

UNIPLY® UNIVERSAL DC POWER SOURCE

0-6 V at 5 A
0-15 V at 3 A
0-30 V at 2 A
0-60 V at 1 A
 with
Digital Panel Meter



features:

- Constant Voltage/Constant Current with automatic crossover
- UNIPLY Technique provides increased output current at lower output voltages
- Power Supply provides increased output power at input line voltages above 105 VAC
- A 4 Digit Display permits reading of the output voltage with an accuracy of 0.1V + 1 digit or output current with an accuracy of 20 MA + 1 digit and a resolution of 10MA. A Mode digit in the Display indicates constant voltage ("E") operation or constant current ("I") operation. Alternating "E"/"I" display indicates power supply overload.
- Panel Adjustable overvoltage crowbar operates to short circuit the Power Supply output in less than 200 microseconds at any output voltage above a present level
- Ten-turn potentiometers for voltage and current control with increased resolution
- Positive or Negative output polarity
- Front or Rear access terminals
- Remote Sensing or Remote Programming

electrical specifications:

INPUT: 105-125 volts, 47-440 Hz, 100W nominal at 115V line. 210-250 volts option available.
OUTPUT: 0-60 VDC, continuously adjustable with the following minimum output levels: 0-6V, 0-5A; 0-15V, 0-3A; 0-30V, 0-2A; 0-60V, 0-1A. Increased outputs are available at input line voltages above minimum.
POLARITY: Positive or negative output terminal may be grounded or the supply may be floated up to 200 VDC between any output terminal and chassis.
TEMPERATURE: 0-50°C, derated 3% (current) per °C from 50°C to 75°C. Storage: -20°C to 85°C.
VOLTAGE CONTROL: Ten turn potentiometer provides continuous adjustment from zero to 60 volts, with a resolution better than 20 mV.
CURRENT CONTROL: Ten turn potentiometer provides continuous output current control from zero to 5A, with a resolution better than 2 mA.
DIGITAL DISPLAY: Provides metering and indicates operating mode of the power supply.
OVERVOLTAGE CROWBAR: 2.5-70V panel mounted adjustable crowbar operates to short circuit the output of the supply in less than 200 microseconds at any output voltage in excess of a preset level.
CONSTANT VOLTAGE MODE
REGULATION: Less than 0.005% + 1 mV for load or line changes within the ratings of the supply when measured at the junction of load and sense leads or at the rear terminals of the supply.
RIPPLE AND NOISE: Less than one millivolt peak to peak up to 10 MHz at input line frequencies of 47-63 Hz.
STABILITY: Less than 0.01% + 5 millivolts per 24 hours at constant line, load and ambient temperature after warm up.
TEMPERATURE COEFFICIENT: Less than 0.01% + 0.5 mV per °C.
RECOVERY TIME: Output voltage will return to within a 50 millivolt band of the original setting within 50 microseconds for a step load change within 10% and 100% of rating.
SOURCE IMPEDANCE: Less than .002 ohms at DC, 0.1 ohms at 20 KHz, 1.0 ohms at 1 MHz.
CONSTANT CURRENT MODE
REGULATION: Less than 1 milliampere at any current setting for load resistance variations or for input line variations within the ratings of the supply.
RIPPLE AND NOISE: Less than 5 milliamperes peak to peak.
STABILITY: Less than 0.05% + 1 milliampere per 24 hours at a constant line, load and temperature after warm up.
TEMPERATURE COEFFICIENT: Less than 0.03% + 300 microamperes per °C.
SOURCE IMPEDANCE: In excess of 100,000 ohms at DC.
REMOTE VOLTAGE PROGRAMMING: With external programming resistor: 160 ohms/volt (approx).
REMOTE CURRENT PROGRAMMING: With external programming resistor: 400 ohms/amp (approx).

mechanical specifications:

DIMENSIONS: 8 3/4" x 4 3/4" x 8 1/16" deep behind front panel mounting surface.
WEIGHT: 15 pounds.

®PAT: 3,699,352

POWER DESIGNS



INSTRUCTION MANUAL

MODEL 6050C SERIAL _____

POWER DESIGNS INC.
1700 SHAMES DR. WESTBURY, N.Y. 11590
TEL: 516-333-6200 TWX 510-222-6561

POWER DESIGNS PACIFIC INC.
3381 MIRANDA AVE. PALO ALTO, CA. 94304
TEL: 415-493-6111 TWX 910-373-1251

A P P E N D I X

1. INTRODUCTION

This Appendix contains an Electrical Parts List, Schematic Diagram, Parts Location Diagram and equipment Warranty.

2. ELECTRICAL PARTS LIST

All electrical and electronic parts are listed in the sequence of their circuit numbers as shown on the Schematic Diagram. A brief description of each part is given, followed by the code number of the manufacturer and his part number. All manufacturers' code numbers are taken from Cataloging Handbooks H4-1 and H4-2, Federal Supply Code for Manufacturers. These handbooks can be obtained from Federal Agencies or ordered directly from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

We recommend that all parts with the code number 98095 be ordered directly from Power Designs, Inc. The commercial equivalents of these parts may have wide parameter tolerances or require special factory inspection or modification before they can be used in the power supply.

