

DataSheet

GNSS L1/L5 Antenna

YOZ-52683ZZ01-YM (Bothside Tape)

YOZ-52683ZZ02-YM (Magnet Mount)

Compact High-Precision GNSS Antenna with L1/L5 Band Coverage.

Achieve Survey-Grade precision positioning with this compact-sized Antenna.



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

Frequency : L1/L5

Dimensions : 56.4 x 64.4 x 22.7 mm

Cable Length : 5,000 mm

Connector : SMA (Male)

Installation : Magnet/Double-Sided Tape

Water & Dust Resistance Grade : IP66/67

Application:

High-Precision Positioning using Dual-Frequency(L1/L5) for Agriculture Machinery, Construction Equipment, Drones, and more.



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

1. Specifications

GNSS Electrical

Frequency[MHz]	L5/E5a/B2a			B1	L1/E1	G1
	1166.22	1176.45	1186.68	1561.1	1575.42	1601.72
VSWR(max.)	3.5	2.4	1.5	1.8	2.1	1.4
Peak Gain[dBic](Typ.) ※1,※2	-0.2	0.9	1.4	3.1	3.5	2.8
Axial Ratio[dB](Typ.) ※1,※2	1.4	1.5	1.5	0.4	0.7	0.9
Polarization	RHCP					
Impedance[Ω]	50					

※1 on a 150mm-diameter ground plate

※2 Measurement angle: zenith direction

LNA and Filter Electrical Properties

Frequency[MHz]	L5/E5a/B2a			B1	L1/E1	G1
	1166.22	1176.45	1186.68	1561.1	1575.42	1601.72
Gain[dB](Typ.)	30.2	30.4	30.4	30.6	30.5	30.0
Noise Figure[dB](Typ.) ※3	2.5	2.5	2.6	2.8	2.8	3.0
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]	L5/E5a/B2a			B1	L1/E1	G1
	1166.22	1176.45	1186.68	1561.1	1575.42	1601.72
Gain[dB](Typ.) ※1,※2,※4	24.7	26.2	27.4	27.9	26.3	25.8
Output Impedance[Ω]	50					

※1 on a 150mm-diameter ground plate

※2 Measurement angle: zenith direction

※4 Including 5000mm cable length and SMA connector

Mechanical

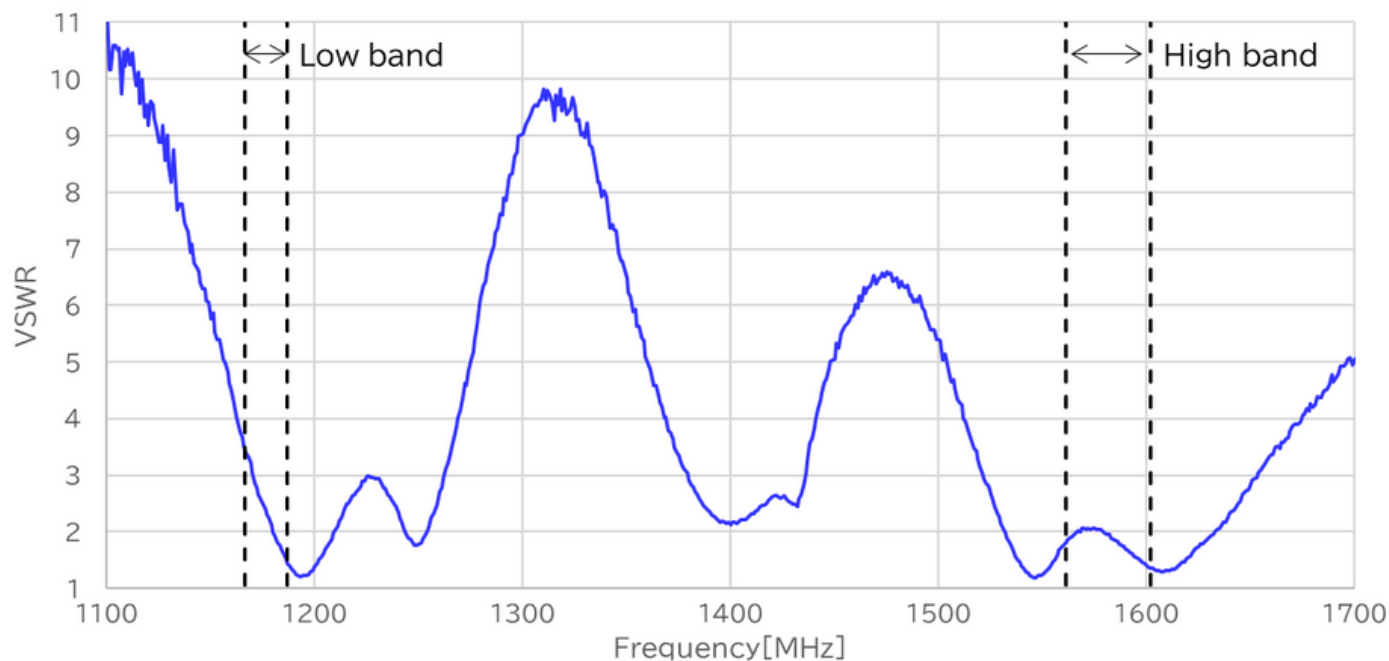
Dimensions	56.4×56.4×22.6mm
Connector	SMA(MALE)
Cable	5000mm, 1.5D
Weight	about 180g

Environmental

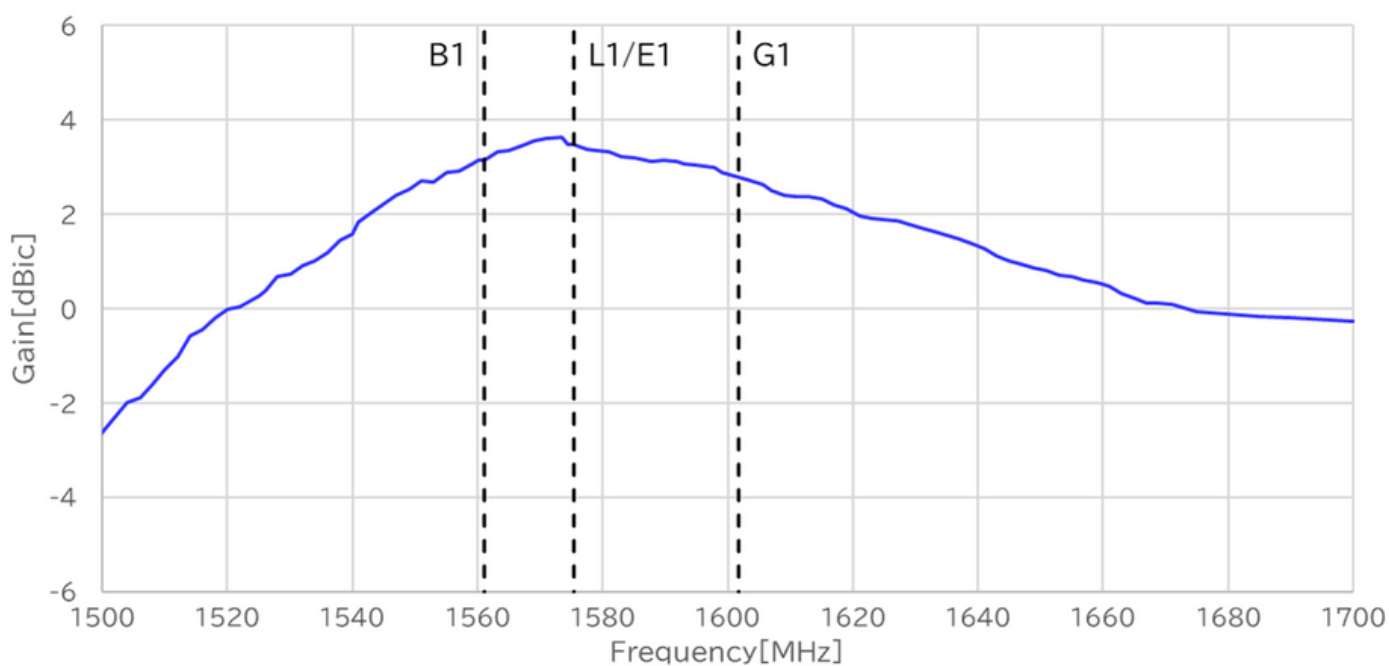
Operation Temperature	-30°C to +85°C
Storage Temperature	-40°C to +85°C

