

DataSheet

Full Band High Precision GNSS Antenna
YOZ-52728ZZ01-YM (Bothside Tape)
YOZ-52728ZZ02-YM (Magnet Mount)

Able to receive GNSS Full Band (L1, L2, L5, L6) + the L-Band.

Achieving High Precision Positioning comparable to Survey-Grade Antenna with this compact size.



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

Frequency : L1/L2/L5/L6/L-Band

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 Triple-Frequency(L1/L2/L5) and using L6/L-Band 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 @Low Band

Frequency[MHz]	L5/E5a/B2a	E5b/B2b	L2	G2	B3	L6/E6
	1176.45	1207.14	1227.6	1245.78	1268.52	1278.75
VSWR(max.)	2.4	1.8	3.0	1.8	3.8	5.7
Peak Gain[dBic](Typ.) ※1,※2	0.9	2.9	3.3	2.4	-0.1	-1.1
Axial Ratio[dB](Typ.) ※1,※2	1.5	1.2	0.7	0.4	0.7	0.8
Polarization	RHCP					
Impedance[Ω]	50					

※1 on a 150mm-diameter ground plate

※2 Measurement angle: zenith direction

GNSS Electrical @High Band

Frequency[MHz]	L-band			B1	L1/E1	G1
	1525	1539	1559	1561.1	1575.42	1601.72
VSWR(max.)	2.7	1.5	1.7	1.8	2.1	1.4
Peak Gain[dBic](Typ.) ※1,※2	0.3	1.6	3.1	3.1	3.5	2.8
Axial Ratio[dB](Typ.) ※1,※2	0.3	0.2	0.4	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 @Low Band

Frequency[MHz]	L5/E5a/B2a	E5b/B2b	L2	G2	B3	L6/E6
	1176.45	1207.14	1227.6	1245.78	1268.52	1278.75
Gain[dB](Typ.)	33.5	34.1	34.5	34.0	32.8	33.0
Noise Figure[dB](Typ.) ※3	1.8	1.8	1.8	1.7	1.8	1.8
Current Draw[mA](Typ.)	20					
Supply voltage[V]	2.7~5.5					

※3 +25°C±5°C

LNA and Filter Electrical Properties @High Band

Frequency[MHz]	L-band			B1	L1/E1	G1
	1525	1539	1559	1561.1	1575.42	1601.72
Gain[dB](Typ.)	34.5	34.1	33.3	33.4	33.1	31.8
Noise Figure[dB](Typ.) ※3	1.4	1.4	1.5	1.5	1.5	1.5
Current Draw[mA](Typ.)	20					
Supply voltage[V]	2.7~5.5					

※3 +25°C±5°C

1. Specifications

Total Specification @Low Band (Through Antenna, SAW Filter and LNA)

Frequency[MHz]	L5/E5a/B2a	E5b/B2b	L2	G2	B3	L6/E6
	1176.45	1207.14	1227.6	1245.78	1268.52	1278.75
Gain[dB](Typ.) ※1,※2,※4	30.7	31.6	33.0	31.1	26.3	25.8
VSWR ※1,※4	1.1	1.1	1.1	1.0	1.1	1.1
Output Impedance[Ω]	50					

※1 on a 150mm-diameter ground plate

※2 Measurement angle: zenith direction

※4 Including 5000mm cable length and SMA connector

Total Specification @High Band (Through Antenna, SAW Filter and LNA)

Frequency[MHz]	L-band			B1	L1/E1	G1
	1525	1539	1559	1561.1	1575.42	1601.72
Gain[dB](Typ.) ※1,※2,※4	31.0	32.1	30.9	30.6	28.5	27.6
VSWR ※1,※4	1.1	1.0	1.0	1.1	1.1	1.1
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

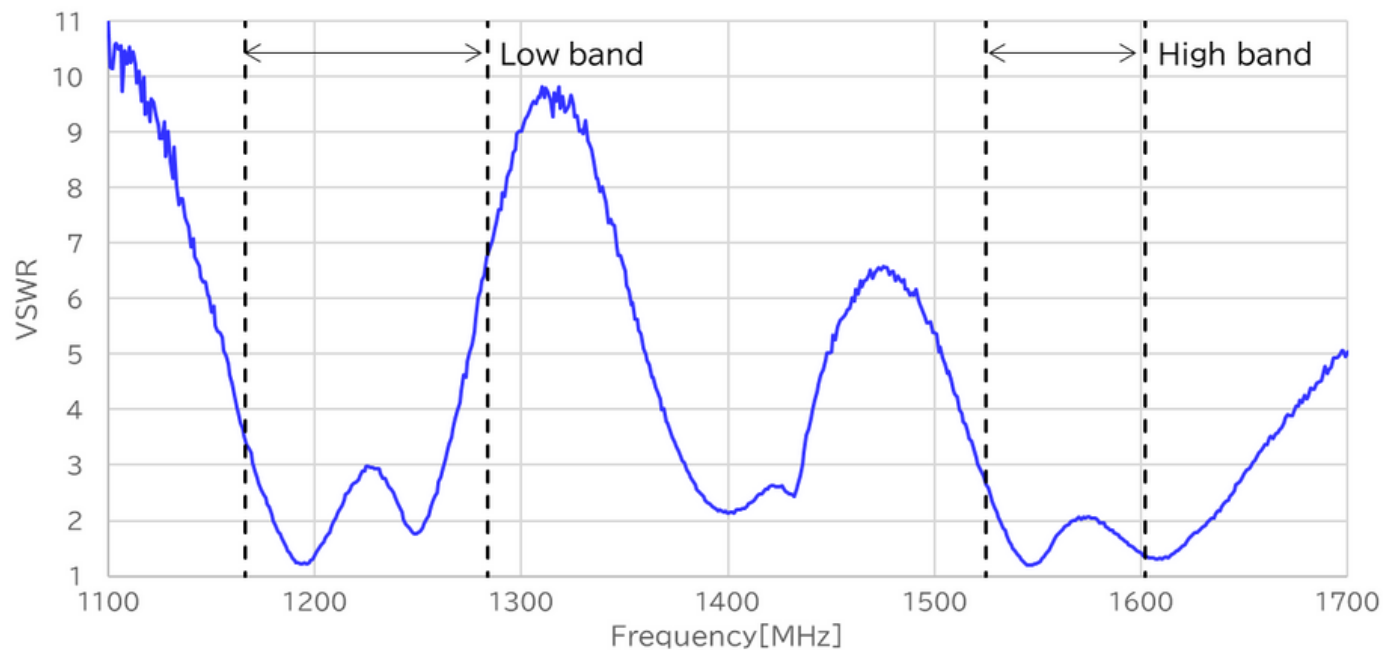
Dimensions	56.4×56.4×22.6mm
Connector	SMA(MALE)
Cable	5000mm, 1.5D
Weight	about 180g

Environmental

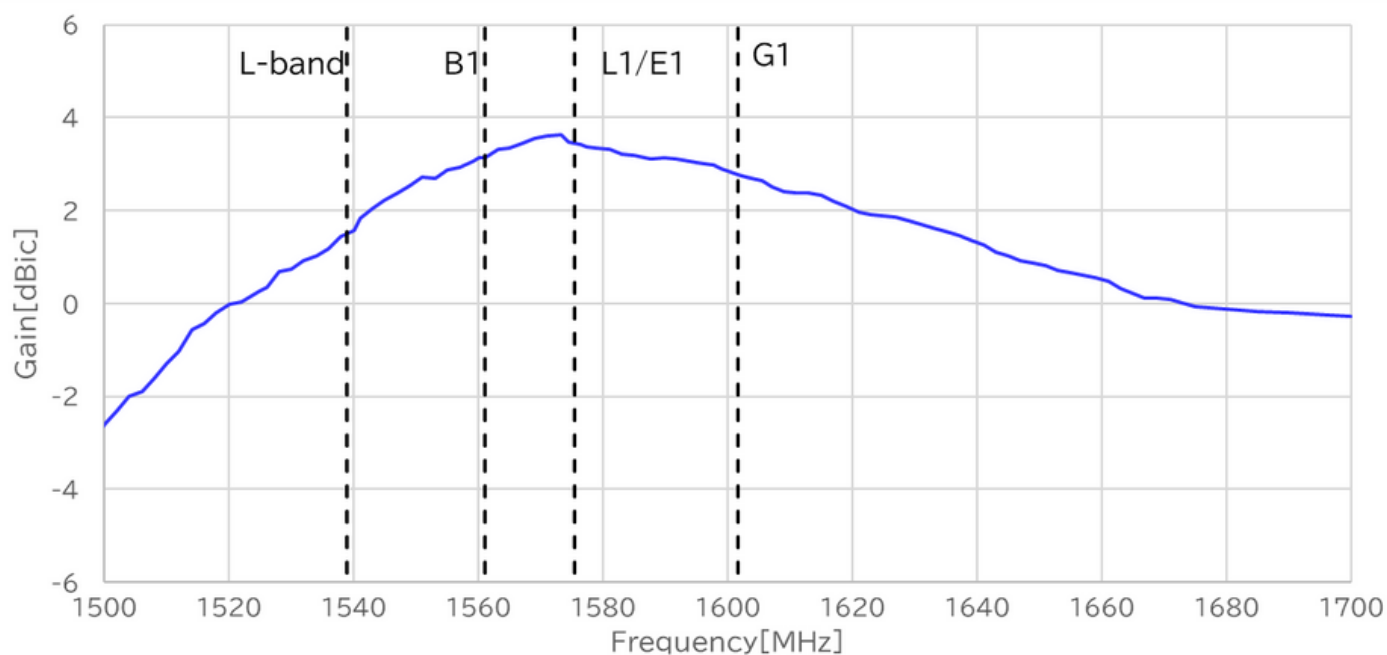
Operation Temperature	-30℃ to +85℃
Storage Temperature	-40℃ to +85℃

