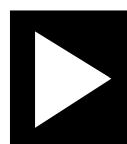
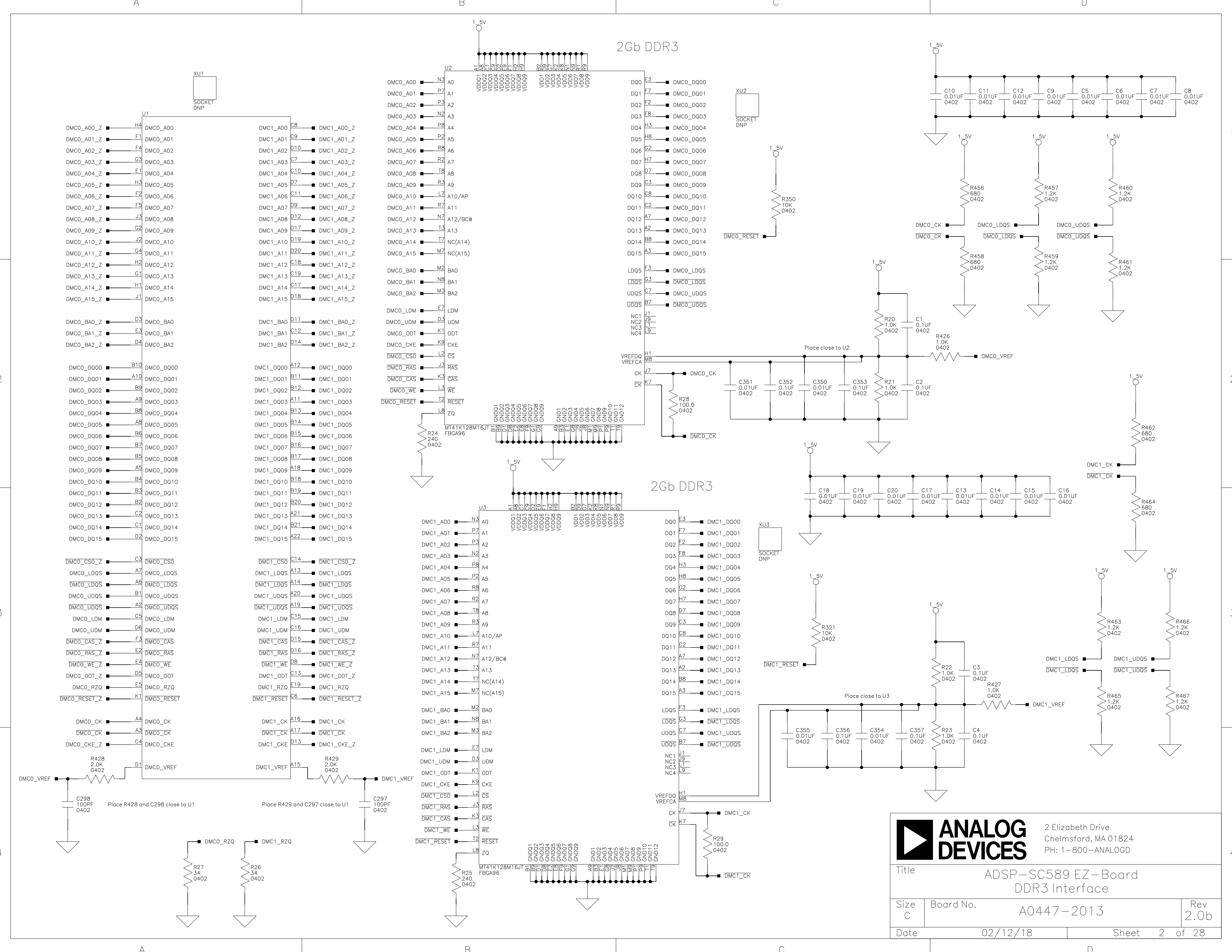

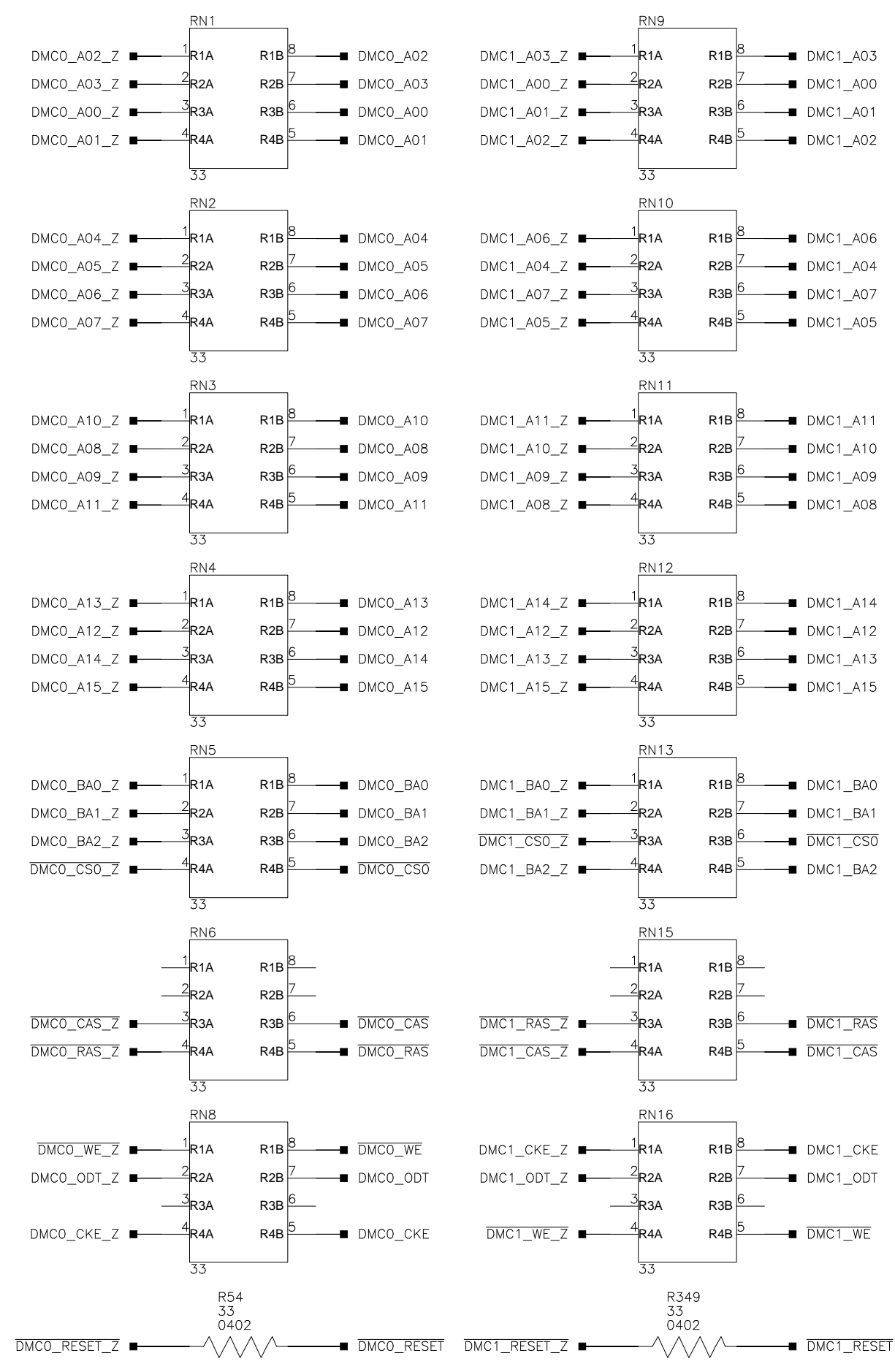



ADSP-SC589 EZ-Board Schematic

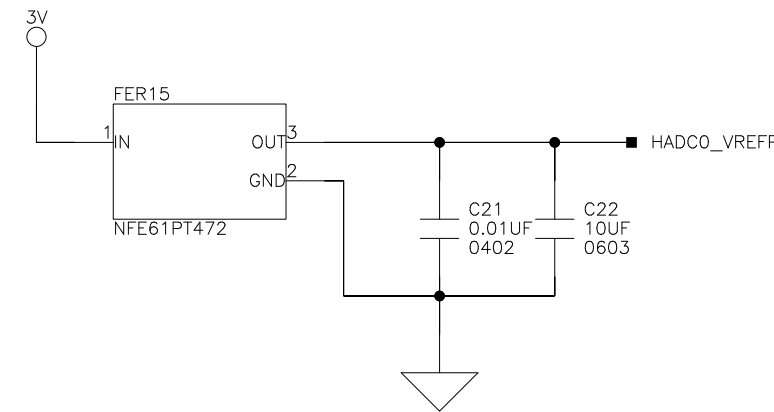
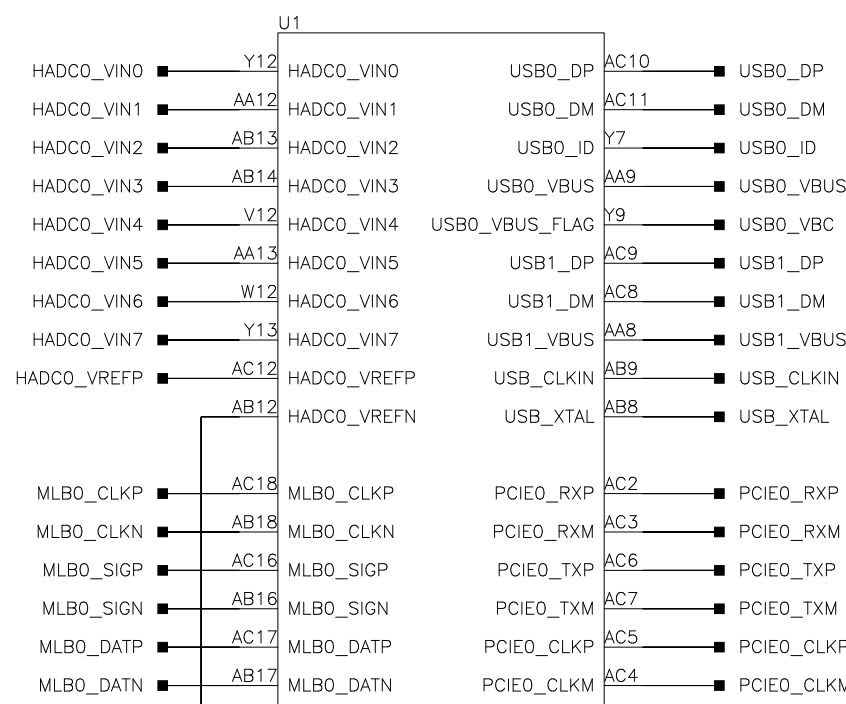
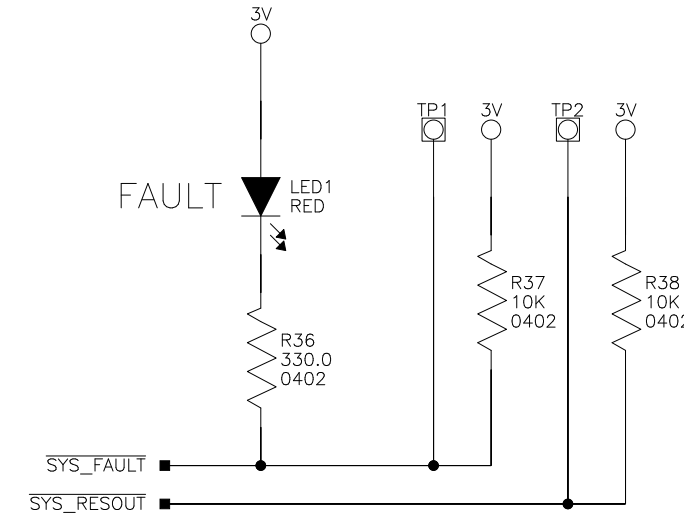
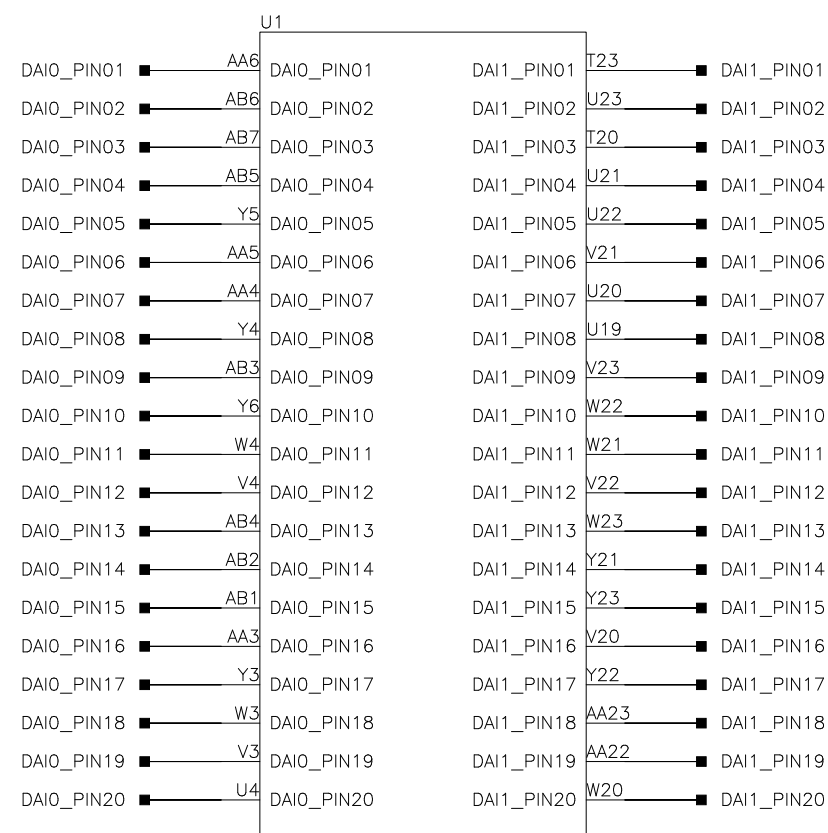
		ANALOG DEVICES	2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD
Title		ADSP-SC589 EZ-Board Title Block	
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet	1 of 28



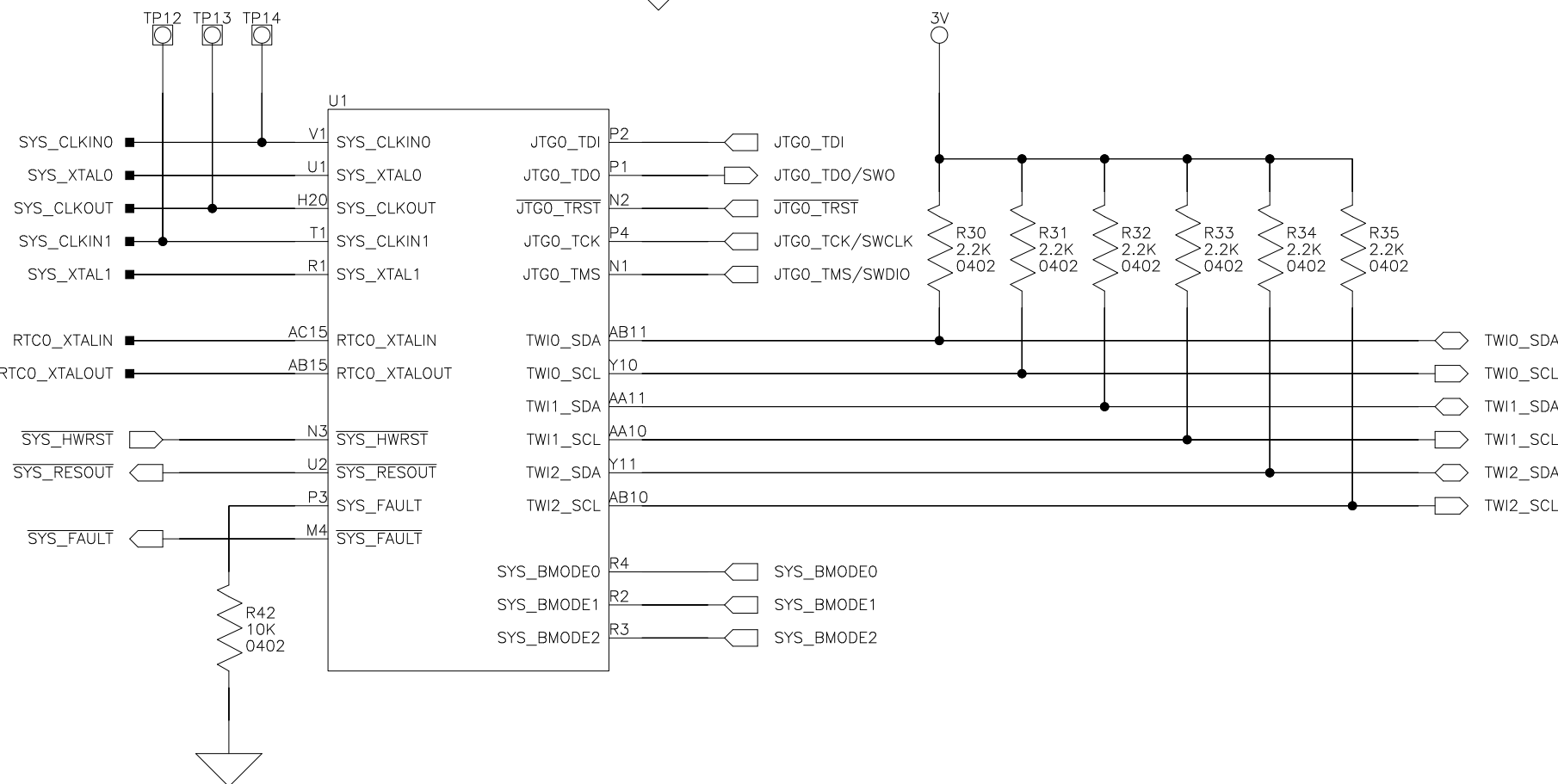
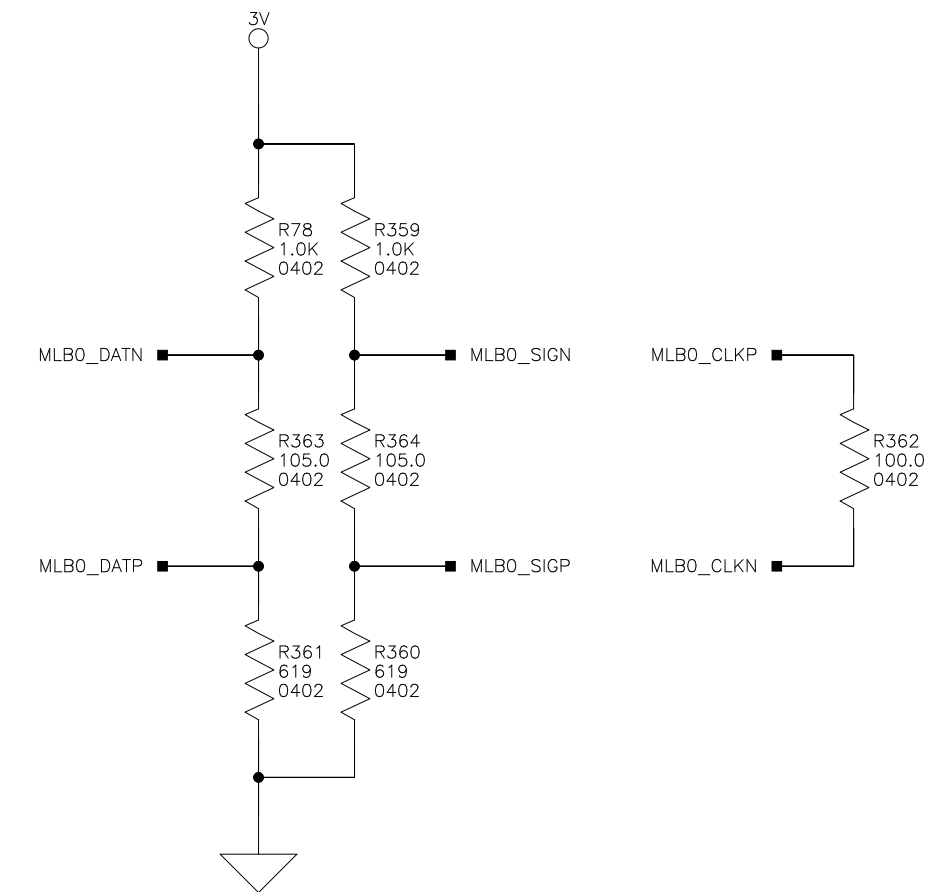
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board DDR3 Interface	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 2 of 28		



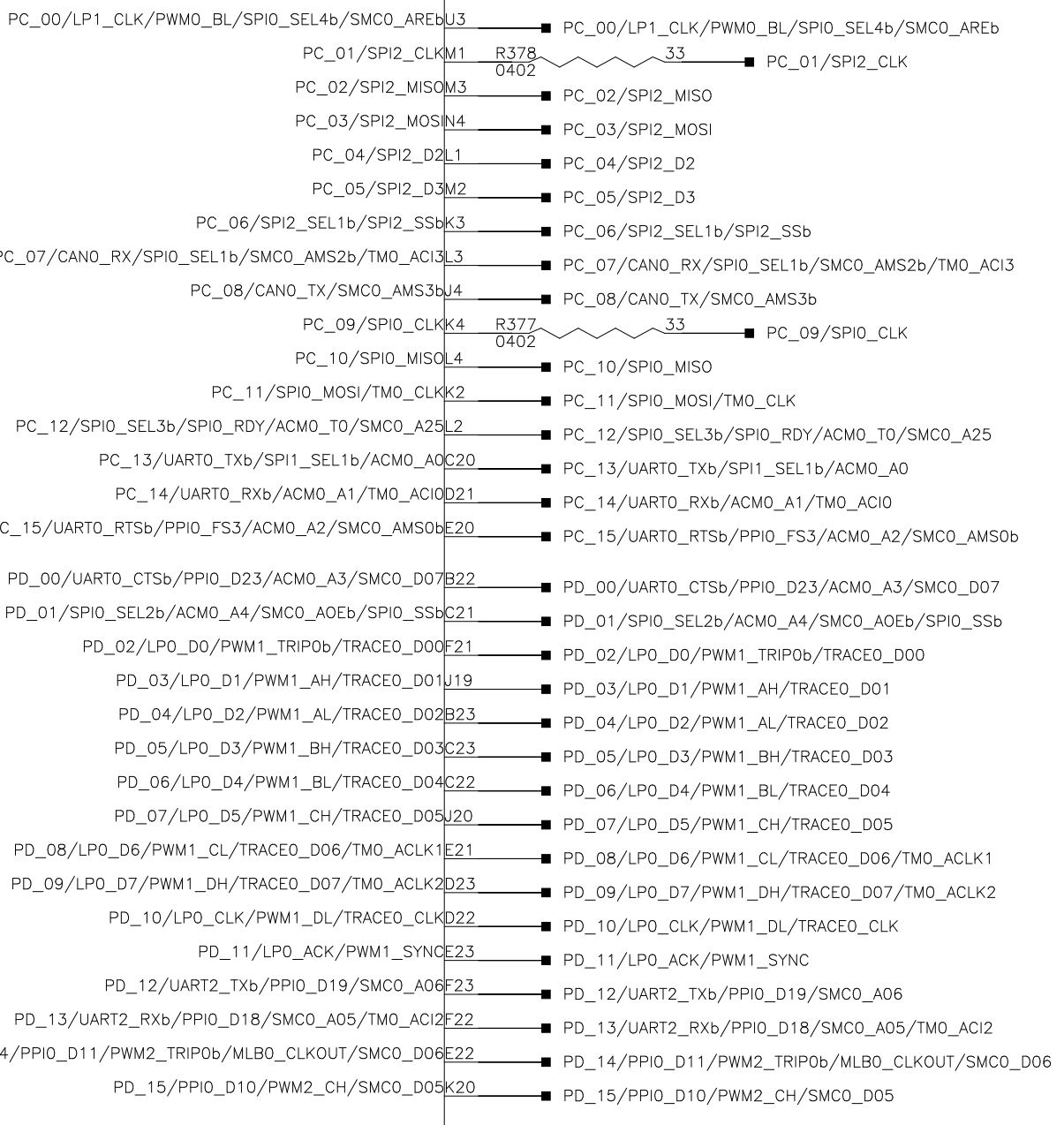
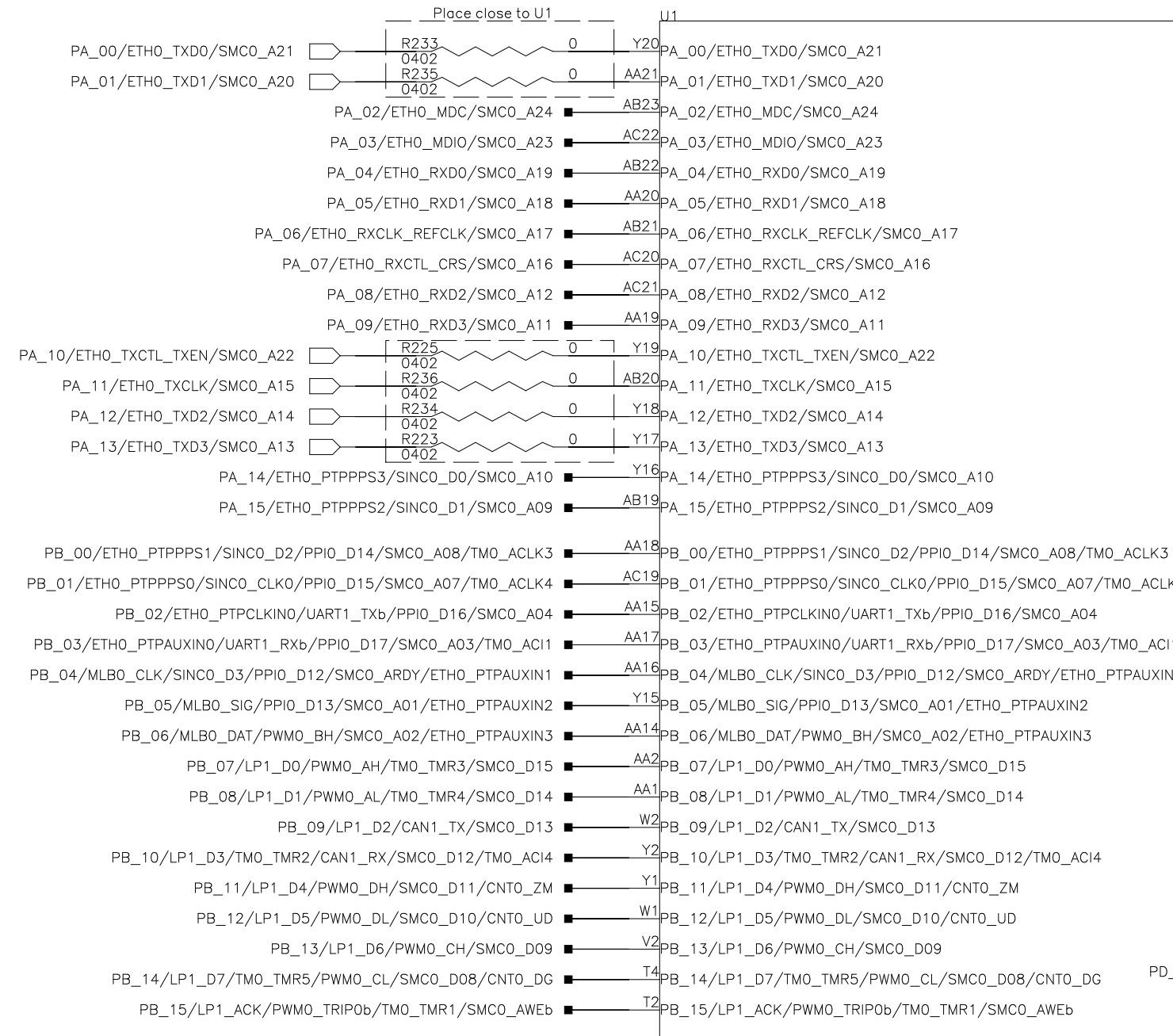
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
Title ADSP-SC589 EZ-Board DDR3 Terminators			
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 3	of 28