2. Antenna Characteristics

VSWR

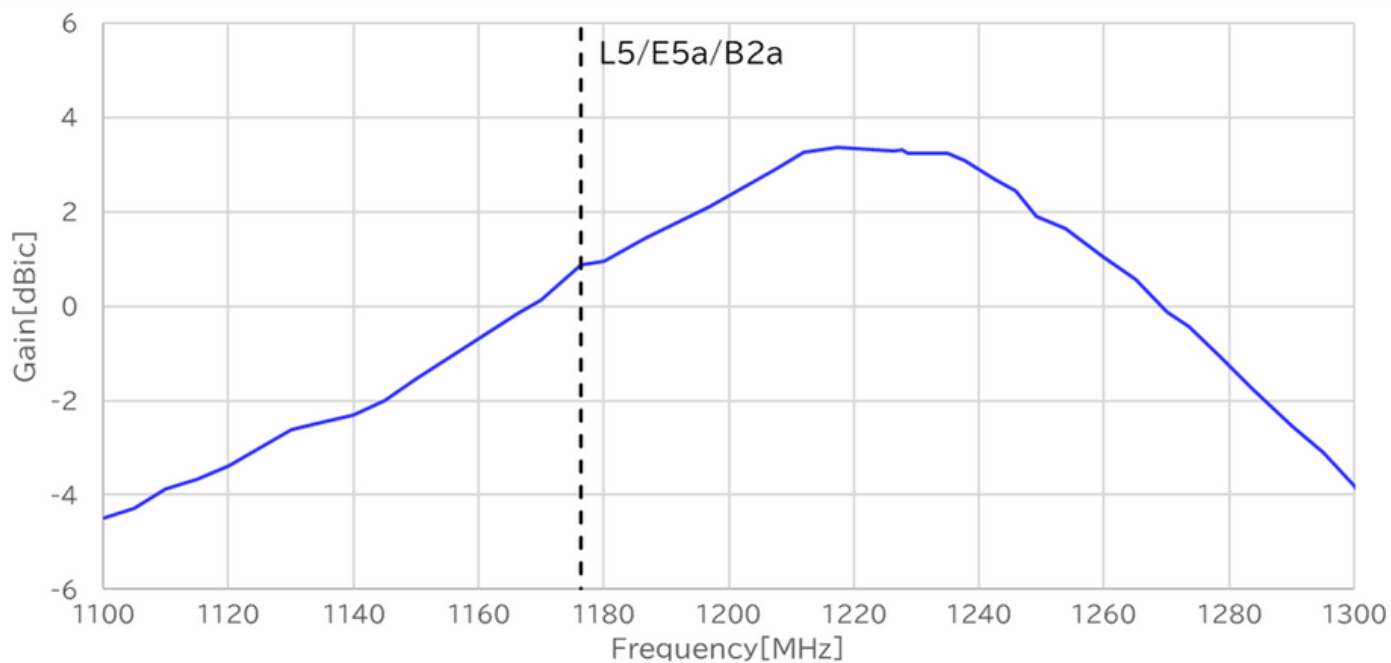


Peak Gain(High Band)

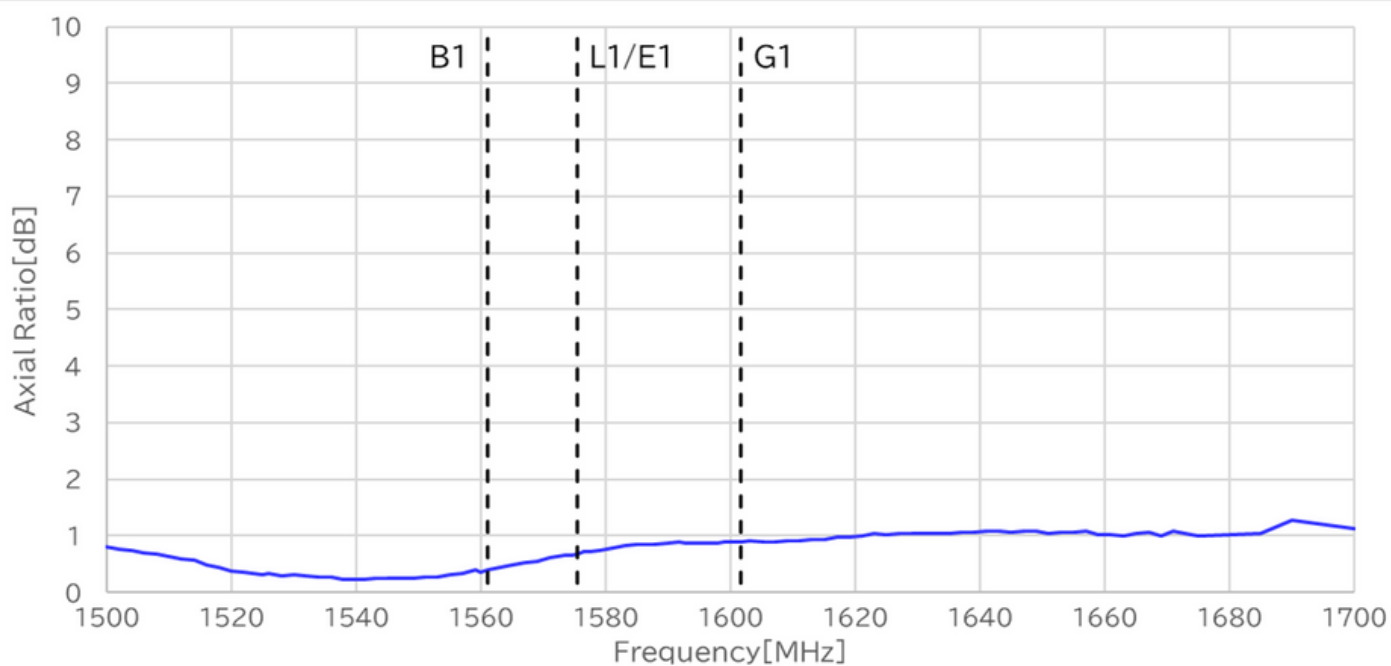


2. Antenna Characteristics

Peak Gain(Low Band)

