




# SPECIFICATION SHEET

## High Precision GNSS Antenna

<b>MESSERS.</b>	
<b>DESCRIPTION</b>	<b>GNSS L1/L2 ANTENNA</b>
<b>PART No.</b>	<b>FES-1BCA-H</b>

ACCEPTANCE		
PREPARED	CHECKED	APPROVED
/	/	/

SUPPLIER		
PREPARED	CHECKED	APPROVED
		
<b>09/04</b>	<b>09/04</b>	<b>09/04</b>

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**◆ REVISION HISTORY**

NO	DATE	REVISION	NOTE	AUTHORS
1	2024.09.04	00	First Draft	LEE.

**◆ APPLICATION**

- Unmanned Aerial Vehicle Navigation
  - Autonomous vehicles
  - Vehicle Tracking
  - Road/Aviation/Rail/Marine Applications
  - Agriculture/Cartographic/Military/Mapping/Marine/Surveying and Mapping Systems
- Telematics and Navigation
  - Satellite Realtime Navigation
  - Logistics and Shipping
  - Smart Parking , Vehicle Control

**◆ KEY FEATURES**

- High Precision GNSS Antenna
- GPS/GLONASS/BEIDOU/Galileo/QZSS/RTK/L1/L2
- 1227MHz and 1561-1610MHZ
- Active Gain 28dB
- Voltage Range 3.0V~5.0V
- Low Noise Figure



**◆ ELECTRICAL SPECIFICATION**

ITEM		SPECIFICATIONS
Antenna	Frequency	GPS L1/L2 GLONASS G1/G2 BEIDOU B1/B2b Galileo E1/E5b
	Polarization	RHCP Right-hand-circulator
	Axial Ratio(min)	≤3dB
	V.S.W.R	≤2.0
	Peak Gain	≥2.0dBi
	Impedance	50Ω
	Horizontal coverage angle	360°

**❖ LNA**

ITEM		SPECIFICATIONS
LNA	Gain	28 ± 2dB
	Noise Figure	≤2.0dB
	Supply Voltage	3.0-5.0V
	Current Consumption	50mA Typ.
	V.S.W.R	≤2.0

### ◆ ENVIRONMENTAL SPECIFICATION

ITEM	SPECIFICATIONS
Operating Temperature	-40°C~+85°C
Storage Temperature	-40°C~+85°C
Relative Humidity	UP to 95%
Waterproof Rating	IP66