All components used in the power supply or supplied as replacements are carefully inspected at the factory. Inspections are performed on a 100% basis or at AQL levels to Military Specification MIL-Q-9858 under which Power Designs, Inc. has been qualified.

All semiconductors are inspected on a 100% basis, not only for operating parameters, but also for critical characteristics related to reliability and predictable life expectancy. Some of these characteristics are observed when the device is taken beyond its normal operating regions. These test techniques have been developed under a "predictable reliability" program in operation at Power Designs, Inc. for the past twelve years. Under this program, quality control procedures are constantly reevaluated and updated as advances are made in solid state technology and experience is gained from field history.

Semiconductor manufacturers are continually modifying their products. Complete lines are discontinued to be replaced by devices having improved gain, operating voltage levels and frequency responses. The high gain, closed loop DC amplifiers used in regulator circuits are particularly sensitive to slight changes in these parameters. Commercial or military "equivalent" transistors may affect the performance of the power supply. We can assure compliance with the original specifications if replacement semiconductors are ordered from the Factory.

All replacement semiconductors are processed and stocked at the factory to insure complete interchangeability with the devices in the original equipment. These devices are coded with a Power Designs, Inc. part number. For example:

| | | |
|--------------------------------------|-----------------------------|--|
| <u>MS</u> | <u>1028</u> | <u>A</u> |
| Semiconductor Manufacturer's Code | Power Designs, Inc. Type | Suffix Identifying Special Parameters |

When ordering replacements, please identify the device as thoroughly as possible, giving the model and serial number if available.

The replacement part you receive may not have the same part number as that shown on the Electrical Parts List. This can be due to several factors:

- a. A different prefix indicates that Power Designs, Inc. is using another vendor source. The operating characteristics of the devices are identical.
- b. A completely different part number indicates:
 1. The original vendor has discontinued manufacture of the item or can no longer manufacture it to the original specifications.
 2. A better device for use in a particular circuit has been substituted.
 3. Tighter controls for interchangeability have provided greater assurance of reliability with the replacement.

MODEL 6050C

ELECTRICAL PARTS LIST

NOTE: BEFORE REPLACING SEMICONDUCTORS SEE PARAGRAPH 2 OF THIS APPENDIX

| CIRCUIT NUMBER | DESCRIPTION | MFR CODE NUMBER | PART NUMBER |
|----------------|--|-----------------|-------------|
| A1 | Di, Itar Meter Assembly | 98095 | A79062 |
| C1, C2, C3 | Capacitor, ceramic disc, 11 pf, 600 vdc | 98095 | CC-37-6 |
| C4, C5 | Capacitor, ceramic disc, 250 pf, 50 vdc | 98095 | CE-252-50 |
| C6 | Capacitor, electrolytic, 11,000 μ f, 15 vdc | 98095 | CE-113-15 |
| C7 | Capacitor, electrolytic, 10,000 μ f, 15 vdc | 98095 | CE-233-15 |
| C8 | Capacitor, electrolytic, 830 μ f, 50 vdc | 98095 | CE-331-50 |
| C9, C10 | Capacitor, tantalum, 5.8 μ f, 25 vdc | 98095 | CE-6A8-.35 |
| C11 | Capacitor, electrolytic, 51 μ f, 25 vdc | 98095 | CEX-51-25 |
| C12 | Capacitor, plastic film, 0.01 μ f, 200 vdc | 98095 | CP-17-2 |
| C13 | Capacitor, tantalum, 33 μ f, 25 vdc | 98095 | CE-33-.10 |
| C14 | Capacitor, plastic film, 0.0022 μ f, 200 vdc | 98095 | CP-A0022-2 |
| C15 | Capacitor, ceramic disc, 47 pf, 1 k vdc | 98095 | CC-47P-102 |
| C16 | Capacitor, plastic film, 0.0027 μ f, 200 vdc | 98095 | CP-26-2 |
| C17 | Capacitor, tantalum, 22 μ f, 25 vdc | 98095 | CE-22-.10 |
| C18 | Capacitor, electrolytic, 47 μ f, 150 vdc | 98095 | CE-4A7-101 |
| C19 | Capacitor, plastic film, 0.001 μ f, 200 vdc | 98095 | CP-24-2 |
| C20 | Capacitor, tantalum, 22 μ f, 50 vdc | 98095 | CE-1-500 |
| C21 | Capacitor, electrolytic, 100 μ f, 50 vdc | 98095 | CE-102-50 |
| C22 | Capacitor, plastic film, 0.01 μ f, 200 vdc | 98095 | CP-16-2 |
| C23, C24 | Capacitor, ceramic disc, 1 pf, 50 vdc | 98095 | CE-1-500 |
| C25 | Capacitor, plastic film, 0.01 μ f, 200 vdc | 98095 | CP-16-2 |
| C26 | Capacitor, tantalum, 22 μ f, 25 vdc | 98095 | CE-22-.10 |
| C27 | Capacitor, plastic film, 0.022 μ f, 200 vdc | 98095 | CP-22-2 |
| C28 | Capacitor, plastic film, 0.02 μ f, 50 vdc | 98095 | CP-29-.5 |
| C29 | Capacitor, tantalum, 22 μ f, 50 vdc | 98095 | CE-1-500 |
| C30 | Capacitor, tantalum, 8.3 μ f, 25 vdc | 98095 | CE-6A8-.35 |
| C31 | Capacitor, plastic film, 0.0022 μ f, 200 vdc | 98095 | CP-A0022-2 |
| CR1 thru CP4 | Diode, silicon | 98095 | SI5A2 |
| CR5 | Rectifier, bridge | 98095 | VH247/TT |
| CR6 | Diode, silicon | 98095 | SI5A2 |
| CR7 | Diode, silicon | 98095 | GI44 |
| CR8 | Diode, silicon | 98095 | SI5A2 |
| CR9 | Diode, silicon | 98095 | SY241N |
| CR10 thru | | | |
| CR14 | Diode, silicon | 98095 | GI44 |
| CR15 | Diode, silicon | 98095 | FS88 |
| CR16 | Diode, silicon | 98095 | GI44Y |
| CR17 | Diode, silicon | 98095 | FS88 |

