

Design and fabrication of UHF Receiver with high sensitivity using ADF 7021

To Xuan Huong

QH-2010-I/CQ, Faculty of Electronics and Telecommunications

Abstract:

Today microwave engineering used widely in the field of communications. The wireless communications services increasingly powerful. The implementation of these types of communications in Ultra high frequency band has become indispensable and essential. Especially the explosion of broadband communications to promote the deployment of frequency channels in the ultrasonic wavelength for maximum effect permitted to use the bandwidth capabilities. Communications in super high frequency bands have outstanding, demonstrated the advantages of transmission in complex environment. In particular the transmission of high frequency directly between the two points and transmission through the ionosphere, duplex in space. In Vietnam, the systems receiver UHF band have many important applications and is used in: broadcast television, microwave devices, radio astronomy, mobile phones, WLAN, Bluetooth, GPS... So, study the receiver system communications in UHF band to understand the structure, transmission characteristics in order to proceed to master the technology to improve and apply of the product on the fact that the ultimate purpose of the study.

In my thesis “**Design and fabrication of UHF Receiver with high sensitivity using ADF 7021**”, I have completed the following tasks:

- Study about the structure of receivers system.
- Study carefully about LNA block in receiver system.
- Study about IC ADF 7021.
- Design and fabricate successfully a Low-noise amplifier circuit operate at UHF band (500MHz) using for ADF 7021.

Keywords: UHF, LNA.