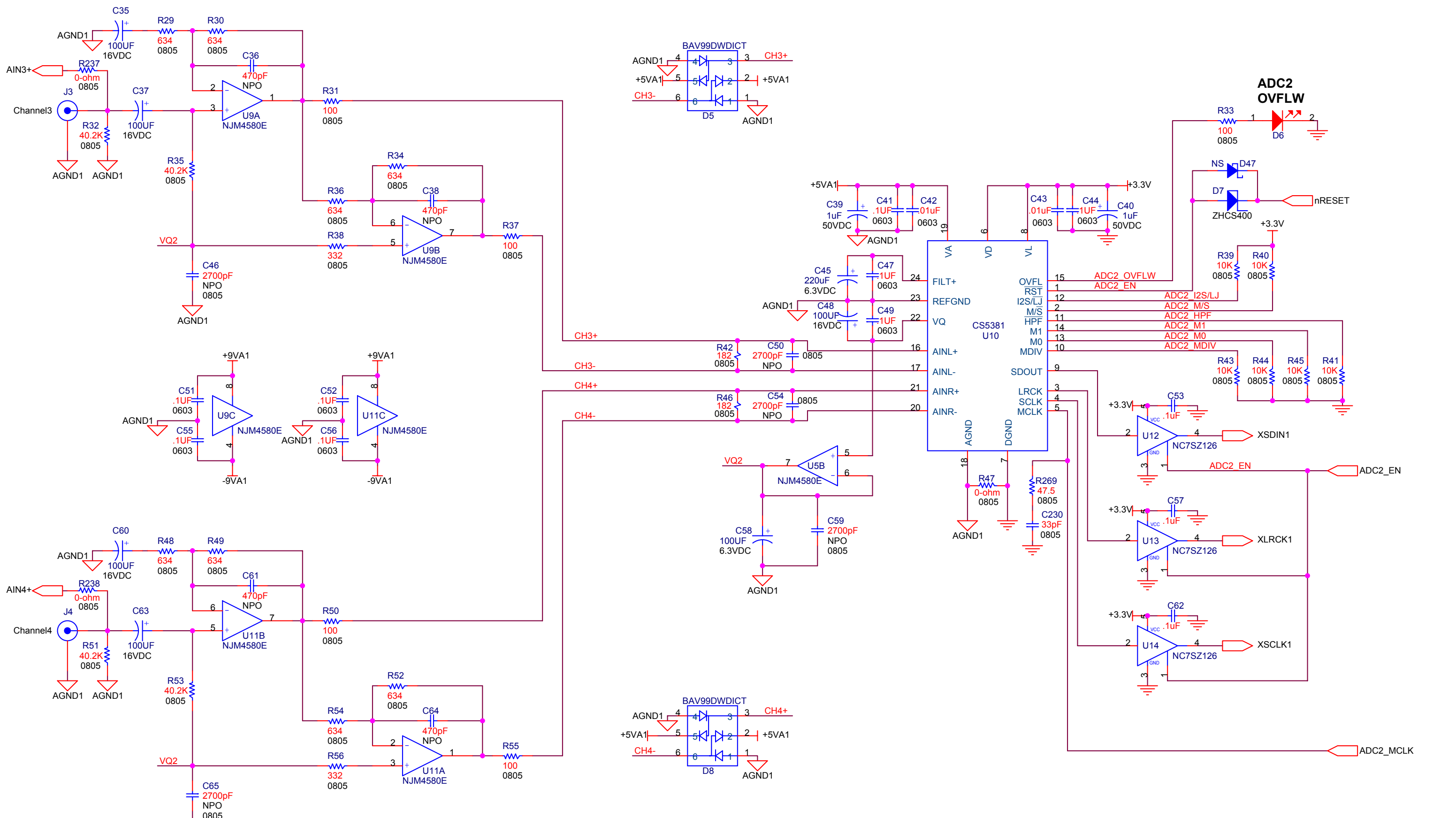


		D2Audio 7600 B Capital Of Texas HWY N Suite 130 Austin, TX 78731	
		Title: <b>Sofia-8 EEBUB 2nd Cut</b>	
Size B	Document Number 0070-C00036-000	<b>External ADC1</b>	
Date: Tuesday, June 15, 2004	Sheet 2 of 11	Rev 02	



