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FINAL REPORT OF DIPLOMA PROJECT

FACULTY OF ELECTRICAL ENGINEERING



VARIABLE STABILIZER POWER  
SUPPLY

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## **ABSTRACT**

The course KEU280 is designed primary to help student's to get the experience in learning basic practical and construct a electronic project and also study skill in their preparation for life. In addition, all students in semester 5 are compulsory to take the course KEU380 next semester.

The project 1 in the booklet preparing how to construct and knowing how the circuit is work also the theoretical and information background, which more complete and sophisticate method of research and development.

This project 1 (KEU280) is prepared into several sections. Each section presents a detailed description of the components and circuit. It is also consists objectives of the project, work plan and conclusion at the end of the project.

This circuit operates to convert 24V DC to variable voltage from 30V down to 3V and stabilized the voltage. IC LM723 was used to stabilize the voltage. These circuits that can be apply to solve most power supply problems arising in the everyday work of any electronics workshop.

## **AKNOWLEDGEMENT**

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I would like to thank our entire friend for their time and effort in helping each other's and me in order to complete the project. I have exchange notes and made some discussion so I can improve our project.

The increase in confidence in this project has motivated me to come with more informative, comprehensive and innovative accepted booklet that would not only benefit me but also future students.

Lastly, I would like to thank UiTM Penang and the staff because providing me with excellent facilities like the library and laboratory so we can finish our project with ease.

# CHAPTER 1: INTRODUCTION

## 1.1 BACKGROUND THEORY

This is a high quality power supply with a continuously variable stabilizer output adjustable at any value between 0 and 30VDV. The circuit also incorporates an electronic output current limiter that effectively controls output current from a few mile Amperes to the maximum output of 2.5 amperes that circuit can deliver .This feature makes this power supply indispensable in the experimenter's laboratory as it is possible to limit the current to the typical maximum that circuit test may require, and power it up then, without any fear that it may be damaged if something goes wrong. There is also a visual indication that the current limiter is in operation so that you can see at glance that your circuit is exceeding or not its preset limits. The technical specifications in characteristics ere like at below:

Input Voltage: .....24VDC

Output Current: .....2.5A

Output voltage: .....3-30V

## 1.2 FUTURE

- Reduced dimensions, easy construction, and simple operation.
- Output voltages easily adjustable
- Output current laminating with visual indication
- Complete protection of the supplied device against over loads and malfunction