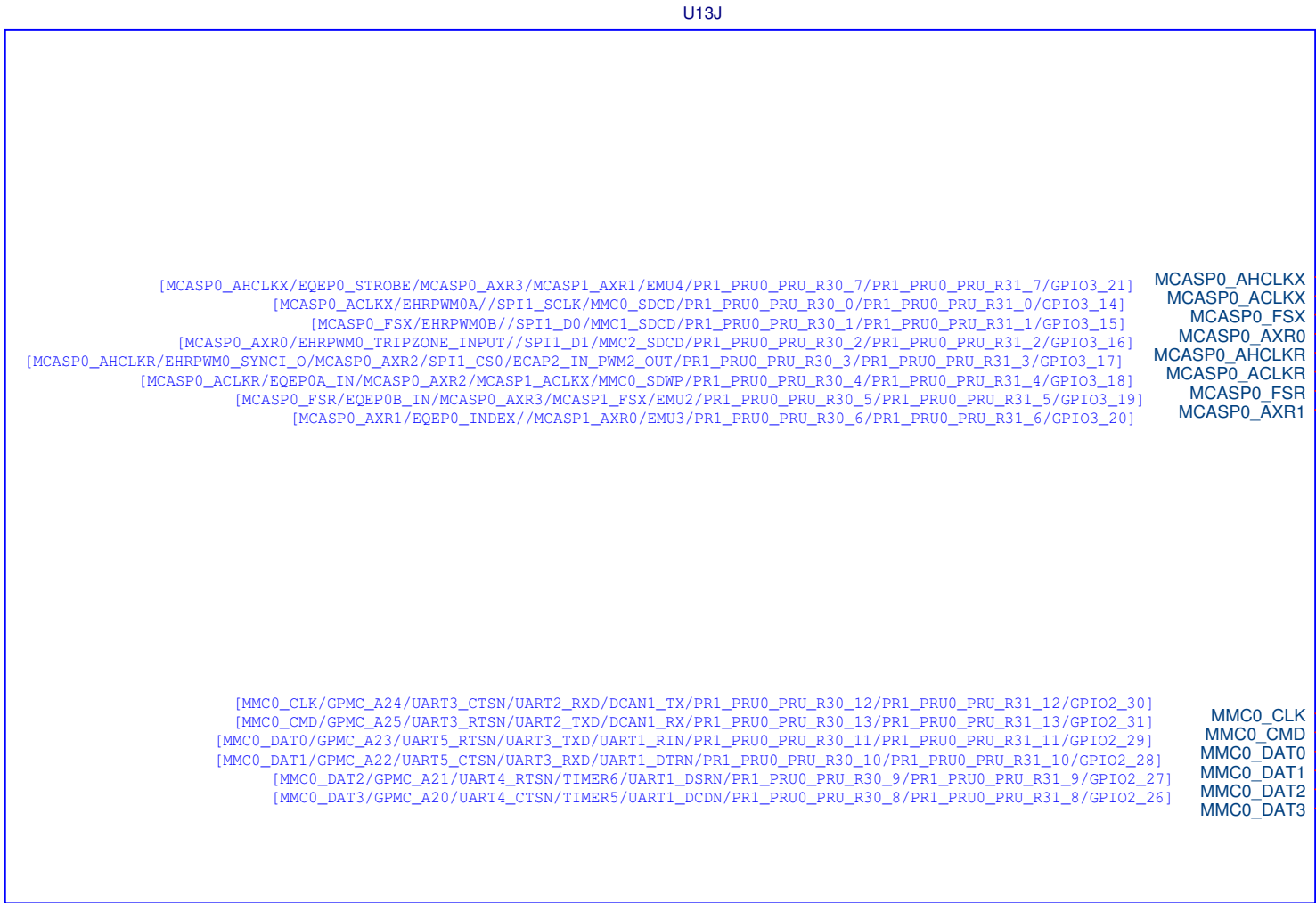


5										4										3										2										1																																																	
<div>SCHEMATIC CONTENTS</div> <div>SH01 - TITLE PAGE</div> <div>SH02 - AM335X GPMC</div> <div>SH03 - AM335X MMC/MCASP</div> <div>SH04 - AM335X LCD INTERFACE</div> <div>SH05 - AM335X SERIAL I/O</div> <div>SH06 - UART 1/2 MUX</div> <div>SH07 - AM335X USB PORTS</div> <div>SH08 - AM335X ETHERNET PORTS</div> <div>SH09 - SPI1 MUX</div> <div>SH10 - AM335X DDR INTERFACE</div> <div>SH11 - AM335X JTAG,CLOCKS</div> <div>SH12 - AM335X ADC</div> <div>SH13 - AM335X POWER 1</div> <div>SH14 - AM335X CORE POWER</div> <div>SH15 - AM335X DDR,PLL POWER</div> <div>SH16 - AM335X LDO PINS</div> <div>SH17 - AM335X GROUND PINS</div> <div>SH18 - I2C PERIPHERALS</div> <div>SH19 - BOOT SWITCHES</div> <div>SH20 - LEDS,</div> <div>SH21 - JTAG CONNECTOR</div> <div>SH22 - DDR2 MEMORY</div> <div>SH23 - NAND FLASH, SPI FLASH</div> <div>SH24 - PLC COM INTERFACE</div> <div>SH25 - ZERO CROSSING DETECTORS</div> <div>SH26 - PLC INTERFACE</div> <div>SH27 - UART0, DEBUG UART CONNECTORS</div> <div>SH28 - IR INTERFACE</div> <div>SH29 - RS485 PORT1</div> <div>SH30 - RS485 PORT2</div> <div>SH31 - UART4 GPRS HEADER</div> <div>SH32 - SD INTERFACE</div> <div>SH33 - ESAM INTERFACE (NOT SUPPORTED)</div> <div>SH34 - ESAM POWER (NOT SUPPORTED)</div> <div>SH35 - USB1 CONNECTOR</div> <div>SH36 - USB2 CONNECTOR</div> <div>SH37 - ETHERNET PORT 0</div> <div>SH38 - ETHERNET PORT 1</div> <div>SH39 - ETHERNET CONNECTOR</div> <div>SH40 - CC INTERFACE 1</div> <div>SH41 - CC INTERFACE 2</div> <div>SH42 - POWER ROUTER</div> <div>SH43 - PMIC</div> <div>SH44 - 3V3 SUPPLY</div> <div>SH45 - 12V TO 15V BOOST CONVERTOR</div> <div>SH46 - 12V TO 5V BUCK CONVERTOR</div> <div>SH47 - AC TO DC INTERFACE</div> <div>SH48 - DC POWER INPUT</div> <div>SH49 - POWER IN</div> <div>SH50 - LAYOUT CONSTRAINTS</div> <div>SH51 - BOARD REVISIONS</div>																																																		REV					DESCRIPTION																									DATE					APPROVED				
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																																																		C					PLC UPDATES																									06/18/2013					TNYC				

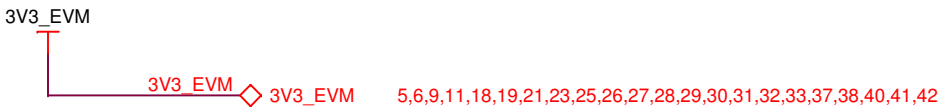
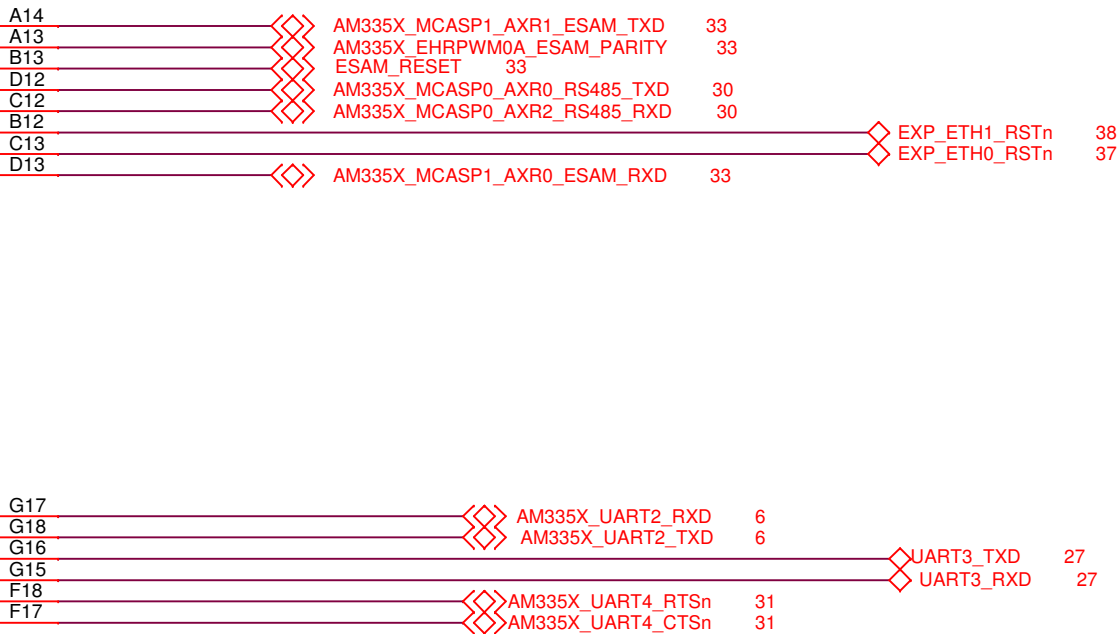
REVISION STATUS OF SHEETS																				
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REV	B	B	B	C	C	C	C	C	B	B			CHK		T.W.K.	02/21/3013	DATE			
SH	21	22	23	24	25	26	27	28	29	30			ENGR		R.R.P.	02/21/3013	DATE			
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SH	11	12	13	14	15	16	17	18	19	20			QA		C.M.D.	02/21/3013	DATE			
REV	C	B	C	B	B	B	B	B	B	B	NEXT ASSY	USED ON	MFG		R.R.P.	02/21/3013	DATE			
SH	1	2	3	4	5	6	7	8	9	10	APPLICATION		RLSE		R.R.P.	02/21/3013	DATE			

SPECTRUM DIGITAL INCORPORATED									
Title: TIDE0058    AM335X DATA CONCENTRATOR									
Page Contents:    TITLE PAGE									
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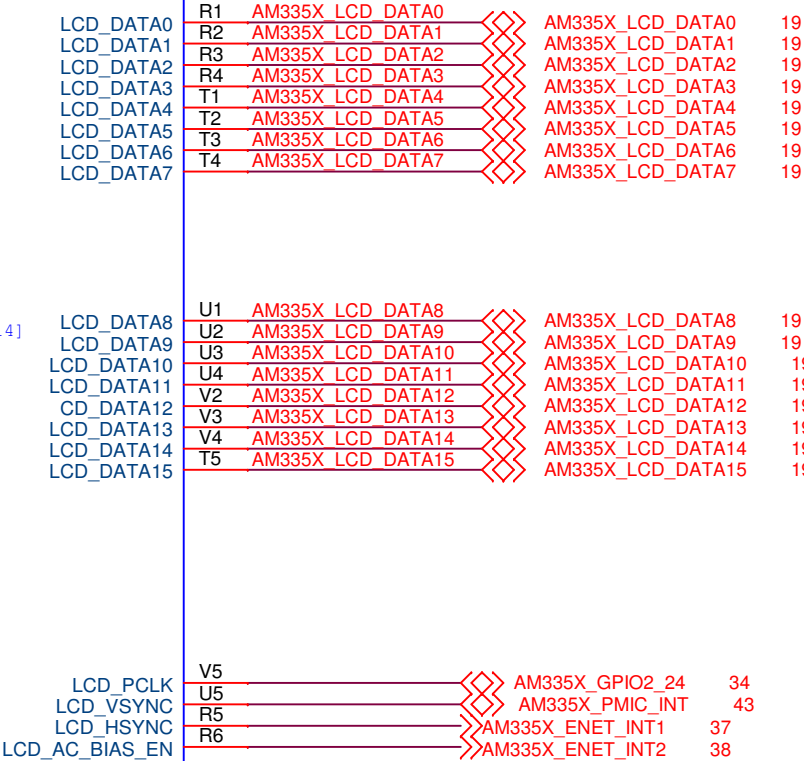
AM335X\_15x15



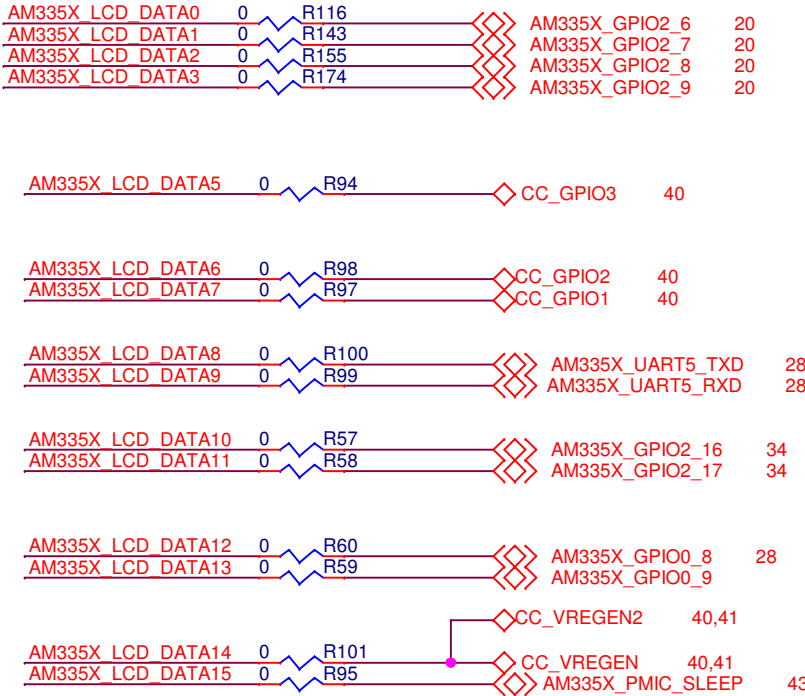
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Title: TIDEP0058 AM335X DATA CONCENTRATOR			
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AM335X\_15x15



LEDS

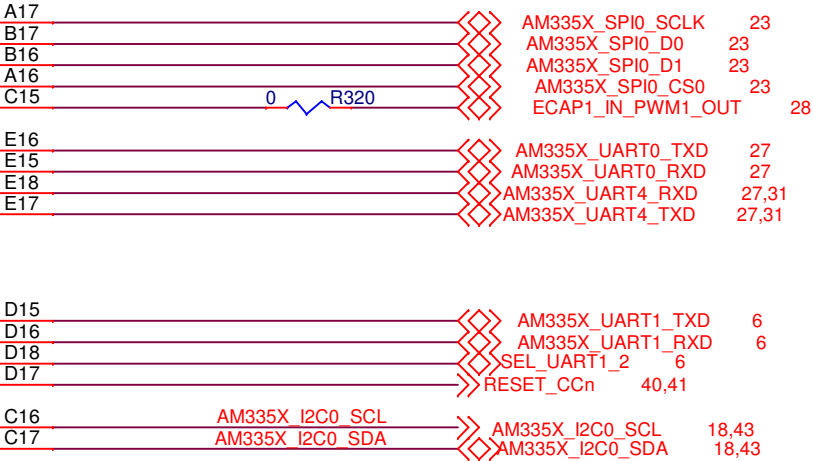


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Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X LCD INTERFACE			
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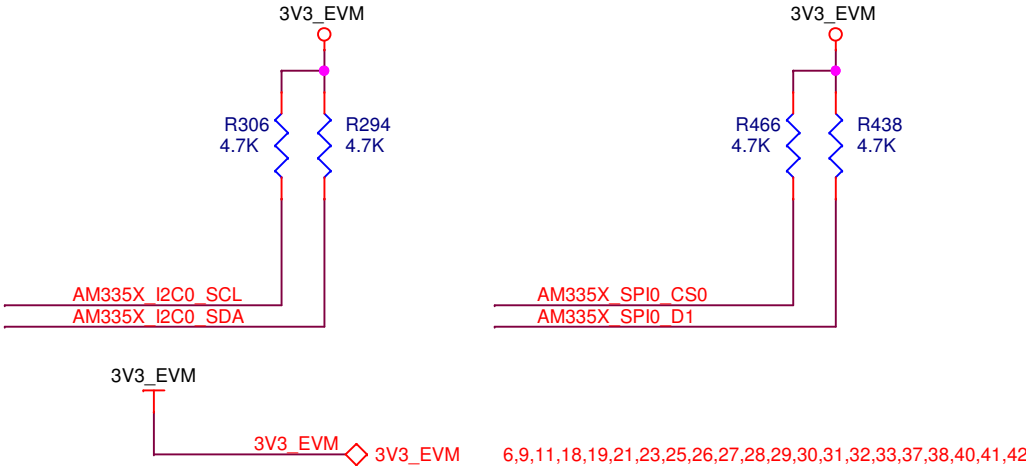
AM335X

15mm x 15mm Package

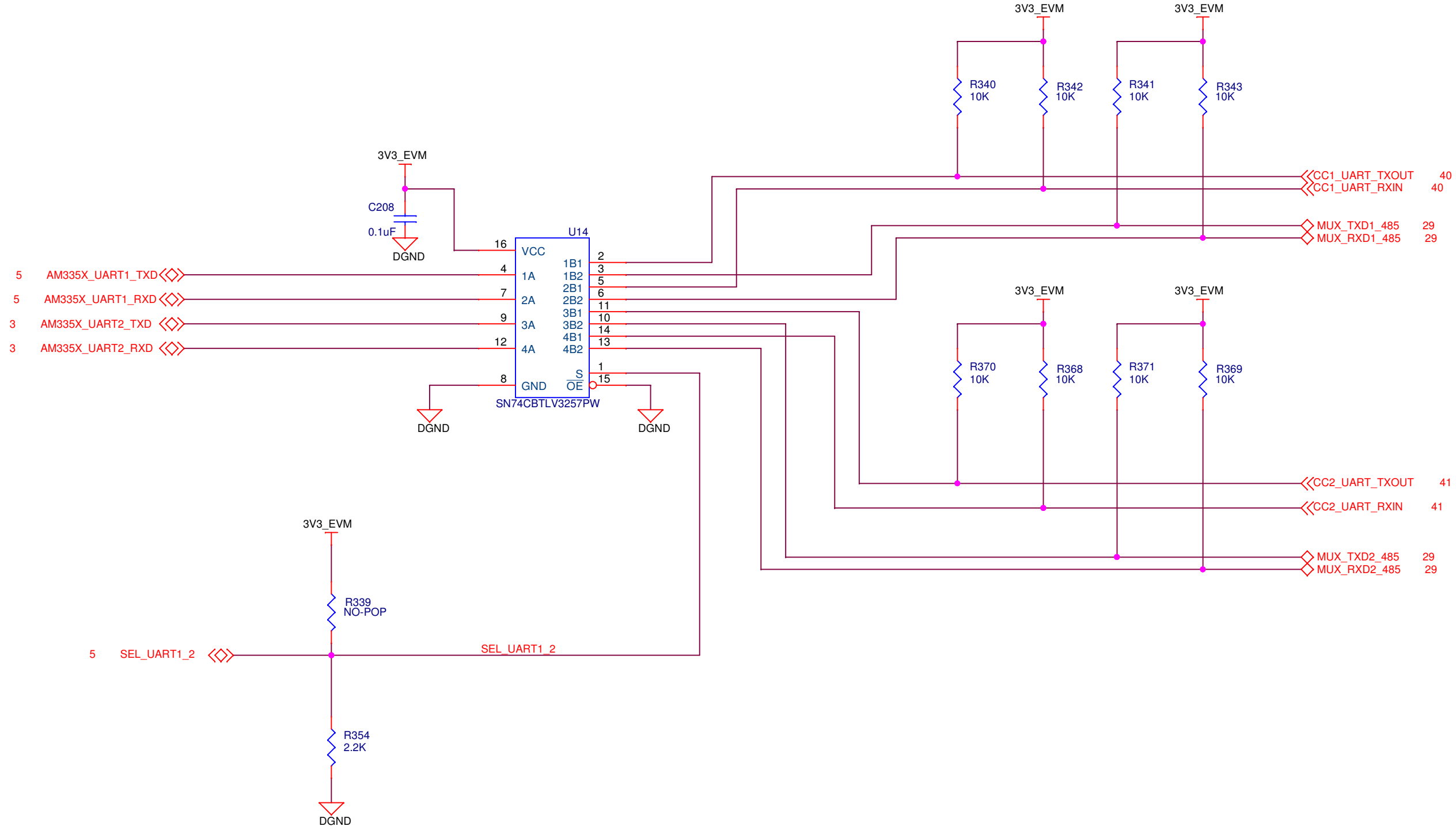
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[SPI0\_D0/UART2\_TXD/I2C2\_SCL/EHRPWM0B/PR1\_UART0\_RTS\_N/PR1\_EDIO\_LATCH\_IN/EMU3/GPIO0\_3] SPI0\_D0  
[SPI0\_D1/MMC1\_SDWP/I2C1\_SDA/EHRPWM0\_TRIPZONE\_INPUT/PR1\_UART0\_RXD/PR1\_EDIO\_DATA\_IN0/PR1\_EDIO\_DATA\_OUT0/GPIO0\_4] SPI0\_D1  
[SPI0\_CS0/MMC2\_SDWP/I2C1\_SCL/EHRPWM0\_SYNCI/PR1\_UART0\_TXD/PR1\_EDIO\_DATA\_IN1/PR1\_EDIO\_DATA\_OUT1/GPIO0\_5] SPI0\_CS0  
[SPI0\_CS1/UART3\_RXD/ECAP1\_IN\_PWM1\_OUT/MMC0\_POW/XDMA\_EVENT\_INTR2/MMC0\_SDCD/EMU4/GPIO0\_6] SPI0\_CS1  
  