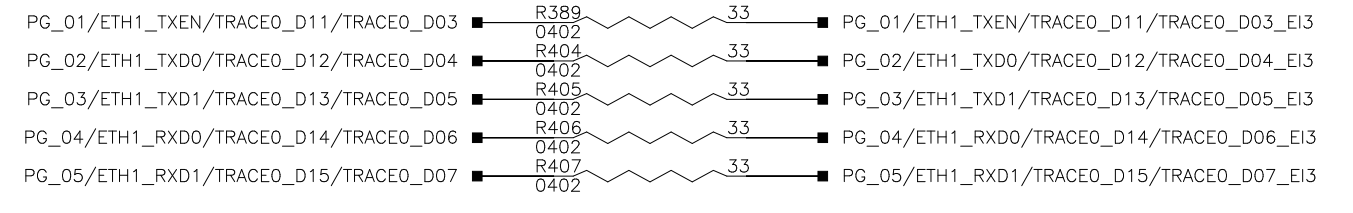
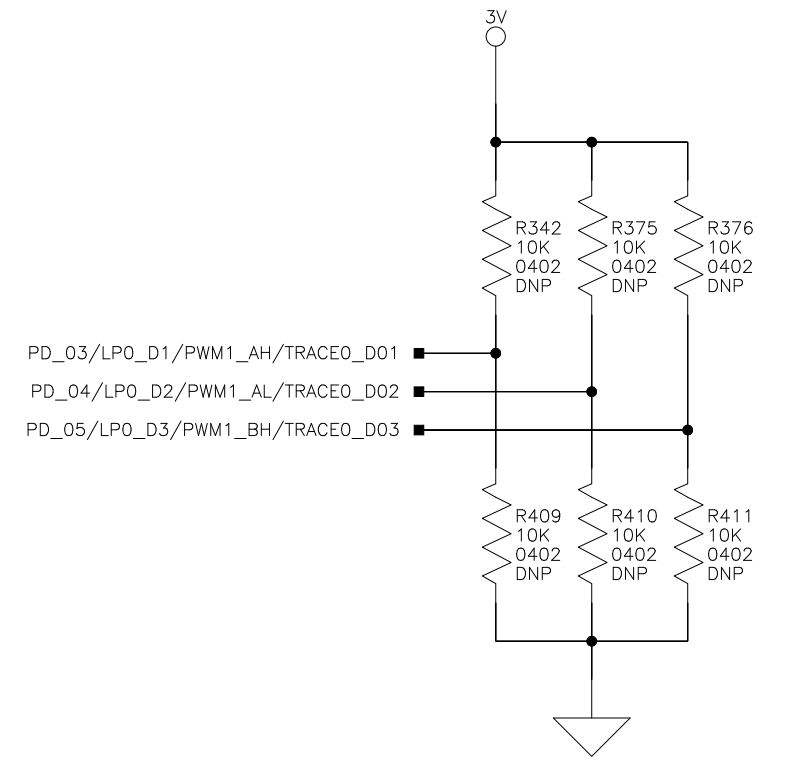
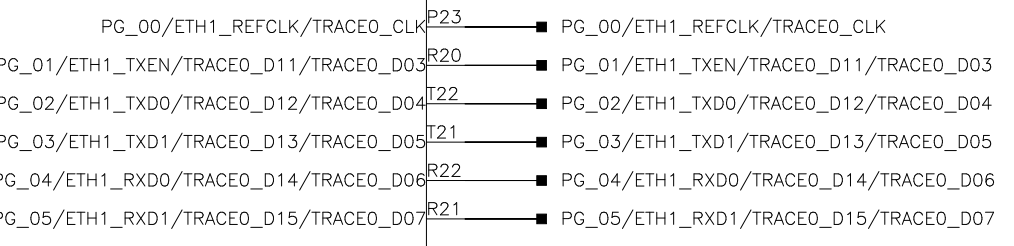
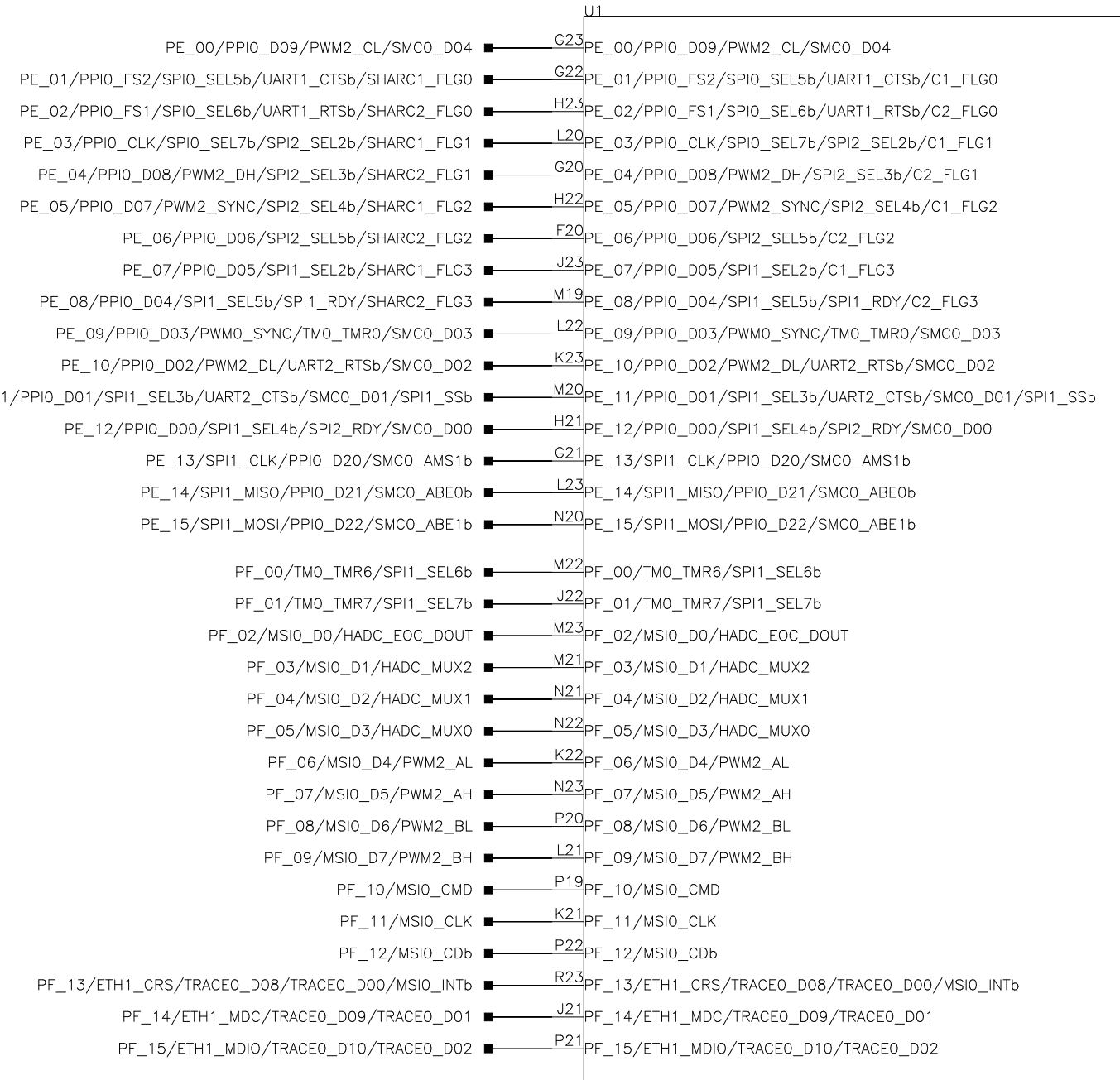
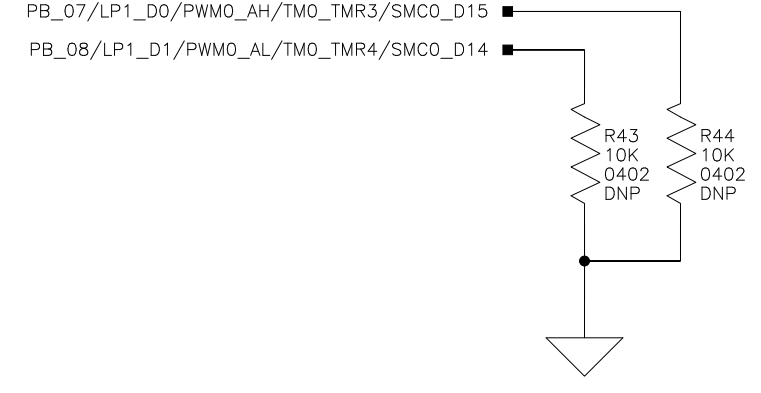
MLB signals need to be short and matched trace length.



		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board Non-Mux Ports	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 4 of 28		



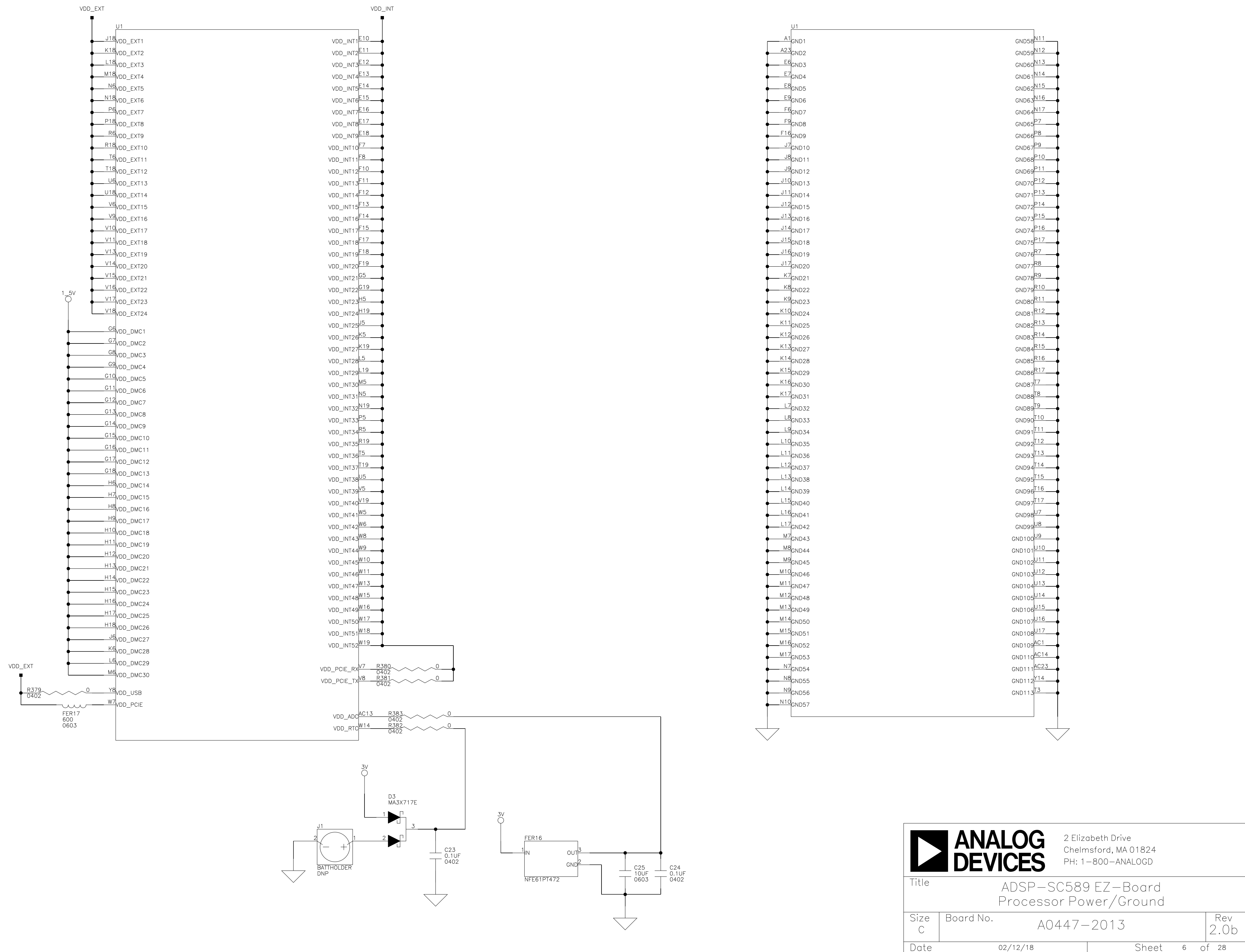
TP for PWM0_AH/AL to connect to N5425A
Place close to DSP




ANALOG DEVICES
 2 Elizabeth Drive
 Chelmsford, MA 01824
 PH: 1-800-ANALOGD

Title: ADSP-SC589 EZ-Board Mux Ports

Size C	Board No. A0447-2013	Rev 2.0b
Date 02/12/18	Sheet 5 of 28	



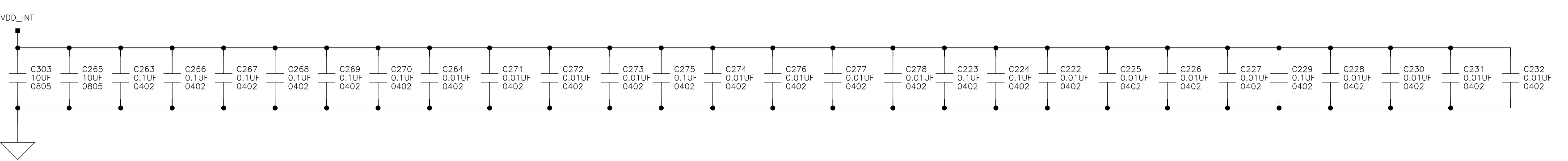
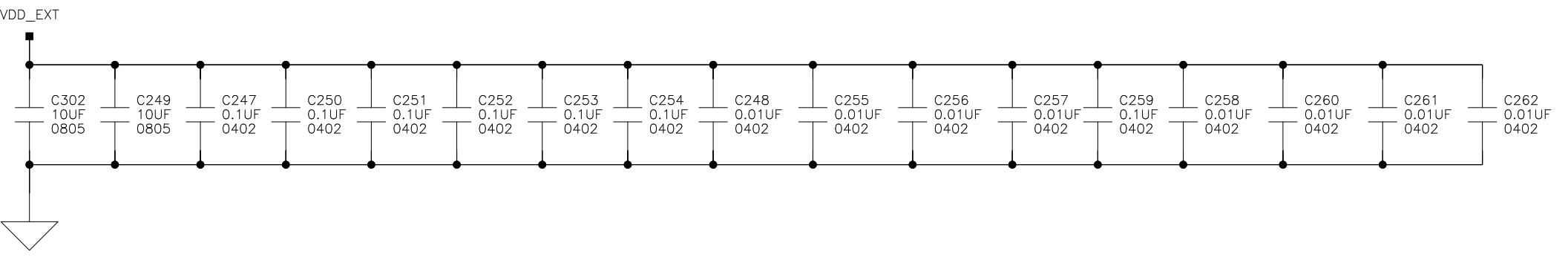
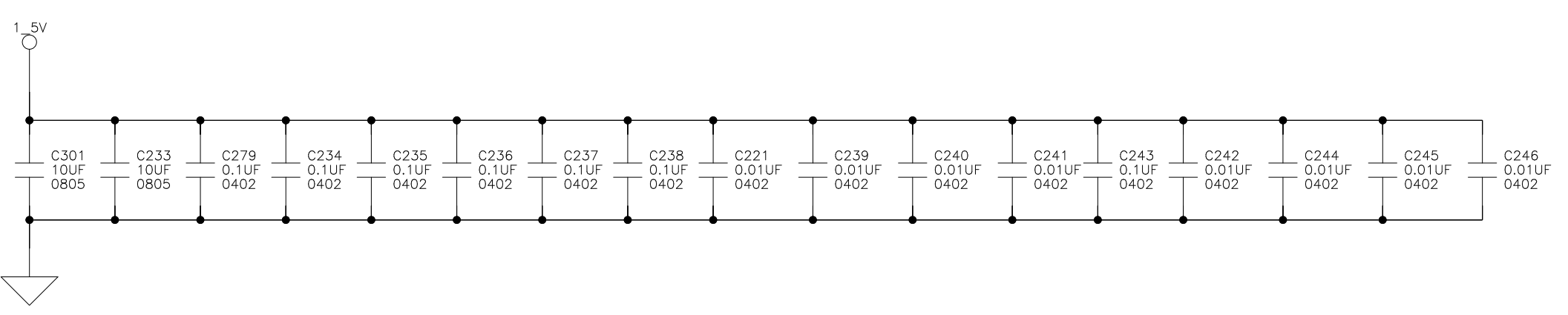
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board Processor Power/Ground	
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 6 of 28	


A

B

C

D



		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
Title		ADSP-SC589 EZ-Board Proc Bypass Caps	
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet	7 of 28

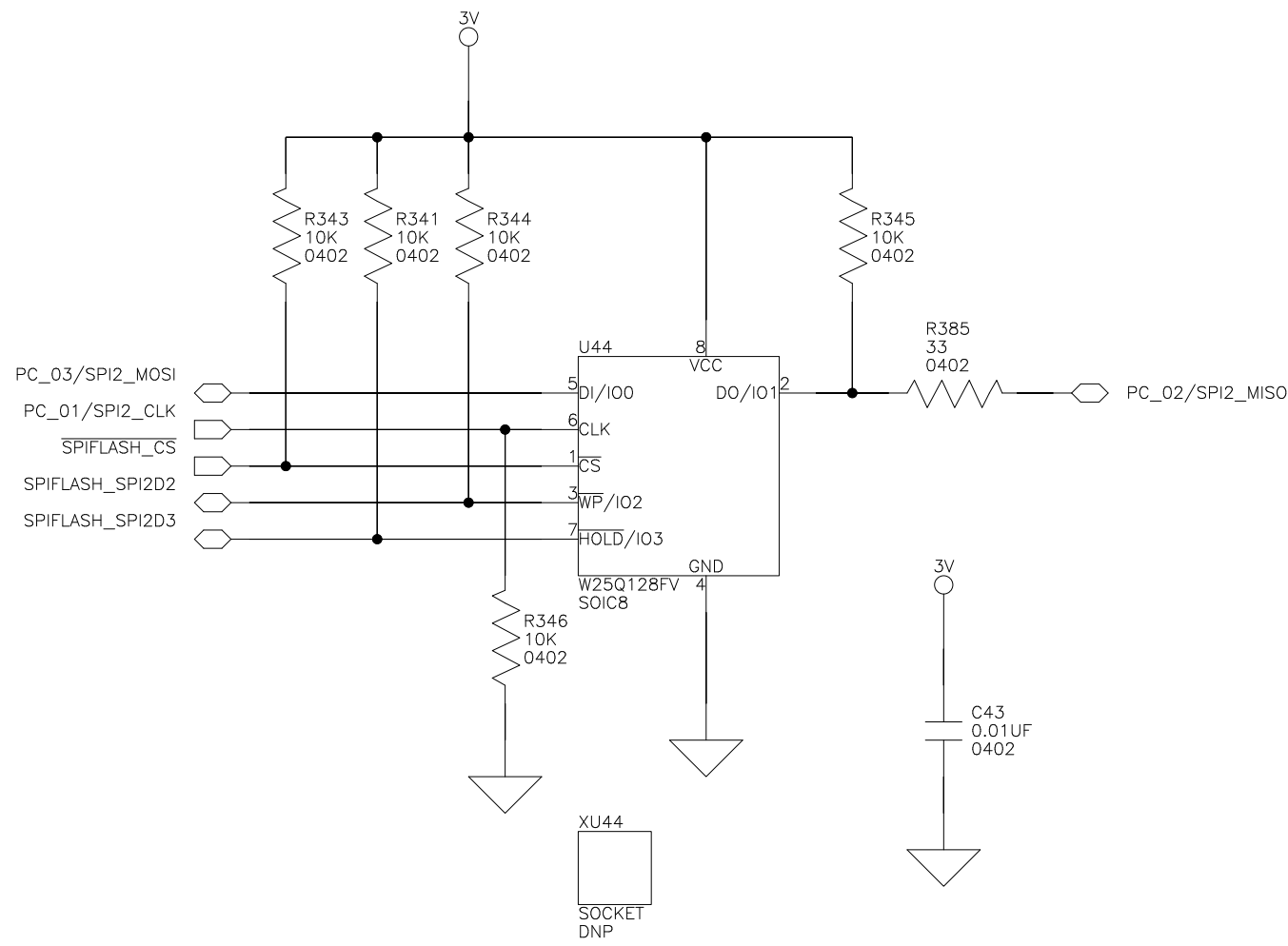
A

B

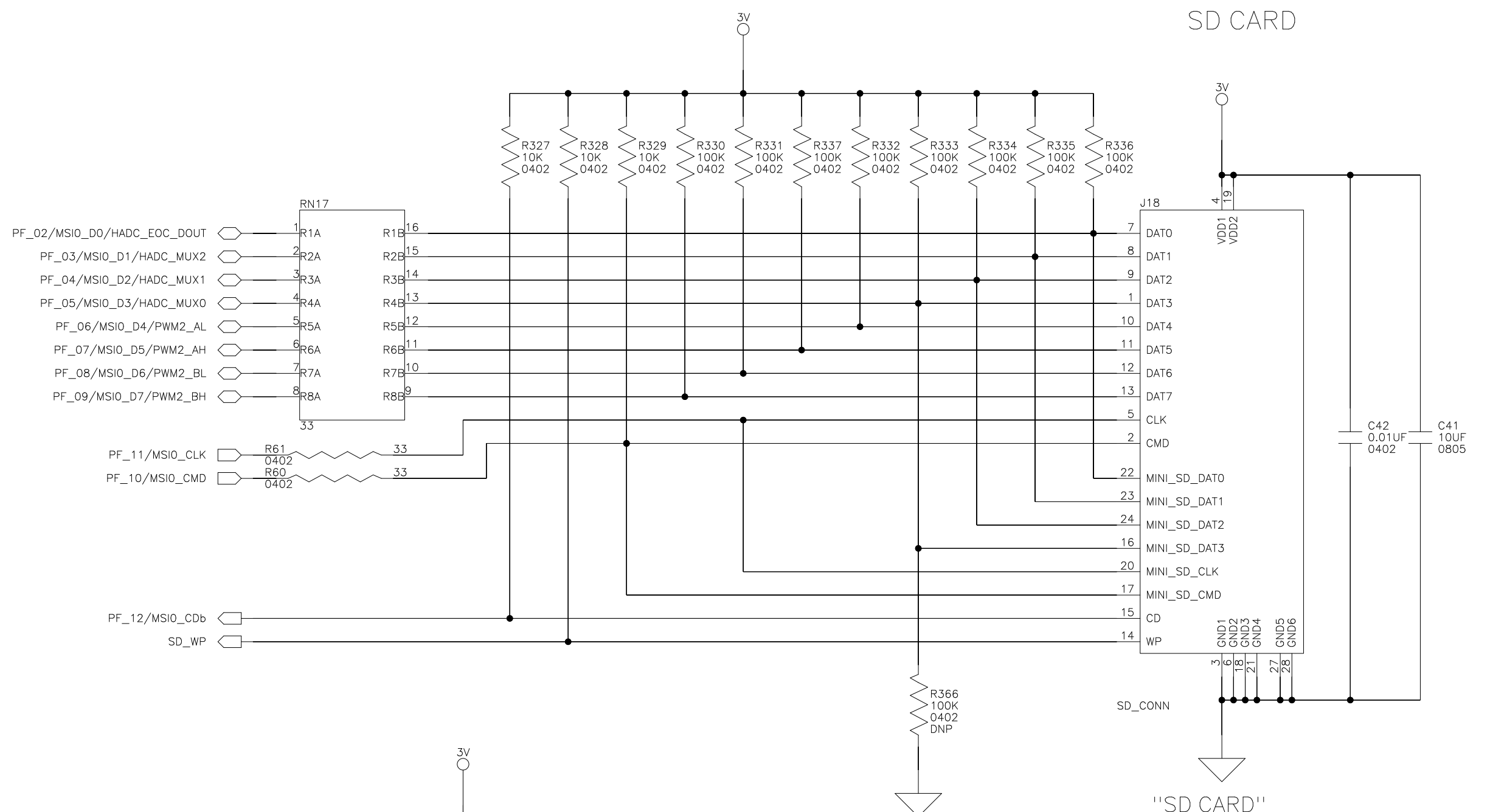
C

D

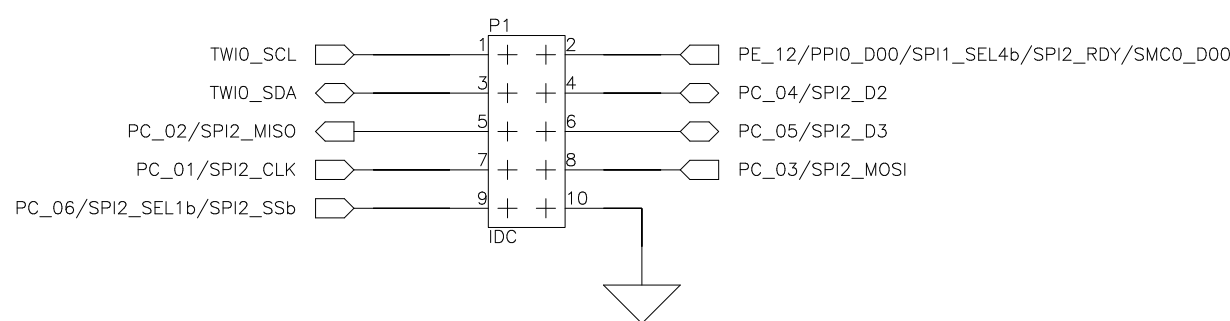
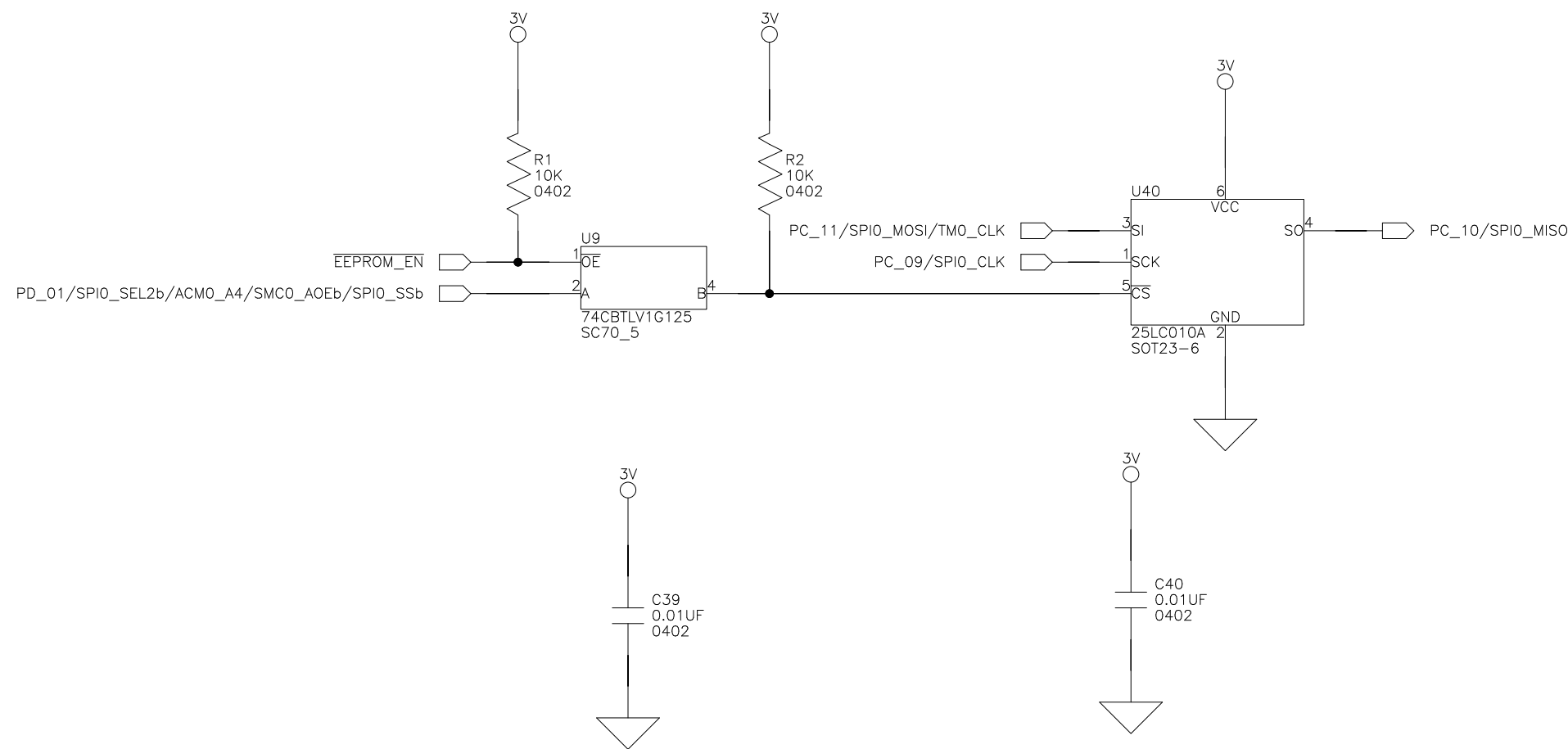
128Mb QUAD SPI FLASH



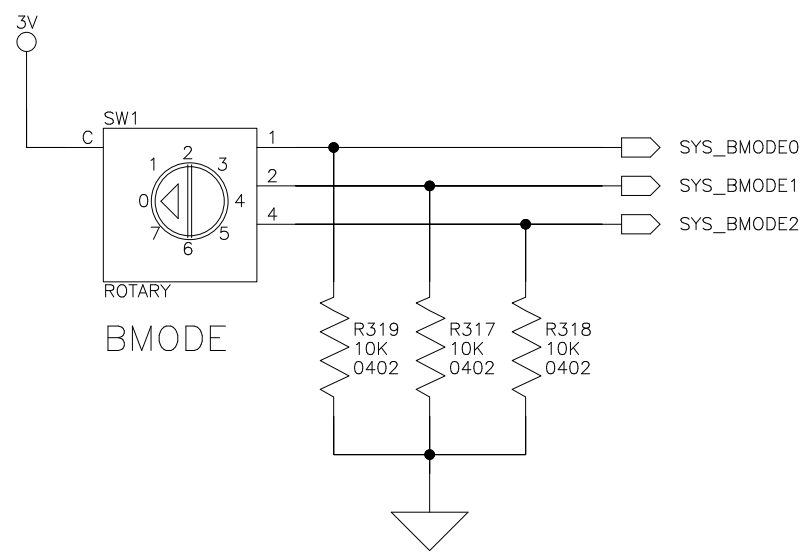
SD CARD



1 Kb SPI EEPROM

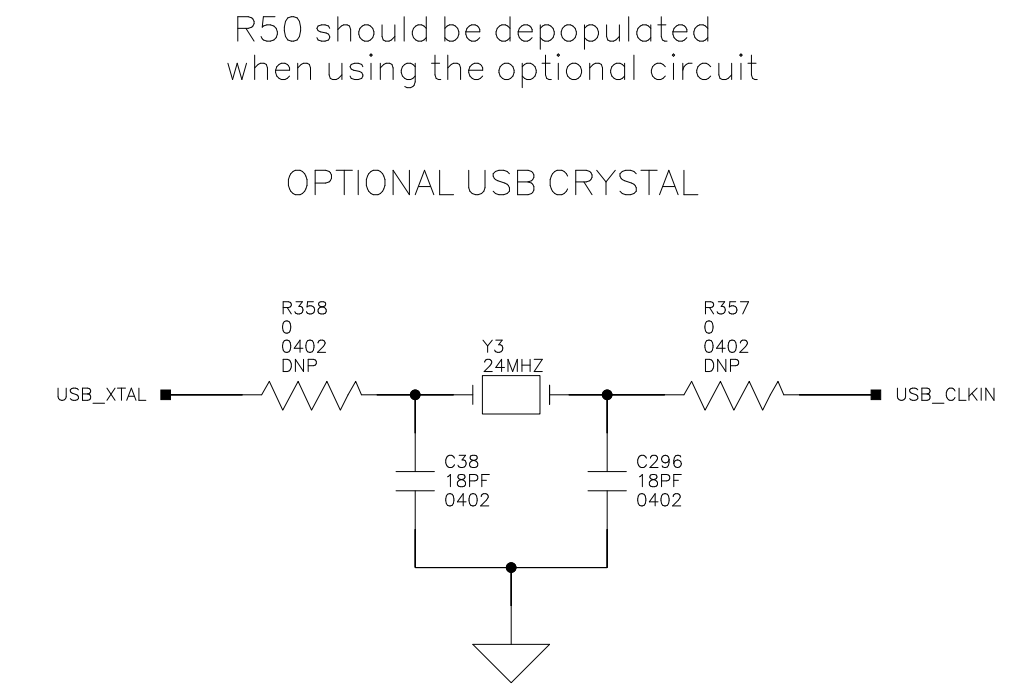
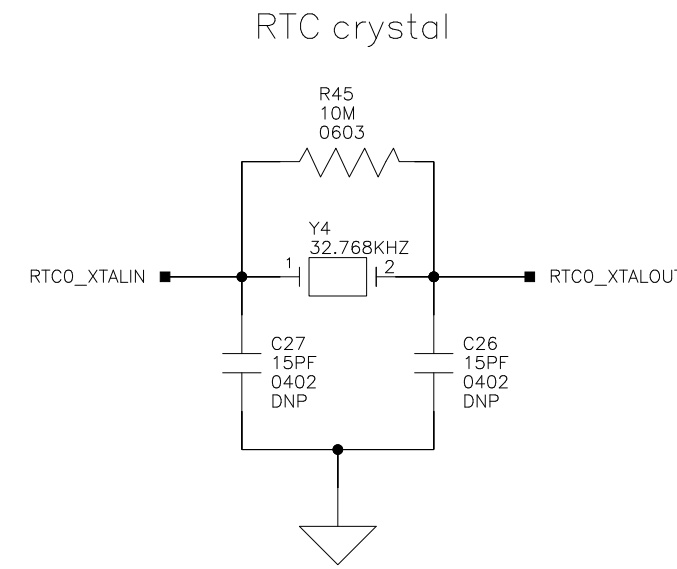


