

NOTES, UNLESS OTHERWISE SPECIFIED:

1. RESISTANCE VALUES IN OHMS.
2. CAPACITANCE VALUES IN MICROFARADS.
3. REFERENCE DESIGNATORS USED:
4. ALL 0.1 uF AND 0.01uF CAPACITORS ARE DECOUPLING CAPS UNLESS OTHERWISE NOTED. THEY ARE SHOWN ON THE PAGE WITH THE INTEGRATED CIRCUITS THEY SHOULD BE PLACED NEAR.

5. OBSERVE THE FOLLOWING LAYOUT NOTES:

- DDR2 ROUTING PER APPLICATION
- ~~SDRAM~~ ROUTING PER APPLICATION NOTE

6. BOARD PROPERTIES

- A. ROUTE TO WITHIN 10% OF MANHATTAN DISTANCE
- B. General layers 50 +/- 5 OHM MATCHED IMPEDANCE
- C. OUTER LAYERS 0.5 OZ CU /W 0.5 OZ AU PLATING
- D. INNER LAYERS 1.0 OZ CU
- E. FR4 BOARD MATERIAL
- F. MINIMUM TRACE WIDTH/SPACING 4 MILS
- G. MINIMUM VIA SIZE 10/19 MIL
- H. LAYER STACKUP:

SCHEMATIC CONTENTS:

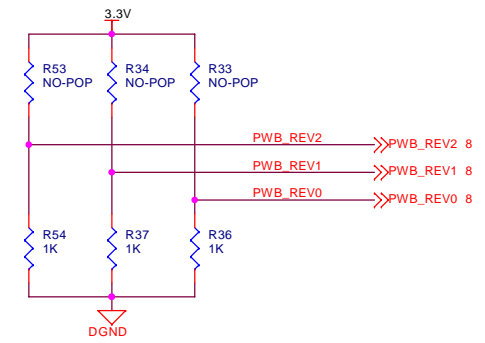
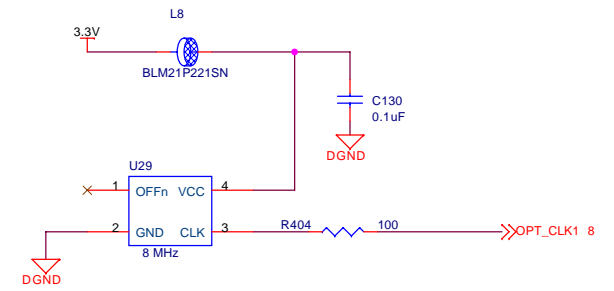
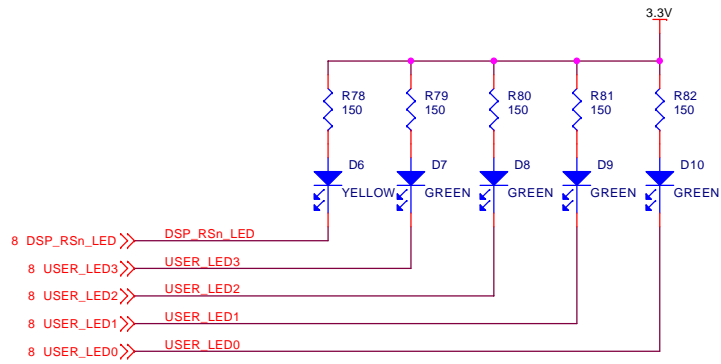
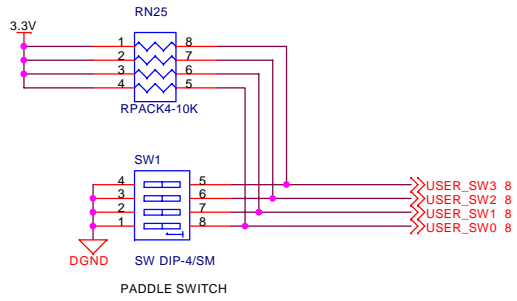
- 1 COVER SHEET
- 2 USER OPTIONS
- 3 Clock Inputs
- 4 6482 DDR2 Interface
- 5 DDR2 Memories
- 6 6482 EMIF A
- 7 BOOT Options
- 8 CPLD
- 9 FLASH MEMORY
- 10 6482 MII INTERFACE
  
- 11 MCBSP INTERFACE
- 12 6482 HOST PORT INTERFACE
- 13 6482 SRIO INTERFACE
- 14 DSK DAUGHTERCARD BUFFERS
- 15 DSK DAUGHTERCARD INTERFACE
- 16 6482 POWER PINS I
- 17 6482 POWER PINS II
- 18 6482 EMULATION
- 19 6482 EMULATION INTERFACE
  
- 20 EMULATION INTERFACE
- 21 HIERARCHICAL BLOCKS
- 22 6482 RGMII INTERFACE
- 23 6482 DECOUPLING CAPS I
- 24 6482 DECOUPLING CAPS II
- 25 POWER INPUT
- 26 AIC23 CODEC
- 27 ETHERNET PHY
- 28 DSK POWER SUPPLIES I
- 29 DSK POWER SUPPLIES II

REV	DESCRIPTION	DATE	APPROVED
A	Initial schematic ready for layout - Alpha Release	09/15/05	RRP
B	Beta Release	10/15/05	RRP

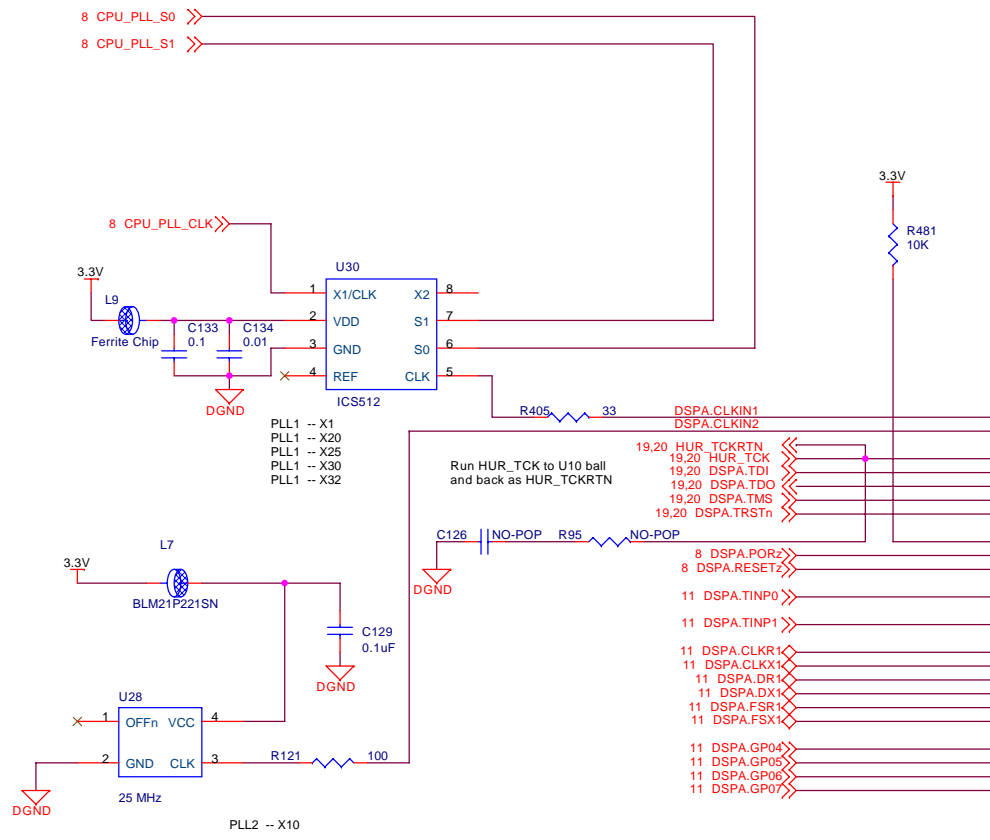
REVISION STATUS OF SHEETS

REV	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	DATE	BY	DESCRIPTION	
REV	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		DWN	R.R.P.	AUG 01,2005
SH																						CHK	R.R.P.	AUG 01,2005
REV	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		ENGR	J.T.C.	AUG 01,2005
SH	11	12	13	14	15	16	17	18	19	20												ENGR-MGR	R.R.P.	AUG 01,2005
REV	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		QA	C.M.D.	AUG 01,2005
SH																						MFG	C.M.D.	AUG 01,2005
REV	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		RLSE	T.M.K.	AUG 01,2005
SH	1	2	3	4	5	6	7	8	9	10												APPLICATION	T.M.K.	AUG 01,2005

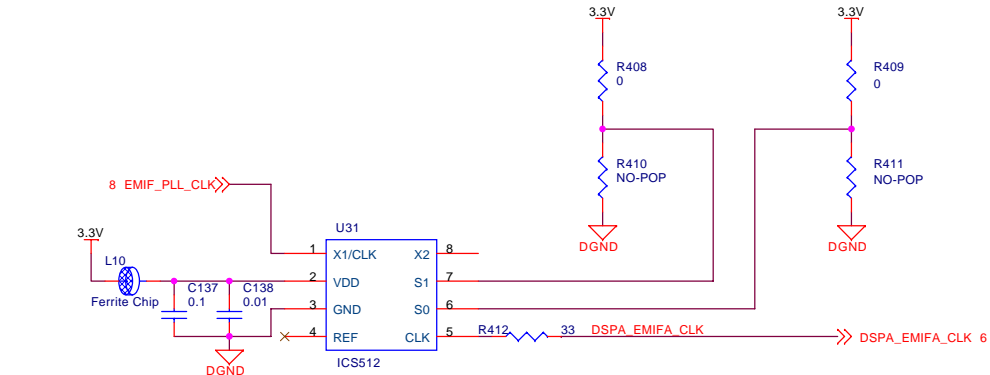
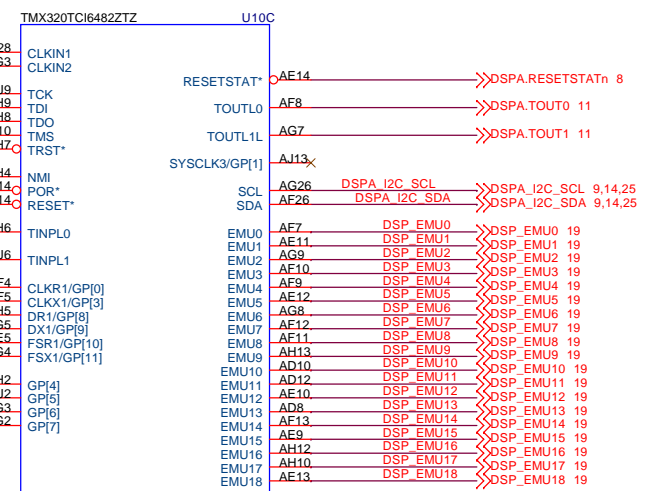
SPECTRUM DIGITAL INCORPORATED			
Title:		TMS320TCI6482 DSK	
Page Contents:		Title Block	
Size: B	DWG NO	508552-2001	Revision: B
Date: Wednesday, April 12, 2006		Sheet 1 of 34	



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: Title Block			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006		Sheet 2 of 34	



S1	S0	MULTIPLY	OUTPUT
0	0	4X	
0	OPEN	5.33X	
0	1	5X	
OPEN	0	2.5X	
OPEN	OPEN	2X	
OPEN	1	3.33X	
1	0	6X	
1	OPEN	3X	
1	1	8X	



S1	S0	MULTIPLY	OUTPUT
0	0	4X	100 MHz
0	OPEN	5.33X	133.25 MHz
0	1	5X	125 MHz
OPEN	0	2.5X	62.5 MHz
OPEN	OPEN	2X	50 MHz
OPEN	1	3.33X	83.25 MHz
1	0	6X	150 MHz
1	OPEN	3X	75 MHz
1	1	8X	200 MHz

SPECTRUM DIGITAL INCORPORATED

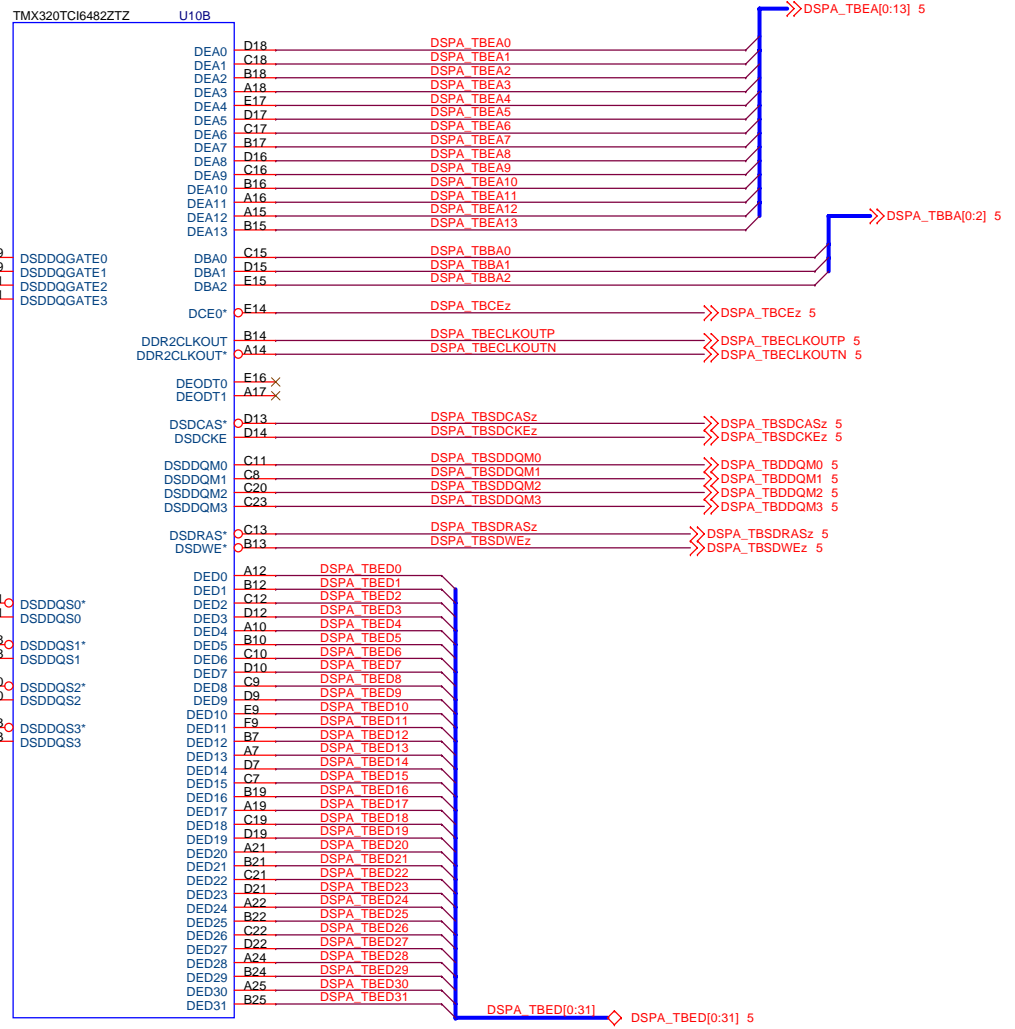
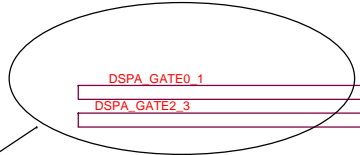
Title: TMS320TCI6482 DSK

