ABSTRACT

Along with the development of wireless-based telecommunications technology, a communication system is needed that can transmit high-speed data with good quality. Microstrip antenna because this antenna has smaller dimensions, cheaper manufacturing costs, and easy fabrication. However, microstrip antennas have weaknesses such as narrow bandwidth, so special methods are needed to increase the bandwidth of microstrip antennas. Proximity Coupled is an indirect rationing technique. The advantage of this indirect distribution can expand bandwidth. In this Proximity Coupled distribution, there are two substats, one of which is the patch and the feed line which are not supplied directly. The first substrate contains the feed line and ground plane. While on the second substrate there is a patch, so the feed line and patch will be electromagnetically coupled, then a technique is needed to increase the gain and widen the bandwidth of the microstrip antenna for a frequency of 3.5 GHz. The antenna design that has been created and simulated produces a return loss value of -20.15 dB, a bandwidth of 416.2 MHz, a VSWR of 1.218, and a gain of 3.428 dBi in the iteration and simulation results. The increase in the value of return loss, VSWR, gain, and bandwidth occurs due to changes in antenna parameters by means of iterations and the advantages of the proximity coupled feeding technique by adding one substrate to improve antenna performance.

Keywords: Proximity Coupled, Mikrostrip, Bandwidth