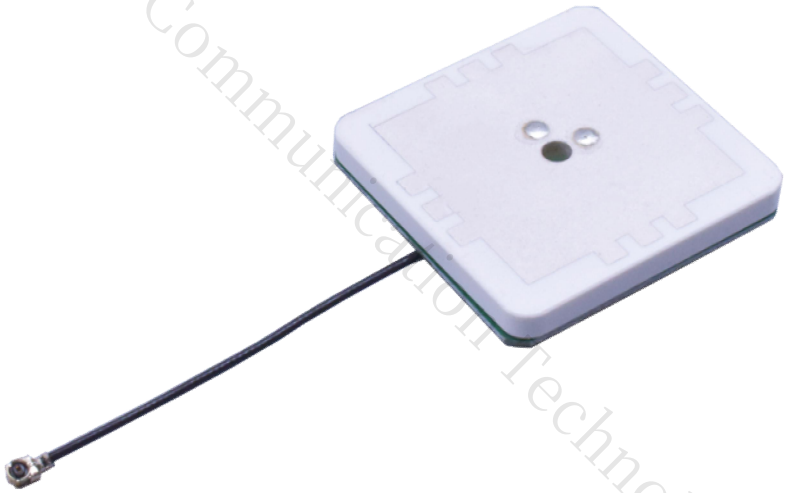
AK152

Shenzhen Dalang Communication Technology Co., Ltd



Dalang Communication Technology Co., Ltd Product Specification

Shenzhen Dalang Communication Technology Co., Ltd

Product Name:	GPS ANTENNA
Product Model:	AK152
Version Number:	V 1.0
Revision Date:	2024.07.04

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1 Product Application Scenarios

Our company's AK152 single-layer ceramic (40 * 40 * 4) active antenna is equipped with a built-in low-noise amplifier, which can significantly improve signal gain, enhance reception sensitivity, and easily capture weak signals. At the same time, it can effectively compensate for losses during signal transmission, reduce signal attenuation, and operate stably in complex electromagnetic environments. This antenna is compact in size and easy to integrate into various devices that require strict space, helping devices achieve miniaturization and lightweight. And it has good frequency selectivity, can filter out interference signals, multi band support function can also meet the needs of different communication standards, and has a wide range of application scenarios. Refer to Figure 1 for details.

Figure 1 Product Application Scenarios

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2 Features

In this chapter, we will delve into and comprehensively elaborate on the functionalities and operating principles of the AK152, detailing how it plays a pivotal role in various applications as follows:

1. **High gain and strong reception capability:** Equipped with a built-in low-noise amplifier (LNA), it can amplify weak signals received, increase antenna gain, make the antenna more sensitive to weak signal reception, and effectively enhance signal transmission distance and reception sensitivity.
2. **Good anti-interference and stability:** LNA has a low noise figure, which can suppress background noise, improve signal-to-noise ratio, and make the antenna more stable and reliable in complex electromagnetic environments. It effectively resists external electromagnetic interference, radio frequency interference, etc., ensuring the accuracy and integrity of the signal.
3. **Flexible design:** The shape and size can be customized according to different application requirements.
4. **High miniaturization and integration:** The size of 40 * 40 * 4 is relatively small, lightweight, and easy to integrate into various electronic devices that require high space, such as smartphones, smartwatches, car devices, IoT terminals, etc.

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3 Structural Characteristic

In this section, we will conduct an in-depth analysis of the product's design details, presenting its aesthetic features and precise interface specifications through detailed structural diagrams. This perspective aims to provide a comprehensive framework, thereby enhancing the understanding and perception of the product's architecture. Refer to Figure 2,Figure 3, Figure 4.