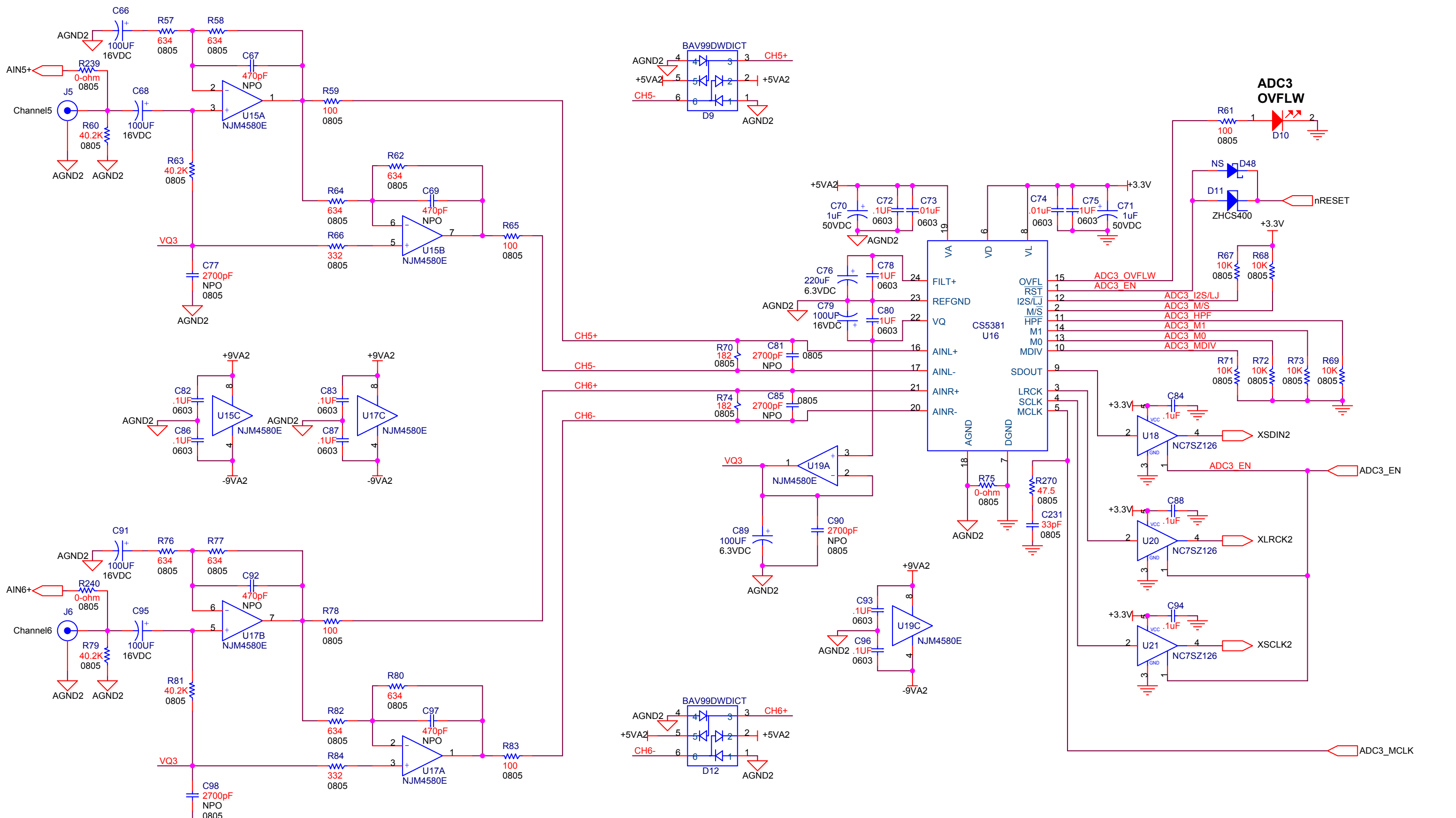
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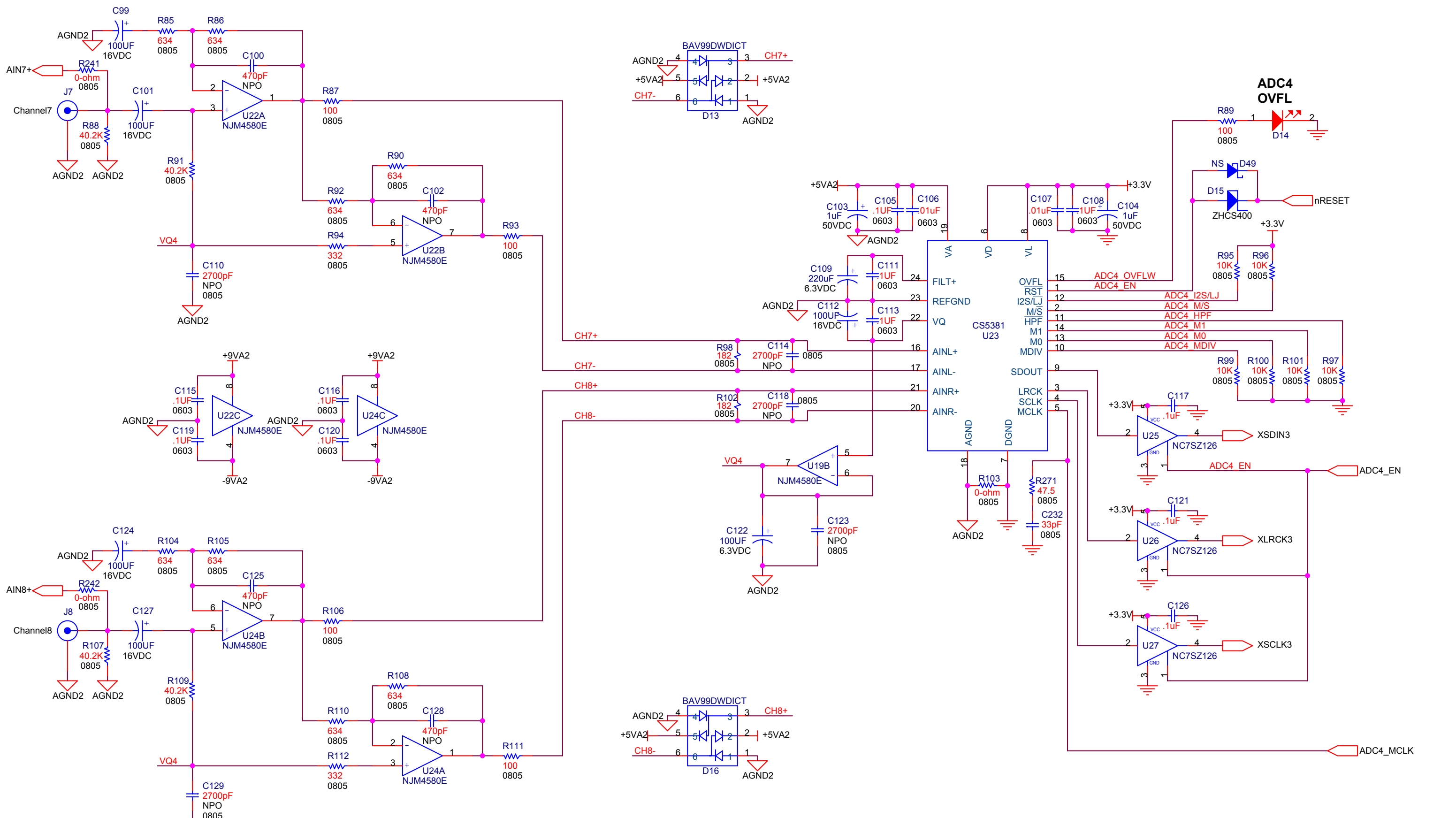
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Title: **Sofia-8 EEBUB 2nd Cut** Dennis Caldwell

