

Product Name: EG-17BW Series_ High-Accuracy GNSS Active Antenna

Part Number: EG-17BW-AS-A01

Features:

- Substantial and environmental-resistance structure
- Proprietary antenna design provides the flexibility to reach a range of operational goals
- IP67 grade waterproof
- Supports GPS, QZSS, GLONASS, Galileo, and BeiDou systems
- Multi-Constellation and Signal-Frequency for faster initialization

Applications:

- Geospatial Surveys
- Single & Multiple frequencies RTK positioning
- Vehicle Tracking
- Security Surveillance
- Precise Guidance

High-Accuracy GNSS Active Antenna

MODEL: EG-17BW-AS-A01

Rev.A

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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 (%)	10.02	61.09	74.13	69.18	48.19
Average Gain (dBi)	-9.99	-2.14	-1.30	-1.60	-3.17
Peak Gain (dBi)	-3.39	4.49	5.41	5.14	3.77
Axial Ratio	2.22	2.08	3.29	2.94	2.64
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 ± 2.046	1575.42 ± 1.023	1602 ± 5
Gain (dB)	45.49	43.00	43.50	45.00	45.00
Noise Figure (dB)	1.91	2.40	5.27	4.05	4.48
Current Consumption (mA)	23 ± 5				
Output Impedance (Ω)	50				

Low Noise Amplifier						
Frequency (MHz)	1561 ~ 1602		1227		1176	
Gain (dB) (typical)	43		43		45	
Noise Figure (dB) (typical)	4.5		2.4		1.9	
Supply Voltages (V)	3.3 ~ 15.0 DC					
Output V.S.W.R	2.0 max.					
Output Impedance (Ω)	50					
Out of Band Rejection						
Application Bands	BeiDou_L1 GPS_L1 GLONASS_L1		GPS_L2		GPS_L5	
Frequencies (MHz)	600~ 1500	1670~ 3000	600~ 1000	1660~ 3000	600~ 1000	1660~ 3000
Out of Band Rejection (dB)	65	75	65	75	65	75
ESD Protection						
Contact Discharge (KV)	± 8					
Air Discharge (KV)	± 15					
Cable and Connector						
Cable	RG-58 (Length is suggested between 3~5M)					
Connector	TNC (SBJ)					
Mount	5/8 inch female thread					
Physical Condition						
Dimension (mm)	$\phi 140(D) \times 49(H)$					
Weight (g)	407					
Environmental Conditions						
Operation Temperature	-40 ~ +85 °C					
Storage Temperature	-40 ~ +85 °C					
Waterproof	IP67					
Relative Humidity	+40 \pm 2 °C, 90~95% R.H					
Electronic Discharge	EN61000-4-2: 20KV Air-discharge ; 8KV Contact-discharge					
Enclosure Rating	IEC 60529 standard: IP67					

