

NOTES, UNLESS OTHERWISE SPECIFIED:

1. The netname "V3P3V" represents connection to the +3.3V power buss
2. The netname "V1P8V" represents connection to the +1.8V power buss
3. The netname "V1P8V\_SW" represents connection to the +1.8V switched power buss
4. The netname "SYS\_PWR" represents connection to the +4.5V power buss.
5. The netname "VBIAS" represents connection to the +18.0V DMD power buss.
6. The netname "VOFS" represents connection to the +10.0V DMD power buss.
7. The netname "VRST" represents connection to the -14.0V DMD power buss.
8. The netname "GND" represents connection to the ground plane.
9. A "Z" suffix on a signal name indicates an active low signal.
10. All components with designators "U\*", "Q\*", and "D\*" are electrostatic discharge sensitive.
11. All resistor values are in ohms.
12. All capacitor values in microfarads unless otherwise specified.



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| REVISIONS |                            |            |          |
|-----------|----------------------------|------------|----------|
| REV       | DESCRIPTION                | DATE       | APPROVED |
| -         | Draft Release              | 07/24/2014 | HPC      |
| A         | ECO 2143348: REV A Release |            |          |
|           |                            |            |          |
|           |                            |            |          |

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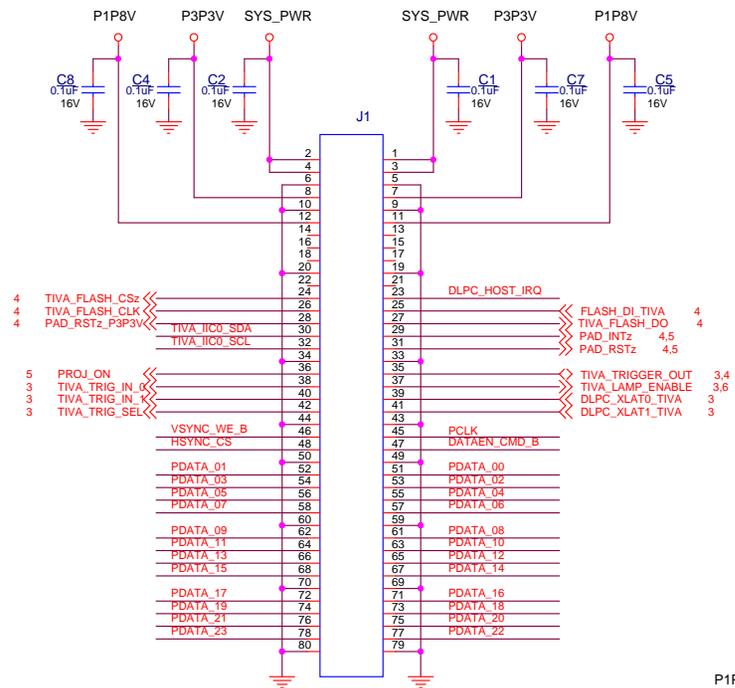
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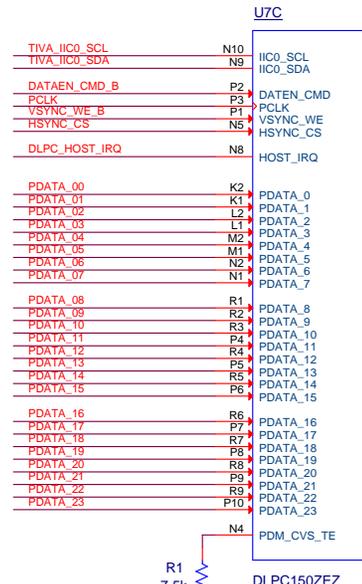
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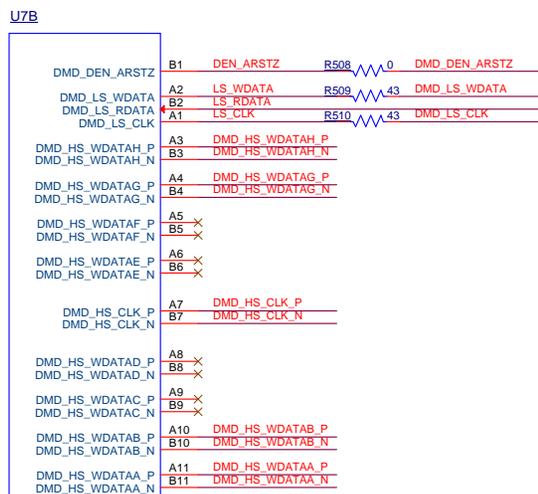
|             |         |                           |            |   |                    |       |
|-------------|---------|---------------------------|------------|---|--------------------|-------|
|             | DWN     | DATE                      | 07/24/2014 | <b>TEXAS INSTRUMENTS</b><br>(C) COPYRIGHT 2014 TEXAS INSTRUMENTS<br>ALL RIGHTS RESERVED |                    |       |
|             | ENGR    |                           |            |   |                    |       |
|             | APVD    |                           |            |   |                    |       |
|             | MFG     |                           |            |   |                    |       |
|             | 0314CP  | QA                        |            | TITLE   |                    |       |
| NEXT ASSY   | USED ON |                           |            | ESD, NIRscan Nano DLPC 150 Board  |                    |       |
|             | SW      | Allegro Design Entry 16.6 |            | A3  | DRAWING NO 2514151 | REV E |
| APPLICATION |         |                           |            | SCALE   | SHEET 1 of 7       |       |