2. Antenna Characteristics

VSWR

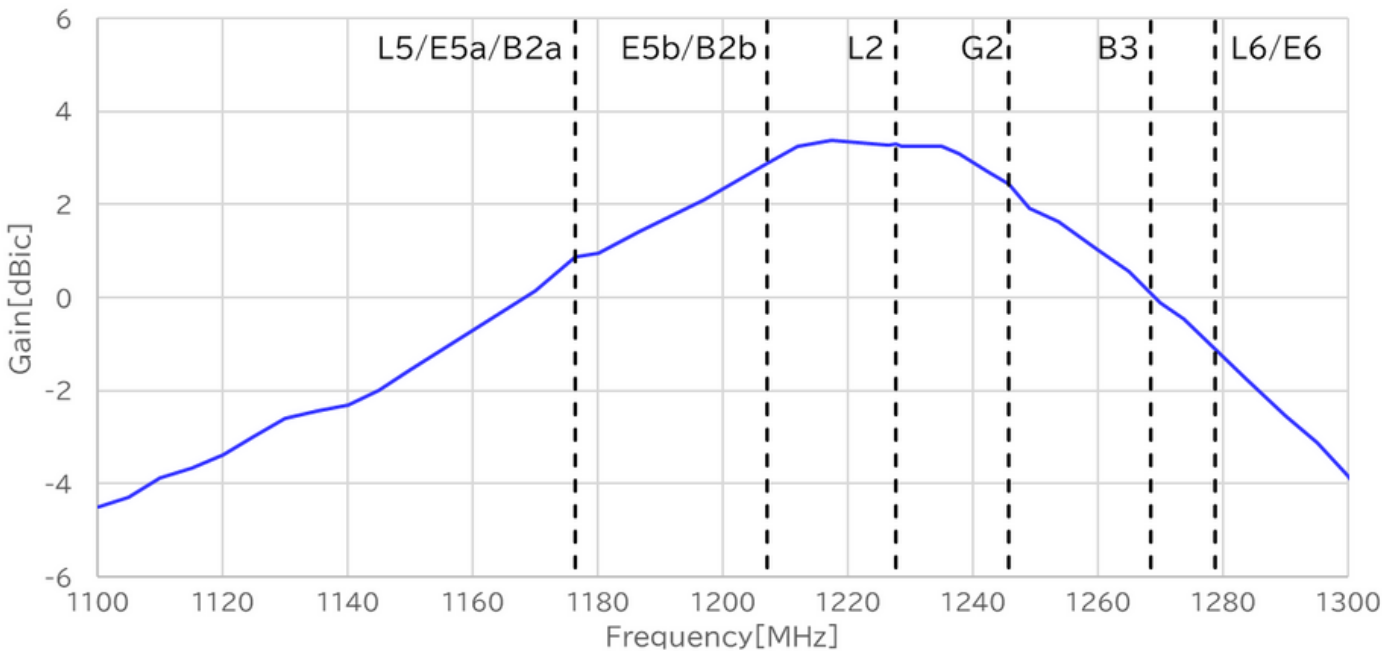


Peak Gain(High Band)

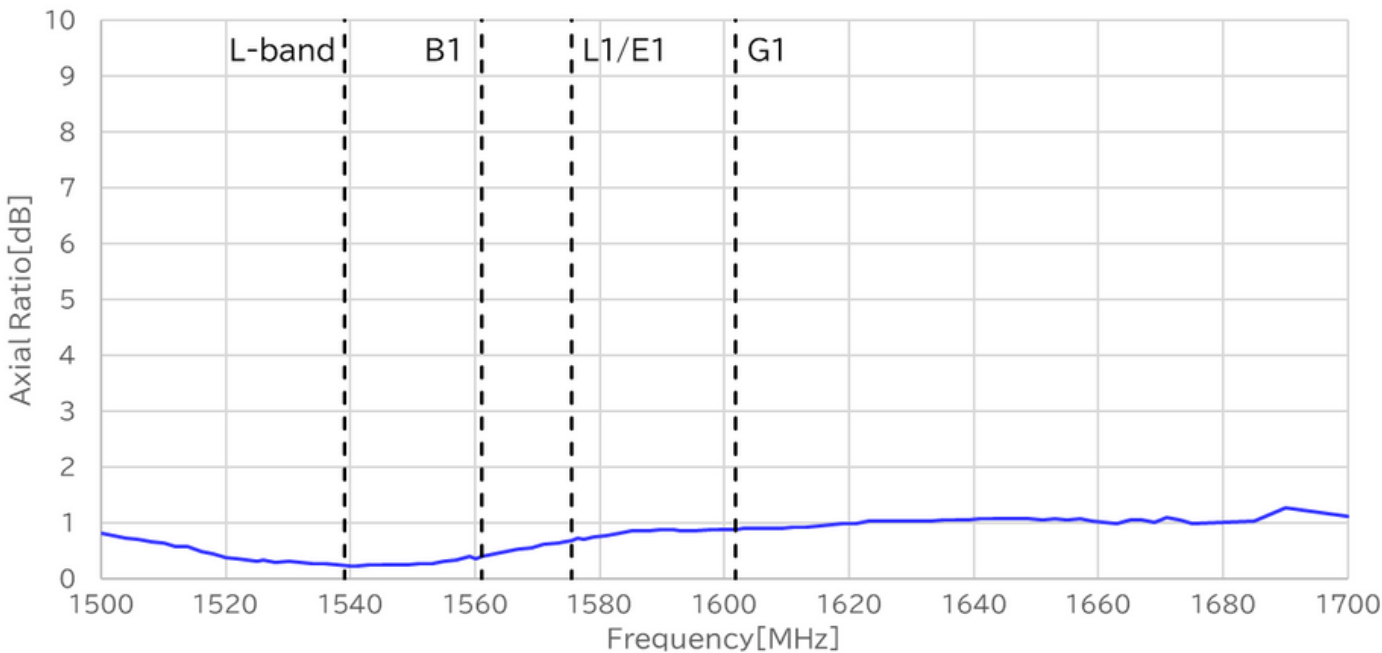


2. Antenna Characteristics

Peak Gain(Low Band)

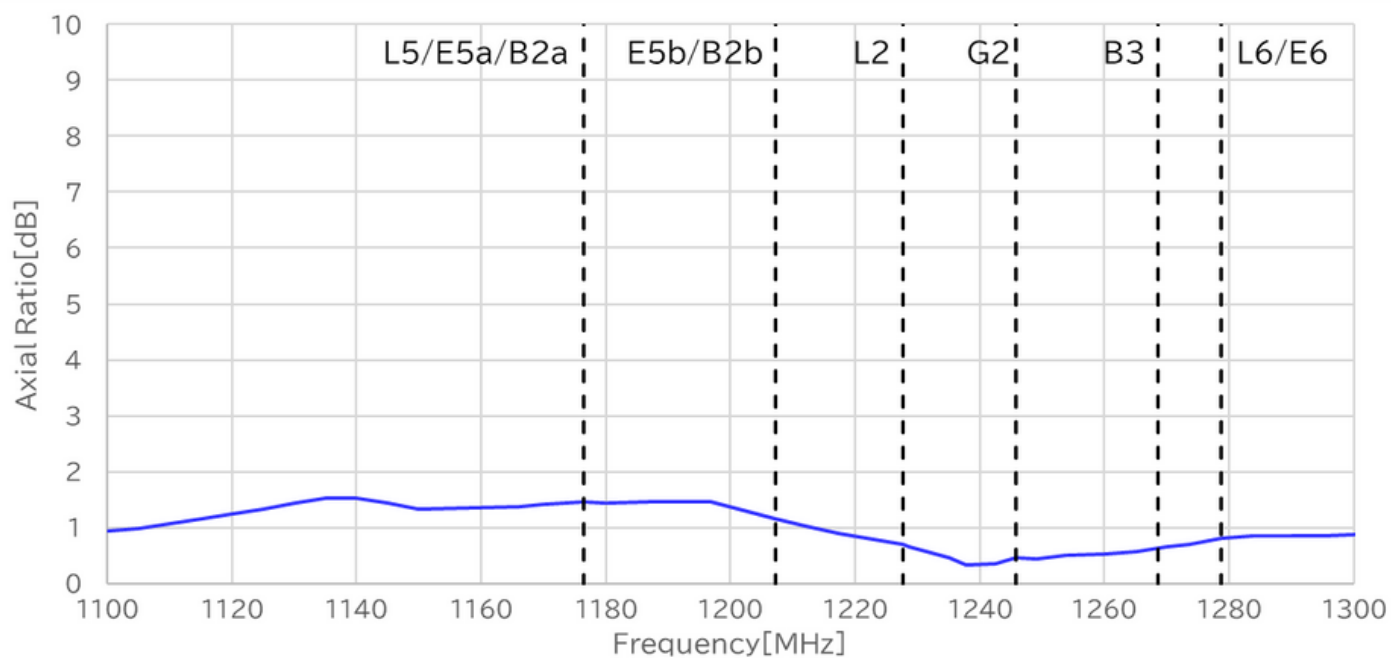


Axial Ratio(High Band)



