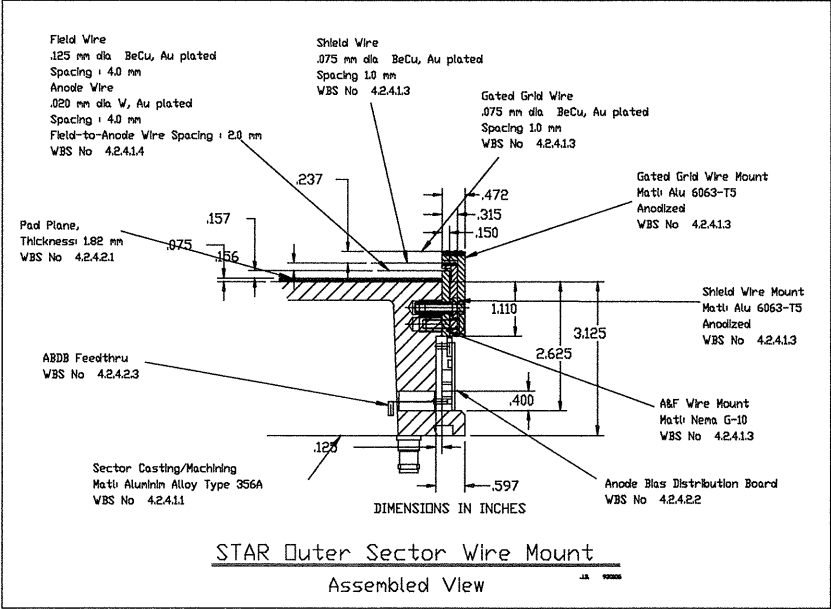


8 7 6 5 4 3 2 1

REV	ITEM	PART NUMBER	DESCRIPTION



STAR Outer Sector Wire Mount
Assembled View

24A0304

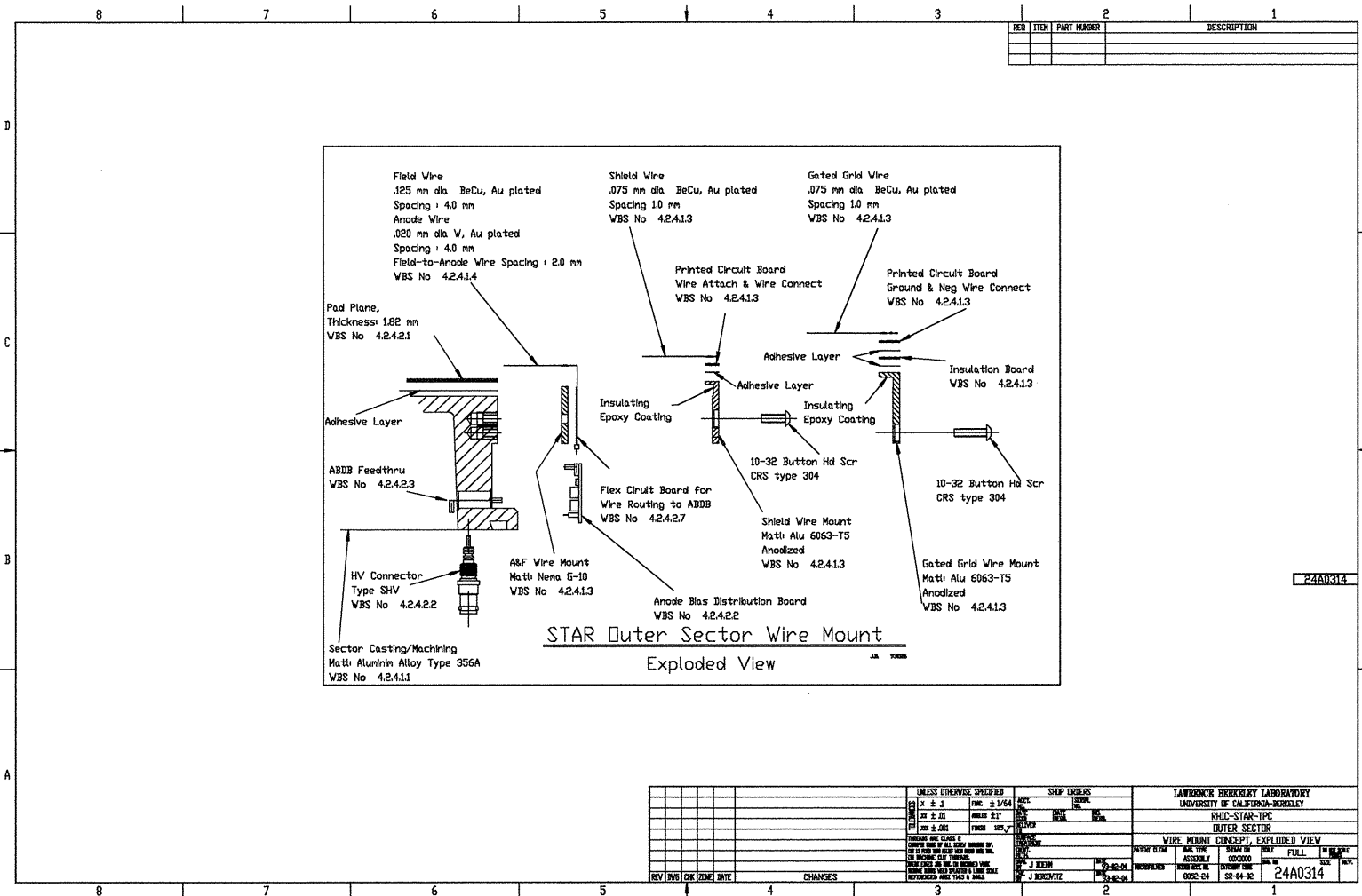
D
C
B
A

D
C
B
A

REV	DESCRIPTION	DATE	CHANGES

UNLESS OTHERWISE SPECIFIED		SHEP DROGGS		LAWRENCE BERKELEY LABORATORY	
Q1	2 ± .1	FIN		UNIVERSITY OF CALIFORNIA-BERKELEY	
Q2	2 ± .02	FIN		RHIC-STAR-TPC	
Q3	2 ± .005	FIN		OUTER SECTOR	
				WIPE MOUNT CONCEPT, ASSEMBLED VIEW	

8 7 6 5 4 3 2 1



REV	ITEM	PART NUMBER	DESCRIPTION

24A0314

REV	NO	OR	DATE	CHANGES

UNLESS OTHERWISE SPECIFIED		SHOP DIMENSIONS		LAWRENCE BERKELEY LABORATORY	
CS	X ± .1	FNC	± 1/64	UNIVERSITY OF CALIFORNIA-BERKELEY	
DR	± .01	FINISH	± .01	RHIC-STAR-TPC	
ED	± .001	FINISH	± .001	OUTER SECTOR	
TITLE: WIRE MOUNT CONCEPT, EXPLODED VIEW PART NO: 24A0314 ASSMBL: 000000 DRAWN BY: J. J. BERNITZ CHECKED BY: J. J. BERNITZ DATE: 02-24-86 SIZE: 11x17 SHEET NO: 1 TOTAL SHEETS: 1					

PRINT LIST

TITLE: STAR TPC
 INNER SECTOR ELECTRONICS
 ANODE WIRE MOUNT BOARD
 (PANEL OF SIX BOARDS)

FILE NO.: a000892p1 REV:
 PRINT NO.: 24A3651 P-1
 CHANGES (*)

ENGINEER: JIM HUNTER
 DRAFTER: STIRKKINEN

DATE: 04/14/94
 PAGE: 1 OF 1

Drawing No.	Chg. Ltr.	Title
24A3651 C-1 (a000892c1)		PARTS LIST (PANEL)
24A3654 M-1 (a000892m1)		BOARD OUTLINE - CUTOUTS (PANEL)
24A3654 M-2 (a000892m2)		BOARD OUTLINE (PANEL)
24A3654 E-1 (a000892e1)		HOLE SCHEDULE - BLIND VIAS
24A3654 E-2 (a000892e2)		HOLE SCHEDULE - LAYERS 1 THRU 4
24A3654 L-1 (a000892l1)		P.C. BOARD ASSEMBLY (PANEL)
24A3651 U-1 (a000892u1)		ARTWORK - SINGLE BOARD LAYER 1 - GROUND PLANE LAYER 2 - PADS LAYER 3 - H.V. CIRCUIT LAYER 4 - OUTER TRACE LAYER
24A3651 U-2 (a000892u2)		ARTWORK - PANEL OF SIX 24A3651 U-1'S

** THE FOLLOWING DRAWING NOT REQUIRED FOR THIS PACKAGE:
 SILKSCREEN

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

PARTS LIST

TITLE: STAR TPC
 INNER SECTOR ELECTRONICS
 ANODE WIRE MOUNT BOARD
 (PANEL OF 6)

FILE NO.: a000892c1 REV:
 PRINT NO.: 24A3651 C-1
 CHANGES (*)

ENGINEER: JIM HUNTER
 DRAFTER: STIRKKINEN

DATE: 04/14/94
 PAGE: 1 OF 1

Reference	Stock No.	Part Type	Description	Qty
HARDWARE				
-	NS	BBL-111-G-E	11 PIN SOCKET, STRAIGHT, SAMTEC #BBL-111-G-E	6
-	NS	BBL-121-G-E	21 PIN SOCKET, STRAIGHT, SAMTEC #BBL-121-G-E	96
-	NS	BBL-101-G-E	1 PIN SOCKET, STRAIGHT, SAMTEC #BBL-101-G-E	6
-	NS	104716-1	1 PIN CONNECTOR, RIGHT ANGLE, AMP #104716-1 OR SAMTEC #HMTSW-1-1-08-S- S230-RA	24
-	NS	a000892u2	24A3651 U-2, PRINTED CIRCUIT BOARD (PANEL OF 6 24A3651 U-1, a000892u1)	1

*

PARTS LIST

TITLE: STAR TPC
 INNER SECTOR ELECTRONICS
 ANODE WIRE MOUNT BOARD
 (PANEL OF 6)

FILE NO.: a000892c1 REV:
 PRINT NO.: 24A3651 C-1
 CHANGES (*)

ENGINEER: JIM HUNTER
 DRAFTER: STIRKKINEN

DATE: 04/14/94
 PAGE: 1 OF 1

Reference	Stock No.	Part Type	Description	Qty		
HARDWARE						
-	1 place.	NS	BBL-111-G-E	11 PIN SOCKET, STRAIGHT, SAMTEC #BBL-111-G-E	6	12
-	16 places.	NS	BBL-121-G-E	21 PIN SOCKET, STRAIGHT, SAMTEC #BBL-121-G-E	96	192
-	1 place.	NS	BBL-101-G-E	1 PIN SOCKET, STRAIGHT, SAMTEC #BBL-101-G-E	6	12
-	4 places.	NS	104716-1	1 PIN CONNECTOR, RIGHT ANGLE, AMP #104716-1 OR SAMTEC #HMTSW-1-1-08-S- S230-RA	24	
		NS	a000892u2	24A3651 U-2, PRINTED CIRCUIT BOARD (PANEL OF 6 24A3651 U-1, a000892u1)	1	

INNER RADIUS

LAYER 1 VIEW
NO SCALE

OUTER RADIUS



SINGLE PIN CONNECTOR, AMP #104716-1
OR SAMTEC HMTSW-1-1-08-S-S230-RR
(24 PLACES)

FEEDTHRU BOARD WILL BE
SOLDERED DIRECTLY TO BOARD.
(48 PLACES)

21 PIN SOCKET, SAMTEC
#BBL-121-G-E (96 PLACES)

SINGLE PIN SOCKET, SAMTEC
#BBL-101-G-E (6 PLACES)

11 PIN SOCKET, SAMTEC
#BBL-111-G-E (6 PLACES)

NOTES:

1. INSTALL SOCKETS AND CONNECTORS AS SPECIFIED.
2. BOARD SIZE IS 28.100 +/- .005 X 18.300 +/- .010.
SINGLE BOARD SIZE IS 28.100 X 2.781 +/- .005.
DIMENSIONS ARE IN INCHES.

3. REFERENCE DRAWINGS:

24A3651 C-1	a000892c1	PARTS LIST - PANEL OF 6
24A3654 M-1	a000892m1	BOARD OUTLINE - CUTOUTS - PANEL OF 6
24A3654 M-2	a000892m2	BOARD OUTLINE (a000892u2) - PANEL OF 6
24A3654 E-1	a000892e1	HOLE SCHEDULE - BLIND VIAS - PANEL OF 6
24A3654 E-2	a000892e2	HOLE SCHEDULE - LAYERS 1 THRU 4 - PANEL OF 6

I:		TITLE		STAR TPC	
II:		SUBTITLE		INNER SECTOR ELECTRONICS	
III:		DESCRIPTION		ANODE WIRE MOUNT BOARD - PANEL OF 6	
IV:		DRAWING NO.		P.C. BOARD ASSEMBLY (24A3651 U-2)	
ACCUANT NUMBER	8052-24	DRAWN	STARKKINEN	DATE	04/13/94
SERIAL NUMBER		CHECKED		DATE	
DATE ISSUED		APPROVED		DATE	
DATE RECD.		ENGINEER	JIM HUNTER	FILE NO.	a00089211
DEL. TO		SCALE	NONE	SIZE	4
				DRAWING NO.	24A3654 L-1
				REV.	
					E2,-C2,E3,E26,R19
					SHEET 1 OF 1

PRINT LIST

11/2/94

TITLE: STAR TPC
 INNER SECTOR
 PAD PLANE INNER SECTOR BOARD -
 2 LAYER WITH INSULATION BOARD

FILE NO.: a000886p1 REV:
 PRINT NO.: 24A1041 P-1
 CHANGES (*)

ENGINEER: JIM HUNTER
 DRAFTER: STIRKKINEN

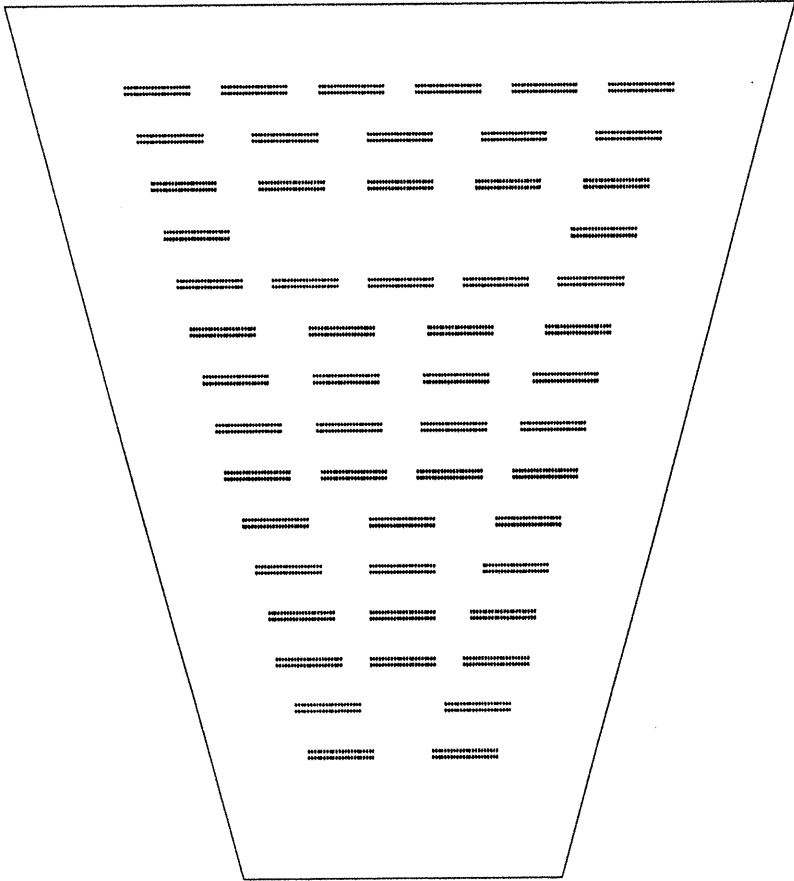
DATE: 10/21/94
 PAGE: 1 OF 1

Drawing No.	Chg. Ltr.	Title
24A1044 M-1 (a000886m1)		BOARD OUTLINE / ASSEMBLY OF BOARDS 1 AND 2
24A1044 E-1 (a000886e1)		HOLE SCHEDULE - BOARD 1 (CIRCUIT BOARD) (LAYERS 1 AND 2)
24A1044 E-2 (a000886e2)		ROUTING SCHEDULE - BOARD 2 (INSULATION BOARD) (LAYERS 3 AND 4)
24A1044 E-3 (a000886e3)		ARTWORK - TIN PLATING (LAYER 2)
24A1041 U-1 (a000886u1)		ARTWORK - BOARD 1 LAYER 1 - DETECTOR PADS LAYER 2 - COMPONENT SIDE
24A1041 U-2 (a000886u2)		ARTWORK - INSULATOR BOARD

** THE FOLLOWING DRAWINGS NOT REQUIRED FOR THIS PACKAGE:
 PARTS LIST, SILKSCREEN, PC BD. ASSEMBLY

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

REV.	CHANGES	DRWN	DATE	CHKD	DATE

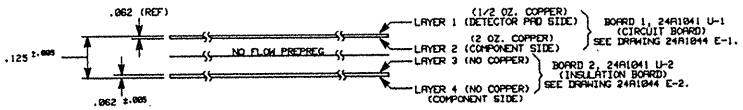


COMPONENT SIDE (LAYER 2) VIEW

24R1041 U-1 a000886u1

NOTES:

- THIS DRAWING REPRESENTS THE ARTWORK TO MASK THE BOARD FOR TIN PLATING THE SHOT CONNECTOR PADS.
- THIS IS A MULTILAYER BOARD CONSISTING OF FOUR LAYERS. BOARD MATERIAL IS EPOXY GLASS LAMINATE TYPE NEMA G10. FINISHED BOARD THICKNESS IS .125 +/- .005". BOARD SIZE IS 26.000" W X 10.460" H X 29.000" H +/- .030".
- ARTWORK TO BE PLOTTED ON GLASS FOR REGISTRATION ACCURACY.
- REFERENCE DRAWINGS:
 24R1044 E-1 a000886e1 HOLE SCHEDULE - CIRCUIT BOARD
 24R1044 E-2 a000886e2 ROUTING SCHEDULE - INSULATION BOARD
 24R1044 M-1 a000886e1 BOARD OUTLINE

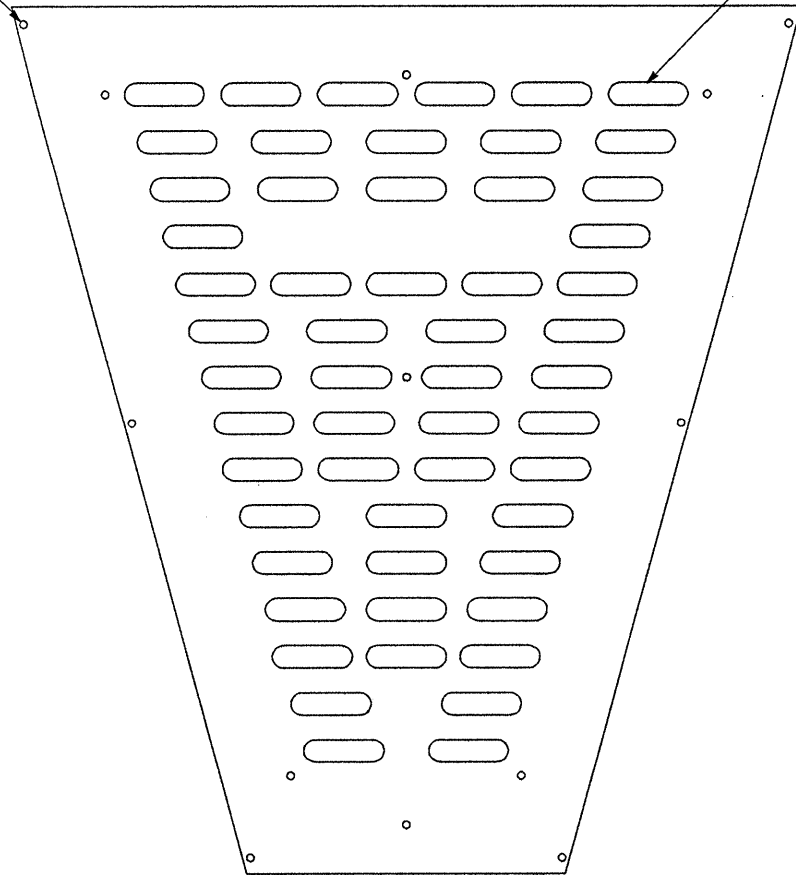


TITLE		STAR TPC	
INNER SECTOR			
PAD PLANE INNER SECTOR BOARD - 2 LAYER			
ARTWORK - TIN PLATING (LAYER 2)			
PROJ	8852-24	DESIGN	10-28-81
LAWRENCE BERKELEY LABORATORY		UNIVERSITY OF CALIFORNIA	
OFFICE OF ELECTRONICS ENGINEERING			
DATE	10/11/81	DESIGNER	FRED BIESER
CHKD	a000886e3	DATE	24R1044 E-3
WFL NONE		R12, E14	
SHEET		3 of 3	

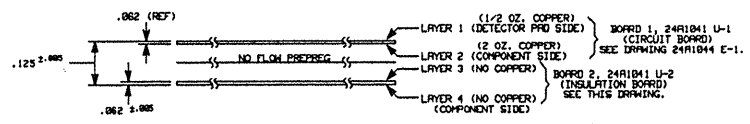
11/2/94

FINISHED HOLE IS .250 DIA.
(13 PLACES)

FINISHED SLOT SIZE
IS 2.50" X .750"
WITH FULL RADIUS
AT BOTH ENDS
(55 PLACES)



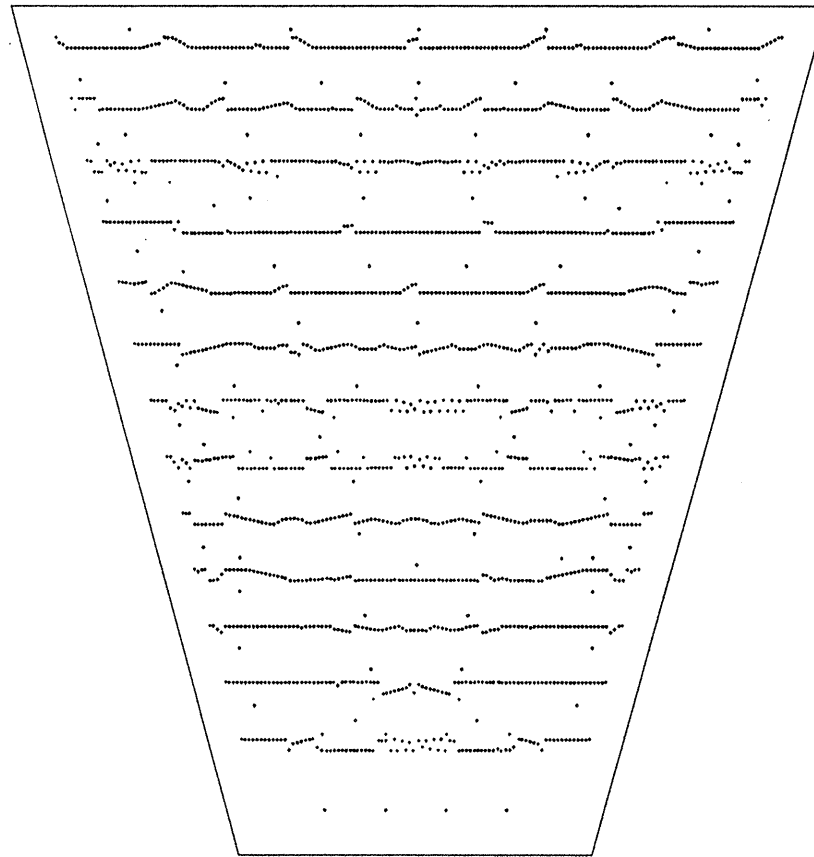
COMPONENT SIDE VIEW
2411041 U-2 4000886u2