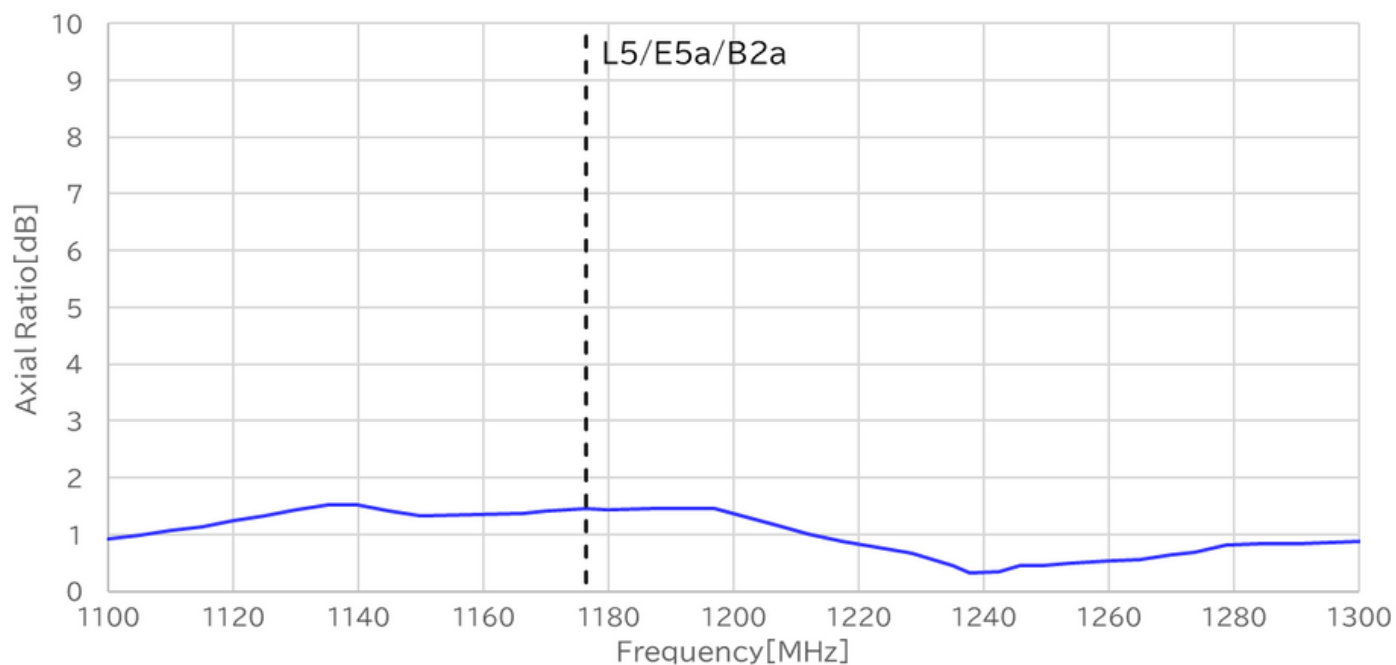


Axial Ratio(High Band)



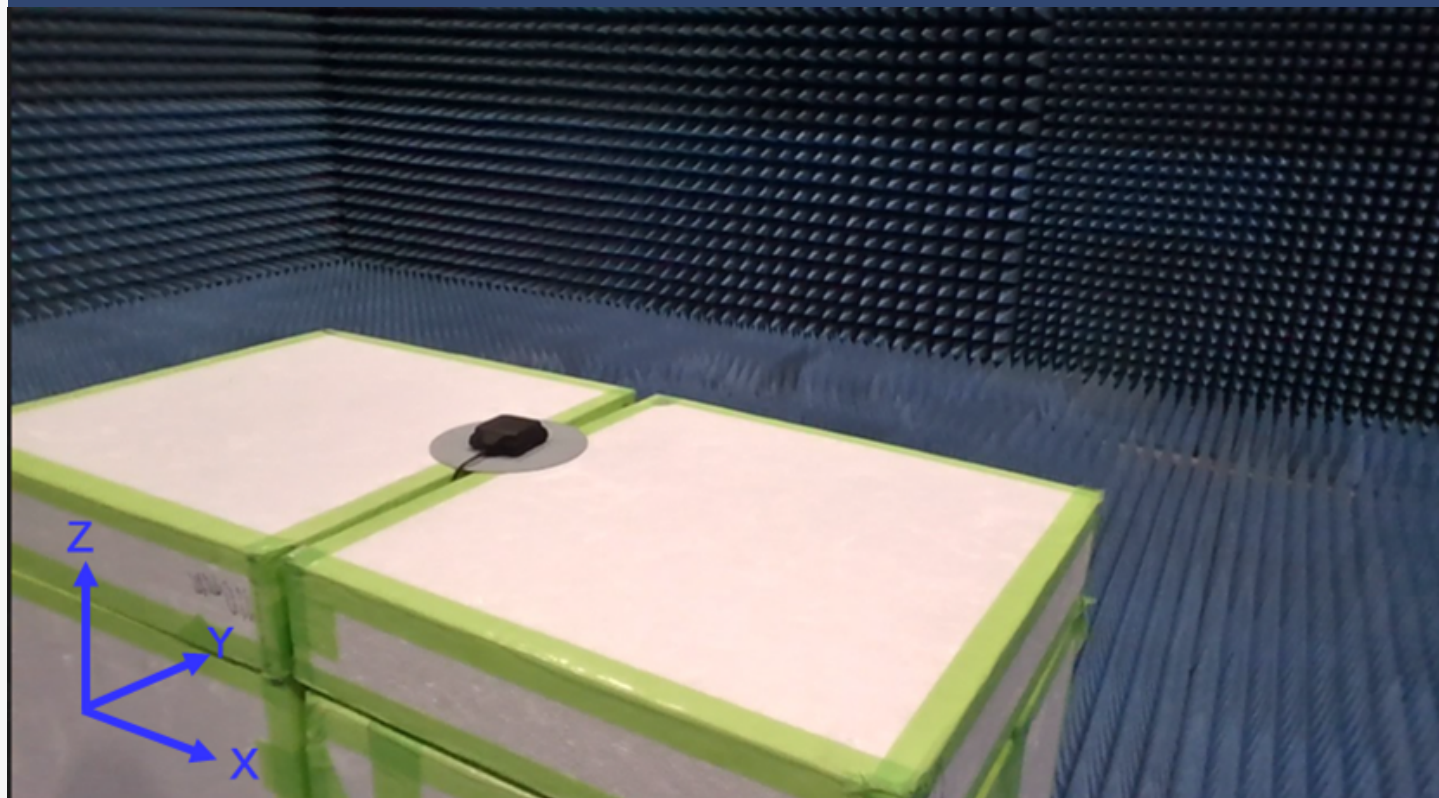
2. Antenna Characteristics

Axial Ratio(Low Band)

