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ADSP-SC584 EZ-Board Schematic

		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
Title		ADSP-SC584 EZ-Board Title Block	
Size C	Board No.	A0448-2013	Rev 1.0A
Date	4/22/16	Sheet	1 of 30

A

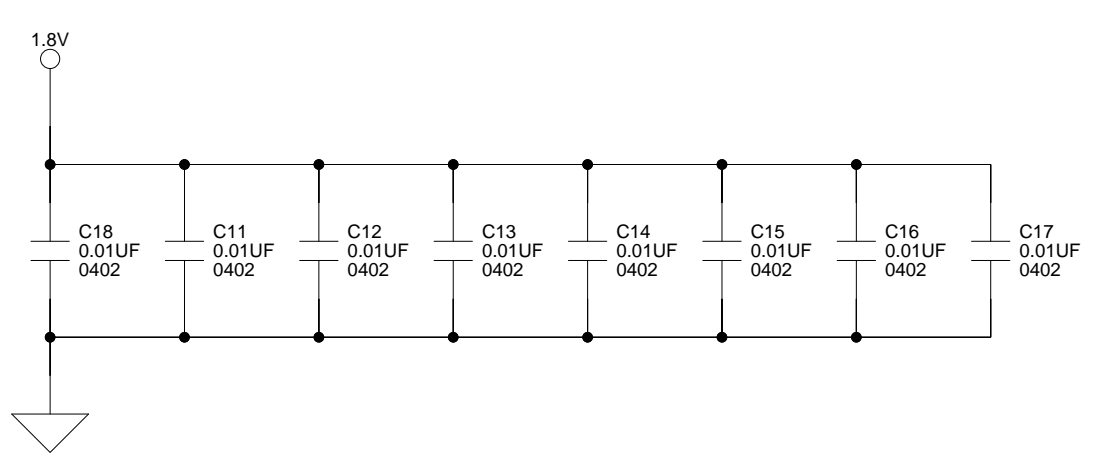
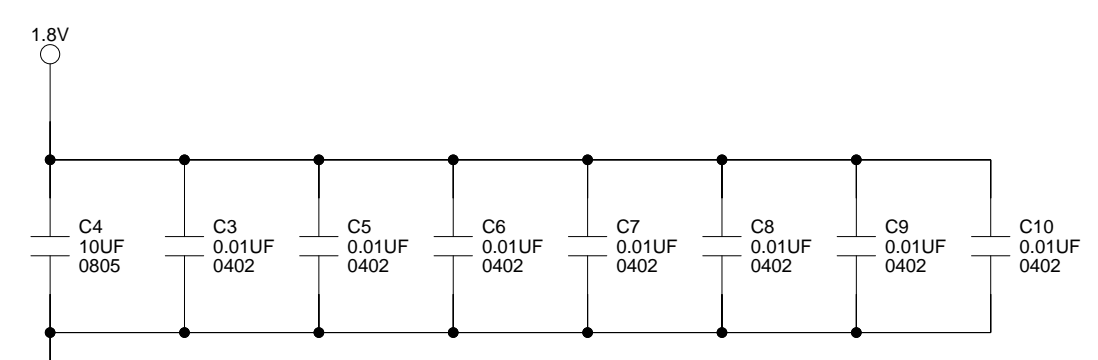
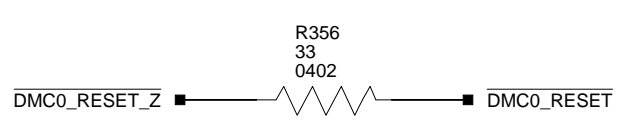
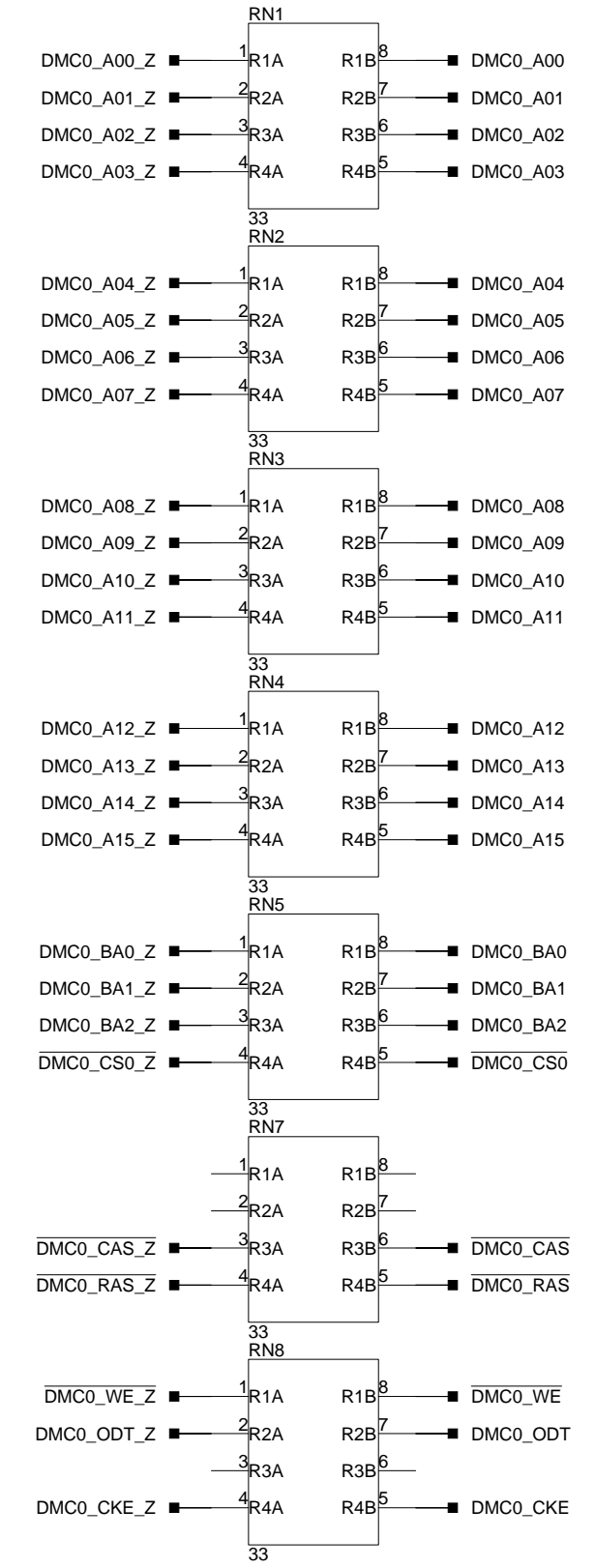
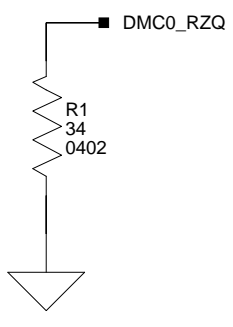
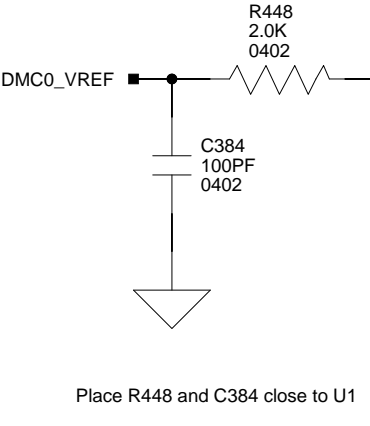
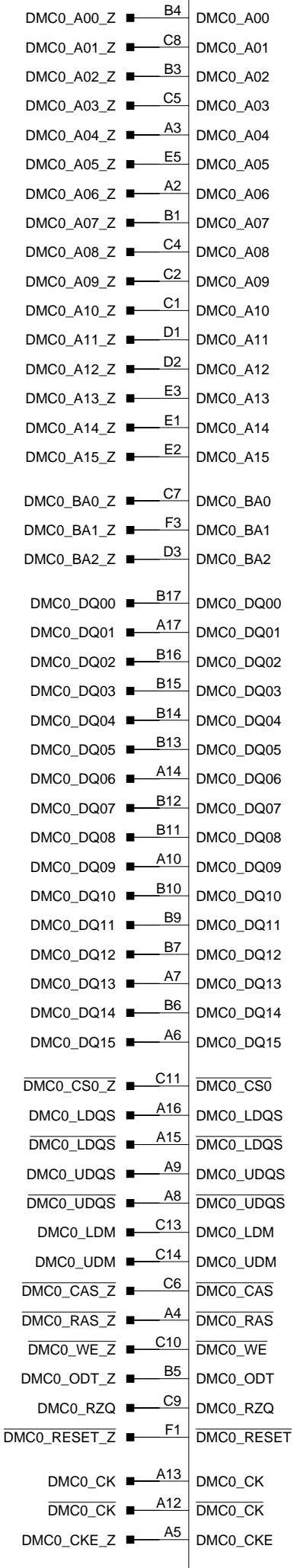
B

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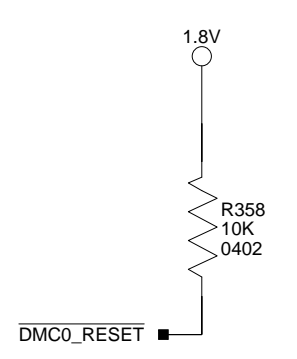
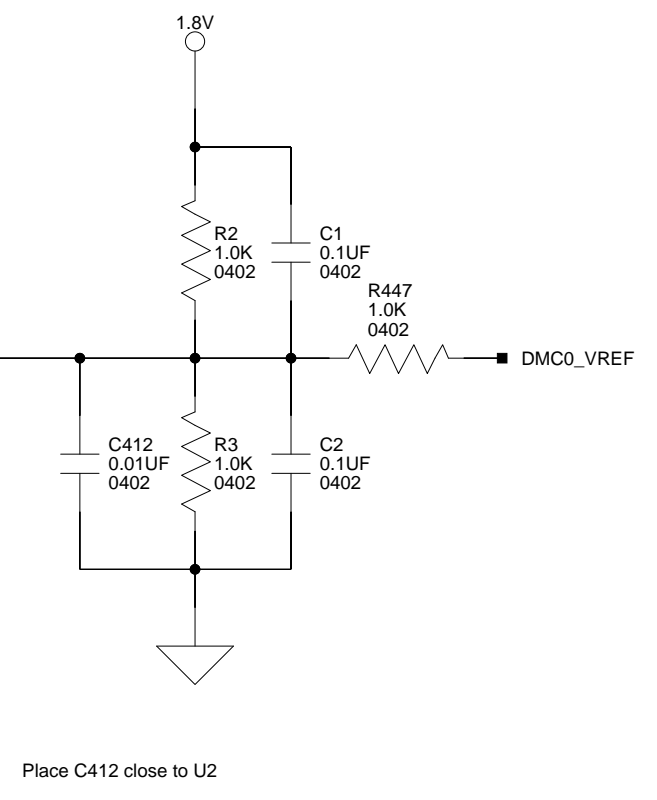
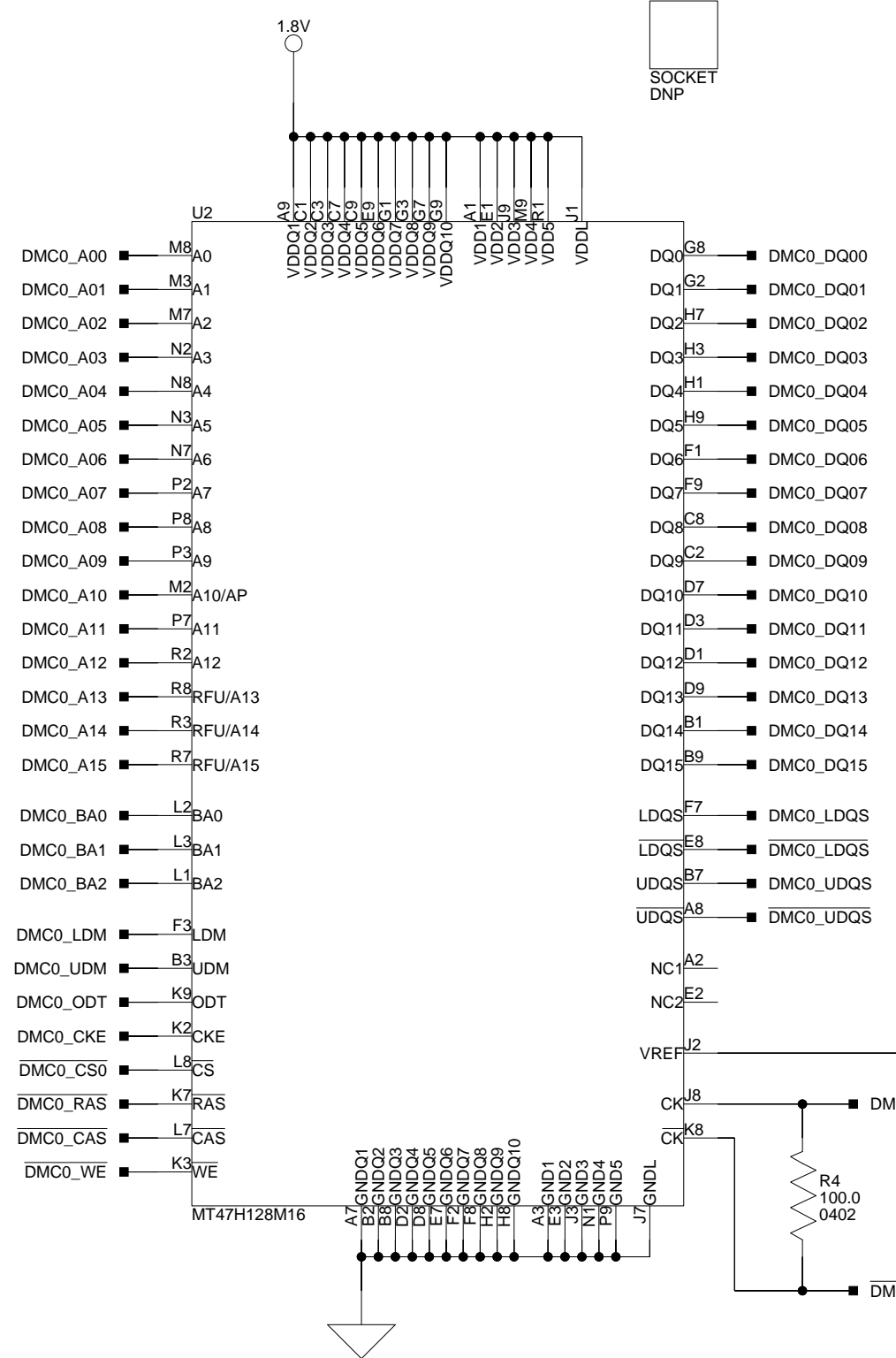
XU1
SOCKET
DNP

U1

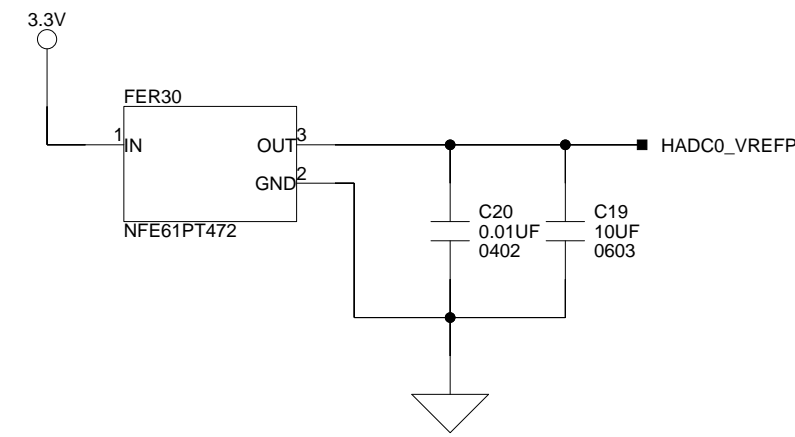
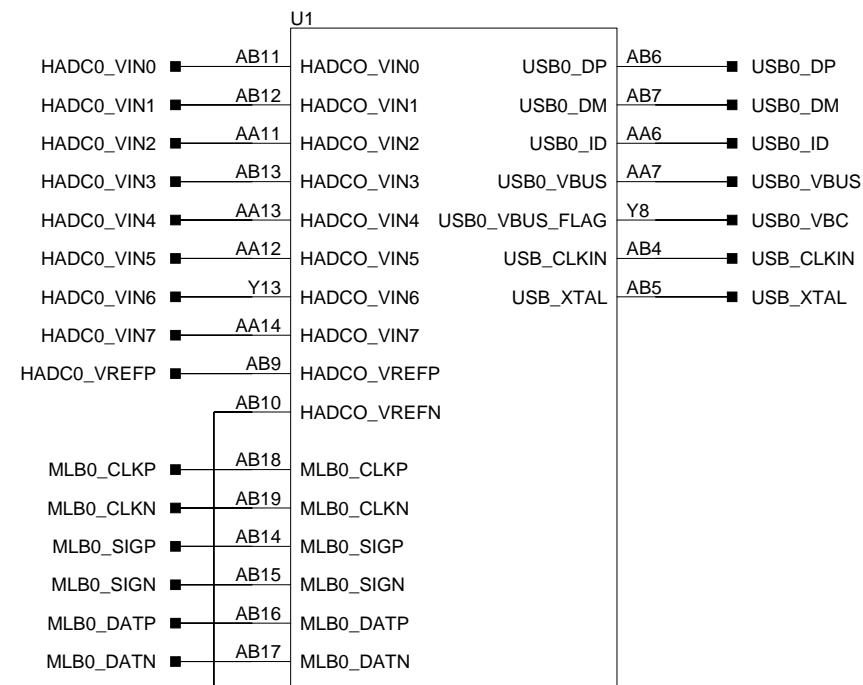
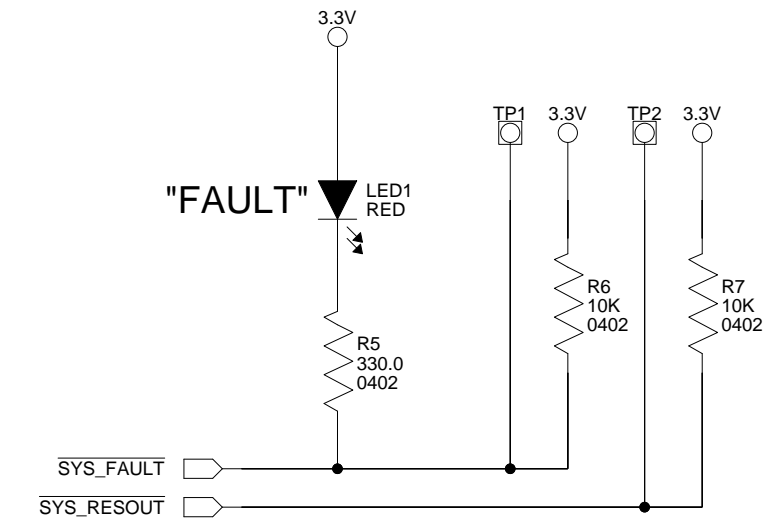
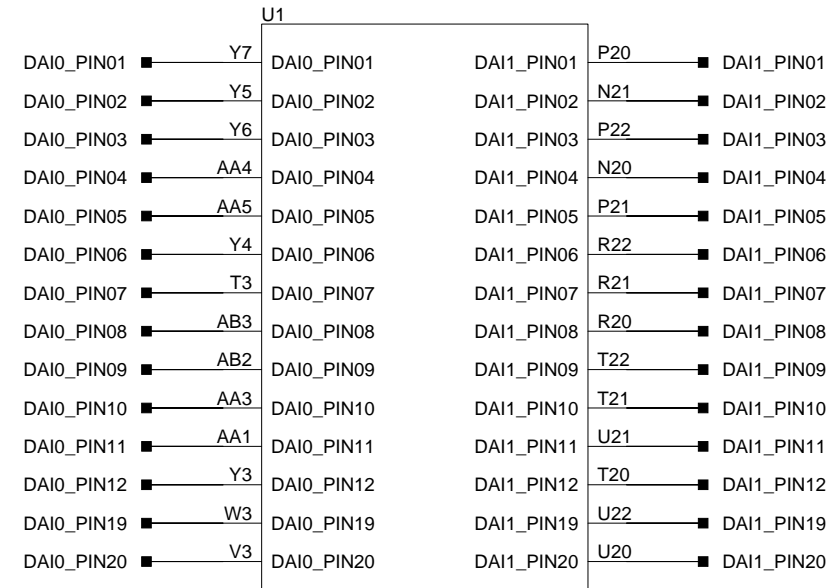


2Gb DDR2

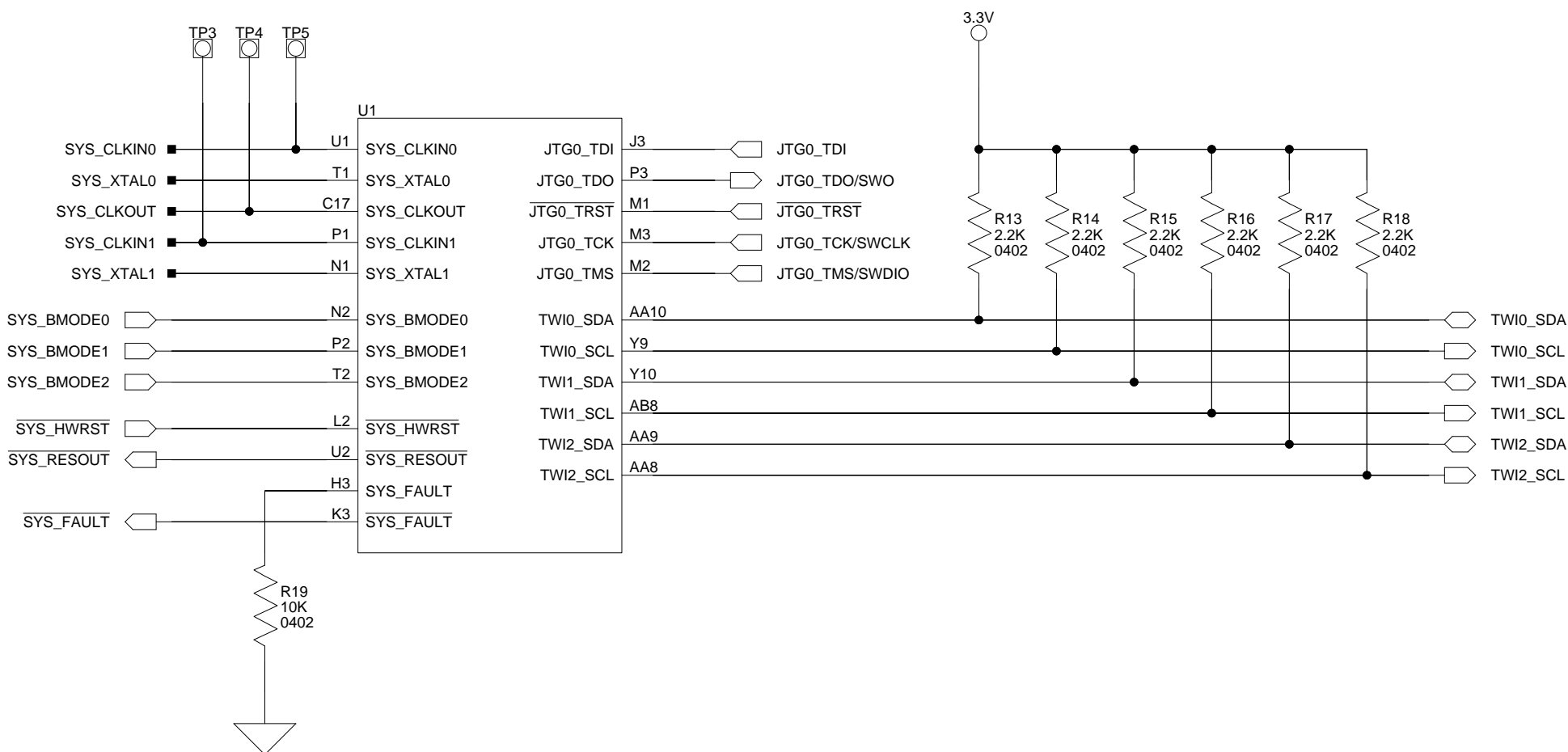
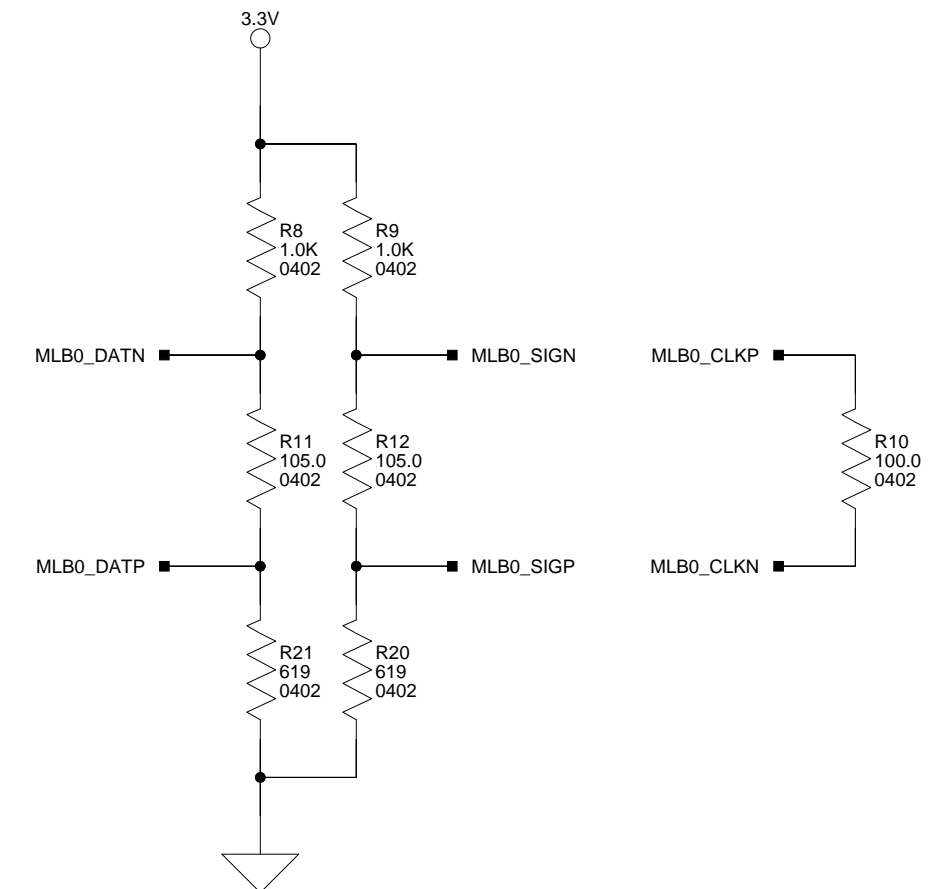
XU2
SOCKET
DNP



		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
Title ADSP-SC584 EZ-Board DDR2 Interface			
Size C	Board No.	A0448-2013	Rev 1.0A
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MLB signals need to be short and matched trace length.



Title		ADSP-SC584 EZ-Board Non-Mux Ports	
Size C	Board No.	A0448-2013	Rev 1.0A
Date	4/22/16	Sheet 3	of 30