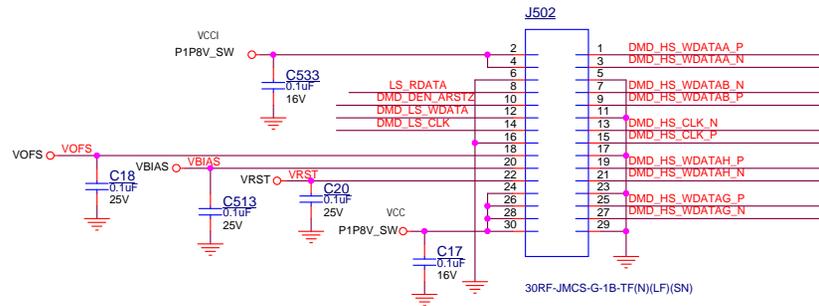
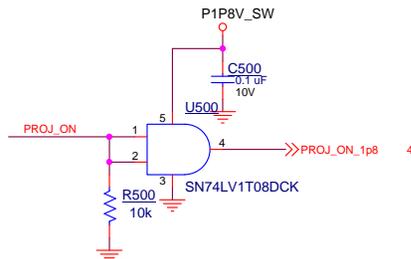
ST4-40-2.50-L-D-P-TR



DLPC150ZEZ



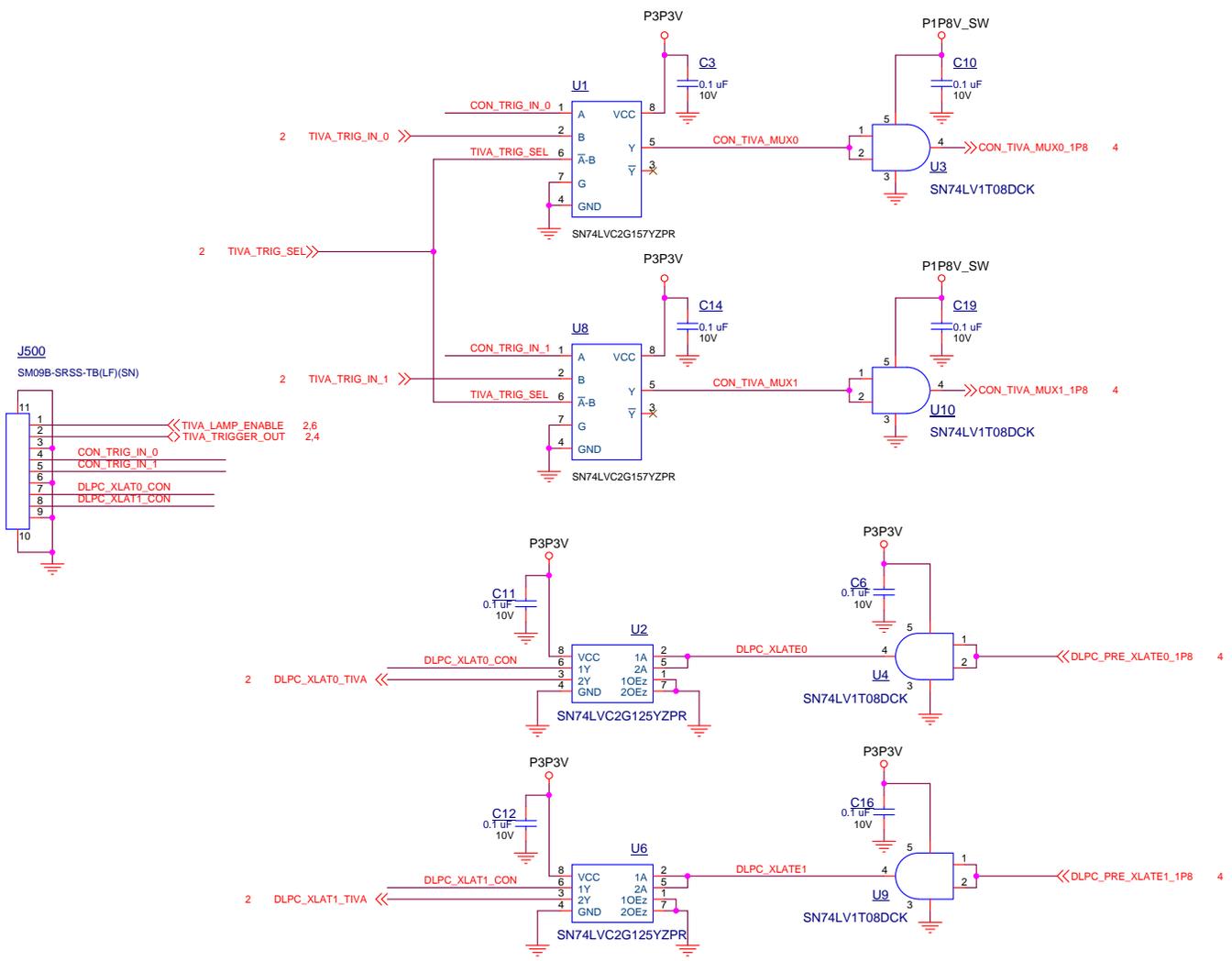
DLPC150ZEZ



30RF-JMCS-G-1B-TF(N)(LF)(SN)

