

DataSheet

GNSS L1 Antenna

YOZ-5270-ZZ01-YM (Magnet Mount)

YOZ-5270-ZZ02-YM (Bothside Tape)

This Yokowo Antenna design and style has a long history of reliability and has been used extensively in the Automotive Industry.

It is applicable to GPS, GLONASS and Galileo applications.

Applicable Satellites: GPS, QZSS, Galileo, GLONASS, BeiDou

Frequency : L1

Dimensions : 35.5 x 30.4 x 11.7 mm

Cable Length : 5,000 mm

Connector : SMA (Male)

Installation : Magnet/Double-Sided Tape

Water & Dust Resistance Grade : Per JIS D0203 S2



Application:

Positioning for Agricultural Machinery, Construction Equipment, Drones, etc.
Time Synchronization for Base Station and IoT Gateways.



1. Specifications
2. Antenna Characteristics
3. Radiation Patterns
4. LNA Characteristics
5. Mechanical Drawing
6. Packaging

1. Specifications

GNSS Electrical			
Frequency[MHz]	B1	L1/E1	G1
	1561.1	1575.42	1601.72
VSWR(max.)	1.4	1.4	1.3
Peak Gain[dBic](Typ.) ※1,※2	0.2	1.3	-0.2
Axial Ratio[dB](Typ.) ※1,※2	3.3	3.3	2.2
Polarization	RHCP		
Impedance[Ω]	50		

※1 on a 60mm-diameter ground plate

※2 Measurement angle: zenith direction

LNA and Filter Electrical Properties			
Frequency[MHz]	B1	L1/E1	G1
	1561.1	1575.42	1601.72
Gain[dB](Typ.)	31.8	31.0	30.2
Noise Figure[dB](Typ.) ※3	0.9	0.9	0.9
Current Draw[mA](Typ.)	20		
Supply voltage[V]	2.7~5.5		

※3 +25°C±5°C

Total Specification(Through Antenna, SAW Filter and LNA)			
Frequency[MHz]	B1	L1/E1	G1
	1561.1	1575.42	1601.72
Gain[dB](Typ.) ※1,※2,※4	23.7	24.2	23.8
VSWR ※1,※4	1.2	1.1	1.2
Output Impedance[Ω]	50		

※1 on a 60mm-diameter ground plate

※2 Measurement angle: zenith direction

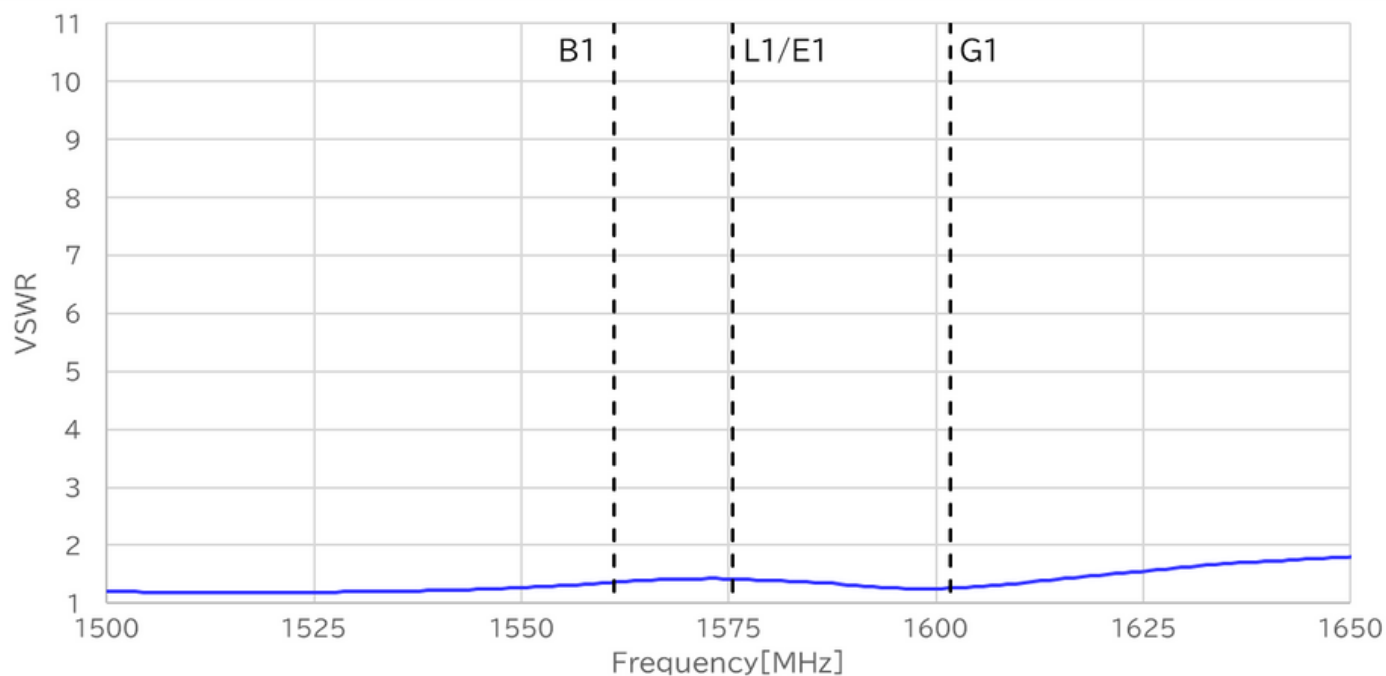
※4 Including 5000mm cable length and SMA connector

Mechanical	
Dimensions	35.5×30.4×11.7mm(Magnet Mount) 35.5×30.4×12.5mm(Bothside Tape)
Connector	SMA(MALE)
Cable	5000mm, 1.5D
Weight	about 100g