Size B	Document Number 0070-C00036-000	<b>External ADC2</b>	Rev 02
Date:	Tuesday, June 15, 2004	Sheet 3 of 11	



		D2Audio 7600 B Capital Of Texas HWY N Suite 130 Austin, TX 78731	
		Title: <b>Sofia-8 EEBUB 2nd Cut</b>	
Size B	Document Number 0070-C00036-000	<b>External ADC3</b>	
Date: Tuesday, June 15, 2004	Sheet 4 of 11	Rev 02	

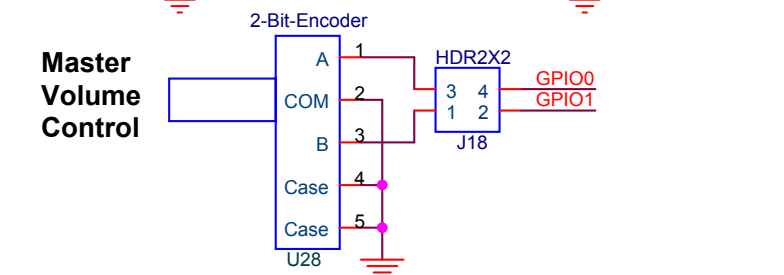
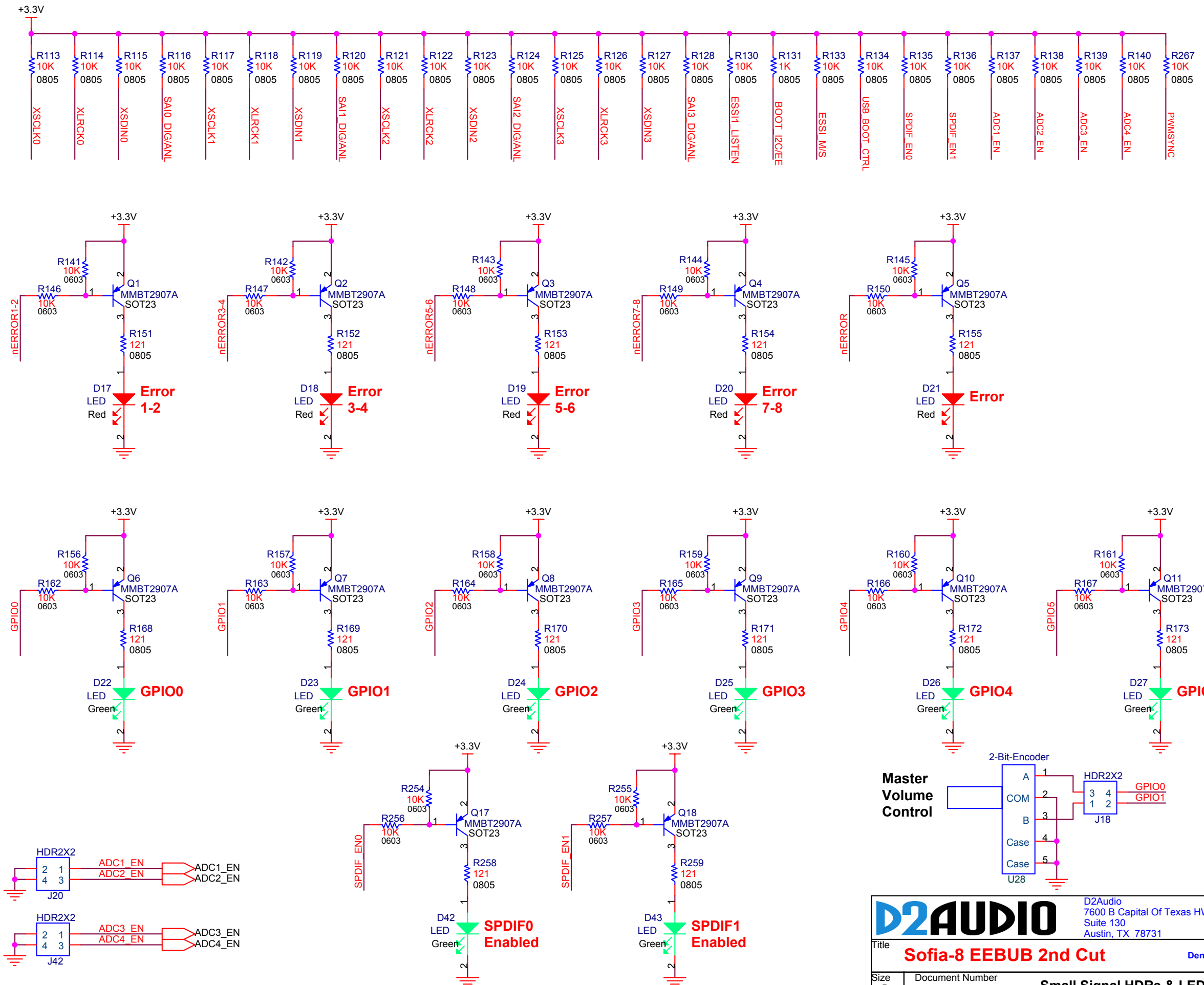
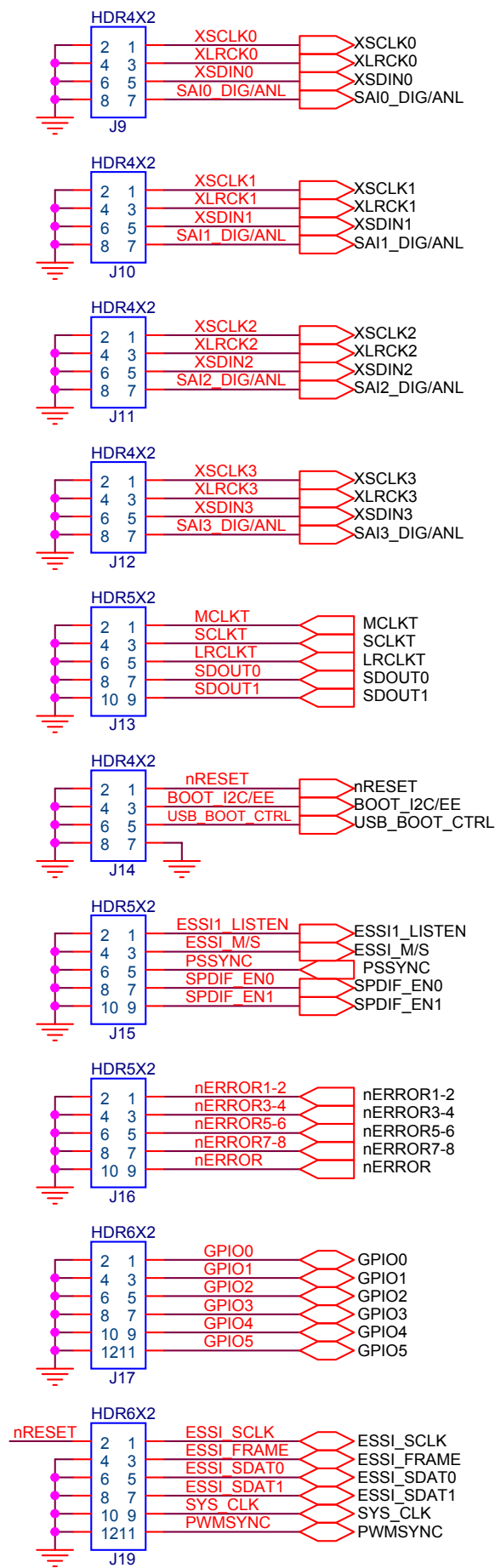