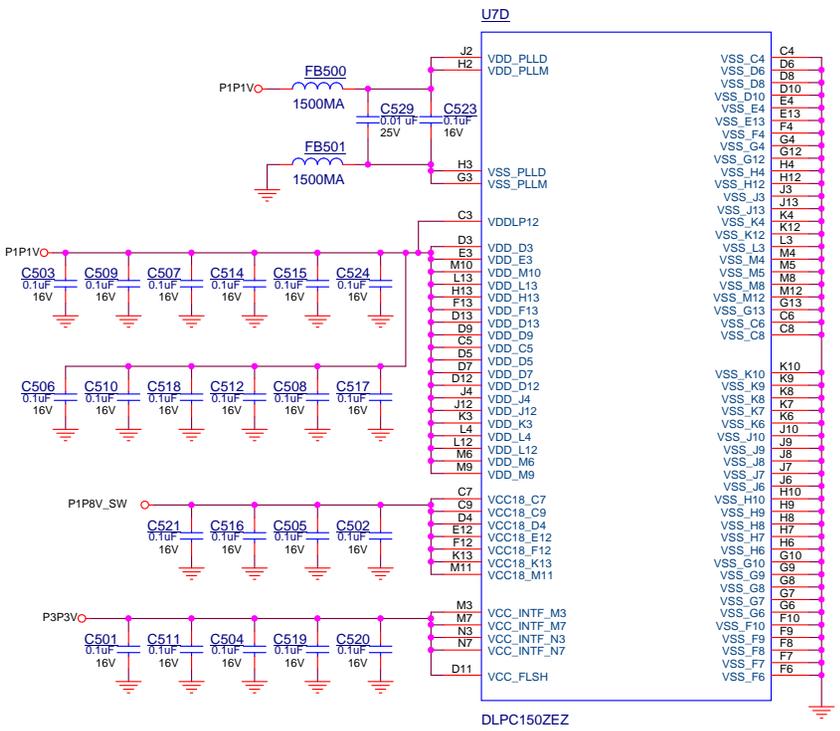
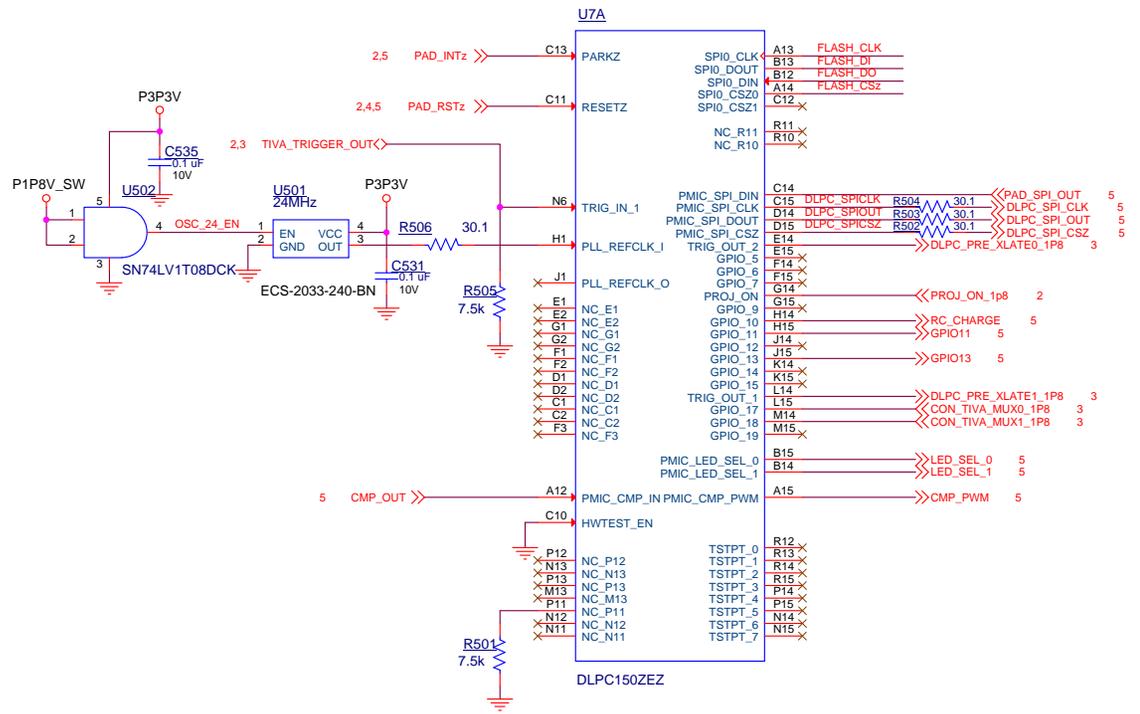
