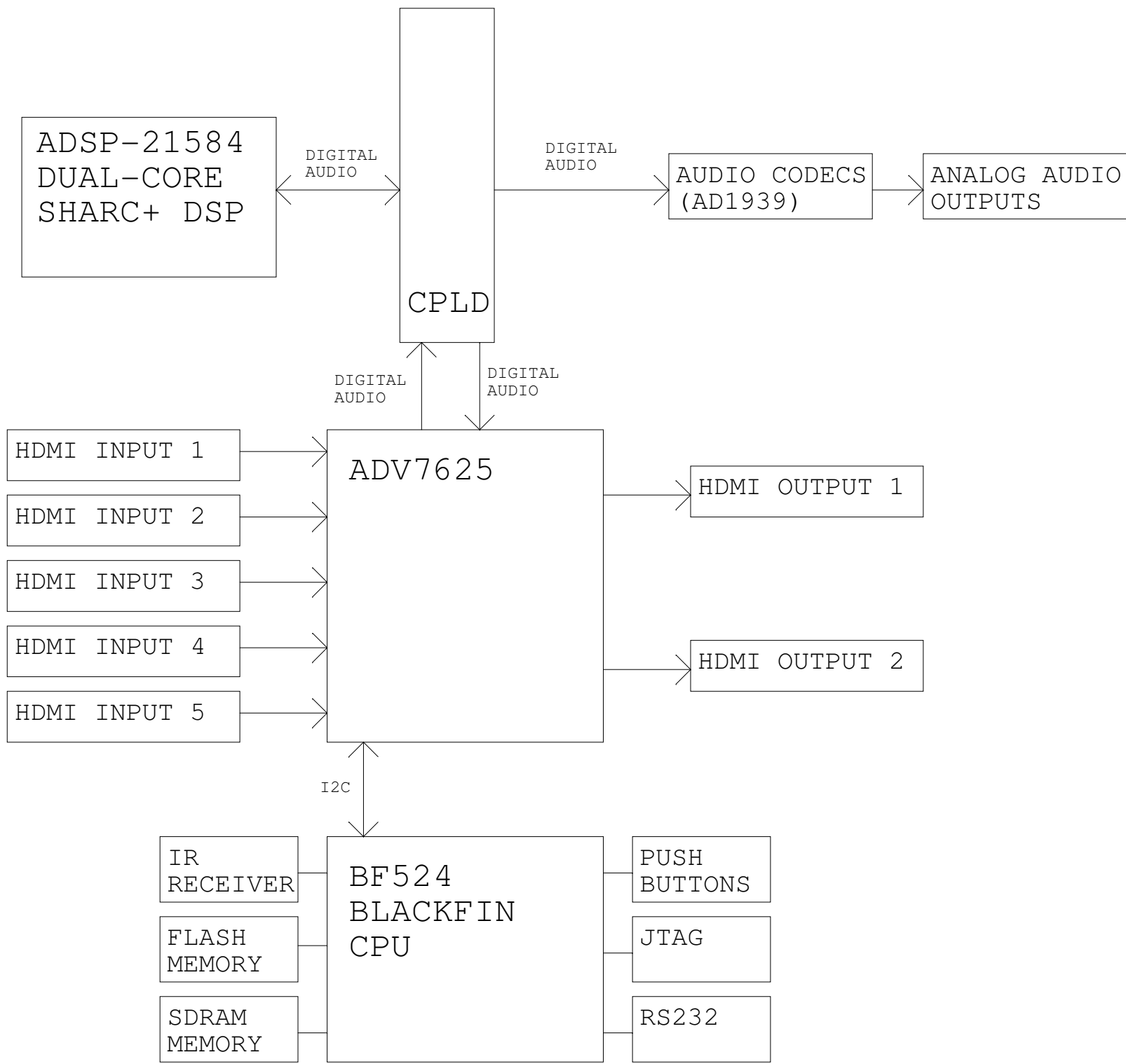
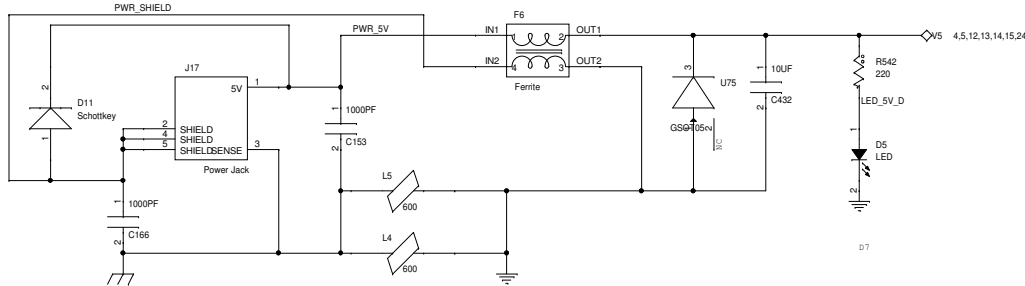
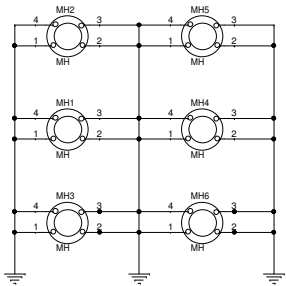


EVAL-MELODY-6 Evaluation Board

Change Log

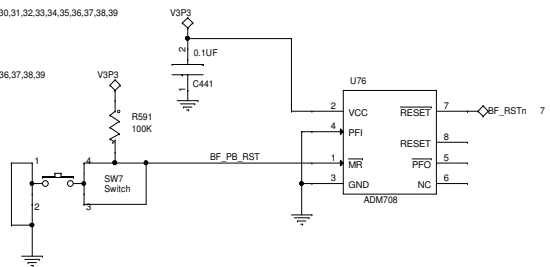
Revision	Date	Description
0.1	2016/06/30	Initial Release
0.2	2017/02/21	Rev 0.2 PCB addressed the following issues on the Rev 0.1 PCB: * CPLD_TDI and CPLD_TMS were pulled up to CPLD_VCC (1.8V) rather than CPLD_VDDIO (3.3V). * The SPDIF transmitter (J22) had an incorrect pinout. * The SPDIF receiver (J21) silkscreen said "OUT". It now says "IN" * The SPDIF transmitter (J22) silkscreen said "IN". It now says "OUT"



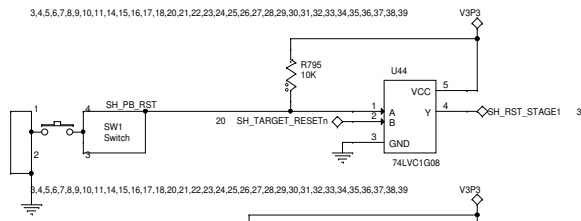


3,4,5,6,7,8,9,10,11,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39

3,4,5,6,7,8,9,10,11,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39

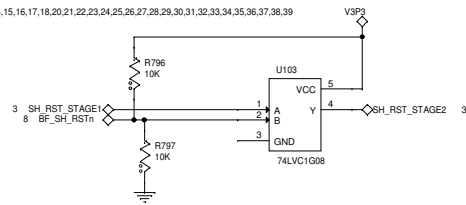


3,4,5,6,7,8,9,10,11,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39

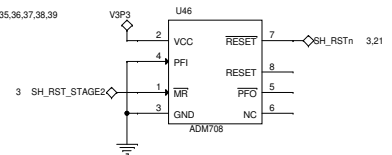


3,21 SH_RSTn R798 33 6H_RSTn_T 24

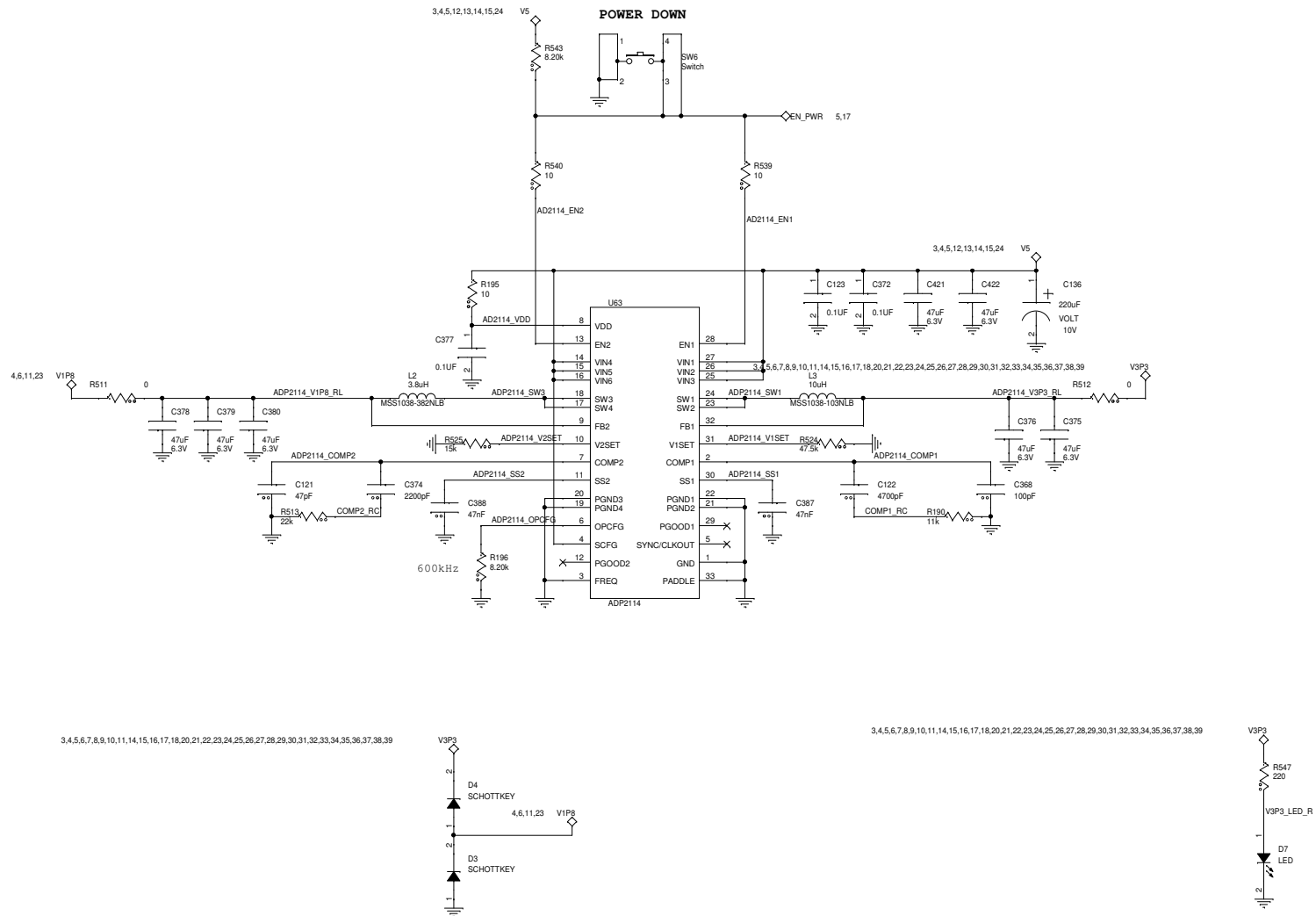
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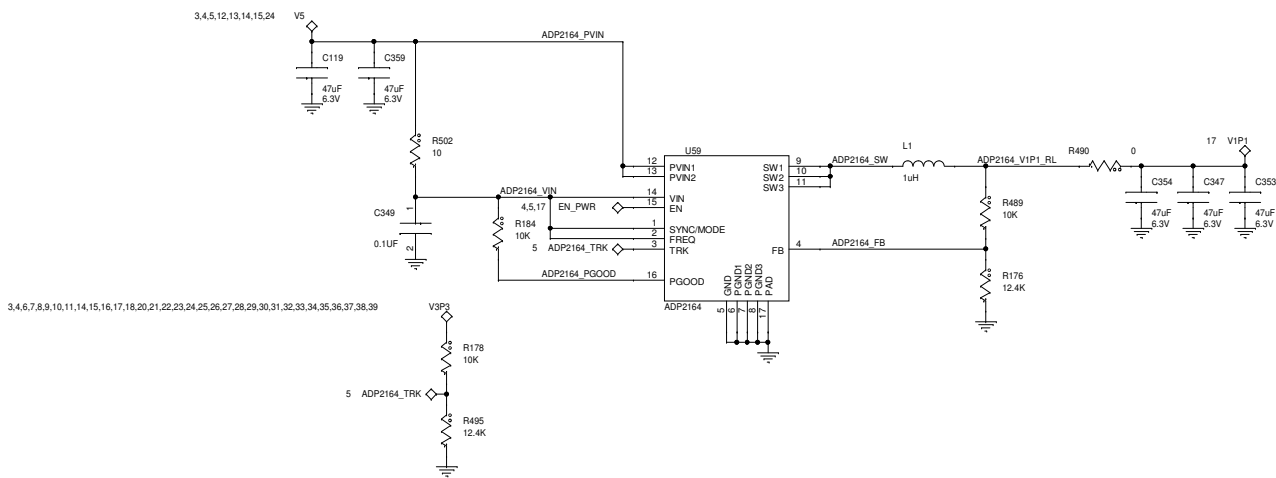
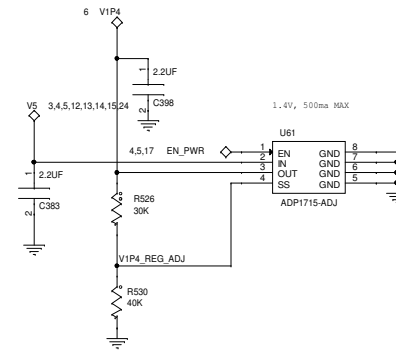
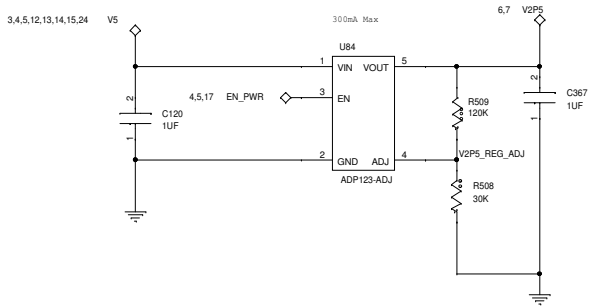
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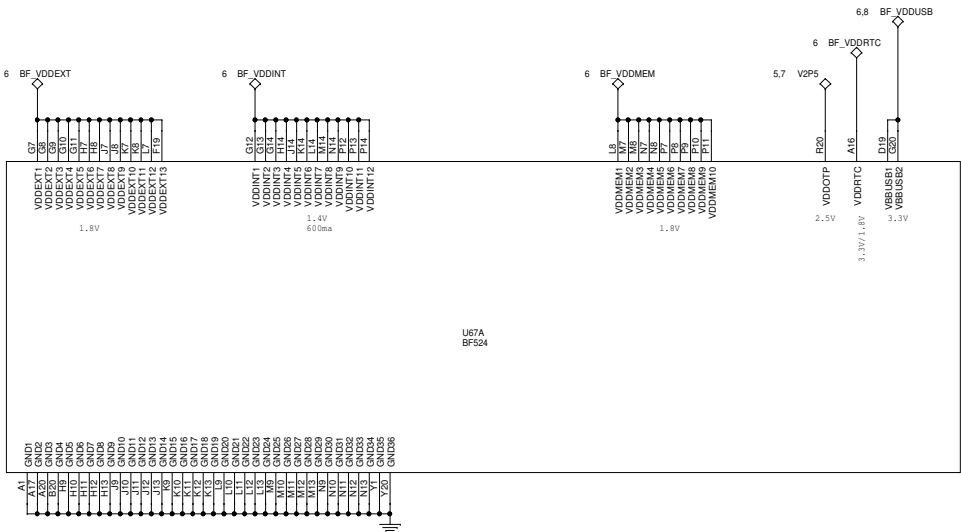
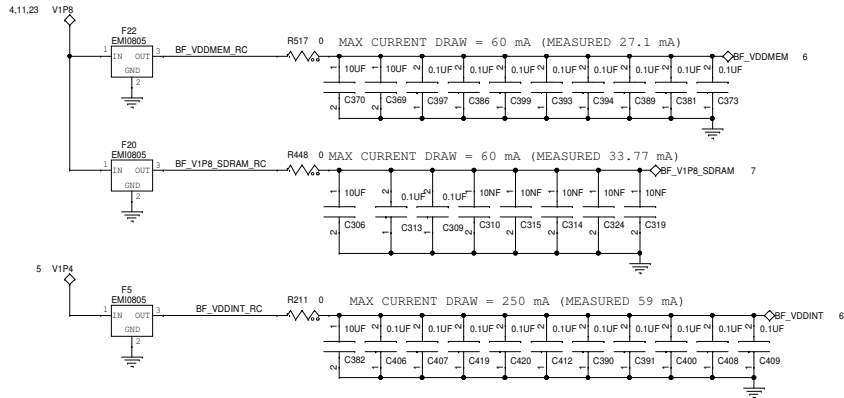
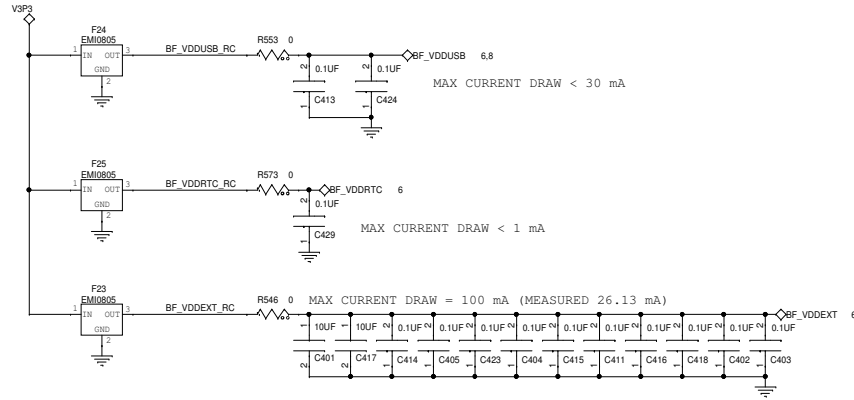