		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board SPI Flash/SD	
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 8	of 28



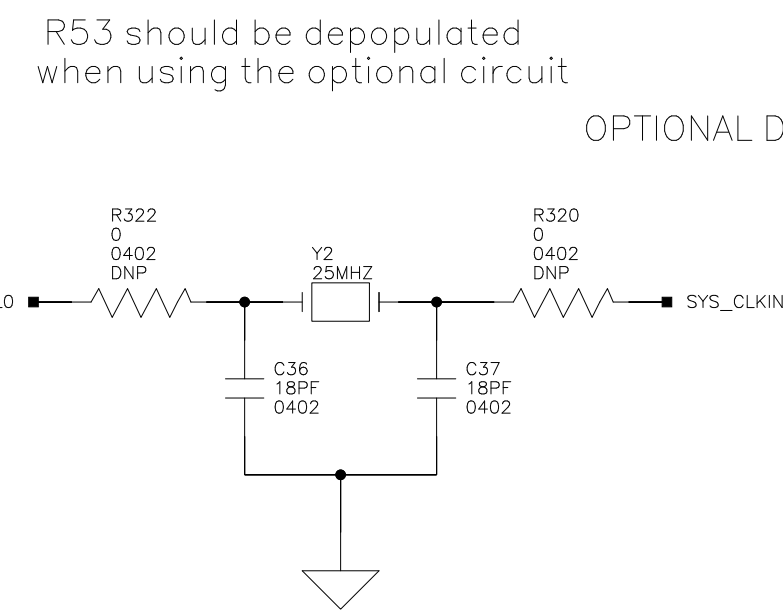
SW1: Boot mode selection switch

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



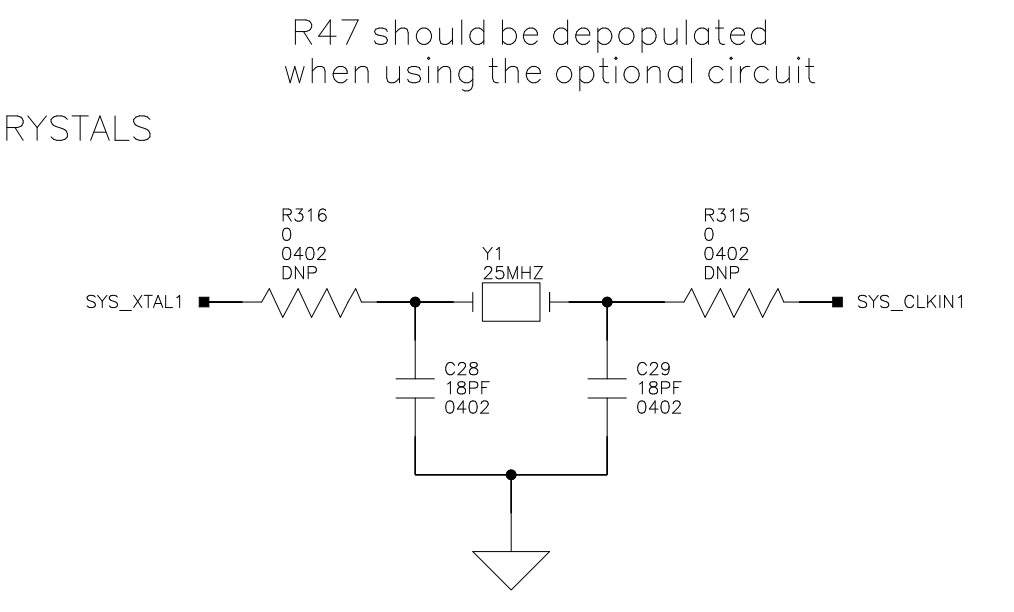
R50 should be depopulated when using the optional circuit

OPTIONAL USB CRYSTAL

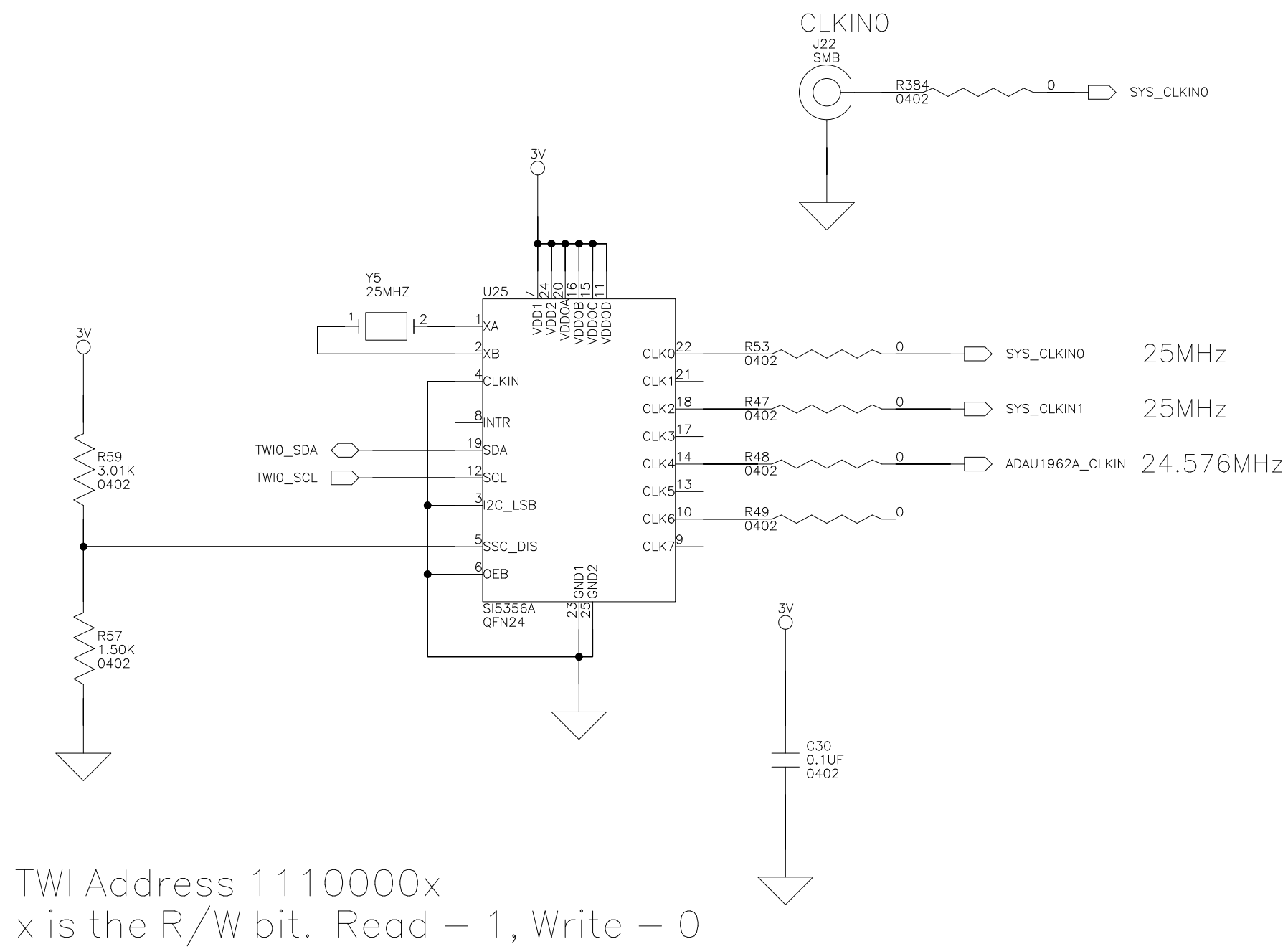


R53 should be depopulated when using the optional circuit

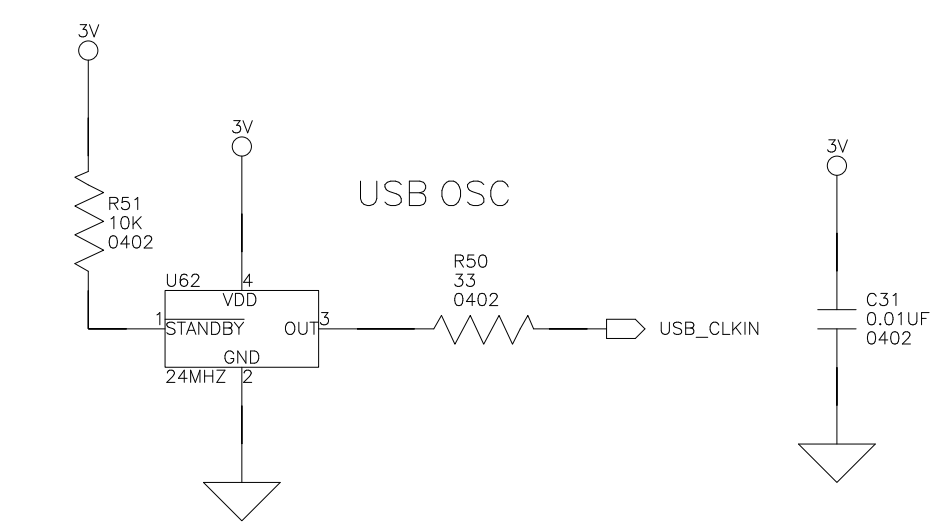
OPTIONAL DSP CRYSTALS



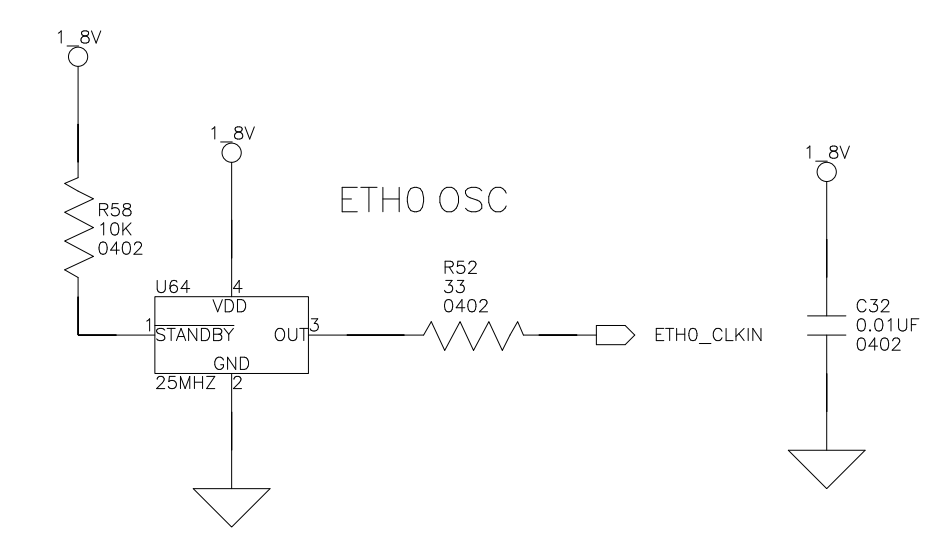
R47 should be depopulated when using the optional circuit



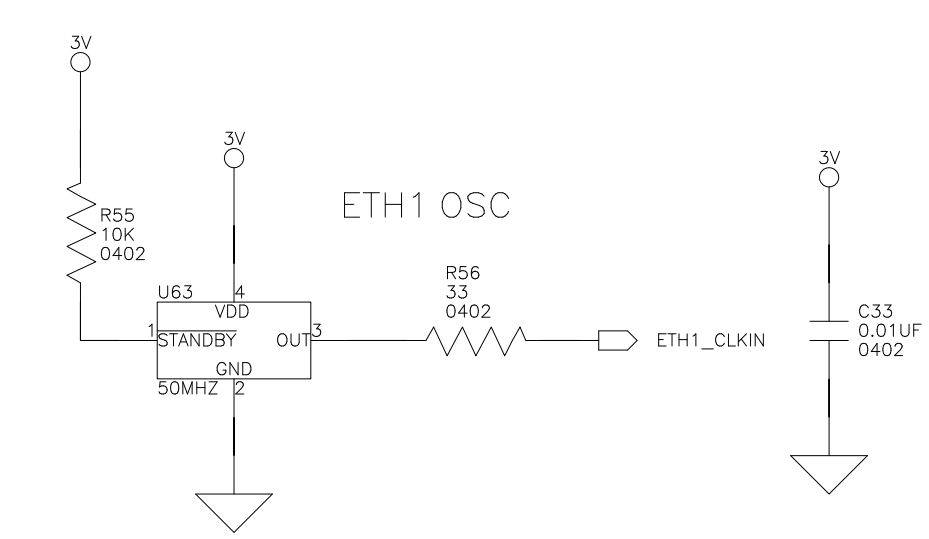
TWI Address 1110000x
x is the R/W bit. Read - 1, Write - 0



USB OSC



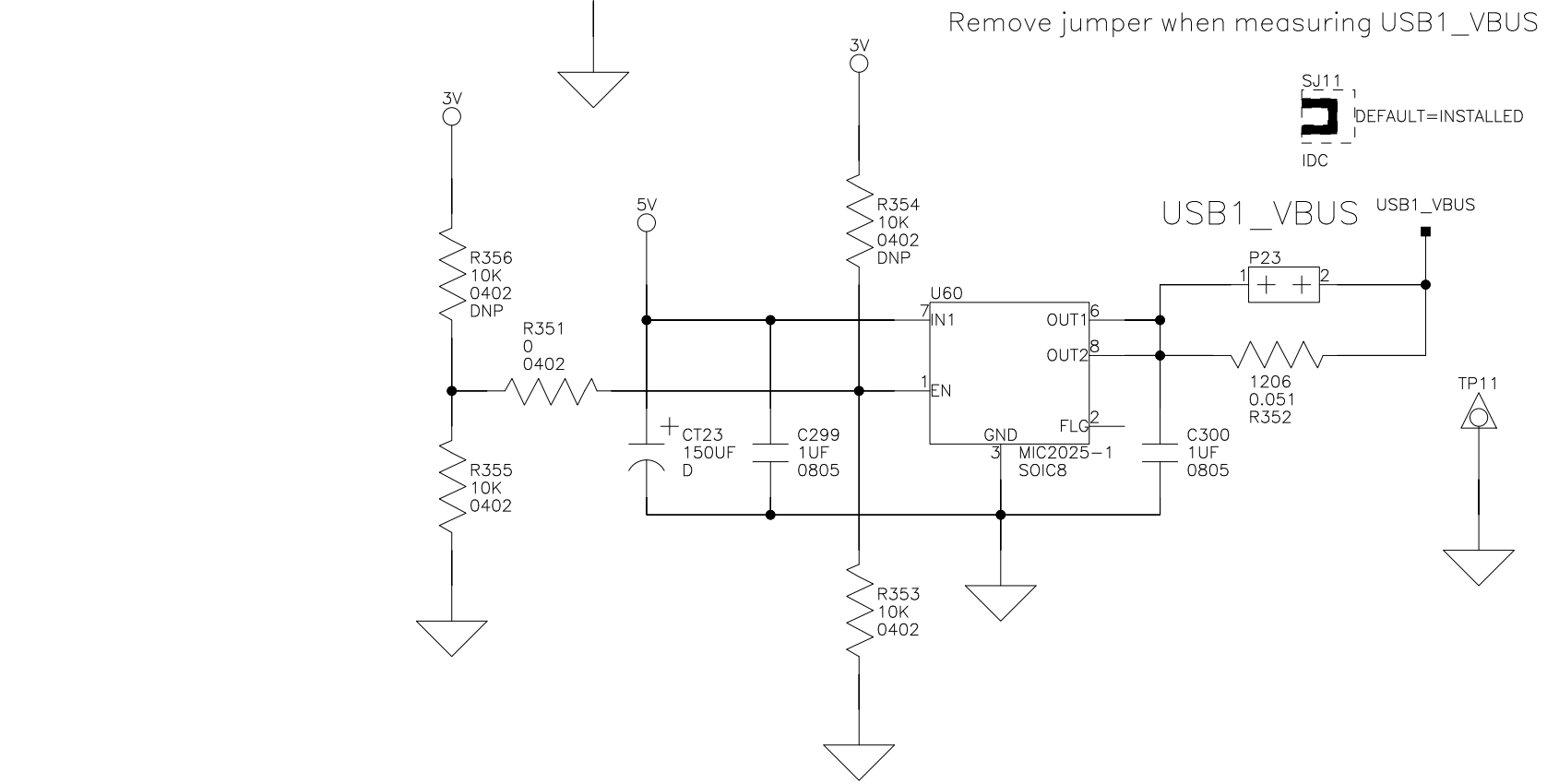
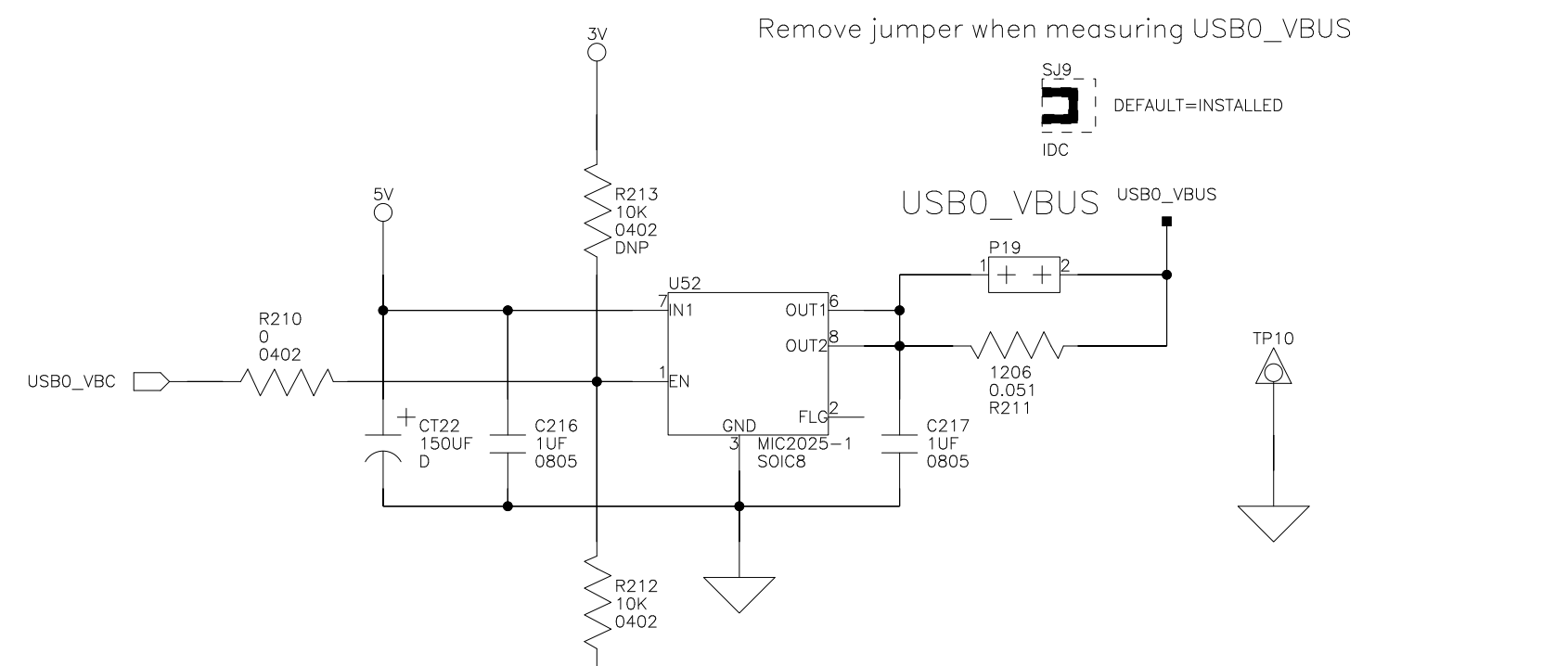
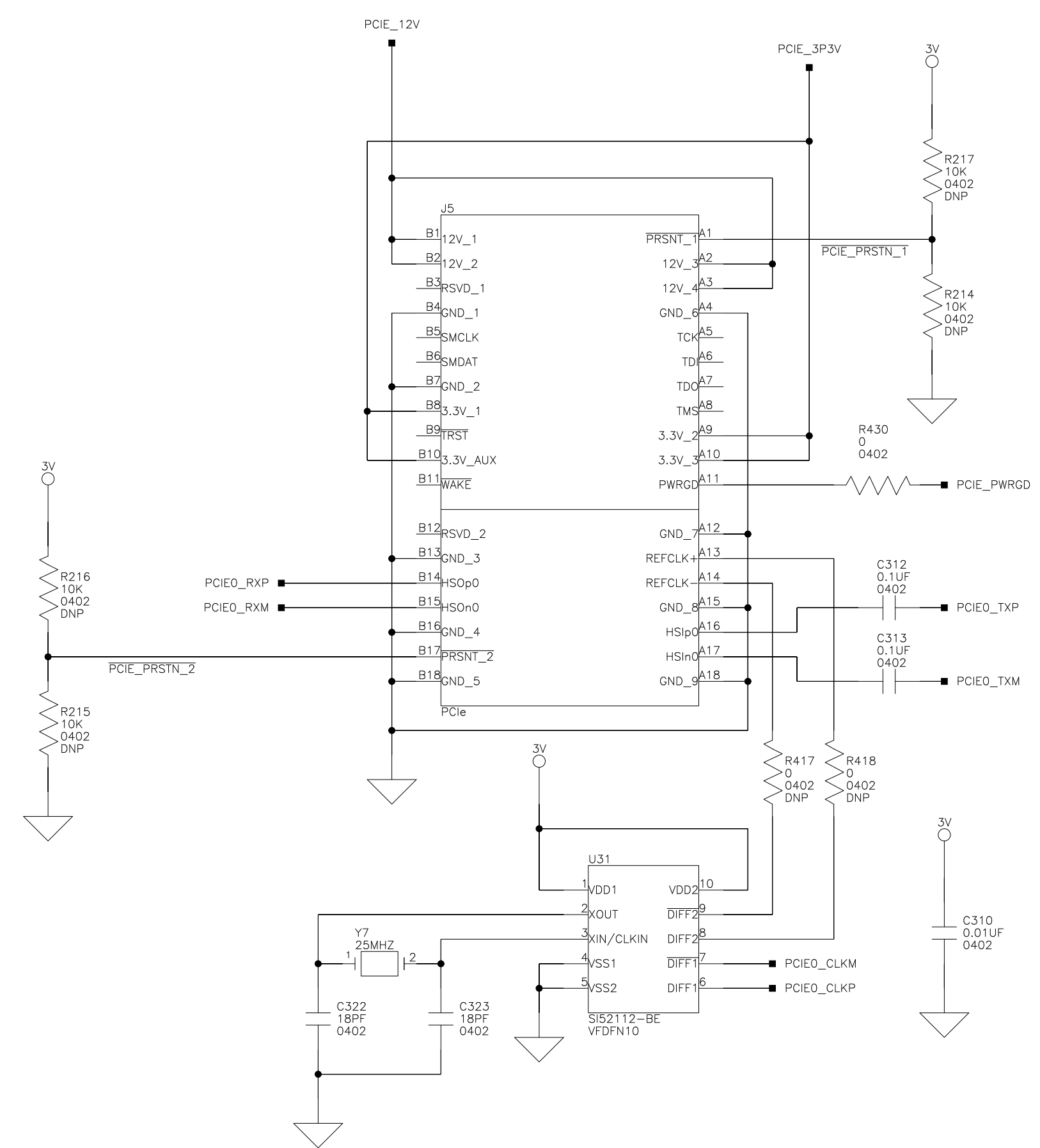
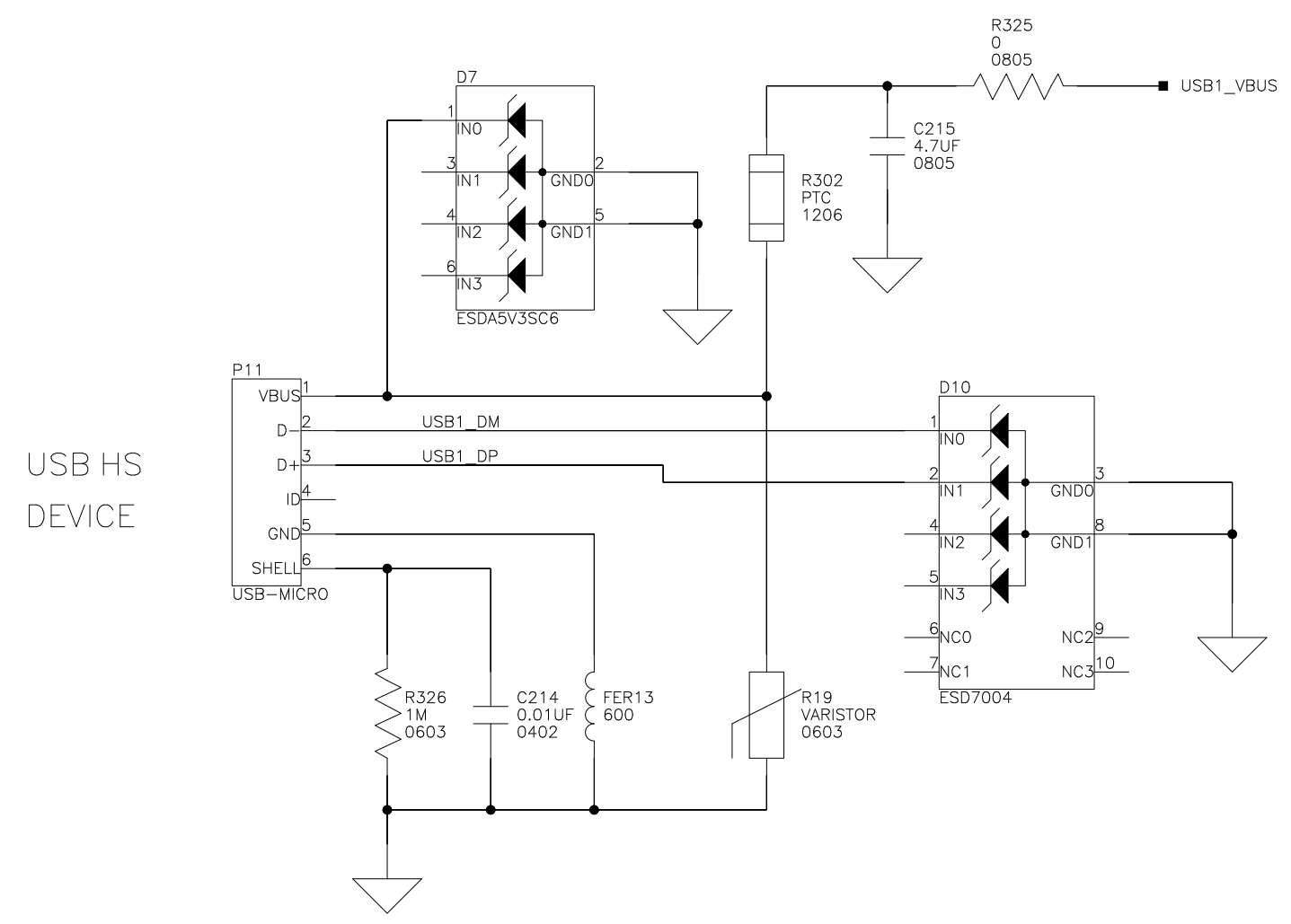
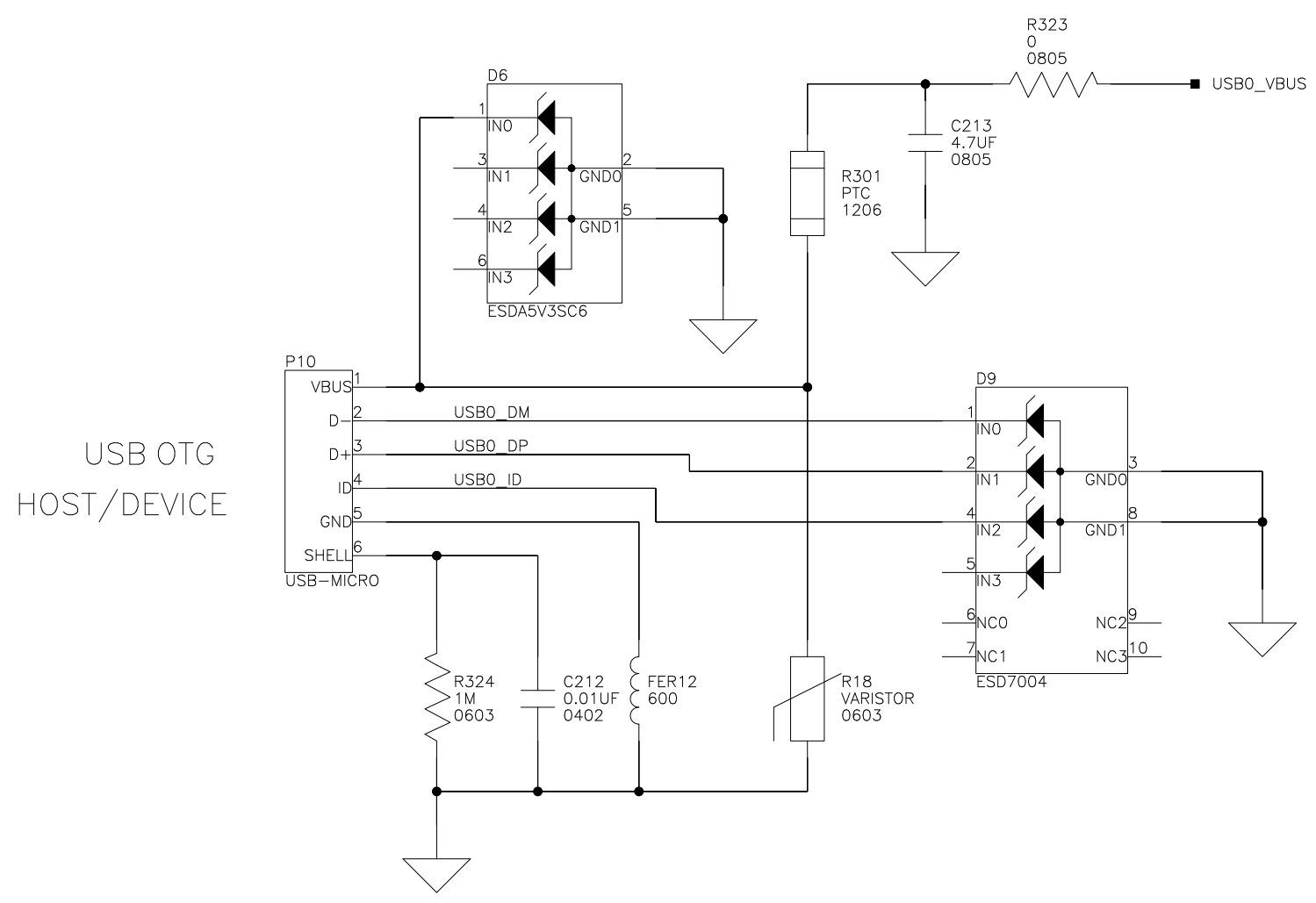
ETH0 OSC