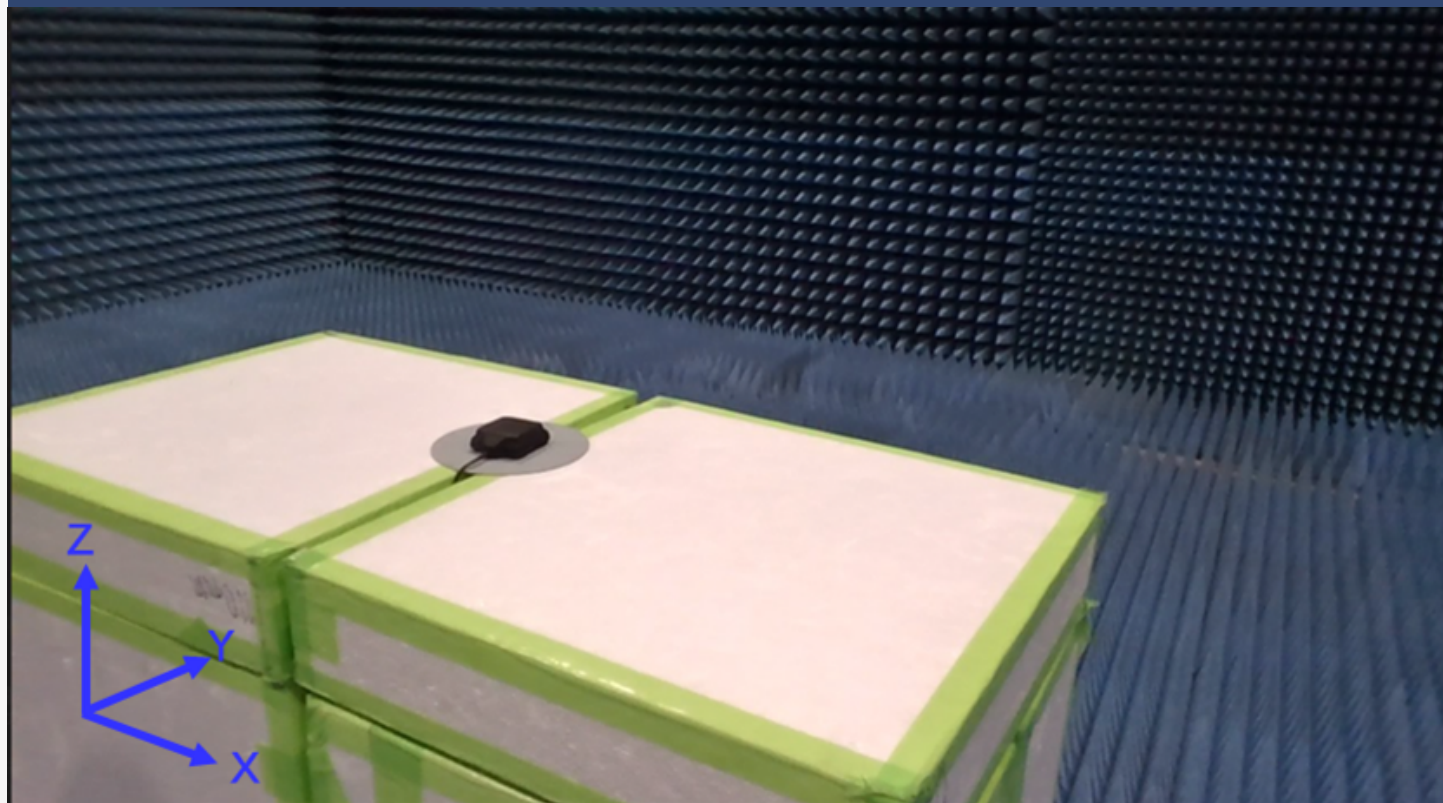
2. Antenna Characteristics

Axial Ratio(Low Band)

