



UNIVERSITI TEKNOLOGI MARA

DESIGN A RECONFIGURABLE U-SLOT
RECTANGULAR MICROSTRIP PATCH
ANTENNA FOR MULTIBAND
APPLICATIONS

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ABSTRACT

Generally, a conventional microstrip patch antenna having a numerous limitations despite being one of the best antenna type in its own class. Among the biggest challenges is the capability to have a good return loss at the resonant frequency while operating in a multiple band of frequencies. This project presents the design of a reconfigurable U-slot microstrip patch antenna for a multiband applications. The frequency range focused in this design is from 2 to 5 GHz where the antenna is designed to operate and change its resonant frequency by using the two switches attached. The proposed design was simulated using CST Microwave Studio software. The prototype antenna was measured by using Vector Network Analyzer (VNA) and few other equipment at the Antenna Research Group (ARG) Lab, UiTM Shah Alam. All the measurement was done inside the chamber room located at the ARG Lab with the assistance of the lab technician. Both simulated and measured results were analysed and discussed focussing in the resonant frequency, gain and the radiation pattern.

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