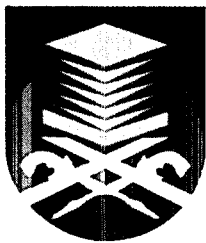


**CHARACTERISTIC MULTIMODE SIW FILTER AND
MICROSTRIP ANTENNA SQUARE PATCH**

**Thesis presented in partial fulfillment for the award of the
Master of Science in Telecommunication and Information Engineering
UNIVERSITI TEKNOLOGI MARA**



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ACKNOWLEDGEMENT

Assalammua'laikum w.b.t.

First of all, I would like to express great gratitude to Allah SWT for giving me the opportunity to be able to complete the project and my thesis as it is today. Thank God, this valuable experience and knowledge that I gained probably helped me to develop my personal skills and work in the future.

In the success of this thesis, I am involved with many people. They have contributed thoughts and ideas much towards my understanding. I would like to express my most gratitude and appreciation to my supervisor, Dr Aziati Husna Binti Awang consistent support and guidance as well as the provision of his valuable time, encouraging, patience and motivation in completing this project.

I wish to express my warm and sincere thanks all my colleagues for the generous support throughout the semester and anybody who involved directly or indirectly constant help and knowledge contribution to ensure the success of the project. Their views and tips are useful indeed.

Last but not least, terima kasih kepada keluarga, adik-adik dan Nor Rasyidah , yang sentiasa memberi sokongan moral, understanding and courage for me to complete this research. Eros sayang semua.

May ALLAH repay all their kindness.

ABSTRACT

There is growing interest in the integration of microwave filters and antennas in the RF communication system. In practice, filters and antennas that have been designed separately which are linked together in a common reference impedance, 50Ω . Multimode irises is one of the main parameter will be considered to analyze characteristics. In this paper, Substrate Integrate Waveguide (SIW) microstrip antenna and filter is proposed a detailed study of how to design a microstrip square patch antenna with enhanced directive gain. A uniform slotted SIW in circular filter is designed using multilayer technology with multimode irises at the common ground plane. The proposed SIW is simulated and analyzed using CST microwave studio suite software. Simulation and measured results proposed in S-band at frequency from 2 to 4 GHz. This antenna is feed by a 50Ω microstrip line offset from the centre of a patch at bottom layers. Measured results will be presented.

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