- NOTES:
- BOARD MATERIAL: (4 LAYER BOARD)
A) BOARD 1 (CIRCUIT BOARD) - SEE DRAWING 2411044 E-1 (4000886e1).
B) BOARD 2 (INSULATION BOARD) - EPOXY GLASS LAMINATE TYPE NEMA G18, .062 THICK PER MIL-P-13849G FL-GEN 862C-3, 5-BIB (1/2 OZ COPPER EACH SIDE). ALL COPPER TO BE ETCHED AWAY ON BOTH SIDES.
 - THERE IS NO THROUGH HOLE PLATING ON THIS BOARD.
 - USE SUPPLIED GERBER OR DXF FILE FOR ROUTING. USE A .125 INCH ROUTER BIT. (GERBER FILE = PCB08RT) DXF FILE = p885pt
 - BOARD SIZE IS 26.000 X 10.460 X 29.000 ±.030 DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 2411044 M-1 (4000886m1).
 - FINISHED BOARD THICKNESS IS .125 ±.005.
 - REFERENCE DRAWINGS:
2411044 E-1 4000886e1 HOLE SCHEDULE - CIRCUIT BOARD
2411044 E-3 4000886e3 PARTWORK - TIN PLATING (LAYER 2)
2411044 M-1 4000886m1 BOARD OUTLINE

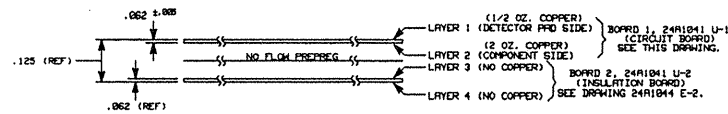
01	ITEM	STAR TPC
02	ITEM	INNER SECTOR
03	ITEM	PAD PLANE INNER SECTOR BOARD - 2 LAYER
04	ITEM	ROUTING SCHEDULE - BOARD 2 (INSULATION BOARD)
05	PROJECT	0652-24
06	DESIGNED BY	STROUDIN 10-27-91
07	DESIGNED AT	LAWRENCE BERKELEY LABORATORY
08	DESIGNED FOR	UNIVERSITY OF CALIFORNIA
09	DESIGNED BY	OFFICE OF ELECTRONICS ENGINEERING
10	DATE	10/28/94
11	SCALE	AS SHOWN
12	UNITS	INCHES
13	NO. OF SHEETS	4
14	SHEET NO.	2411044 E-2
15	TITLE	ROUTING SCHEDULE - BOARD 2 (INSULATION BOARD)
16	DATE	10/28/94
17	BY	STROUDIN
18	CHKD.	
19	APP'D.	
20	DATE	

11/2/94



DETECTOR PAD SIDE VIEW

24A1041 U-1 #000886u1



NOTES:

- BOARD MATERIAL: (4 LAYER BOARD)
- BOARD 1 (CIRCUIT BOARD) - EPOXY GLASS LAMINATE TYPE NEPI G18 .062 THICK PER MIL-P-13849G FL-CM 8820-27, 3-918 (2 OZ. COPPER - LAYER 2 AND 1/2 OZ. COPPER - LAYER 1).
- BOARD 2 (INSULATION BOARD) - SEE DRAWING 24A1044 E-2 (#000886u2). THERE IS NO COPPER OR CIRCUITRY ON THIS BOARD.
- THERE IS TO BE TIN PLATING USED ONLY ON LAYER 2 ON SMT CONNECTOR PADS. THERE IS TO BE NO TIN PLATING IN THROUGH HOLES. SEE DRAWING 24A1044 E-3 (#000886u3).
- FINISHED HOLE SIZE AFTER COPPER PLATING IS .035 DIA. +/- .002 (INCHES). MINIMUM ANNULAR RING SHALL BE ANSI/IPC-RB-276 CLASS 3. THERE ARE A TOTAL OF 1853 HOLES.
- CORE AND PREPREG THICKNESS TO BE DETERMINED BY MANUFACTURER PER IPC-L-189A OR MIL-P-13849G. CLASS OF RESIN FLOW: NO FLOW.
- FINISHED BOARD THICKNESS IS .125 +/- .005".
- BOARD SIZE IS 26.0004 X 10.4604 X 25.0004 +/- .030. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A1044 M-1 (#000886u1).
- ARTWORK TO BE PLOTTED ON GLASS FOR REGISTRATION ACCURACY.
- REFERENCE DRAWINGS:
 24A1044 M-1 #000886u1 BOARD OUTLINE
 24A1044 E-2 #000886u2 ROUTING SCHEDULE - INSULATION BOARD
 24A1044 E-3 #000886u3 ARTWORK - TIN PLATING (LAYER 2)

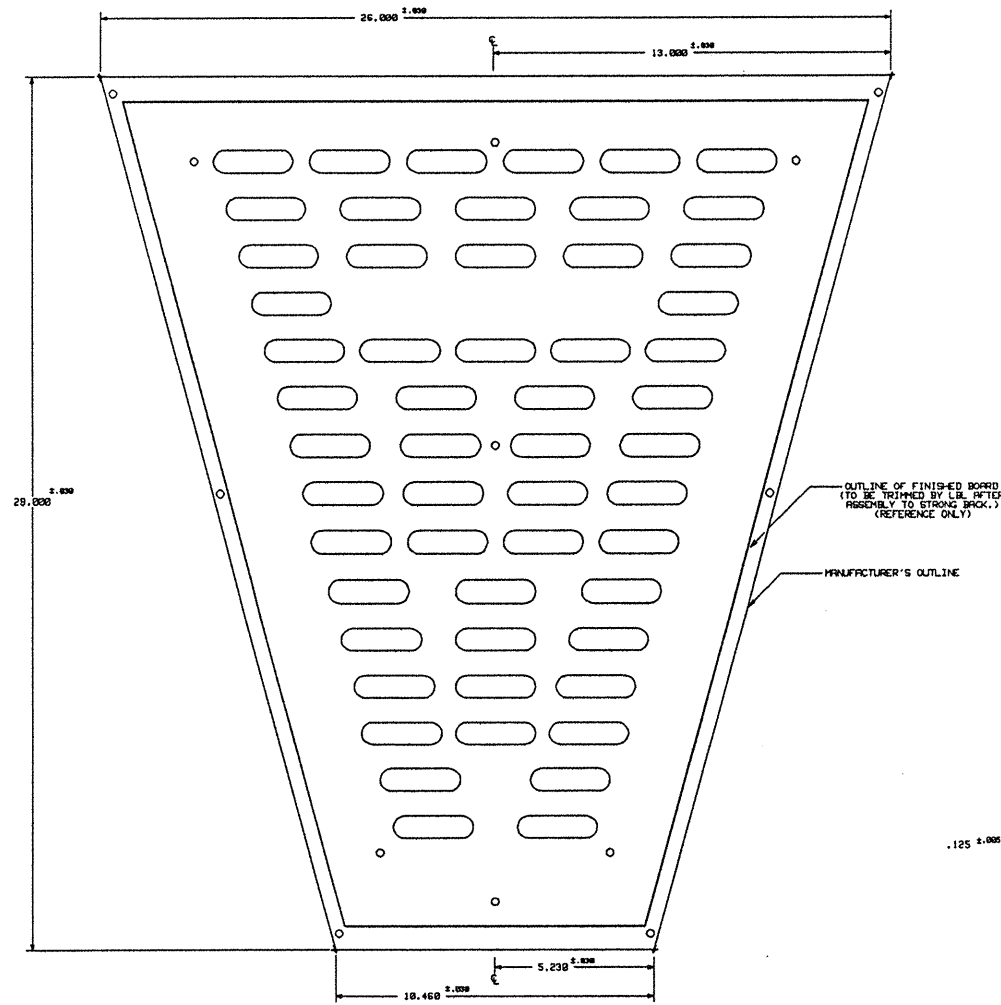
TOOLING NO.	HOLE DIA.	COUNT
1	.035	1563
2	.020	155
3	.020	50
4	.020	45
TOTAL HOLE COUNT =		1853

USE .035 DIA HOLE FOR ALL HOLES.

011	STAR TPC
012	INNER SECTOR
013	PAD PLANE INNER SECTOR BOARD - 2 LAYER
014	HOLE SCHEDULE - BOARD 1 (CIRCUIT BOARD)
015	#052-24
016	09/22/93
017	LAWRENCE BERKELEY LABORATORY
018	UNIVERSITY OF CALIFORNIA
019	OFFICE OF ELECTRONICS ENGINEERING
020	SEE DRAWING NO.
021	FRED BLOSER #000886u1
022	4
023	24A1044 E-1
024	E14,C28
025	WET 1 of 3

11/2/94

REV.	OFFICER	DRWN	DATE	CHKD.	DATE

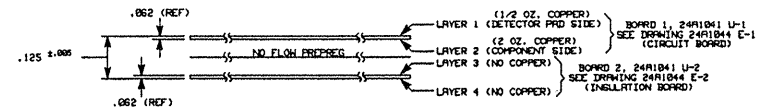


VIEWED FROM CONNECTOR SIDE
WITH INSULATION BOARD

NOTES:

- BOARD MATERIAL: (4 LAYER BOARD)
 - BOARD 1 (CIRCUIT BOARD) - GLASS EPOXY LAMINATE TYPE NEMA G10, .062 THICK PER MIL-P-13949G FL-SER 0520-27, 5-813 (2 OZ. COPPER FOR LAYER 2 AND 1/2 OZ. COPPER FOR LAYER 1).
 - BOARD 2 (INSULATION BOARD) - GLASS EPOXY LAMINATE TYPE NEMA G10, .062 THICK PER MIL-P-13949G FL-SER 0520-27, 5-813 (1/2 OZ. EACH SIDE, ETCHED AWAY).
- THERE IS TO BE TIN PLATING ONLY ON LAYER 2 ON SMT CONNECTOR PADS. THERE IS TO BE NO TIN PLATING THROUGH HOLES. SEE DRAWING 24R1044 E-3.
- FINISHED BOARD THICKNESS TO BE .125 +/- .005. OVER-ALL DIMENSIONS FOR BOARD ARE 25.000 X 29.000. DIMENSIONS ARE IN INCHES.
- PREPREG TO BE NO FLOW TYPE.
- PATHWORK TO BE PLOTTED ON GLASS FOR REGISTRATION ACCURACY.
- REFERENCE DRAWINGS:

24R1044 E-1	#000886#1	HOLE SCHEDULE - CIRCUIT BOARD
24R1044 E-2	#000886#2	ROUTING SCHEDULE - INSULATION BOARD
24R1044 E-3	#000886#3	PATHWORK - TIN PLATING



QTY	NAME	STAR TPC
1	NAME	TANNER SECTOR
1	NAME	PAD PLANE INNER SECTOR BOARD - 2 LAYER BOARD OUTLINE (#000886U1)
DRWN	DATE	BY
PROJECT	NO	DATE
DESIGNED	BY	DATE
CHECKED	BY	DATE
APPROVED	DATE	BY
FILE NO.	SEE DRAWING NO.	DATE
DRW. NO.	24R1044 M-1	REV.
DRW. NAME	FRED BIESER	#000886M1 4
SCALE	NONE	E2.E7
SHEET	1	OF 1

OCTOBER 29, 1994

11/2/94

*

PRINT LIST

SEP 29 1994

TITLE: STAR TPC
INNER SECTOR ELECTRONICS
GATED GRID WIRE MOUNT BOARD
(PANEL OF 16 BOARDS)

FILE NO.: a000896p1 REV:
PRINT NO.: 24A4501 P-1
CHANGES (*)

ENGINEER: JIM HUNTER
DRAFTER: STIRKKINEN

DATE: 04/08/94
PAGE: 1 OF 1

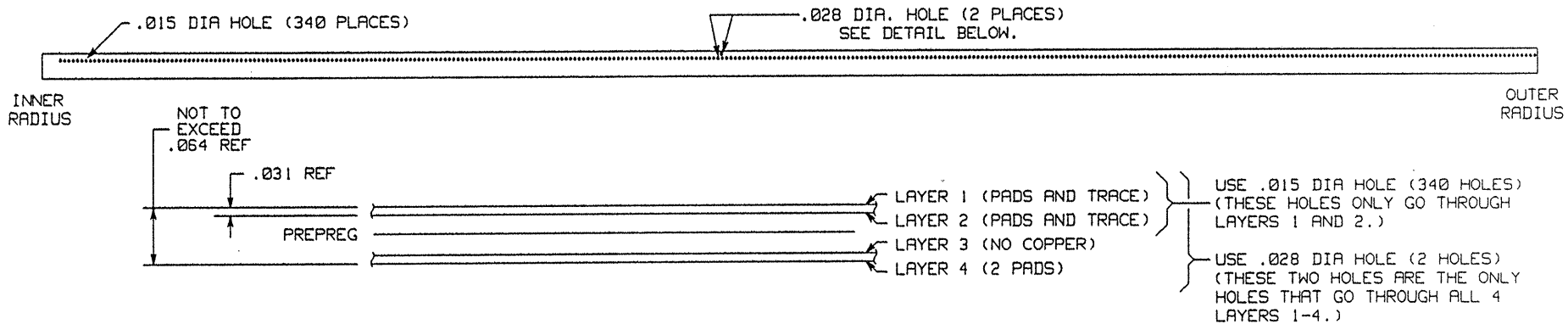
Drawing No.	Chg. Ltr.	Title
24A4502 M-1 (a000896m1)		BOARD OUTLINE - SINGLE BOARD
24A4503 M-2 (a000896m2)		BOARD OUTLINE - PANEL OF 16
24A4502 E-1 (a000896e1)		HOLE SCHEDULE - SINGLE BOARD
24A4503 E-2 (a000896e2)		HOLE SCHEDULE - PANEL OF 16 (BLIND VIAS)
24A4503 E-3 (a000896e3)		HOLE SCHEDULE - PANEL OF 16
24A4501 U-1 (a000896u1)		ARTWORK - SINGLE BOARD LAYER 1 - WIRE MOUNT PADS LAYER 2 - PADS AND TRACES LAYER 3 - NO COPPER (BLANK) LAYER 4 - H.V. PADS
24A4501 U-2 (a000896u2)		ARTWORK - PANEL OF 16 24A4501 U-1'S

** THE FOLLOWING DRAWINGS NOT REQUIRED FOR THIS PACKAGE:
PARTS LIST, SILKSCREEN, PC BOARD ASSEMBLY

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE

LAYER ONE VIEW



NOTES:

- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- MANUFACTURER MAY NOT PUT ANY IDENTIFICATION NOMENCLATURE ON PRINTED CIRCUIT BOARD.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- THIS BOARD TO BE THROUGH HOLE PLATED. SEE DETAIL FOR BLIND VIAS (340 HOLES).
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- BOARD SIZE IS .472 +.000/-.010 X 28.100 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A4502 M-1 (a000896m1).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:

24A4502 M-1	a000896m1	BOARD OUTLINE - SINGLE BOARD
24A4503 M-2	a000896m2	BOARD OUTLINE - PANEL OF 16
24A4503 E-2	a000896e2	HOLE SCHEDULE - PANEL OF 16 (BLIND VIAS)
24A4503 E-3	a000896e3	HOLE SCHEDULE - PANEL OF 16

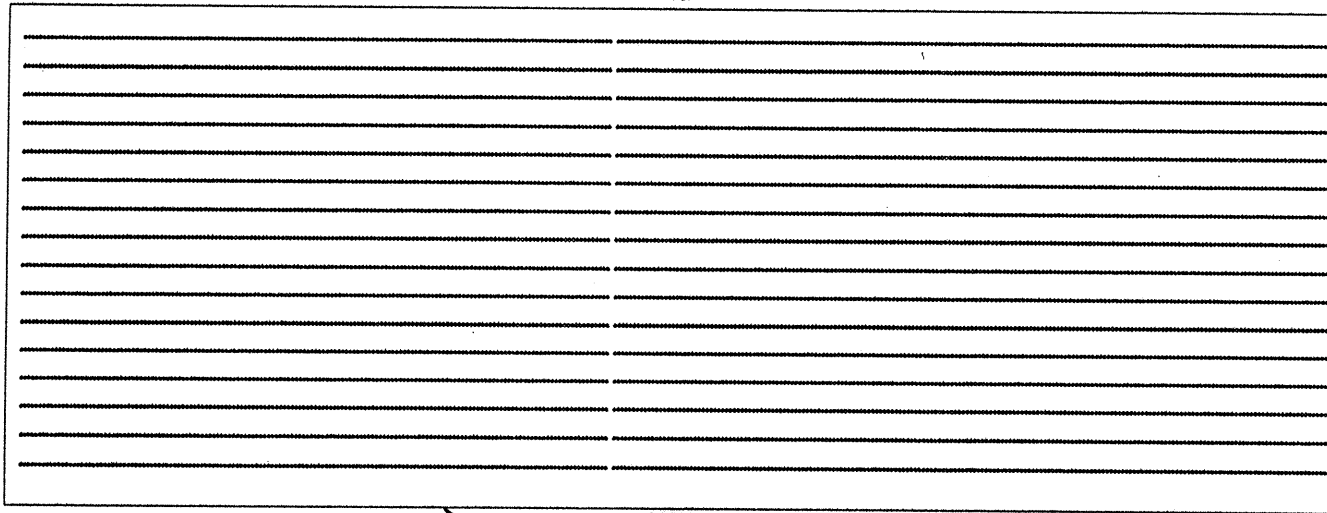
D I S T		TITLE		STAR TPC			
				INNER SECTOR ELECTRONICS			
				GATED GRID WIRE MOUNT BOARD - SINGLE BD.			
				HOLE SCHEDULE - 24A4501 U-1 (A000896U1)			
SHOWN ON		ACCOUNT NUMBER		DRAWN		DATE	
		8052-24		STIRKKINEN		4/8/94	
		SERIAL NUMBER		CHECKED		DATE	
DATE ISSUED		NO. RECD.		APPROVED		DATE	
DATE RECD.				ENGINEER		FILE NO.	
				JIM HUNTER		a000896e1	
						SIZE	
						2	
						DRAWING NO.	
						24A4502 E-1	
						REV.	
DEL. TO		SCALE		NONE		E2,C3	
						SHEET 1 of 3	

SEP 29 1994

LAYER TWO VIEW

SCALE: NONE

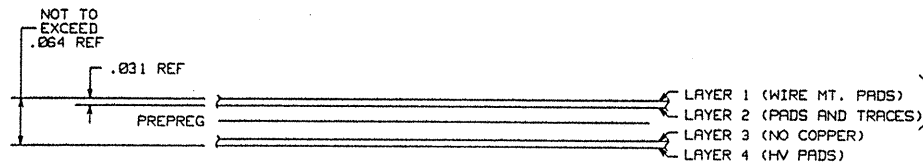
TOP



INNER RADIUS

MANUFACTURER MAY PUT THEIR IDENTIFICATION NUMBER ON OUTER EDGES ONLY, TOP OR BOTTOM.

OUTER RADIUS



USE .015 DIA HOLE (5,440 HOLES). THESE HOLES ONLY GO THROUGH LAYERS 1 AND 2 (BLIND VIAS). SEE THIS DRAWING.

USE .028 DIA HOLE (32 HOLES). DRILL THESE HOLES AFTER ASSEMBLY OF ALL LAYERS, SEE DRAWING 24A4503 E-3.

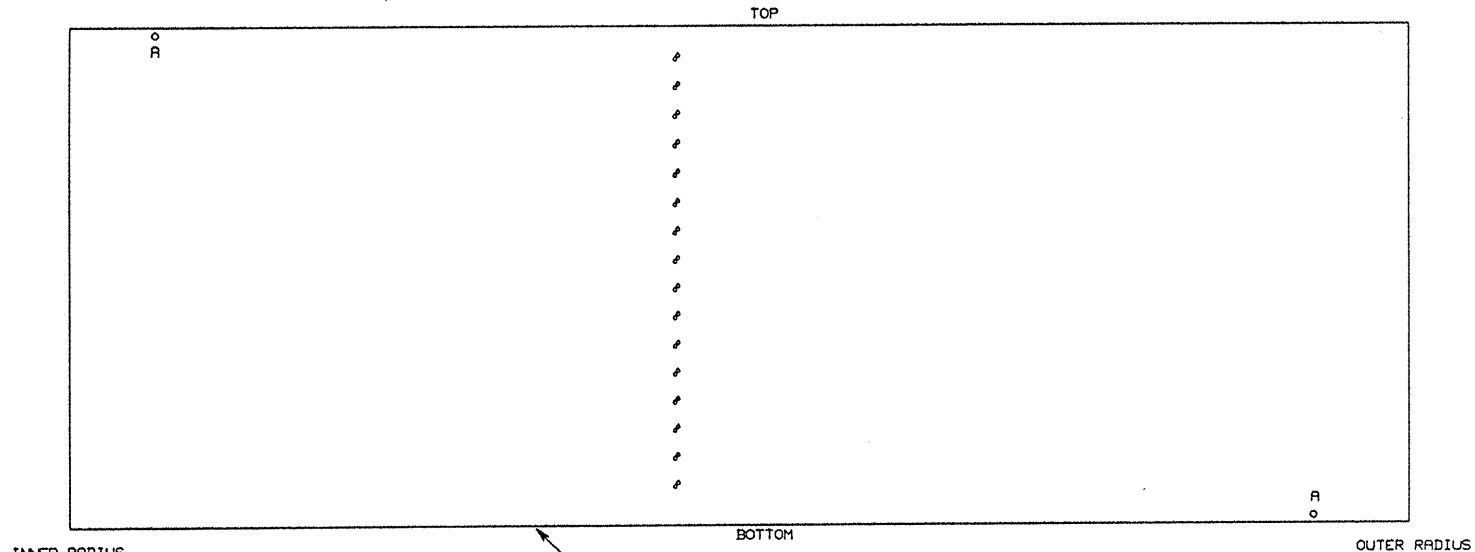
NOTES:

- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- THIS BOARD TO BE THROUGH HOLE PLATED.
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- BOARD SIZE IS 10.500 +/- .010 X 28.100 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A4503 M-2 (a000896m2).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:
 24A4502 M-1 a000896m1 BOARD OUTLINE - SINGLE BOARD
 24A4503 M-2 a000896m2 BOARD OUTLINE - PANEL OF 16
 24A4502 E-1 a000896e1 HOLE SCHEDULE - SINGLE BOARD
 24A4503 E-3 a000896e3 HOLE SCHEDULE - PANEL OF 16

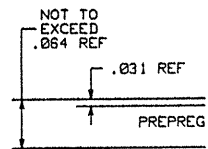
HOLE SCHEDULE		
CODE	HOLE DIA.	COUNT
NONE	.015	5,440

D I S T		TITLE STAR TPC	
DRAWN		INNER SECTOR ELECTRONICS	
CHECKED		GATED GRID WIRE MOUNT BOARD - PANEL OF 16	
DATE ISSUED		HOLE SCHEDULE - 24A4501 U-2 (BLIND VIAS)	
ACCOUNT NUMBER	DRAWN	DATE	LAWRENCE BERKELEY LABORATORY
8052-24	STROKINEN	4/28/54	UNIVERSITY OF CALIFORNIA
SERIAL NUMBER	CHECKED	DATE	OFFICE OF ELECTRONICS ENGINEERING
DATE ISSUED	NO. RECD.	APPROVED	FILE NO.
		DATE	SIZE
DATE RECD.		ENGINEER	DRAWING NO.
DEL. TO		JIM HUNTER	a000896e2 3
		SCALE NONE	24A4503 E-2
			CB, E14
			SHEET 2 of 3

LAYER FOUR VIEW
SCALE: NONE



MANUFACTURER MAY PUT THEIR IDENTIFICATION NUMBER ON OUTER EDGES ONLY, TOP OR BOTTOM.



