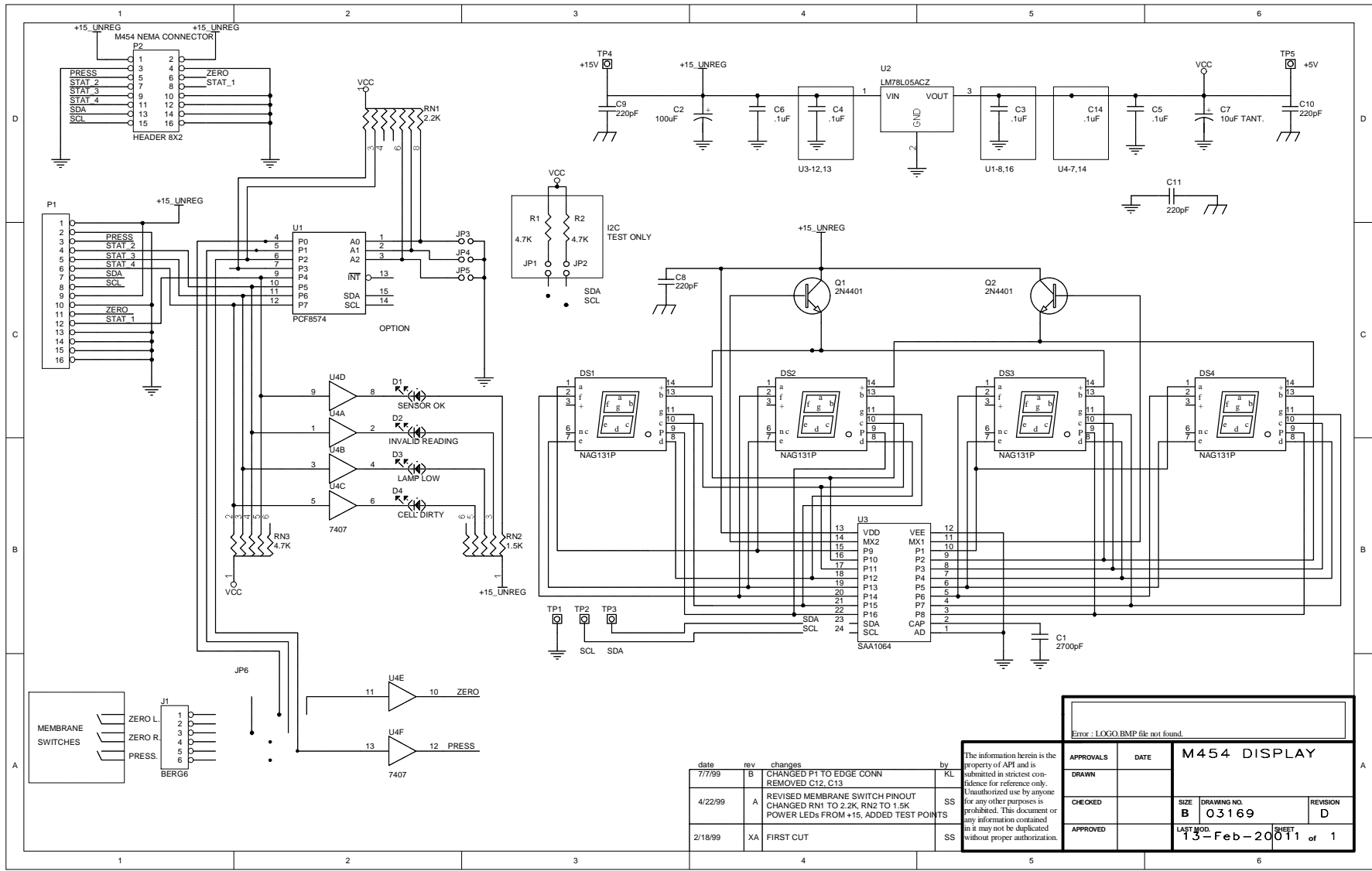


## Appendix B – Electronic Schematics

Table B-1 M460L List of Electronic Schematics

| DOCUMENT # | DESCRIPTION              |
|------------|--------------------------|
| 03169      | PCA, FRONT PANEL DISPLAY |
| 04992      | PCA, MAINBOARD           |
| 03493      | PCA, CPU                 |