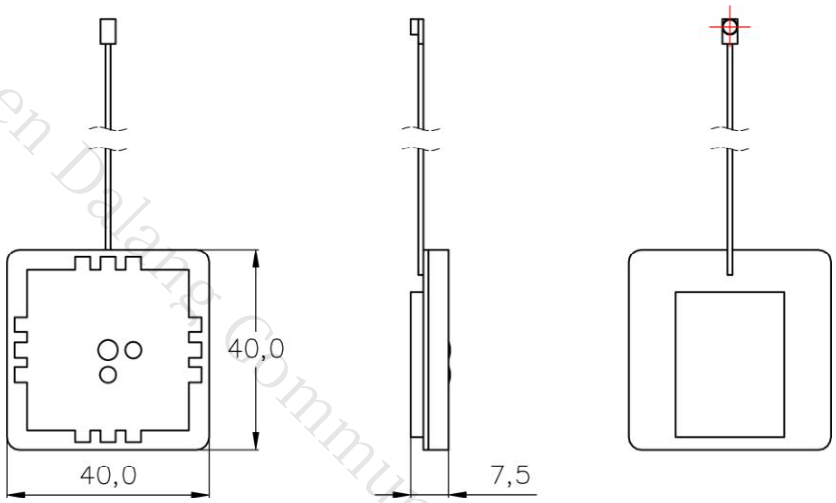

Figure 2 Product structure diagram

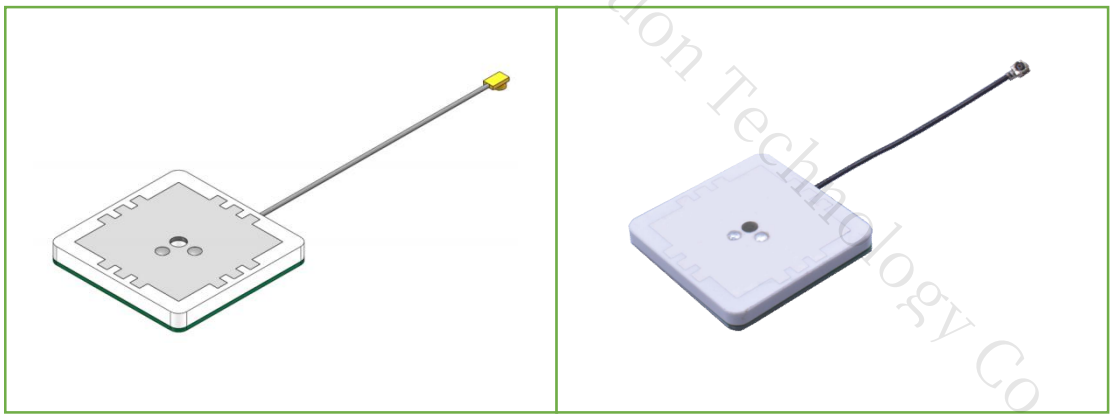

Figure 3 Product correlation chart

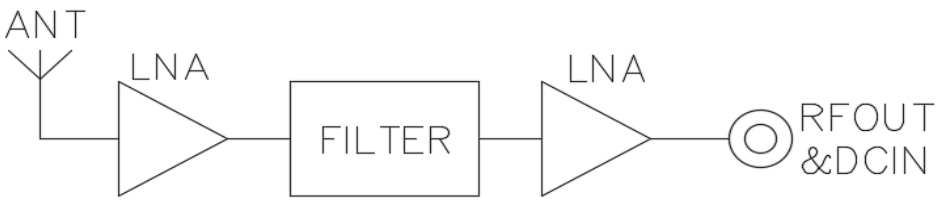

Figure 4 Process flow diagram

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4 Specifications

In this section, we will provide a detailed list and explanation of the product's chip features, sensitivity, accuracy, operating principles, and other technical details, as detailed in Table 1.