Title		
BOARD POWER		
Size	Document Number	Rev
C	EVAL-MELODY-6 Evaluation Board	0.2
Date:	Tuesday, February 21, 2017	Sheet 3 of 40

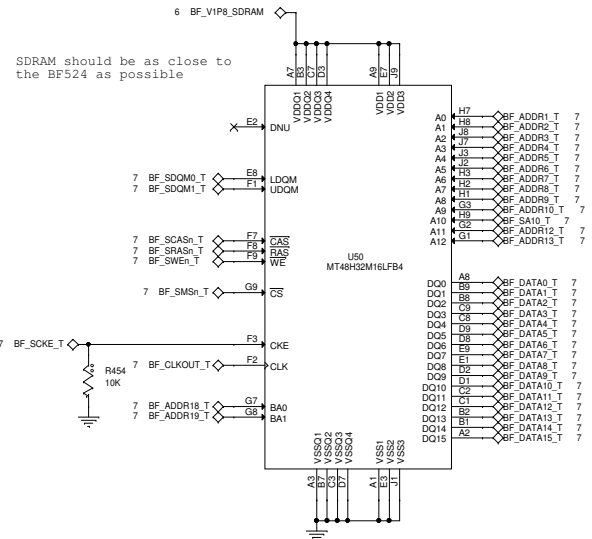
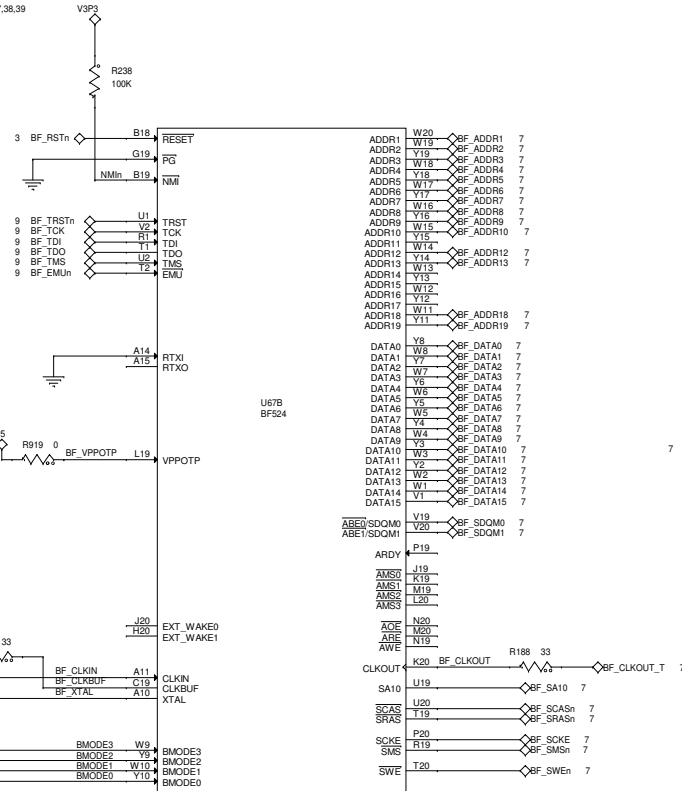


Title		
SWITCHING REGULATOR FOR 3.3V AND 1.8V		
Size	Document Number	Rev
C	EVAL-MELODY-6 Evaluation Board	0.2
Date:	Tuesday, February 21, 2017	Sheet 4 of 40

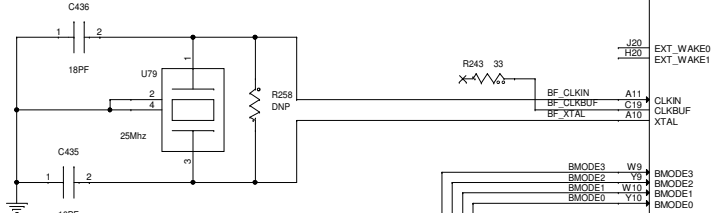




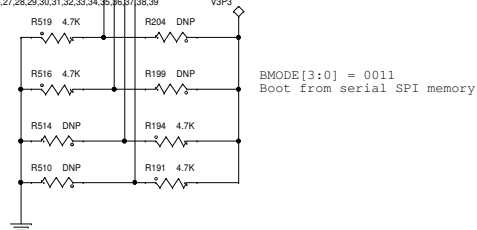
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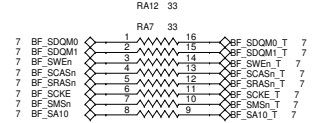
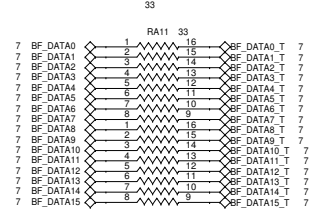
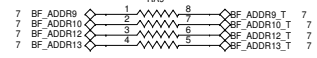
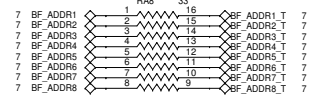
SDRAM should be as close to the BF524 as possible



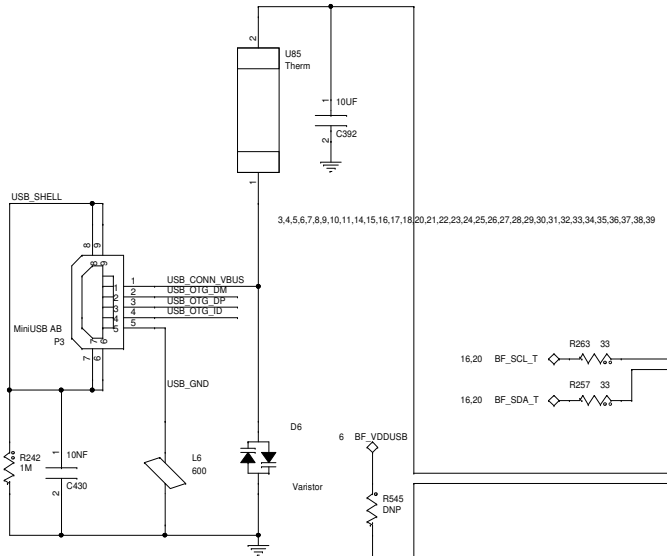
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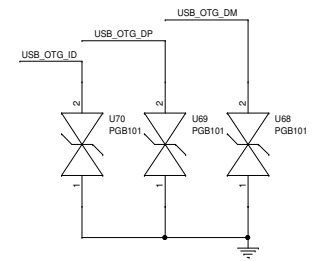
BMODE[3:0] = 0011
Boot from serial SPI memory



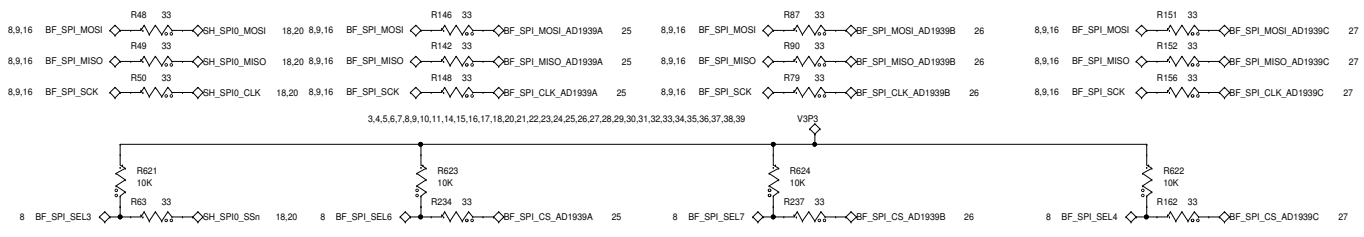
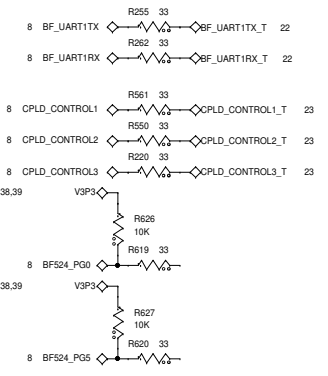
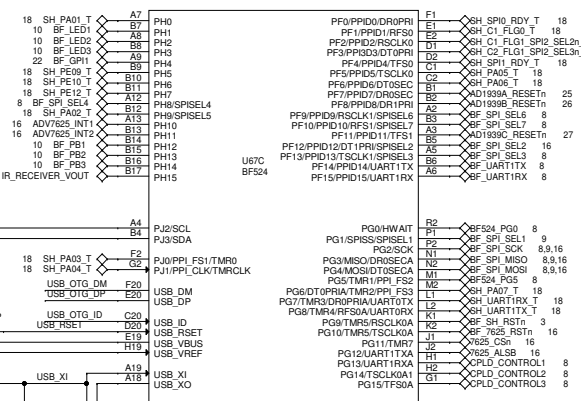
Title			BF524 SDRAM		
Size	Document Number	Rev			0.2
C	Eval-MELODY-6 Evaluation Board				
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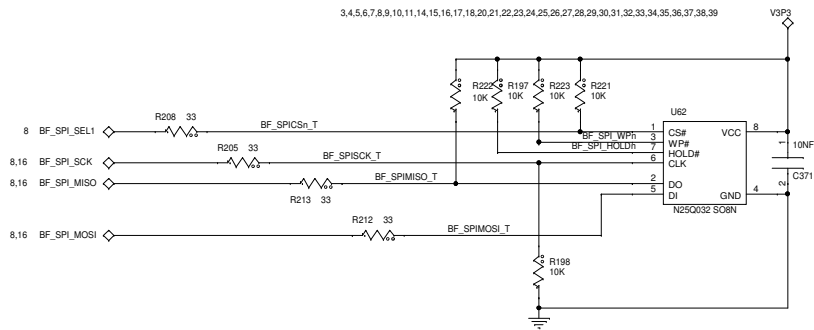
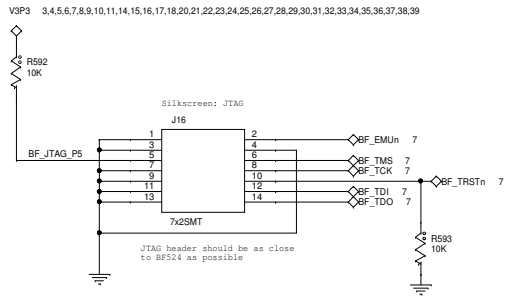
USB_OTG_DM and USB_OTG_DP are differential pairs with 90 ohm impedance and should be as short as possible



- BF_SPI_SEL1: BF524 SERIAL FLASH MEMORY
- BF_SPI_SEL2: ADV7625 SERIAL FLASH MEMORY
- BF_SPI_SEL3: ADSP-21584 SPI0 CS
- BF_SPI_SEL4: AD1939C SPI CS
- BF_SPI_SEL5: UNUSED
- BF_SPI_SEL6: AD1939A SPI CS
- BF_SPI_SEL7: AD1939B SPI CS

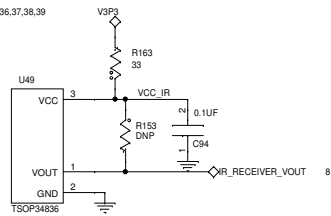


Title		
BF524 PERIPHERALS		
Size	Document Number	Rev
C	EVAL-MELODY-6 Evaluation Board	0.2
Date:	Tuesday, February 21, 2017	Sheet 8 of 40

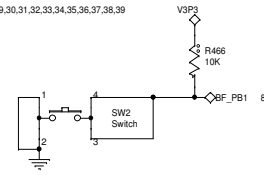


Title		
BF524 FLASH / JTAG / RS232		
Size	Document Number	Rev
C	EVAL-MELODY-6 Evaluation Board	0.2
Date:	Tuesday, February 21, 2017	Sheet 9 of 40

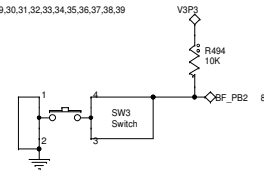
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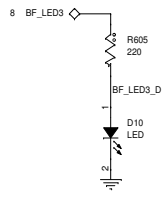
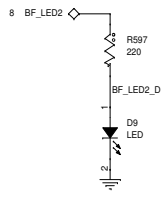
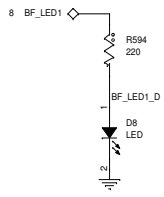
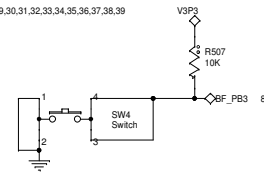
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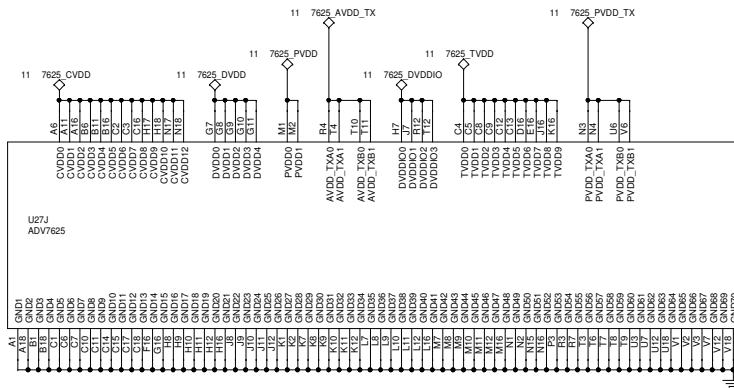
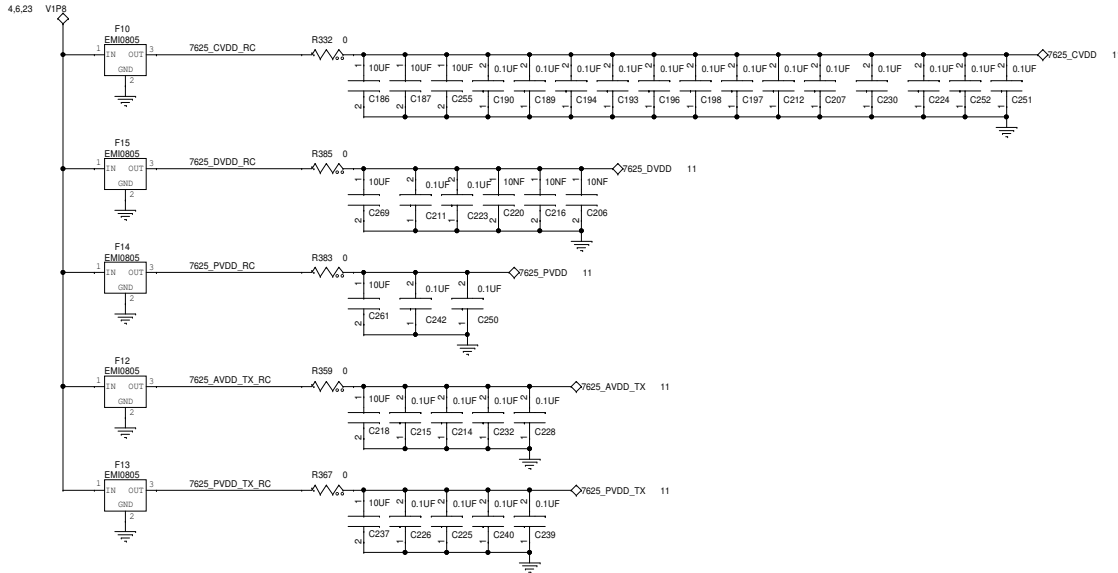
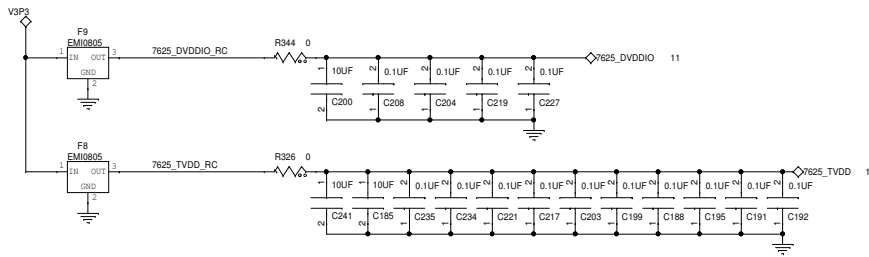
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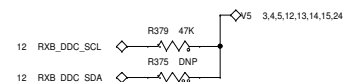
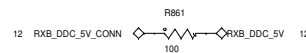
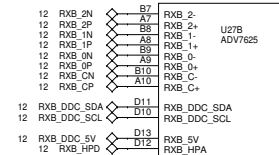
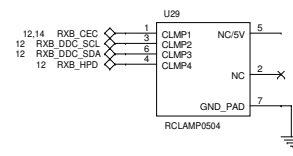
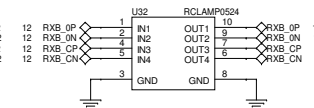
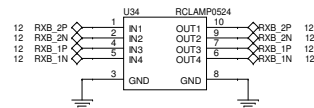
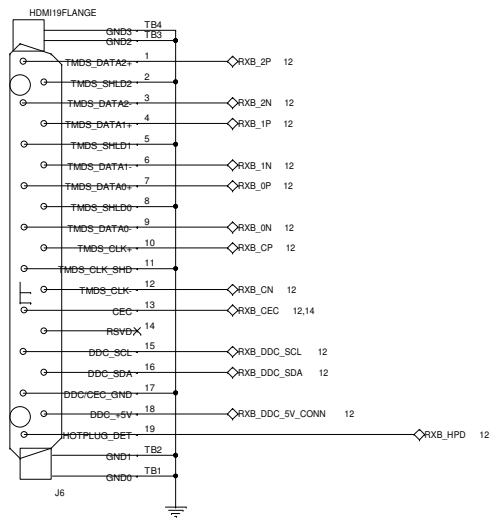
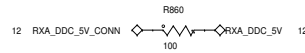
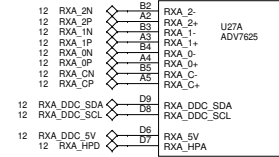
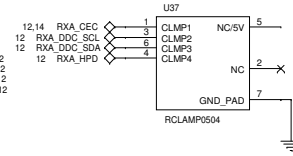
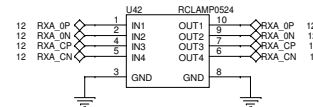
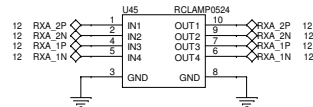
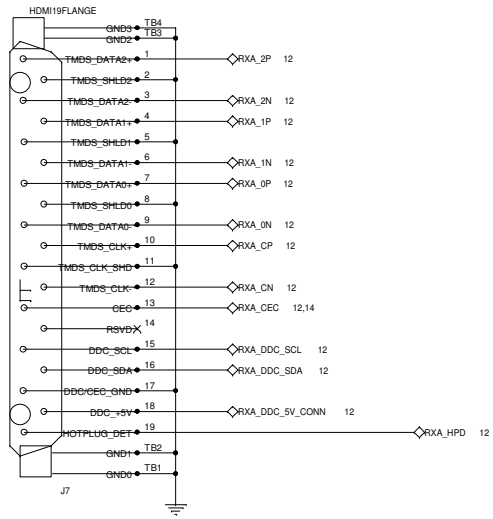


