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SEDAYA INTERNATIONAL COLLEGE

FACULTY OF ENGINEERING AND INFORMATION

TECHNOLOGY

SCHOOL OF ENGINEERING

FINAL REPORT

FINAL YEAR ENGINEERING PROJECT 2002

Project Title : DESIGN OF A BROADBAND
MICROWAVE AMPLIFIER
Name : CHEW KIM FIE
Student ID : 99006184
First Supervisor : MR. LOW BOON TATT
Second Supervisor : MR. ZUBEIR IZARUKU
Project Coordinator : DR. KHEDR





ABSTRACT

The main objective of this project is to present the design and analysis of broadband low noise microwave transistor amplifier using scattering parameter technique. The MGA 86576 transistor from Hewlett-Packard has been used in this design. The amplifier design is centered at 4 GHz to provide a nominal 1.6dB noise figure and 23dB of stable gain. The ideal transmission line and microstrip line models of the amplifier were built and simulated using Microwave Office and the results obtained are in good agreement.

Comparison between different ways of designing the amplifier and discussion about the application of the amplifier will also be comment in this report.

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