




# SPECIFICATION SHEET

## High Precision GNSS Internal Antenna

<b>MESSERS.</b>	
<b>DESCRIPTION</b>	<b>GNSS L1/L2/L5 ANTENNA</b>
<b>PART No.</b>	<b>FES-14BBHF-H</b>

ACCEPTANCE		
PREPARED	CHECKED	APPROVED
/	/	/

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

**◆ INDEX**

— INDEX	----- 2
— REVISION HISTORY	----- 2
— APPLICATION	----- 3
— KEY FEATURES	----- 3
— ELECTRICAL SPECIFICATION	----- 4
— ENVIRONMENTAL SPECIFICATION	----- 5
— MECHANICAL SPECIFICATION	----- 5
— ANTENNA DIMENSION	----- 6

**◆ REVISION HISTORY**

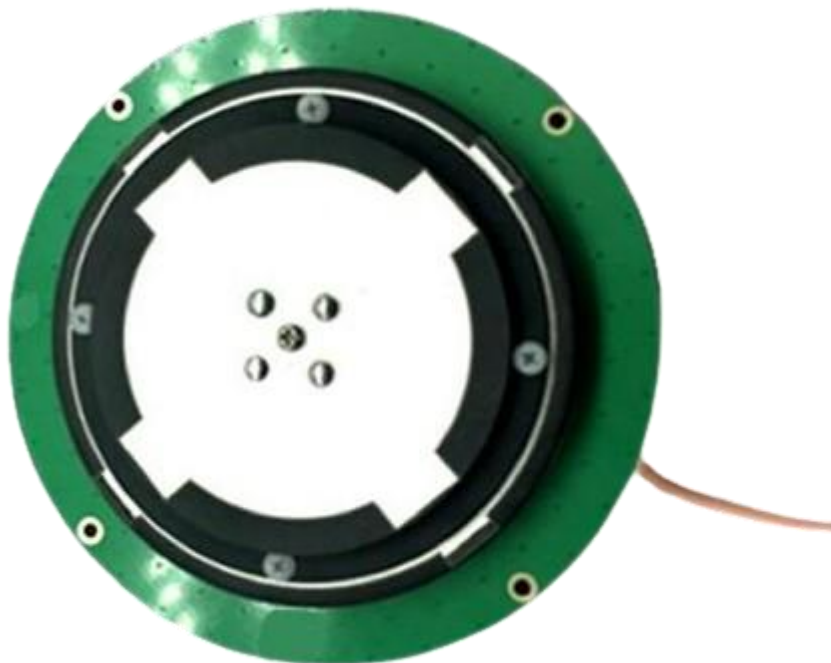
NO	DATE	REVISION	NOTE	AUTHORS
1	2024.09.04	00	First Draft	LEE.

**◆ APPLICATION**

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

**◆ KEY FEATURES**

- High Precision GNSS Internal Antenna
- GPS/GLONASS/BEIDOU/Galileo/QZSS/RTK/L1/L2/L5
- 1176/1227MHz and 1561-1610MHZ
- Active Gain 30dB or 40dB
- Voltage Range 3.0V~12.0V
- Low Noise Figure



**◆ ELECTRICAL SPECIFICATION**

ITEM		SPECIFICATIONS
Antenna	Frequency	GPS L1/L2/L5/L-BAND GLONASS G1/G2/G3 BEIDOU B1/B2a/B2b/B3 Galileo E1/E5a/E5b/E6
	Polarization	RHCP Right-hand-circulator
	Axial Ratio(min)	≤3dB
	V.S.W.R	≤2.0
	Peak Gain	≥5.5dBi
	Impedance	50Ω
	Horizontal coverage angle	360°

**❖ LNA**

ITEM		SPECIFICATIONS
LNA	Gain	30dB ± 2dB or 40dB ± 2dB
	Noise Figure	≤2.0dB
	Supply Voltage	3.0-12.0V
	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%

RoHS Compliant

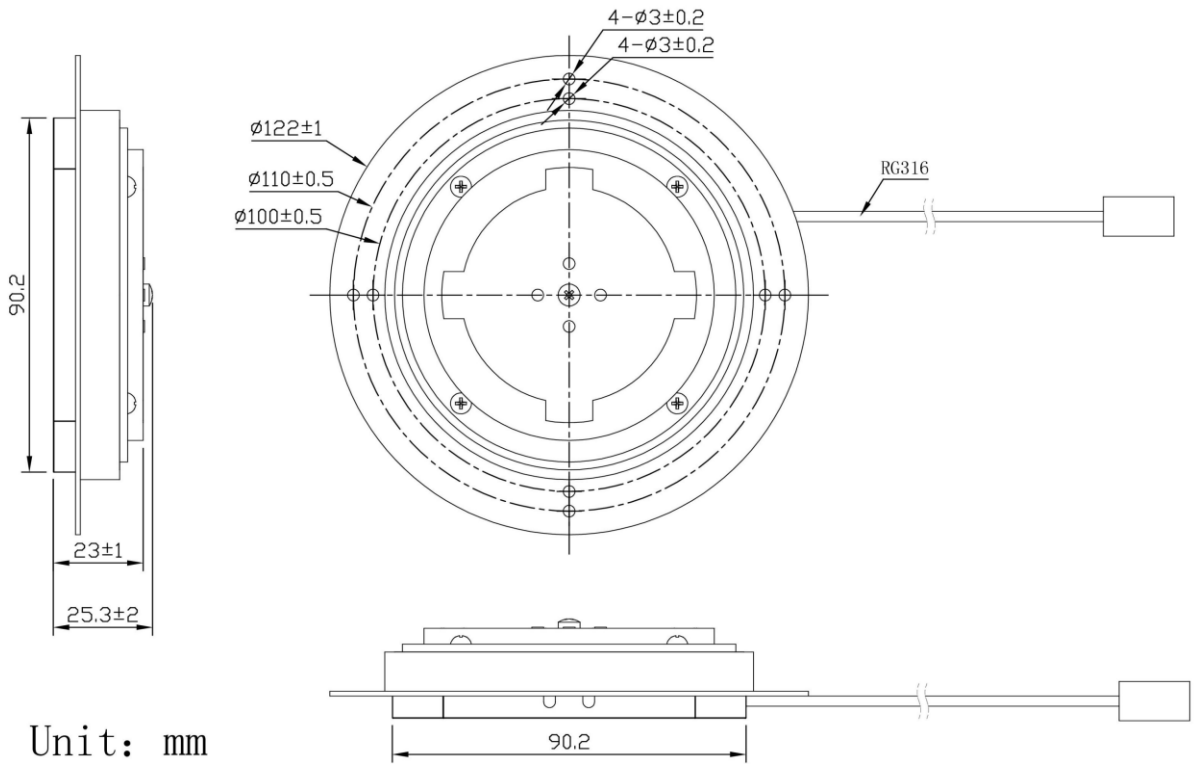
### ◆ MECHANICAL SPECIFICATION

ITEM	SPECIFICATIONS
Dimensions	Ø122x25.3mm
Cable and Connector	RG316/SMA(M) or others
Mounting Method	Screw or Embedded

### ❖ 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