USE .015 DIA HOLE (5,440 HOLES)
THESE HOLES ONLY GO THROUGH
LAYERS 1 AND 2 (BLIND VIAS).
SEE DRAWING 24A4503 E-2.

USE .028 DIA HOLE (32 HOLES).
DRILL THESE HOLES AFTER ASSEMBLY
OF ALL LAYERS, SEE THIS DRAWING.

NOTES:

- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- THIS BOARD TO BE THROUGH HOLE PLATED.
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- BOARD SIZE IS 10.500 +/- .010 X 28.100 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A4503 M-2 (a000896m2).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:

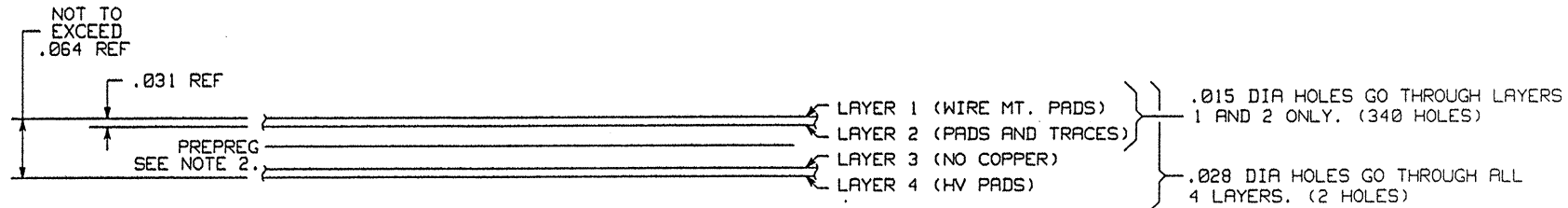
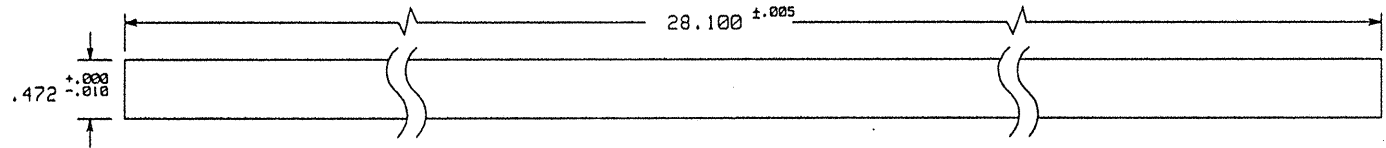
24A4502 M-1	a000896m1	BOARD OUTLINE - SINGLE BOARD
24A4503 M-2	a000896m2	BOARD OUTLINE - PANEL OF 16
24A4502 E-1	a000896e1	HOLE SCHEDULE - SINGLE BOARD
24A4503 E-2	a000896e2	HOLE SCHEDULE - PANEL OF 16, BLIND VIAS

HOLE SCHEDULE		
CODE	HOLE DIA.	COUNT
NONE	.028	32
A	.125	2

TITLE		STAR TPC	
SUBJECT		INNER SECTOR ELECTRONICS	
DRAWN BY		GATED GRID WIRE MOUNT BOARD - PANEL OF 16	
DRAWN		HOLE SCHEDULE - 24A4501 U-2 (A000896U2)	
ACCOUNT NUMBER	8052-24	DRAWN	STRICKLINEN
SERIAL NUMBER		DATE	4/28/84
DATE ISSUED		APPROVED	
DATE RECD.		NO. RECD.	
DEL. TO		ENGINEER	JIM HUNTER
		FILE NO.	a000896e3
		SIZE	3
		DRAWING NO.	24A4503 E-3
		REV.	
		SCALE	NONE
			E14
			SHEET 3 OF 3

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE

LAYER 1 VIEW



NOTES:

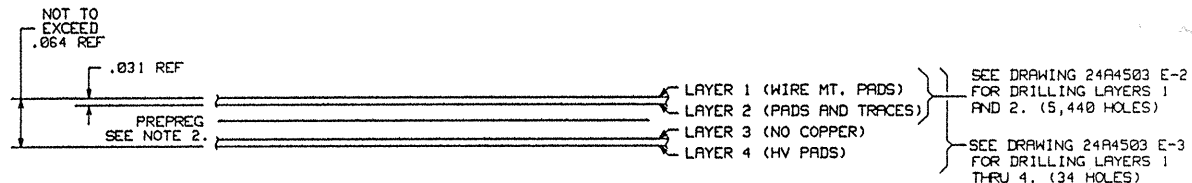
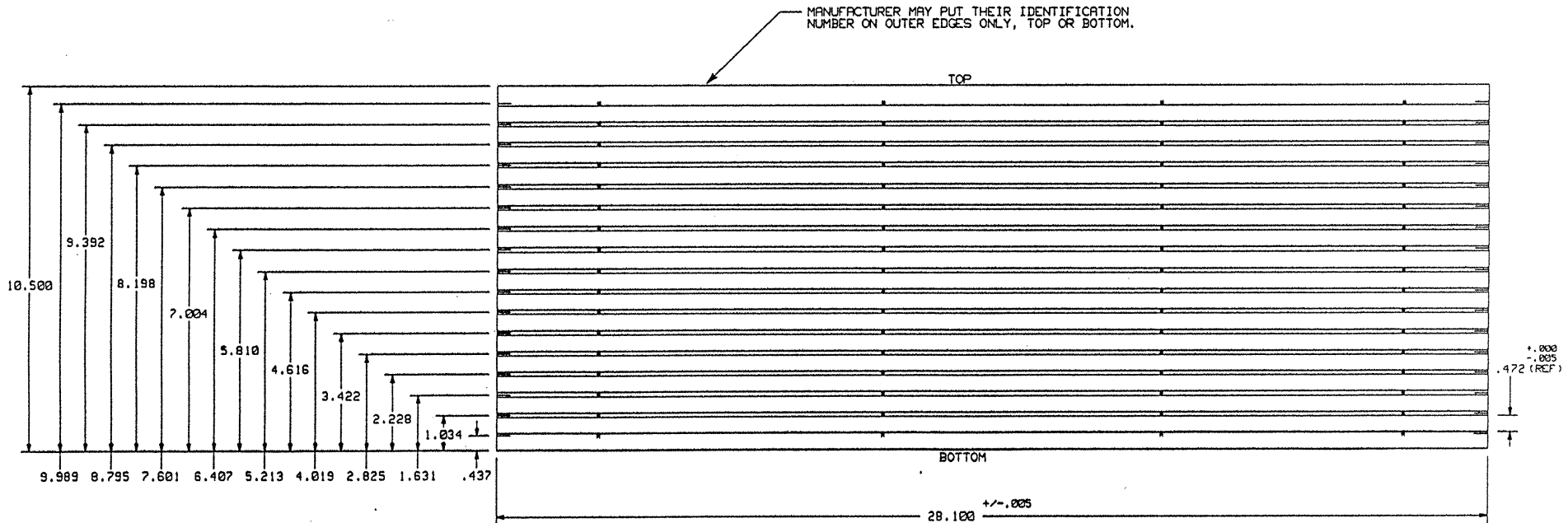
- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- PREPREG THICKNESS TO BE DETERMINED BY MANUFACTURER PER IPC-L-109A OR MIL-P-55617.
- MANUFACTURER MAY NOT PUT ANY IDENTIFICATION NOMENCLATURE ON PRINTED CIRCUIT BOARD.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- DIMENSIONS ARE IN INCHES.
- BOARD SIZE IS .472 +.000/- .010 X 28.100 +/- .005.
- REFERENCE DRAWINGS:

24A4502 E-1	a000896e1	HOLE SCHEDULE - SINGLE BOARD
24A4503 E-2	a000896e2	HOLE SCHEDULE - PANEL OF 16 (BLIND VIAS)
24A4503 E-3	a000896e3	HOLE SCHEDULE - PANEL OF 16
24A4503 M-2	a000896m2	BOARD OUTLINE - PANEL OF 16

D I S T		TITLE		STAR TPC	
				INNER SECTOR ELECTRONICS	
				GATED GRID WIRE MOUNT BOARD - SINGLE BD.	
				BOARD OUTLINE - 24A4501 U-1 (A000896U1)	
ACCOUNT NUMBER	8052-24	DRAWN	STIRKKINEN	DATE	4/08/94
				LAWRENCE BERKELEY LABORATORY	
				UNIVERSITY OF CALIFORNIA	
				OFFICE OF ELECTRONICS ENGINEERING	
DATE ISSUED	NO. RECD.	APPROVED	DATE	FILE NO.	SIZE
				a000896m1	2
DATE RECD.		ENGINEER	JIM HUNTER	DRAWING NO.	24A4502 M-1
DEL. TO		SCALE	NONE		E2
				SHEET 1 OF 2	

SEP 20 1994

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE



NOTES:

- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- PREPREG THICKNESS TO BE DETERMINED BY MANUFACTURER PER IPC-L-109A OR MIL-P-55617.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- BOARD PANEL SIZE IS 10.500 $\pm .010$ X 28.100 $\pm .005$. SINGLE BOARD SIZE IS .472 $\pm .000$ $\pm .010$ X 28.100 $\pm .005$. DIMENSIONS ARE IN INCHES.
- * = APPROXIMATE PLACEMENT OF .050 TABS. SLOTS TO BE .125 WIDE.
- REFERENCE DRAWINGS:

24A4502 E-1	a000896e1	HOLE SCHEDULE - SINGLE BOARD
24A4503 E-2	a000896e2	HOLE SCHEDULE - PANEL OF 16 (BLIND VIAS)
24A4503 E-3	a000896e3	HOLE SCHEDULE - PANEL OF 16
24A4502 M-1	a000896m1	BOARD OUTLINE - SINGLE BOARD

II:	TITLE STAR TPC	
I:	INNER SECTOR ELECTRONICS	
III:	GATED GRID WIRE MOUNT BOARD - PANEL OF 16	
SHOW ON	BOARD OUTLINE - 24A4501 U-2 (A000896U2)	
PROJECT NUMBER	8052-24	DATE 4/28/54
DESIGNER	STIRKINEN	DATE
CHECKED		DATE
DATE DRAWN		NO. REC'D.
DATE REC'D.		
TEL. TO		
APPROVED	ENGINEER JIM HUNTER	FILE NO. a000896m2
SCALE NONE	SIZE 3	DRAWING NO. 24A4503 M-2
	E2	REV. SHEET 2 OF 2

SEP 29 1994

PRINT LIST

TITLE: STAR TPC
INNER SECTOR ELECTRONICS
LITTLE ORPHAN ANODE BOARD
(PANEL OF 10 24A4511 U-1,
a000897u1)

FILE NO.: a000897p1 REV: A
PRINT NO.: 24A4511 P-1
CHANGES (*) 09/28/94

ENGINEER: JIM HUNTER
DRAFTER: STIRKKINEN

DATE: 04/15/94
PAGE: 1 OF 1

Drawing No.	Chg. Ltr.	Title
24A4511 C-1 (a000897c1)		PARTS LIST (PANEL)
24A4512 M-1 (a000897m1)		BOARD OUTLINE (PANEL)
24A4512 E-1 (a000897e1)		HOLE SCHEDULE (PANEL)
24A4512 L-1 (a000897l1)	A	PC BOARD ASSEMBLY (PANEL) *
24A4511 U-1 (a000897u1)		PC BOARD - ISOR/10 WIRE (SINGLE BOARD)
24A4511 U-2 (a000897u2)		PC BOARD - ISOR/10 WIRE (PANEL)

** DRAWINGS NOT REQUIRED FOR THIS PACKAGE - SILKSCREEN **

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

*

PARTS LIST

SEP 29 1994

TITLE: STAR TPC
INNER SECTOR ELECTRONICS
LITTLE ORPHAN ANODE BOARD
(PANEL OF 10 BOARDS)

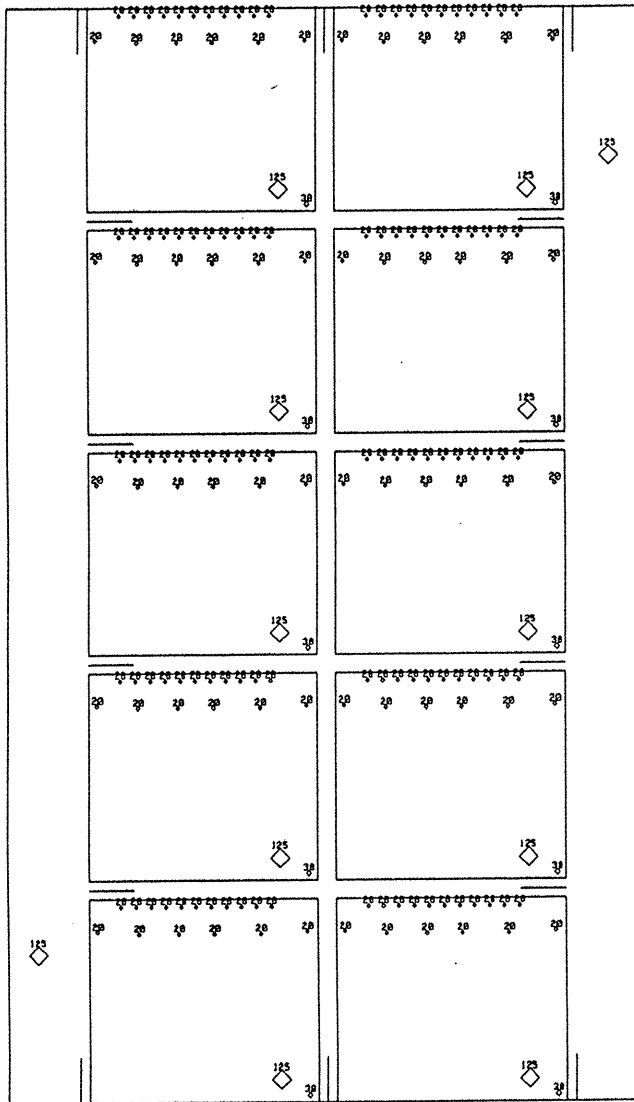
FILE NO.: a000897c1 REV:
PRINT NO.: 24A4511 C-1
CHANGES (*)

ENGINEER: JIM HUNTER
DRAFTER: STIRKKINEN

DATE: 04/15/94
PAGE: 1 OF 1

Reference	Stock No.	Part Type	Description	Qty
CAPACITORS				
C1,C2,C3,C4,C5, NS C6,C7,C8,C9, C10,C11		.001uF	.001uF,3KV,CERAMIC,SMT, SIZE .120 X .180	110
RESISTORS				
R1,R2,R3,R4,R5, NS R6,R7,R8,R9, R10,R11		10M	10M,1/8W,5%,SMT,SIZE	110
MISCELLANEOUS				
J1	NS	CN11SROW	11 PIN,SINGLE ROW CON- NECTOR,STRAIGHT,SAMTEC #SSK-111-S-G,SOLDER TAIL	10
-	NS	CN1SROW	1 PIN,SINGLE ROW CON- NECTOR,STRAIGHT,SAMTEC #SSK-101-S-G,SOLDER TAIL	4
-	NS	24A4511 U-2 (a000897u2)	24A4511 U-2,PC BD,PANEL OF 10 BOARDS (24A4511 U-1 , a000897u1)	1

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE



SOLDER SIDE VIEW

NOTES:

- BOARD MATERIAL: .062 THICK NEMA G10 GLASS EPOXY PER MIL-P-13949G FL-GEN 062C-1/1-A1A (1 OZ. COPPER BOTH SIDES).
- SEE HOLE SCHEDULE FOR HOLE SIZES.
- THIS BOARD TO BE THROUGH HOLE PLATED.
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- THIS PANEL BOARD IS NOT TO BE SILKSCREENED.
- PANEL SIZE IS 4.200 +/- .010 X 7.350 +/- .005. SINGLE BOARD SIZE IS 1.520 X 1.370 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE IS DRAWING 24A4512 M-1 (a000897m1).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:
 24A4511 C-1 a000897c1 PARTS LIST (PANEL)
 24A4512 M-1 a000897m1 BOARD OUTLINE (PANEL)
 24A4512 L-1 a000897l1 P.C. BOARD ASSEMBLY (PANEL)

HOLE SCHEDULE		
TOOLING NO.	HOLE DIA.	COUNT
1	.026	110
2	.020	60
3	.038	10
4	.125	12

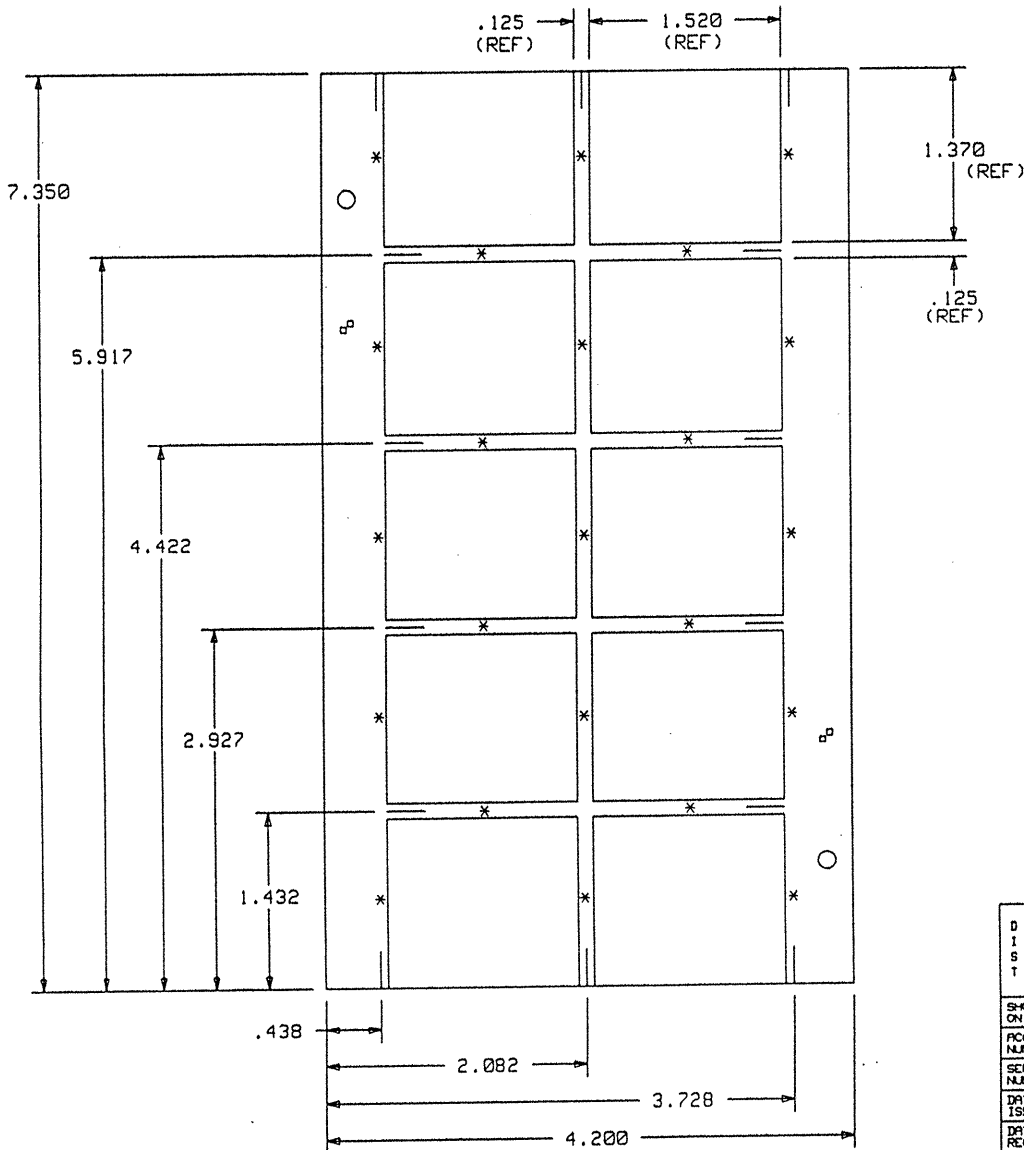
TOTAL HOLE COUNT = 192.