| NUMBER | DESCRIPTION | NUMBER | NUMBLR |
|------------|---|--------|-------------|
| CR13 | Rectifier, complementary silicon controlled | 98095 | C13F |
| CR19, CR20 | Diode, silicon | 98095 | GI14Y |
| CR21 | Diode, silicon | 98095 | GI44 |
| CR22 | Rectifier, silicon controlled | 98095 | IR9918-3 |
| CR23 | Diode, silicon | 98095 | SI5A2 |
| CR24 | Diode, silicon | 98095 | FS88 |
| CR25 | Diode, silicon | 98095 | SI250A |
| DS1, DS2 | Diode, Light Emitting | 98095 | LED-2 |
| F1 | Fuse, 5A, Slo-Blo, 250V | 71400 | MDX-2 |
| F2 | Fuse, 6A, Fast Blow, 250V | 71400 | AGC-6 |
| Q1, Q2 | Transistor, silicon, NPN | 98095 | MS1700G |
| Q3, Q4 | Transistor, silicon, NPN | 98095 | 2N6254 |
| Q5 | Transistor, silicon, NPN | 98095 | 2N2243A |
| Q6, Q7, Q8 | Transistor, silicon, PNP | 98095 | RA1029A |
| Q9 | Transistor, silicon, NPN | 98095 | FS1700E |
| Q11, Q12 | Transistor, silicon, PNP | 98095 | RA1029A |
| Q13 | Transistor, silicon, NPN | 98095 | 2N2219A |
| Q14 | Transistor, silicon, NPN | 98095 | FS2270B |
| Q15 | Transistor, silicon, NPN | 98095 | 2N6254 |
| R1 | Resistor, wirewound, 100 Ω, ± 5%, 7 w | 98095 | RW-F5-3RA |
| R2 | Resistor, wirewound, 100 Ω, ± 5%, 7 w | 98095 | RW-F2-3RA |
| R3 | Resistor, wirewound, 3.1 kΩ, ± 5%, 7 w | 98095 | RW-F1-4RA |
| R4 | Resistor, composition, 20 kΩ, ± 10%, 1/4 w | 01121 | EB3931 |
| R5 | Resistor, precision, metal film, 6.04 kΩ, ± 1%, 1/4 w | 98095 | RD-6041-1QA |
| R6 | Resistor, wirewound, 150 Ω, ± 5%, 7 w | 98095 | RW-361-3KA |
| R9 | Resistor, precision, metal film, 604 Ω, ± 1%, 1/4 w | 98095 | RD-6040-1QA |
| R10, R11 | Resistor, precision, metal film, 6.04 kΩ, ± 1%, 1/4 w | 98095 | RD-6041-1QA |
| R12 | Resistor, precision, metal film, 645 Ω, ± 1%, 1/4 w | 98095 | RD-8450-1QA |
| R13 | Resistor, precision, metal film, 940 Ω, ± 1%, 1/4 w | 98095 | RD-944-1QA |
| R14 | Resistor, precision, metal film, 1 kΩ, ± 1%, 1/4 w | 98095 | RD-102-1QA |
| R15 | Resistor, precision, metal film, 32.4 kΩ, ± 1%, 1/4 w | 98095 | RD-3242-1QA |
| R16 | Resistor, precision, metal film, 1 kΩ, ± 1%, 1/4 w | 98095 | RD-102-1QA |
| R17 | Resistor, precision, metal film, 2.1 kΩ, ± 1%, 1/4 w | 98095 | RD-212-1QA |
| R19 | Resistor, precision, metal film, 15 kΩ, ± 1%, 1/4 w | 98095 | RD-153-1QA |
| R20 | Resistor, precision, metal film, 5.65 kΩ, ± 1%, 1/4 w | 98095 | RD-3651-1QA |
| R21 | Resistor, precision, metal film, 2.15 kΩ, ± 1%, 1/4 w | 98095 | RD-2151-1QA |
| R22 | Resistor, precision, metal film, 475 kΩ, ± 1%, 1/4 w | 98095 | RD-4753-1QA |
| R23 | Resistor, wirewound, 1.9 kΩ, ± 3%, 3 w | 98095 | RW-192-7KA |
| R24 | Resistor, precision, metal film - selected range from 50 Ω - 332 kΩ, ± 1%, 1/4 w | 98095 | |
| R25 | Resistor, composition, 3.3 kΩ, ± 10%, 1/4 w | 01121 | EB3321 |
| R27 | Resistor, precision, metal film, 1 kΩ, ± 1%, 1/4 w | 98095 | RD-102-1QA |
| R28 | Resistor, precision, metal film - selected range from 1.87 kΩ - 16.2 kΩ, ± 1%, 1/4 w | 98095 | |

