

ABSTRACT

The community's need for data access and to be able to communicate easily, quickly, and can be accessed by any individual, group, or agency anytime and anywhere without the barriers of distance and time is increasing. Therefore, in this study, a research was conducted to design a microstrip antenna with a rectangular patch shape with a feed-line method with DGS that is able to work and is applied to LTE technology that can work at a frequency of 2.1 GHz. Based on the results obtained from this study, the resonance frequency = 2.1 GHz, return loss = -23.91 dB, bandwidth = 533 MHz which is in the frequency range 1741 MHz - 2274 MHz, VSWR value = 1.13, and gain value = 3.24 dBi. Increased return loss = 100.08%, bandwidth = 925%. VSWR = 33.5%, profit = 32.78%. This can occur due to changes in the antenna specifications in the initial design with mathematical calculations and with the results after iteration and the addition of the DGS method.

Keywords: *Microstrip antenna, rectangular patch, bandwidth, gain, VSWR, return loss*