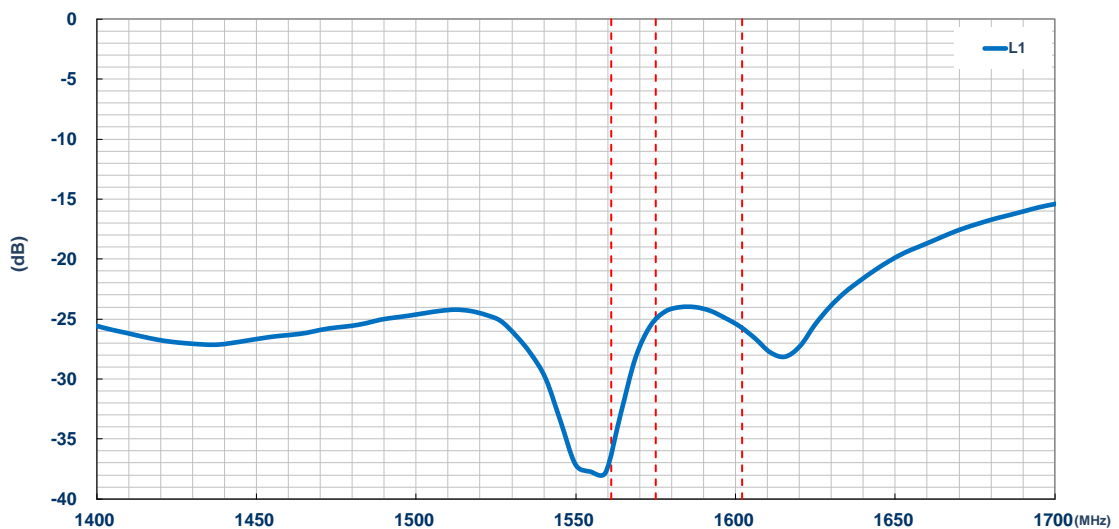
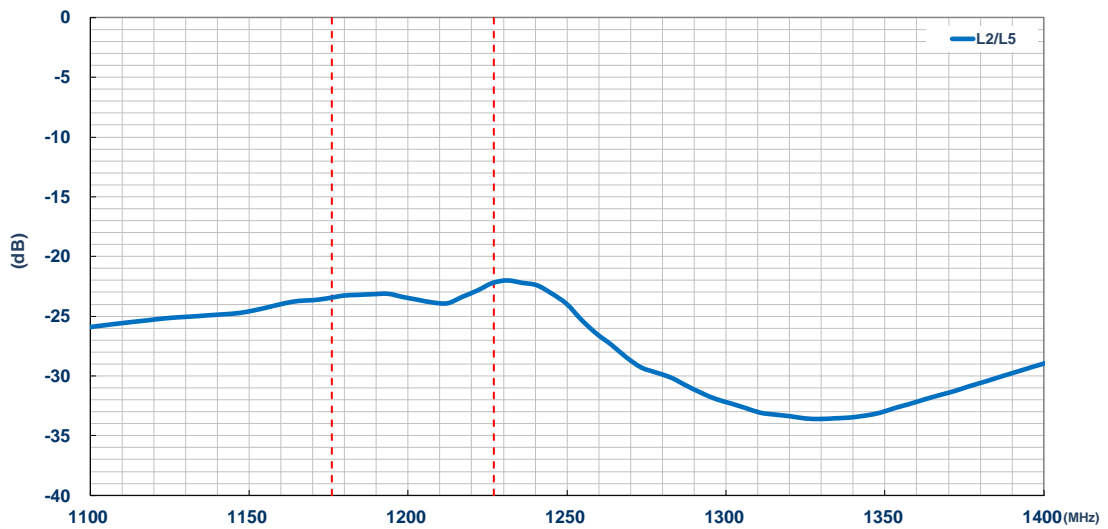
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Solar Radiation	MIL-STD 810E, SAE 1961
Mechanical Shock	MIL-STD-810G, Method 516.6 a. Procedure I, Functional shock
Vibration	Antenna Non-Working 5G/30min Antenna Working 2.5G/30min
Chemical Resistance	Alcohol · Plastic and Vinyl cleaner · Glass cleaner · Saline Solution · Soapy water

