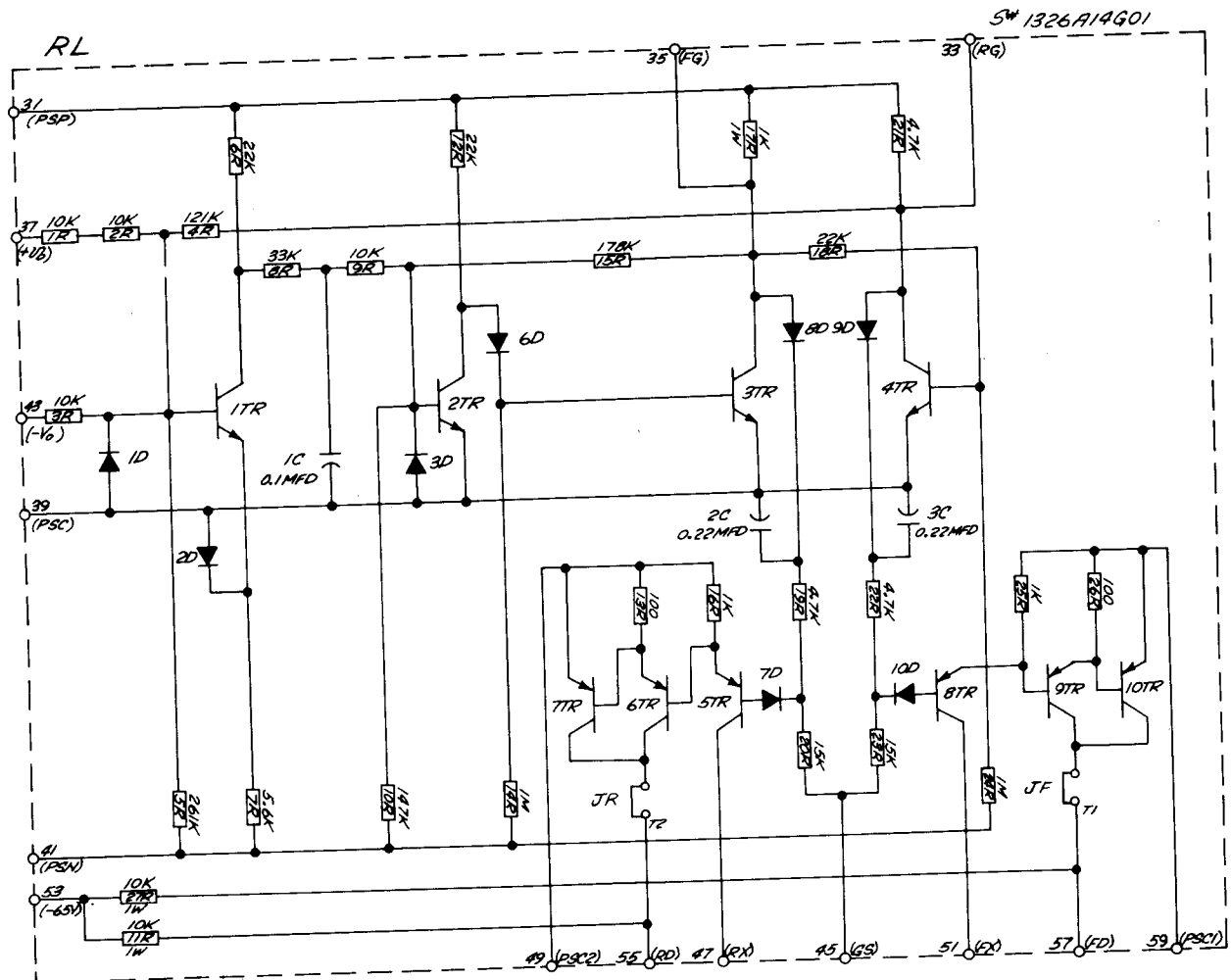




## REVERSING LOGIC



REVERSING LOGIC SCHEMATIC DIAGRAM

## I. DESCRIPTION

This module is designed to sense the demand of current reversal and to produce the appropriate output signals for the C-56 Thyristor Power System as described in I.L. 16-800-126.

The summing junction of transistor 1TR compares the bus voltage signal  $v_b$  with the output signal of the voltage controller  $-V_0$  and a bias signal through 4R. Assume that there is a jumper from terminals GS to PSN and that initially the transistors 1TR, 3TR, 5TR, 6TR and 7TR are in the on state.

Now the input signals are changed to turn off transistor 1TR. Its collector will swing positive; approximately 1 ms later the voltage on capacitor 1C has changed sufficiently to overcome the bias applied through 10R. 2TR turns on, switching off 3TR. This will turn on 4TR, and change the feedback signals through 4R and 15R. These feedback signals produce a desired hysteresis into these switching loops. Through 8D, transistors 5TR, 6TR, and 7TR are immediately turned off, and after about 2 ms time delay (3C), transistors 8TR, 9TR and 10TR are turned on. A complementary sequence takes place if the signals at the input are changed in the opposite direction.