Page Contents: 6482 CLOCK INPUTS

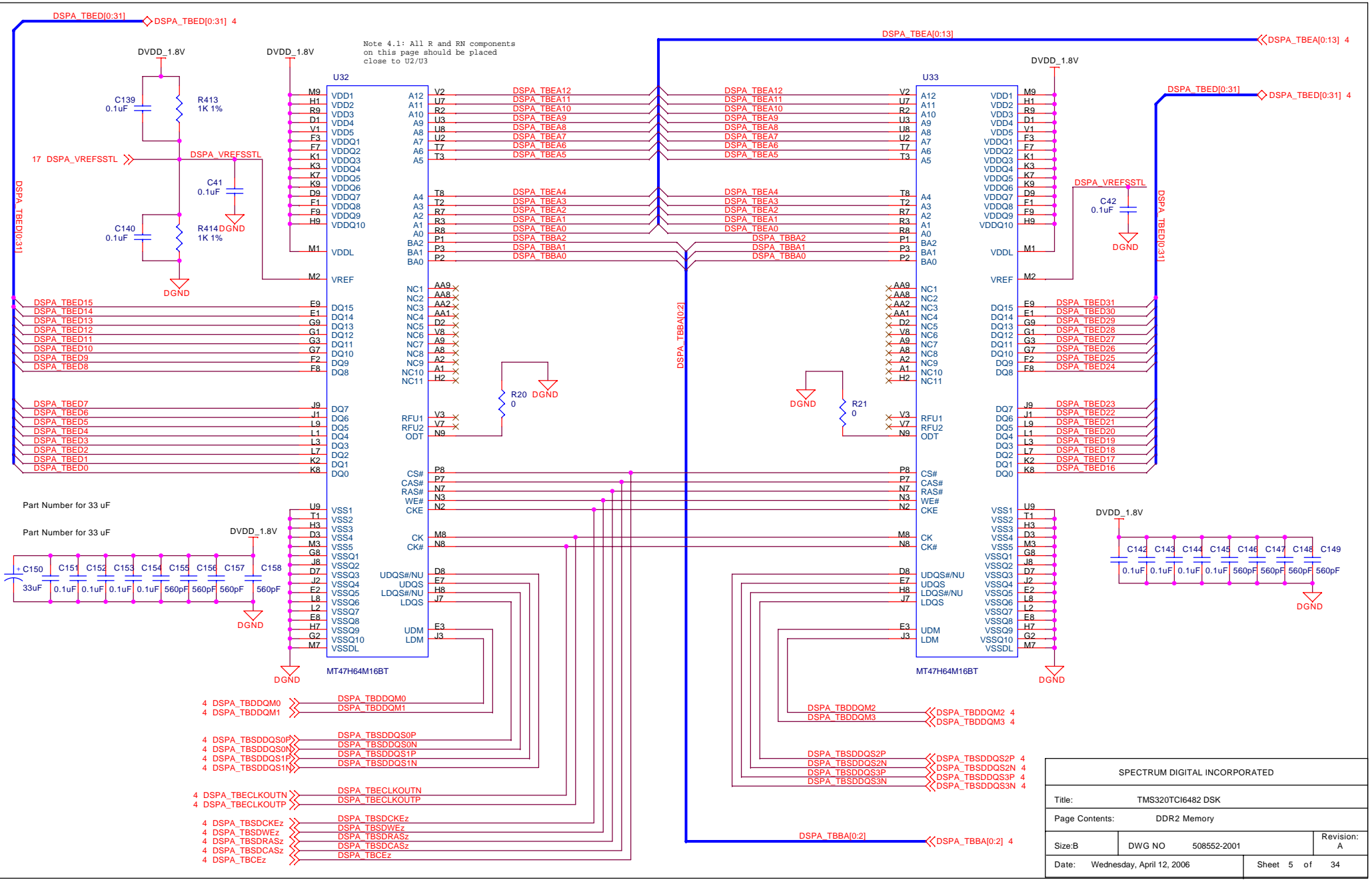
Size: B	DWG NO: 508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 3 of 34	

NOTE: Route DUT\_BSDDQGATE0 signals needs to run to DDR memories near D15-D0 and back to DUT\_TBSDDQGATE1.

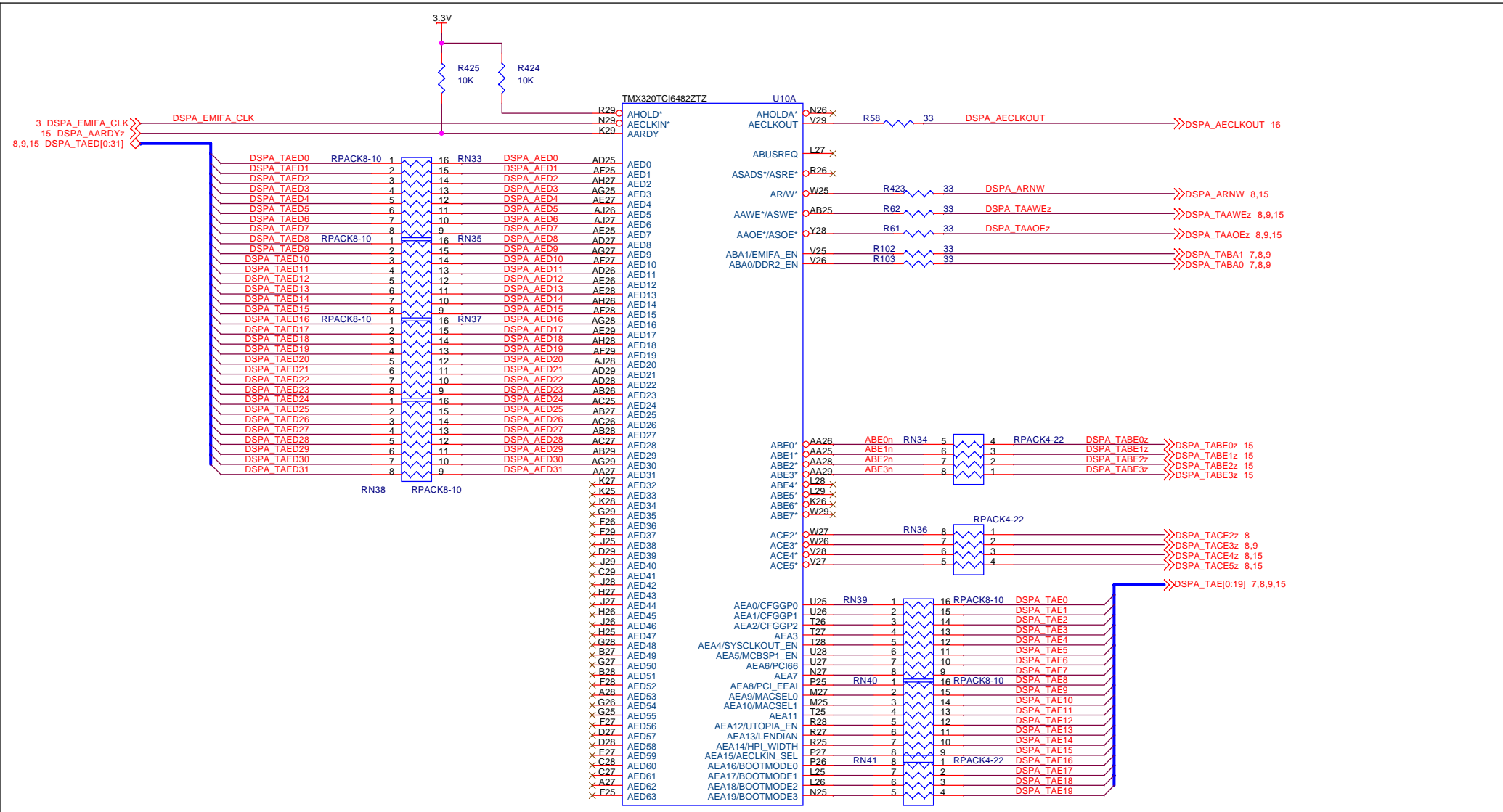
NOTE: Route DUT\_BSDDQGATE2 signals needs to run to DDR memories near D31-D16 and back to DUT\_TBSDDQGATE3.



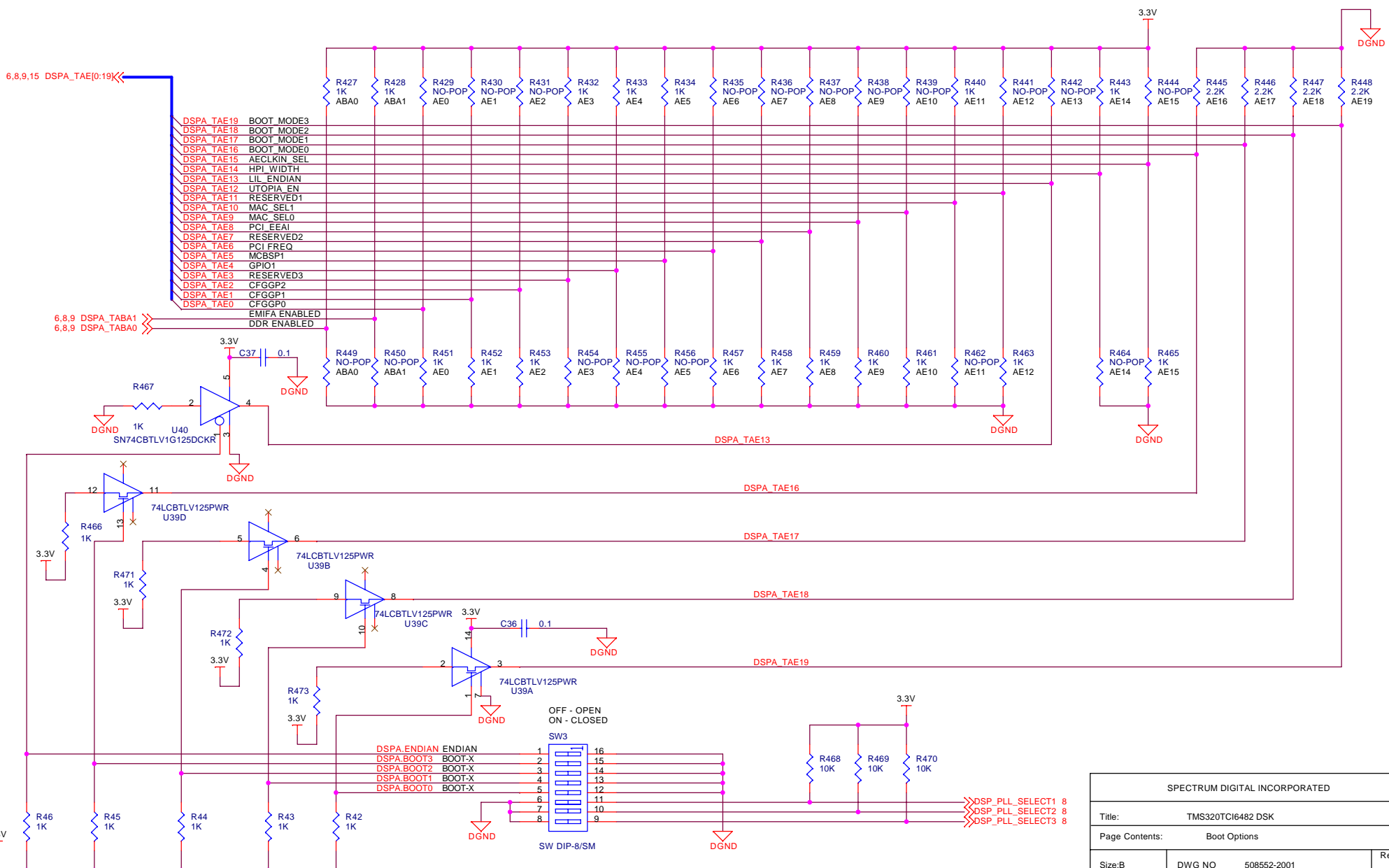
SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: 6482 DDR Interface			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 4 of		34