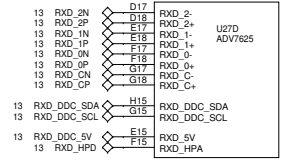
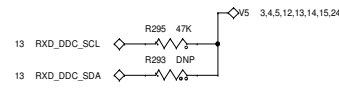
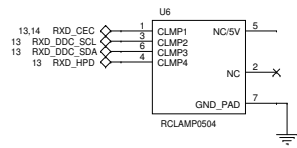
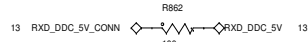
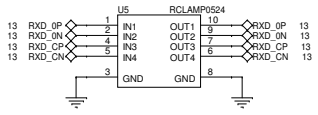
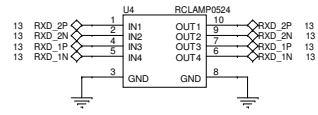
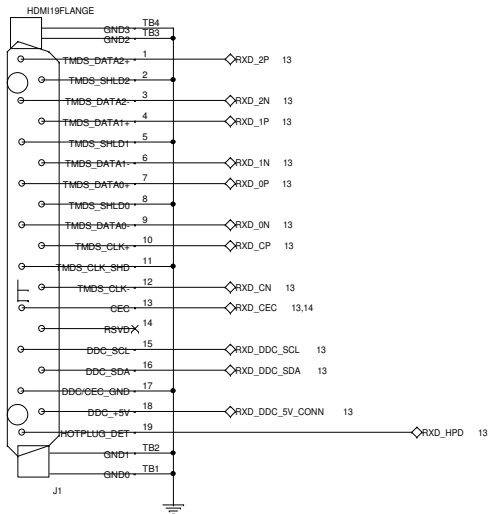
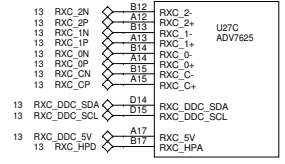
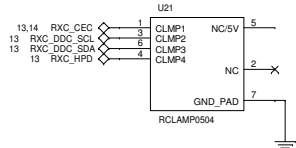
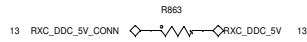
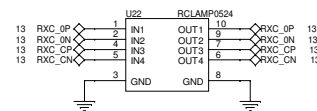
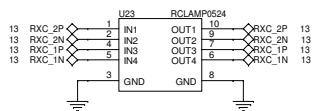
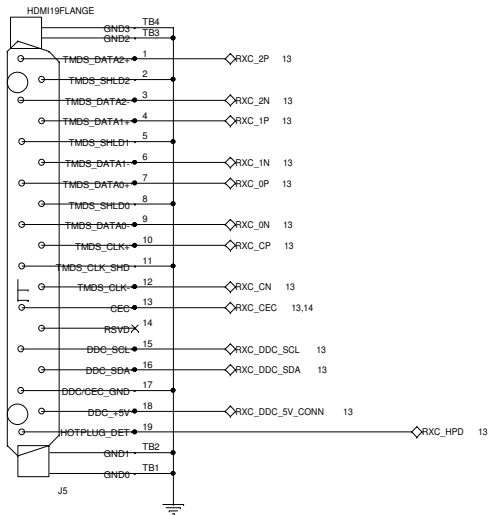
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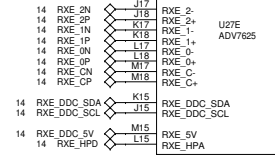
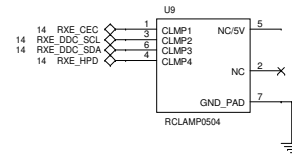
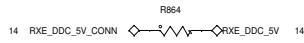
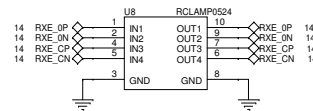
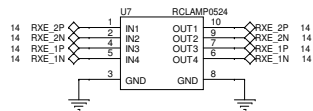
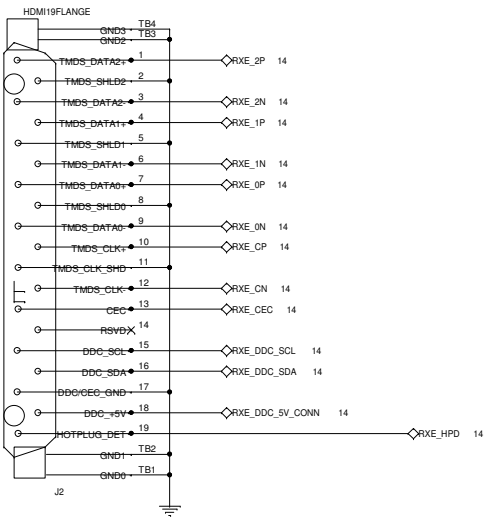


Title		
BF524 GP INPUTS / OUTPUTS		
Size	Document Number	Rev
C	EVAL-MELODY-6 Evaluation Board	0.2
Date:	Tuesday, February 21, 2017	Sheet 10 of 40

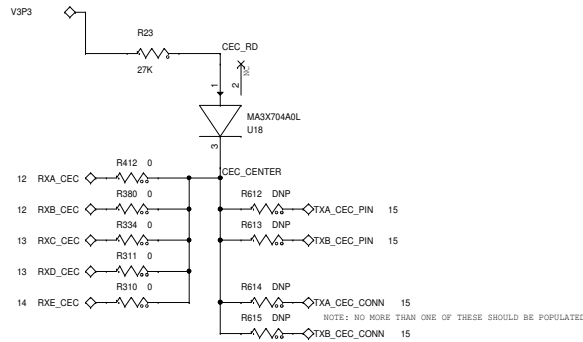


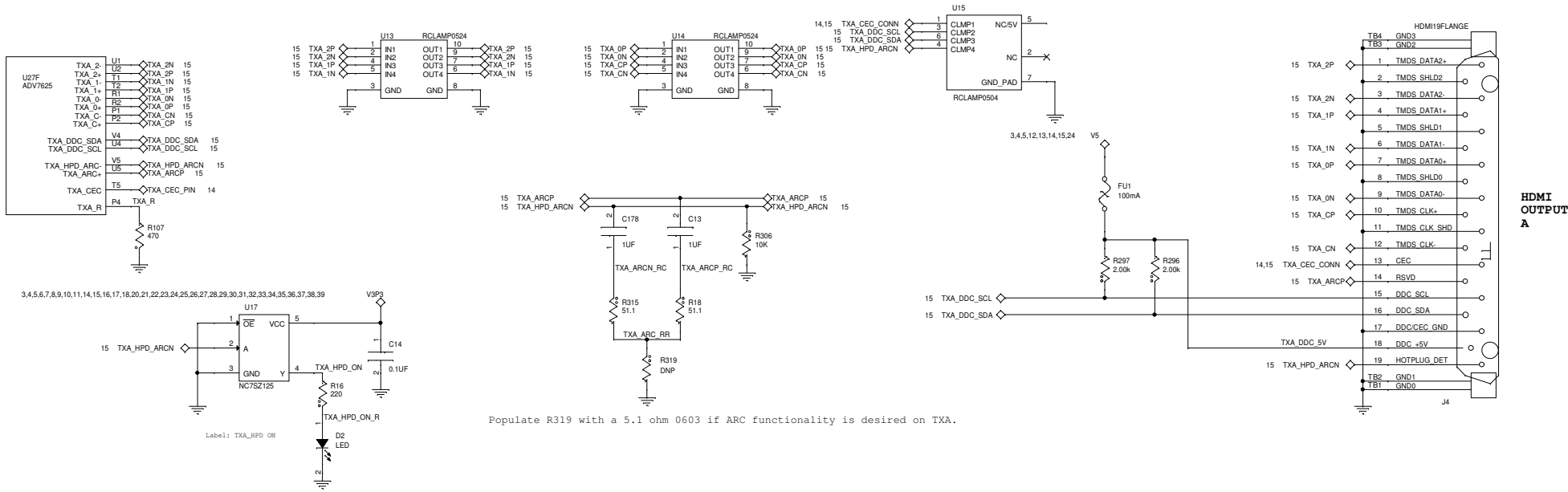




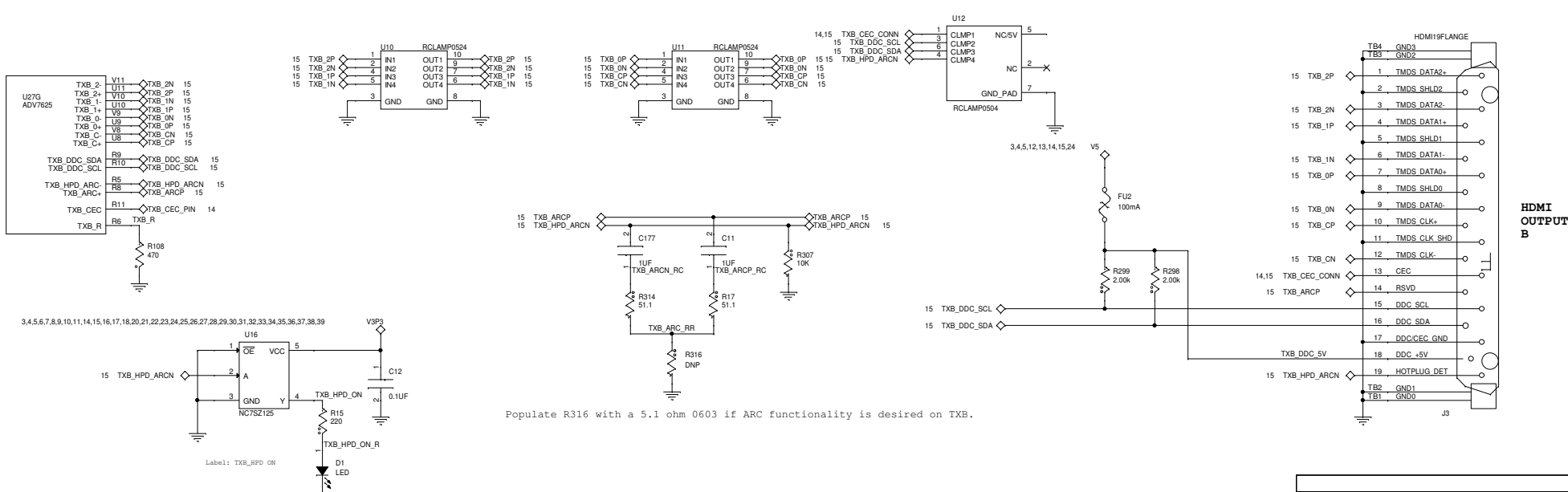


3,4,5,6,7,8,9,10,11,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39





Populate R319 with a 5.1 ohm 0603 if ARC functionality is desired on TXA.

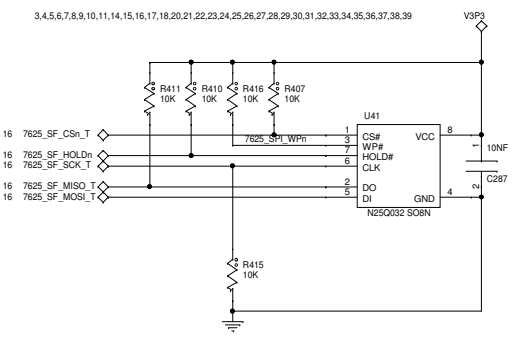
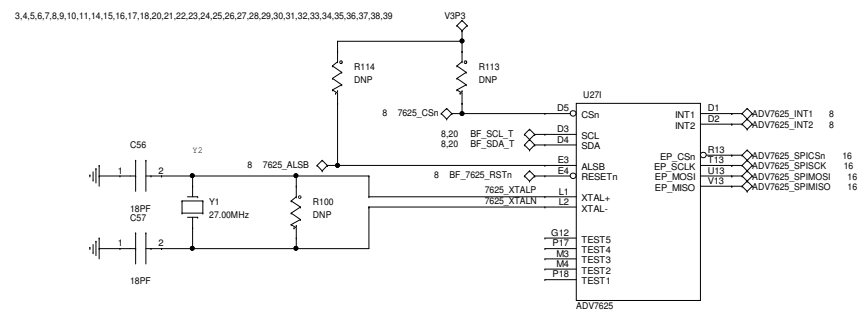
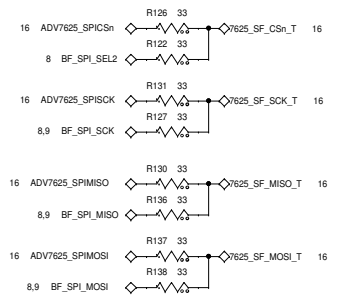
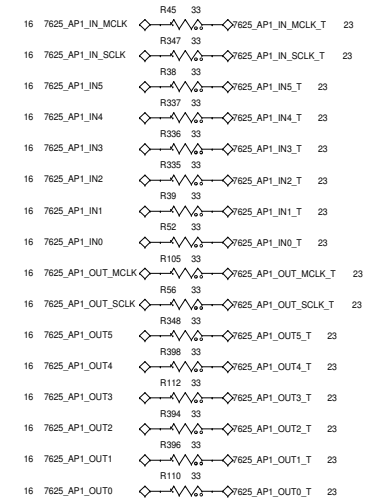
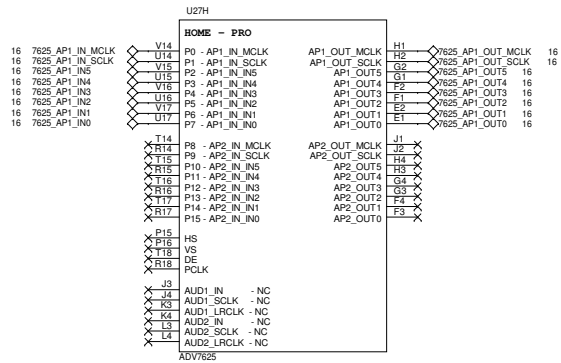


Populate R316 with a 5.1 ohm 0603 if ARC functionality is desired on TXB.

