

CUSTOMER NAME J.E. Medical w/c# 9808  
Assembly Drawings  
SERIAL # 820239904  
NAME OF HOST COMPUTER RSCP

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This document contains schematics, topologies, power supplies, wiring diagrams, etc.

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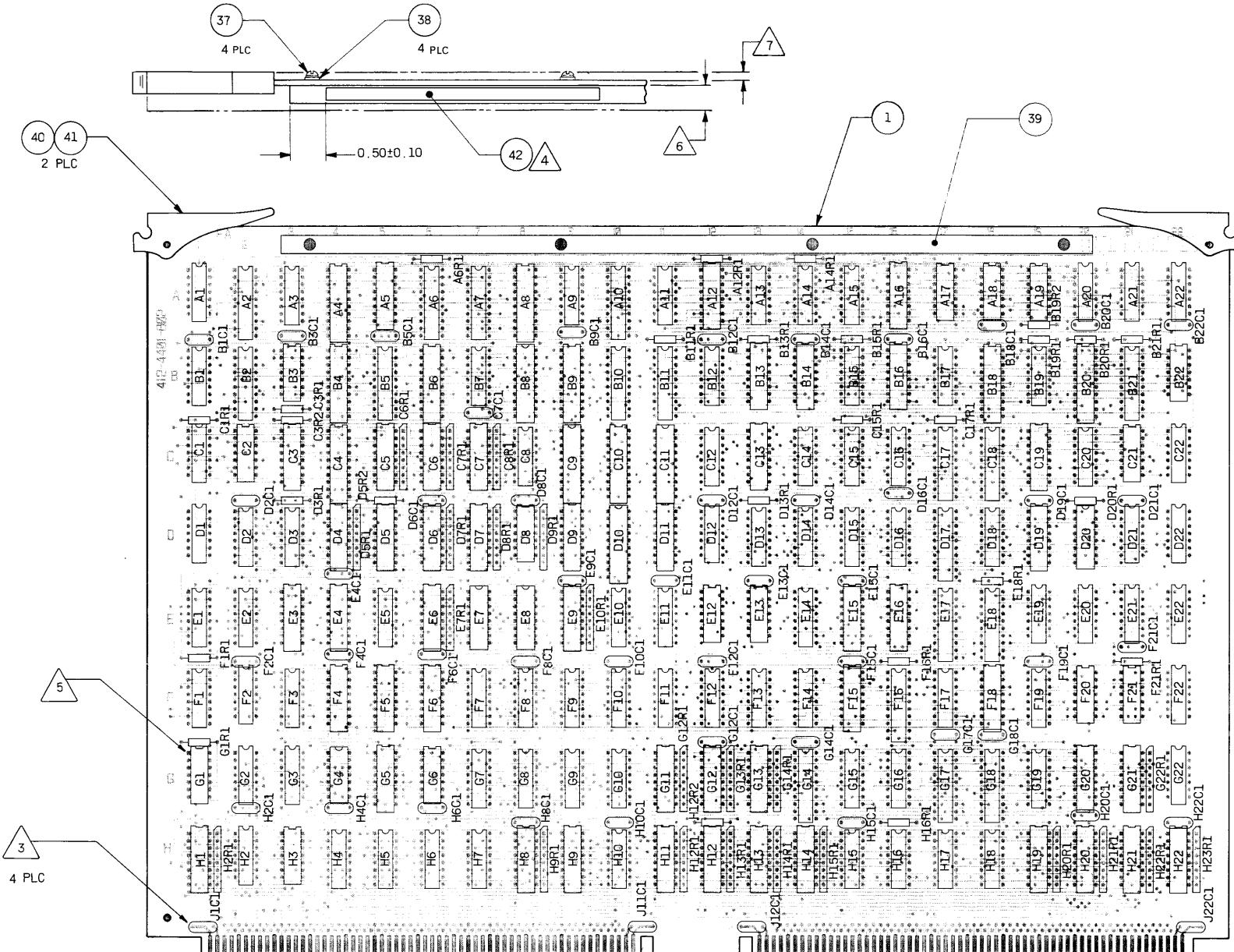
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COMPONENT SIDE

- 10**) DESIGNATIONS IN PARENTHESES "( )" DENOTES CONTINUITY CHECK POINT FROM FEED-THRU HOLE.
  - 9**) FT DENOTES FEED-THRU HOLE.
  - 8**) MODIFY WITH CUTS AND STRAPS AS SHOWN ON SHEET 3. REWORK TABLE ON SHEET 3 PROVIDES CONTINUITY CHECK POINTS WHICH MAY BE USED AS NECESSARY TO VERIFY LOCATIONS.
  - 7**) MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON SOLDER SIDE IS 0.150.
  - 6**) MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON COMPONENT SIDE IS 0.310.
  - 5**) SQUARE PADS INDICATE ORIENTATION OF PIN 1 ON IC'S, AND R-PAKS.
  - 4**) INK STAMP OR TYPE IDENTIFICATION CHARACTERS AS REQUIRED ON LABEL AND APPLY IN POSITION AS SHOWN.
  - 3**) OBSERVE POLARITY WHEN INSTALLING COMPONENT.
  - 2. INSTALL ALL COMPONENTS PER REFERENCE DESIGNATORS.
  - 1**) REFER ALL ITEMS TO PARTS LIST, SAME PART NUMBER AS THIS DRAWING.

ECO # 82353

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DIMENSIONS ARE IN MILLIMETERS  
TOLERANCES ± 0.5 mm  
SIZES ± 0.5 mm  
PRECISION DECIMAL ± 0.5 mm

SPECIFIED  
INCHES

	PROJ. ENG.
	Dave Cook
	DRAWN BY
	JOHN C. YOUNG
	CHECK BY
	6-16

REFERENCE DESIGNATION			
DATE <u>4-7-80</u>	 <b>FLOATING POINT SYSTEMS, INC.</b> POBox 23489 Portland OR 97223		
DATE <u>10-3-79</u>	DRAWING TITLE		
DATE <u>10-9-79</u>	ETCH CIRCUIT BOARD ASSEMBLY, 401-B, FLOATING ADDER		
DATE <u>4-7-80</u>	SIZE	CODE IDENT. NO.	DRAWING NO.
	<b>D</b>	<b>56504</b>	<b>612-4401-002</b>
RAWING	SCALE	NAME	SHEET 1 OF 1

REVISIONS					
AUTH.	DESCRIPTION	ZONE	APVD / DATE	CHK.	DATE
N #040	INITIAL LEVEL 2 RELEASE		10/29/87		
CO 80106	LEVEL 3 RELEASE		AC-450	D	4/2
CO 80272	CORRECT G14-18 FLOATING	8C	11/18/80	S	1/18
CO 80392	CHANGE TO 1K PULLUPS	8C	10/22/82	S	10/22/82

45	H12R2, H16R1
44	A18
36	A4,A7, B2
35	A2,A6,A8,A10, B4,B5,B10,B11
34	B6,B8,B9, C4,C9,C10,C11, D10
33	G11,G12,G13,G21, H1,H8,H11,H12,H13,H14,H19,H20,H21,H22
32	D20
31	B1, F1, F1
30	A11,A12,A13,A14,A15, B13,B14,B15,B16, C5,C6,C7,C8,C12,C13,C14,C15,C16, D2,D3,D6,D7,D13,D14,D15,D16, E2,E4,E5,E6,E9,E10,E14,E15,E16, F3,F4,F5, F6,F7,F8,F9,F10,F14,F15, G5, H6,H7
29	A16
28	A3,A5,A9, B12
27	B17, C19,C20, E3, F11,F12,F18, G8,G9,G15,G16,G19,G20, H5,H10,H16,H17,H18
26	B21
25	E11, F13, G7,G10, H4,H9,H15
24	A19, B22, E19
23	B18,B20, C17,C18, D17, E17,E18, F16, G14,G17,G18
22	D12
21	B7,B19, D9,D11,D18,D19, F17
20	C3, F19
19	D4,D5, E7,E8
18	A22, C22, G2, H2,H3
17	A1
16	C2
15	A21, D21
14	B3, G3,G6, F2
13	D22, E12
12	A20, C1, D1, G1, F21
11	C21, E13,E22
10	G4
9	A17, D8, E20,E21, F20,F22
8	J1C1,J11C1,J12C1,J22C1
7	B1C1,B3C1,B5C1,B9C1,B12C1,B14C1,B16C1,B18C1,B20C1,B22C1, C7C1, D2C1, D6C1,D8C1,D12C1,D14C1,D16C1,D19C1,D21C1, E4C1,E9C1,E11C1,E13C1,E15C1, F2C1,F4C1,F6C1,F8C1,F10C1,F12C1,F15C1,F19C1,F21C1, G12C1,G14C1,G17C1, G18C1, H2C1,H4C1,H6C1,H8C1,H10C1,H15C1,H20C1,H22C1
6	G12R1,G13R1,G14R1,G22R1, H2R1,H9R1,H12R1,H13R1,H14R1,H15R1,H20R1, H21R1,H22R1,H23R1
5	G22
4	C6R1,C7R1,C8R1, D5R1,D7R1,D8R1,D9R1, E7R1,E10R1
3	A6R1, B11R1,B21R1,
2	A12R1,A14R1, B13R1,B15R1,B19R1,B19R2,B20R1, C1R1,C3R1,C3R2,C15R1, C17R1, D3R1,D5R2,D13R1,D20R1, F1R1,F21R1, G1R1,E18R1,F16R1
1	REFERENCE DESIGNATION

8

3

1

D

C

2

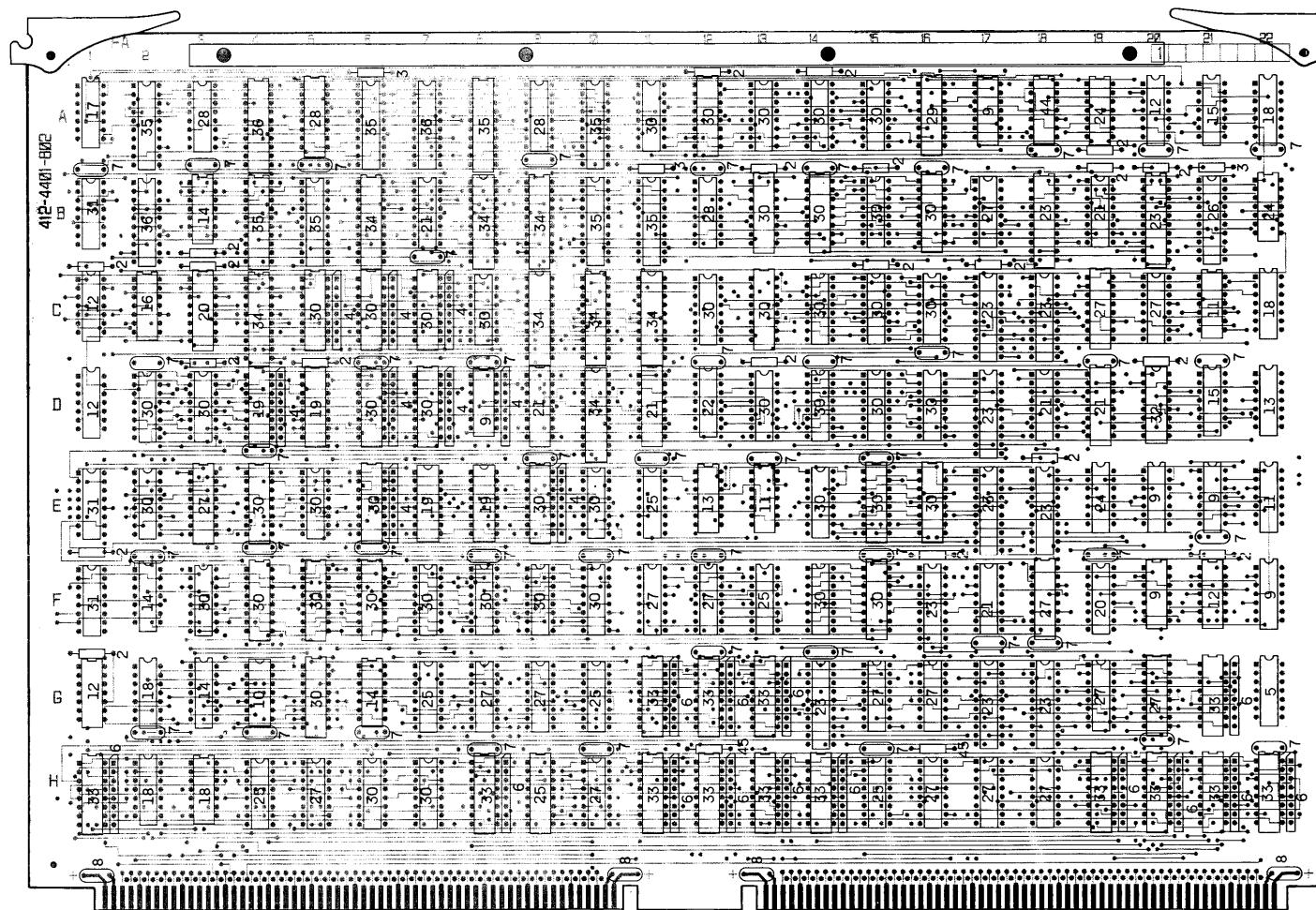
A

1

10

1

4



COMPONENT SIDE

THIS VIEW FOR REFERENCE ON

COMPONENTS ARE IDENTIFIED WITH  
ITEM NUMBERS.

612-4401-002	REV. C
SHEET 2 OF 4	

D

C

B

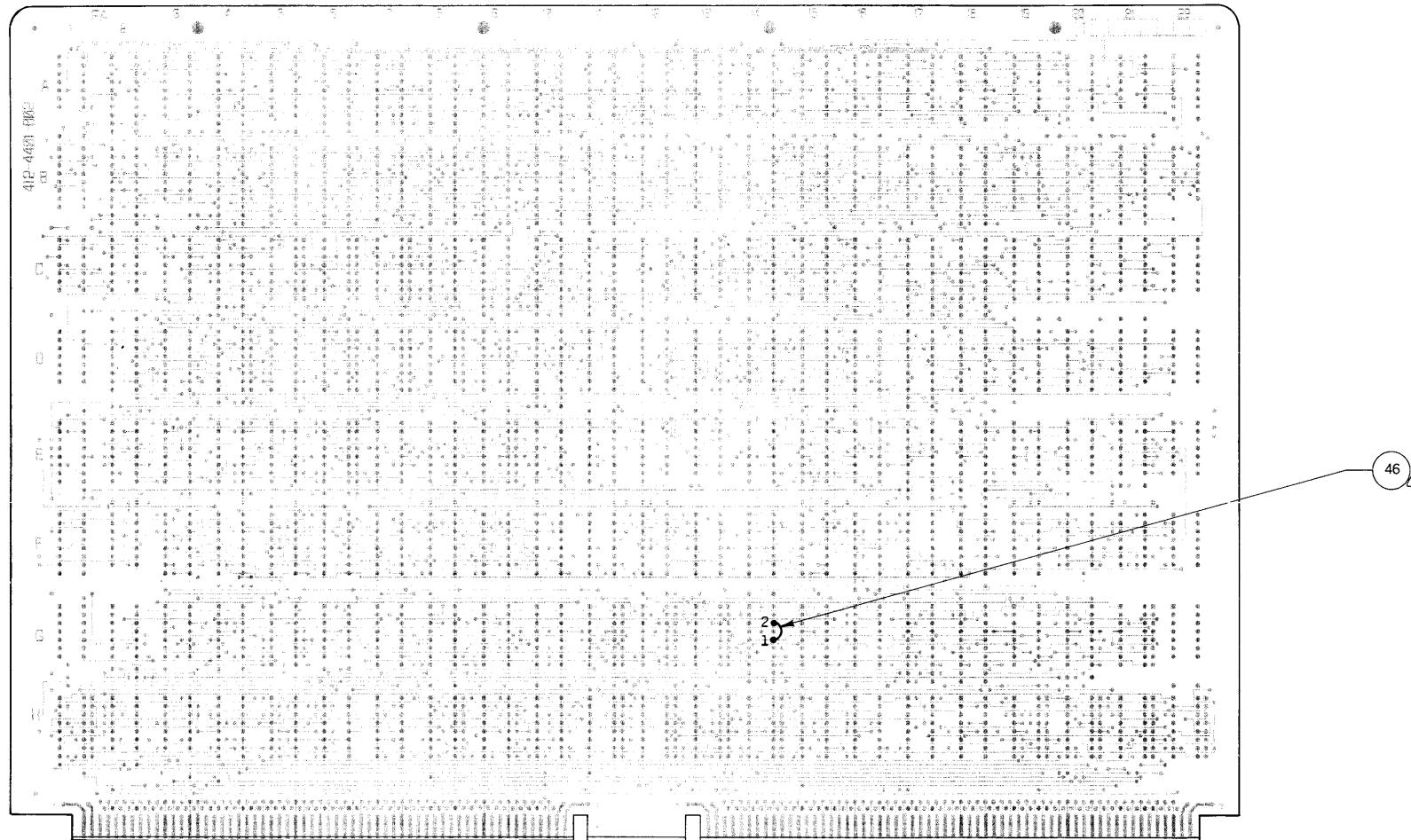
A

D

C

B

A



COMPONENT SIDE

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X	1-2	G14-16	G14-18	COMPONENT
ADD STRAP	CUT ETCH	DESIGNATOR	FROM TO	SIDE
CONTINUITY CHECK POINTS				
8	9	10	REWORK TABLE	
ENR	DATE			
DRN BY	DATE			
CHK BY	DATE			DRAWING TITLE
PROD RELEASE	DATE			ETCH CIRCUIT BOARD ASSEMBLY, 401-B, FLOATING ADDER
D	CODE IDENT. NO.	DRAWING NO.	REV	
D	56504	612-4401-002	C	
SCALE NONE				
SHEET 3 OF 4				