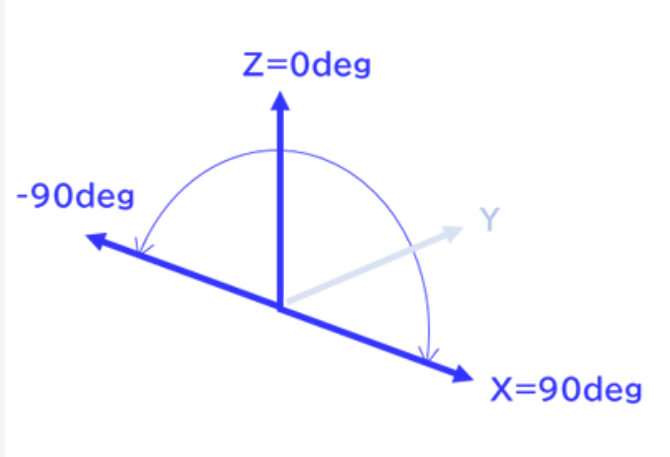


3. Radiation Patterns

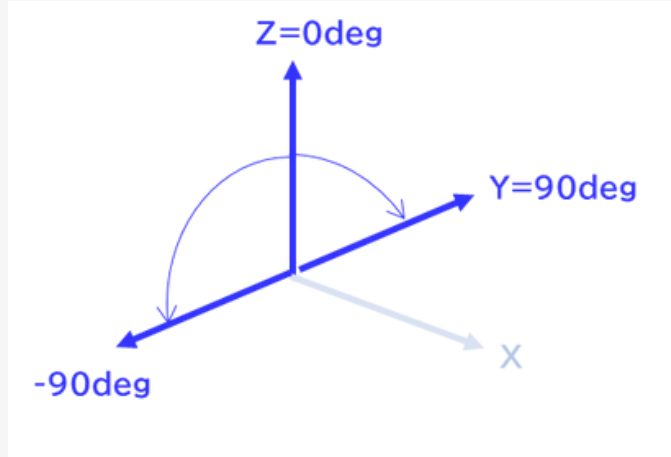
Test Setup



XZ Plane

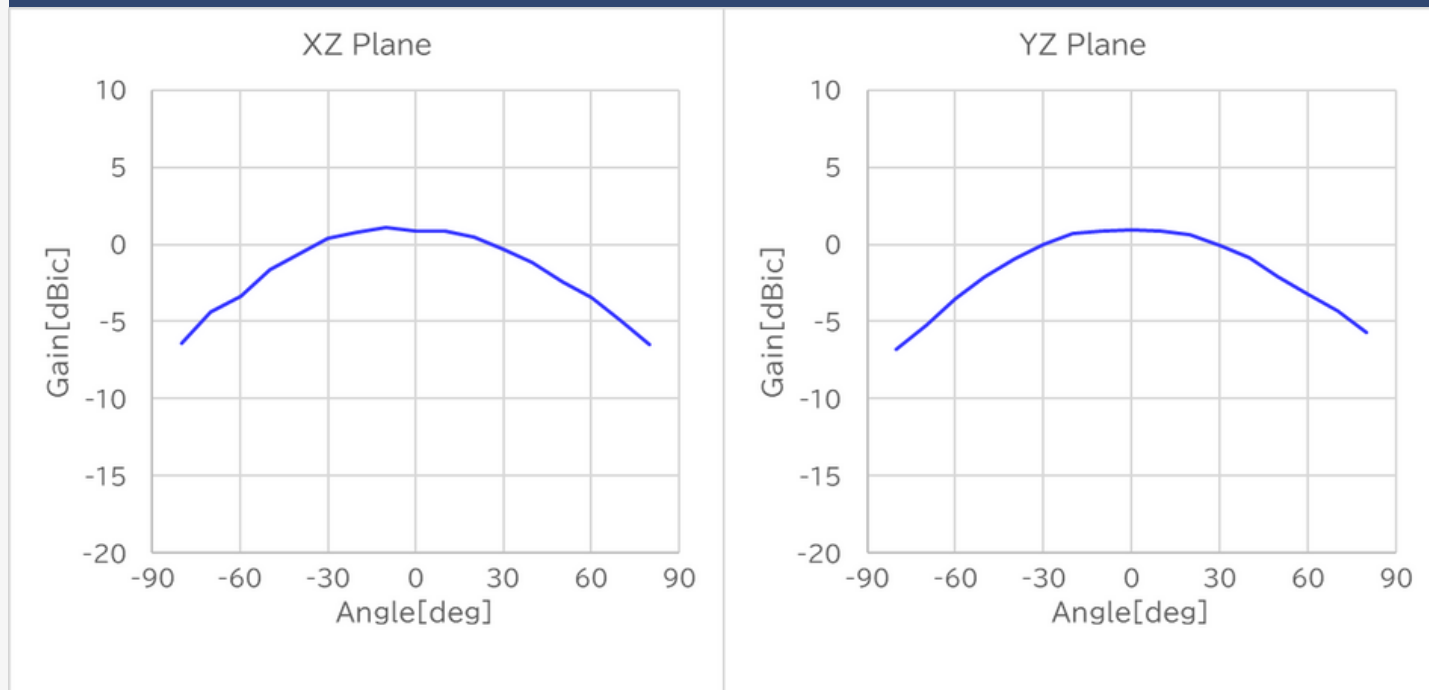


YZ Plane

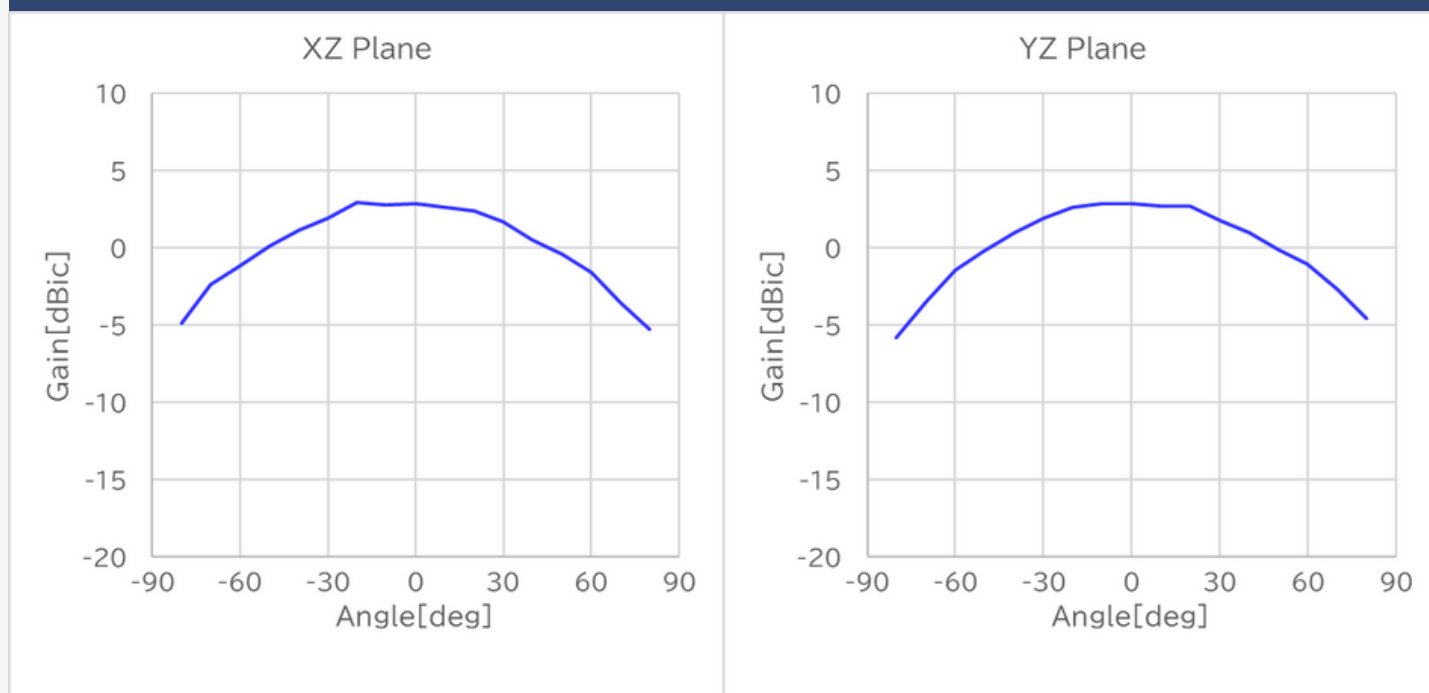


3. Radiation Patterns

Radiation Pattern 1176.45MHz

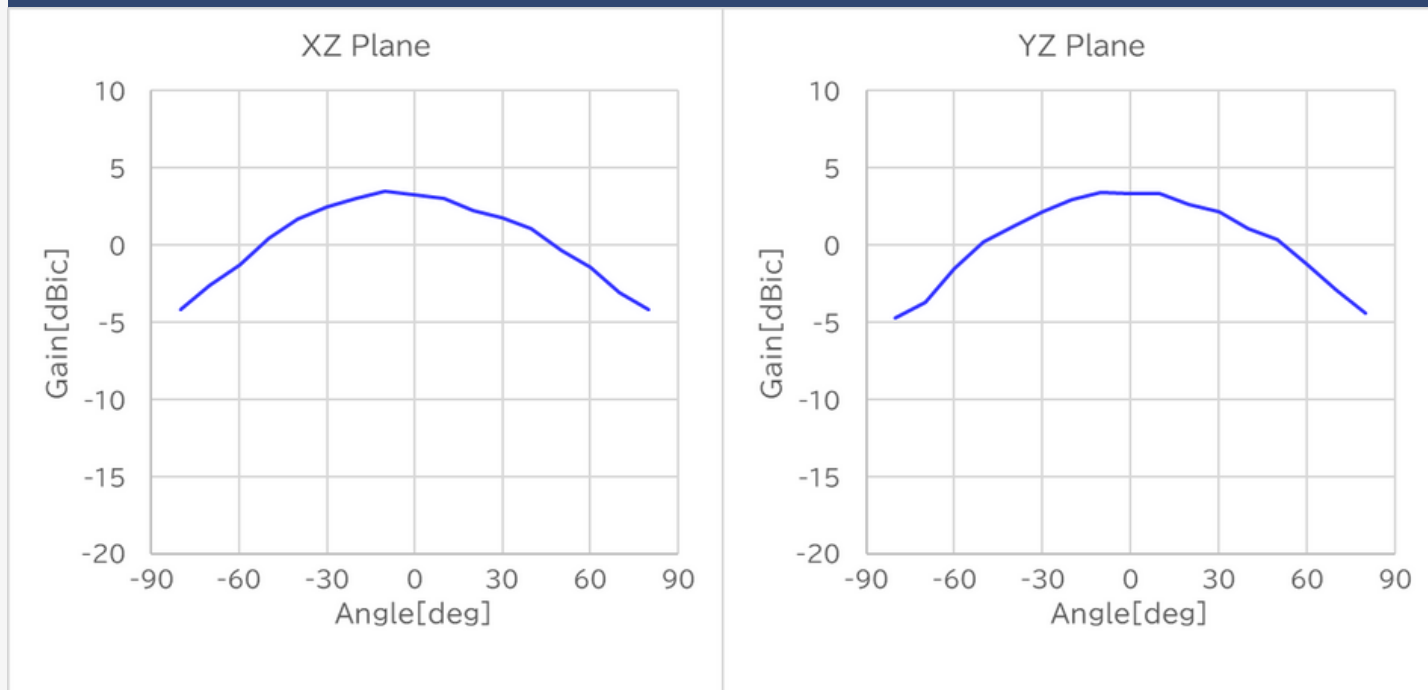


Radiation Pattern 1207.14MHz

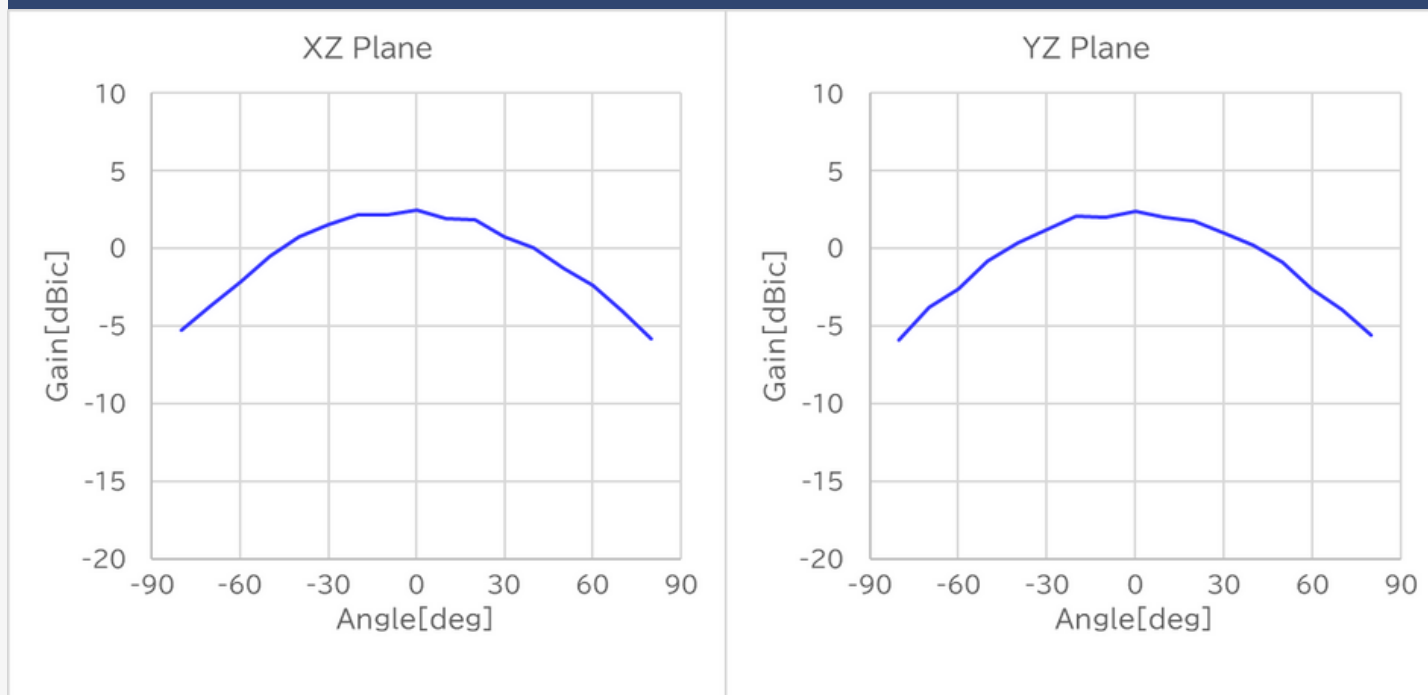


3. Radiation Patterns

Radiation Pattern 1227.6MHz

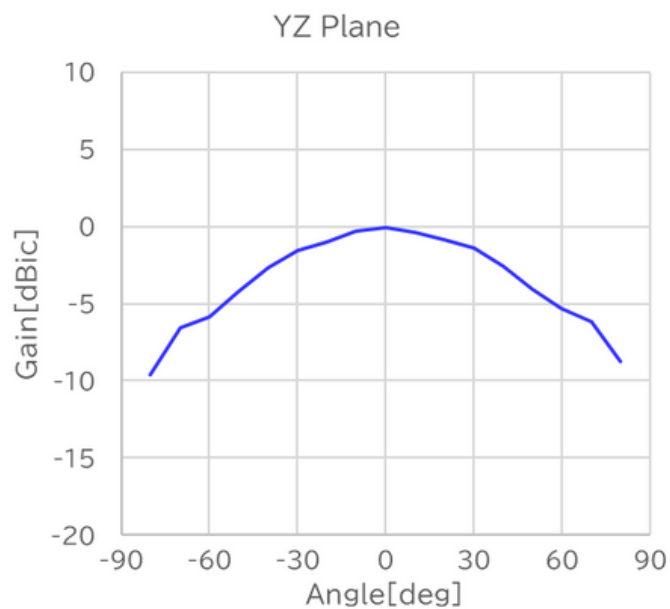
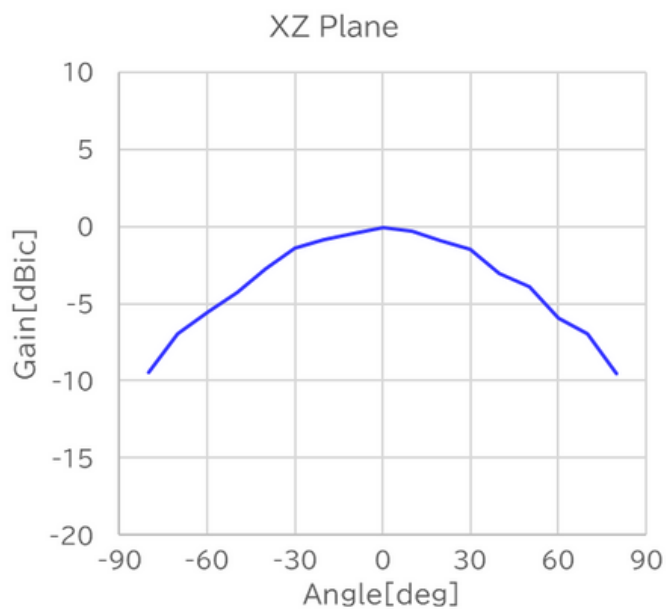