ETH1 OSC

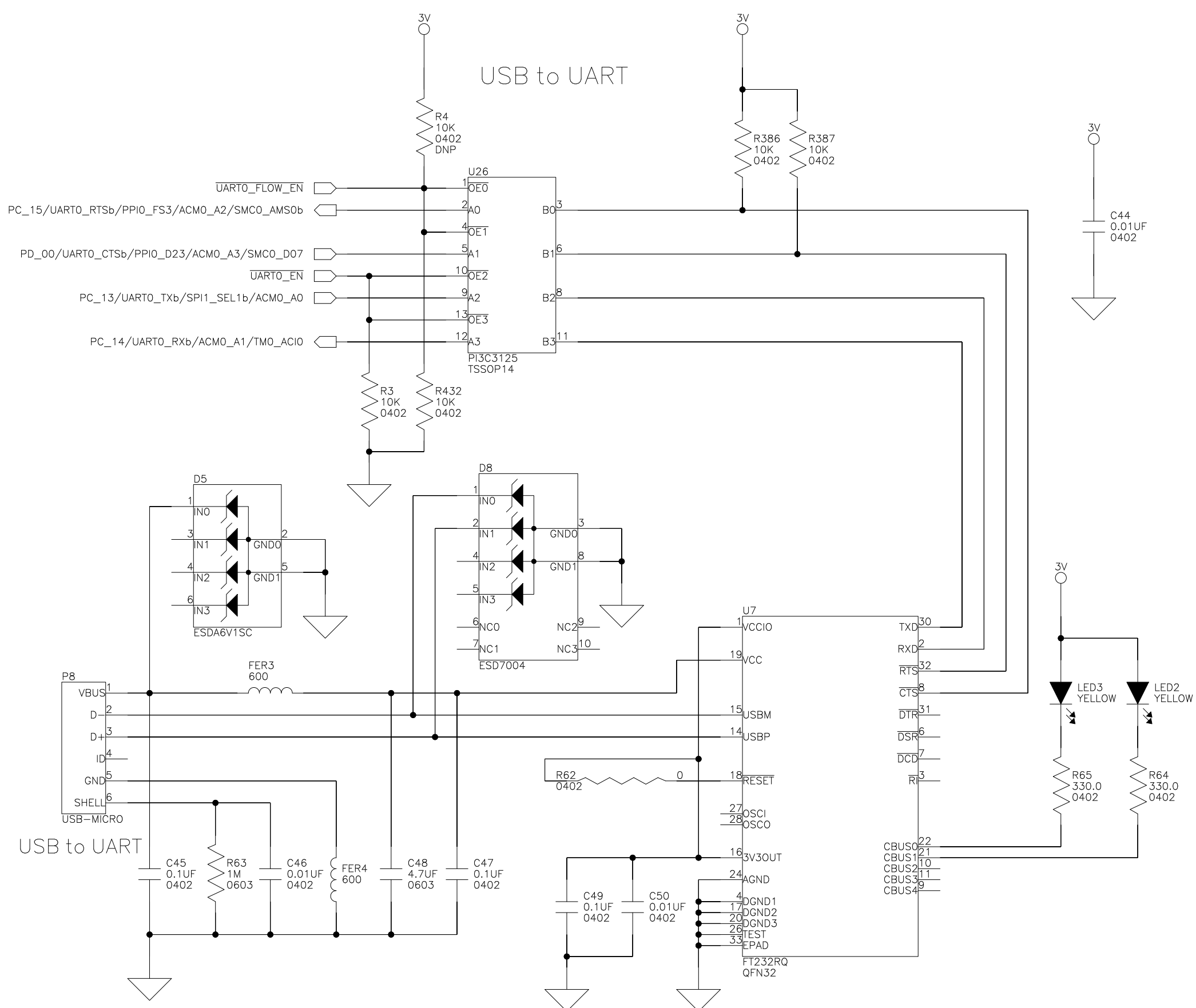
2 Elizabeth Drive
Chelmsford, MA 01824
PH: 1-800-ANALOGD

Title			ADSP-SC589 EZ-Board Clocks/Boot Mode		
Size	Board No.				Rev
C	A0447-2013				2.0b
Date	02/12/18	Sheet	9	of	28

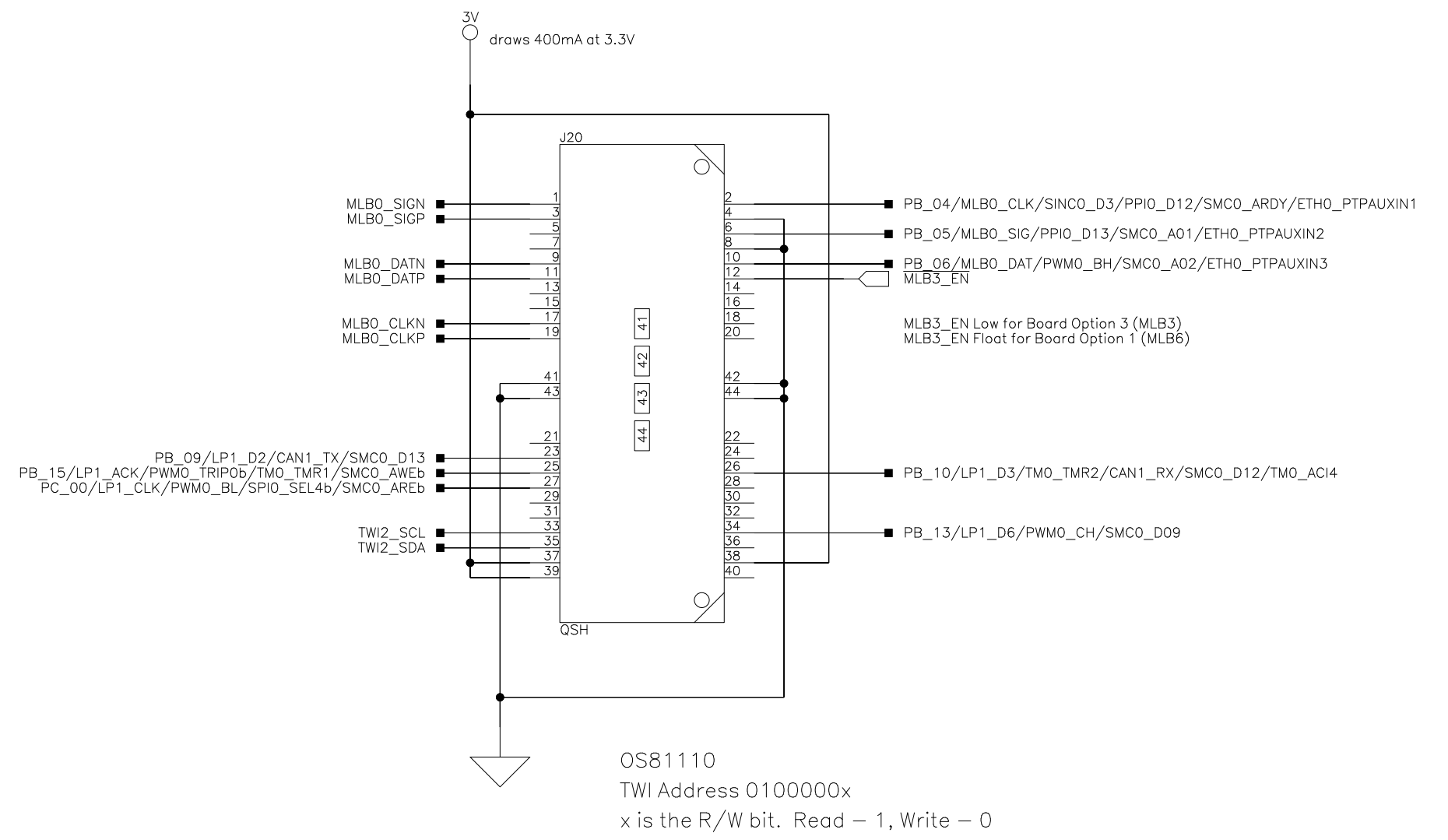


		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board USB/PCIe	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 10 of 28		

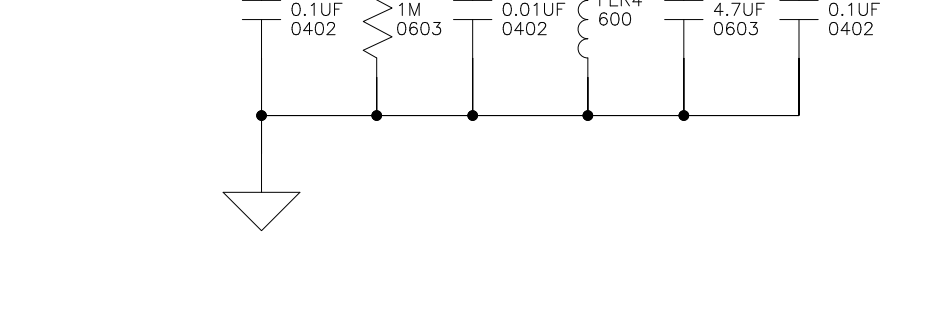
USB to UART



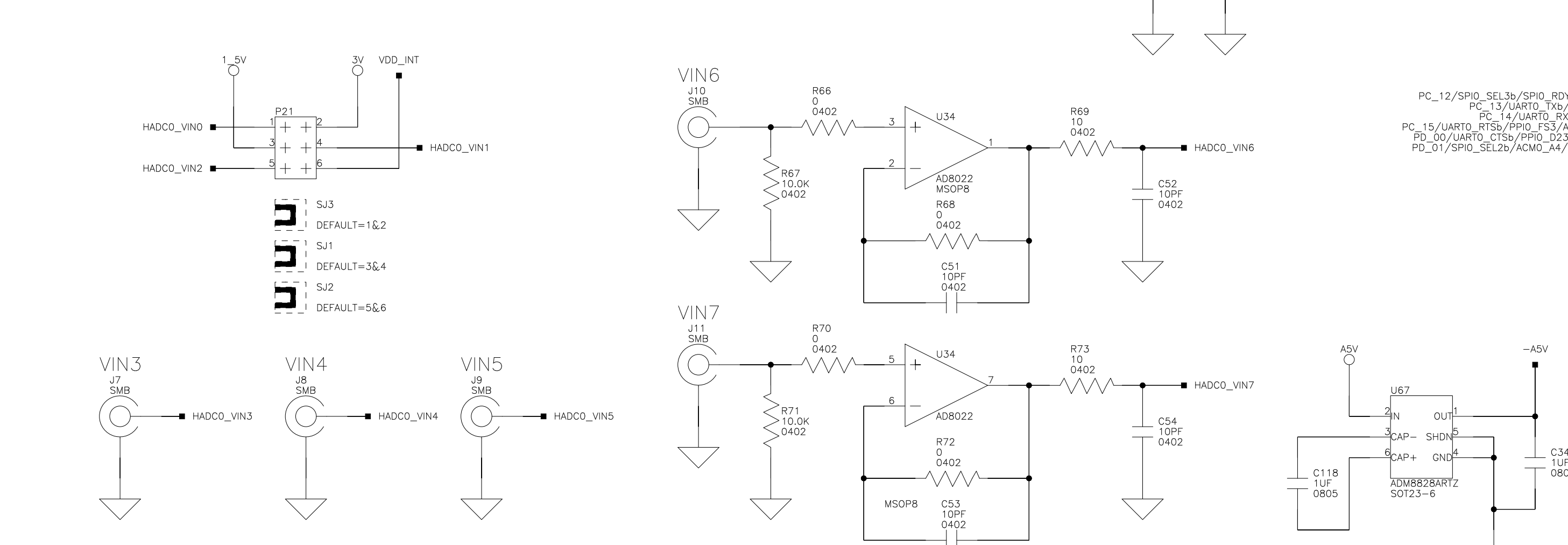
MLB 3/6



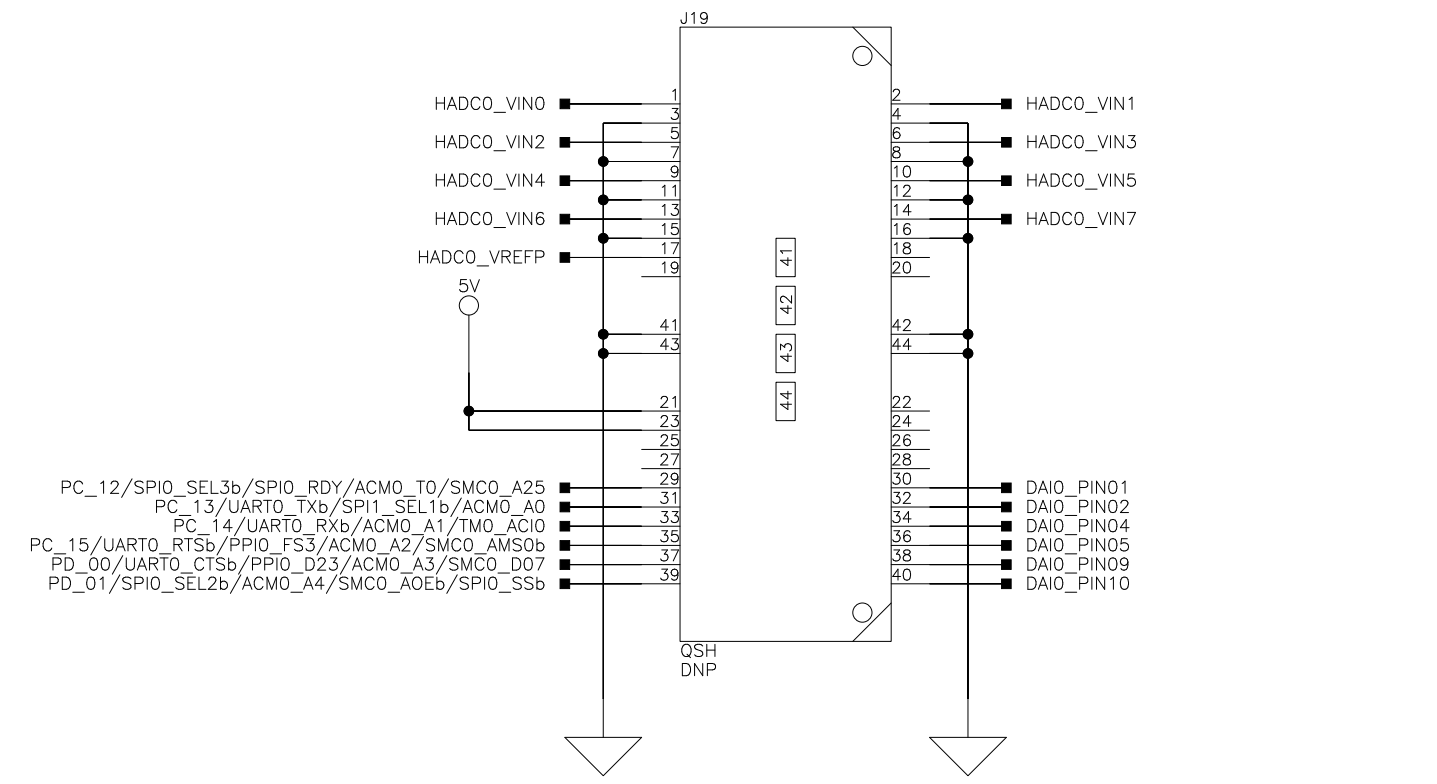
USB to UART



HADC Connectors

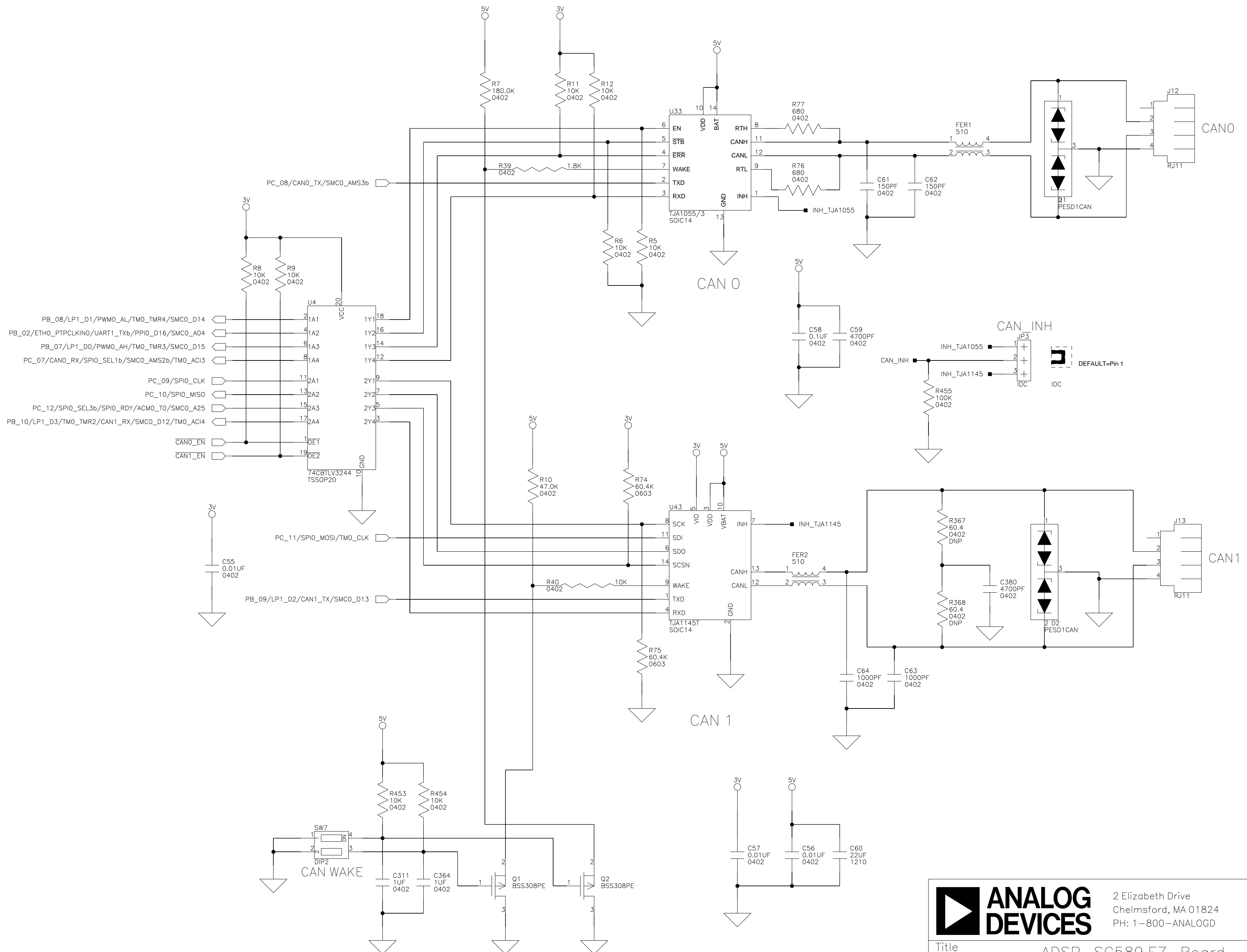



ADC Connector



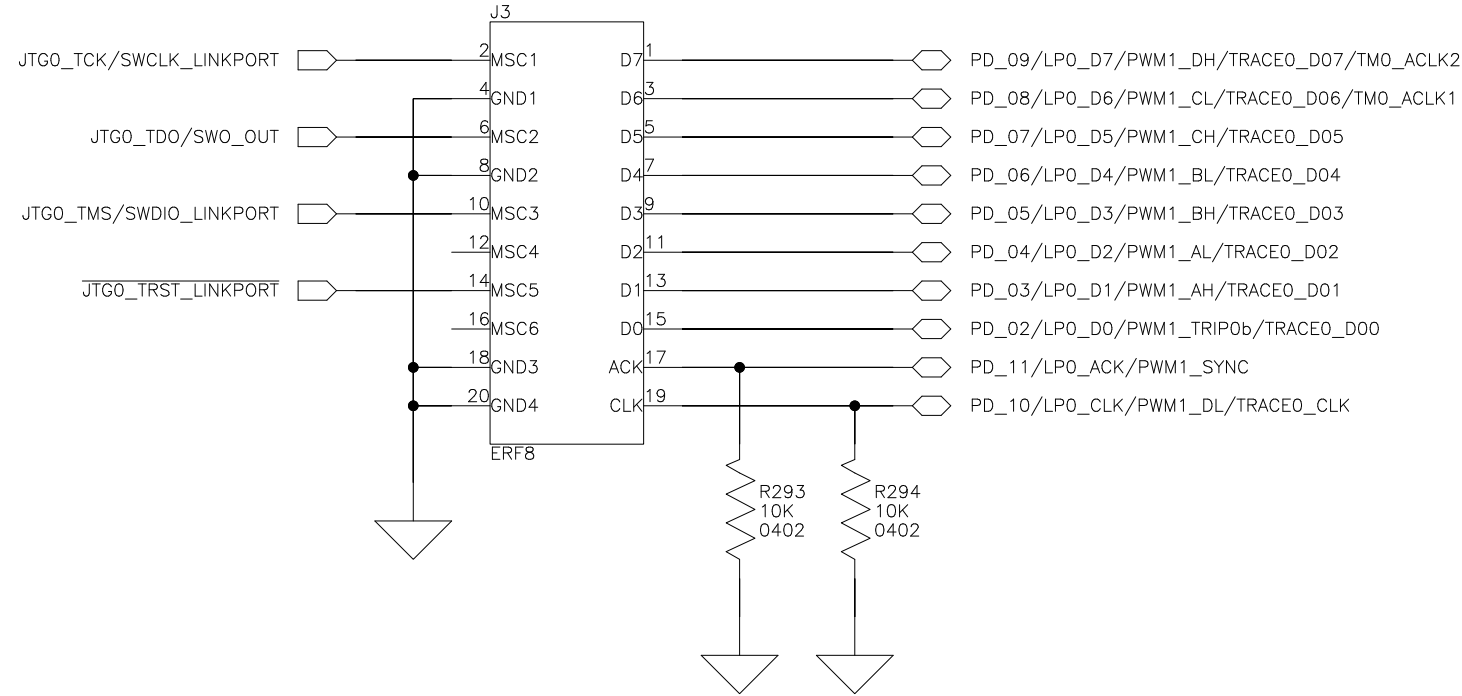
2 Elizabeth Drive
Chelmsford, MA 01824
PH: 1-800-ANALOGD

Title			ADSP-SC589 EZ-Board UART/MOST/HADC		
Size	Board No.	A0447-2013		Rev	
C				2.0b	
Date	02/12/18	Sheet	11	of 28	

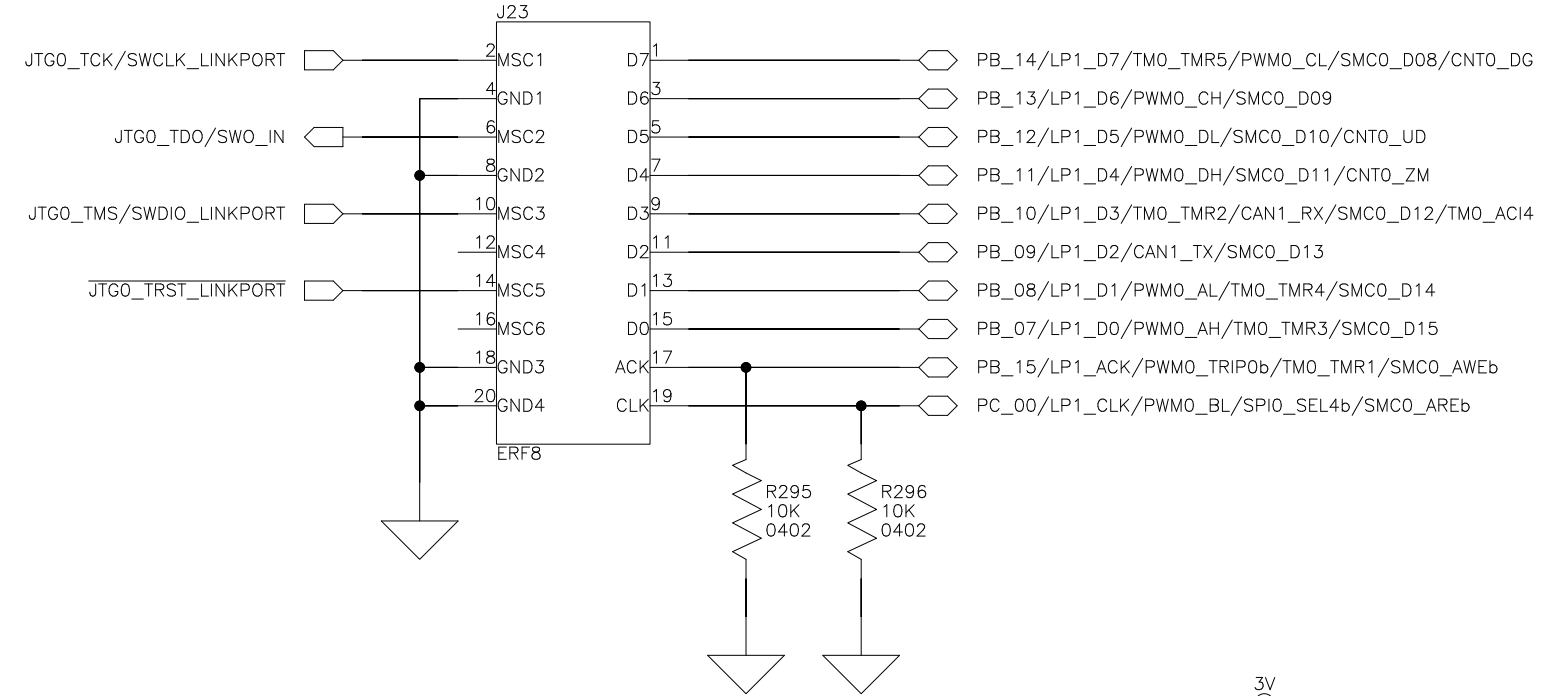


		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board CAN	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 12 of 28		

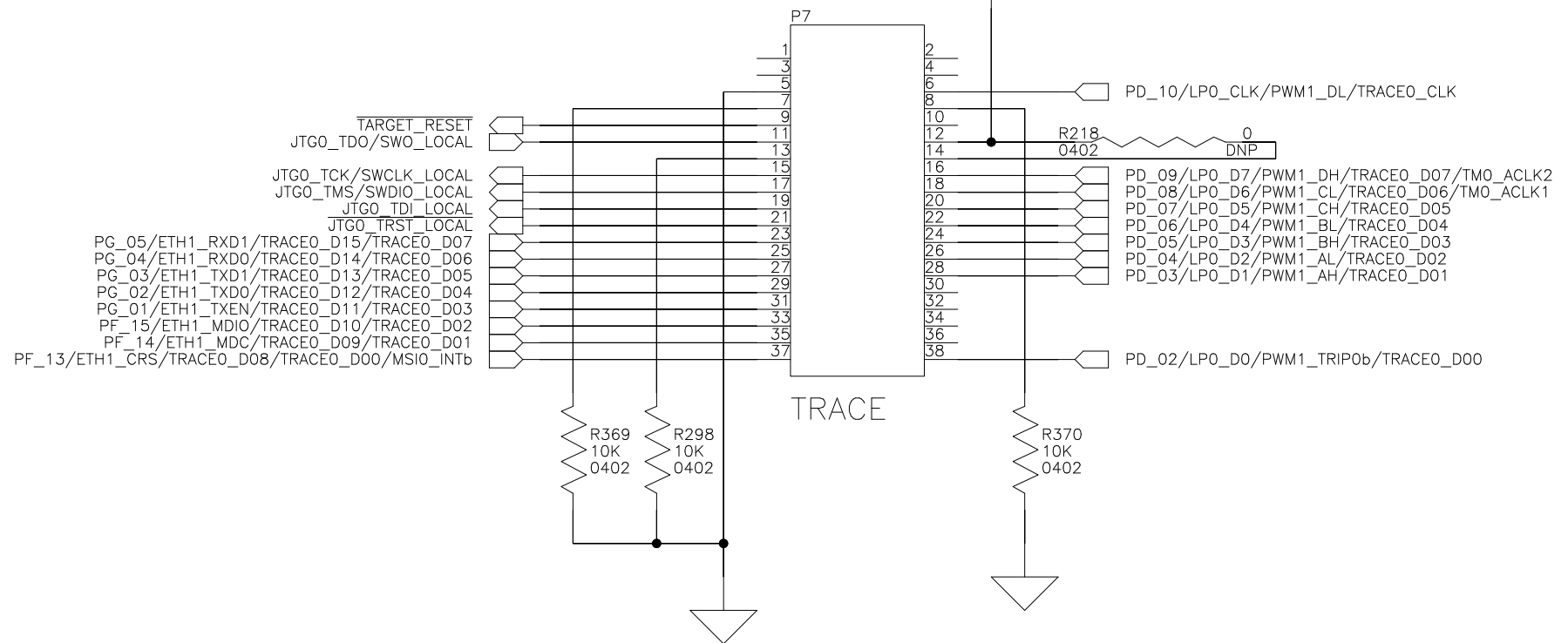
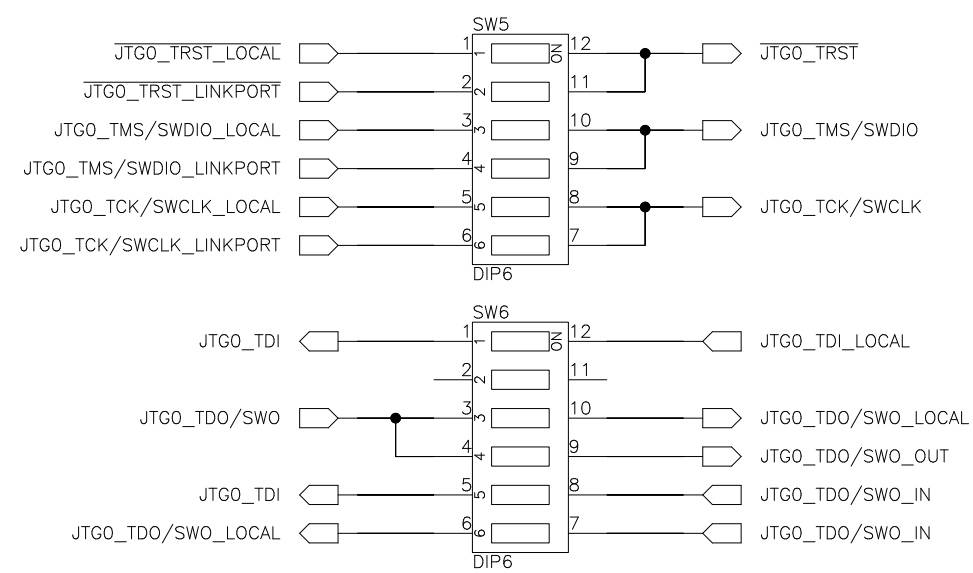
LINK PORT 0 / JTAG OUT