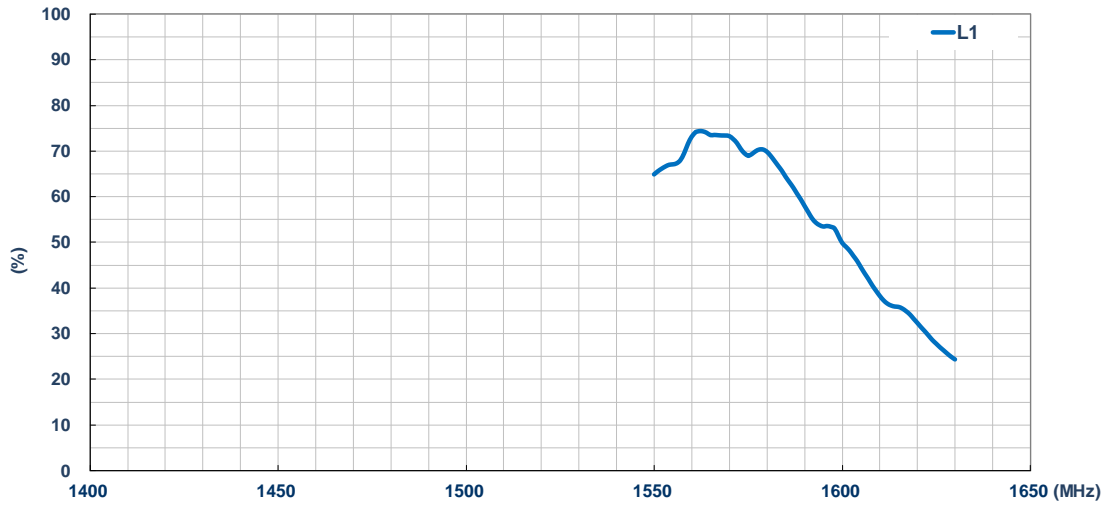
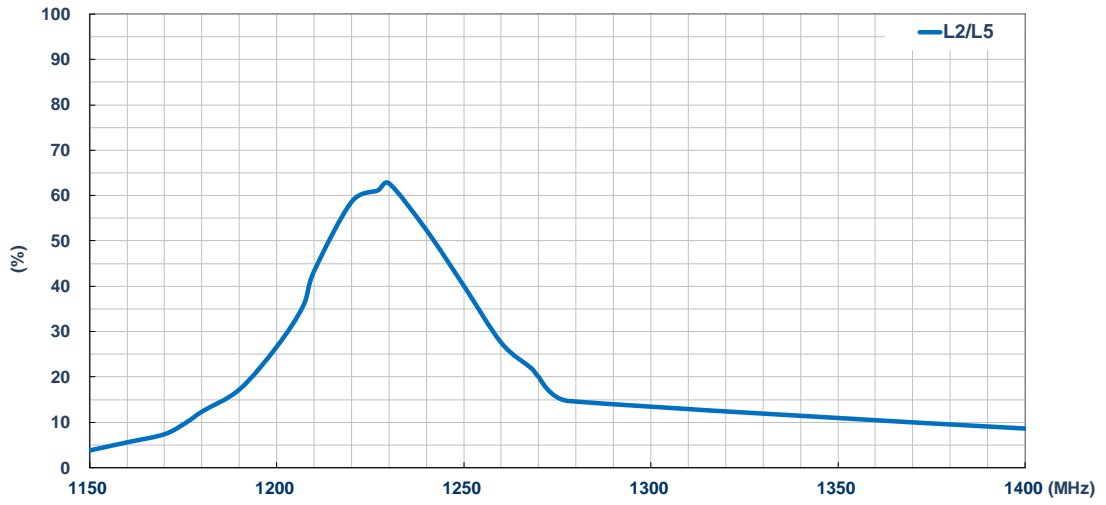
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II. Passive Electrical Properties:

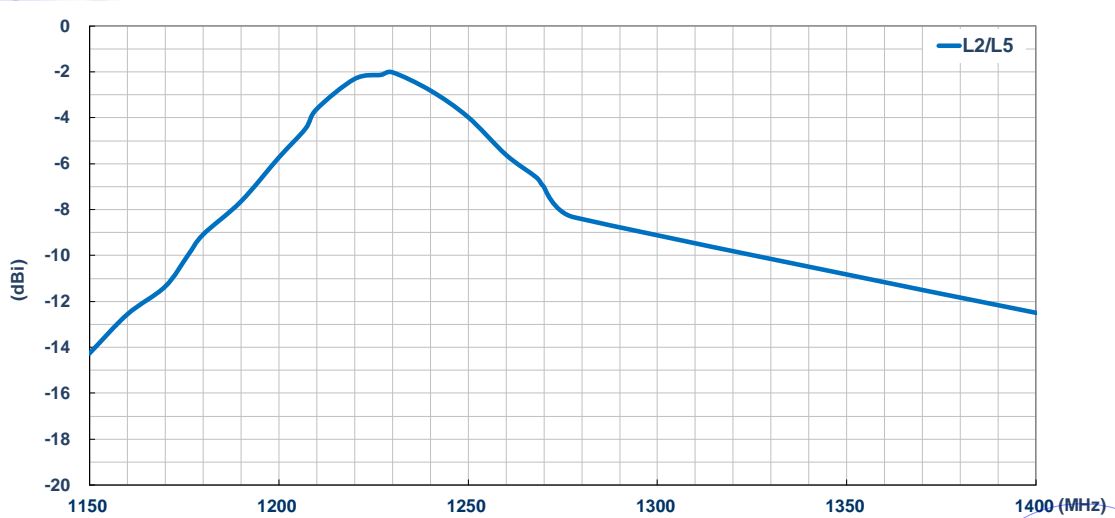
S11 (dB)

