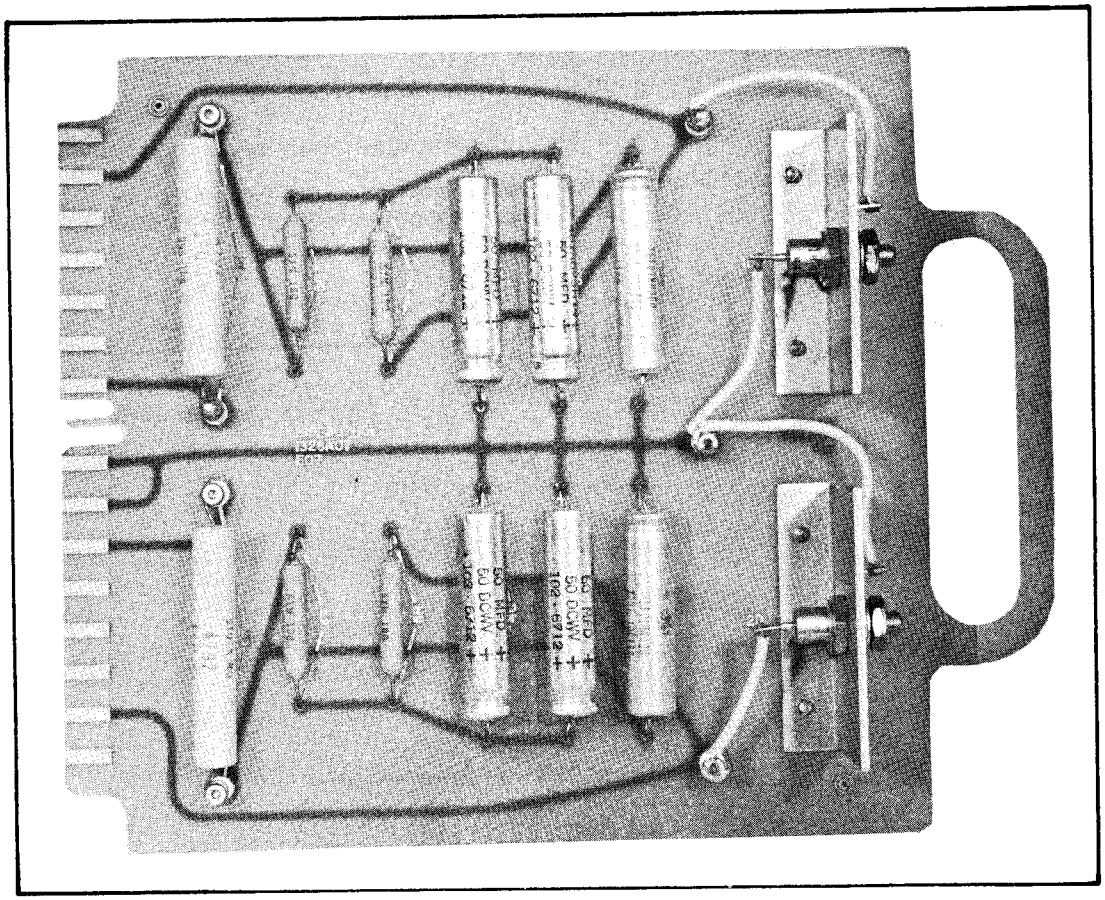
E07 POWER SUPPLY
For Use in S-56F

I. INTRODUCTION

The power supply card (E07) is one of five printed circuit cards comprising field regulators for S-56F systems. Other standard cards, explained in separate instruction leaflets, are: E05, gate pulse generator; E06, field current controller; E08, field function generator; and E09, voltage sensor.



E07 PC CARD
FIGURE 1

Figure 1 is a picture of the E07 pc card. The power supply provides dc power for the regulator functions of the control system. The output is ±24 vdc, zener regulated

Printed circuit cards designed for S-56 systems are plug-in cards for insertion into AMP, connector type, number 67131-1 or equivalent. Each card type (designated by "E" number) is uniquely keyed to prevent insertion in improper regulator positions. Overall board dimensions are 6" X 7.6". A handle is machined in the card which facilitates insertion or removal and prevents inadvertant component breakage or board contamination. All electrical inputs and outputs are taken through the 15 terminals located at the rear edge of the card. Reading

from the top of the pc card to the bottom, terminals will always be identified on schematics by numbers 31, 33, 35, 37, ... 59.