LINK PORT 1 / JTAG IN



JTAG SWITCHES



SINGLE PROCESSOR JTAG SETTINGS
EMULATOR OR DEBUG AGENT (DEFAULT)

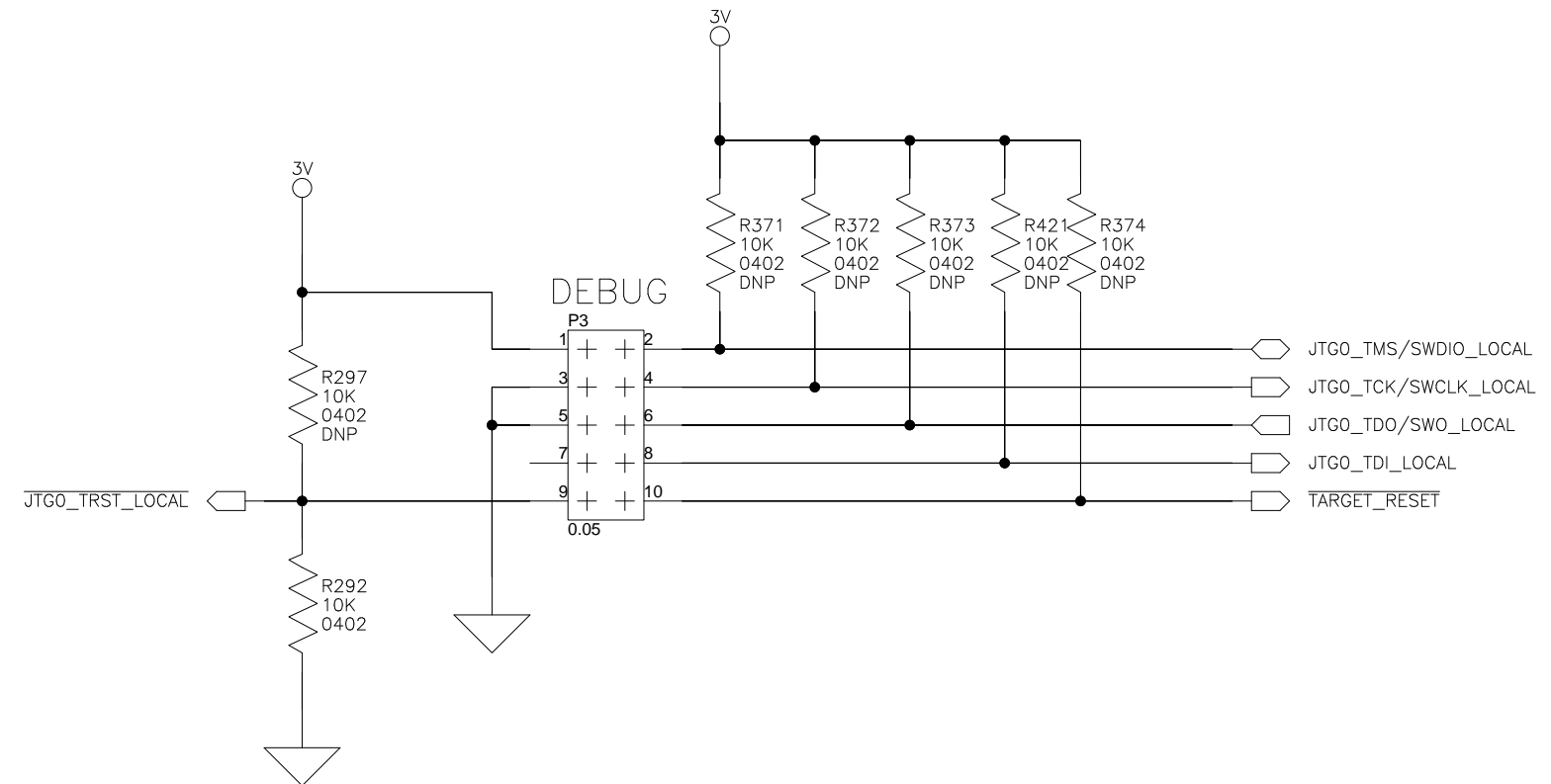
BOARD ATTACHED

SWITCH	TO EMULATOR
SW5.1	ON
SW5.2	OFF
SW5.3	ON
SW5.4	OFF
SW5.5	ON
SW5.6	OFF
SW6.1	ON
SW6.2	OFF
SW6.3	ON
SW6.4	OFF
SW6.5	OFF
SW6.6	OFF

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

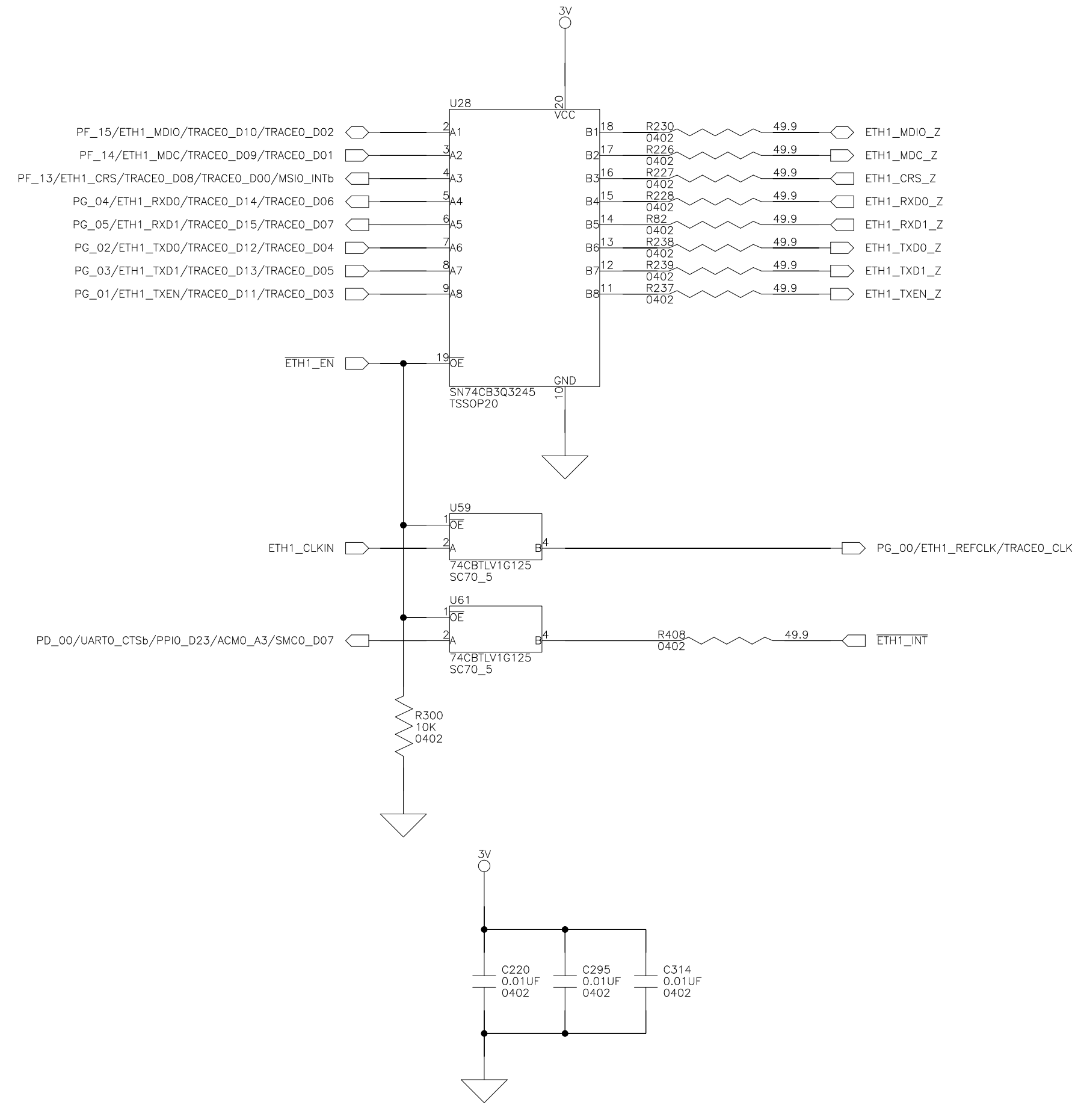
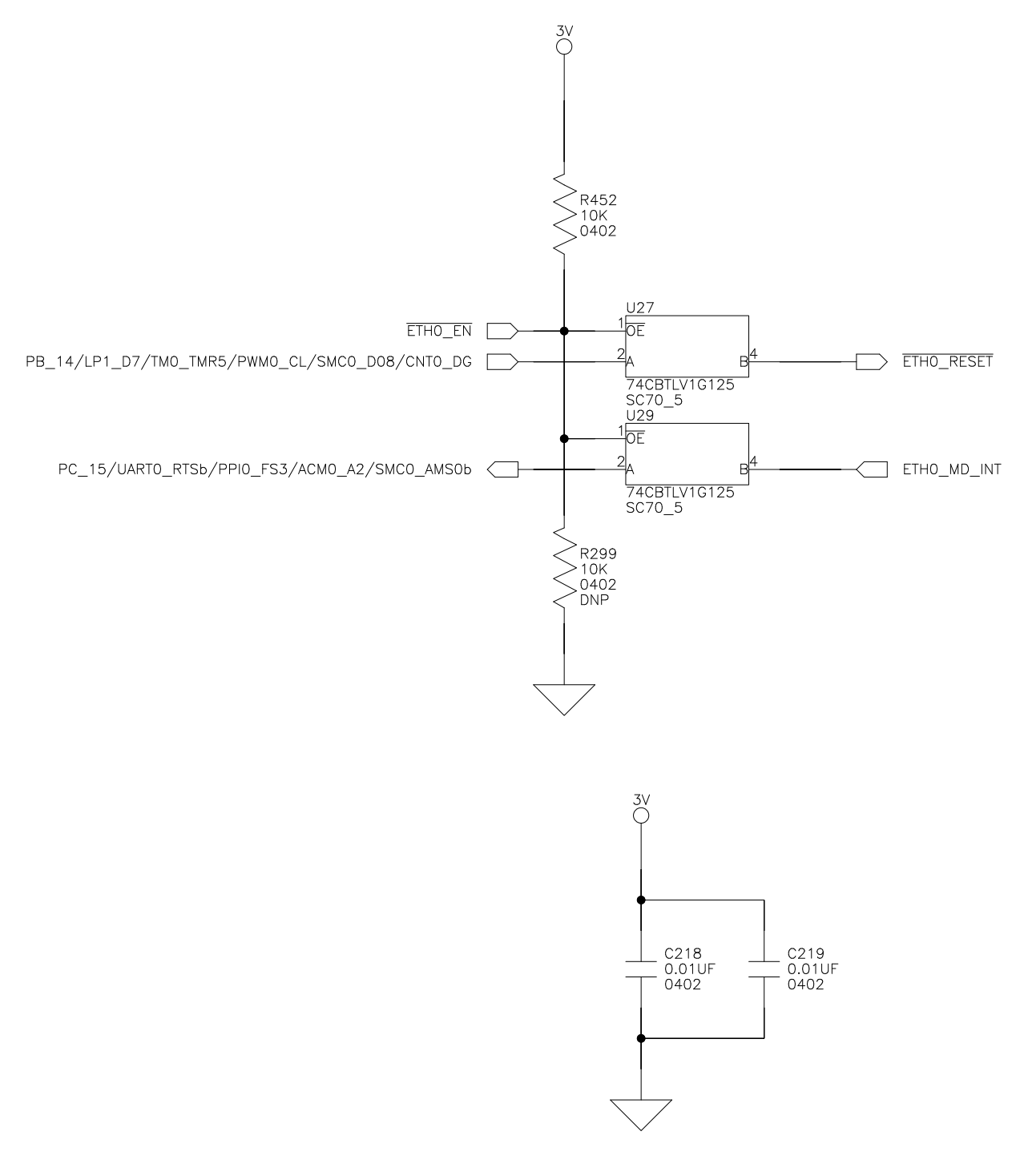
BOARD ATTACHED BOARD(S) NOT ATTACHED


SWITCH	TO EMULATOR	TO EMULATOR
SW5.1	ON	OFF
SW5.2	ON	ON
SW5.3	ON	OFF
SW5.4	ON	ON
SW5.5	ON	OFF
SW5.6	ON	ON
SW6.1	ON	OFF
SW6.2	OFF	OFF
SW6.3	OFF	OFF
SW6.4	ON	ON
SW6.5	OFF	ON
SW6.6	ON	OFF

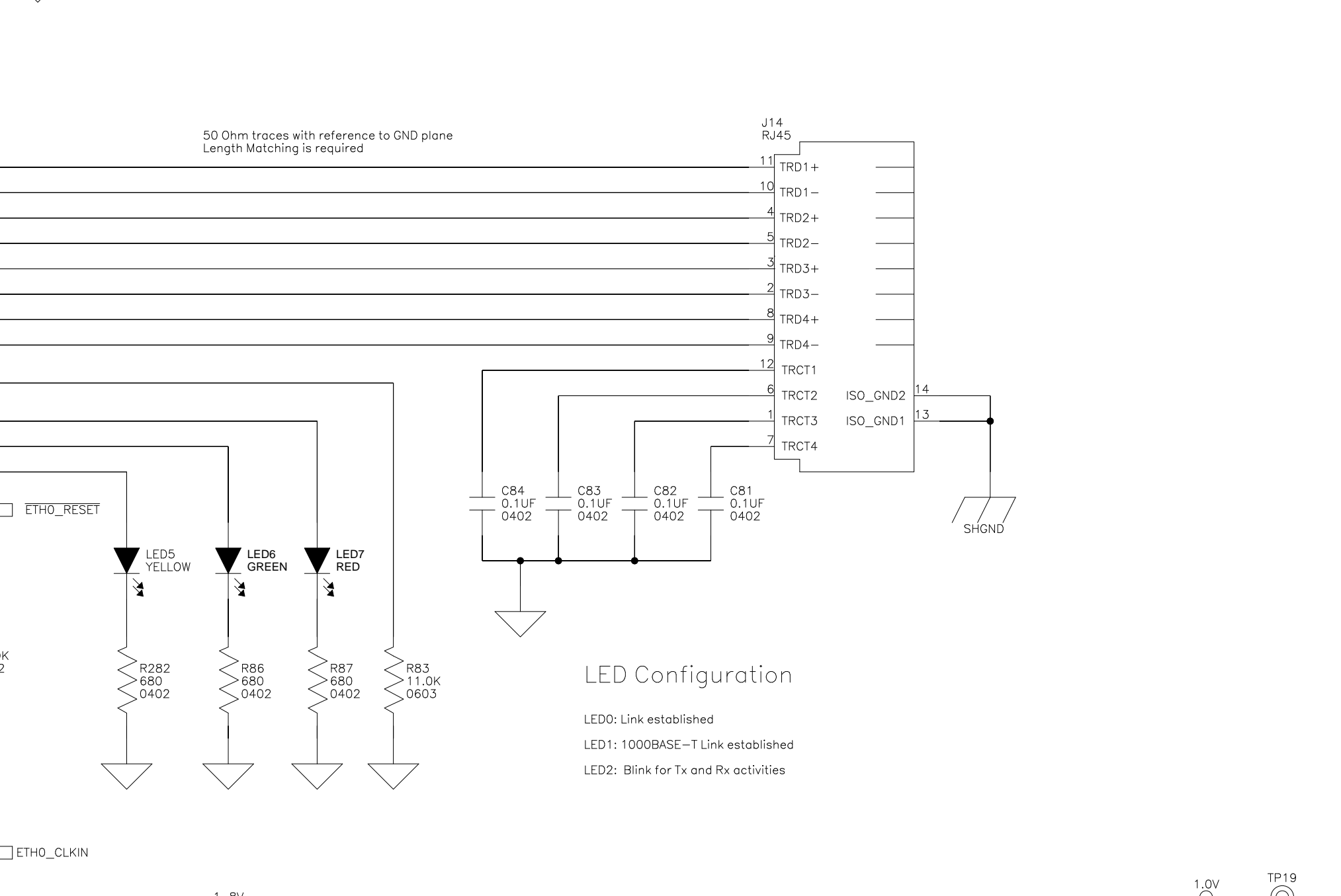
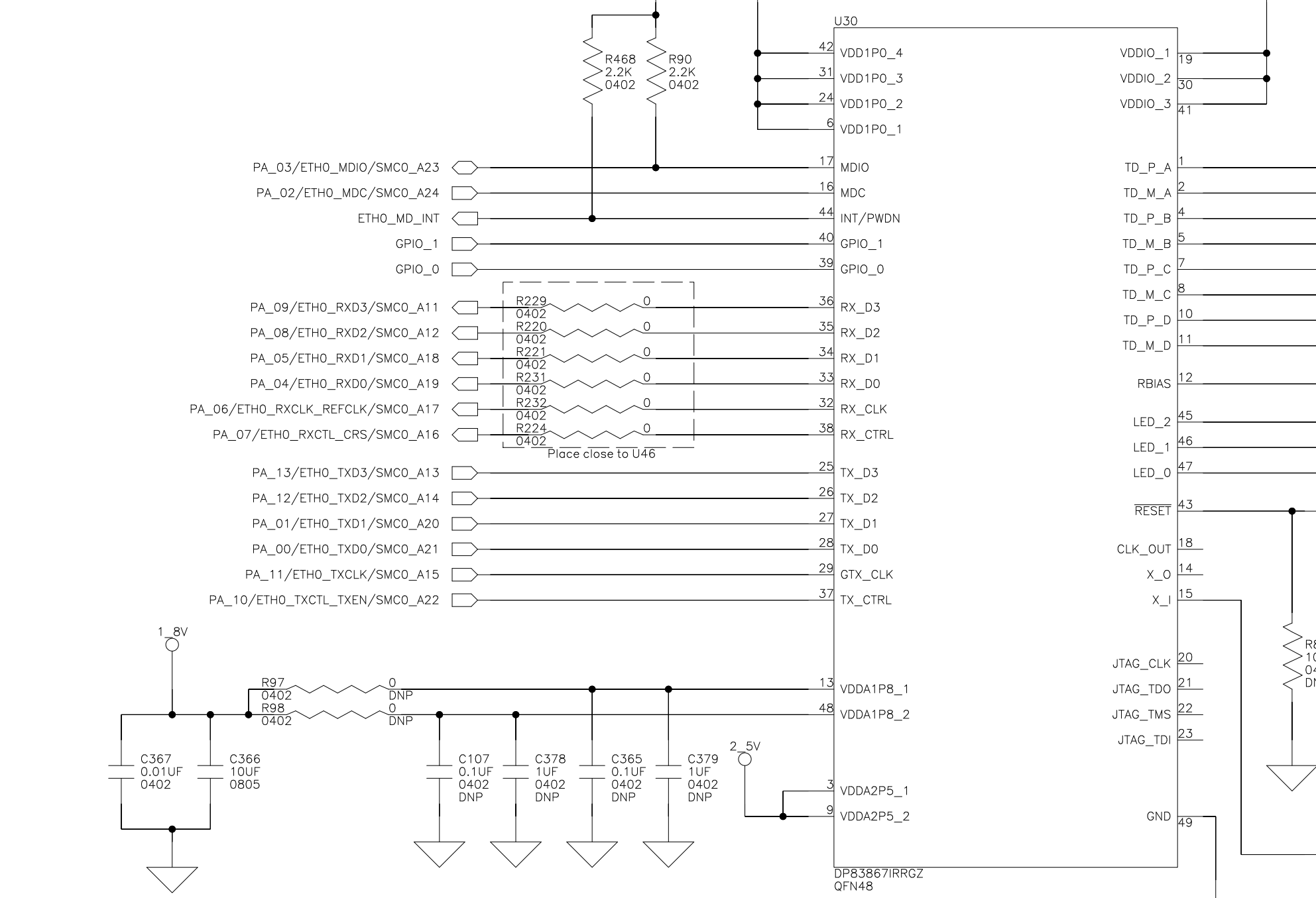
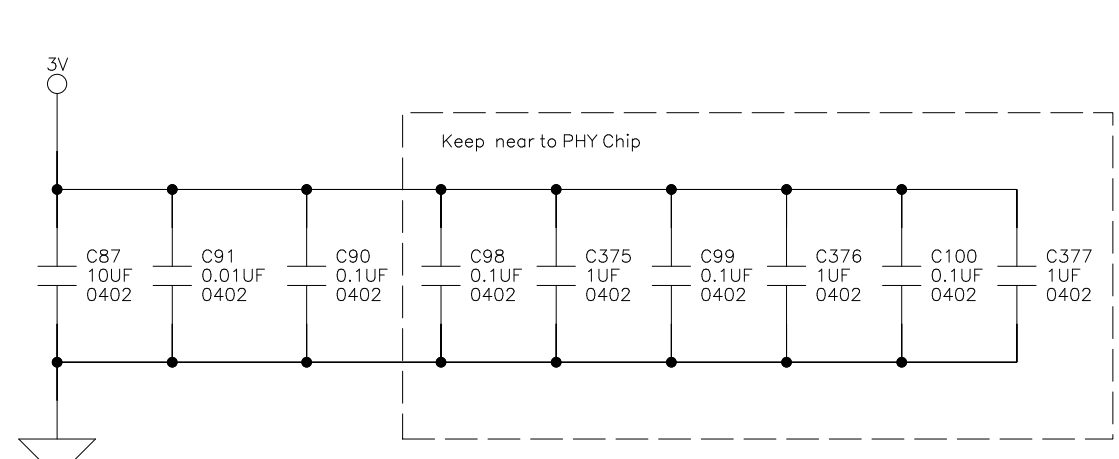
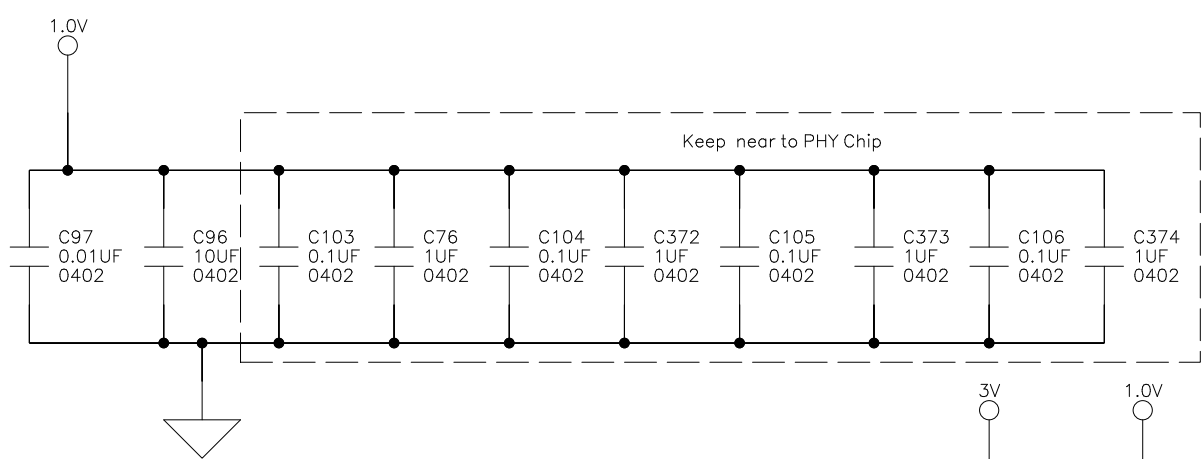


2 Elizabeth Drive
Chelmsford, MA 01824
PH: 1-800-ANALOGD

Title			ADSP-SC589 EZ-Board Link Port/Debug		
Size	Board No.				Rev
C	A0447-2013				2.0b
Date	02/12/18	Sheet	13	of	28

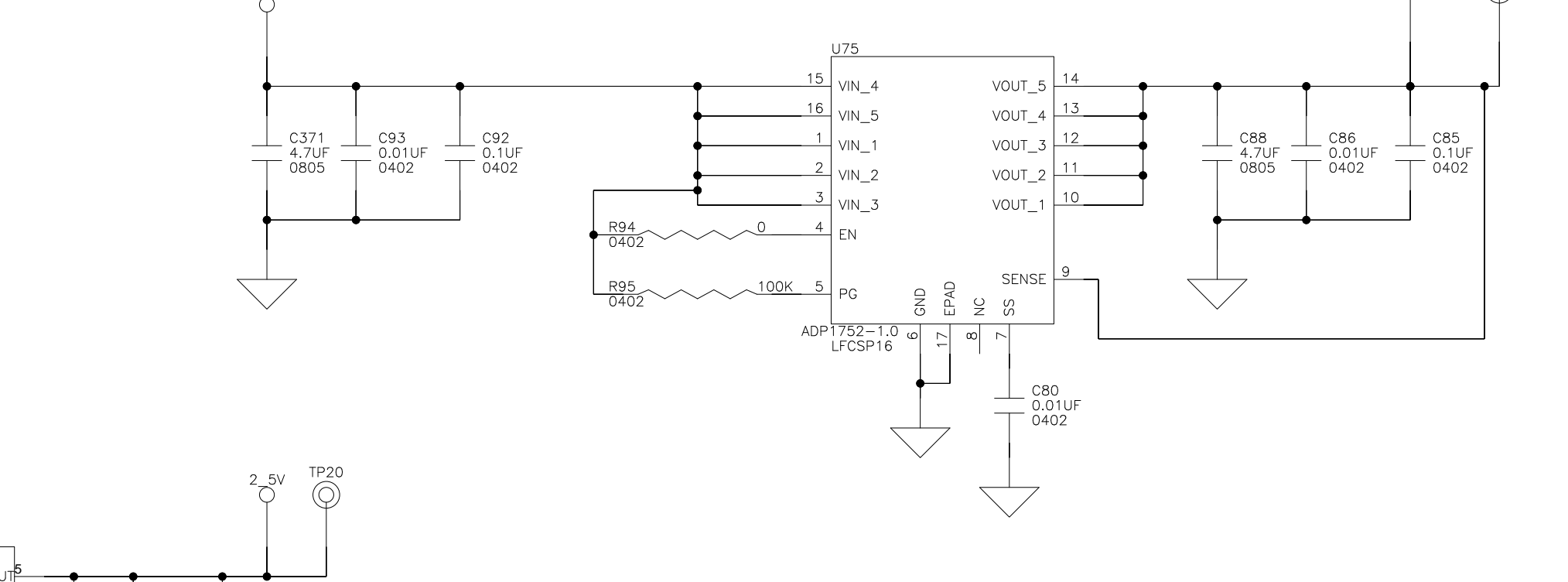
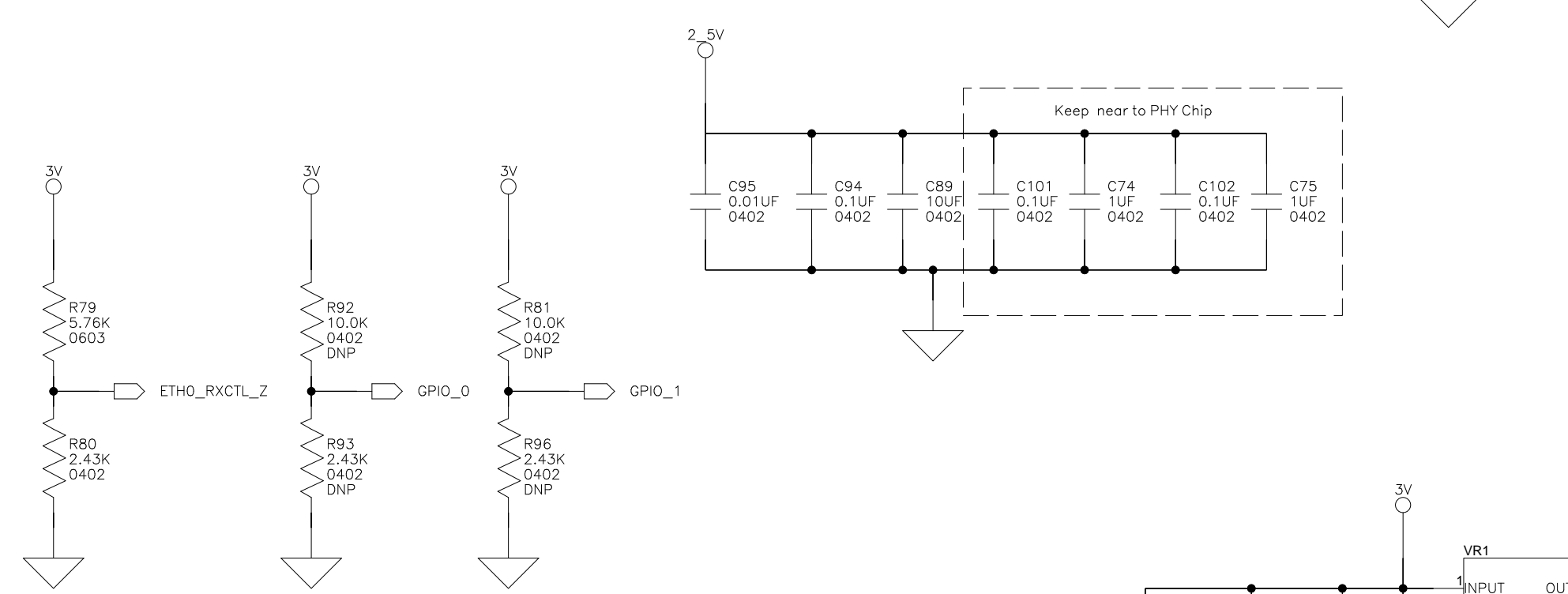


		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board EMAC Switching	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 14 of 28		



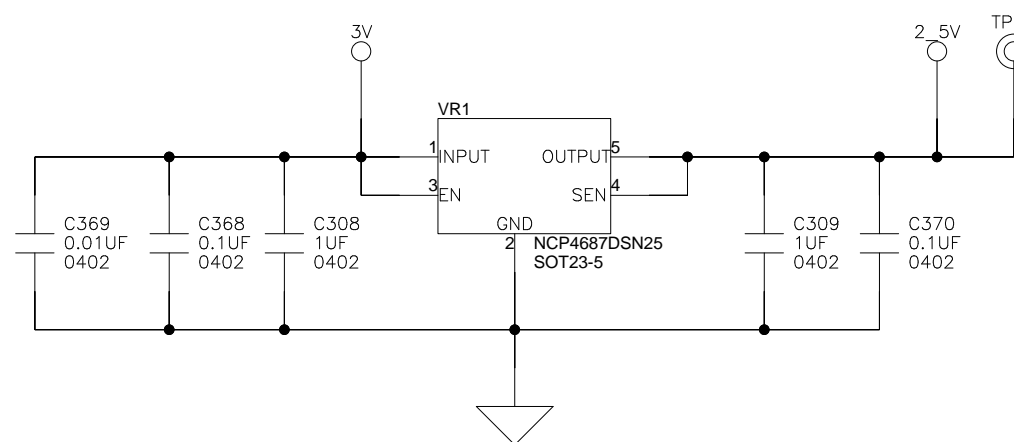
LED Configuration

LED0: Link established
 LED1: 1000BASE-T Link established
 LED2: Blink for Tx and Rx activities