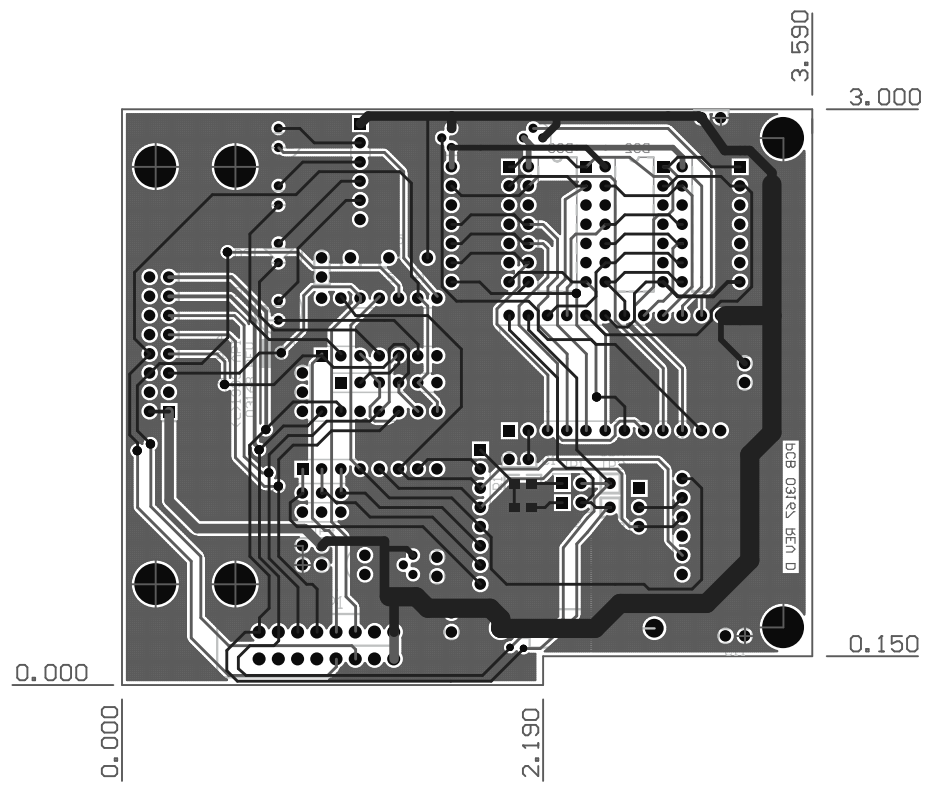
Error: LOGO.BMP file not found.

### M454 DISPLAY

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| APPROVALS | DATE | M454 DISPLAY |          |
|-----------|------|--------------|----------|
| DRAWN     |      | SIZE         | REVISION |
| CHECKED   |      | B            | D        |
| APPROVED  |      | DRAWING NO.  |          |
|           |      | 03169        |          |
|           |      | LAST MOD.    | SHEET    |
|           |      | 13-Feb-20    | 011 of 1 |

| date    | rev | changes  | by |
|---------|-----|--|----|
| 7/7/99  | B   | CHANGED P1 TO EDGE CONN<br>REMOVED C12, C13  | KL |
| 4/22/99 | A   | REVISED MEMBRANE SWITCH PINOUT<br>CHANGED RN1 TO 2.2K, RN2 TO 1.5K<br>POWER LEDs FROM +15, ADDED TEST POINTS | SS |
| 2/18/99 | XA  | FIRST CUT  | SS |



**Constructions**

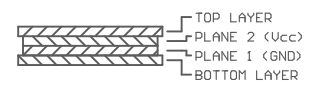
FOUR LAYER PCB

Material: FR-4 copper clad glass epoxy or equiv.  
2 OZ copper .002 thk min., C.T.L > 175.