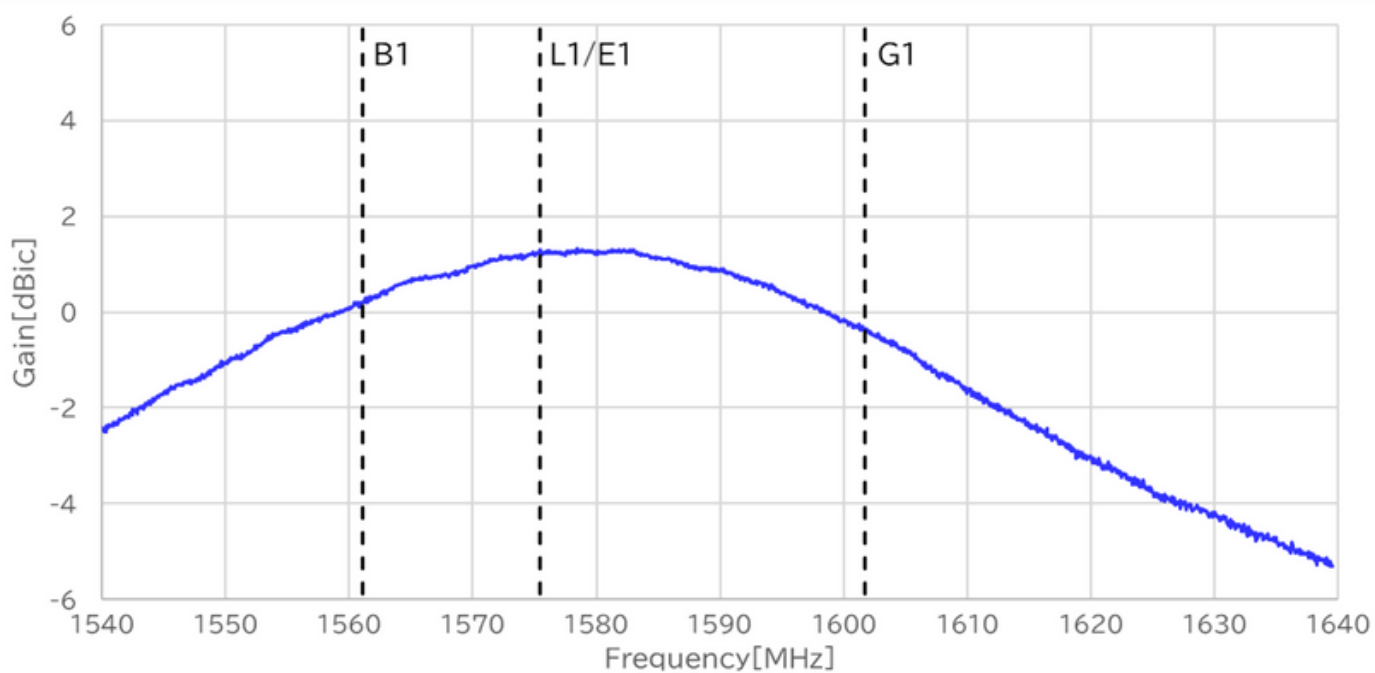
Environmental	
Operation Temperature	-30°C to +85°C
Storage Temperature	-40°C to +85°C