FOR TOOLING NOS. 1 & 3
 USE .033 DIA. HOLE.
 (COUNT = 120 HOLES)

USE .016 DIA. HOLE

D I S T	I:	TITLE STAR TPC					
	II:	INNER SECTOR ELECTRONICS					
	III:	LITTLE ORPHAN ANODE BOARD (ISOR)-10 WIRES					
SHOW ON		HOLE SCHEDULE - PANEL OF 10 (24A4511 U-2)					
ACCOUNT NUMBER	8052-24	DRAWN	STIRKKINEN	DATE	04/15/94	LAWRENCE BERKELEY LABORATORY	
SERIAL NUMBER		CHECKED		DATE		UNIVERSITY OF CALIFORNIA	
DATE ISSUED		APPROVED		DATE		OFFICE OF ELECTRONICS ENGINEERING	
DATE RECD.		ENGINEER	JIM HUNTER	FILE NO.	a000897e1	SIZE	2
DEL. TO				DRAWING NO.	24A4511 E-1	REV.	
		SCALE	NONE		C1,E2,E56	SHEET 1 OF 1	

COMPONENT SIDE VIEW



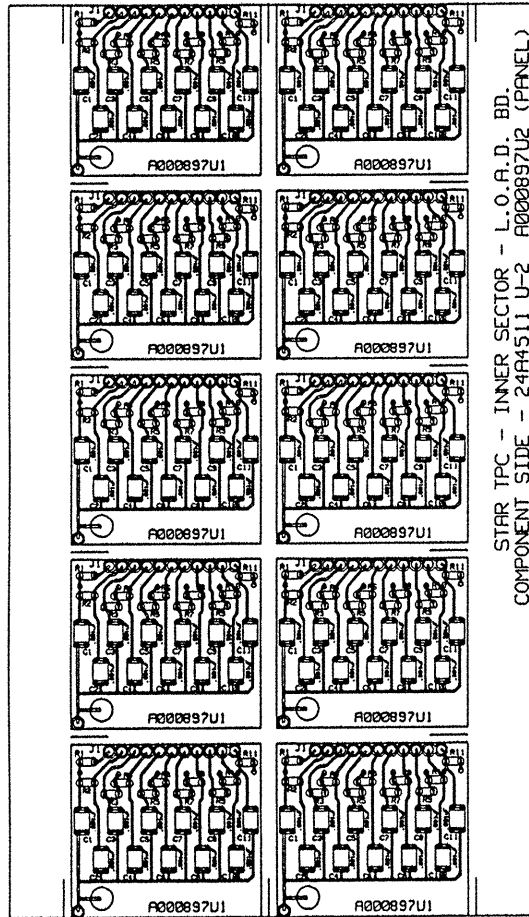
REV.	CHANGES	DRAWN	DATE	CHKD.	DATE

NOTES:

- BOARD MATERIAL: .062 THICK NEMA G10 PER MIL-P-13949G FL-GEN 062C-1/1-A1A (1 OZ. COPPER EACH SIDE).
- PANEL SIZE IS 4.200 +/- .010 X 7.350 +/- .005. SINGLE BOARD SIZE IS 1.520 X 1.370 +/- .005. DIMENSIONS ARE IN INCHES.
- * = APPROXIMATE PLACEMENT OF .050 TABS. SLOTS TO BE .125" WIDE.
- UNSPECIFIED TOLERANCES ARE +/- .005.
- REFERENCE DRAWINGS:
 24A4511 C-1 a000897c1 PARTS LIST (PANEL)
 24A4512 E-1 a000897e1 HOLE SCHEDULE (PANEL)
 24A4512 L-1 a000897l1 P.C. BD. ASSY (PANEL)

I:		TITLE STAR TPC			
II:		INNER SECTOR ELECTRONICS			
III:		LITTLE ORPHAN ANODE BD (ISOR)-10 WIRES			
SHOW IN		BOARD OUTLINE-PANEL OF 10 (24A4511 U-2)			
PROCAT NUMBER	8052-24	DRAWN	DATE	LAWRENCE BERKELEY LABORATORY	
SERIAL NUMBER		STIRKKINEN	04/15/94	UNIVERSITY OF CALIFORNIA	
		CHECKED	DATE	OFFICE OF ELECTRONICS ENGINEERING	
DATE ISSUED	NO. RECD.	APPROVED	DATE	FILE NO.	SIZE
DATE RECD.		ENGINEER	JIM HUNTER	a000897m1	2
				DRAWING NO.	REV.
				24A4512 M-1	
DEL. TO		SCALE	NONE	E2,R19	SHEET 1 OF 1

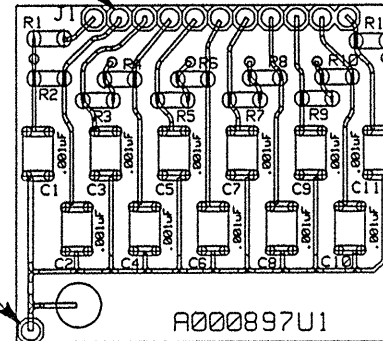
REV.	CHANGES	DRAWN	DATE	CHKD.	DATE
A	DRAWING NO. WAS 24A4512 L-2.	JJS	03/28/94		



STAR TPC - INNER SECTOR - L.O.R.D. BD.
 COMPONENT SIDE - 24A4511 U-2 A000897U2 (PANEL)

11 PIN SOCKET, SAMTEC
 #SSK-1111-S-G (10 PLACES)

1 PIN SOCKET, SAMTEC
 #SSK-101-S-G (10 PLACES)



SCALE: ~2:1

NOTES:

- UNLESS OTHERWISE SPECIFIED:
 - RESISTORS ARE 10M, 1/8W, 5%, SURFACE MOUNT, SIZE 1206.
 - CAPACITORS ARE .001uF, 3KV, CERAMIC, SURFACE MOUNT, SIZE .120" X .180".
- PANEL BOARD SIZE IS 4.200 +/- .010 X 7.350 +/- .005. SINGLE BOARD SIZE IS 1.520 X 1.370 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE IS 24A4512 M-1 (a000897m1).
- REFERENCE DRAWINGS:

24A4511 C-1	a000897c1	PARTS LIST (PANEL)
24A4512 M-1	a000897m1	BOARD OUTLINE (PANEL)
24A4512 E-1	a000897e1	HOLE SCHEDULE (PANEL)

D I S T		TITLE		STAR TPC	
SHOWN				INNER SECTOR ELECTRONICS	
ACCOMPLISH				LITTLE ORPHAN ANODE BOARD (ISOR)-10 WIRES	
NUMBER				P.C. BD. ASSY - PANEL OF 10 (24A4511 U-2)	
8052-24	DRAWN	DATE	LAWRENCE BERKELEY LABORATORY		
	STIRKKINEN	04/15/94	UNIVERSITY OF CALIFORNIA		
SERIAL NUMBER	CHECKED	DATE	OFFICE OF ELECTRONICS ENGINEERING		
DATE ISSUED	APPROVED	DATE	FILE NO.	SIZE	DRAWING NO.
NO. REQD.	ENGINEER		a00089711	2	24A4512 L-1
DATE REQD.	JIM HUNTER				REV. A
DEL. TO	SCALE	NONE	E2, E3, E5, E27, E26, E52, E53	SHEET 1 OF 1	

SEP 20 1994

PRINT LIST

SEP 23 1984

TITLE: STAR TPC
 INNER/OUTER SECTORS
 FEEDTHRU BOARD - PANEL OF 10

FILE NO.: a000871p1 REV:
 PRINT NO.: 24A1081 P-1
 CHANGES (*)

ENGINEER: THOMAS NOGGLE
 DRAFTER: STIRKKINEN

DATE: 12/23/93
 PAGE: 1 OF 1

Drawing No.	Chg. Ltr.	Title
24A1081 C-1 (a000871c1)	B	PARTS LIST
24A1082 E-1 (a000871e1)	B	HOLE SCHEDULE
24A1082 M-1 (a000871m1)	B	BOARD OUTLINE
24A1082 L-1 (a000871l1)	B	PC BOARD ASSEMBLY
24A1081 U-1 (a000871u1)	B	PC BOARD - SINGLE BOARD
24A1081 U-2 (a000871u2)	B	PC BOARD - PANEL OF 10

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

*

PARTS LIST

9812 004

TITLE: STAR TPC
INNER/OUTER SECTORS
FEEDTHRU BOARD - PANEL OF 10

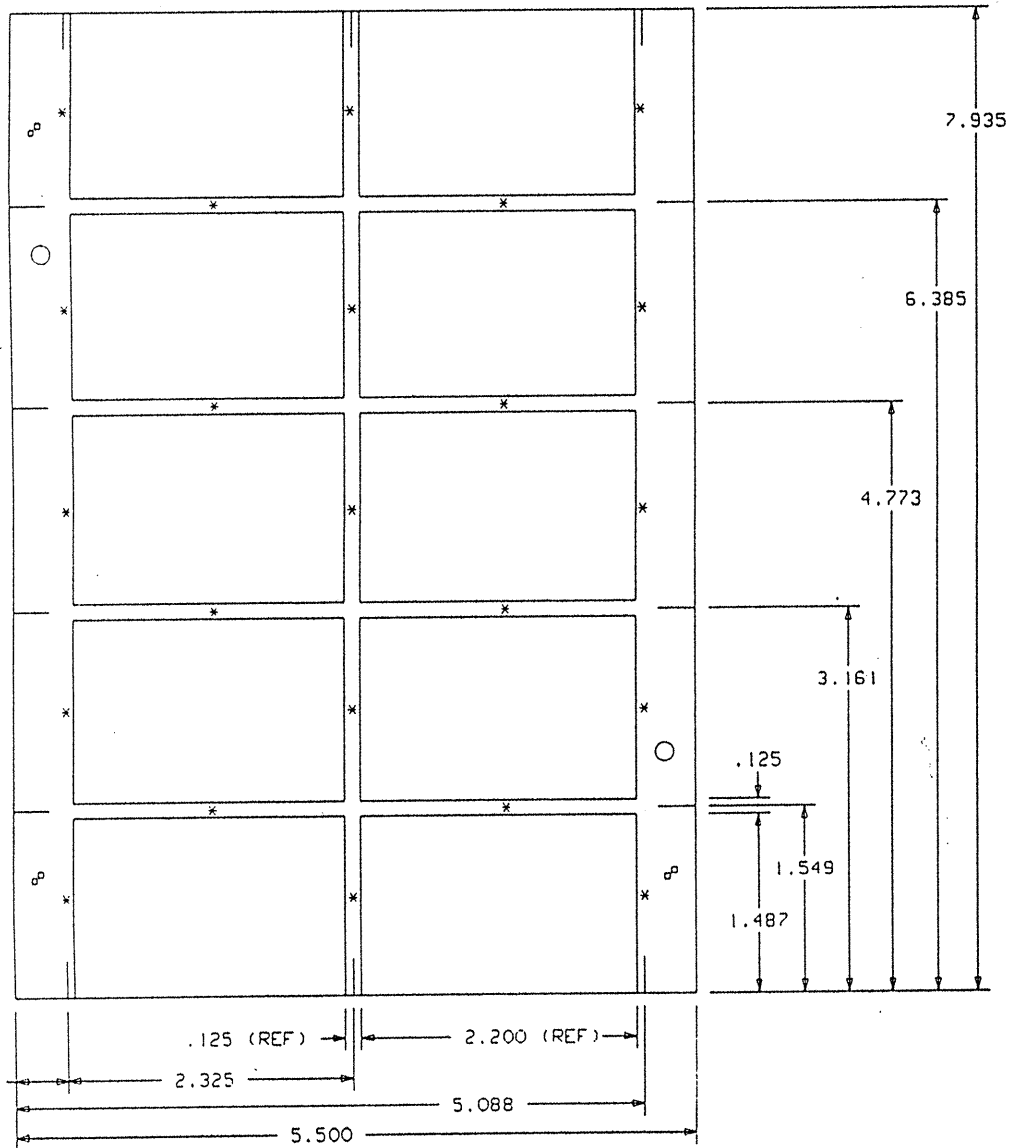
FILE NO.: a000871c1 REV: B
PRINT NO.: 24A1081 C-1
CHANGES (*)

ENGINEER: THOMAS NOGGLE
DRAFTER: STIRKKINEN

DATE: 12/23/93
PAGE: 1 OF 1

Reference	Stock No.	Part Type	Description	Qty
J1	NS	SMTCN40	40 PIN CONNECTOR, SMT, SAMTEC #SSM-120-S-DV	10
J2	NS	CN21SRA	21 PIN CONNECTOR, SINGLE ROW, RIGHT ANGLE, SAMTEC #HMPSW-1-21-08-S-S-230- RA	10
-	NS	a000871u2	24A1081 U-2, PC BOARD, PANEL OF 10	1

COMPONENT SIDE VIEW



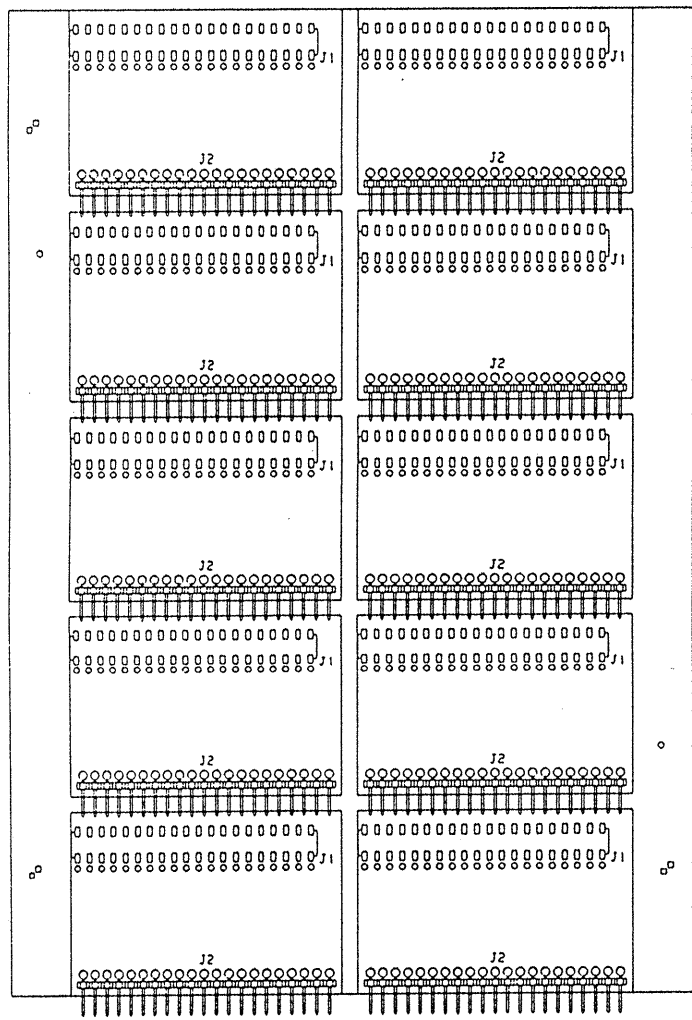
REV.	CHANGES	DRAWN	DATE	CHKD.	DATE
A	SINGLE BOARD SIZE WAS 1.586 AND BOARD MAT. WAS G10, .062 THICK.	JJS	10/15/93		
B	PANEL SIZE WAS 4.525; MOVED J1, ARTWORK REV.B	JJS	12/22/93		

NOTES:

- BOARD MATERIAL: .125 THICK NEMA FR-4 PER MIL-P-13949E FL-GFN 125C-1/1-A1A (1 OZ COPPER EACH SIDE).
- PANEL BOARD SIZE IS 5.500 X 7.935 +/- .010. SINGLE BOARD SIZE IS 2.200 X 1.487 +/- .005.
- * = APPROXIMATE PLACEMENT OF .050 INCH TABS. SLOTS TO BE .125 INCH WIDE.
- DIMENSIONS ARE IN INCHES. TOLERANCE IS +/- .005.
- REFERENCE DRAWINGS:
 24A1082 E-1 a000871e1 HOLE SCHEDULE
 24A1082 L-1 a00087111 PC BOARD ASSEMBLY

D I S T		TITLE		STAR TPC								
				INNER/OUTER SECTORS								
				FEEDTHRU BOARD - PANEL OF 10								
SHOWN ON				BOARD OUTLINE - A000871U2								
ACCOUNT NUMBER	8052-24	DRAWN	STIRKKINEN	DATE	4/7/93							
SERIAL NUMBER		CHECKED		DATE								
DATE ISSUED		APPROVED		DATE								
DATE RECD.		ENGINEER	THOMAS NOGGLE		FILE NO.	a000871m1	SIZE	2	DRAWING NO.	24A1082 M-1	REV.	B
DEL. TO		SCALE	NONE		E2		SHEET 1 OF 1					

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE
A	SINGLE BOARD SIZE WAS 1.586 AND BOARD MAT. WAS G10, .062 THICK	JJS	10/15/93		
B	PANEL SIZE WAS 4.525; MOVED J1, ART-WORK IS REV. B	JJS	12/22/93		



COMPONENT SIDE VIEW

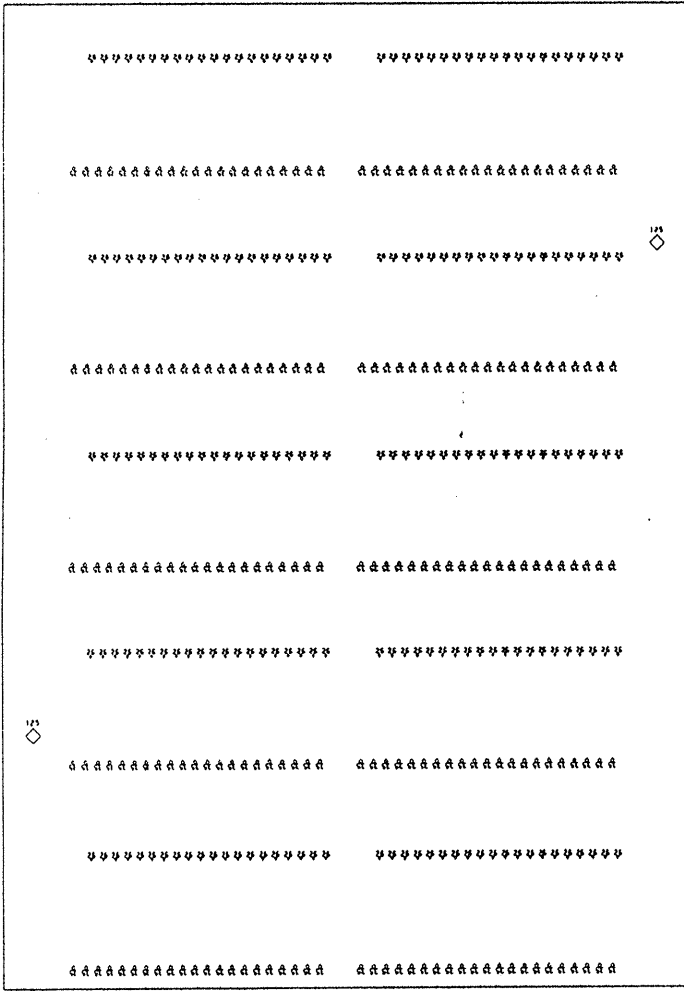
NOTES:

- J1 IS A 40 PIN, SURFACE MOUNT CONNECTOR, SAMTEC #SSM-120-S-DV. (10 PLACES)
- J2 IS A 21 PIN, SINGLE ROW, RIGHT ANGLE CONNECTOR, SAMTEC #HMTSW-1-21-08-S-S-230-RA. (10 PLACES)
- PANEL BOARD SIZE IS 5.500 X 7.935 +/- .010. SINGLE BOARD SIZE IS 2.200 X 1.487 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A1082 M-1 (a000871m1).
- REFERENCE DRAWINGS:
 24A1082 M-1 a000871m1 BOARD OUTLINE (PANEL)
 24A1082 E-1 a000871e1 HOLE SCHEDULE (PANEL)

DIS T	I:	TITLE STAR TPC							
	II:	INNER/OUTER SECTORS							
	III:	FEEDTHRU BOARD - PANEL OF 10							
SHOW ON		PC BOARD ASSEMBLY							
ACCOUNT NUMBER	8052-24	DRAWN	STIRKKINEN	DATE	12/22/93	LAWRENCE BERKELEY LABORATORY			
SERIAL NUMBER		CHECKED		DATE		UNIVERSITY OF CALIFORNIA			
DATE ISSUED		APPROVED		DATE		OFFICE OF ELECTRONICS ENGINEERING			
DATE RECD.		ENGINEER	THOMAS NOGGLE	FILE NO.	a00087111	SIZE	2	DRAWING NO.	24A1082 L-1
DEL TO		SCALE	NONE		E2, E3, P5, R19, E26, E27, E53			REV.	B
								Sheet 1 of 1	

SEE 2 OF 10

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE
A	SINGLE BOARD SIZE WAS 1.586 AND BOARD MAT. WAS G10, .062 THICK	JJS	10/15/93		
B	PANEL SIZE WAS 4.525; MOVED J1, PART-WORK IS REV. B	JJS	12/22/93		



SOLDER SIDE VIEW

NOTES:

- BOARD MATERIAL: .125 NEMA FR-4 GLASS EPOXY LAM- INATE PER MIL-P-13949G FL-GFN 125C-1/1-A1A (1 OZ COPPER EACH SIDE).
- SEE HOLE SCHEDULE FOR HOLE SIZES.
- THIS BOARD TO BE THROUGH HOLE PLATED.
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- THERE IS NO SILKSCREEN FOR THIS BOARD.
- PANEL BOARD SIZE IS 5.500 X 7.935 +/- .010. SINGLE BOARD SIZE IS 2.200 X 1.487 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A1082 M-1 (a000871m1).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:
24A1082 L-1 a00087111 PC BOARD ASSEMBLY
24A1082 M-1 a000871m1 BOARD OUTLINE

HOLE SCHEDULE		
TOOLING NO.	HOLE DIA.	COUNT
1	.026	200
2	.035	210
3	.125	2

TOTAL HOLE COUNT = 412.

D I S T		TITLE		STAR TPC	
				INNER/OUTER SECTORS	
				FEEDTHRU BOARD - PANEL OF 10	
SHOW ON				HOLE SCHEDULE - A000871U2	
ACCOUNT NUMBER	8052-24	DRAWN	STIRKKINEN	DATE	12/22/93
SERIAL NUMBER		CHECKED		DATE	
DATE ISSUED		APPROVED		DATE	
DATE RECD.		ENGINEER	THOMAS NOGGLE	FILE NO.	a000871e1
DEL-TO		NO. RECD.		SIZE	2
				DRAWING NO.	24A1082 E-1
				REV.	B
		SCALE	NONE	C1.E14.N56	SHEET 1 of 1

PRINT LIST

SEP 29 1994

TITLE: STAR PROJECT
 SECTOR ELECTRONICS
 GATED GRID CONNECTION BOARD
 (PANEL OF 68 - 24A4521 U-1,
 a000898u1)

FILE NO.: a000898p1 REV:
 PRINT NO.: 24A4521 P-1
 CHANGES (*)

ENGINEER: HOWARD WIEMAN
 DRAFTER: STIRKKINEN

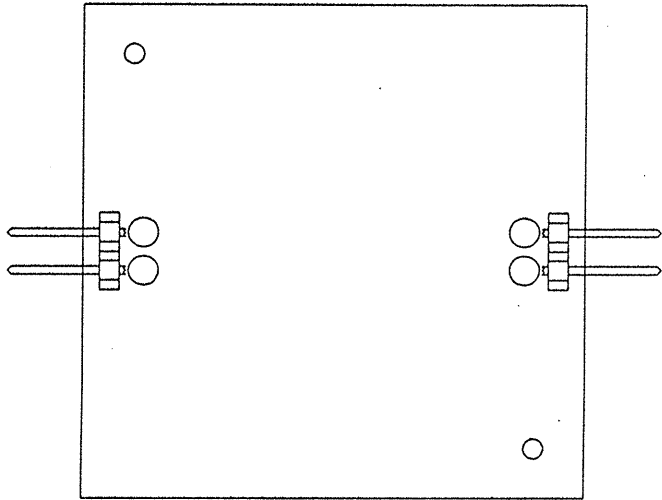
DATE: 09/28/94
 PAGE: 1 OF 1

Drawing No.	Chg. Ltr.	Title
24A4524 M-1 (a000898m1)		BOARD OUTLINE (PANEL)
24A4523 E-1 (a000898e1)		HOLE SCHEDULE (PANEL)
24A4521 L-1 (a000898l1)		PC BOARD ASSEMBLY (SINGLE)
24A4521 U-1 (a000898u1)		PC BOARD (SINGLE BOARD)
24A4521 U-2 (a000898u2)		PC BOARD (PANEL OF 68 24A4521 U-1)