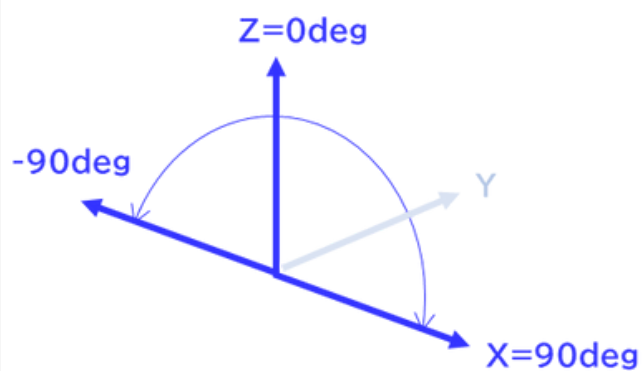


3. Radiation Patterns

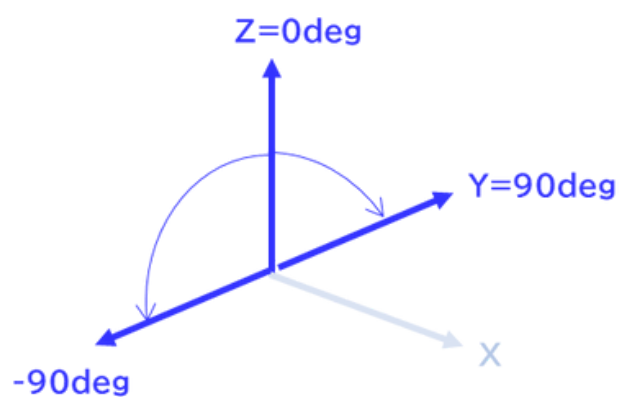
Test Setup



XZ Plane



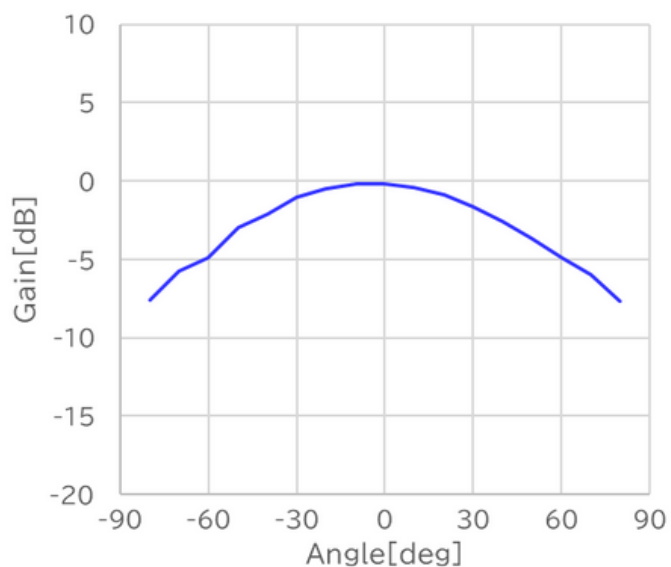
YZ Plane



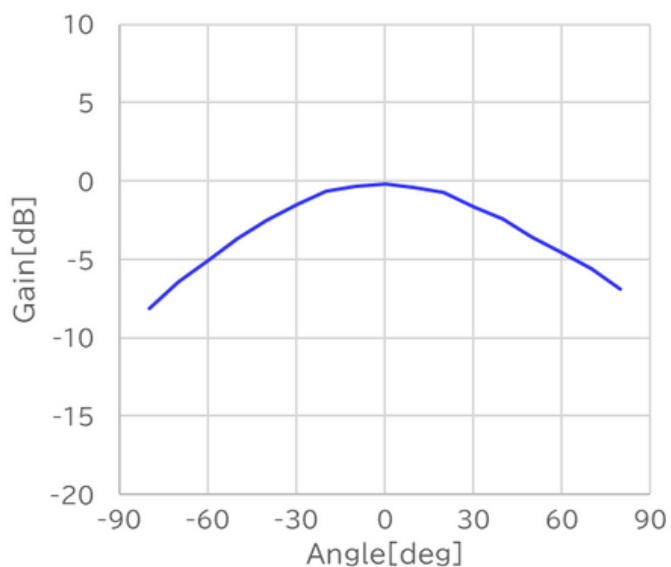
3. Radiation Patterns

Radiation Pattern 1166.22MHz

XZ Plane

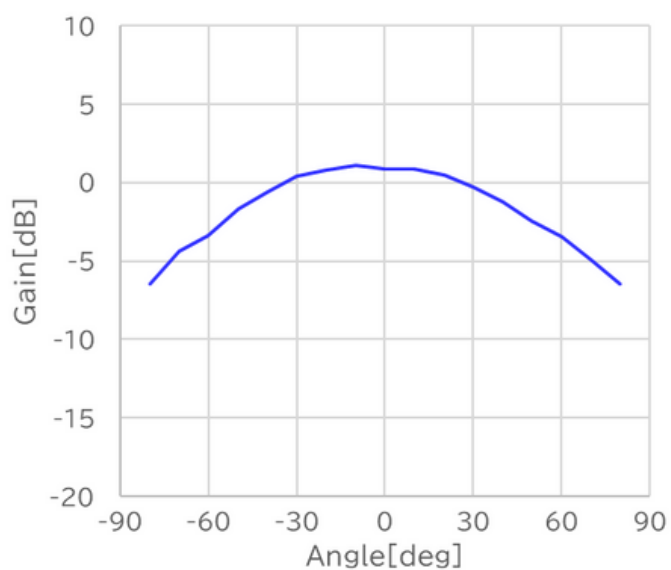


YZ Plane

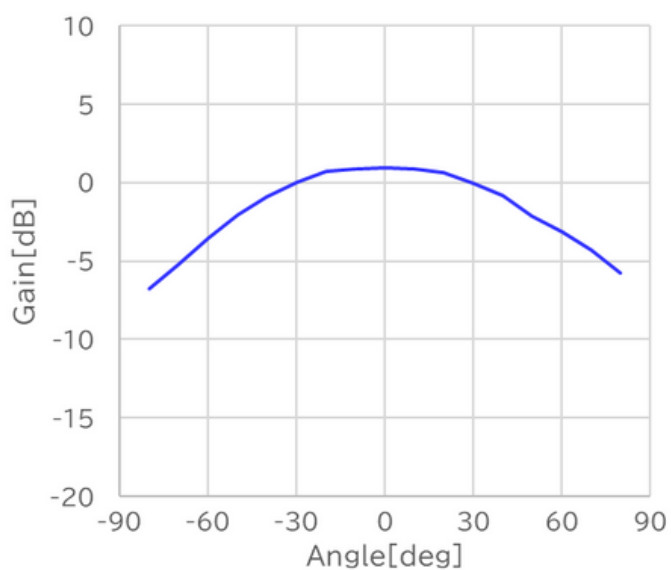