1

1

2

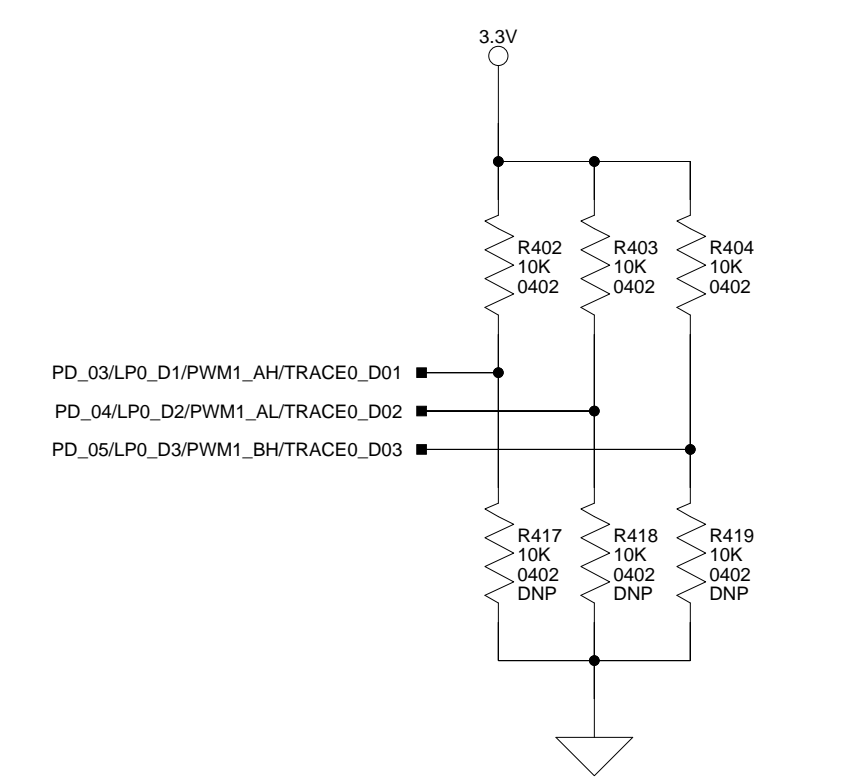
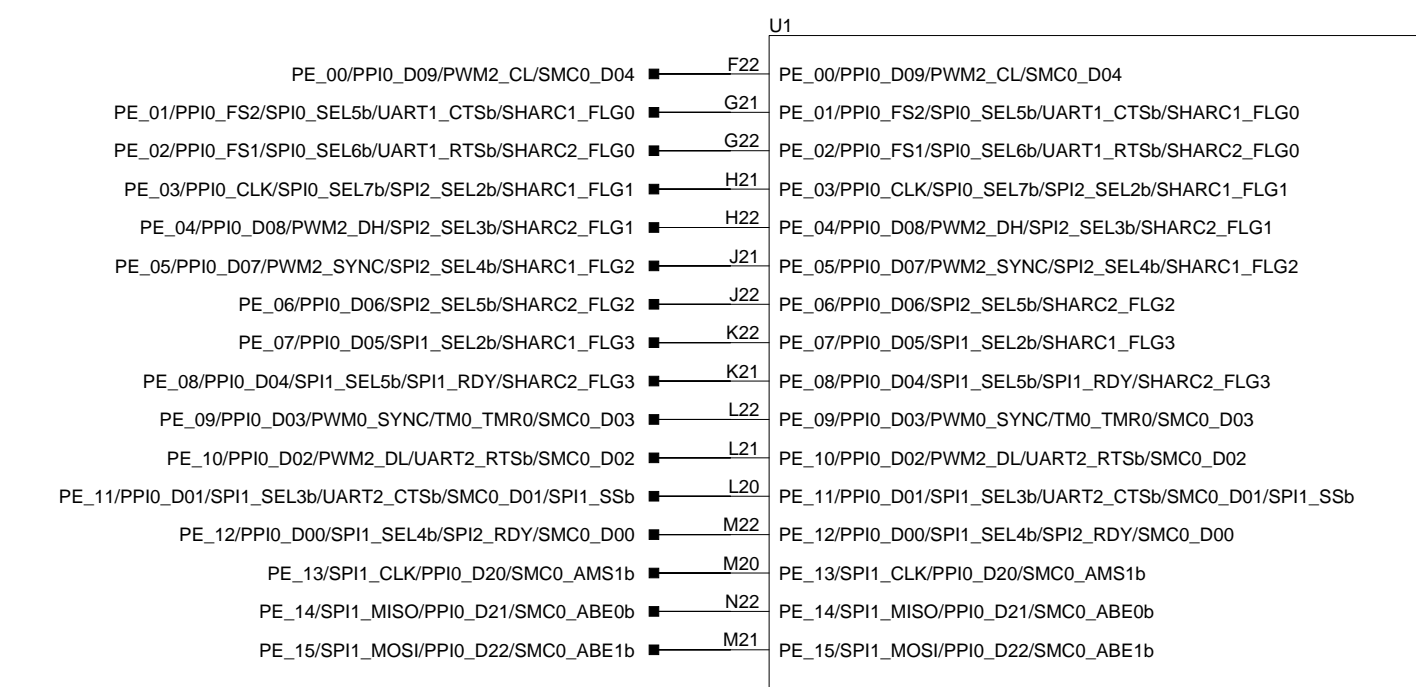
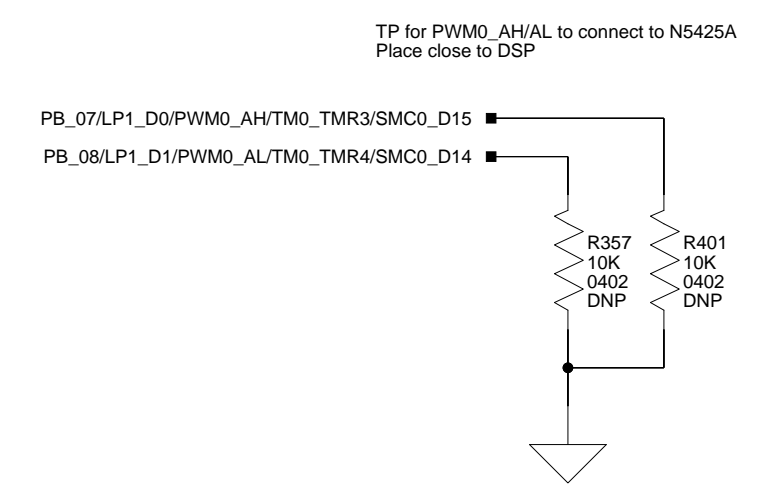
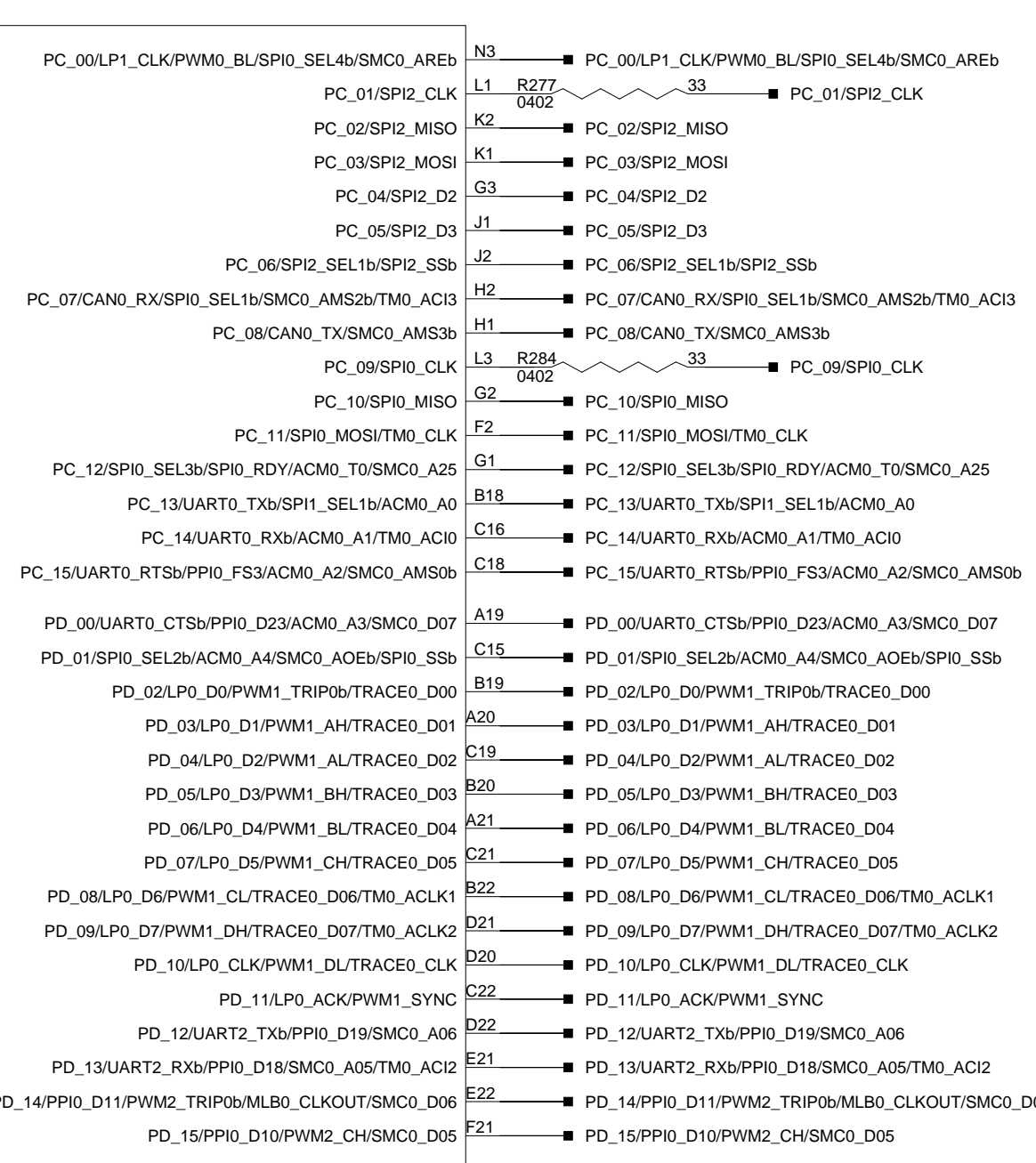
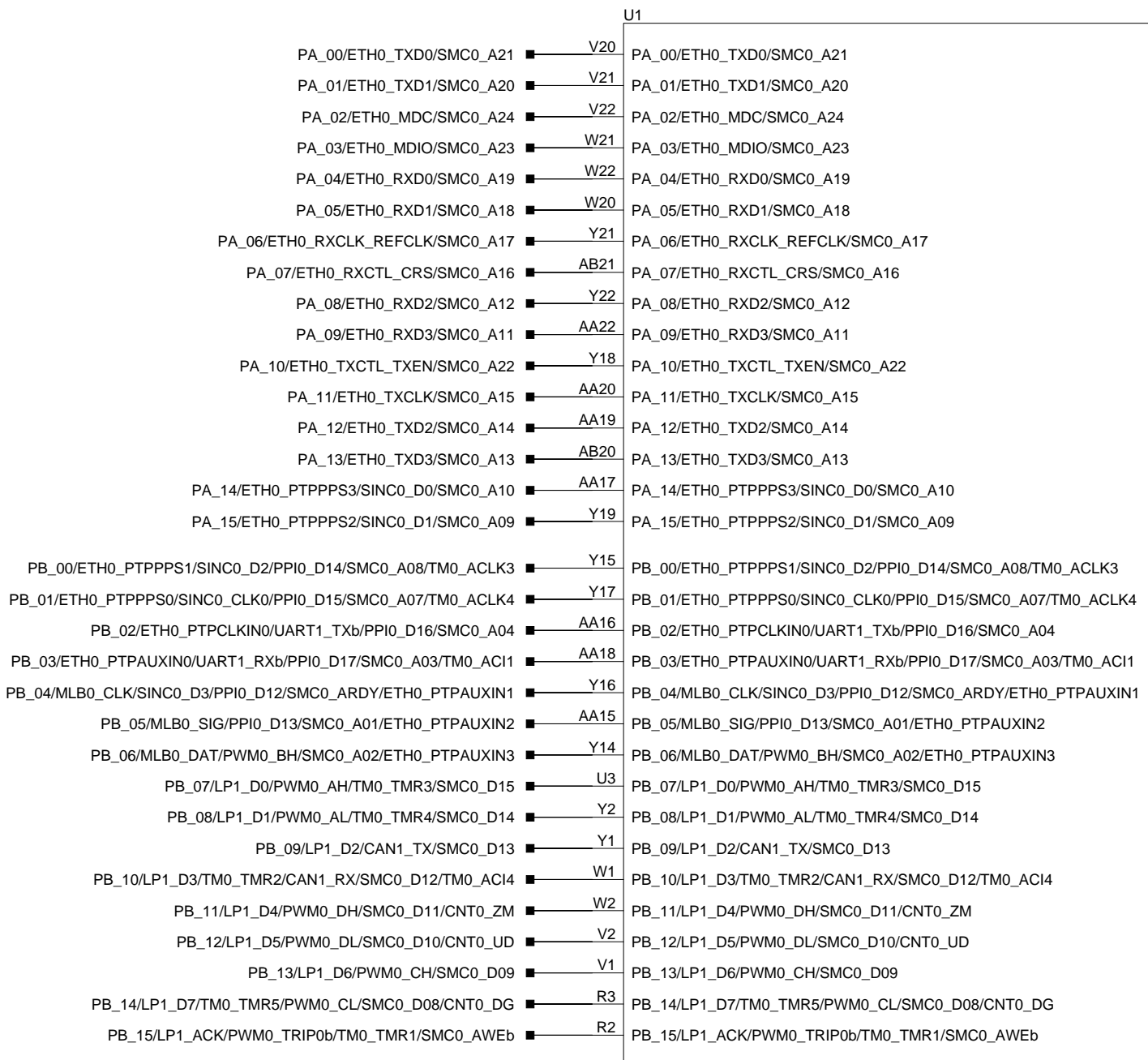
2

3

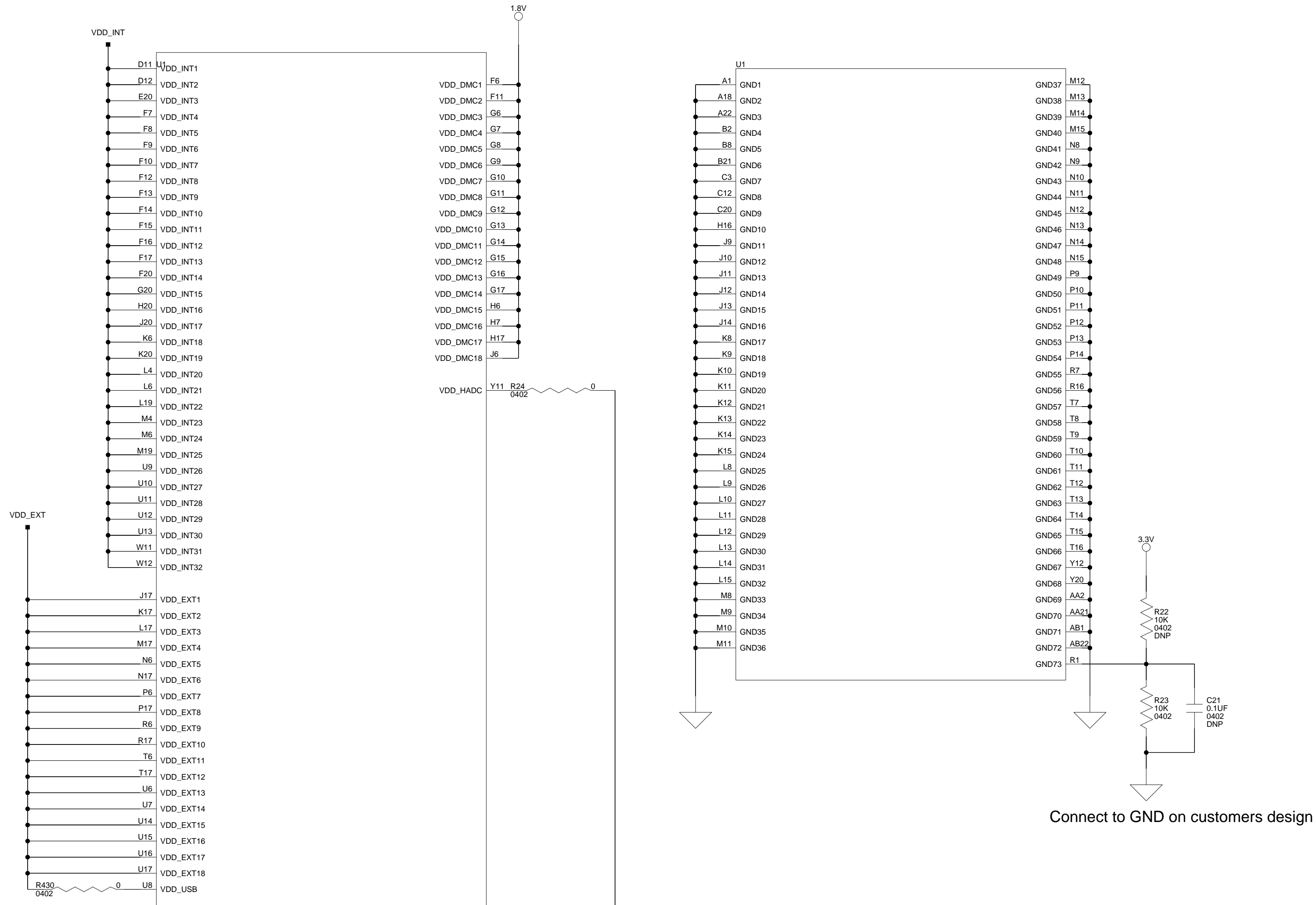
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4

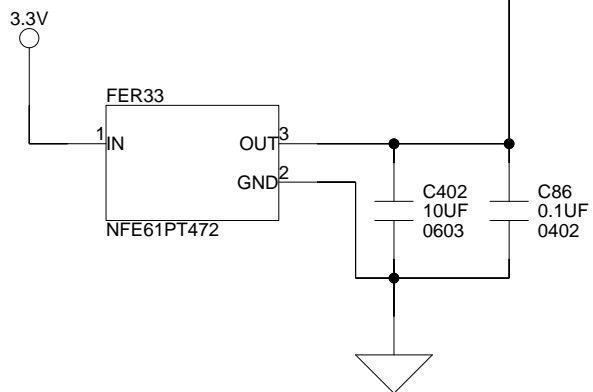
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		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board Mux Ports	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 4		of 30



Connect to GND on customers design



		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board Processor Power/Ground	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 5		of 30

A

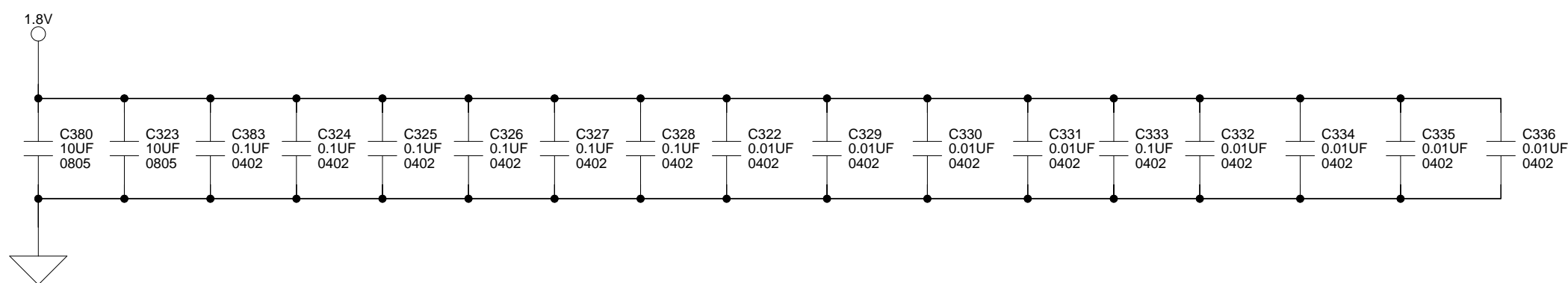
B

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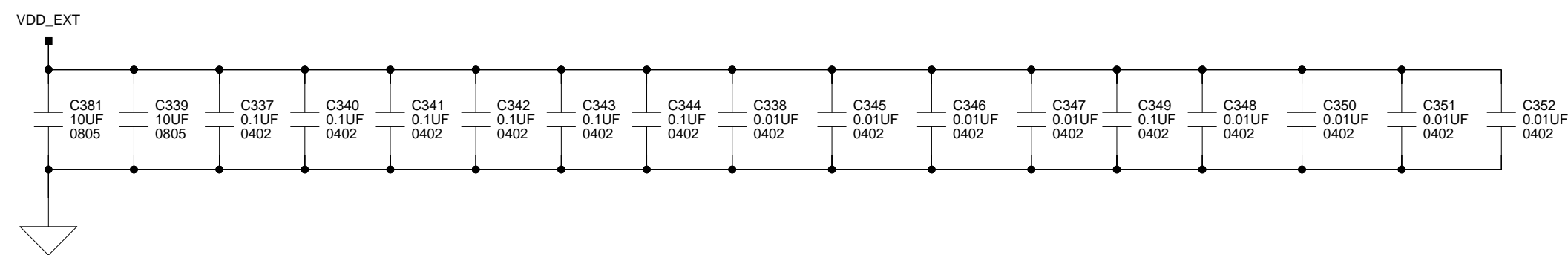
1

1



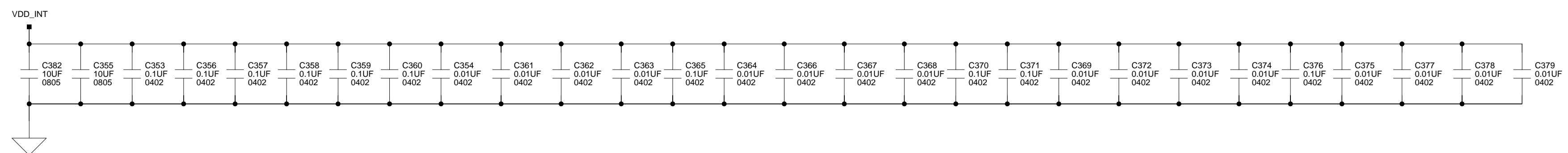
2

2



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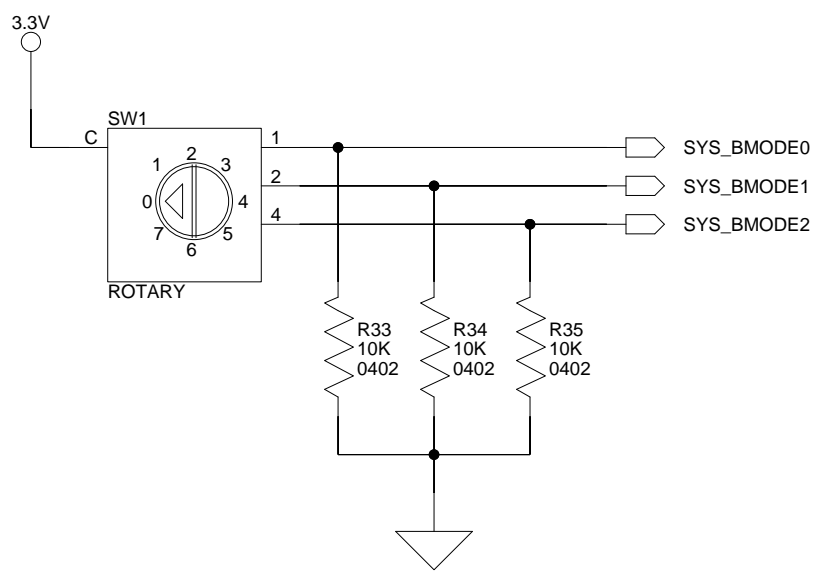
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
Title		ADSP-SC584 EZ-Board Proc Bypass Caps	
Size C	Board No.	A0448-2013	Rev 1.0A
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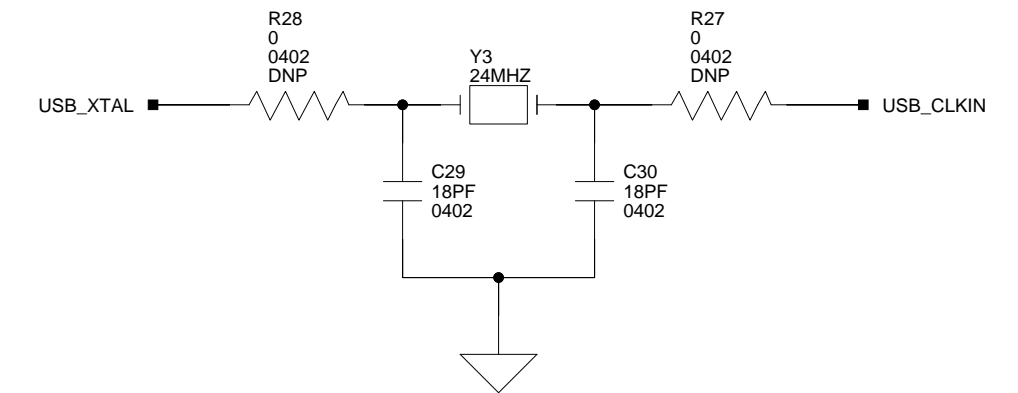
SW1: Boot mode selection switch

BMODE[2:0]	Boot Source
000	No boot/Custom ROM
001	SPI2 master boot
010	SPI2 slave boot
011	Reserved
100	Reserved
101	Reserved
110	LP0 slave boot
111	UART0 slave boot

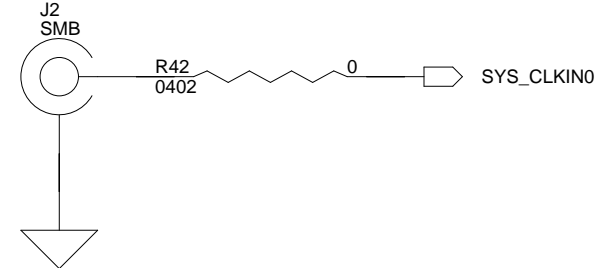
DEFAULT

R36 should be depopulated when using the optional circuit

OPTIONAL USB CRYSTAL

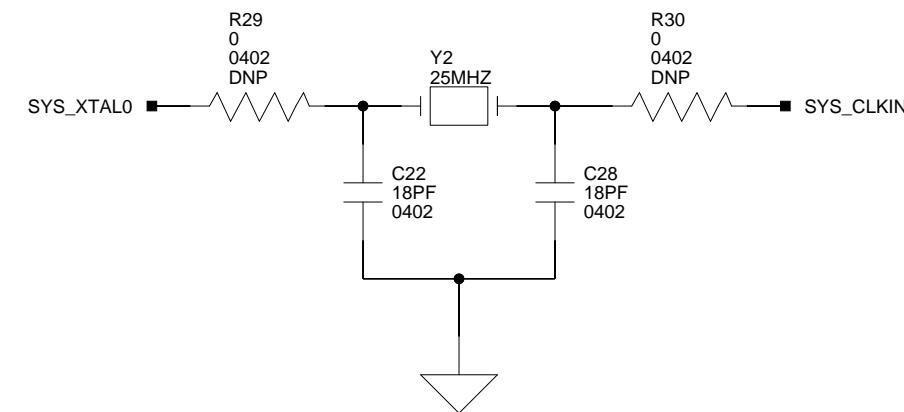


"CLKIN0"

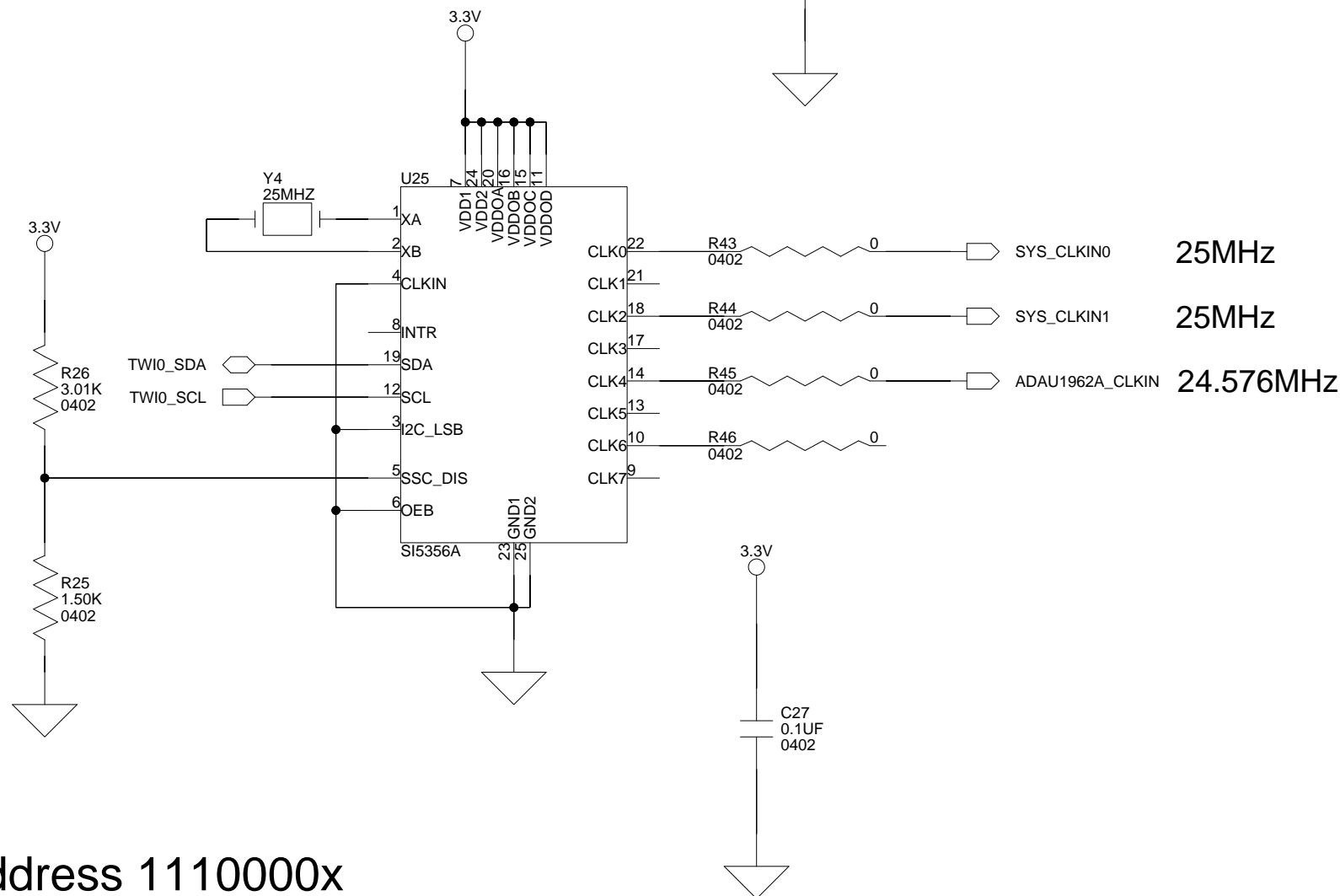
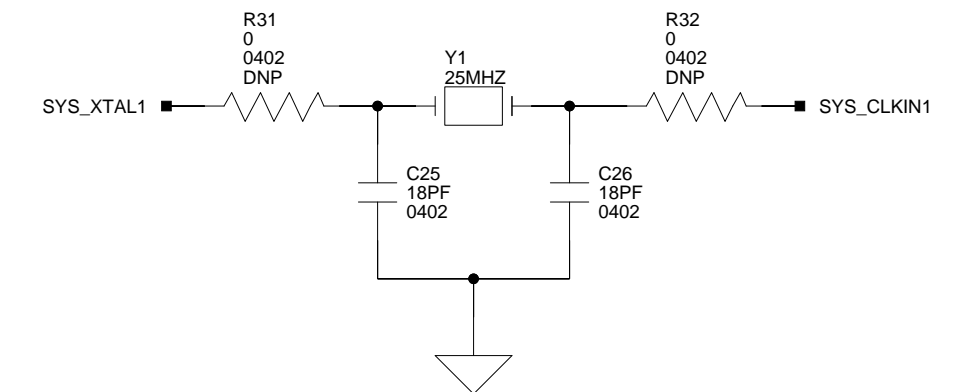


R43 should be depopulated when using the optional circuit

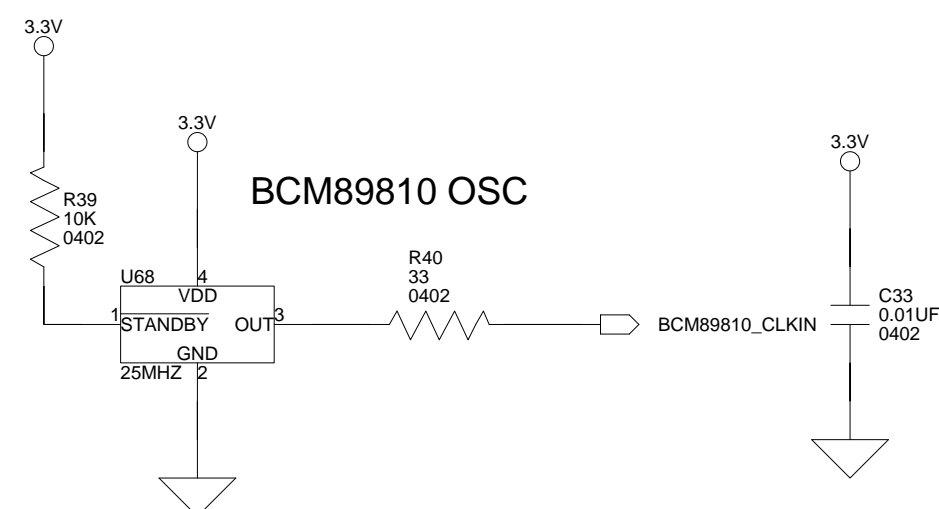
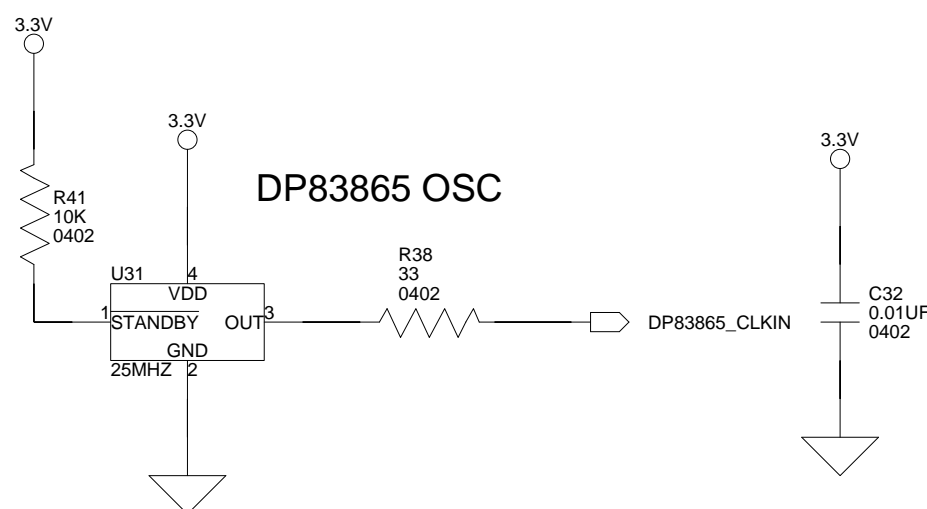
OPTIONAL DSP CRYSTALS