2. Antenna Characteristics

VSWR

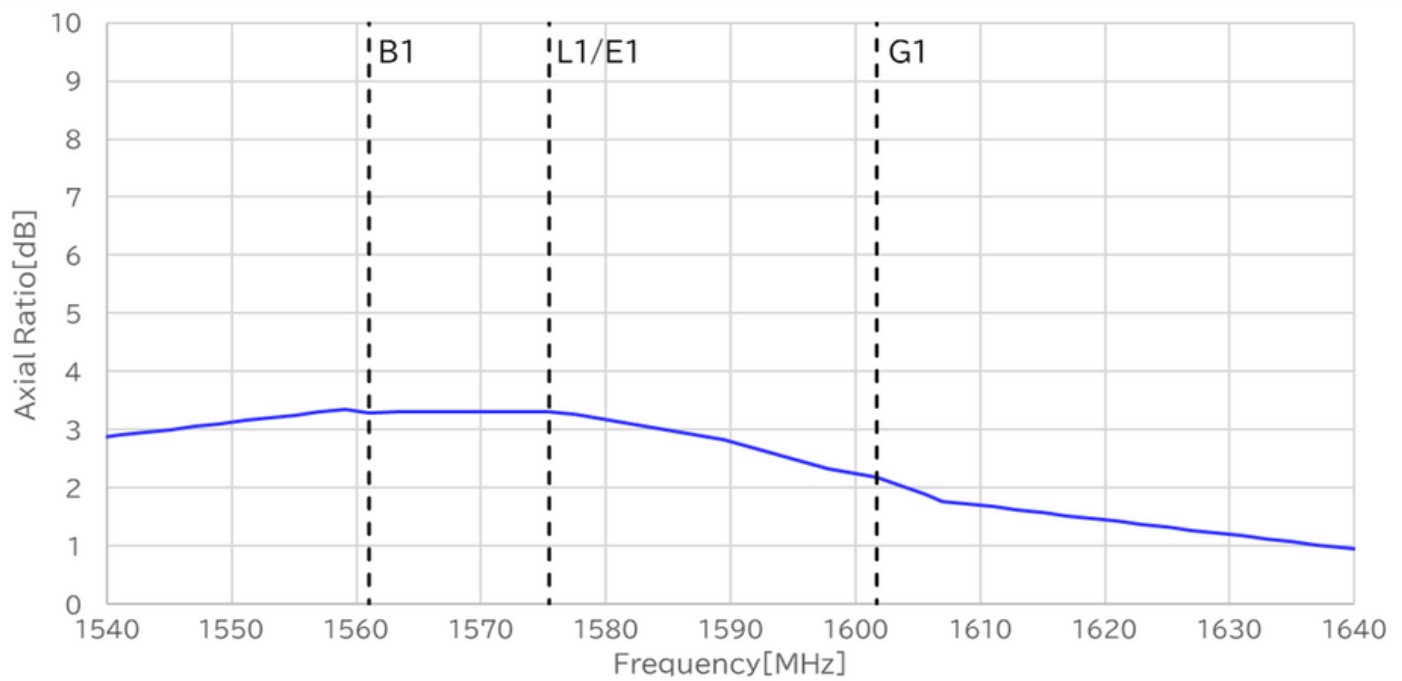


Peak Gain



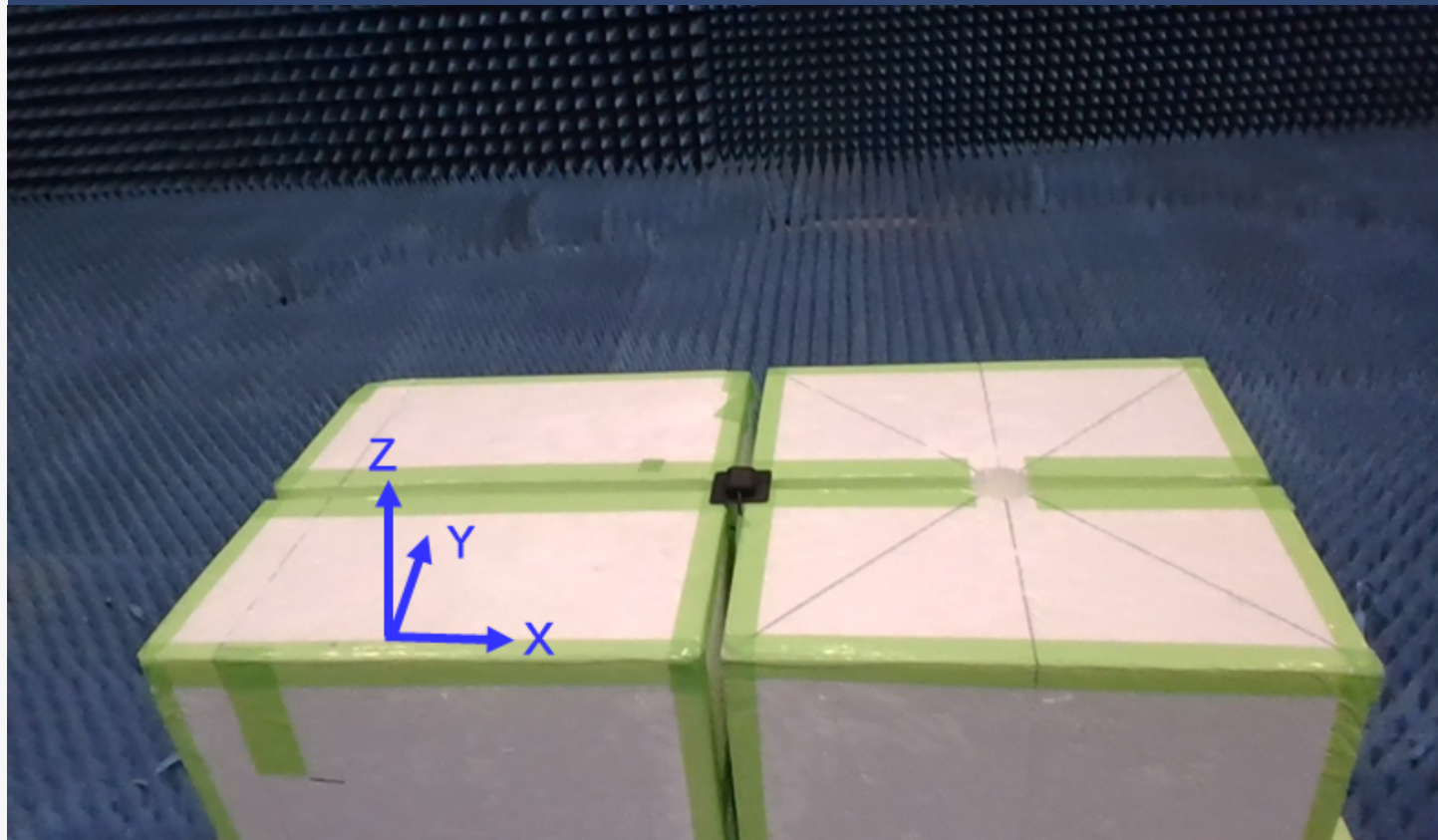
2. Antenna Characteristics

Axial Ratio

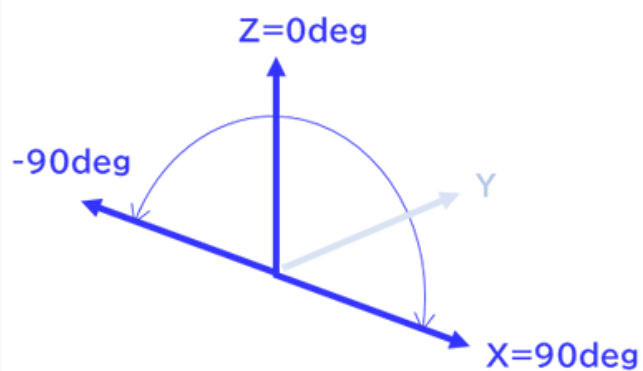


3. Radiation Patterns