**FPS** FLOATING POINT SYSTEMS, INC.  
POBox 23489 Portland OR 97223

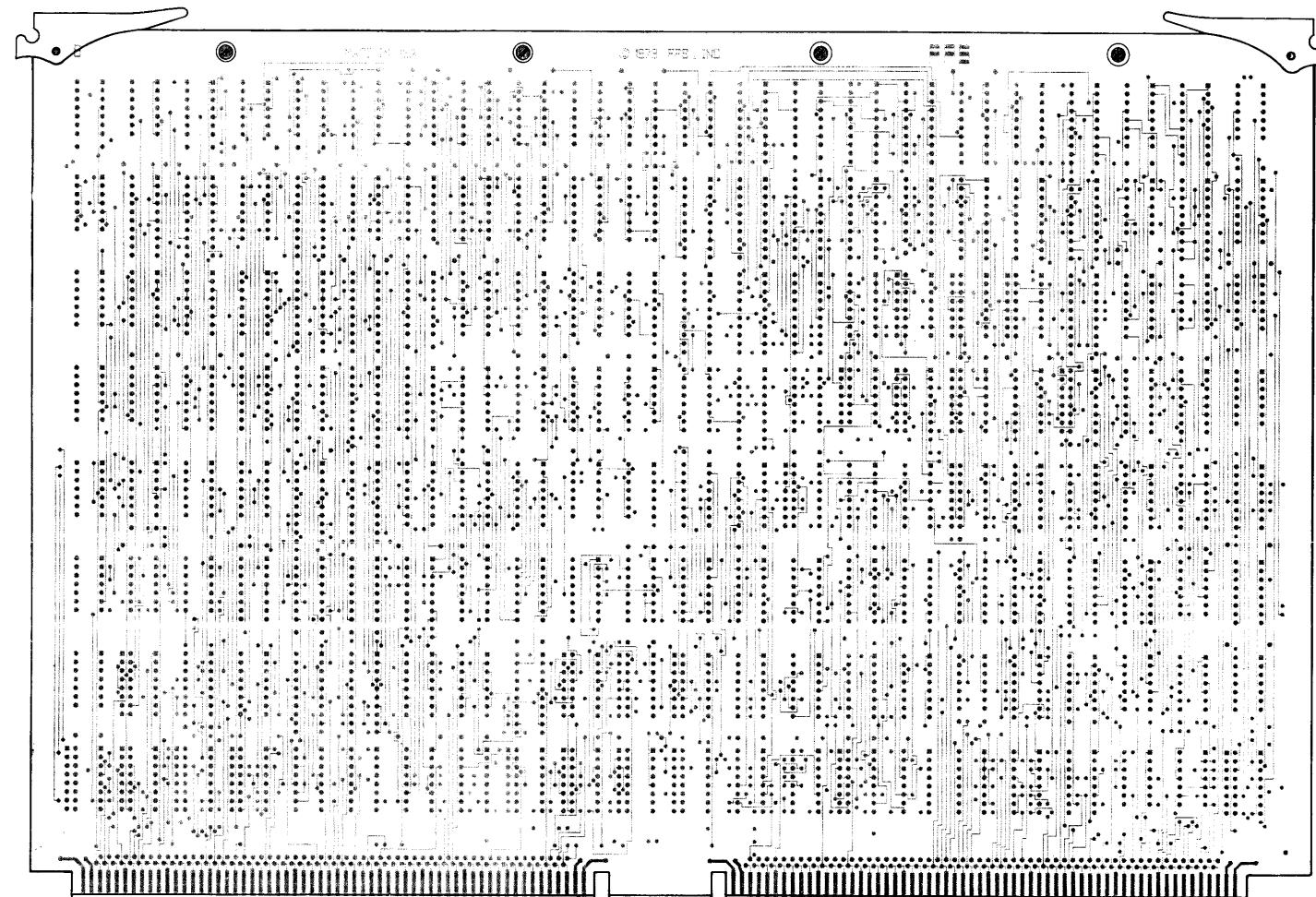
8 7 6 5 4 3 2 1

D

C

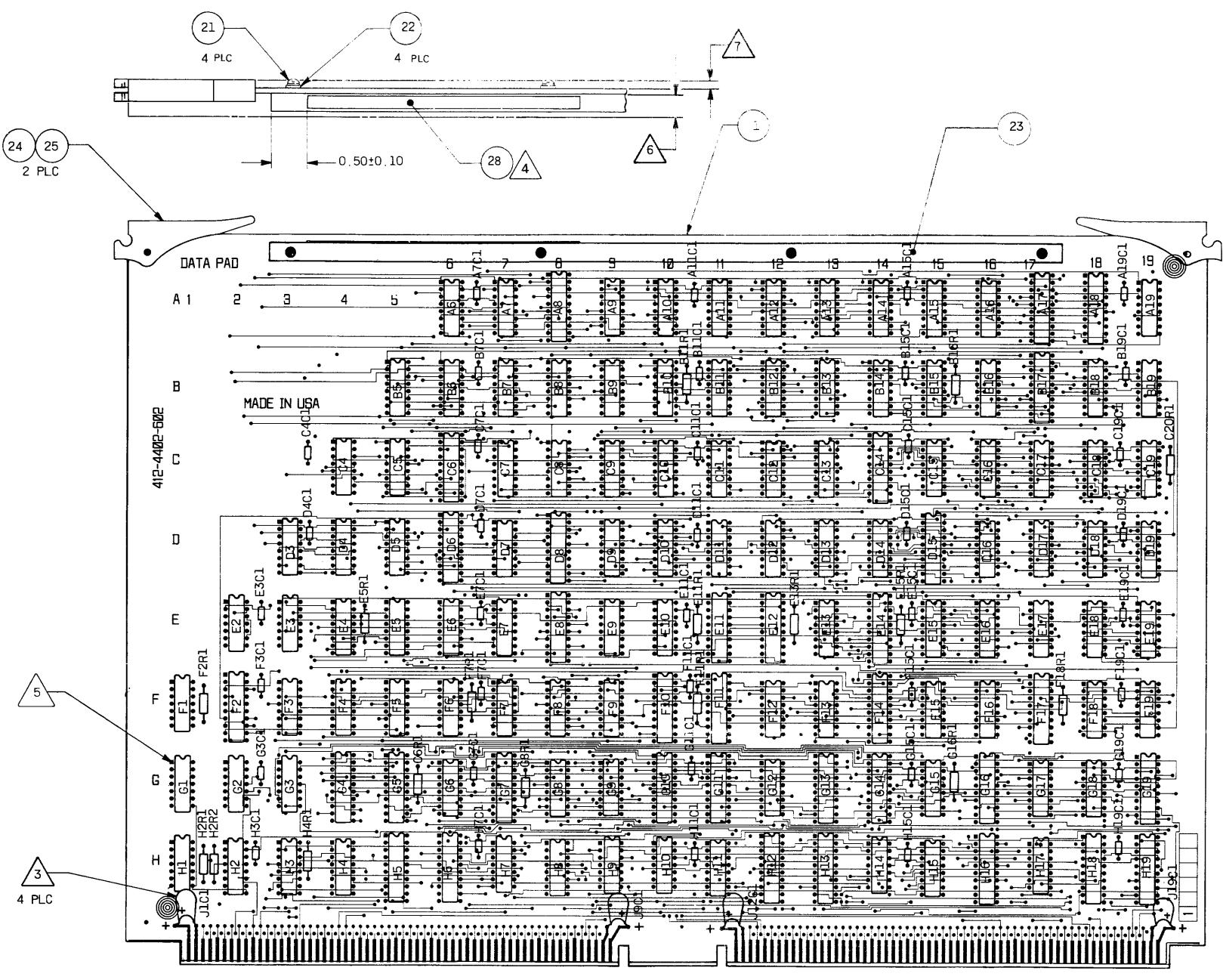
B

A



SOLDER SIDE

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D	56504	612-4401-002	C
SCALE NONE			SHEET 4 OF 4



COMPONENT SIDE

10 DESIGNATIONS IN PARENTHESES "(" DENOTES CONTINUITY CHECK POINT FROM FEED-THRU HOLE.

9 FT DENOTES FEED-THRU HOLE.

8 MODIFY WITH CUTS AND STRAPS AS SHOWN ON SHEET 3, REWORK TABLE ON SHEET 3 PROVIDES CONTINUITY CHECK POINTS WHICH MAY BE USED AS NECESSARY TO VERIFY LOCATIONS.

7 MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON SOLDER SIDE IS 0.090.

6 MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON COMPONENT SIDE IS 0.310.

5 SQUARE PADS INDICATE ORIENTATION OF PIN 1 ON IC'S, AND R-PAKS

4 INK STAMP OR TYPE IDENTIFICATION CHARACTERS, ASSEMBLY PART NUMBER, REVISION LEVEL PER THIS DRAWING, AND SERIAL NUMBER AS ASSIGNED ON LABEL. APPLY IN POSITION AS SHOWN.

3 OBSERVE POLARITY WHEN INSTALLING COMPONENT.

2. INSTALL ALL COMPONENTS PER REFERENCE DESIGNATORS

1 REFER ALL ITEMS TO PARTS LIST, SAME PART NUMBER AS THIS DRAWING.

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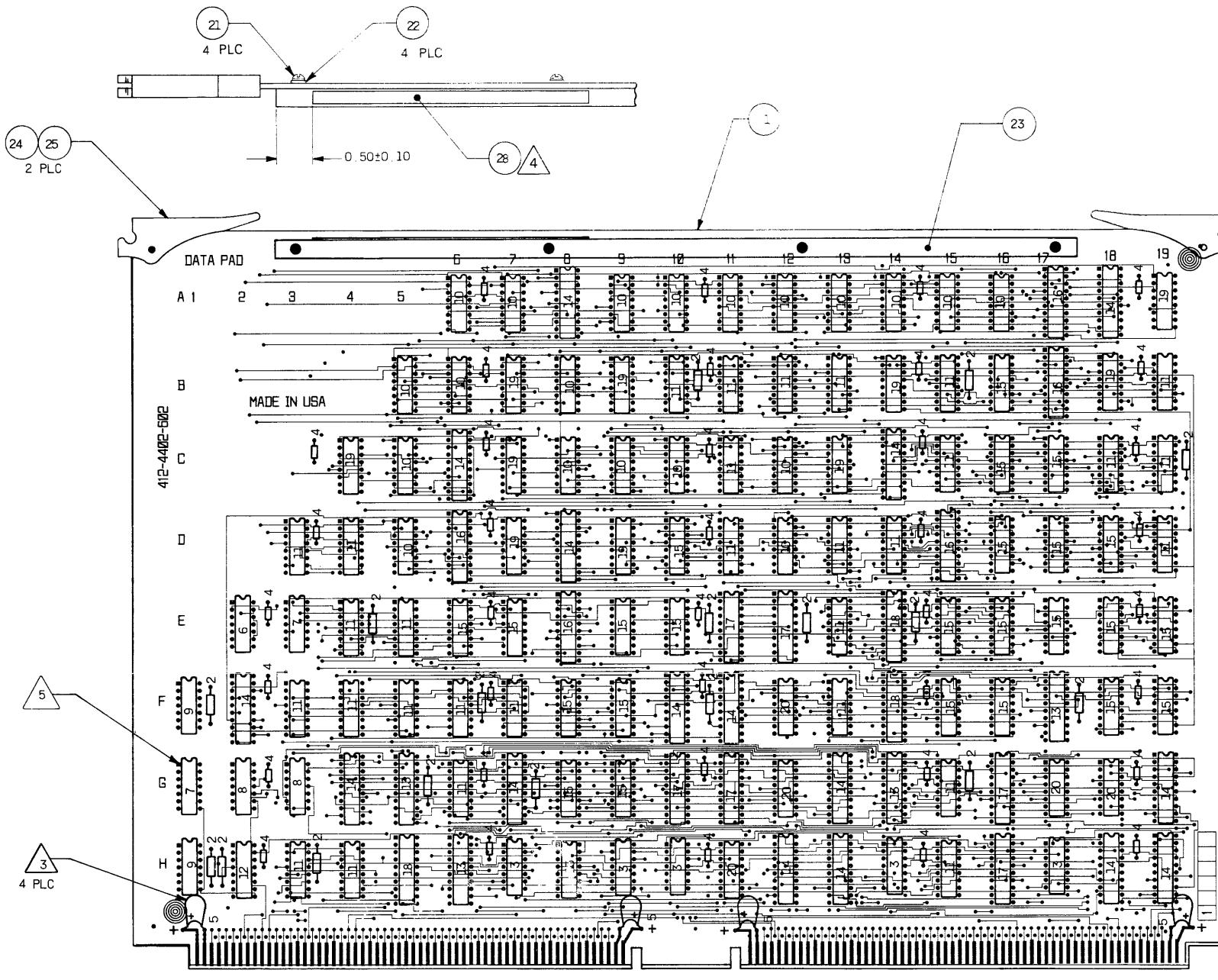
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ECO #82353

REVISIONS					
REV	AUTH	DESCRIPTION	ZONE	APVD/DATE	CHK/DATE
O1	ECO 79117	INITIAL LEVEL 2 RELEASE, 106101		10/24/79	7-10-79
O2	ECO 79614	PARTS LIST CORRECTIONS		10/24/79	7-10-79
O3	ECO 79679	PARTS LIST CORRECTION		10/24/79	7-10-79
A	ECO 80063	LEVEL 3 RELEASE		10/24/80	7-10-80
B	ECO 80259	ADD PAGE 3 REWORK SHEET		10/24/80	7-10-80

20	F12, G12, G17, G18, H11
19	A19, B7, B9, B14, B18, C4, C7, C13, D7, D9
18	E14, F14, H5
17	E11, E12, G10, G11, G16, H16
16	A17, B17, D6, D15, E8
15	B16, C16, C17, D10, D16, D17, D18, E6, E7, E9, E10, E15, E16, E17, E18, E19, F8, F9, F15, F16, F18, F19, G8, G9, H8
14	A8, A18, C6, C14, D8, F2, F10, F11, G4, G7, G13, G19, H12, H13, H18, H19
13	F17, G5, G14, H6
12	H2
11	B10, B11, B12, B13, B15, B19, C11, C15, C18, C19, D3, D4, D11, D13, D14, D19, E4, E5, E13, F3, F4, F5, F6, F7, F13, G6, G15, H3, H4, H15
10	A6, A7, A9, A10, A11, A12, A13, A14, A15, A16, B5, B6, B8, C5, C8, C9, C10, C12, D5, D12
9	F1, H1
8	G2, G3
7	E3, G1
6	E2
5	J1C1, J9C1, J12C1, J19C1
4	A7C1, A11C1, A15C1, A19C1, B7C1, B11C1, B15C1, B19C1, C4C1, C7C1, C11C1, C15C1, C19C1, D4C1, D7C1, D11C1, D15C1, D19C1, E3C1, E7C1, E11C1, E15C1, E19C1, F3C1, F7C1, F11C1, F15C1, F19C1, G3C1, G7C1, G11C1, G15C1, G19C1, H3C1, H7C1, H11C1, H15C1, H19C1
3	H7, H9, H10, H14, H17
2	B11R1, B16R1, C20R1, E5R1, E11R1, E13R1, E15R1, F2R1, F7R1, F11R1, F18R1, G6R1, G8R1, G16R1, H2R1, H2R2, H4R1
ITEM	REFERENCE DESIGNATION

ENGR	Dave Cook	DATE	11-1-79
DRN BY	R.S. THURMAN	DATE	5/22/79
CHK BY	CHINH NGUYEN	DATE	5-25-79
PROD RELEASE		DATE	
FLOTTING POINT SYSTEMS, INC.		POBox 23489 Portland OR 97223	
DRAWING TITLE			
ETCH CIRCUIT BOARD ASSEMBLY, 402-B, DATA PAD			
SIZE	CODE IDENT. NO.	DRAWING NO.	REV
D	56504	612-4402-003	B



COMPONENT SIDE

THIS VIEW FOR REFERENCE ONLY.

COMPONENTS ARE IDENTIFIED WITH  
ITEM NUMBERS.

