




SPECIFICATION SHEET

High Precision GNSS Internal Antenna

MESSERS.	
DESCRIPTION	GNSS L1/L5 ANTENNA
PART No.	FES-14BCFS-H

ACCEPTANCE		
PREPARED	CHECKED	APPROVED
/	/	/

SUPPLIER		
PREPARED	CHECKED	APPROVED
		
09/04	09/04	09/04

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◆ REVISION HISTORY

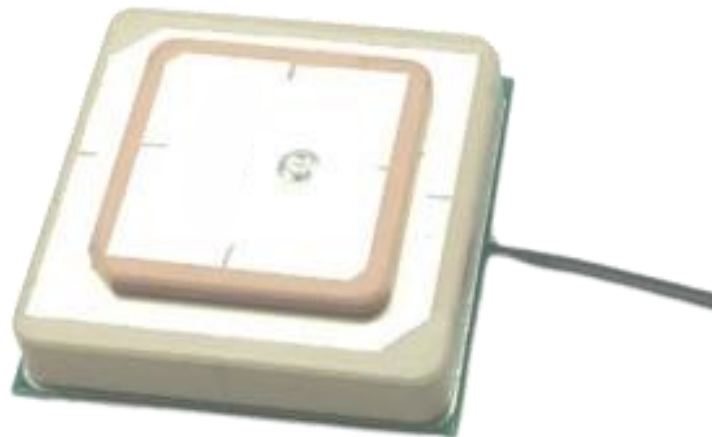
NO	DATE	REVISION	NOTE	AUTHORS
1	2024.09.04	00	First Draft	LEE.

◆ 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/L5
- 1176MHz and 1561-1610MHZ
- Active Gain 28dB
- Voltage Range 3.0V~5.0V
- Low Noise Figure



◆ ELECTRICAL SPECIFICATION

ITEM		SPECIFICATIONS
Antenna	Frequency	GPS L1/L5 GLONASS G1 BEIDOU B1/B2a Galileo E1/E5a
	Polarization	RHCP Right-hand-circulator
	Axial Ratio(min)	≤3dB
	V.S.W.R	≤2.0
	Peak Gain	3.0dBi(Zenith)
	Impedance	50Ω
	Horizontal coverage angle	360°

❖ GNSS LNA

ITEM		SPECIFICATIONS
LNA	Gain	28 ± 2dB
	Noise Figure	≤1.5dB
	Supply Voltage	3.0-5.0V
	Current Consumption	45mA 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	65°C, 95%RH for 96 hours

RoHS Compliant

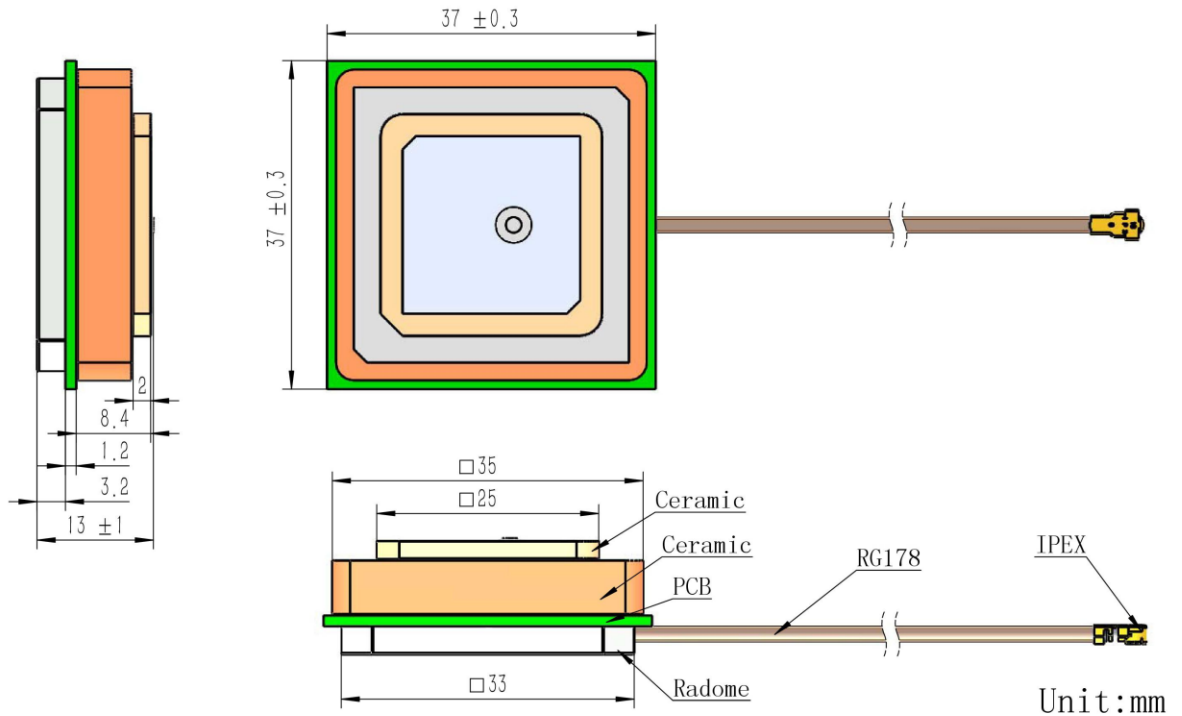
◆ MECHANICAL SPECIFICATION

ITEM	SPECIFICATIONS
Dimensions	37x37x13mm
Cable and Connector	RG178/IPEX or others
Mounting Method	Embedded