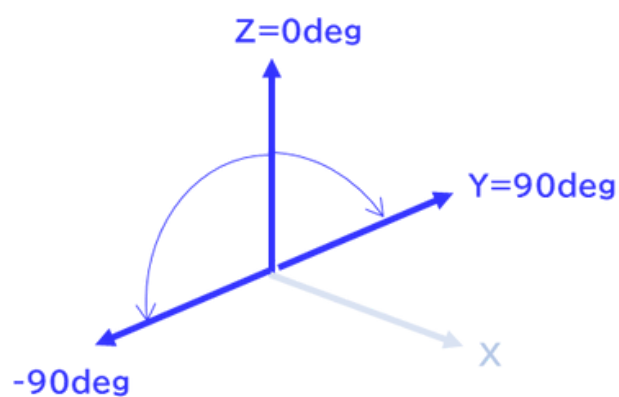
Test Setup



XZ Plane

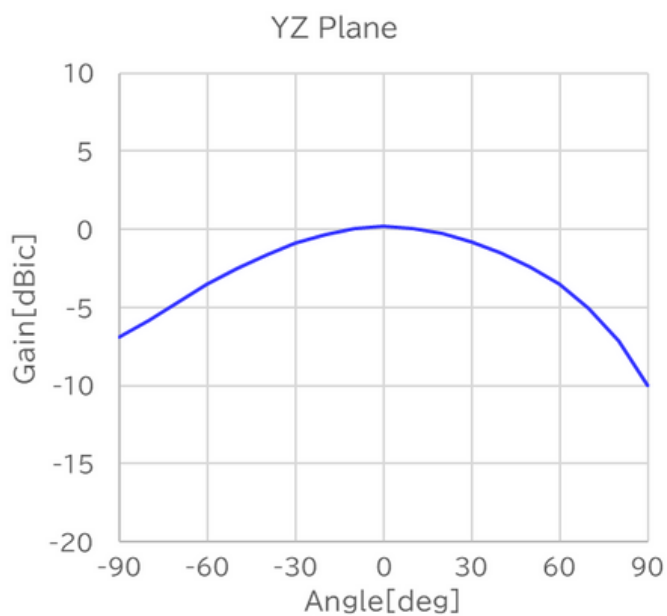
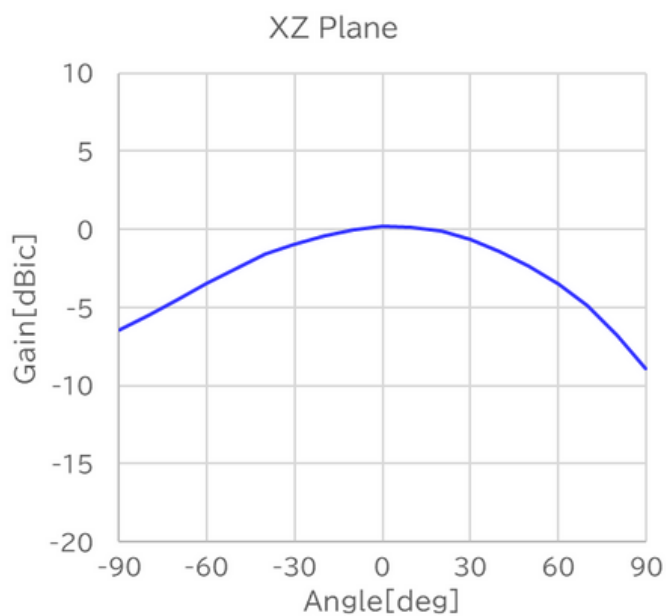


YZ Plane

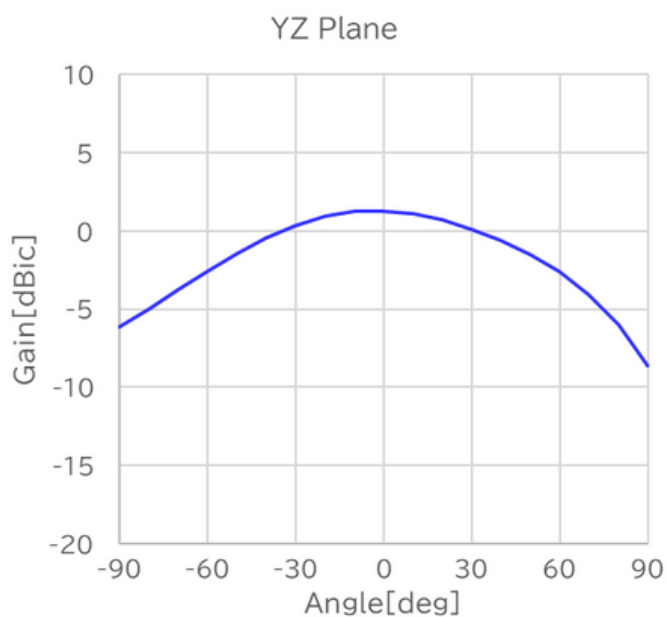
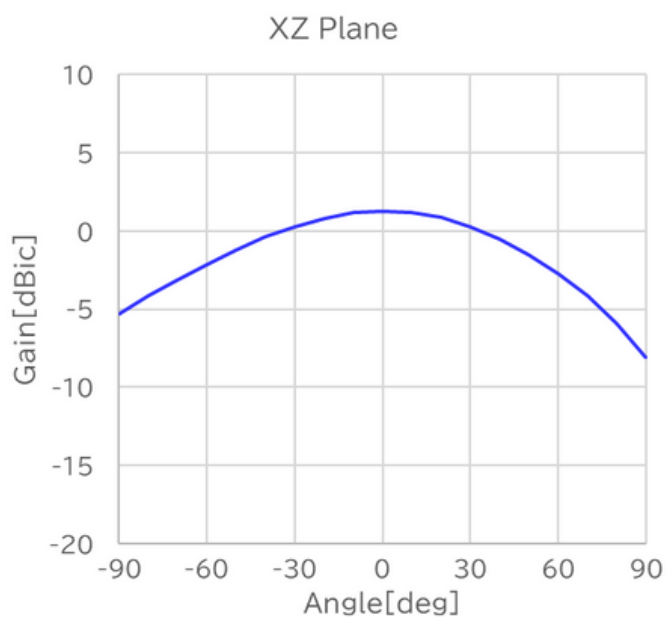