R44 should be depopulated when using the optional circuit

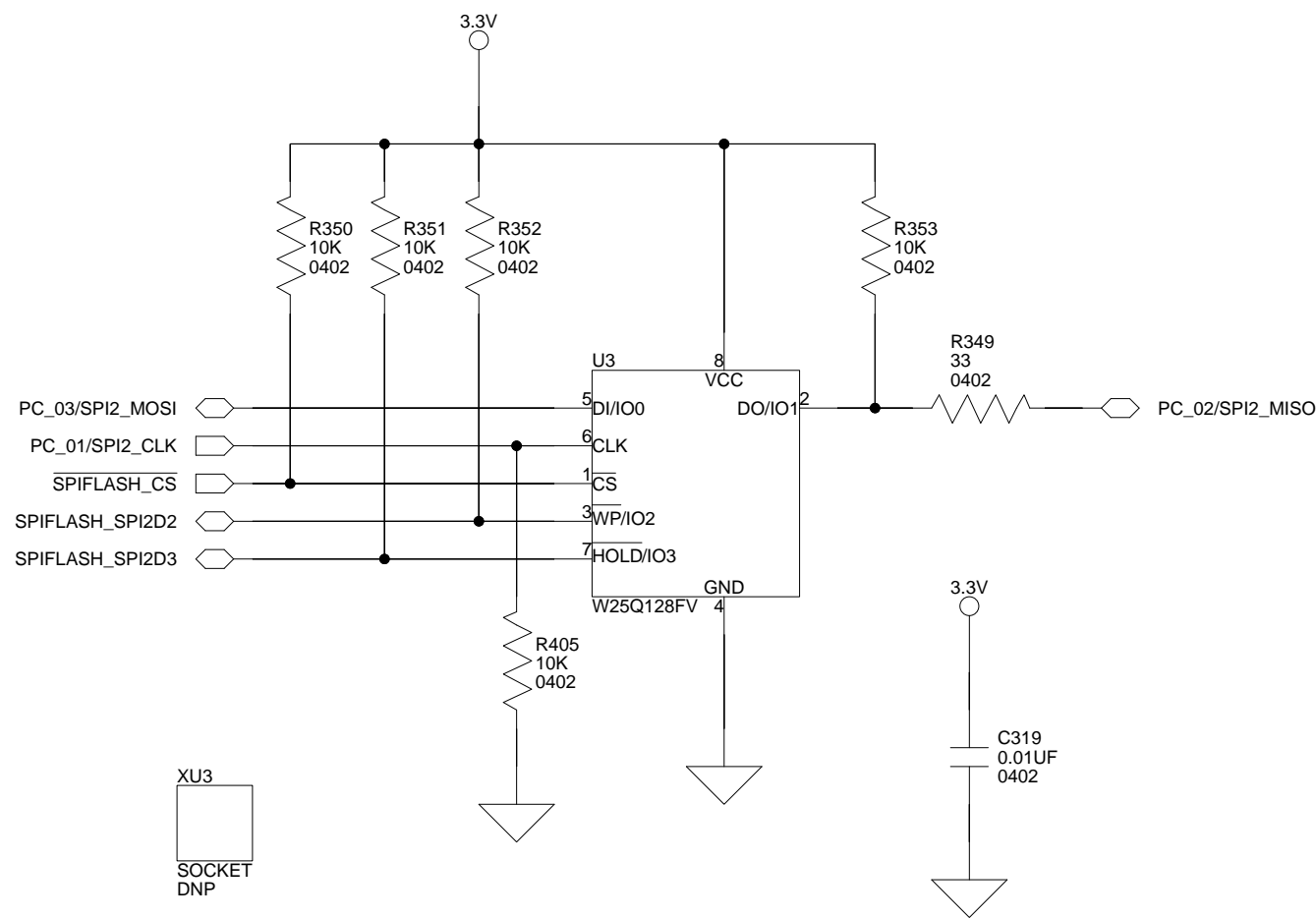


TWI Address 1110000x
x is the R/W bit. Read - 1, Write - 0

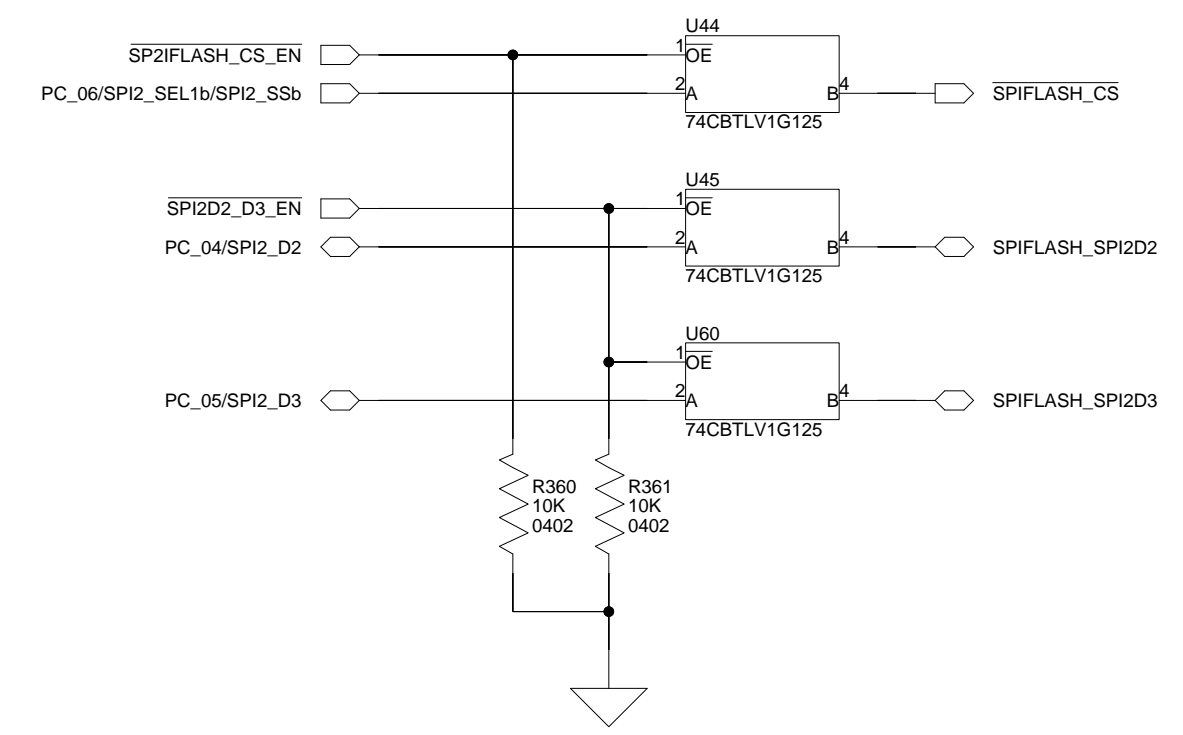
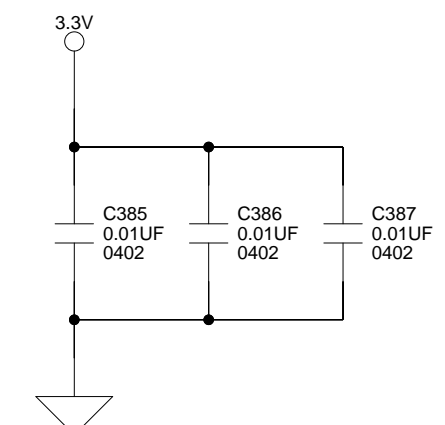
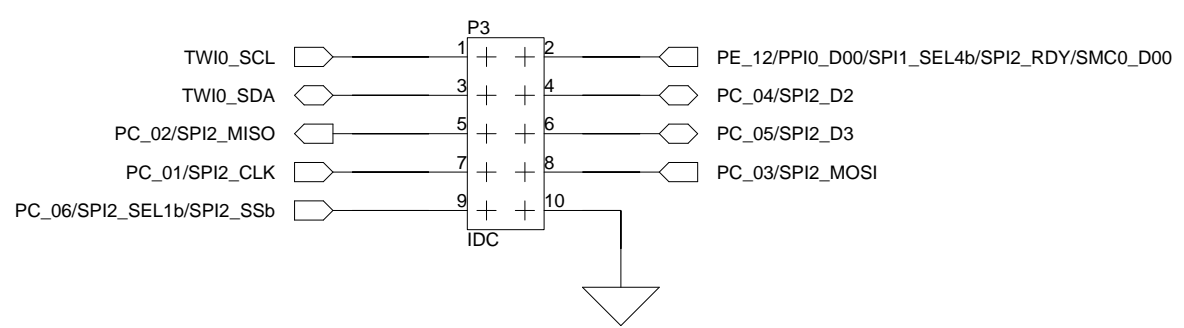
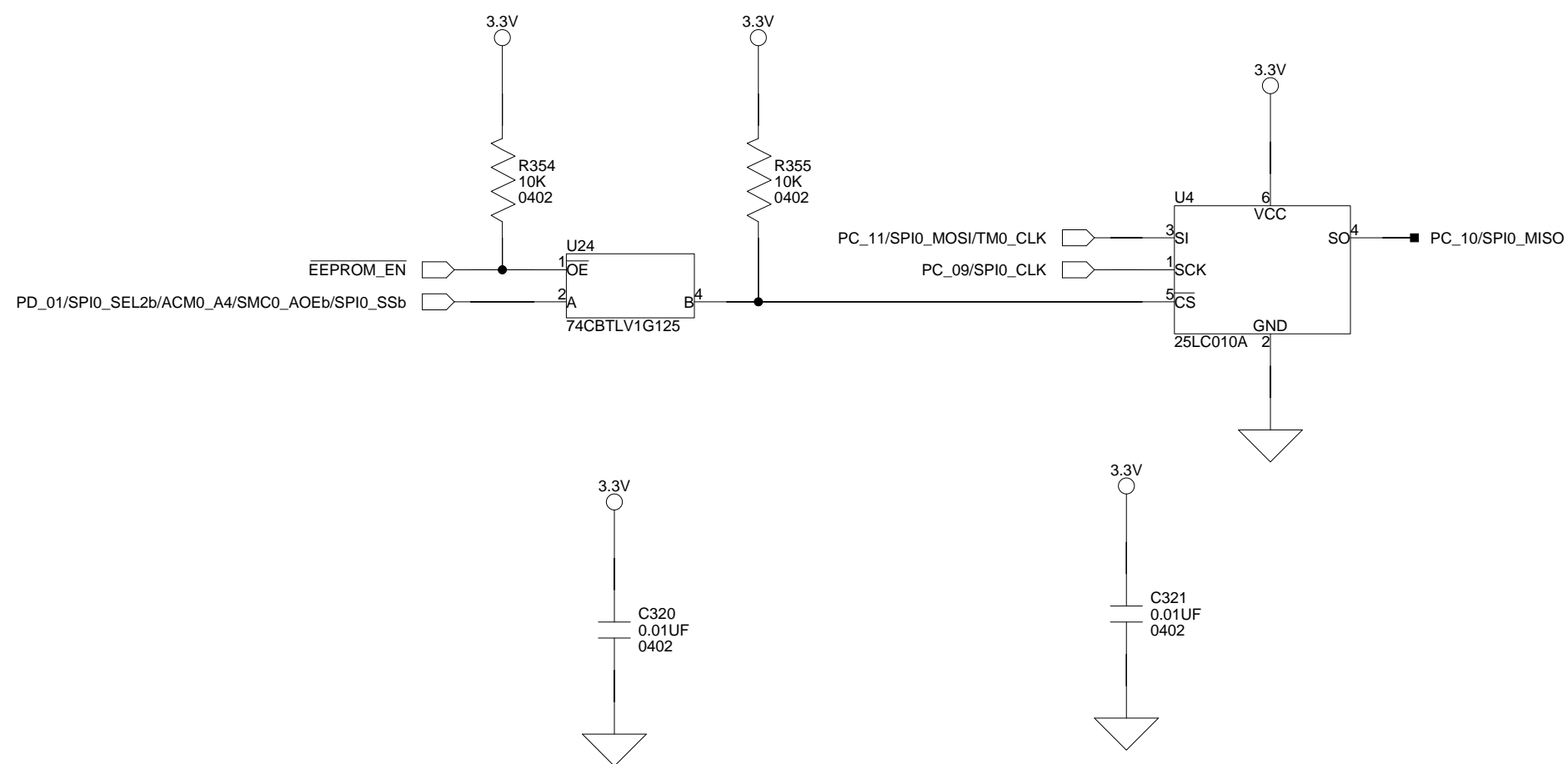



		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board Clocks/Boot Mode	
Size C	Board No.	A0448-2013	Rev 1.0A
Date	4/22/16	Sheet 7	of 30

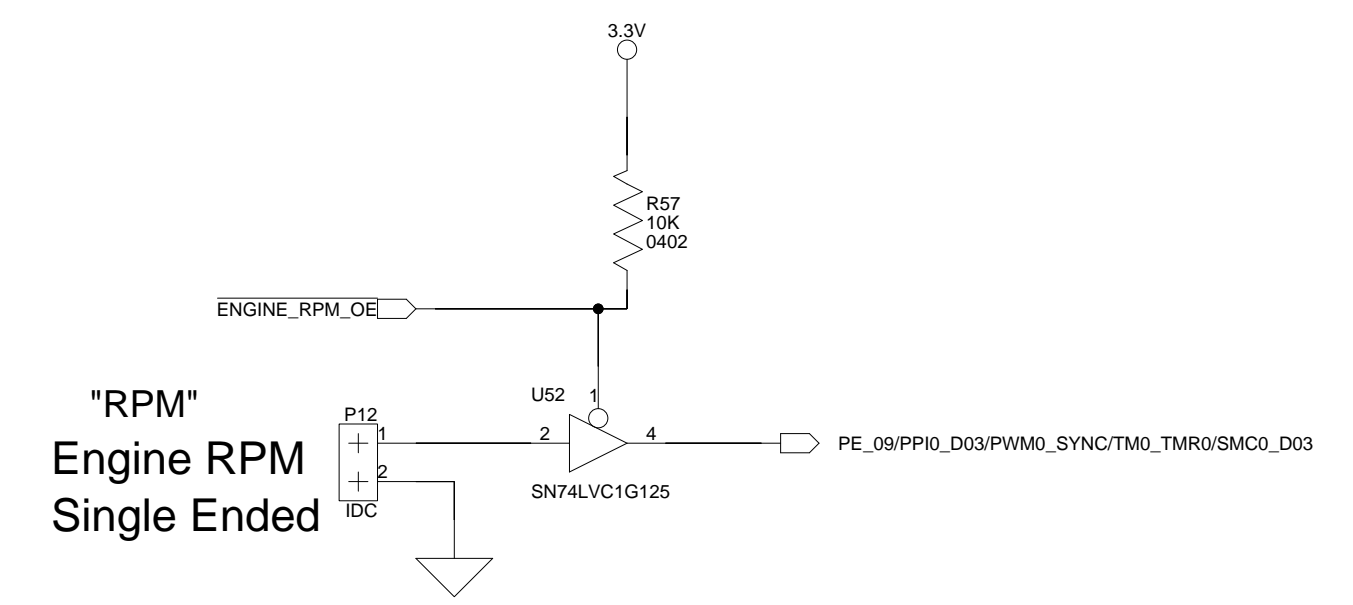
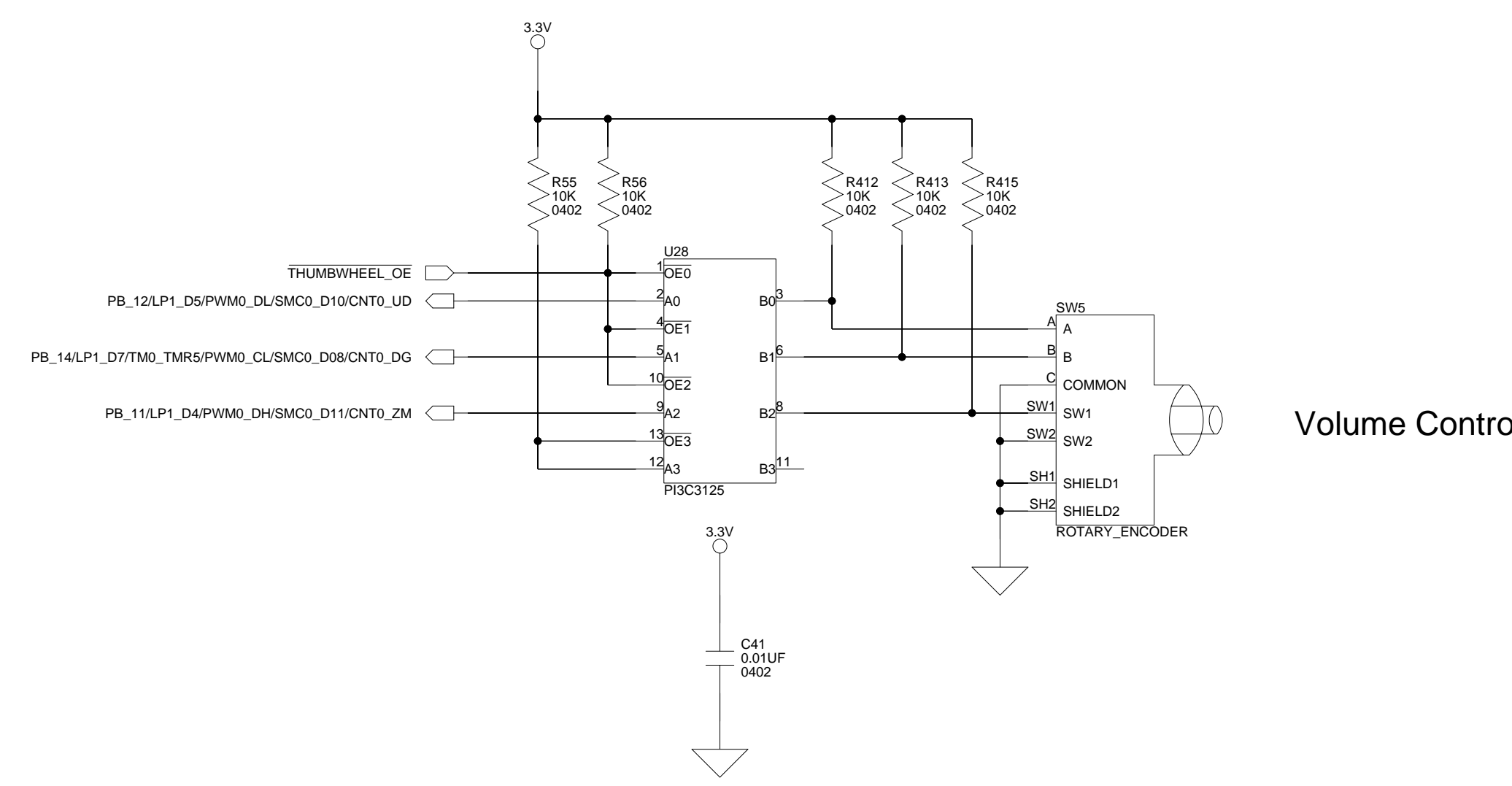
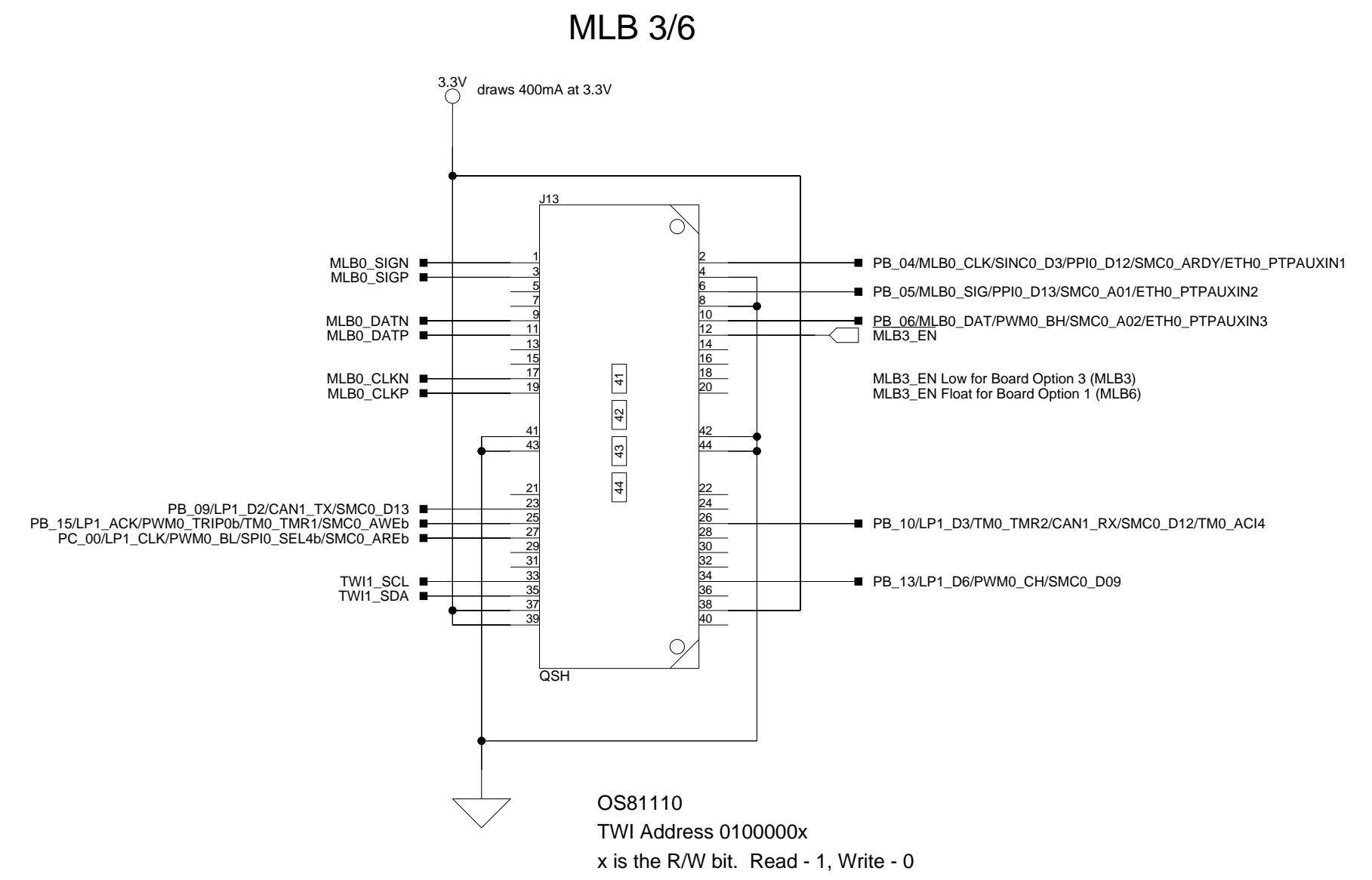
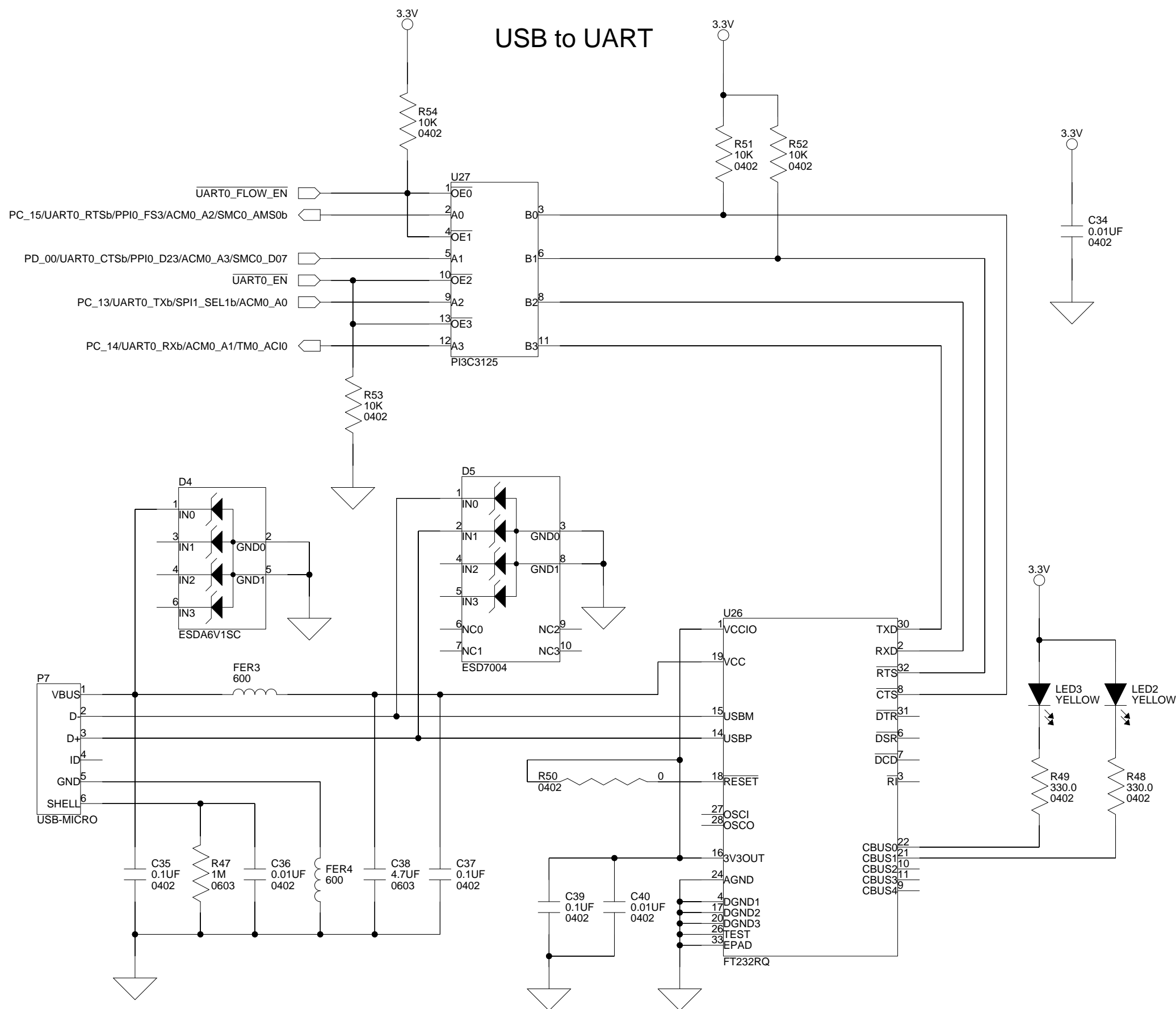
128Mb QUAD SPI FLASH



1Kb SPI EEPROM



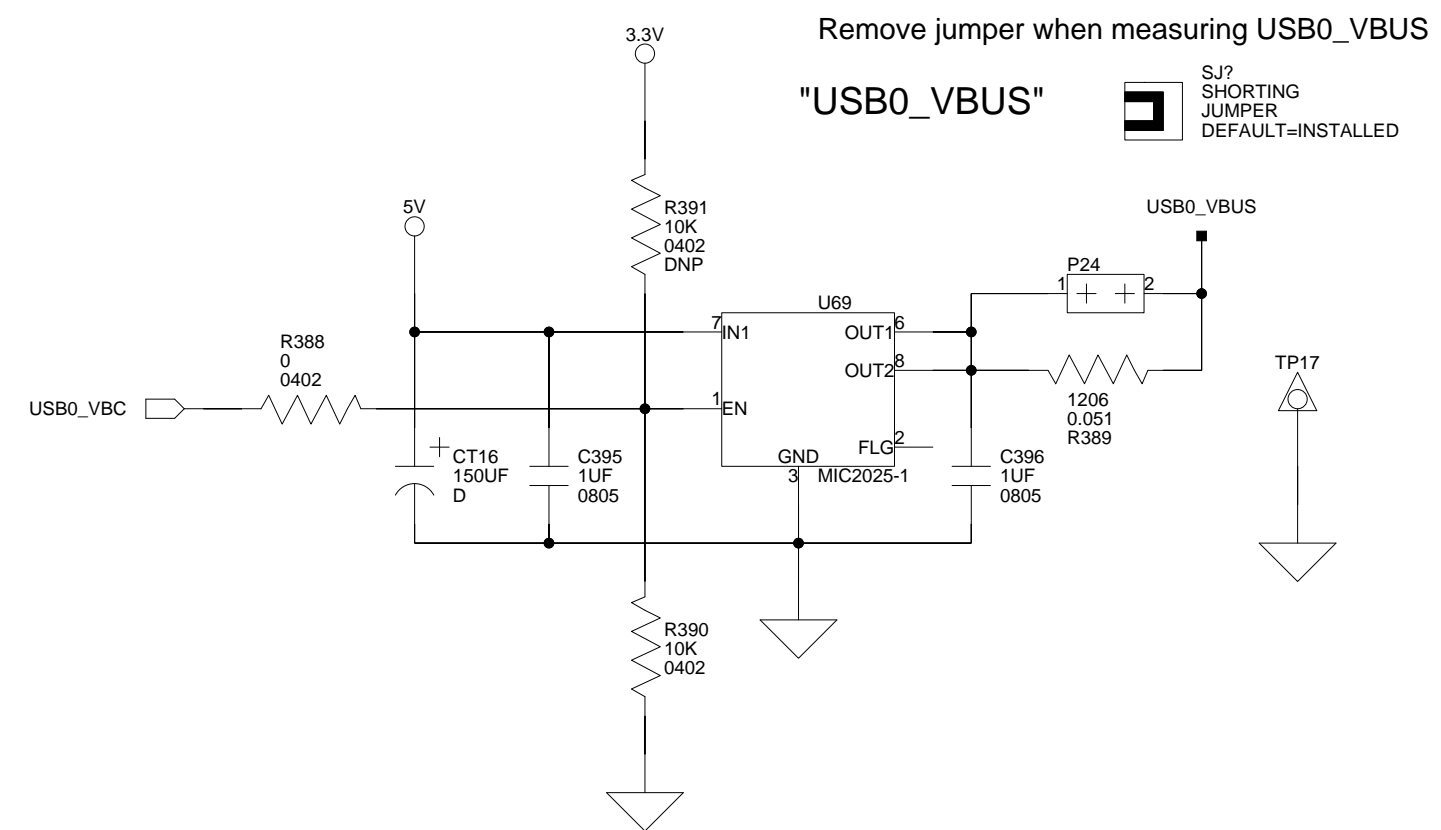
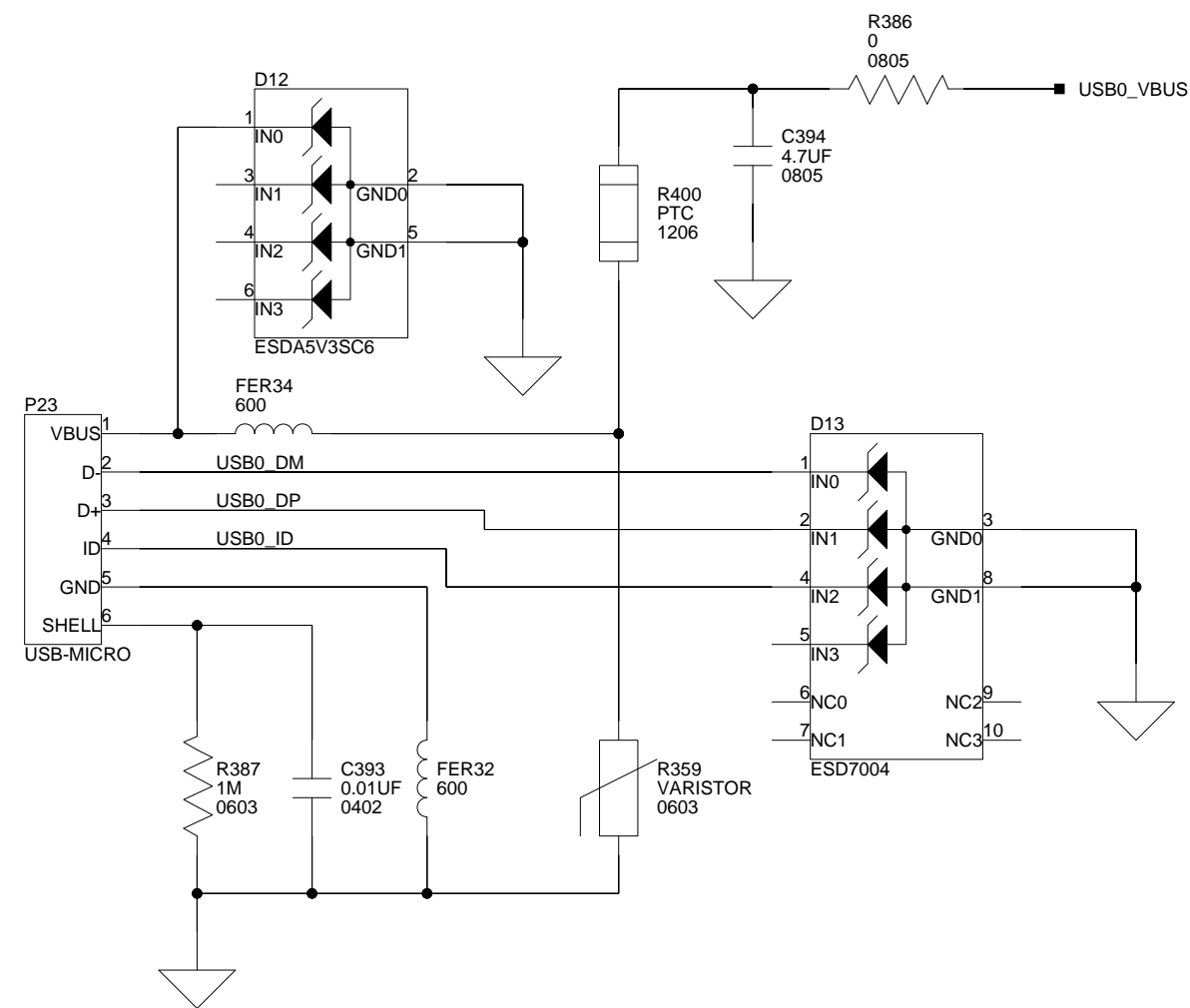
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board SPI Flash	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 8		of 30



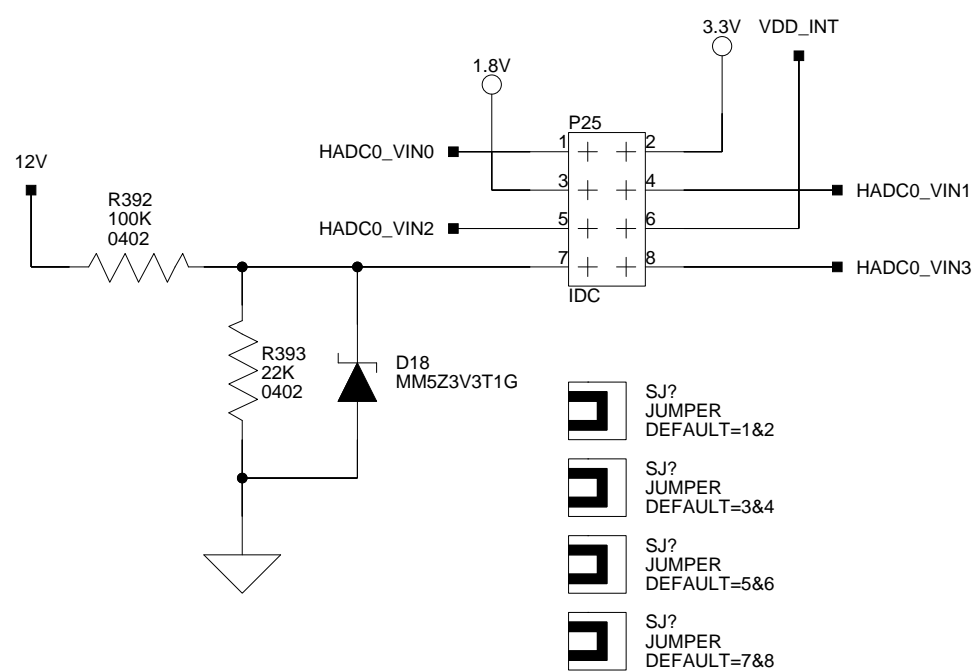
ANALOG DEVICES 20 Cotton Road
Nashua, NH 03063
PH: 1-800-ANALOGD

Title		ADSP-SC584 EZ-Board UART/MOST/Thumbwheel	
Size C	Board No.	A0448-2013	Rev 1.0A
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"USB OTG"
HOST/DEVICE