[UART0\_TXD/SPI1\_CS1/DCAN0\_RX/I2C2\_SCL/ECAP1\_IN\_PWM1\_OUT/PR1\_PRU1\_PRU\_R30\_15/PR1\_PRU1\_PRU\_R31\_15/GPIO1\_11] UART0\_TXD  
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[UART0\_CTSN/UART4\_RXD/DCAN1\_TX/I2C1\_SDA/SPI1\_D0/TIMER7/PR1\_EDC\_SYNC0\_OUT/GPIO1\_8] UART0\_CTSn  
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[I2C0\_SCL/TIMER7/UART2\_RTSN/ECAP1\_IN\_PWM1\_OUT////GPIO3\_6] I2C0\_SCL  
[I2C0\_SDA/TIMER4/UART2\_CTSN/ECAP2\_IN\_PWM2\_OUT////GPIO3\_5] I2C0\_SDA  
  
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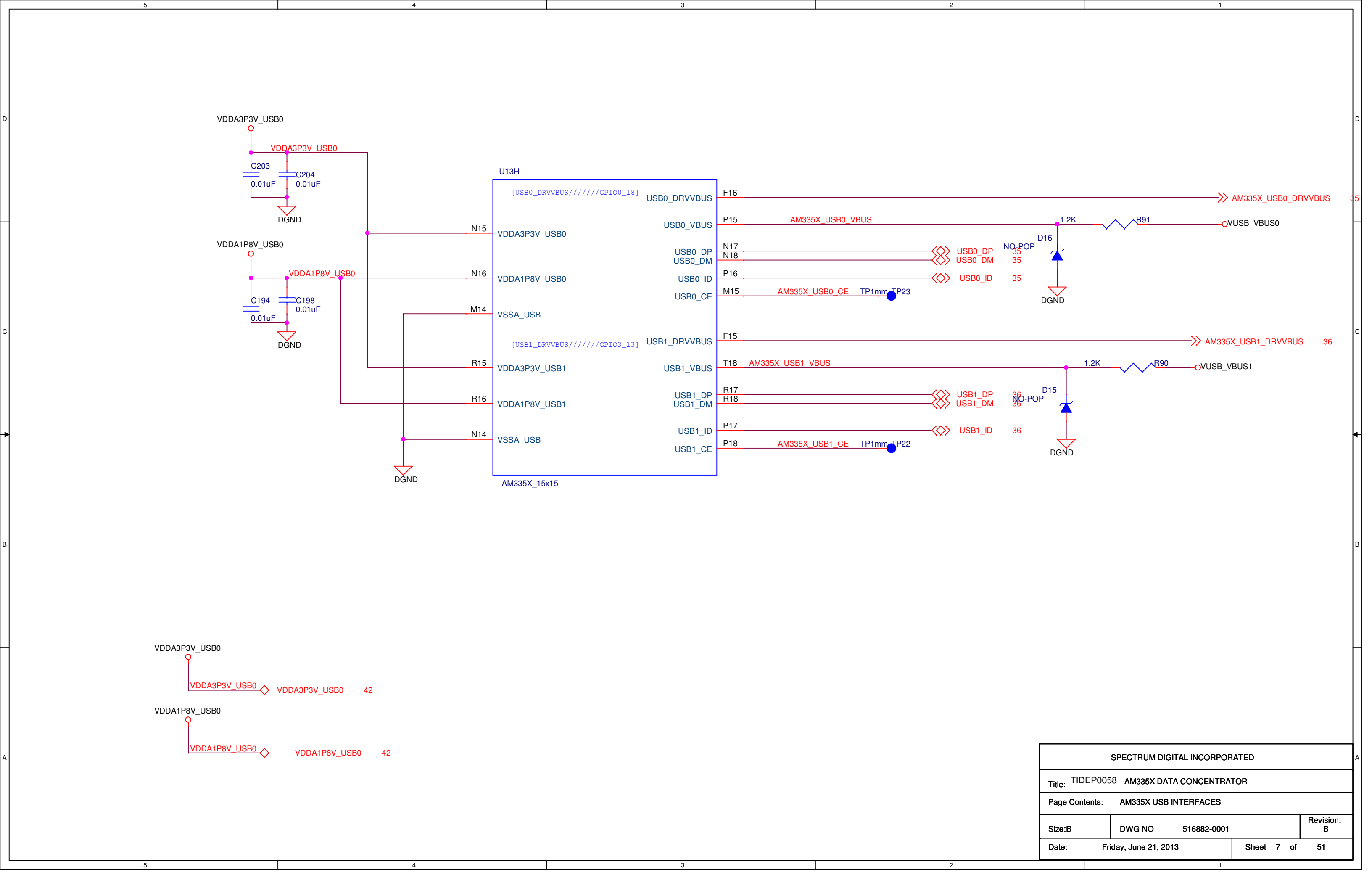
AM335X\_15x15



SPECTRUM DIGITAL INCORPORATED			
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Page Contents: AM335X SERIAL I/O INTERFACES			
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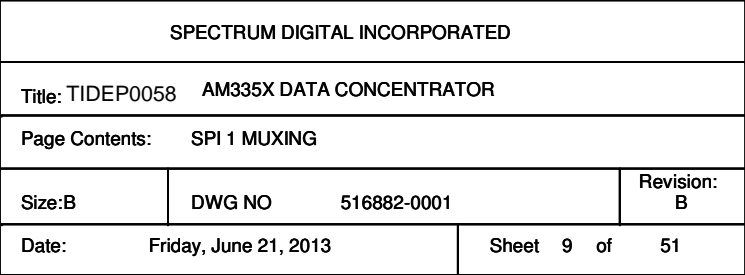
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Page Contents: UART 1,2 MUXING			
Size:B	DWG NO	516882-0001	Revision: B
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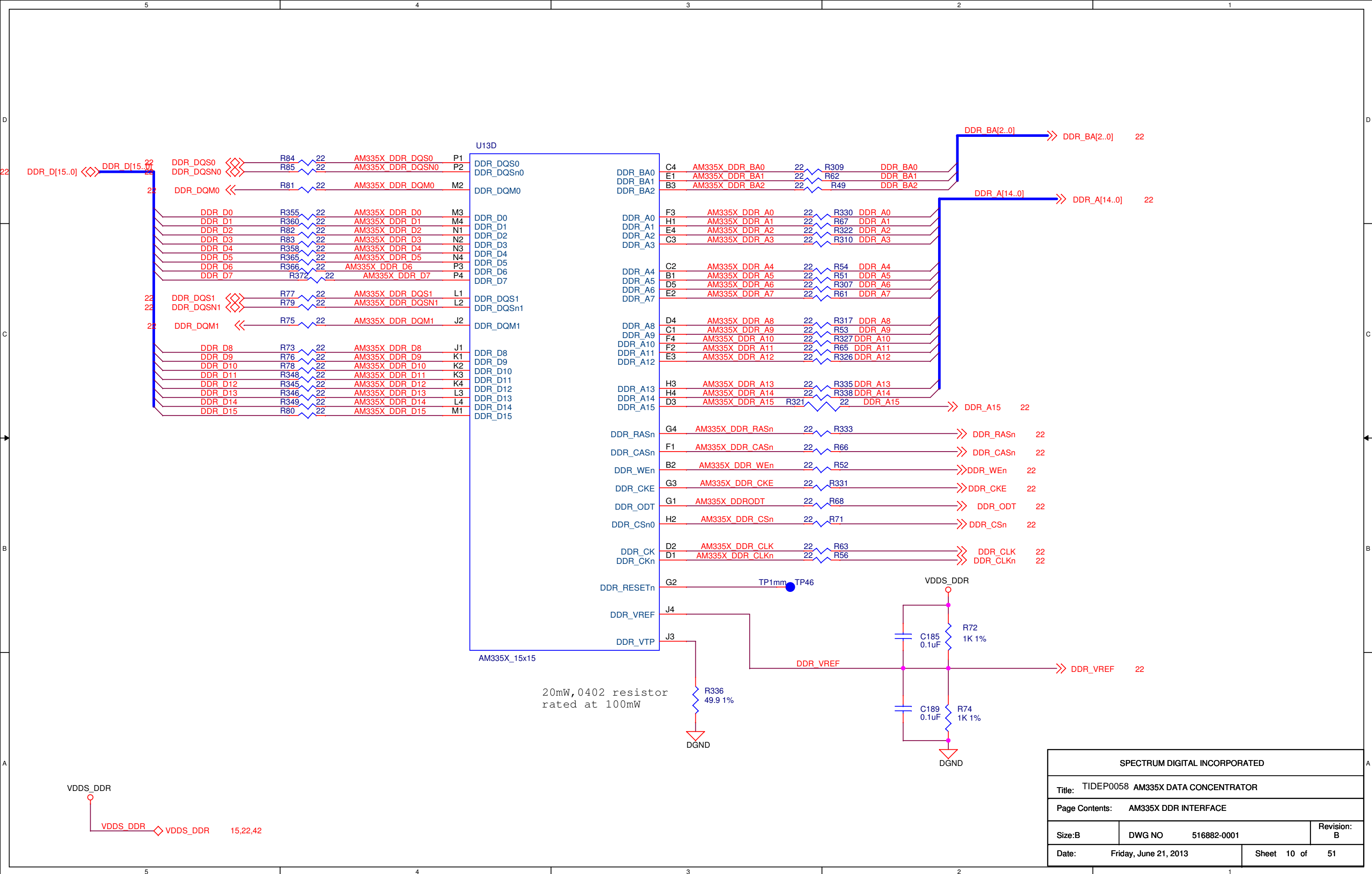


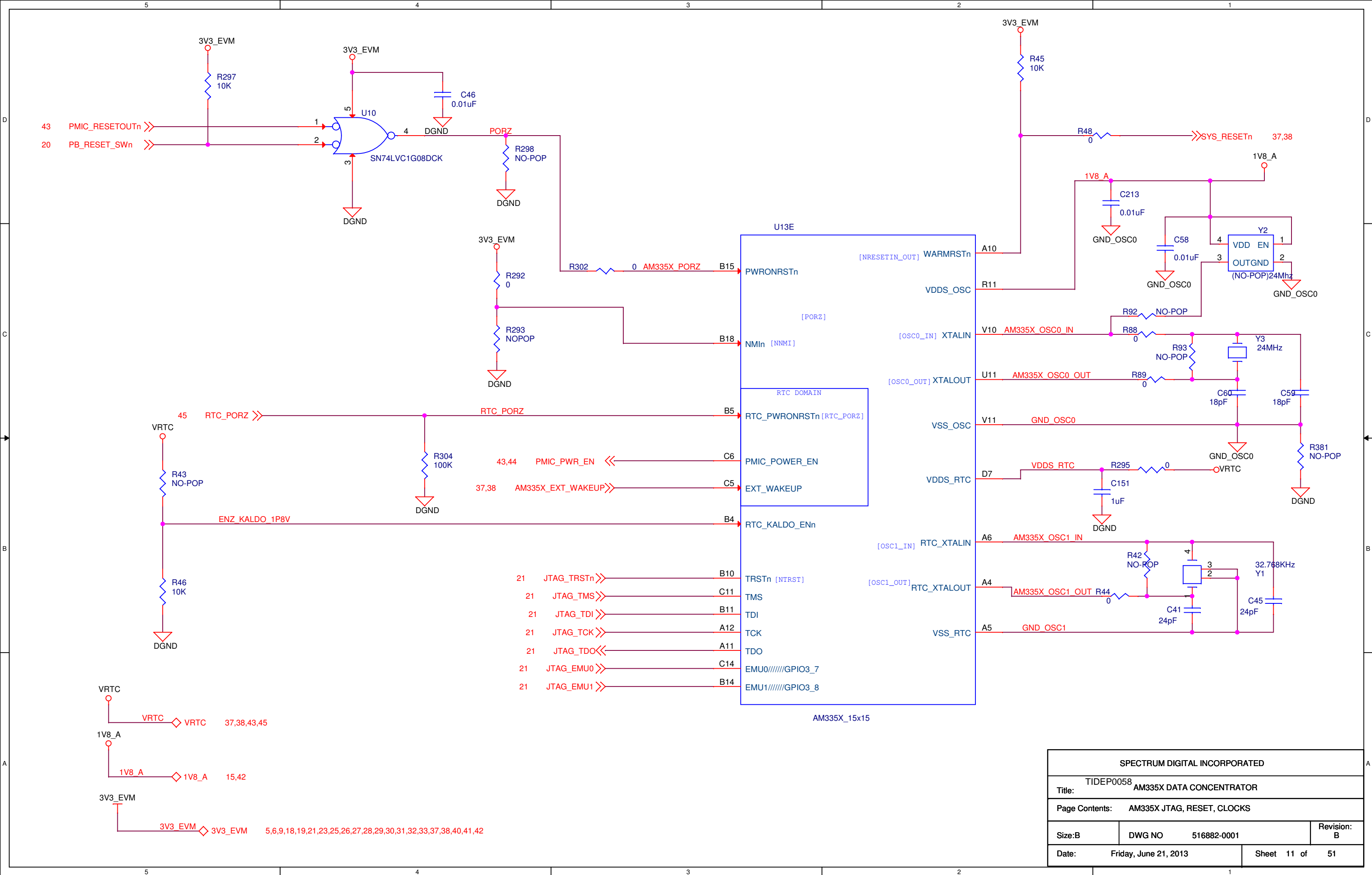
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Page Contents: AM335X USB INTERFACES			
Size:B	DWG NO	516882-0001	Revision: B
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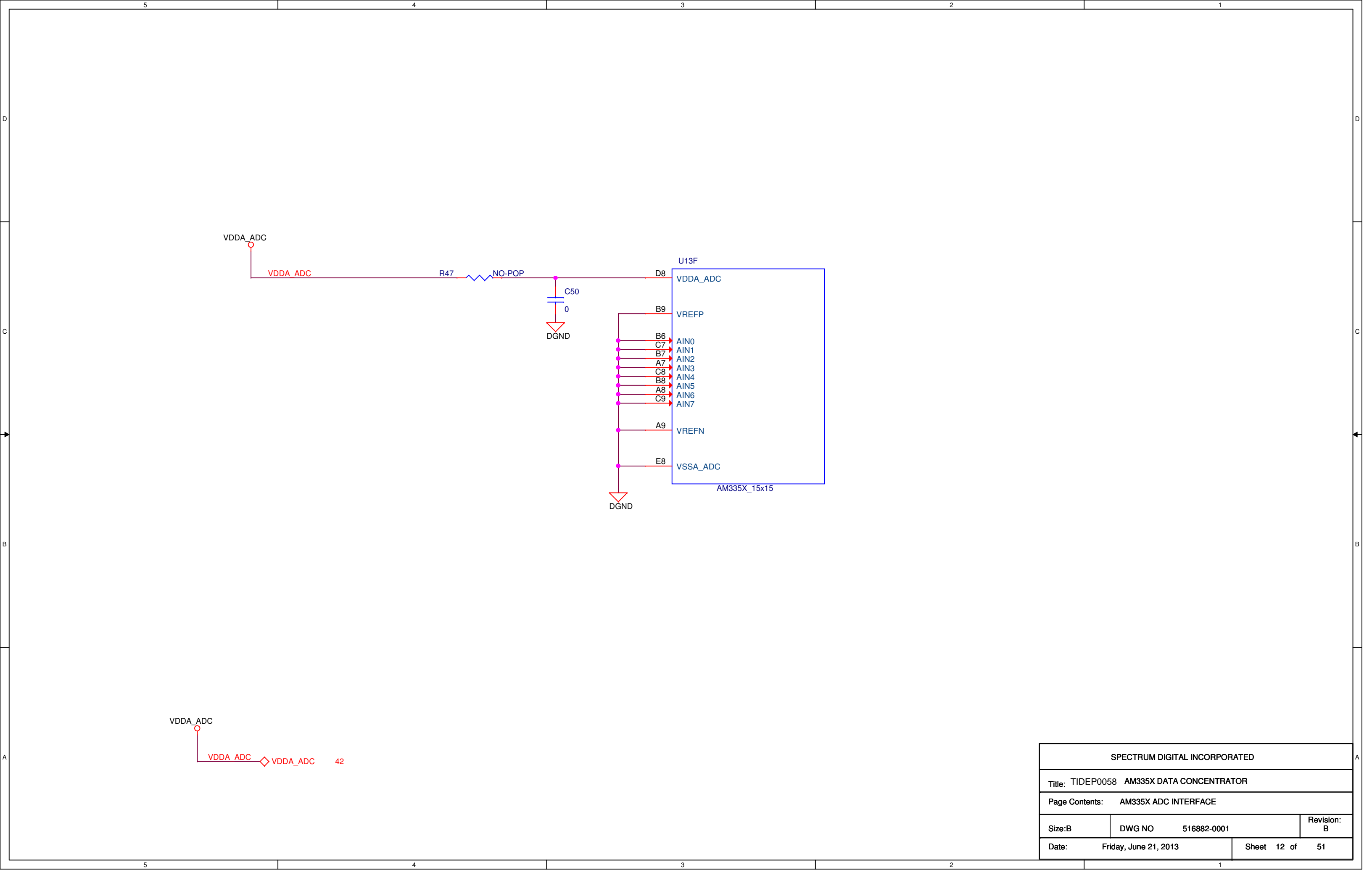


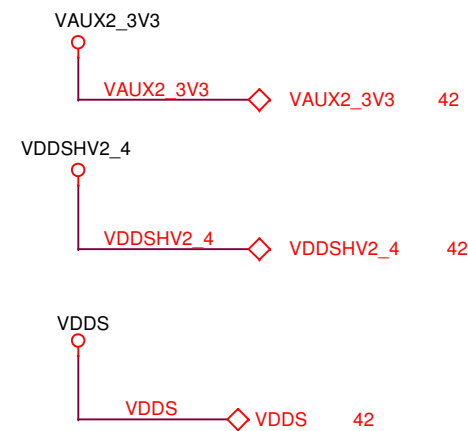
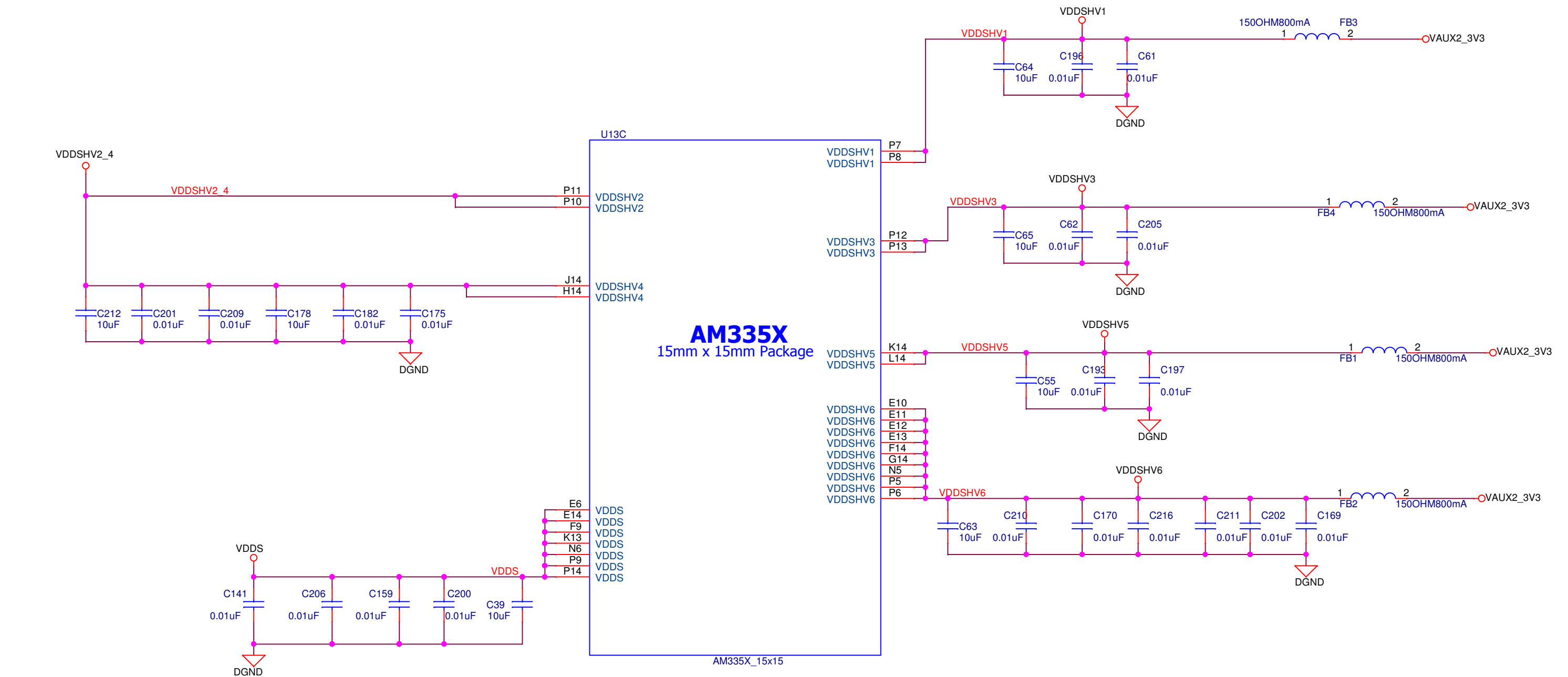