3. Radiation Patterns

Radiation Pattern 1561.1MHz

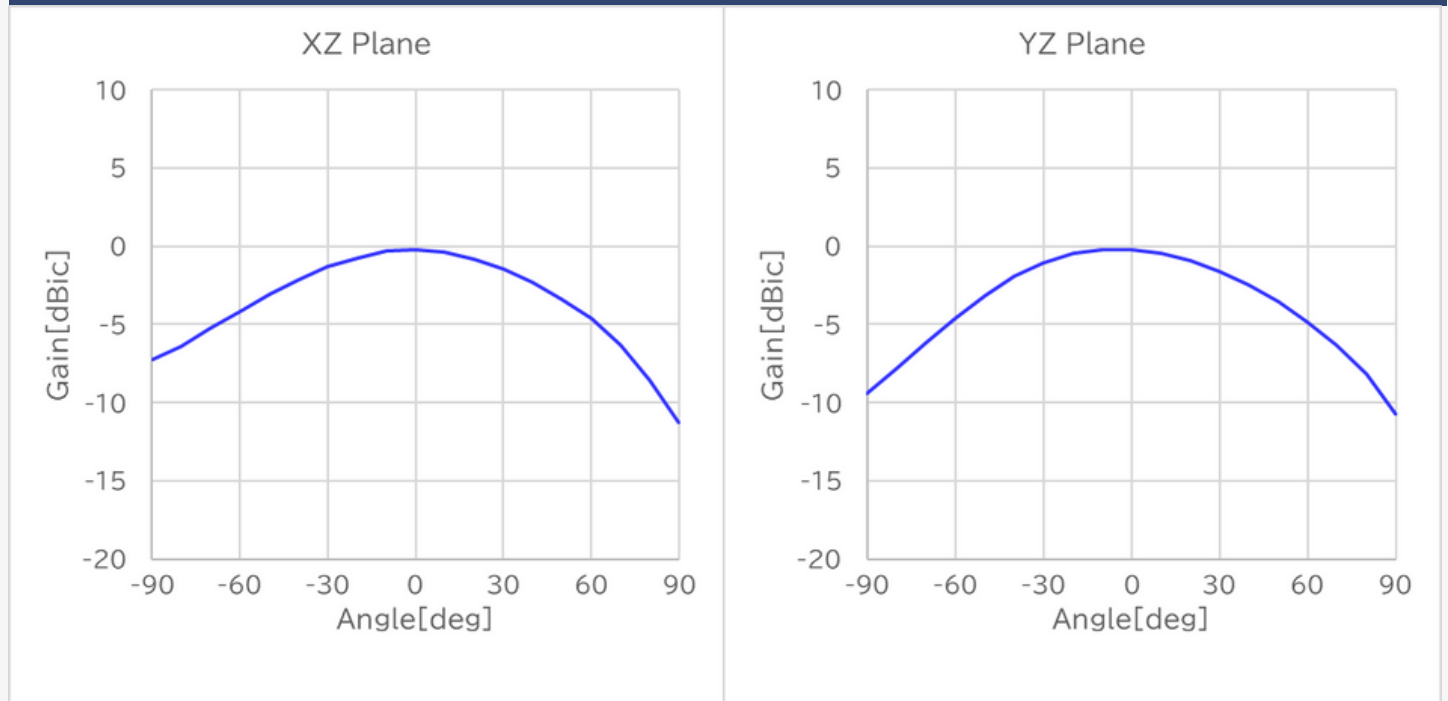


Radiation Pattern 1575.42MHz



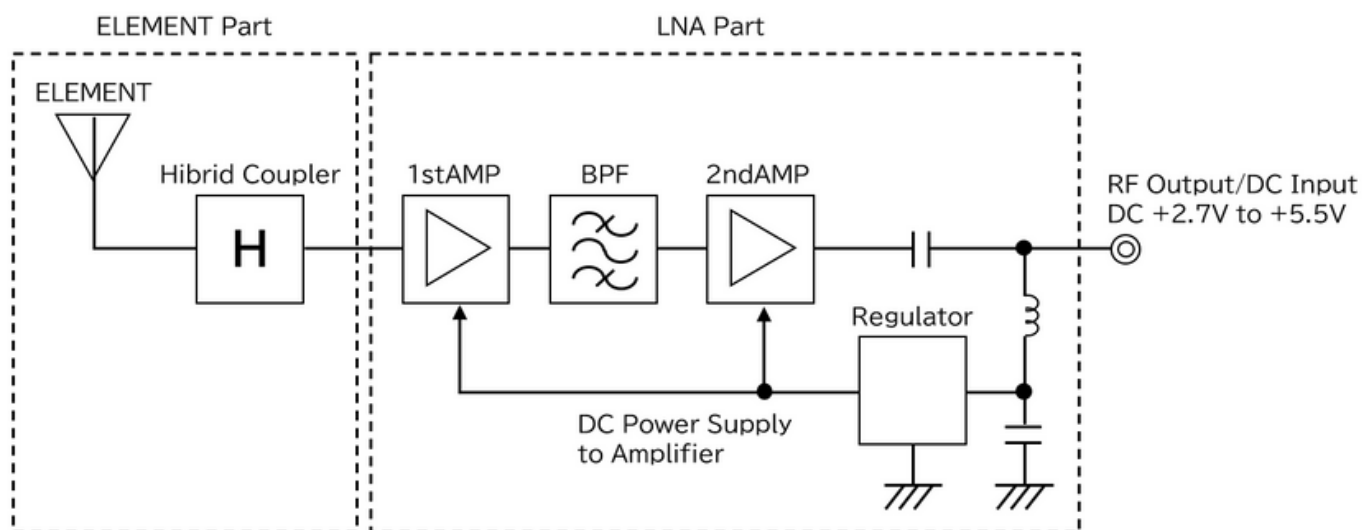
3. Radiation Patterns

Radiation Pattern 1601.72MHz

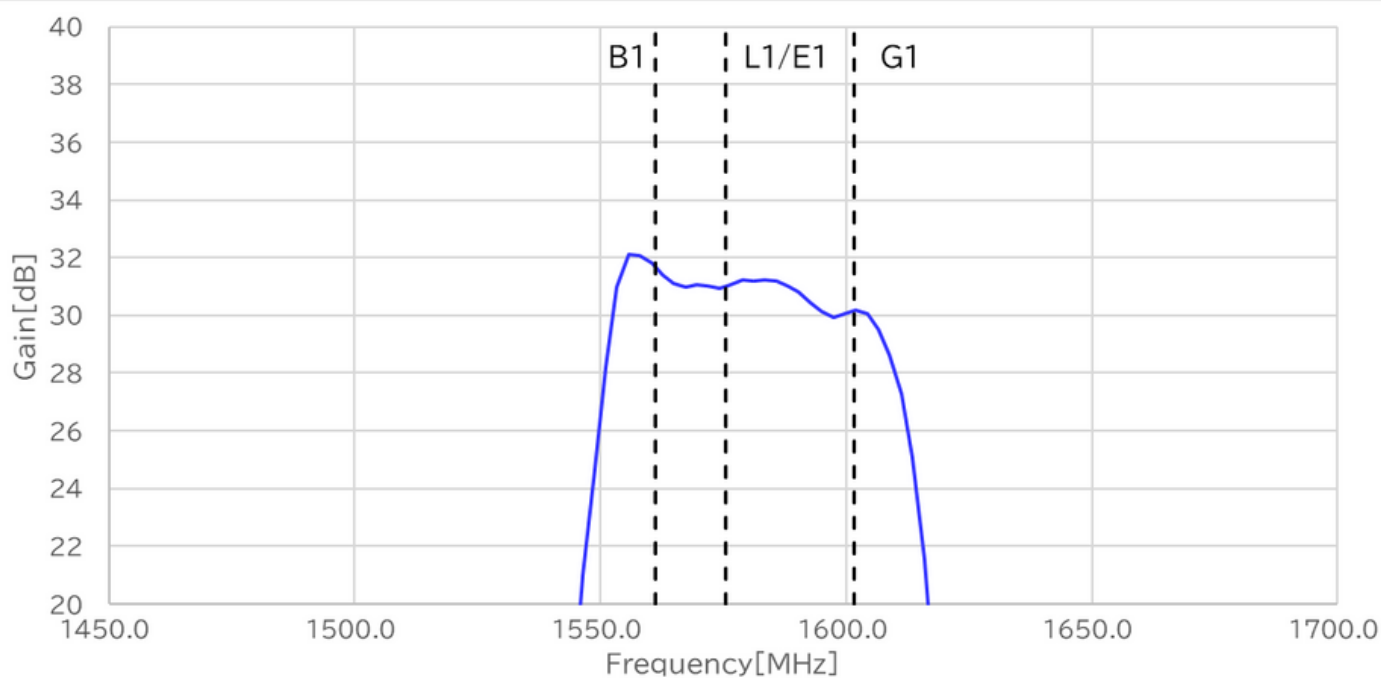


4. LNA Characteristics

Block Diagram(Active Antenna)