The outputs FG, FR, FX, RX, FD and RD are used to drive various functions in the C-56 basic regulator, as can be seen on the basic regulator signal distribution in I.L. 16-800-126.

## II. CHARACTERISTICS AND RATINGS

Ambient Temperature: 0 to 55°C

Power Requirement: PSP: +24V + 0.5V --- 26mA  
PSN: -24V ± 0.5V --- 4mA

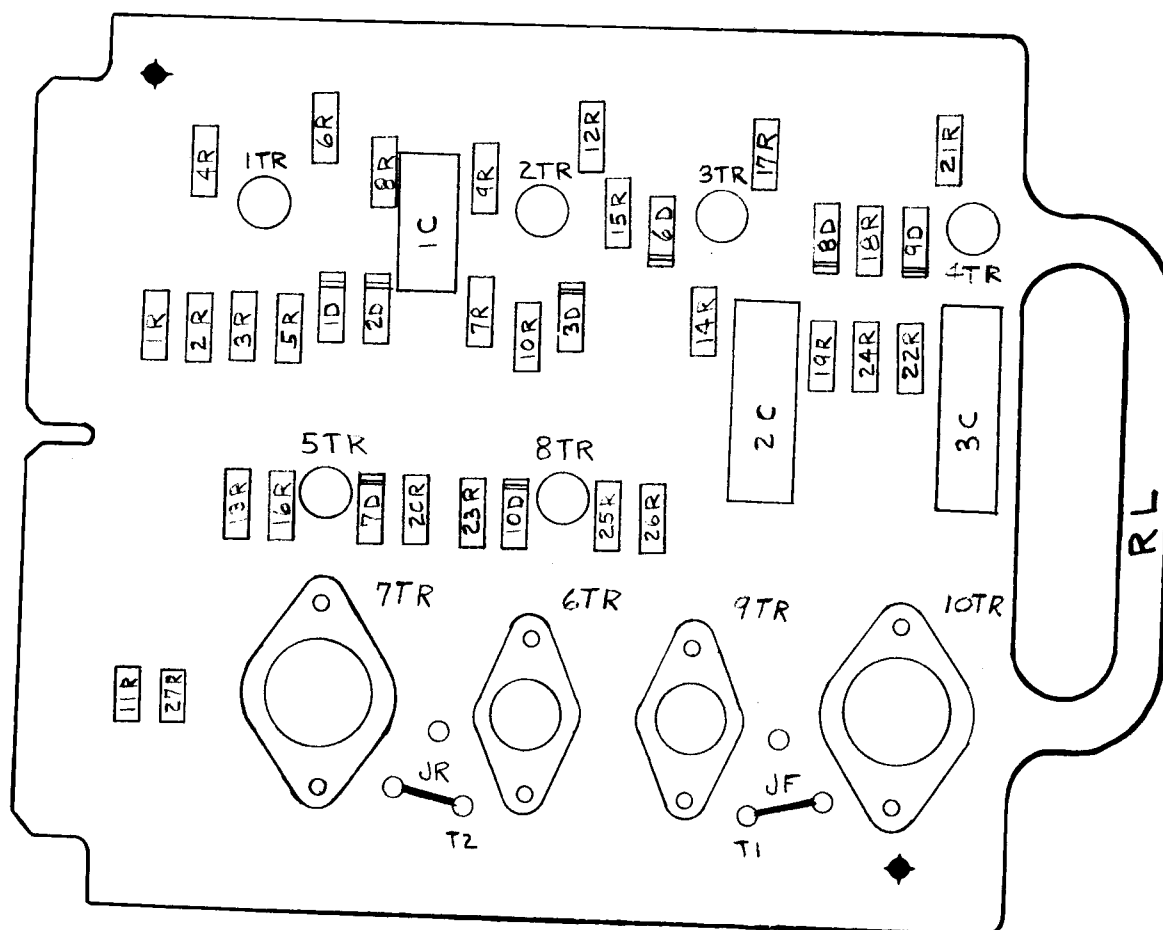
Voltage required to switch:

FORWARD  $-2(-V_0) - v_b \geq 1V$   
(10TR ON)

REVERSE  $-2(-V_0) - v_b \leq -1V$   
(7TR ON)

Outputs:

Terminal	(FG) 35	(RG) 33	(FX) 51	(RX) 47	(FD) 57	(RD) 55
Forward	21.0V	0.2V	-1.5V	-23.0V	-0.8V	-65.0V
Reverse	0.2V	22.0V	-23.0V	-1.5V	-65.0V	-0.8V



PC CARD (FRONT VIEW)