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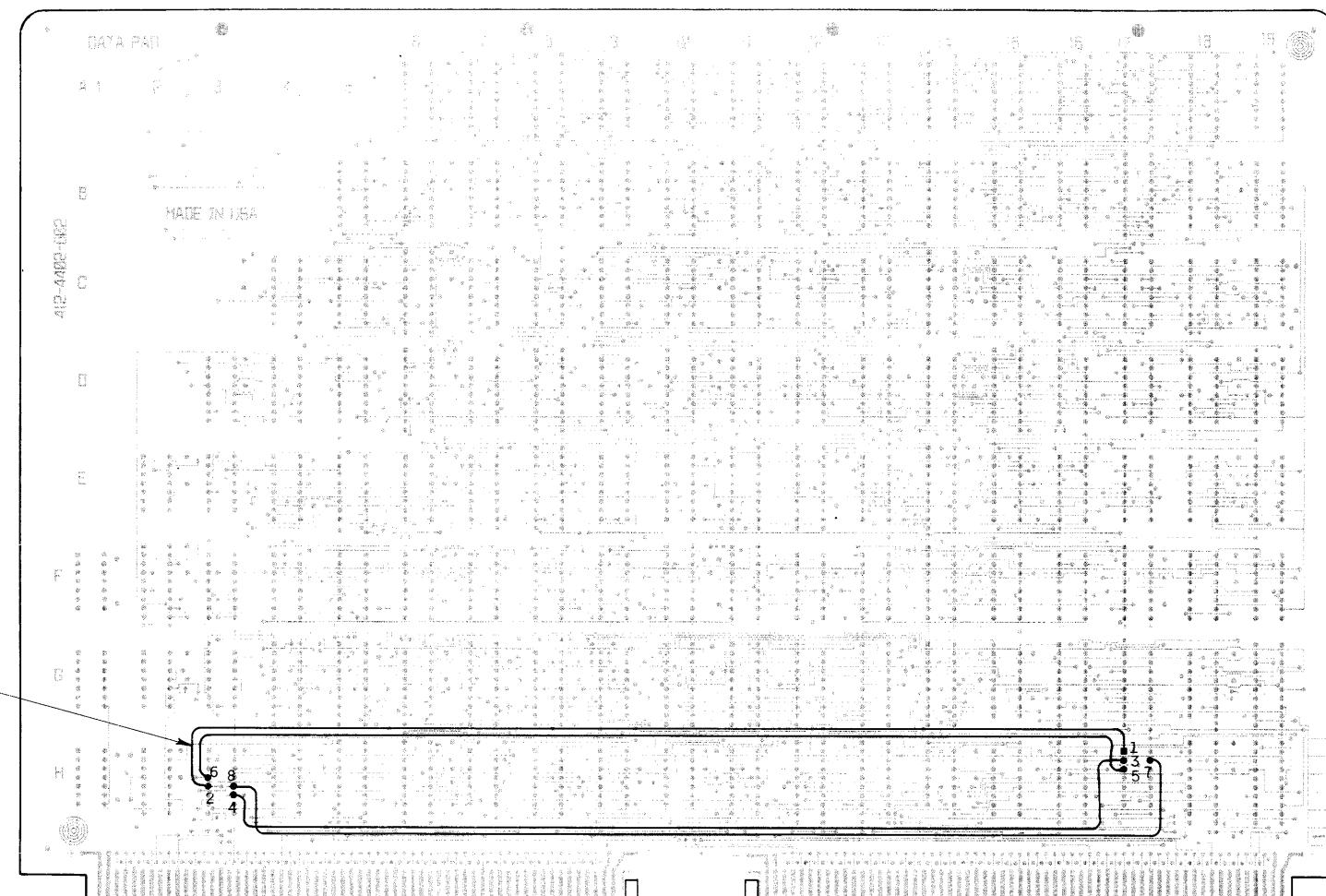
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ENGR	DATE	<b>FLOATING POINT SYSTEMS, INC.</b> POBox 23489 Portland OR 97223
FRACTIONS ± _____ ANGLES ± _____ 3 PLACE DEC. ± _____ 2 PLACE DEC. ± _____		DRN BY	DATE	
CHK BY		DATE	DRAWING TITLE	
MATERIAL:		PROD RELEASE	DATE	ETCH CIRCUIT BOARD ASSEMBLY, 402-B, DATA PAD
				SIZE CODE IDENT. NO. DRAWING NO.
D 56504		612-4402-003		REV. B
SCALE NONE		SHEET 2 OF 4		

8 29

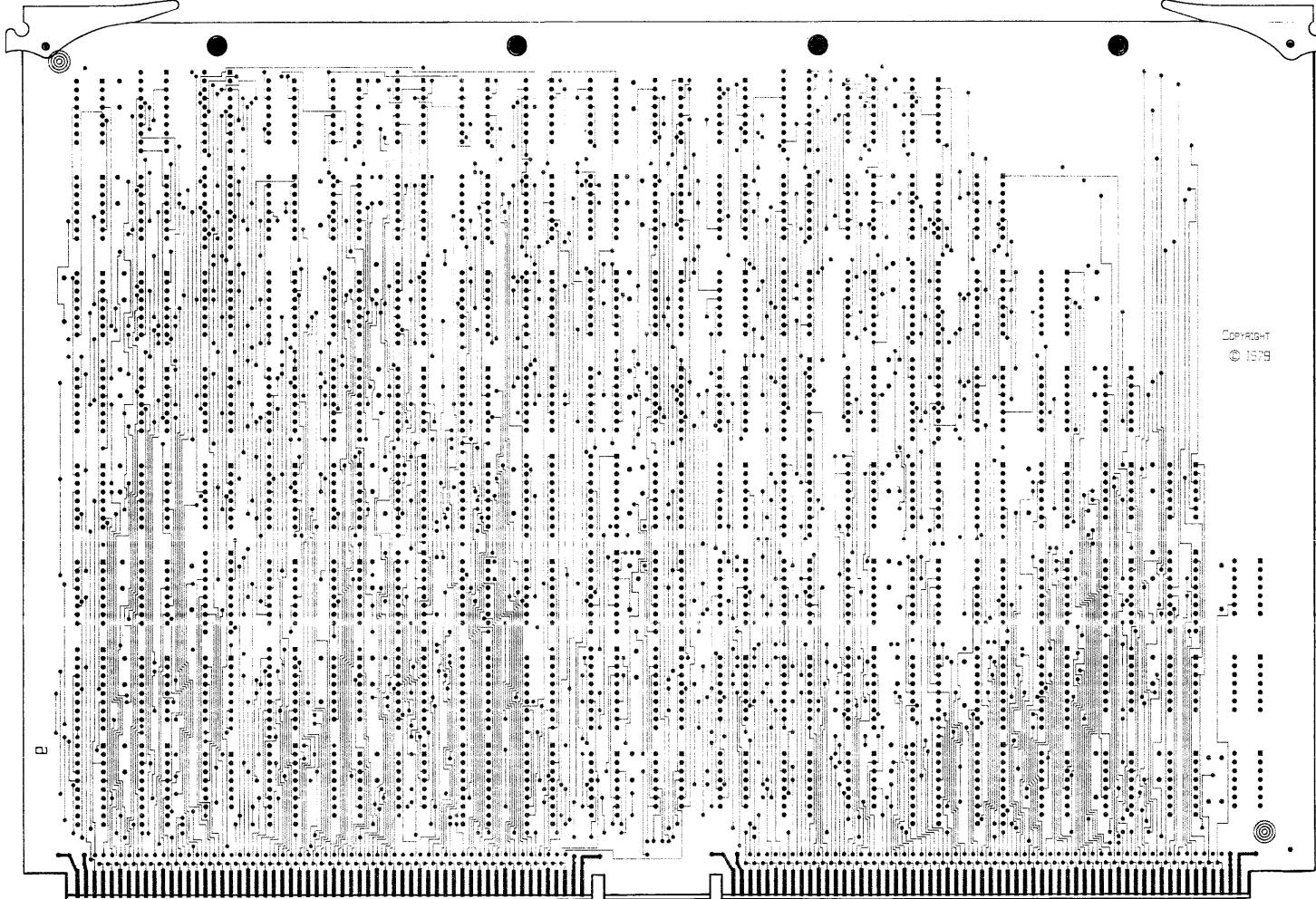
DRAWING NO.  
612-4402-003SHT  
3

W

X	7-8	H17-13	H3-12	COMPONENT
X	5-6	H17-3	H3-4	
X	3-4	H17-2	H3-11	
X	1-2	H17-1	H3-5	COMPONENT
ADD STRAP	CUT ETCH	DESIGNATOR	FROM TO	SIDE
			CONTINUITY CHECK POINTS	

8 9 10 REWORK TABLE

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D	56504	612-4402-003	B



SOLDER SIDE

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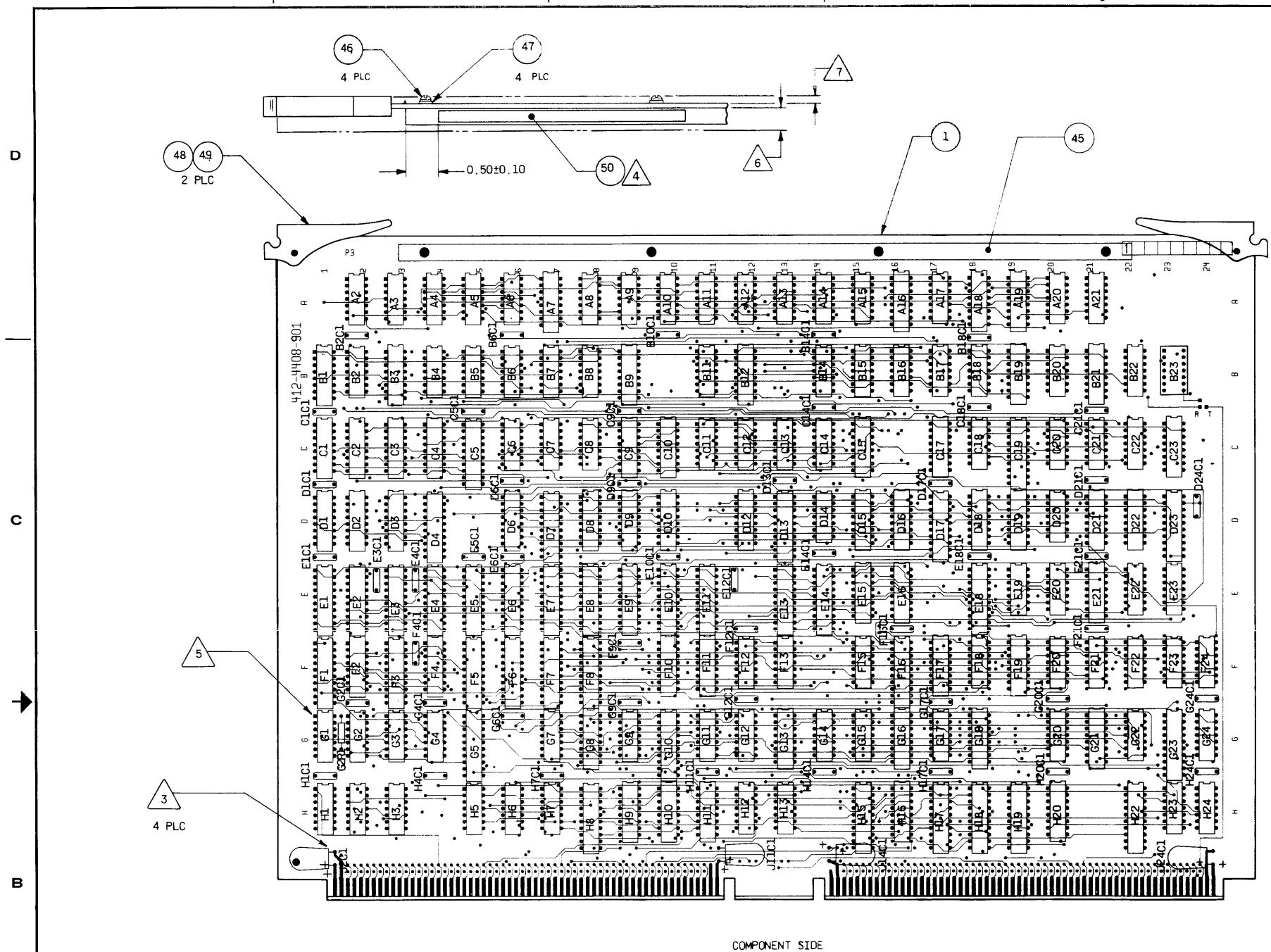
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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
 FRACTIONS ± \_\_\_\_\_  
 ANGLES ± \_\_\_\_\_  
 3 PLACE DEC. ± \_\_\_\_\_  
 2 PLACE DEC. ± \_\_\_\_\_

MATERIAL:

ENGR	DATE	<b>FPS</b> FLOATING POINT SYSTEMS, INC. POBox 23469 Portland OR 97223	
DRN BY	DATE		
CHK BY	DATE		
DRAWING TITLE			
ETCH CIRCUIT BOARD ASSEMBLY, 402-B, DATA PAD			
SIZE	CODE IDENT. NO.	DRAWING NO.	
D	56504	612-4402-003	
REV.	B		
SCALE	NONE	SHEET 1 OF 1	



- 10 DESIGNATIONS IN PARENTHESES "()" DENOTES CONTINUITY  
CHECK POINT FROM FEED THRU HOLES.
- 9 FT DENOTES FEED-THRU HOLE.
- 8 MODIFY WITH CUTS AND STRAPS AS SHOWN ON SHEET 3.  
REWORK TABLE ON SHEET 3 PROVIDES CONTINUITY CHECK POINTS  
WHICH MAY BE USED AS NECESSARY TO VERIFY LOCATIONS
- 7 MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON SOLDER SIDE IS 0.090
- 6 MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON COMPONENT SIDE  
IS 0.310.
- 5 SQUARE PADS INDICATE ORIENTATION OF PIN 1 ON IC'S, AND R-PAKS
- 4 MARK LABEL WITH APPROPRIATE INFORMATION PER FPS STD 10.018  
AND INSTALL APPROXIMATELY WHERE SHOWN.
- 3 OBSERVE POLARITY WHEN INSTALLING COMPONENT.
2. INSTALL ALL COMPONENTS PER REFERENCE DESIGNATORS.
- 1 REFER ALL ITEMS TO PARTS LIST, SAME PART NUMBER AS THIS DRAWING.
- NOTES: UNLESS OTHERWISE SPECIFIED

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REVISIONS					
REV.	AUTH.	DESCRIPTION	ZONE	APVD / DATE	CHK. / DATE
O1	ECO 79723	LEVEL 1 RELEASE		AC 1-29-80	JUL 1/29
A	ECO 80155	ADD REWORK INSTRUCTIONS		AP 4-18-80	DEC 6/18
B	ECO 80346	NEW SCHEMATIC		AP 9/18/80	C 9/18
C	ECO 80505	ADD CLOCK STRAP OPTION		M/J 7/25/81	JUN 25
D	ECO 81161	CORRECT POWER-UP PROBLEM ON IORST*		M/J 5-22-81	C NGUYEN 5-11-81

44	F16
43	F3, F7
42	C1, C3, C4, D3, D10, D15
41	A16, C10, C23, D12, D18, F19, G18, H9, H10
40	A18, D8, F17
39	G8
38	A8, A15, C8
37	G15, H7, H24
36	C19, E14, F1
35	F12, G20, H6, H12, H13
34	A21, E20, G11
33	C9, D19
32	C5, D7, D23, E2, E4, E5, E6, E7, E8, E9, E10, E18, F5, F6, F8, G5, G10, H17, H18, H22
31	D4, D13, D17, E1, E3, E11, E13, G23, H8, H15, H19
30	A13, B8, F24
29	B1, D9, D16
28	D1, D2, D6, E15, E16, F2, F4, F10
27	C2, D21
26	A7, A19, B9, B12, B21, C15, C17, E21, F11, G13, G16, G21, H16, H20
25	A11, B11, B14, B16, D14, G17
24	A2, A14, C13
23	A10, F18
22	A20, E19
21	A5, A9, A12, B4, B15, B17, B18, C11, F13, G12
20	G1
19	C6
18	A4, A6, B2, B20, C12, C21, E23, F23, G4, G24
17	B22, G22
16	D22
15	B3
14	H11
13	B19
12	A17, C14, D20, F22
11	B5, B6, G14
10	C20, F15, F20, F21, G7
9	C7, C22, E22, H1, H2, H3, H23
8	A3, B7, G3, G9
7	B23
6	G2, H5
5	C18
4	J2C1, J11C1, J14C1, J24C1
3	B2C1, B6C1, B10C1, B14C1, B18C1, C1C1, C5C1, C9C1, C14C1, C18C1, C21C1, D1C1, D6C1, D9C1, D13C1, D17C1, D21C1, D24C1, E1C1, E3C1, E4C1, E5C1, E6C1, E10C1, E12C1, E14C1, E18C1, E21C1, F4C1, F9C1, F12C1, F16C1, F21C1, G2C1, G4C1, G6C1, G9C1, G12C1, G17C1, G20C1, G24C1, H1C1, H4C1, H7C1, H11C1, H14C1, H17C1, H20C1, H24C1,
2	G2R1

ITEM REFERENCE DESIGNATION

PROJ. ENG.	Date Code	DATE	
DRAWN BY	JOHN C. YOUNG	9-13-78	
CHECK BY	Donald Stoker	4/18/80	
MATERIAL:	1		
FINISH:			
DO NOT SCALE DRAWING			
SHEET	CODE IDENT. NO.	DRAWING NO.	REV.
D	56504	612-4408-005	D
SCALE NONE		SHEET 1 OF 4	

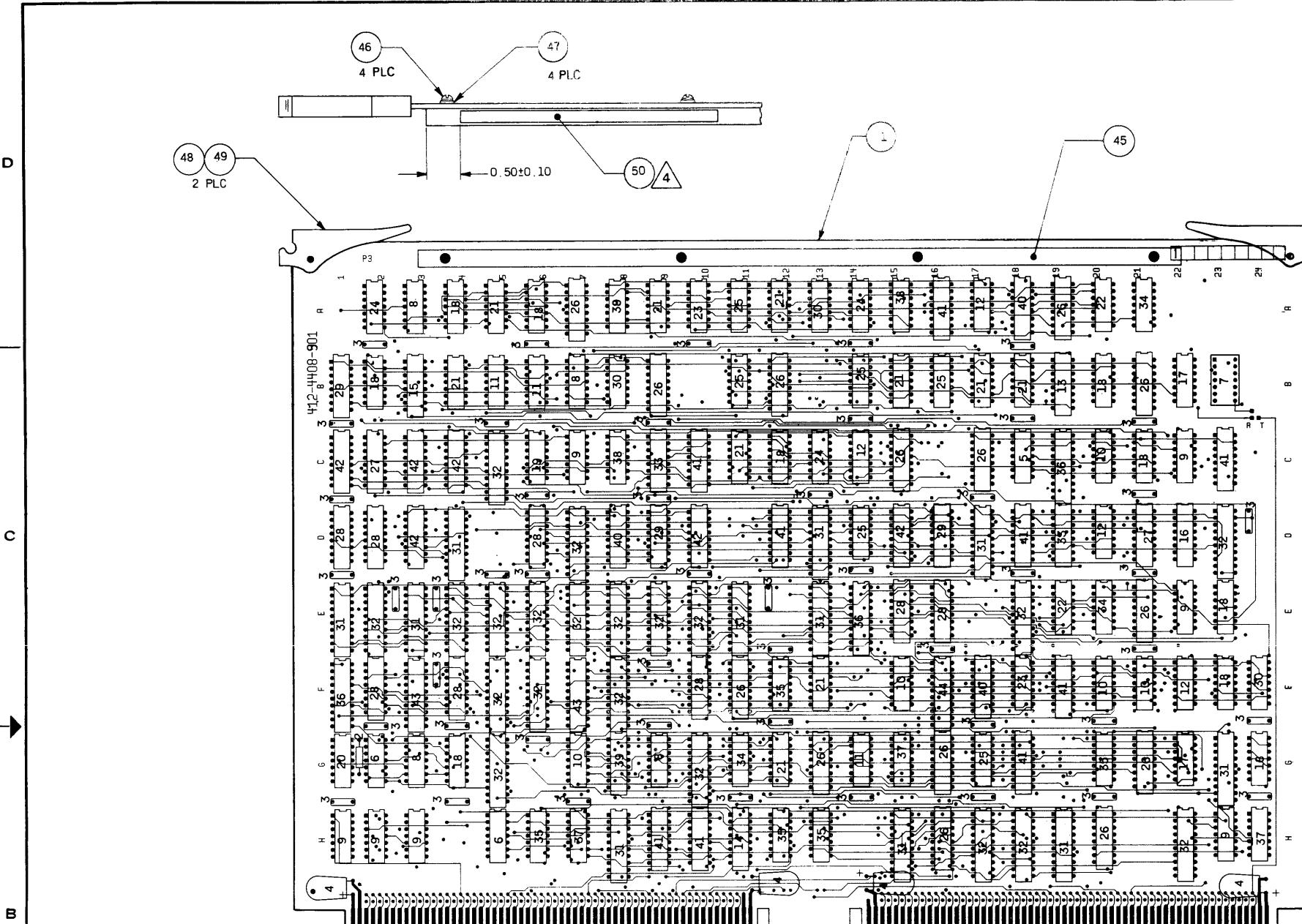
FLOATING POINT  
SYSTEMS, INC.