| CIRCUIT NUMBER | DESCRIPTION | MFR CODE NUMBER | PART NUMBER |
|----------------|---|-----------------|--------------|
| R29 | Resistor, precision, metal film, 34 Ω , $\pm 1\%$, 1/4 w | 98095 | RD-340-1QA |
| R30 | Resistor, precision, metal film, 1 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-102-1QA |
| R31 | Resistor, composition, 3.9 k Ω , $\pm 10\%$, 2 w | 01121 | HR3921 |
| R33 | Resistor, 0.11 Ω | 98095 | PS-6050B-17 |
| R34 | Resistor, precision, metal film, 3.32 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-3321-1QA |
| R38 | Resistor, wirewound, variable, 10 k Ω , $\pm 5\%$, 2 w, 10 turn | 98095 | RWV-103-3C10 |
| R39 | Resistor, precision, metal film, 301 Ω , $\pm 1\%$, 1/4 w | 98095 | RD-3010-1QA |
| R40 | Resistor, composition, 220 Ω , $\pm 10\%$, 1/4 w | 01121 | EB2211 |
| R41 | Resistor, wirewound, 0.44 Ω , $\pm 5\%$, 3 w | 98095 | RW-F44-3KA |
| R42 | Resistor, precision, metal film, 1 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-102-1QA |
| R43 | Resistor, composition, 56 Ω , $\pm 10\%$, 1/2 w | 01121 | EB5601 |
| R44 | Resistor, composition, 220 Ω , $\pm 10\%$, 1/4 w | 01121 | EB2211 |
| R45 | Resistor, wirewound, 0.22 Ω , $\pm 5\%$, 3 w | 98095 | RW-F22-3KA |
| R46 | Resistor, precision, metal film, 1 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-102-1QA |
| R47 | Resistor, composition, 27 Ω , $\pm 10\%$, 1/2 w | 01121 | EB2701 |
| R48 | Resistor, composition, 220 Ω , $\pm 10\%$, 1/4 w | 01121 | EB2211 |
| R49 | Resistor, wirewound, 0.15 Ω , $\pm 5\%$, 3 w | 98095 | RW-F15-3KA |
| R50 | Resistor, precision, metal film, 1 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-102-1QA |
| R51 | Resistor, composition, 27 Ω , $\pm 10\%$, 1/2 w | 01121 | EB2701 |
| R53 | Resistor, precision, metal film, 221 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-2213-1QA |
| R54 | Resistor, precision, metal film, 1 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-102-1QA |
| R55 | Resistor, precision, metal film, 221 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-2213-1QA |
| R56 | Resistor, composition, 2.7 M Ω , $\pm 10\%$, 1/2 w | 01121 | EB2751 |
| R57 | Resistor, precision, metal film, 221 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-2213-1QA |
| R58 | Resistor, precision, metal film, 10 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-103-1QA |
| R59, R60 | Resistor, precision, metal film, 1 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-102-1QA |
| R61, R62, R63 | Resistor, precision, metal film, 10 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-103-1QA |
| R64 | Resistor, precision, metal film, 6.04 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-6041-1QA |
| R65 | Resistor, precision, metal film, 10 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-103-1QA |
| R67 | Resistor, wirewound, trimmer, 500 Ω , $\pm 10\%$, 1 1/4 w | 98095 | RWTP-501-C4 |
| R69 | Resistor, precision, metal film, 6.04 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-6041-1QA |
| R70 | Resistor, precision, metal film, 499 Ω , $\pm 1\%$, 1/4 w | 98095 | RD-4990-1QA |
| R71 | Resistor, precision, metal film, 1 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-102-1QA |
| R72 | Resistor, composition, 47 Ω , $\pm 10\%$, 1/2 w | 01121 | EB4701 |
| R73 | Resistor, precision, metal film, 100 Ω , $\pm 1\%$, 1/4 w | 98095 | RD-101-1QA |
| R74 | Resistor, wirewound, variable, 100 k Ω , $\pm 10\%$, 1 w | 98095 | RVC-104B4-1 |
| R75 | Resistor, wirewound, variable, 2 k Ω , $\pm 5\%$, 2 w, 10 turn | 98095 | RWV-202-3C10 |
| R76 | Resistor, precision, metal film, 22.1 Ω , $\pm 1\%$, 1/4 w | 98095 | RD-22F1-1QA |
| R77 | Resistor, precision, metal film, 2.15 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-2151-1QA |
| R78 | Resistor, precision, metal film, 1.58 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-1581-1QA |
| R79 | Resistor, precision, metal film, 3.01 k Ω , $\pm 1\%$, 1/4 w | 98095 | RD-3011-1QA |
| R80 | Resistor, composition, 1.5 k Ω , $\pm 5\%$, 1/2 w | 01121 | EB1525 |
| S1 | Switch, toggle, S. P. S. T. | 98095 | ST-5 |
| S2 | Switch, push button, D. P. D. T. | 98095 | ST-41 |
| T1 | Transformer | 98095 | TTM-6050BK-3 |

| CIRCUIT NUMBER | DESCRIPTION | MFR CODE NUMBER | PART NUMBER |
|-------------------|-----------------------|--------------------|----------------|
| U1 | Integrated circuit | 98095 | μ A3403DC |
| VR1 | Diode, silicon, zener | 98095 | DZ, E, F, G |
| VR2 | Diode, silicon, zener | 98095 | 3EZ5.6D5 |
| VR3 | Diode, silicon, zener | 98095 | 1N825 J, K |