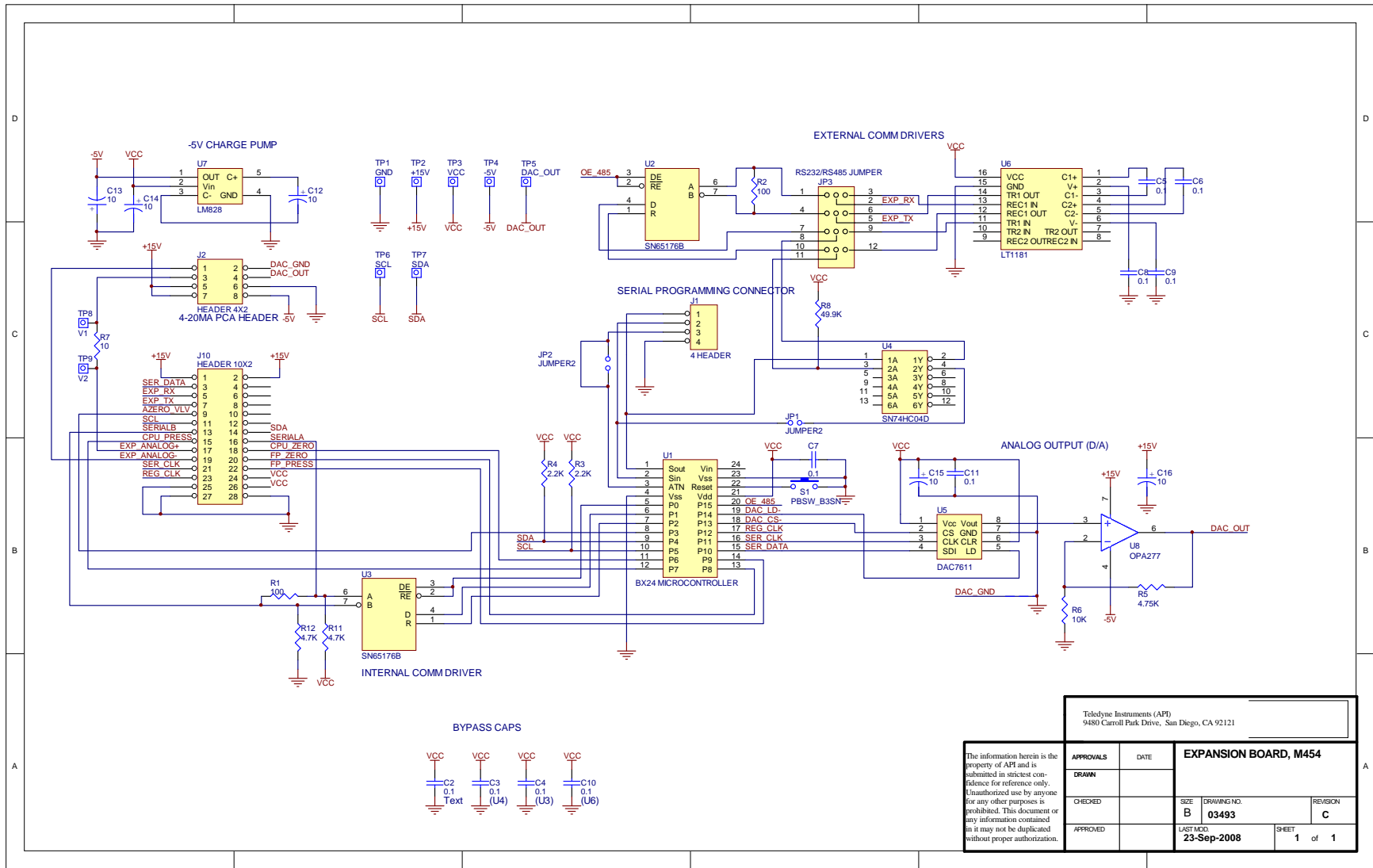
Solder mask over bare copper w/reflow process  
or equiv. both sides (LPI GREEN)