Radiation Pattern 1561.1MHz

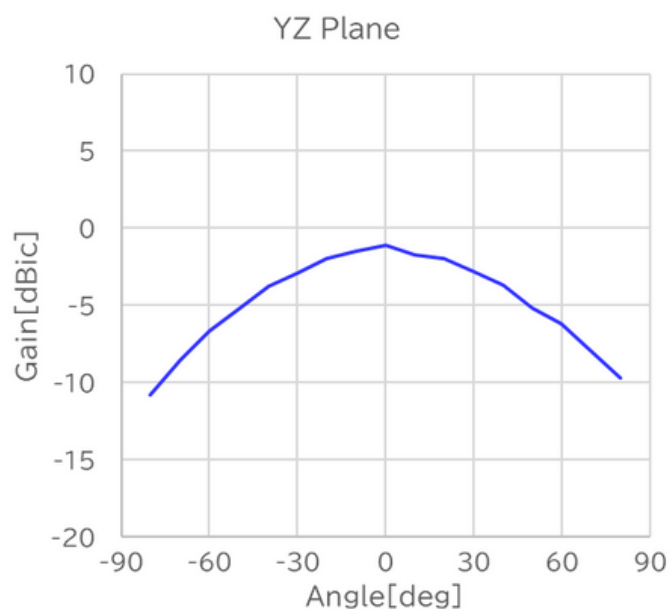
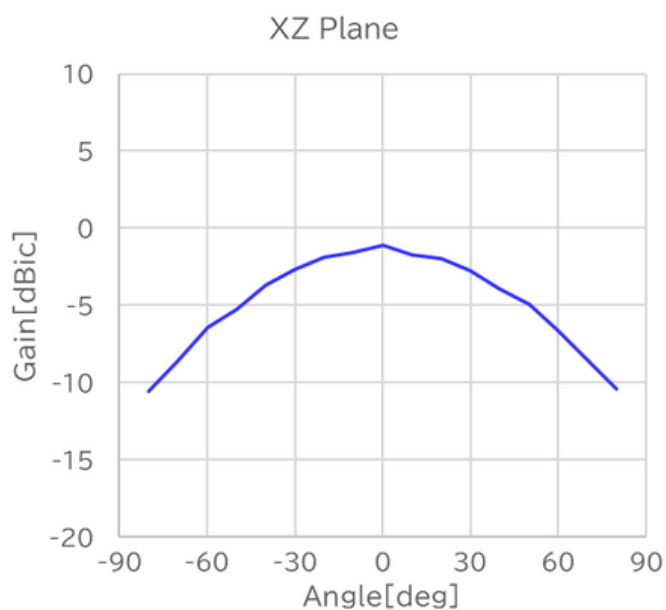