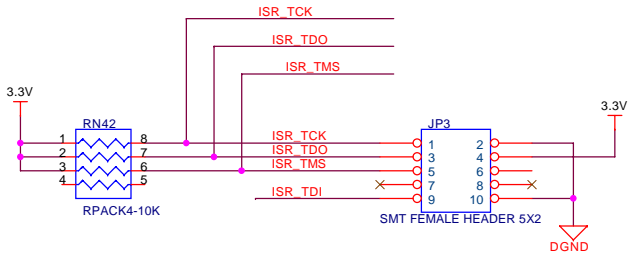
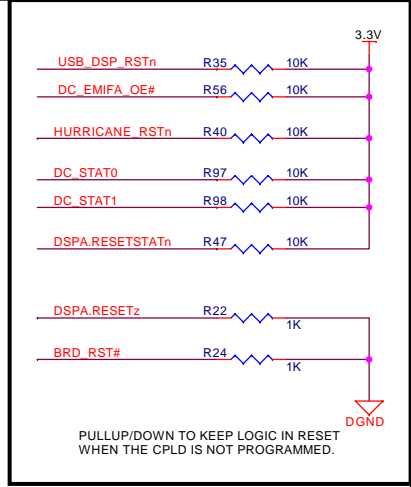
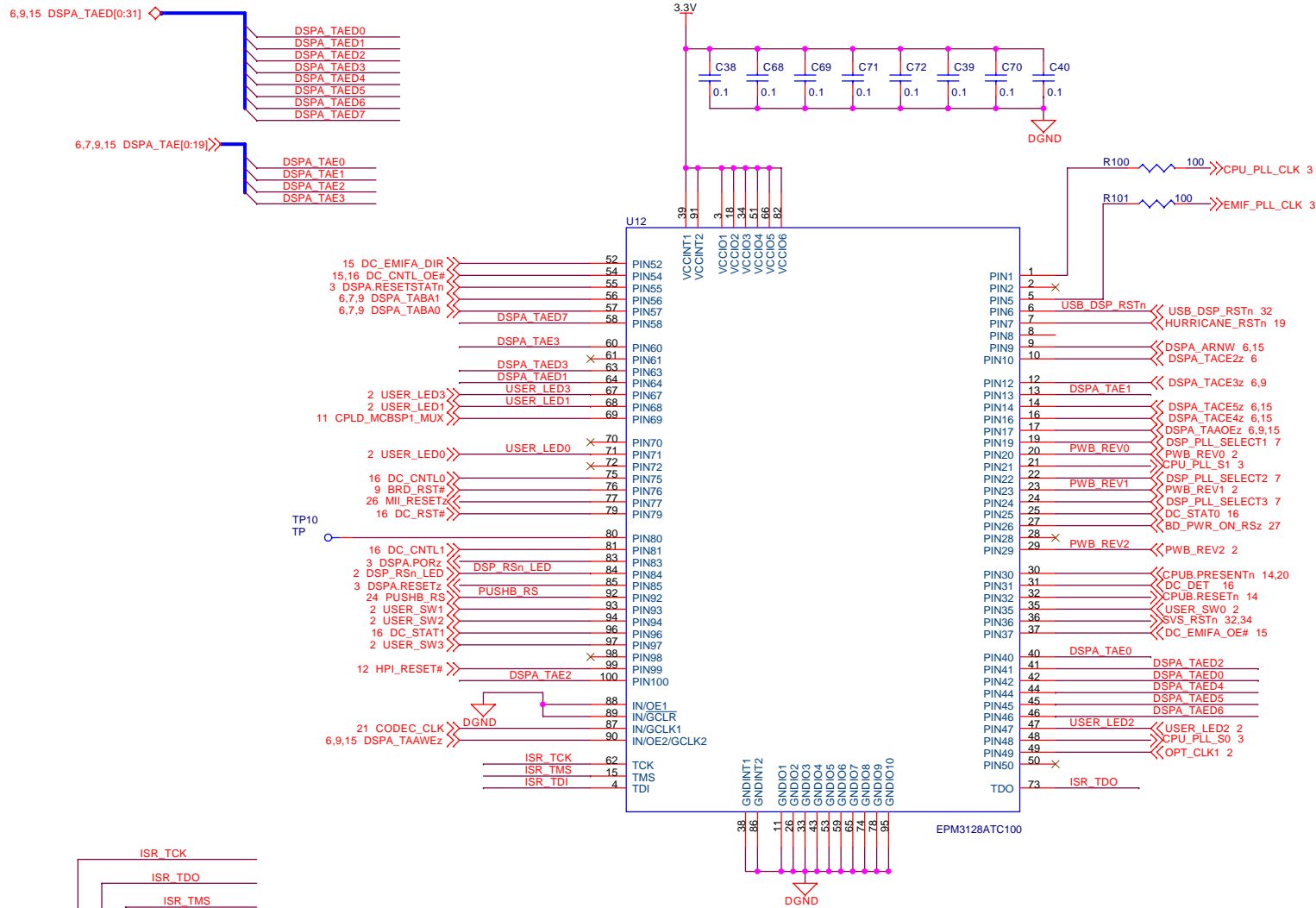
SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TC16482 DSK			
Page Contents: DDR2 Memory			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 5 of		34



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: 6455 Emif A Interface			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 6 of 34		

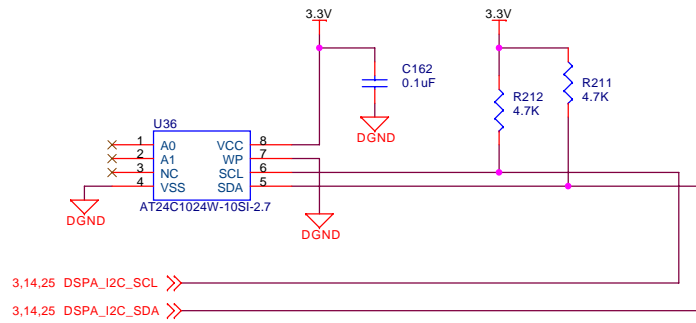
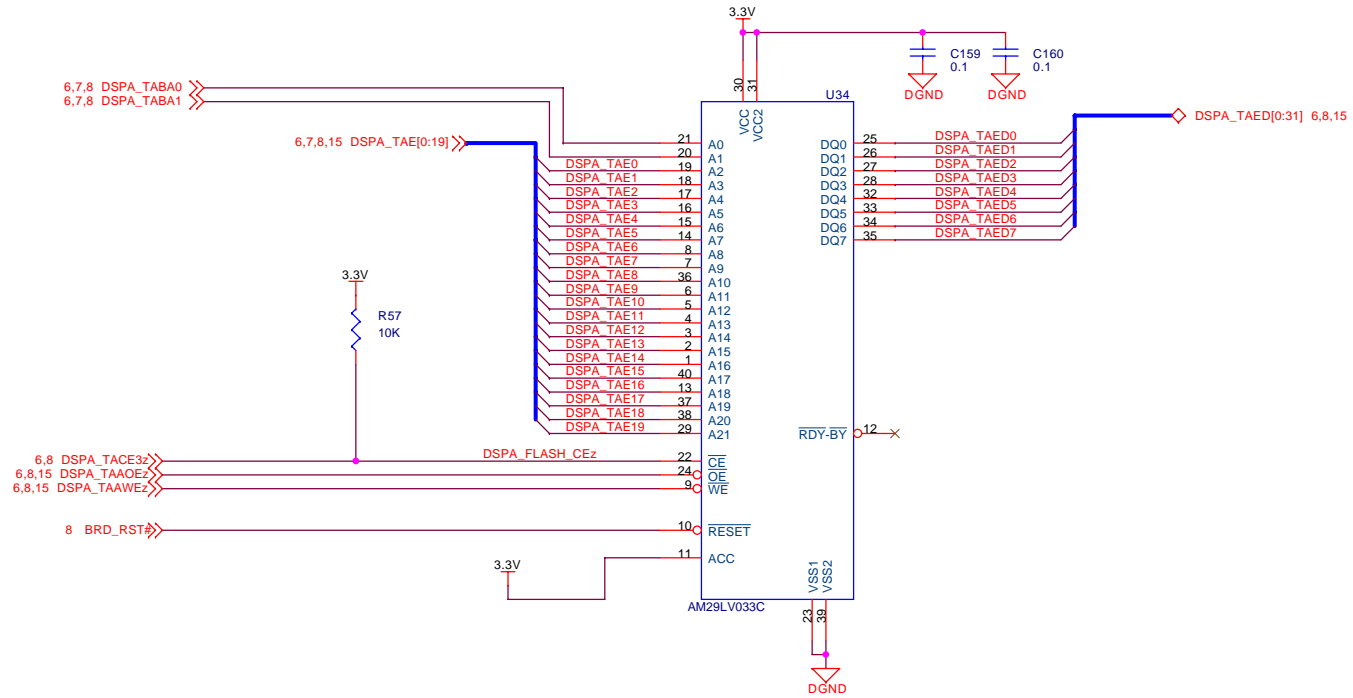


SPECTRUM DIGITAL INCORPORATED		
Title: TMS320CI6482 DSK		
Page Contents: Boot Options		
Size: B	DWG NO 508552-2001	Revision: B
Date: Wednesday, April 12, 2006	Sheet 7 of 34	

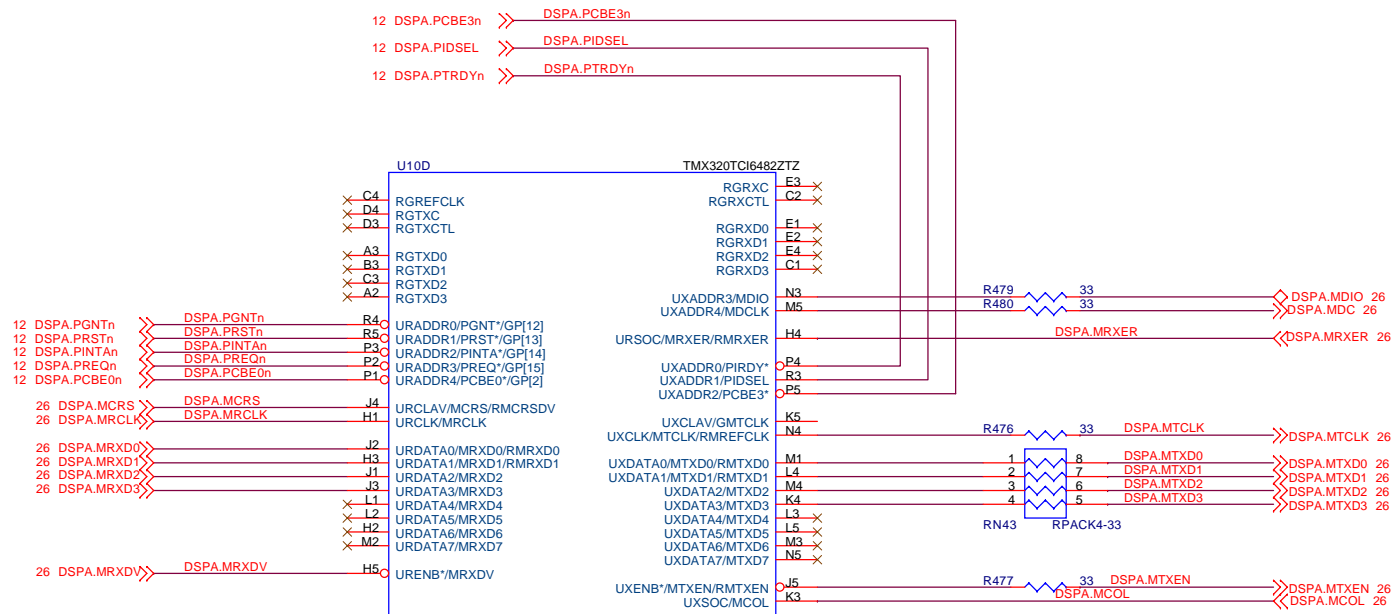


SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TC16482 DSK			
Page Contents: CPLD INTERFACE			
Size: B	DWG NO	508552-2001	Revision: B
Date: Wednesday, April 12, 2006	Sheet 8 of 34		

