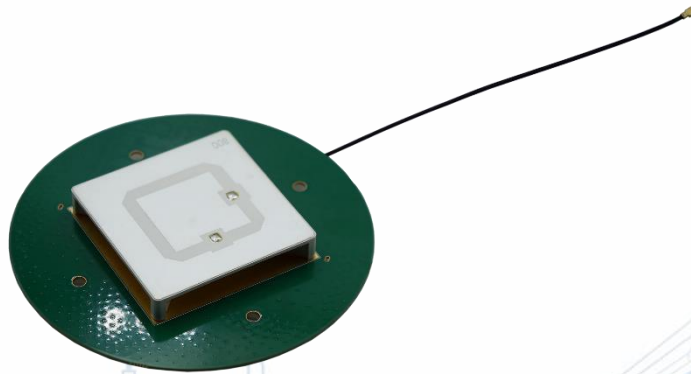




Product Name: GNSS L1/L2/L5 Antenna Module

Part Number: AM-11-C-A01

Features:

- Support GPS L1 / GLONASS L1/ BeiDou L1/ GPS L2/ GPS L5 Bands
- Connector : IPEX
- Excellent Out of Band Suppression, Up to 75 dB
- 40 dB Active Peak Gain
- Customizable Cables and Connectors
- RoHS & REACH Compliant

Applications:

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

GNSS L1/L2/L5 Antenna Module

MODEL: AM-11-C-A01

Rev.A

I. Specifications:

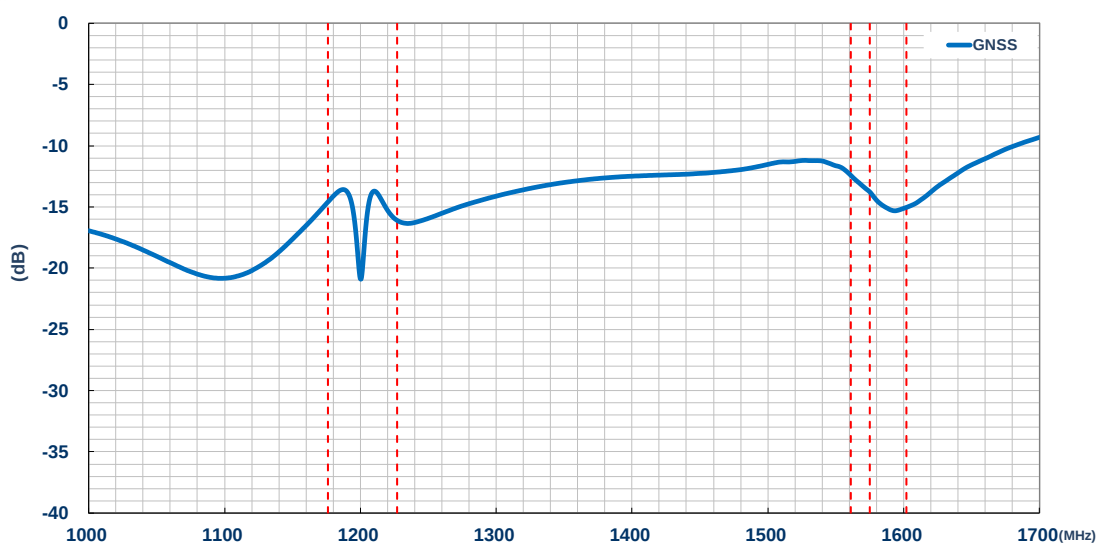
Items	Specifications				
Passive Antenna Performance					
Application Bands	GPS L5	GPS L2	BeiDou L1	GPS L1	GLONASS L1
Frequencies (MHz)	1176	1227	1561	1575.42	1602
Efficiency (%)	7.48	6.78	54.58	43.95	29.04
Average Gain (dBi)	-11.26	-11.69	-2.63	-3.57	-5.37
Peak Gain (dBi)	-6.14	-11.69	3.24	2.48	0.69
Axial Ratio	1.34	1.29	2.24	2.16	2.38
V.S.W.R	< 2				
Return loss (dB)	< -10				
Test Condition	Free Space				
Impedance (Ω)	50				
Polarization	R.H.C.P. (Right-Handed Circular Polarization)				
Active Antenna Performance					
Application Bands	GPS L5	GPS L2	BeiDou L1	GPS L1	GLONASS L1
Frequencies (MHz)	1176 ± 5	1227 ± 5	1561 ± 5	1575.42 ± 1.023	1602 ± 5
Gain (dB)	44	44	41	42	40
Noise Figure (dB)	2.9	3.1	3.4	3.2	3.4
Operation Voltage (V)	3.3 ~ 5.0				
Current Consumption (mA)	26 ± 4				
Output Impedance (Ω)	50				

