiation Pattern:

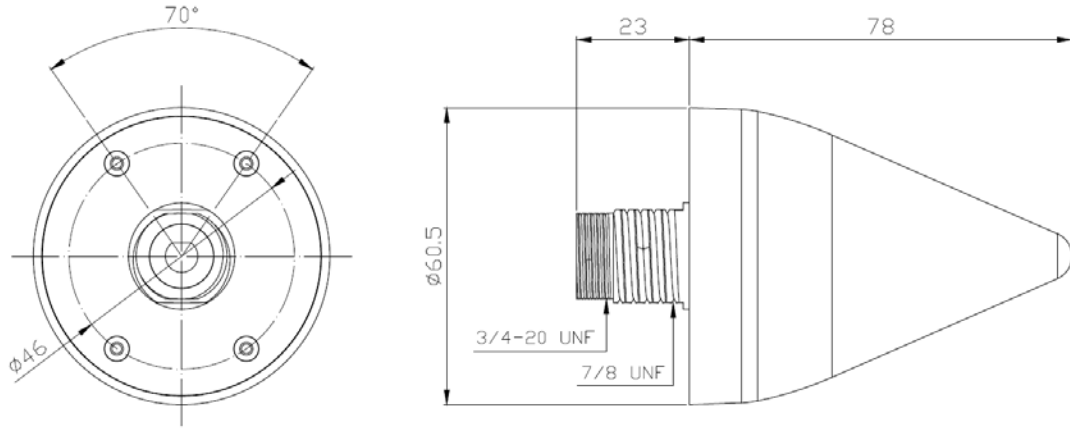
1575.42MHz (dBi)



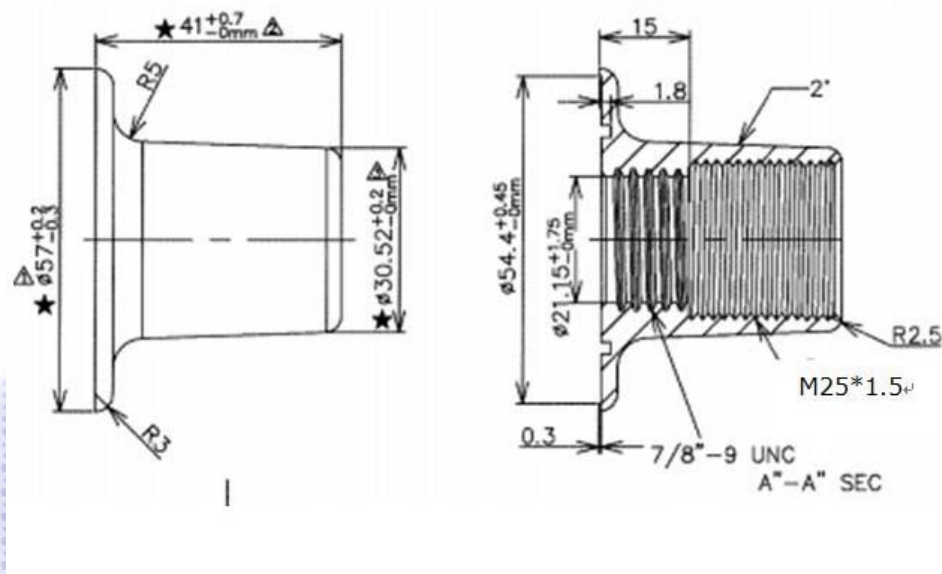
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## VI. Mechanical Drawing (Unit:mm):



Pole Mount



Unit: mm

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