HDMI OUTPUT A

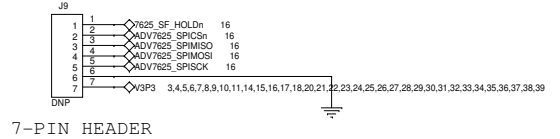
HDMI OUTPUT B

Title		
ADV7625 OUTPUTS A AND B		
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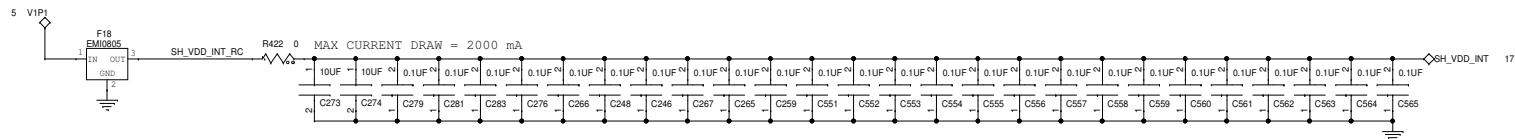
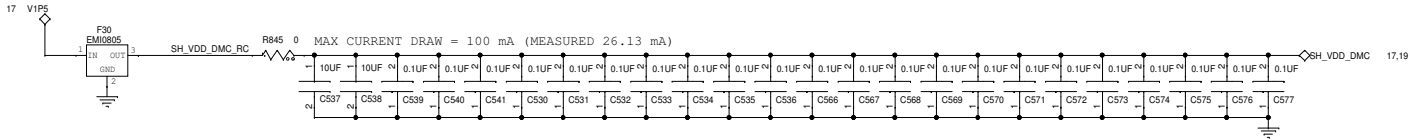
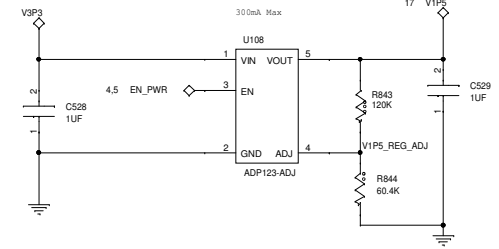
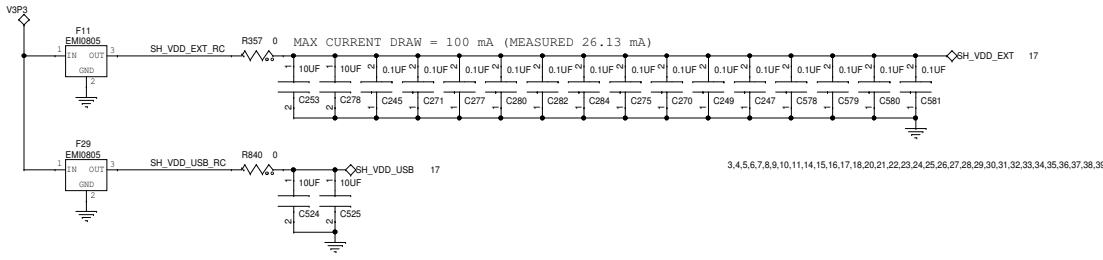
ADV7625 I2C ADDRESS:
 ALSB Low : IO Map address is 0xB0 (default)
 ALSB High : IO Map address is 0xB2

8003-STYLE MASTER SPI HEADER (NOT POPULATED)

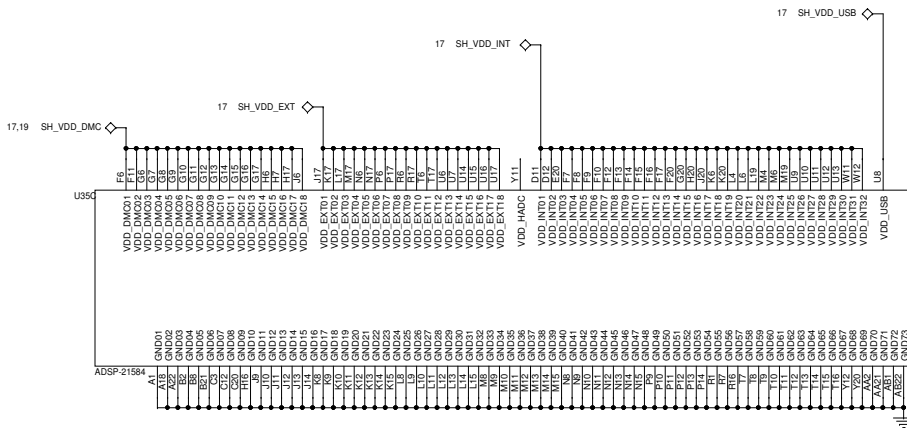


NEED TO CALCULATE VALUES FOR 1.5V

3,4,5,6,7,8,9,10,11,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39



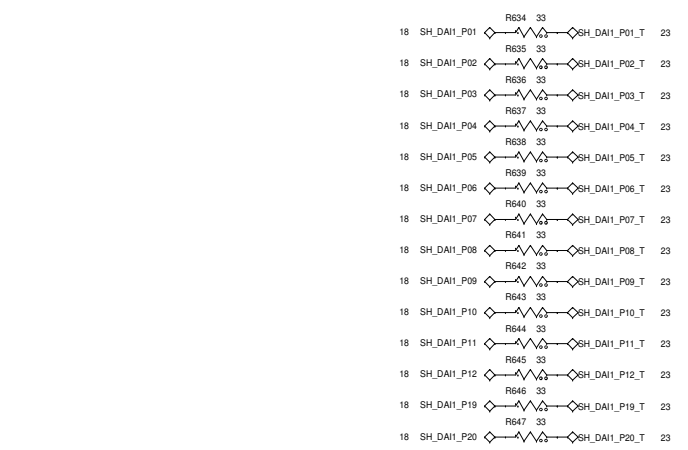
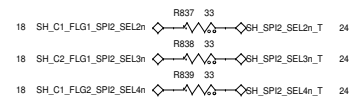
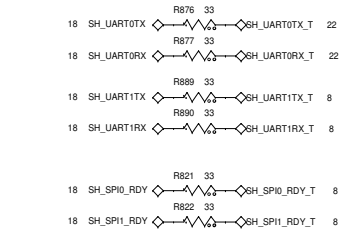
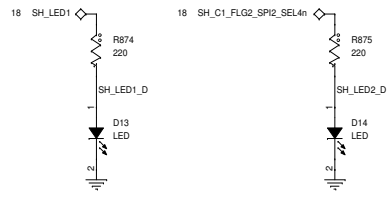
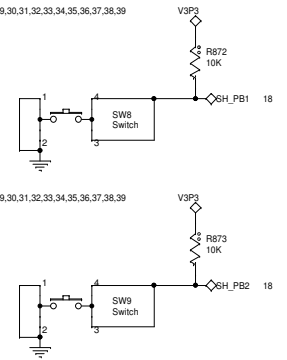
U35C



Title		
ADSP-21584 POWER		
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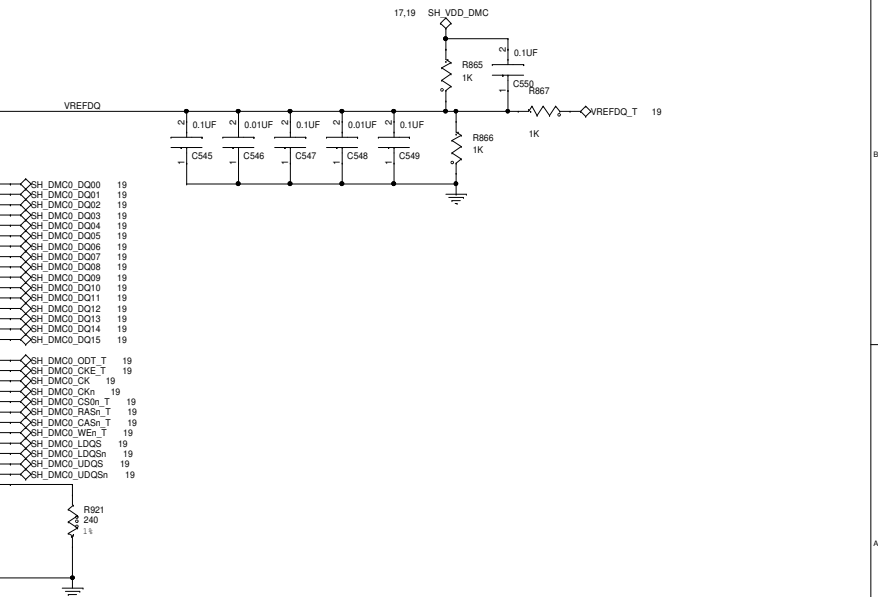
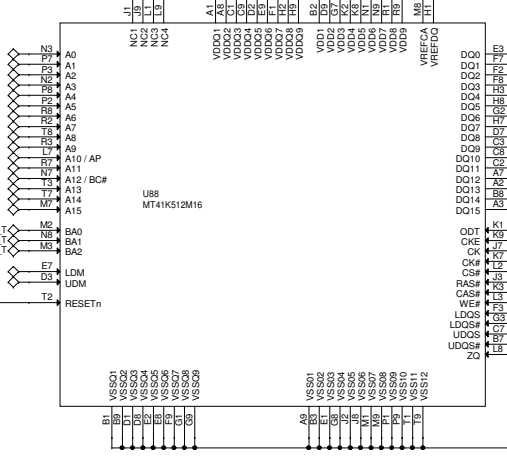
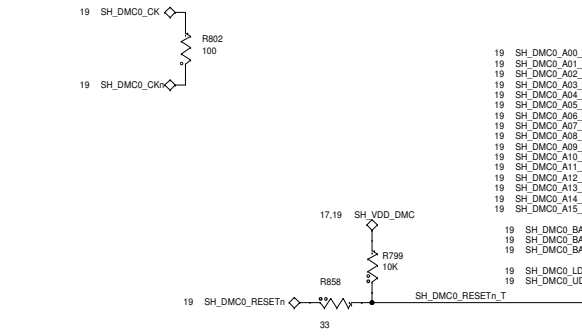
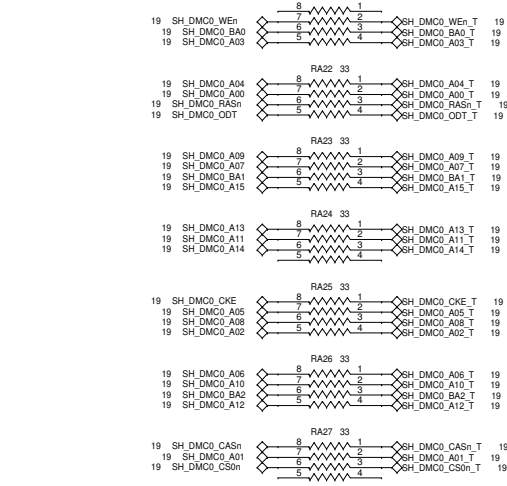
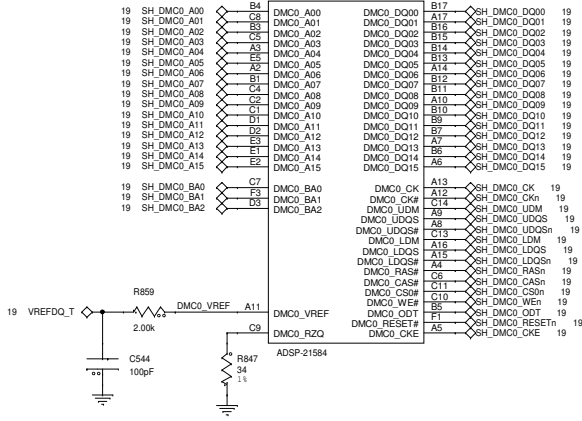
USB			
18 SH_DAIO_P01	Y7	DAIO_P01	Y15
18 SH_DAIO_P02	Y8	DAIO_P02	Y17
18 SH_DAIO_P03	Y9	DAIO_P03	Y18
18 SH_DAIO_P04	AA4	DAIO_P04	AA18
18 SH_DAIO_P05	AA5	DAIO_P05	Y16
18 SH_DAIO_P06	T3	DAIO_P06	AA15
18 SH_DAIO_P07	T8	DAIO_P07	PB_05
18 SH_DAIO_P08	AB3	DAIO_P08	PB_06
18 SH_DAIO_P09	AB5	DAIO_P09	PB_07
18 SH_DAIO_P10	AA3	DAIO_P10	PB_08
18 SH_DAIO_P11	AA1	DAIO_P11	PB_09
18 SH_DAIO_P12	W3	DAIO_P12	PB_10
18 SH_DAIO_P19	W3	DAIO_P19	PB_11
18 SH_DAIO_P20	V3	DAIO_P20	PB_12
18 SH_DAI1_P01	P20	DAI1_P01	PB_13
18 SH_DAI1_P02	P22	DAI1_P02	PB_14
18 SH_DAI1_P03	N20	DAI1_P03	PB_15
18 SH_DAI1_P04	N20	DAI1_P04	R2
18 SH_DAI1_P05	R22	DAI1_P05	N3
18 SH_DAI1_P06	R21	DAI1_P06	PC_00 / SPI0_SEL#
18 SH_DAI1_P07	R20	DAI1_P07	L1
18 SH_DAI1_P08	T22	DAI1_P08	PC_01 / SPI2_CLK
18 SH_DAI1_P09	T21	DAI1_P09	K2
18 SH_DAI1_P10	T21	DAI1_P10	PC_02 / SPI2_MISO
18 SH_DAI1_P11	T20	DAI1_P11	K1
18 SH_DAI1_P12	T22	DAI1_P12	PC_03 / SPI2_MOSI
18 SH_DAI1_P19	T22	DAI1_P19	G3
18 SH_DAI1_P20	T20	DAI1_P20	PC_04 / SPI2_D2
			J1
			PC_05 / SPI2_D3
			J2
			PC_06 / SPI2_SEL1# / SPI2_SS#
			I2
			SH_SPI2_SEL1n_SPI2_SSn
			H1
			PC_07 / SPI0_SEL1#
			H1
			PC_08 / SPI0_CLK
			L3
			SH_SPI0_CLK
			8,20
			PC_09 / SPI0_MISO
			G2
			SH_SPI0_MISO
			8,20
			PC_10 / SPI0_MOSI
			G1
			SH_SPI0_MOSI
			8,20
			PC_11 / SPI0_RDY / SPI0_SS#
			B18
			SH_SPI0_RDY
			18
			PC_12 / SPI0_RDY / SPI0_SS#
			C18
			SH_UART0TX
			18
			PC_13 / SPI1_SEL1# / UART0_TX
			C18
			SH_UART0TX
			18
			PC_14 / UART0_RX
			C18
			SH_UART0RX
			18
			PC_15
			PD_00
			A19
			SH_SPI0_SS#
			8,20
			PD_01 / SPI0_SEL2# / SPI0_SS#
			C15
			PD_02
			B19
			PD_03
			C19
			PD_04
			B20
			PD_05
			A21
			PD_06
			C21
			PD_07
			B22
			PD_08
			D21
			PD_09
			D20
			PD_10
			C22
			PD_11
			D22
			PD_12
			C21
			PD_13
			E22
			PD_14
			F21
			PD_15
			F21
			PE_00
			F22
			SH_GP1
			22
			PE_01 / C1_FLG0 / SPI0_SEL#
			G21
			SH_C1_FLG0
			18
			PE_02 / C2_FLG0 / SPI0_SEL#
			G22
			SH_LED1
			18
			PE03/C1_FLG1/SPI0_SEL# / SPI2_SEL#
			H21
			SH_C1_FLG1_SPI2_SEL2n
			18
			PE_04 / C2_FLG1 / SPI2_SEL#
			H22
			SH_C2_FLG1_SPI2_SEL3n
			18
			PE_05 / C1_FLG2 / SPI2_SEL#
			J21
			SH_C1_FLG2_SPI2_SEL4n
			18
			PE_06 / C2_FLG2 / SPI2_SEL#
			J22
			SH_PB1
			18
			PE_07 / C1_FLG3 / SPI1_SEL#
			K22
			SH_PB2
			18
			PE08/C2FLG3/SPI1_RDY/SPI1_SEL#
			L22
			SH_SPI1_RDY
			18
			PE_09
			L21
			SH_PE09
			18
			PE_10
			L20
			SH_PE10
			18
			PE_11 / SPI1_SEL# / SPI1_SS#
			M22
			SH_SPI1_SS#
			20
			PE_12 / SPI1_SEL# / SPI2_RDY
			M20
			SH_SPI2_RDY
			18
			PE_13 / SPI1_CLK
			N22
			SH_SPI1_CLK
			20
			PE_14 / SPI1_MISO
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			PE_15 / SPI1_MOSI
			M21
			SH_SPI1_MOSI
			20

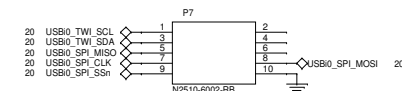
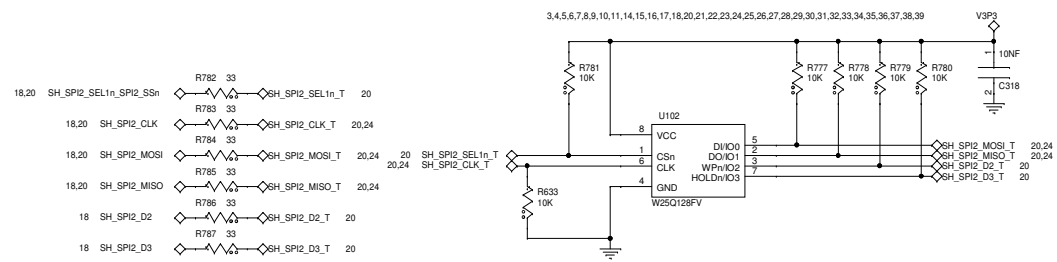
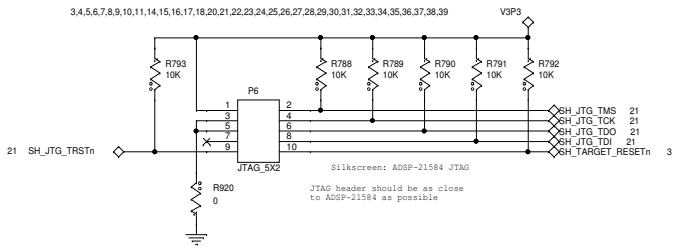
ADSP-21584