RoHS Compliant

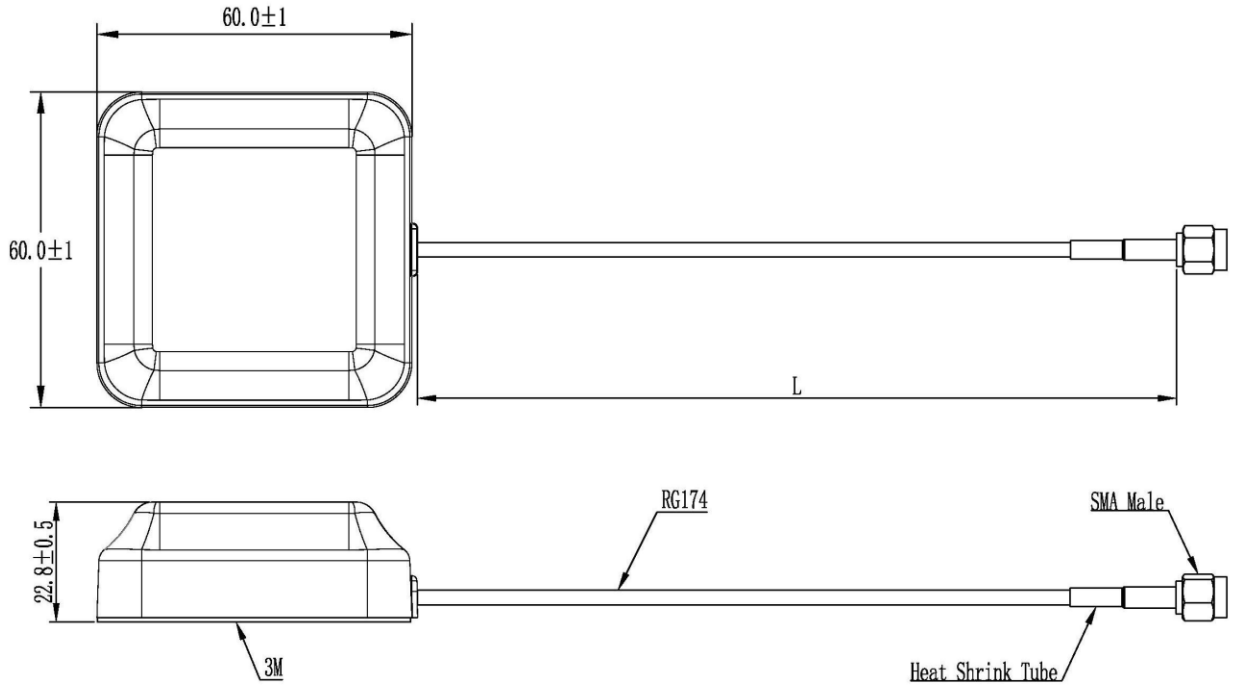
### ◆ MECHANICAL SPECIFICATION

ITEM	SPECIFICATIONS
Dimensions	60x60x22.8mm
Cable	RG174 or others
Connector	SMA(M) or others
Mounting Method	Magnet/Adhesive

### ❖ GNSS FREQUENCY BAND

GPS/GNSS FREQUENCY BAND					
GPS /QZSS	L1	L2	L5	L6	
	1575.42MHz	1227MHz	1176MHz	1278MHz	
GLONASS	G1	G2	G3		
	1602MHz	1248MHz	1207MHz		
GALILEO	E1	E5a	E5b	E6	
	1575.42MHz	1176MHz	1202MHz	1278MHz	
BEIDOU	B1	B2a	B2b	B3	
	1561MHz	1176MHz	1207MHz	1268MHz	
SBAS	L1	G1	L5	G2	G3
	1575.42MHz	1602MHz	1176MHz	1248MHz	1207MHz
L-BAND IRNSS	L-BAND	IRNSS			
	1542MHz	1176MHz			