Silkscreen, white epoxy ink on component side

All holes plated through, sizes are after plating



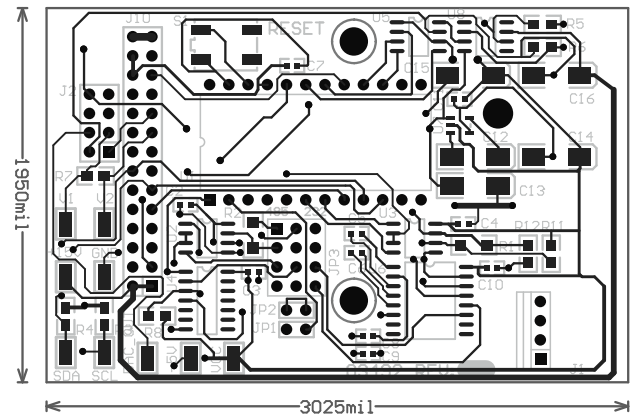
|  |                     |
|--|---------------------|
| API 6565 Nancy Ridge Dr. San Diego 92121 |                     |
| drawn<br>JW                              | M454 DISPLAY PCB    |
| checked                                  | Mechanical Layer 1  |
| approved                                 | PCB# 03167d.pcb     |
|  | REVISED 23-Sep-2008 |



Teledyne Instruments (API)  
9480 Carroll Park Drive, San Diego, CA 92121

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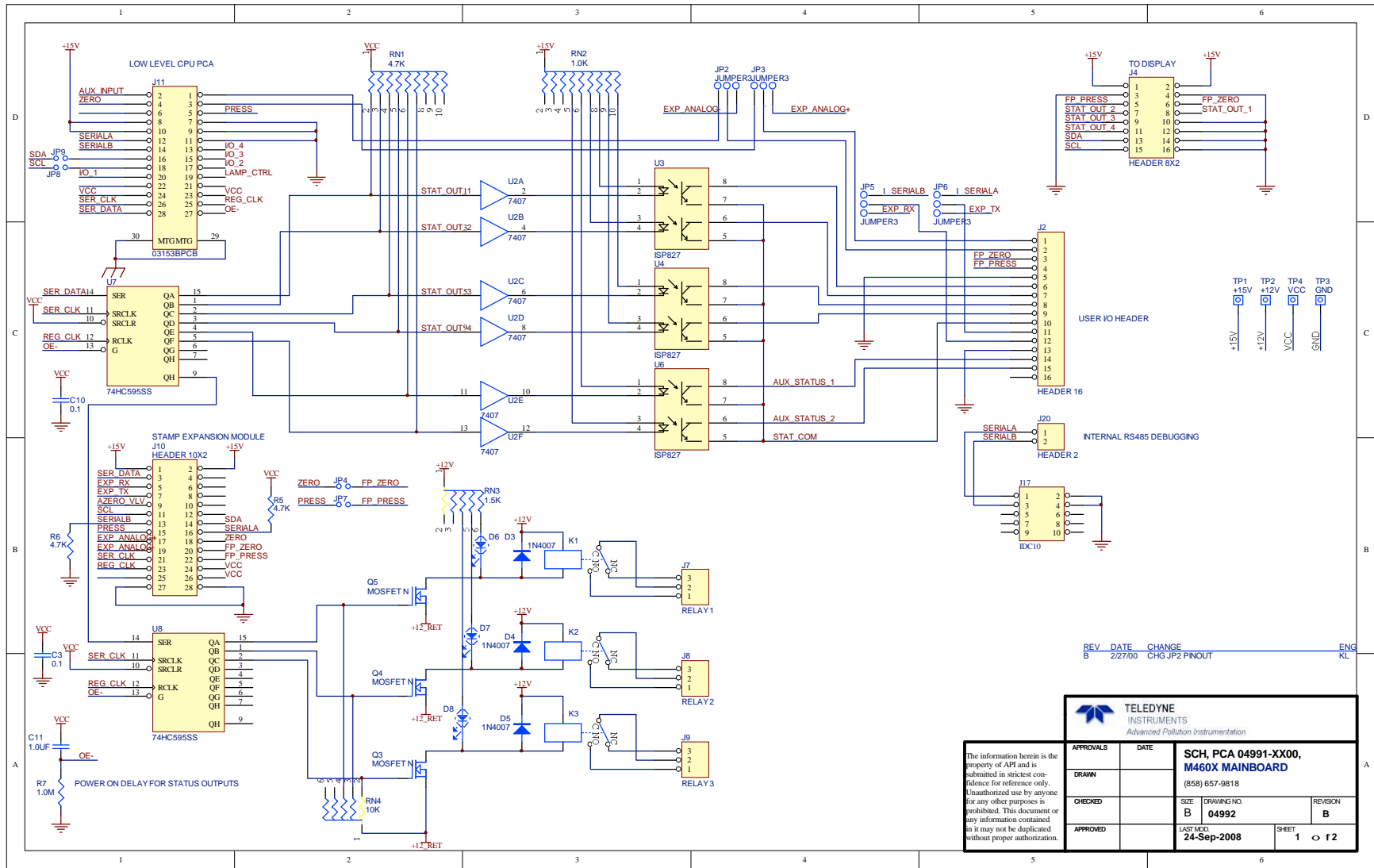
| APPROVALS | DATE | EXPANSION BOARD, M54  |              |
|-----------|------|-----------------------|--------------|
| DRAWN     |      | SIZE                  | REVISION     |
| CHECKED   |      | B 03493               | C            |
| APPROVED  |      | LAST MOD. 23-Sep-2008 | SHEET 1 of 1 |