POBox 23489 Portland OR 97223

ETCH CIRCUIT BOARD ASSEMBLY,  
408-A,  
P-3

Eco 482281

8 7 6 5 4 3 2 1



COMPONENT SIDE

THIS VIEW FOR REFERENCE ONLY.

COMPONENTS ARE IDENTIFIED WITH  
ITEM NUMBERS.

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
ANGLES ± \_\_\_\_\_  
3 PLACE DEC. ± \_\_\_\_\_  
2 PLACE DEC. ± \_\_\_\_\_

MATERIAL: \_\_\_\_\_

ENGR \_\_\_\_\_ DATE \_\_\_\_\_  
DRN BY \_\_\_\_\_ DATE \_\_\_\_\_  
CHK BY \_\_\_\_\_ DATE \_\_\_\_\_  
C. ALSEN PROD RELEASE DATE \_\_\_\_\_

**FLOATING POINT  
SYSTEMS, INC.**  
POBox 23489 Portland OR 97223  
DRAWING TITLE  
ETCH CIRCUIT BOARD ASSEMBLY,  
408-A,  
P-3  
SIZE D CODE IDENT. NO. 56504 DRAWING NO. 612-4408-005 REV D  
SCALE NONE SHEET 2 OF 4



8

7

6

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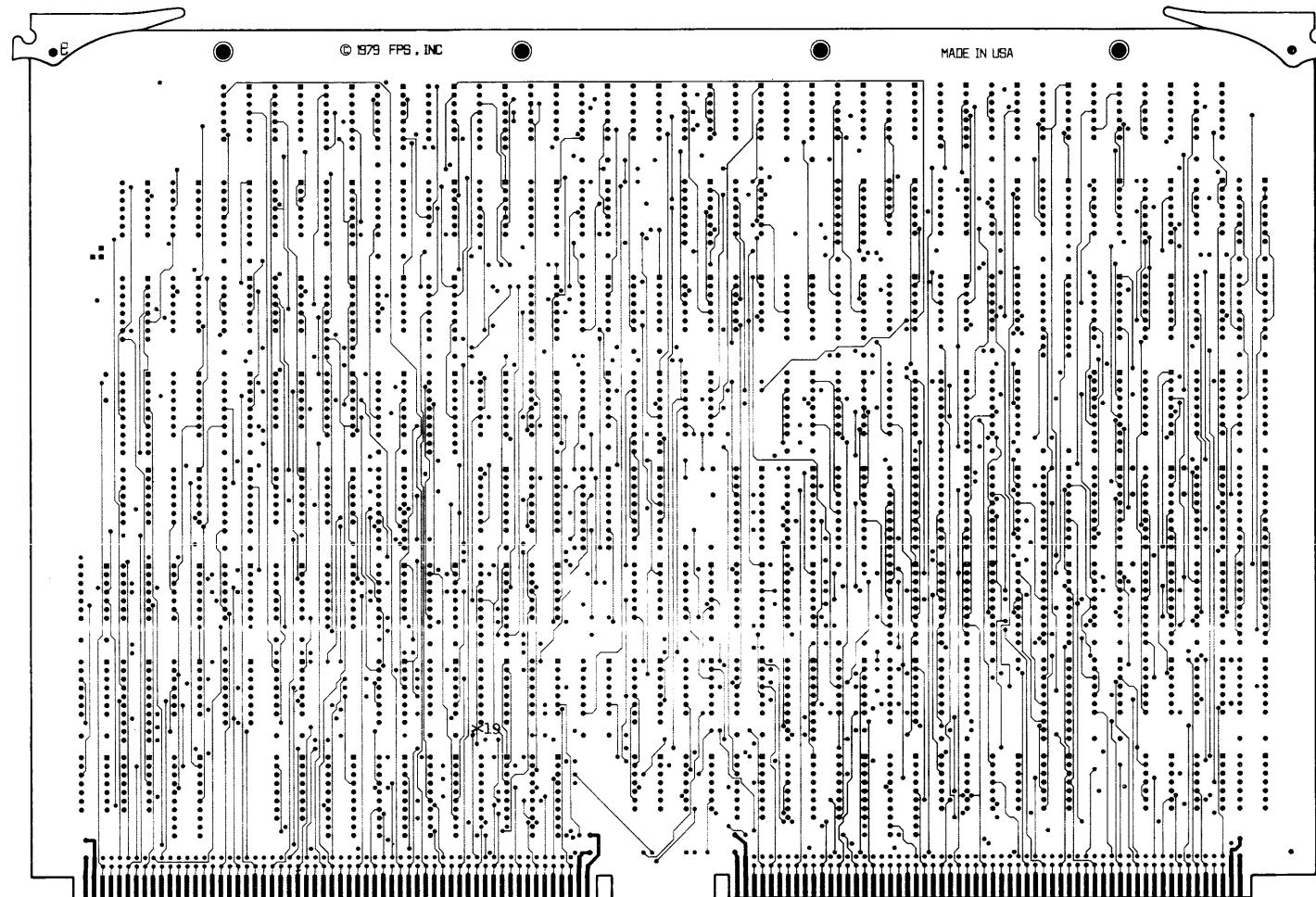
3

2

1

D

D



SOLDER SIDE

A

A

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ENGR	DATE
FRACTIONS ± _____		DRN BY	DATE
ANGLES ± _____		CHK BY	DATE
3 PLACE DEC. ± _____		C. OLSEN	9-9-86
2 PLACE DEC. ± _____			
MATERIAL:		PROD RELEASE	DATE
SIZE	CODE IDENT. NO.	DRAWING NO.	REV
<b>D</b>	<b>56504</b>	<b>612-4408-005</b>	<b>D</b>
SCALE NONE		SHEET 4 OF 4	

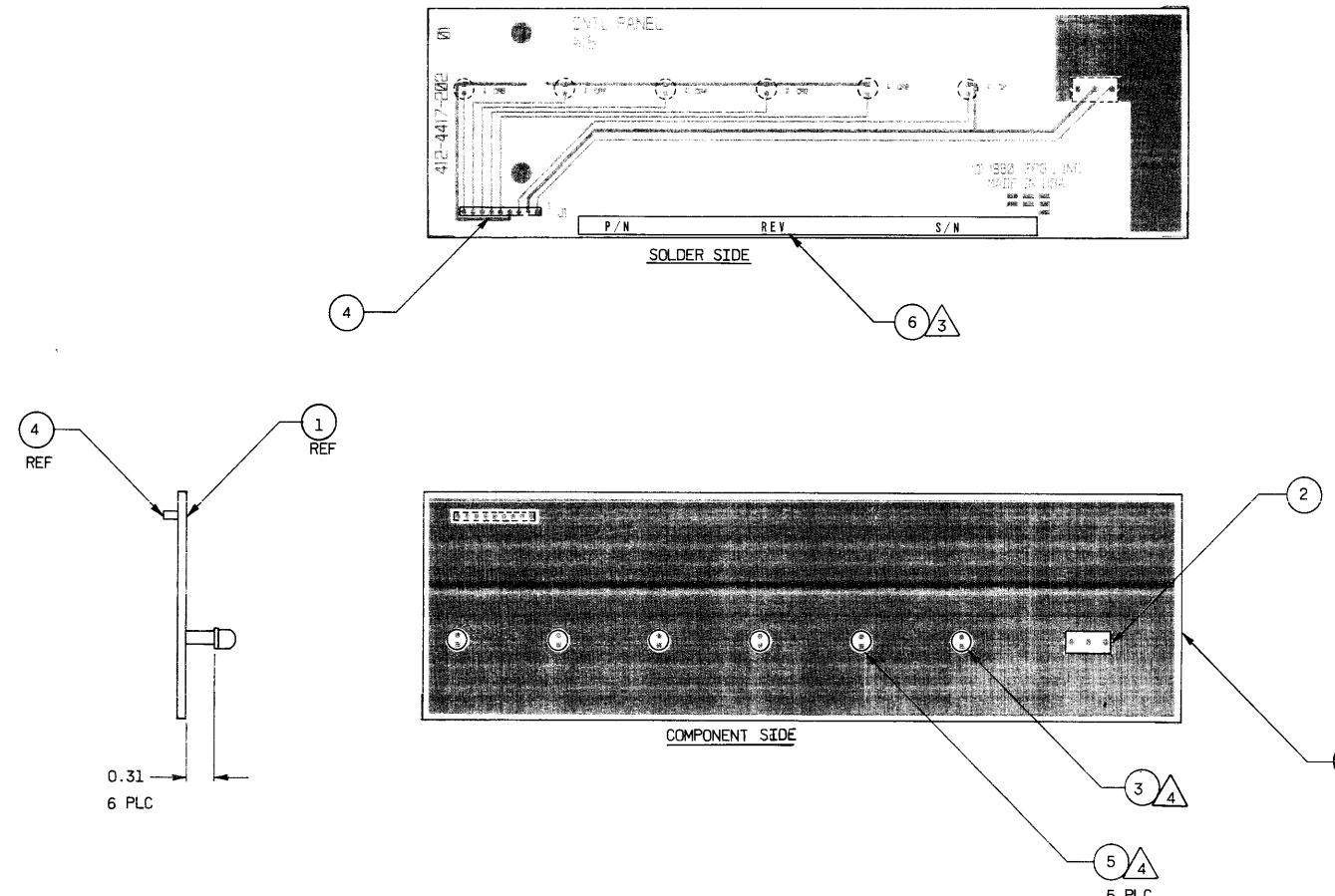
**FPS** FLOATING POINT SYSTEMS, INC.  
POBox 23409 Portland OR 97223

ETCH CIRCUIT BOARD ASSEMBLY,  
408-A,  
P-3

REVISIONS

REV.	AUTH.	DESCRIPTION	ZONE	APVD / DATE	CHK. / DATE
A	ECO 80530	LEVEL 3 RELEASE		MAN 7/1/81	Stew 5

D



6. INTERPRETATION OF DIMENSIONS &amp; TOLERANCES PER ANSI Y14.5.

5. ITEM NUMBERS ON PARTS LIST ARE SHOWN IN BALLOONS AND/OR PARENTHESES.

4 △ SQUARE PADS DENOTES CATHODE END OF LIGHT EMITTING DIODE.  
FLAT SIDE OF DIODE BODY DENOTES CATHODE.

3 △ MARK LABEL WITH APPROPRIATE INFORMATION PER FPS  
STD 10.018 AND INSTALL APPROXIMATELY WHERE SHOWN.

2. INSTALL ALL COMPONENTS PER REFERENCE DESIGNATORS.

1. REFER ALL ITEMS TO PARTS LIST, SAME PART NUMBER AS THIS DRAWING.

NOTES: UNLESS OTHERWISE SPECIFIED

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES

FRACTIONS ± \_\_\_\_\_

ANGLES ± \_\_\_\_\_

3 PLACE DEC. ± \_\_\_\_\_

2 PLACE DEC. ± \_\_\_\_\_

CHECK BY \_\_\_\_\_

DATE \_\_\_\_\_

MFG. ENG. \_\_\_\_\_

DATE \_\_\_\_\_

C.G. PETERSON

2-13-81

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PROJ. ENG. *C. G. Peterson* DATE 7-11-81  
DRAWN BY *J. D. S.* DATE 0-8-80  
CHECK BY *J. D. S.* DATE 10-10-80  
MFG. ENG. *C. G. Peterson* DATE 2-13-81

FLOATING POINT SYSTEMS, INC. POBox 23489 Portland OR 97223

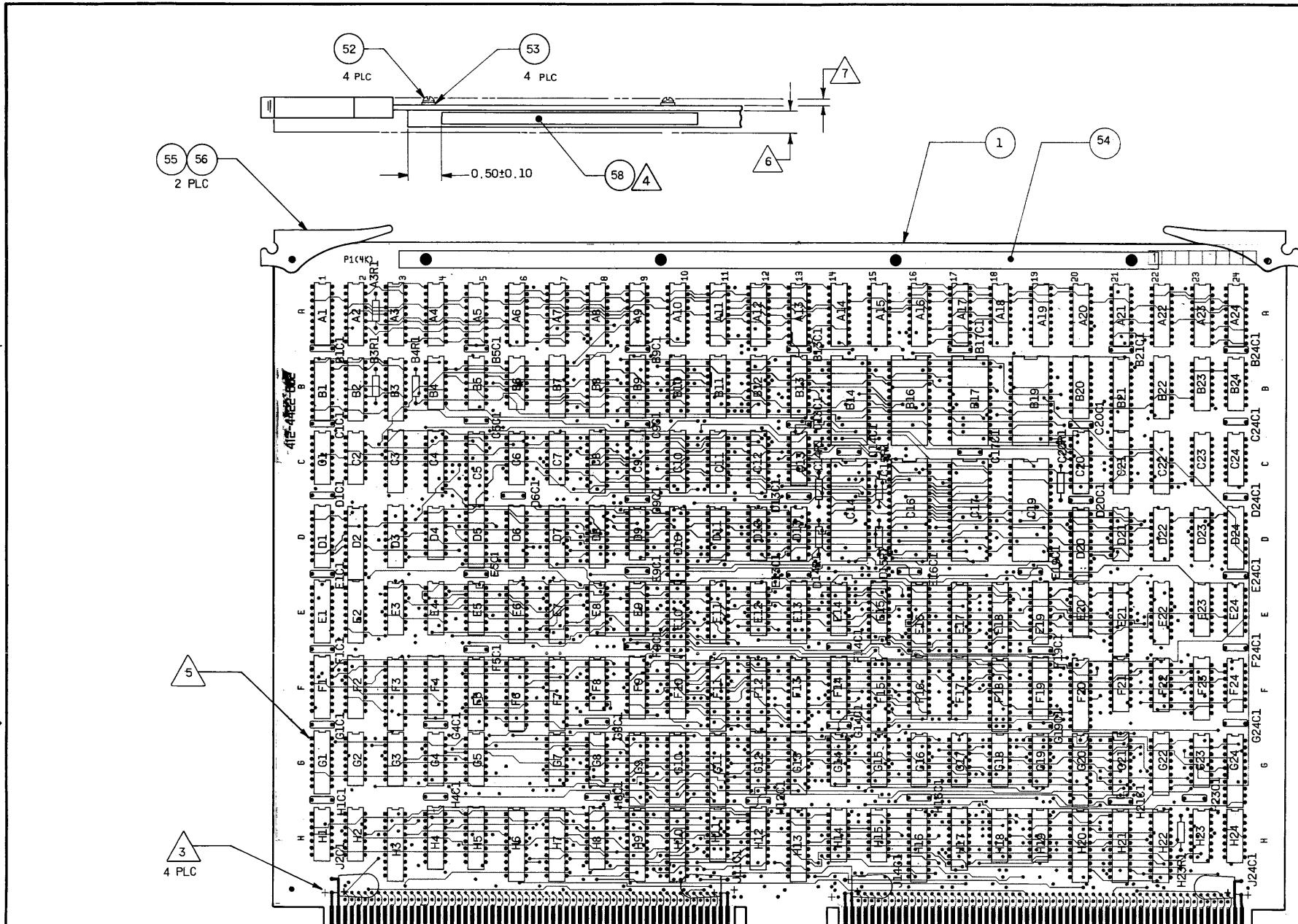
DRAWING TITLE

ETCH CIRCUIT BOARD ASSEMBLY,  
417-B,  
CONTROL PANEL

SIZE CODE IDENT. NO. DRAWING NO. REV.

D 56504 612-4417-002 A

SCALE NONE SHEET 1 OF 1



COMPONENT SIDE

10 DESIGNATIONS IN PARENTHESES "()" DENOTES CONTINUITY CHECK POINT FROM FEED-THRU HOLES.

9 FT DENOTES FEED-THRU HOLE.

8 MODIFY WITH CUTS AND STRAPS AS SHOWN ON SHEET 3 AND 4. REWORK TABLE ON SHEET 3 PROVIDES CONTINUITY CHECK POINTS WHICH MAY BE USED AS NECESSARY TO VERIFY LOCATIONS.

