

ABSTRACT

In the medical world, the post-cranium surgery patient sensitive to electromagnetic wave radiation that affects raise health issues. This Undergraduate Thesis proposed an absorber based on AMC is expected to be the solution for that problem. Many utilization of absorber that realized on the substrate materials that hard and qualified only uses for a planar field, therefore flexible absorber can use for uneven surfaces.

This Undergraduate Thesis did a simulation using the software. With a square patch and substrate with material duroid roger 5880. The model system is used boundary so don't need structural design until unlimited structure. With a unit cell, the application reflection condition can be done. This research is done with resistor addition to getting a good absorption level and SAR to see the absorption power.

Based on the simulation result with software, unit cell work at the frequency 1.75 GHz. With resistor addition, 430 ohm with S_{11} -12.13 dB, 470 ohm with S_{11} -11.71 dB, 510 ohm with S_{11} -11.22 dB, 560 ohm with S_{11} -11.01 dB, 620 ohm with S_{11} -9.67 dB, 680 ohm with S_{11} -9.08 dB, 750 ohm with S_{11} -8.19 dB.

Keywords: Health, Absorber, Electromagnetic, AMC, Metamaterial.