Radiation Pattern 1176.45MHz

XZ Plane

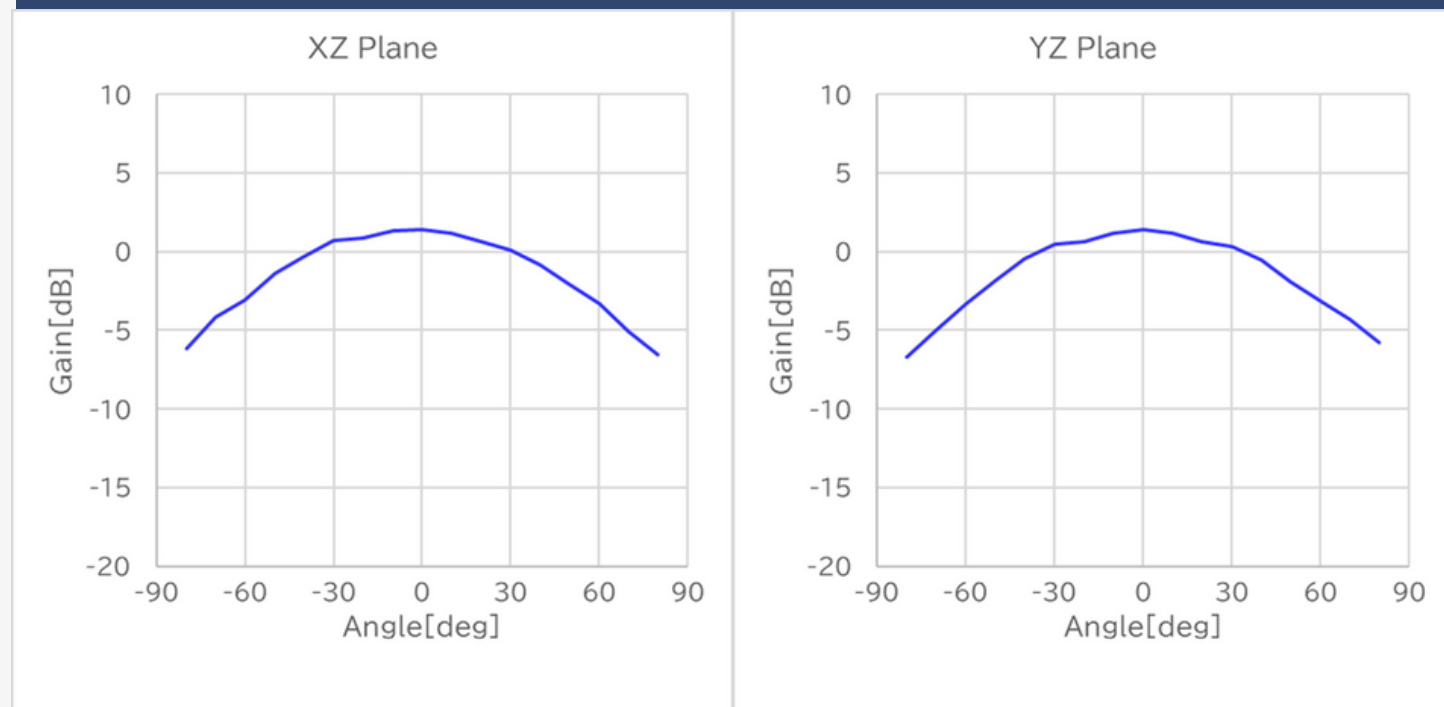


YZ Plane

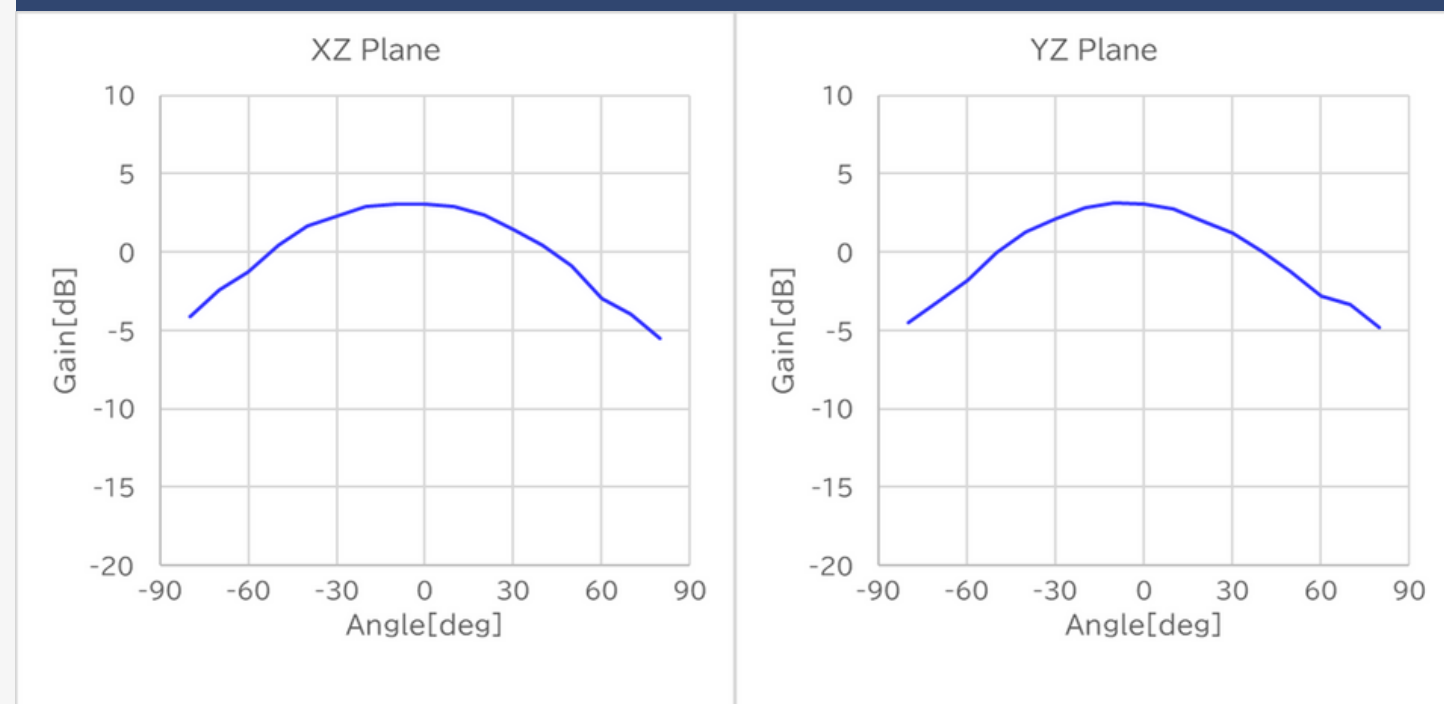


3. Radiation Patterns

Radiation Pattern 1186.68MHz

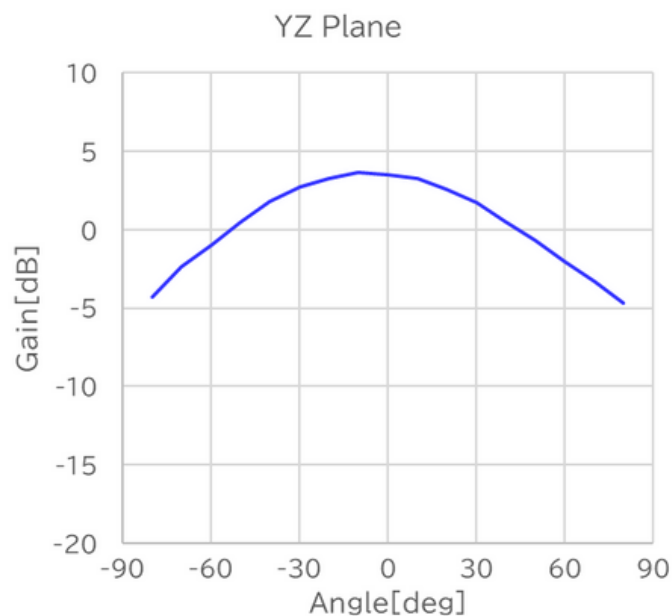
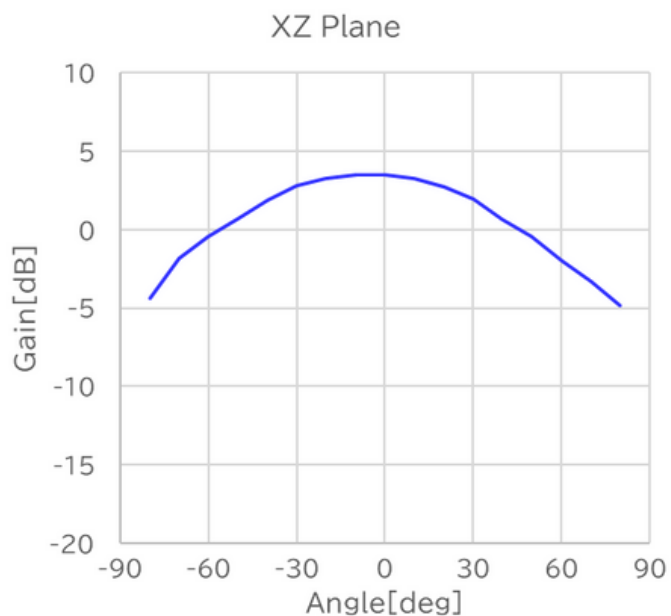


Radiation Pattern 1561.1MHz

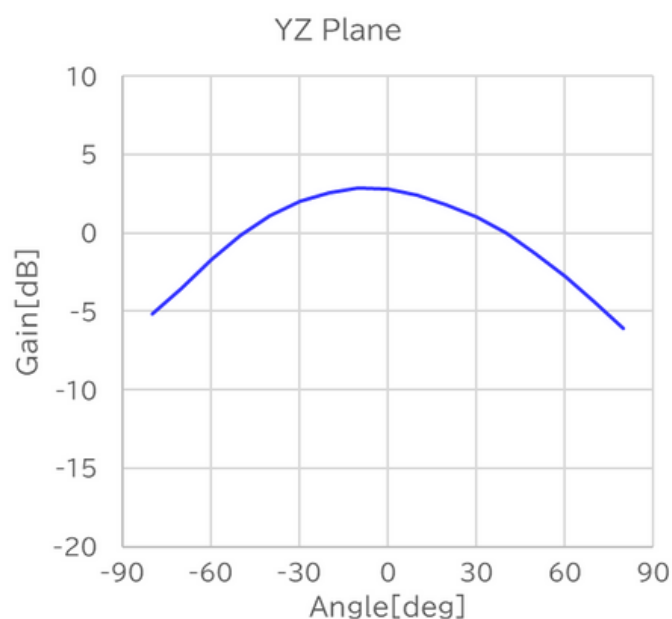
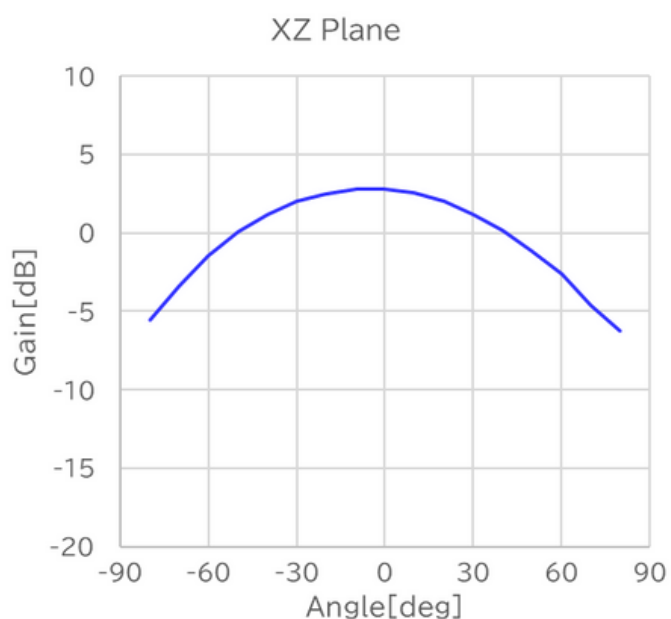