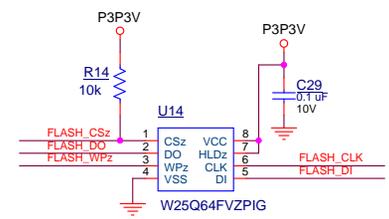
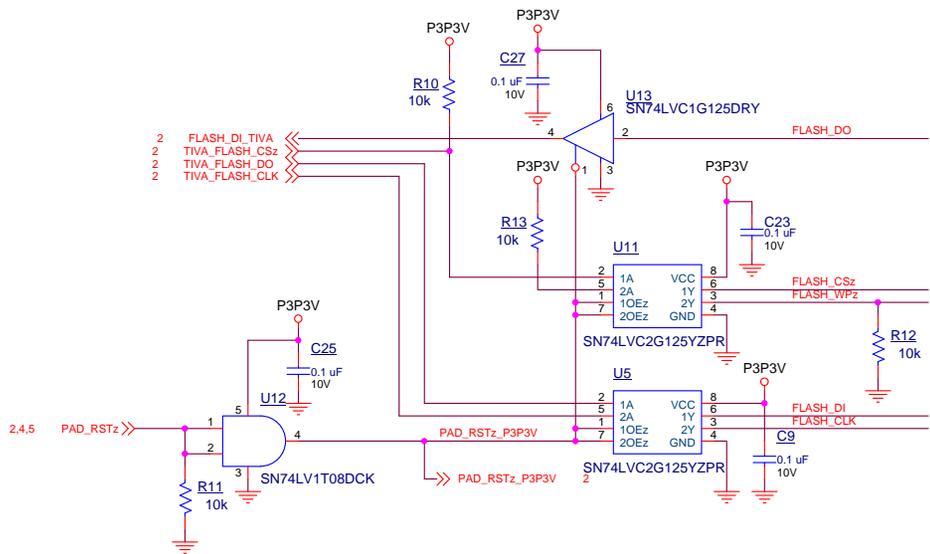
DLPC150 PARALLEL & DMD INTERFACES