7 MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON SOLDER SIDE IS 0.090.

6 MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON COMPONENT SIDE IS 0.310.

5 SQUARE PADS INDICATE ORIENTATION OF PIN 1 ON IC'S, AND R-PAKS

4 INK STAMP OR TYPE IDENTIFICATION CHARACTERS AS REQUIRED ON LABEL AND APPLY IN POSITION AS SHOWN.

3 OBSERVE POLARITY WHEN INSTALLING COMPONENT.

2. INSTALL ALL COMPONENTS PER REFERENCE DESIGNATORS.

1 REFER ALL ITEMS TO PARTS LIST, SAME PART NUMBER AS THIS DRAWING.

NOTES: UNLESS OTHERWISE SPECIFIED

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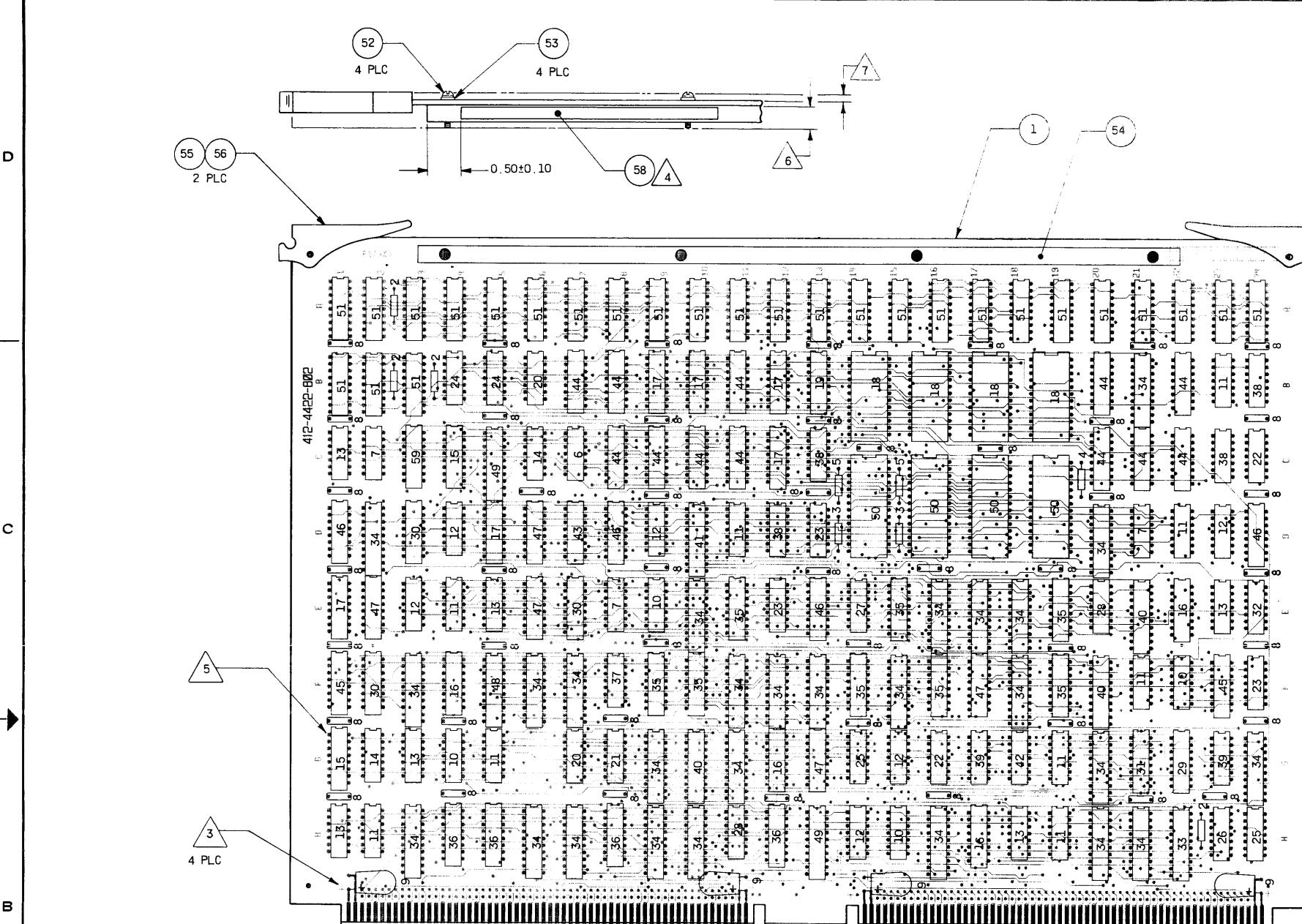
REVISIONS					
REV	AUTH	DESCRIPTION	ZONE	APVD/DATE	CHK/DATE
O1	EN #037	INITIAL LEVEL 2 RELEASE		06/10/79	
O2	ECO 79659	CHANGE LABEL		06/10/79	06/10/79
A	ECO 80177	LEVEL 3 RELEASE		AC 5/14/80	SLB 5/14/80
B	ECO 80258	CORRECT ITEM #50		AC 5/14/80	SLB 5/14/80
C	ECO 80495	CHANGE RES. LOC.		MPH 2/1/81	PJG 2/1/81

39	G17, G23
38	B24, C13, C23, D12
37	F8
36	H4, H5, H8, H12
35	E11, E15, E19, F9, F10, F14, F16, F19
	B21, D2, D20, E10, E16, E17, E18, F3, F6, F7, F11, F12, F13, F15, F18, G9, G11, G20,
34	G24, H3, H6, H7, H9, H10, H16, H20, H21
33	H22
32	E24
31	G21
30	D3, E7, F2
29	G22
28	E20, H11
27	E14
26	H23
25	G14, H24
24	B4, B5
23	D13, E12, F24
22	C24, G16
21	G8
20	B6, G7
19	B13
18	B14, B16, B17, B19
17	B9, B10, B12, C12, D5, E1
16	E22, F4, G12, H17
15	C4, G1
14	C6, G2
13	C1, E5, E23, G3, H1, H18
12	D4, D9, D23, E3, G15, H14
11	B23, D11, D22, E4, F21, G5, G19, H2, H19
10	E9, F22, G4, H15
9	J2C1, J11C1, J14C1, J24C1
	B1C1, B5C1, B9C1, B13C1, B17C1, B21C1, B24C1, C1C1, C5C1, C9C1, C13C1, C14C1, C17C1, C20C1, C24C1, D1C1, D6C1, D9C1, D13C1, D20C1, D24C1, E1C1, E5C1, E9C1, E13C1, E16C1, E19C1, E24C1, F1C1, F5C1, F9C1, F14C1, F19C1, F24C1, G1C1, G4C1, G8C1, G14C1, G19C1, G24C1, H1C1, H4C1, H8C1, H12C1, H16C1, H21C1, H23C1,
8	C2, D21, E8
7	C7
5	C14R1, C15R1
4	C20R1
3	D14R1, D15R1
2	A3R1, B3R1, B4R1, H23R1

REFERENCE DESIGNATION	
ENGR: Michael Stanbro	DATE: 9-7-79
DRN BY: M.W. Baileyt	DATE: 9-6-79
CHK BY: CHINH NGUYEN	DATE: 9-6-79
MATERIAL: 1	PROD RELEASE DATE <i>Ken Bealek</i> /-17-80
	DRAWING TITLE: ETCH CIRCUIT BOARD ASSEMBLY, 422-B, PROCESSOR 1, 4K RAM
SIZE: D CODE IDENT. NO: 56504	DRAWING NO: 612-4422-002
REV: C	
SCALE: NONE	SHEET 1 OF 4

ECO #82353

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1



COMPONENT SIDE

THIS VIEW FOR REFERENCE ONLY.

COMPONENTS ARE IDENTIFIED WITH  
ITEM NUMBERS

CONTINUED FROM SHEET 1

ITEM	REFERENCE DESIGNATION
59	C3
51	A1,A2,A3,A4,A5,A6,A7,A8,A9,A10,A11,A12,A13,A14,A15,A16,A17,A18,A19,A20, A21,A22,A23,A24, B1,B2,B3
50	C14,C16,C17,C19
49	C5, H13
48	F5
47	D6, E2,E6, F17, G13
46	D1,D8,D24, E13
45	F1,F23
44	B7,B8,B11,B20,B22, C8,C9,C10,C11,C20,C21,C22
43	D7
42	G18
41	D10
40	E21, F20, G10

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FRACTIONS = _____	DRN BY	DATE	POBox 23489 Portland OR 97223	
ANGLES = _____	CHK BY	DATE	DRAWING TITLE	
3 PLACE DEC. ± _____	PROD RELEASE	DATE	ETCH CIRCUIT BOARD ASSEMBLY, 422-B, PROCESSOR 1, 4K RAM	
2 PLACE DEC. ± _____			SIZE	CODE IDENT. NO.
			D	56504
				612-4422-002
			REV	C
			SCALE	NONE
			SHEET	2 OF 4

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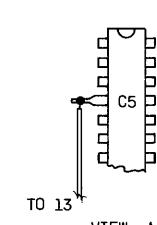
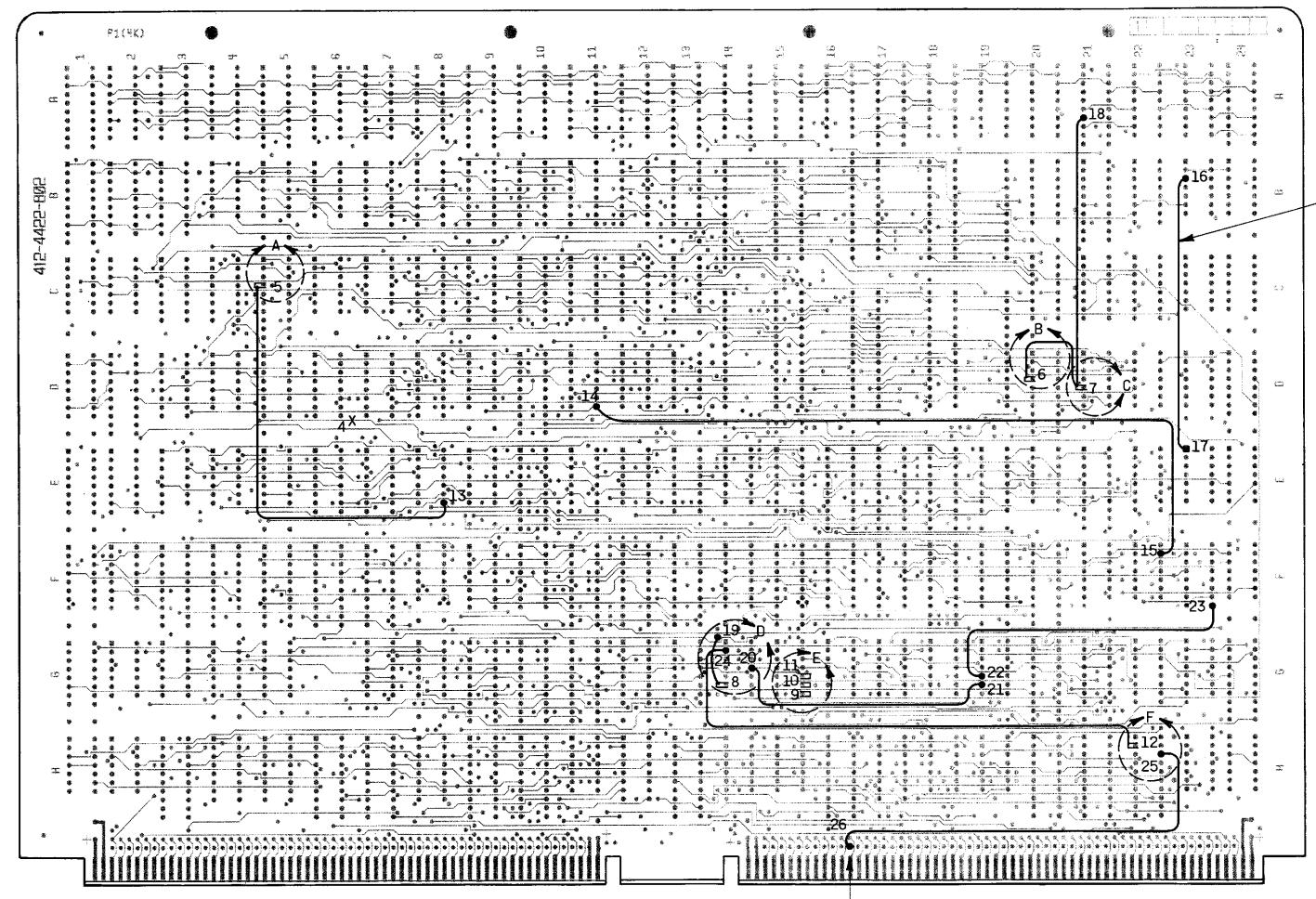
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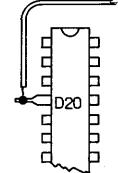
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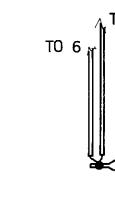
D



VIEW -A-  
SCALE: NONE  
LIFT IC LEG C5-4  
ATTACH WIRE TO LEG



VIEW -B-  
SCALE: NONE  
LIFT IC LEG D20-4  
ATTACH WIRE TO LEG



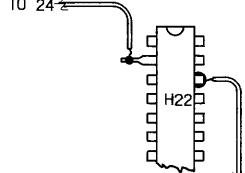
VIEW -C-  
SCALE: NONE  
LIFT IC LEG D21-5  
ATTACH WIRE TO LEG



VIEW -D-  
SCALE: NONE  
LIFT IC LEG G14-6  
ATTACH WIRE TO LEG



VIEW -E-  
SCALE: NONE  
LIFT IC LEGS G15-8,9,10  
ATTACH WIRES TO LEG  
ATTACH WIRES TO PADS



VIEW -F-  
SCALE: NONE  
LIFT IC LEG H22-2  
ATTACH WIRE TO LEG  
ATTACH WIRE TO PAD

A

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
FRACTIONS  $\frac{1}{16}$   
ANGLES  $\pm 3^\circ$   
3 PLACE DEC.  $\pm .001$   
2 PLACE DEC.  $\pm .01$

MATERIAL:

X	25-26	H22-18	FT (E.C. B26)	COMPONENT
X	24-12	G14-2	H22-2 (LEG)	
X	22-23	G19-5	F23-9	
X	20-21	G14-11	G19-6	
X	8-19	G14-6 (LEG)	FT (G12-1)	
X	7-18	D21-5 (LEG)	A21-7	
X	6-7	D20-4 (LEG)	D21-5 (LEG)	
X	16-17	B23-3	E23-1	
X	14-15	D11-8	F22-13	
X	5-13	C5-4 (LEG)	E8-8	
LIFT IC LEG	12	H22-2 (LEG)	H22-2 (PAD)	
	11	G15-10 (LEG)	G15-10 (PAD)	
	10	G15-9 (LEG)	G15-9 (PAD)	
	9	G15-8 (LEG)	G15-8 (PAD)	
	8	G14-6 (LEG)	G14-6 (PAD)	
	7	D21-5 (LEG)	D21-5 (PAD)	
	6	D20-4 (LEG)	D20-4 (PAD)	
LIFT IC LEG	5	C5-4 (LEG)	C5-4 (PAD)	
	X	4	FT (E8-8)	COMPONENT
	X	3	G14-6	SOLDER
	X	2	A21-7	SOLDER
	X	1	FT (F22-12)	SOLDER
ADD STRAP	CUT	ETCH	DESIGNATOR	FROM TO SIDE
				CONTINUITY CHECK POINTS

**REWORK TABLE**

8 9 10

ENGR	DATE	FPC FLOWING POINT SYSTEMS, INC.	
DRN BY	DATE	POBox 23499 Portland OR 97223	
CHK BY	DATE		
PROD RELEASE	DATE	DRAWING TITLE	
		ETCH CIRCUIT BOARD ASSEMBLY, 422-B, PROCESSOR 1, 4K RAM	
SIZE	CODE IDENT. NO.	DRAWING NO.	REV
D	56504	612-4422-002	C
SCALE	NONE		
SHEET	3	OF	4