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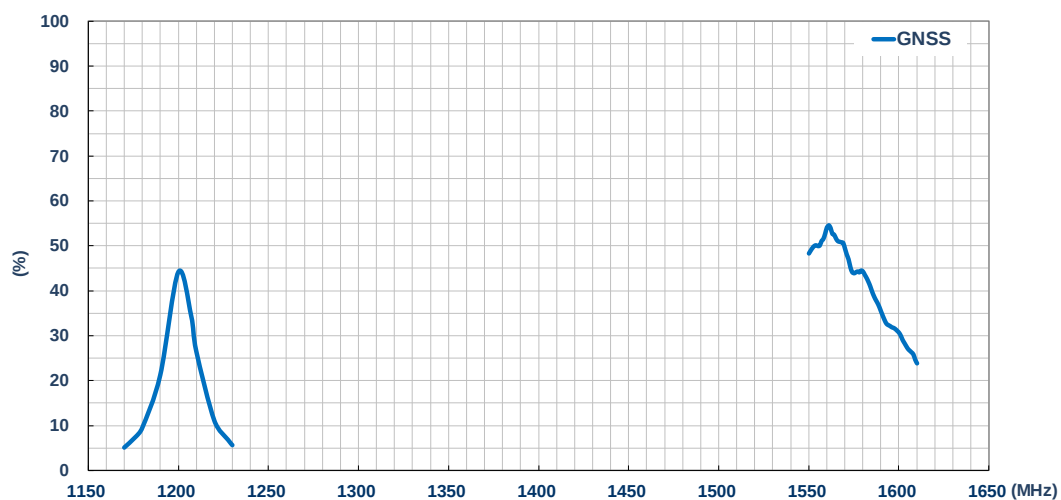
Out of Band Rejection			
Frequency (MHz)	500 ~ 1100	1270~1530	1650 ~ 3000
Out of Band Rejection (dB)	49	47	75
ESD Protection	+/- 8 KV (direct discharge) +/- 15KV (air discharge)		
Mechanical			
Dimension (mm)	φ 100(D)		
Connector	IPEX MHF1		
Cable	OD1.37		
Length (mm)	130		
Environmental Conditions			
Operation Temperature (°C)		-40 ~ +85	
Storage Temperature (°C)		-40 ~ +85	
Relative Humidity		95% non-condensing	

II. Passive Electrical Properties:

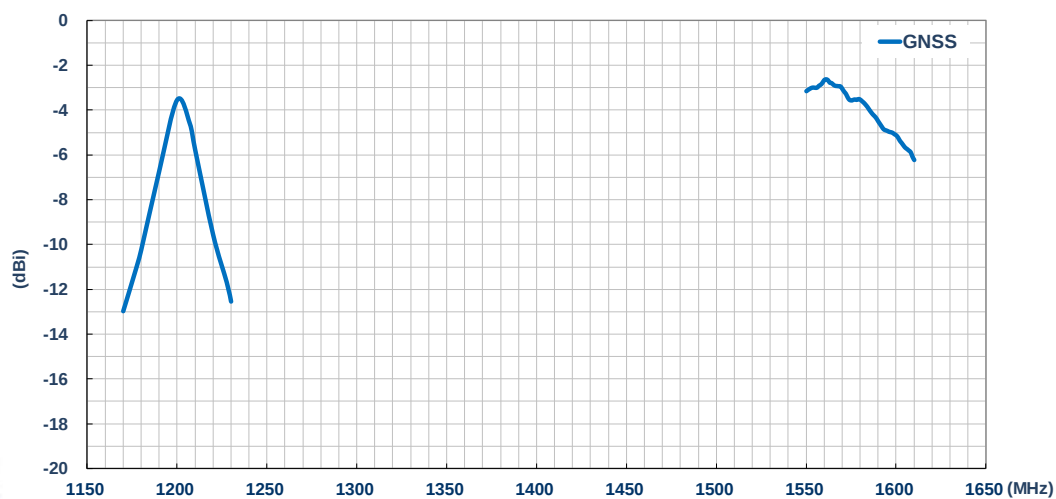
S11 (dB)