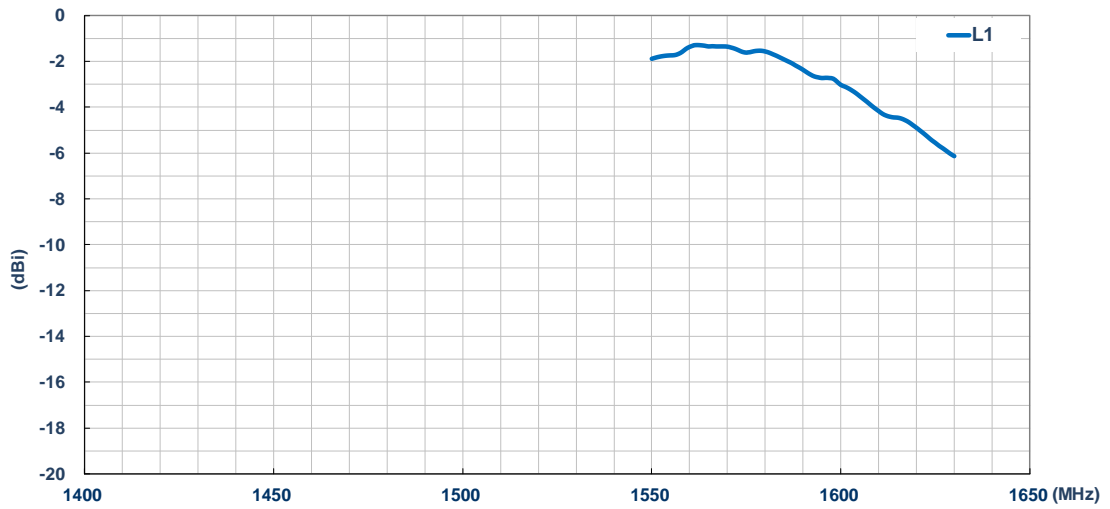


Efficiency (%)

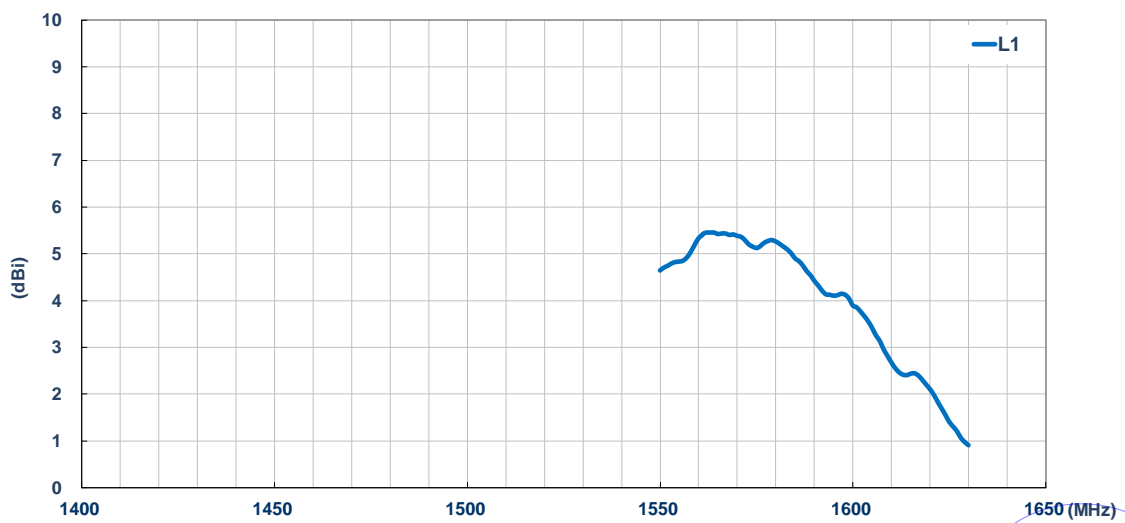
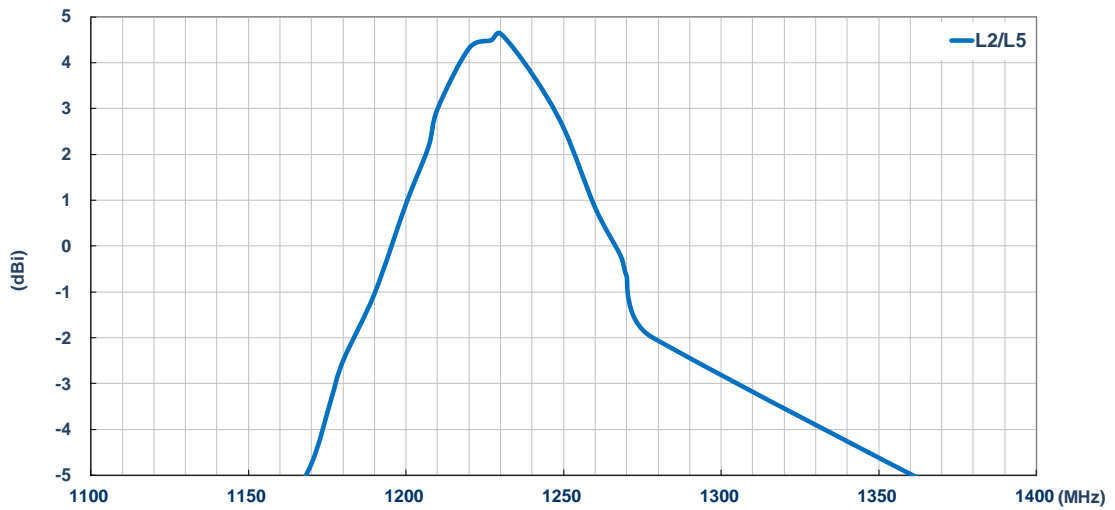