3. Radiation Patterns

Radiation Pattern 1268.52MHz

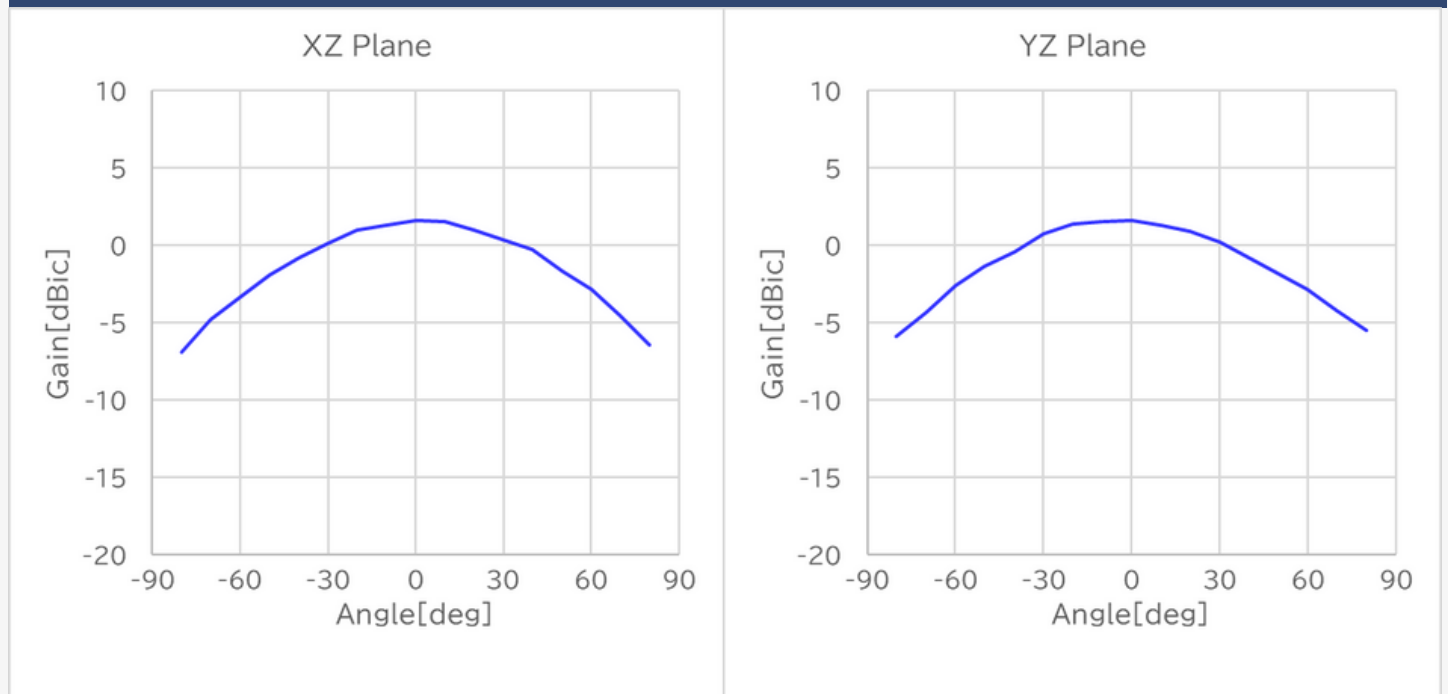


Radiation Pattern 1278.75MHz

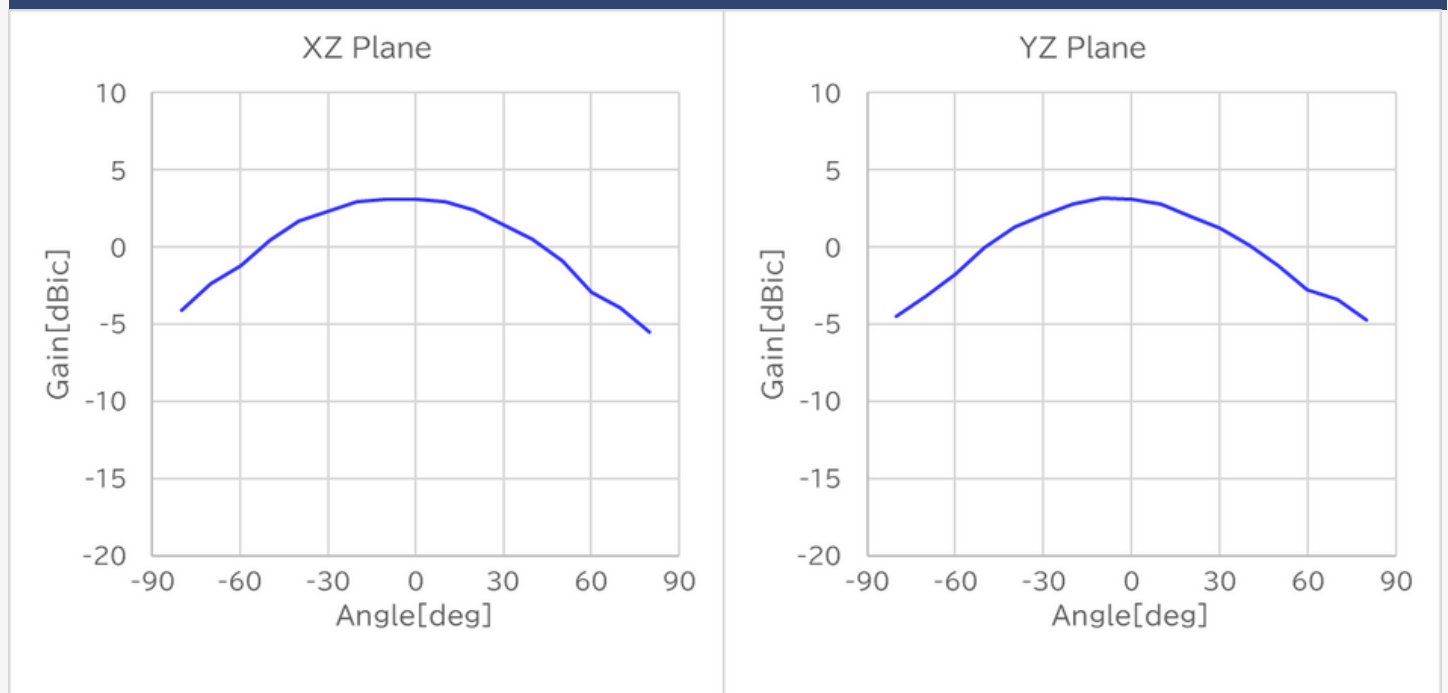


3. Radiation Patterns

Radiation Pattern 1539MHz

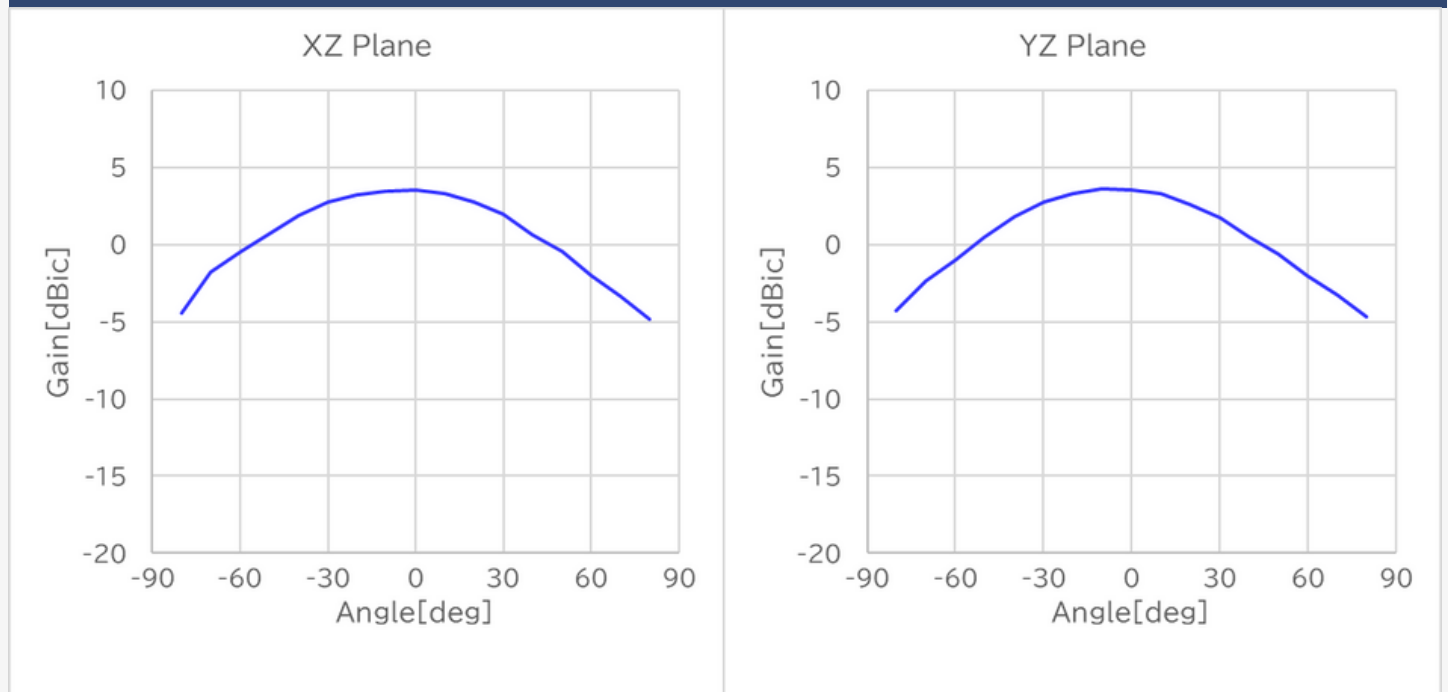


Radiation Pattern 1561.1MHz

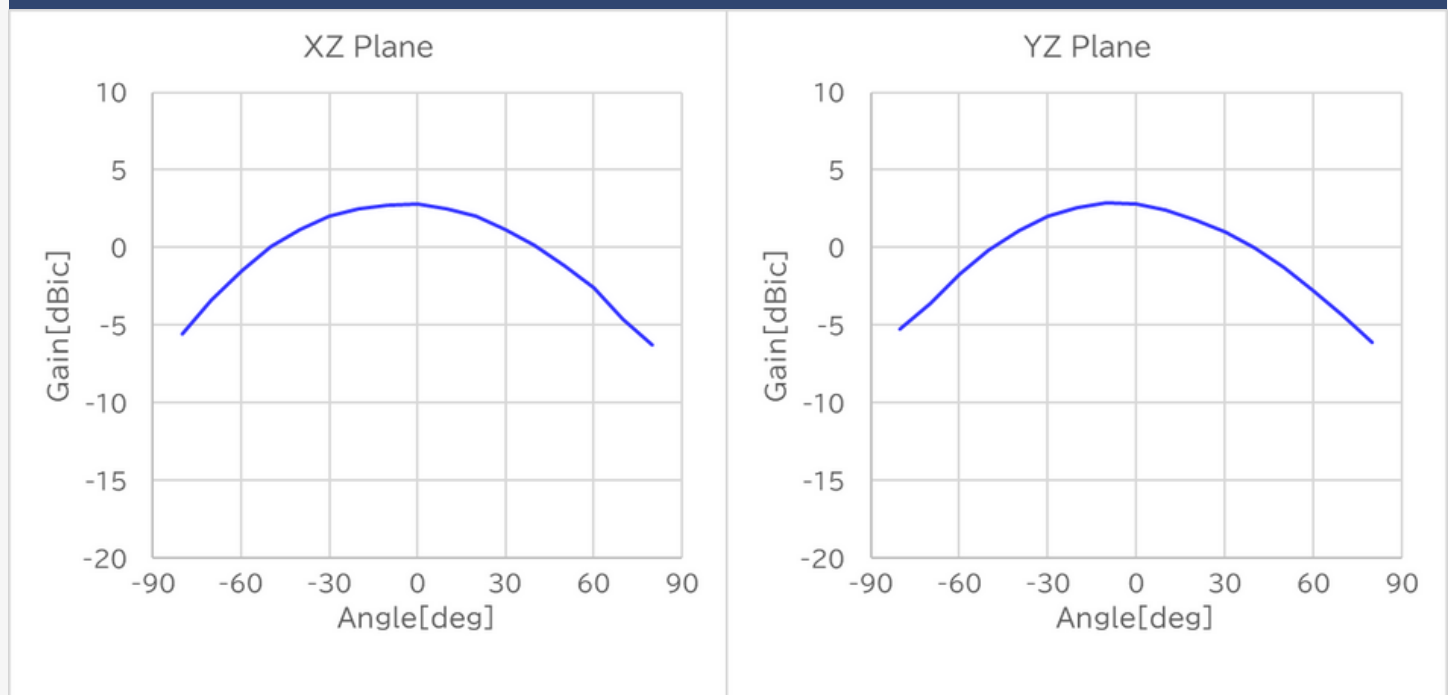


3. Radiation Patterns

Radiation Pattern 1575.42MHz

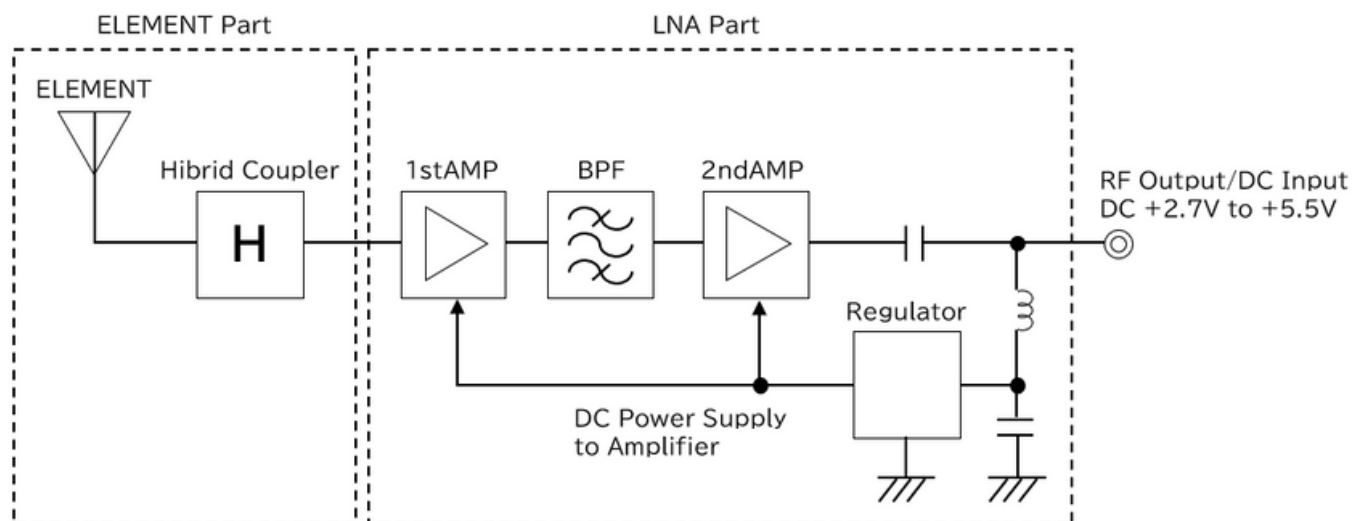


Radiation Pattern 1601.72MHz

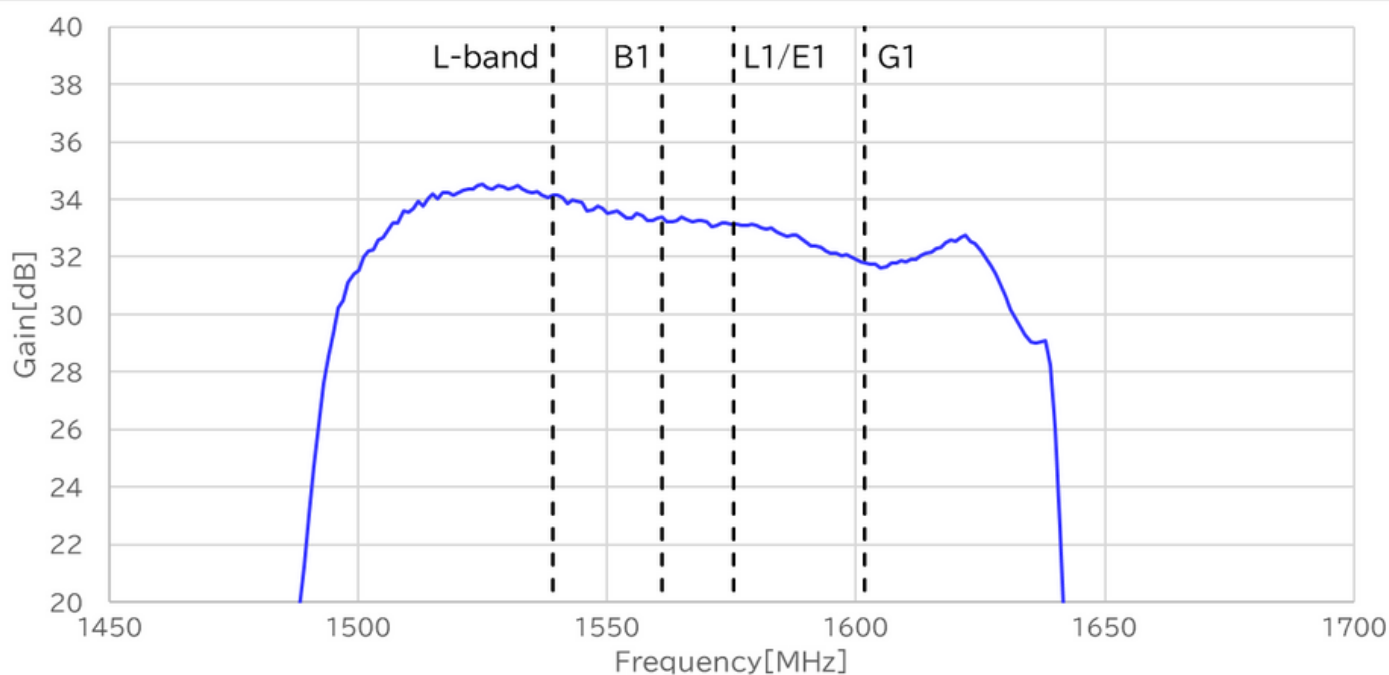


4. LNA Characteristics

Block Diagram(Active Antenna)