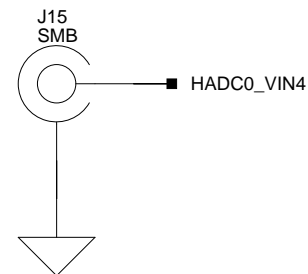
"VIN0/1/2/3"



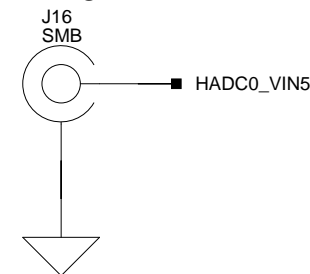
HADC Connectors

- SJ7 JUMPER DEFAULT=1&2
- SJ7 JUMPER DEFAULT=3&4
- SJ7 JUMPER DEFAULT=5&6
- SJ7 JUMPER DEFAULT=7&8

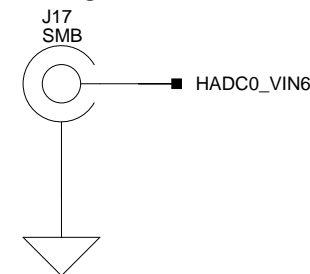
"VIN4"



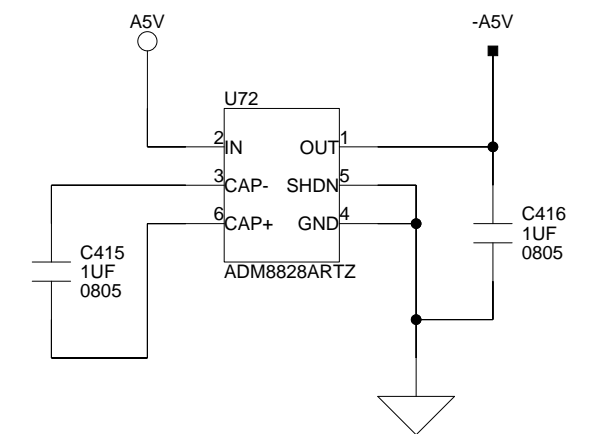
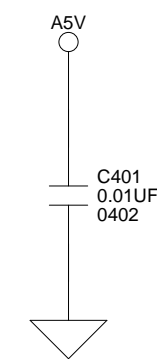
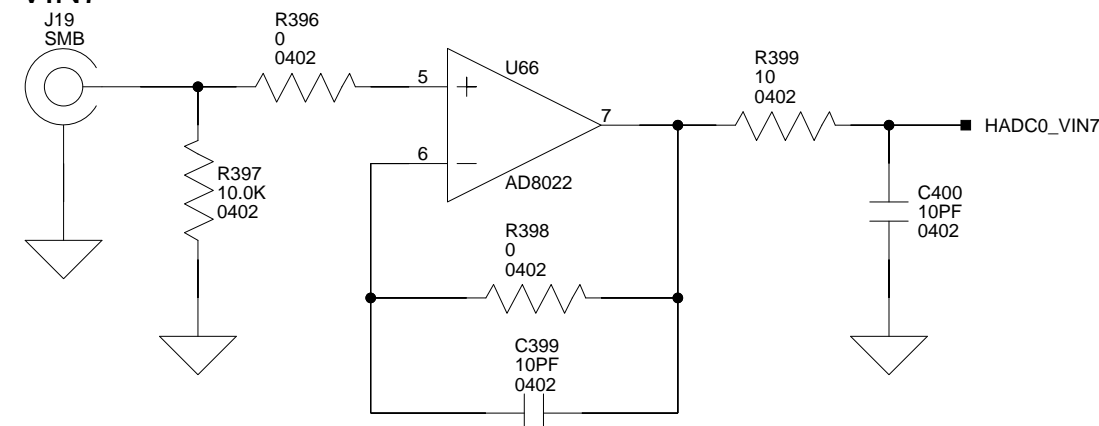
"VIN5"



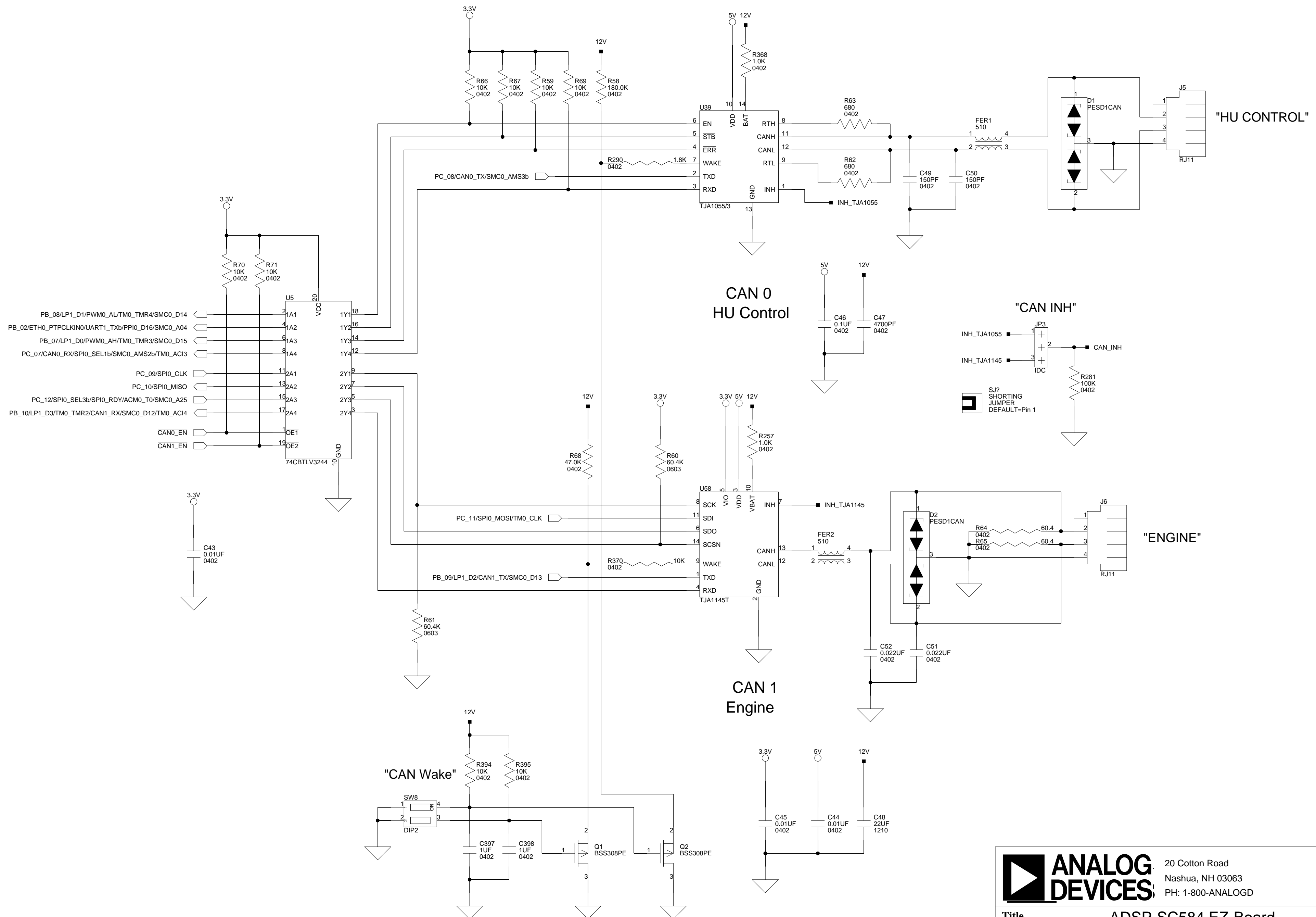
"VIN6"




"VIN7"

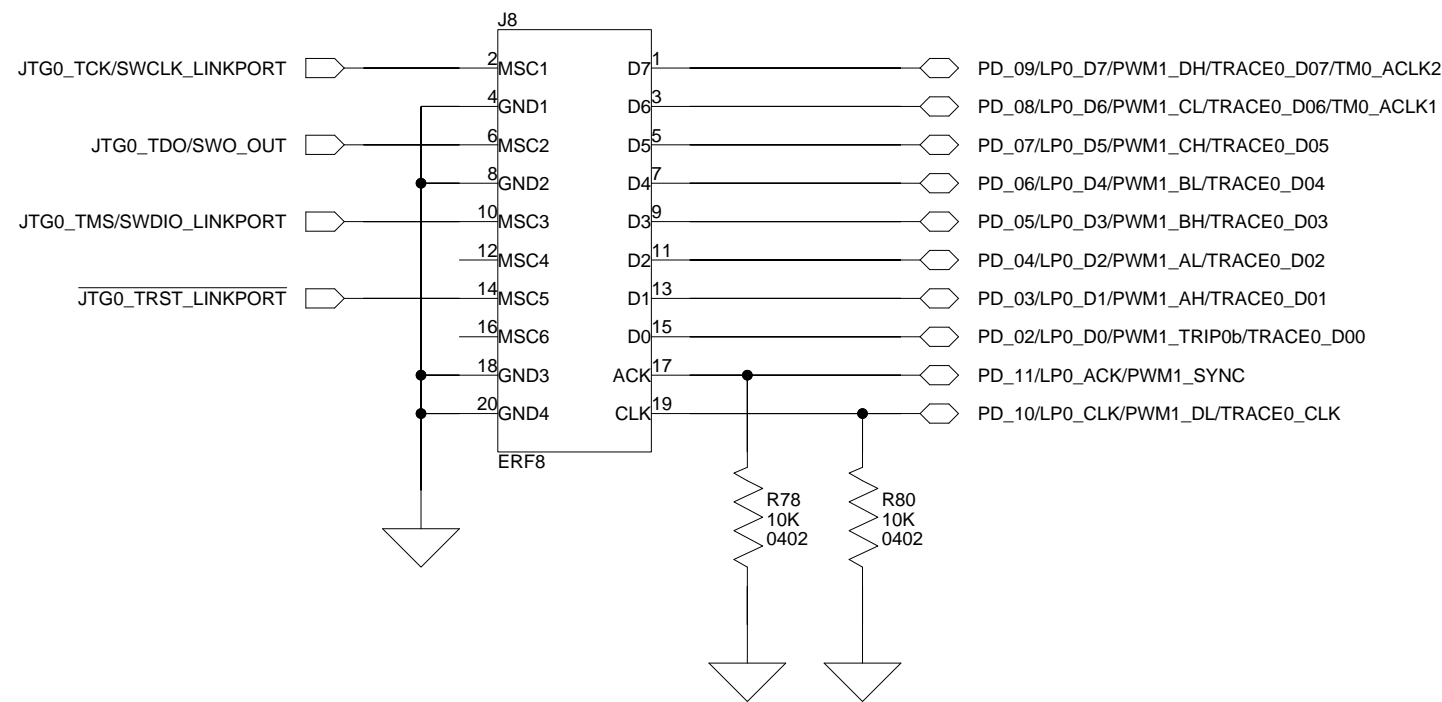


		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
Title ADSP-SC584 EZ-Board USB/ADC			
Size C	Board No.	A0448-2013	Rev 1.0A
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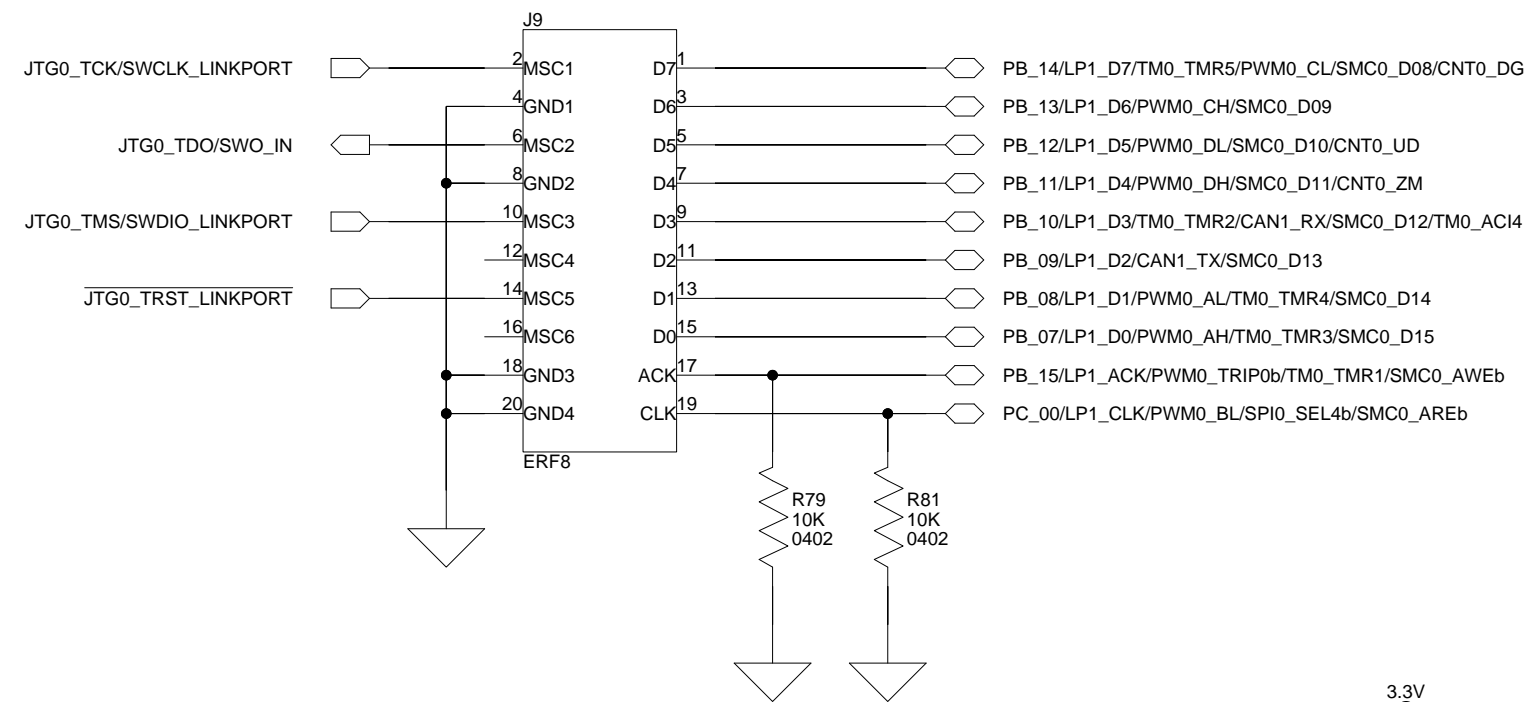


		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board CAN	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 11		of 30

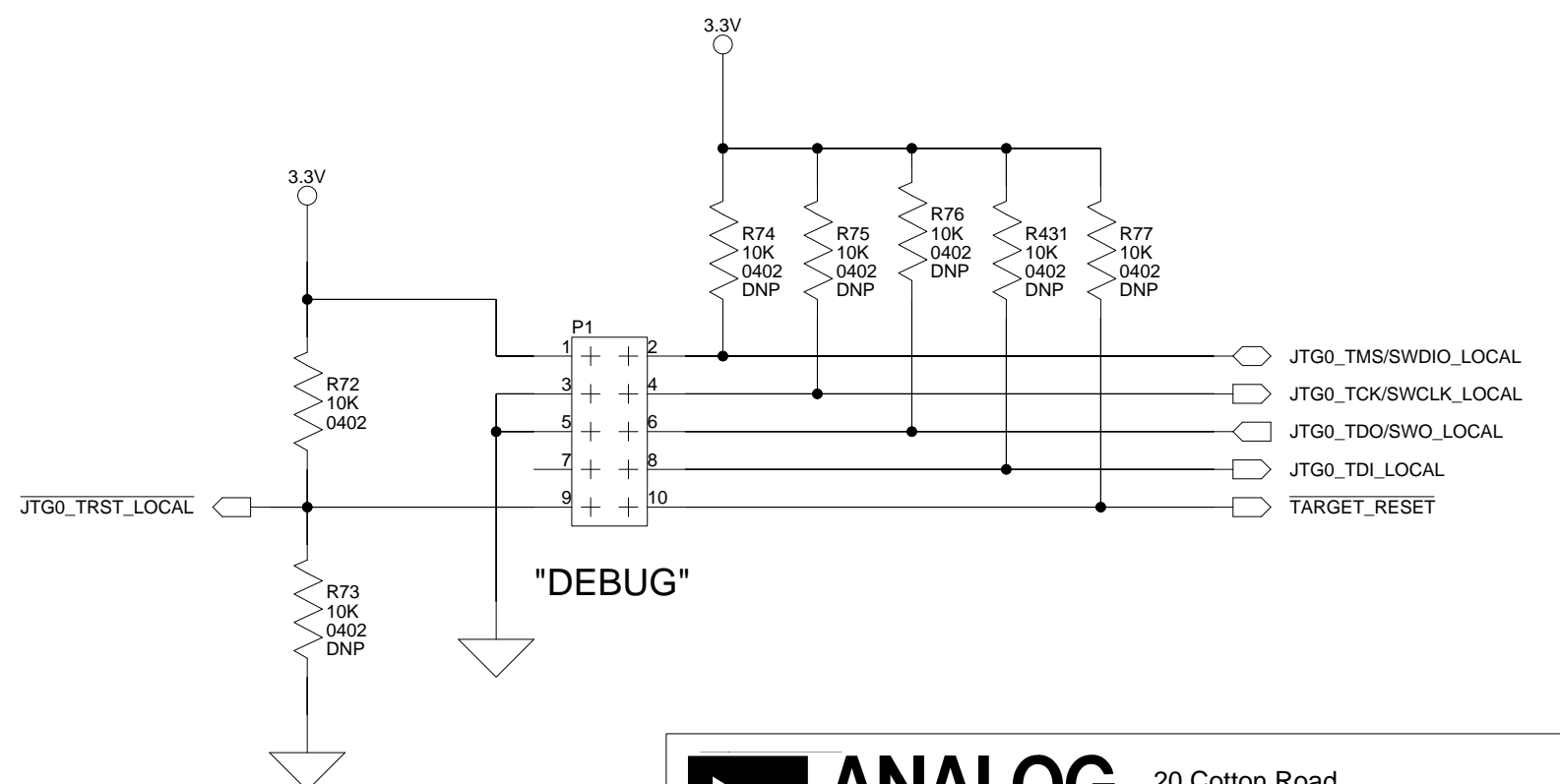
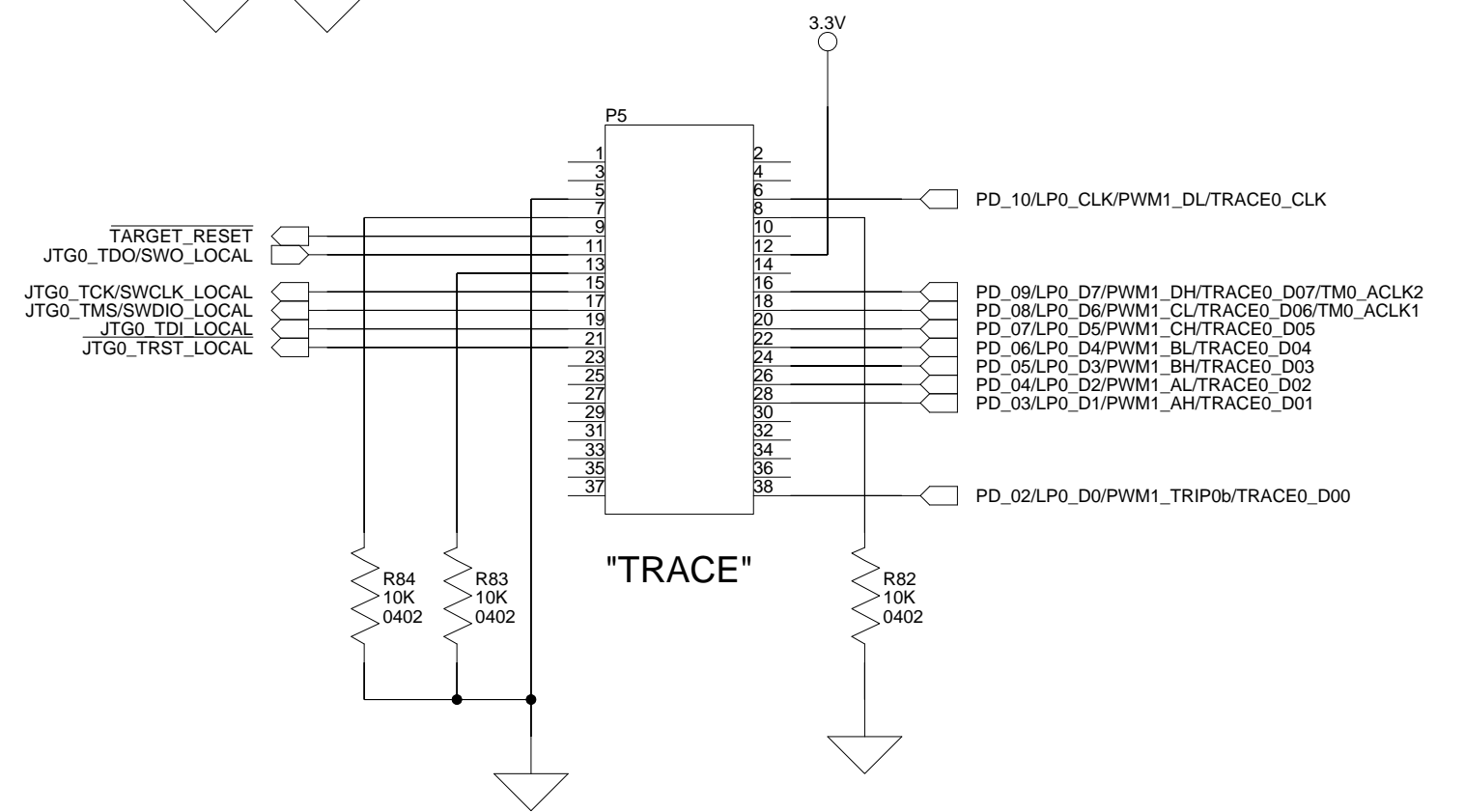
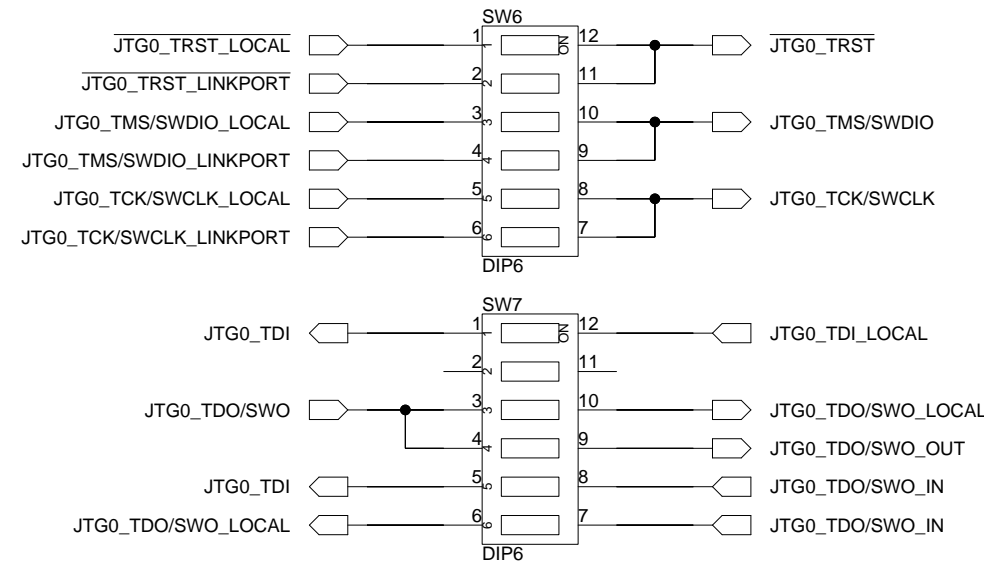
LINK PORT 0 / JTAG OUT



LINK PORT 1 / JTAG IN



JTAG SWITCHES



SINGLE PROCESSOR JTAG SETTINGS EMULATOR OR DEBUG AGENT (DEFAULT)

SWITCH	BOARD ATTACHED TO EMULATOR
SW?.1	ON
SW?.2	OFF
SW?.3	ON
SW?.4	OFF
SW?.5	ON
SW?.6	OFF
SW?.1	ON
SW?.2	OFF
SW?.3	ON
SW?.4	OFF
SW?.5	OFF
SW?.6	OFF

MULTI PROCESSOR JTAG SETTINGS USING TWO OR MORE EZ-BOARDS (LINK PORT CABLES REQUIRED FOR MORE THAN TWO BOARDS)

SWITCH	BOARD ATTACHED TO EMULATOR	BOARD(S) NOT ATTACHED TO EMULATOR
SW?.1	ON	OFF
SW?.2	ON	ON
SW?.3	ON	OFF
SW?.4	ON	ON
SW?.5	ON	OFF
SW?.6	ON	ON
SW?.1	ON	OFF
SW?.2	OFF	OFF
SW?.3	OFF	OFF
SW?.4	ON	ON
SW?.5	OFF	ON
SW?.6	ON	OFF

ANALOG DEVICES 20 Cotton Road
Nashua, NH 03063
PH: 1-800-ANALOGD

Title **ADSP-SC584 EZ-Board
Link Port/Debug**

Size C	Board No. A0448-2013	Rev 1.0A
Date 4/22/16	Sheet 12	of 30

A

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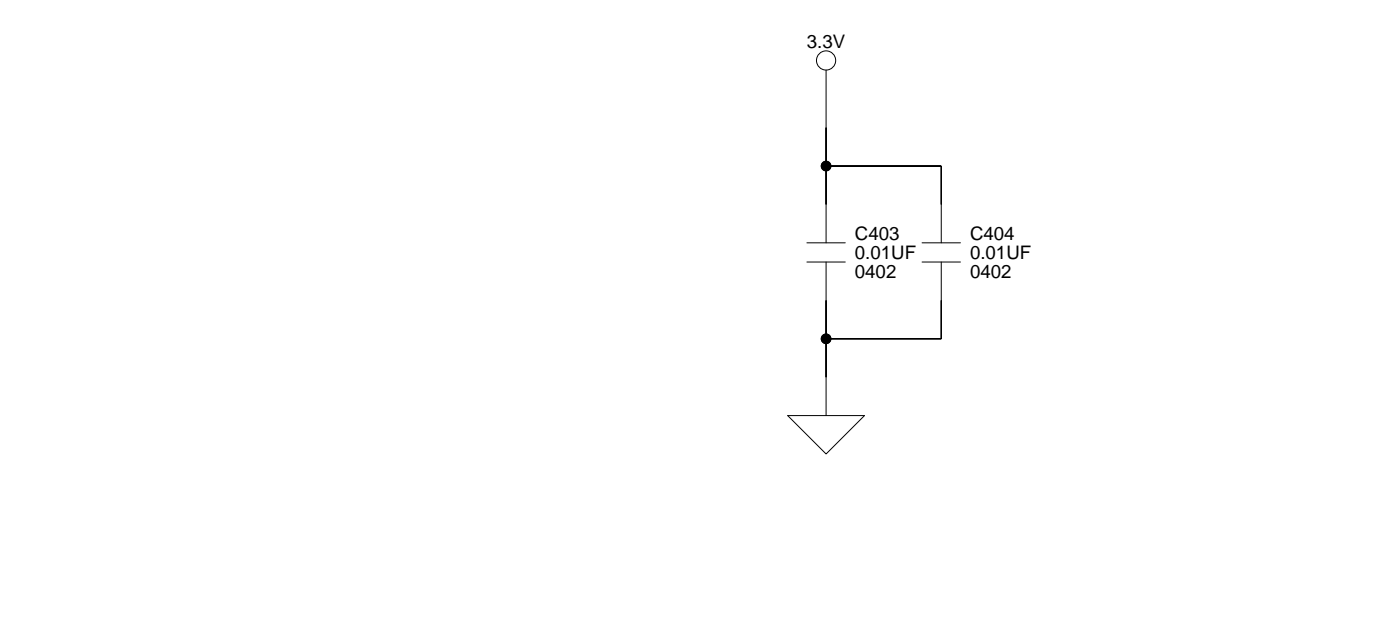
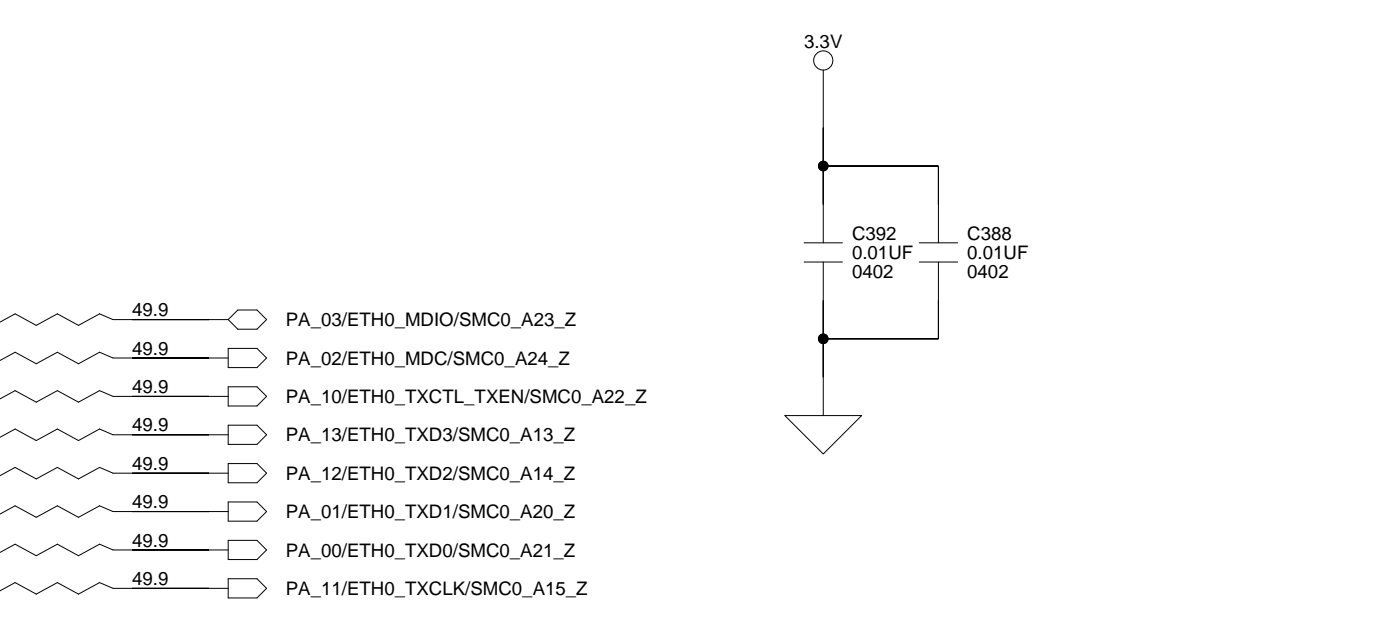
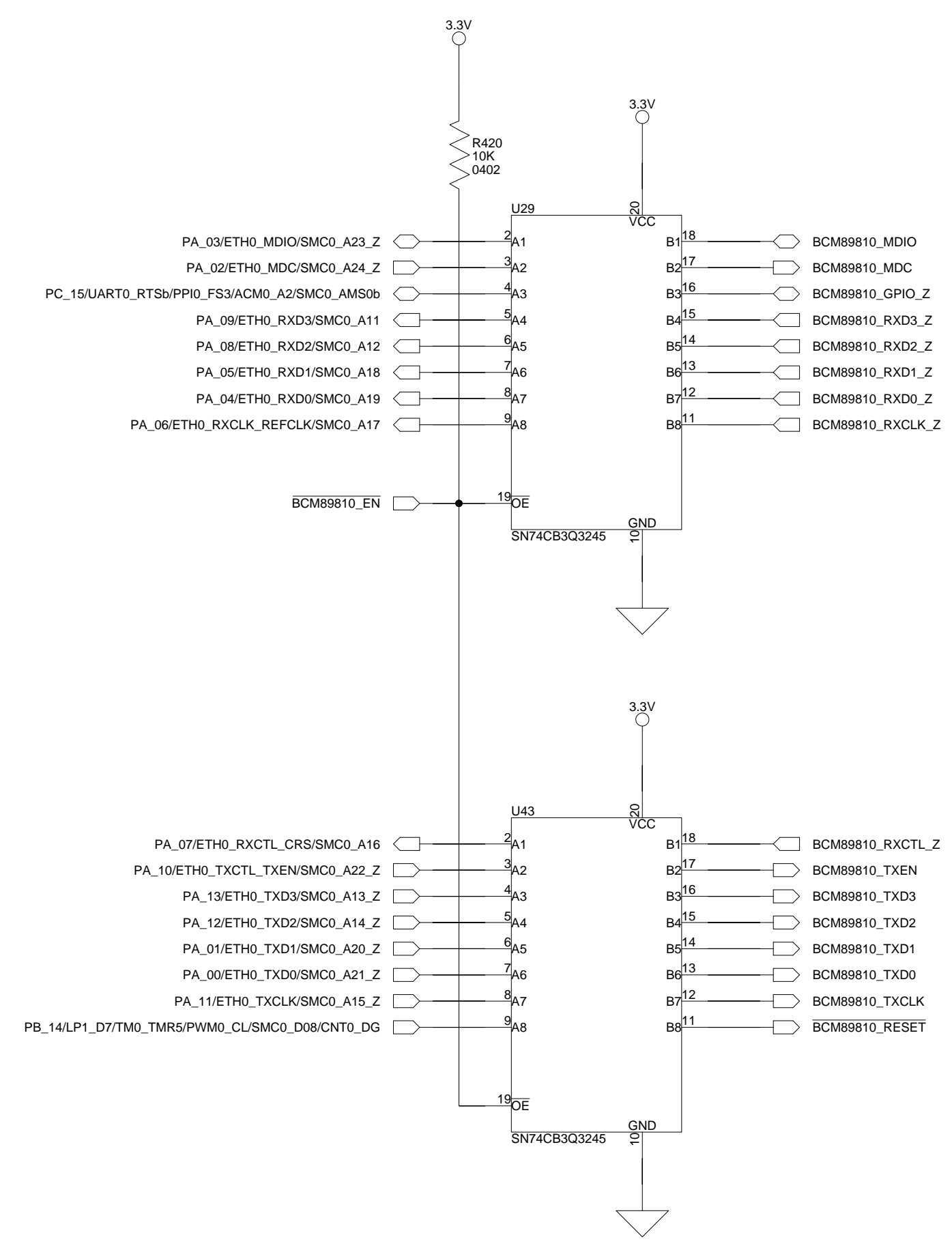
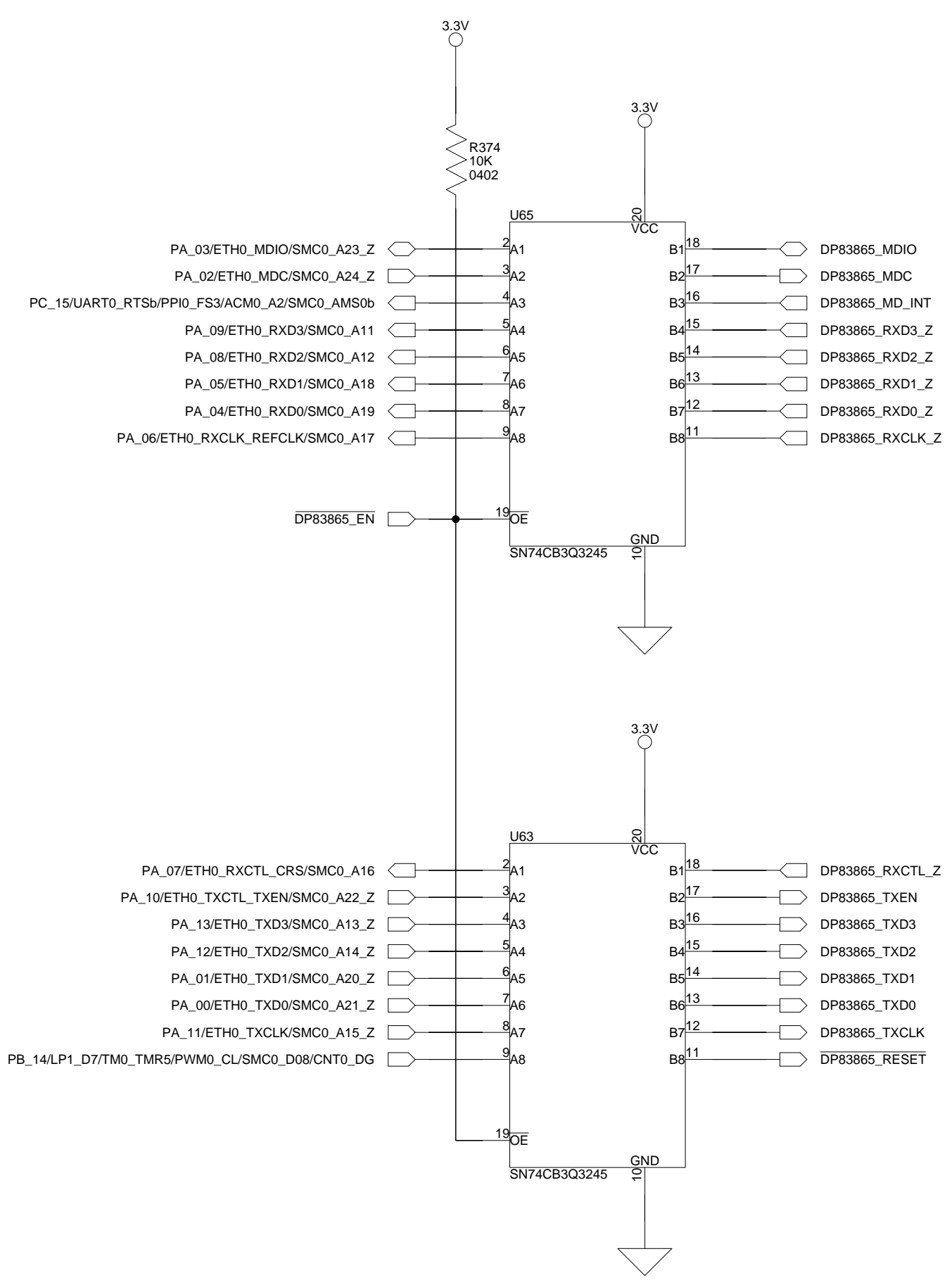
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Place near U1