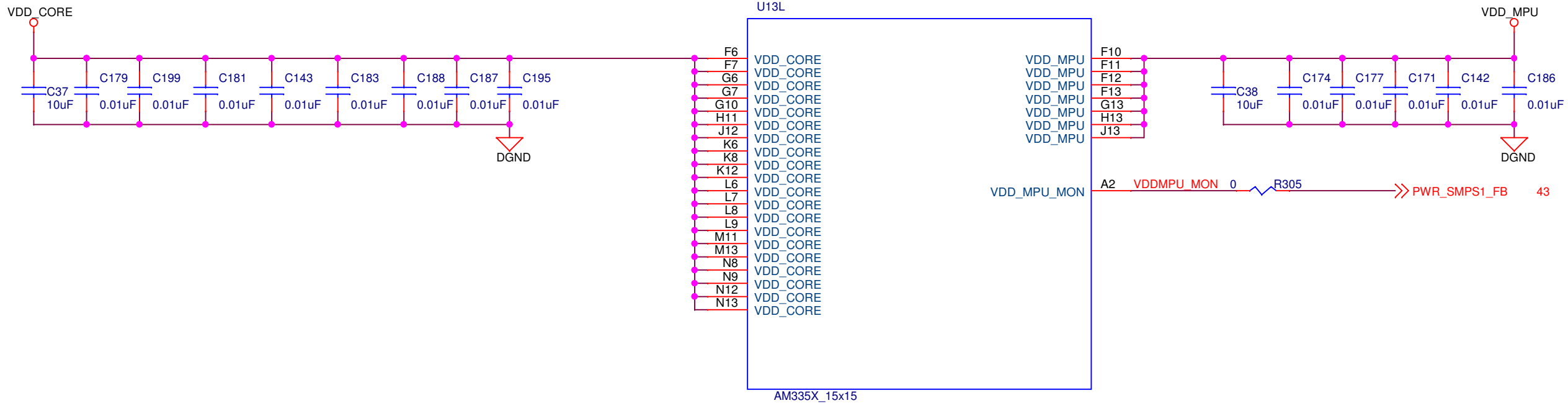








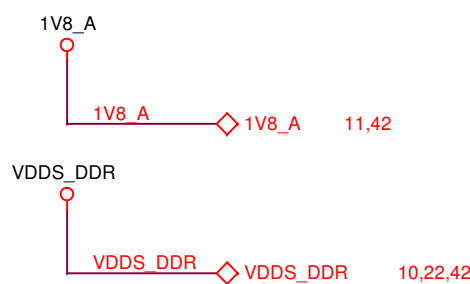
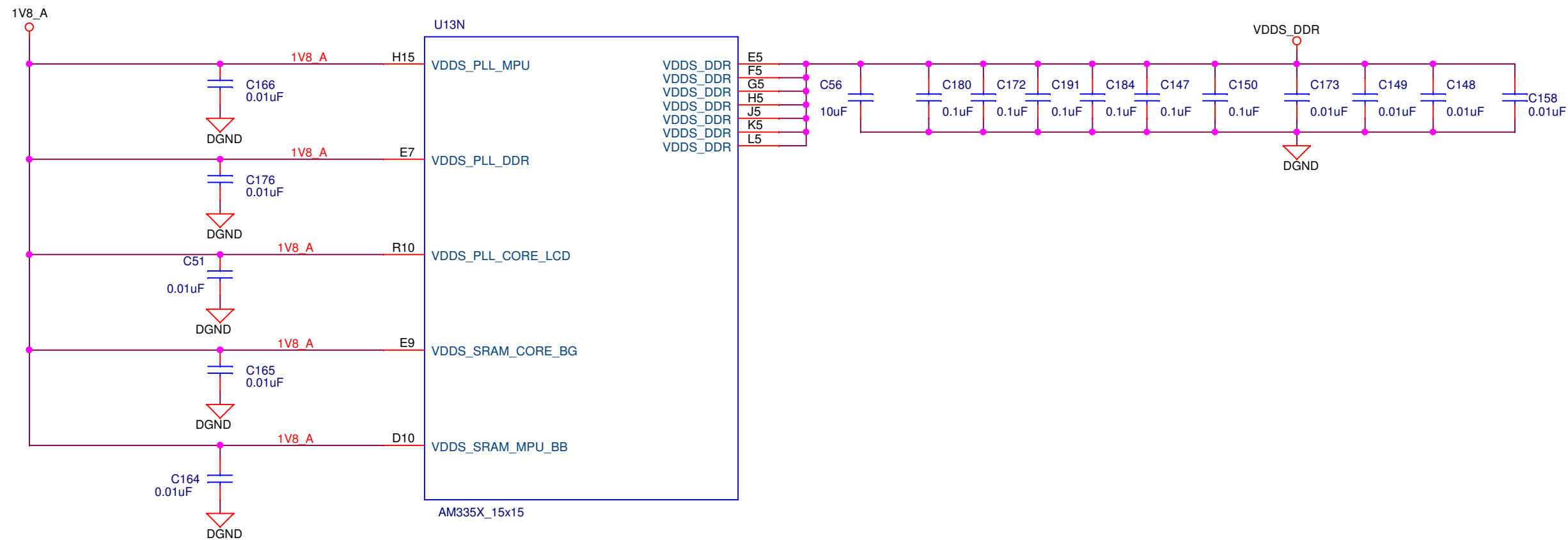
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Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X I/O POWER			
Size:B	DWG NO 516882-0001		Revision: B
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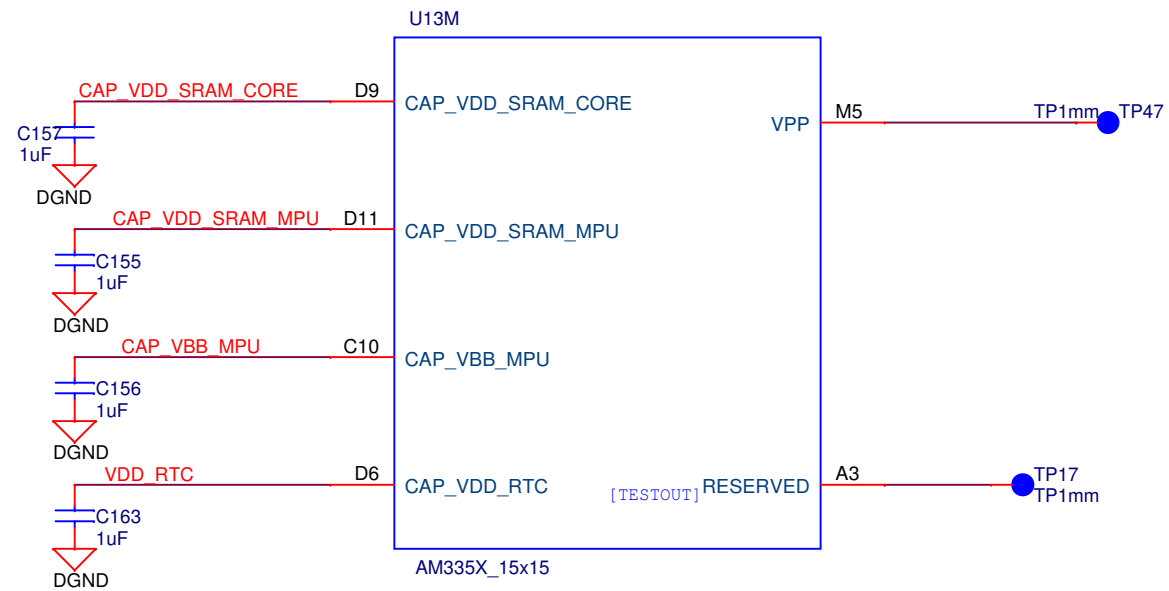
VDD\_CORE  
VDD\_CORE ◇ VDD\_CORE 42

VDD\_MPU  
VDD\_MPU ◇ VDD\_MPU 42

SPECTRUM DIGITAL INCORPORATED		
Title: TIDEP0058 AM335X DATA CONCENTRATOR		
Page Contents: AM335X CORE POWER		
Size: B	DWG NO 516882-0001	Revision: B
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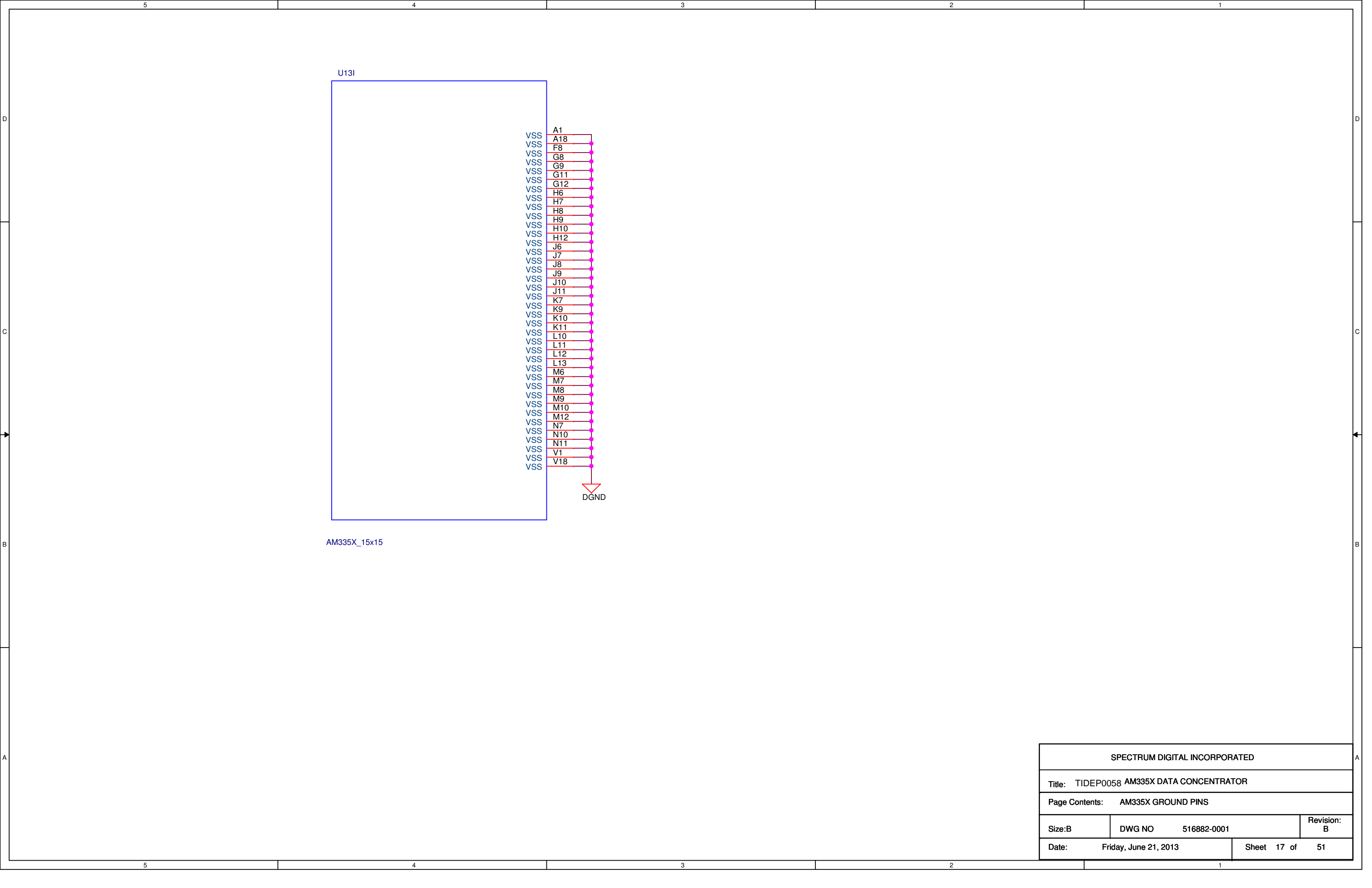


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Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X DDR / PLL POWER			
Size:B	DWG NO	516882-0001	Revision: B
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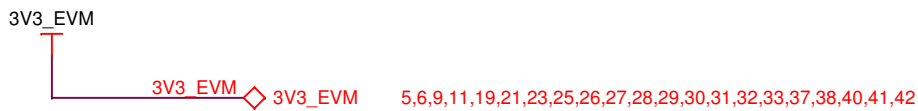
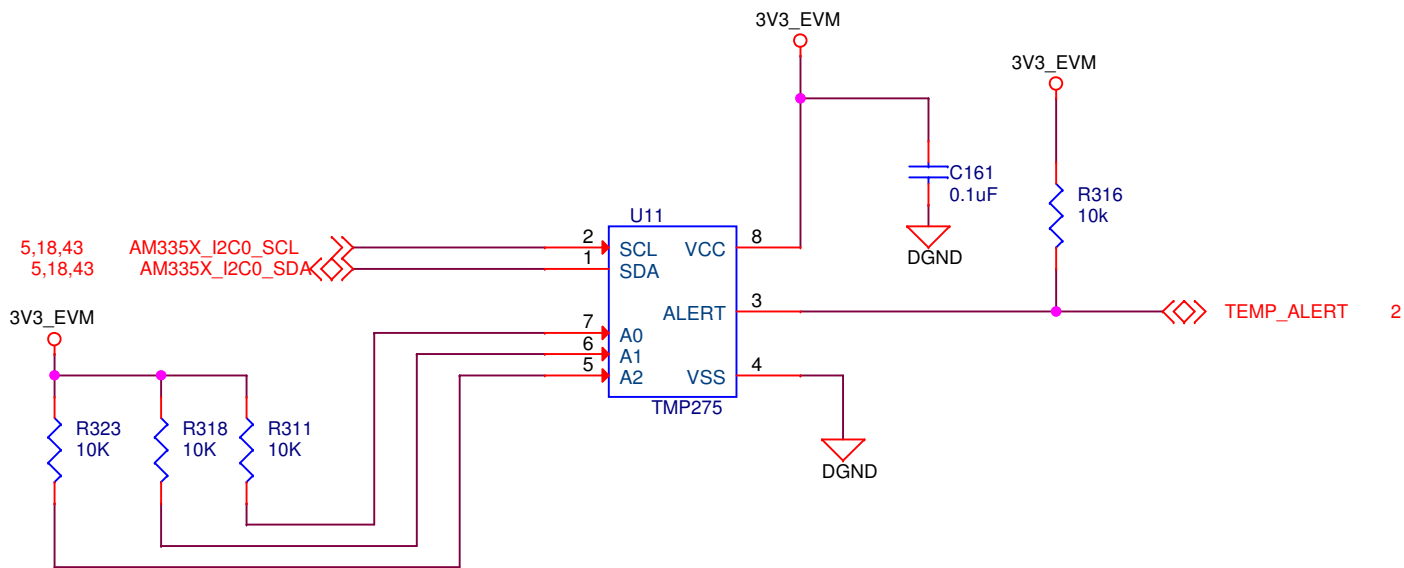
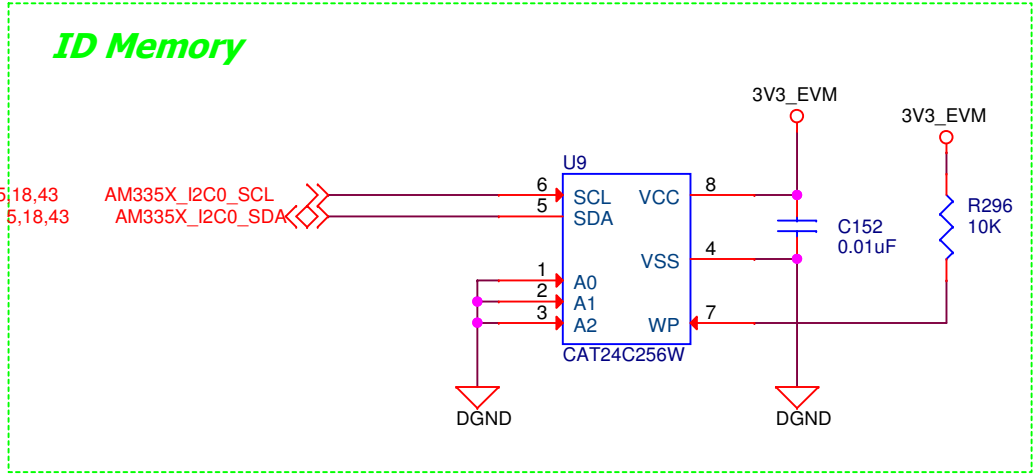


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Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X LDO'S			
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SPECTRUM DIGITAL INCORPORATED			
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**Boot Configuration**

The diagram illustrates the boot configuration for the AM335X LCD concentrator. It features two primary circuit sections and a detailed pin connection table.

### Circuit Section 1: SYSBOOT[15:10]

- Inputs:** 3V3\_EVM, DGND.
- Resistors:** R430-R423 (10K), R456-R449 (2K).
- Switches:** SW3 DIP\_SWITCH\_8 (pins 1-8).
- Connections:**
  - SYSBOOT9 → AM335X\_LCD\_DATA9
  - SYSBOOT4 → AM335X\_LCD\_DATA4
  - SYSBOOT3 → AM335X\_LCD\_DATA3
  - SYSBOOT2 → AM335X\_LCD\_DATA2
  - SYSBOOT1 → AM335X\_LCD\_DATA1
  - SYSBOOT0 → AM335X\_LCD\_DATA0

### Circuit Section 2: SYSBOOT[11:4]

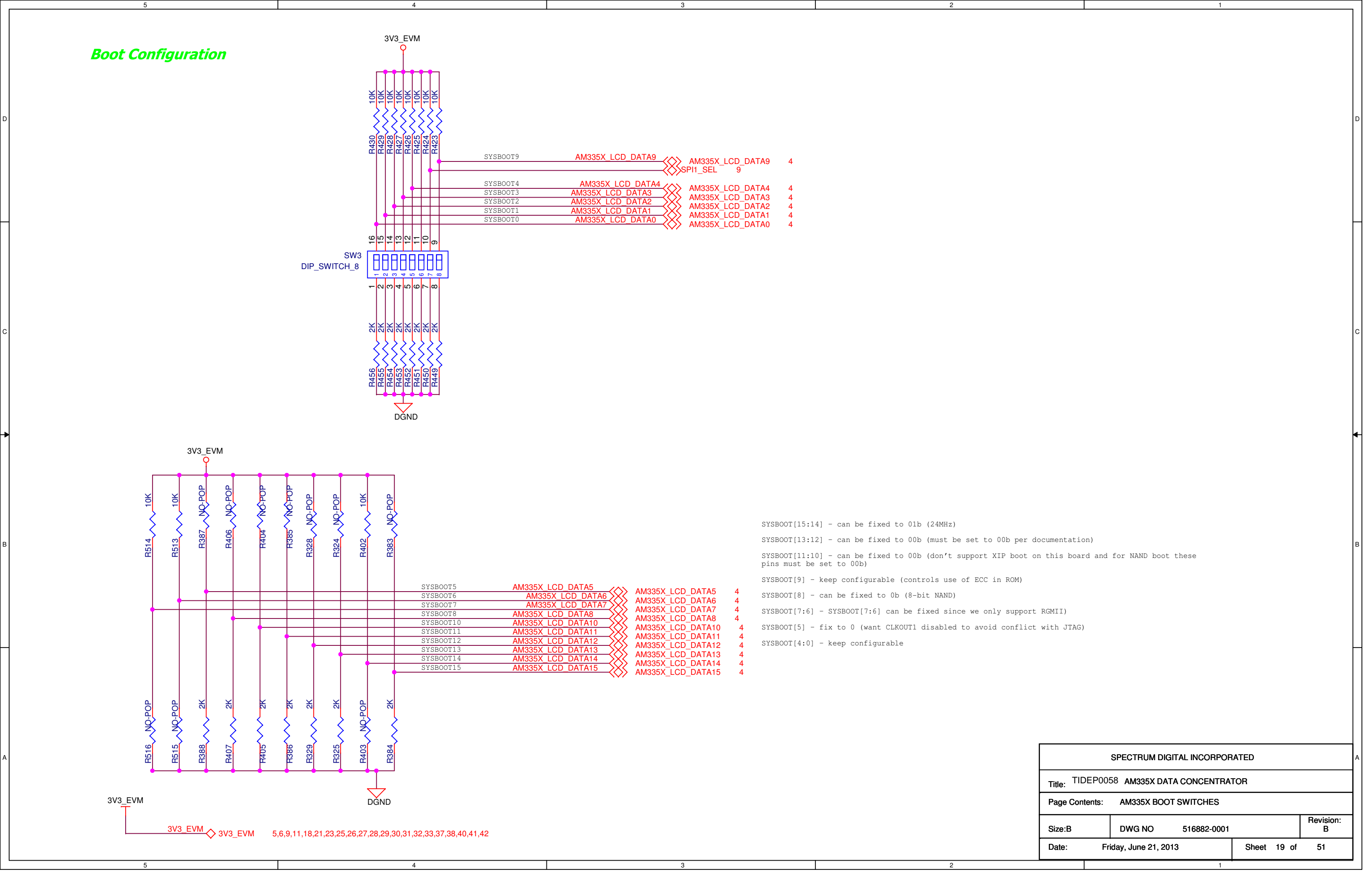
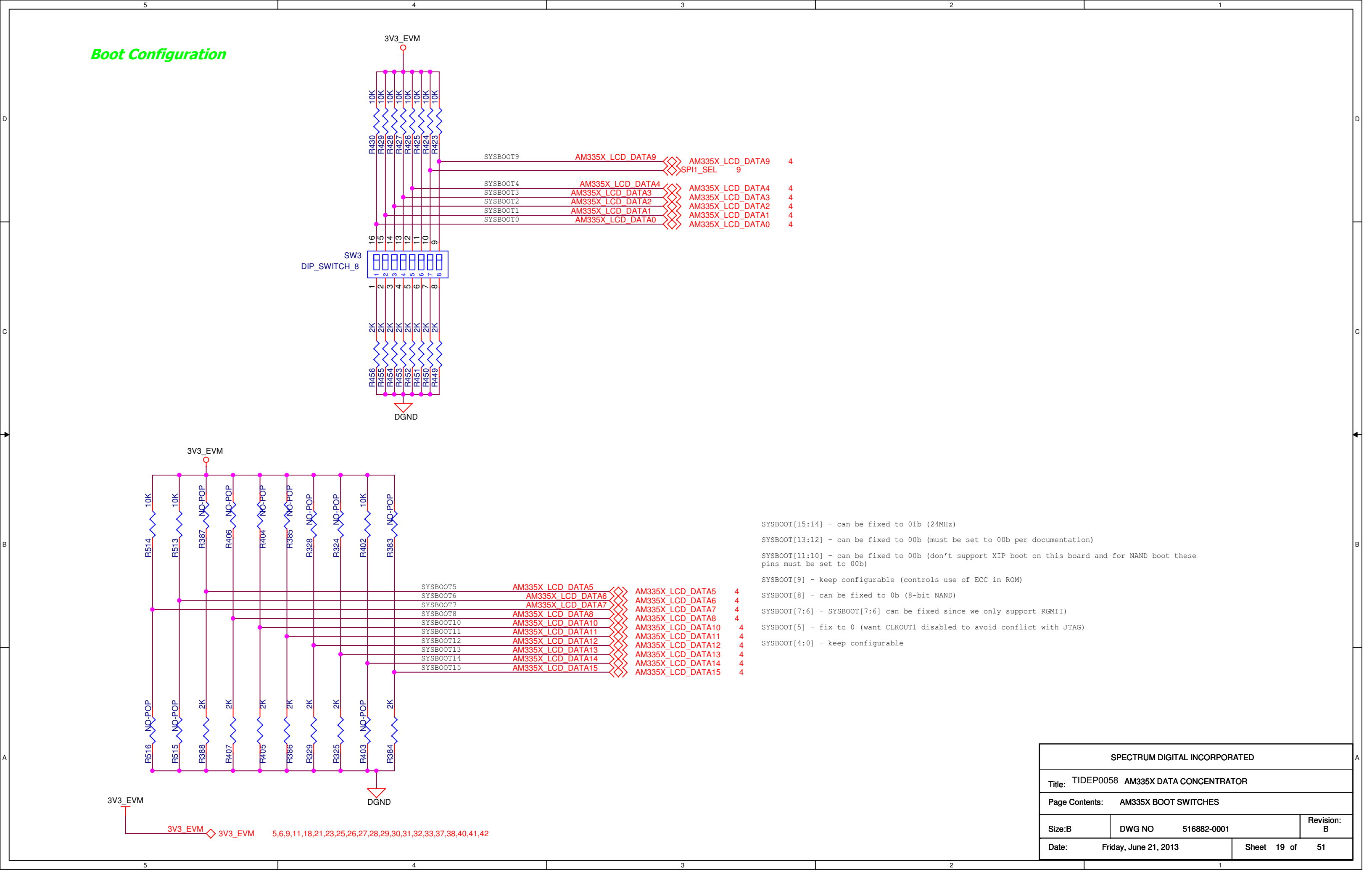
- Inputs:** 3V3\_EVM, DGND.
- Resistors:** R514-R383 (10K), R388-R384 (2K).
- Connections:**
  - SYSBOOT5 → AM335X\_LCD\_DATA5
  - SYSBOOT6 → AM335X\_LCD\_DATA6
  - SYSBOOT7 → AM335X\_LCD\_DATA7
  - SYSBOOT8 → AM335X\_LCD\_DATA8
  - SYSBOOT10 → AM335X\_LCD\_DATA10
  - SYSBOOT11 → AM335X\_LCD\_DATA11
  - SYSBOOT12 → AM335X\_LCD\_DATA12
  - SYSBOOT13 → AM335X\_LCD\_DATA13
  - SYSBOOT14 → AM335X\_LCD\_DATA14
  - SYSBOOT15 → AM335X\_LCD\_DATA15