CODE LIST OF MANUFACTURERS

| | | |
|-------|---------------------------------|----------------------|
| 01121 | Allen-Bradley Corporation | Milwaukee, Wisconsin |
| 71400 | Bussmann Manufacturing Division | St. Louis, Missouri |
| 98095 | Power Designs Inc. | Westbury, New York |

A1

DIGITAL PANEL METER ASSEMBLY

P/N A79062

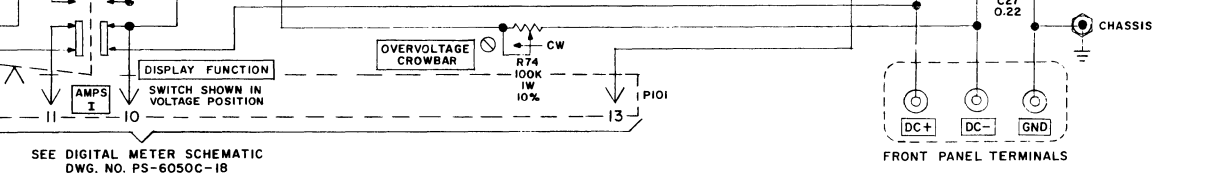
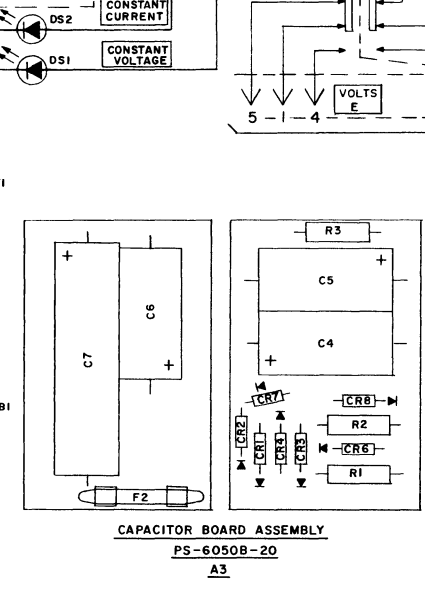
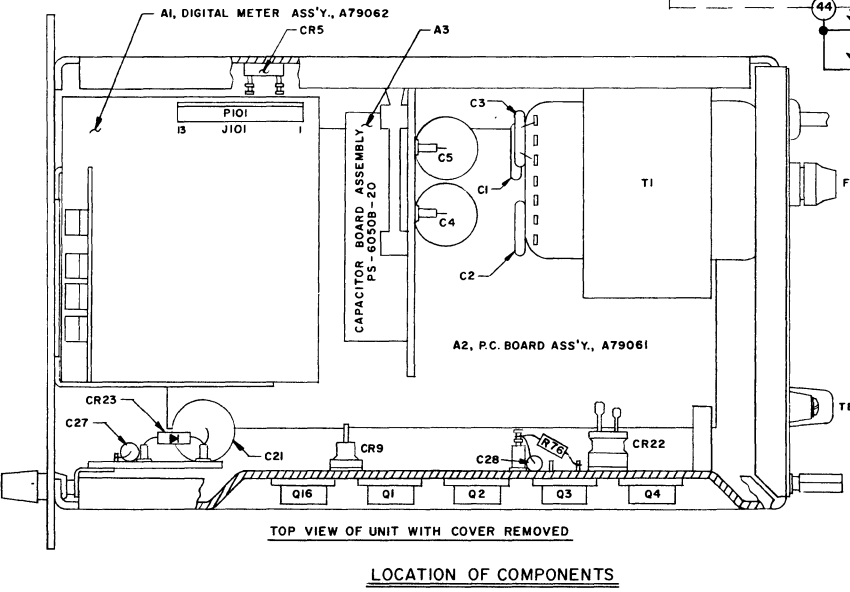
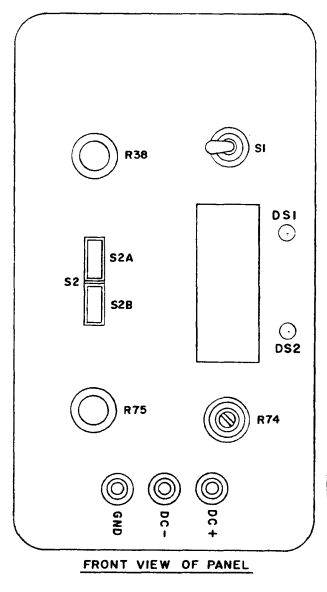
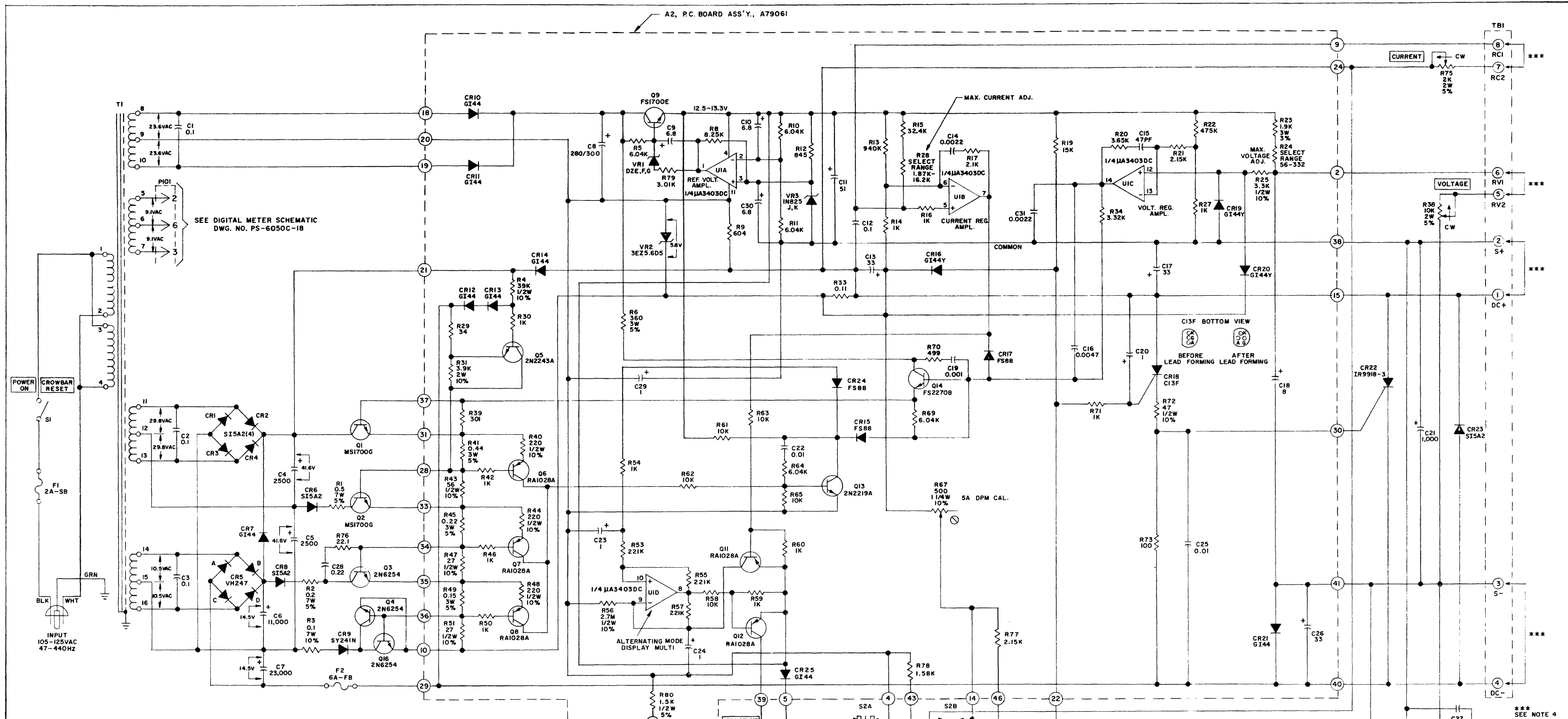
ELECTRICAL PARTS LIST