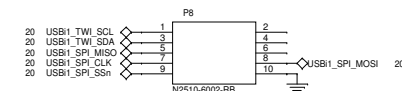
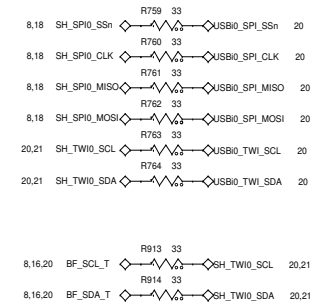
Title		
ADSP-21584 PERIPHERALS		
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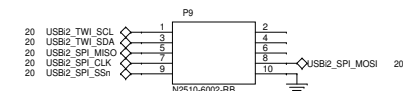
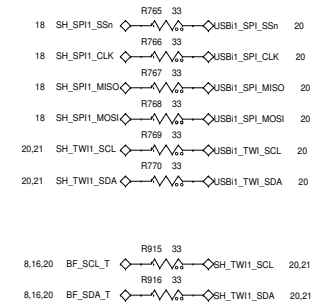




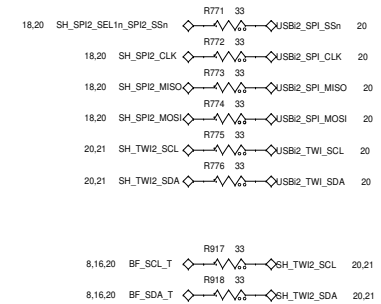
USBi or Aardvark SPI INTERFACE



USBi or Aardvark SPI INTERFACE

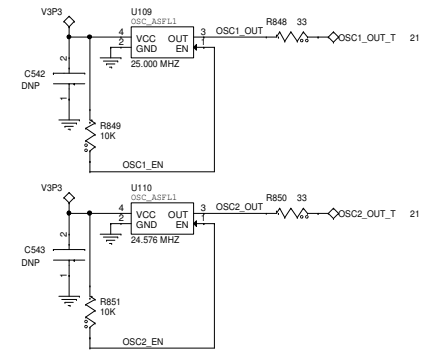


USBi or Aardvark SPI INTERFACE



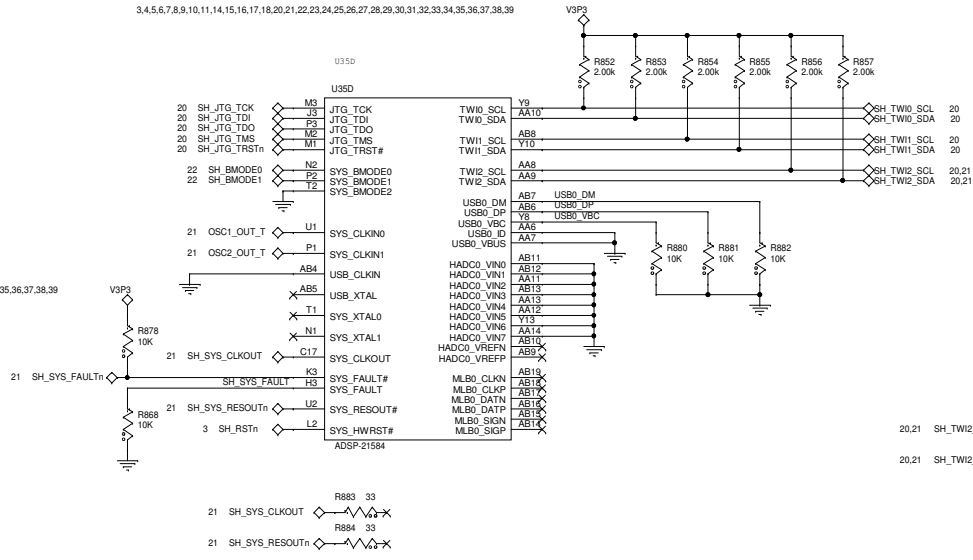
Title		
ADSP-21584 FLASH / JTAG		
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3,4,5,6,7,8,9,10,11,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39

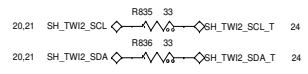
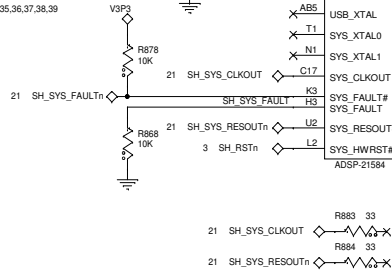


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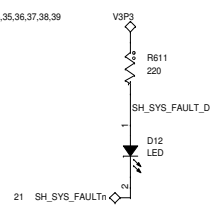
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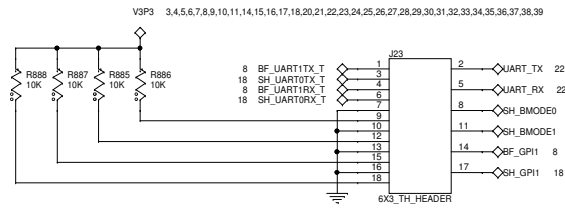
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3,4,5,6,7,8,9,10,11,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39

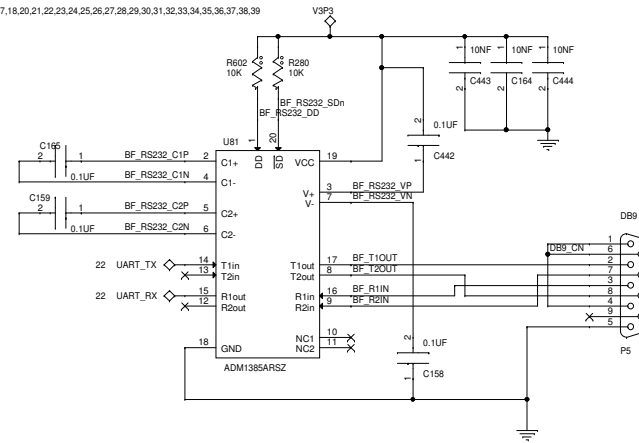


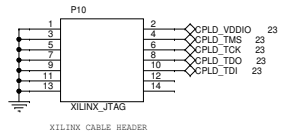
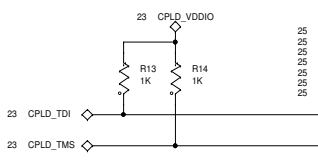
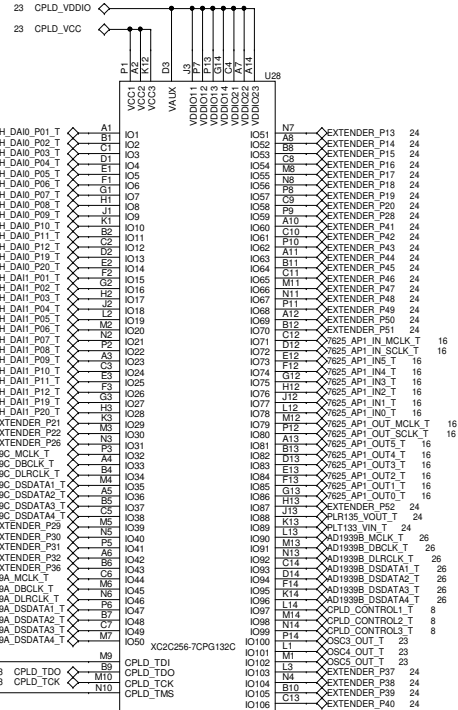
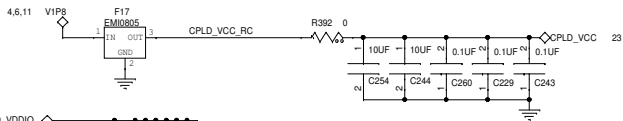
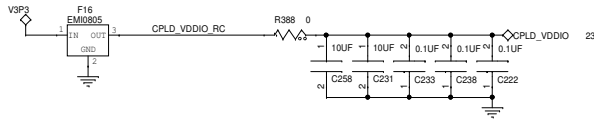
Title		
ADSP-21584 SYSTEM		
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SH_BMODE[1:0] BOOT SOURCE
 00 NO BOOT / CUSTOM ROM
 01 SPI2 MASTER BOOT
 10 SPI2 SLAVE BOOT

3,4,5,6,7,8,9,10,11,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39

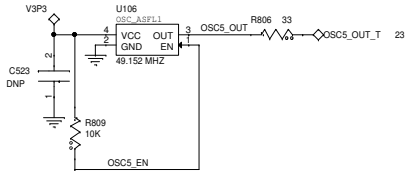
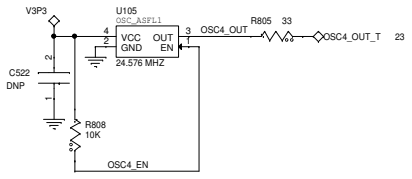
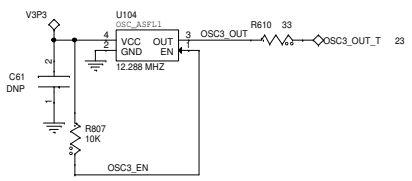




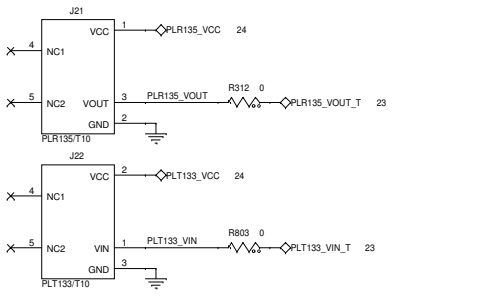
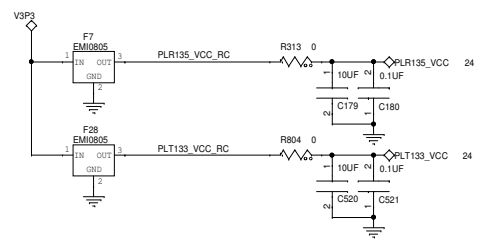
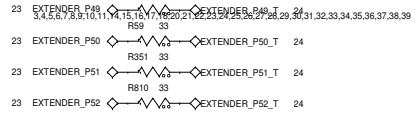
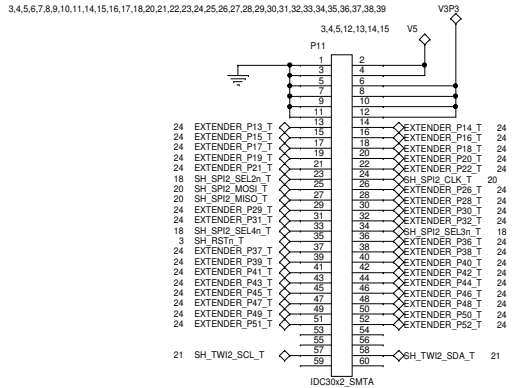
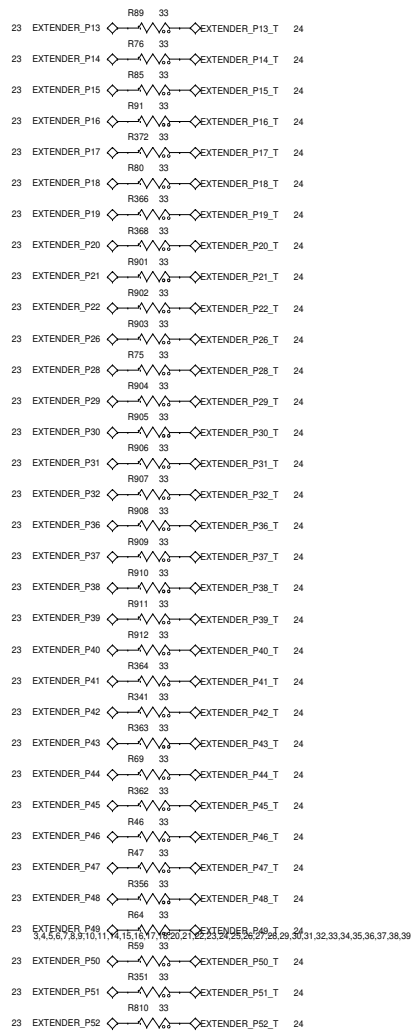
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3,4,5,6,7,8,9,10,11,14,15,16,17,18,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39