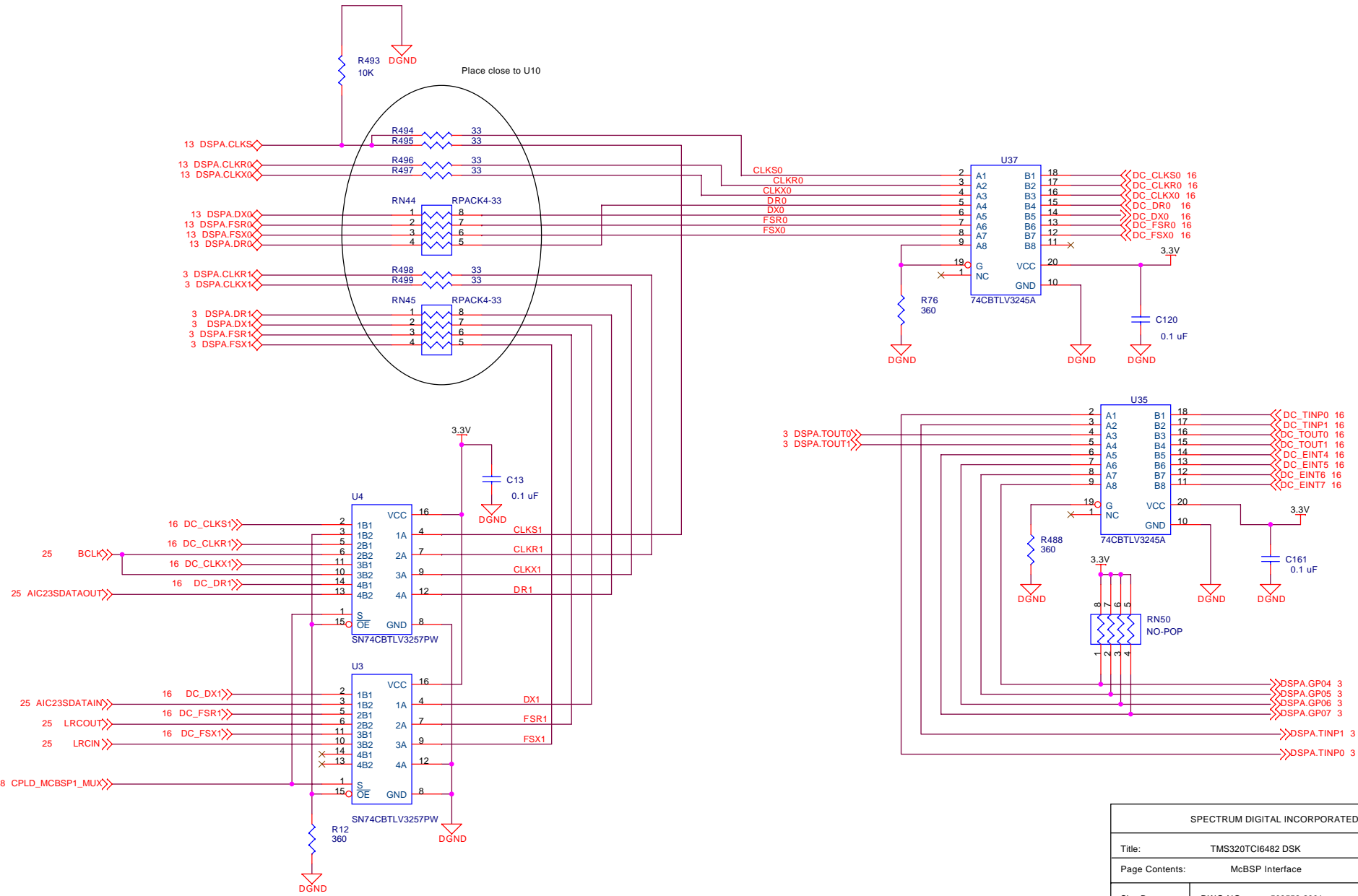




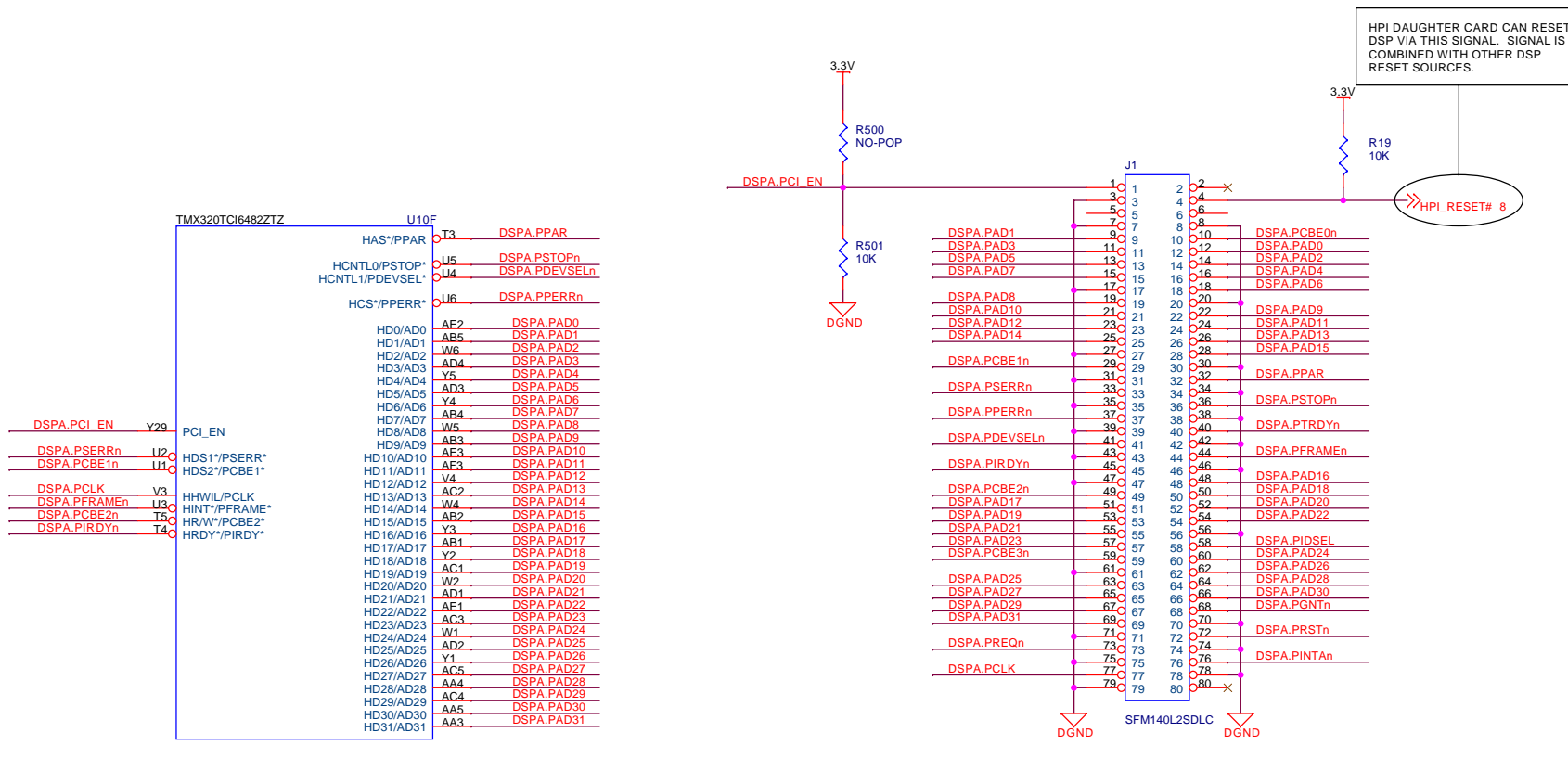
SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: Flash			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 9 of		34



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: UTOPIA INTERFACE			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 10 of		34



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: McBSP Interface			
Size: B	DWG NO	508552-2001	Revision: B
Date: Wednesday, April 12, 2006	Sheet 11 of		34

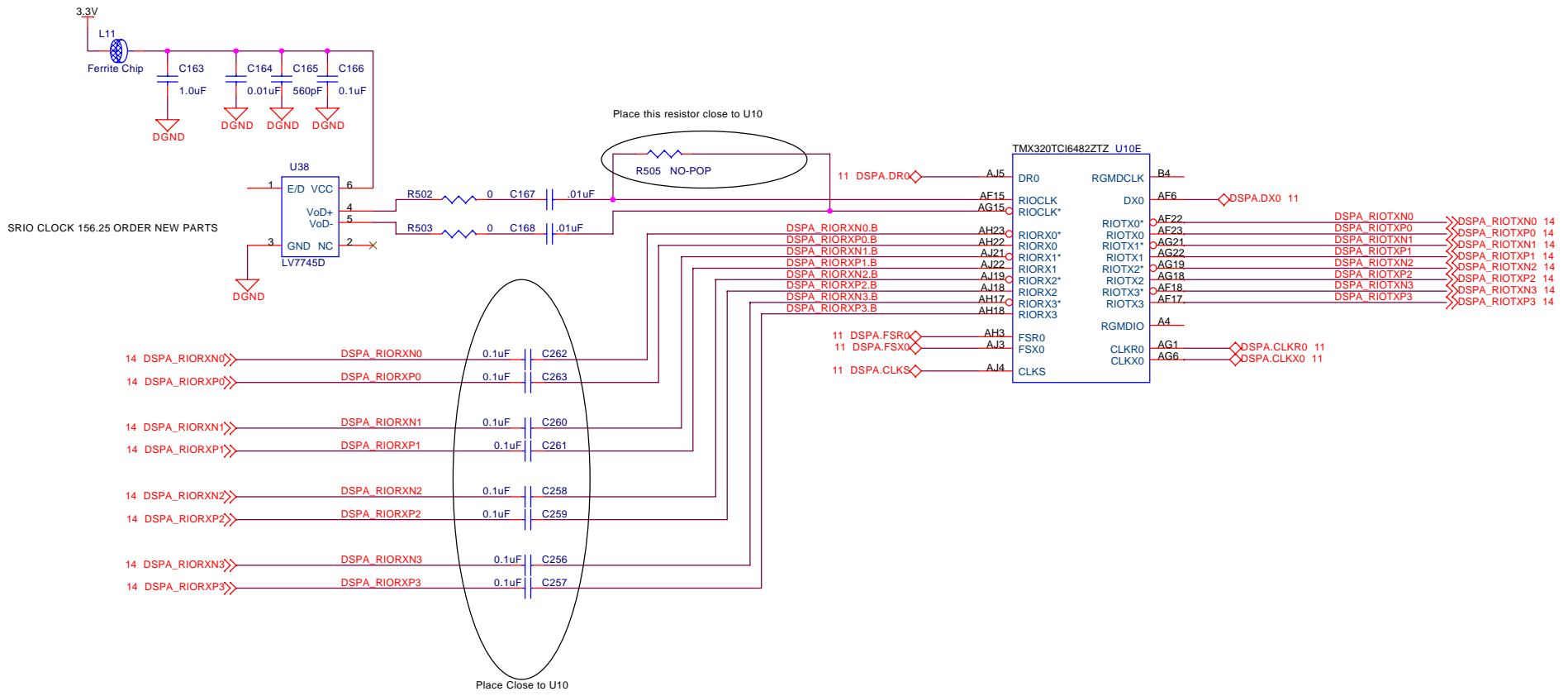


- DSPA.PCI\_EN Y29
- DSPA.PSERRn U2
- DSPA.PCBEn U1
- DSPA.PCLK V3
- DSPA.PFRAMEn U3
- DSPA.PCBEn U3
- DSPA.PIRDYn T4

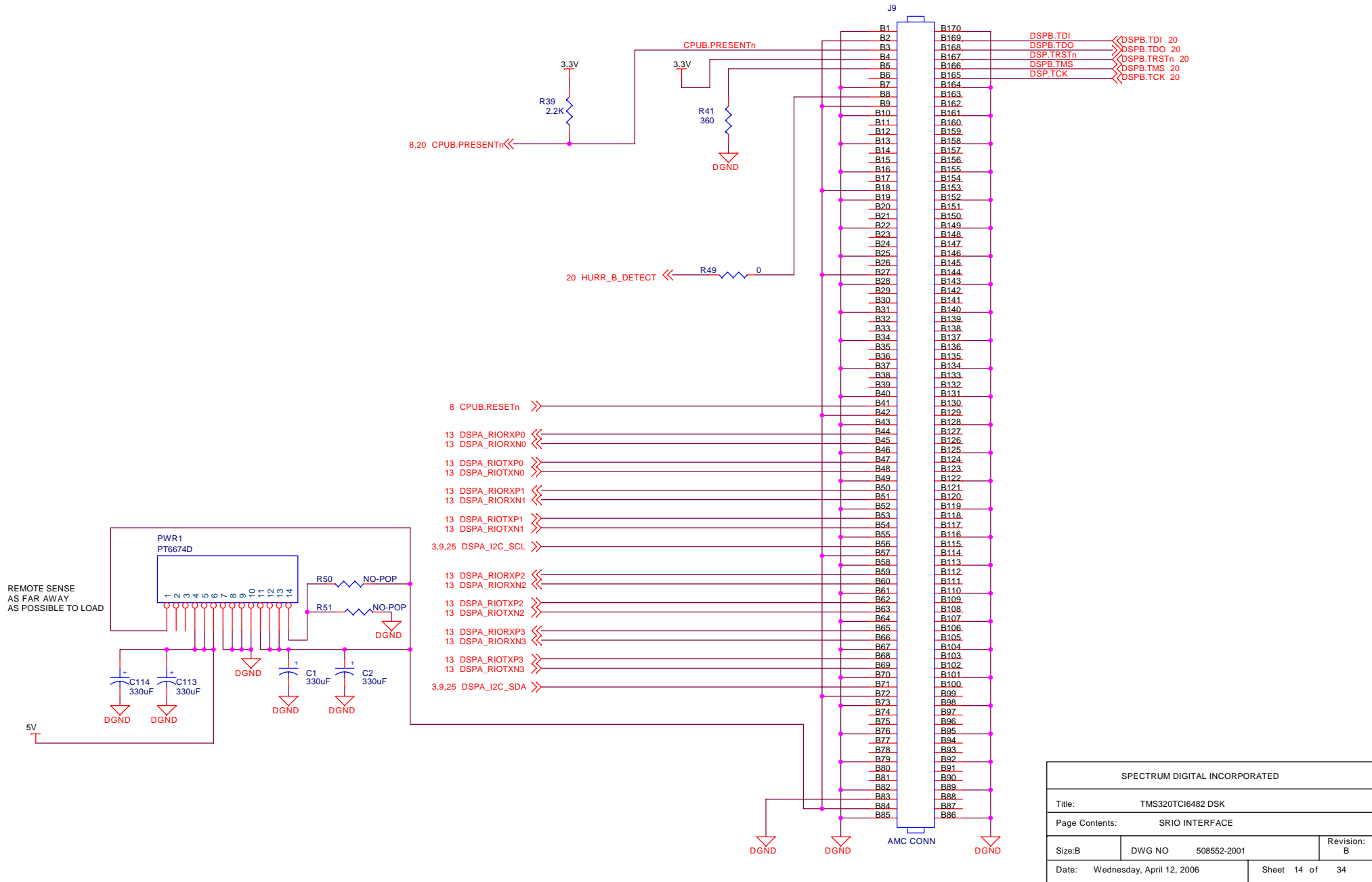
- |           |                 |            |               |
|-----------|-----------------|------------|---------------|
| U10F      | HAS*/PPAR       | T3         | DSPA.PPAR     |
|           | HCNTL0/PSTOP*   | U5         | DSPA.PSTOPn   |
|           | HCNTL1/PDEVSEL* | U4         | DSPA.PDEVSELn |
|           | HCS*/PPERR*     | U6         | DSPA.PPERRn   |
| HD0/AD0   | AE2             | DSPA.PAD0  |               |
| HD1/AD1   | AB5             | DSPA.PAD1  |               |
| HD2/AD2   | W6              | DSPA.PAD2  |               |
| HD3/AD3   | AD4             | DSPA.PAD3  |               |
| HD4/AD4   | Y5              | DSPA.PAD4  |               |
| HD5/AD5   | AD3             | DSPA.PAD5  |               |
| HD6/AD6   | Y4              | DSPA.PAD6  |               |
| HD7/AD7   | W5              | DSPA.PAD7  |               |
| HD8/AD8   | AB3             | DSPA.PAD9  |               |
| HD9/AD9   | AE3             | DSPA.PAD10 |               |
| HD10/AD10 | AE3             | DSPA.PAD11 |               |
| HD11/AD11 | V4              | DSPA.PAD12 |               |
| HD12/AD12 | AC2             | DSPA.PAD13 |               |
| HD13/AD13 | W4              | DSPA.PAD14 |               |
| HD14/AD14 | AB2             | DSPA.PAD15 |               |
| HD15/AD15 | Y3              | DSPA.PAD16 |               |
| HD16/AD16 | AB1             | DSPA.PAD17 |               |
| HD17/AD17 | Y2              | DSPA.PAD18 |               |
| HD18/AD18 | AC1             | DSPA.PAD19 |               |
| HD19/AD19 | W2              | DSPA.PAD20 |               |
| HD20/AD20 | AD1             | DSPA.PAD21 |               |
| HD21/AD21 | AE1             | DSPA.PAD22 |               |
| HD22/AD22 | AC3             | DSPA.PAD23 |               |
| HD23/AD23 | W1              | DSPA.PAD24 |               |
| HD24/AD24 | AD2             | DSPA.PAD25 |               |
| HD25/AD25 | Y1              | DSPA.PAD26 |               |
| HD28/AD28 | AC5             | DSPA.PAD27 |               |
| HD27/AD27 | AA4             | DSPA.PAD28 |               |
| HD28/AD28 | AC4             | DSPA.PAD29 |               |
| HD29/AD29 | AA5             | DSPA.PAD30 |               |
| HD30/AD30 | AA3             | DSPA.PAD31 |               |
| HD31/AD31 |                 |            |               |

- |                |     |             |
|----------------|-----|-------------|
| 10 DSPA.PTRDYn | >>> | DSPA.PTRDYn |
| 10 DSPA.PIDSEL | >>> | DSPA.PIDSEL |
| 10 DSPA.PCBEn  | >>> | DSPA.PCBEn  |
| 10 DSPA.PGNTn  | >>> | DSPA.PGNTn  |
| 10 DSPA.PRSTn  | >>> | DSPA.PRSTn  |
| 10 DSPA.PINTAn | >>> | DSPA.PINTAn |
| 10 DSPA.PREQn  | >>> | DSPA.PREQn  |
| 10 DSPA.PCBEn  | >>> | DSPA.PCBEn  |

SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: PCI/HOST PORT INTERFACE			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 12 of		34



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TC16482 DSK			
Page Contents: SRIO INTERFACE			
Size:B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006		Sheet 13 of 34	



