

Dalang

AK215





Dalang Communication Technology Co., Ltd Product Specification

Product Name: GPS ANTENNA

Product Model: AK215

Version Number: V 1.0

Revision Date: 2025.04.30

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1 Product Application Scenarios

Our company's 4G+4G ordinary cabinet antenna adopts a dual 4G frequency band design, which can simultaneously cover two 4G network signals, significantly improving the stability and efficiency of data transmission. The antenna is integrated into a standard cabinet, with a compact structure, easy installation, and effective space saving; Its high gain performance combined with optimized radiation mode ensures strong signal penetration and wide area coverage, which can be applied to automotive electronics, vehicle positioning, navigation, anti-theft, area measurement, monitoring devices and other equipment; For devices in emerging electronic products and consumer electronics that require enhanced LTE signals, such as mobile phones, tablets, and watches, please refer to Figure 1.



Figure 1 Product Application Scenarios

2 Features

In this chapter, we will delve into and comprehensively elaborate on the functionalities and operating principles of the AK215, detailing how it plays a pivotal role in various applications as follows:

1. **Efficient dual band transmission:** Supports simultaneous operation of dual 4G frequency bands, significantly improving data transmission capacity and speed, effectively avoiding signal congestion, and meeting the concurrent usage needs of multiple users.
2. **Stable coverage performance:** Cabinet style design optimizes antenna layout to ensure wide and uniform signal coverage, providing stable signals even in complex environments and reducing signal blind spots.
3. **High gain signal amplification:** Equipped with a built-in high gain antenna unit, it enhances signal strength and penetration capability, enabling stable signal transmission even in buildings with multiple wall barriers.
4. **Compact and durable structure:** Adopting a compact cabinet design, it saves installation space and has good dust, moisture, and high temperature resistance performance, which can adapt to various harsh indoor and outdoor environments and reduce maintenance costs.

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.