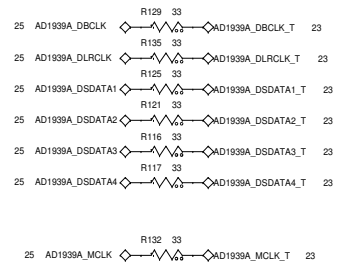
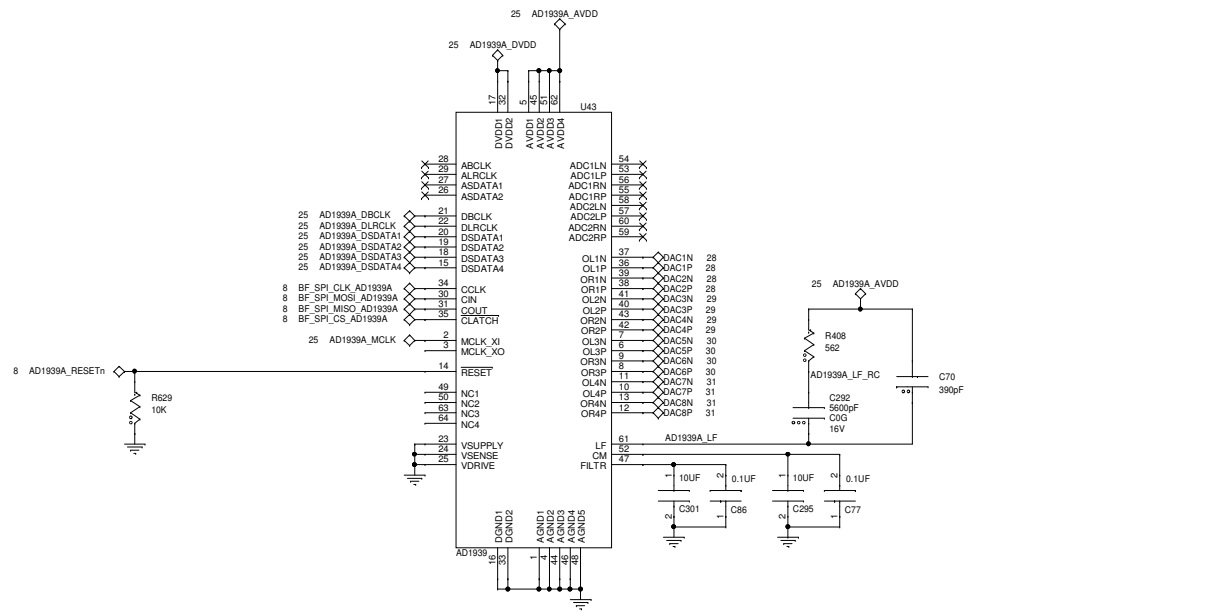
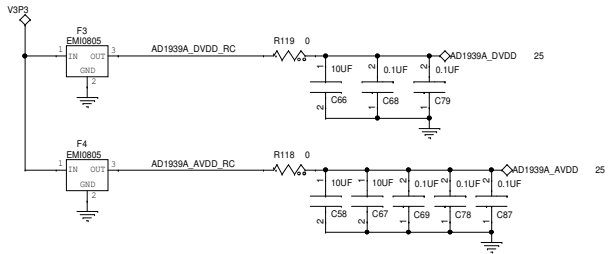
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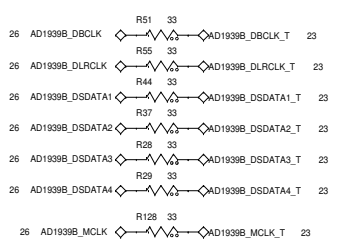
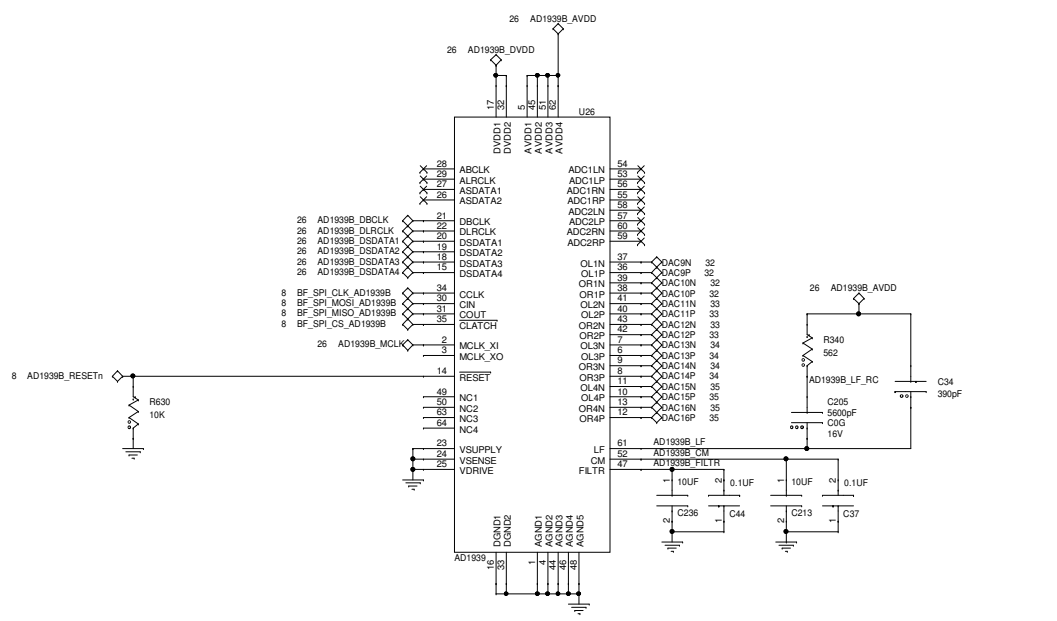
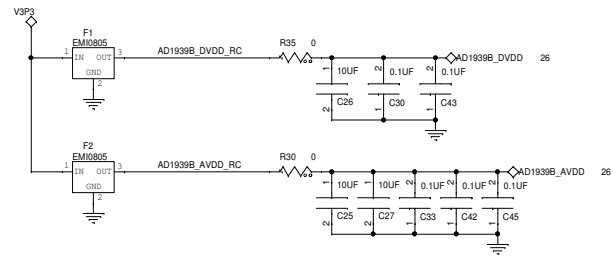
Title		
CPLD		
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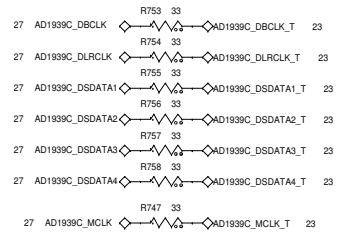
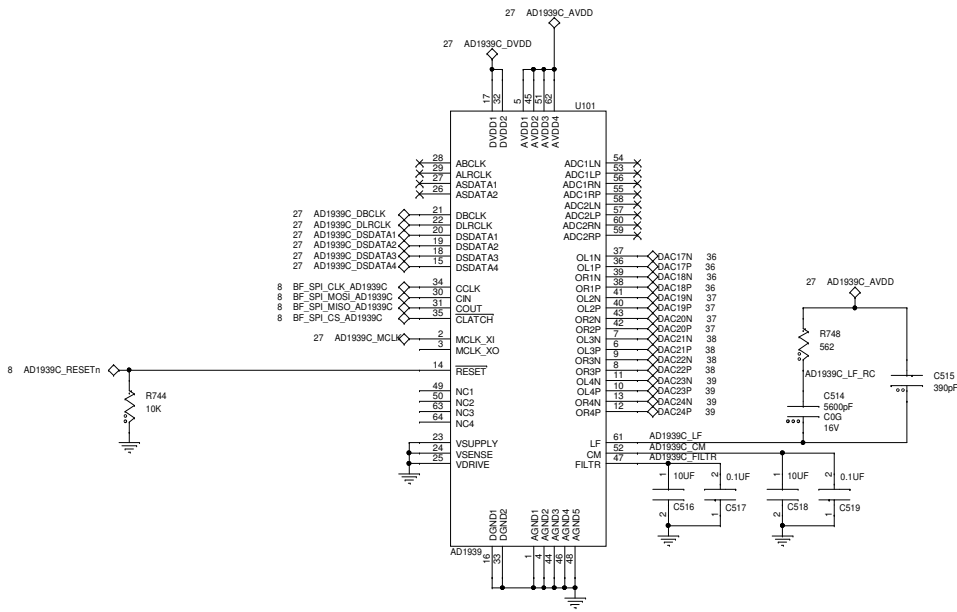
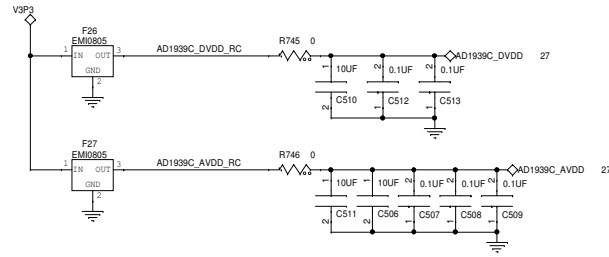
Title		
60-PIN E12 CONNECTOR		
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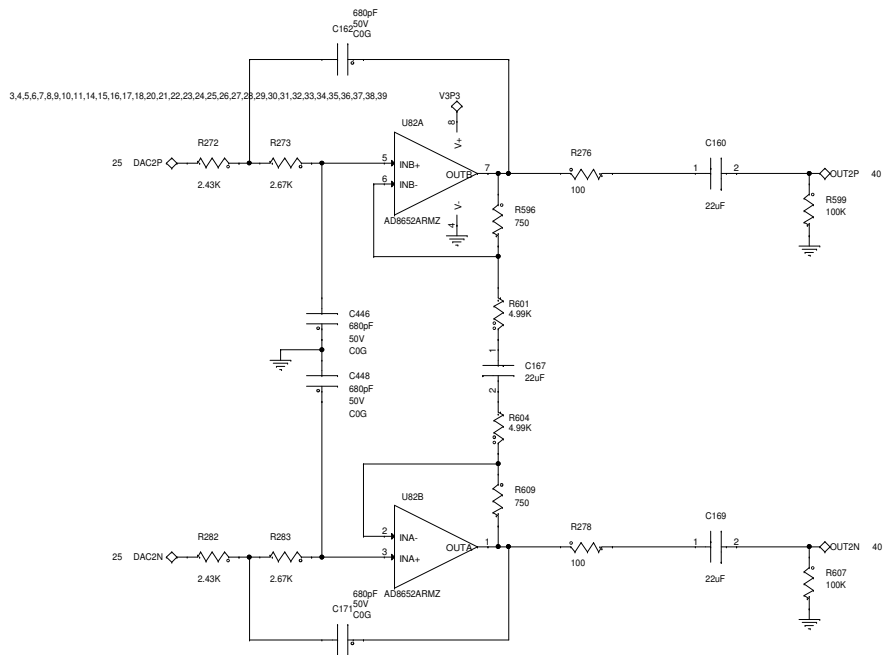
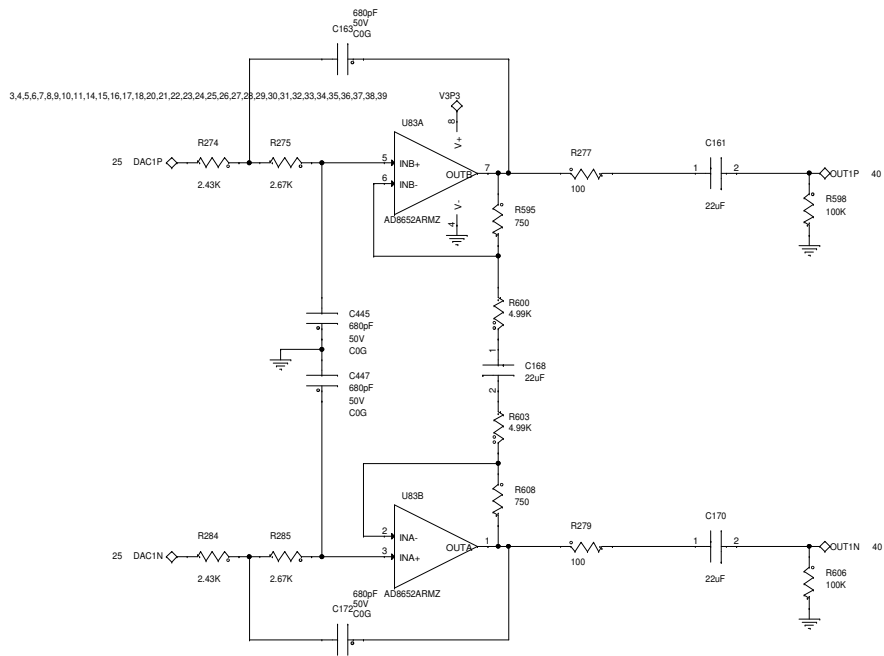
Title		
AD1939 CODEC A		
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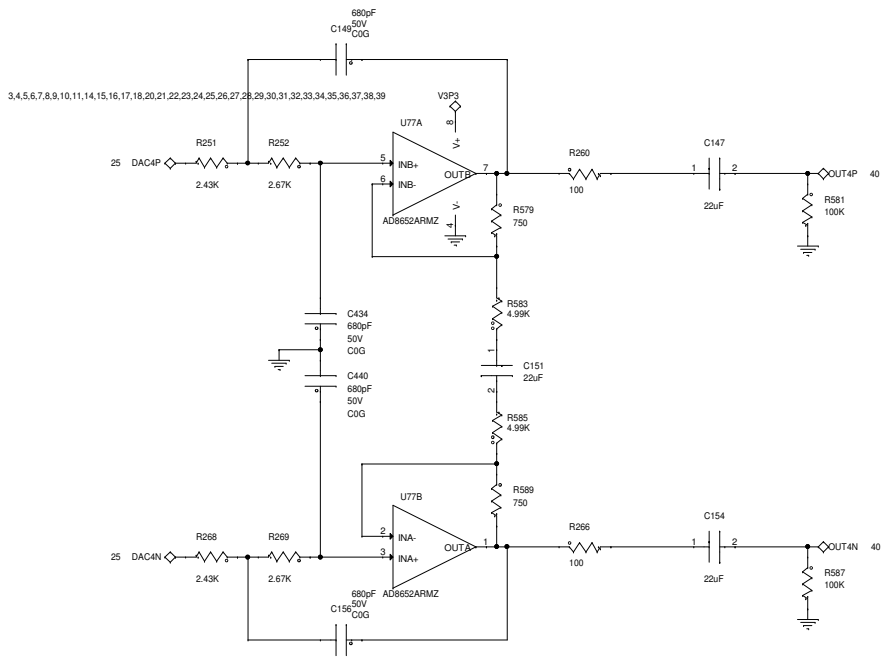
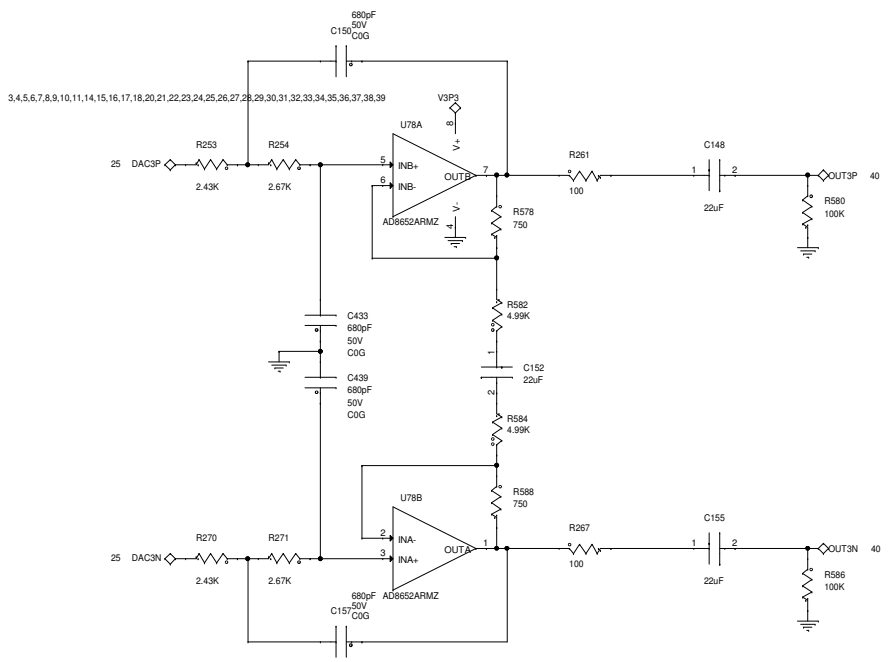
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Size	Document Number	Rev
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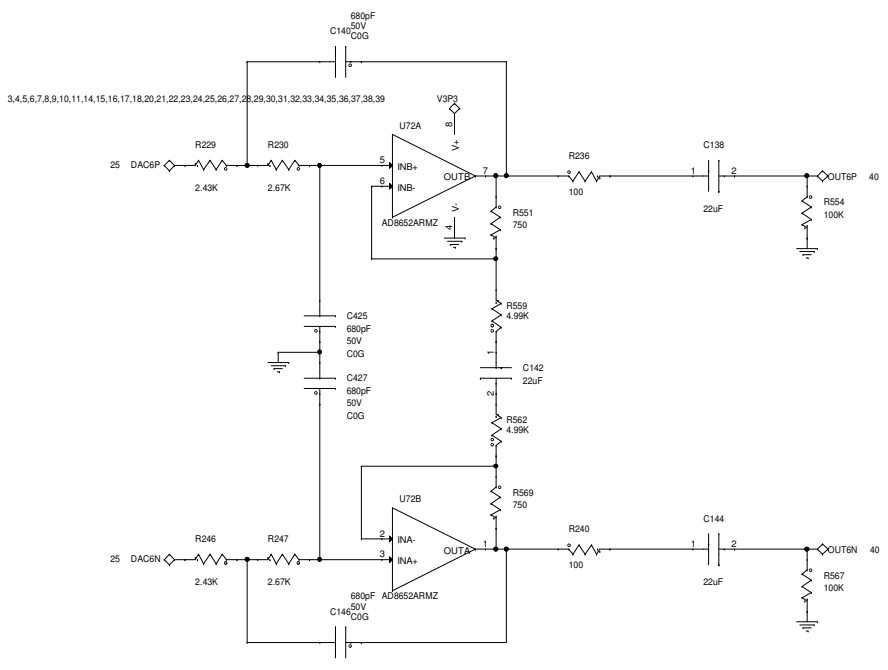
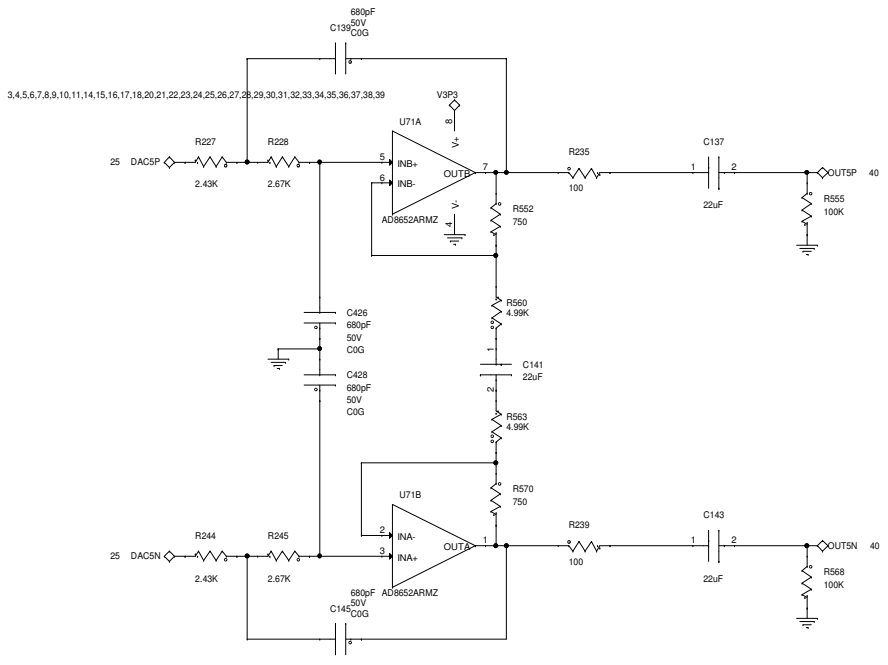
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C	EVAL-MELODY-6 Evaluation Board	0.2
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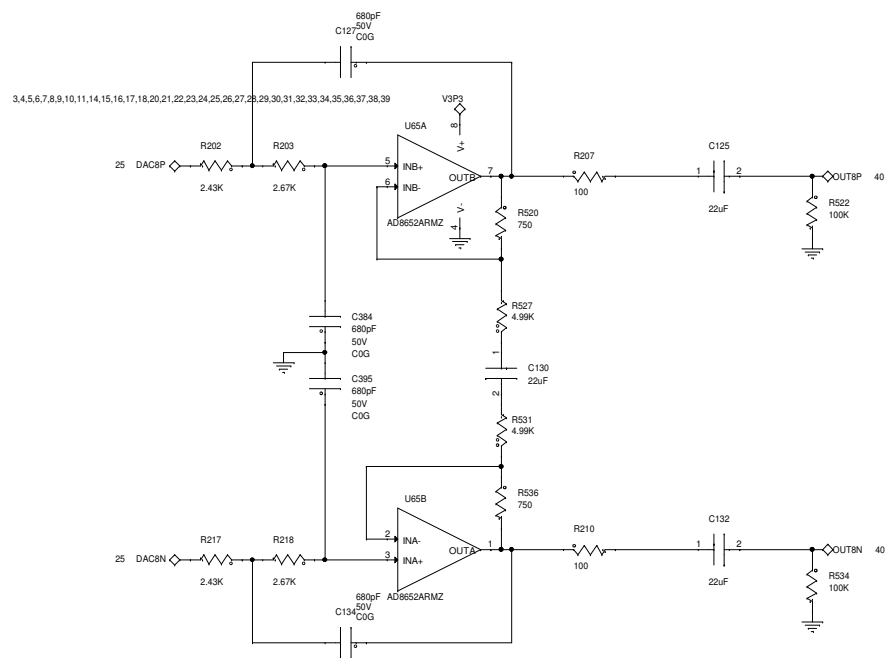
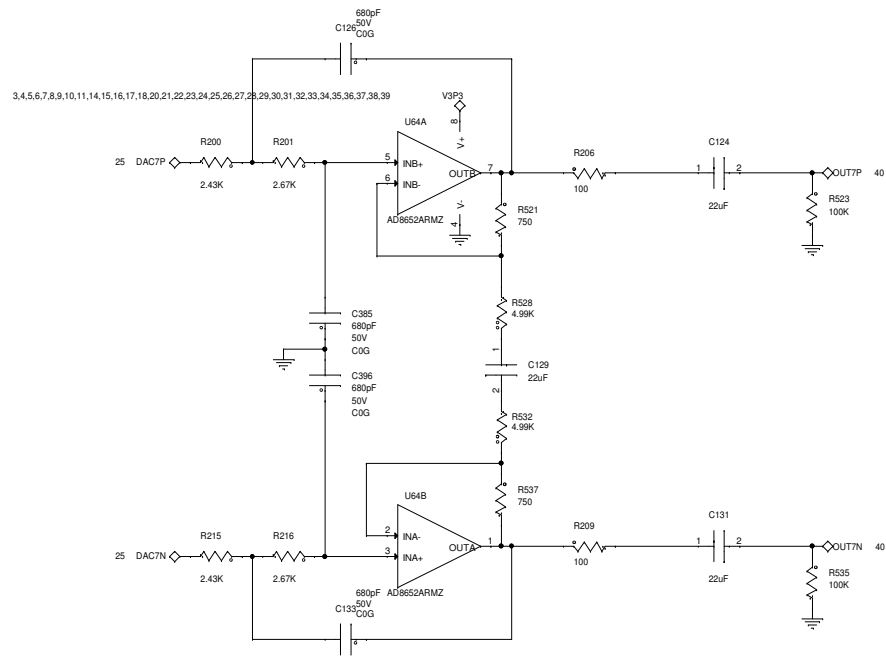