8

7

6

5

4

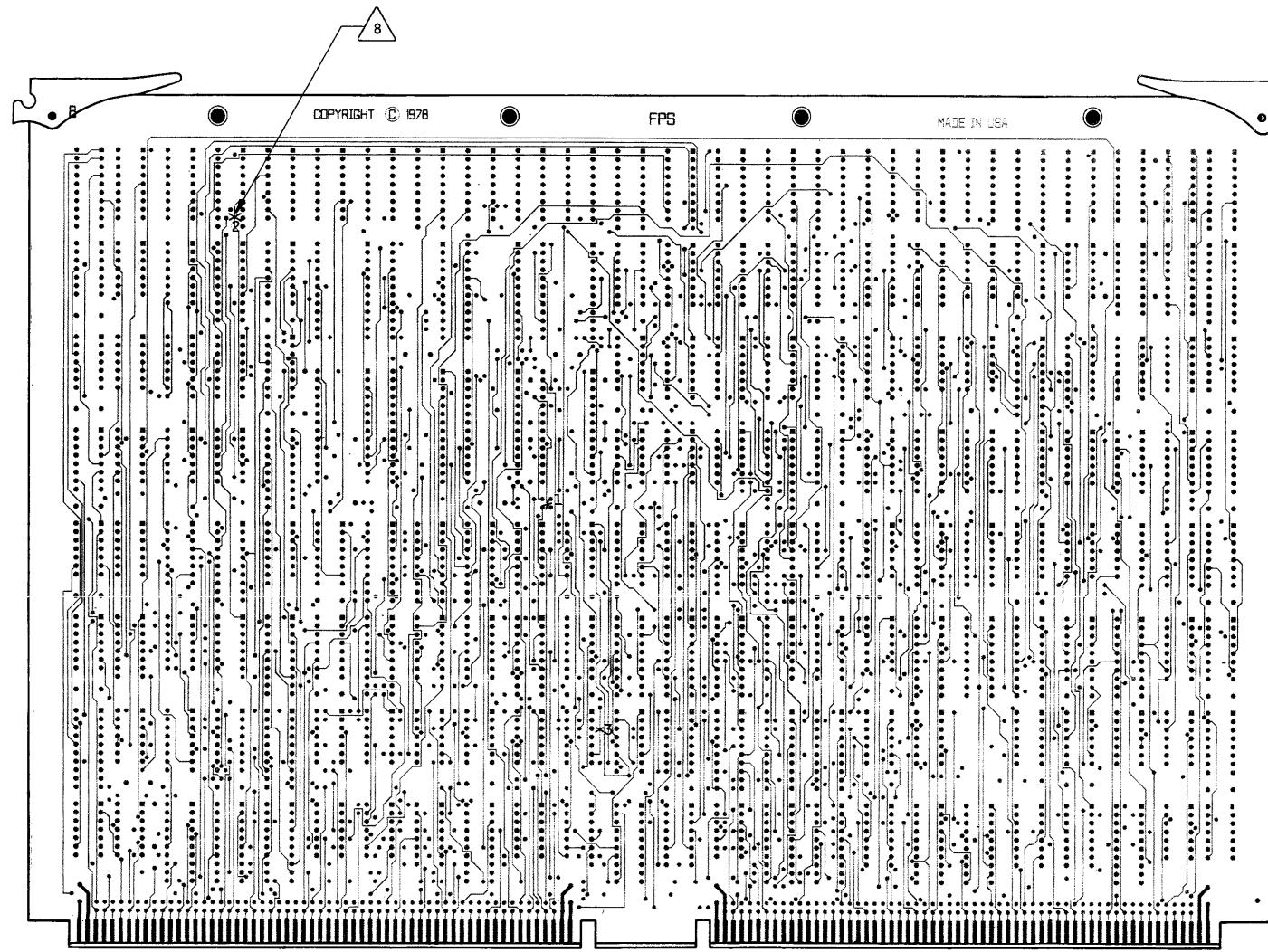
3

2

1

D

D



C

C

B

B

A

A

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
 FRACTIONS ± \_\_\_\_\_  
 ANGLES ± \_\_\_\_\_  
 3 PLACE DEC. ± \_\_\_\_\_  
 2 PLACE DEC. ± \_\_\_\_\_

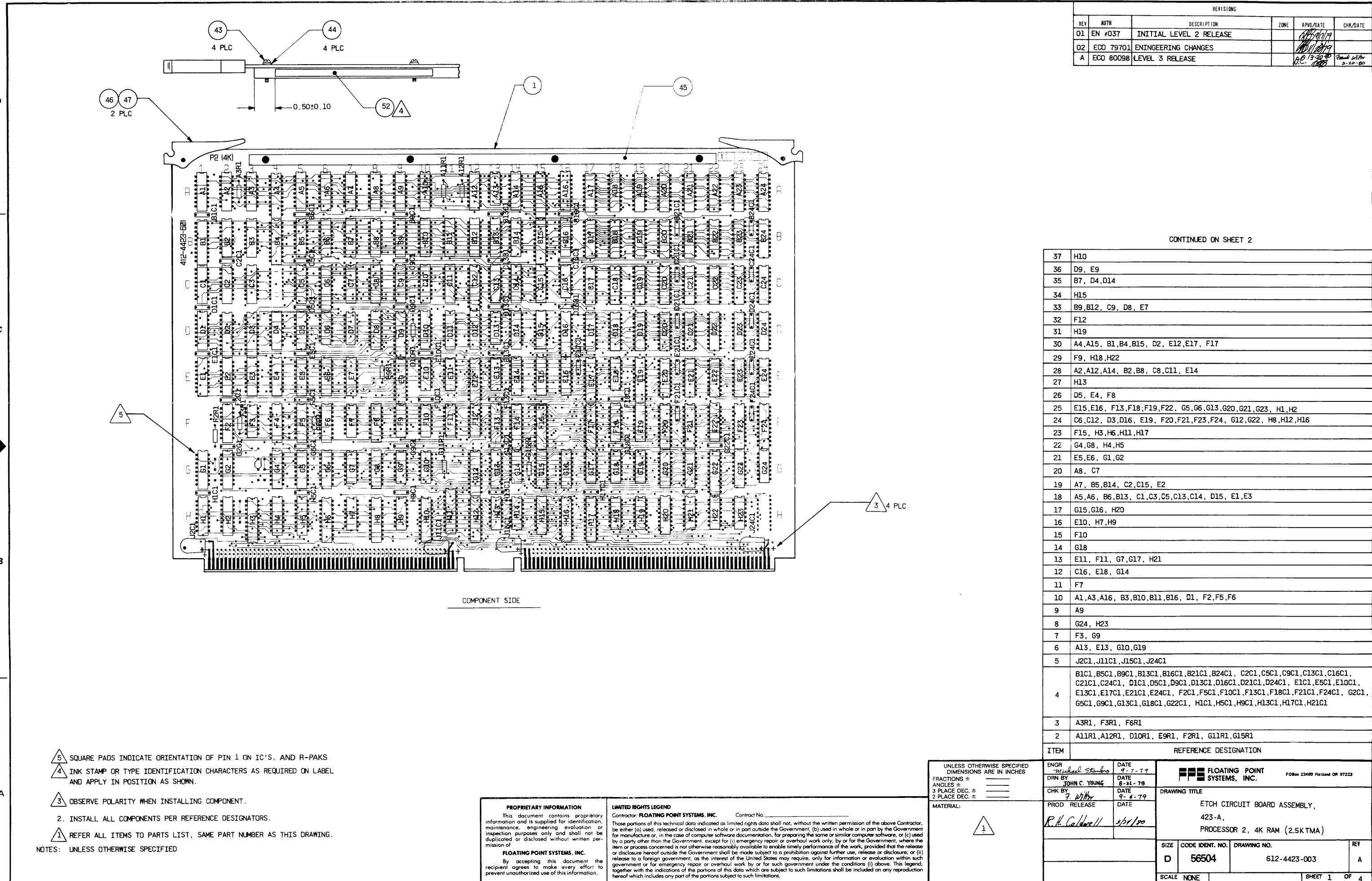
MATERIAL: \_\_\_\_\_

ENGR \_\_\_\_\_ DATE \_\_\_\_\_  
 DRN BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHK BY \_\_\_\_\_ DATE \_\_\_\_\_  
 PROD RELEASE \_\_\_\_\_ DATE \_\_\_\_\_

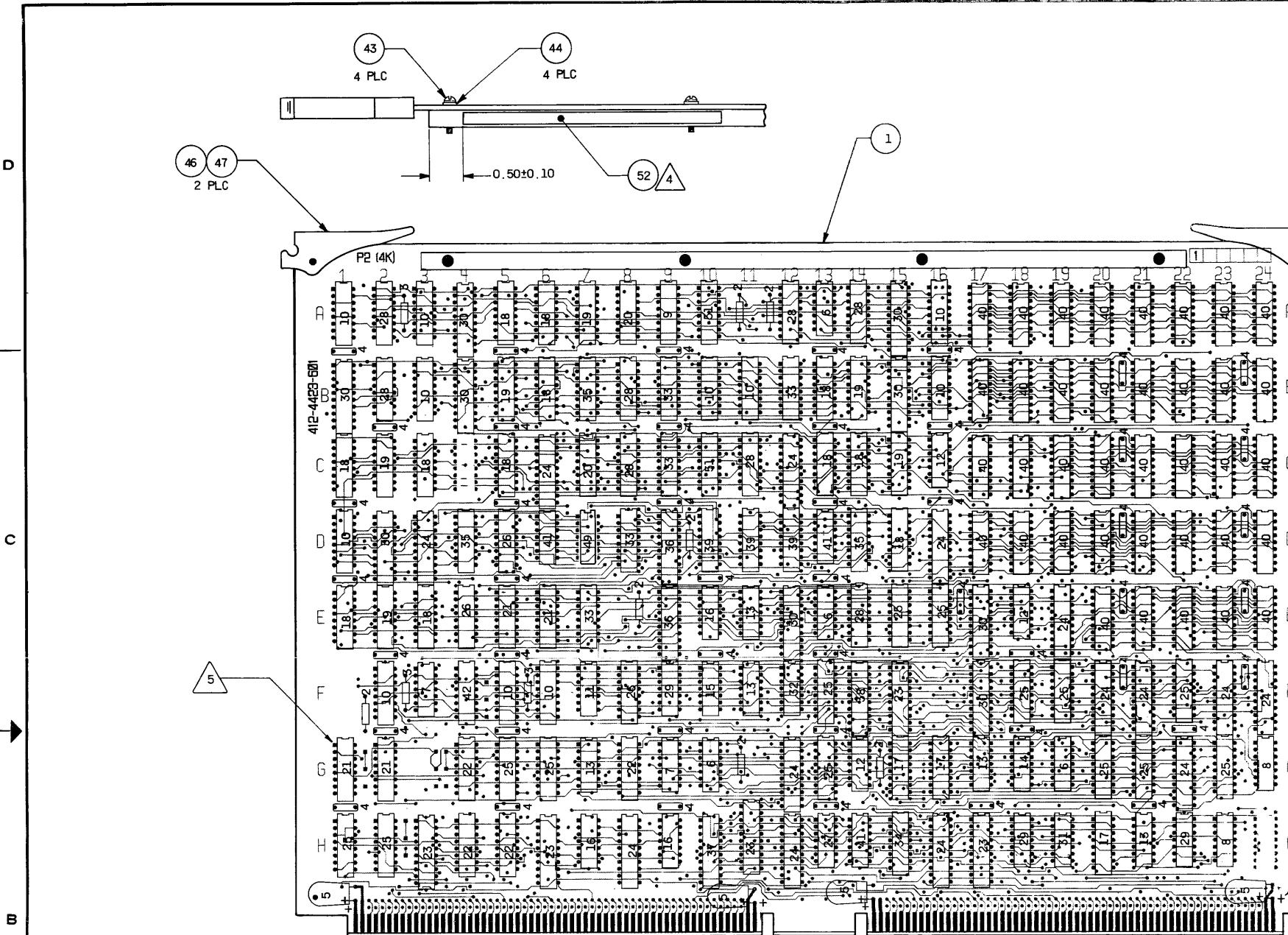
**FLOATING POINT SYSTEMS, INC.**  
 POBox 23489 Portland OR 97223  
 DRAWING TITLE  
 ETCH CIRCUIT BOARD ASSEMBLY,  
 422-B,  
 PROCESSOR 1, 4K RAM

SIZE CODE IDENT. NO. DRAWING NO. REV  
 D 56504 612-4422-002 C

SCALE NONE SHEET 4 OF 4



8 | 7 | 6 | 5 | 4 | 3 | 2 | 1



COMPONENT SIDE

THIS VIEW FOR REFERENCE ONLY.

COMPONENTS ARE IDENTIFIED WITH  
ITEM NUMBERS.

CONTINUED FROM SHEET 1

51	A10, C10	
49	D7	
42	F4	
41	D6, D13, H14	
	A17, A18, A19, A20, A21, A22, A23, A24, B17, B18, B19, B20, B21, B22, B23, B24, C17, C18, C19, C20, C21, C22, C23, C24, D17, D18, D19, D20, D21, D22, D23, D24, E20, E21	
40	E22, E23, E24	
39	D10, D11, D12	
38	F14	
ITEM	REFERENCE DESIGNATION	
		FLOATING POINT SYSTEMS, INC. POBox 23469 Portland OR 97223
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	DRAWING TITLE ETCH CIRCUIT BOARD ASSEMBLY, 423-A, PROCESSOR 2, 4K RAM (2.5Ktma)
	FRACTIONS ± _____ ANGLES ± _____ 3 PLACE DEC. ± _____ 2 PLACE DEC. ± _____	SIZE CODE IDENT. NO. DRAWING NO. D 56504 612-4423-003 A
	ENGR DATE DRN BY DATE CHK BY DATE	REV
	MATERIAL: PROD RELEASE DATE	SCALE NONE SHEET 2 OF 4

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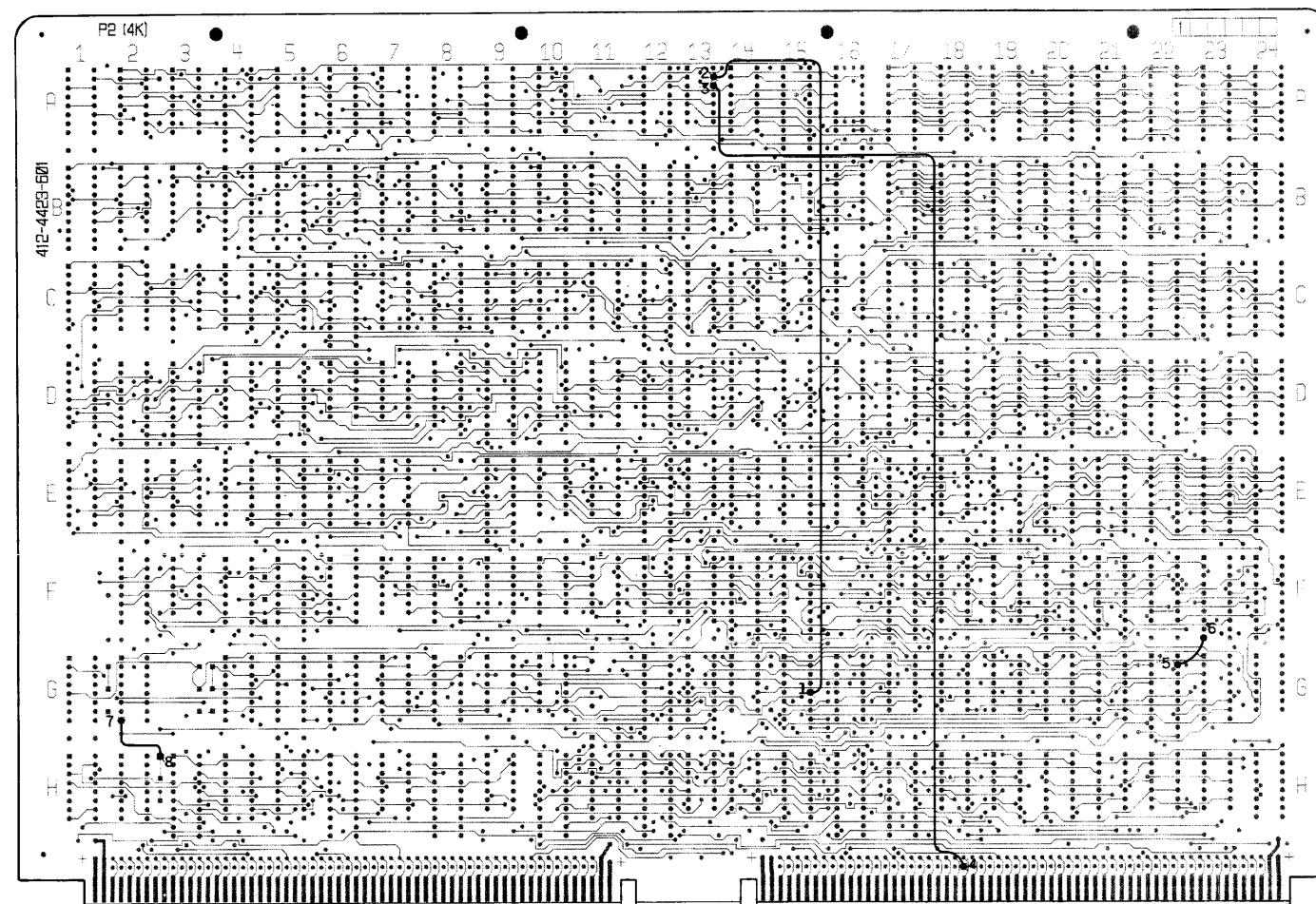
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8 | 7 | 6 | 5 | 4 | 3 | 2 | 1



D

D



COMPONENT SIDE

B

B

C

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A

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X		7-8	G2-8	FT (H2-13)	COMPONENT
X		5-6	G22-19	F23-10	
X		3-4	A13-12	E. C. (FT)B48	
X		1-2	G15-12	A13-13	COMPONENT
ADD STRAP	CUT ETCH	DESIGNATOR	FROM	TO	SIDE
CONTINUITY CHECK POINTS					

REWORK TABLE

ENGR	DATE	FLOTING POINT SYSTEMS, INC.	
DRN BY	DATE	POBox 23469 Portland OR 97223	
CHK BY	DATE	DRAWING TITLE	
PROD RELEASE	DATE	ETCH CIRCUIT BOARD ASSEMBLY, 423-A, PROCESSOR 2, 4K RAM (2.5K TMA)	
SIZE	CODE IDENT. NO.	DRAWING NO.	REV
D	56504	612-4423-003	A
SCALE	NONE		
		SHEET	3 OF 4

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

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A

DRAWING NO. SHT  
612-4423-003 4



SOLDER SIDE

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES.  
FRACTIONS ± \_\_\_\_\_  
ANGLES \_\_\_\_\_  
2 PLACE DEC. ± \_\_\_\_\_  
2 PLACE DEC. ± \_\_\_\_\_