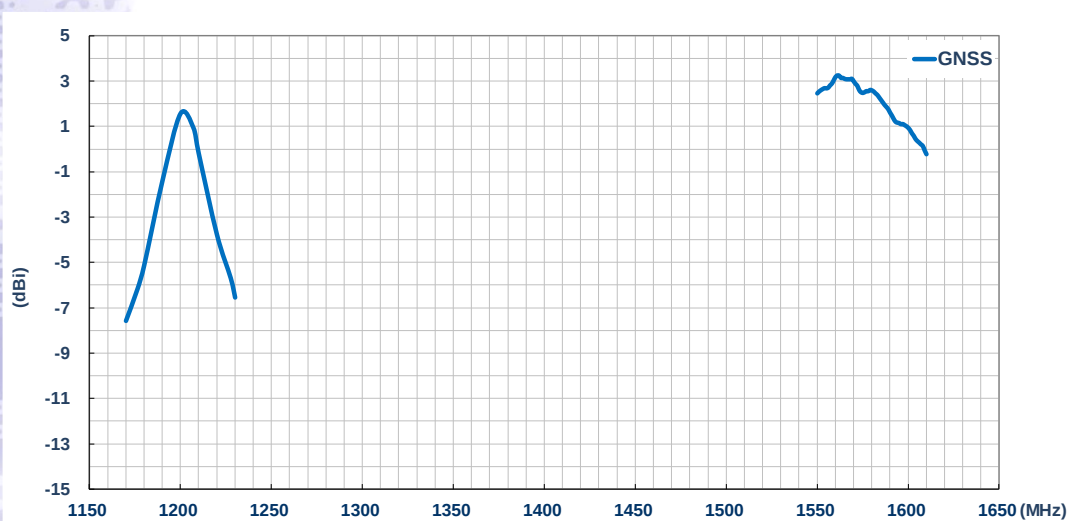
Efficiency (%)



Average Gain (dBi)

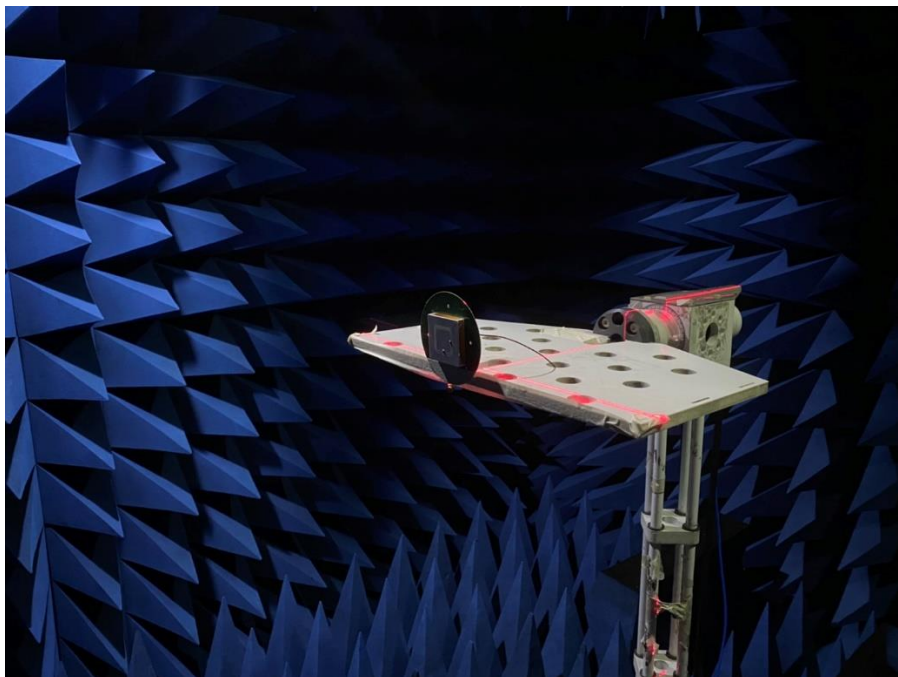


Peak Gain (dBi)