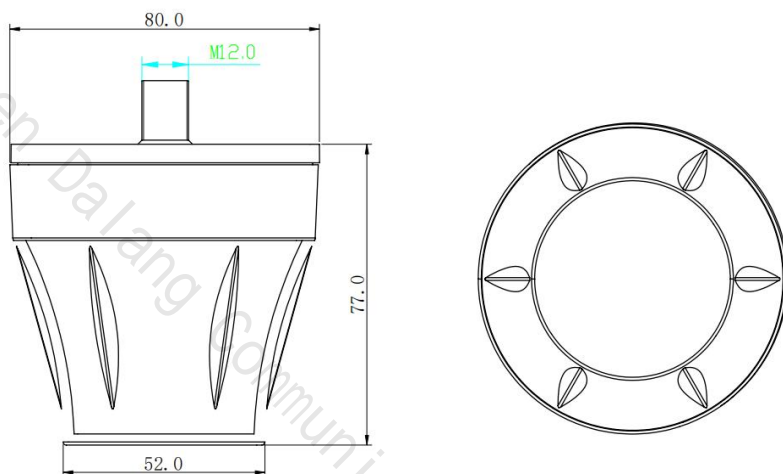


Figure 2 Product structure diagram

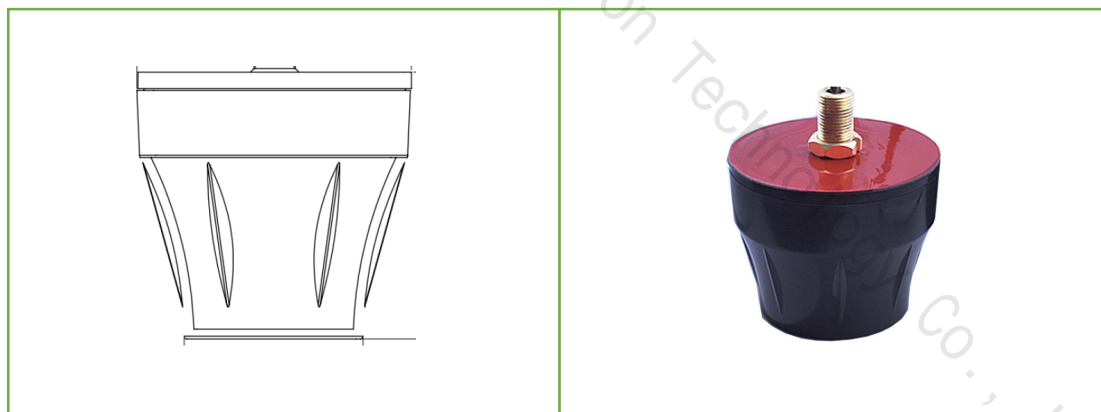


Figure 3 Product correlation chart



Figure 4 Process flow diagram

4 Specifications

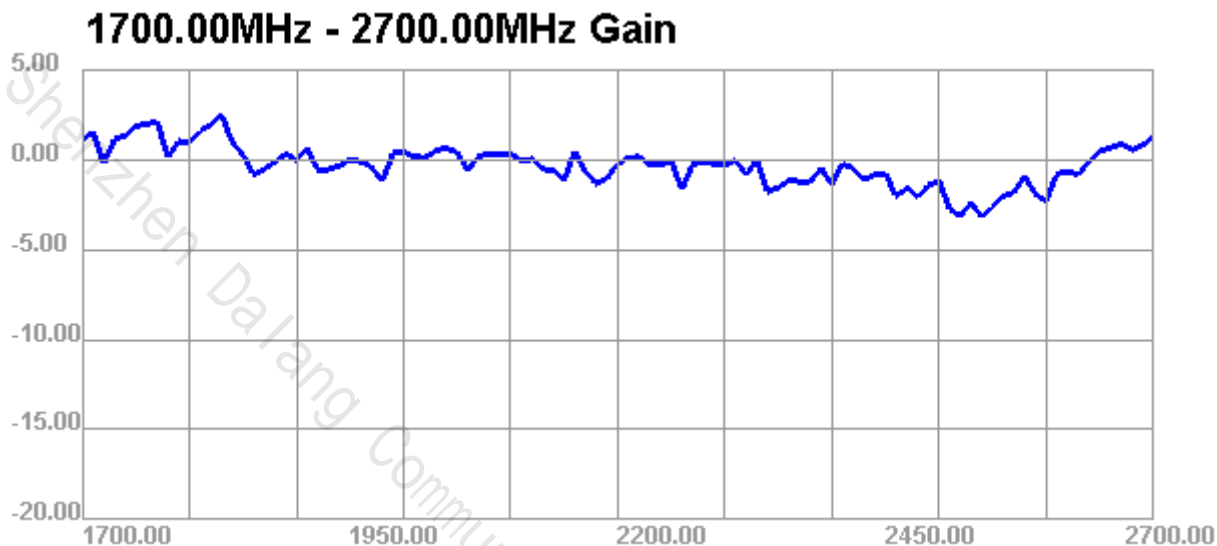
In this section, we will provide a detailed list and explanation of the product's chip features, sensitivity, accuracy, operating principles, and other technical details, as detailed in Table 1.

Table 1 Product Specifications

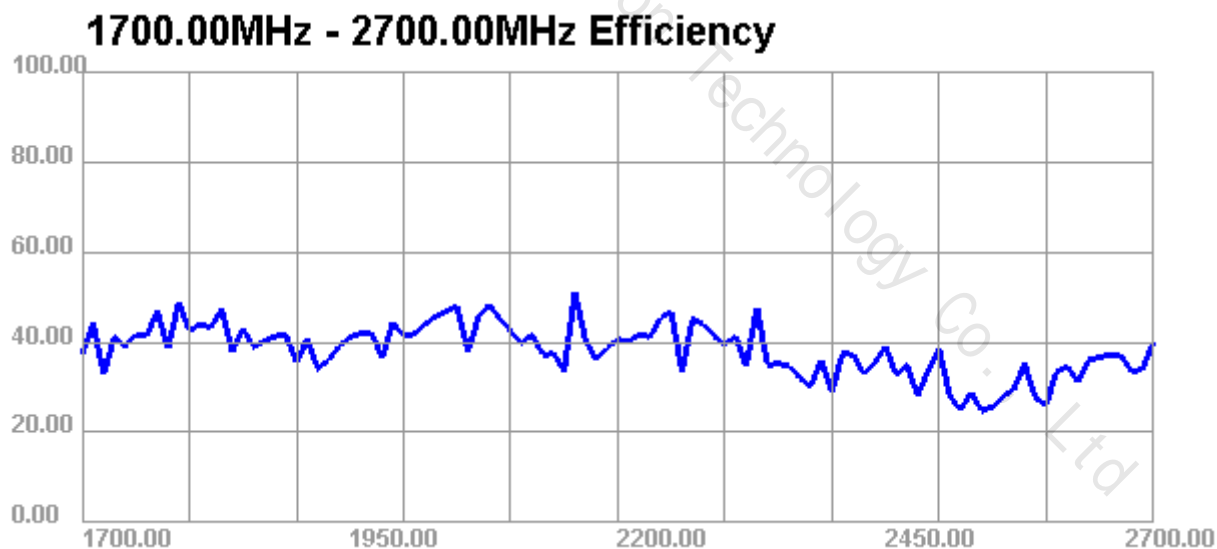
Specification parameters			
Antenna characteristics	1	antenna model	Dual 4G cabinet antenna
	3	frequency	824-960MHz
	4	Antenna gain	1710-2700 MHz
	7	Polarization mode	2dBic
mbom	1	Overall size (mm)	linear polarization
	2	Product weight	80*77mm
	3	joint	15g
	4	wire rod	SMA-J (customizable)
	5	Line length	RG316 (customizable)
work environment	1	work environment	-40℃~+85℃ , 10%~95%RH
	2	Environment	-40℃~+85℃ , 10%95%RH