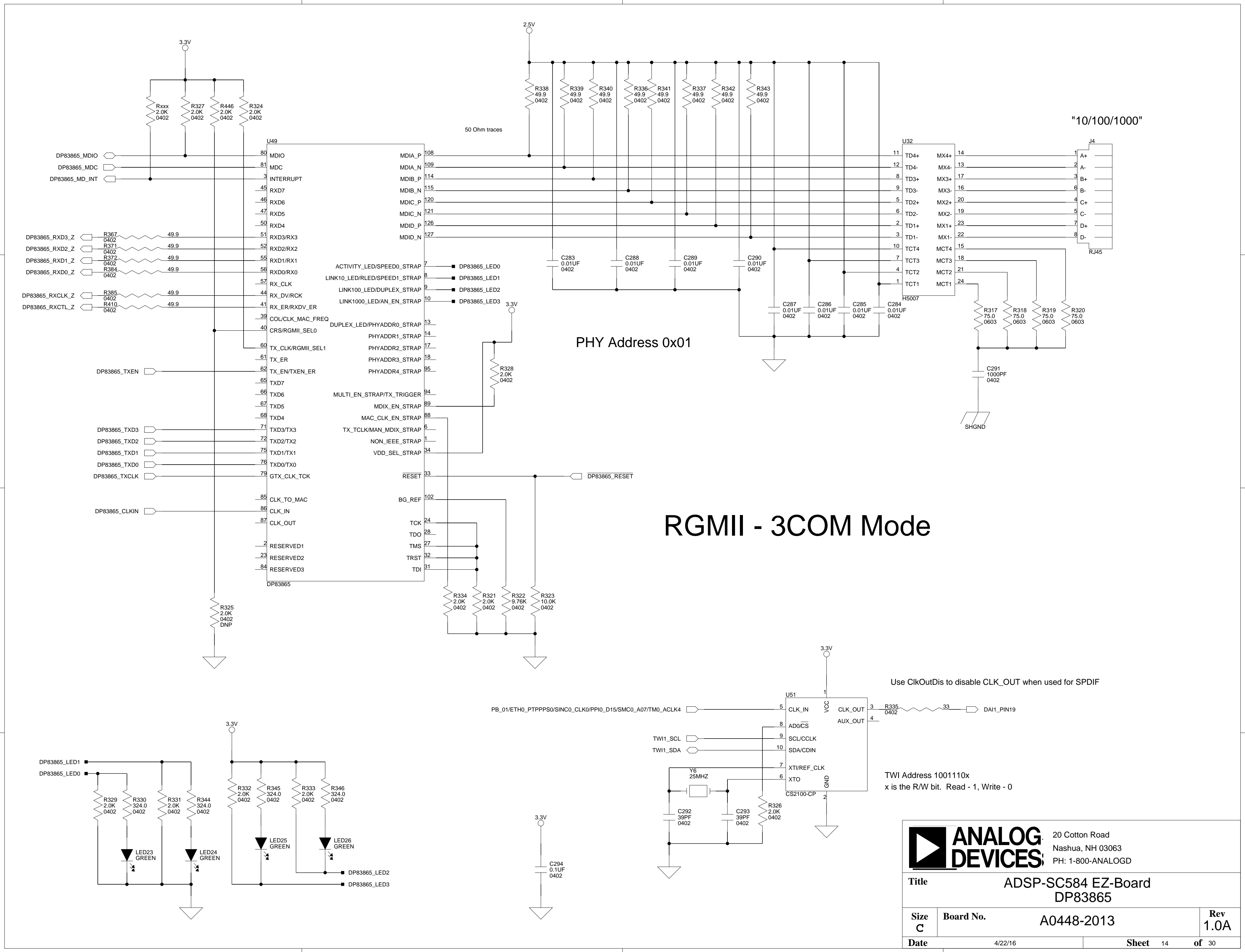
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board EMAC Switching	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 13		of 30


A

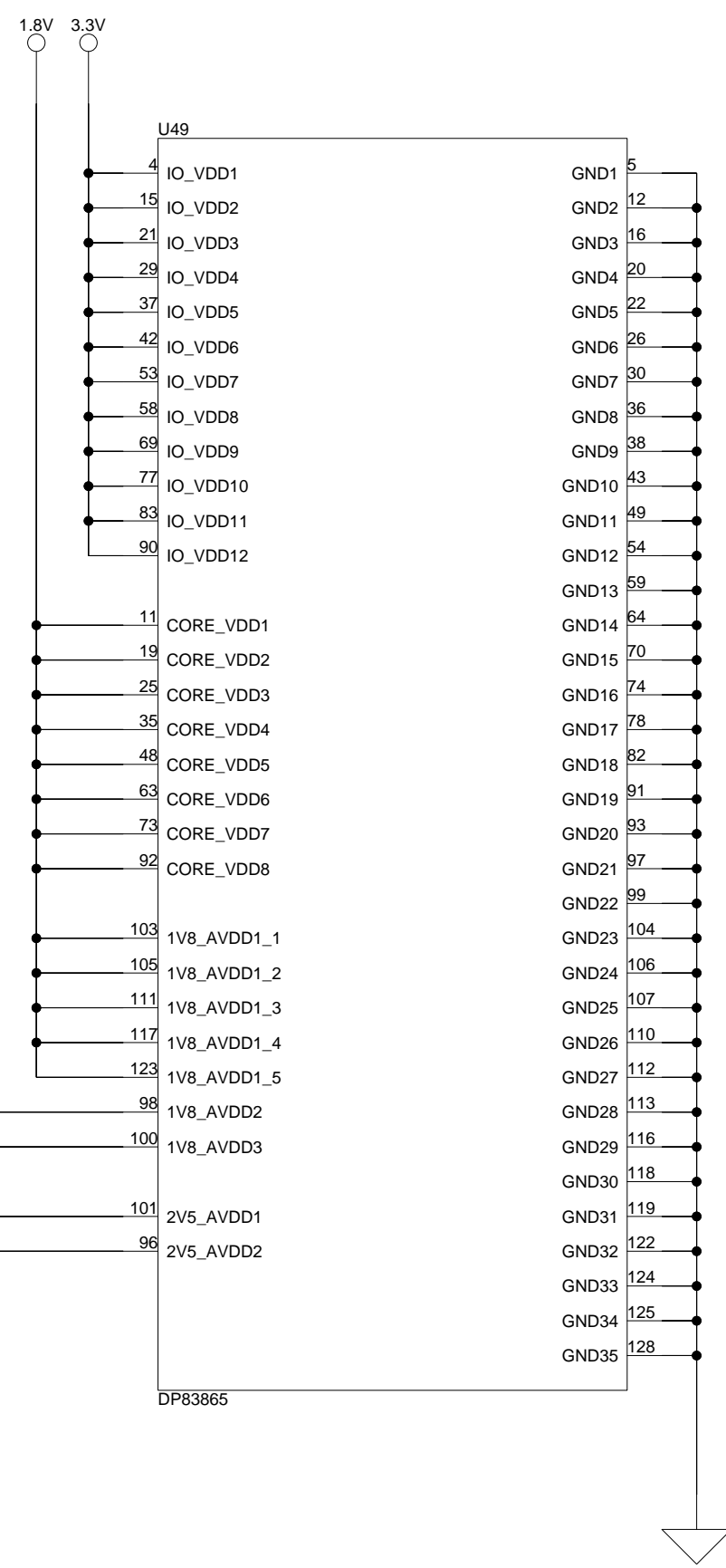
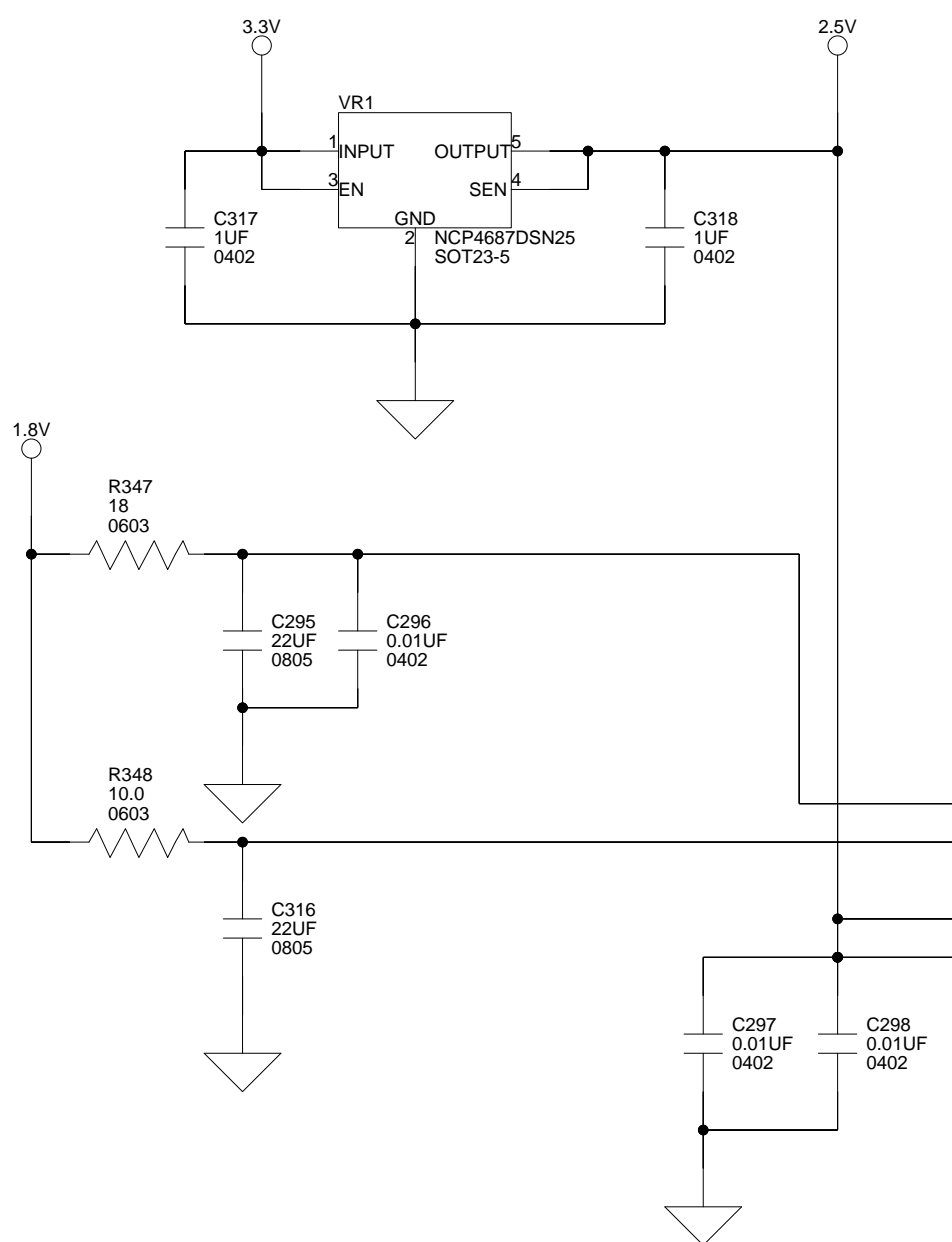
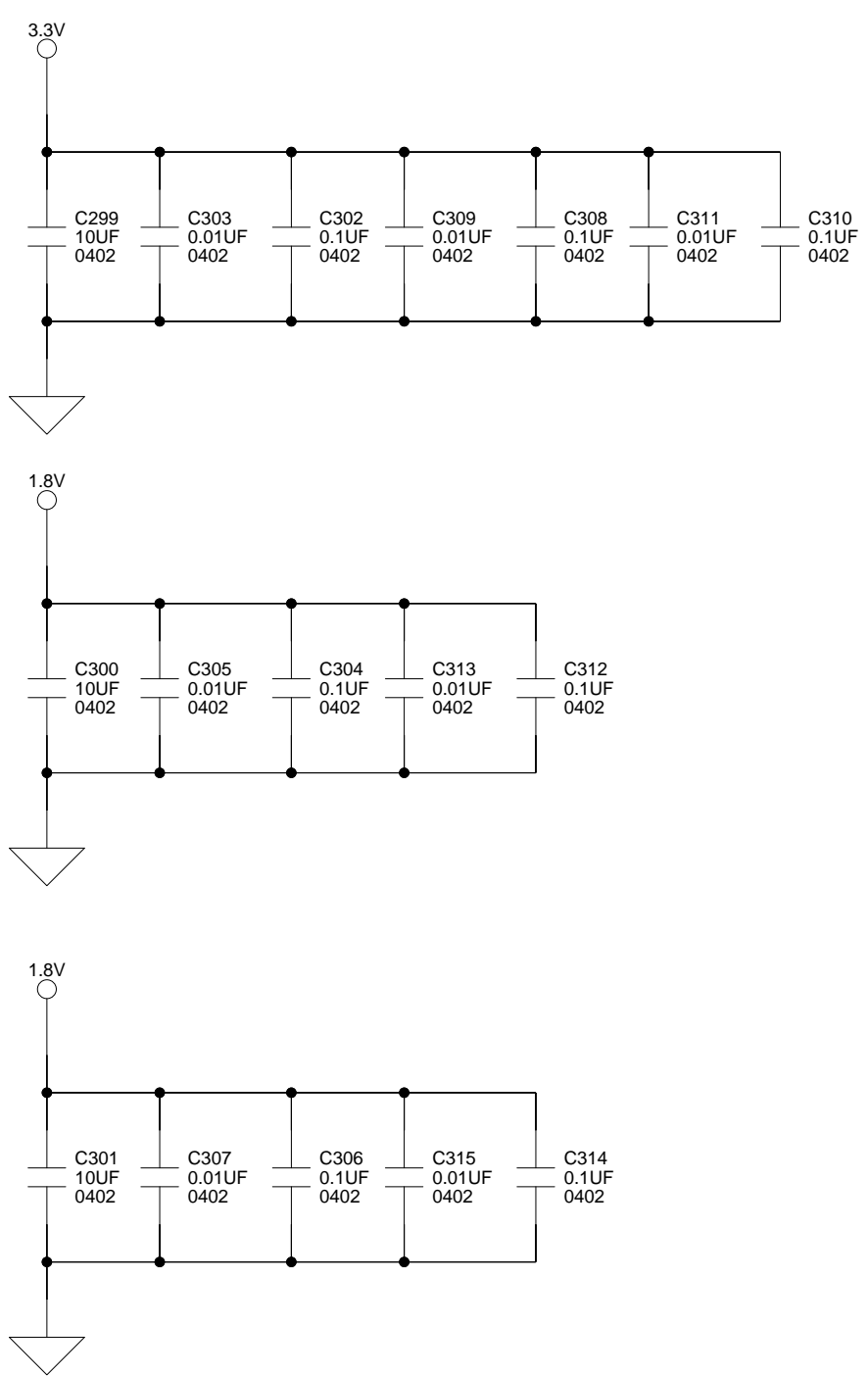
B


C

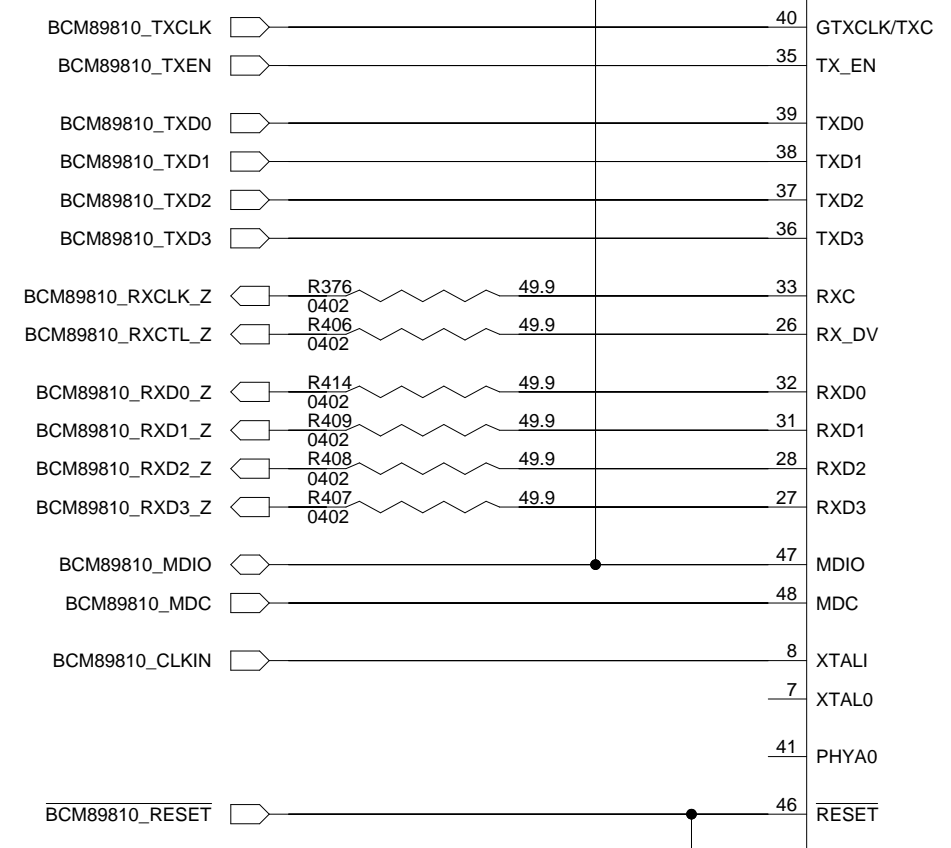
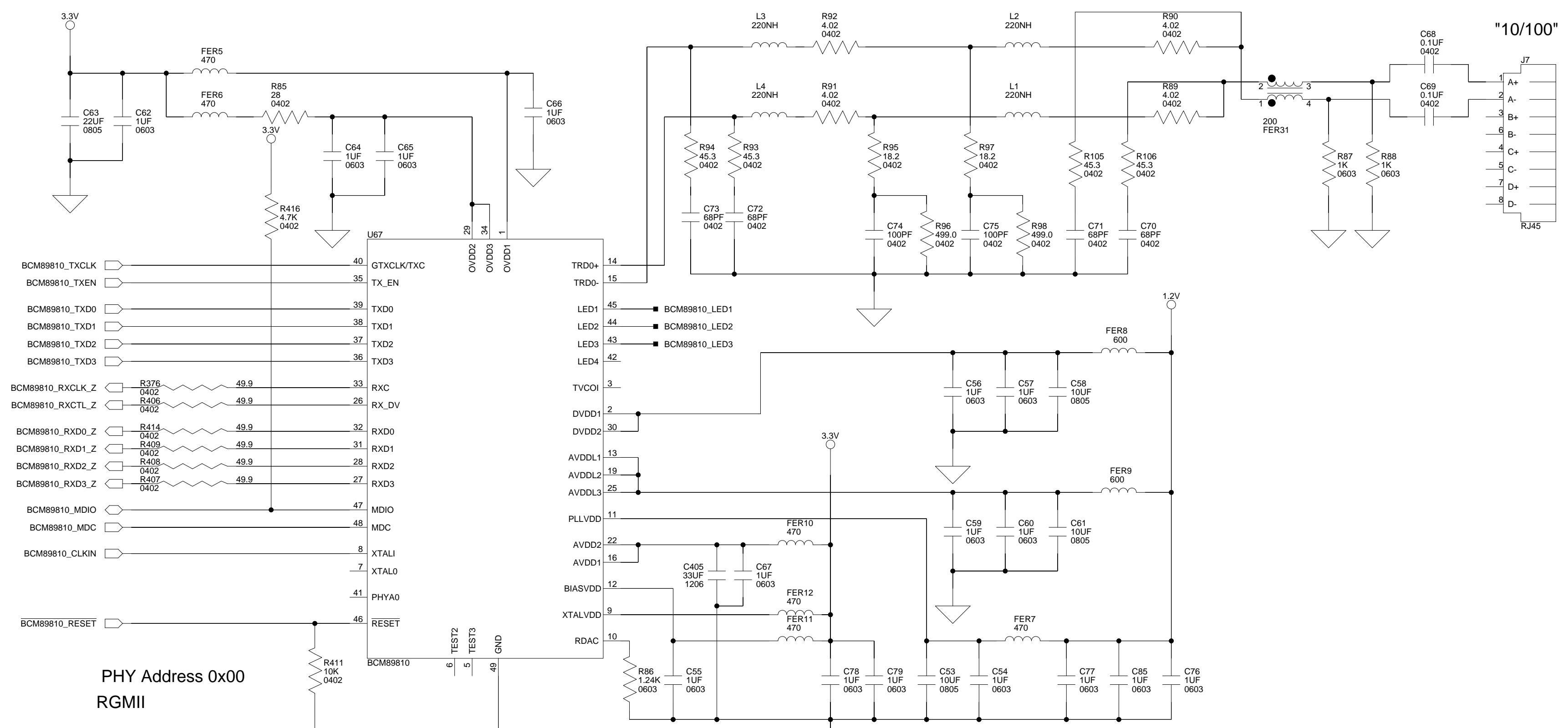
D



		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board DP83865	
Size C	Board No. A0448-2013	Rev 1.0A	
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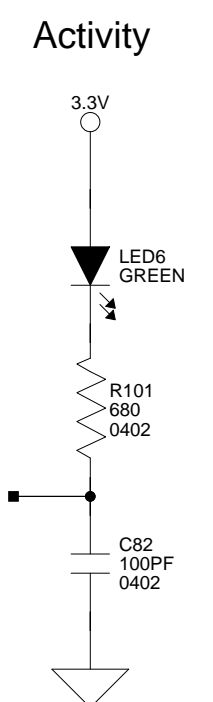
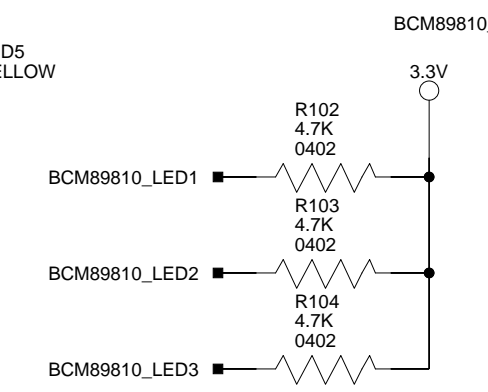
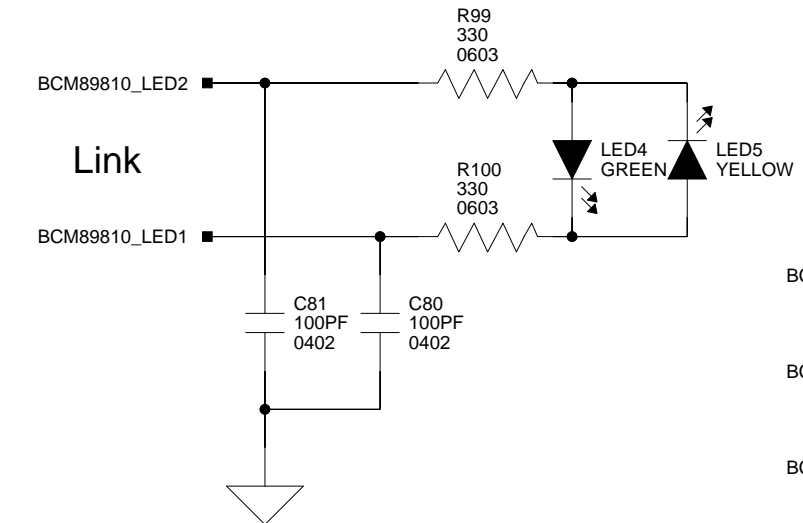
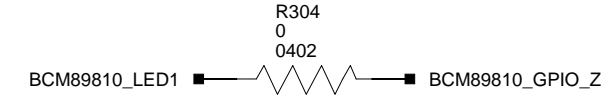
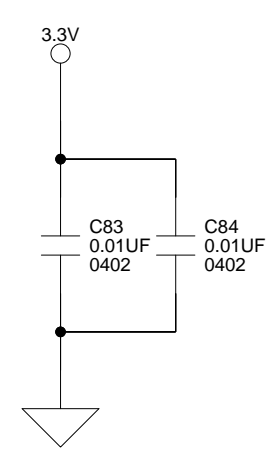


		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
Title		ADSP-SC584 EZ-Board DP83865 Power	
Size C	Board No.	A0448-2013	Rev 1.0A
Date	4/22/16	Sheet	15 of 30

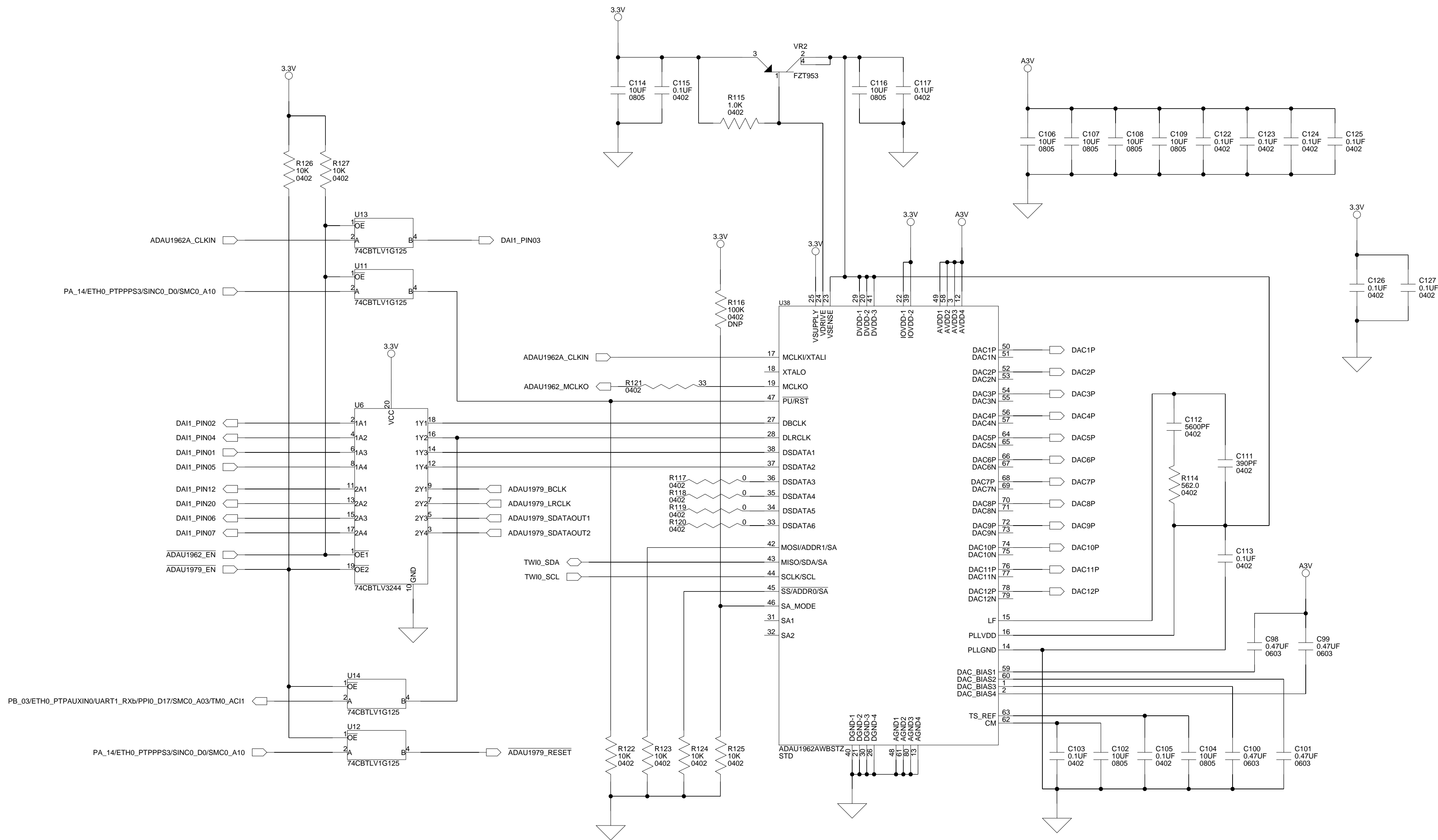


PHY Address 0x00
RGMII

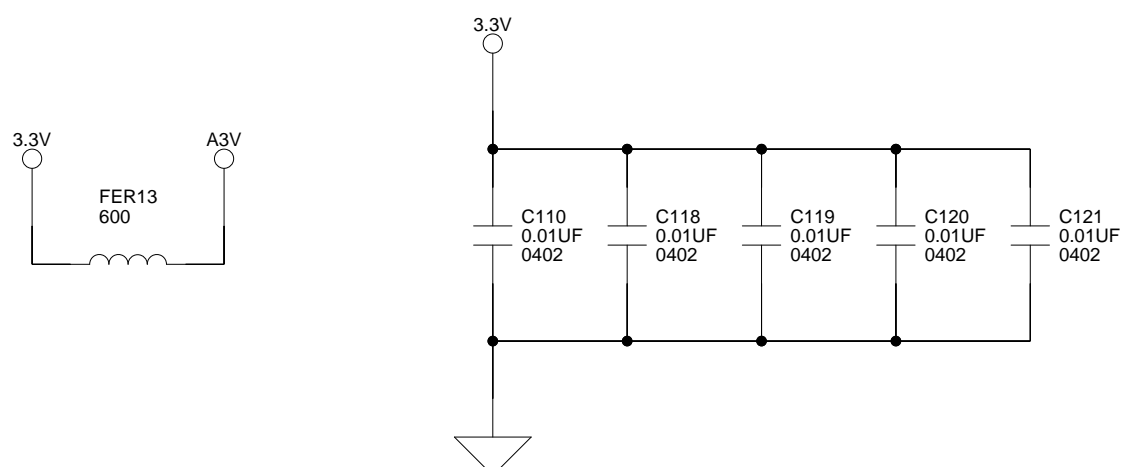
Set bit 10 of register 0x00 to 1
to put into isolate mode.
Set bit 5 of register 0x18 (Shadow 010)
to 1 to put into super isolate mode.




