

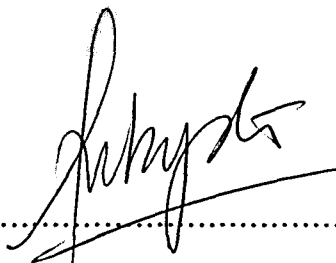
DESIGNING WIVALDI ANTENNA USING FR4 SUBSTRATE

JOHANA BINTI MD JOHARI

FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITY TECHNOLOGI MARA
MALAYSIA

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This thesis is approved by:



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PUAN NORHAYATI BINTI HAMZAH

(PROJECT SUPERVISOR)

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ABSTRACT

This thesis represents a study of tapered slot Vivaldi antenna which is one of the ultra-wideband (UWB) antennas. The antenna was designed by using FR4 substrates with the value of relative dielectric constant equal to 4.7. The antenna performance was analyzed during the simulation process using CST Microwave Studio[®] (CST MWS) software. A comparison between simple tapered slot Vivaldi antenna with round corners Vivaldi antenna was conducted during the simulation. The specifications that have to be fulfilled are S_{11} less than -10dB and VSWR less than 2. Besides that, the radiation pattern of both antennas also was observed. At the end of the project, a tapered slot Vivaldi antenna was produced with the operational frequency between 8 to 12GHz which is in the range of operational frequency for radar communications. All simulated results were presented in this paper.

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