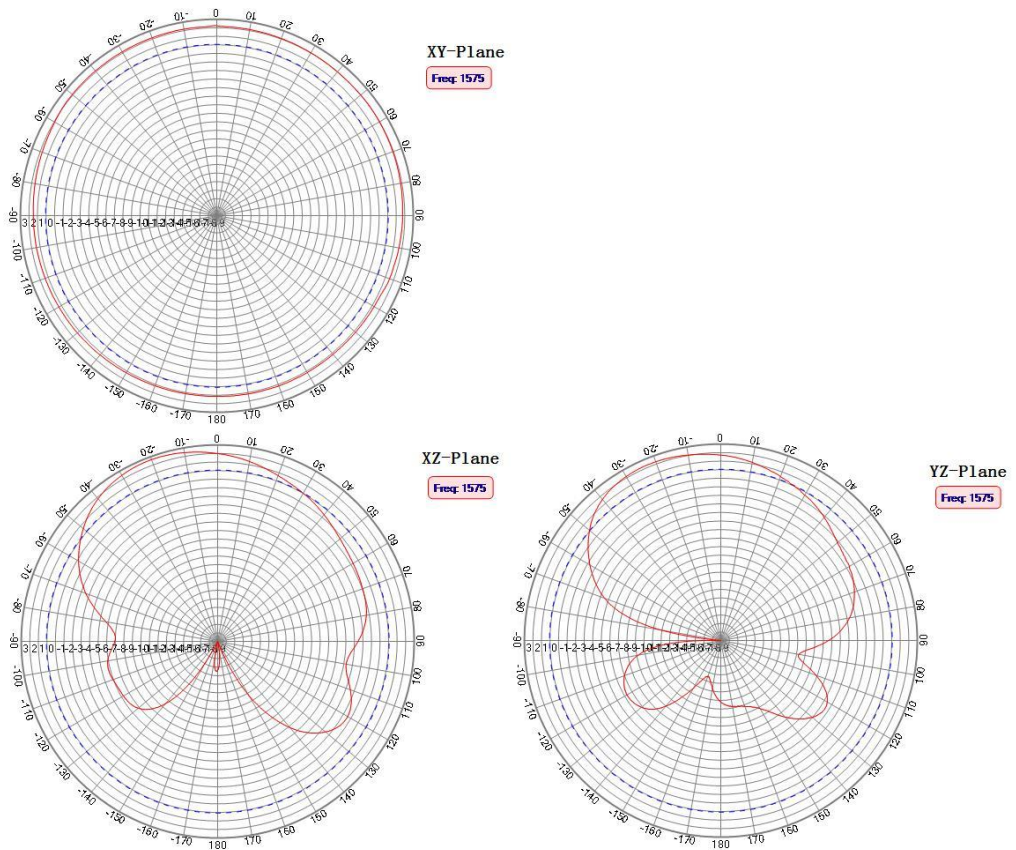
❖ GNSS FREQUENCY BAND

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		

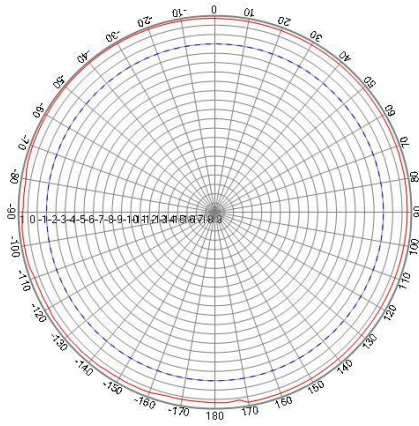
◆ ANTENNA DIMENSION



◆ Radiation Pattern

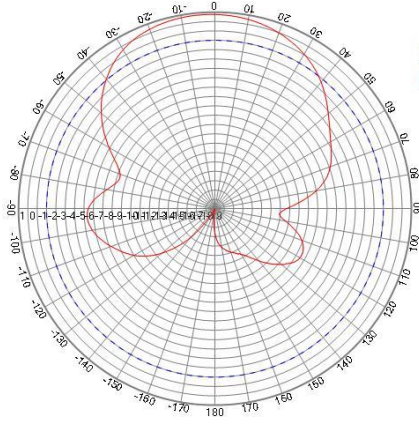


◆ Radiation Pattern



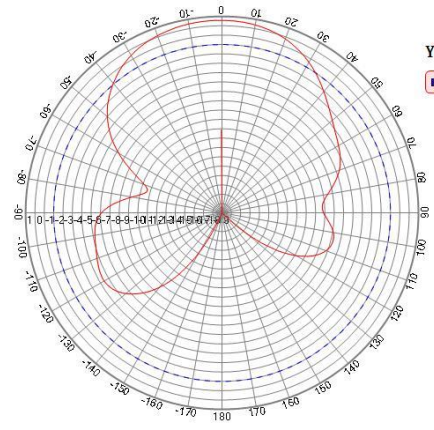
XY-Plane

Freq: 1176



XZ-Plane

Freq: 1176



YZ-Plane

Freq: 1176