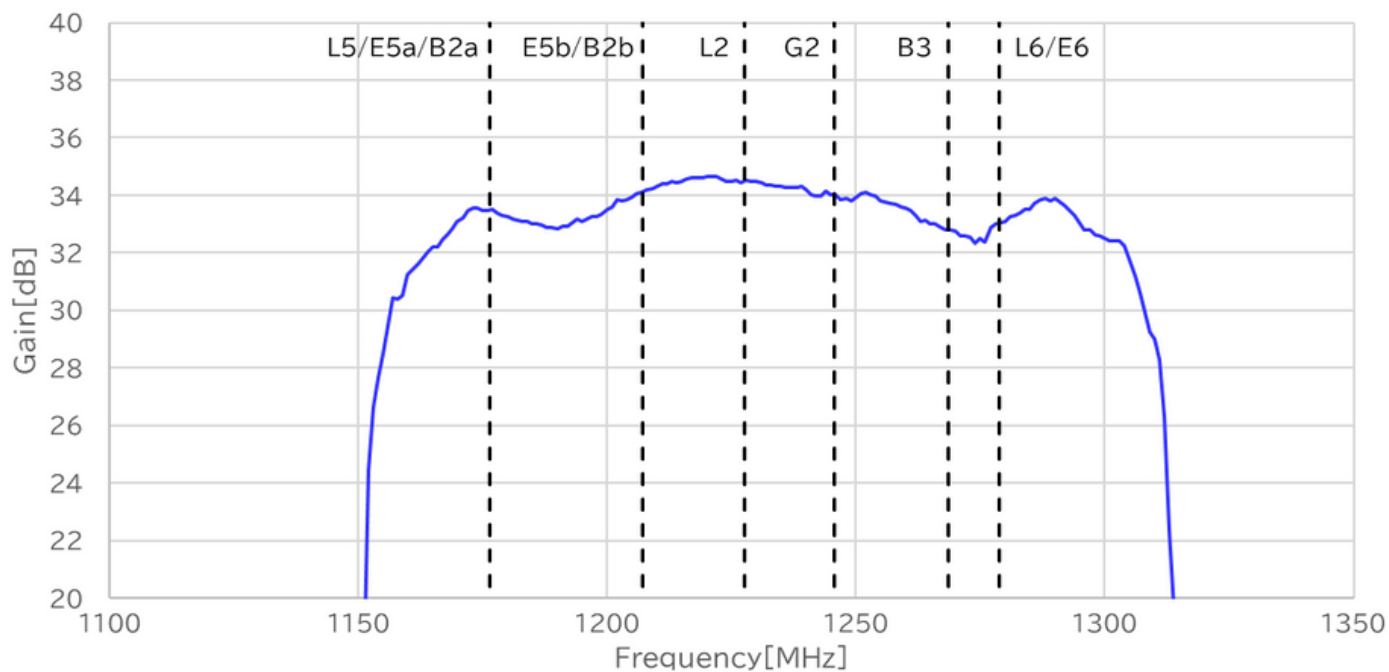


LNA Gain (High Band)

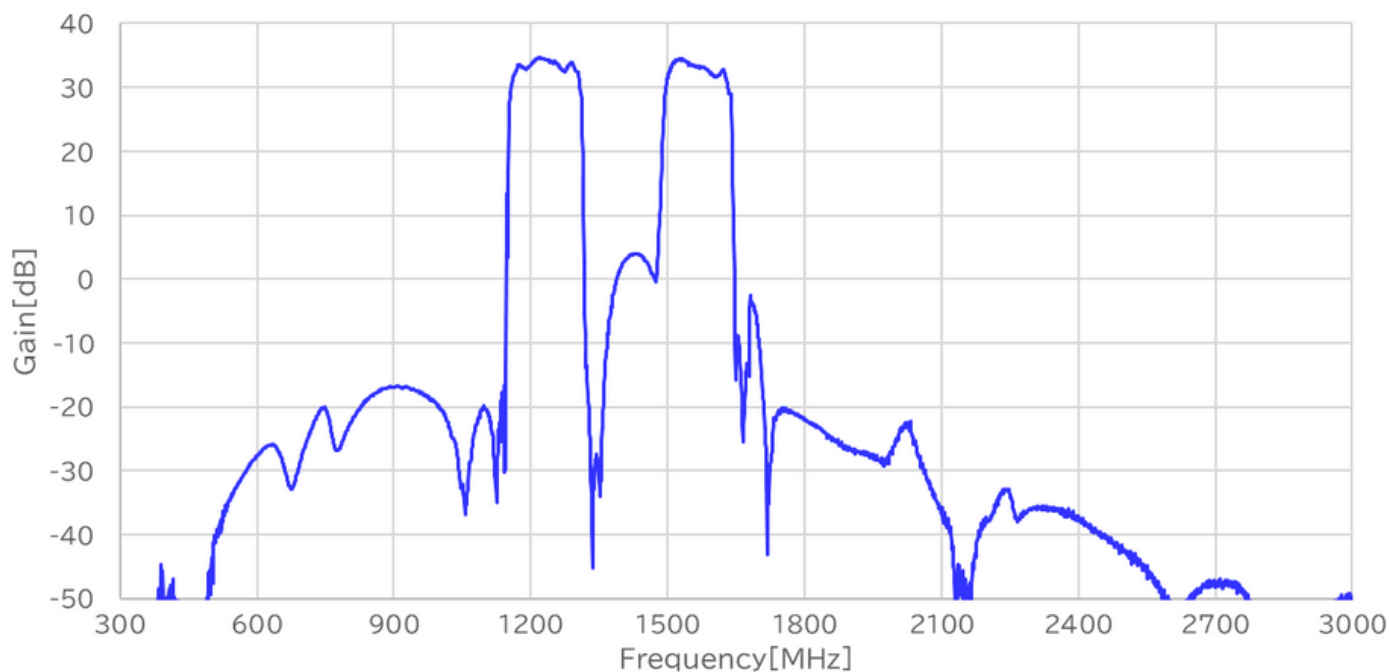


4. LNA Characteristics

LNA Gain (Low Band)

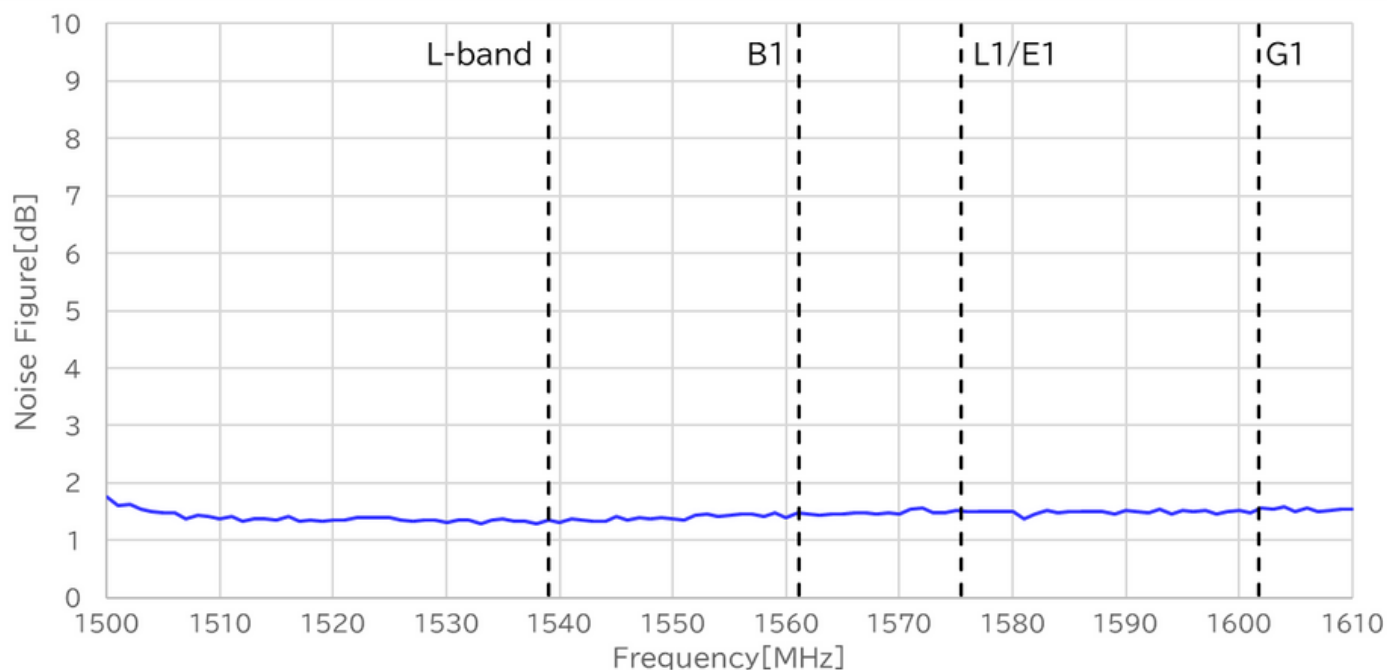


LNA Gain (Wide Band)