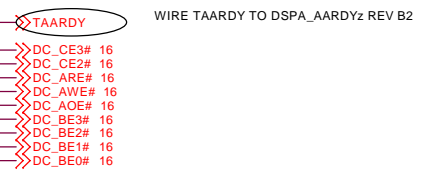
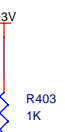
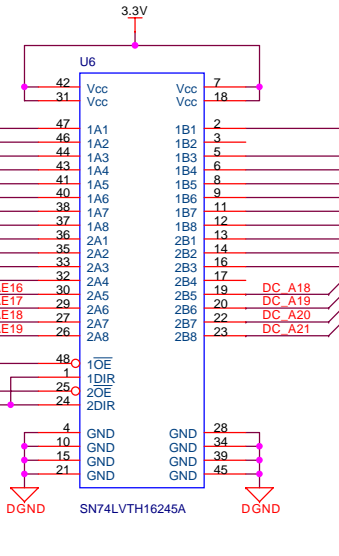
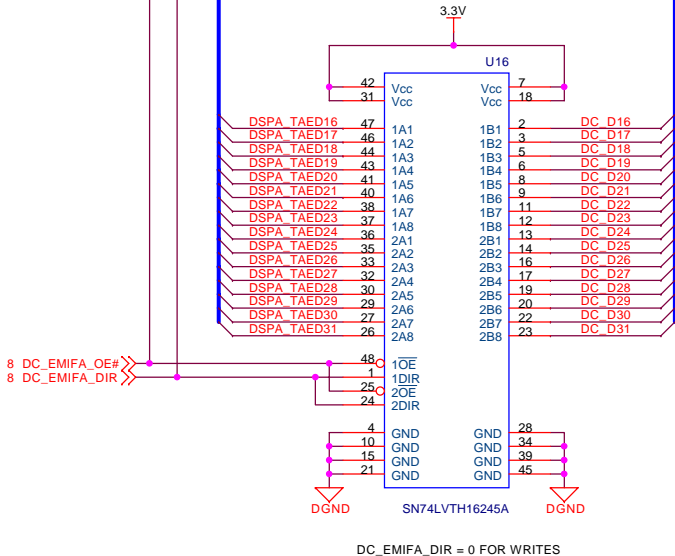
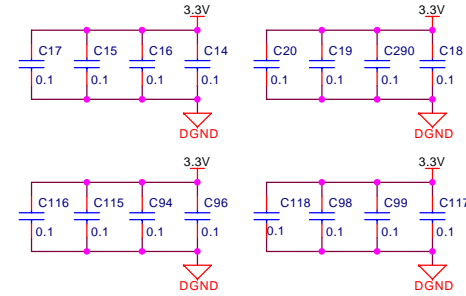
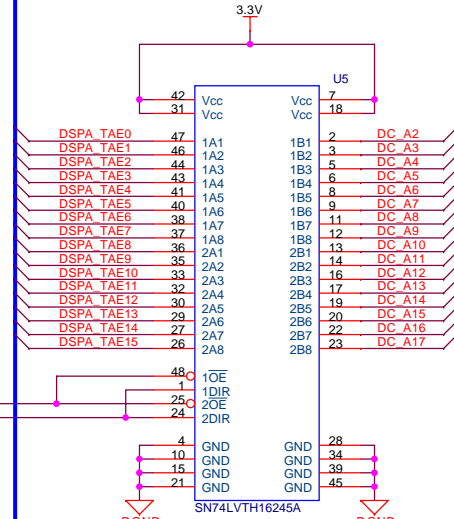
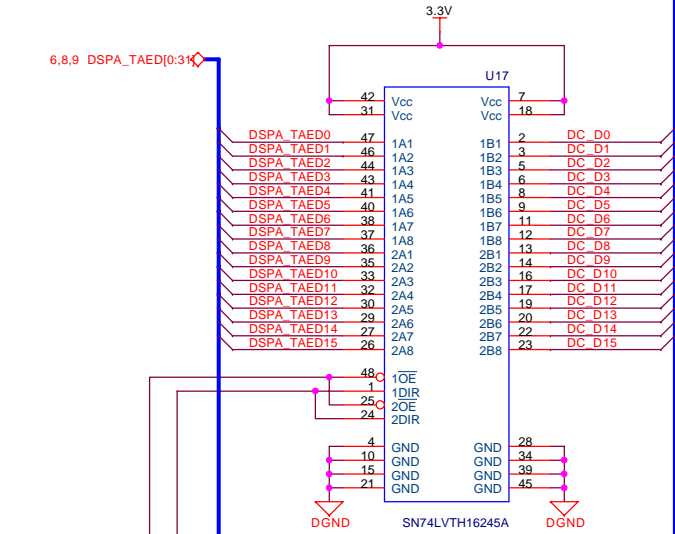
SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: SRIO INTERFACE			
Size: B	DWG NO	508552-2001	Revision: B
Date: Wednesday, April 12, 2006	Sheet 14 of		34

6,7,8,9 DSPA\_TAE[0:19]

6,8,9 DSPA\_TAED[0:31]

DC\_D[31..0] 16

DC\_A[21..2] 16



8 DC\_EMIFA\_OE#

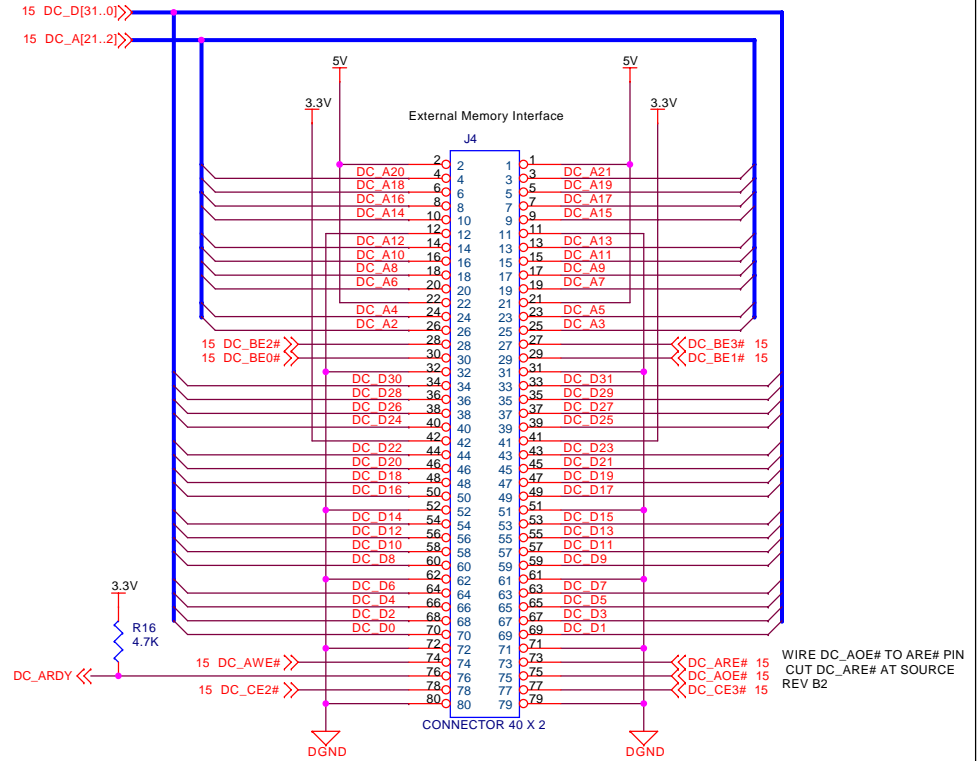
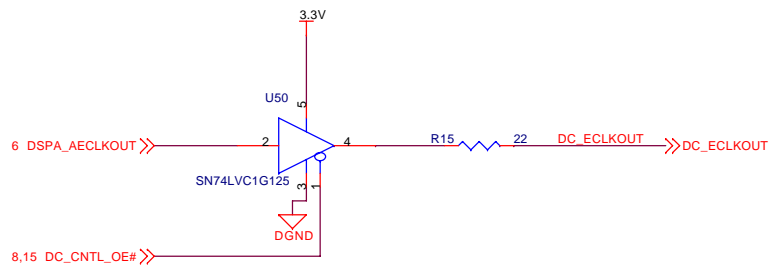
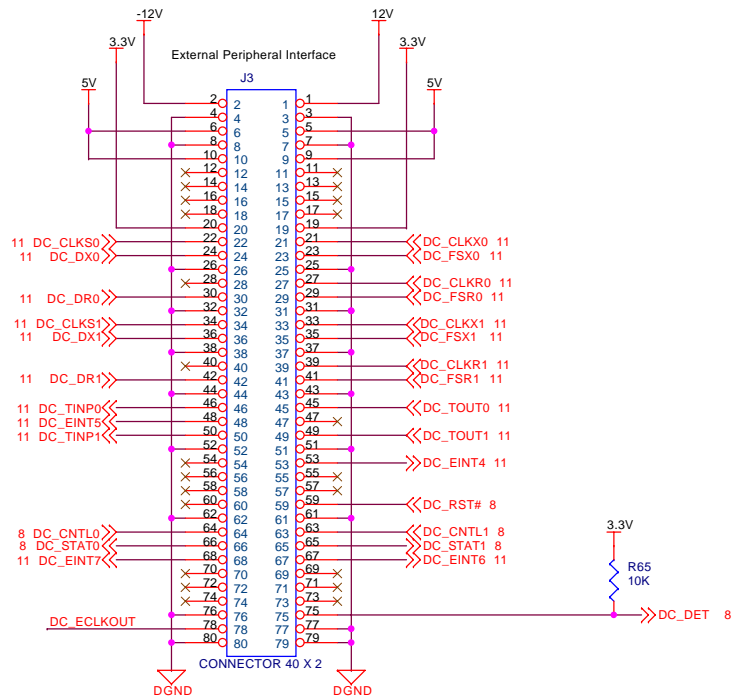
8 DC\_EMIFA\_DIR

DC\_EMIFA\_DIR = 0 FOR WRITES

8,16 DC\_CNTL\_OE#

#OE DIR OPERATION  
 L L A <- B  
 L H A -> B  
 H X ISOLATION

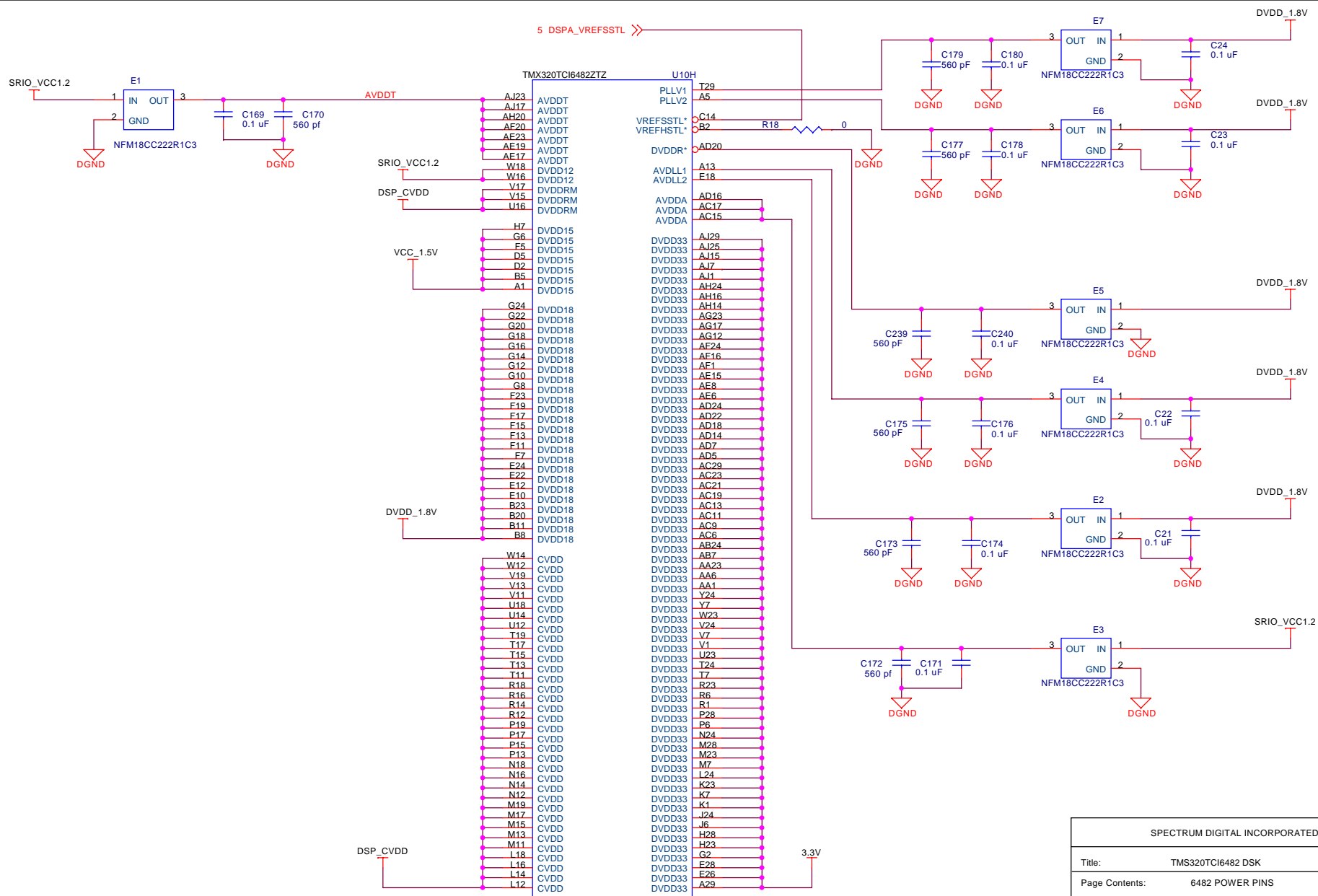
SPECTRUM DIGITAL INCORPORATED		
Title: TMS320TCI6482 DSK		
Page Contents: DAUGHTERCARD BUFFERING		
Size: B	DWG NO 508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 15 of 34	