### Pin Connection Table

Signal	Component	Value	Notes
SYSBOOT[15:14]	-	-	can be fixed to 01b (24MHz)
SYSBOOT[13:12]	-	-	can be fixed to 00b (must be set to 00b per documentation)
SYSBOOT[11:10]	-	-	can be fixed to 00b (don't support XIP boot on this board and for NAND boot these pins must be set to 00b)
SYSBOOT[9]	-	-	keep configurable (controls use of ECC in ROM)
SYSBOOT[8]	-	-	can be fixed to 0b (8-bit NAND)
SYSBOOT[7:6]	-	-	SYSBOOT[7:6] can be fixed since we only support RGMII)
SYSBOOT[5]	-	-	fix to 0 (want CLKOUT1 disabled to avoid conflict with JTAG)
SYSBOOT[4:0]	-	-	keep configurable

### Metadata Table

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[illegible]

**Boot Configuration**

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X BOOT SWITCHES			
Size:B	DWG NO	516882-0001	Revision: B
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**Boot Configuration**

**Top Section:**

- 3V3\_EVM supply
- Resistors: R430, R429, R428, R427, R426, R425, R424, R423 (10K)
- DIP\_SWITCH\_8 (SW3)
- Resistors: R456, R455, R454, R453, R452, R451, R450, R449 (2K)
- AM335X LCD\_DATA pins: DATA0-DATA15

**Bottom Section:**

- 3V3\_EVM supply
- Resistors: R516, R515, R388, R407, R405, R386, R329, R325, R403, R384 (2K)
- Resistors: R514, R513, R387, R406, R404, R385, R328, R324, R402, R383 (10K)
- AM335X LCD\_DATA pins: DATA0-DATA15

**Table:**

SYSBOOT	AM335X LCD_DATA	AM335X_LCD_DATA	
SYSBOOT9	AM335X_LCD_DATA9	AM335X_LCD_DATA9	4
SYSBOOT4	AM335X_LCD_DATA4	AM335X_LCD_DATA4	4
SYSBOOT3	AM335X_LCD_DATA3	AM335X_LCD_DATA3	4
SYSBOOT2	AM335X_LCD_DATA2	AM335X_LCD_DATA2	4
SYSBOOT1	AM335X_LCD_DATA1	AM335X_LCD_DATA1	4
SYSBOOT0	AM335X_LCD_DATA0	AM335X_LCD_DATA0	4

**Table:**

SYSBOOT	AM335X LCD_DATA	AM335X_LCD_DATA	
SYSBOOT5	AM335X_LCD_DATA5	AM335X_LCD_DATA5	4
SYSBOOT6	AM335X_LCD_DATA6	AM335X_LCD_DATA6	4
SYSBOOT7	AM335X_LCD_DATA7	AM335X_LCD_DATA7	4
SYSBOOT8	AM335X_LCD_DATA8	AM335X_LCD_DATA8	4
SYSBOOT10	AM335X_LCD_DATA10	AM335X_LCD_DATA10	4
SYSBOOT11	AM335X_LCD_DATA11	AM335X_LCD_DATA11	4
SYSBOOT12	AM335X_LCD_DATA12	AM335X_LCD_DATA12	4
SYSBOOT13	AM335X_LCD_DATA13	AM335X_LCD_DATA13	4
SYSBOOT14	AM335X_LCD_DATA14	AM335X_LCD_DATA14	4
SYSBOOT15	AM335X_LCD_DATA15	AM335X_LCD_DATA15	4

**Table:**

SYSBOOT	AM335X LCD_DATA	AM335X_LCD_DATA	
SYSBOOT[15:14]	- can be fixed to 01b (24MHz)		
SYSBOOT[13:12]	- can be fixed to 00b (must be set to 00b per documentation)		
SYSBOOT[11:10]	- can be fixed to 00b (don't support XIP boot on this board and for NAND boot these pins must be set to 00b)		
SYSBOOT[9]	- keep configurable (controls use of ECC in ROM)		
SYSBOOT[8]	- can be fixed to 0b (8-bit NAND)		
SYSBOOT[7:6]	- SYSBOOT[7:6] can be fixed since we only support RGMII)		
SYSBOOT[5]	- fix to 0 (want CLKOUT1 disabled to avoid conflict with JTAG)		
SYSBOOT[4:0]	- keep configurable		

**Table:**

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X BOOT SWITCHES			
Size: B	DWG NO	516882-0001	Revision: B
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**Boot Configuration**

The diagram illustrates the boot configuration for the AM335X LCD concentrator. It features two main sections of circuitry, both powered by a 3V3\_EVM supply.

**Top Section:** This section connects the SYSBOOT pins to the AM335X\_LCD\_DATA bus. The SYSBOOT pins are labeled from 16 down to 9. The corresponding AM335X\_LCD\_DATA pins are labeled from 9 down to 0. The connections are as follows:

- SYSBOOT9 → AM335X\_LCD\_DATA9
- SYSBOOT4 → AM335X\_LCD\_DATA4
- SYSBOOT3 → AM335X\_LCD\_DATA3
- SYSBOOT2 → AM335X\_LCD\_DATA2
- SYSBOOT1 → AM335X\_LCD\_DATA1
- SYSBOOT0 → AM335X\_LCD\_DATA0

**Bottom Section:** This section connects the SYSBOOT pins to the AM335X\_LCD\_DATA bus. The SYSBOOT pins are labeled from 16 down to 9. The corresponding AM335X\_LCD\_DATA pins are labeled from 15 down to 6. The connections are as follows:

- SYSBOOT5 → AM335X\_LCD\_DATA5
- SYSBOOT6 → AM335X\_LCD\_DATA6
- SYSBOOT7 → AM335X\_LCD\_DATA7
- SYSBOOT8 → AM335X\_LCD\_DATA8
- SYSBOOT10 → AM335X\_LCD\_DATA10
- SYSBOOT11 → AM335X\_LCD\_DATA11
- SYSBOOT12 → AM335X\_LCD\_DATA12
- SYSBOOT13 → AM335X\_LCD\_DATA13
- SYSBOOT14 → AM335X\_LCD\_DATA14
- SYSBOOT15 → AM335X\_LCD\_DATA15

**Legend:**

- SYSBOOT[15:14] - can be fixed to 01b (24MHz)
- SYSBOOT[13:12] - can be fixed to 00b (must be set to 00b per documentation)
- SYSBOOT[11:10] - can be fixed to 00b (don't support XIP boot on this board and for NAND boot these pins must be set to 00b)
- SYSBOOT[9] - keep configurable (controls use of ECC in ROM)
- SYSBOOT[8] - can be fixed to 0b (8-bit NAND)
- SYSBOOT[7:6] - SYSBOOT[7:6] can be fixed since we only support RGMII)
- SYSBOOT[5] - fix to 0 (want CLKOUT1 disabled to avoid conflict with JTAG)
- SYSBOOT[4:0] - keep configurable

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X BOOT SWITCHES			
Size:B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013	Sheet 19 of	51

[illegible][illegible]

**Boot Configuration**

**Top Section:**

- 3V3\_EVM supply
- Resistors: R430, R429, R428, R427, R426, R425, R424, R423 (10K)
- DIP\_SWITCH\_8 (SW3)
- Resistors: R456, R455, R454, R453, R452, R451, R450, R449 (2K)
- AM335X LCD\_DATA pins: DATA0-DATA15

**Bottom Section:**

- 3V3\_EVM supply
- Resistors: R516, R515, R388, R407, R405, R386, R329, R325, R403, R384 (2K)
- Resistors: R514, R513, R387, R406, R404, R385, R328, R324, R402, R383 (10K)
- AM335X LCD\_DATA pins: DATA0-DATA15

**Table:**

SYSBOOT	AM335X LCD_DATA	AM335X_LCD_DATA	
SYSBOOT9	AM335X_LCD_DATA9	AM335X_LCD_DATA9	4
SYSBOOT4	AM335X_LCD_DATA4	AM335X_LCD_DATA4	4
SYSBOOT3	AM335X_LCD_DATA3	AM335X_LCD_DATA3	4
SYSBOOT2	AM335X_LCD_DATA2	AM335X_LCD_DATA2	4
SYSBOOT1	AM335X_LCD_DATA1	AM335X_LCD_DATA1	4
SYSBOOT0	AM335X_LCD_DATA0	AM335X_LCD_DATA0	4

**Notes:**

- SYSBOOT[15:14] - can be fixed to 01b (24MHz)
- SYSBOOT[13:12] - can be fixed to 00b (must be set to 00b per documentation)
- SYSBOOT[11:10] - can be fixed to 00b (don't support XIP boot on this board and for NAND boot these pins must be set to 00b)
- SYSBOOT[9] - keep configurable (controls use of ECC in ROM)
- SYSBOOT[8] - can be fixed to 0b (8-bit NAND)
- SYSBOOT[7:6] - SYSBOOT[7:6] can be fixed since we only support RGMII)
- SYSBOOT[5] - fix to 0 (want CLKOUT1 disabled to avoid conflict with JTAG)
- SYSBOOT[4:0] - keep configurable

**Table:**

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X BOOT SWITCHES			
Size: B	DWG NO	516882-0001	Revision: B
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[illegible]

**Boot Configuration**

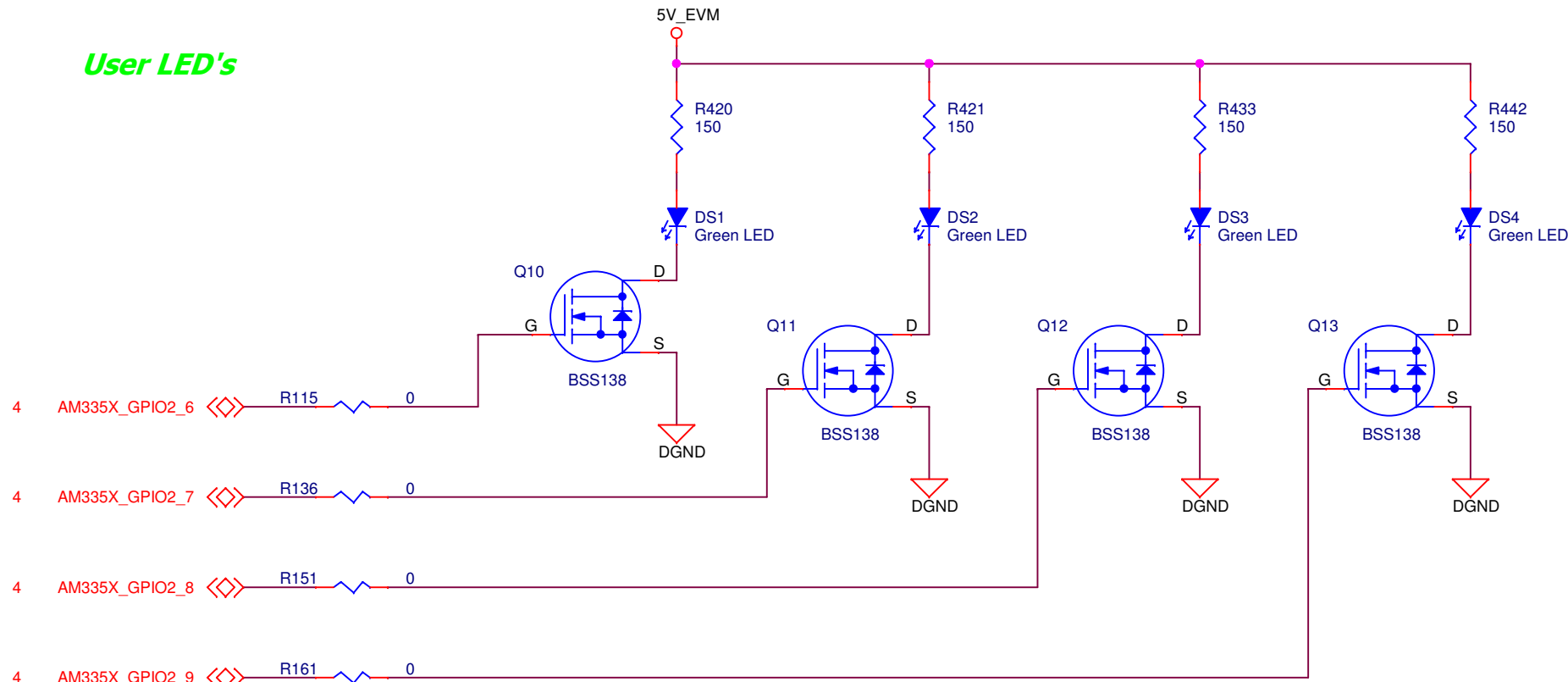
**Legend:**

- SYSBOOT[15:14] - can be fixed to 01b (24MHz)
- SYSBOOT[13:12] - can be fixed to 00b (must be set to 00b per documentation)
- SYSBOOT[11:10] - can be fixed to 00b (don't support XIP boot on this board and for NAND boot these pins must be set to 00b)
- SYSBOOT[9] - keep configurable (controls use of ECC in ROM)
- SYSBOOT[8] - can be fixed to 0b (8-bit NAND)
- SYSBOOT[7:6] - SYSBOOT[7:6] can be fixed since we only support RGMII)
- SYSBOOT[5] - fix to 0 (want CLKOUT1 disabled to avoid conflict with JTAG)
- SYSBOOT[4:0] - keep configurable

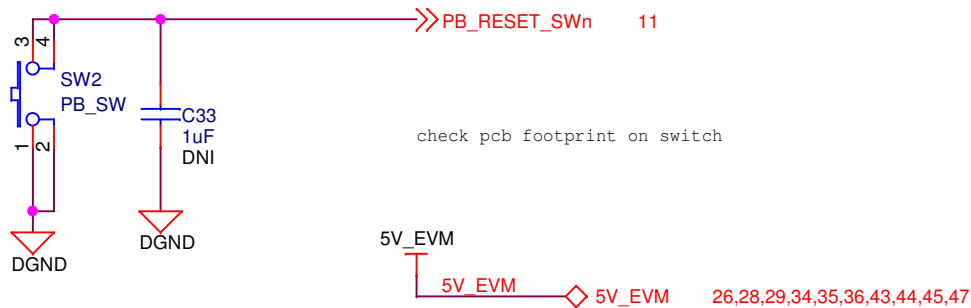
**Table:**

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X BOOT SWITCHES			
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User LED's

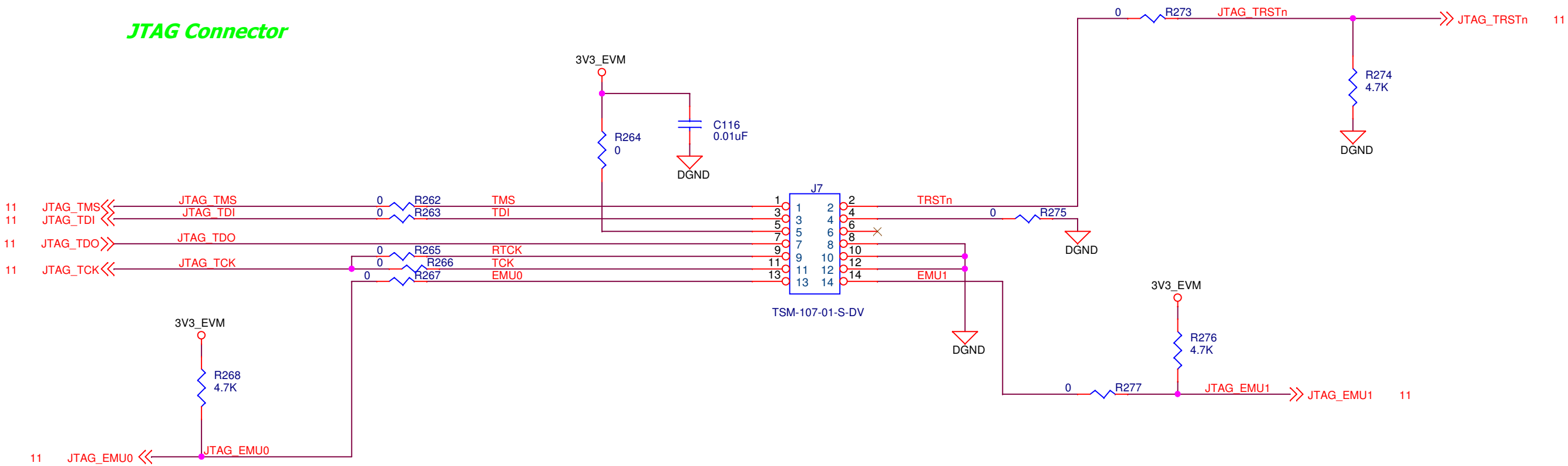


User Reset Switches



SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AM335X LEDS, USER SWITCHES			
Size:B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013	Sheet 20 of	51

