

## ABSTRACT

Current developments mean that humans need communication technology to exchange information anywhere, anytime, quickly, and easily with everyone. Communication systems often use telecommunication technology, which is used as a signal transmitter and receiver, namely an antenna. Microstrip antennas are a type of antenna that is currently being developed because they have many advantages, such as small size, light weight, low production costs, and easy fabrication. The need for antennas with increasingly good performance is a challenge in the development of wireless communications technology.

This research aims to compare the performance of microstrip antennas from the application of the slot method and peripheral slits with the same dimensions and antenna specifications. The 5 GHz frequency was chosen because it has several advantages, including wide bandwidth, high transmit power and higher data transmission speeds, as well as the potential for use in various applications, such as cellular communications, wi-fi and Bluetooth.

The results of the simulations and measurements that have been carried out show that the peripheral slits method can provide better performance improvements than the slot method. Microstrip antennas using the peripheral slits method get better return loss, VSWR and gain values. Meanwhile, the slot method provides increased performance on the larger antenna bandwidth side, namely 185 MHz.

**Keywords :** Microstrip Antenna, Slot, Peripheral Slits.