

**UNIVERSITI TEKNOLOGI MARA
CAWANGAN PULAU PINANG**

**COMPREHENSIVE INVESTIGATION
TOWARDS MICROWAVE ELIMINATION
BY USING ORGANIC COMPOSITE SOLID
BRICK MICROWAVE ABSORBER**

**MUHAMMAD IRSYAD SAFWAN B.
NASHARUDDIN**

**BACHELOR OF ENGINEERING (HONS)
ELECTRICAL AND ELECTRONIC
ENGINEERING**

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AUTHOR'S DECLARATION

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Name of Student : Nurul Aida binti Musa
Student ID No : 2014304253
Programme : Bachelor of Engineering (Hons) Electrical
& Electronic
Faculty : Faculty of Electrical Engineering
Thesis Title : Smart Car Park Allocation and Monitoring System Via
Internet of Things (IoT)
Signature of Student :
Date : Jan 201

AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

Name of Student : Muhammad Irsyad Safwan B. Nasharuddin
Student ID No : 2014591191
Programme : Bachelor of Engineering (Hons) Electrical &
Electronic
Faculty : Faculty of Electrical Engineering
Thesis : Comprehensive Investigation Towards Microwave
Elimination by Using Organic Composite Solid Brick
Microwave Absorber

Signature of Student :
Date : January 2018

ABSTRACT

Waste and radiation pollution has become a serious problem in this recent days. Uncontrollable waste disposal has affecting environmental issues while microwave radiation lead to various health issues. To dealing with this issue, organic composite brick absorber is design and fabricated. This study will show the capability of organic material used which is rice husk, coconut husk and sawdust as an absorbing material combined with cement as it based. CST Microwave Studio Suite software are used to obtained the simulation result of the designed absorber. Free space arch reflectivity measurement method is used to investigate the absorption performance of the design absorber at frequency range 8 to 12 GHz. This study also will include the absorption performance of the design absorber with the commercial flat absorber as it benchmarks. From this study, rice husk has the best absorption performance followed by sawdust and after that coconut husk.

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