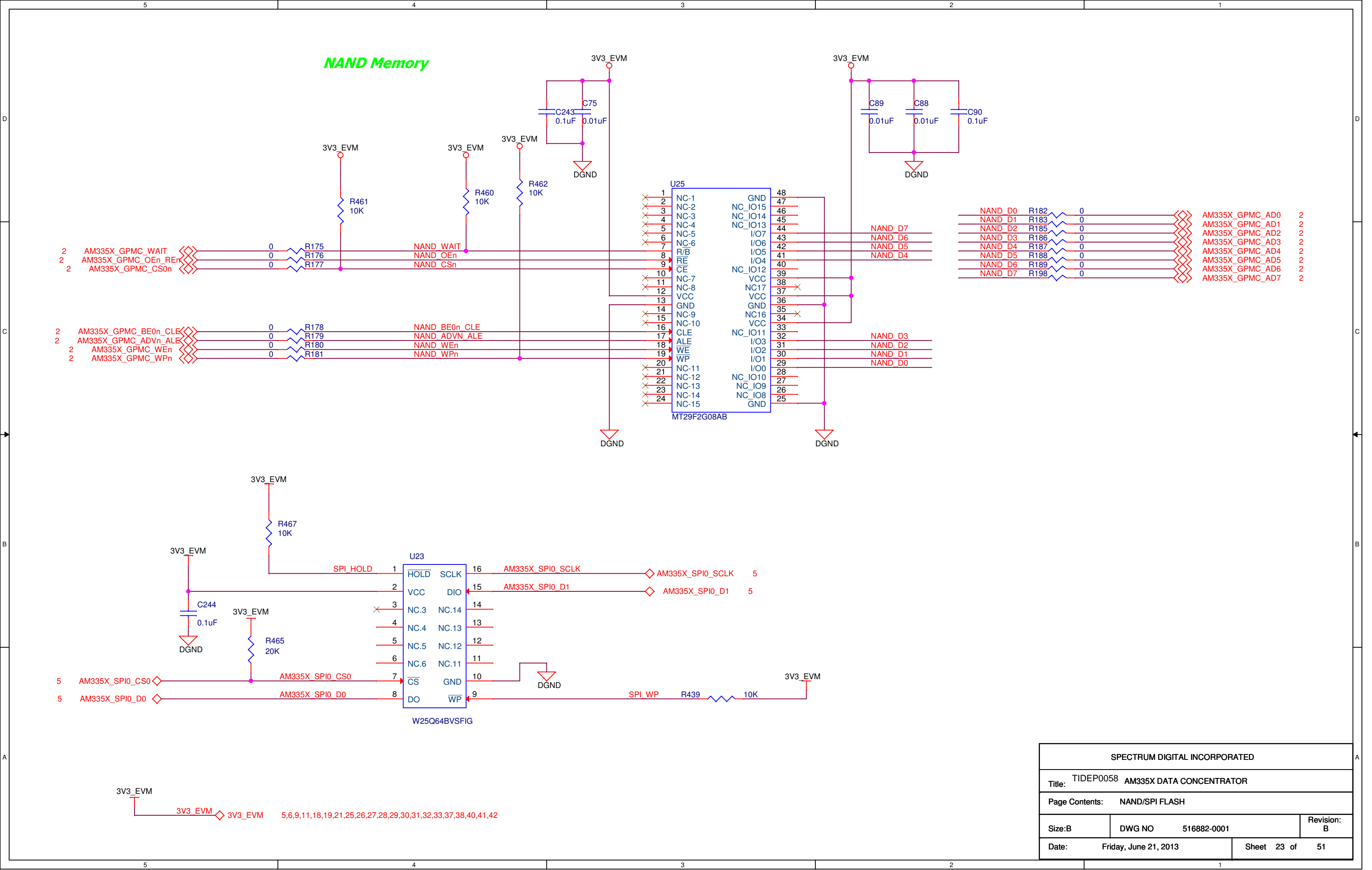
JTAG Connector



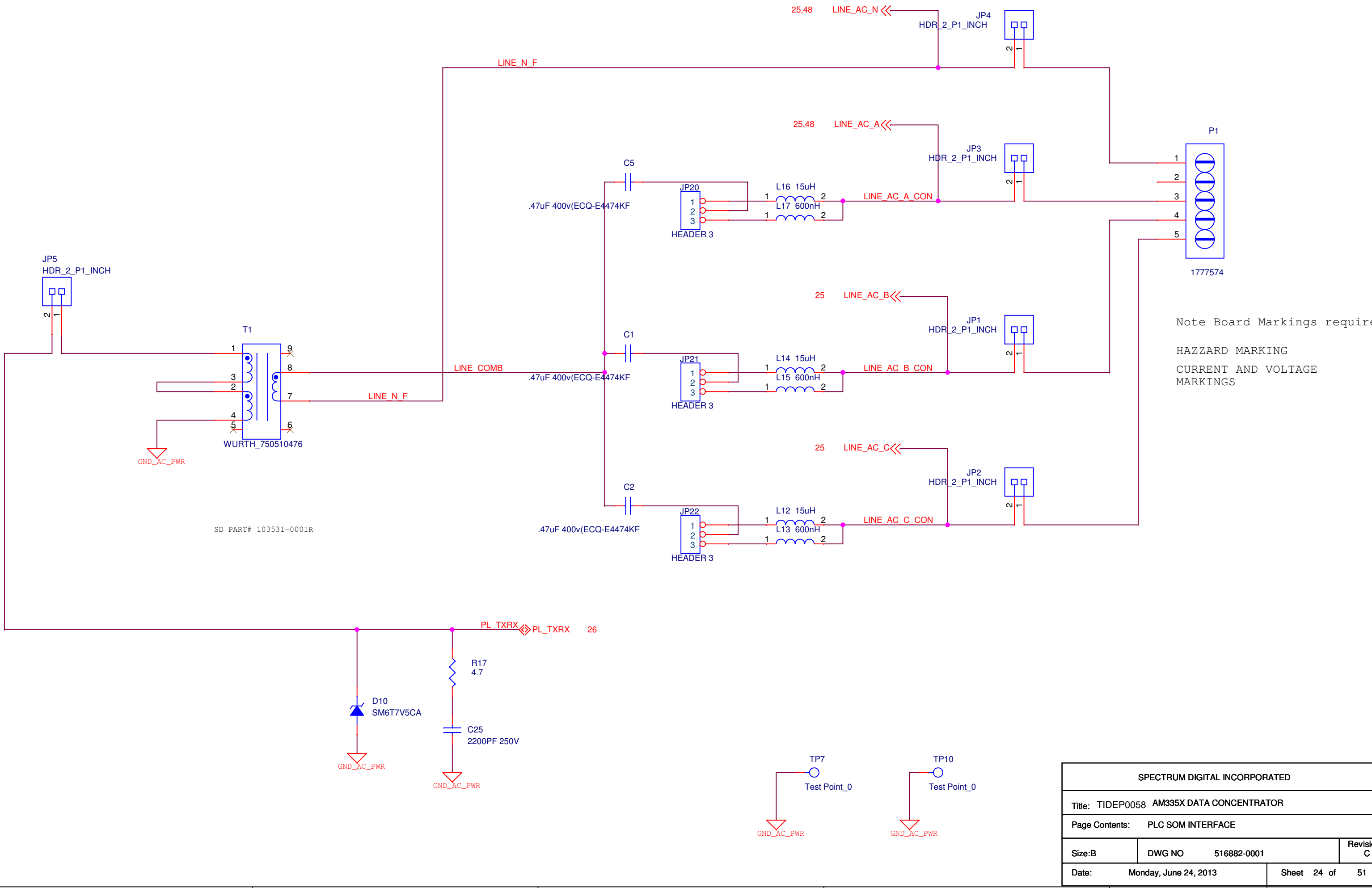
3V3\_EVM  
3V3\_EVM  
3V3\_EVM  
5,6,9,11,18,19,23,25,26,27,28,29,30,31,32,33,37,38,40,41,42

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: JTAG CONNECTOR			
Size:B	DWG NO	516882-0001	Revision: B
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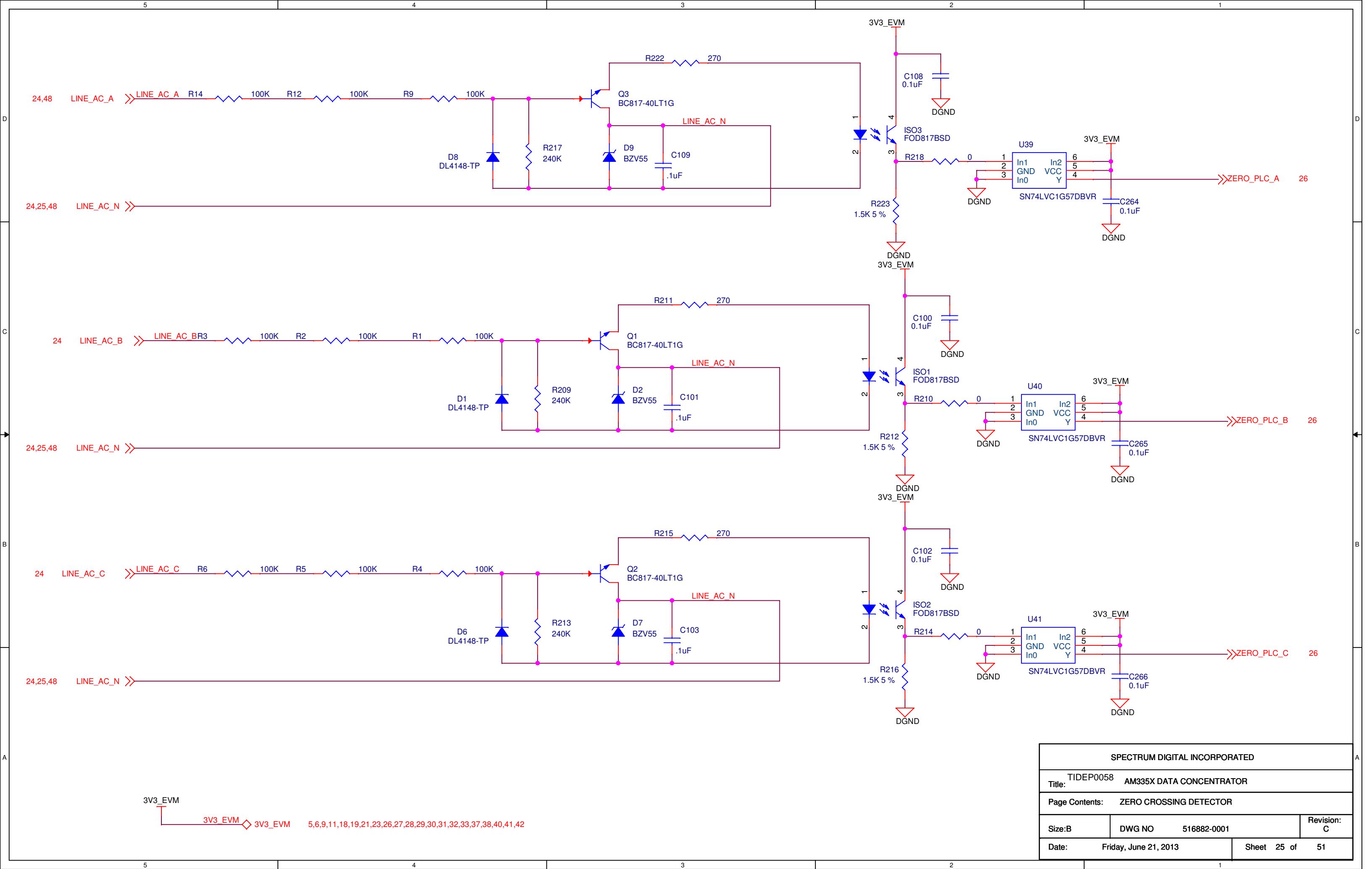
SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: NAND/SPI FLASH			
Size:B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013	Sheet 23 of	51



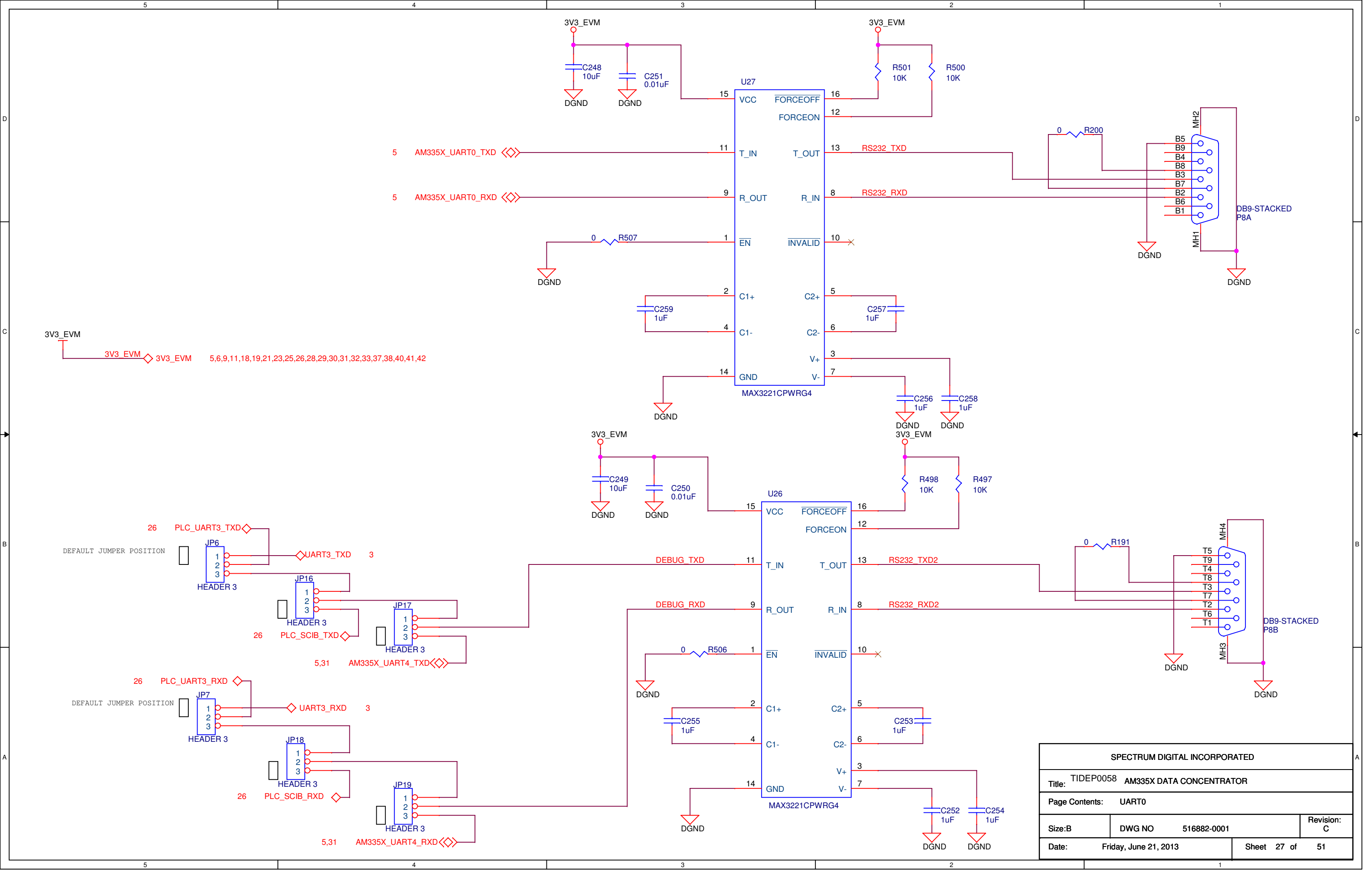
Note Board Markings required  
HAZZARD MARKING  
CURRENT AND VOLTAGE  
MARKINGS

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: PLC SOM INTERFACE			
Size:B	DWG NO	516882-0001	Revision: C
Date:	Monday, June 24, 2013		Sheet 24 of 51

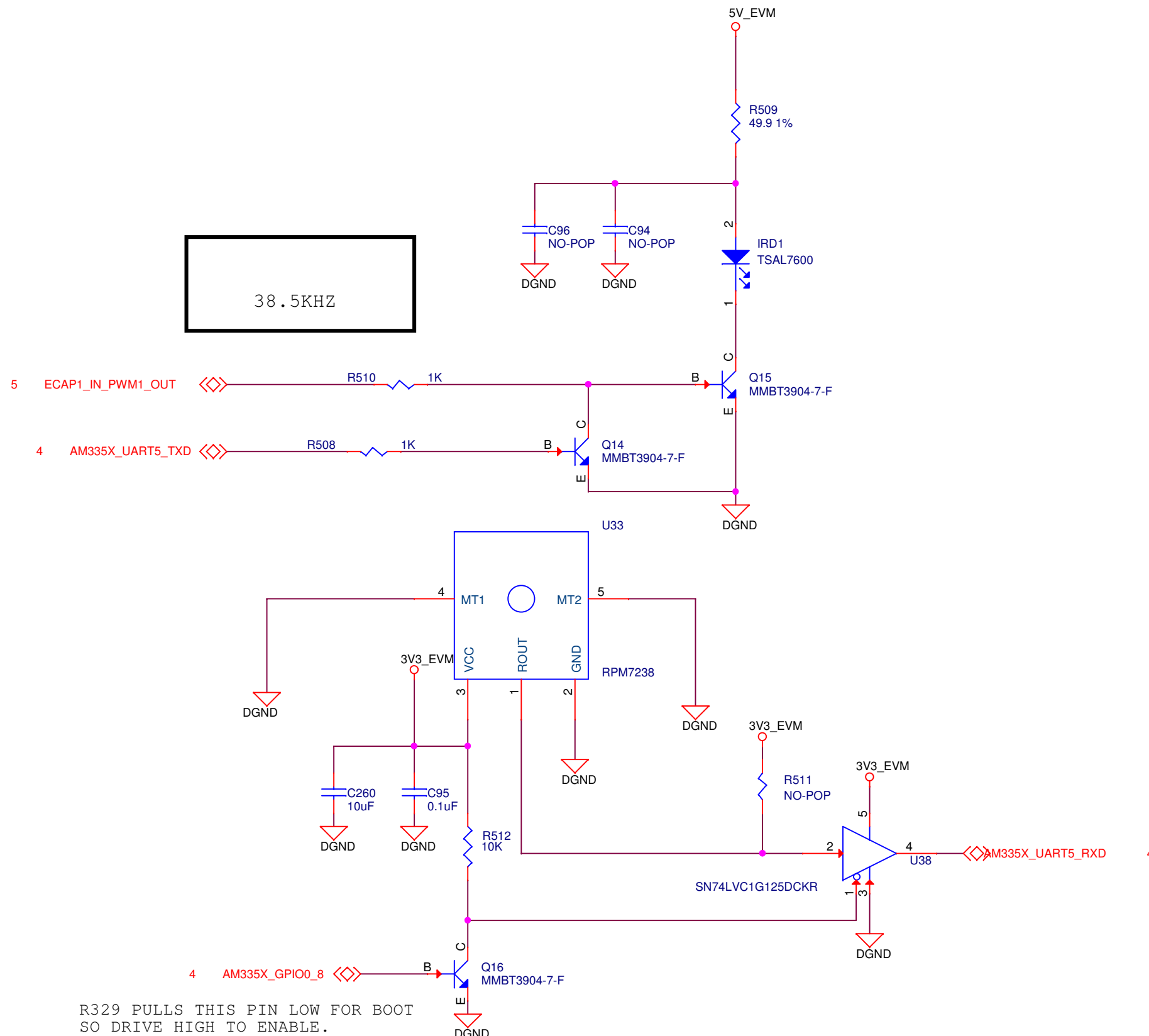




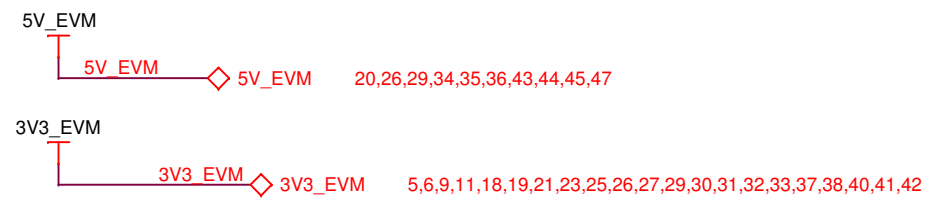




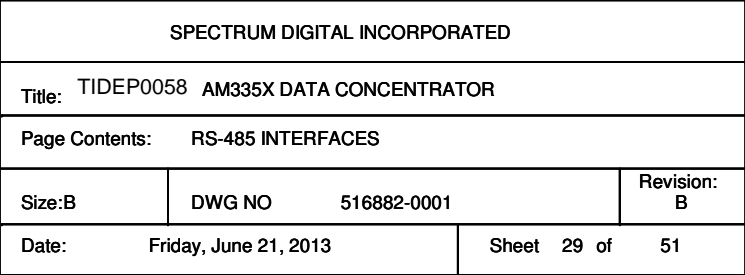
SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: UART0			
Size: B	DWG NO	516882-0001	Revision: C
Date:	Friday, June 21, 2013	Sheet 27 of	51

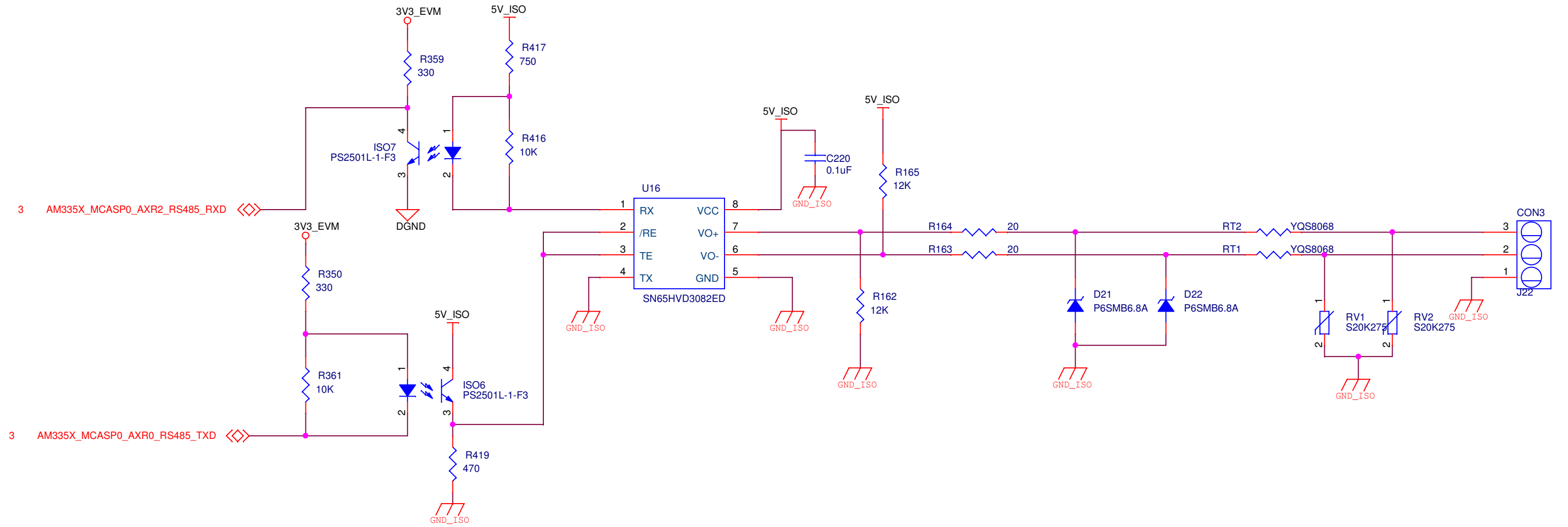


R329 PULLS THIS PIN LOW FOR BOOT  
SO DRIVE HIGH TO ENABLE.

