

GNSS Active L1, L2, L5 Patch Antenna NM Direct Mount

GNSSL125DM26NM

YAGEO GROUP
PULSE



Features:

- GNSS RHCP active antenna
- Beidou, GPS, Glonass
- LNA gain 30dB
- Stacked L1 / L2 + L5 patch antenna
- High rejection filters to suppress out of band interference
- ESD Protected

Applications:

- Base station timing antenna
- Tracking
- Asset tracking, Fleet management, IoT, M2M

Electrical Specifications @ 25° C

Antenna type	Nominal Impedance	Polarization	Radiation pattern
Patch	50Ω	RHCP	Directional

Frequency (MHz)	L1: 1561-1602	L2: 1215-1237	L5: 1164-1189
Return Loss (dB)	< -10	< -13	< -15
Radiating Element Peak Gain (dBi)	>2.5	>1.9	>1.9
Avg. Efficiency (%)	>40	>33	>39
LNA Gain (dB) Typical	28	33	30
Noise Figure (dB)	1.7 @1575MHz	2.2@1227MHz	2.2 @1164MHz
Operating Voltage ¹ (V)	2.5 - 18		
Power Consumption (mA)	Max. 16		

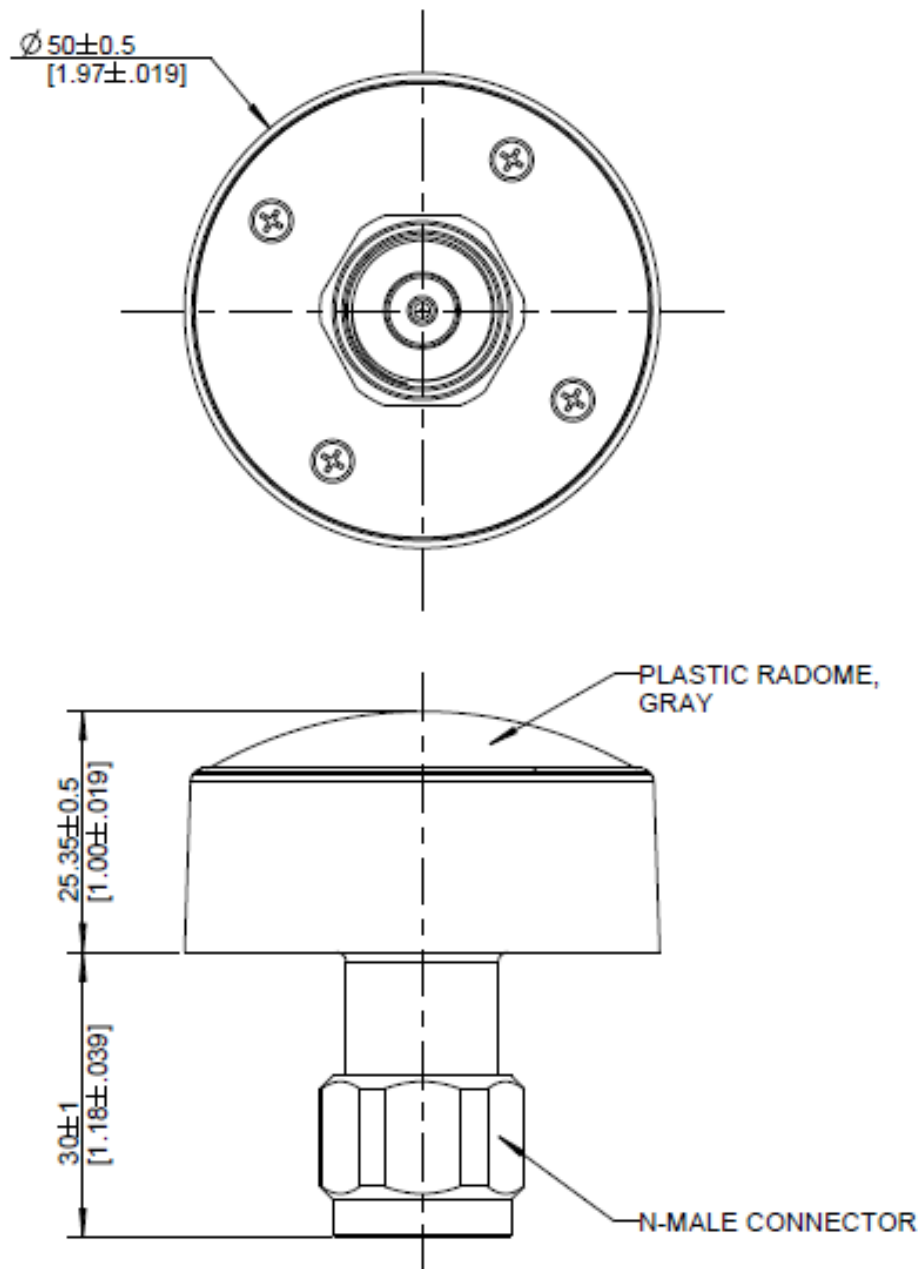
Mechanical Specifications

Dimension with stud (w/o cable)	Color	Antenna Material	Connector type	Installation torque	Weight
Ø50mm*55.35mm / Ø1.97"x2.18"	Gray	PC + Copper	N-Male	6.2 - 9.7 in-lbs. / 0.7 - 1.1 Nm	128 grams
Storage and operating Temperature	Ingress Protection	RoHS-Compliant	UV Protection	Flammability	
40°C to +85°C	IP67	Yes	UL f1	UL 94 V0	

Notes:

- LNA internal voltage stabilized by LDO (Low dropout regulator).