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Size	Document Number	Rev	
C	EVAL-MELODY-6 Evaluation Board	0.2	
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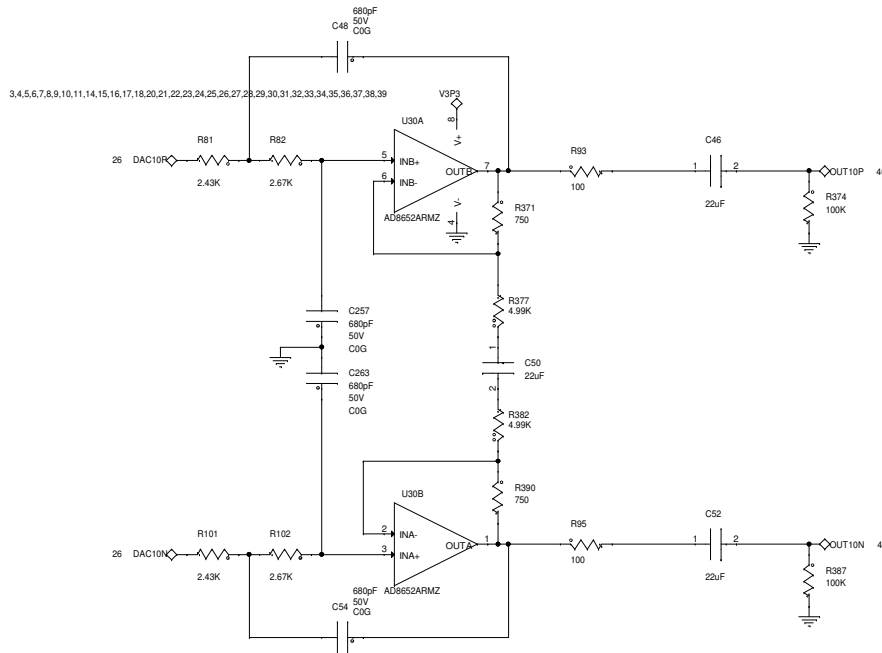
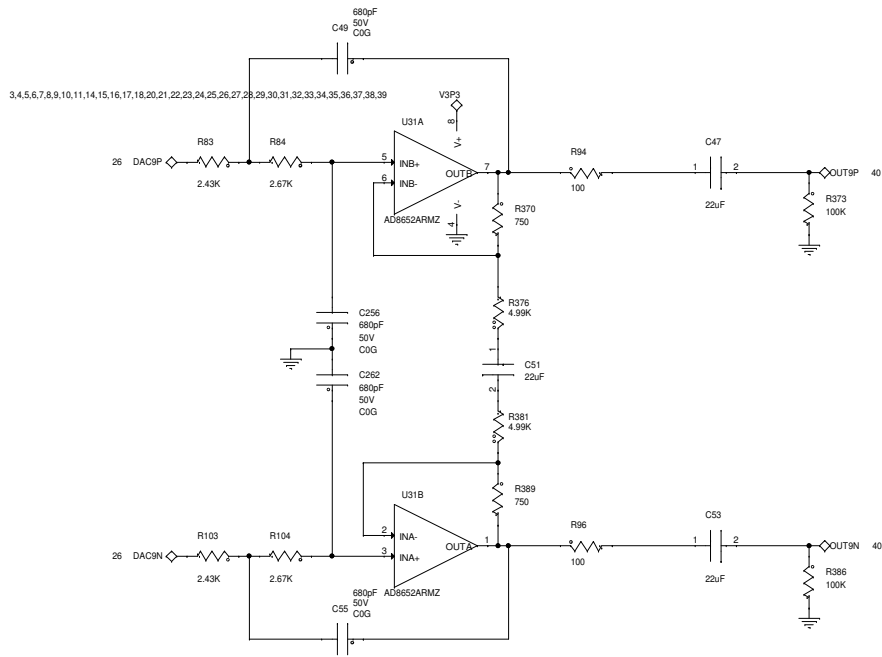
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Size	Document Number	Rev
C	EVAL-MELODY-6 Evaluation Board	0.2
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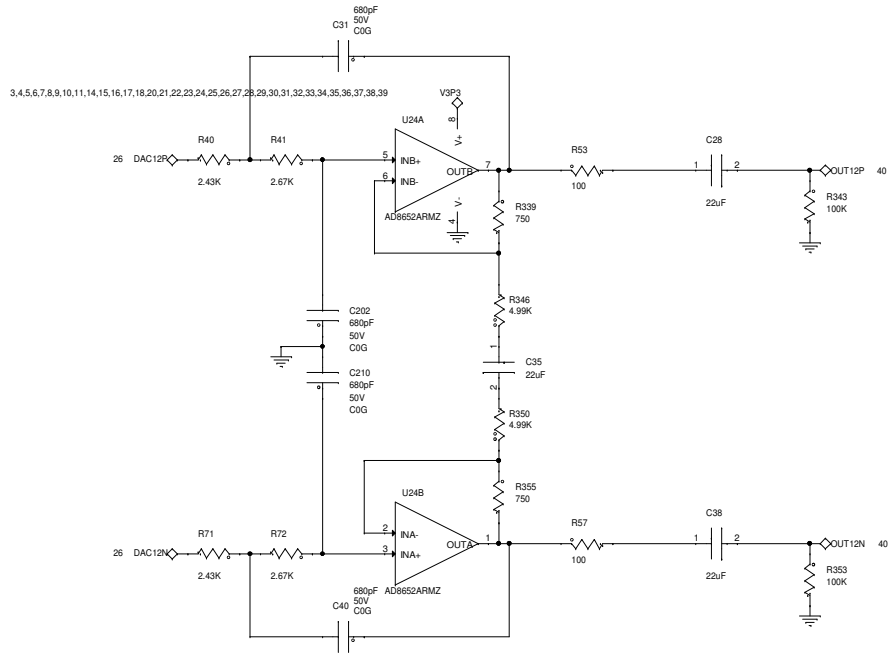
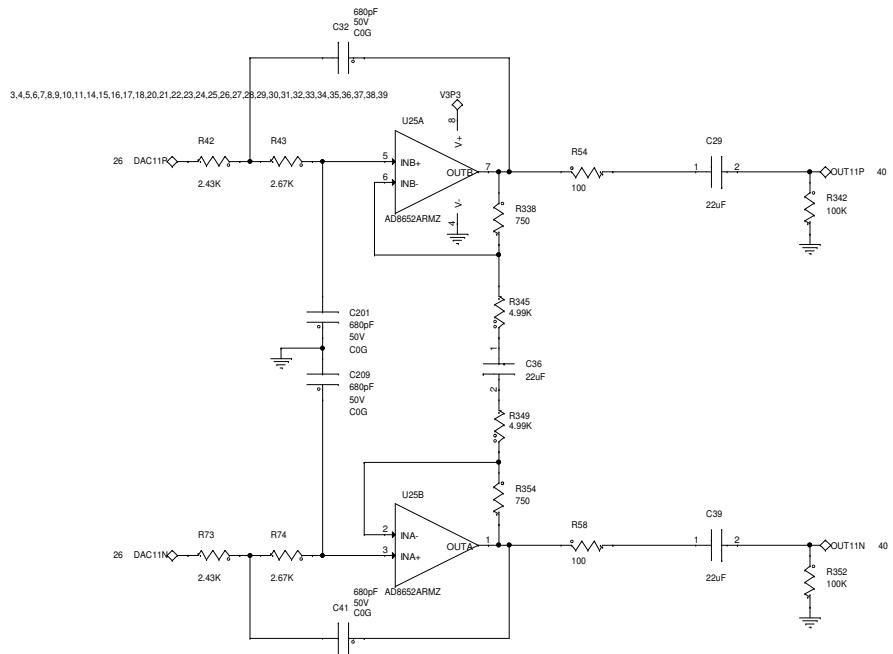
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Size	Document Number	Rev
C	EVAL-MELODY-6 Evaluation Board	0.2
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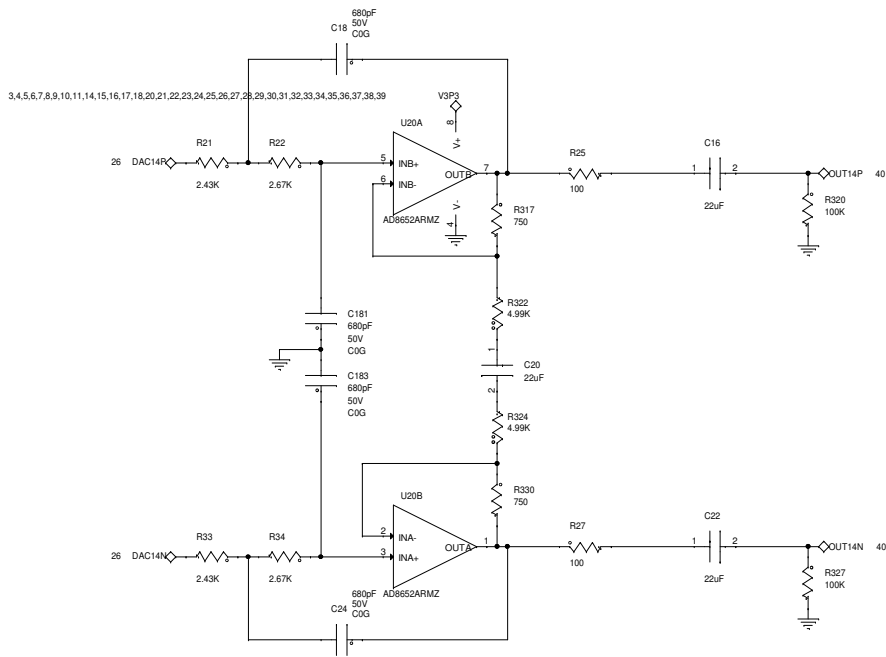
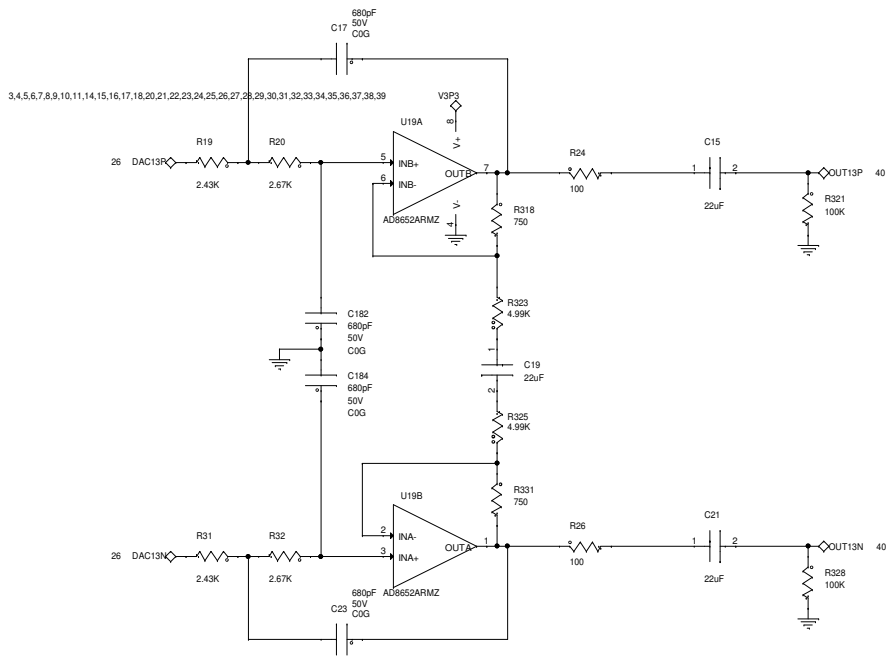
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Size	Document Number	Rev	
C	EVAL-MELODY-6 Evaluation Board	0.2	
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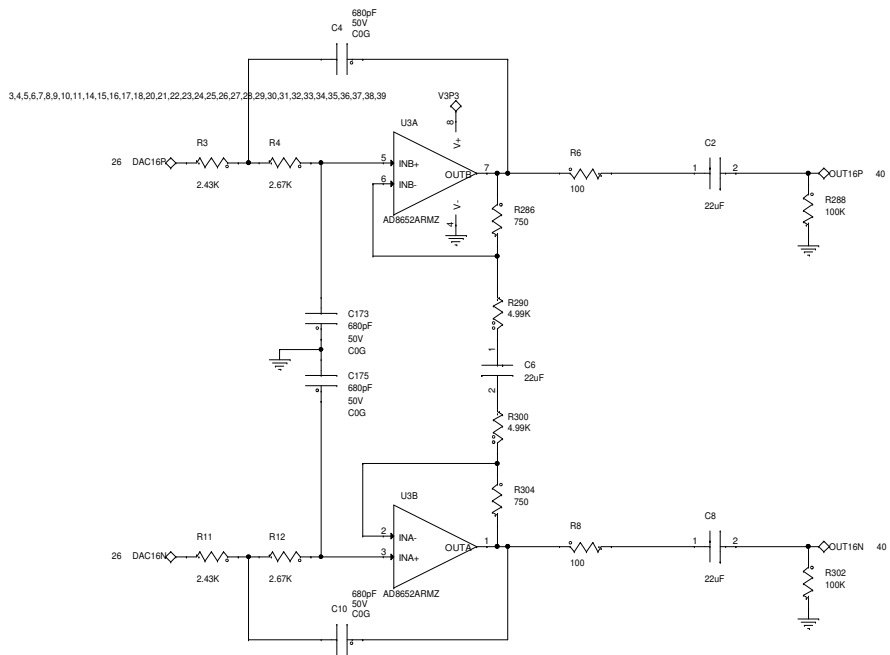
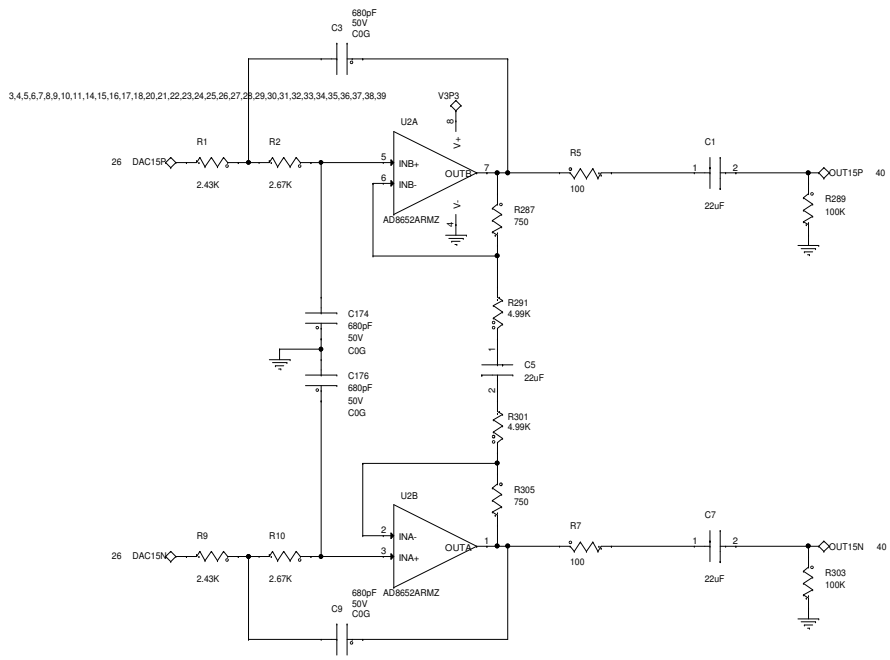
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Size	Document Number	Rev
C	EVAL-MELODY-6 Evaluation Board	0.2
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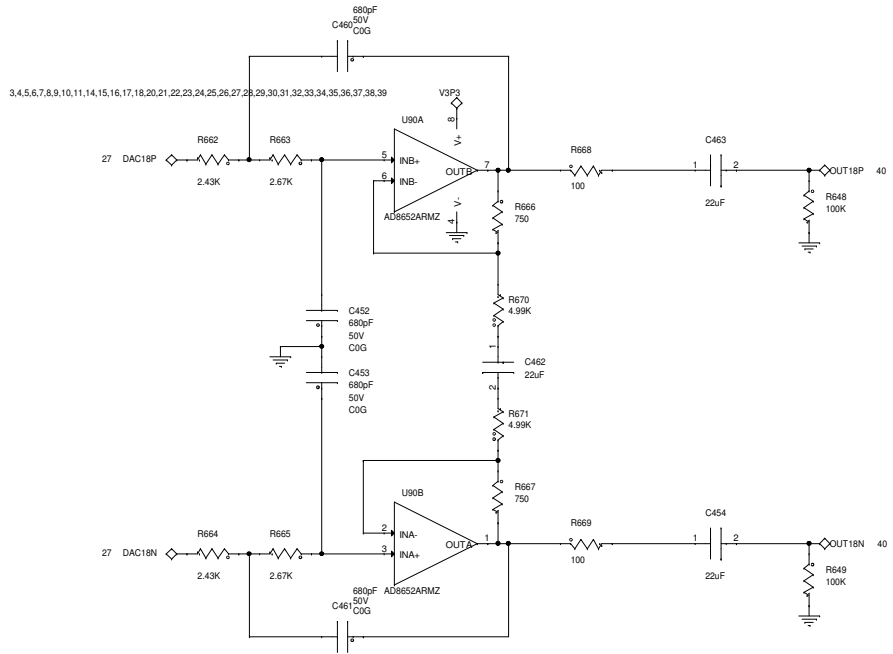
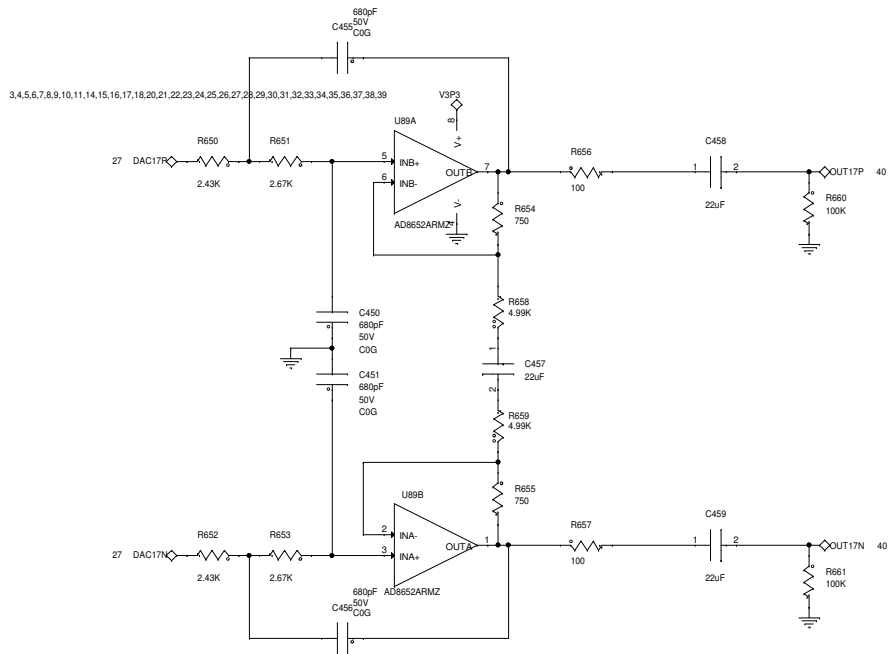