| CIRCUIT NUMBER | DESCRIPTION | MFR CODE NUMBER | PART NUMBER |
|---------------------|---|--------------------|----------------|
| C101 | Capacitor, electrolytic, 1000 μ f, 16 vdc | 98095 | CE-102-16-SE |
| C102 | Capacitor, tantalum, 1 μ f, 50 vdc | 98095 | CE-1-500 |
| C103 | Capacitor, ceramic disc, 390 pf, 1 k vdc | 98095 | CC-390P-102 |
| C104, C105 | Capacitor, plastic film, 0.47 μ f, 80 vdc | 98095 | CP-31-.8 |
| C106 | Capacitor, tantalum, 6.8 μ f, 35 vdc | 98095 | CE-6A8-.35 |
| C107 | Capacitor, tantalum, 1 μ f, 50 vdc | 98095 | CE-1-500 |
| CR101 thru CR104 | Diode, silicon | 98095 | GI44 |
| DS101 thru DS104 | Display, digital | 98095 | B78014 |
| J101 | Connector | 98095 | A78022 |
| P101 | Connector | 98095 | A78023 |
| R101 | Resistor, precision, metal film, 845 Ω , \pm 1%, 1/4 w | 98095 | RD-8450-1QA |
| R102 | Resistor, precision, metal film, 20 k Ω , \pm 1%, 1/4 w | 98095 | RD-203-1QA |
| R103, R104 | Resistor, wirewound, trimmer, 10 k Ω , \pm 10%, 1/2 w | 98095 | RWT-103-4A |
| R105 | Resistor, precision, metal film, 562 Ω , \pm 1%, 1/4 w | 98095 | RD-5620-1QA |
| R106 | Resistor, wirewound, trimmer, 100 Ω , \pm 10%, 1/2 w | 98095 | RWT-101-4A |
| R107 | Resistor, precision, metal film, 2.43 k Ω , \pm 1%, 1/4 w | 98095 | RD-2431-1QA |
| R108 thru | | | |
| R112 | Resistor, composition, 200 Ω \pm 5% 1/2 w | 01121 | EB2015 |
| R113, R114 | Resistor, composition, 47 Ω , \pm 10%, 1/2 w | 01121 | EB4701 |
| R115 | Resistor, composition, 22 M Ω , \pm 10%, 1/2 w | 01121 | EB2261 |
| R116 | Resistor, precision, metal film, 100 k Ω , \pm 1%, 1/4 w | 98095 | RD-104-1QA |
| R117 | Resistor, precision, metal film, 499 Ω , \pm 1%, 1/4 w | 98095 | RD-4990-1QA |
| R118 | Resistor, precision, metal film, 6.04 k Ω , \pm 1%, 1/4 w | 98095 | RD-6041-1QA |
| R119 thru | | | |
| R125 | Resistor, composition, 47 Ω , \pm 10%, 1/2 w | 01121 | EB4701 |
| R126 | Resistor, precision, metal film, 154 k Ω , \pm 0.25% 1/4 w | 98095 | RD-1543-11QA |
| R127 | Resistor, precision, metal film, 6.34 k Ω , \pm 1%, 1/4 w | 98095 | RD-6341-1QA |
| R128 | Resistor, precision, metal film, 1.62 k Ω , \pm 0.25% 1/4 w | 98095 | RD-1621-11QA |
| R129 | Resistor, precision, metal film, 100 k Ω , \pm 1%, 1/4 w | 98095 | RD-104-1QA |
| R130 | Resistor, composition, 1 M Ω , \pm 10%, 1/2 w | 01121 | EB1051 |