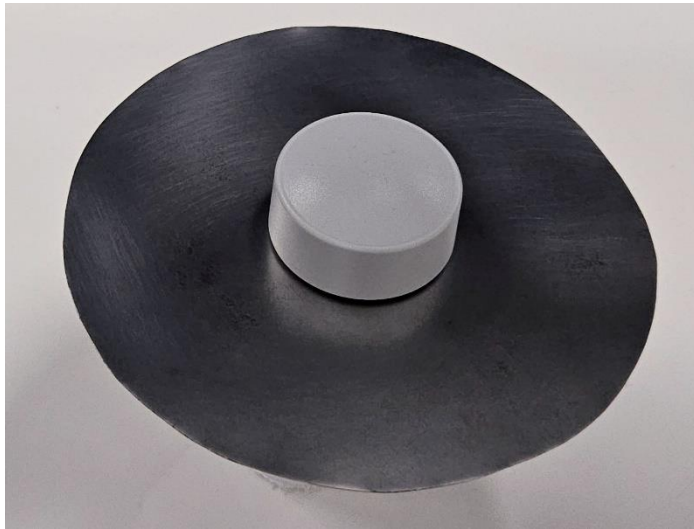
Mechanical Drawing



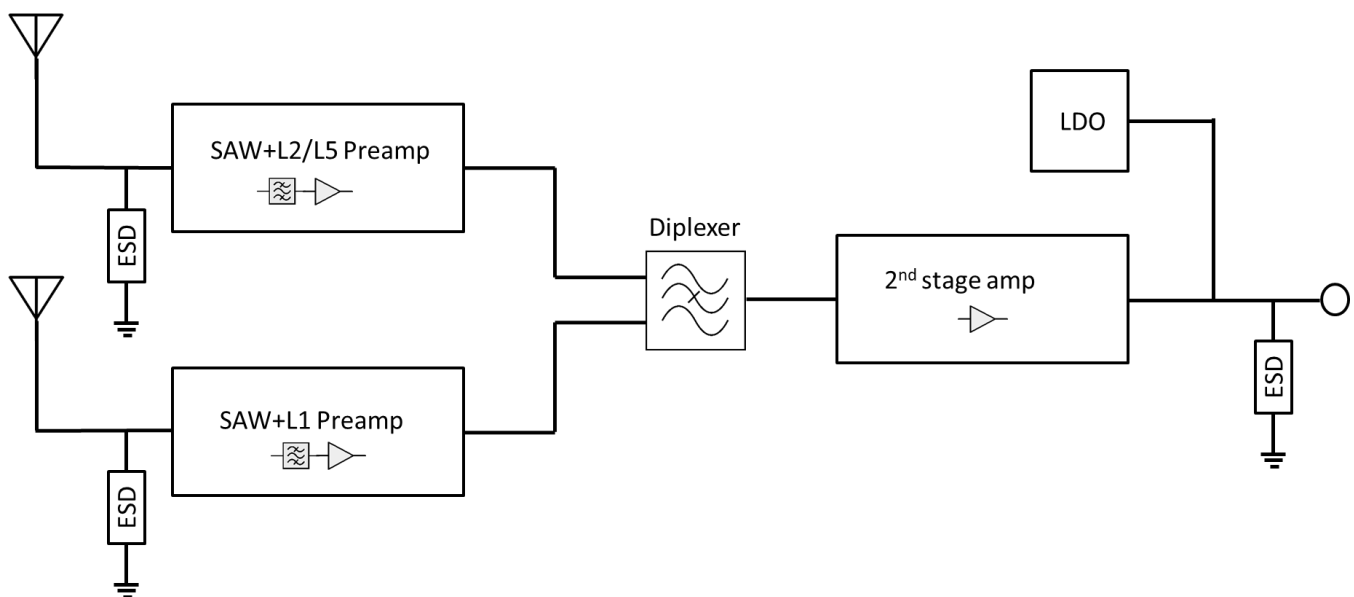