MATERIAL: \_\_\_\_\_

ENGR	DATE
DRN BY	DATE
CHK BY	DATE
PROD RELEASE	DATE

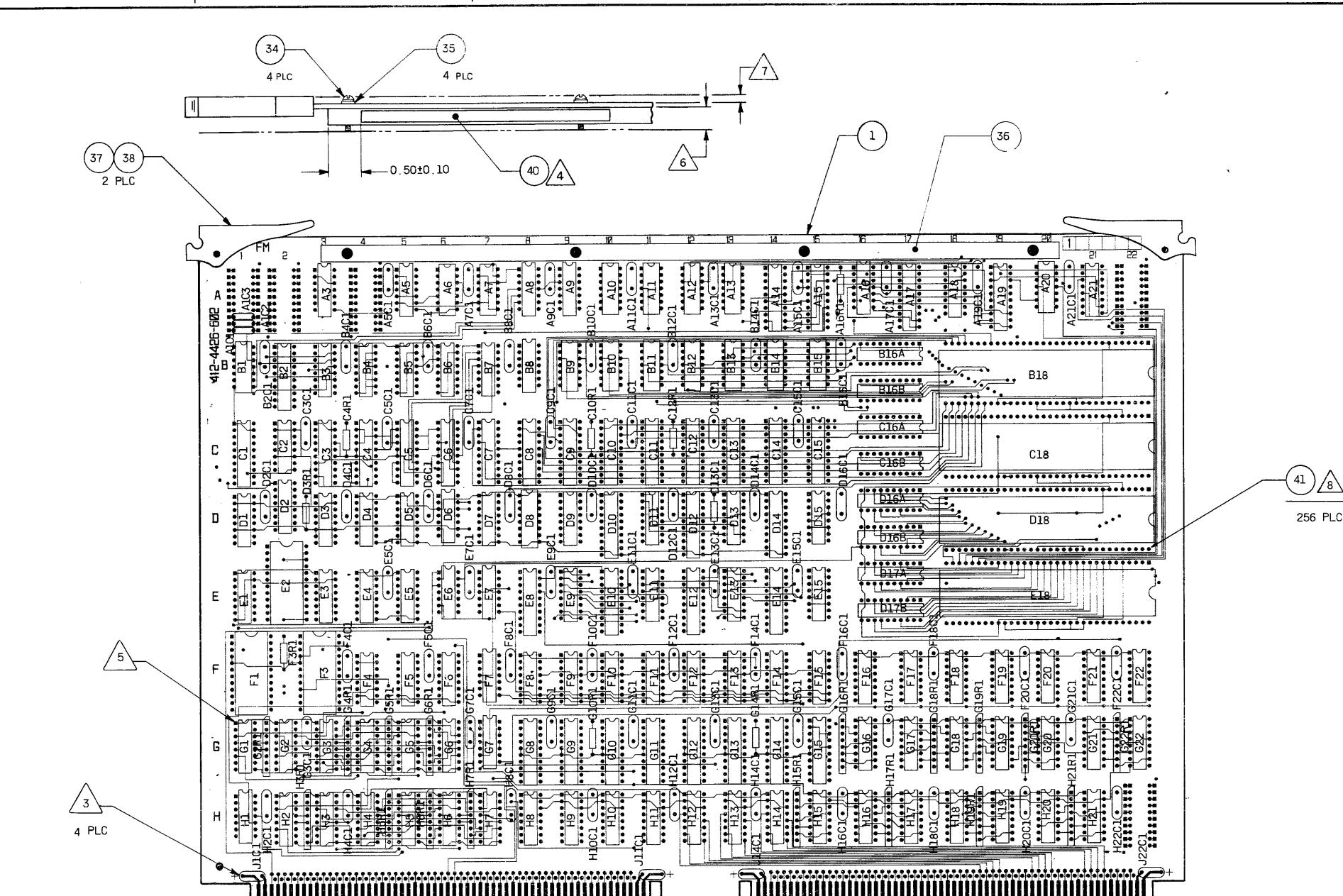
**FLOATING POINT SYSTEMS, INC.**  
POBox 23489 Portland OR 97228  
ETCH CIRCUIT BOARD ASSEMBLY;  
423-A,  
PROCESSOR 2, 4K RAM (2.5KTMA)

SIZE CODE IDENT. NO. DRAWING NO.  
**D 56504 612-4423-003**

REV A

SCALE NONE SHEET 4 OF 4

8 7 6 5 4 3 2 1



11 DESIGNATIONS IN PARENTHESES "( )" DENOTES CONTINUITY CHECK POINT FROM FEED-THRU HOLES.

10 FT DENOTES FEED-THRU HOLE.

9 MODIFY WITH CUTS AND STRAPS AS SHOWN ON SHEET 3. REWORK TABLE ON SHEET 3 PROVIDES CONTINUITY CHECK POINTS WHICH MAY BE USED AS NECESSARY TO VERIFY LOCATIONS.

8 SOLDER ITEM 41 (256 PLC) IN PLACE BEFORE INSERTION OF ITEM 33.

7 MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON SOLDER SIDE IS 0.090.

6 MAXIMUM COMPONENT HEIGHT ABOVE BOARD SURFACE ON COMPONENT SIDE IS 0.310.

5 SQUARE PADS INDICATE ORIENTATION OF PIN 1 ON IC'S, AND R-PAKS

4 INK STAMP OR TYPE IDENTIFICATION CHARACTERS AS REQUIRED ON LABEL AND APPLY IN POSITION AS SHOWN.

3 OBSERVE POLARITY WHEN INSTALLING COMPONENT.

2. INSTALL ALL COMPONENTS PER REFERENCE DESIGNATORS.

1 REFER ALL ITEMS TO PARTS LIST, SAME PART NUMBER AS THIS DRAWING.

NOTES: UNLESS OTHERWISE SPECIFIED

#### COMPONENT SIDE

ECO #82353

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UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
FRACTIONS ±  
ANGLES ±  
3 PLACE DEC. ± 0.005  
2 PLACE DEC. ±

MATERIAL:

PROJ. ENG. Michael Stankus	DATE 10/12/79	FLOATING POINT SYSTEMS, INC.	PO Box 23489 Portland OR 97223
DRAWN BY T. Kelle	DATE 9-21-79		
CHECK BY Mfg. Eng.	DATE 10-1-79	DRAWING TITLE	ETCH CIRCUIT BOARD ASSEMBLY, 426-B, FLOATING MULTIPLIER
MFG. ENG. Hort Marshall	DATE 10-18-79		
SIZE	CODE IDENT NO	DRAWING NO.	REV.
D	56504	612-4426-003	C
DO NOT SCALE DRAWING			
SCALE	NONE	SHEET 1 OF 4	

8

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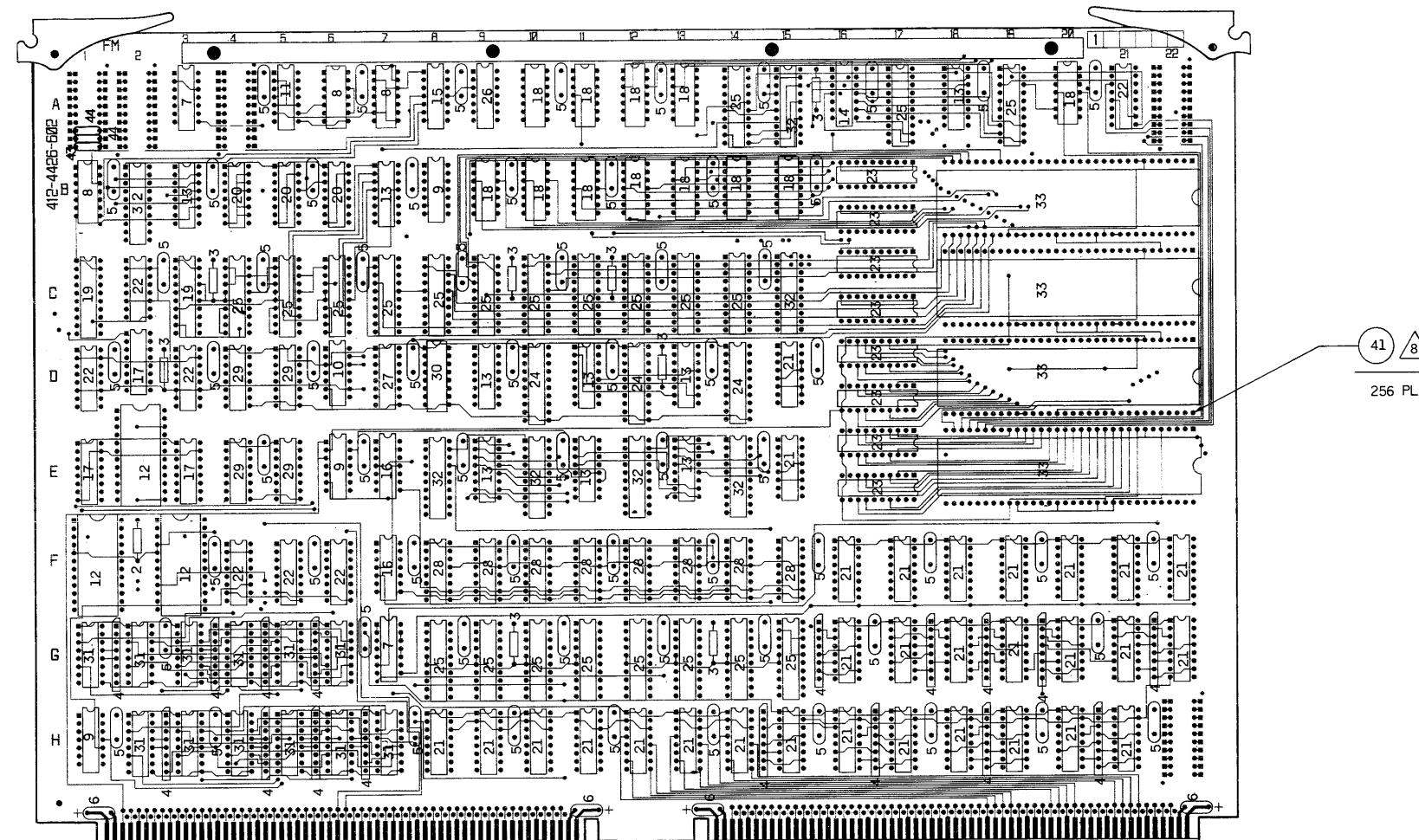
3

2

1

D

D



COMPONENT SIDE

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COMPONENTS ARE IDENTIFIED WITH  
ITEM NUMBERS.DRAWING NO.  
612-4426 003SHT  
2REV.  
CSIZE CODE IDENT. NO. DRAWING NO.  
**D** 56504 612-4426-003

SCALE SHEET 2 OF 4

A

REV.  
C

D

D

B

B

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B

A

A

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6

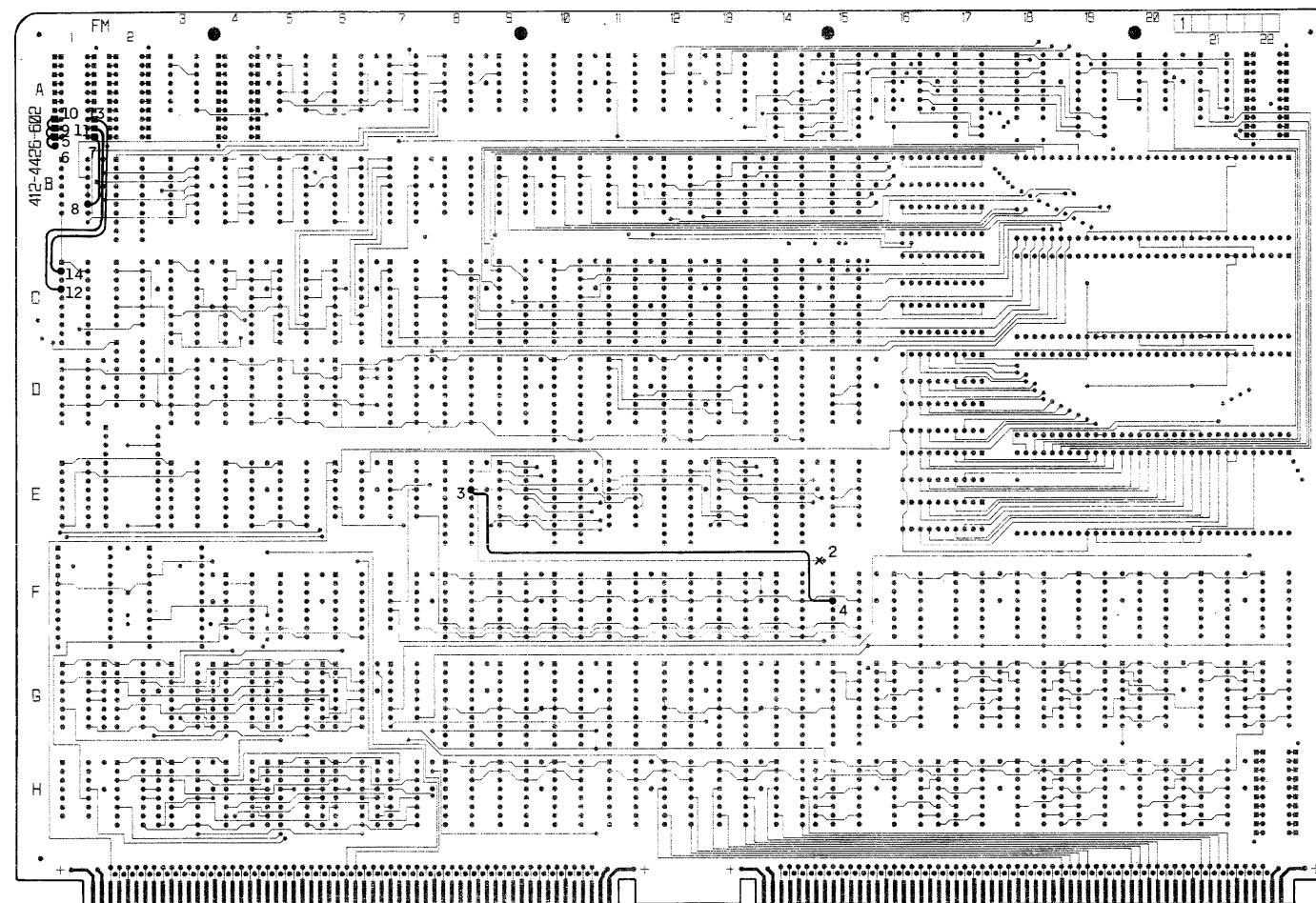
5

4

3

2

1



COMPONENT SIDE

D

C

B

A

612-4426-003 | SHT 3

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FRACTIONS ± \_\_\_\_\_  
ANGLES ± \_\_\_\_\_  
3 PLACE DEC. ± \_\_\_\_\_  
2 PLACE DEC. ± \_\_\_\_\_

MATERIAL:

ADD STRAP	CUT ETCH	DESIGNATOR	FROM	TO	SIDE
X		13-14	A1-13	C1-2	COMPONENT
X		11-12	A1-12	C1-4	
X		9-10	A1-9	A1-8	
X		5-9	A1-10	A1-9	
X		7-8	A1-11	B1-9	COMPONENT
X		5-6	A1-10	FT (GND)	COMPONENT
X		3-4	E8-17	F15-4	COMPONENT
X		2	E8-17	F15	COMPONENT
X		1		F15-4	SOLDER

## REWORK TABLE

ENGR	DATE	F floating point systems, inc.	
DRN BY	DATE	POBox 23489 Portland OR 97223	
CHK BY	DATE	DRAWING TITLE	
PROD RELEASE	DATE	ETCH CIRCUIT BOARD,	
		426-B,	
		FLOATING MULTIPLIER	
SIZE D	CODE IDENT. NO. 56504	DRAWING NO. 612-4426-003	REV C
SCALE NONE			

