

SKA07-JZ01A

High-Precision RTK

Antenna

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1 Overview

The SKA07A-JZ01A is a quad-system, nine-frequency helical antenna featuring a compact size, high positioning accuracy, and lightweight design. It is compatible with various receivers and is widely used in UAVs, handheld terminal devices, and compact RTK equipment. Depending on application requirements, it can also be used in military fields.

2 Product Appearance

Dimensions	Φ27.5×58mm	Mounting Method	Threaded fastening
Weight	<28 g	Connector Type	SMA
Shell Color	Black	Cable	/

3 Operating Conditions

Temperature: -40℃～+85℃

Humidity: 95 % ～100 %

4 Storage Conditions

Temperature: -40℃～+85℃

Humidity: 95 % ～100 %

5 GPS/BD Antenna Specifications

NO.	Item	Specification	Post-Environmental Tolerance*
1	Receiving Frequency Range (MHz)	1、1168-1286 (MHz) 2、1545-1610 (MHz)	±2.5 (MHz)
2	Center Frequency (with 30 mm × 30 mm ground plane)	1568 (MHz)	±25 (MHz)
3	Bandwidth (MHz) (Return Loss ≤ - 10 dB)	≥20 (MHz)	±25 (MHz)
4	V.S.W.R (at Center Frequency)	≤1.8	±0.5
5	Gain (Zenith, dBi typ, with 70 mm square GND plane)	3.0	±0.5
6	Axial Ratio (with 70 mm square GND plane)	3.0dB	±0.2
7	Polarization	Right-Hand Circular Polarization	----

8	Characteristic Impedance (Ω)	50	----
9	Frequency Temperature Coefficient (ppm/ $^{\circ}\text{C}$)	0 ± 10	----

* Post-Environmental Tolerance refers to allowable deviation after environmental tests.

6 GPS/BD Amplifier Specifications

NO.	Item	Specification
1	Frequency Range	1545-1610 (MHz)
2	Antenna Gain	34dB $\pm$ 2dB
3	Output V.S.W.R	<2.0
4	Noise Figure	$\leq 1.8\text{dB}$
5	Supply Voltage (DC)	3-12V
6	Operating Current (DC)	$\leq 45\text{mA}$

7 Environmental Tests

1. High Temperature Test: Placed in a dry oven at 80°C for 48 hours. No deformation observed. After drying and placing at room temperature for 24 hours, no oxidation was found.

2. Low Temperature Test: Placed in a freezer at -40°C for 48 hours. No deformation observed, no oxidation or rust after returning to room temperature.

NO.	Performance (Normal)	Performance (High Temp.)	Performance (Low Temp.)
1	Amplifier Gain: 34dB $\pm$ 2	± 2	± 2
2	V.S.W.R: <2.0	± 0.1	± 0.3
3	Noise Figure: $\leq 1.8\text{dB}$	± 0.1	± 0.1

3. Rainfall Test: Place the product under a faucet for 4 hours, allowing water to flow directly onto the casing. After four hours, if no water ingredients are observed at the bottom of the product, it indicates that the product has excellent waterproof performance.

4. Salt Spray Test:

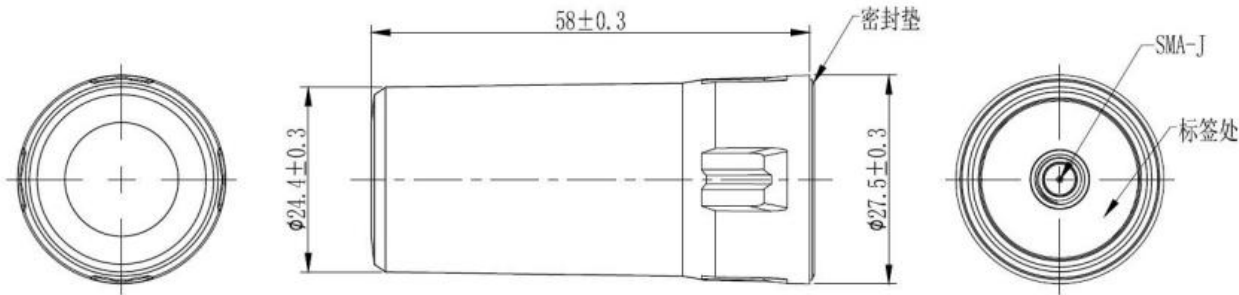
Test quantity	Suspension method	Test parameters	Result	Conclusion
2	30° hanging, cut edge covered with 3M tape	Dust-free environment, atmospheric pressure 80 Pa Solution pH: 6.9 Salt solution concentration: 42 g	No oxidation or corrosion observed.	The product demonstrates excellent anti-oxidation and

		sea salt per liter of water at 35℃ Density: 1.0366 After testing, rinse with 32℃ flowing pure water and blow dry.		corrosion resistance.
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8 Product Photos



9 Dimensional Drawing



Tolerance:

- $X = \pm 2 \text{ mm}$
- $X.X = \pm 0.3 \text{ mm}$
- $X.XX = \pm 0.05 \text{ mm}$

Units: mm

10 Contact Information

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