II. DESCRIPTION

A. Specifications

Ambient Temperature: 0 to 55°C

Input: 115-volt single-phase full-wave bridge-rectified dc with center-tap connection.

Output: PSP, +24 vdc ±1.2V; 90 ma maximum.
PSN, -24 vdc ±1.2V; 90 ma maximum.
Peak-to-Peak Ripple, 100 mv maximum, 10 mv typical.

B. Circuit Operation

The power supply is composed of two circuits which are identical except for polarity. Each circuit has a two-section, RC filter, and a zener diode mounted on a heat sink. The schematic is shown in Figure 2.

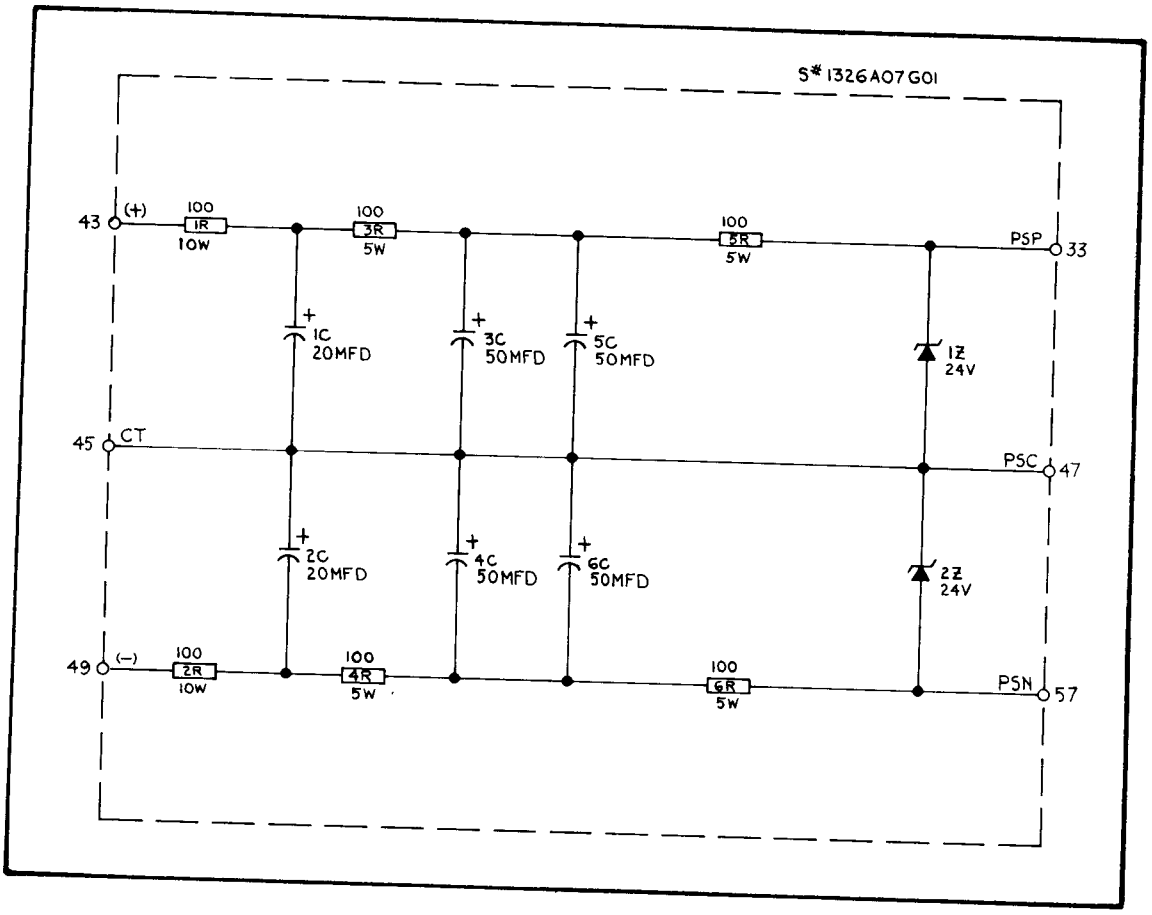


FIGURE 2

III. SERVICE

Personnel familiar with electrical equipment utilizing semiconductors can isolate most problems using an oscilloscope, multimeter, and information contained in relative instruction leaflets.

Semiautomatic equipment is available at the factory to test static and dynamic performance of all edge-connected printed circuit cards. Generally, repair of modules is facilitated by returning them to: Westinghouse Electric Corporation
Industrial Systems Division
P.O. Box 225
Buffalo, New York 14240.