5 High frequency, low frequency, and standing wave ratio

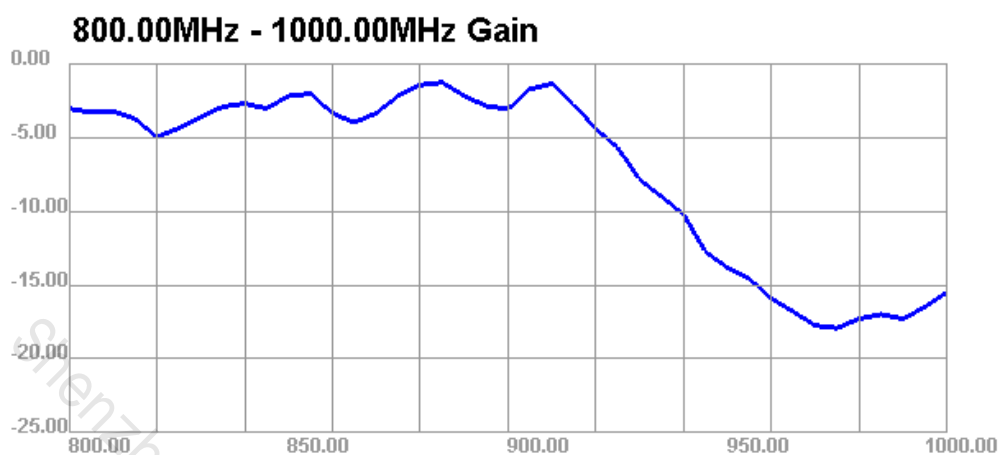
High frequency gain:



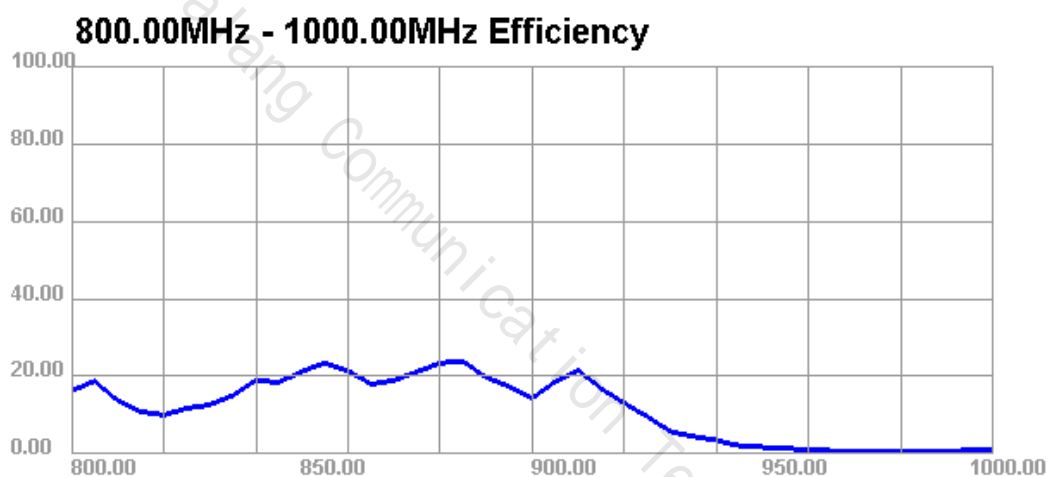
High frequency efficiency:



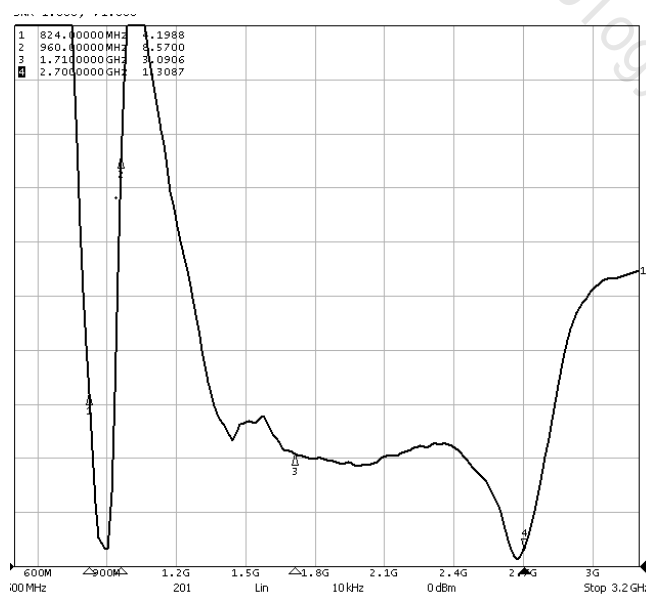
Low frequency gain:



Low frequency efficiency:



Standing Wave Ratio Diagram:



6 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