** DRAWINGS NOT REQUIRED FOR THIS PACKAGE - SILKSCREEN
 OR PARTS LIST **

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE



COMPONENT SIDE

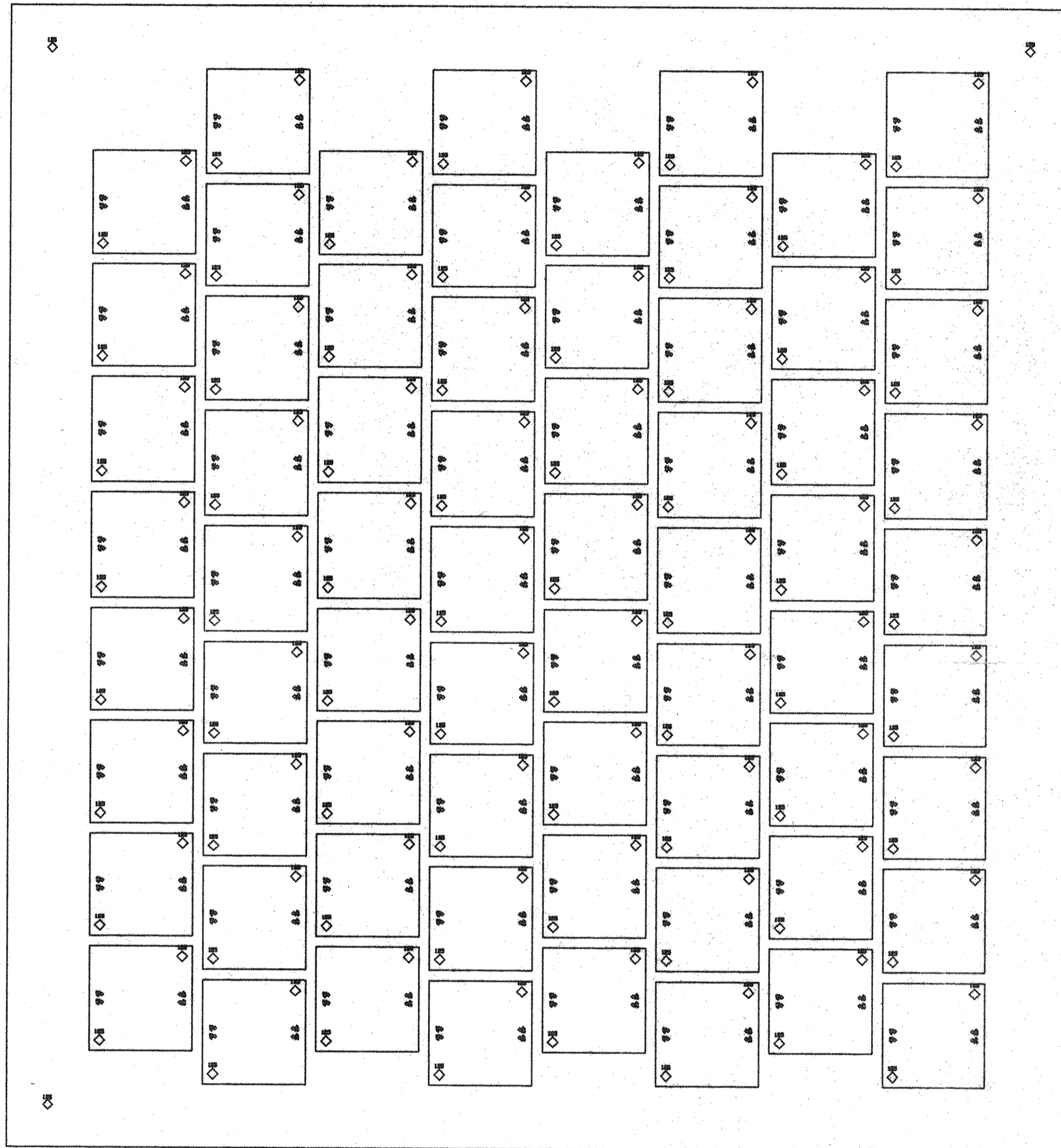
NOTES:

- CONNECTORS ARE 2 PINS, RIGHT ANGLE, SAMTEC # HMTSW-150-08-S-S-230-RA. (2 PLACES)
- BOARD SIZE IS 1.250 X 1.250 +/- .010. DIMENSIONS ARE IN INCHES.
- REFERENCE DRAWINGS:
24A4523 E-1 a000898e1 HOLE SCHEDULE -
PANEL OF 68
24A4524 M-1 a000898m1 BOARD OUTLINE -
PANEL OF 68

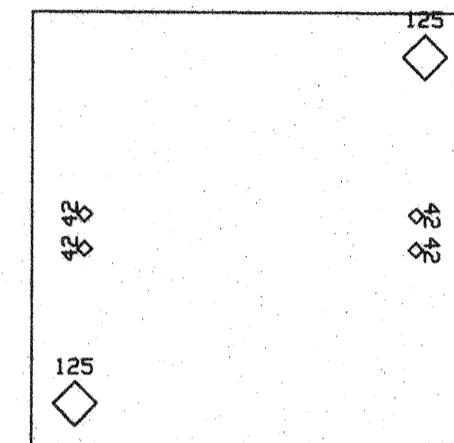
DIS T	I:	TITLE STAR TPC					
	II:	SECTORS ELECTRONICS					
	III:	GATED GRID CONNECTION BOARD					
SHOWN ON	PC BOARD ASSEMBLY-SINGLE BD. (24A4521 U-1)						
ACCOUNT NUMBER	8052-24	DRAWN	DATE	LAWRENCE BERKELEY LABORATORY UNIVERSITY OF CALIFORNIA OFFICE OF ELECTRONICS ENGINEERING			
SERIAL NUMBER		STIRKKINEN	08/03/94				
DATE ISSUED	NO. REQD.	CHECKED	DATE				
DATE REQD.		APPROVED	DATE				
DEL. TO		ENGINEER		FILE NO.	SIZE	DRAWING NO.	REV.
				a00089811	1	24A4521 L-1	
		SCALE ~2:1	E2, E3, E26			SHEET 1 OF 1	

SEP 29 1994

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE



VIEWED FROM SOLDER SIDE
(68 BOARDS - 24A4521 U-1 - A000898U1)



VIEWED FROM SOLDER SIDE
(24A4521 U-1 - A000898U1)
SCALE: ~2:1

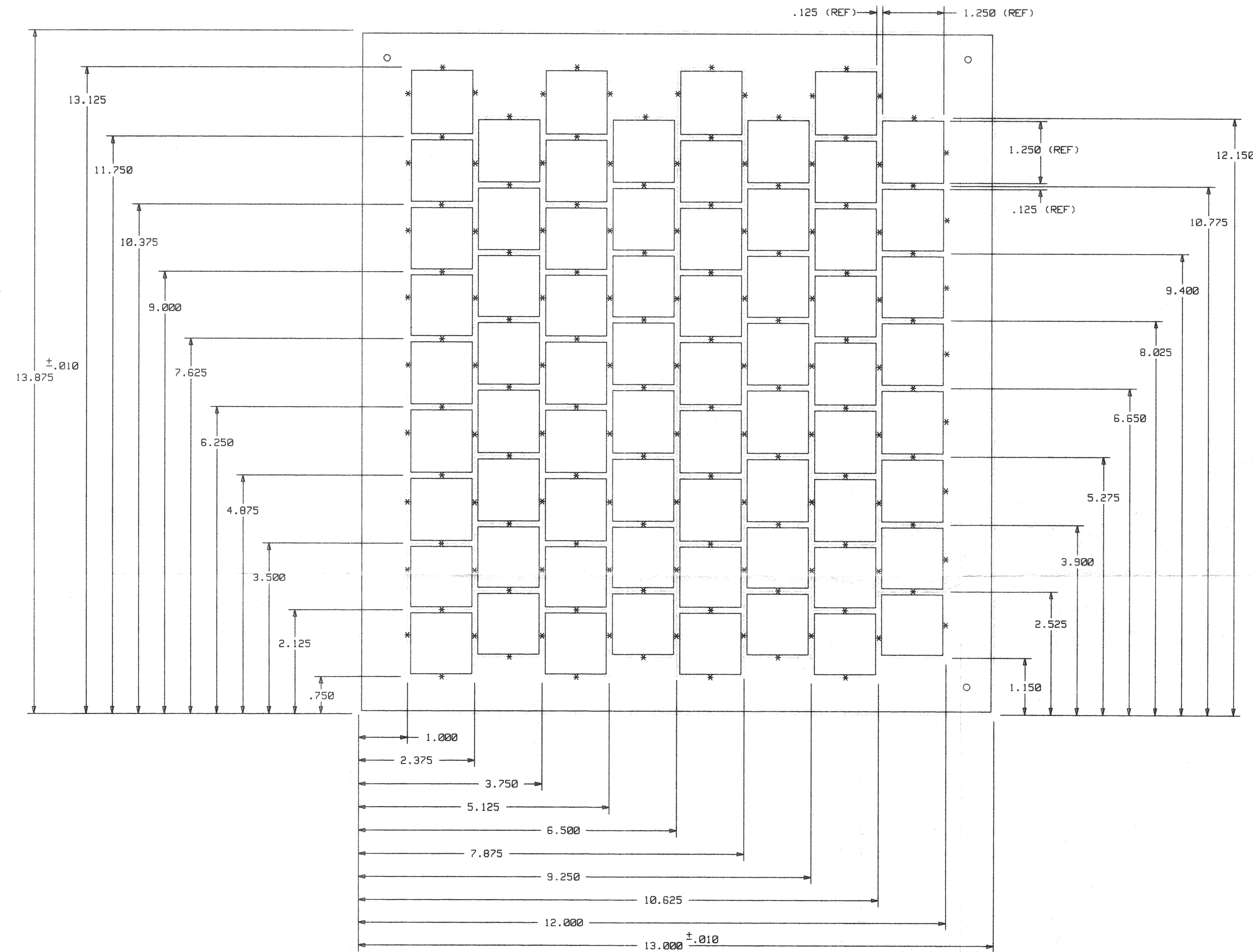
NOTES:

1. BOARD MATERIAL: .062 THICK NEMA G10 GLASS EPOXY PER MIL-P-13949G FL-GEN 062C-0/2-1A (2 OZ COPPER). THIS IS A SINGLE SIDED BOARD.
2. SEE HOLE CHART FOR HOLE SIZES.
3. THIS BOARD IS NOT PLATED THROUGH.
4. THIS BOARD IS NOT TO BE SILKSCREENED.
5. PANEL SIZE IS 12.875 X 13.750 +.000/-.020. SINGLE BOARD SIZE IS 1.250 X 1.250 +.010. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A4523 M-1 (a000898m1).
6. SOLDERMASK IS NOT USED ON THIS BOARD.
7. REFERENCE DRAWINGS:
24A4521 L-1 a000898l1 PC BOARD ASSEMBLY - SINGLE BD
24A4524 M-1 a000898m1 BOARD OUTLINE - PANEL OF 68

HOLE SCHEDULE		
TOOLING NO.	HOLE DIA.	COUNT
1	.125	139
2	.042	272

TOTAL HOLE COUNT = 411

DISC I:		TITLE STAR TPC	
DISC II:		SECTOR ELECTRONICS	
DISC III:		GATED GRID CONNECTION BOARD	
SHOWN ON:		HOLE SCHEDULE - PANEL OF 68 (24A4521 U-2)	
ACCOUNT NUMBER	8052-24	DRAWN	DATE
SERIAL NUMBER		STIRKKINEN	08/02/94
DATE ISSUED	NO. RECD.	CHECKED	DATE
DATE RECD.		APPROVED	DATE
DEL. TO		ENGINEER	FILE NO.
		HOWARD WIEMAN	a000898e1
		SCALE NONE	SIZE 3
			DRAWING NO. 24A4523 E-1
			REV.
			E2,C1,N56
			SHEET 1 of 1



NOTES:

- BOARD MATERIAL: .062 THICK NEMA G10 GLASS EPOXY PER MIL-P-13949G FL-GEN-062C-0/2-1A (2 OZ COPPER). THIS IS A SINGLE SIDED BOARD.
- PANEL SIZE IS 12.875 X 13.750 +/- .020. SINGLE BOARD SIZE IS 1.250 X 1.250 +/- .010. DIMENSIONS ARE IN INCHES.
- * = APPROXIMATE PLACEMENT OF .050 TABS. SLOTS TO BE .125" WIDE. DIMENSIONS ARE FOR A .125 DIA ROUTER.
- UNSPECIFIED TOLERANCES ARE +/- .005.
- REFERENCE DRAWINGS:
24A4523 E-1 a000898e1 HOLE SCHEDULE (PANEL OF 68 BDS)
24A4521 L-1 a000898l1 PC BOARD ASSEMBLY (SINGLE BD.)

COMPONENT SIDE VIEW (NO COPPER)

SCALE: NONE

D I T I S T		TITLE STAR PROJECT	
DRAWN BY		DRAWN DATE 05/03/94	
CHECKED		CHECKED DATE	
DATE ISSUED		APPROVED DATE	
NO. RECD.		NO. RECD.	
ENGINEER HOWARD WIEMAN		ENGINEER	
SCALE NONE		SCALE NONE	
FILE NO. a000898m1		FILE NO. a000898m1	
SIZE 4		SIZE 4	
DRAWING NO. 24A4524 M-1		DRAWING NO. 24A4524 M-1	
REV. 1		REV. 1	
SHEET 1 OF 1		SHEET 1 OF 1	

*

PRINT LIST

SEP 29 1994

SEP 29 1994

TITLE: STAR TPC
INNER SECTOR ELECTRONICS
GATED GRID WIRE MOUNT BOARD
(PANEL OF 16 BOARDS)

FILE NO.: a000896p1 REV:
PRINT NO.: 24A4501 P-1
CHANGES (*)

ENGINEER: JIM HUNTER
DRAFTER: STIRKKINEN

DATE: 04/08/94
PAGE: 1 OF 1

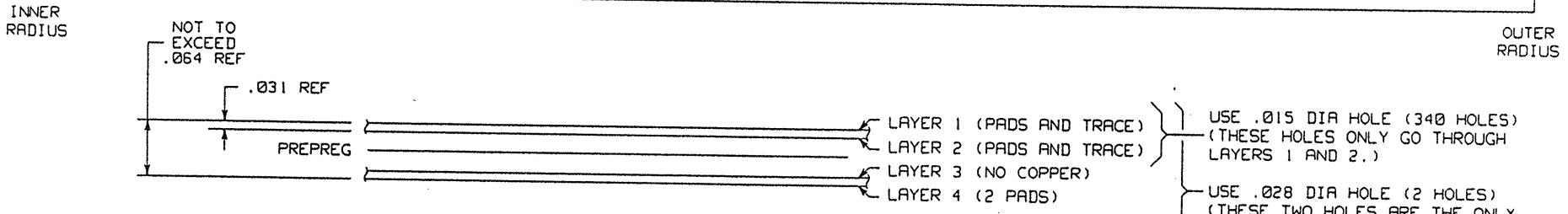
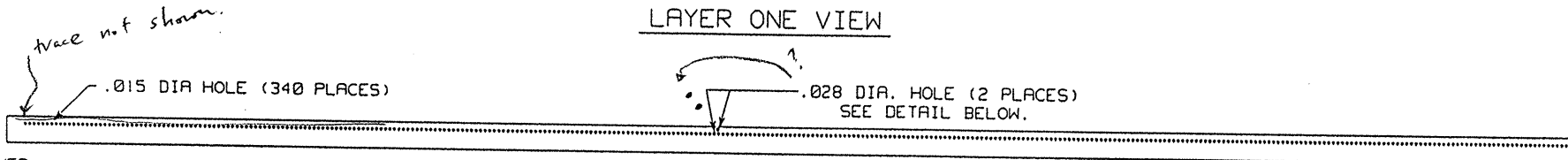
Drawing No.	Chg. Ltr.	Title
24A4502 M-1 (a000896m1)		BOARD OUTLINE - SINGLE BOARD
24A4503 M-2 (a000896m2)		BOARD OUTLINE - PANEL OF 16
24A4502 E-1 (a000896e1)		HOLE SCHEDULE - SINGLE BOARD
24A4503 E-2 (a000896e2)		HOLE SCHEDULE - PANEL OF 16 (BLIND VIAS)
24A4503 E-3 (a000896e3)		HOLE SCHEDULE - PANEL OF 16
24A4501 U-1 (a000896u1)		ARTWORK - SINGLE BOARD LAYER 1 - WIRE MOUNT PADS LAYER 2 - PADS AND TRACES LAYER 3 - NO COPPER (BLANK) LAYER 4 - H.V. PADS
24A4501 U-2 (a000896u2)		ARTWORK - PANEL OF 16 24A4501 U-1'S

** THE FOLLOWING DRAWINGS NOT REQUIRED FOR THIS PACKAGE:
PARTS LIST, SILKSCREEN, PC BOARD ASSEMBLY

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE

LAYER ONE VIEW



USE .015 DIA HOLE (340 HOLES)
(THESE HOLES ONLY GO THROUGH LAYERS 1 AND 2.)

USE .028 DIA HOLE (2 HOLES)
(THESE TWO HOLES ARE THE ONLY HOLES THAT GO THROUGH ALL 4 LAYERS 1-4.)

NOTES:

- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- MANUFACTURER MAY NOT PUT ANY IDENTIFICATION NOMENCLATURE ON PRINTED CIRCUIT BOARD.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- THIS BOARD TO BE THROUGH HOLE PLATED. SEE DETAIL FOR BLIND VIAS (340 HOLES).
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- BOARD SIZE IS .472 +.000/- .010 X 28.100 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A4502 M-1 (a000896m1).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:

24A4502 M-1	a000896m1	BOARD OUTLINE - SINGLE BOARD
24A4503 M-2	a000896m2	BOARD OUTLINE - PANEL OF 16
24A4503 E-2	a000896e2	HOLE SCHEDULE - PANEL OF 16 (BLIND VIAS)
24A4503 E-3	a000896e3	HOLE SCHEDULE - PANEL OF 16

7/27/94

panel #1
474 - .475

basic 28.100 basic
max 28.105
min 28.095

472 basic
472 +.000 = 472 max
472 -.010 = 462 min

panel #2
474 -
475 - .476
measure 28.110 - .115

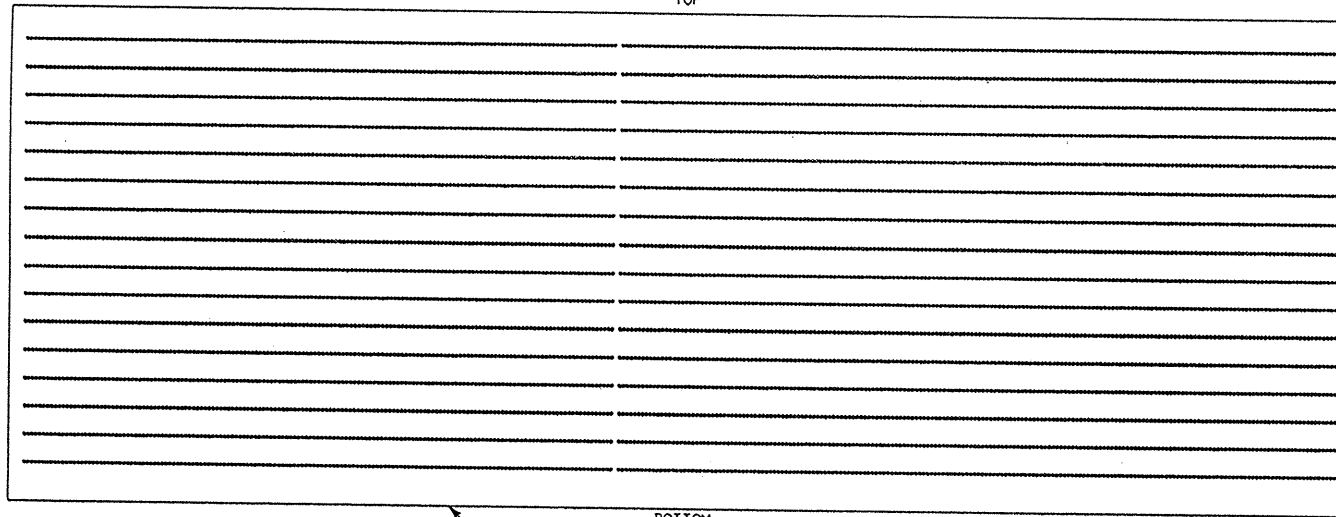
D I S T		TITLE		STAR TPC	
SHOW ON		DRAWN		DATE	
ACCOUNT NUMBER		STARKKINEN		4/8/94	
SERIAL NUMBER		CHECKED		DATE	
DATE ISSUED		APPROVED		DATE	
DATE RECD.		ENGINEER		FILE NO.	
DEL TO		JIM HUNTER		a000896e1	
SCALE		NONE		SIZE	
E2, C3		DRAWING NO.		24A4502 E-1	
SHEET		1		OF 3	

REV.	CHANGES	DATE	BY	DATE	BY

LAYER TWO VIEW

SCALE: NONE

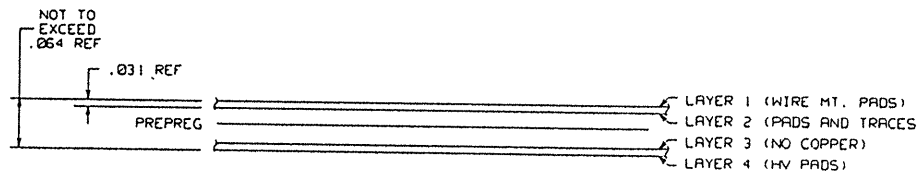
TOP



INNER RADIUS

MANUFACTURER MAY PUT THEIR IDENTIFICATION NUMBER ON OUTER EDGES ONLY, TOP OR BOTTOM.

OUTER RADIUS



USE .015 DIA HOLE (5,440 HOLES)
THESE HOLES ONLY GO THROUGH
LAYERS 1 AND 2 (BLIND VIAS).
SEE THIS DRAWING.

USE .028 DIA HOLE (32 HOLES).
DRILL THESE HOLES AFTER ASSEMBLY
OF ALL LAYERS, SEE DRAWING
24A4503 E-3.

NOTES:

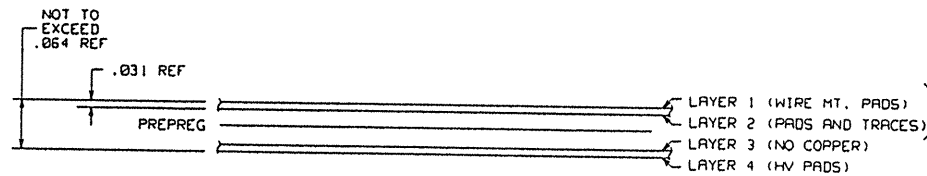
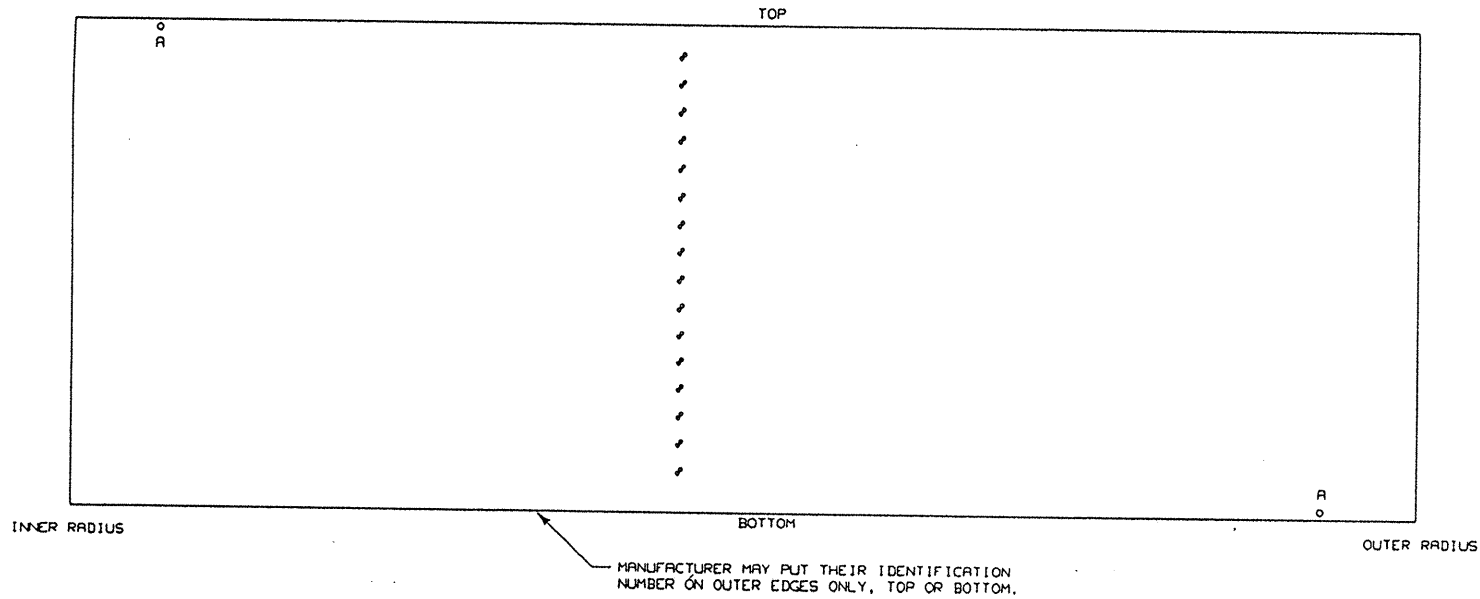
- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617
FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE).
THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL
THICKNESS NOT TO EXCEED .064.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- THIS BOARD TO BE THROUGH HOLE PLATED.
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES
AFTER PLATING.
- BOARD SIZE IS 10.500 +/- .010 X 28.100 +/- .005.
DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING
IS 24A4503 M-2 (a000896m2).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:
24A4502 M-1 a000896m1 BOARD OUTLINE - SINGLE BOARD
24A4503 M-2 a000896m2 BOARD OUTLINE - PANEL OF 16
24A4502 E-1 a000896e1 HOLE SCHEDULE - SINGLE BOARD
24A4503 E-3 a000896e3 HOLE SCHEDULE - PANEL OF 16

HOLE SCHEDULE		
CODE	HOLE DIA.	COUNT
NONE	.015	5,440

D I S T		TITLE STAR TPC	
S-DRAW ON		INNER SECTOR ELECTRONICS	
ACCOUNT NUMBER 8052-24		GATED GRID WIRE MOUNT BOARD - PANEL OF 16	
SERIAL NUMBER		HOLE SCHEDULE - 24A4501 U-2 (BLIND VIAS)	
DATE ISSUED		LAWRENCE BERKELEY LABORATORY	
NO. REC'D.		UNIVERSITY OF CALIFORNIA	
DATE REC'D.		OFFICE OF ELECTRONICS ENGINEERING	
DATE TO		FILE NO. a000896e2	DRAWING NO. 24A4503 E-2
SCALE NONE		SIZE 3	REV.
C8.E14		SHEET 2 of 3	

REV.	CHANGES	DRAWN	DATE	CHK'D.	DATE

LAYER FOUR VIEW
SCALE: NONE



USE .015 DIA HOLE (5,440 HOLES)
THESE HOLES ONLY GO THROUGH
LAYERS 1 AND 2 (BLIND VIAS).
SEE DRAWING 24A4503 E-2.