Average Gain (dBi)



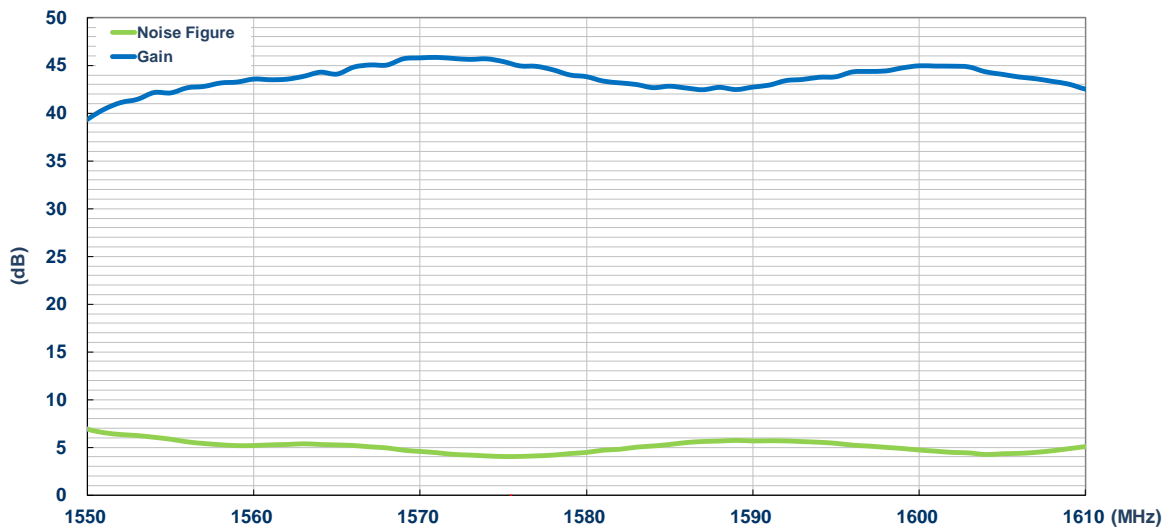
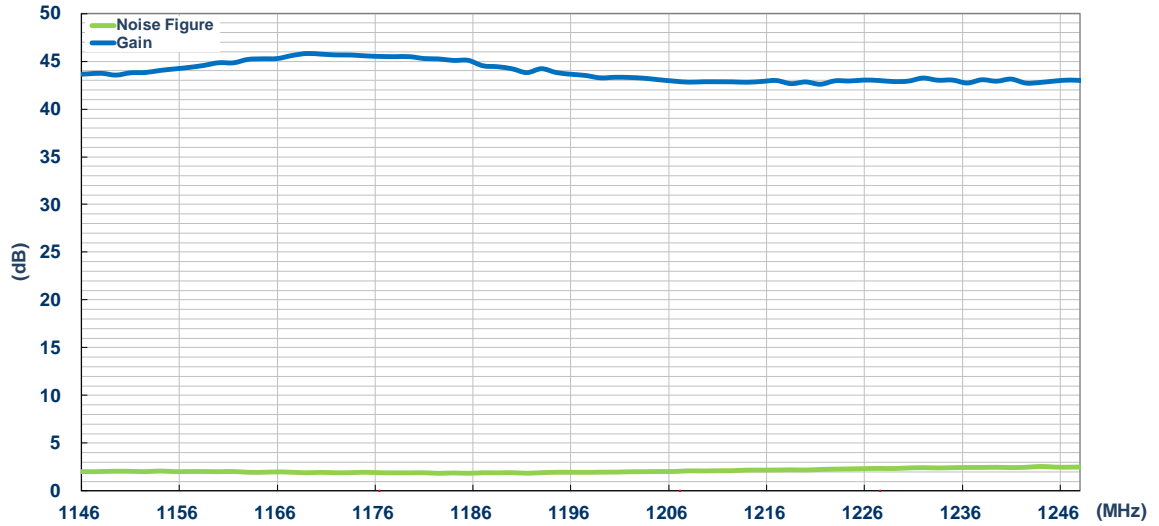