3. Radiation Patterns

Radiation Pattern 1575.42MHz

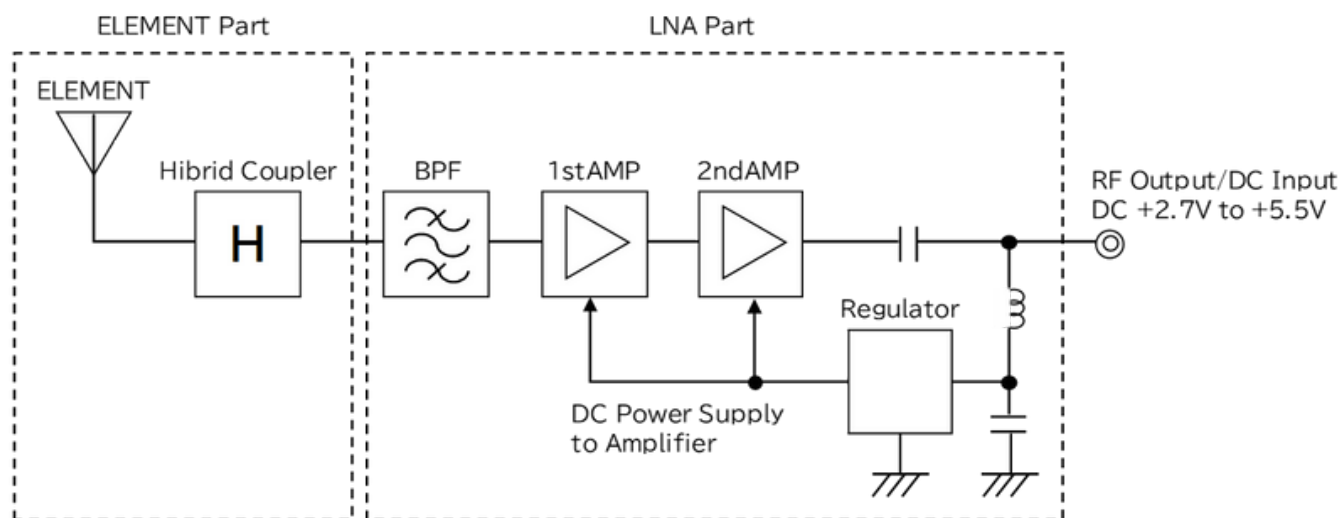


Radiation Pattern 1601.72MHz

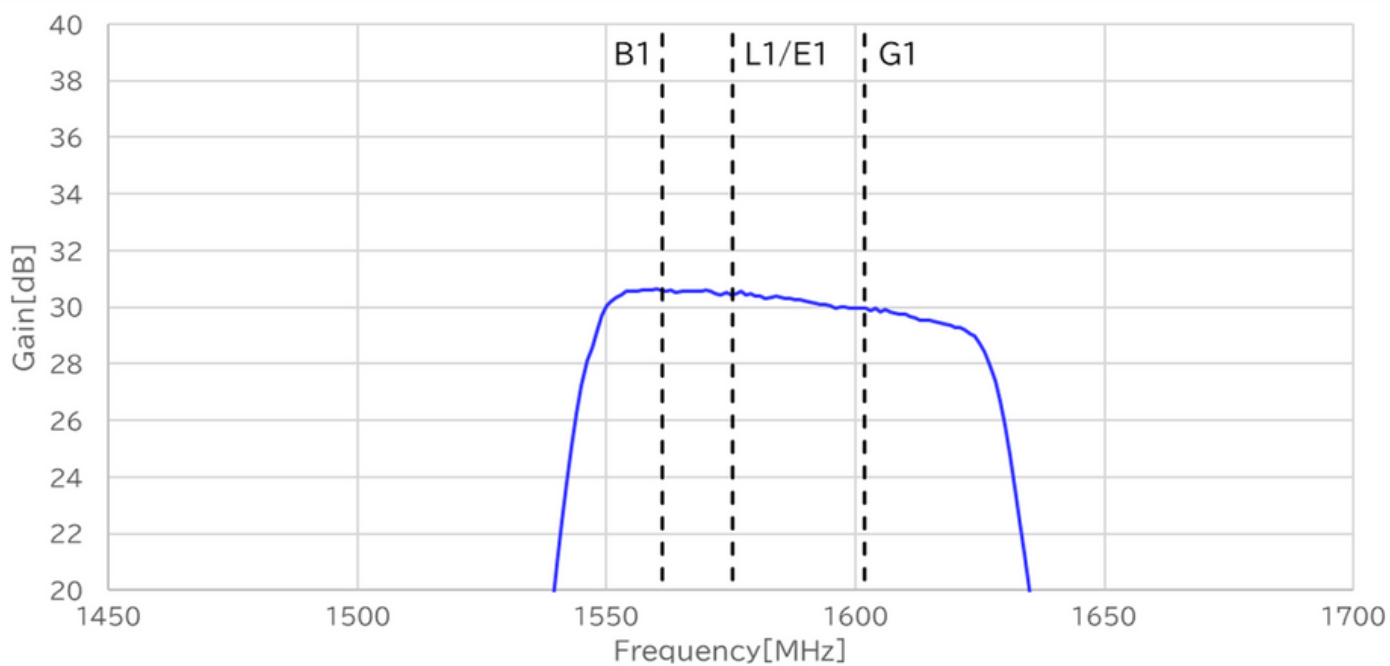


4. LNA Characteristics

Block Diagram(Active Antenna)

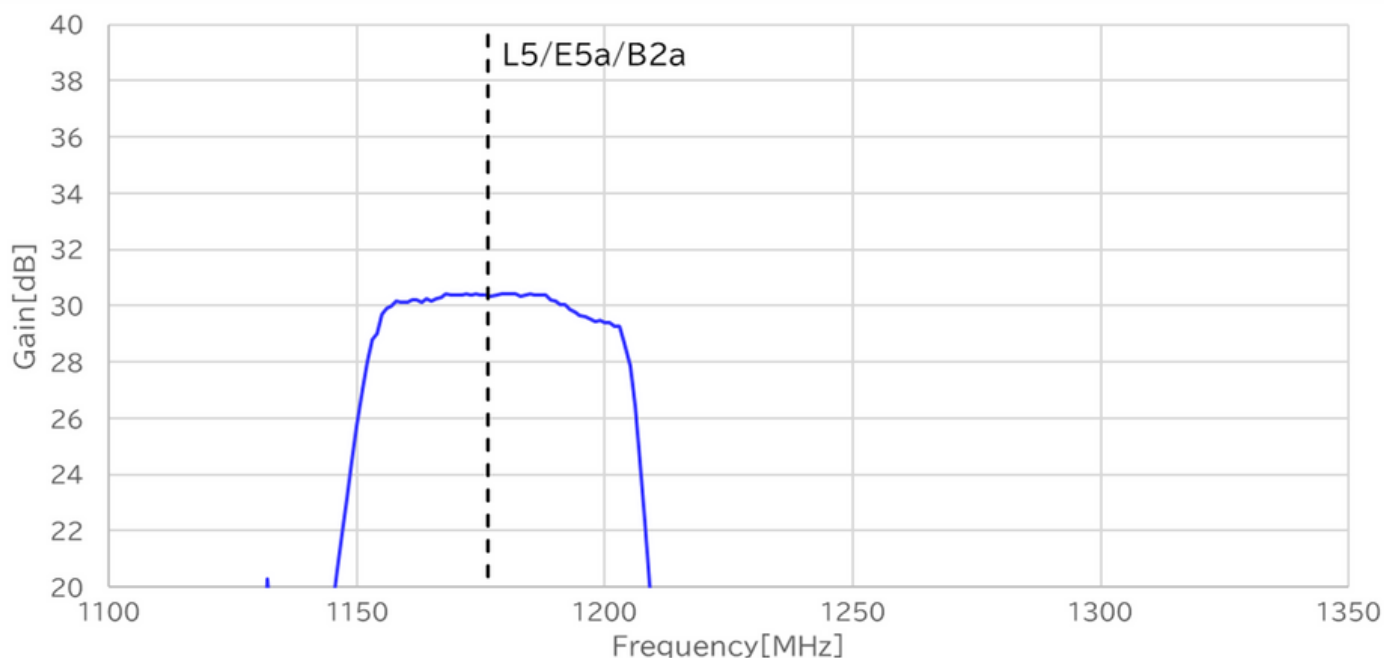


LNA Gain (High Band)