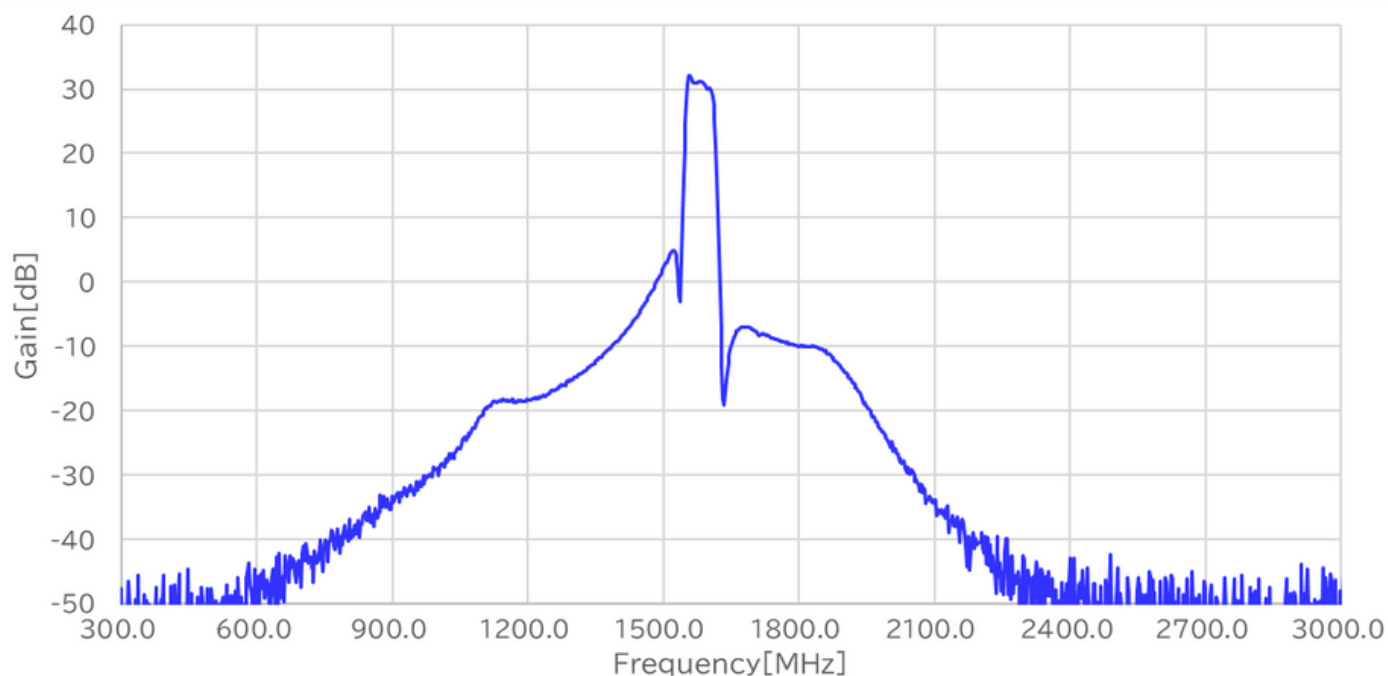


LNA Gain

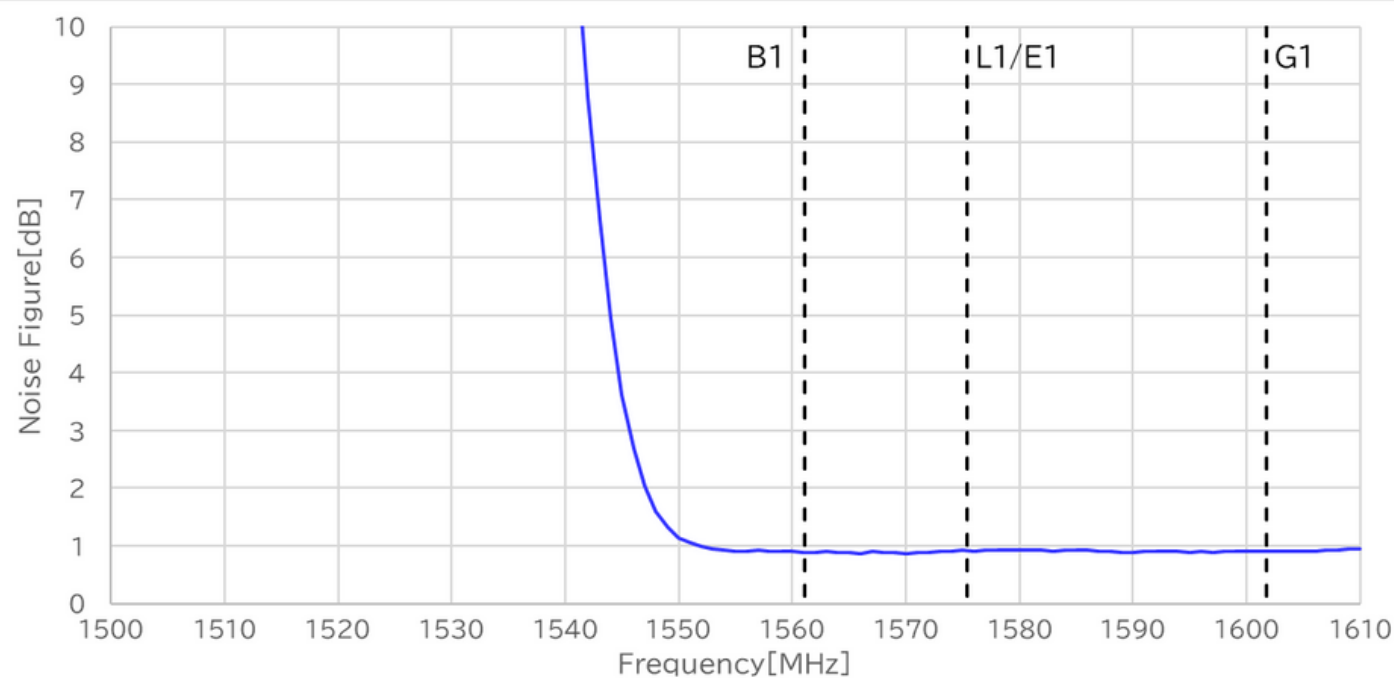