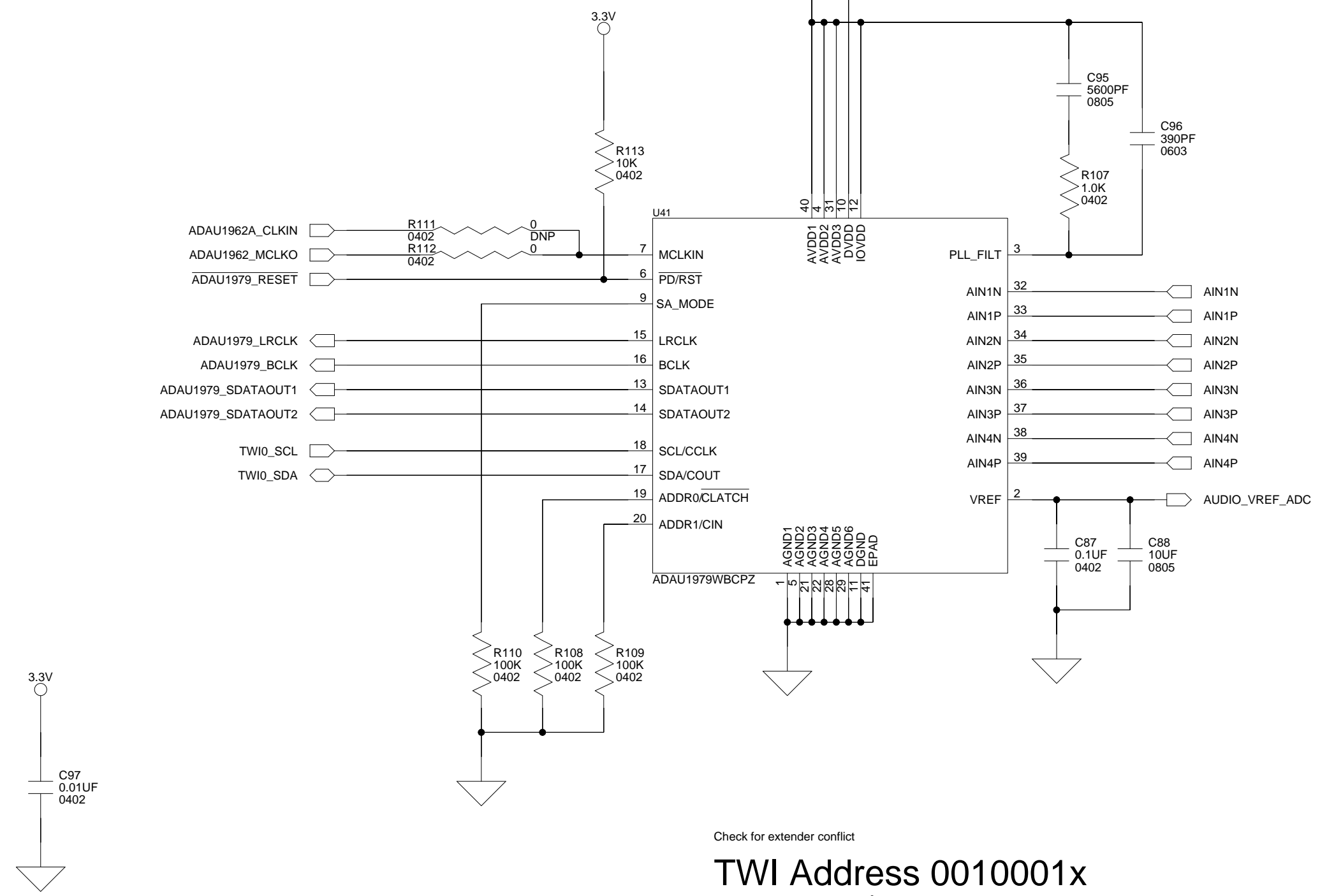
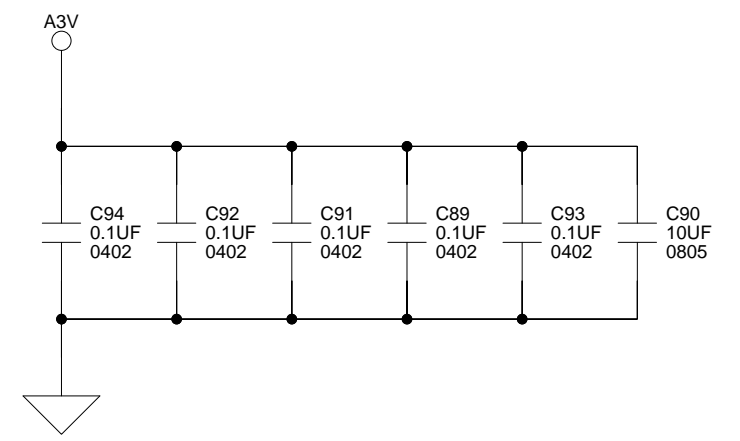
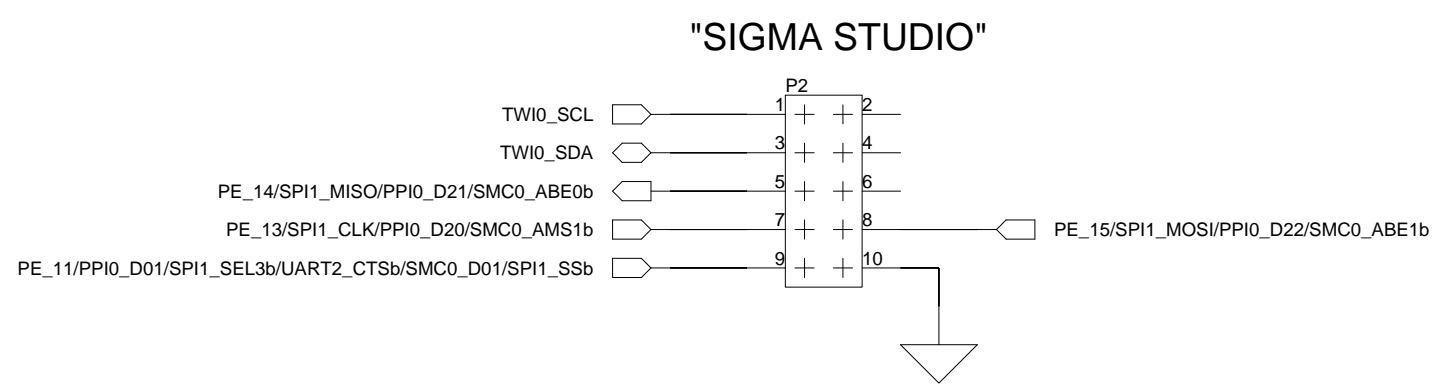
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board BCM89810	
Size C	Board No.	A0448-2013	Rev
Date	4/22/16	Sheet	16 of 30



Check for extender conflict
 TWI Address 0000100x
 x is the R/W bit. Read - 1, Write - 0



		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board ADAU1962A	
Size C	Board No.	A0448-2013	
Date	4/22/16	Sheet	17 of 30
		Rev	1.0A



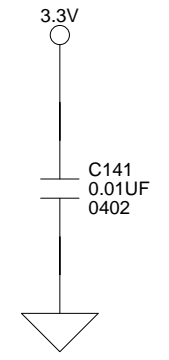
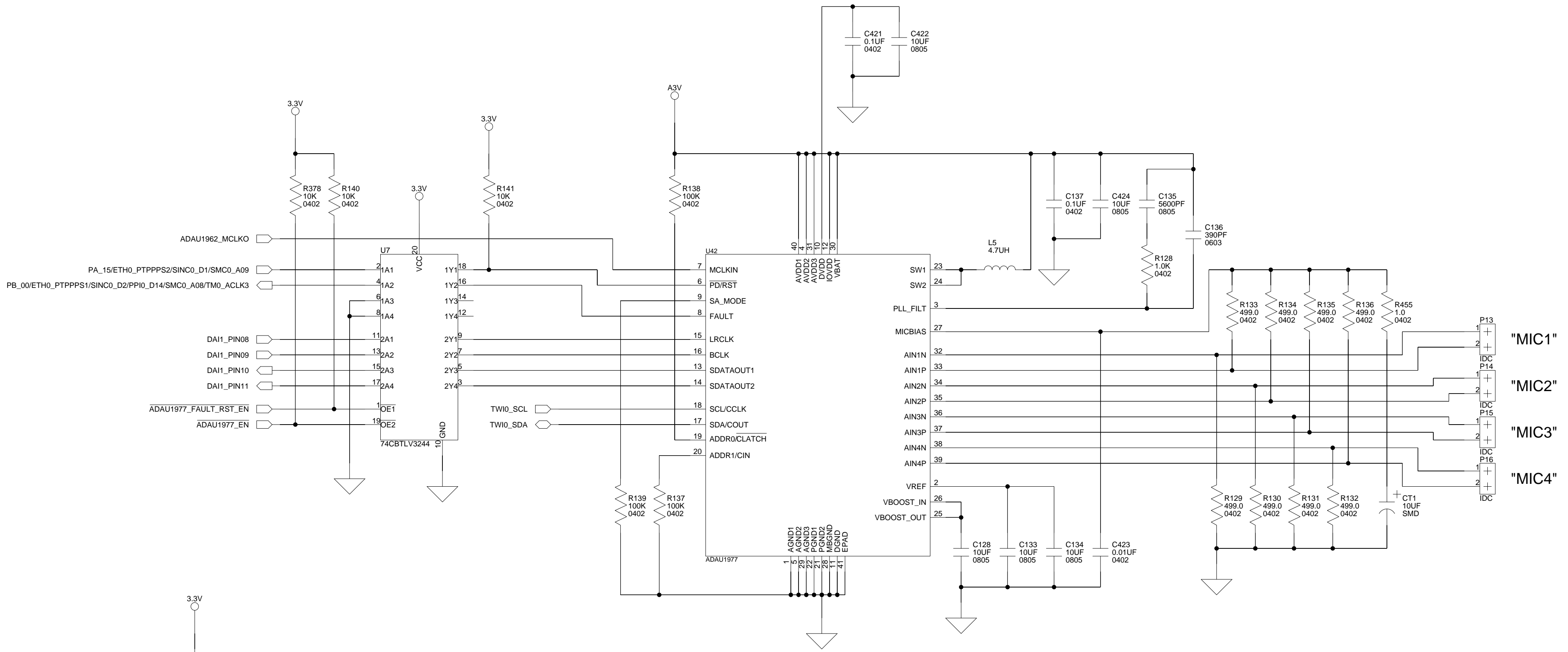
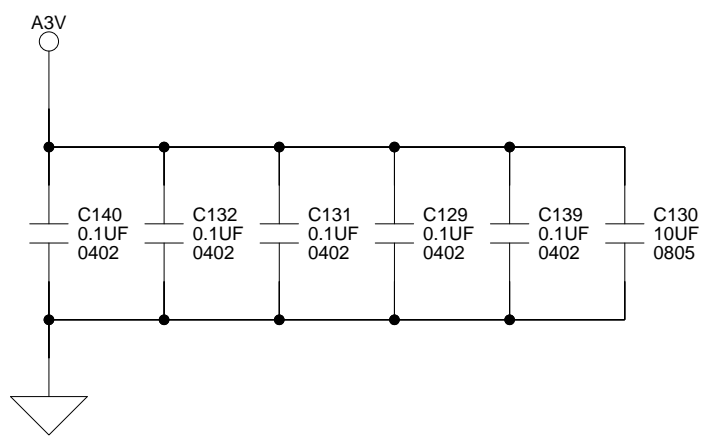
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board ADAU1979	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 18		of 30

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D



Check for extender conflict

TWI Address 0110001x
 x is the R/W bit. Read - 1, Write - 0

		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board ADAU1977	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 19		of 30

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D

1

1

2

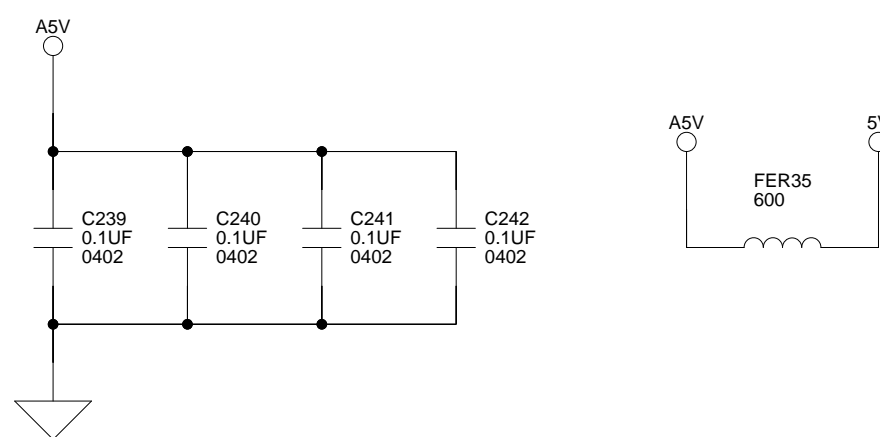
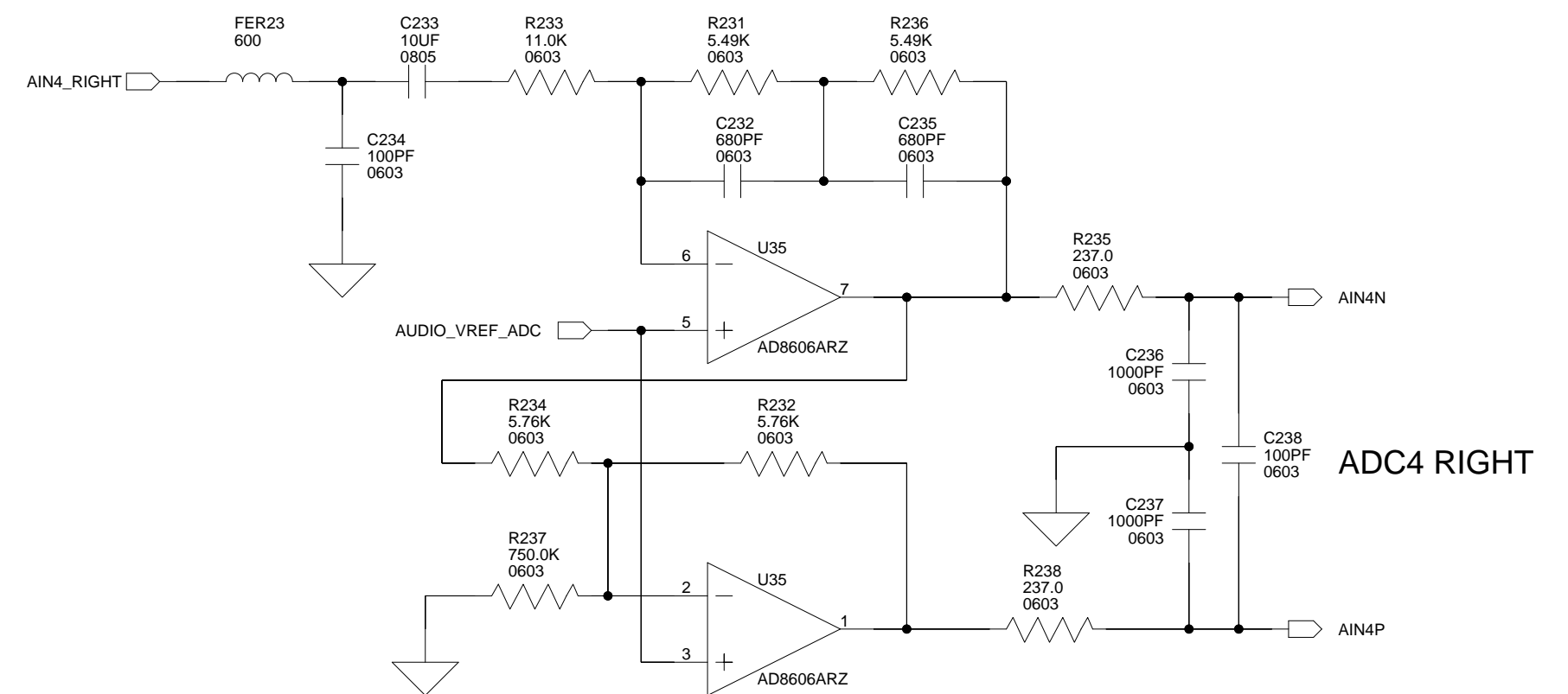
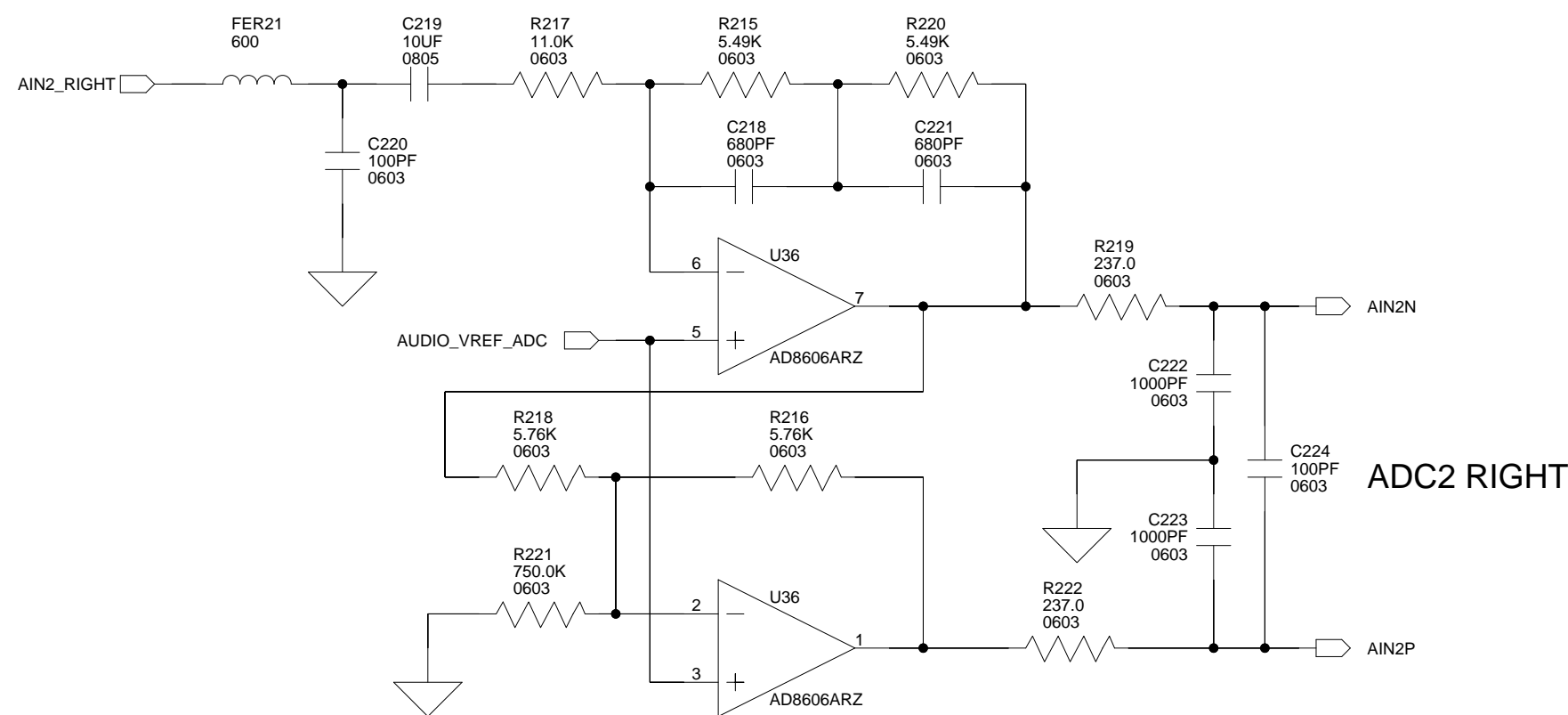
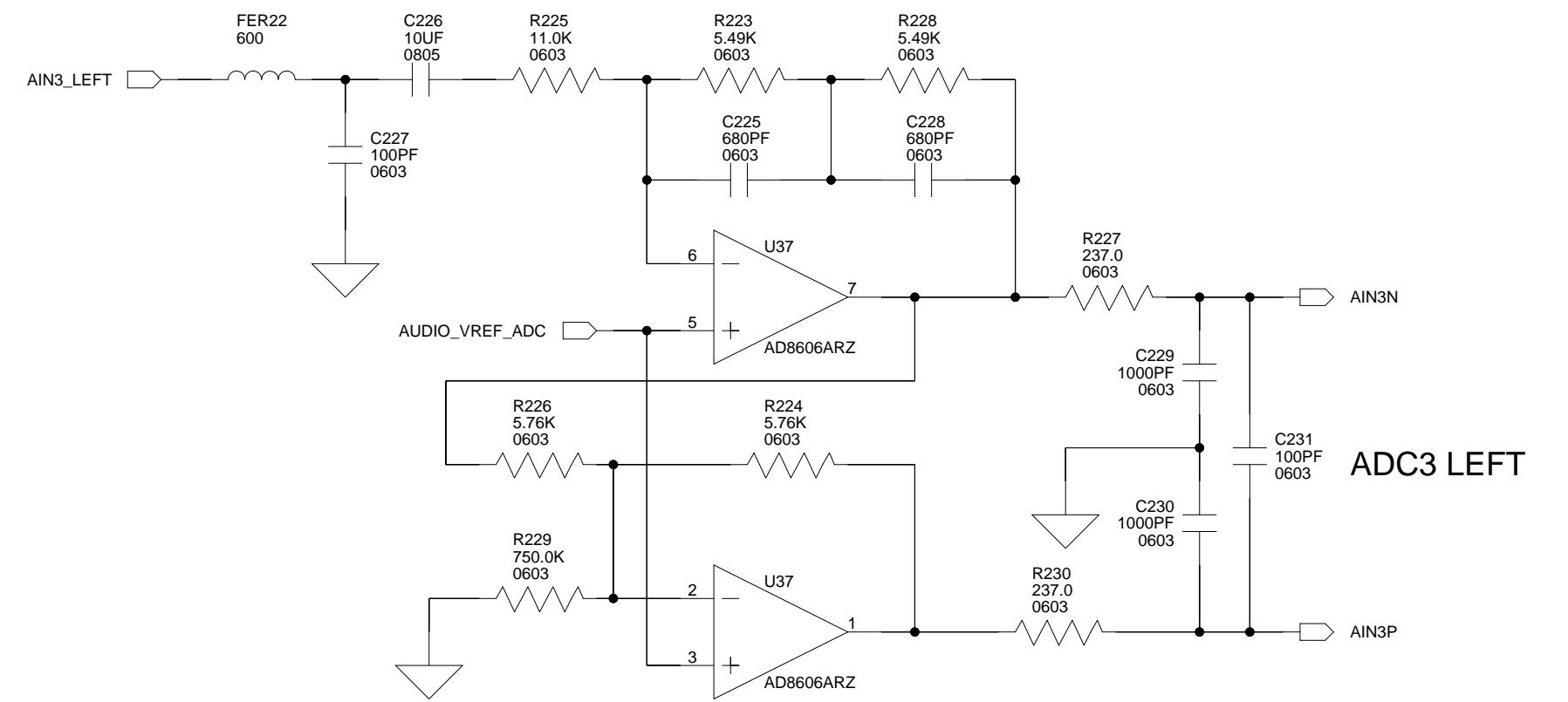
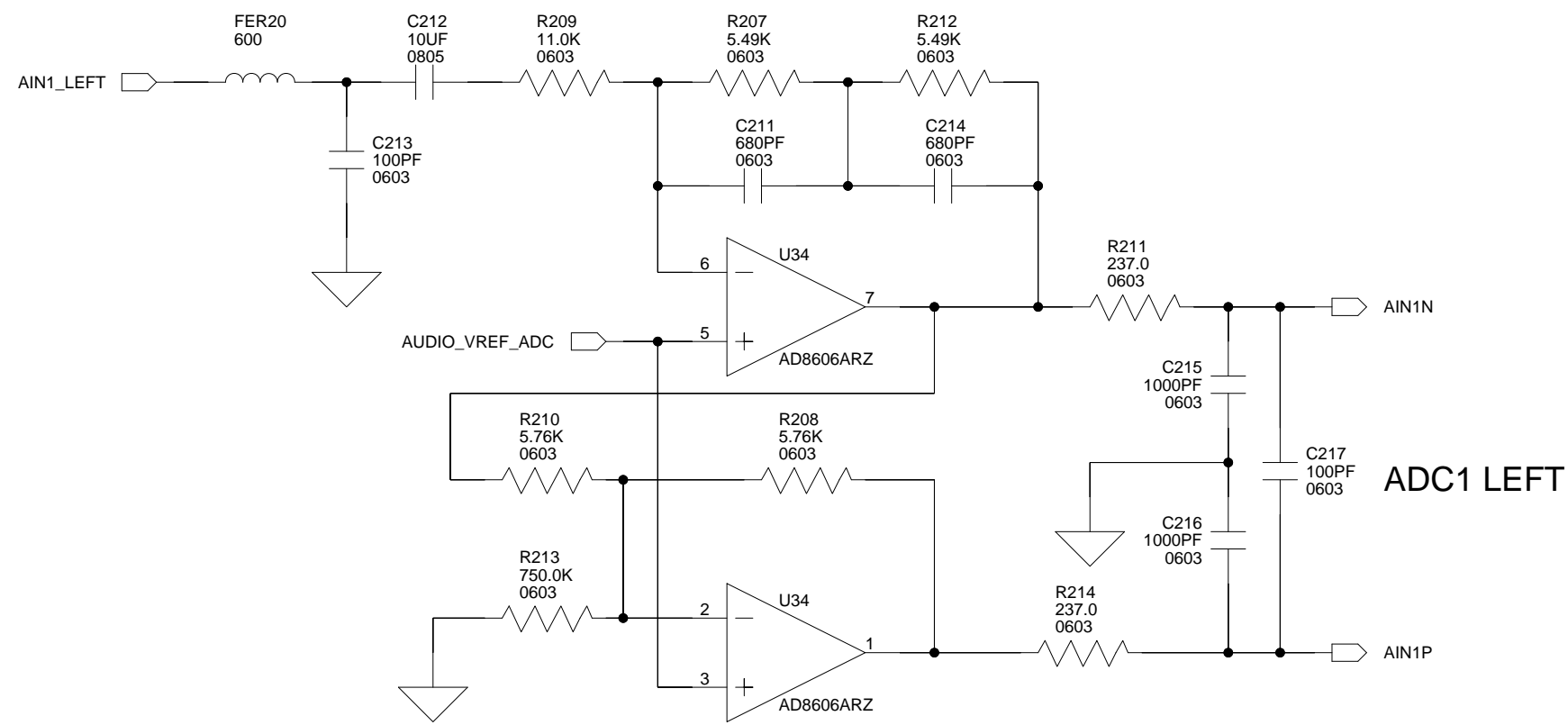
2


3

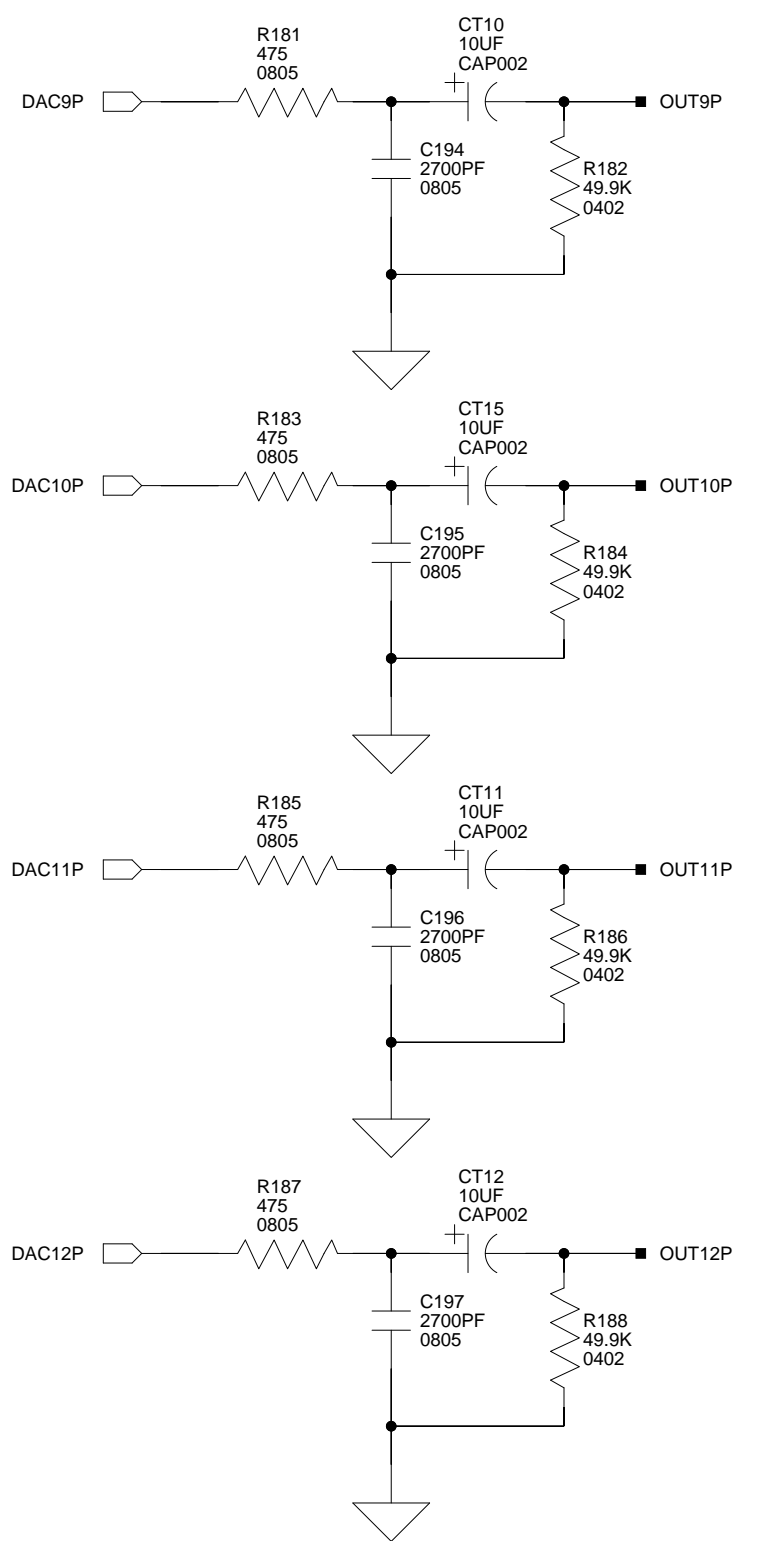
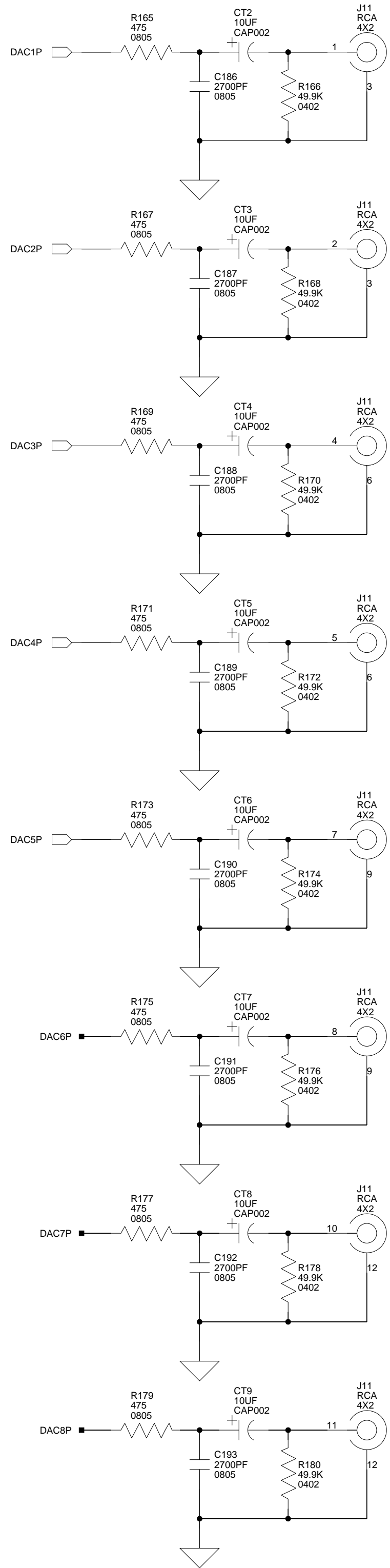
3