4. LNA Characteristics

LNA Gain (Low Band)

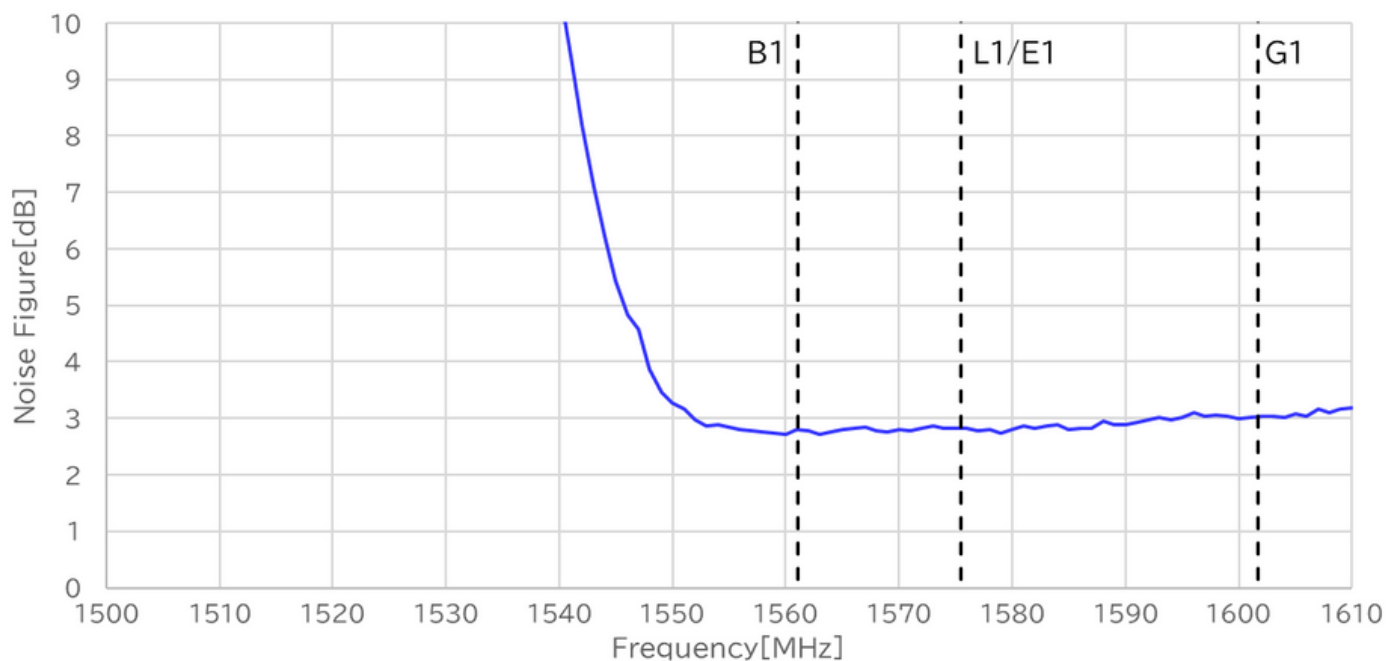


LNA Gain (Wide Band)

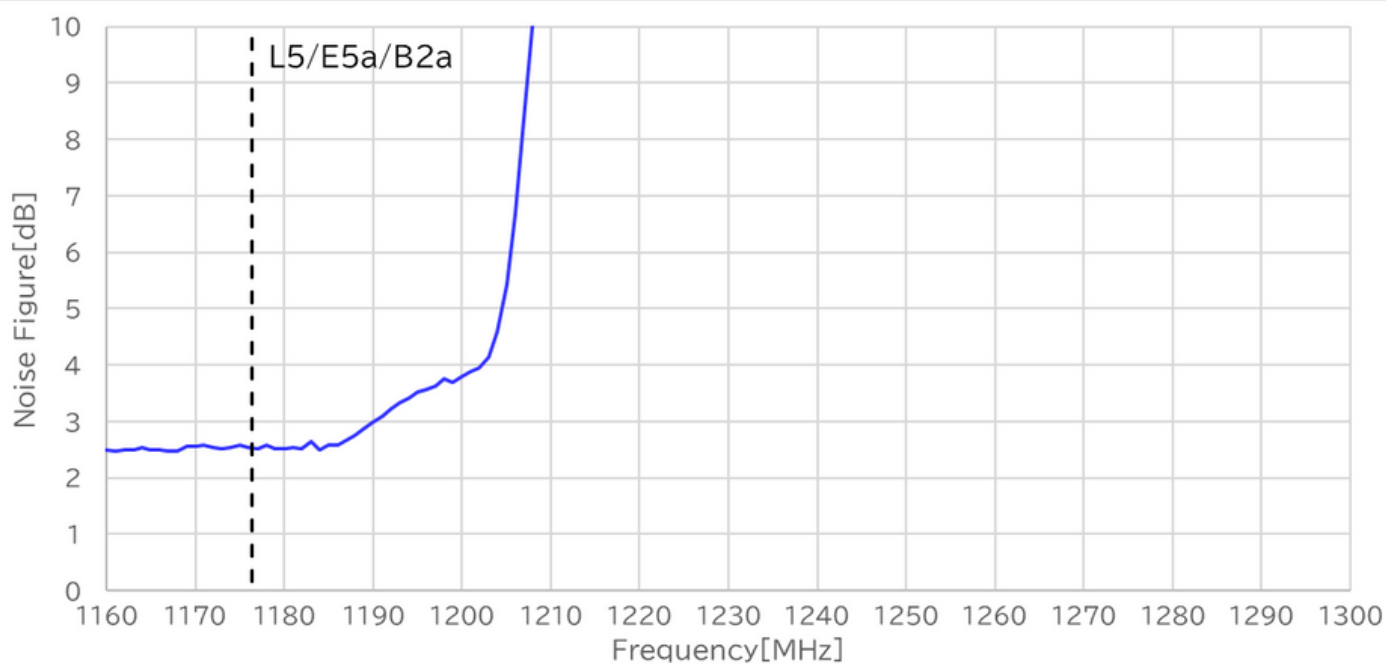


4. LNA Characteristics

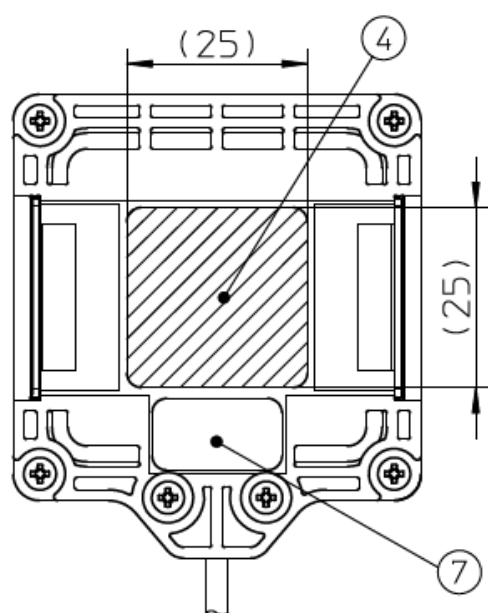
Noise Figure (High Band)



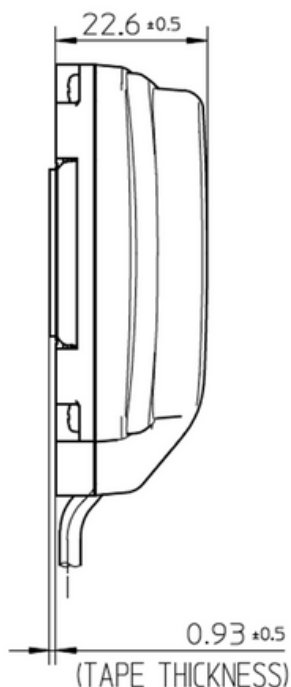
Noise Figure (Low Band)