| CIRCUIT NUMBER | DESCRIPTION | MFR CODE NUMBER | PART NUMBER |
|---------------------------|------------------------|----------------------------|------------------------|
| U101 | Integrated circuit | 98095 | LM340T-5.0 |
| U102 | Integrated circuit | 98095 | ADD3501CCN |
| U103 | Integrated circuit | 98095 | CD4081BCN |
| U104 | Integrated circuit | 98095 | DS75492N |
| VR101 | Diode, I. C. Reference | 98095 | LM336H |

CODE LIST OF MANUFACTURERS

| | | |
|-------|---------------------------|----------------------|
| 01121 | Allen-Bradley Corporation | Milwaukee, Wisconsin |
| 98095 | Power Designs Inc. | Westbury, New York |

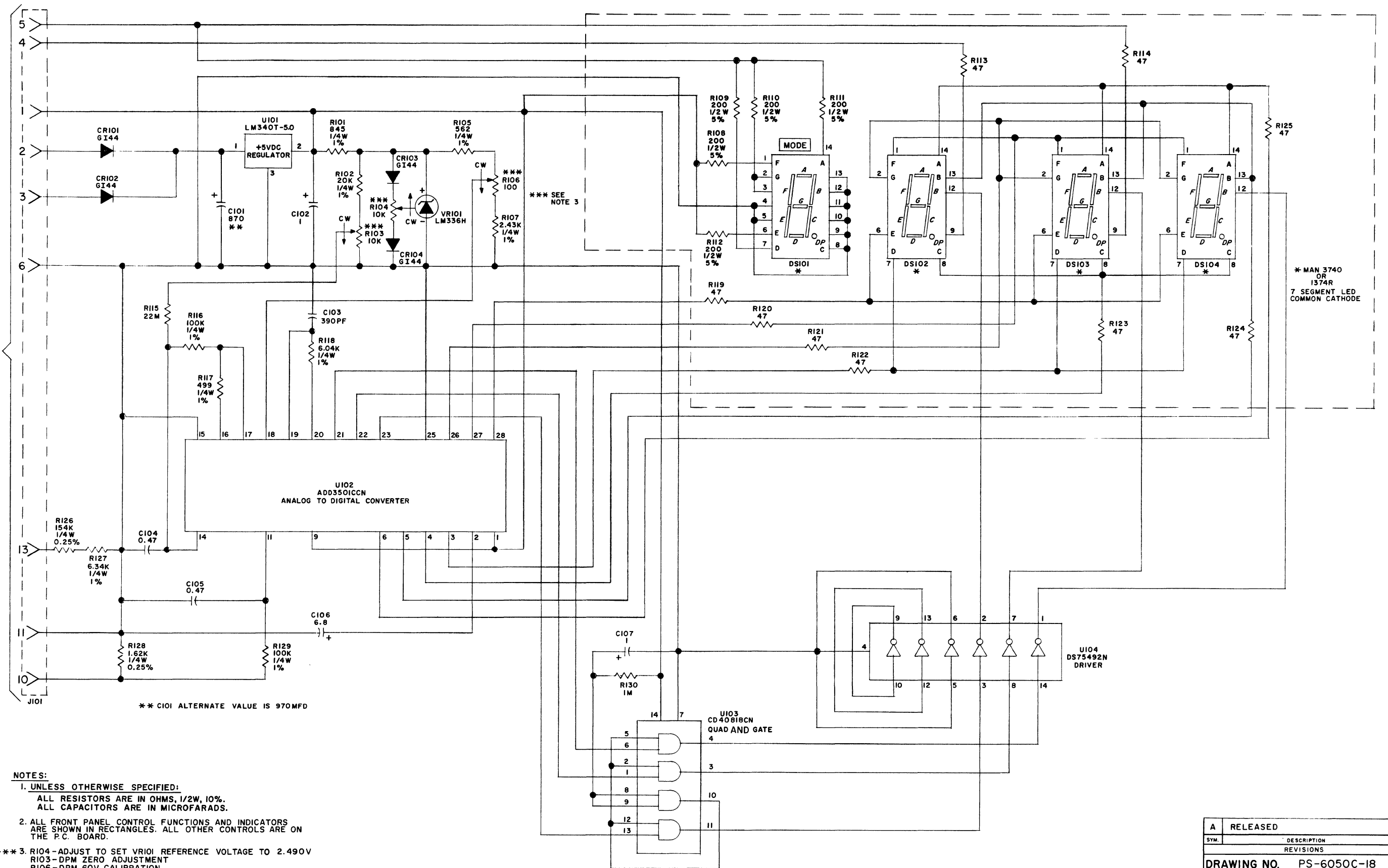


NOTES:
 1. UNLESS OTHERWISE SPECIFIED:
 ALL RESISTORS ARE IN OHMS, 1/4W, 1%.
 ALL CAPACITORS ARE IN MICROFARADS.
 ALL VOLTAGES REFERENCE TO COMMON.
 2. ALL FRONT PANEL CONTROL FUNCTIONS AND INDICATORS ARE SHOWN IN RECTANGLES. ALL OTHER CONTROLS ARE ON THE P.C. BOARD.
 3. NUMERALS IN CIRCLES THAT ARE CONNECTED BY DASH LINES INDICATE P.C. BOARD TERMINAL NUMBERS.
 *** 4. SHORTING LINKS ARE SHOWN FOR NORMAL OPERATION.

NOTICE
 PATENTS HAVE BEEN GRANTED. PATENT APPLICATIONS ARE PENDING OR IN PROCESS OF PREPARATION ON THE PROPRIETARY PORTIONS OF THE CIRCUITS SHOWN ON THIS DRAWING. REPRODUCTION IN WHOLE OR IN PART MAY NOT BE MADE WITHOUT PERMISSION.

| | | |
|----------------------------------|---------------------|----------------------|
| DRAWING NO. PS-6050C-1 | | REV. A |
| TITLE SCHEMATIC, MODEL 6050C | | |
| DRAWN FLF | CHECKED [Signature] | APPROVED [Signature] |
| DATE 2/19/81 | DATE [Signature] | DATE [Signature] |
| Power Designers Inc. NEW YORK | | |

SEE SCHEMATIC, DWG. NO. PS-6050C-1



** C101 ALTERNATE VALUE IS 970MFD

- NOTES:**
- UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE IN OHMS, 1/2W, 10%.
ALL CAPACITORS ARE IN MICROFARADS.
 - ALL FRONT PANEL CONTROL FUNCTIONS AND INDICATORS ARE SHOWN IN RECTANGLES. ALL OTHER CONTROLS ARE ON THE P.C. BOARD.
 - R104 - ADJUST TO SET VR101 REFERENCE VOLTAGE TO 2.490V