Peak Gain (dBi)



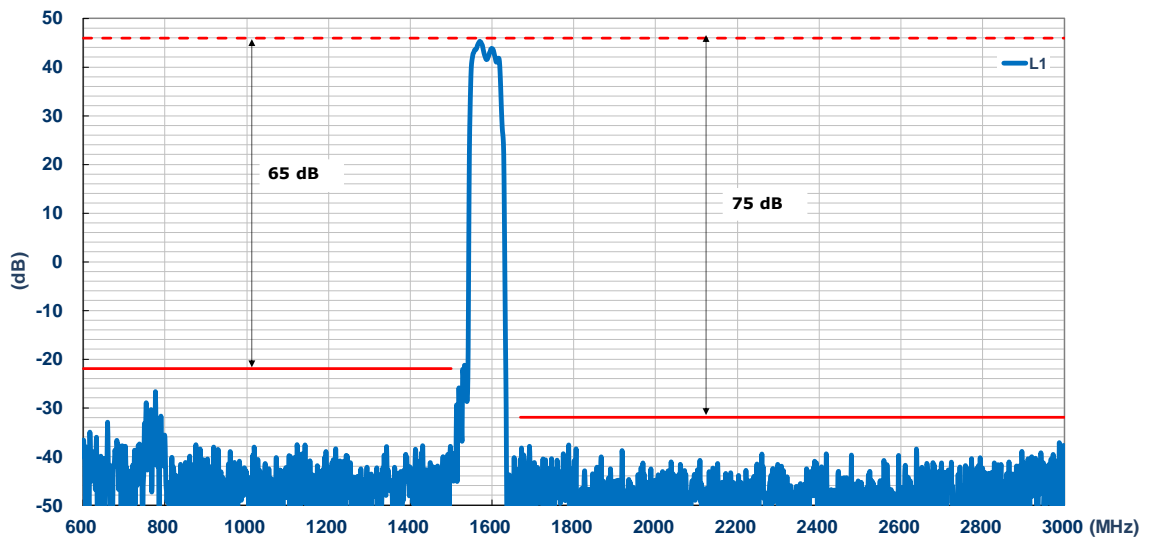
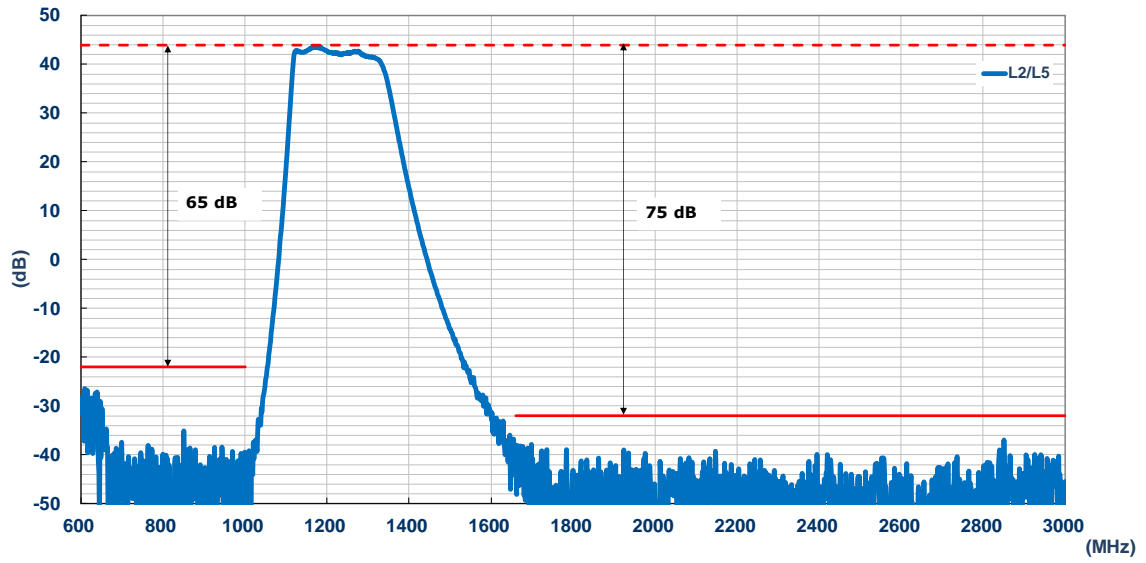
III. Active Electrical Properties:

Noise Figure & Gain (dB)



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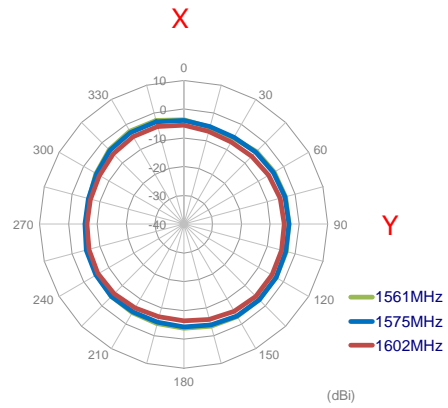
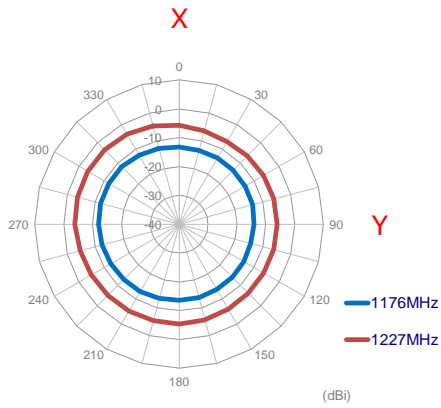
Out of Band Rejection (dB)



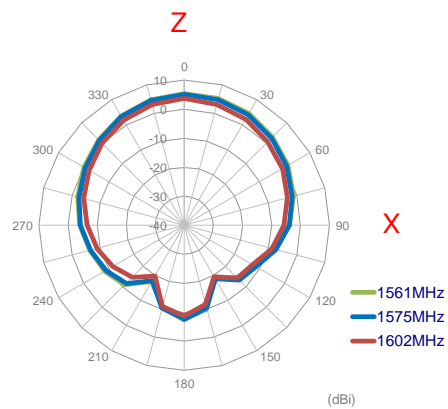
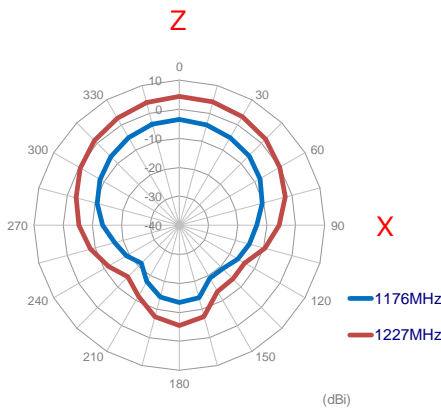
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IV. 2D Radiation Pattern:

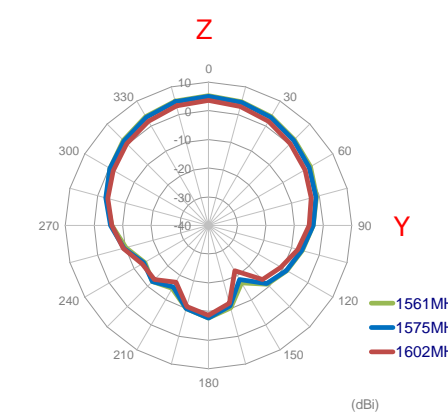
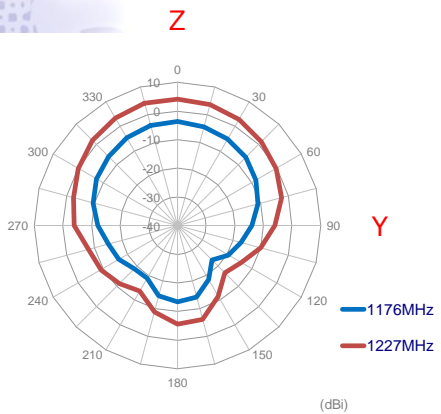
X-Y Plane