4

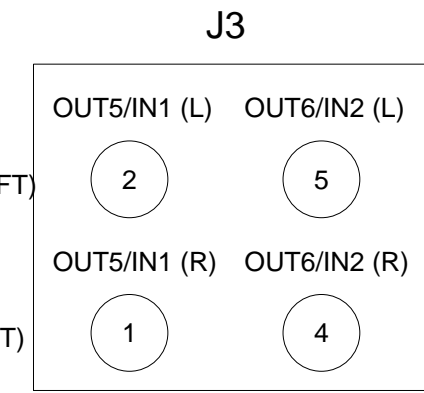
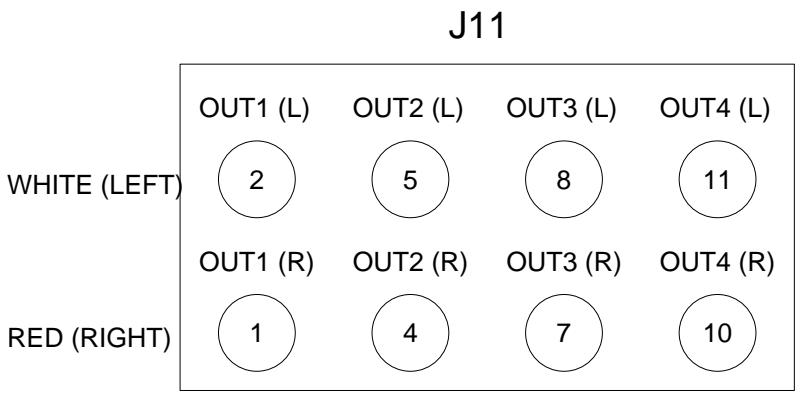
4



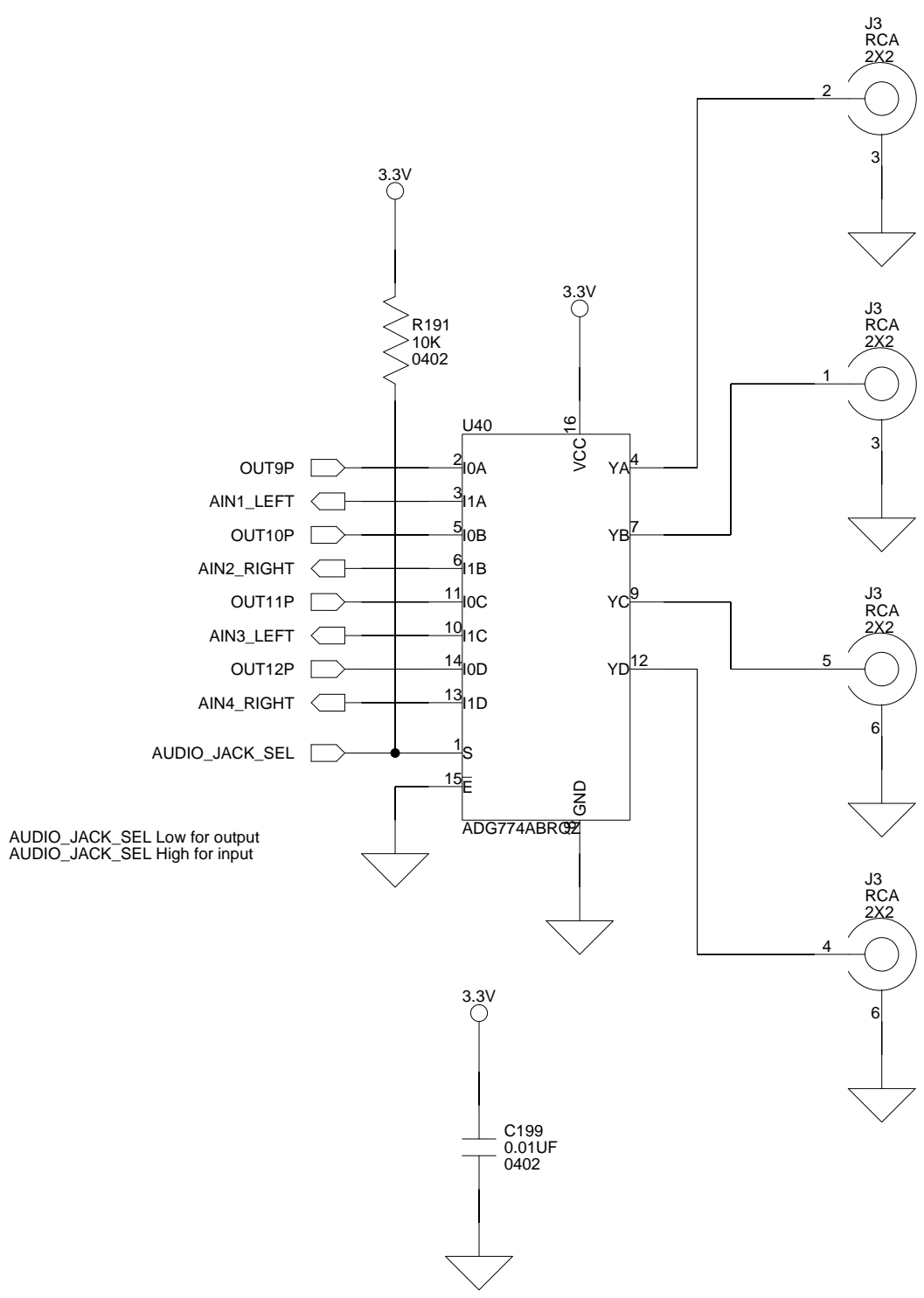
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board Audio Input	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 20		of 30



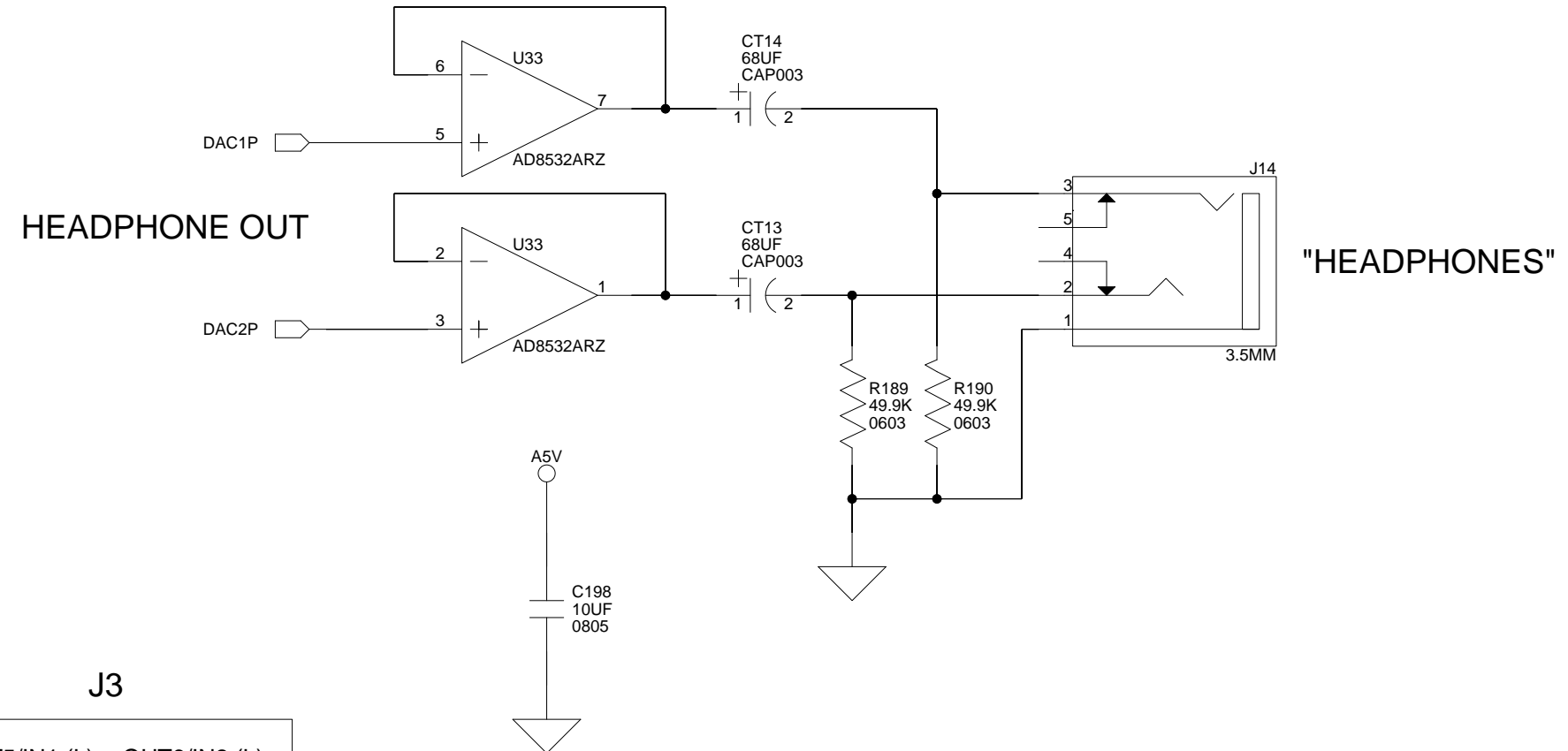
"INPUT"



NOTE: THE NUMBER INSIDE EACH OF THE CIRCLES IS THE ACTUAL PIN NUMBER FOR THE RESPECTIVE CONNECTOR.



"INPUT/OUTPUT"



		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD
Title ADSP-SC584 EZ-Board Audio Connectors		
Size C	Board No. A0448-2013	Rev 1.0A
Date	4/22/16	Sheet 21 of 30

"SPDIF IN"

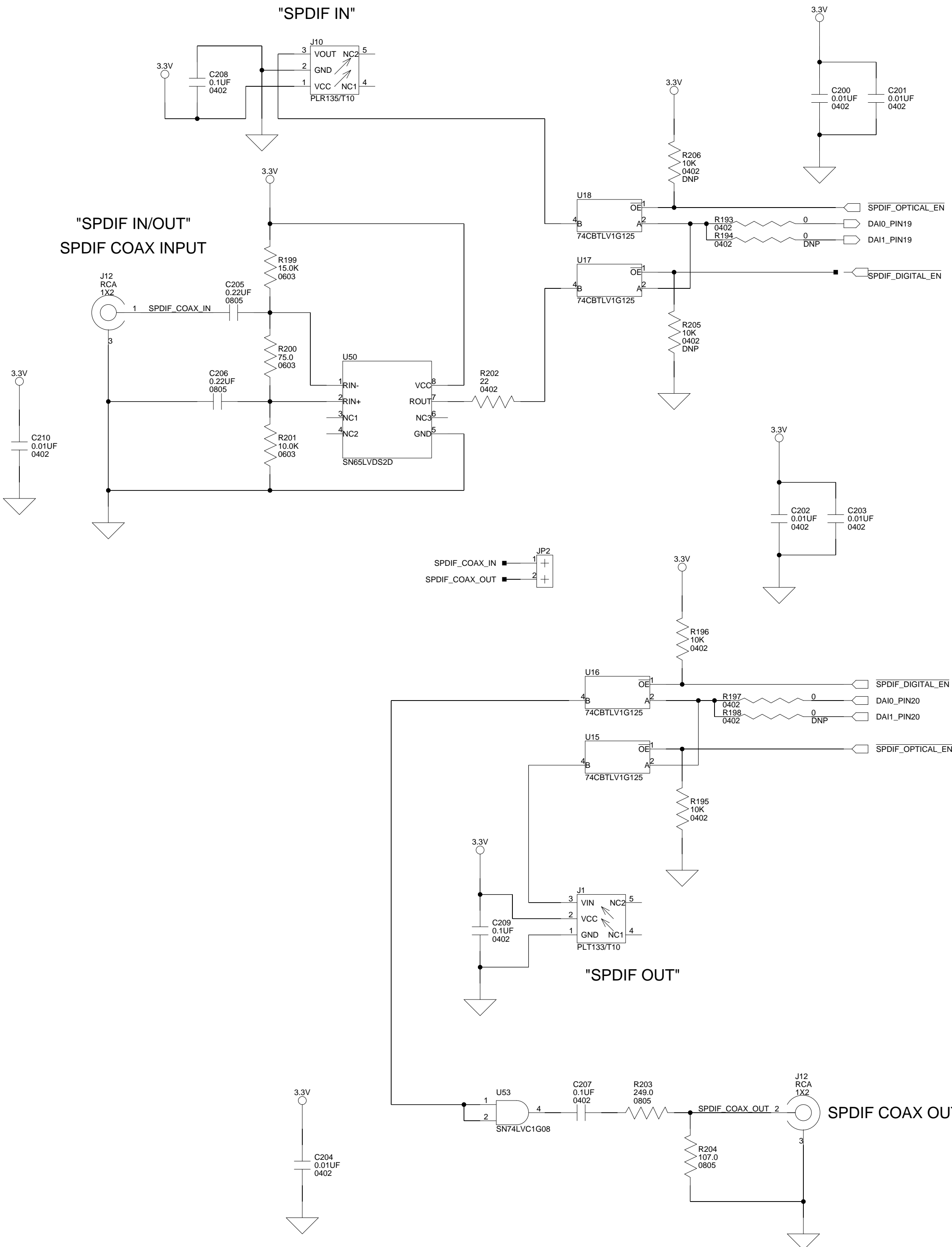
"SPDIF IN/OUT"
SPDIF COAX INPUT


"SPDIF OUT"

SPDIF COAX OUTPUT


HU Data

Debug




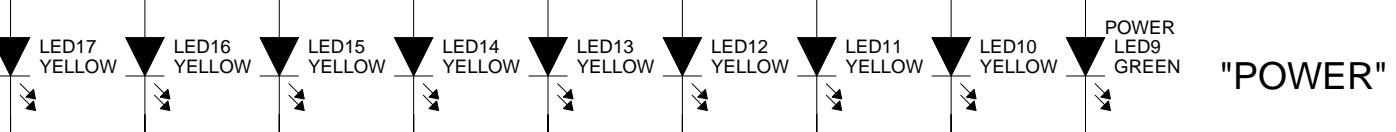
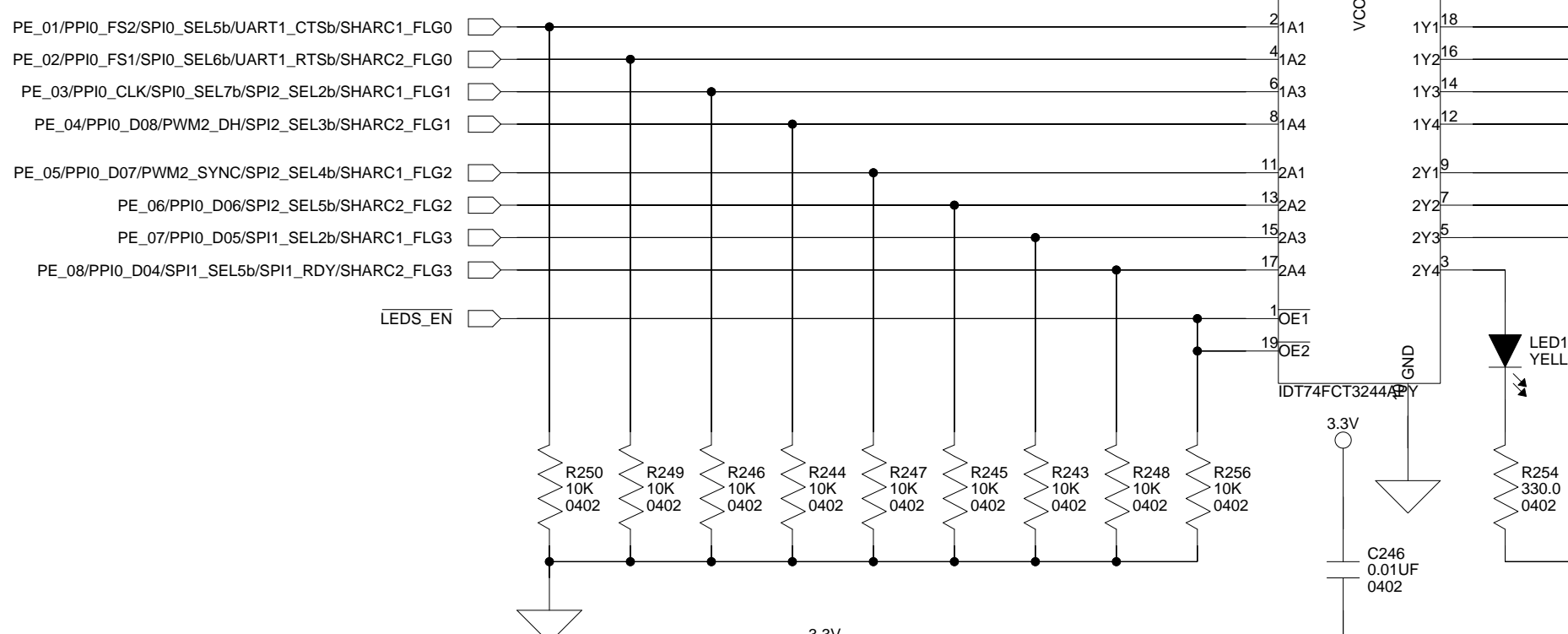
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board SPDIF	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 22	of 30	

Please contact your nearest ADI sales office to complete the Non-Disclosure Agreement (NDA) required to receive additional A2B technical information.

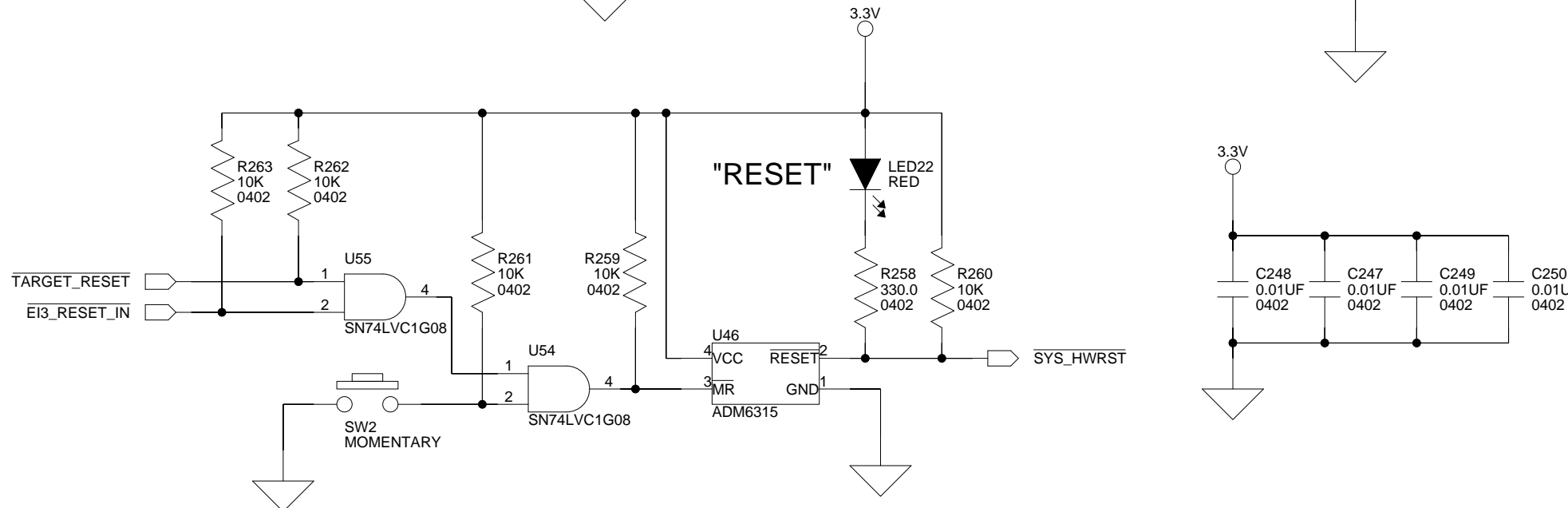
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD
Title		ADSP-SC584 EZ-Board A2B Master Node A
Size C	Board No.	A0448-2013
Date	4/22/16	Sheet 23 of 30
Rev	1.0A	

Please contact your nearest ADI sales office to complete the Non-Disclosure Agreement (NDA) required to receive additional A2B technical information.

		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD
Title		ADSP-SC584 EZ-Board A2B Master/Slave Node B
Size C	Board No.	A0448-2013
Date	4/22/16	Sheet 24 of 30

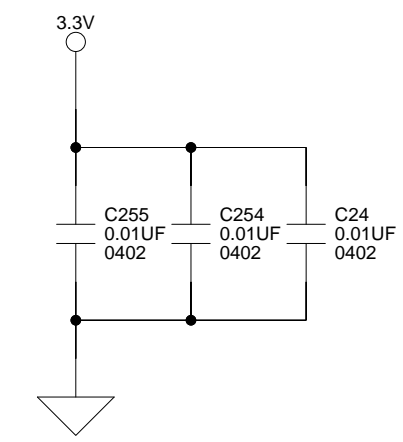
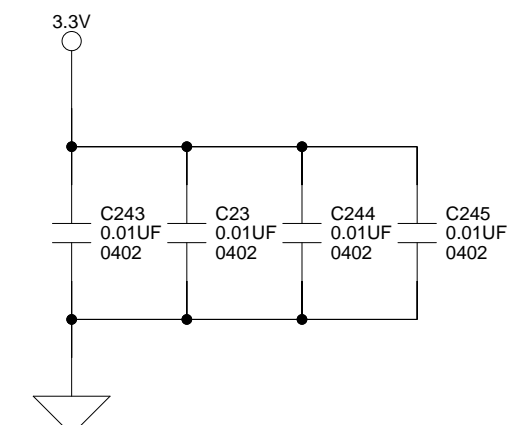
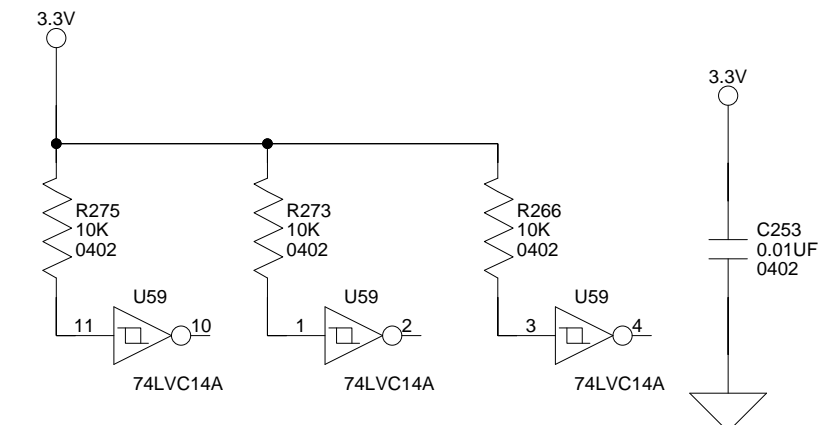
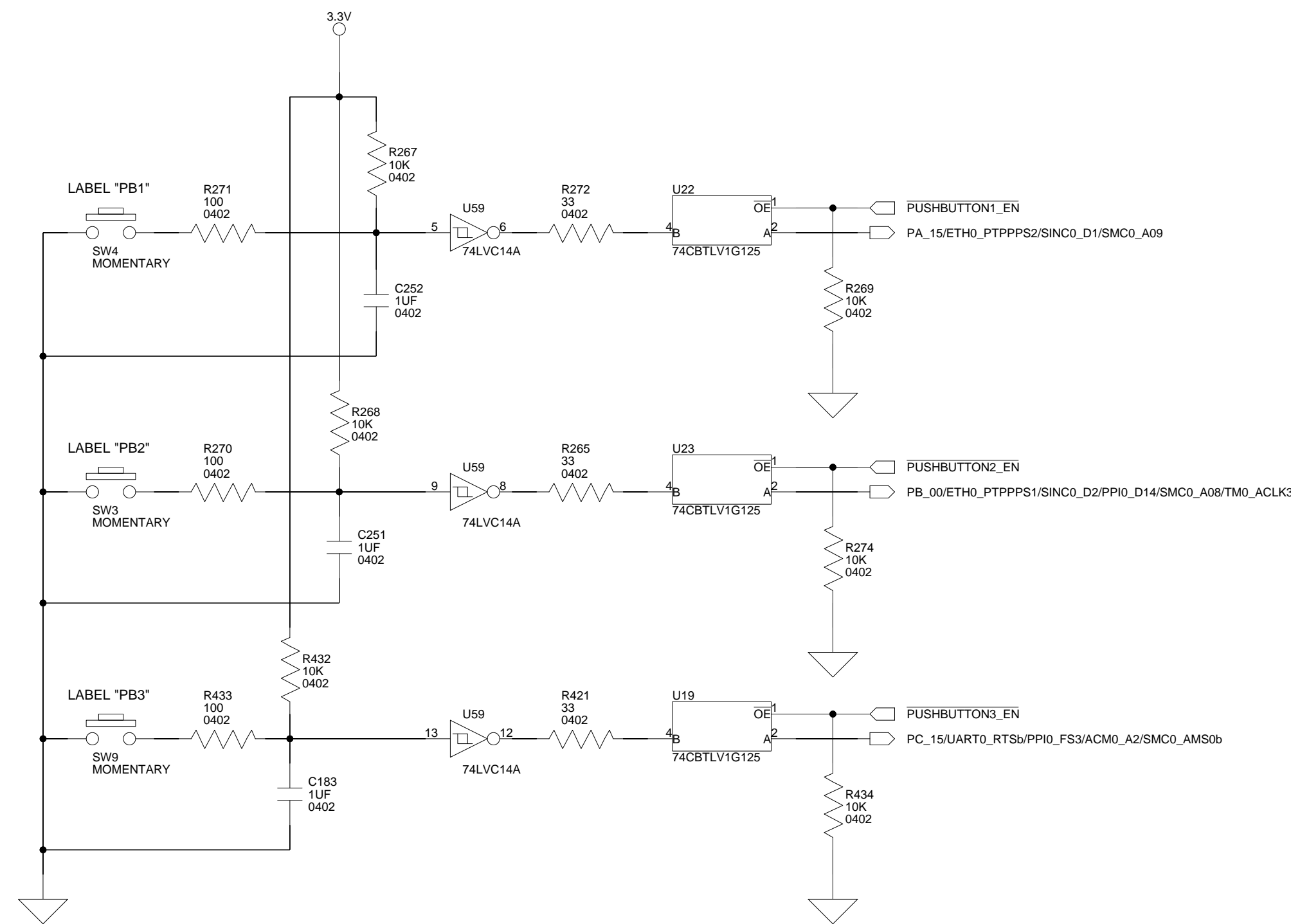
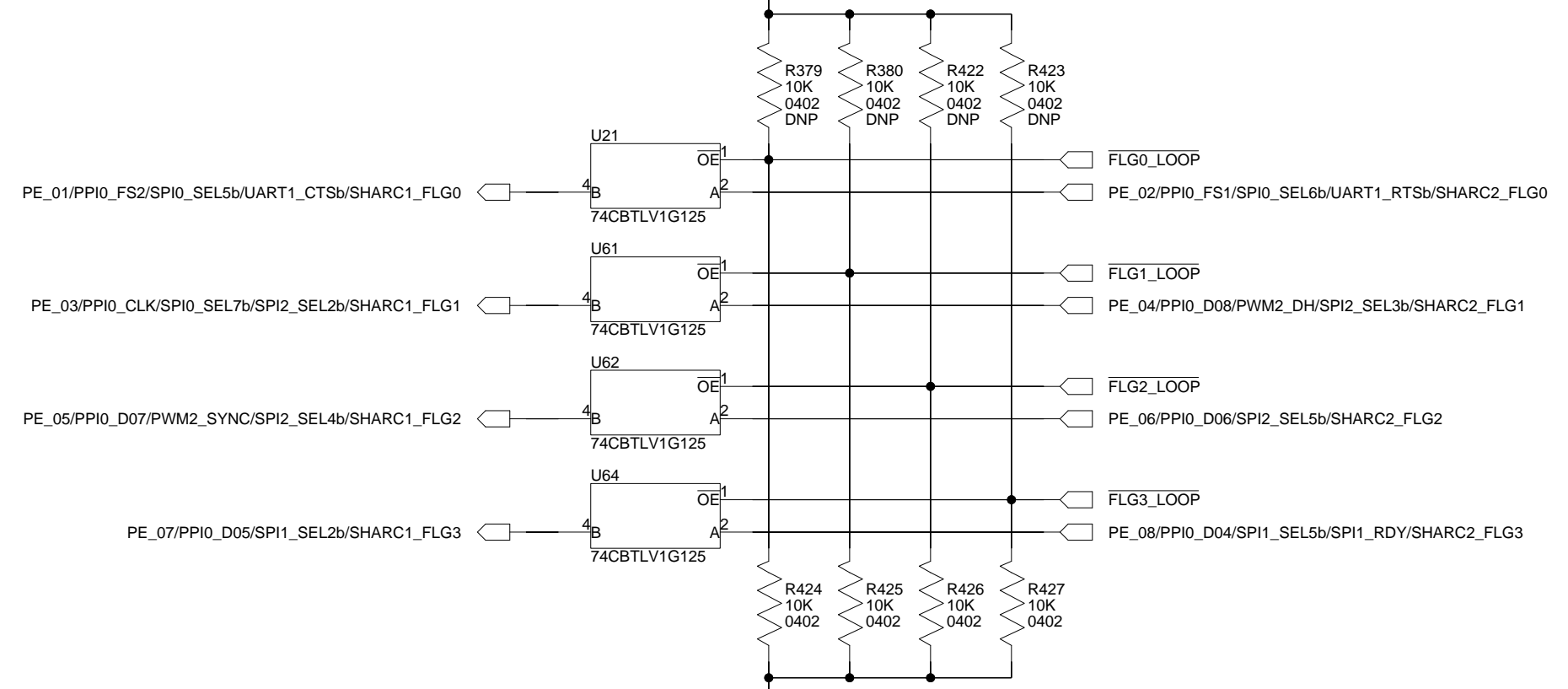



"POWER"