All dimensions are in mm / inches

Testing Setup

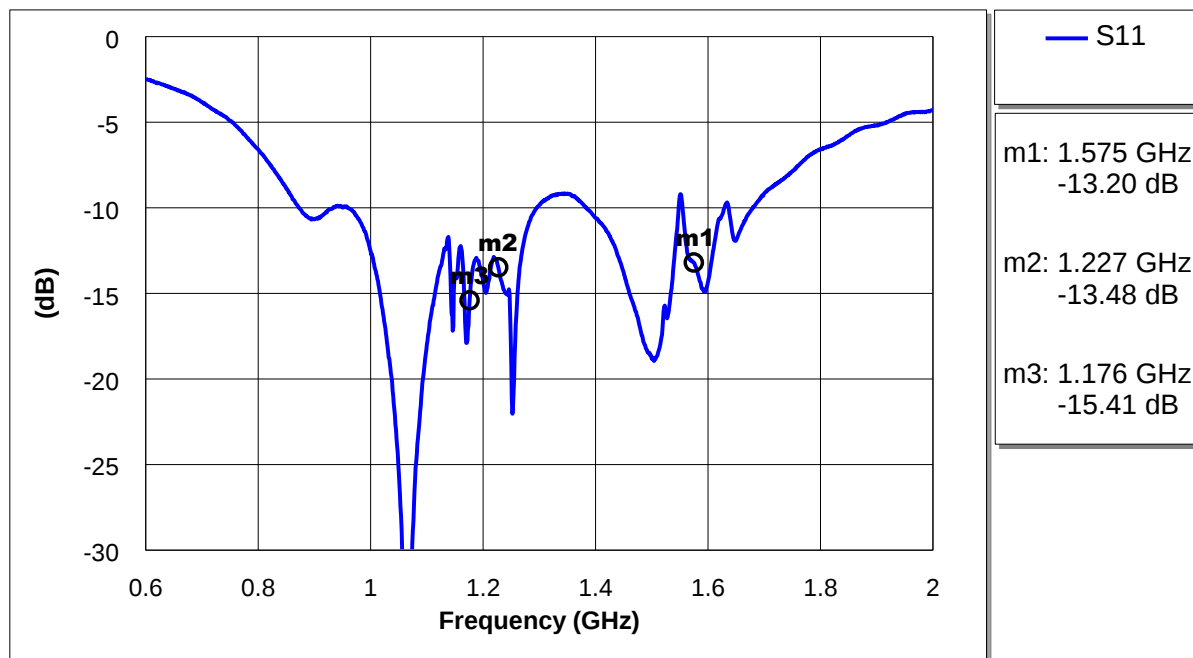
Module is tested on dia. 120mm ground plane.