Strap Configuration

RX_D0: MODE 1 - PHY_ADD1 0 and PHY_ADD0 0
 RX_D2: MODE 1 - PHY_ADD3 0 and PHY_ADD2 0
 RX_DV/RX_CTRL - MODE 3 - Autoneg Disable 0
 GPIO_0: MODE 1 - RGMII Clock Skew RX[0] 0
 GPIO_1: MODE 1 - RGMII Clock Skew RX[2] 0 and RX[1] 0 --> Clock Skew 2.0ns
 LED0: MODE 1 - Mirror Enable 0
 LED1: MODE 1 - ANEG_SEL 0 & RGMII Clock Skew TX[2] 0
 LED2: MODE 1 - RGMII Clock Skew TX[1] 0 and TX[0] 0 --> Clock Skew 2.0ns



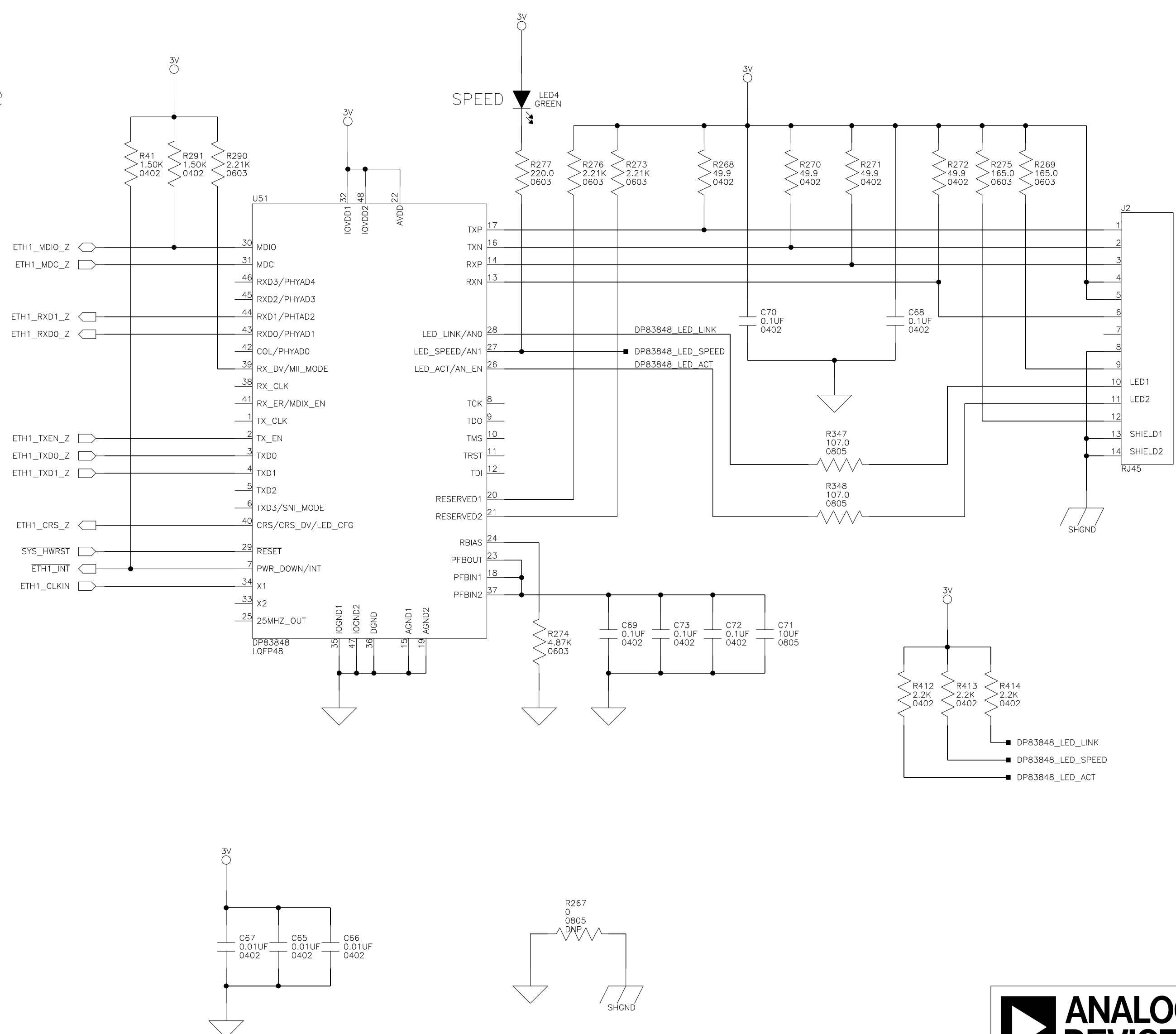
ANALOG DEVICES 2 Elizabeth Drive
 Chelmsford, MA 01824
 PH: 1-800-ANALOGD


Title: ADSP-SC589 EZ-Board DP83867

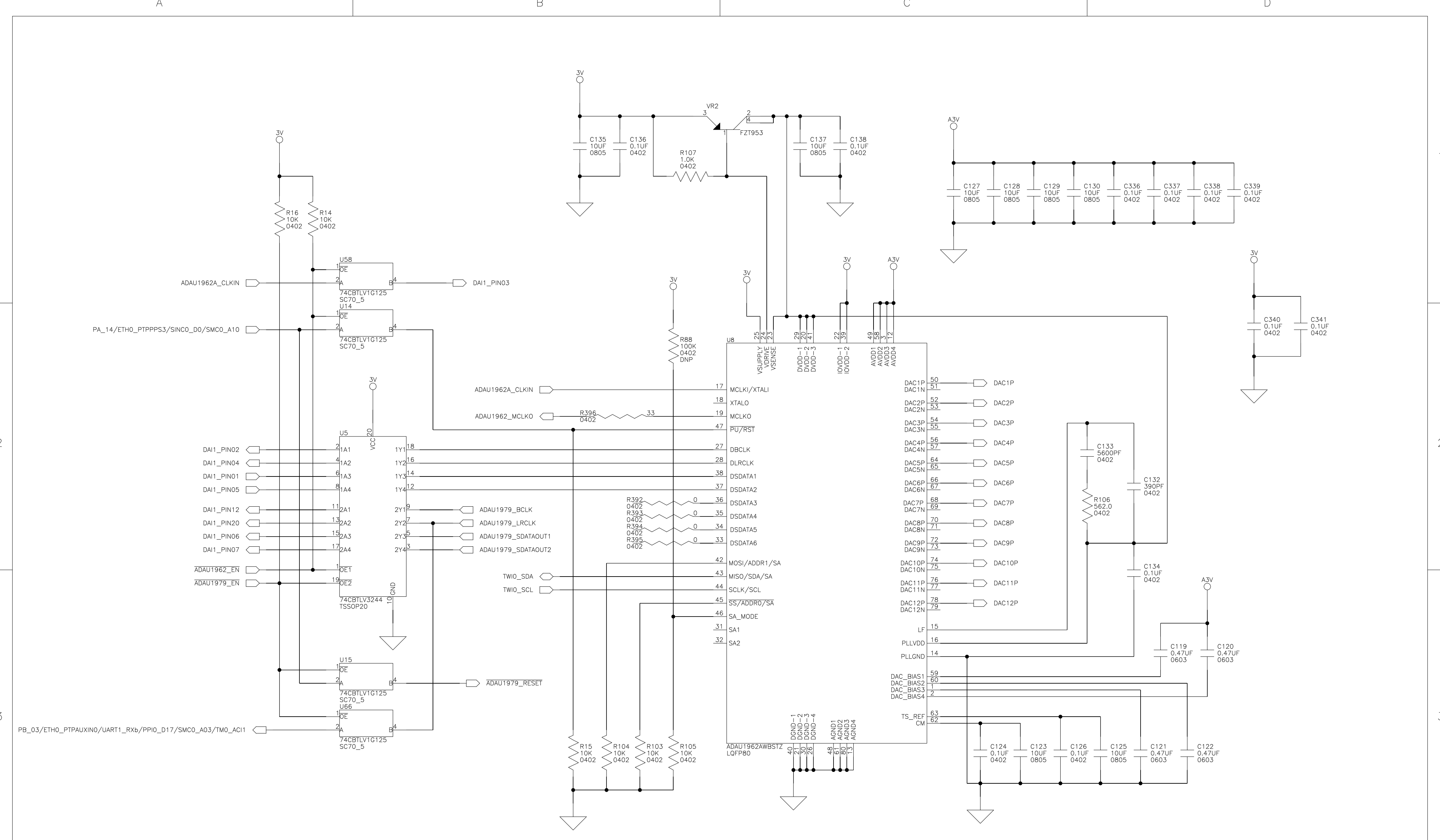
Size C	Board No. A0447-2013	Rev 2.0b
Date 02/12/18	Sheet 15 of 28	

RMII Mode

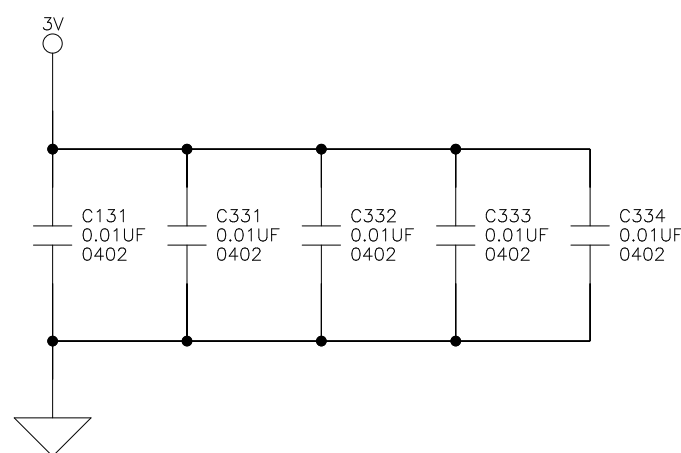
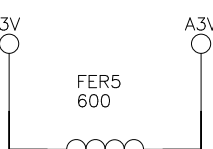
PHY Address 0x01




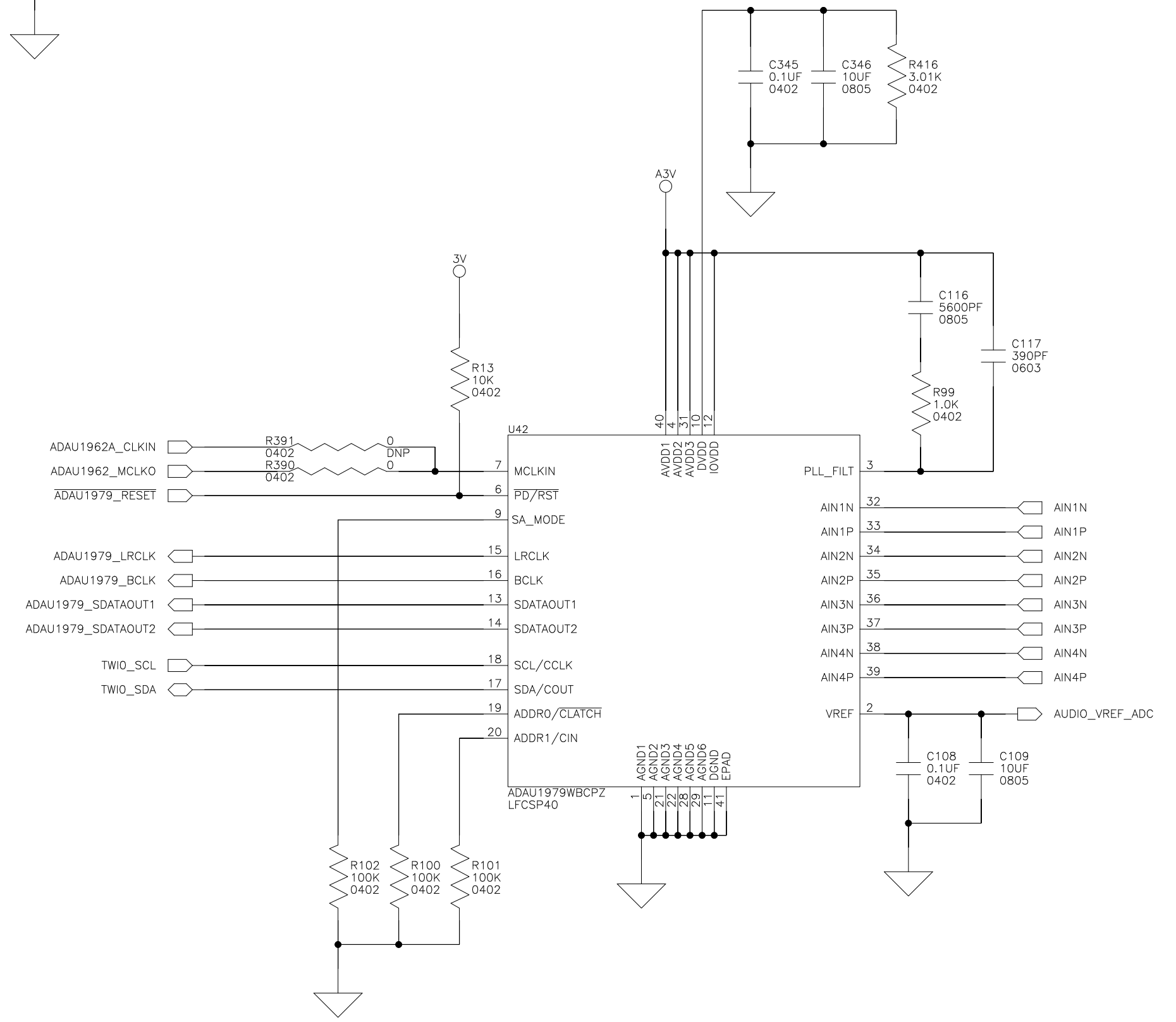
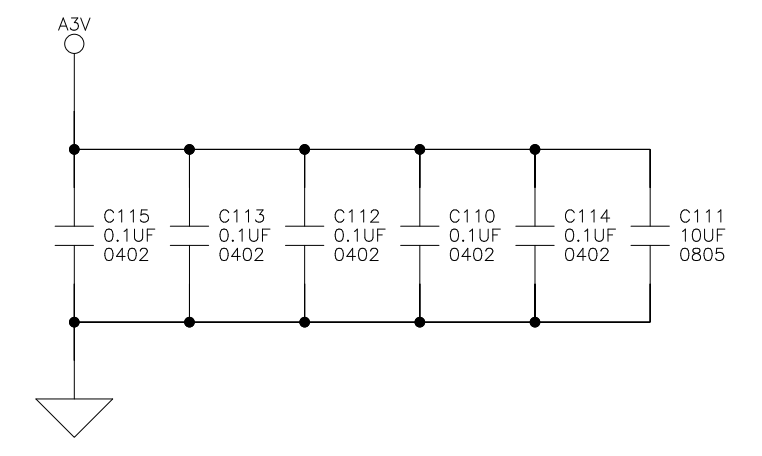
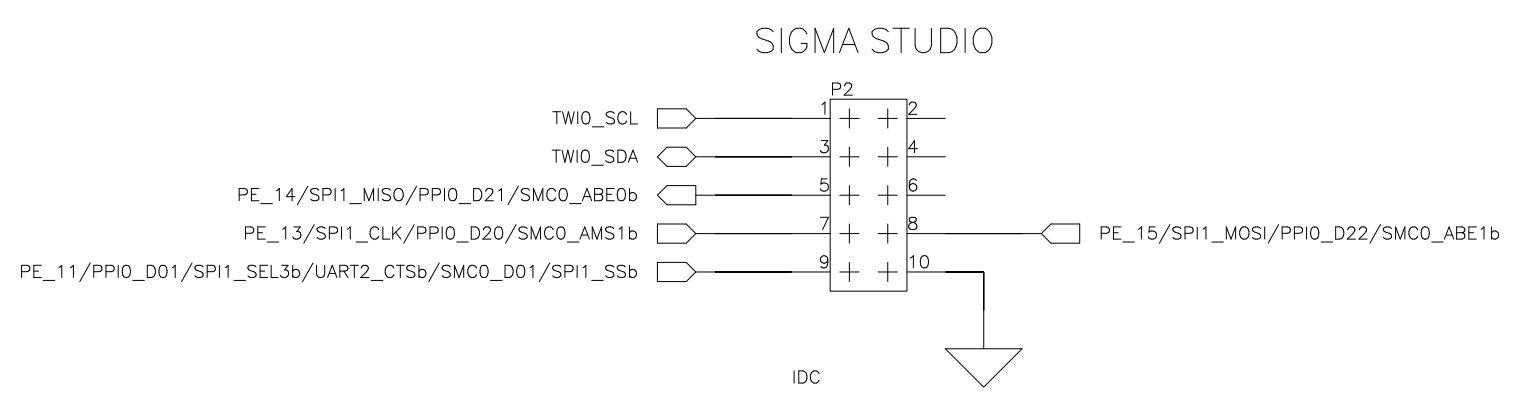
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board DP83848	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 16 of 28		



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

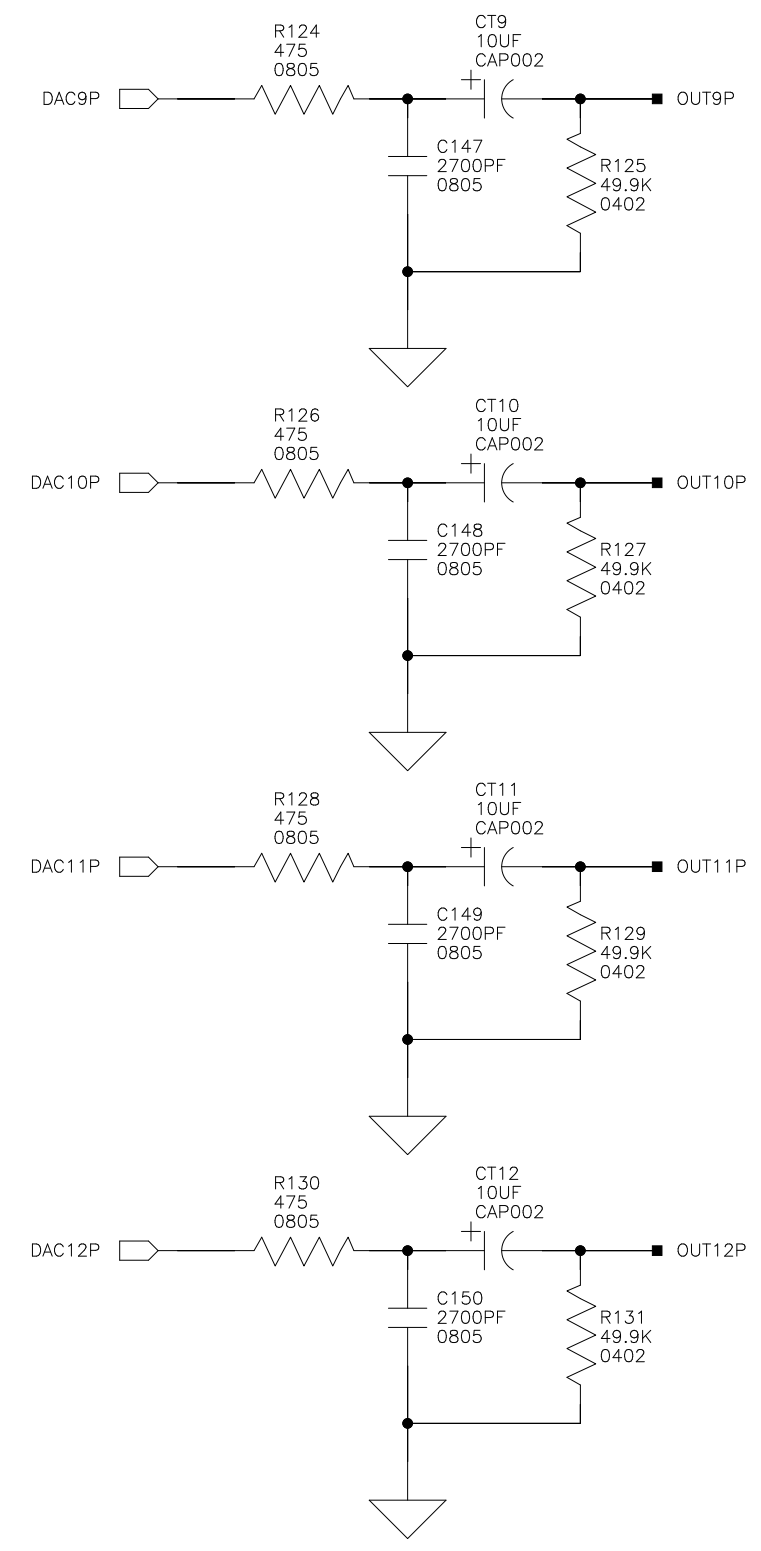
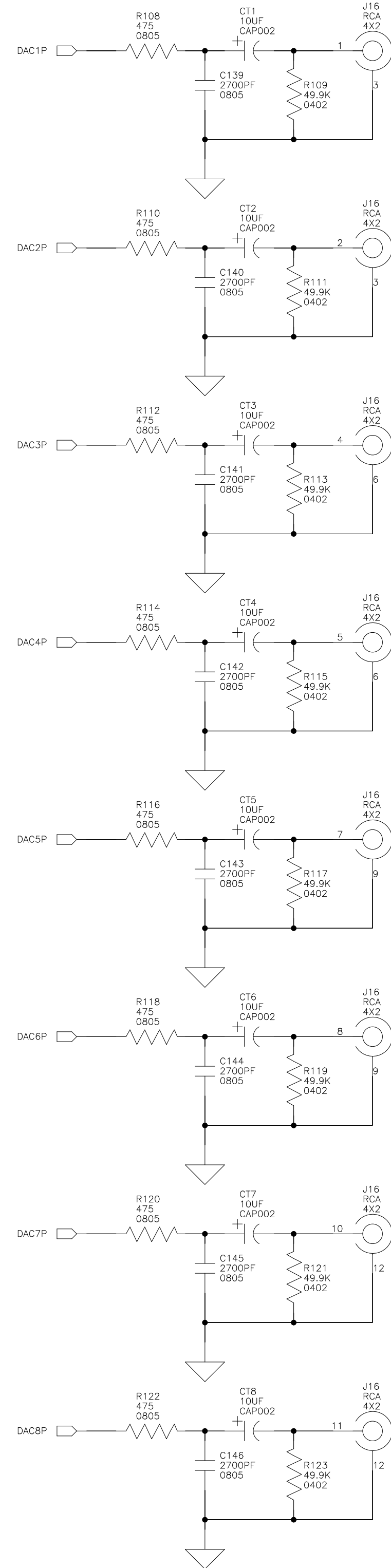


		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board ADAU1962A	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 17 of 28		

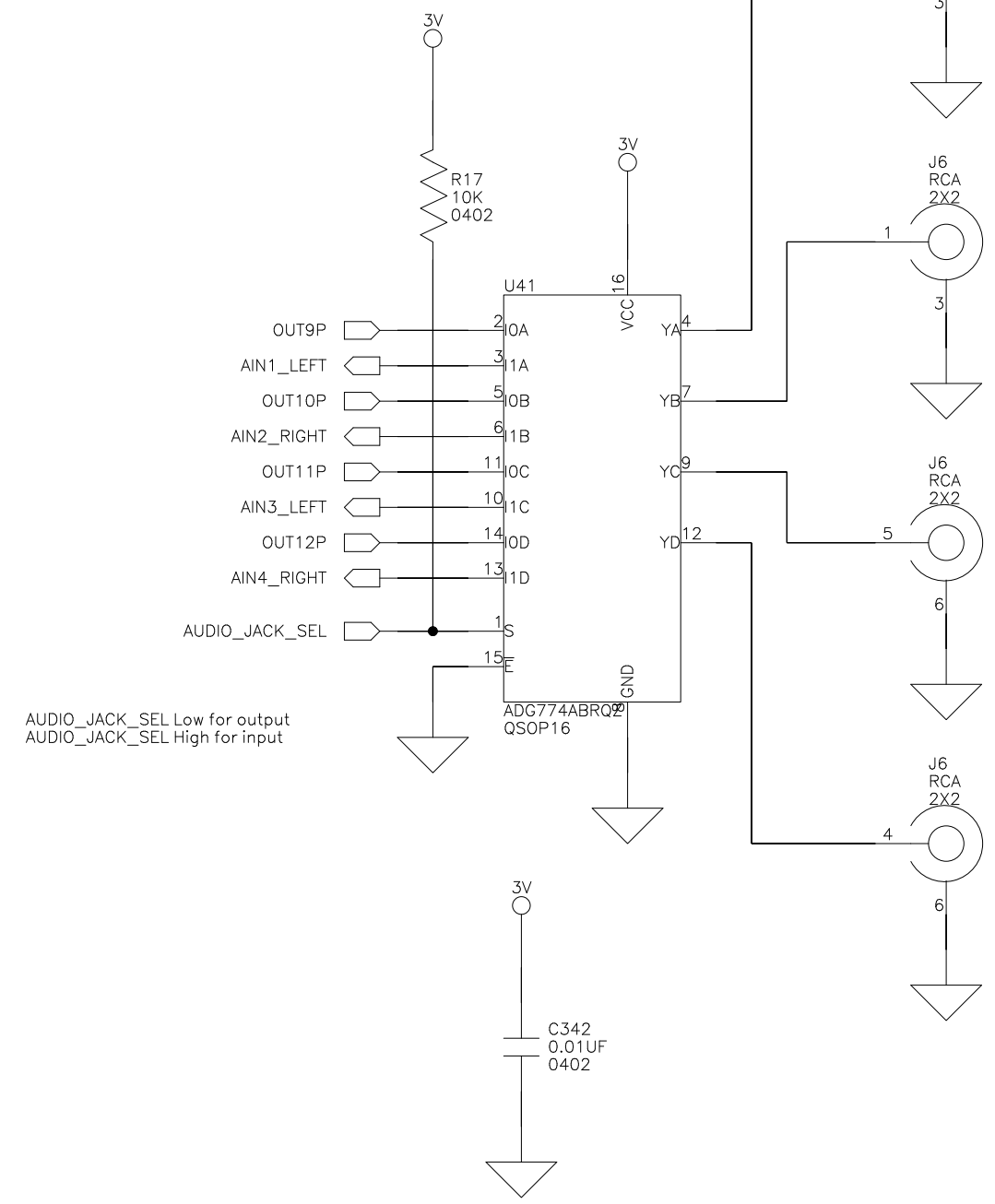


TWI Address 0010001x
x is the R/W bit. Read – 1, Write – 0

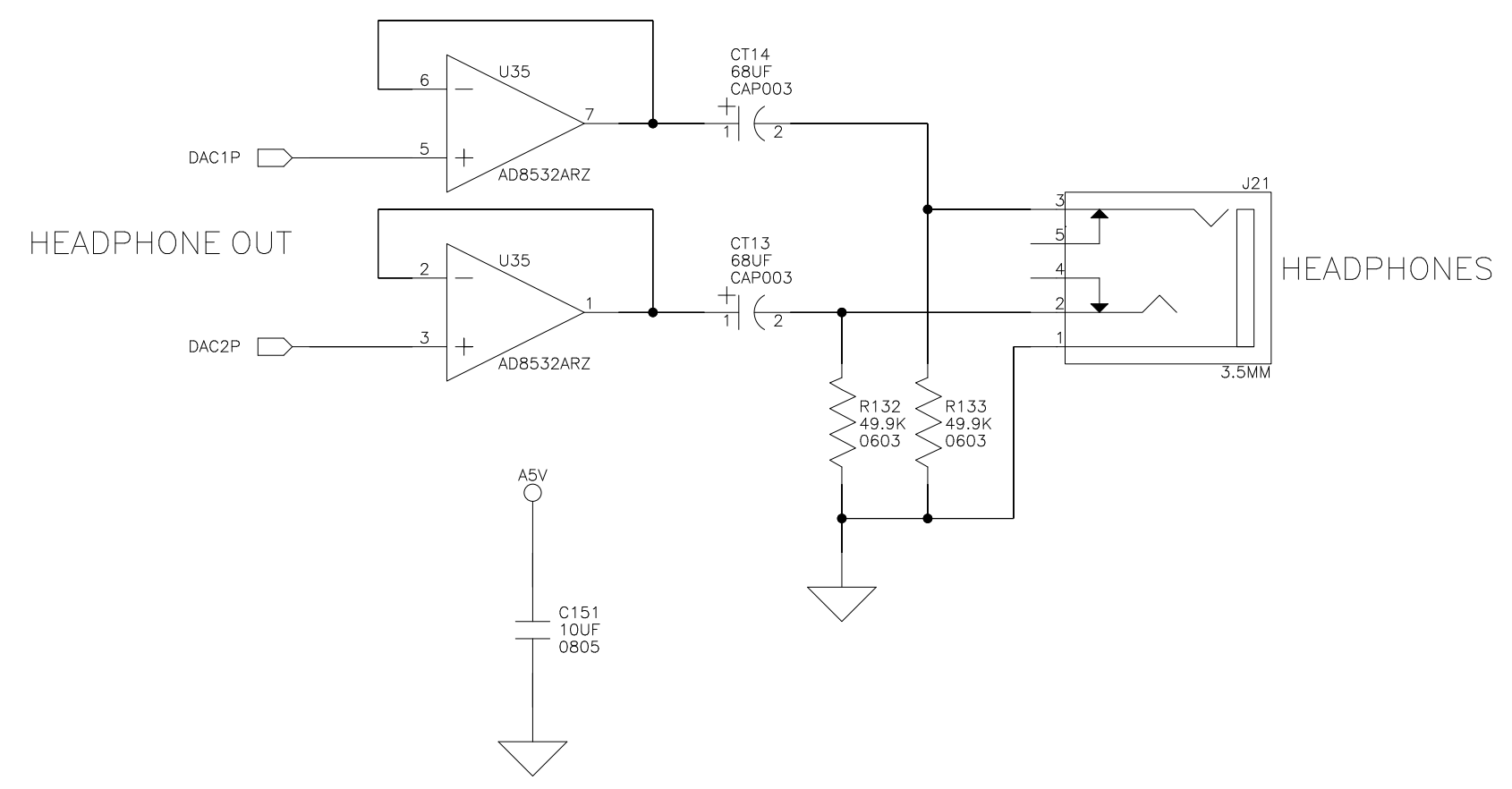
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
Title ADSP-SC589 EZ-Board ADAU1979			
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 18	of 28