Table 1 Product Specifications

Specification parameters			
Electrical characteristics	1	antenna model	GNSS antenna
	2	Antenna size	40*40*4mm
	3	Usage frequency	GPS：L1:1575.42±1.023MHZ GLONASS：L1:1602+0.5625MHz BDS: B1:1561±1.023MHz GALILEO：E1:1575
	4	Gain	32±2dB
	5	V.S.W.R	≤2
	6	impedance	20Ω
	7	Polarization mode	RHCP
	8	voltage	DC 3~5V
	9	electric current	15~25mA
Mbom	1	Overall size (mm)	40*40*7.5mm
	2	Product weight	15g
	3	joint	IPEX(Customizable)
	4	wire rod	RG1.13 (Customizable)
	5	Line length	65mm(Customizable)）
	6	PCB	FR4
Environmental	1	work environment	-40℃~+85℃，10%~95%RH
	2	Environment	-55℃+100℃，10%95%RH
	3	humidity	10%~95%

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5 Product Photos

In this chapter, we will showcase real-life images of the product, as shown in Figure 5. These images provide a detailed view of our product from various angles and perspectives. We believe that through authentic representation, we can better convey the value and concept of the product, thereby enhancing your trust and satisfaction.

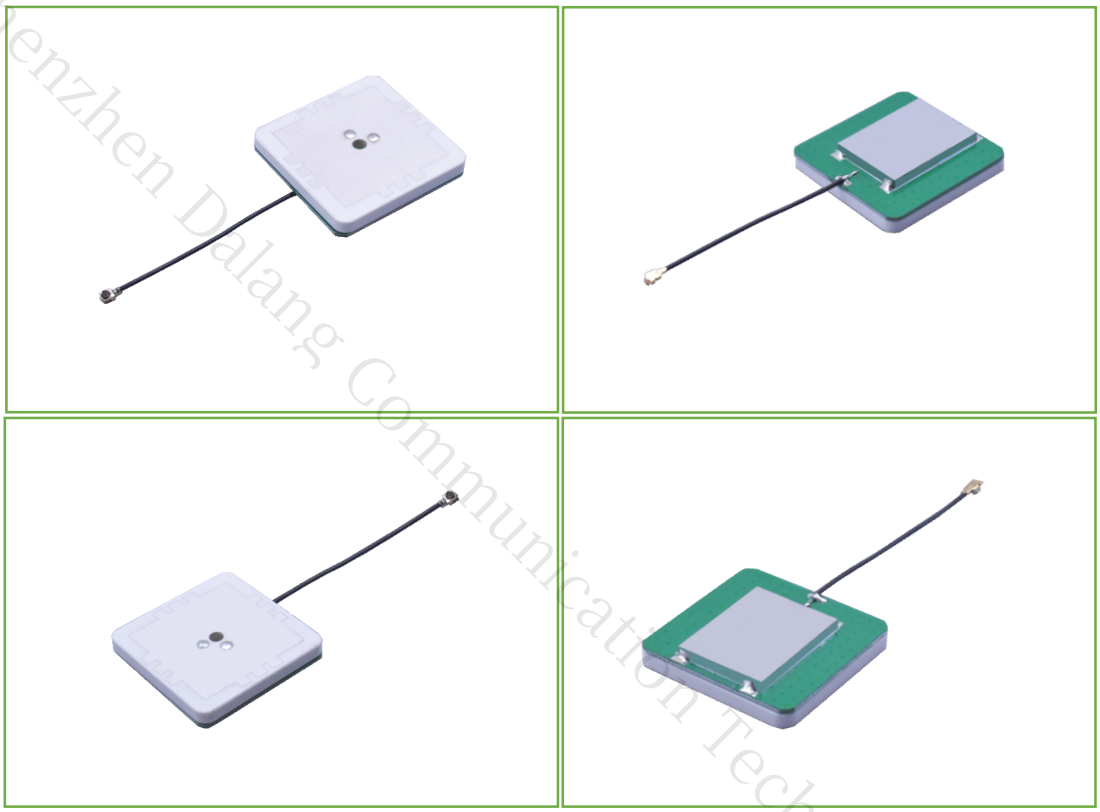

Figure 5 Product Images

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