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Size B	Document Number 0070-C00036-000	<b>External ADC4</b>	Rev 02
Date:	Tuesday, June 15, 2004	Sheet 5 of 11	

# Small Signal I/O Headers



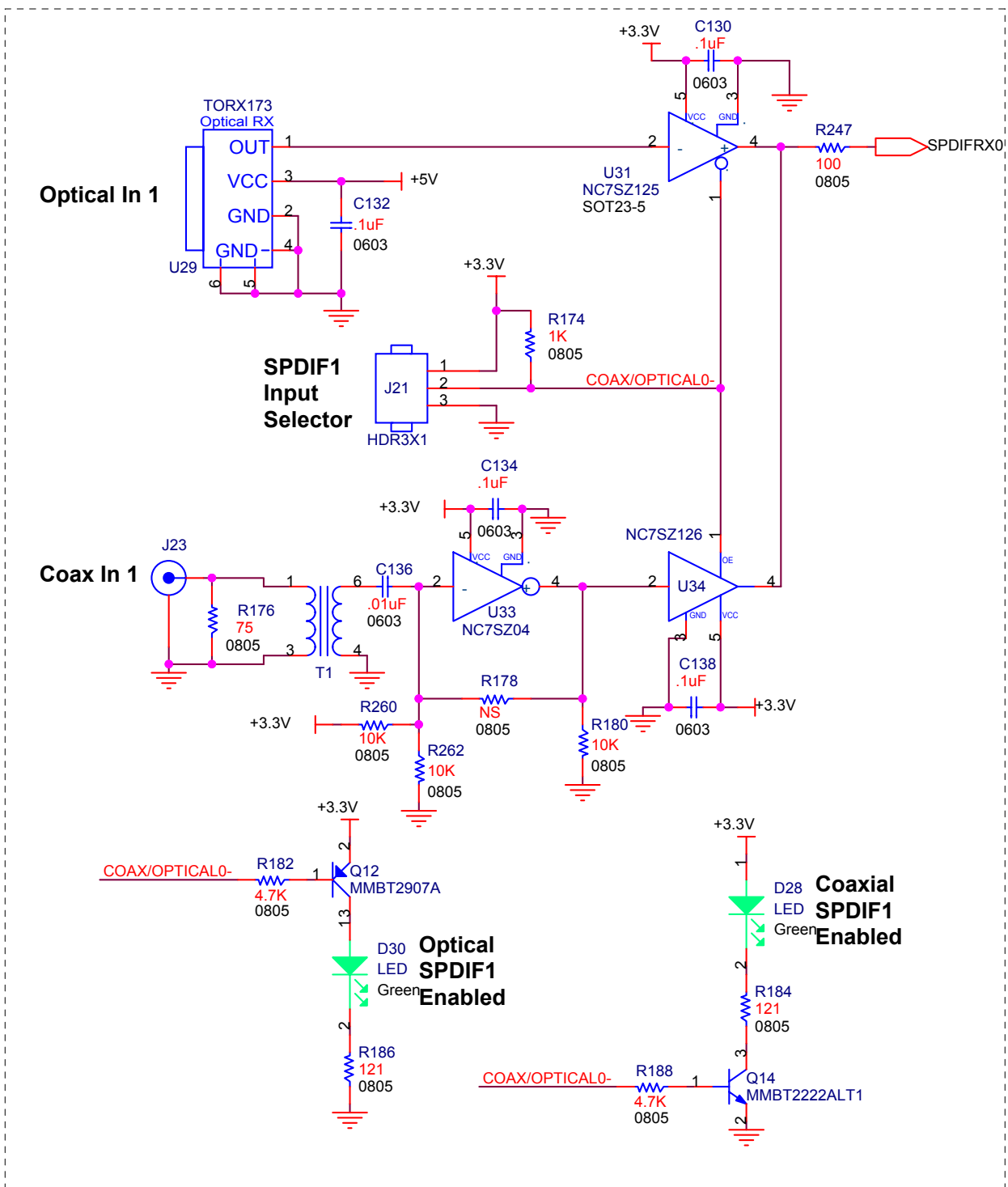