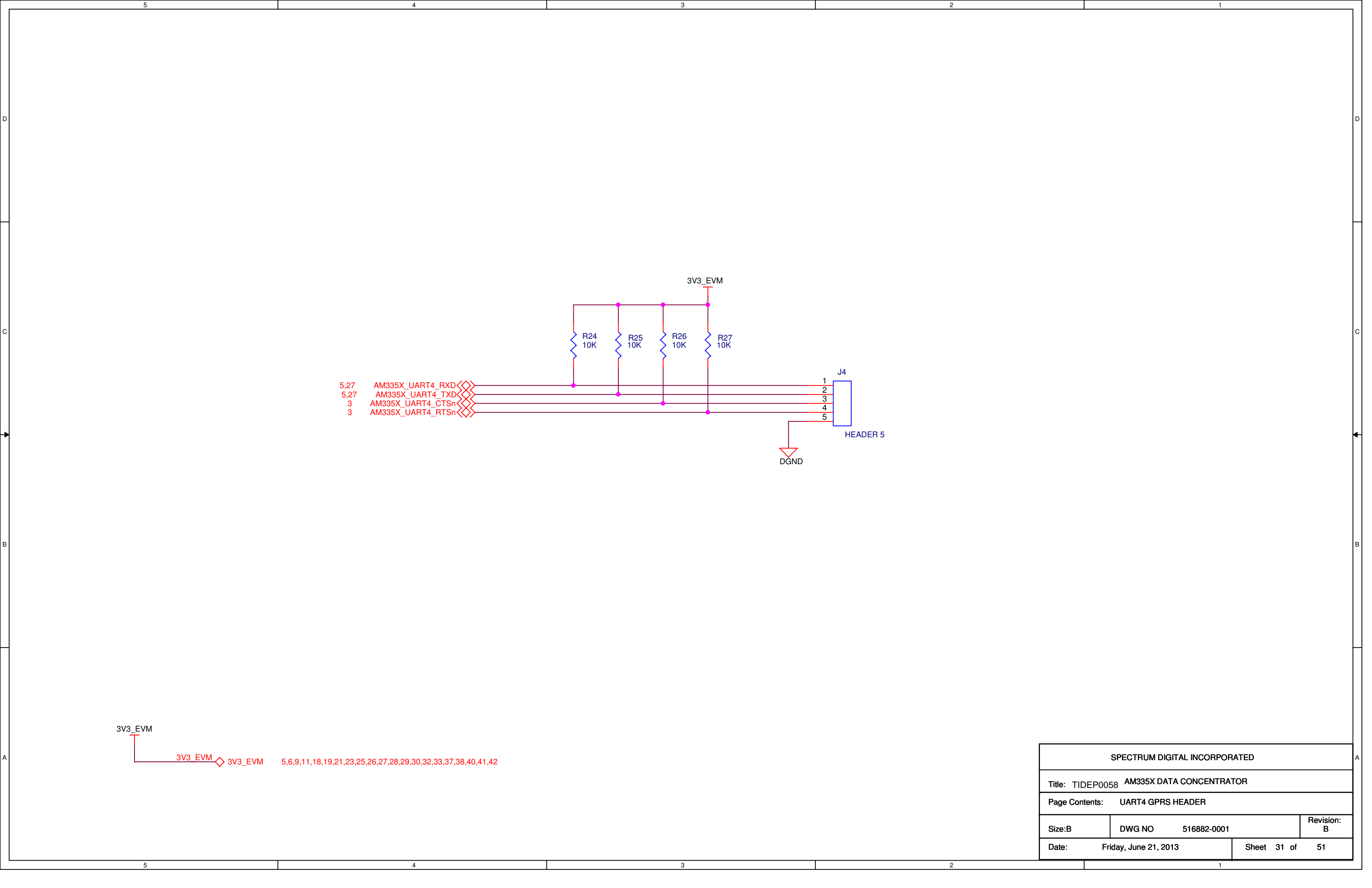


SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: IR INTERFACE			
Size:B	DWG NO	516882-0001	Revision: C
Date:	Friday, June 21, 2013		Sheet 28 of 51

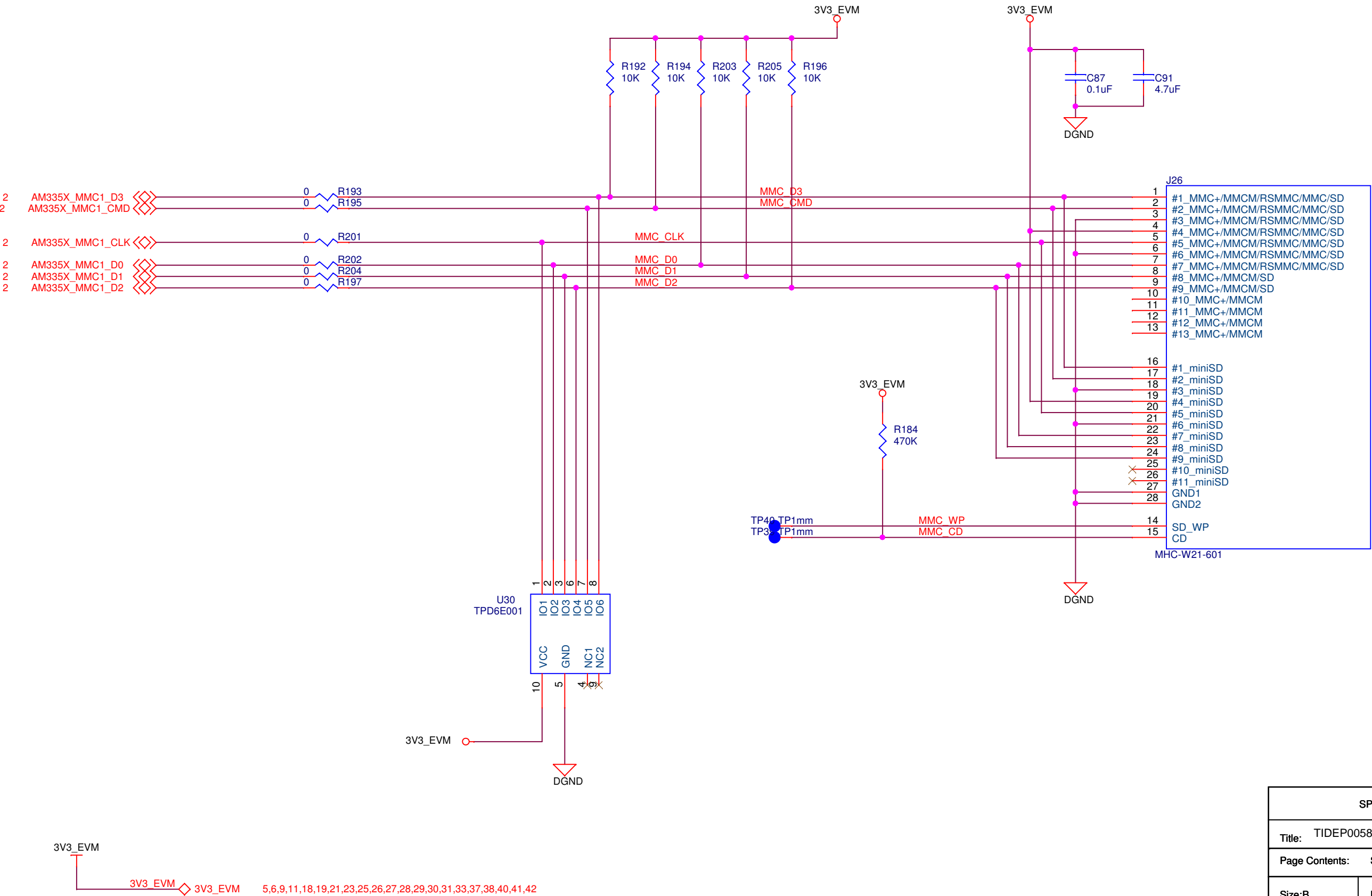




SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: RS-485 INTERFACES			
Size: B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013		Sheet 30 of 51

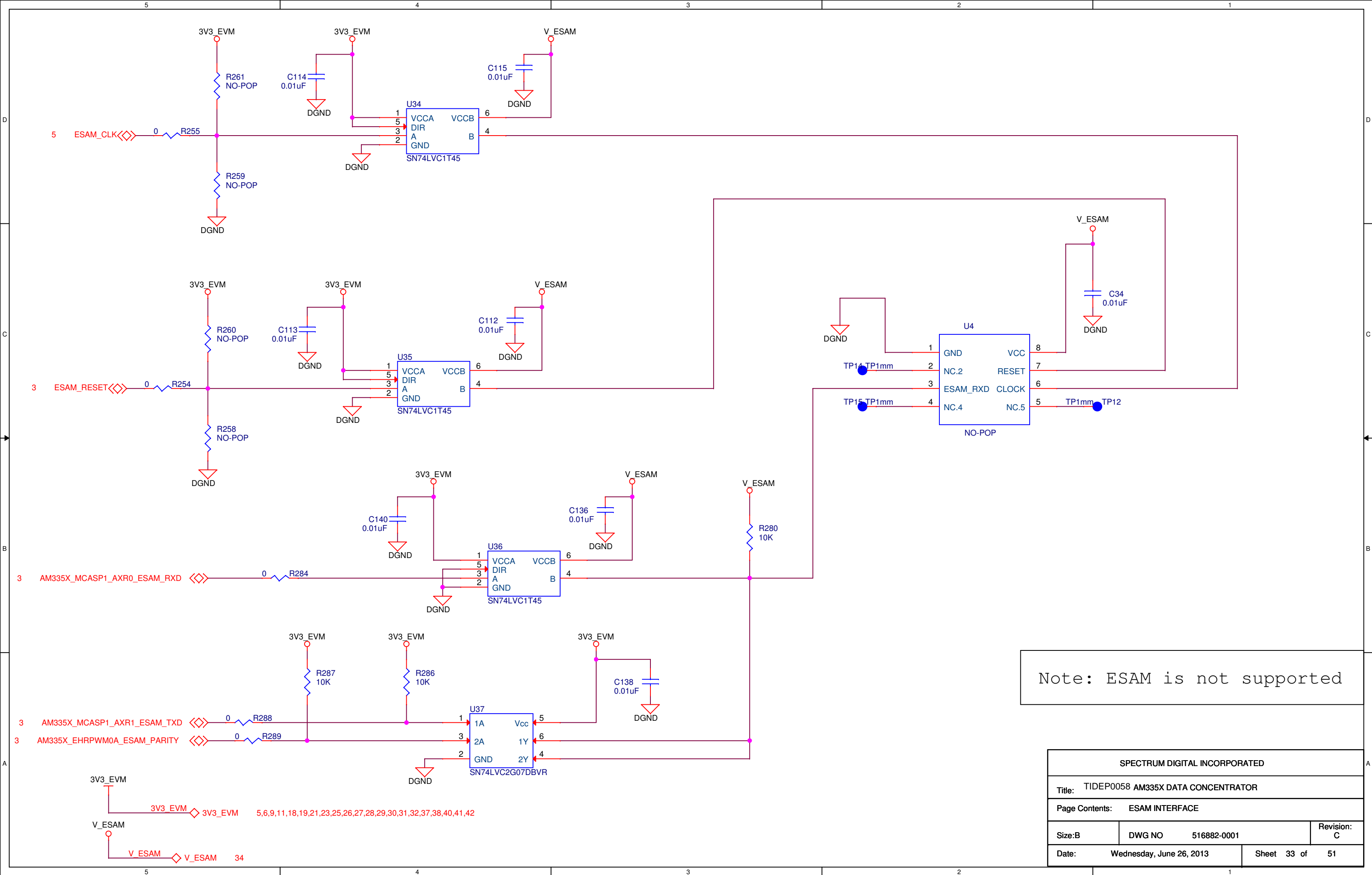


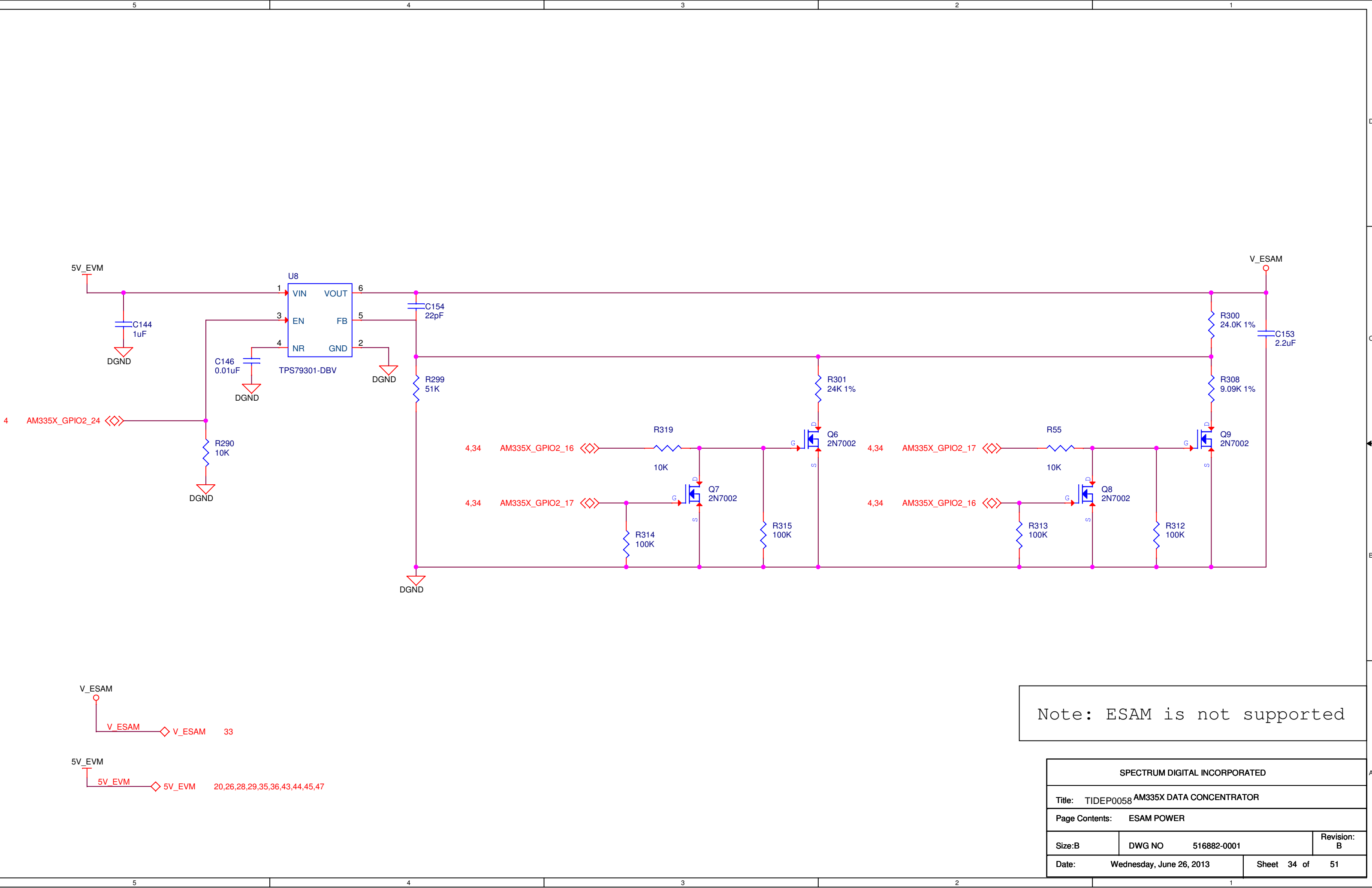
SD/MMC Connector



SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: SD CARD INTERFACE			
Size: B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013		Sheet 32 of 51

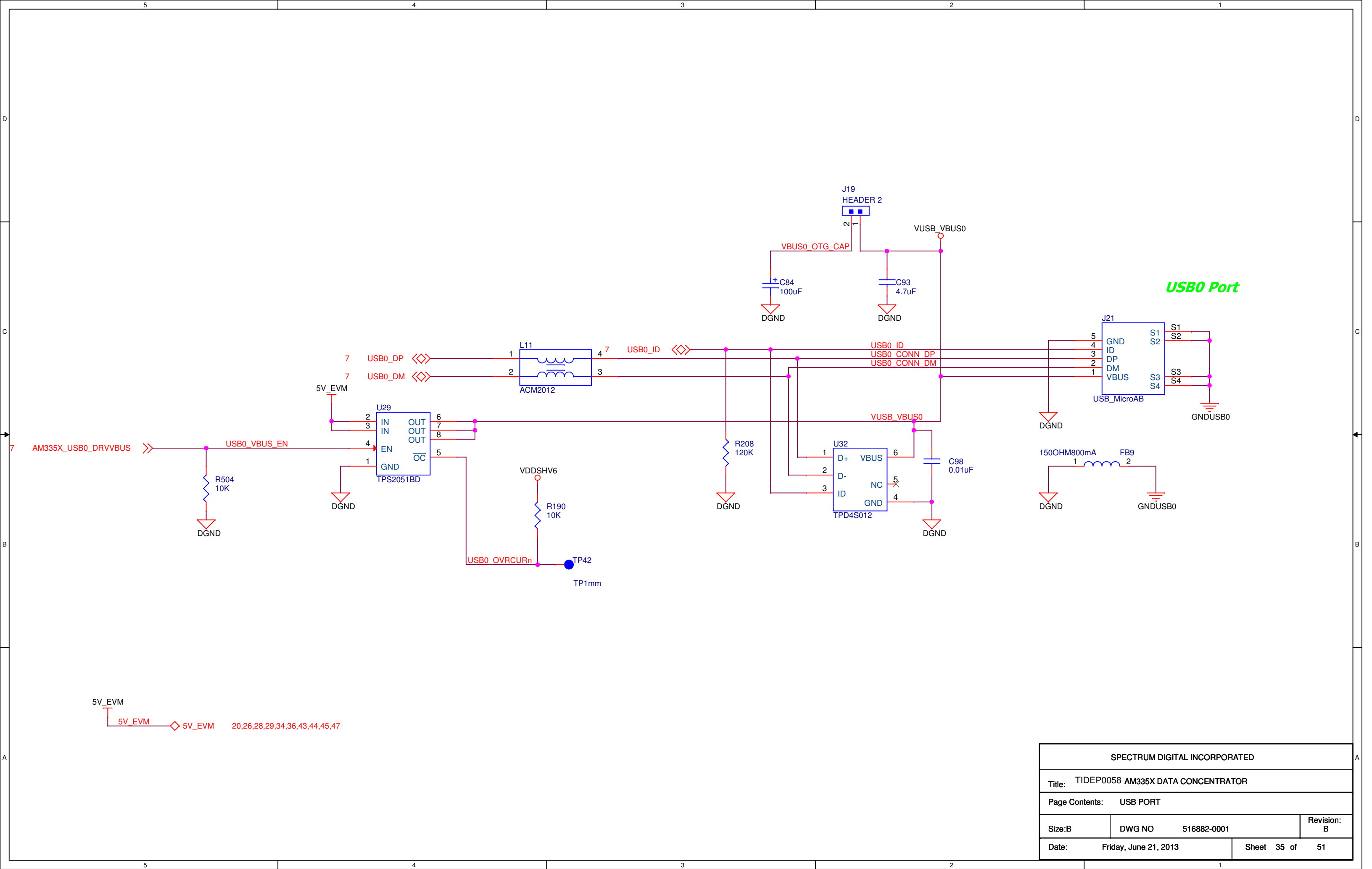


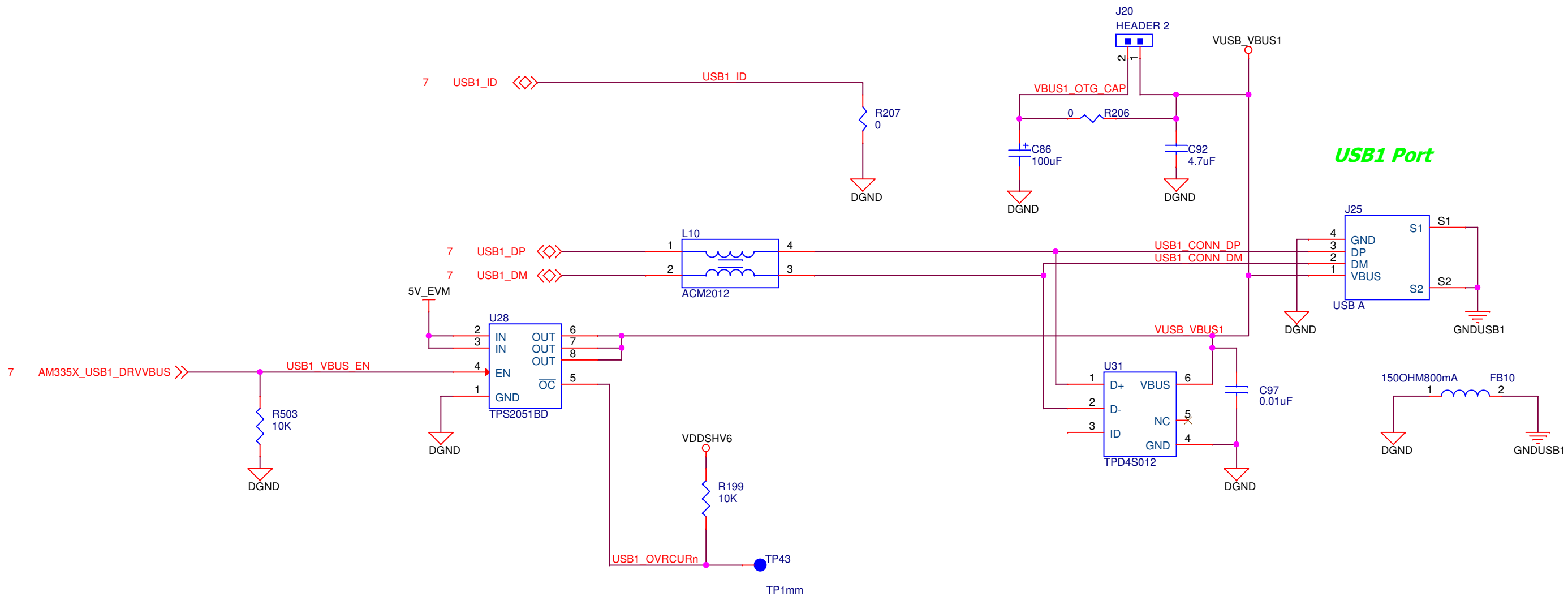




Note: ESAM is not supported

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: ESAM POWER			
Size:B	DWG NO	516882-0001	Revision: B
Date:	Wednesday, June 26, 2013	Sheet 34 of	51



