




SPECIFICATION SHEET

GNSS Active Antenna

MESSERS.	
DESCRIPTION	GPS & GNSS EXTERNAL ANTENNA
PART No.	FES-1BCAQ

ACCEPTANCE		
PREPARED	CHECKED	APPROVED
/	/	/

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

◆ 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

- Location information
- Unmanned Aerial Vehicle Navigation
- Telematics and Navigation
- Autonomous vehicles
- Satellite Realtime Navigation
- Vehicle Tracking
- Logistics and Shipping
- Agriculture machine

◆ KEY FEATURES

- GPS/GLONASS/BEIDOU/GALILEO/QZSS/L1
- GNSS L1 BAND External Antenna
- Active Gain 35dB
- Voltage Range 3.0V~5.0V
- Low Noise Figure



◆ ELECTRICAL SPECIFICATION

ITEM		SPECIFICATIONS
Antenna	Frequency	GPS L1 GLONASS BEIDOU B1 Galileo E1 QZSS
	Polarization	RHCP Right-hand-circulator
	Axial Ratio(min)	≤3dB
	V.S.W.R	≤1.5
	Peak Gain	≥5.0dBi
	Impedance	50Ω
	Horizontal coverage angle	360°

❖ LNA

ITEM		SPECIFICATIONS
LNA	Gain	35 ± 2dB
	Noise Figure	≤1.5dB
	Supply Voltage	3.0-5.0V
	Current Consumption	35mA 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

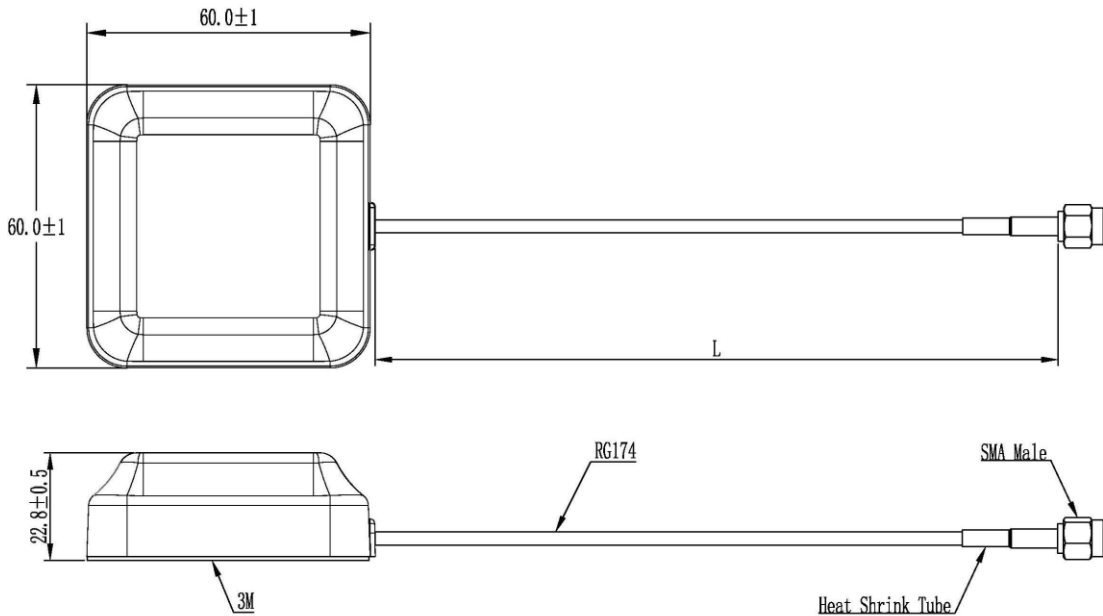
◆ MECHANICAL SPECIFICATION

ITEM	SPECIFICATIONS
Dimensions	60x60x22.8mm
Radome Material	ABS
Connector & Cable	FAKRA/SMA(M) Others / RG174 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