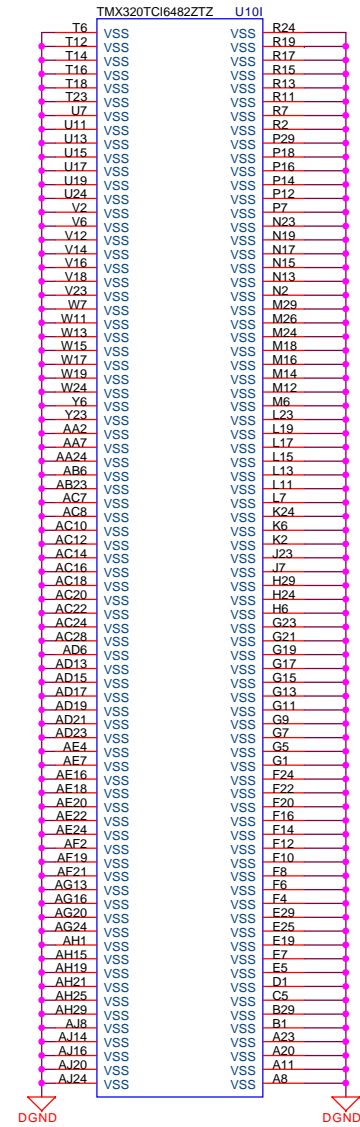
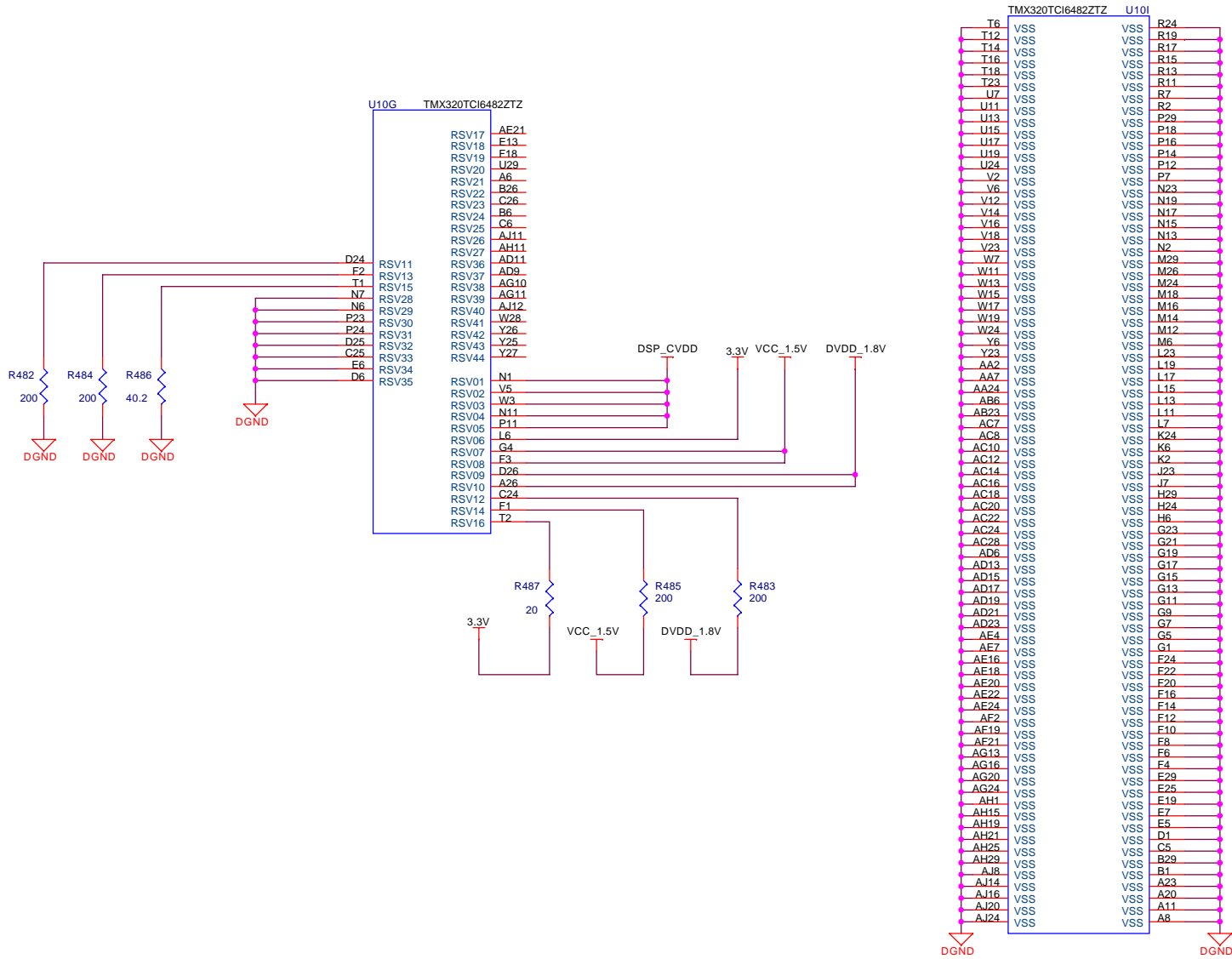
WIRE DC\_AOE# TO ARE# PIN  
CUT DC\_AE# AT SOURCE  
REV B2

SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: DAUGHTERCARD I/F			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 16 of		34

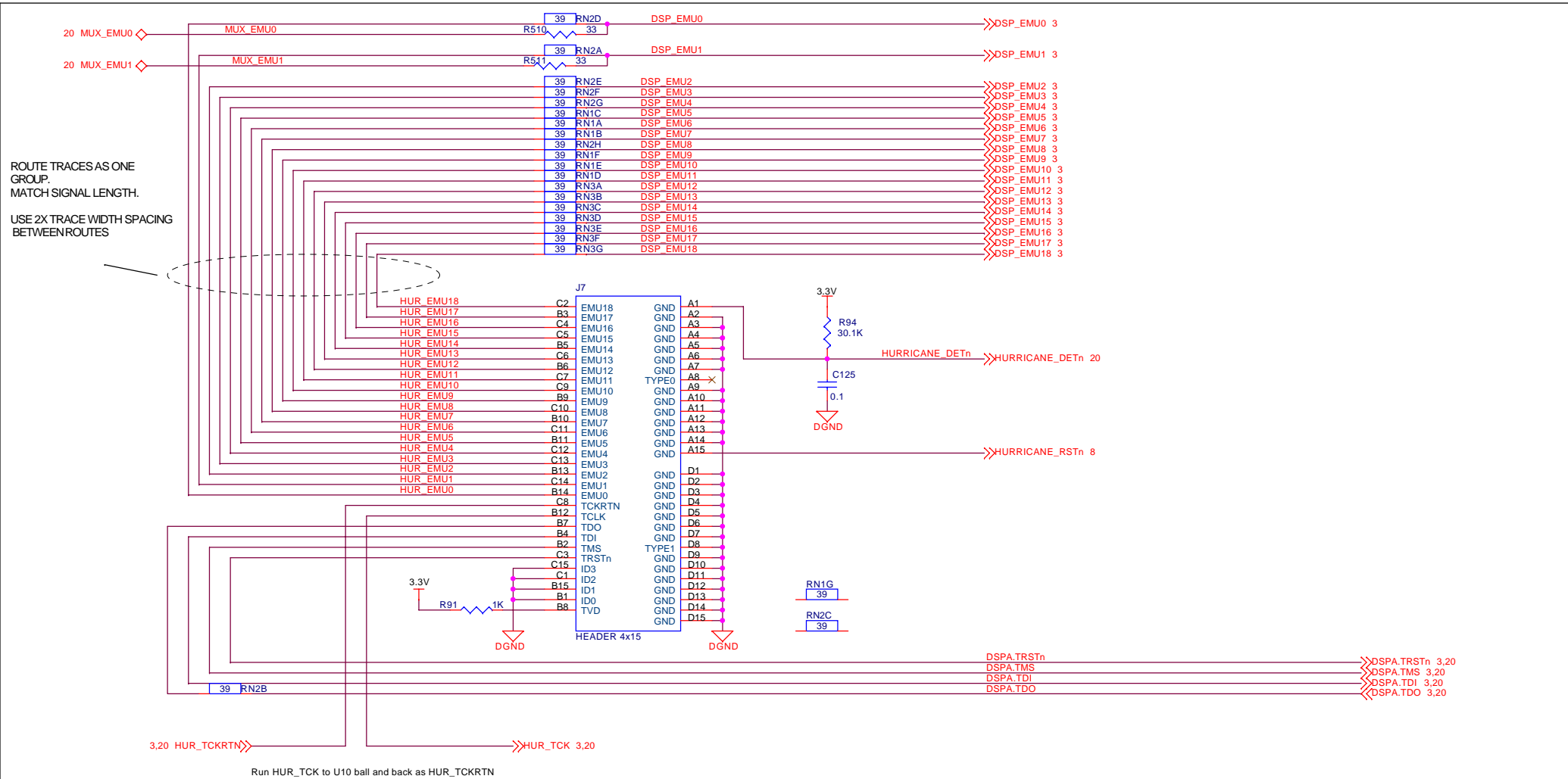




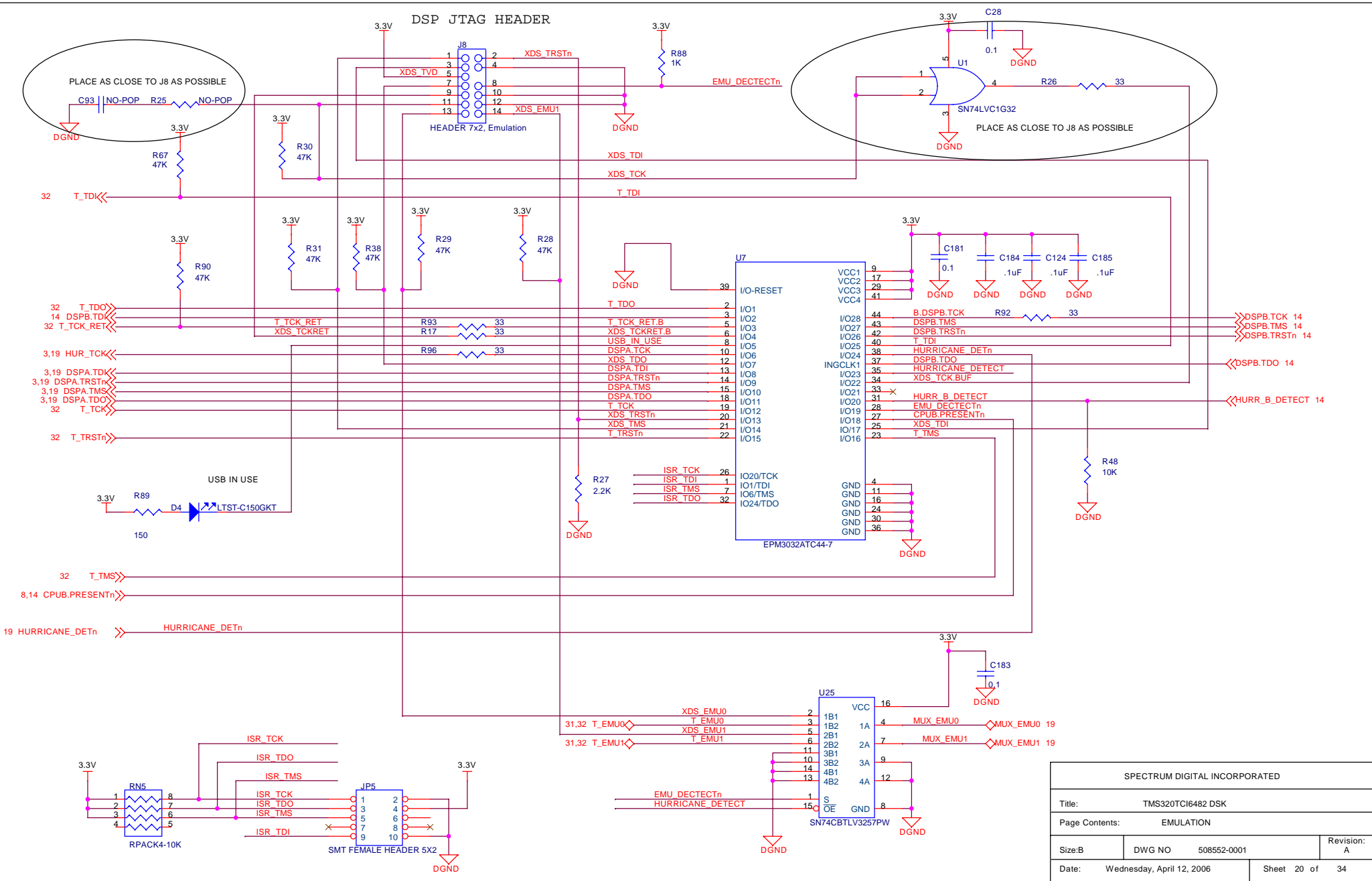
SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: 6482 POWER PINS			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006		Sheet 17 of 34	