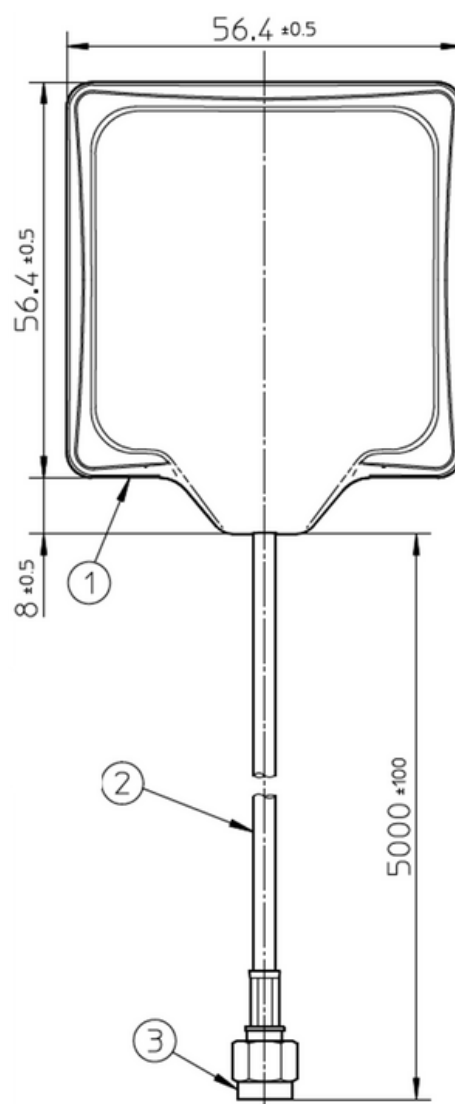
5. Mechanical Drawing



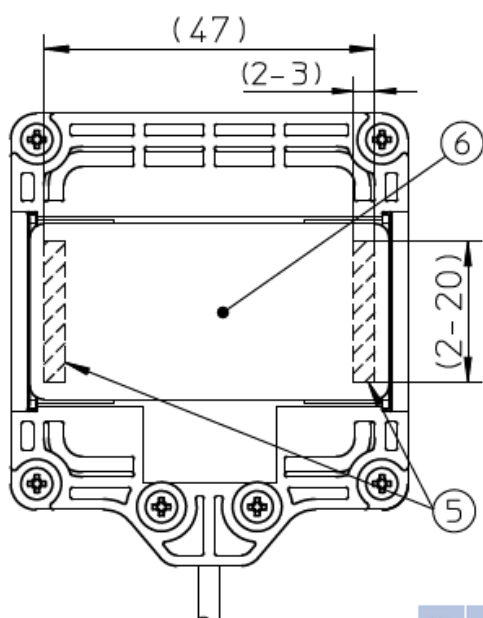
BOTTOM VIEW
DOUBLE SIDED TAPE TYPE
(YOZ-52683ZZ01)



SIDE VIEW



TOP VIEW

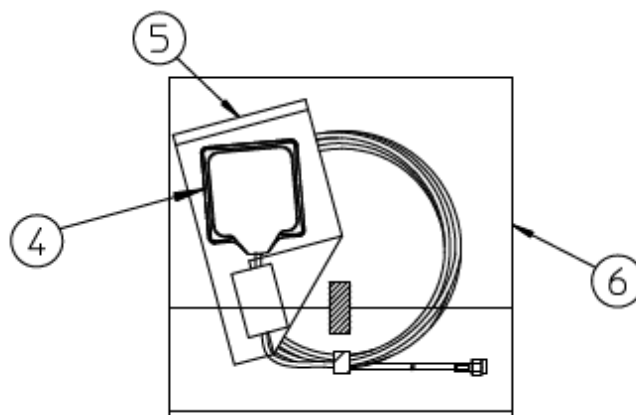


BOTTOM VIEW
MAGNET TYPE
(YOZ-52683ZZ02)

No	DESCRIPTION	Q'TY	MATERIAL	FINISH	REMARKS
1	MAIN BODY	1	PC+ASA, PBT-GF	-	Body color: Black Grainning
2	COAXIAL CABLE	1	1.5D Cable	-	-
3	SMA(MALE)	1	BRASS	NICKEL PLATING	-
4	DOUBLE SIDES TAPE	1	Acrylic Adhesive	-	DOUBLE SIDED TAPE TYPE ONLY
5	MAGNET	2	Nd-Fe-B	-	MAGNET TYPE ONLY
6	PROTECTION FILM	1	POLYESTER	-	DOUBLE SIDED TAPE TYPE ONLY
7	LABEL	1	WATER-RESISTANT PARER	-	MAGNET TYPE ONLY

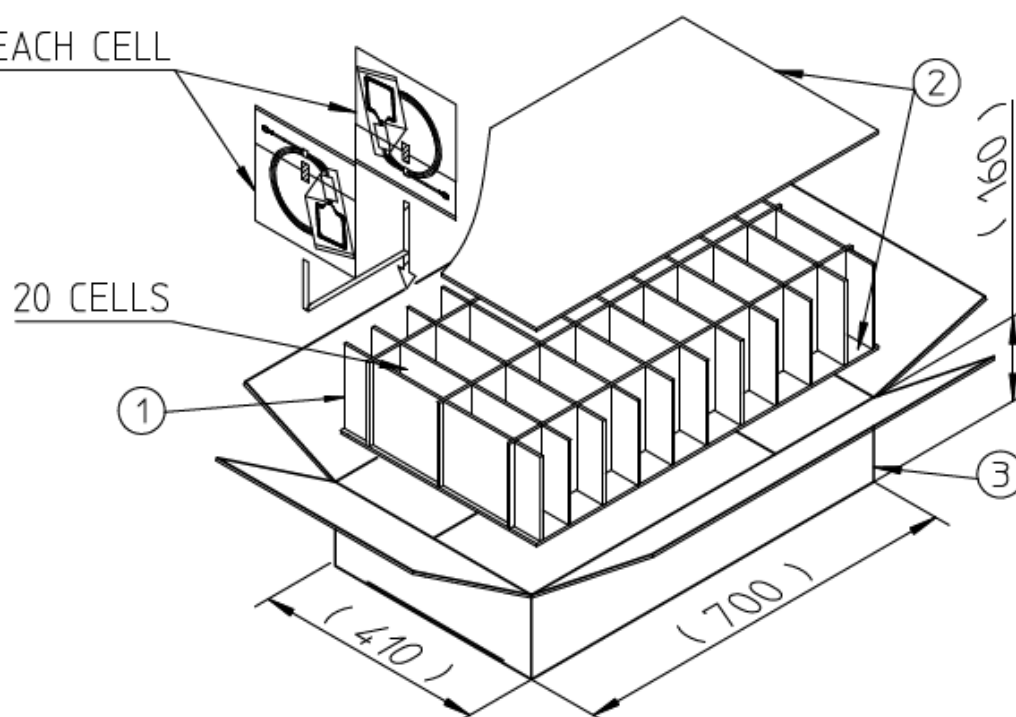
6. Packaging

1PCS PER PE BAG
 WEIGHT : 0.18kg



40PCS PER CARTON
 CARTON DIMENSIONS : 410*700*160mm
 WEIGHT : 8kg

2 PCS IN EACH CELL



No	DESCRIPTION	Q'TY	MATERIAL	FINISH	REMARKS
1	PARTITION	1	C6-A BROWN	-	-
2	CARDBOARD	2	C6-A BROWN	-	-
3	CARDBOARD BOX	1	C6-W BROWN	-	-
4	ANTENNA ASSY(GNSS L1/L5)	40	-	-	-
5	POLYETHYLENE BAG	40	PE(BLUE)	-	-
6	POLYETHYLENE BAG	40	PE(BLUE)	-	-