|                   |            |            |              |            |     |
|-------------------|------------|------------|--------------|------------|-----|
| TEXAS INSTRUMENTS | DWN        | DATE       | A3           | DRAWING NO | REV |
|                   | ISSUE DATE | 07/24/2014 |              |            |     |
| SCALE             |            |            | SHEET 2 OF 7 |            |     |



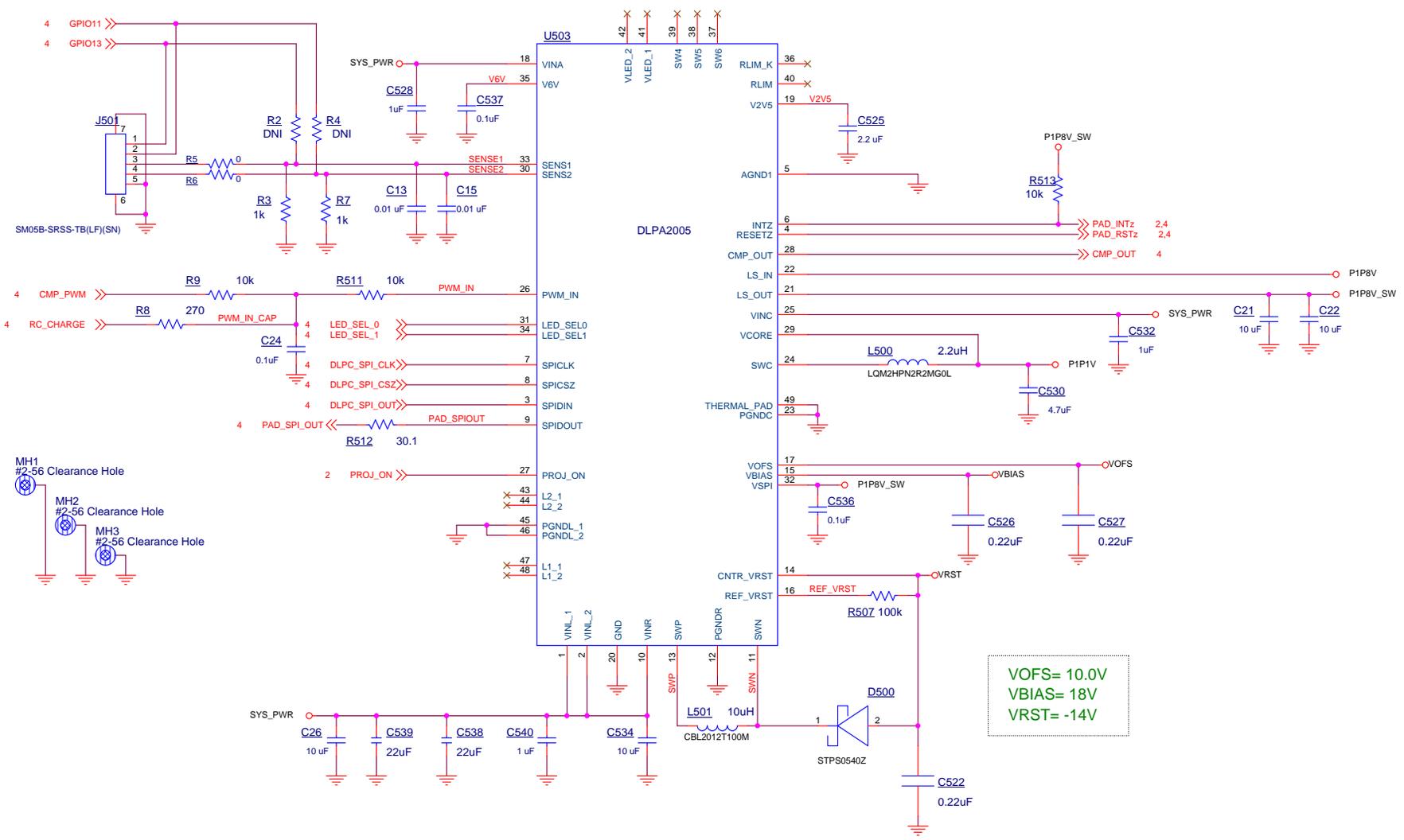
TIVA - DPP - CONNECTOR - I/O

|                          |            |                    |           |                              |                 |
|--------------------------|------------|--------------------|-----------|------------------------------|-----------------|