USE .020 DIA HOLE (32 HOLES).
DRILL THESE HOLES AFTER ASSEMBLY
OF ALL LAYERS, SEE THIS DRAWING.

NOTES:

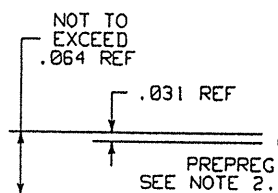
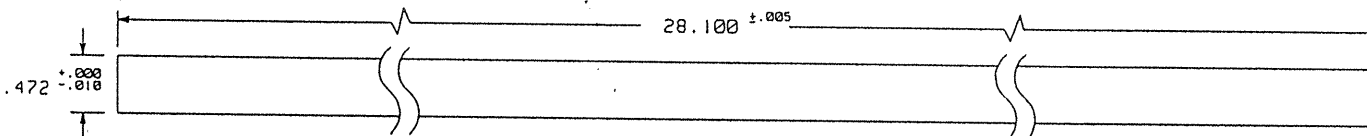
- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- THIS BOARD TO BE THROUGH HOLE PLATED.
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- BOARD SIZE IS 10.500 +/- .010 X 28.100 +/- .005. DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A4503 M-2 (A000896m2).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:
 24A4502 M-1 A000896m1 BOARD OUTLINE - SINGLE BOARD
 24A4503 M-2 A000896m2 BOARD OUTLINE - PANEL OF 16
 24A4502 E-1 A000896e1 HOLE SCHEDULE - SINGLE BOARD
 24A4503 E-2 A000896e2 HOLE SCHEDULE - PANEL OF 16, BLIND VIAS

HOLE SCHEDULE		
CODE	HOLE DIA.	COUNT
NONE	.020	32
A	.125	2

D I S T		TITLE STAR TPC	
S I T I		INNER SECTOR ELECTRONICS	
T I T L E		GATED GRID WIRE MOUNT BOARD - PANEL OF 16	
S I T I		HOLE SCHEDULE - 24A4501 U-2 (A000896U2)	
ACCOUNT NUMBER	8052-24	DRAWN BY	STARKINEN
DATE	11/08/84	DATE	11/08/84
SCALE NUMBER		APPROVED	JIM HUNTER
DATE ISSUED		DATE	
DATE REC'D.		FILE NO.	A000896e3
DATE		SIZE	3
DATE		DRAWING NO.	24A4503 E-3
DATE		REV.	
DATE		SCALE	NONE
DATE		SIZE	E14
DATE		SHEET	3 OF 3

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE

LAYER 1 VIEW



LAYER 1 (WIRE MT. PADS)
 LAYER 2 (PADS AND TRACES)
 LAYER 3 (NO COPPER)
 LAYER 4 (HV PADS)

.015 DIA HOLES GO THROUGH LAYERS 1 AND 2 ONLY. (340 HOLES)
 .028 DIA HOLES GO THROUGH ALL 4 LAYERS. (2 HOLES)

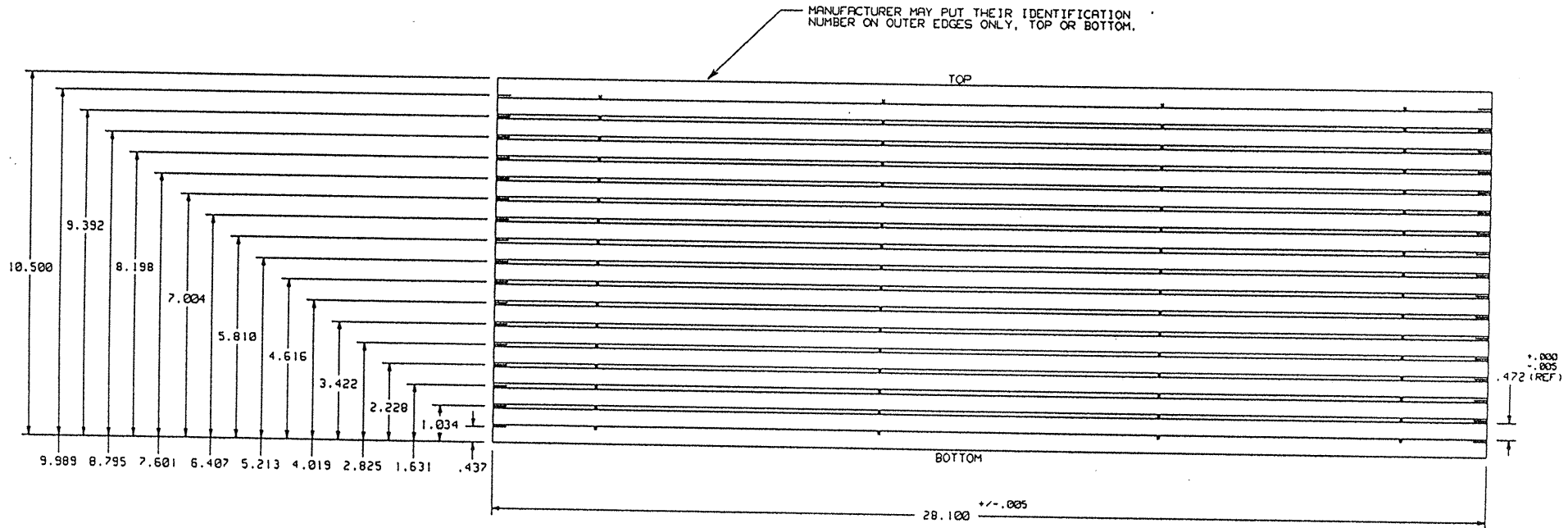
NOTES:

- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- PREPREG THICKNESS TO BE DETERMINED BY MANUFACTURER PER IPC-L-109A OR MIL-P-55617.
- MANUFACTURER MAY NOT PUT ANY IDENTIFICATION NOMENCLATURE ON PRINTED CIRCUIT BOARD.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- DIMENSIONS ARE IN INCHES.
- BOARD SIZE IS .472 +.000/-.010 X 28.100 +/- .005.
- REFERENCE DRAWINGS:
 24A4502 E-1 a000896e1 HOLE SCHEDULE - SINGLE BOARD
 24A4503 E-2 a000896e2 HOLE SCHEDULE - PANEL OF 16 (BLIND VIAS)
 24A4503 E-3 a000896e3 HOLE SCHEDULE - PANEL OF 16
 24A4503 M-2 a000896m2 BOARD OUTLINE - PANEL OF 16

D I S T		TITLE		STAR TPC	
				INNER SECTOR ELECTRONICS	
				GATED GRID WIRE MOUNT BOARD - SINGLE BD.	
				BOARD OUTLINE - 24A4501 U-1 (A000896U1)	
ACCOUNT NUMBER	8052-24	DRAWN	STIRKKINEN	DATE	4/08/94
SERIAL NUMBER		CHECKED		DATE	
DATE ISSUED		APPROVED		DATE	
DATE RECD.		ENGINEER	JIM HUNTER	FILE NO.	a000896m1
				SIZE	2
				DRAWING NO.	24A4502 M-1
				REV.	
		SCALE	NONE		E2
					SHEET 1 OF 2

SEP 23 1994

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE

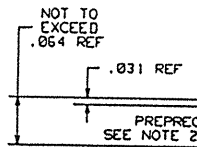


NOTES:

- BOARD MATERIAL: .031 THICK G10 PER MIL-P-55617 FL-GEN 031C-1/1-A1A (1 OZ. COPPER EACH SIDE). THIS IS A MULTILAYER BOARD (4 LAYERS). TOTAL THICKNESS NOT TO EXCEED .064.
- PREPEG THICKNESS TO BE DETERMINED BY MANUFACTURER PER IPC-L-109A OR MIL-P-55617.
- PLEASE NOTE THAT THERE IS NO COPPER ON LAYER 3.
- BOARD PANEL SIZE IS 10.500 +/- .010 X 28.100 +/- .005. SINGLE BOARD SIZE IS .472 +/- .000 +/- .010 X 28.100 +/- .005. DIMENSIONS ARE IN INCHES.
- * = APPROXIMATE PLACEMENT OF .050 TABS. SLOTS TO BE .125 WIDE.

REFERENCE DRAWINGS:

24A4502 E-1	a000896e1	HOLE SCHEDULE - SINGLE BOARD
24A4503 E-2	a000896e2	HOLE SCHEDULE - PANEL OF 16 (BLIND VIAS)
24A4503 E-3	a000896e3	HOLE SCHEDULE - PANEL OF 16
24A4502 M-1	a000896m1	BOARD OUTLINE - SINGLE BOARD



SEE DRAWING 24A4503 E-2 FOR DRILLING LAYERS 1 AND 2. (5,440 HOLES)

SEE DRAWING 24A4503 E-3 FOR DRILLING LAYERS 1 THRU 4. (34 HOLES)

DESIGN NO.	8052-24	TITLE	STAR TPC		
PROJECT NAME	INNER SECTOR ELECTRONICS				
REVISION	GATED GRID WIRE MOUNT BOARD - PANEL OF 16				
DATE	BOARD OUTLINE - 24A4501 U-2 (A000896U2)				
DESIGNER	JIM HUNTER	DATE	4/08/94	LAWRENCE BERKELEY LABORATORY	
NO. REQS.	3	APPROVED		UNIVERSITY OF CALIFORNIA	
DATE REC'D.		ENGINEER	JIM HUNTER	OFFICE OF ELECTRONICS ENGINEERING	
FILE NO.	a000895m2	SIZE	3	DRAWING NO.	24A4503 M-2
SCALE	NONE	REV.			
SHEET	2	E2		2 OF 2	

PRINT LIST

0000 834

TITLE: STAR TPC
 INNER/OUTER SECTORS
 GRID WIRE TERMINATION BOARD
 (PANEL OF 8)

FILE NO.: a000874p1 REV: A *
 PRINT NO.: 24A3541 P-1
 CHANGES (*) 08/01/94 *

ENGINEER: THOMAS NOGGLE
 DRAFTER: STIRKKINEN

DATE: 12/01/93
 PAGE: 1 OF 1

Drawing No.	Chg. Ltr.	Title
24A3541 C-1 (a000874c1)		PARTS LIST - GRID WIRE TERMINATION BOARD (SINGLE BOARD)
24A3541 C-2 (a000874c2)		PARTS LIST - FIELD WIRE TERMINATION BOARD (SINGLE BOARD)
24A3541 M-1 (a000874m1)		BOARD OUTLINE
24A3542 E-1 (a000874e1)	A	HOLE SCHEDULE *
24A3541 L-1 (a000874l1)	A	PC BOARD ASSEMBLIES FOR SHIELD & FIELD WIRES *
24A3541 U-1 (a000874u1)	A	ARTWORK - SINGLE BOARD *
24A3541 U-2 (a000874u2)	A	ARTWORK - PANEL OF EIGHT BOARDS *

** SILKSCREEN DRAWING IS NOT REQUIRED FOR THIS PACKAGE.

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

*

PARTS LIST

24A3541

TITLE: STAR TPC
INNER/OUTER SECTORS
GRID WIRE TERMINATION BOARD
(SINGLE BOARD)

FILE NO.: a000874c1 REV:
PRINT NO.: 24A3541 C-1
CHANGES (*)

ENGINEER: THOMAS NOGGLE
DRAFTER: STIRKKINEN

DATE: DECEMBER 1, 1993
PAGE: 1 OF 1

Reference	Stock No.	Part Type	Description	Qty
DIODES				
CR1,CR2	NS	TBD	VALUES TO BE DETERMINED, PACKAGE SOT23	2
RESISTORS				
R1,R4	NS	3 OHMS	3 OHMS,1/8W,1%,SMT,SIZE 1206	2
R2,R5	NS	10 OHMS	10 OHMS,1/8W,1%,SMT,SIZE 1206	2
R3,R6	NS	40 OHMS	40 OHMS,1/8W,1%,SMT,SIZE 1206	2
MISCELLANEOUS				
-	NS	a000874u1	24A3541 U-1,PC BOARD	1

*

PARTS LIST

SEP 20 1994

TITLE: STAR TPC
INNER/OUTER SECTORS
FIELD WIRE TERMINATION BOARD
(SINGLE BOARD)

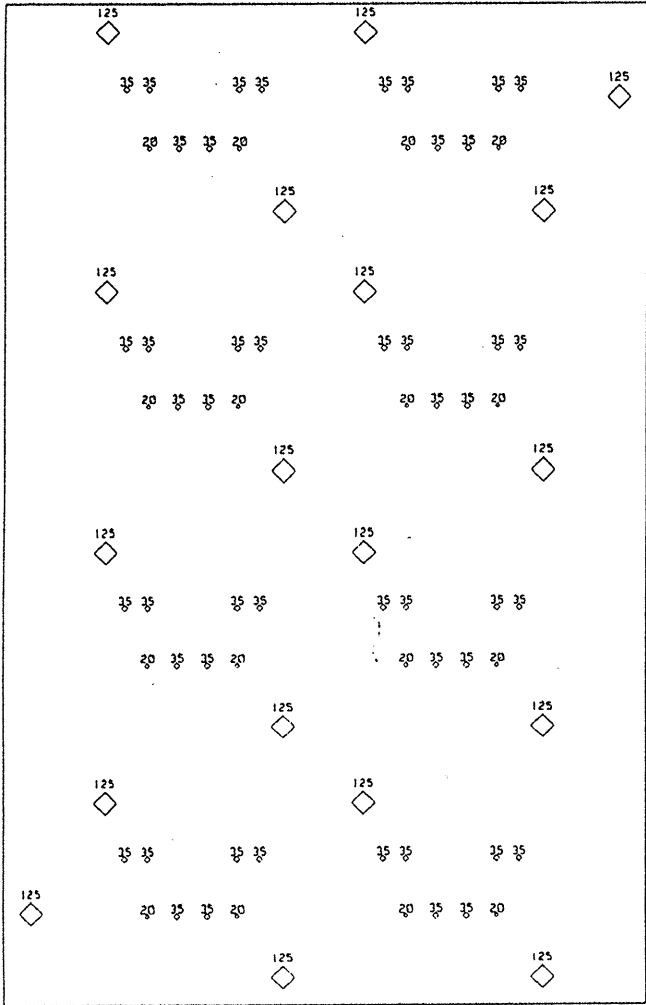
FILE NO.: a000874c2 REV:
PRINT NO.: 24A8741 C-2
CHANGES (*)

ENGINEER: THOMAS NOGGLE
DRAFTER: STIRKKINEN

DATE: DECEMBER 1, 1993
PAGE: 1 OF 1

Reference	Stock No.	Part Type	Description	Qty
DIODES				
CR1,CR2	NS		NOT USED	
RESISTORS				
R1,R4	NS		NOT USED	
R2,R5	NS	10 OHMS	1206 10 OHMS, 1/8W, 1%, SMT, SIZE	2
R3,R6	NS	40 OHMS	1206 40 OHMS, 1/8W, 1%, SMT, SIZE	2
MISCELLANEOUS				
-	NS	a000874u1	24A3541 U-1, PC BOARD	1

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE



SOLDER SIDE VIEW

NOTES:

- BOARD MATERIAL: .062 THICK G10 PER MIL-P-13949E
FL-GEN 062C-1/1-A1A (1 OZ COPPER EACH SIDE).
- SEE HOLE SCHEDULE FOR HOLE SIZES.
- THIS BOARD TO BE THROUGH HOLE PLATED.
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- BOARD PANEL SIZE IS 3.425 X 5.375 +/- .010.
DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A3542 M-1 (a000874m1).
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:
24A3542 L-1 a000874l1 PC BOARD ASSEMBLY
24A3542 M-1 a000874m1 BOARD OUTLINE
24A3541 C-1 a000874c1 PARTS LIST

HOLE SCHEDULE		
TOOLING NO.	HOLE DIA.	COUNT
1	.125	18
2	.035	48
3	.020	16

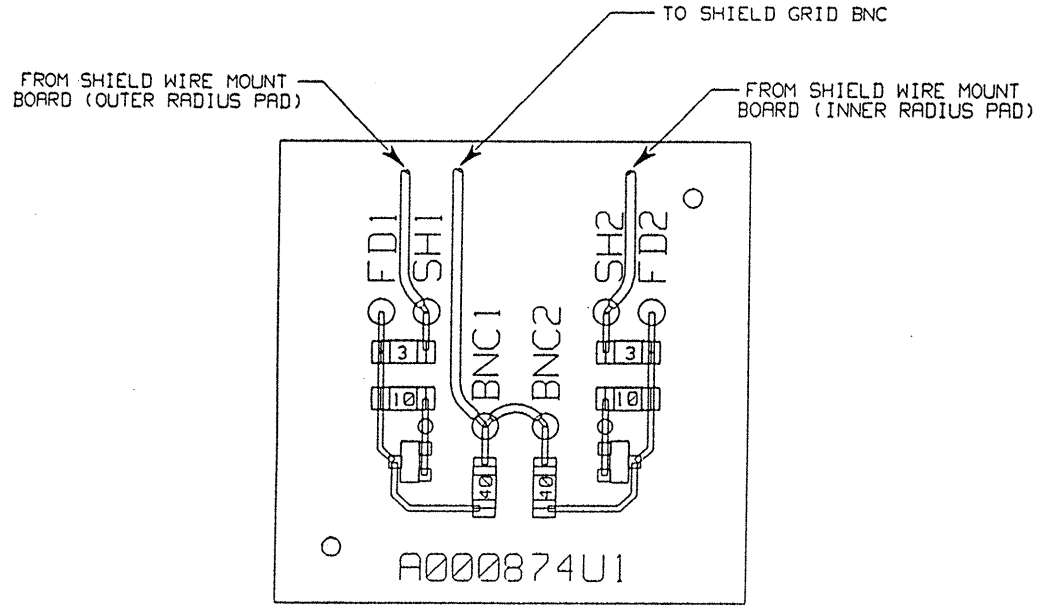
→ USE .033 DIA HOLE
→ USE .016 DIA HOLE

TOTAL HOLE COUNT = 82.

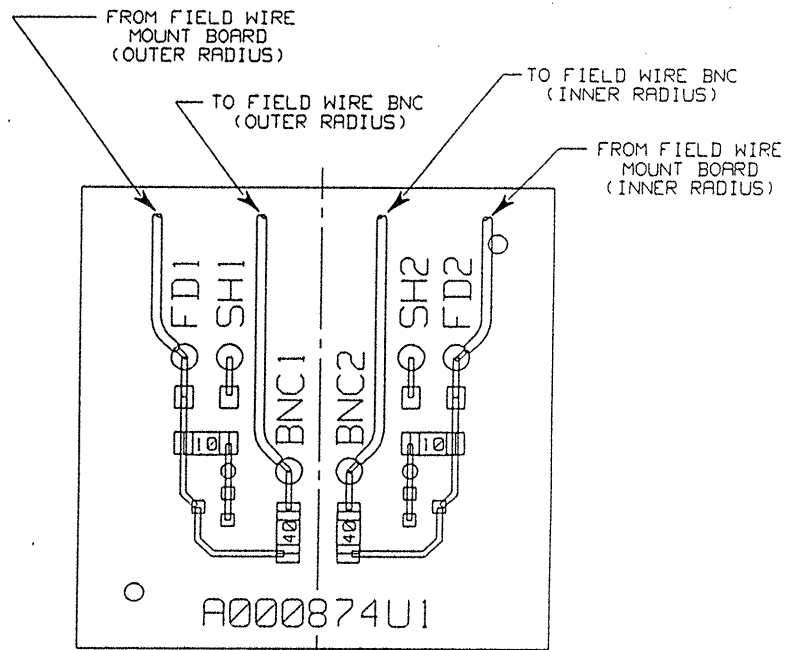
D I S		TITLE		STAR TPC			
1				INNER/OUTER SECTORS			
				GRID WIRE TERMINATION BOARD - A000874U1			
				HOLE SCHEDULE - PANEL BOARD (A000874U2)			
SHOWN ON		ACCOUNT NUMBER		DRAWN		DATE	
		8052-24		STIRKKINEN		5/7/93	
				LAWRENCE BERKELEY LABORATORY			
				UNIVERSITY OF CALIFORNIA			
				OFFICE OF ELECTRONICS ENGINEERING			
DATE ISSUED		NO. RECD.		APPROVED		DATE	
				ENGINEER			
				THOMAS NOGGLE			
DATE RECD.				FILE NO.		SIZE	
				a000874e1		2	
				DRAWING NO.		REV.	
				24A3542 E-1			
DEL. TO:		SCALE:		CHECKED:		SERIAL:	

SEP 29 1994

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE



THIS ASSEMBLY IS FOR THE SHIELD GRID TERMINATION BOARD.



LOAD THIS SIDE (R1,R3) FOR FIELD WIRE TERMINATION BOARD. THIS BOARD IS LOCATED BY THE OUTER RADIUS FIELD BNC. LOAD THIS SIDE (R4,R6) FOR FIELD WIRE TERMINATION BOARD. THIS BOARD IS LOCATED BY THE INNER RADIUS FIELD BNC.