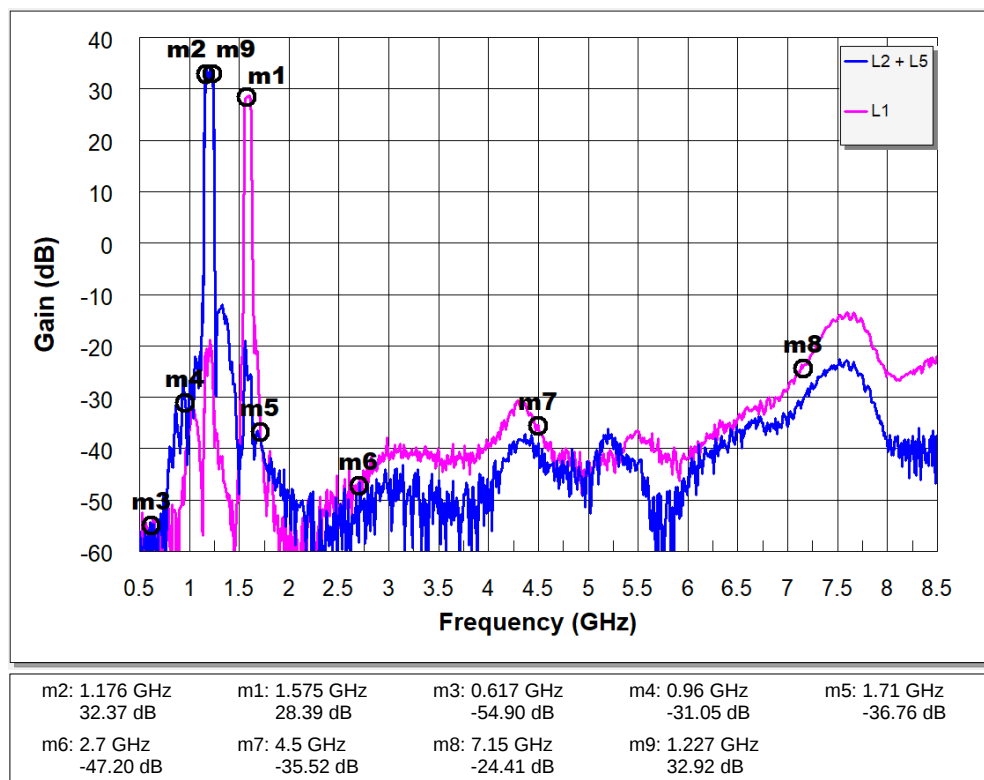
Active Antenna Block Diagram



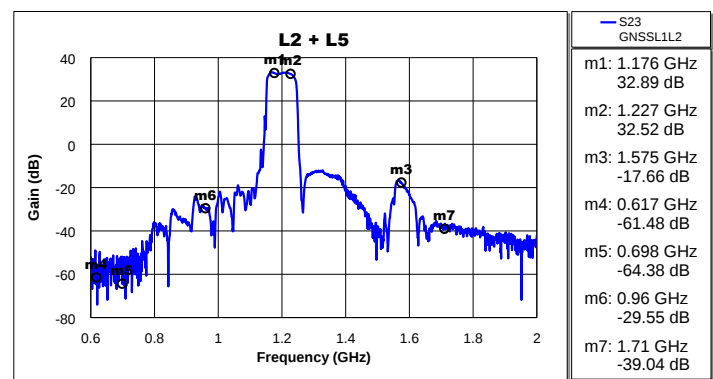
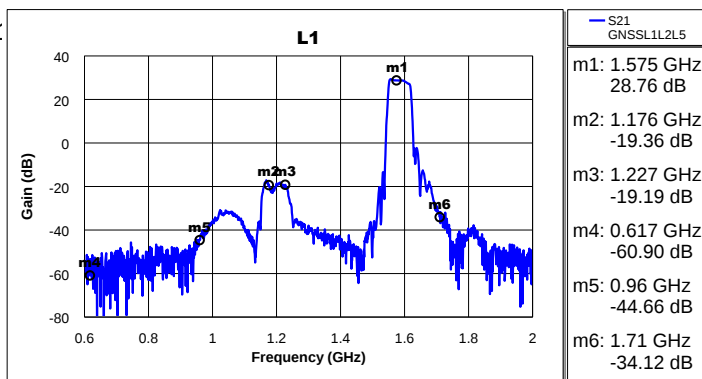
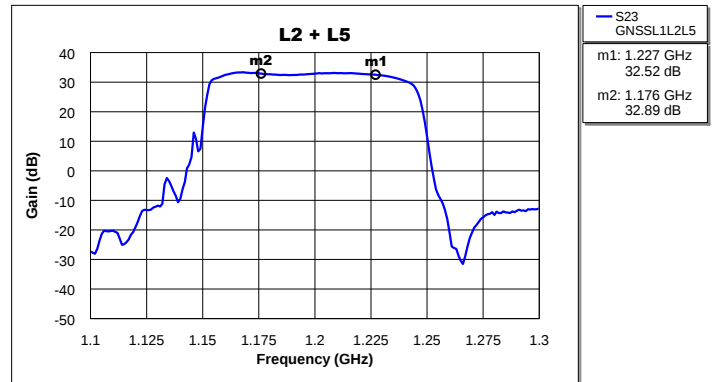
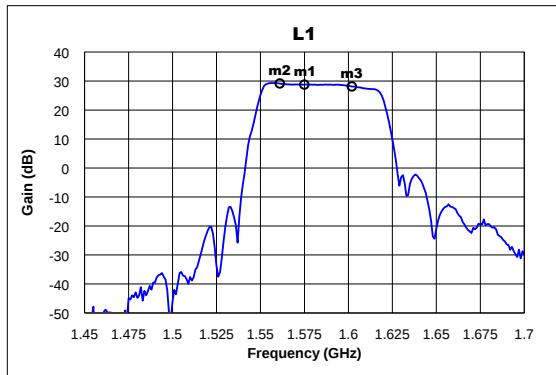
Return Loss