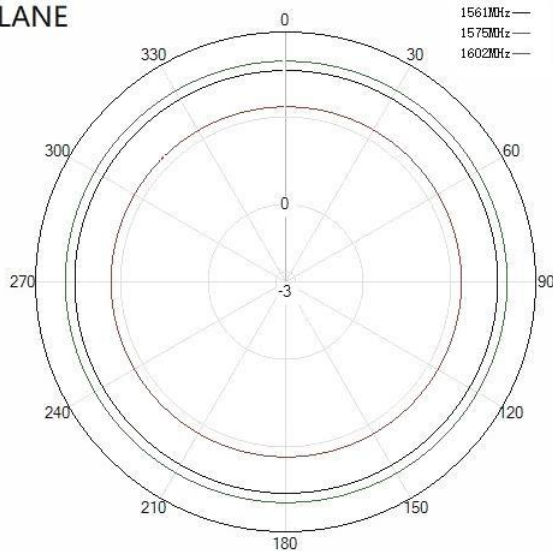
◆ ANTENNA DIMENSION



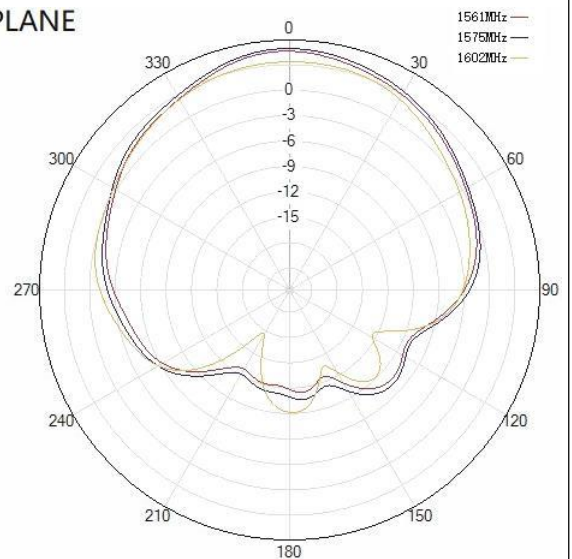
Unit: mm

◆ Radiation Pattern

XY-PLANE

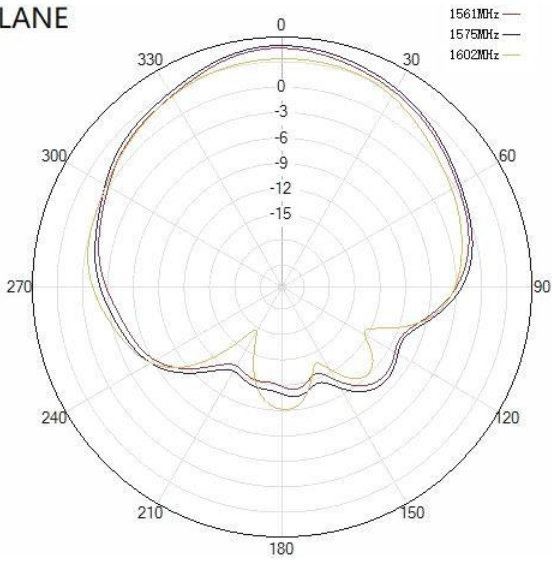


YZ-PLANE

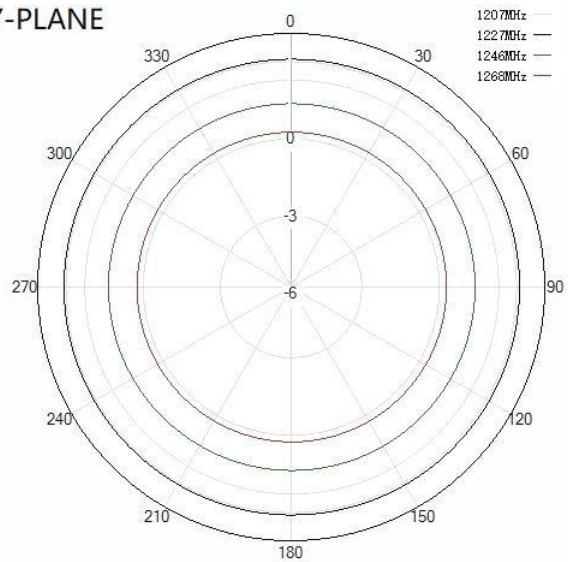


◆ Radiation Pattern

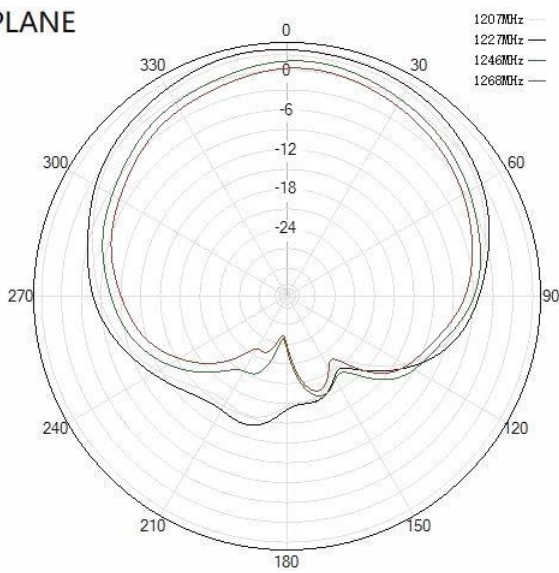
YZ-PLANE



XY-PLANE



XZ-PLANE



YZ-PLANE

