

ABSTRACT

Due to the high-intensity rain and hail happened in many parts of Indonesia these days, a lot of disasters from flood to landslide pushed the government to act swiftly by taking important steps in handling this kind of situation based on the data gathered by weather radar. The radio wave that can be used to gain a better resolution comes with a small wavelength such as X-band frequency. In this final task, a linear arrayed antenna will be designed for the application of the aforementioned weather radar which will be consisted of 8 elements and work on the X-Band frequency between 9.37 – 9.43 GHz using CST Microwave 2016 simulation before fabricate it in the real life to obtain the data from the measurement and comparing it to the simulation result and the specification. From the result of the measurement, the antenna has the VSWR value of ≤ 2 , bandwidth of ≥ 60 MHz, gain of 8.76 dB, with a linear polarization and unidirectional radiation pattern.

Key words : microstrip antenna, radar, X-band