

ABSTRACT

There is one technology that makes it possible to transmit small data that is quite far away and operates on battery power for a long time, namely Long Range (LoRa). In Indonesia, the frequency regulation used for LoRa is 920 – 923 MHz. This report aims to create an antenna filter used for LoRa in the 920 – 923 MHz frequency. The filter design made is a filter with a Band Pass Filter (BPF) type with the hairpin method. The substrate used is FR4 with a relative dielectric constant of 4.3 and a thickness of 1.6 mm. Based on the simulation results after optimization, the filter can work at a working frequency of 920 – 923 MHz which is indicated by the S parameter value forming a tapered pattern to a frequency of 922.36 MHz with a Gain of -29.99 dB, this value is still less appropriate than planned, namely between -2 to -1 dB. This can happen because one of them is the value obtained from the calculation for the filter dimensions, which greatly affects the simulation results.

Key Word: LoRa, Band Pass Filter