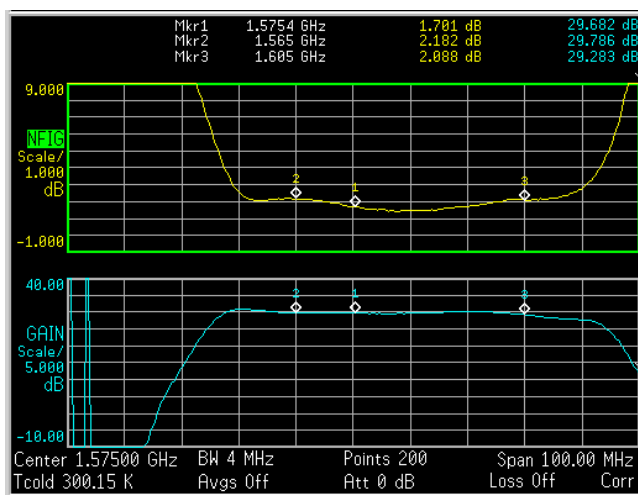
LNA Out of band rejection



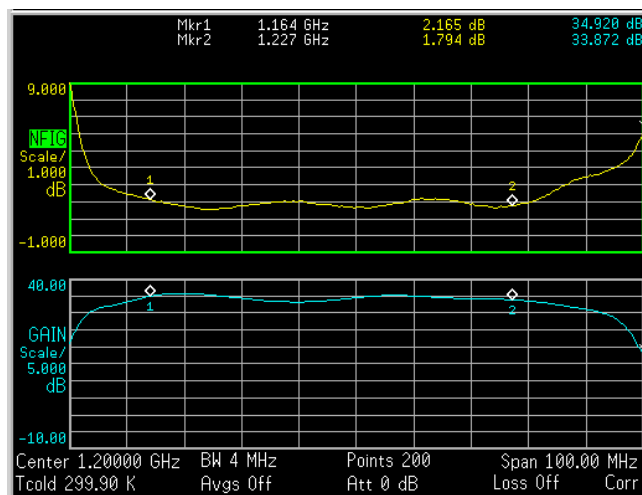
LNA Gain



LNA Noise Figure

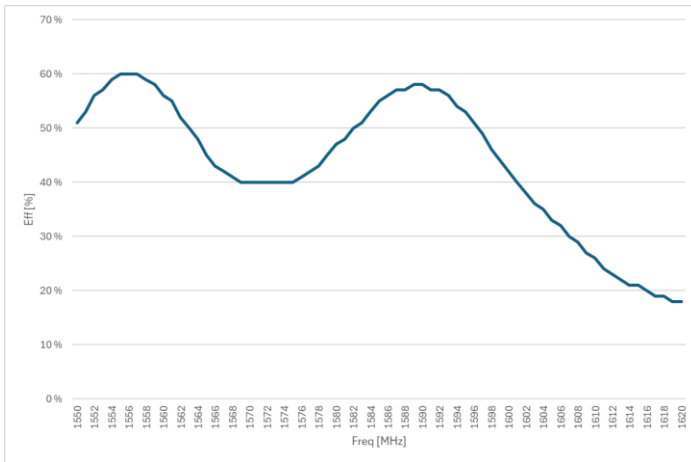


L1 Noise Figure