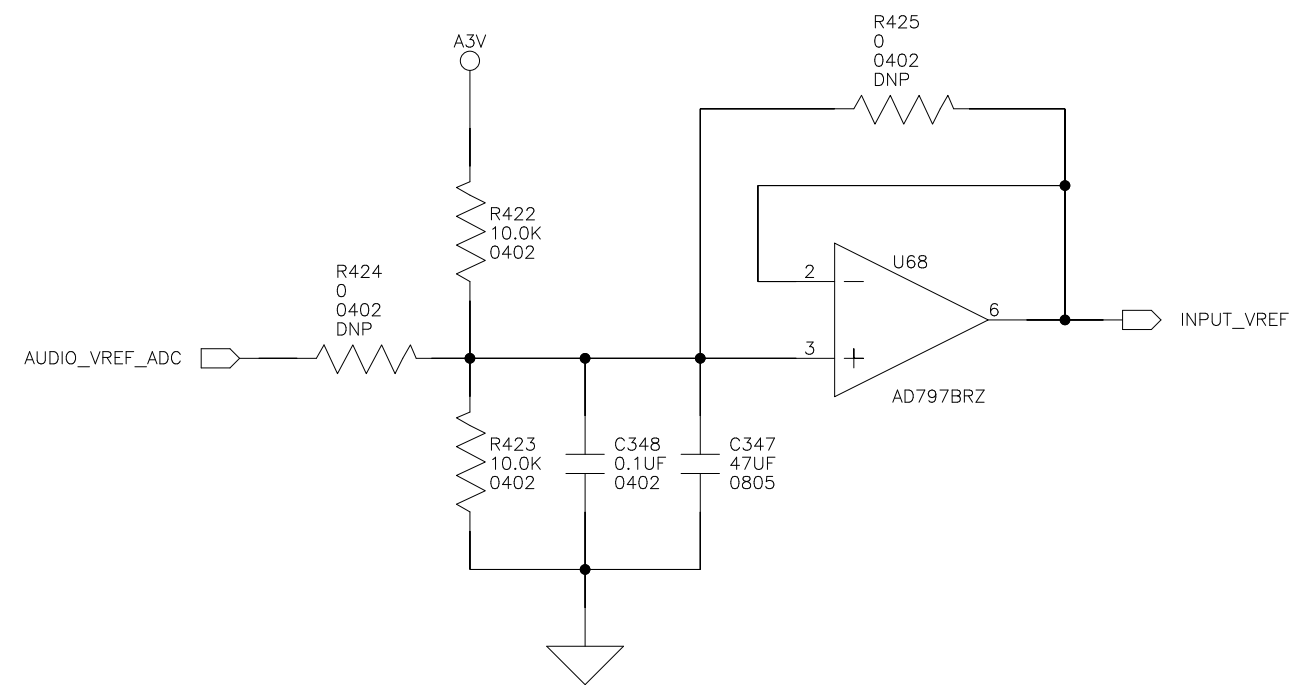
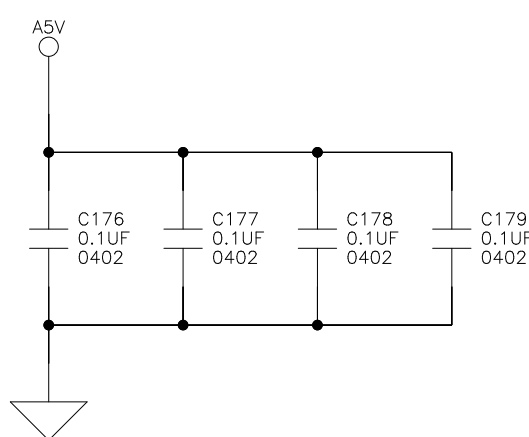
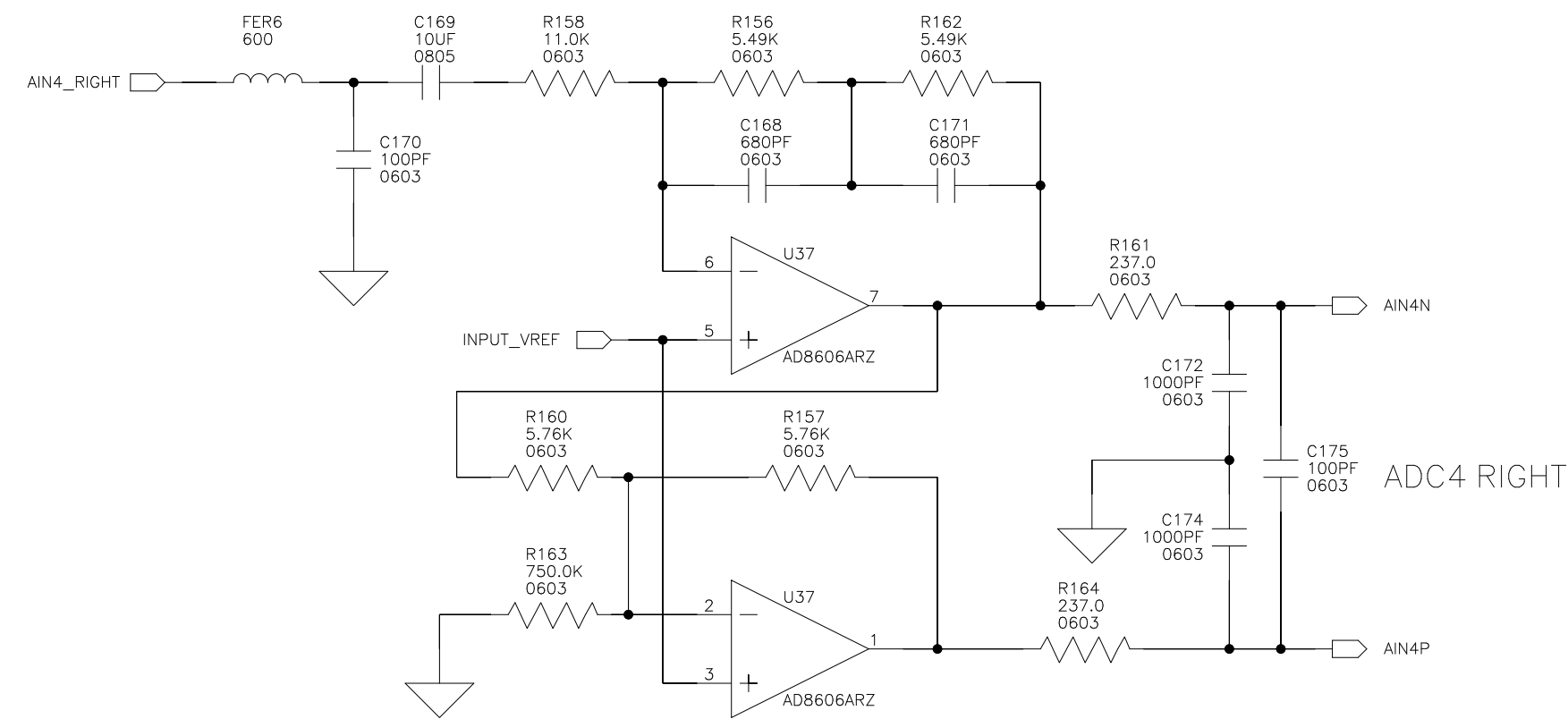
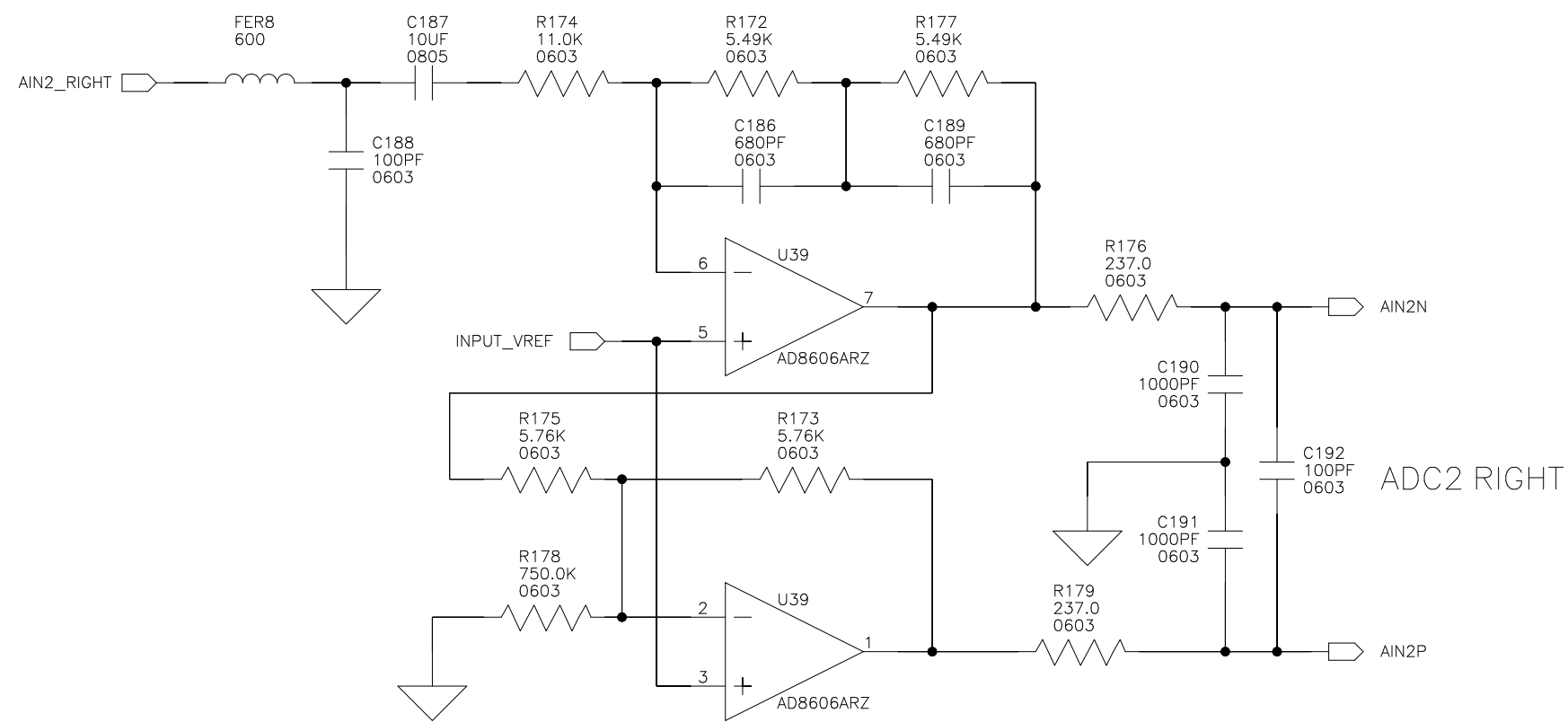
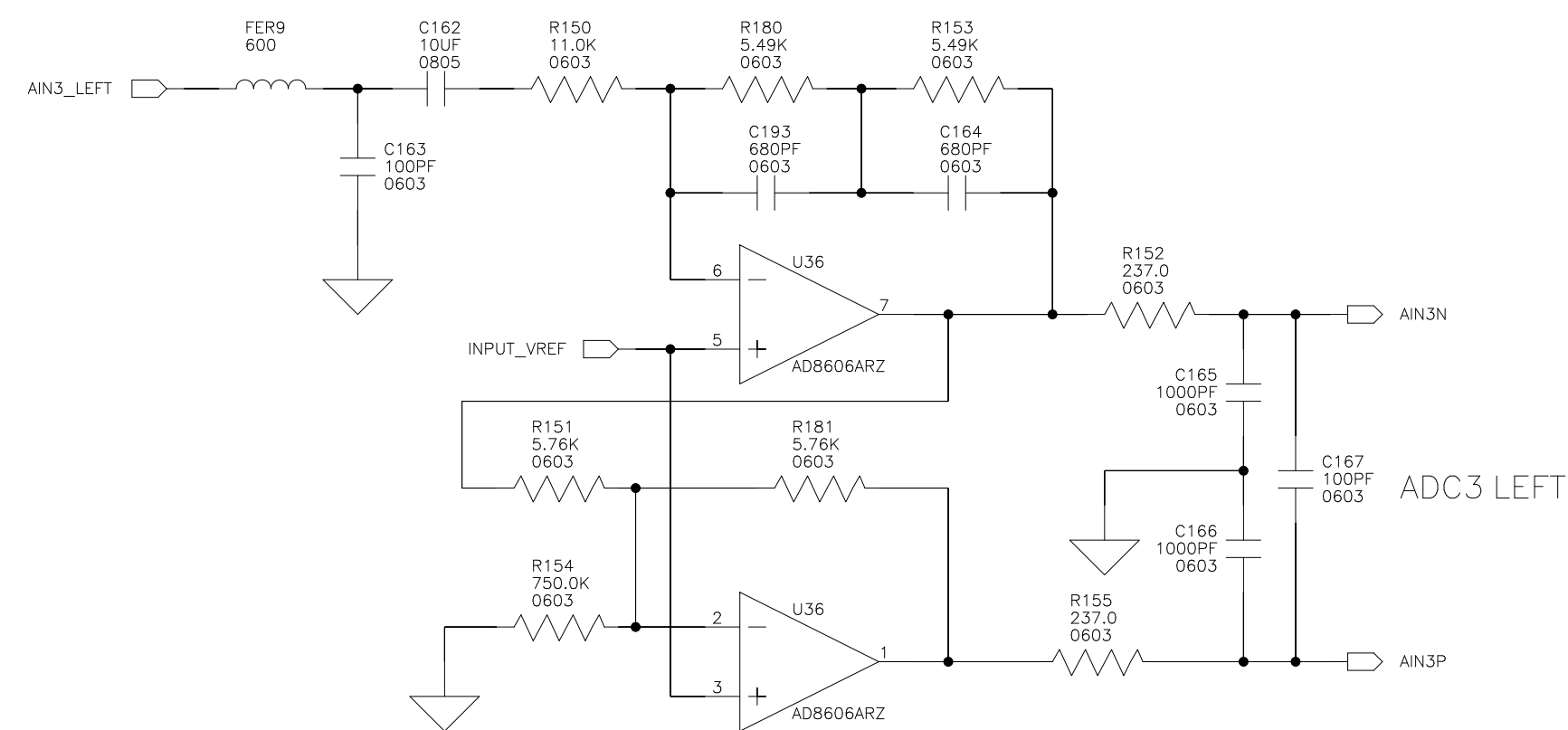
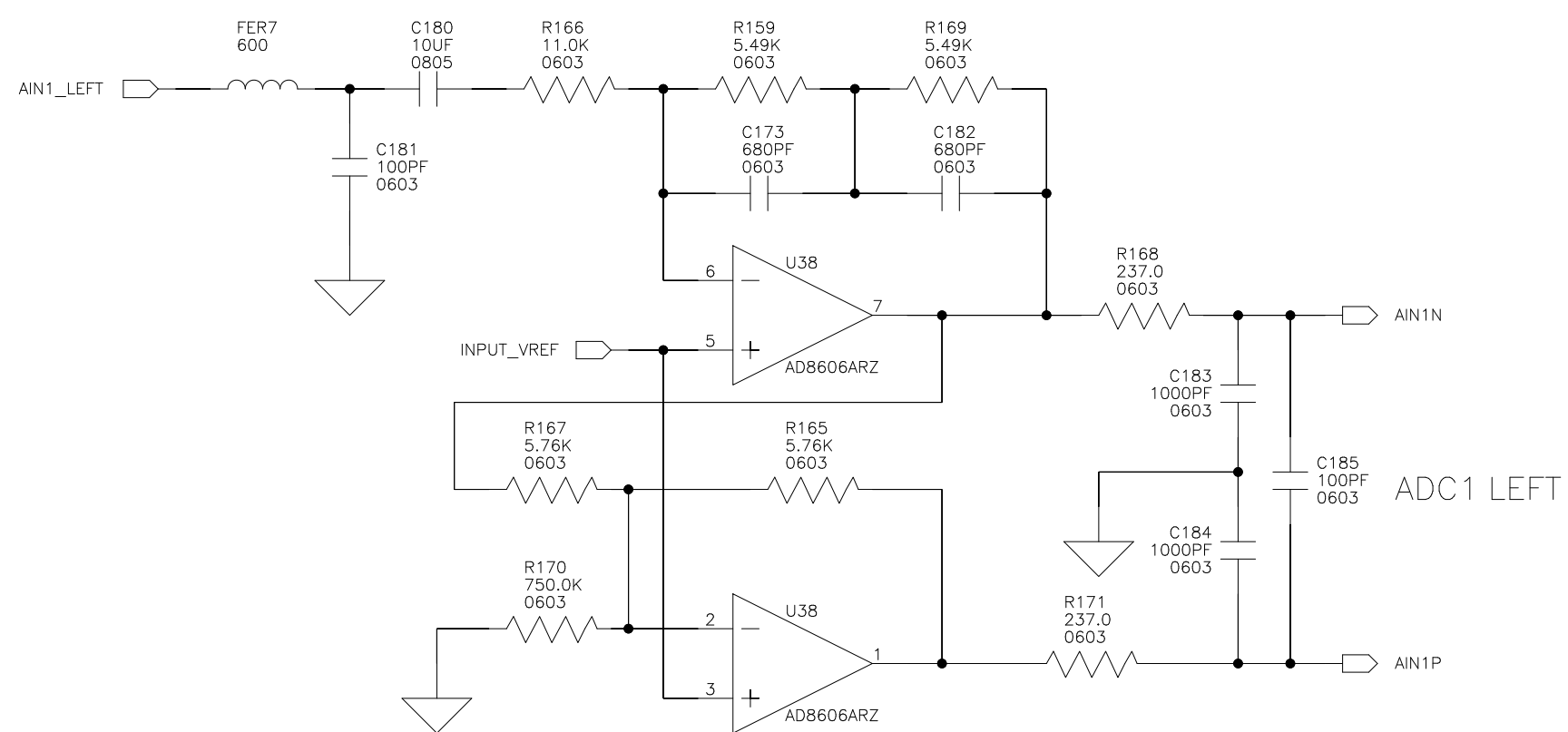
"INPUT"



"INPUT/OUTPUT"



		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
Title ADSP-SC589 EZ-Board Audio Connectors			
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 19	of 28



		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board Audio Input	
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 20	of 28

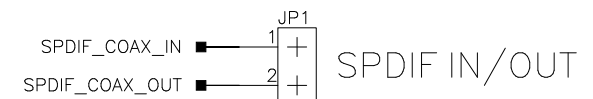
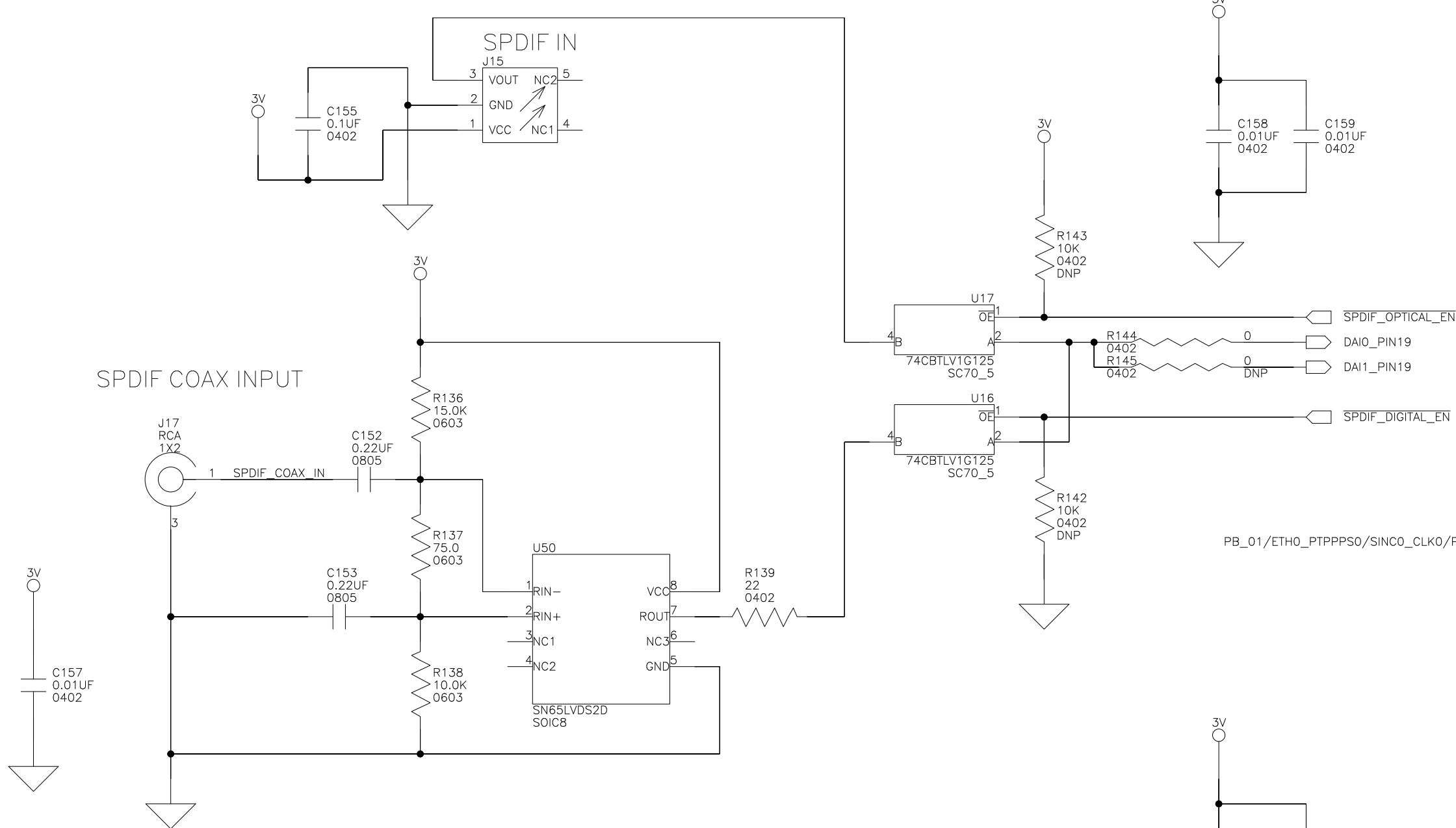
A

B

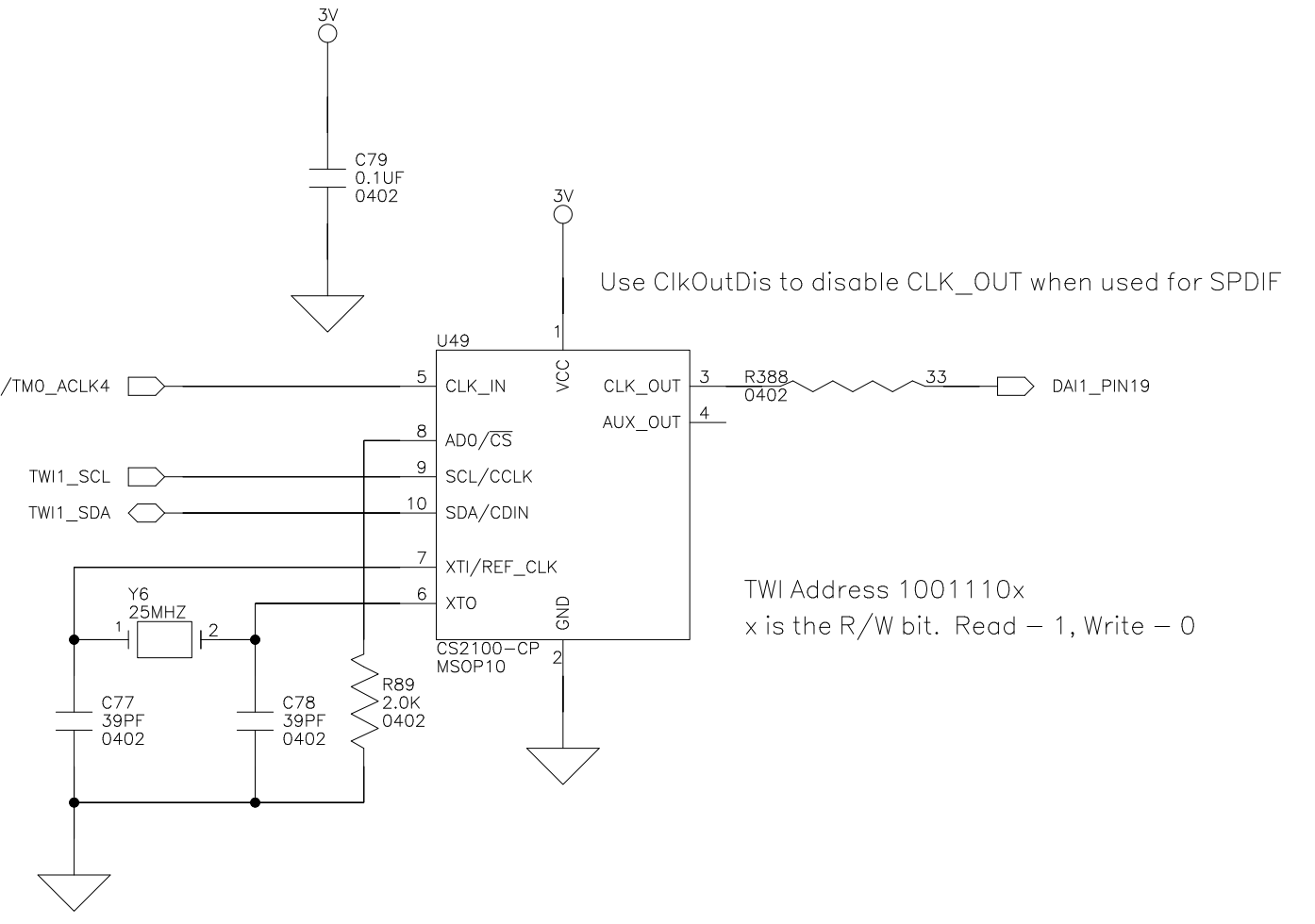
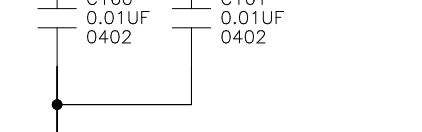
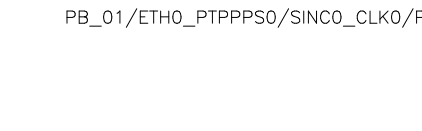
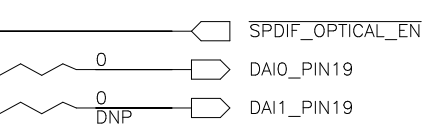
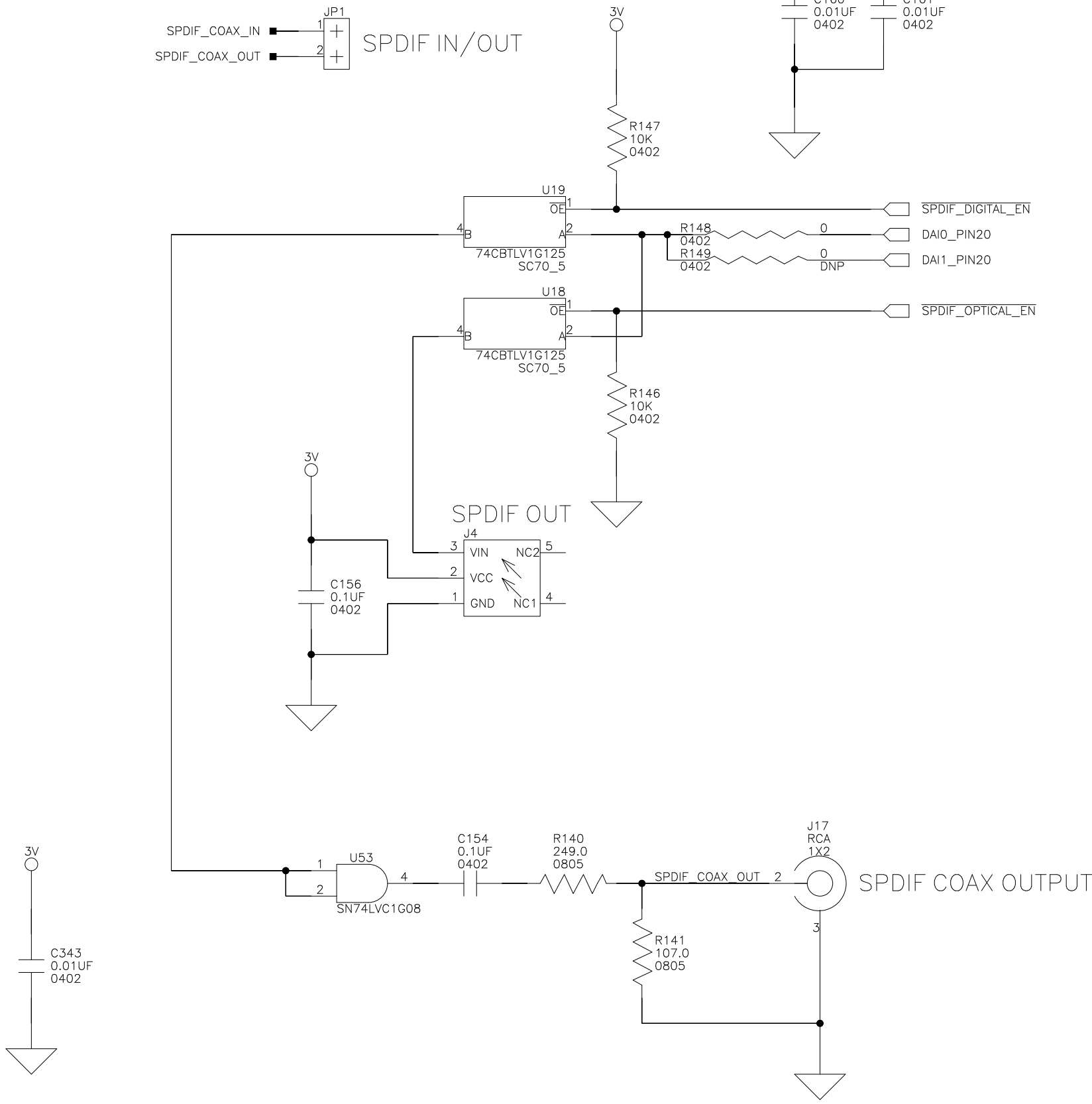
C