R103 - DPM ZERO ADJUSTMENT
R106 - DPM 60V CALIBRATION

NOTICE
PATENTS HAVE BEEN GRANTED, PATENT APPLICATIONS ARE PENDING OR IN PROCESS OF PREPARATION ON THE PROPRIETARY PORTIONS OF THE CIRCUITS SHOWN ON THIS DRAWING. REPRODUCTION IN WHOLE OR IN PART MAY NOT BE MADE WITHOUT PERMISSION.

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|--|-------------|---------|--------------|
| A | RELEASED | | |
| SYM. | DESCRIPTION | APPR. | DATE |
| REVISIONS | | | |
| DRAWING NO. | PS-6050C-18 | REV. | A |
| TITLE SCHEMATIC, DIGITAL METER ASSEMBLY A79062 | | | |
| DRAWN | HC | CHECKED | APPROVED |
| DATE | 11/4/81 | DATE | DATE 12/0/81 |
| NEW YORK | | | |

WARRANTY

POWER DESIGNS INC., warrants to the original purchaser, each instrument sold by us, or our authorized agents, and all the parts thereof, to be free from defects in material or workmanship under normal use and service within the specified ratings and operating conditions.

Its obligation under this warranty is hereby limited to the repair or replacement of any instrument, or part thereof, which is returned to us within one year after delivery, and which shall prove, after our examination, to be thus defective.

This warranty does not include the cost of transportation charges to and from the factory and/or the cost of packaging or crating of instruments for return to the factory, unless such instrument is returned within thirty (30) days from the date of original shipment as shown on the packing list or shipping documents, and prior written authorization for such costs is obtained from the factory.

The repair or replacement of an instrument, or any part thereof, does not void or extend the original warranty.

POWER DESIGNS INC., reserves the right to discontinue any instrument without notice, or to make modifications in design at any time, without incurring any obligation to make these modifications in instruments previously sold.

POWER DESIGNS INC.

Westbury, L. I., New York

POWER DESIGNS PACIFIC, INC.

Palo Alto, California