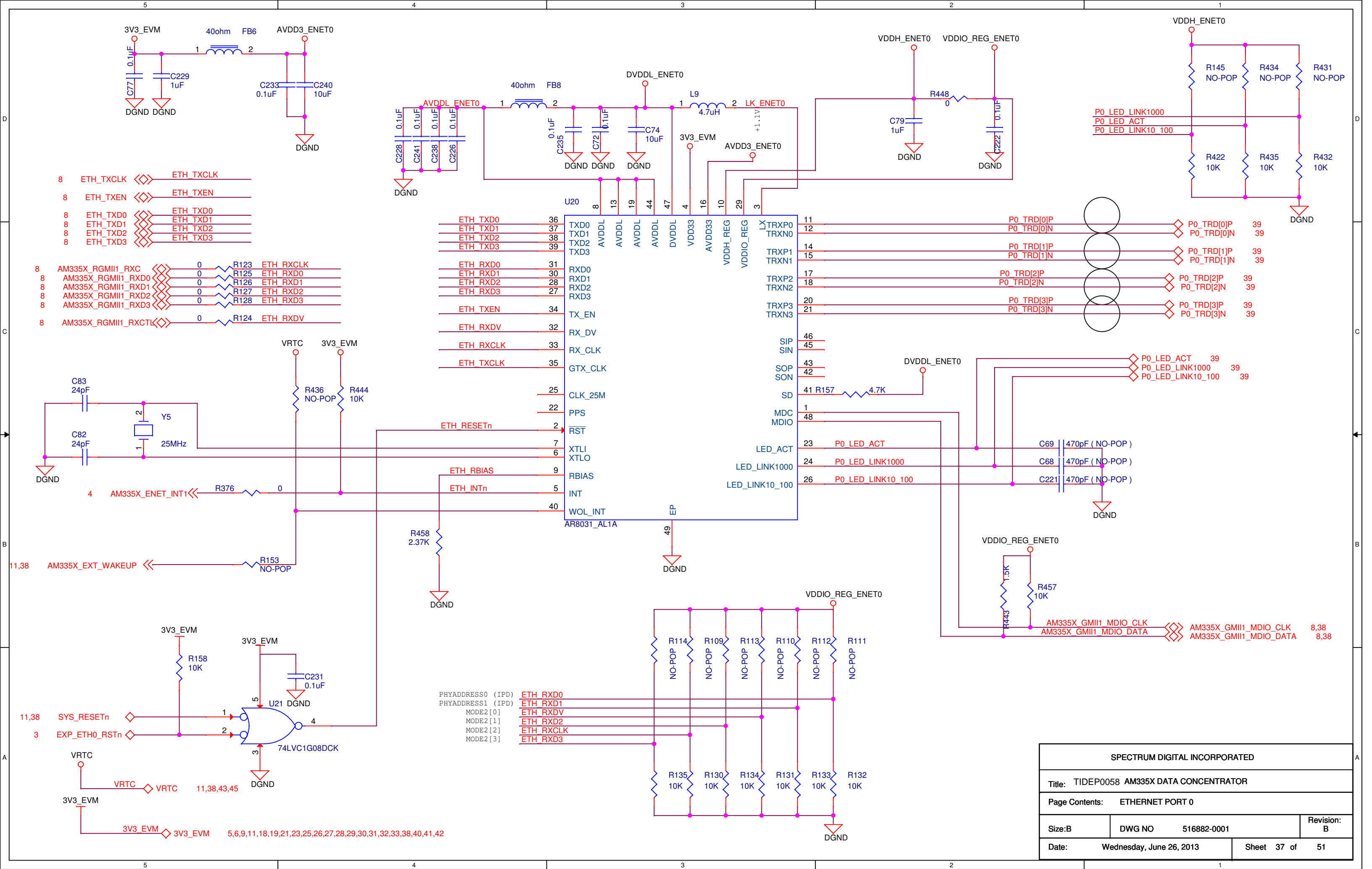


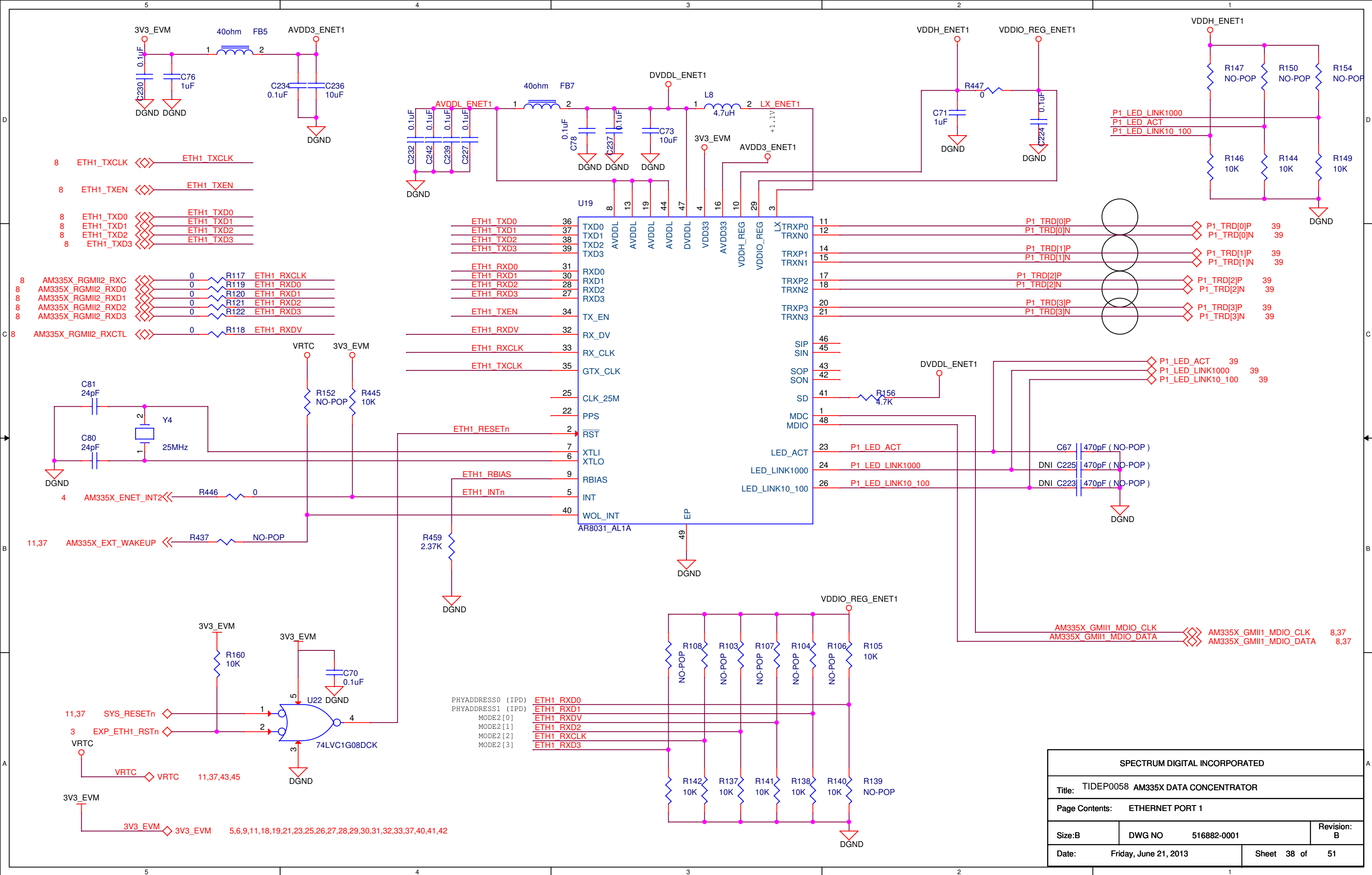
7 AM335X\_USB1\_DRVVBUS >> USB1\_VBUS EN

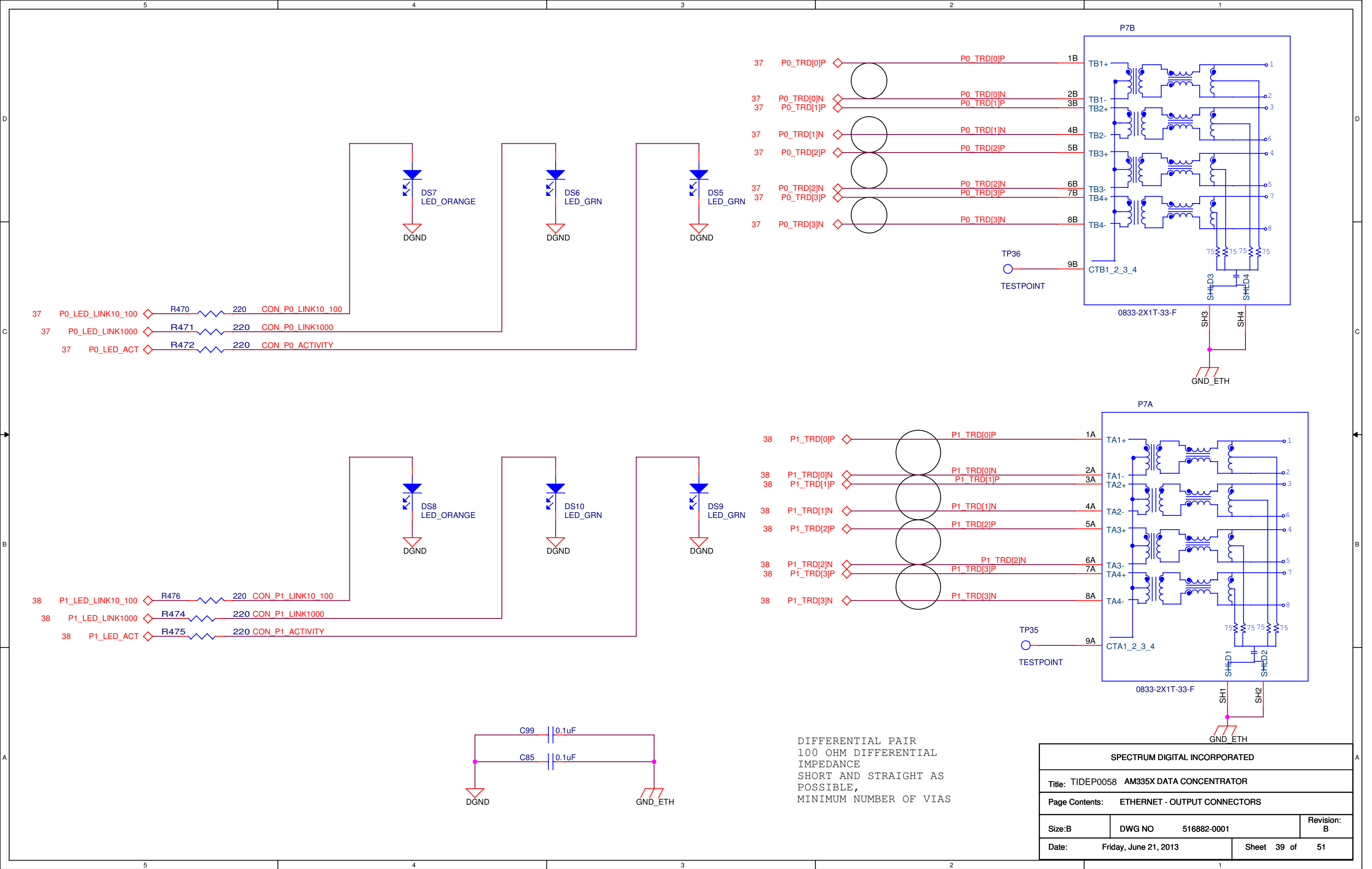
5V\_EVM

5V\_EVM 5V\_EVM 20,26,28,29,34,35,43,44,45,47

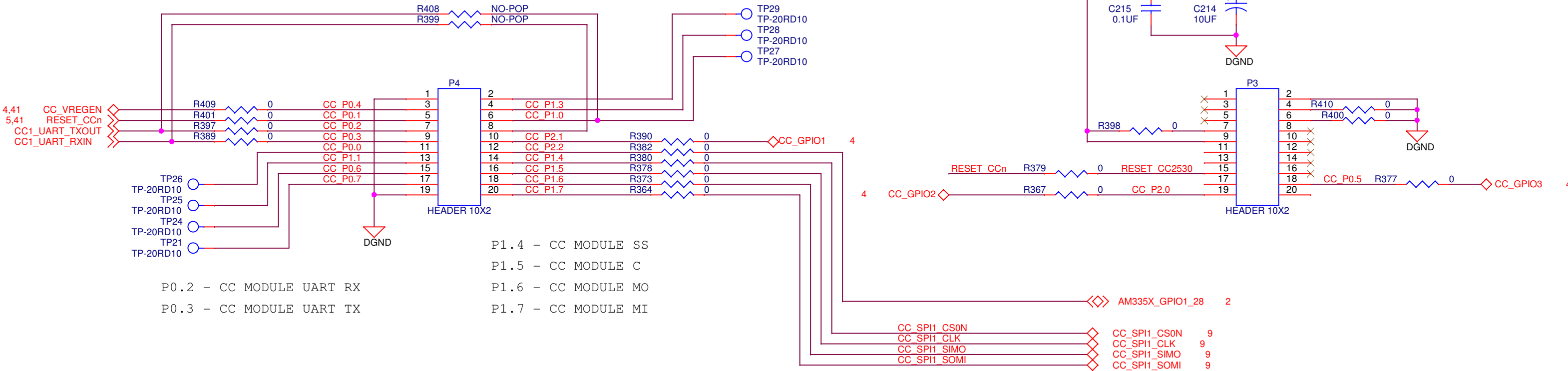
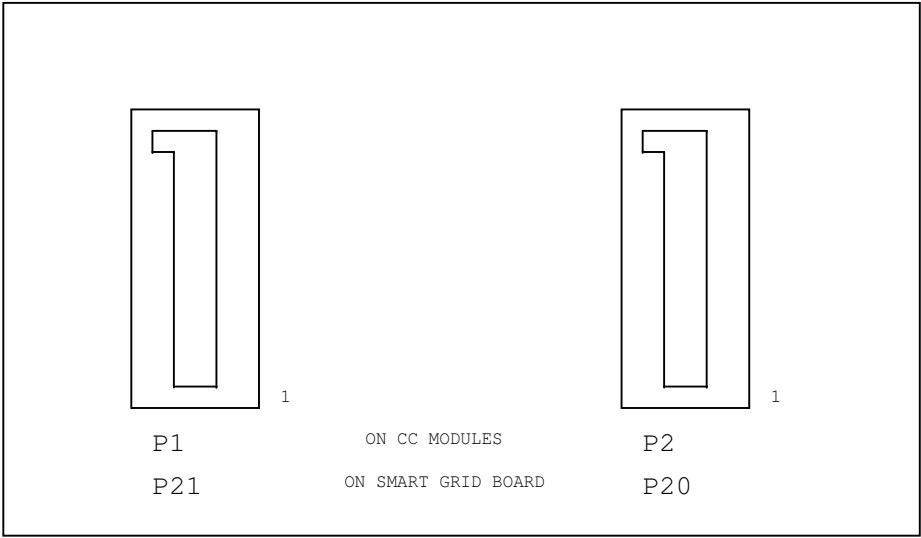
SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: USB PORT 1			
Size:B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013		Sheet 36 of 51







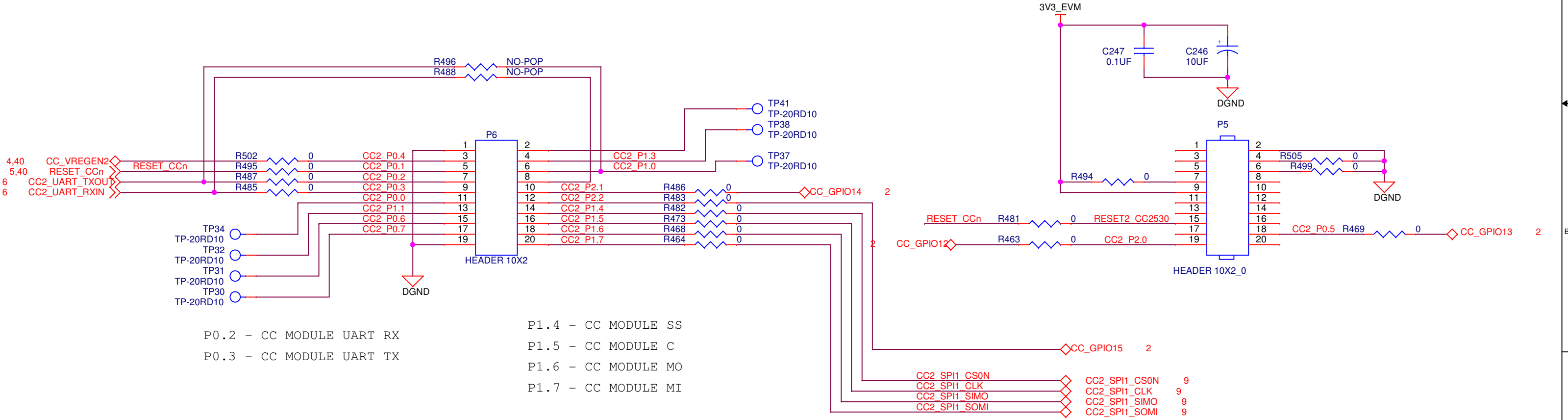
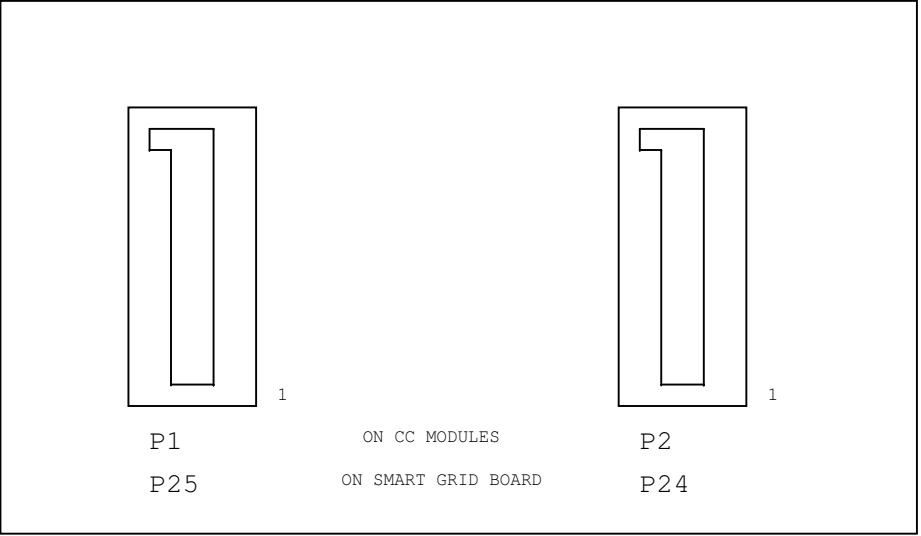
NOTE: DIMENSIONS AND LOCATIONS OF THESE CONNECTORS MUST MEET SPECIFICATION FOR INTERFACE MODULES  
REFERENCE CC2530-EVM-UG



SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: CC CARD INTERFACE1			
Size: B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013	Sheet 40 of	51



NOTE: DIMENSIONS AND LOCATIONS OF THESE CONNECTORS MUST MEET SPECIFICATION FOR INTERFACE MODULES REFERENCE

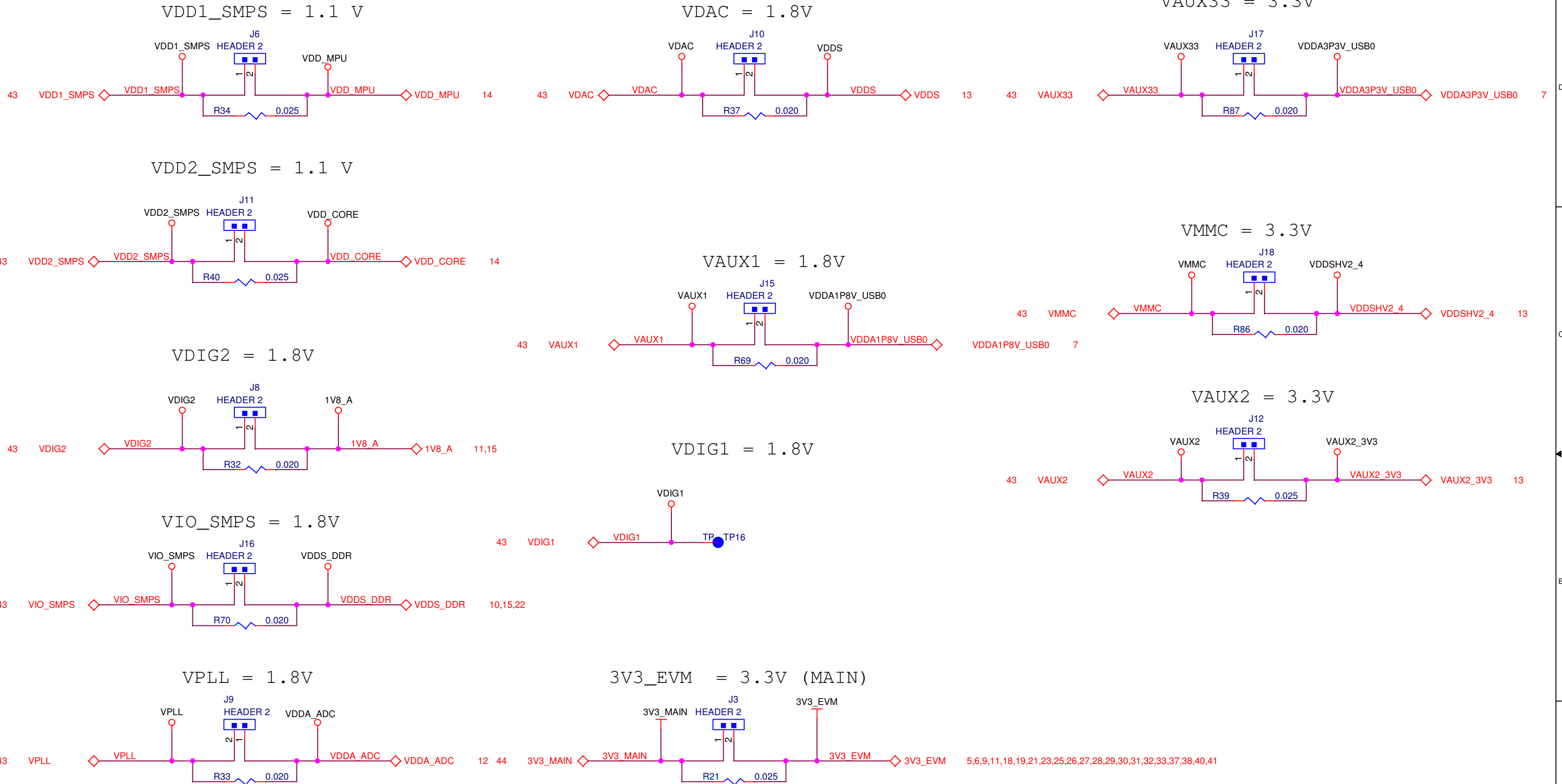


P0.2 - CC MODULE UART RX  
P0.3 - CC MODULE UART TX

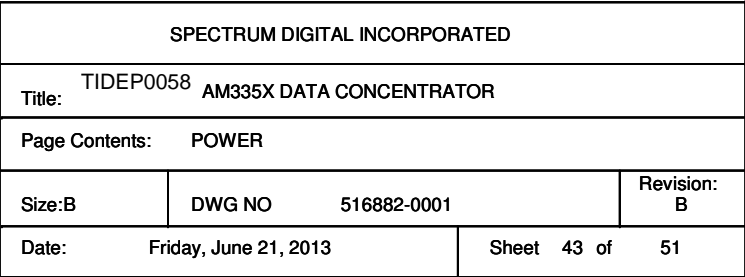
P1.4 - CC MODULE SS  
P1.5 - CC MODULE C  
P1.6 - CC MODULE MO  
P1.7 - CC MODULE MI