D

SPDIF COAX INPUT



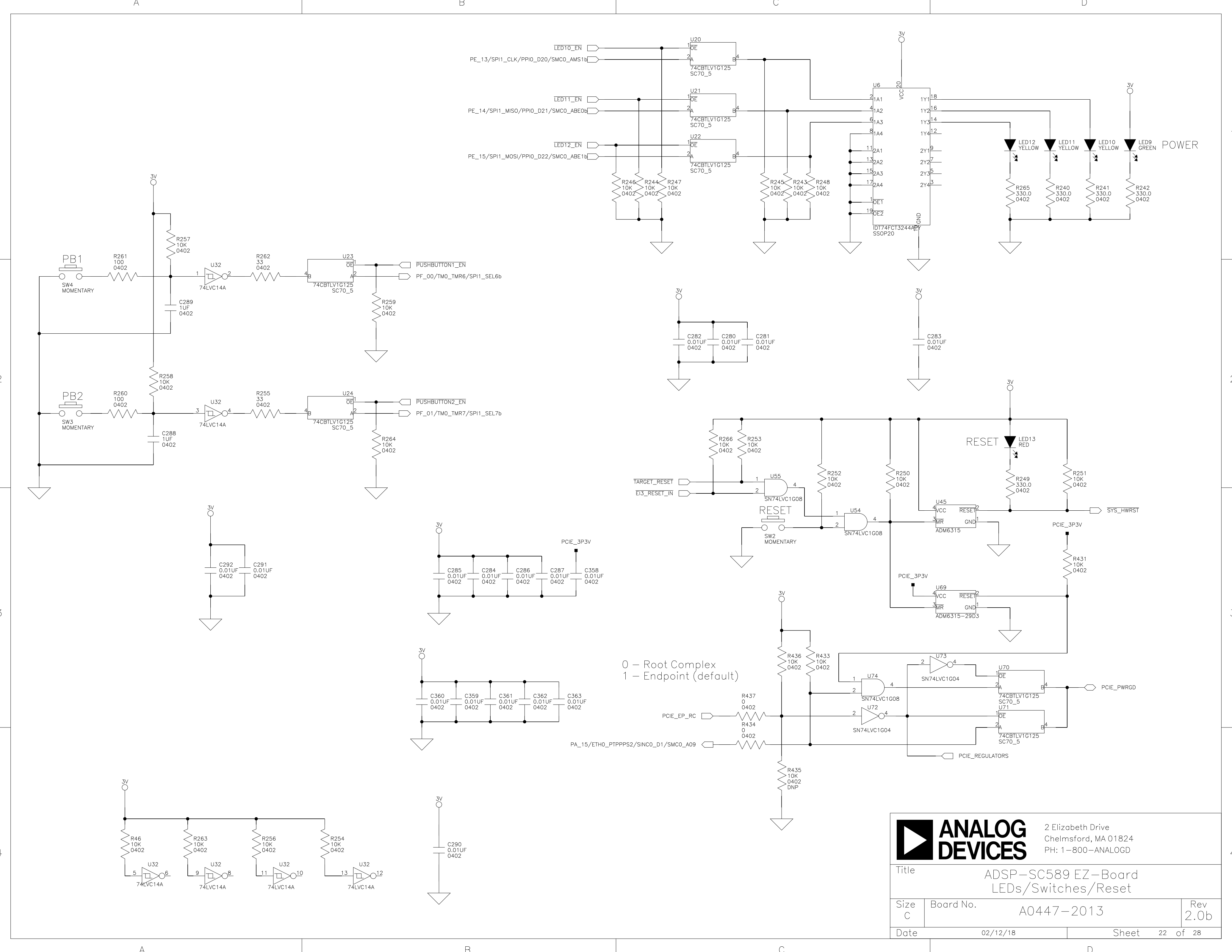
SPDIF OUT




ANALOG DEVICES 2 Elizabeth Drive
Chelmsford, MA 01824
PH: 1-800-ANALOG

Title ADSP-SC589 EZ-Board
SPDIF

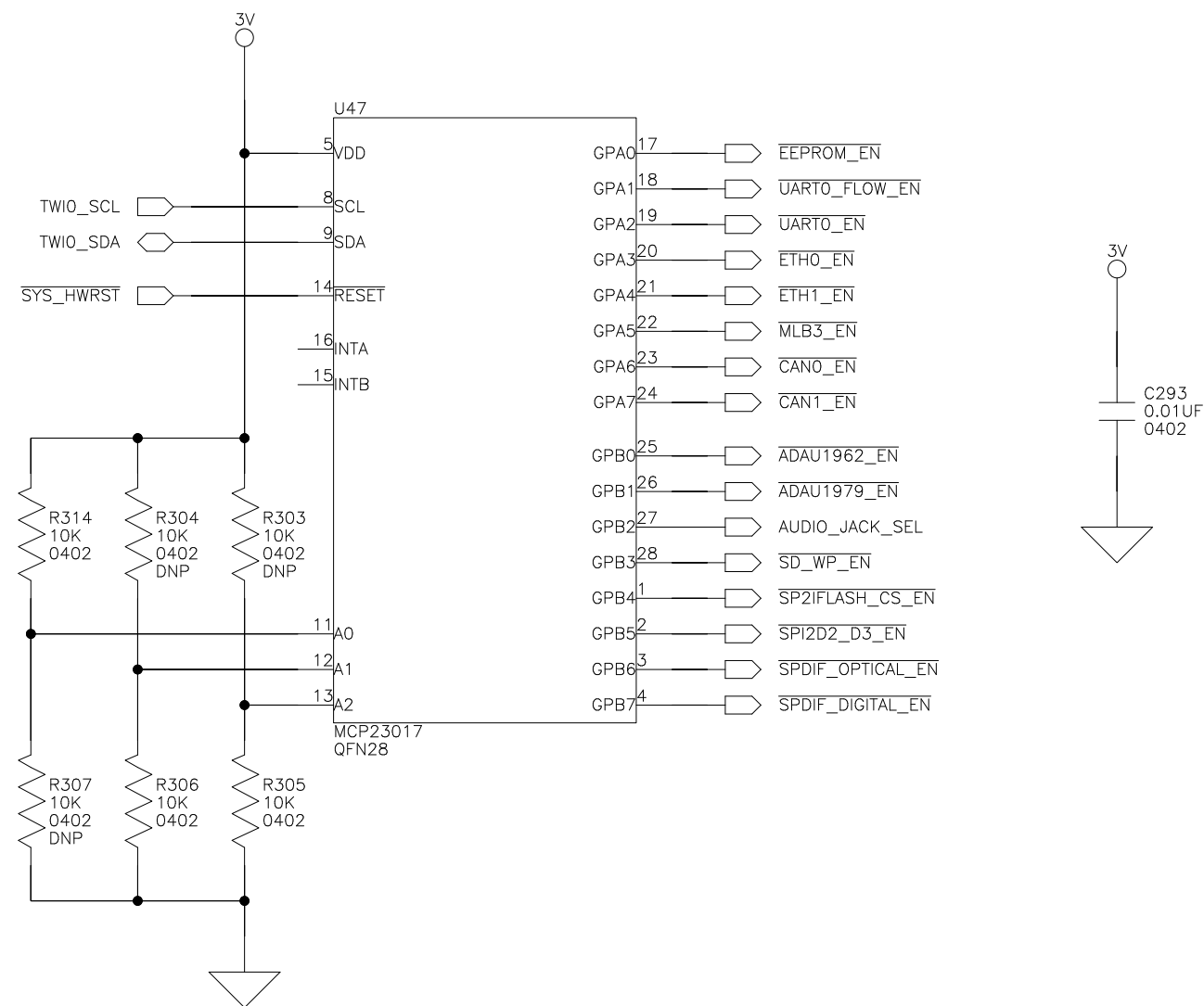
Size C	Board No. A0447-2013	Rev 2.0b
Date 02/12/18	Sheet 21	of 28



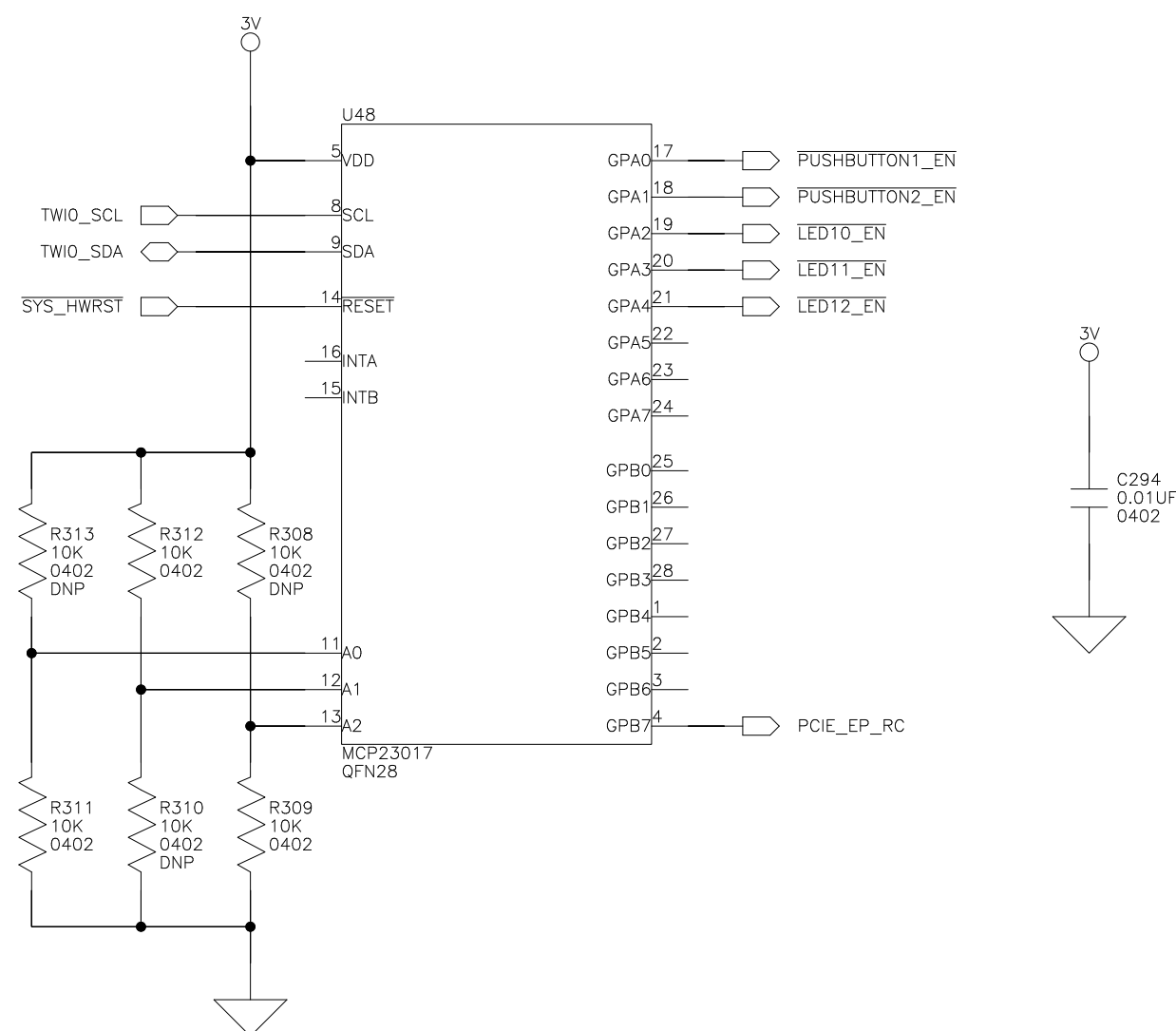
0 - Root Complex
1 - Endpoint (default)

		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board LEDs/Switches/Reset	
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 22	of 28

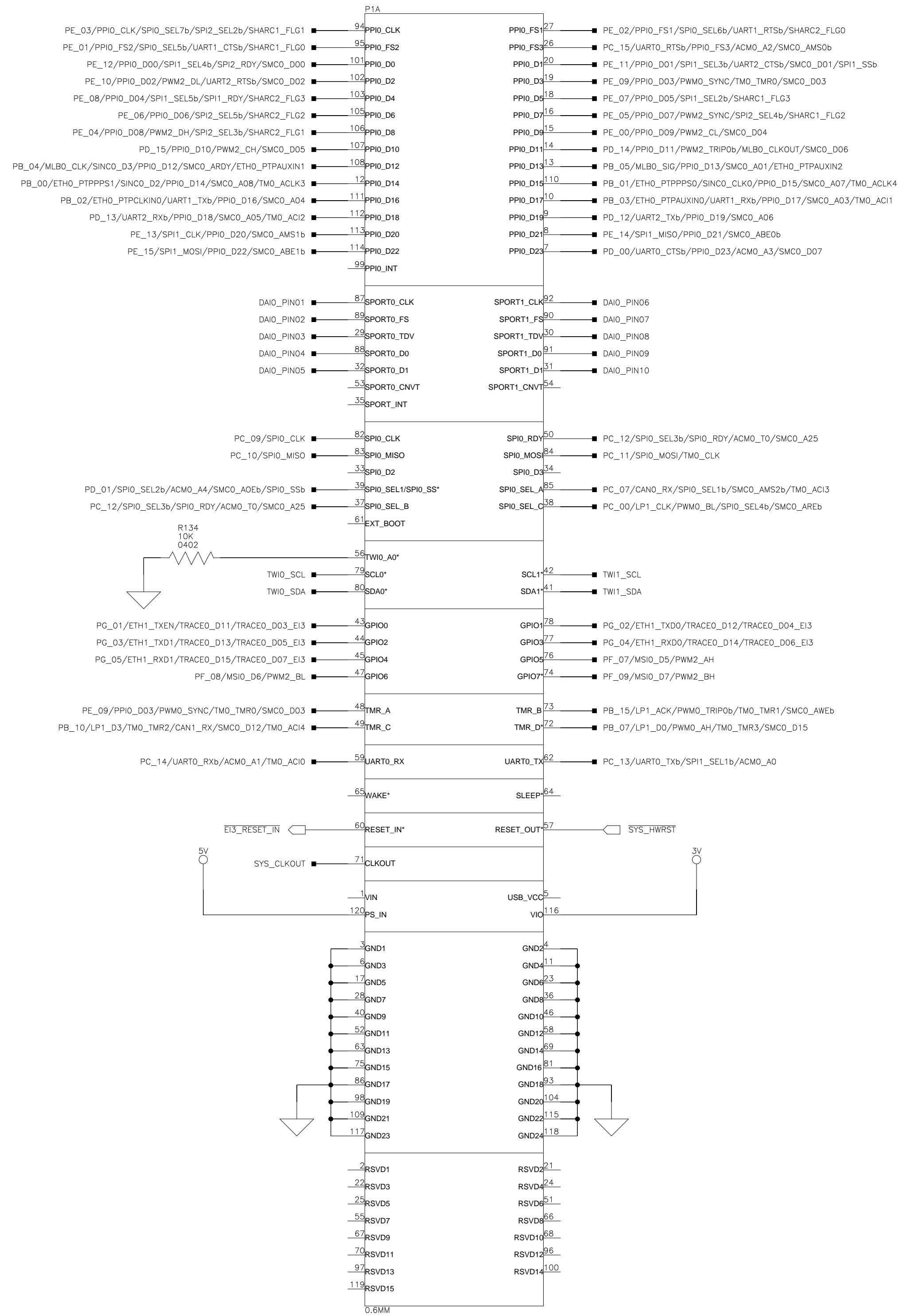
TWI Address 0100001x
x is the R/W bit. Read - 1, Write - 0




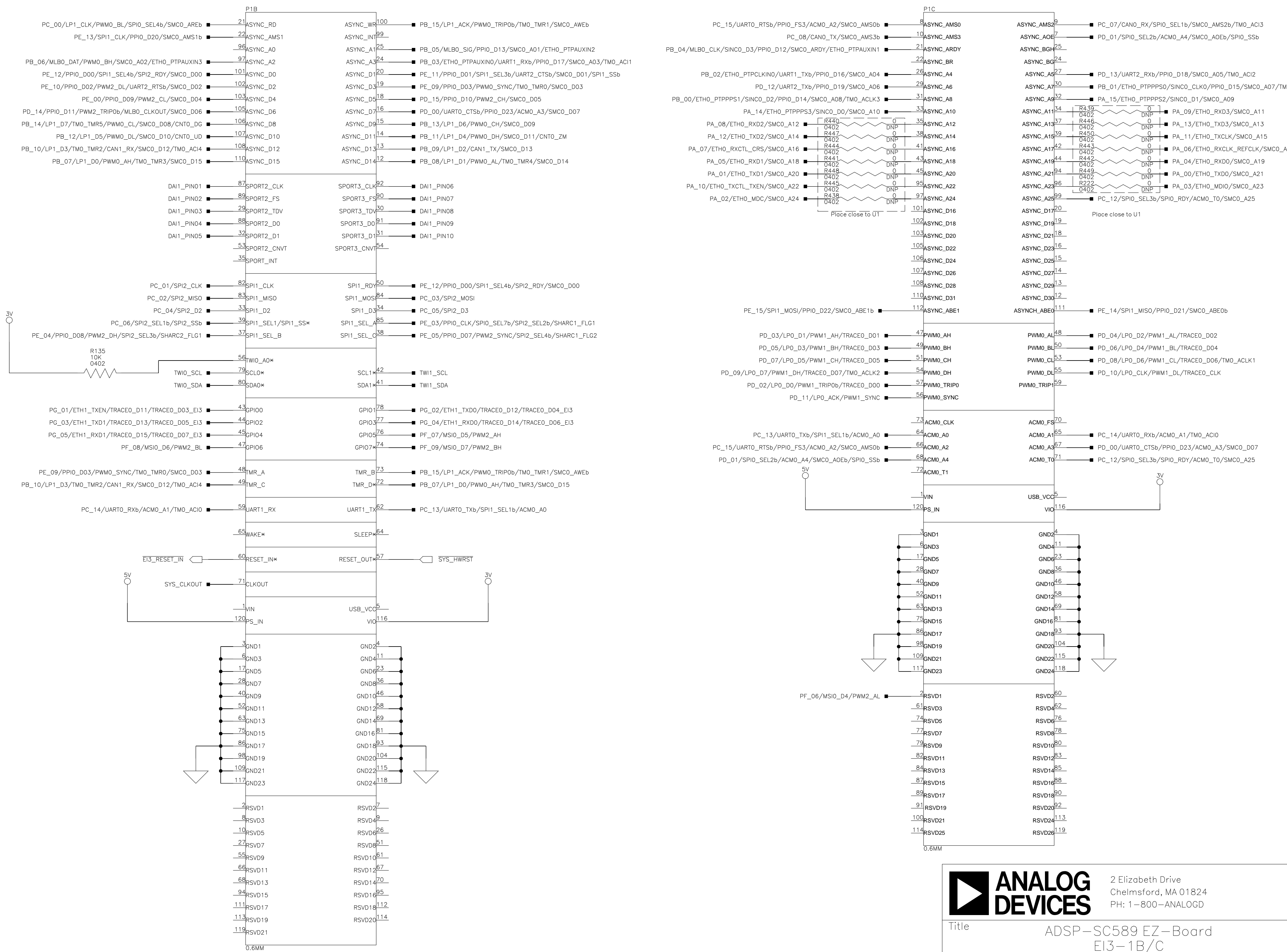
TWI Address 0100010x
x is the R/W bit. Read - 1, Write - 0




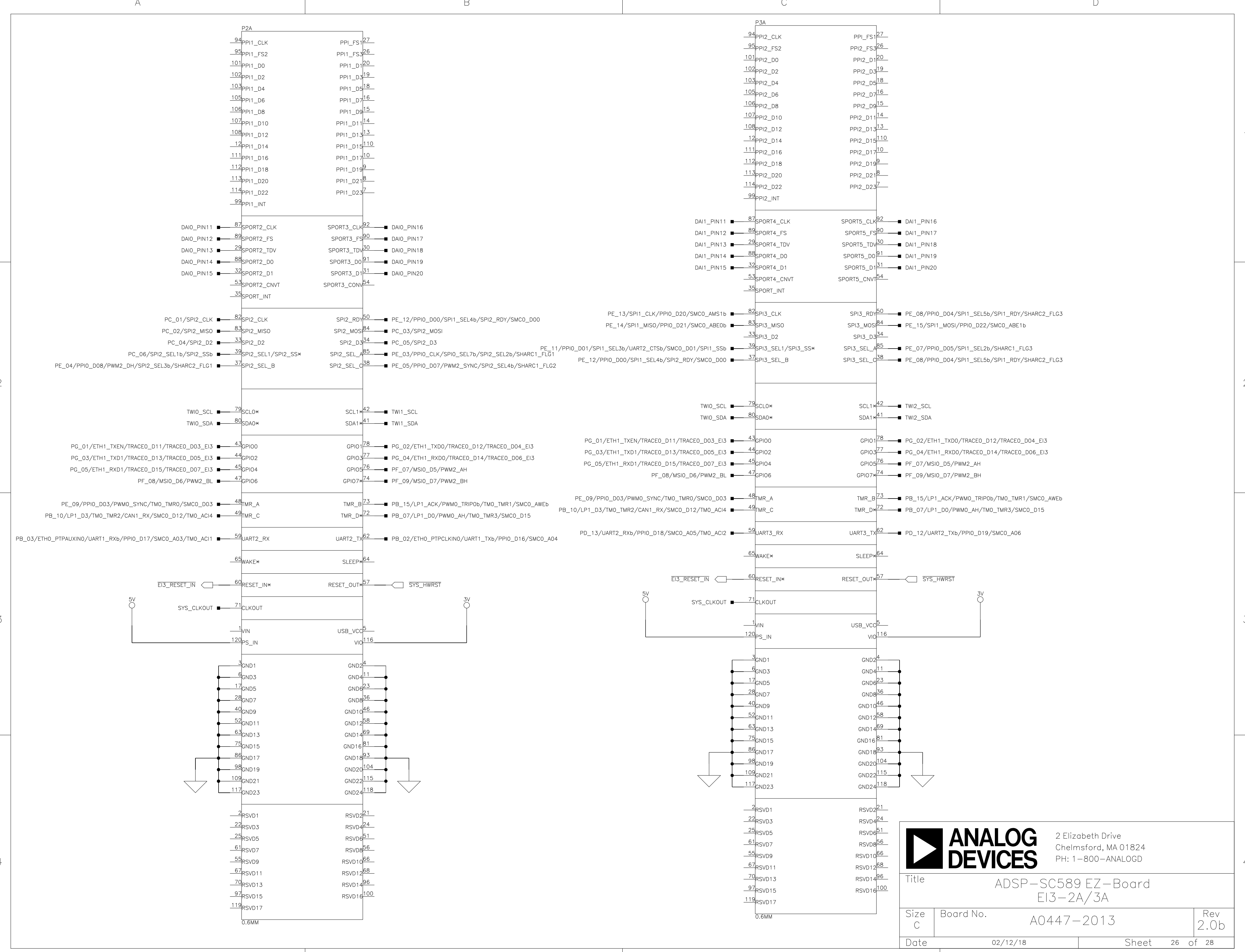
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
Title ADSP-SC589 EZ-Board SoftConfig			
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 23 of 28		




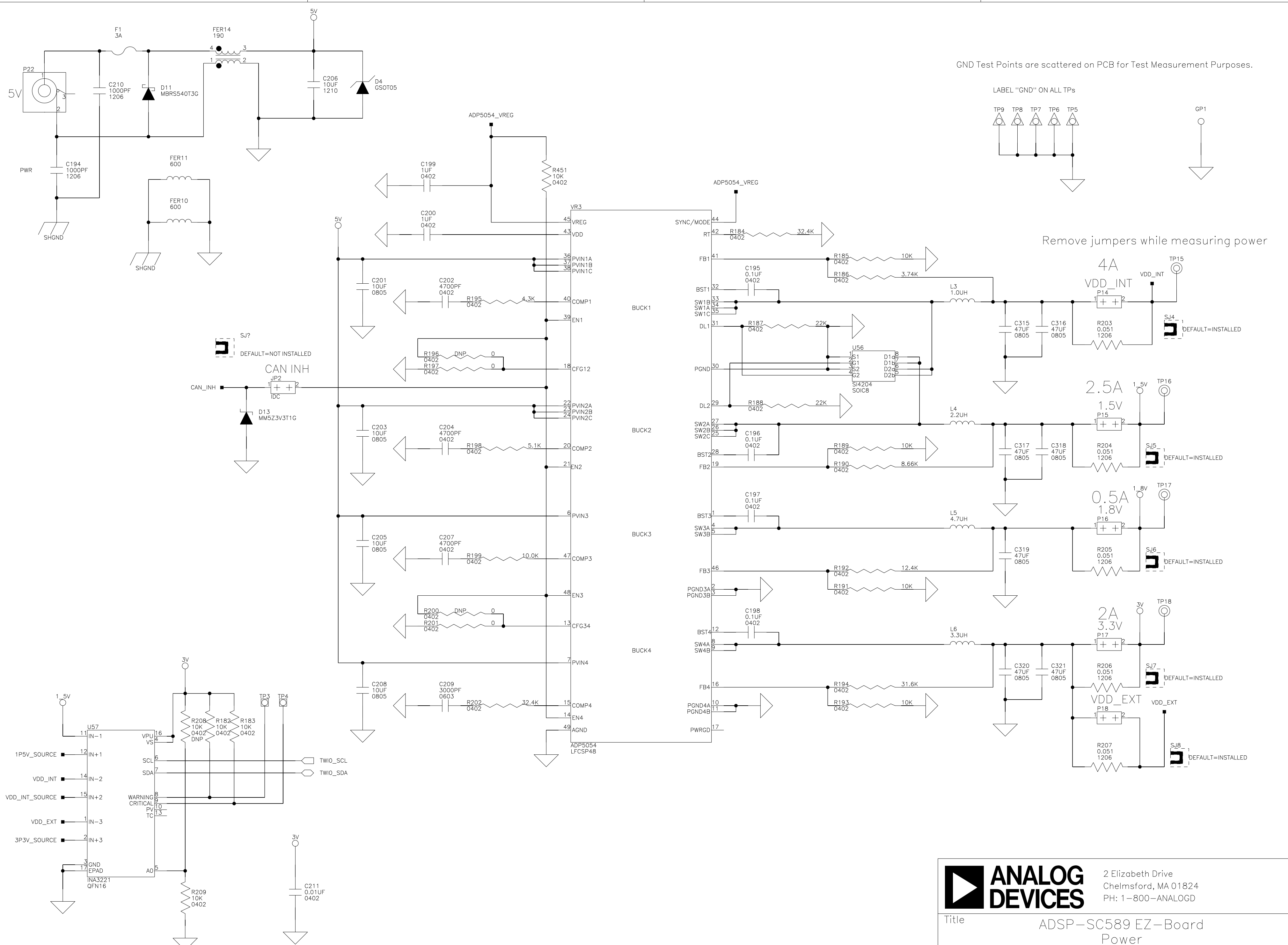
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board EI3-1A	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 24	of 28	



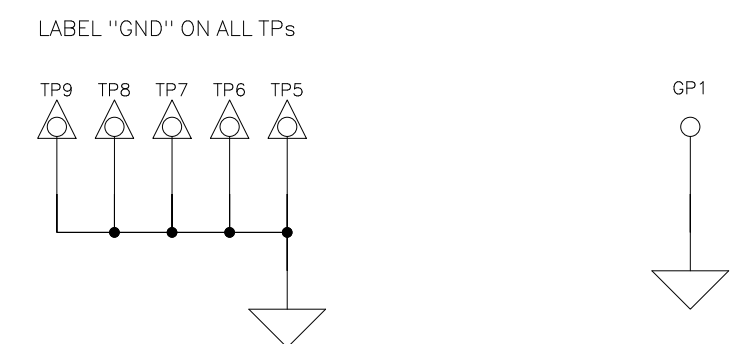
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board E13-1B/C	
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 25	of 28



		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board E13-2A/3A	
Size C	Board No. A0447-2013	Rev 2.0b	
Date 02/12/18	Sheet 26	of 28	



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



Remove jumpers while measuring power

SJ? DEFAULT=NOT INSTALLED

CAN INH JP2 IDC

SJ4_1 DEFAULT=INSTALLED

SJ5_1 DEFAULT=INSTALLED

SJ6_1 DEFAULT=INSTALLED

SJ7_1 DEFAULT=INSTALLED

SJ8_1 DEFAULT=INSTALLED

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

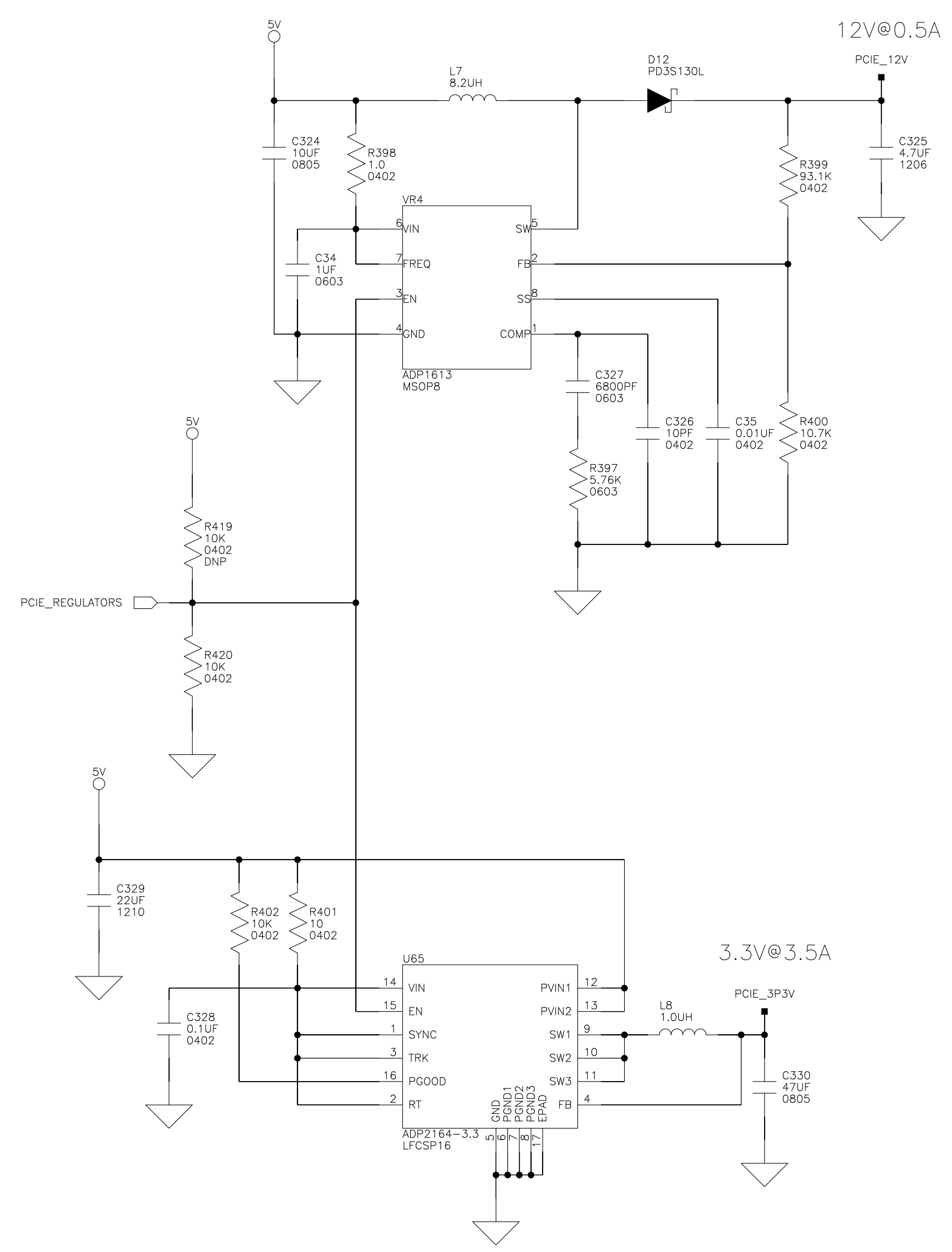
		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD	
		Title ADSP-SC589 EZ-Board Power	
Size C	Board No.	A0447-2013	Rev 2.0b
Date	02/12/18	Sheet 27 of 28	


A

B

C

D



		2 Elizabeth Drive Chelmsford, MA 01824 PH: 1-800-ANALOGD
Title ADSP-SC589 EZ-Board PCIe Power		
Size C	Board No. A0447-2013	Rev 2.0b
Date 02/12/18	Sheet 28 of 28	

A

B

C

D