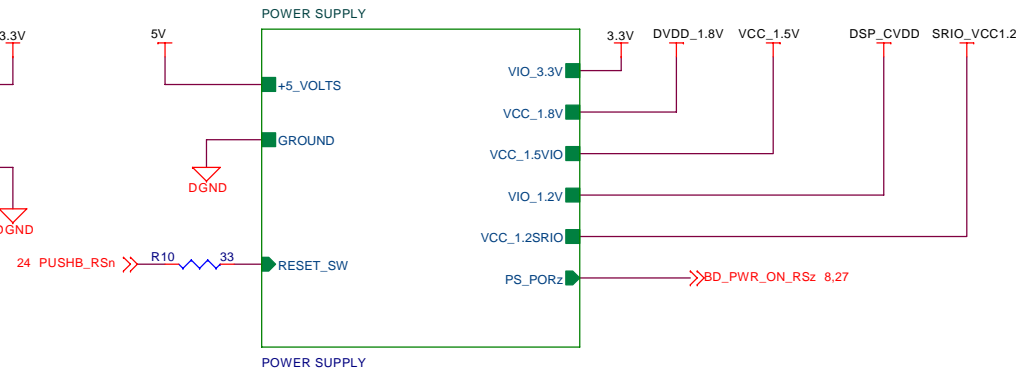
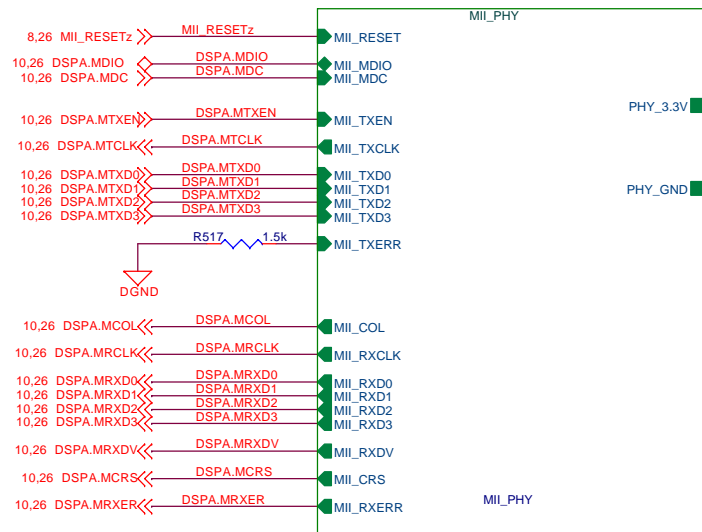
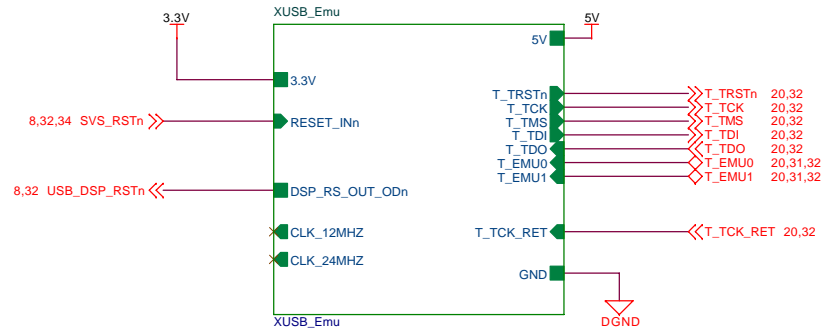
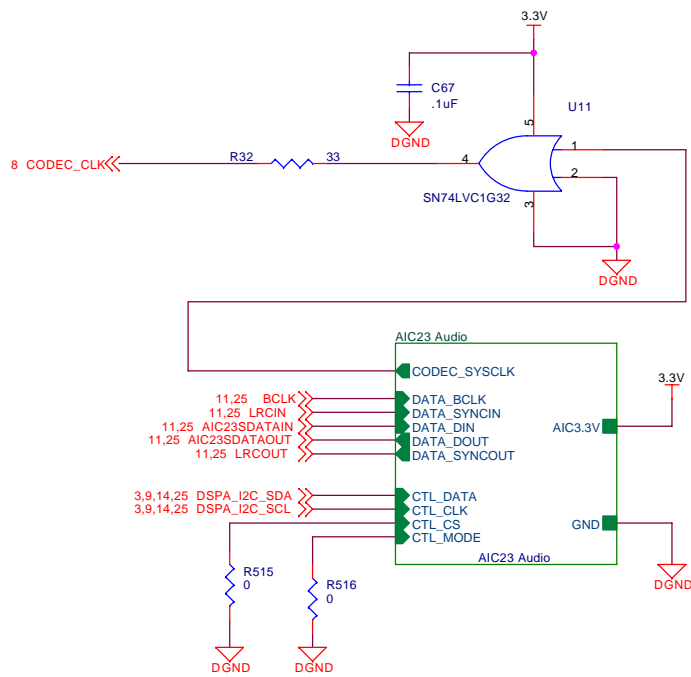
SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: 6482 POWER PINS			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 18 of		34



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: Emulation Interface			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 19 of		34

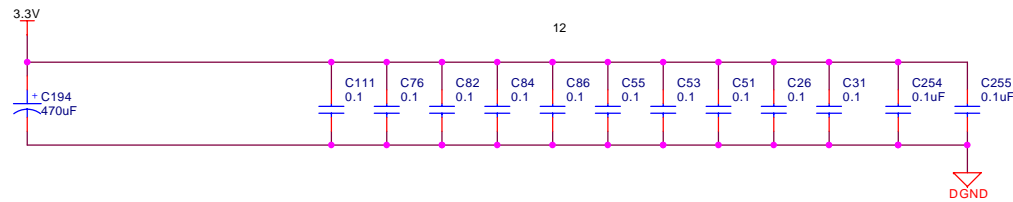
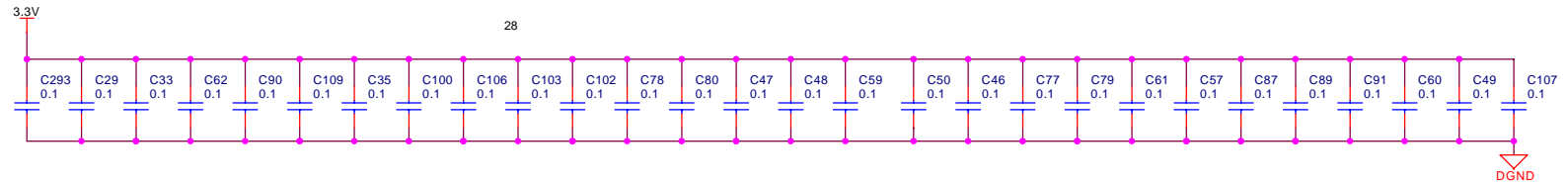
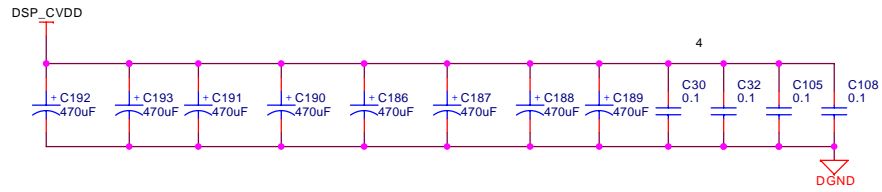
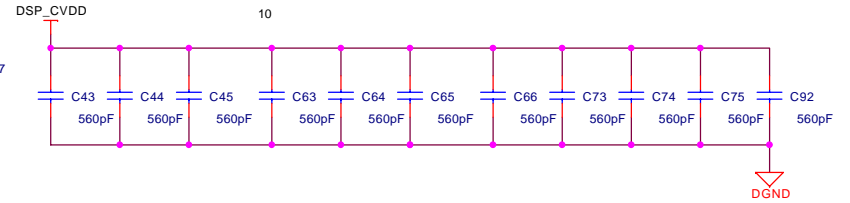
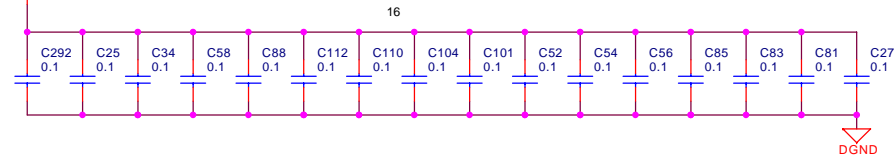


SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: EMULATION			
Size: B	DWG NO	508552-0001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 20 of 34		

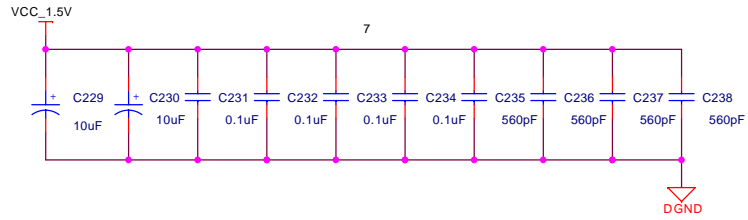
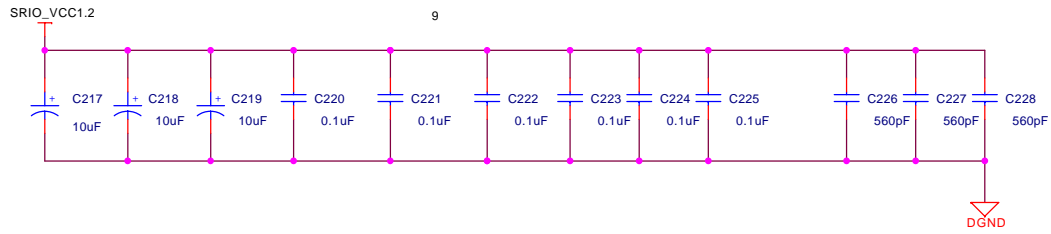
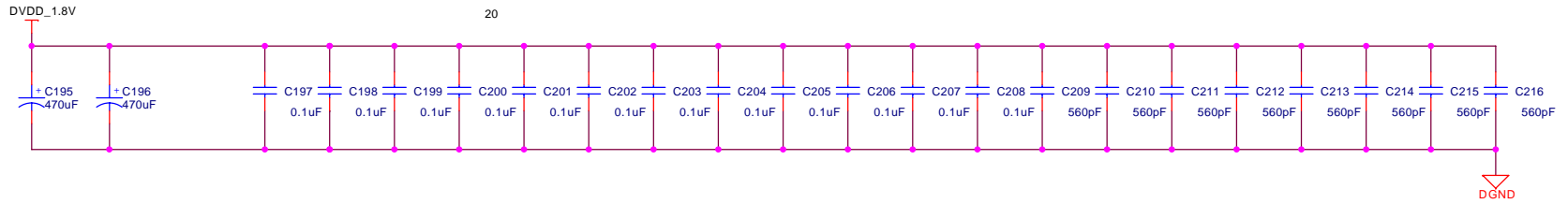


SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: Hierarchical Blocks			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 21 of 34		

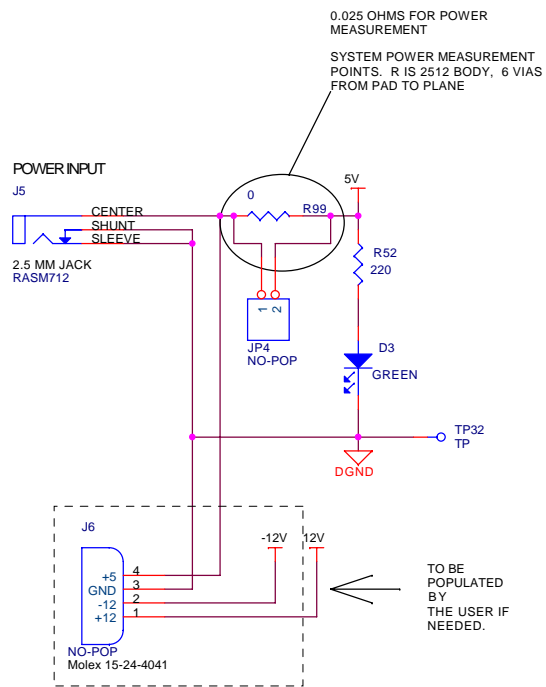
DSP\_CVDD All capacitors on this sheet are decoupling capacitors for the DSP. They should be placed as close as possible to the DSP.



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: Decoupling Capacitors I			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 22 of		34

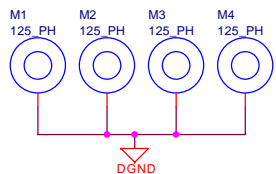


SPECTRUM DIGITAL INCORPORATED			
Title:		TMS320TCI6482 DSK	
Page Contents:		Decoupling Capacitors II	
Size: B	DWG NO	508552-2001	Revision: A
Date:	Wednesday, April 12, 2006	Sheet 23 of	34

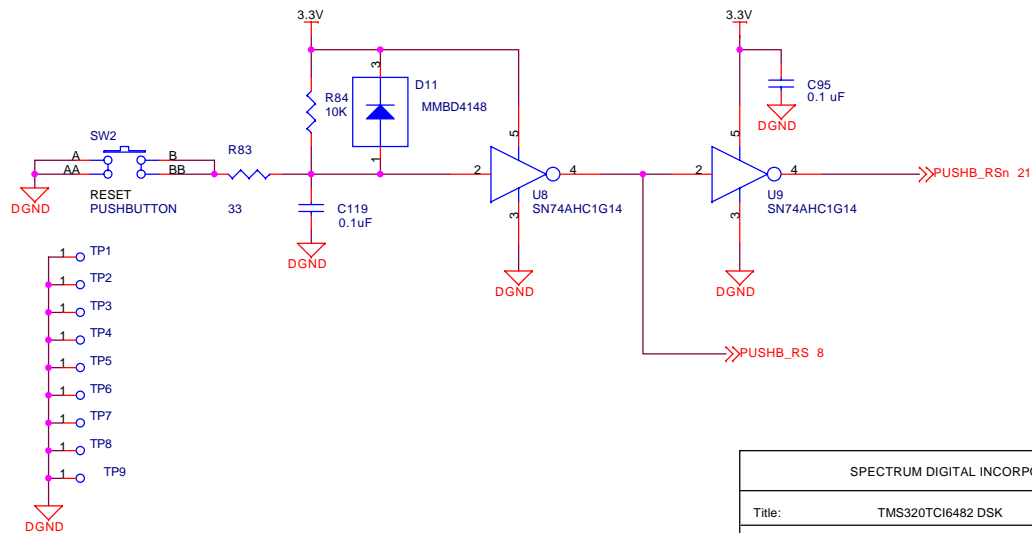


**WARNING:**  
DO NOT SUPPLY POWER TO BOTH POWER CONNECTORS AT THE SAME TIME!

DAUGHTERCARD STANDOFF GROUNDING

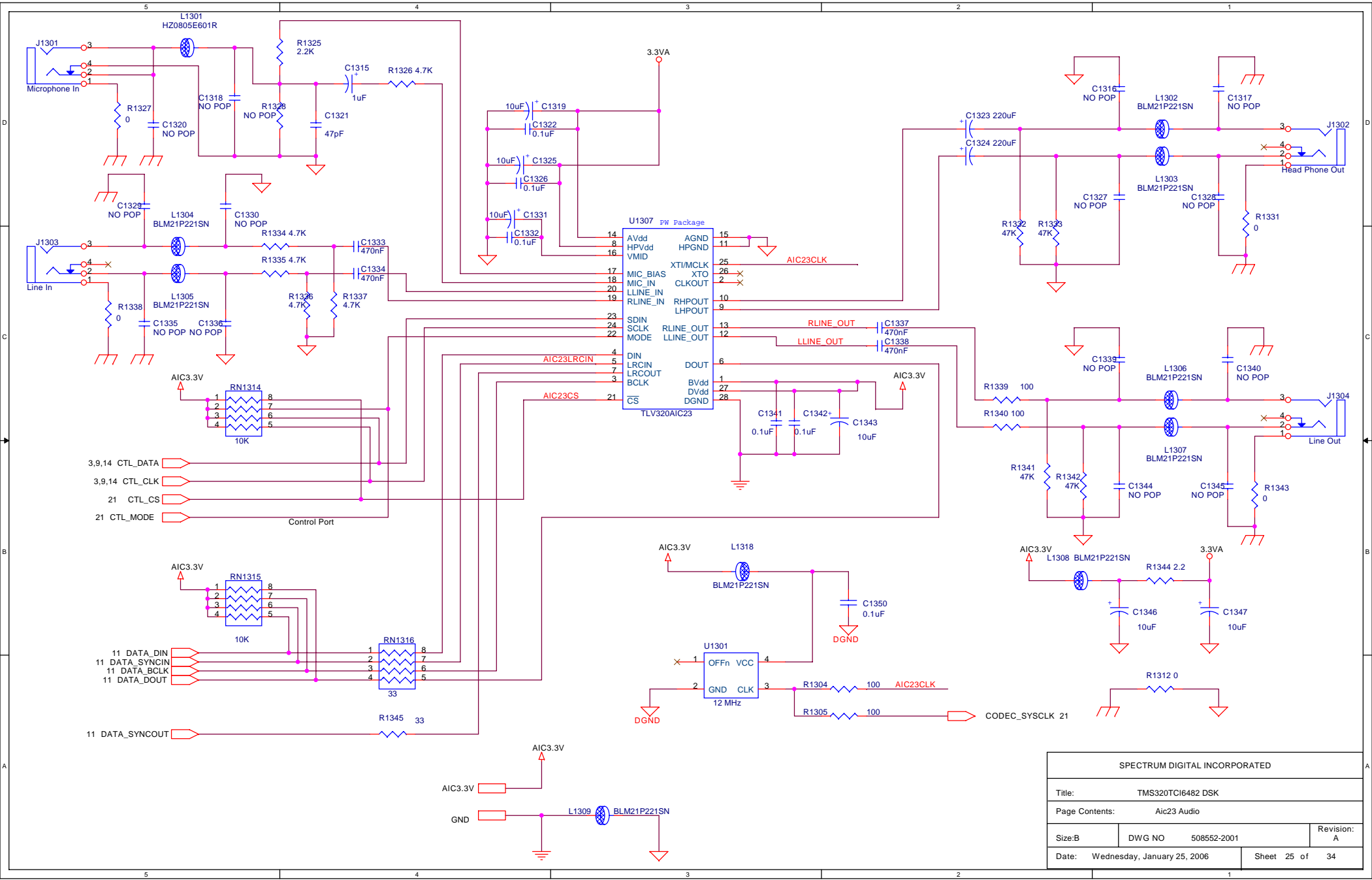


KEEP TRACES A MINIMUM OF 0.070 INCHES FROM THESE HOLES.