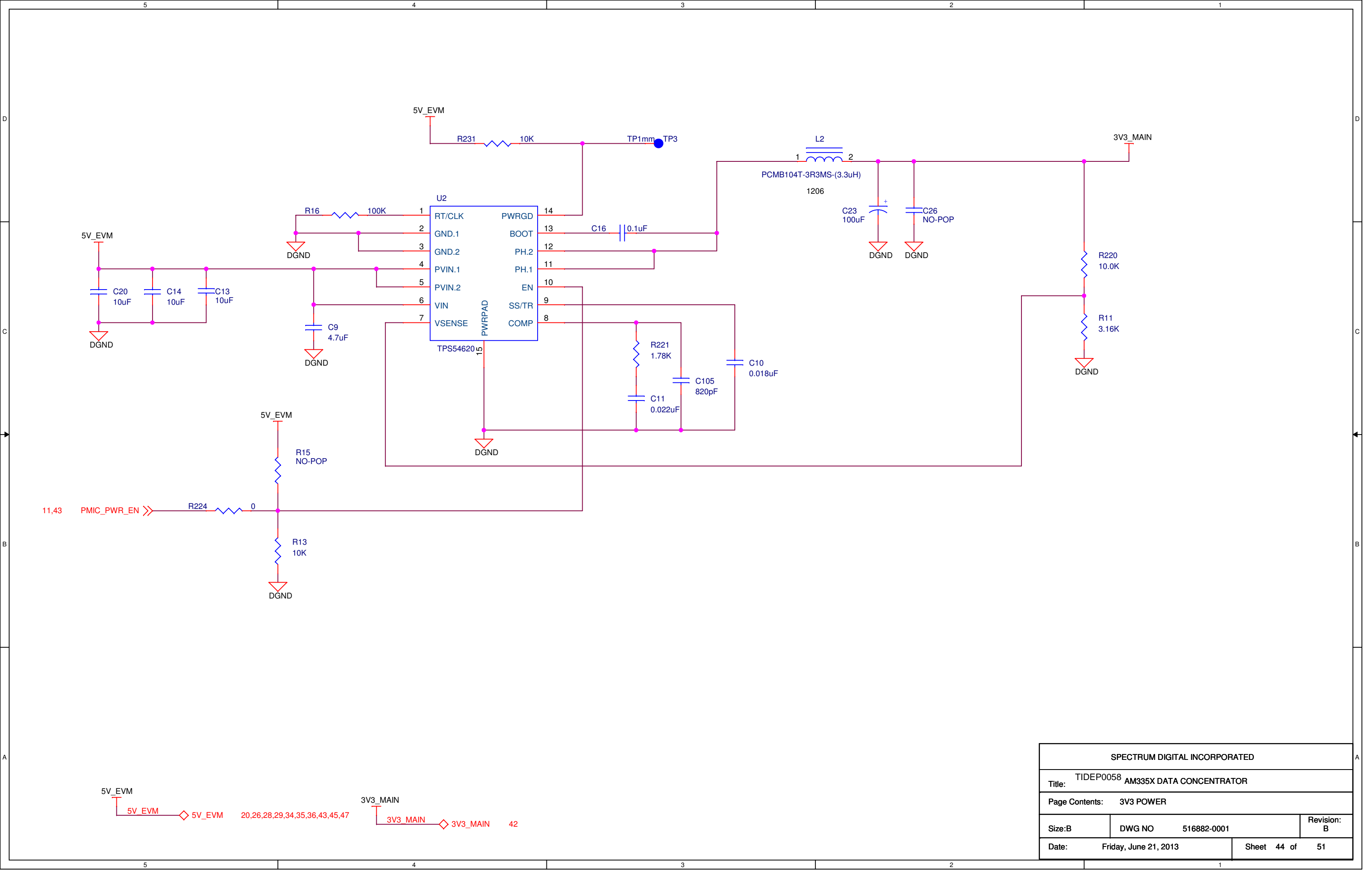
3V3\_EVM  
3V3\_EVM 5,6,9,11,18,19,21,23,25,26,27,28,29,30,31,32,33,37,38,40,42

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: CC CARD INTERFACE2			
Size:B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013		Sheet 41 of 51

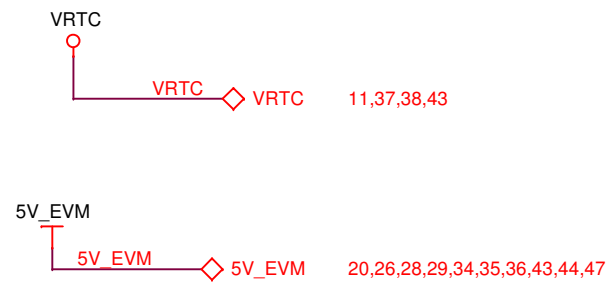
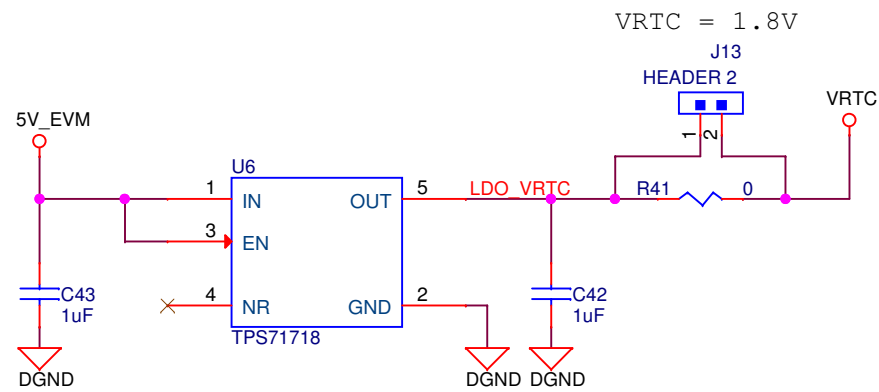
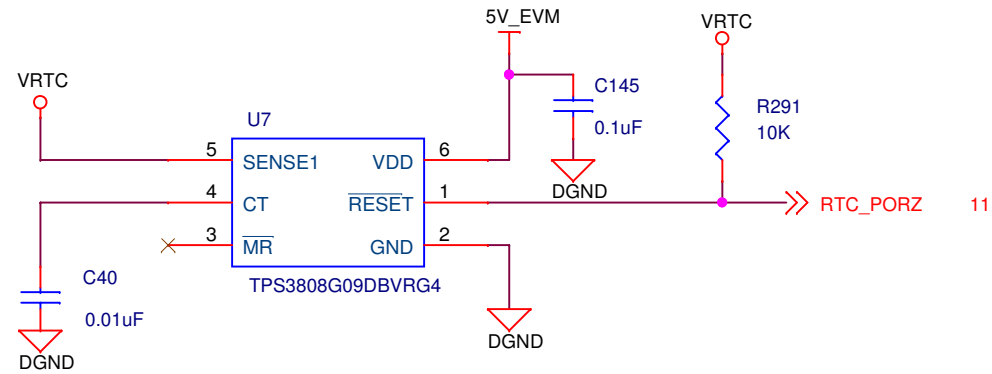


SPECTRUM DIGITAL INCORPORATED		
Title: TIDEP0058 AM335X DATA CONCENTRATOR		
Page Contents: Power Monitor		
Size: B	DWG NO 516882-0001	Revision: B
Date: Friday, June 21, 2013	Sheet 42 of	51

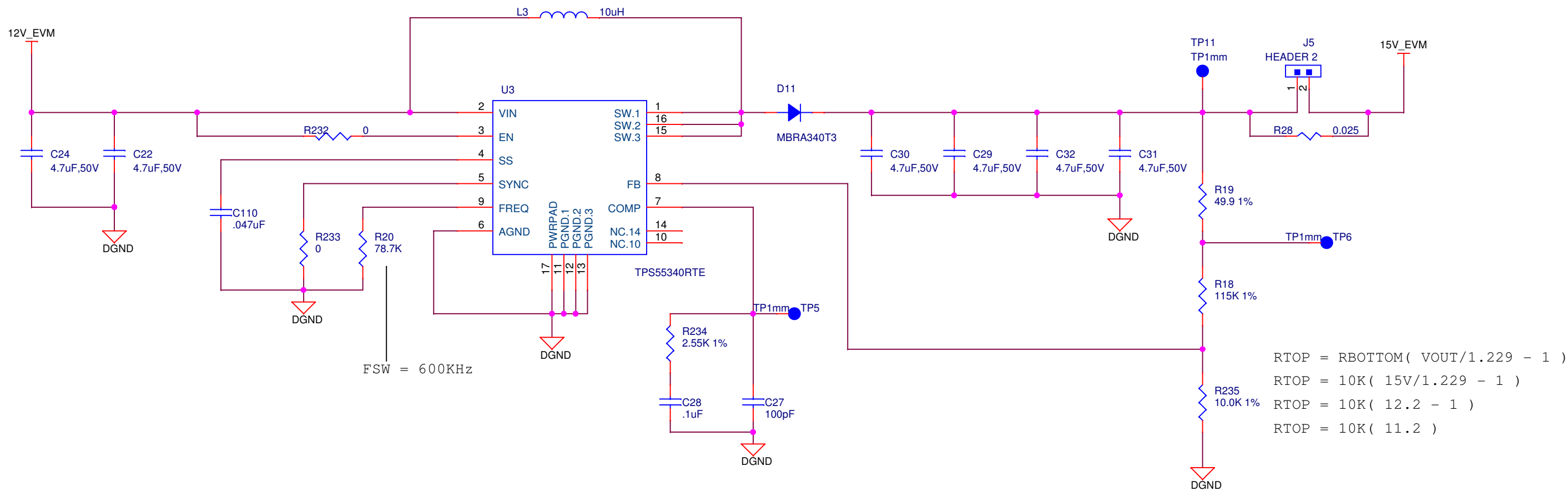




SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: 3V3 POWER			
Size: B	DWG NO	516882-0001	Revision: B
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SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: RTC POWER RESET			
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$$R_{TOP} = R_{BOTTOM} \left( \frac{V_{OUT}}{1.229} - 1 \right)$$
$$R_{TOP} = 10K \left( \frac{15V}{1.229} - 1 \right)$$
$$R_{TOP} = 10K \left( 12.2 - 1 \right)$$
$$R_{TOP} = 10K \left( 11.2 \right)$$

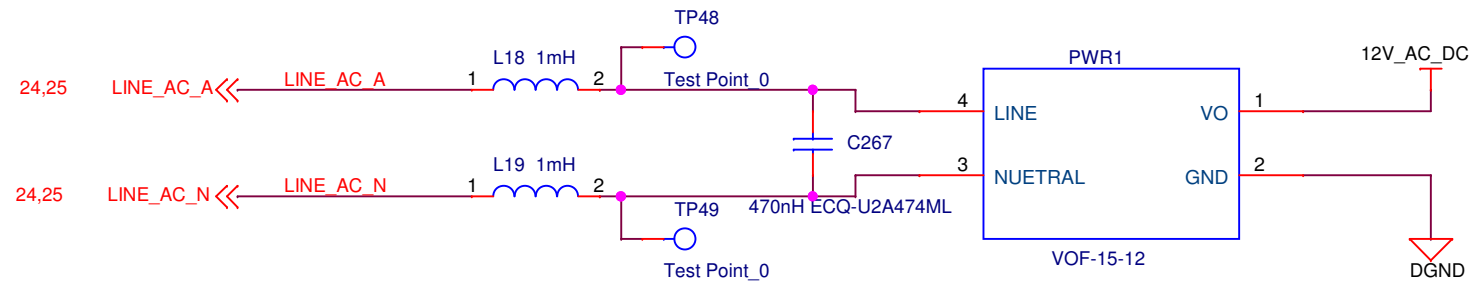
12V\_EVM  
12V\_EVM 47,49

15V\_EVM  
15V\_EVM 26

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: 12V TO 15V BOOST			
Size:B	DWG NO	516882-0001	Revision: B
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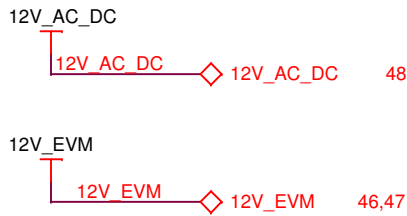
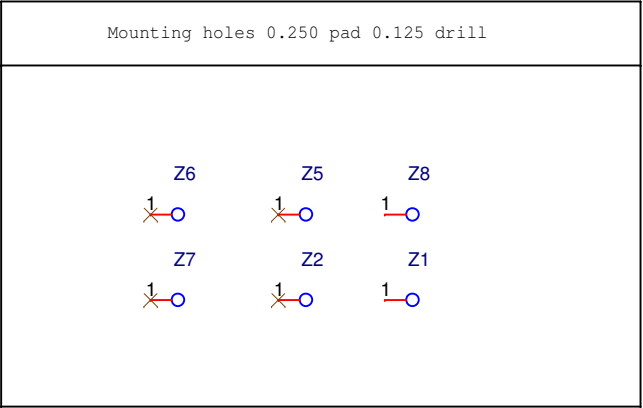
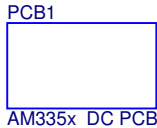
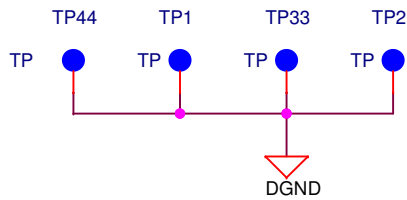
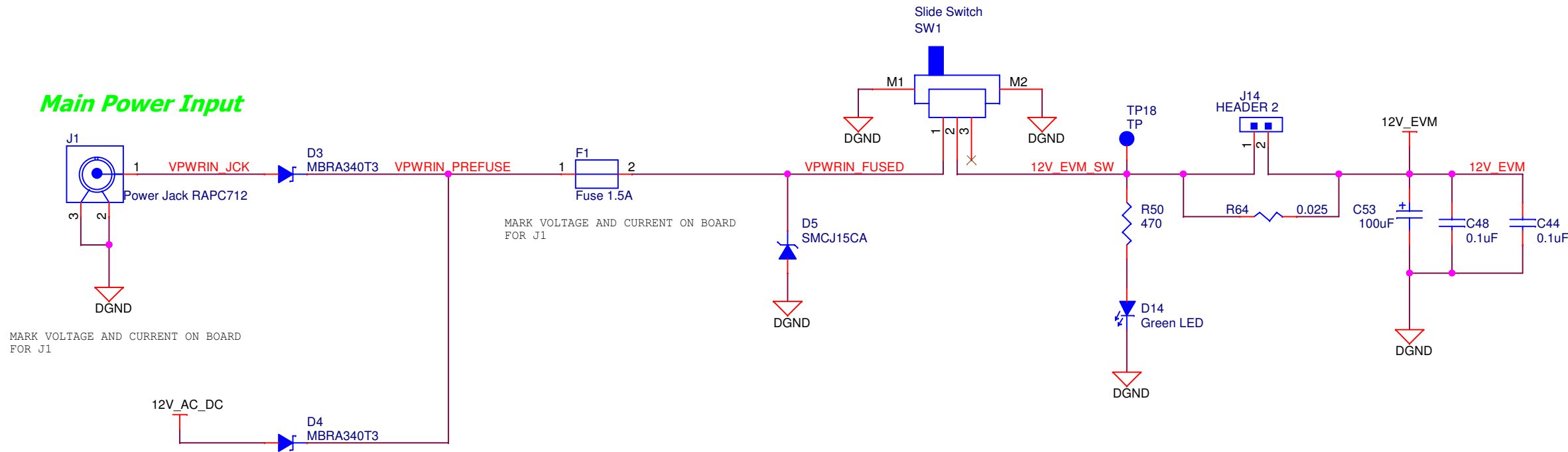
100 MILLIMETER BY 60 MILLIMETER RESERVE



SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058 AM335X DATA CONCENTRATOR			
Page Contents: AC TO DC CONVERTOR			
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Main Power Input



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Page Contents: POWER INPUT			
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GENERAL  
USE 4 MIL LINES AND 4 MIL SPACE  
  
USE 20-10 VIA OR 18-8 VIA  
  
IMPEDANCE CONTROLLED 50 OHMS AT 4 MIL

USB0  
DIFFERENTIAL PAIR DP/DM 90 OHMS  
SET PHASE TO 0  
ROUTE PAIR WITH 3X CLEARANCE TO NEXT CLOSET SIGNAL

USB1  
DIFFERENTIAL PAIR DP/DM 90 OHMS  
SET PHASE TO 0  
ROUTE PAIR WITH 3X CLEARANCE TO NEXT CLOSET SIGNAL

DDR  
  
USE TIMING MODEL  
  
TURN ON Z VIA  
  
SET ADDRESS AND CONTROL TO 20 PICOSECONDS  
  
SET DATA TO 20 PICOSECONDS  
  
CONTROL HAS DIFFERENTIAL PAIR ON CLOCKS  
  
DATA HAS 2 DIFFERENTIAL PAIRS FOR DATA STROBES

ETHERNET PORT 0  
  
MAC TO PHY INTERFACE HAS 2 GROUPS WITH CONSTRAINTS, TX GROUP AND RX GROUP      100 MIL TRACE MATCHING  
  
4 SETS OF DIFF PAIRS FROM PHY TO ETHERNET JACK 100 OHM

ETHERNET PORT 1  
  
MAC TO PHY INTERFACE HAS 2 GROUPS WITH CONSTRAINTS, TX GROUP AND RX GROUP      100 MIL TRACE MATCHING  
  
4 SETS OF DIFF PAIRS FROM PHY TO ETHERNET JACK 100 OHM

SPECTRUM DIGITAL INCORPORATED			
Title: TIDEP0058AM335X DATA CONCENTRATOR			
Page Contents: REVISION HISTORY			
Size:B	DWG NO	516882-0001	Revision: B
Date:	Friday, June 21, 2013		Sheet 50 of 51



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### Products

Audio	<a href="http://www.ti.com/audio">www.ti.com/audio</a>
Amplifiers	<a href="http://amplifier.ti.com">amplifier.ti.com</a>
Data Converters	<a href="http://dataconverter.ti.com">dataconverter.ti.com</a>
DLP® Products	<a href="http://www.dlp.com">www.dlp.com</a>
DSP	<a href="http://dsp.ti.com">dsp.ti.com</a>
Clocks and Timers	<a href="http://www.ti.com/clocks">www.ti.com/clocks</a>
Interface	<a href="http://interface.ti.com">interface.ti.com</a>
Logic	<a href="http://logic.ti.com">logic.ti.com</a>
Power Mgmt	<a href="http://power.ti.com">power.ti.com</a>
Microcontrollers	<a href="http://microcontroller.ti.com">microcontroller.ti.com</a>
RFID	<a href="http://www.ti-rfid.com">www.ti-rfid.com</a>
OMAP Applications Processors	<a href="http://www.ti.com/omap">www.ti.com/omap</a>
Wireless Connectivity	<a href="http://www.ti.com/wirelessconnectivity">www.ti.com/wirelessconnectivity</a>

### Applications

Automotive and Transportation	<a href="http://www.ti.com/automotive">www.ti.com/automotive</a>
Communications and Telecom	<a href="http://www.ti.com/communications">www.ti.com/communications</a>
Computers and Peripherals	<a href="http://www.ti.com/computers">www.ti.com/computers</a>
Consumer Electronics	<a href="http://www.ti.com/consumer-apps">www.ti.com/consumer-apps</a>
Energy and Lighting	<a href="http://www.ti.com/energy">www.ti.com/energy</a>
Industrial	<a href="http://www.ti.com/industrial">www.ti.com/industrial</a>
Medical	<a href="http://www.ti.com/medical">www.ti.com/medical</a>
Security	<a href="http://www.ti.com/security">www.ti.com/security</a>
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