

# CPS FC21

3-VOLT REFERENCE AND FILTER CIRCUIT (0,1)

**COMPONENT LIST**

**CAPACITOR**

| DESIG                          | CODE                                       |
|--------------------------------|--------------------------------------------|
| [20] C1.0-C10.0,<br>C1.1-C10.1 | 39 10K-20V 602H<br>(KEMET, 1110039, 029A5) |

**INTEGRATED CIRCUIT**

| DESIG | CODE |
|-------|------|
| CM1   | 588A |

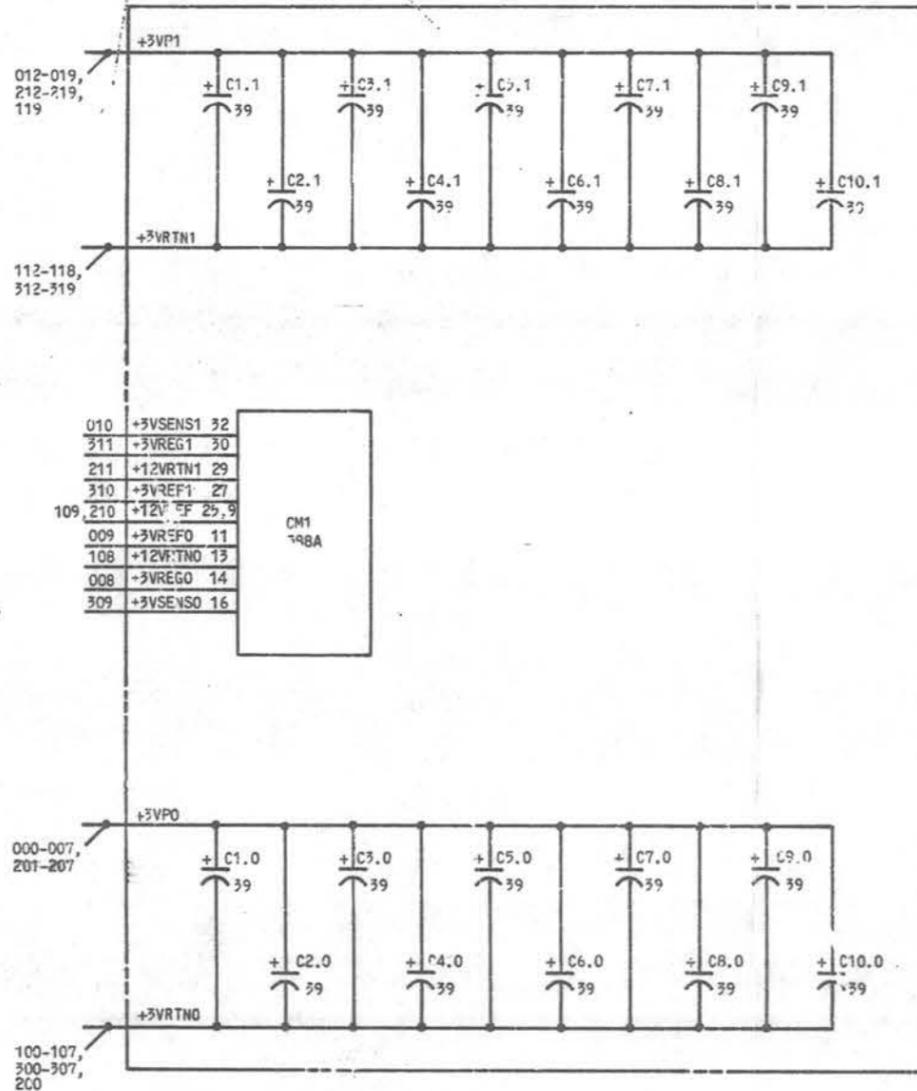
**3-VOLT REFERENCE AND FILTER CIRCUIT (0,1) FC21**

**A. DESCRIPTION**

THIS BOARD PROVIDES REFERENCE AND SENSE INPUTS FOR THE J87389-F 3-VOLT POWER SUPPLY AND FILTER CAPACITANCE AT THE LOAD. TWO POWER SUPPLIES OF UP TO 4 AMPS EACH CAN BE HANDLED BY THE FC21.

THE 3-VOLT REFERENCE OUTPUT IS ACHIEVED THROUGH A VOLTAGE DIVIDER OF R9 AND R10 (FOR CKT 0) AND R7 AND R8 (FOR CKT 1) CONNECTED TO A 12-VOLT REFERENCE. IN ORDER TO BALANCE THE INPUTS IN THE "A" CIRCUIT, R2, EQUIVALENT TO THE PARALLEL COMBINATION R9 AND R10, AND R1 EQUIVALENT TO THE PARALLEL COMBINATION OF R7 AND R8, ARE CONNECTED IN SERIES WITH THE SENSE LEADS.

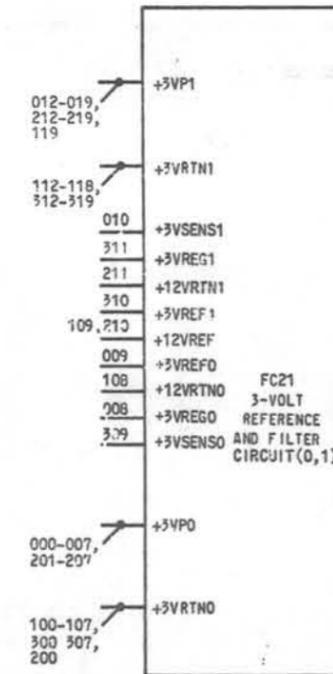
THE FILTER CAPACITANCE FOR EACH CIRCUIT CONSISTS OF TEN 39 μF TANTALUM CAPACITORS IN PARALLEL TO MINIMIZE SERIES RESISTANCE.



MANUFACTURING REFERENCES

| CATEGORY                                    | NO.                         |
|---------------------------------------------|-----------------------------|
| CIRCUIT PACK CODE                           | FC21                        |
| CONNECTOR ON FRAME CIRCUIT PACK INFORMATION | 947C SD-3A006-01            |
| SERIES NO. IDENT                            | FOR LATEST CLASS "A" CHANGE |
|                                             | 2                           |
|                                             | FOR CURRENT MANUFACTURE     |
|                                             | 2                           |

**SYMBOL**



**NOTES:**

- HORIZONTAL MOUNTING CENTERS AT .500 INCH.
- UNLESS OTHERWISE SPECIFIED: CAPACITANCE VALUES ARE IN MICROFARADS, VALUES PRECEDED BY THE SYMBOL + (PLUS) OR - (MINUS) ARE IN VOLTS.

| SYSTEM USED ON | DESIGN CONTROL |
|----------------|----------------|
| 1A PROC        | TH             |

| DRG ISSUE | OR CD | DATE    | ISSUED | BY | APPD   |
|-----------|-------|---------|--------|----|--------|
| 1         |       | 1-21-72 |        |    | TEL R5 |
| 2D        |       | 9-26-73 |        |    | TEL R5 |
| 3A        |       | 2-8-74  |        |    | TEL R5 |
| 4D1       |       | 5/26/74 |        |    | TEL R5 |

**NOTICE** - NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL SYSTEM EXCEPT UNDER WRITTEN AGREEMENT.

|                                                          |                     |
|----------------------------------------------------------|---------------------|
| FC21 CIRCUIT PACK<br>3 VOLT REFERENCE AND FILTER CIRCUIT | AT&T CO<br>STANDARD |
| BELL TELEPHONE LABORATORIES<br>INCORPORATED              | CPS-FC21            |

ISSUE 4D1