| <b>TEXAS INSTRUMENTS</b> | DWN        | DATE<br>07/24/2014 | <b>A3</b> | DRAWING NO<br><b>2514151</b> | REV<br><b>E</b> |
|                          | ISSUE DATE | SCALE              |           |                              |                 |



DLPC150 MISC & POWER

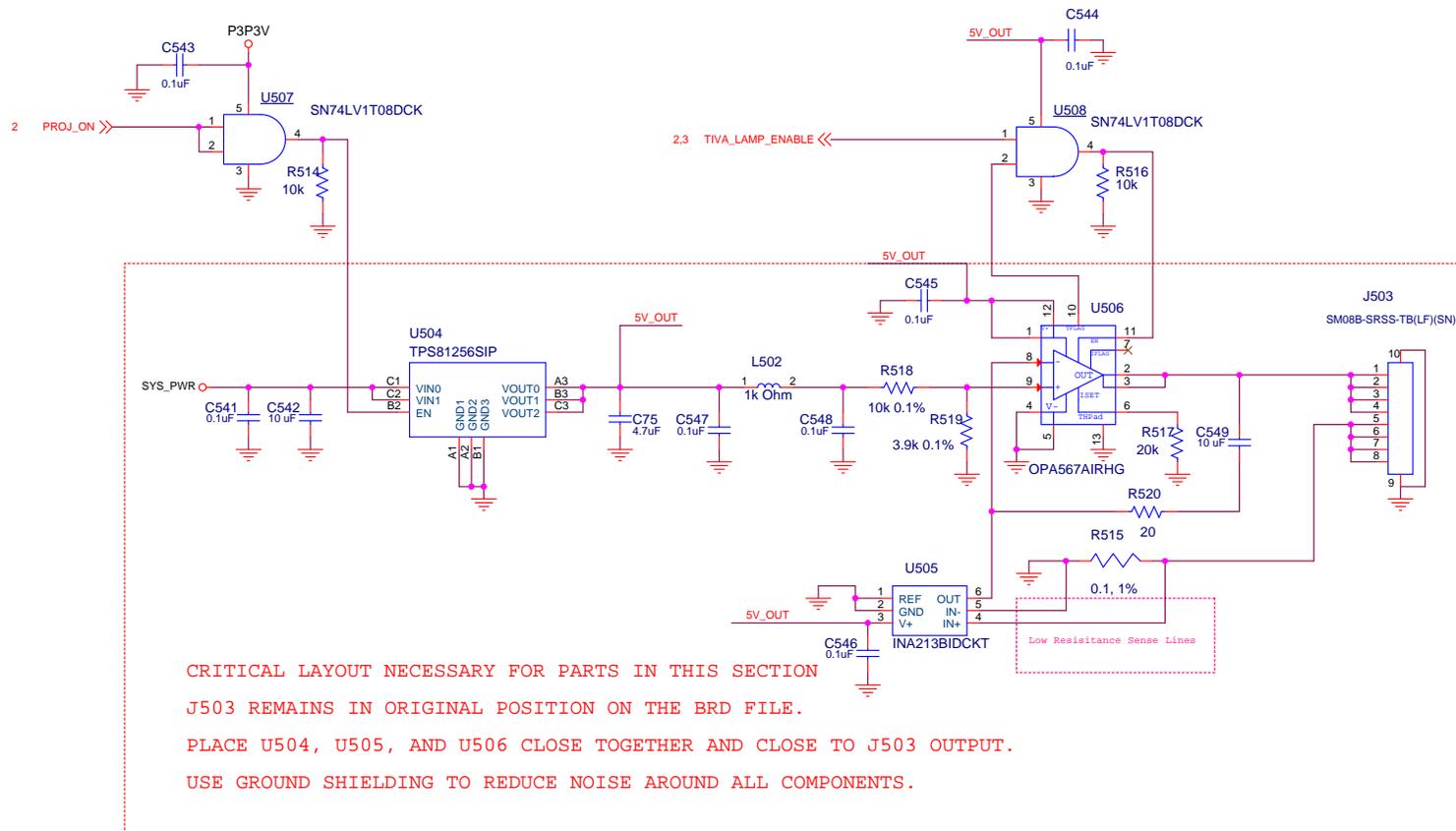
|                          |            |                    |           |                              |                 |
|--------------------------|------------|--------------------|-----------|------------------------------|-----------------|
| <b>TEXAS INSTRUMENTS</b> | DWN        | DATE<br>07/24/2014 | <b>A3</b> | DRAWING NO<br><b>2514151</b> | REV<br><b>E</b> |
|                          | ISSUE DATE |                    |           | SCALE                        | SHEET 4 OF 7    |