X-Z Plane

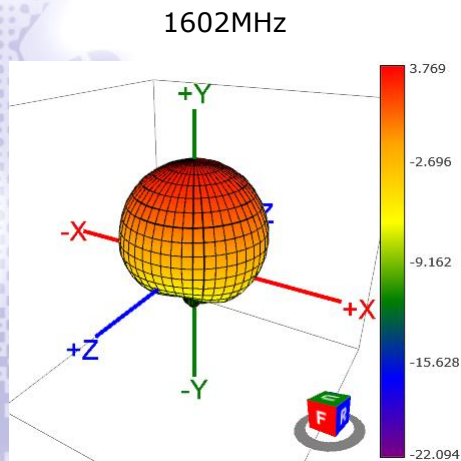
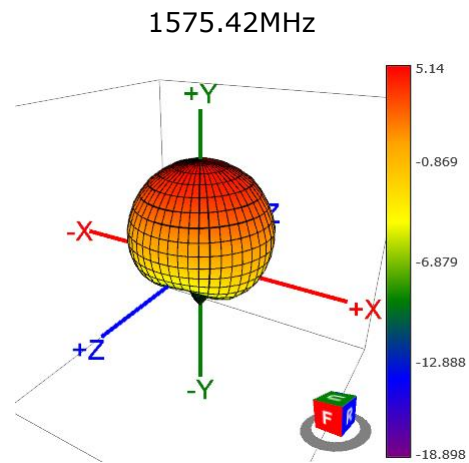
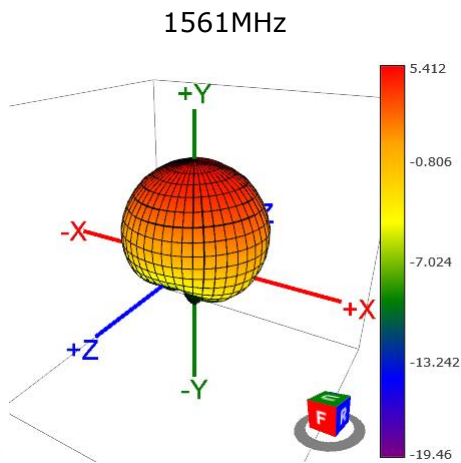
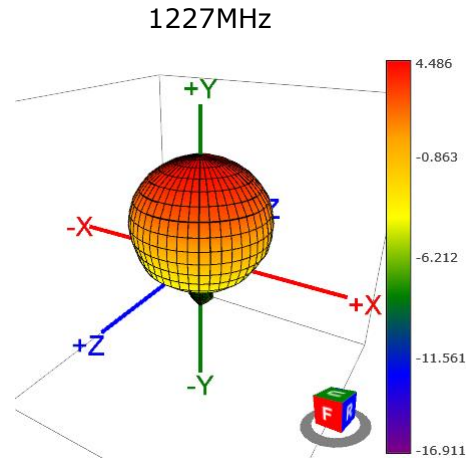
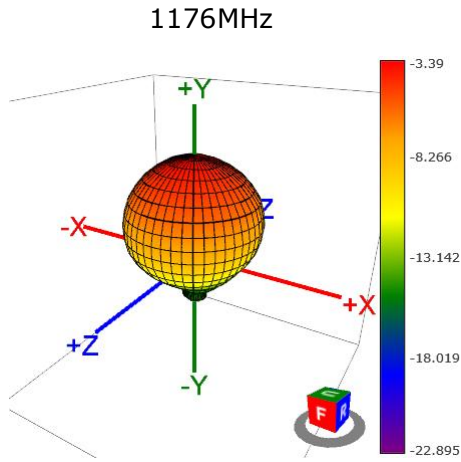


Y-Z Plane



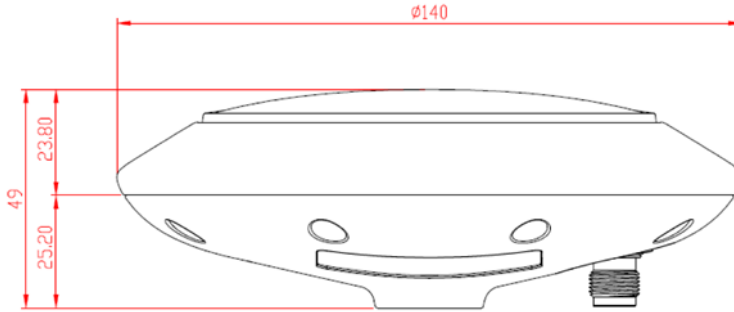
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V. 3D Radiation Pattern:



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VI. Mechanical Drawing (Unit:mm):



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