Construction:

- 2 layers
- 0.063 thick
- LPI Green solder mask
- Material: FR-4 copper clad glass epoxy or equiv.
- 2 OZ copper .002 thk min.
- Material must have C11 > 175
- Solder mask over bare copper w/reflow process or equiv. both sides
- Silkscreen, white epoxy ink on component side only
- All holes plated through, sizes are after plating

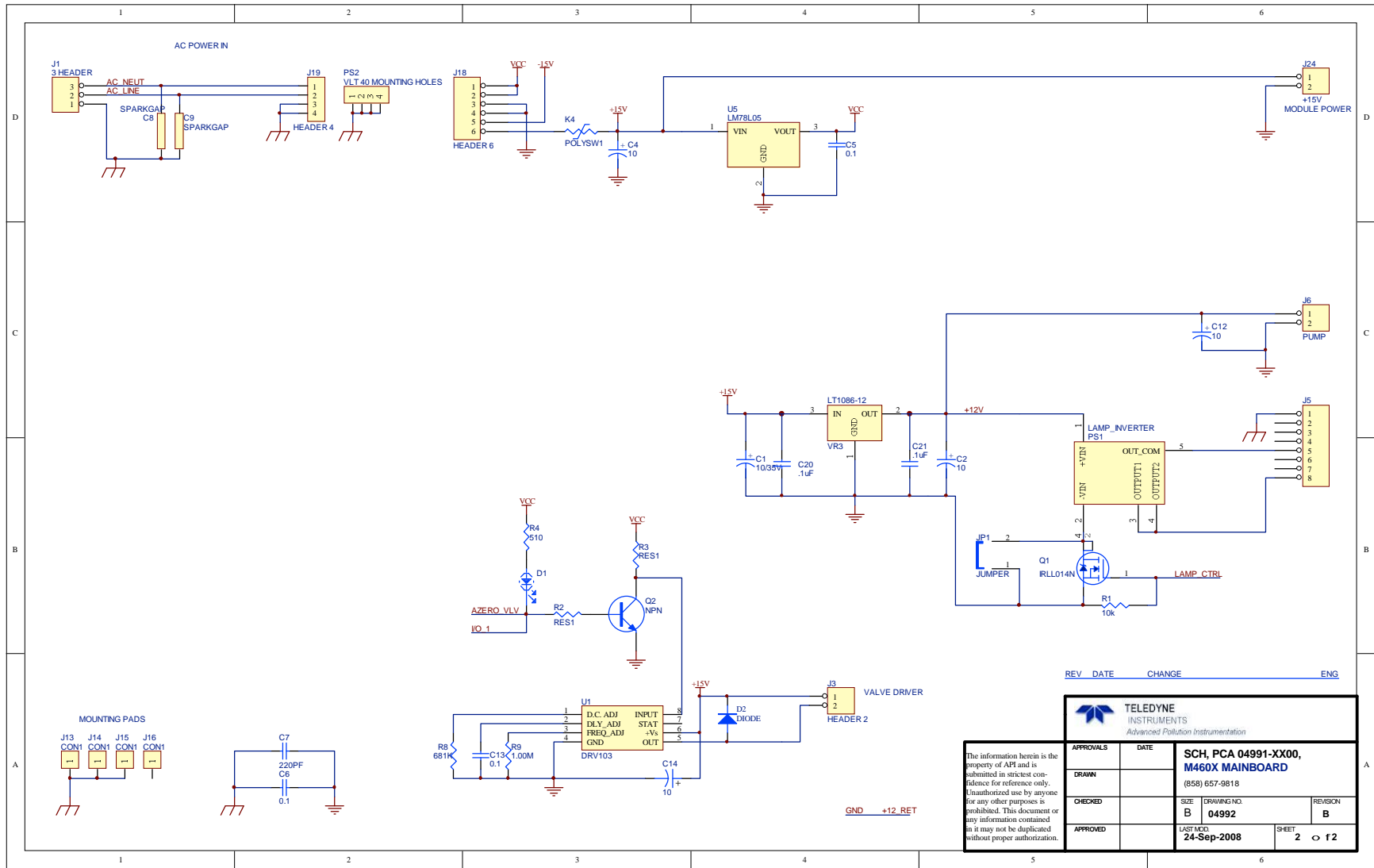
|  |                     |
|--|---------------------|
| API 6565 Nancy Ridge Dr. San Diego 92121 |                     |
| drawn                                    | TEMP SENSOR PCB     |
| KL 1/28/99                               |                     |
| checked                                  |                     |
|  | Mechanical Layer 1  |
| approved                                 | PCB# 03491C.PCB     |
|  | REVISED 23-Sep-2008 |



REV DATE CHANGE ENG KL  
 B 2/27/00 CHG JP2 PINOUT

| TELEDYNE INSTRUMENTS<br>Advanced Pollution Instrumentation |      | SCH, PCA 04991-XX00,<br>M460X MAINBOARD<br>(858) 657-9818 |          |
|--|------|---|----------|
| APPROVALS  | DATE | SIZE  | REVISION |
| DRAWN  |      | B 04992   | B        |
| CHECKED  |      | LAST MOD.   | SHEET    |
| APPROVED   |      | 24-Sep-2008   | 1 of 2   |

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REV. DATE CHANGE ENG

|  |                           |   |                                |
|--|---------------------------|---|--------------------------------|
| <br>Advanced Pollution Instrumentation   |                           | <b>SCH. PCA 04991-XX00,</b><br><b>M460X MAINBOARD</b> |                                |
|  |                           | (858) 657-9818  |                                |
| APPROVALS<br>DRAWN<br>CHECKED<br>APPROVED  | DATE<br>SIZE<br>LAST MOD. | DRAWING NO.<br><b>04992</b>                           | REVISION<br><b>B</b>           |
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