VOFS= 10.0V  
 VBIAS= 18V  
 VRST= -14V

PAD 2005

|                          |            |                    |           |                              |                 |
|--------------------------|------------|--------------------|-----------|------------------------------|-----------------|
| <b>TEXAS INSTRUMENTS</b> | DWN        | DATE<br>07/24/2014 | <b>A3</b> | DRAWING NO<br><b>2514151</b> | REV<br><b>E</b> |
|                          | ISSUE DATE | SCALE              |           |                              |                 |



### LAMP DRIVER

|                          |            |                    |           |                              |                 |
|--------------------------|------------|--------------------|-----------|------------------------------|-----------------|
| <b>TEXAS INSTRUMENTS</b> | DWN        | DATE<br>07/24/2014 | <b>A3</b> | DRAWING NO<br><b>2514151</b> | REV<br><b>E</b> |
|                          | ISSUE DATE | SCALE              |           |                              |                 |

## Revision History

Rev. -- : Draft Release ~ 07/24/2014

Rev. A: ECO 2143348: ~ 07/??/2014

Rev. A: Added three 2-56 mounting holes: 08/22/2014 MR.

Rev. A: Changed U7 from DLPC150ZEEZ to DLPC3435ZEEZ: 08/29/2014 MR.

Rev. A: Changed U503 from DLPC2005 to DLPA2005: 08/29/2014 MR.

Rev. B: Changed J502 pinout:switched odd/even pins to match DMD board pinout: 10/17/2014 MR.(page2)

Rev. B: Changed U13 : P3P3V connection to pin6, 10/17/2014 MR.(page4)

Rev. B: Changed U14 : Changed part to MX25L3206EZUI12G requires new PCB footprint. MR.(page5)

Rev. B: Changed U503 : Changed symbol SPICLK to pin7 and SPIDIN to pin3. 10/17/2014 MR.(page5)

Rev. B: Changed C26, C540 to 0603 : C538,C539, C541, C542 to 0805 Changed 10/21/2014 MR.(page5)

Rev. C: Added U7A pinN6 connection to net TIVA\_EXP\_I2C\_SDA 2/7/2015 MR.(page4)

Rev. C: Removed L502, C541,C28, C542, C30, R516, R518, R517, R515 and J503 traces from PAD2005 2/7/2015 MR.(page5).

Rev. C: Added Lamp Driver circuit to schematic 2/7/2015 MR.(page7).

Rev. D: Added C549 and R520 to Lamp Driver circuit U506 output compensation. 3/12/2015 MR.(page7).

Rev. E: Changed U7 pin names to match DLPC150 datasheet pin names. 11/11/2015 MR.

Rev. E: Changed signal names to TIVA LAMP\_ENABLE and TIVA\_TRIGGER\_OUT pg2,3,4,6. 11/11/2015 MR.

### Schematic Revision History

|                          |            |                    |           |                              |                 |
|--------------------------|------------|--------------------|-----------|------------------------------|-----------------|
| <b>TEXAS INSTRUMENTS</b> | DWN        | DATE<br>07/24/2014 | <b>A3</b> | DRAWING NO<br><b>2514151</b> | REV<br><b>E</b> |
|                          | ISSUE DATE |                    |           |                              |                 |