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

D

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C

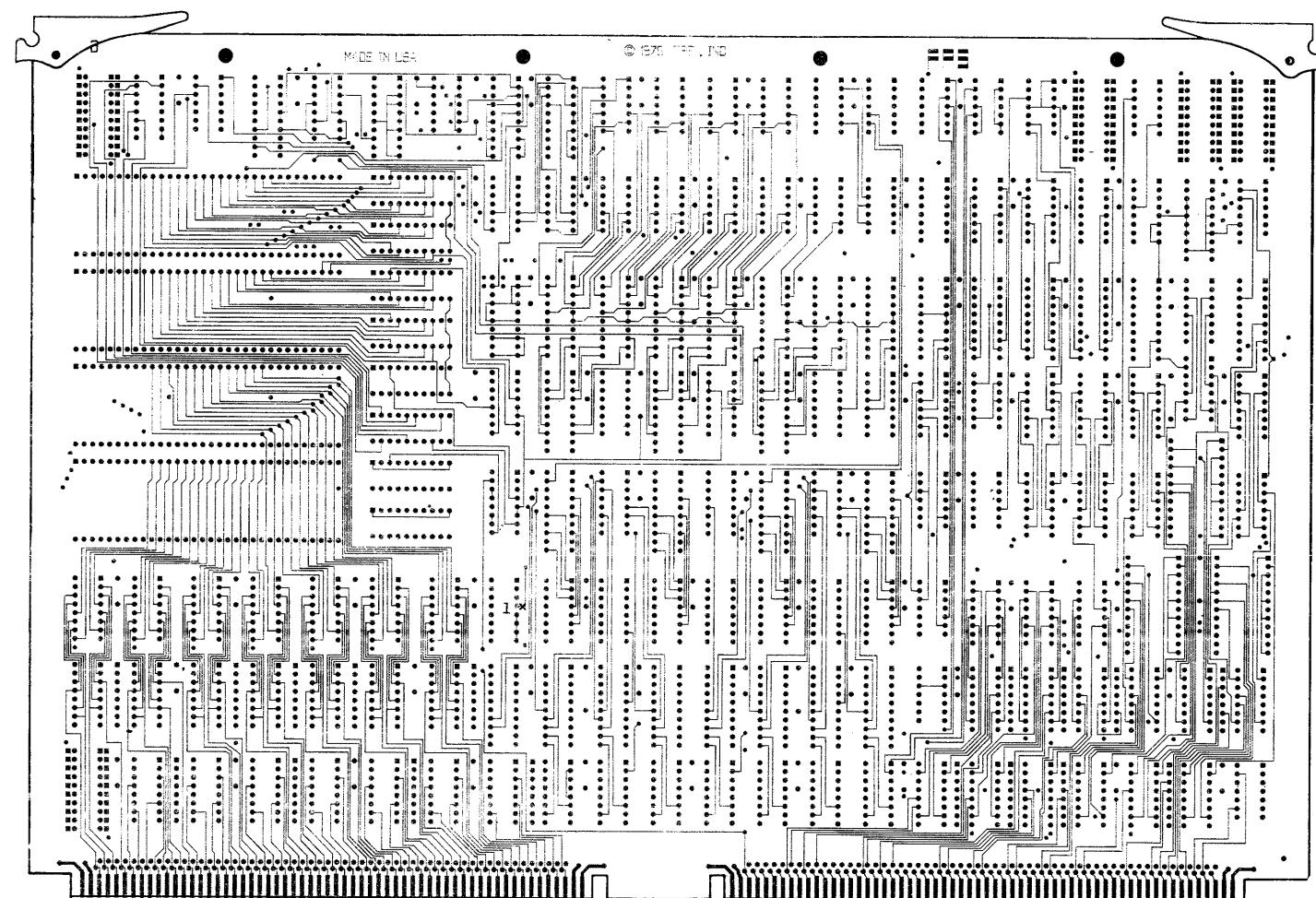
C

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B

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A



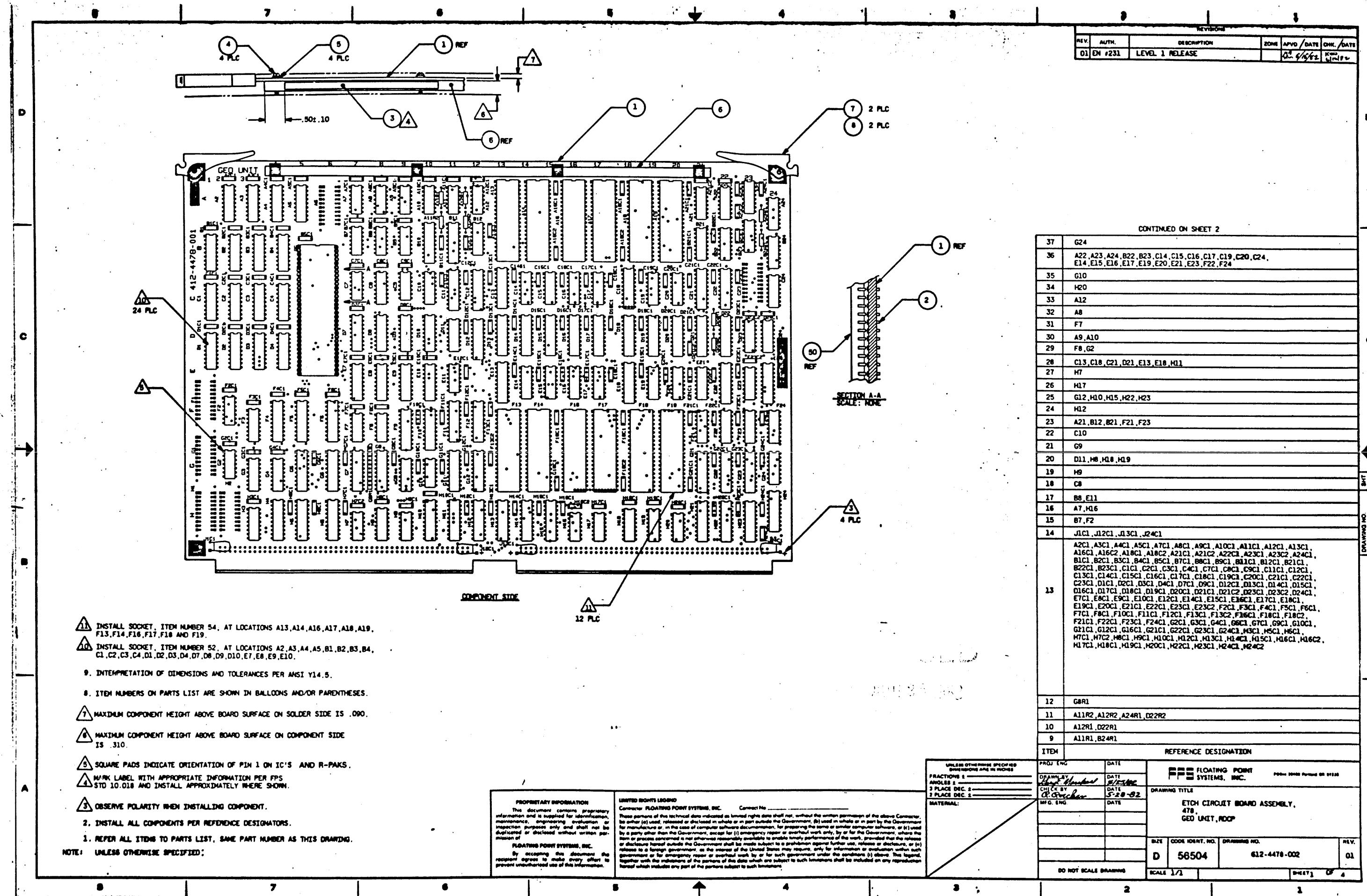
SOLDER SIDE

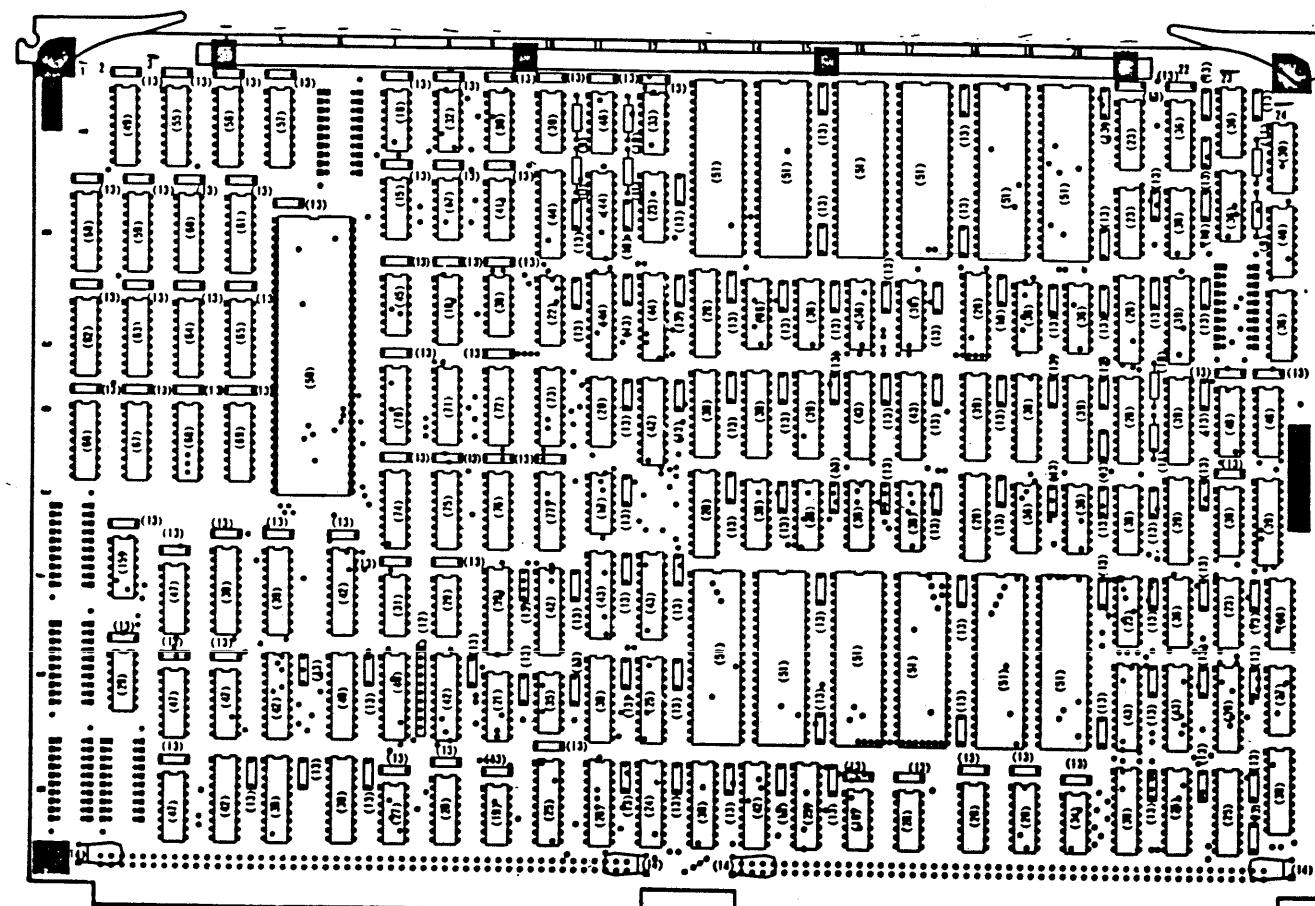
DRAWING NO.  
612-4426-003

SHFT  
4

REV  
A

SIZE	CODE IDENT. NO.	DRAWING NO.	REV
D	56504	612-4426-003	C
SCALE	NONE	SHEET 4 OF 4	





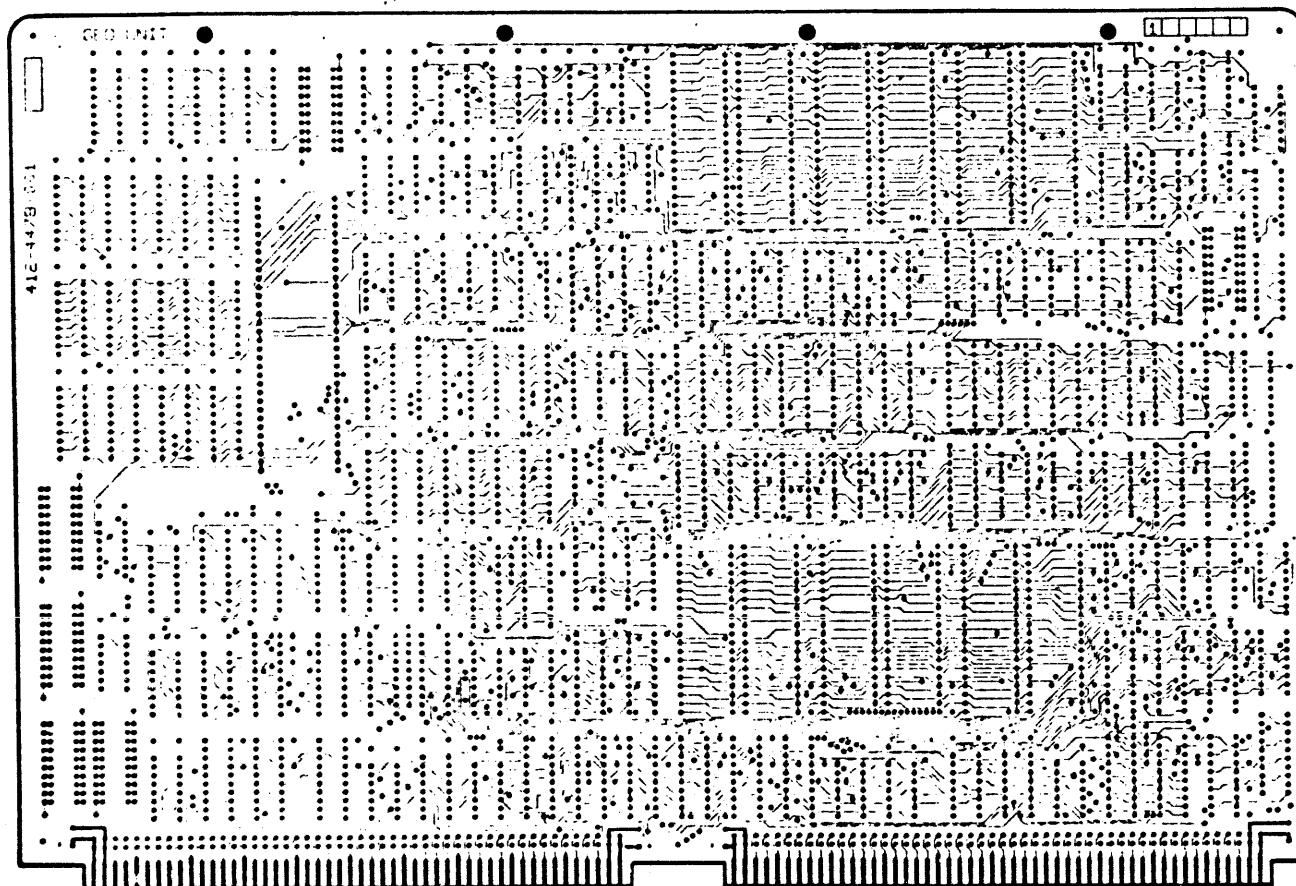
COMPONENT SIDE

ISSUED

AUG 25 1982

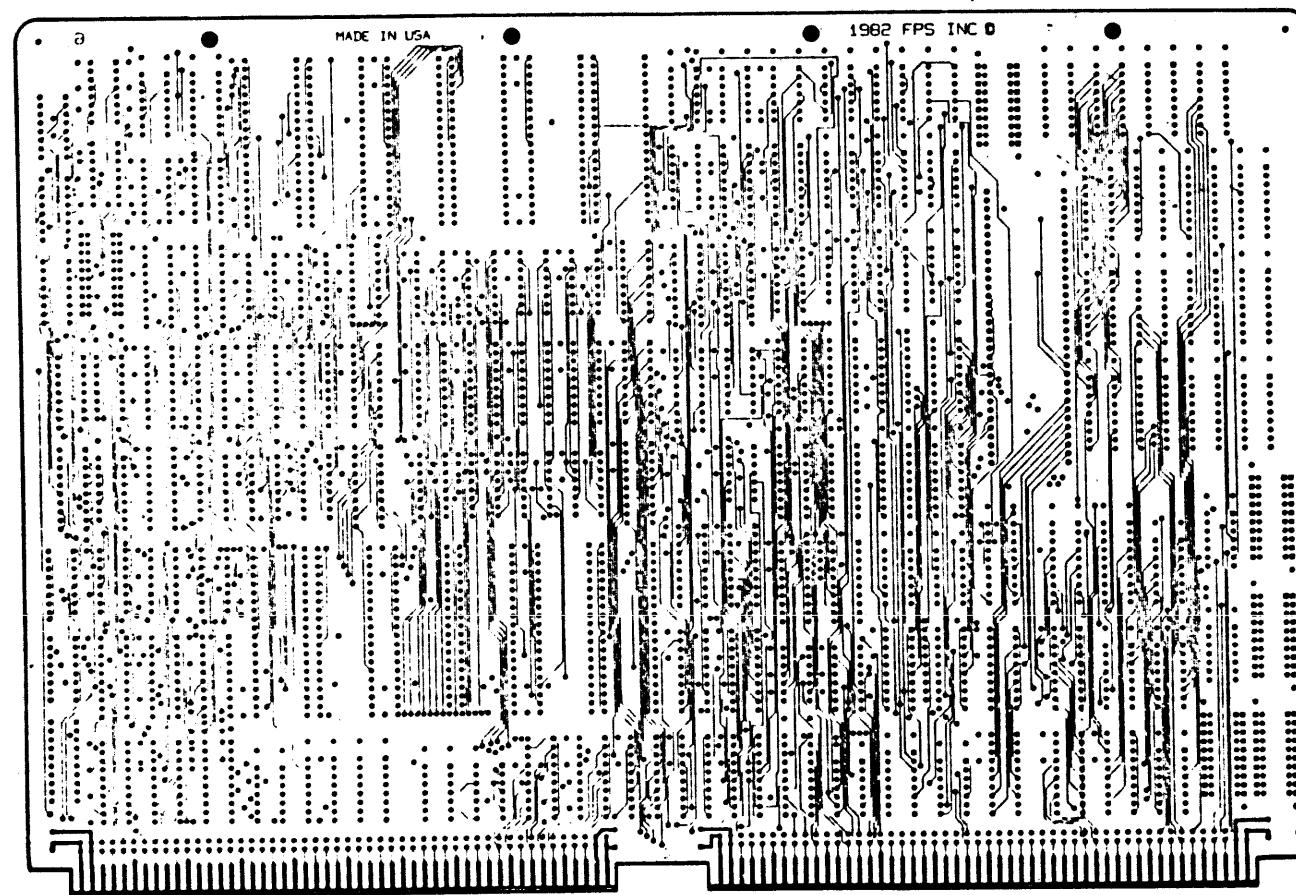
ITEM	REFERENCE DESIGNATION	SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
77	E10				
76	E9				
75	E8				
74	E7				
73	D10				
72	D9				
71	D8				
70	D7				
69	D4				
68	D3				
67	D2				
66	D1				
65	C4				
64	C3				
63	C2				
62	C1				
61	B4				
60	B3				
59	B2				
58	B1				
57	A5				
56	A4				
55	A3				
51	A13,A14,A16,A17,A18,A19,F13,F14,F16,F17,F18,F19				
50	B5				
49	A2				
48	B24,023,D24				
47	F3,G3,G4,M3				
46	A11				
45	C7				
44	B10,B11,C11,C12				
43	D16,D17,F11,F12,G21,G22				
42	D12,F6,F10,G9,G8,H4,H14				
41	B9				
40	G6,G7				
39	C22,D13,D14,D15,D16,D19,D20,D22,E22,E24,F4,F5,F9, G11,G23,M6,M6,M13,M21,M24				
38	C9				

ITEM	REFERENCE DESIGNATION	SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
		D	58504	612-4478-002	01
		SCALE 1/1		SHEET 2	



COMPONENT SIDE

ADD STRAP	CUT ETCH	DESIGNATOR	FROM	TO	SIDE
REWORK TABLE					
			SIZE CODE IDENT. NO.	DRAWING NO.	REV. 01
			D 56504	612-4478-002	
			SCALE 1/1	SHEET 3	



SOLDER SIDE

ADD STRAP	CUT ETCH	DESIGNATOR	FROM	TO	SIDE
REWORK TABLE					
			D	56504	REV. 01
			SCALE 1/1		HEET 4