

ABSTRACT

The development of technology at this time makes everything feel easier and efficient in doing something, as well as communication technology, especially in monitoring and reconnaissance using current drones. Making a drone requires a transmission device, namely an antenna. In making the previous drone there were still many using cavity type antennas, namely cloverleaf and monopole which had quite large dimensions. In addition to the large enough dimensions, the antenna generally still uses singleband which causes the shape of the drone itself to not look simple because it requires distance for Tx and Rx antennas. . To overcome this problem, microstrip antennas that have small dimensions and use dual band antennas to simplify the shape of the drone are the right choice for use on drones.

In this research, a double band double band microstrip antenna for drones was designed and realized. By using a rectangular patch on the antenna. To overcome the low bandwidth value, the proximity coupled technique is used and use the Wilkinson method to divide the input signal into several output signals with the same phase. Realization of the antenna using FR-4 material. The resulting antenna has linear polarization with unidirectional polaradiation, works at frequencies 2.4 and 5.8 GHz with bandwidth at a frequency of 2.4 GHz as wide as 171 MHz and at a frequency of 5.8 GHz as wide as 643.6 MHz. Drones are designed with dimensions of 9 cm × 6 cm × 0.16 cm, and have a mass of 27 grams

Keywords: *Antenna, Microstrip, Rectangular Patch, Dual band, Drone*