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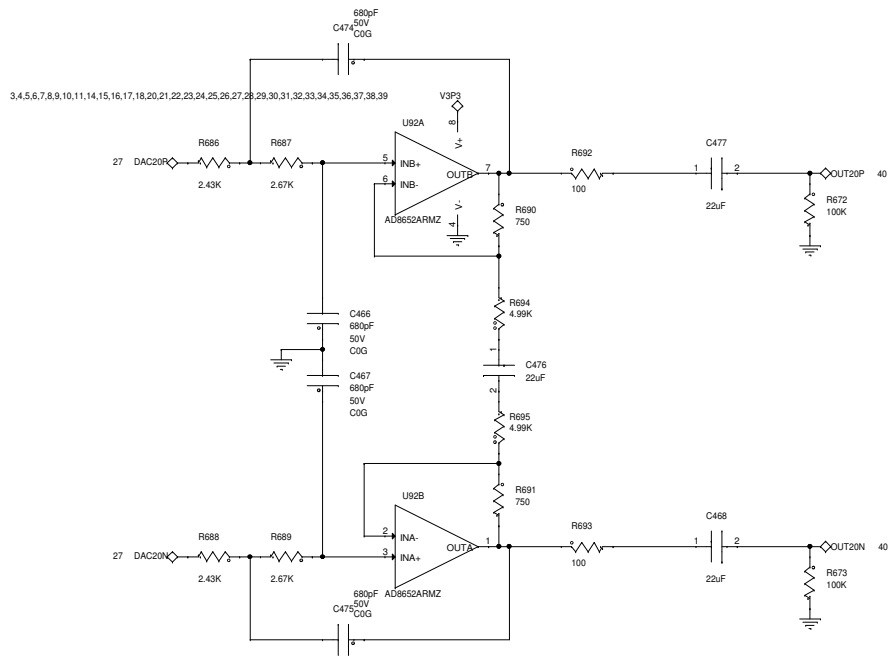
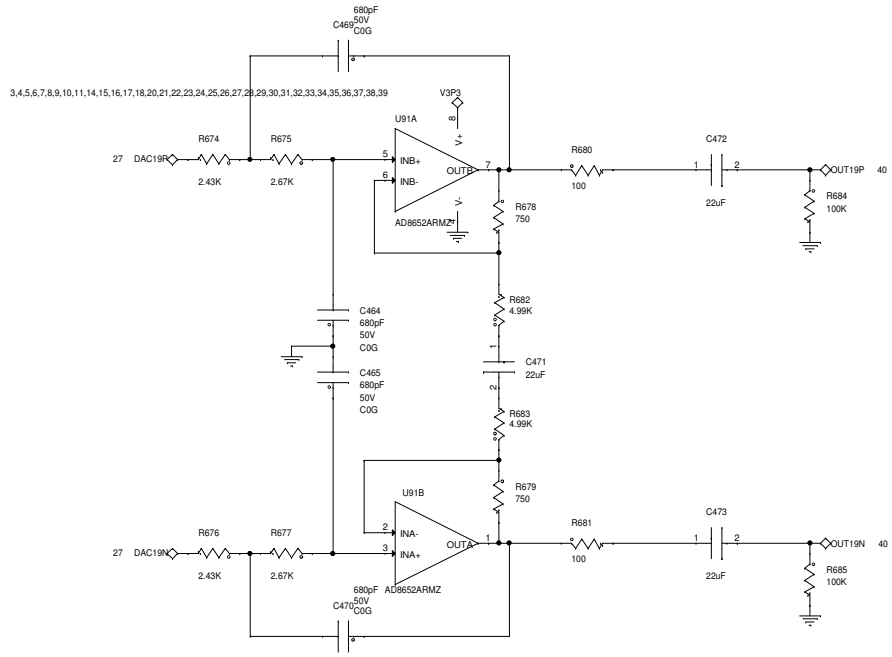
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Size	Document Number	Rev	
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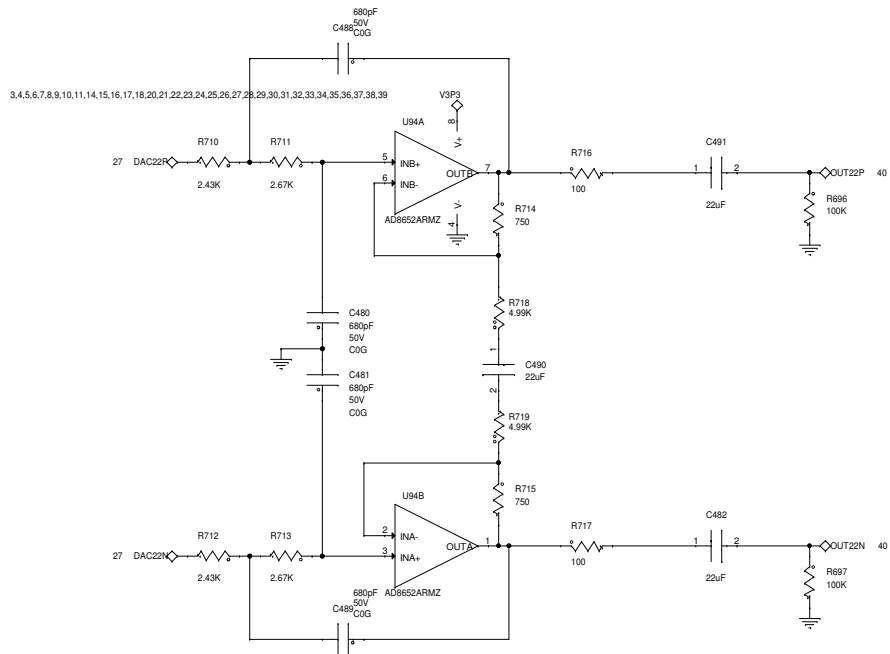
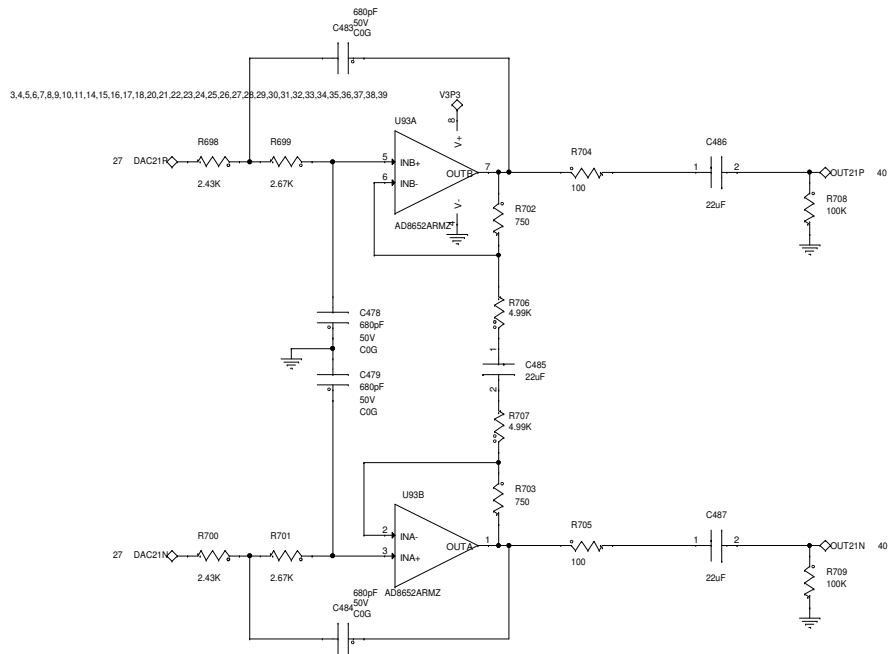
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Size	Document Number	Rev	
C	EVAL-MELODY-6 Evaluation Board	0.2	
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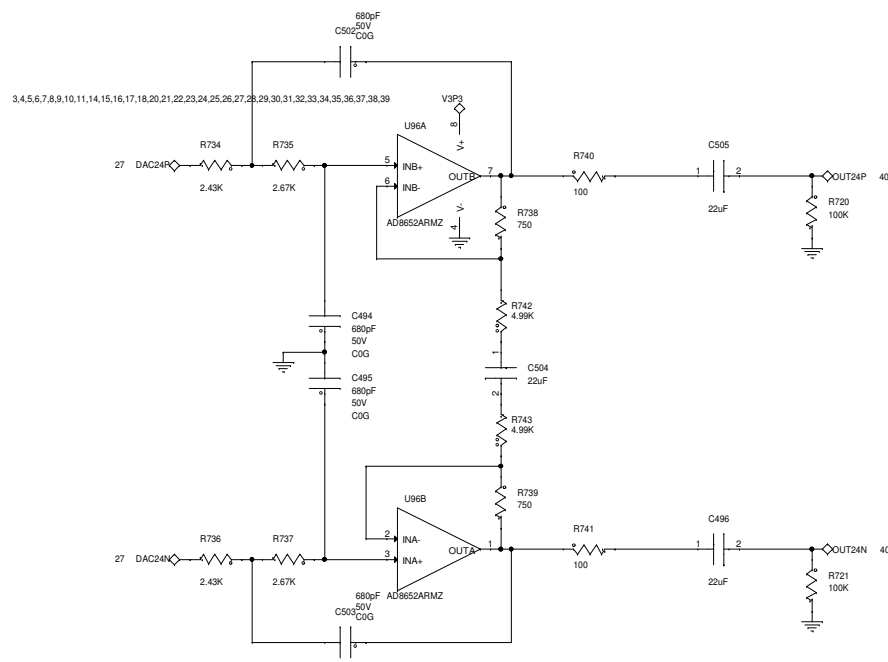
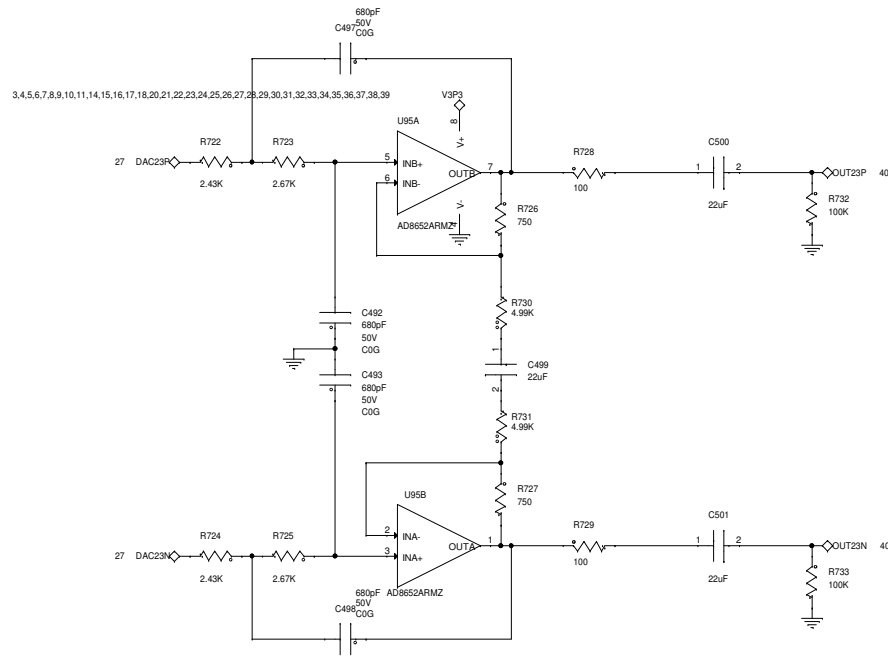
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Size	Document Number	Rev	
C	EVAL-MELODY-6 Evaluation Board	0.2	
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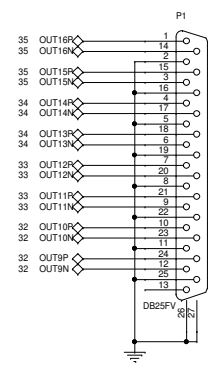
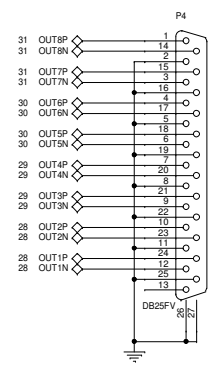
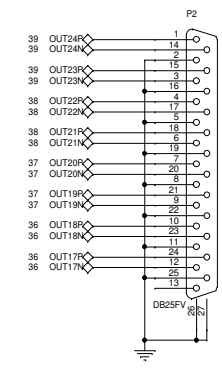
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Title		
OUT21 / OUT22		
Size	Document Number	Rev
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Title		
OUT23 / OUT24		
Size	Document Number	Rev
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Title		
DB25 CONNECTORS		
Size	Document Number	Rev
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