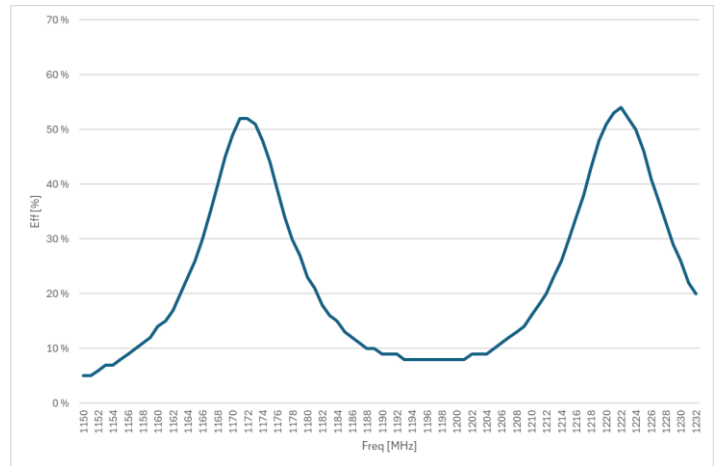


L2 + L5 Noise Figure

Radiating Element Efficiency

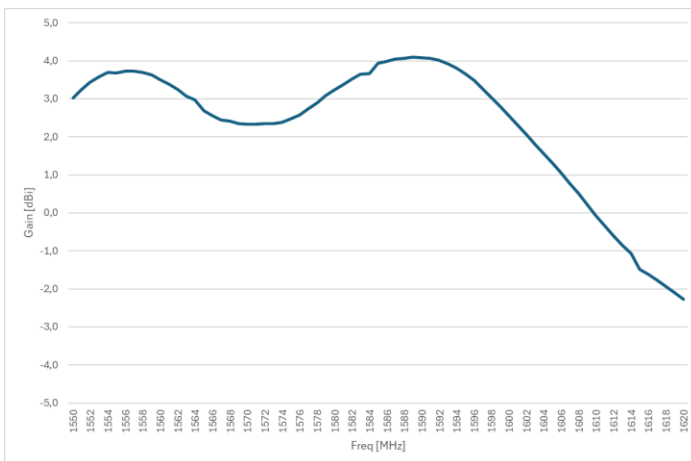


L1 Band

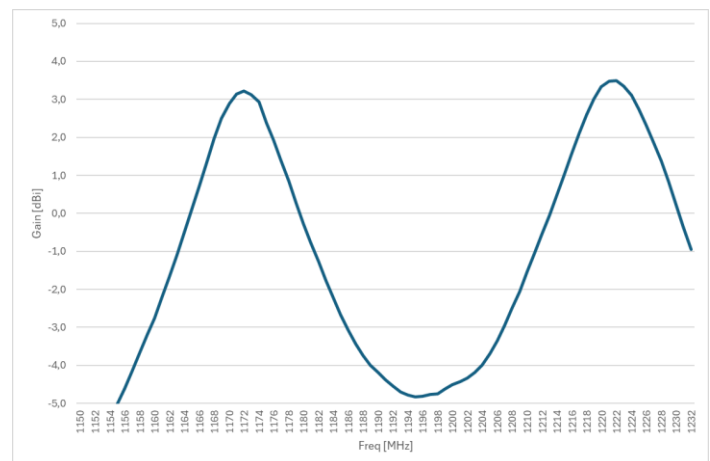


L2 + L5 Band

Radiating Element Peak Gain (Linear)