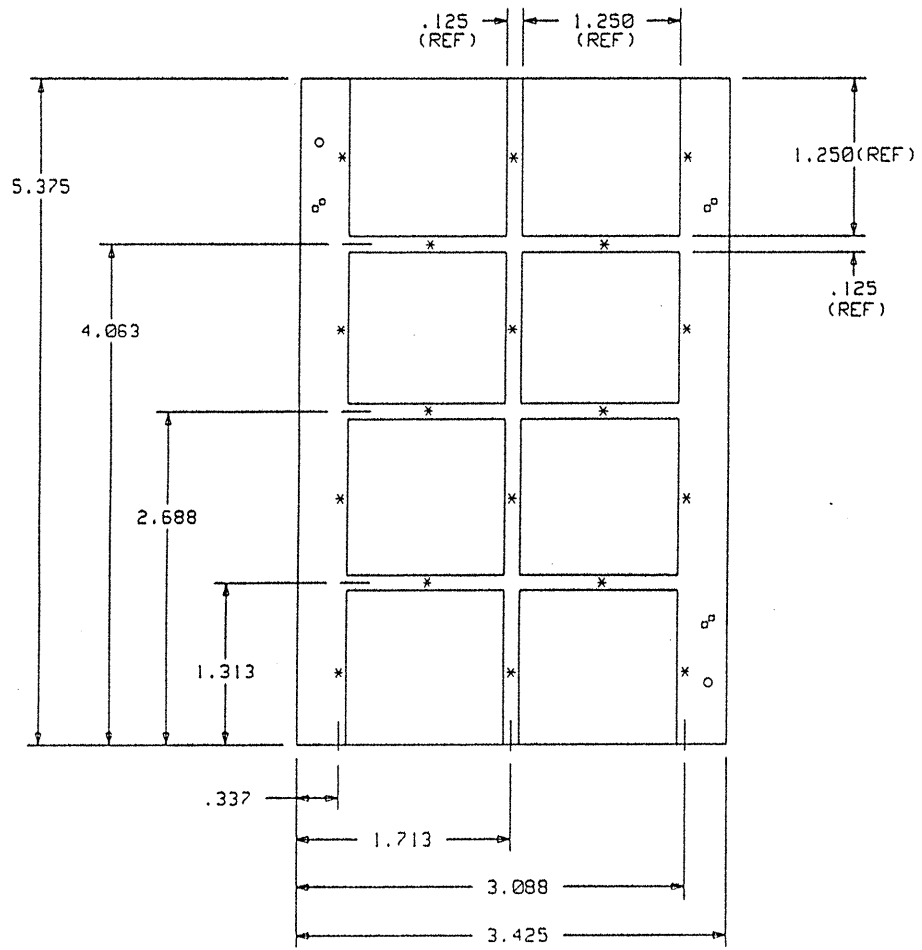
NOTES:

- UNLESS OTHERWISE SPECIFIED:
A. RESISTORS ARE SIZE 1206, 1/8W, 1%.
B. DIODES ARE TO BE SPECIFIED.
- BOARD SIZE IS 1.250 X 1.250 +/- .010. DIMENSIONS ARE IN INCHES.
- USE ARTWORK A000874U1 FOR BOTH ASSEMBLIES.
- REFERENCE DRAWINGS:
24A3542 M-1 a000874m1 BOARD OUTLINE
24A3542 E-1 a000874e1 HOLE SCHEDULE
24A3541 C-1 a000874c1 PARTS LIST

D I S T		TITLE		STAR TPC	
S				INNER/OUTER SECTORS	
T				GRID WIRE TERMINATION BOARD	
SHOW ON		PC BOARD ASSEMBLIES FOR SHIELD AND FIELD WIRES			
ACCOUNT NUMBER	8052-24	DRAWN	DATE	LAWRENCE BERKELEY LABORATORY	
SERIAL NUMBER		CHECKED	DATE	UNIVERSITY OF CALIFORNIA	
DATE ISSUED	NO. RECD.	APPROVED	DATE	OFFICE OF ELECTRONICS ENGINEERING	
DATE RECD.		ENGINEER		FILE NO.	SIZE
		THOMAS NOGGLE		a00087411	2
				DRAWING NO.	REV.
				24A3542 L-1	

SEP 29 1994

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE



COMPONENT SIDE VIEW

NOTES:

- BOARD MATERIAL: .062 THICK G10 PER MIL-P-13949E FL-GEN 062C-1/1-A1A (1 OZ. COPPER EACH SIDE.)
- PANEL BOARD SIZE IS 3.425 X 5.375 +/- .010. SINGLE BOARD SIZE IS 1.250 X 1.250. TOLERANCE ON SINGLE BOARDS IS +/- .005. DIMENSIONS ARE IN INCHES.
- * = APPROXIMATE PLACEMENT OF .100 TABS. SLOTS TO BE .125 WIDE.
- UNSPECIFIED TOLERANCES ARE +/- .005.
- REFERENCE DRAWINGS:
 24A3542 E-1 a000874e1 HOLE SCHEDULE
 24A3542 L-1 a00087411 PC BOARD ASSEMBLY

D I S T		TITLE		STAR TPC			
D I S T		TITLE		INNER/OUTER SECTORS			
D I S T		TITLE		GRID WIRE TERMINATION BOARD - A000874U1			
SHOW#		TITLE		BOARD OUTLINE FOR PANEL (A000874U2)			
ACCOUNT NUMBER	8052-24	DRAWN	STIRKKINEN	DATE	4/23/93	LAWRENCE BERKELEY LABORATORY	
SERIAL NUMBER		CHECKED		DATE		UNIVERSITY OF CALIFORNIA	
DATE ISSUED		APPROVED		DATE		OFFICE OF ELECTRONICS ENGINEERING	
DATE RECD.		ENGINEER	THOMAS NOGGLE	FILE NO.	a000874m1	SIZE	2
				DRAWING NO.	24A3542 M-1	REV.	
TEL.		SCALE	NONE				

SEP 29 1994

PRINT LIST

SEP 29 1994

TITLE: STAR TPC
 INNER/OUTER SECTORS
 ANODE BIAS DISTRIBUTION BOARD
 PANEL OF 10 BOARDS

FILE NO.: a000869p1 REV: A
 PRINT NO.: 24A1061 P-1
 CHANGES (*) 03/31/94

ENGINEER: THOMAS NOGGLE
 DRAFTER: STIRKKINEN

DATE: 12/01/93
 PAGE: 1 OF 1

Drawing No.	Chg. Ltr.	Title	
24A1061 C-1 (a000869c1)		PARTS LIST	
24A1061 S-1 (-)		SCHEMATIC - CREATED IN MENTOR GRAPHICS	
24A1063 E-1 (a000869e1)		HOLE SCHEDULE	
24A1062 M-1 (a000869m1)		BOARD OUTLINE	
24A1063 L-1 (a000869l1)		PC BOARD ASSEMBLY	
24A1061 U-1 (a000869u1)	B	ARTWORK FOR SINGLE BOARD	*
24A1061 U-2 (a000869u2)	B	ARTWORK FOR PANEL OF 10 BOARDS	*

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

*

PARTS LIST

SEP 29 1994

TITLE: STAR TPC
INNER/OUTER SECTORS
ANODE BIAS DISTRIBUTION BOARD
(PANEL OF 10 BOARDS)

FILE NO.: a000869c1 REV:
PRINT NO.: 24A1061 C-1
CHANGES (*)

ENGINEER: THOMAS NOGGLE
DRAFTER: STIRKKINEN

DATE: NOVEMBER 30, 1993
PAGE: 1 OF 1

Reference	Stock No.	Part Type	Description	Qty
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CAPACITORS

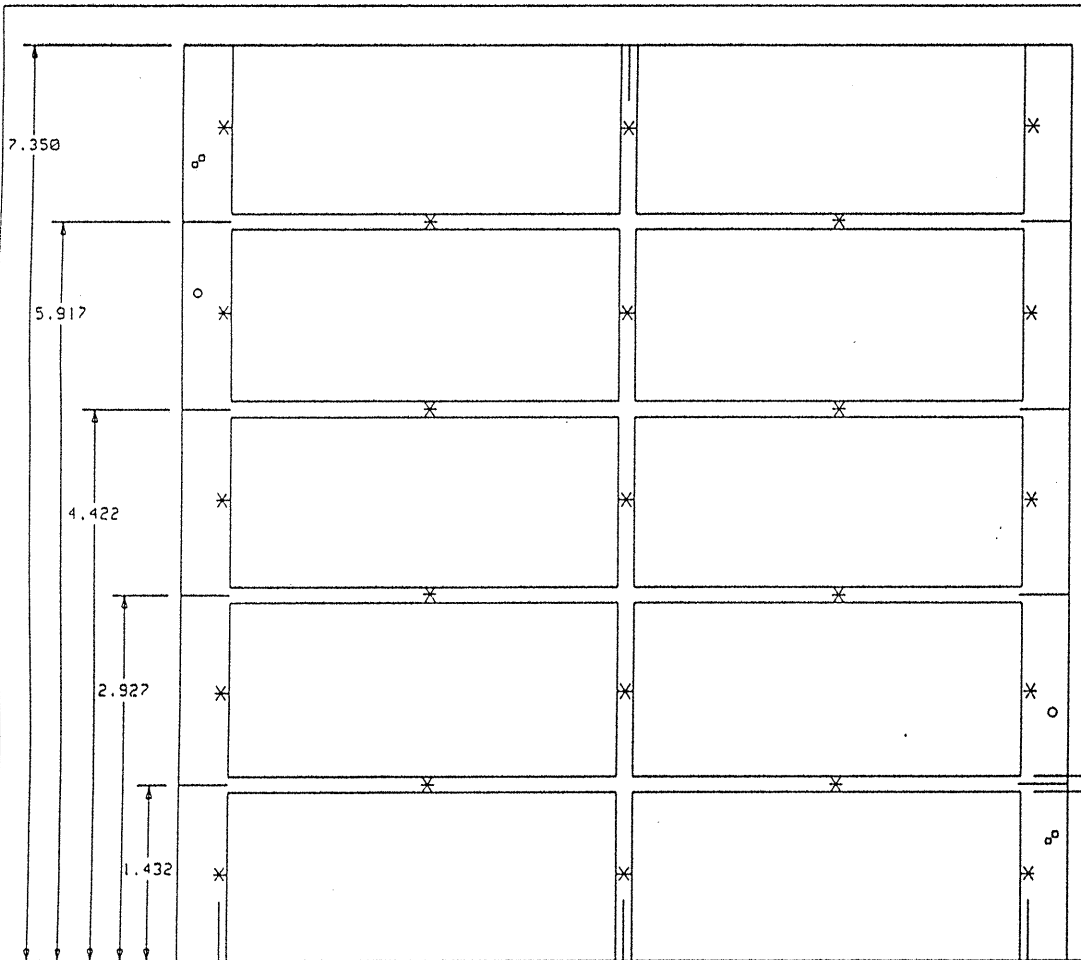
C1, C2, C3, C4, C5, NS C6, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21		.001uF	.001uF, 3KV, CERAMIC, SMT, SIZE .120 X .180	210
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RESISTORS

R1, R2, R3, R4, R5, NS R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R36, R37, R38, R39, R40, R41		10M	10M, 1/8W, 5%, SMT, SIZE	410
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MISCELLANEOUS

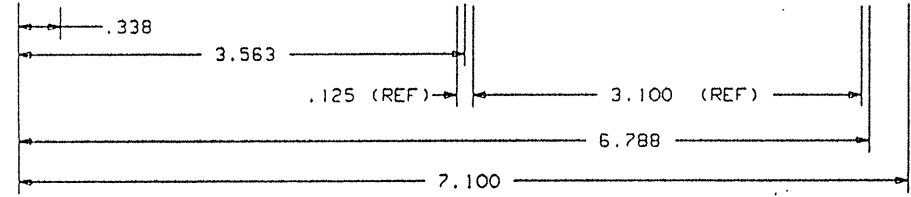
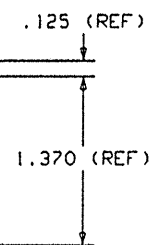
J1, J2	NS	CN21SROW	21 PIN, SINGLE ROW CON- NECTOR, STRAIGHT, SAMTEC #SSK-121-S-G, SOLDER TAIL	10
-	NS	A000869U2	24A1061 U-2, PC BOARD, PANEL OF 10 BOARDS	1



REV.	CHANGES	DRAWN	DATE	CHKD.	DATE
A	ARTWORK REV.A; TAB DIMENSION WAS .100.	JJS	6/4/93		
B	ARTWORK REV.B; WIDTH WAS 1.378; LOW VOLTAGE RESISTORS WERE 1M, SIZE 0805 PACKAGE; DELETED H.V. PIN.	JJS	10/21/93		

NOTES:

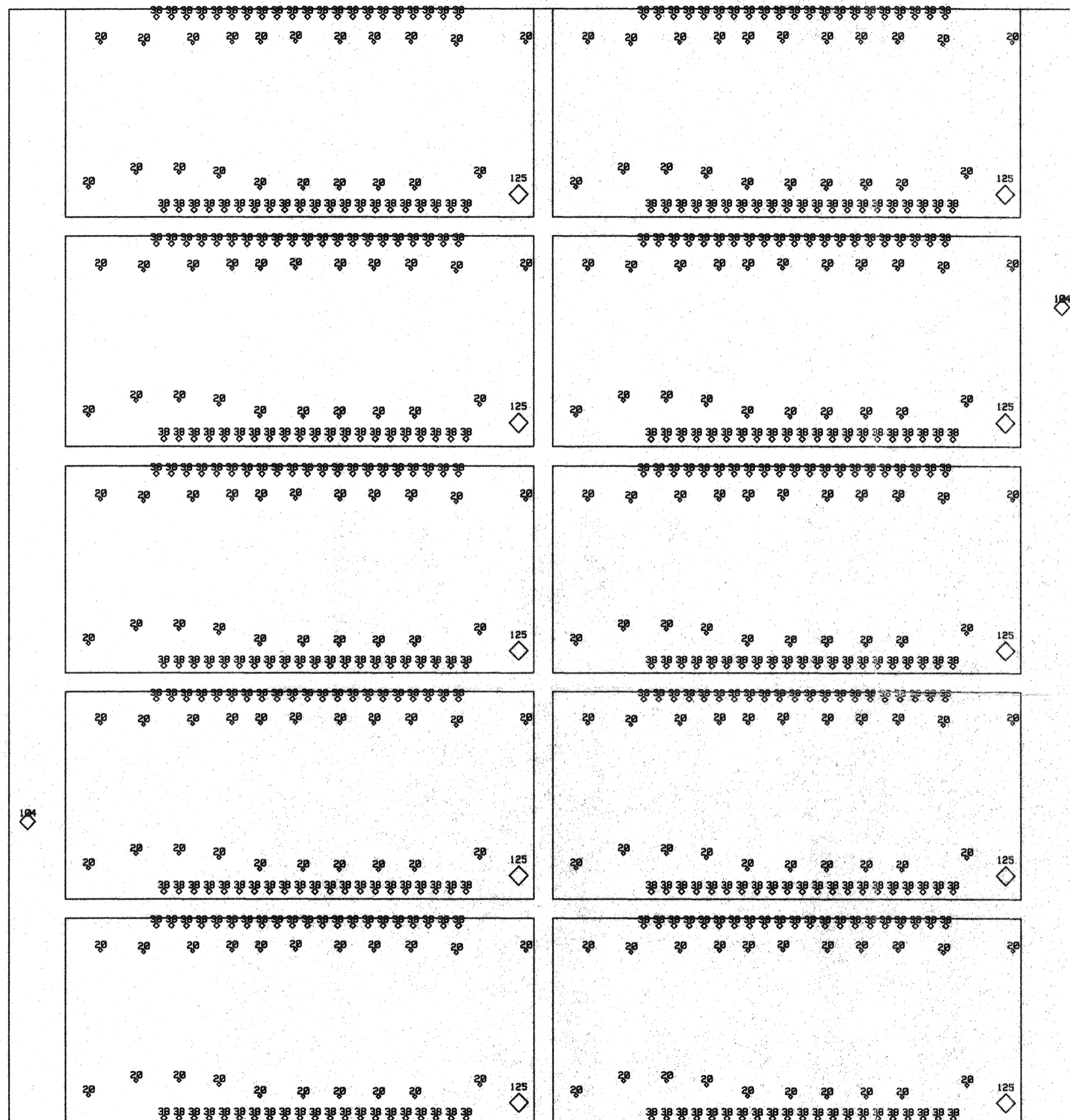
- BOARD MATERIAL: .062 THICK G10 PER MIL-P-55617 FL-GEN 062C-1/1-A1A (1 OZ. COPPER EACH SIDE.)
- BOARD PANEL SIZE IS 7.100 +/- .010 X 7.350 +/- .005. SINGLE BOARD 3.100 X 1.370 +/- .005.
- * = APPROXIMATE PLACEMENT OF .050 TABS. SLOTS TO BE .125 WIDE. DIMENSION TOLERANCES TO BE +/- .005.
- REFERENCE DRAWINGS:
 24A1063 E-1 a000869e1 HOLE SCHEDULE
 24A1063 L-1 a000869l1 PC BOARD ASSEMBLY



D		TITLE		STAR TPC	
I				INNER/OUTER SECTORS	
S				ANODE BIAS DISTRIBUTION BOARD (ABDB)	
1				BOARD OUTLINE - A000869U2	
DRAWN BY		DATE		LAWRENCE BERKELEY LABORATORY	
ACCOUNT NUMBER		4/1/93		UNIVERSITY OF CALIFORNIA	
8052-24		STIRKKINEN		OFFICE OF ELECTRONICS ENGINEERING	
SERIAL NUMBER		CHECKED		DATE	
		APPROVED		DATE	
DATE ISSUED		ENGINEER		FILE NO.	
		THOMAS NOGGLE		a000869m1	
NO. RECD.				SIZE	
				2	
DATE RECD.				DRAWING NO.	
				24A1062 M-1	
DCL. TO		SCALE		REV.	
		NONE		B	

SEP 29 1994

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE



NOTES:

1. BOARD MATERIAL: .062 G10 PER MIL-P-13949E FL-GEN 062C-1/1-A1A (1 OZ COPPER CLAD).
2. SEE HOLE SCHEDULE FOR HOLE SIZES.
3. THIS BOARD TO BE THROUGH HOLE PLATED.
4. SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
5. BOARD NOT TO BE SILKSCREENED.
6. SOLDERMASK IS NOT USED ON THIS BOARD.
7. PANEL BOARD SIZE IS 7.100 +/- .010 X 7.350 +/- .005. SINGLE BOARD SIZE IS 3.100 X 1.370 +/- .005. DIMENSIONS ARE IN INCHES. FOR BOARD OUTLINE SEE DRAWING 24A1062 M-1 (a000869m1).
8. REFERENCE DRAWINGS:
 24A1063 L-1 a000888l1 PC BOARD ASSEMBLY
 24A1062 M-1 a000888m1 BOARD OUTLINE
 24A1061 C-1 a000888c1 PARTS LIST

HOLE SCHEDULE		
TOOLING NO.	HOLE DIA.	COUNT
1	.104	2
2	.020	210
3	.038	420
4	.125	10

USE .125 DIA FOR TOOLING NOS. 1 & 4. (TOTAL HOLE COUNT=12)
 USE .016 DIA.
 USE .032 DIA.

TOTAL HOLE COUNT = 642.

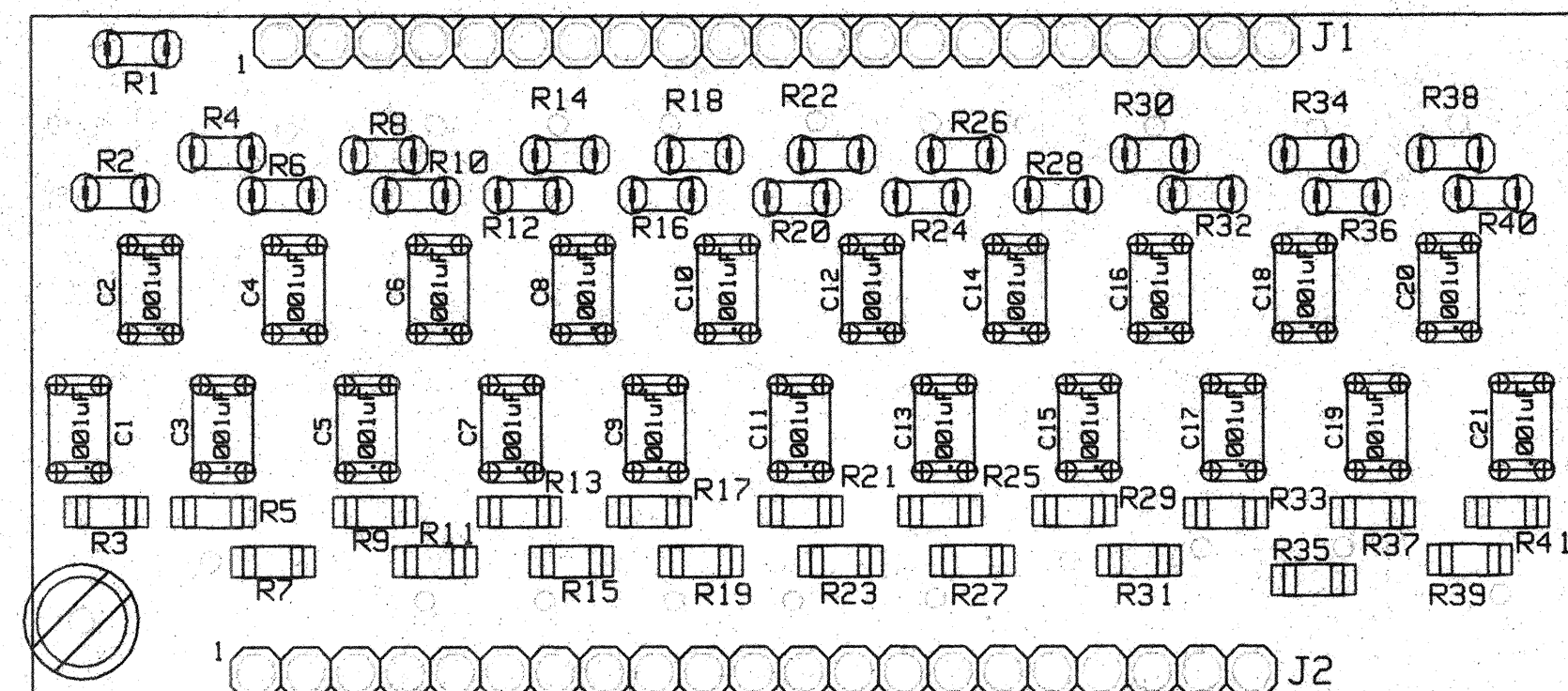
SOLDER SIDE VIEW (ARTWORK REV. B)

NO SCALE

D I S T		TITLE STAR TPC	
		INNER/OUTER SECTORS	
		ANODE BIAS DISTRIBUTION BOARD (PANEL)	
		HOLE SCHEDULE - 24A1061 U-2 (A000869U2)	
ACCOUNT NUMBER	8052-24	DRAWN	STIRKINEN
SERIAL NUMBER		DATE	11/30/93
DATE ISSUED		CHECKED	
DATE RECD.		DATE	
DEL. TO		APPROVED	
		ENGINEER	THOMAS NOGGLE
		FILE NO.	a000869e1
		SIZE	3
		DRAWING NO.	24A1063 E-1
		REV.	
		SCALE	NONE
			C1,E2,E56
			SHEET 1 OF 1