4. LNA Characteristics

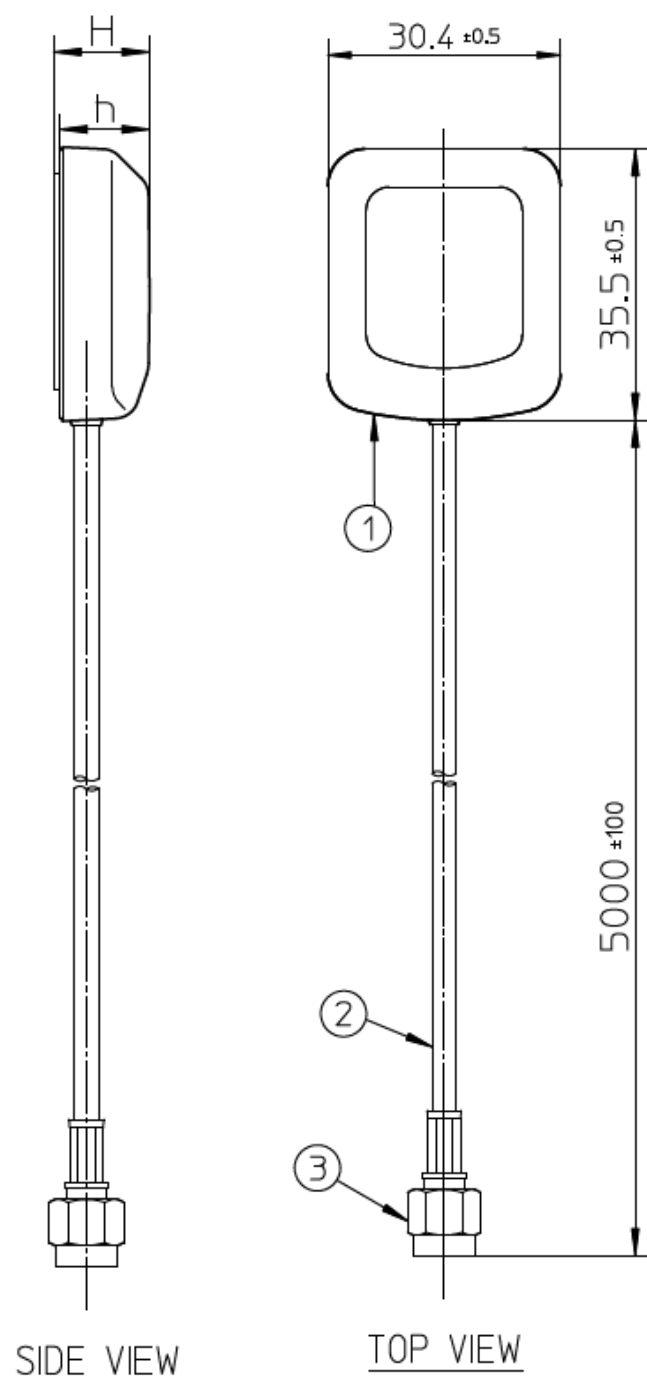
LNA Gain (Wide Band)