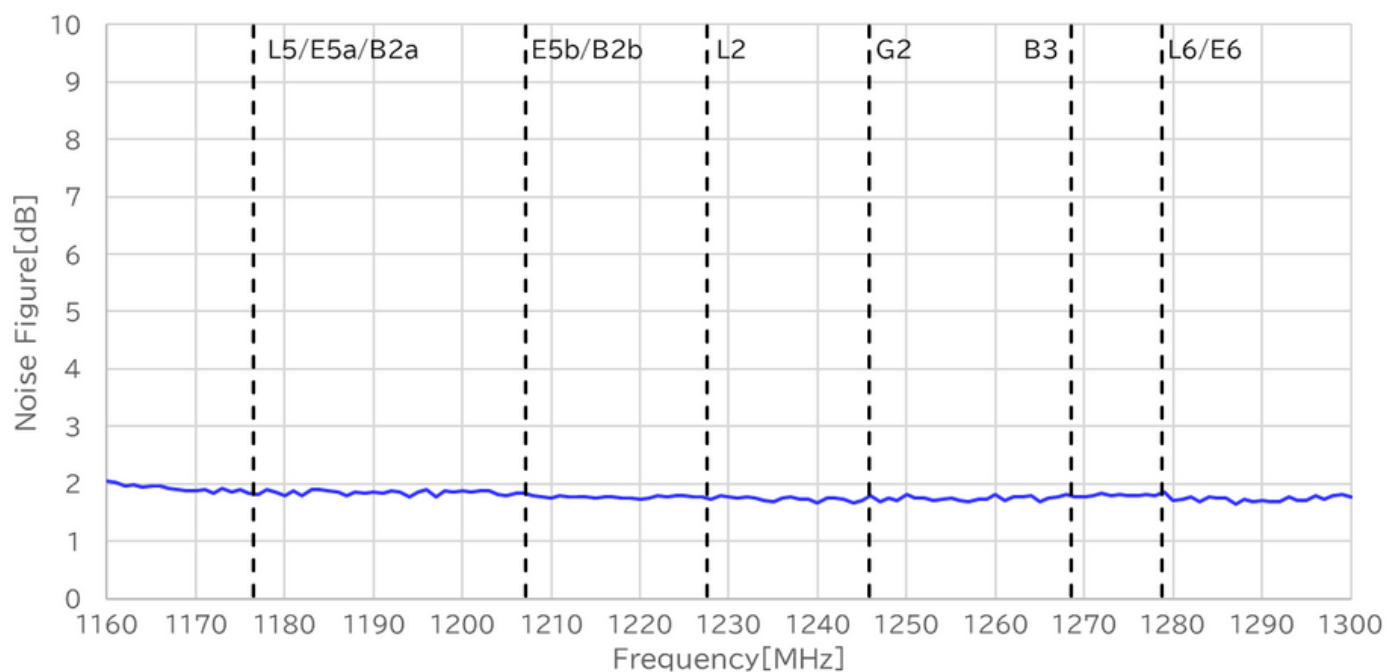


4. LNA Characteristics

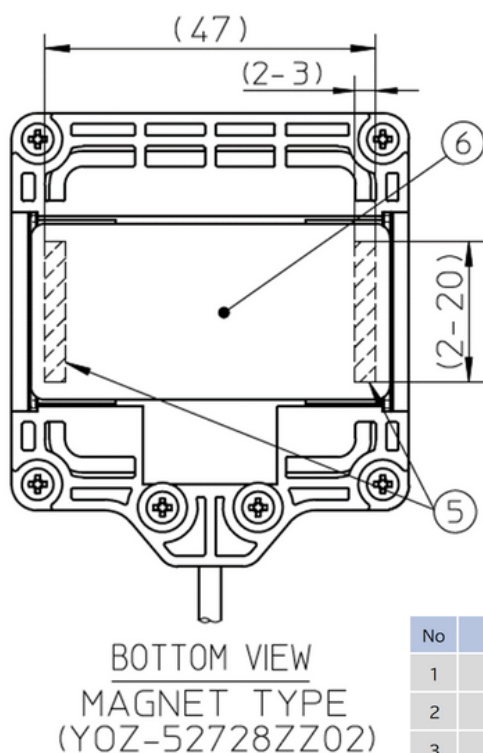
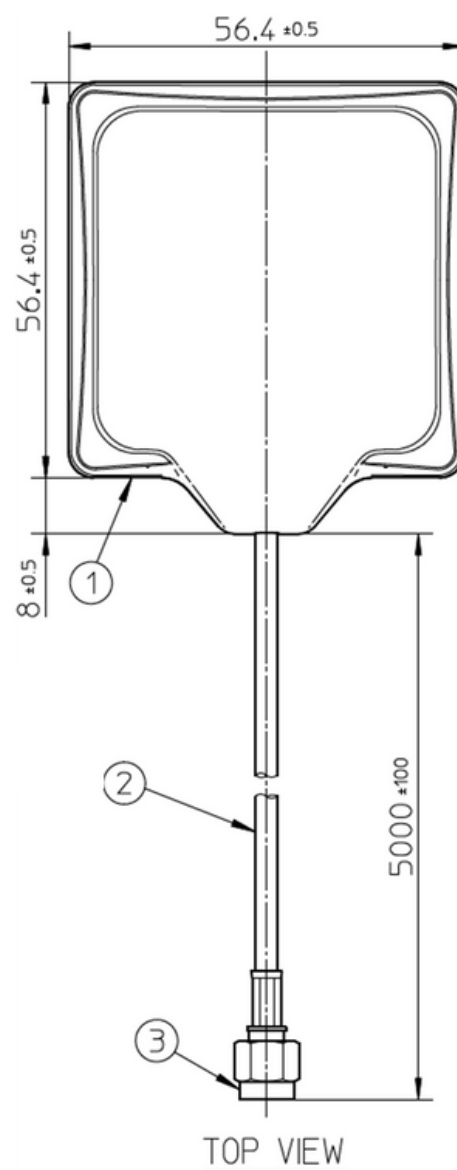
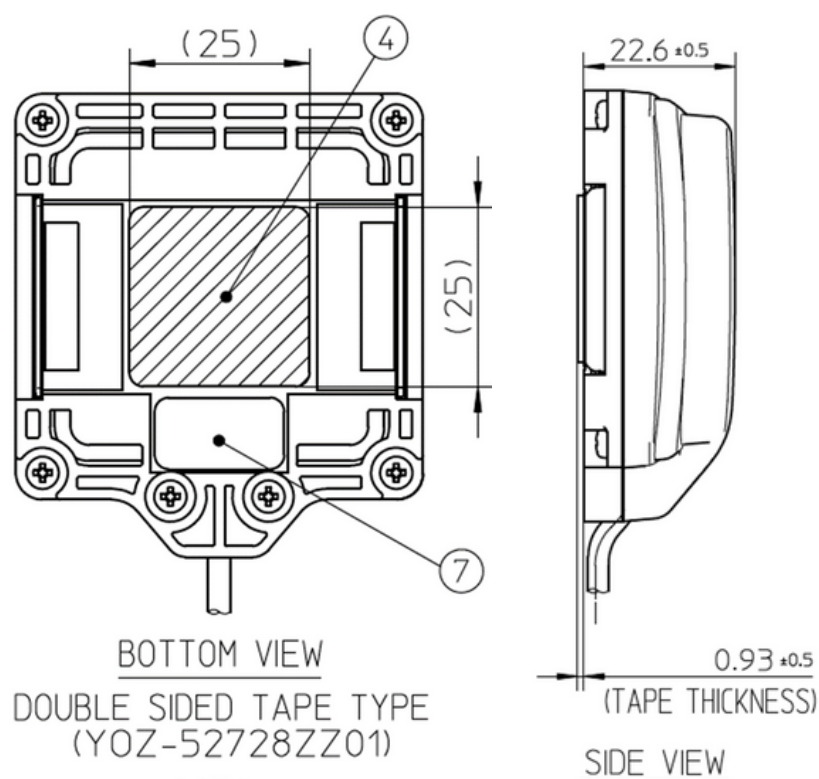
Noise Figure (High Band)



Noise Figure (Low Band)



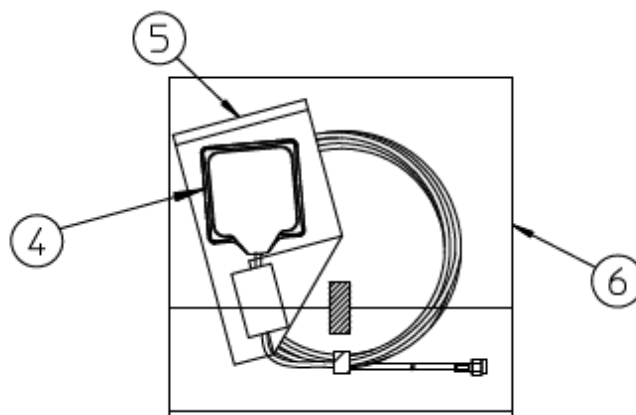
5. Mechanical Drawing



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

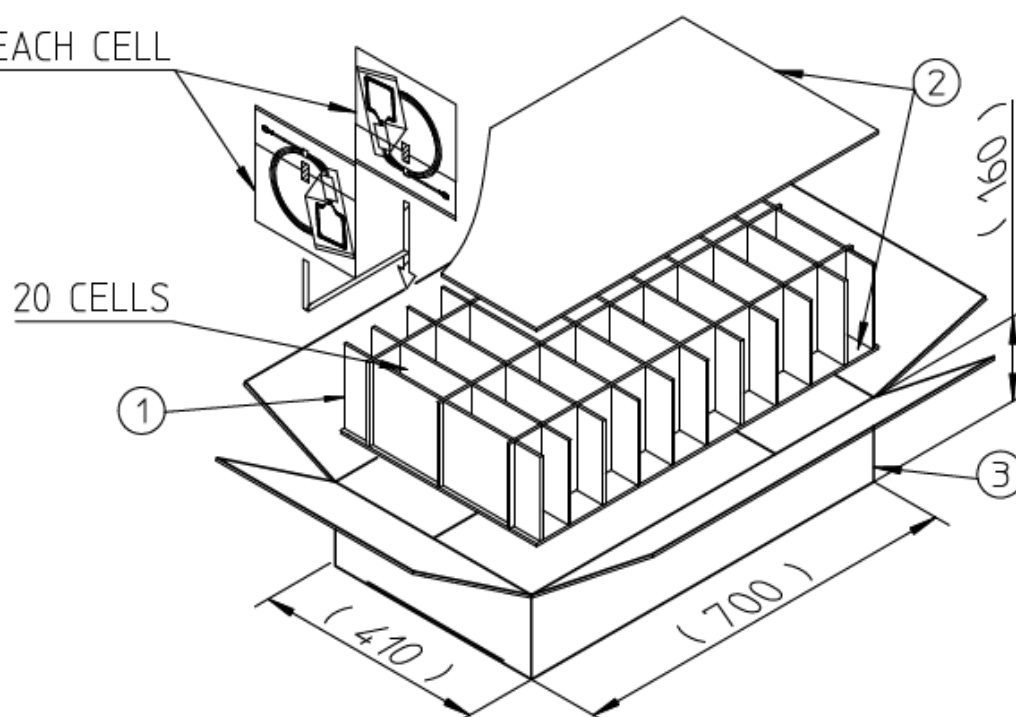
6. Packaging

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/L2/L5/L6/L band)	40	-	-	-
5	POLYETHYLENE BAG	40	PE (BLUE)	-	-
6	POLYETHYLENE BAG	40	PE (BLUE)	-	-