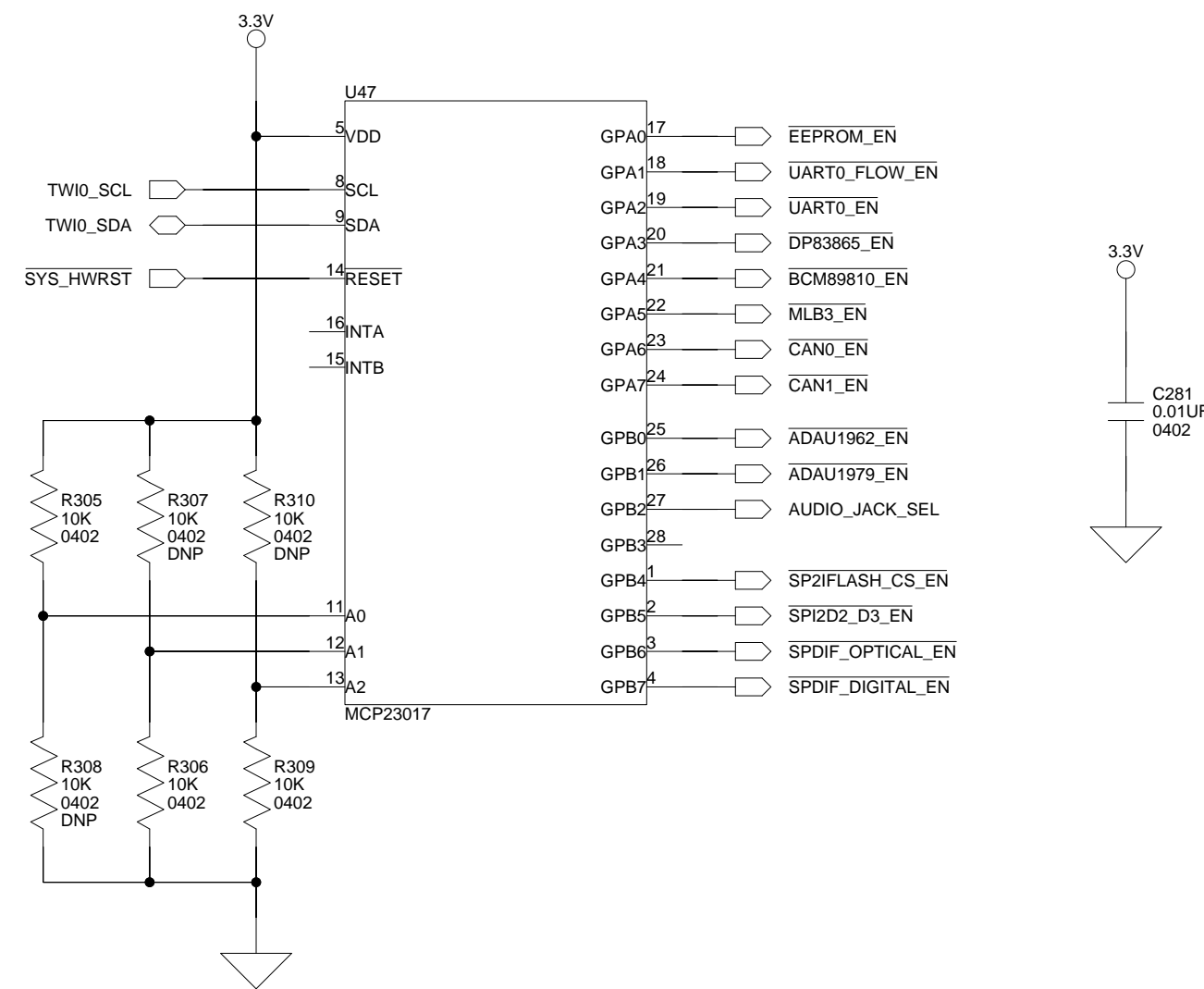
"RESET"

"RESET"

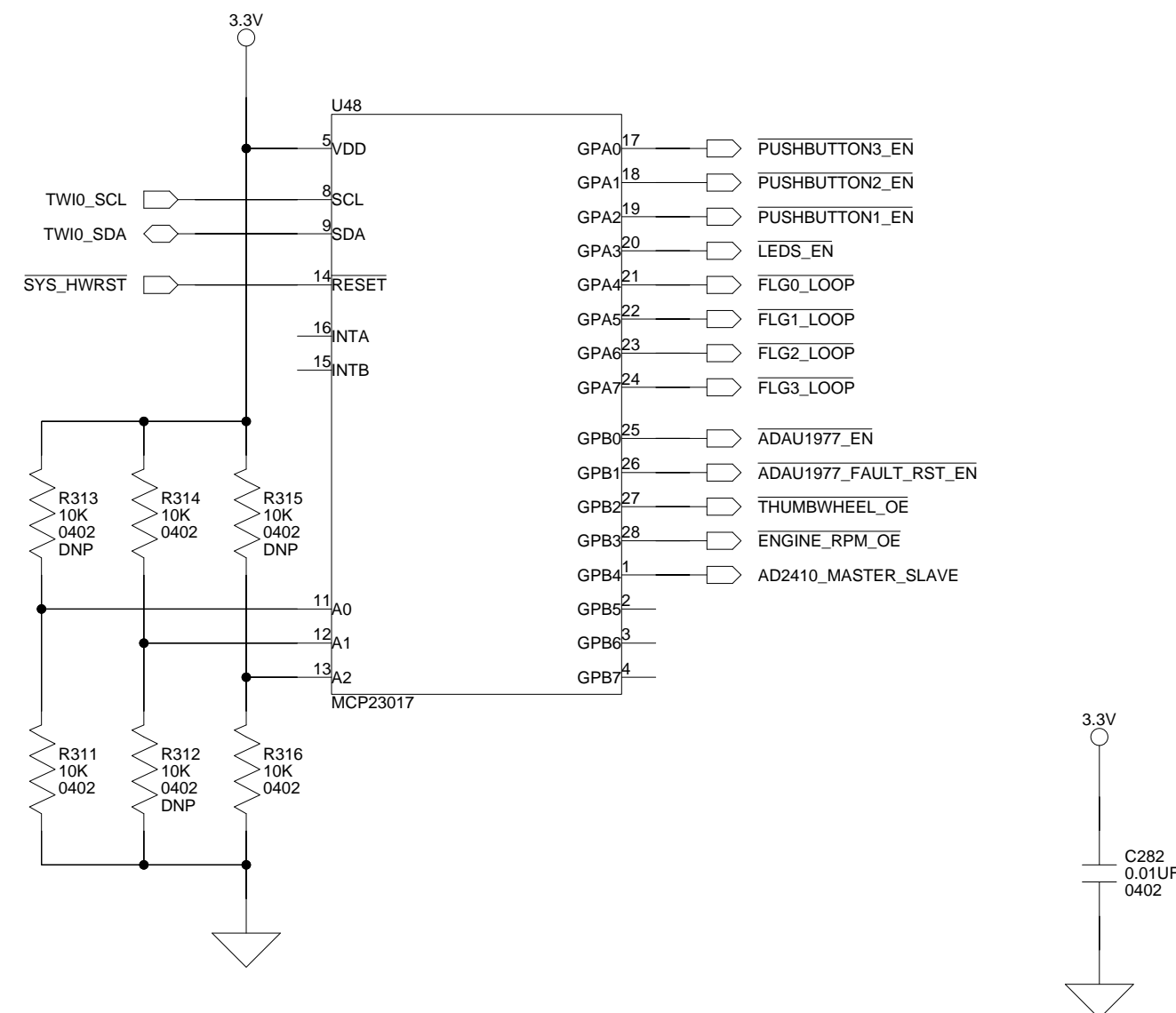



		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board Push Buttons/LEDs/Reset	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 25	of 30	

TWI Address 0100001x
 x is the R/W bit. Read - 1, Write - 0



TWI Address 0100010x
 x is the R/W bit. Read - 1, Write - 0



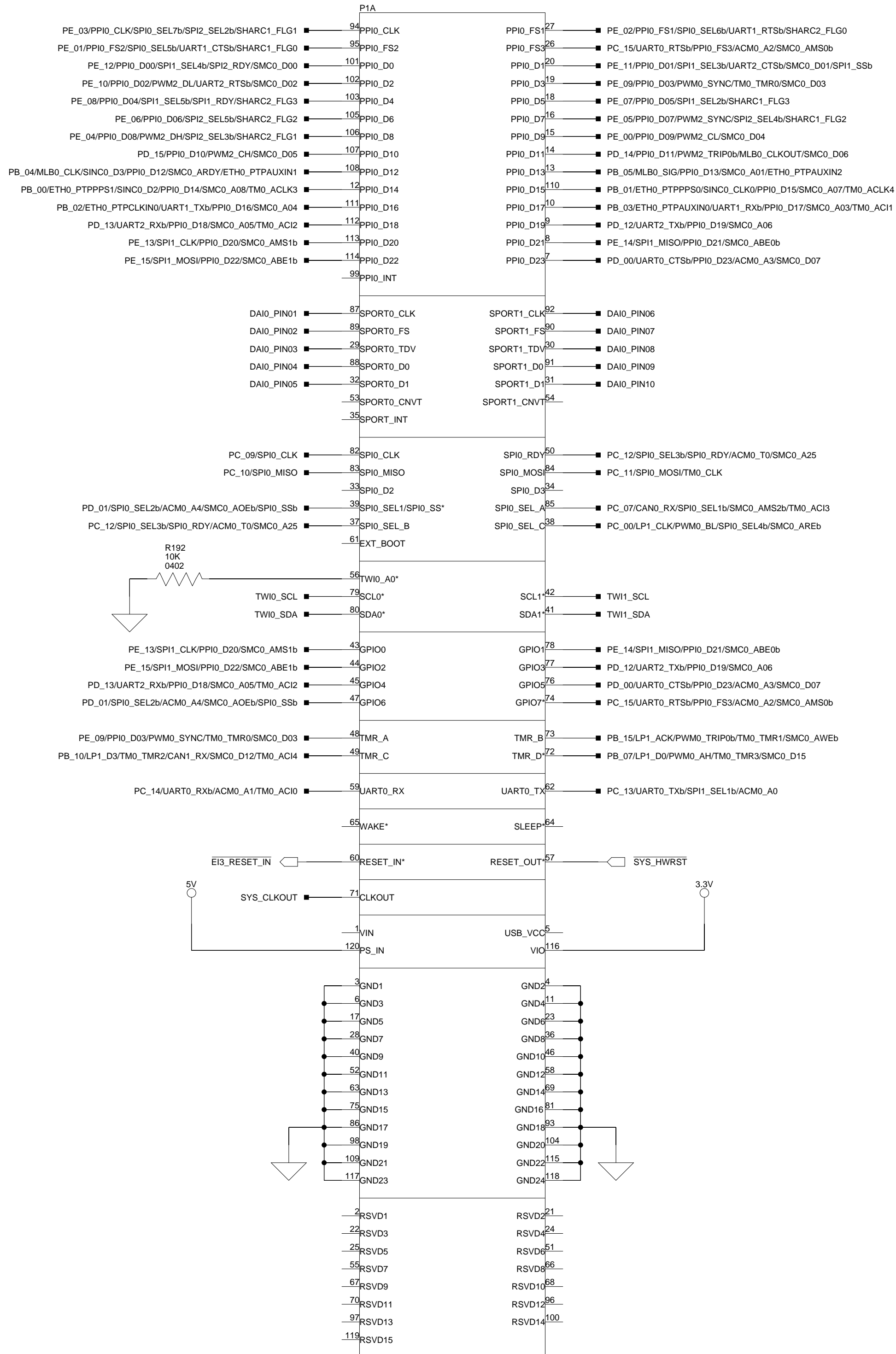
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board SoftConfig	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 26		of 30


A

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D



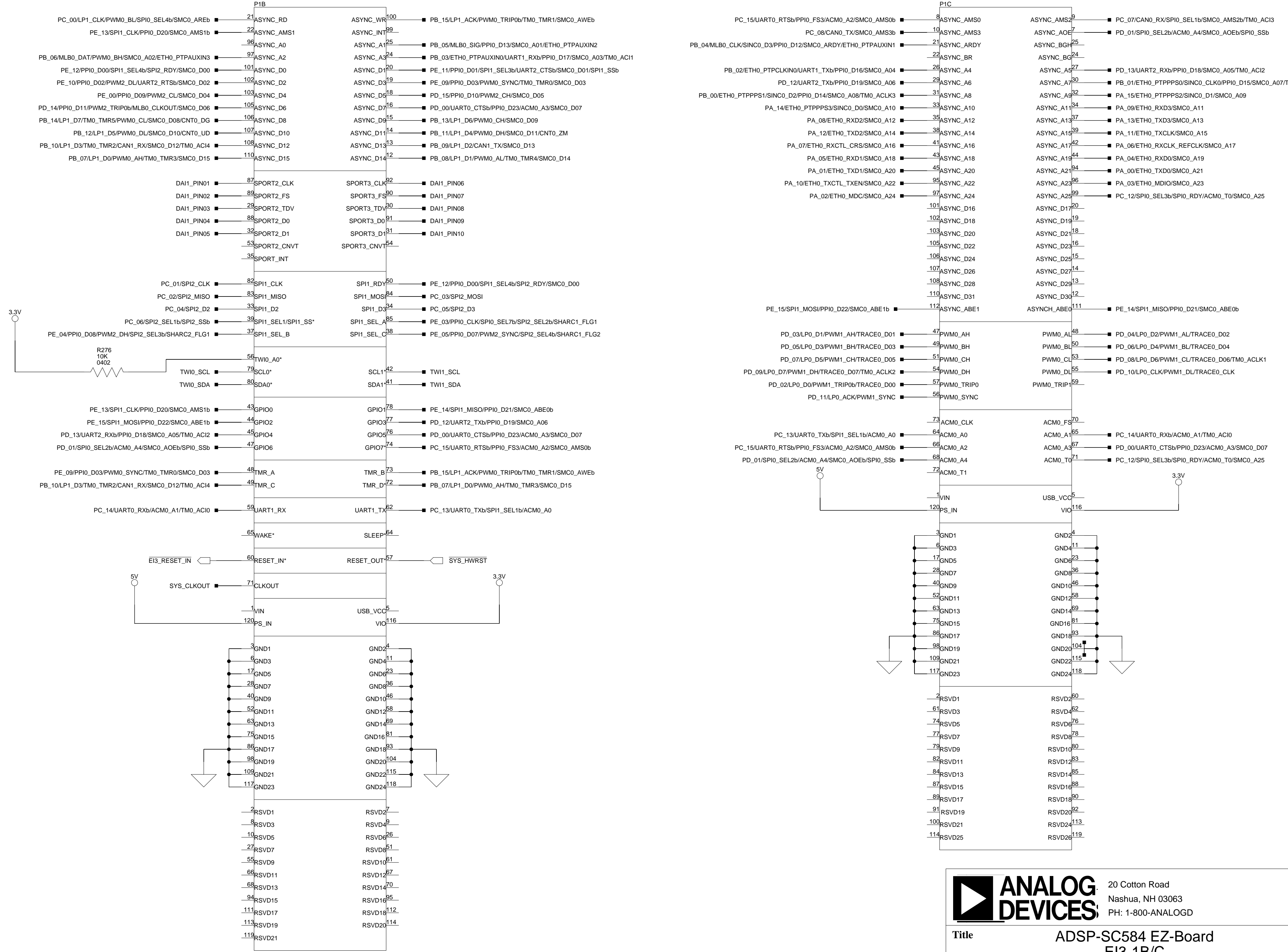
		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board EI3-1A	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 27		of 30


A

B

C

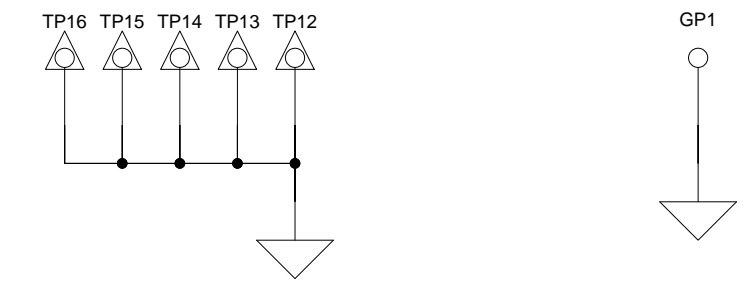
D



		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board EI3-1B/C	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 28		of 30

GND Test Points are scattered on PCB for Test Measurement Purposes.

LABEL "GND" ON ALL TPs

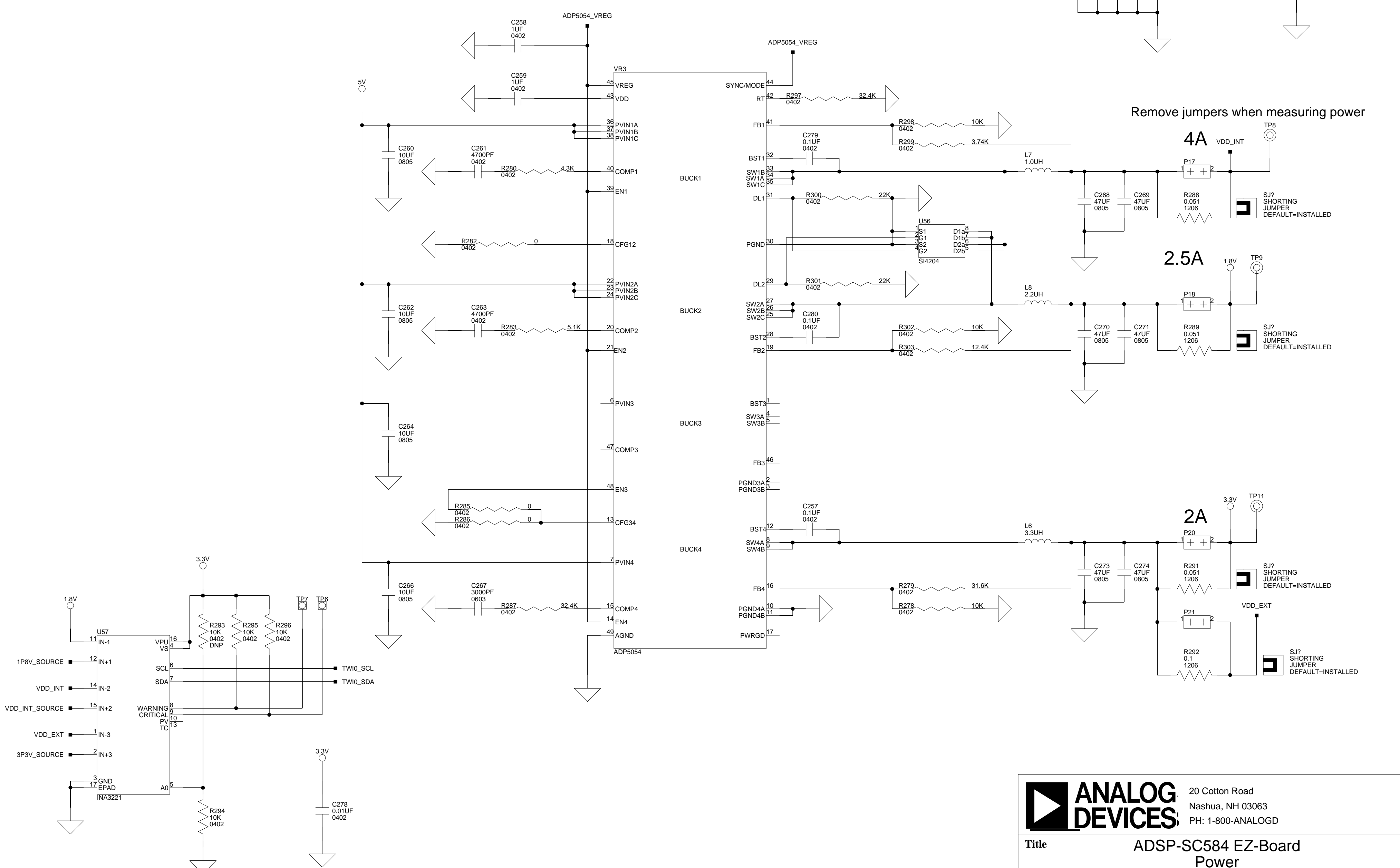


Remove jumpers when measuring power

4A

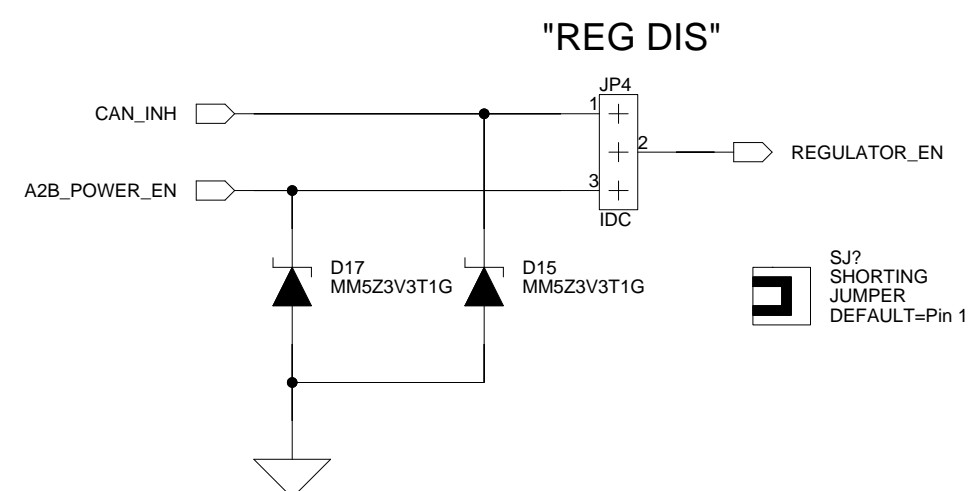
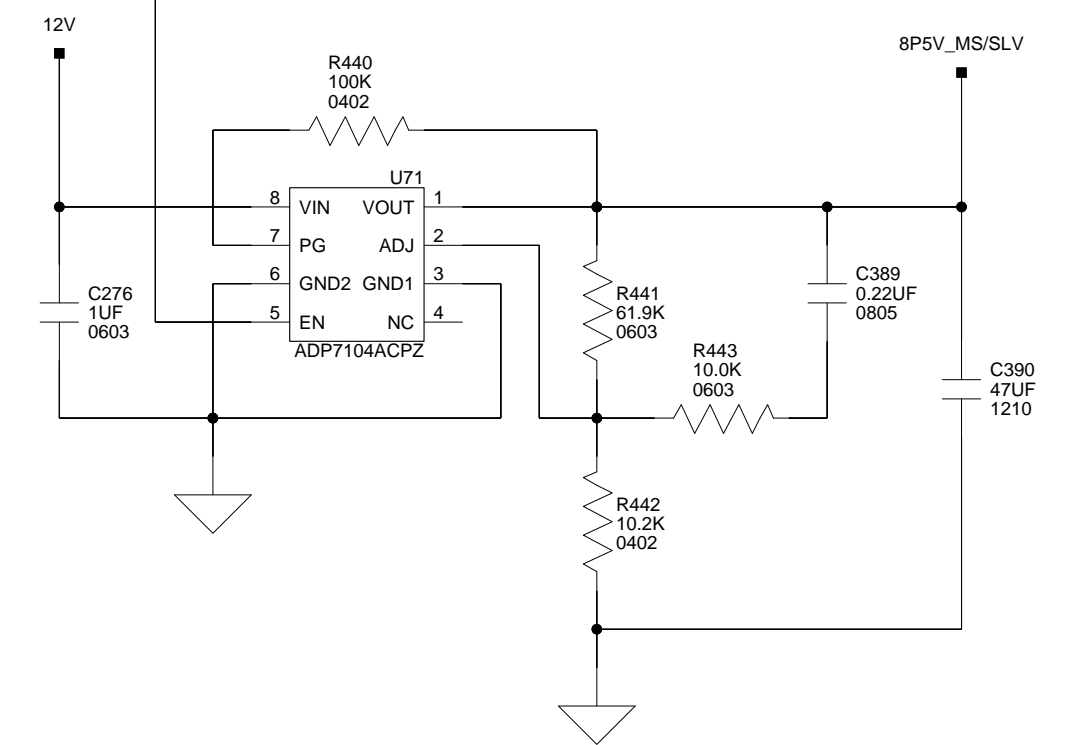
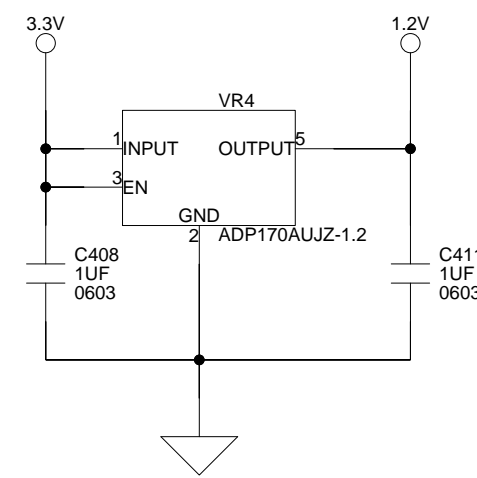
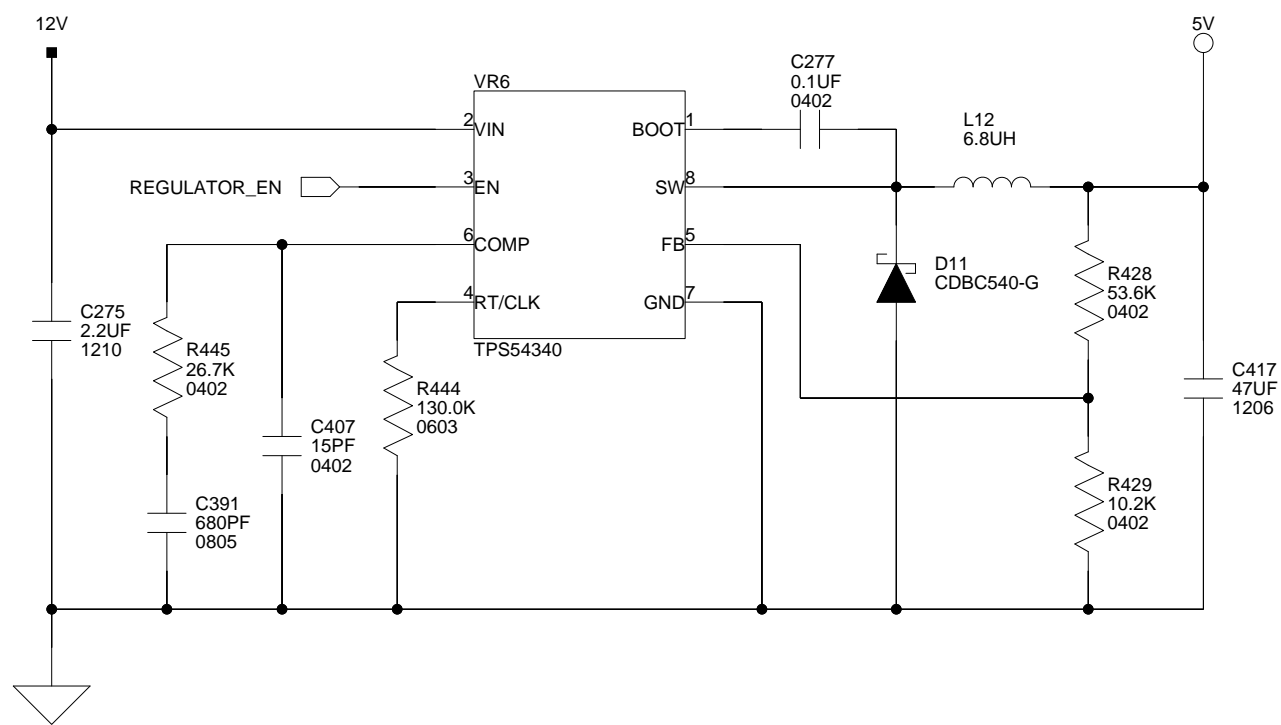
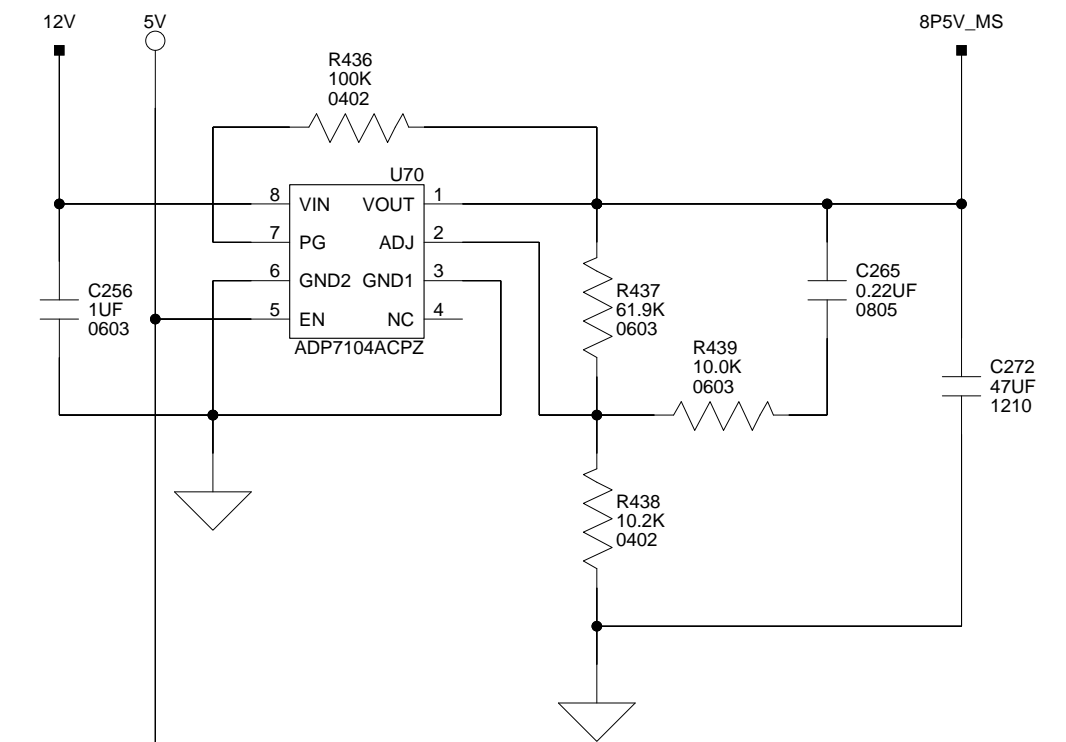
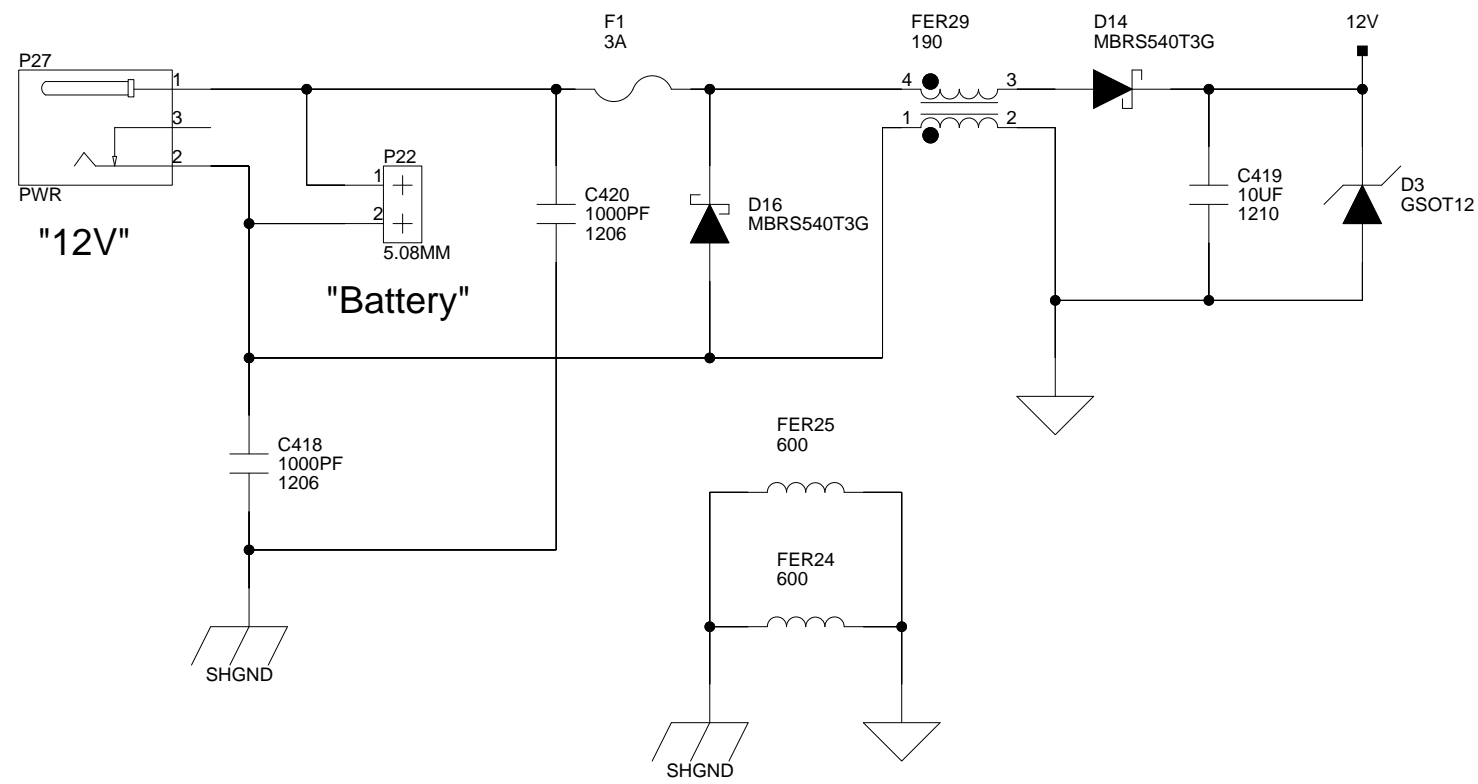
2.5A

2A



TWI address 1000 000x
where x is the R/W bit. Read - 1, Write - 0

		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
Title ADSP-SC584 EZ-Board Power			
Size C	Board No.	A0448-2013	Rev 1.0A
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		20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
		Title ADSP-SC584 EZ-Board Battery/CAN/A2B Power	
Size C	Board No. A0448-2013	Rev 1.0A	
Date 4/22/16	Sheet 30	of 30	