Noise Figure

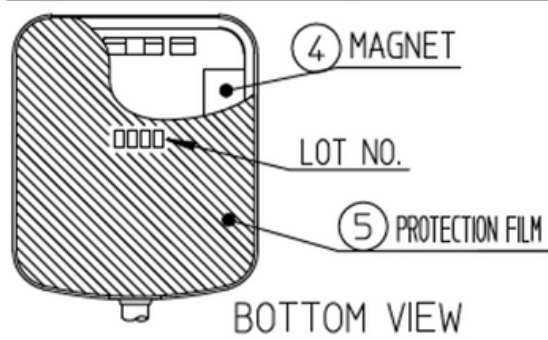


5. Mechanical Drawing



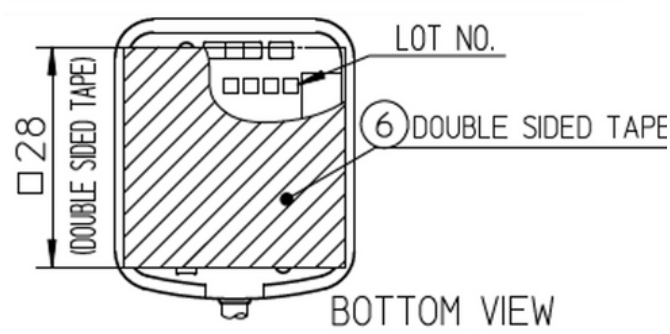
MAGNET TYPE Model No. : YOP-5270-ZZ01

Symbol	Dimension
H	
h	11.7±0.5 ※Main body (Incl. Protection film)



DOUBLE SIDED TAPE TYPE Model No. : YOP-5270-ZZ02

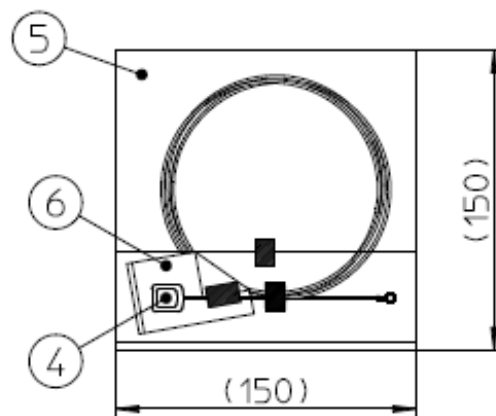
Symbol	Dimension
H	(12.5) ※Main body (Incl. Double sided tape)
h	11.5±0.5 ※Main body



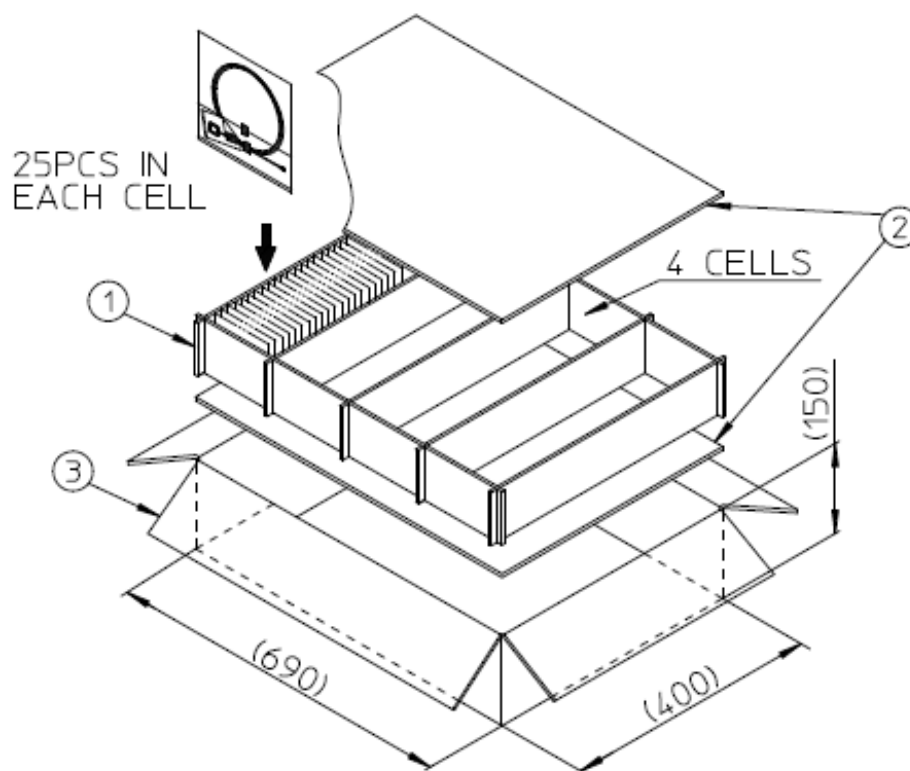
No	DESCRIPTION	Q'TY	MATERIAL	FINISH	REMARKS
1	ANT ASSY	1	(ASA)	-	-
2	COAXIAL CABLE	1	1.5D Cable	-	-
3	CONNECTOR	1	BRASS	NICKEL PLATING	SMA(MALE)
4	MAGNET	2	Nd-Fe-B	NICKEL PLATING	MAGNET TYPE ONLY
5	PROTECTION FILM	1	PE	-	MAGNET TYPE ONLY
6	DOUBLE SIDES TAPE	1	Acrylic Adhesive	-	DOUBLE SIDED TAPE TYPE ONLY

6. Packaging

1PC PER PE BAG
· WEIGHT : 0.1kg
· SIZE : 150mmX150mm



100PC PER CARTON
· WEIGHT : 11kg
· SIZE : 690mmX400mmX150mm



No	DESCRIPTION	Q'TY	MATERIAL	FINISH	REMARKS
1	PARTITION	1	CARDBOARD	-	-
2	BOARD	2	CARDBOARD	-	-
3	BOX	1	CARDBOARD	-	-
4	GNSS L1 ANTENNA	100	-	-	-
5	PE BAG	100	PE(BLUE)	-	-
6	PE BAG	100	PE(CLEAR	-	-