

ABSTRACT

In this era of globalization technological advancement has been highly developed. For example in the field of research on Absorber microstrip-based AMC (Artificial Magnetic Conductor). In this research, we want to develop the research by adding capacitor chip in AMC based absorber (Artificial Magnetic Conductor) itself so that the result obtained can make the frequency of the working area can be shifted and can maximize the microstrip wave absorber. The wave absorbing research will be designed with the help of 3D software to simplify the design process and calculation in the process of data analysis.

The simulation results show that the absorber works very well and the frequency can be shifted ie, at a frequency of 3 - 2.1 GHz with a value of return loss -20 dB range. Reabsorbed reagents provide good results, with a mean value of return loss -18 dB at a frequency of 3 - 2.1 GHz. The absorber designed is not good enough to work as expected, but the results of the measurement on the absorber of the full resistor have a value of 100 MHz bandwidth, the one-line absorbent capacitor has a value of 200 MHz bandwidth, the absorber three lines and five lines have a bandwidth value of 150 MHz and 100 MHz, while the value obtained from the simulation is on the absorber full resistor has a value of 430 MHz bandwidth, the absorbent one line capacitor has a value of 196 MHz bandwidth, the absorber three lines and five lines have a value of bandwidth of 250 MHz and 100 MHz. This is possible because the wave absorber measurement process is not in ideal condition, so the result of BW and return loss on realization is not as good as from the simulation result.

Keyword : AMC (Artificial Magnetic Conductor), Absorber, Capacitors Chip