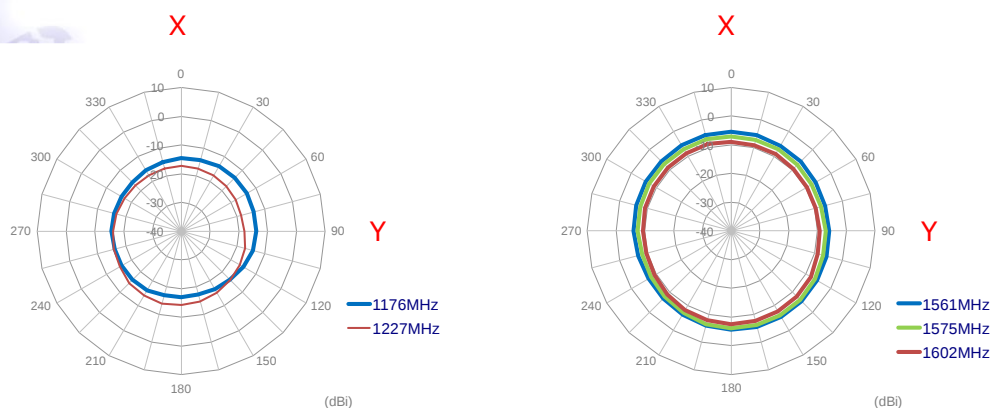
IV. Antenna Radiation Pattern Measurement:

The antenna radiation patterns are measured in 3D Anechoic Chamber.
The measurement setup is as show below,

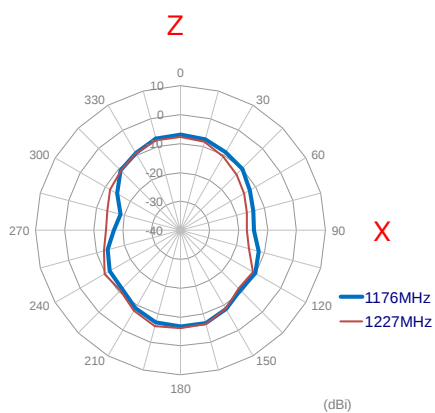


A) 2D Radiation Pattern:

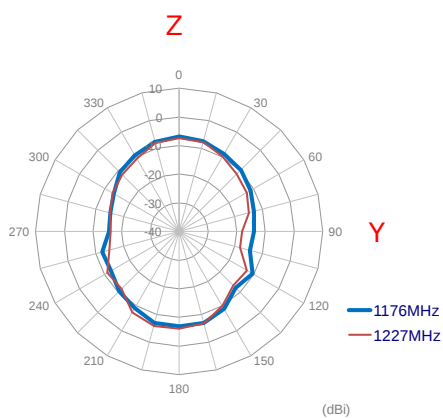
X-Y Plane



X-Z Plane

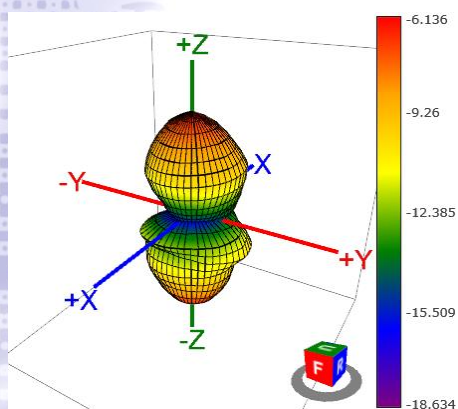


Y-Z Plane

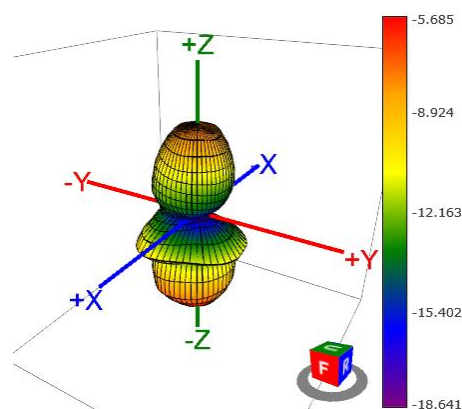


B) 3D Radiation Pattern:

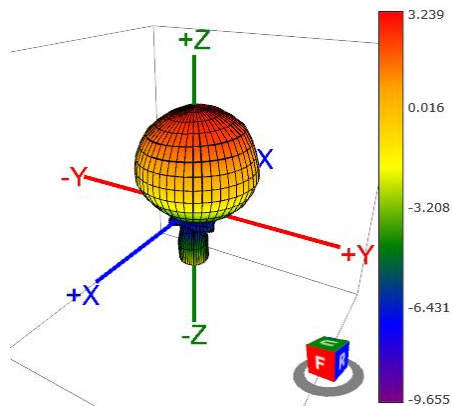
1176MHz



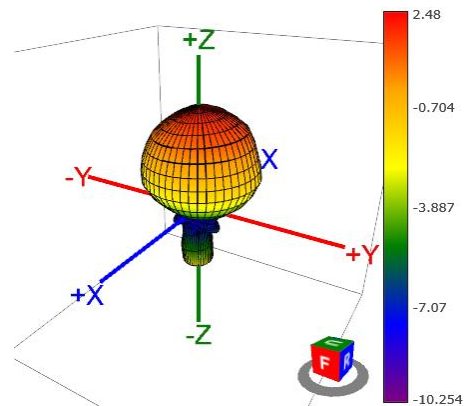
1227MHz



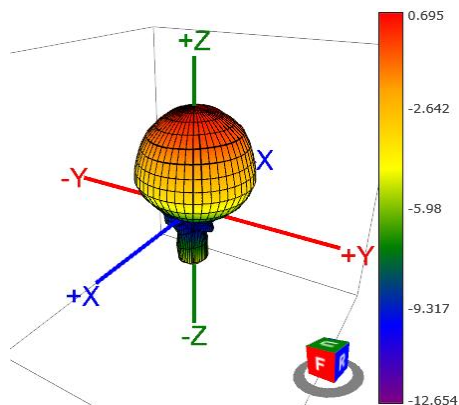
1561MHz



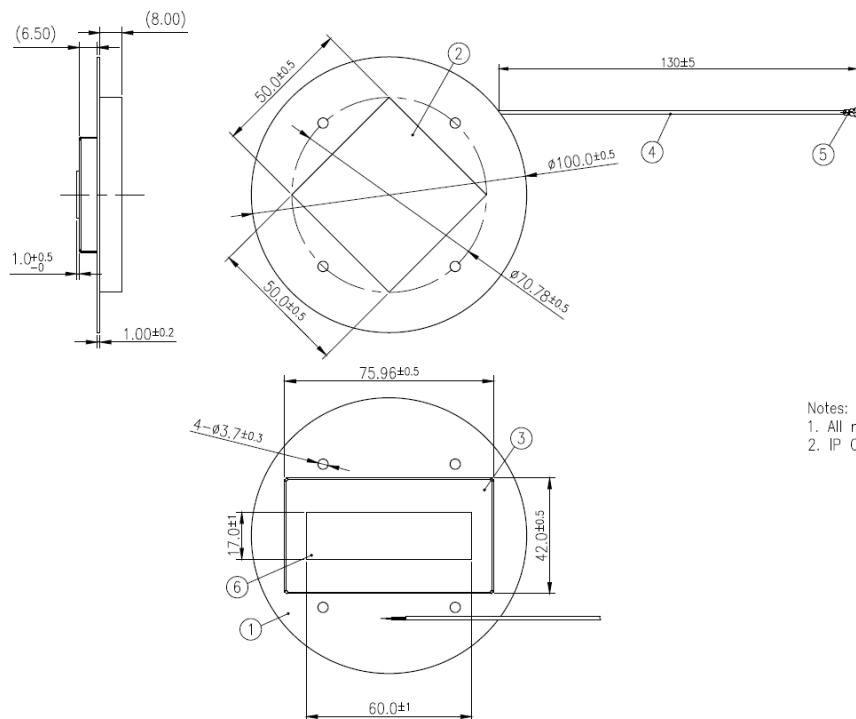
1575.42MHz



1602MHz



V. Mechanical Drawing (Unit:mm):



Notes:
1. All material must be RoHS compliant.
2. IP Code : None.

6	Acrylic Foam Tape	3M/4218P	Red Liner	1
5	IPEX Connector (20351-112R-37)	Brass	Au Plated	1
4	OD1.37 Coaxial Cable	FEP	Black	1
3	Shielding Case	SPTE	Natural	1
2	Patch Antenna	Ceramic	Clear	1
1	PCB	Polymer 1.0t	Green	1
No	NAME	MATERIAL	FINISH	Q'TY

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