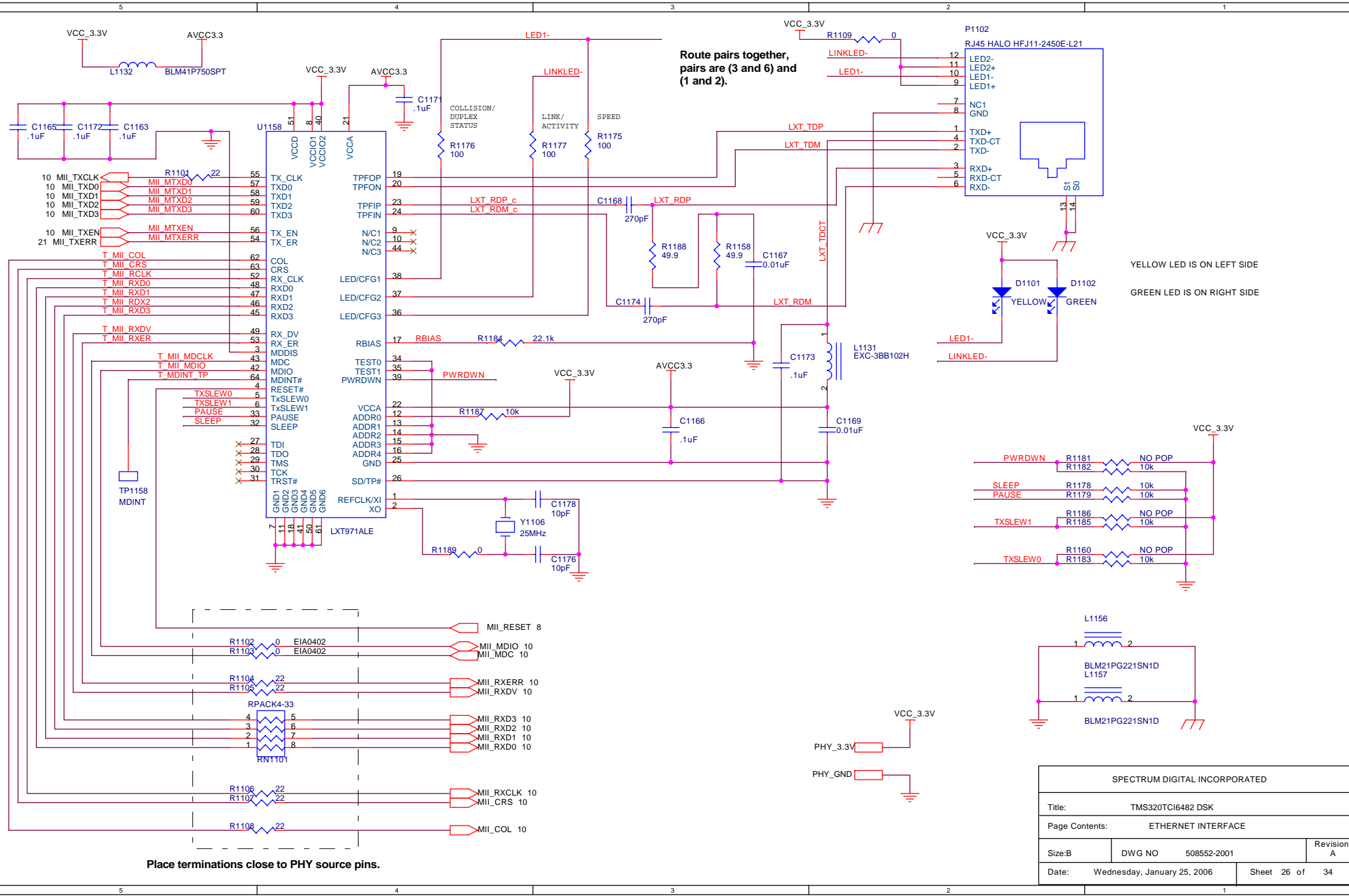


SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: Power Input			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, April 12, 2006	Sheet 24 of		34





SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TCI6482 DSK			
Page Contents: Aic23 Audio			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, January 25, 2006	Sheet 25 of 34		

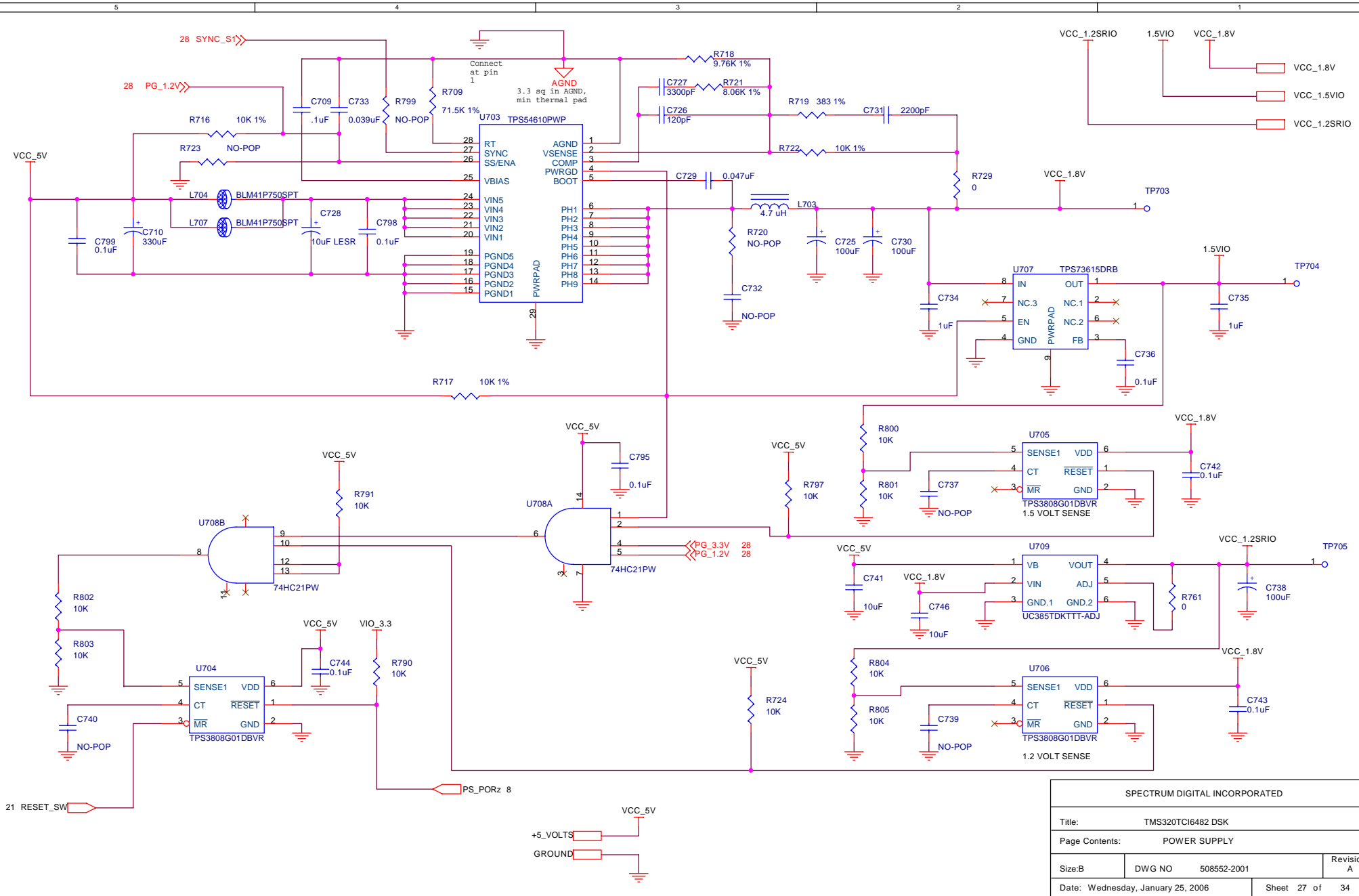


Route pairs together,  
pairs are (3 and 6) and  
(1 and 2).

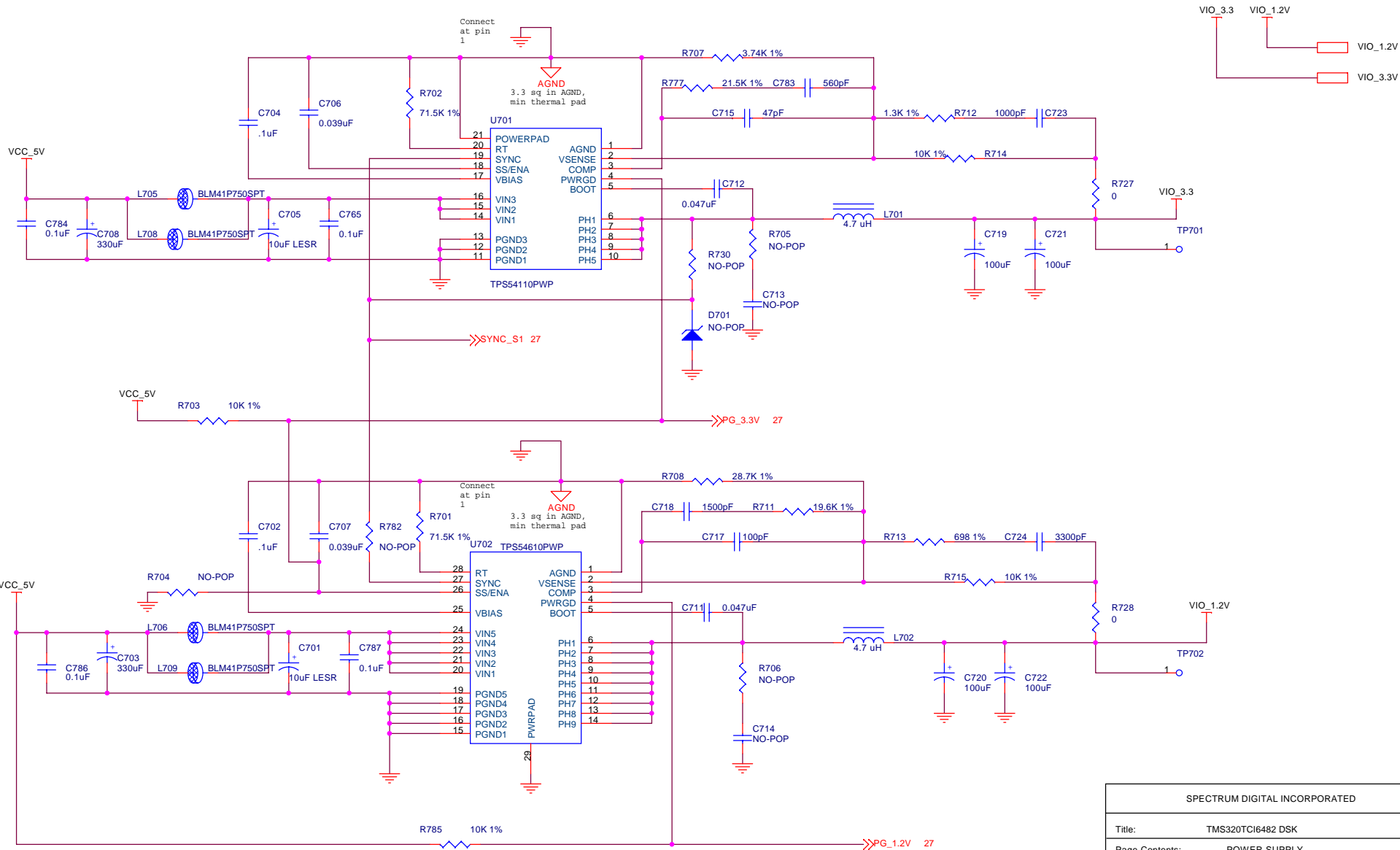
YELLOW LED IS ON LEFT SIDE  
GREEN LED IS ON RIGHT SIDE

Place terminations close to PHY source pins.

SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TC16482 DSK			
Page Contents: ETHERNET INTERFACE			
Size: B	DWG NO	508552-2001	Revision: A
Date:	Wednesday, January 25, 2006	Sheet	26 of 34



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TC16482 DSK			
Page Contents: POWER SUPPLY			
Size: B	DWG NO	508552-2001	Revision: A
Date: Wednesday, January 25, 2006			Sheet 27 of 34



SPECTRUM DIGITAL INCORPORATED			
Title: TMS320TC16482 DSK			
Page Contents: POWER SUPPLY			
Size: B	DWG NO	508552-2001	Revision: A
Date:	Wednesday, January 25, 2006		Sheet 28 of 34