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE

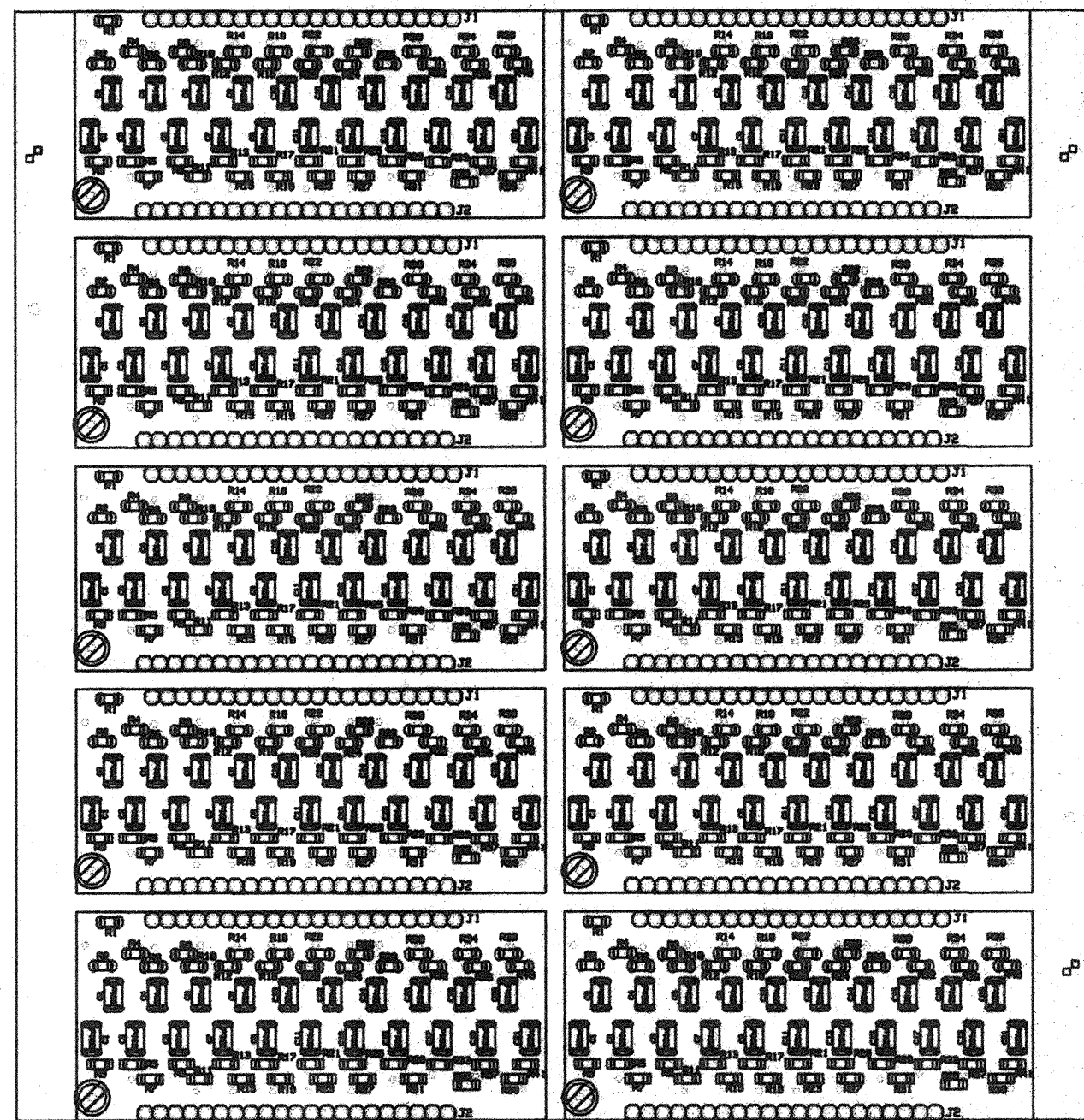
24A1061 U-1 (a000869u1) REV. B



DETAIL A

THIS IS ONE BOARD OF TEN.
SCALE 3:1

COMPONENT SIDE
24A1061 U-2 (a000869u2)
SCALE 1:1



SEE DETAIL A.

NOTES:

- UNLESS OTHERWISE SPECIFIED:
 - A. RESISTORS ARE 1/8W, 5%, SURFACE MOUNT, SIZE 1206.
 - B. CAPACITORS ARE .001uF, 3KV, CERAMIC, SURFACE MOUNT, SIZE .120" X .180".
 - C. CONNECTORS ARE SAMTEC #SSK-121-S-G, 21 PINS.
- PANEL BOARD SIZE IS 7.100 +/- .010 X 7.350 +/- .005.
SINGLE BOARD SIZE IS 3.100 X 1.370 +/- .005.
DIMENSIONS ARE IN INCHES.
- REFERENCE DRAWINGS:

24A1061 C-1	a000869c1	PARTS LIST - PANEL BOARD
24A1061 S-1	-	SCHEMATIC
24A1063 E-1	a000869e1	HOLE SCHEDULE

I:		TITLE STAR TPC			
D		INNER/OUTER SECTORS			
I		ANODE BIAS DISTRIBUTION BOARD (PANEL)			
S		PC BOARD ASSEMBLY - 24A1061 U-2 (a000869u2)			
T		LAWRENCE BERKELEY LABORATORY			
SHOWN ON		UNIVERSITY OF CALIFORNIA			
ACCOUNT NUMBER 8052-24		DRAWN STIRKINEN	DATE 11/30/93	OFFICE OF ELECTRONICS ENGINEERING	
SERIAL NUMBER		CHECKED	DATE	FILE NO.	SIZE
DATE ISSUED		APPROVED	DATE	24A1063 L-1	REV.
DATE RECD.		ENGINEER THOMAS NOGGLE	a00086911	3	24A1063 L-1
DEL. TO		SCALE -	E2, E3, R5, C5, P5, R19, L26, E27, E52, E53	SHEET 1 OF 1	

PRINT LIST

SEP 29 1994

TITLE: STAR TPC
 INNER/OUTER SECTORS
 LITTLE ORPHAN ANODE BOARDS
 (PANEL OF 4 EACH-24A3561 U-1 &
 24A3571 U-1)

FILE NO.: a000877p1 REV:
 PRINT NO.: 24A3571 P-1
 CHANGES (*)

ENGINEER: THOMAS NOGGLE
 DRAFTER: STIRKKINEN

DATE: 12/23/93
 PAGE: 1 OF 1

Drawing No.	Chg. Ltr.	Title
24A3571 C-1 (a000877c1)		PARTS LIST
24A3572 M-1 (a000877m1)	A	BOARD OUTLINE
24A3572 E-1 (a000877e1)	A	HOLE SCHEDULE
24A3572 L-1 (a000877l1)	A	PC BOARD ASSEMBLY
24A3571 U-1 (a000877u1)	A	PC BOARD - OSIR/7 WIRE
24A3561 U-1 (a000876u1)	A	PC BOARD - OSOR/5 WIRE
(a876877u)	A	PC BOARD - PANEL OF 4 EACH 24A3561 U-1 & 24A3571 U-1

NUMBERS WITHIN () REFER TO EGS COMPUTER FILES

*

PARTS LIST

SEP 29 1994

TITLE: STAR TPC
 INNER/OUTER SECTORS
 LITTLE ORPHAN ANODE BOARDS
 (PANEL OF 10 BOARDS)

FILE NO.: a000877c1 REV:
 PRINT NO.: 24A3571 C-1
 CHANGES (*)

ENGINEER: THOMAS NOGGLE
 DRAFTER: STIRKKINEN

DATE: NOVEMBER 30, 1993
 PAGE: 1 OF 1

Reference	Stock No.	Part Type	Description	Qty
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CAPACITORS

C1,C2,C3,C4,C5, NS C6 (A0008761 U-1) C1,C2,C3, C4,C5,C6,C7,C8 (A0008771 U-1)		.001uF	.001uF,3KV,CERAMIC,SMT, SIZE .120 X .180	56
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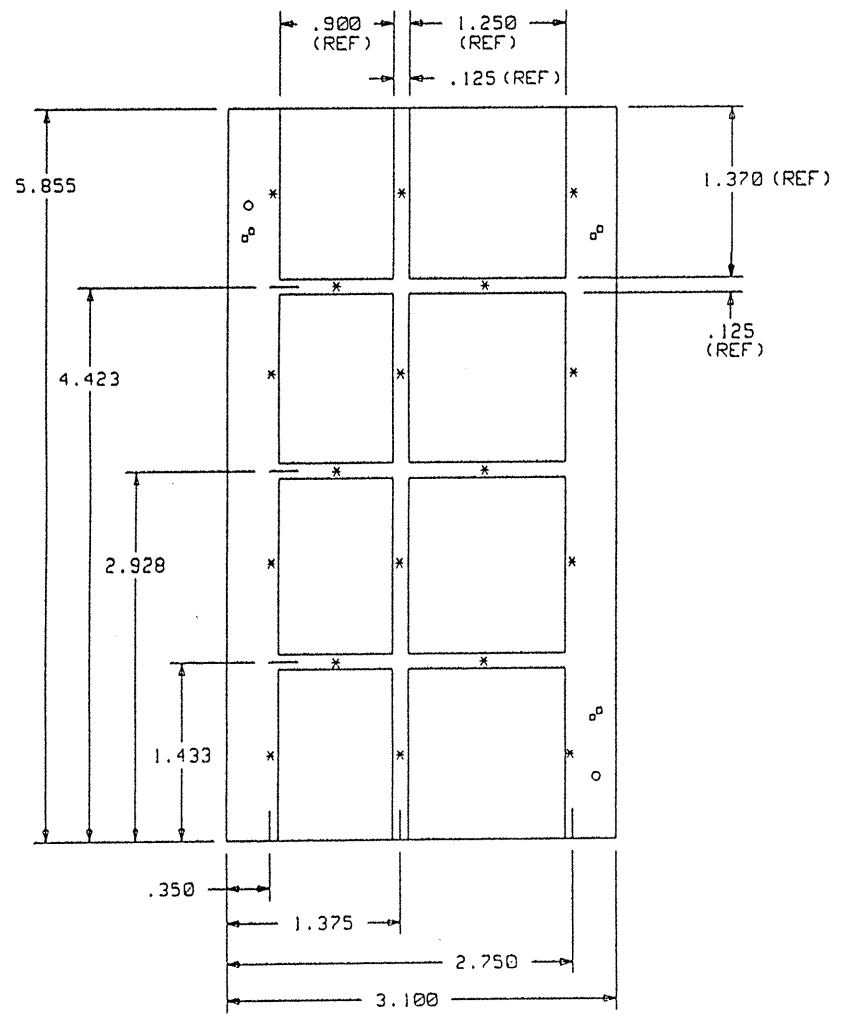
RESISTORS

R1,R2,R3,R4,R5, NS R6 (A0008761 U-1) R1,R2,R3,R4,R5, R6,R7,R8 (A0008771 U-1)		10M	10M,1/8W,5%,SMT,SIZE	56
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MISCELLANEOUS

J1 (A0008761 U-1)	NS	CN6SROW	6 PIN,SINGLE ROW CON- NECTOR,STRAIGHT,SAMTEC #SSK-106-S-G,SOLDER TAIL	4
J1 (A0008771 U-1)	NS	CN8SROW	8 PIN,SINGLE ROW CON- NECTOR,STRAIGHT,SAMTEC #SSK-108-S-G,SOLDER TAIL	4
-	NS	A876877U	A876877U,PC BOARD,PANEL OF 8 BOARDS (4 A0008761 U-1 AND 4 A0008771 U-1)	1

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE
A	SINGLE BOARD SIZES WERE 1.100 X 1.100 & 1.100 X 1.250; ARTWORK REV. A	JJS	11/16/93		



COMPONENT SIDE VIEW

NOTES:

- BOARD MATERIAL: .062 THICK G10 PER MIL-P-55617 FL-GEN 062C-1/1-A1A (1 OZ. COPPER EACH SIDE.)
- PANEL BOARD SIZE IS 3.100 +/- .010 X 5.855 +/- .005. SINGLE BOARD SIZES ARE .900 X 1.370 AND 1.250 X 1.370. TOLERANCE ON SINGLE BOARDS IS +/- .005. DIMENSIONS ARE IN INCHES.
- * = APPROXIMATE PLACEMENT OF .050 TABS. SLOTS TO BE .125 WIDE.
- UNSPECIFIED TOLERANCES ARE +/- .005.
- THIS PANEL CONSIST OF TWO DIFFERENT BOARDS:
 - 24A3561 U-1 a000876u1 LITTLE ORPHAN ANODE BOARD (OSOR-5 WIRE)
 - 24A3571 U-1 a000877u1 LITTLE ORPHAN ANODE BOARD (OSIR-7 WIRE)
- REFERENCE DRAWINGS:
 - 24A3572 E-1 a000877e1 HOLE SCHEDULE - PANEL
 - 24A3572 L-1 a000877l1 PC BOARD ASSEMBLY - PANEL

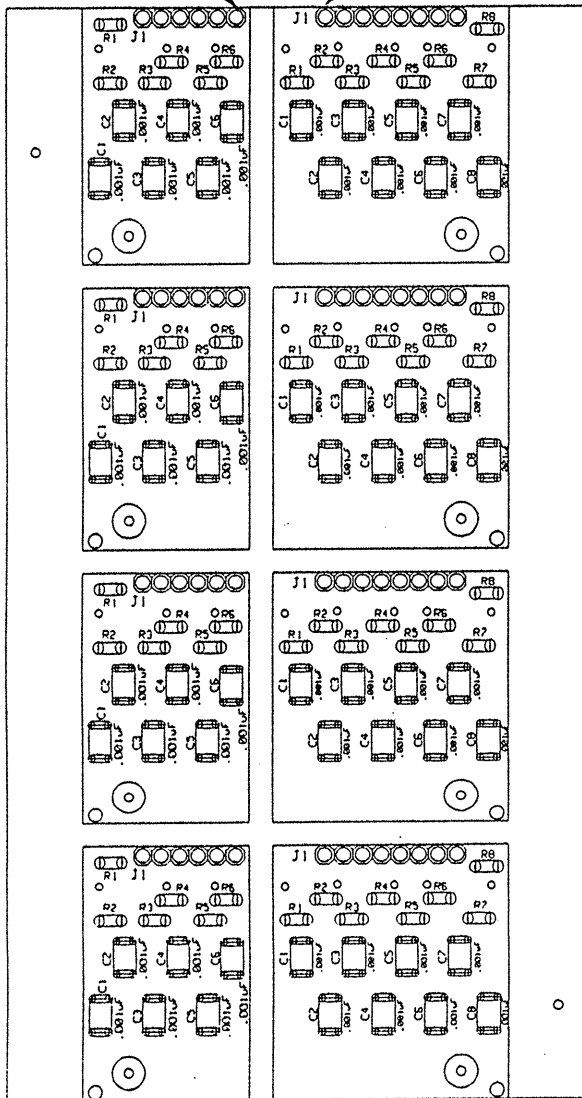
D I S T		TITLE		STAR TPC	
				INNER/OUTER SECTORS	
				LITTLE ORPHAN ANODE BOARDS - PANEL	
SHOW ON				BOARD OUTLINE (A000876U1 & A000877U1)	
ACCOUNT NUMBER	8052-24	DRAWN	STIRKINEN	DATE	4.22/93
SERIAL NUMBER		CHECKED		DATE	
DATE ISSUED	NO. RECD.	APPROVED		DATE	
DATE RECD.		ENGINEER	THOMAS NOGGLE	FILE NO.	a000877m1
				SIZE	2
				DRAWING NO.	24A3572 M-1
				REV.	A

SEP 29 1994

6 PIN CONNECTOR,
SAMTEC #SSK-106-S-G,
24A3561 U-1 (4 PLACES)

8 PIN CONNECTOR,
SAMTEC #SSK-108-S-G,
24A3571 U-1 (4 PLACES)

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE
A	SINGLE BOARD SIZES WERE 1.100 X 1.100 & 1.100 X 1.250; ARTWORK REV. A	JJS	12/03/93		



COMPONENT SIDE

NOTES:

- UNLESS OTHERWISE SPECIFIED:
 - RESISTORS ARE 10M, 1/8W, 5%, SURFACE MOUNT, SIZE 1206.
 - CAPACITORS ARE .001uF, 3KV, CERAMIC, SURFACE MOUNT, SIZE .120" X .180".
- PANEL BOARD SIZE IS 3.100 +/- .010 X 5.855 +/- .005. SINGLE BOARD SIZES ARE .900 X 1.370 AND 1.250 X 1.370. TOLERANCES ON SINGLE BOARDS ARE +/- .005. DIMENSIONS ARE IN INCHES.
- THIS PANEL CONSIST OF TWO DIFFERENT BOARDS:

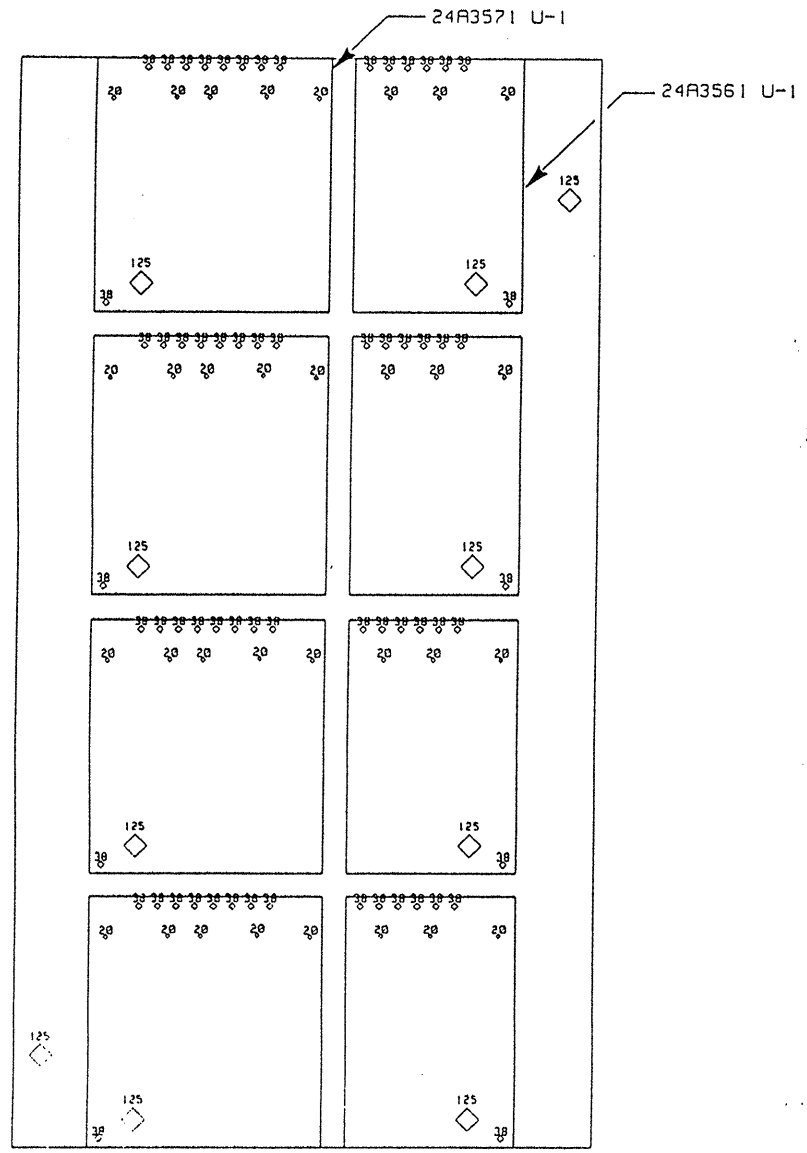
24A3561 U-1	a000876u1	LITTLE ORPHAN ANODE BOARD (OSOR - 5 WIRES)
24A3571 U-1	a000877u1	LITTLE ORPHAN ANODE BOARD (OSIR - 7 WIRES)
- REFERENCE DRAWINGS:

24A3571 C-1	a000877c1	PARTS LIST - PANEL
24A3572 E-1	a000877e1	HOLE SCHEDULE - PANEL
24A3572 M-1	a000877m1	BOARD OUTLINE - PANEL

D I S		TITLE				STAR TPC			
I						INNER/OUTER SECTORS			
I						LITTLE ORPHAN ANODE BOARDS - PANEL			
I						PC BOARD ASSEMBLY (A000876U1 & A000877U1)			
SHOWN ON									
ACCOUNT NUMBER	8052-24	DRAWN	STIRKKINEN	DATE	12/03/93	LAWRENCE BERKELEY LABORATORY			
SERIAL NUMBER		CHECKED		DATE		UNIVERSITY OF CALIFORNIA			
DATE ISSUED		APPROVED		DATE		OFFICE OF ELECTRONICS ENGINEERING			
DATE RECD.		NO. RECD.				FILE NO.	SIZE	DRAWING NO.	REV.
						A00087711	2	24A3572 L-1	A
FILE		SCALE		1.5:1					

SEP 20 1994

REV.	CHANGES	DRAWN	DATE	CHKD.	DATE
A	SINGLE BOARD SIZES WERE 1.100 X 1.100 & 1.100 X 1.250; PARTWORK REV. A	JJS	12/02/93		



NOTES:

- BOARD MATERIAL: .062 THICK G10 GLASS EPOXY PER MIL-P-13949E FL-GEN 062C-1/1-A1A (1 OZ COPPER).
- SEE HOLE SCHEDULE FOR HOLE SIZES.
- THIS BOARD TO BE THROUGH HOLE PLATED.
- SPECIFIED HOLE DIA. SIZES ARE FOR FINISHED HOLES AFTER PLATING.
- THIS PANEL BOARD IS NOT TO BE SILKSCREENED.
- PANEL BOARD SIZE IS 3.100 +/- .010 X 5.855 +/- .005. SINGLE BOARD SIZES ARE .900 X 1.370 (24A3561 U-1) AND 1.250 X 1.370 (24A3571 U-1). DIMENSIONS ARE IN INCHES. BOARD OUTLINE DRAWING IS 24A3572 M-1 (a000877m1).
- THIS PANEL CONSIST OF TWO DIFFERENT BOARDS:
 24A3561 U-1 a000876u1 LITTLE ORPHAN ANODE BOARD (OSOR-5 WIRE)
 24A3571 U-1 a000877u1 LITTLE ORPHAN ANODE BOARD (OSIR-7 WIRE)
- SOLDERMASK IS NOT USED ON THIS BOARD.
- REFERENCE DRAWINGS:
 24A3572 L-1 a000877l1 PC BOARD ASSEMBLY (PANEL)
 24A3572 M-1 a000877m1 BOARD OUTLINE (PANEL)
 24A3571 C-1 a000877c1 PARTS LIST (PANEL)

HOLE SCHEDULE		
TOOLING NO.	HOLE DIA.	COUNT
1	.038	56
2	.020	48
3	.125	10

← USE .033 DIA. HOLE
 ← USE .016 DIA. HOLE

TOTAL HOLE COUNT = 114.

SOLDER SIDE VIEW

D I S I		TITLE	
		STAR TPC	
		INNER/OUTER SECTORS	
		LITTLE ORPHAN ANODE BOARDS - PANEL	
		HOLE SCHEDULE (A000876U1 & A000877U1)	
ACCOUNT NUMBER	8052-24	DRAWN	DATE
SCRIPT NUMBER		STIRKKINEN	12/02/93
DATE ISSUED	NO. RECD.	CHECKED	DATE
DATE RECD.		APPROVED	DATE
		ENGINEER	THOMAS NOGGLE
		FILE NO.	a000877e1
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