

ABSTRACT

Airport Surveillance Radar (ASR) is a radar which oversees commercial aircraft movements on entering and leaving the territory of airport terminals, and these radars can also monitor the movement of aircraft so that the aircraft is always monitored.

ASR bekerja on asar S-band frequencies that have the frequency range of 2 GHz - 4 GHz. Radar watchdog this airport bekerja at 3:00 GHz frequency. And it takes a module that can skip these frequencies, the module is a filter. This type of filter is needed is a band pass filter, which is skipped and the desired frequency cut off frequency that is not expected.

In this final project has been realized with a methodical hairpin line filter. This filter is realized using RO 4003 ROGERS substrate which has an inductive loss tangent value of 0.0027. who works at a frequency of 3:00 GHz with a bandwidth of 100 MHz. On the results of the measurement values shifted to 3:10 GHz frequency and bandwidth is still wide enough that is 150 MHz, but memiliki a good return loss in the amount of 20 277 dB and has a value of 2,018 dB insertion loss.

Key Word : Band Pass Filter, Hairpin, Synthetic Aperture Radar