L1 Band

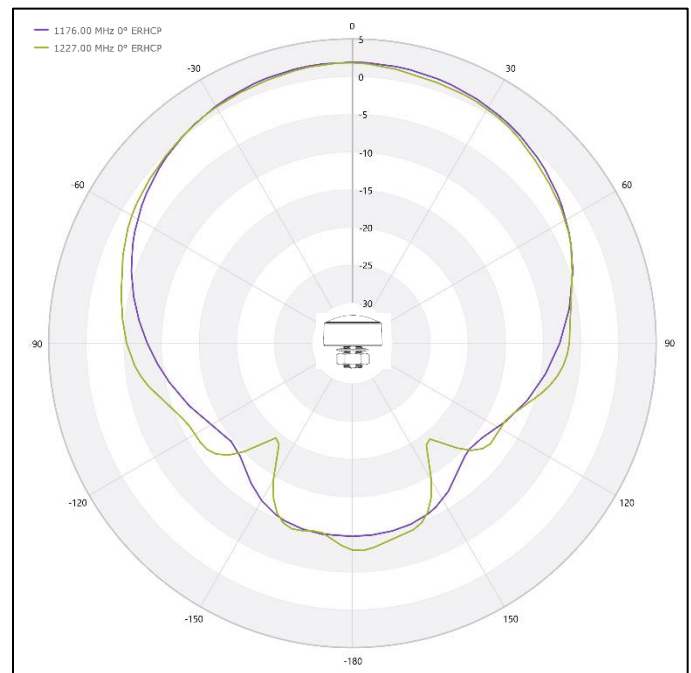


L2 + L5 Band

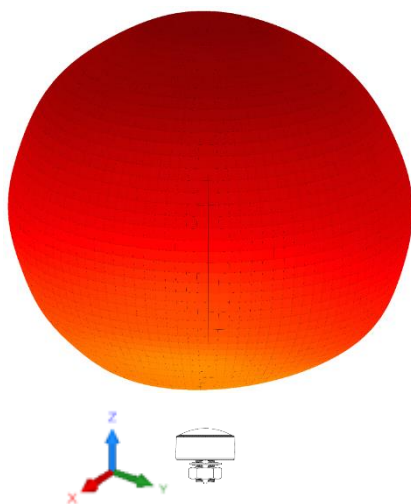
Radiation Patterns



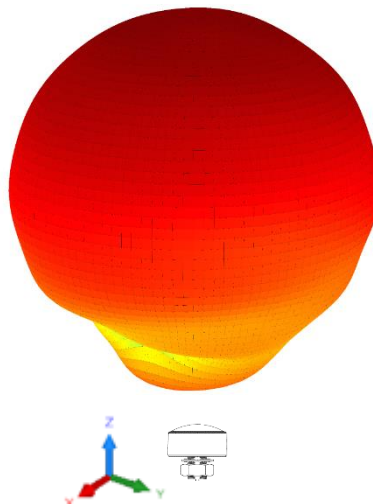
L1 Pattern



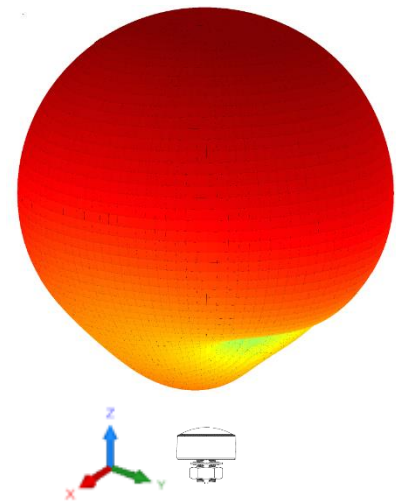
L2 + L5 Pattern



L1 3D RHCP Pattern
 @1575 MHz



L2 3D RHCP Pattern
 @1227 MHz



L5 3D RHCP Pattern
 @1176 MHz

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