**D2AUDIO**  
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 Suite 130  
 Austin, TX 78731

**Title:** Sofia-8 EEBUB 2nd Cut  
**Author:** Dennis Caldwell

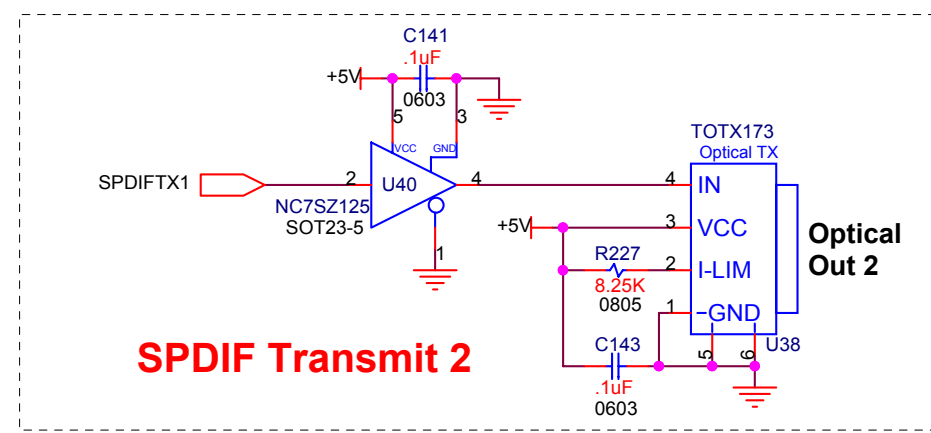
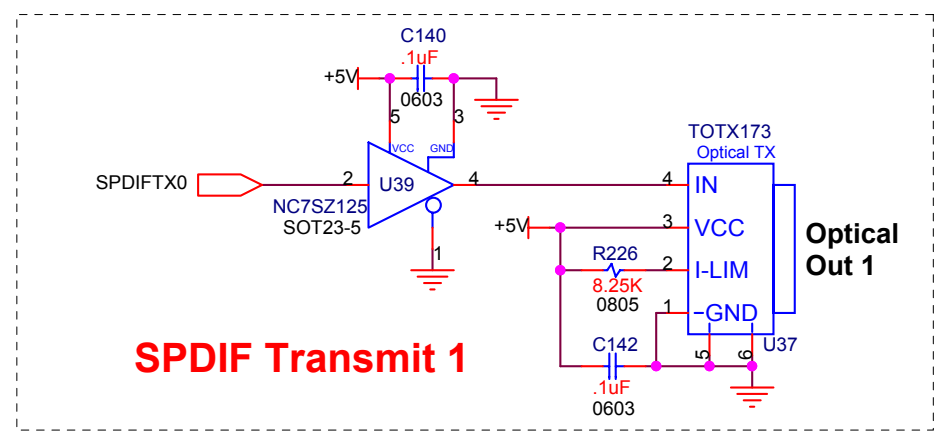
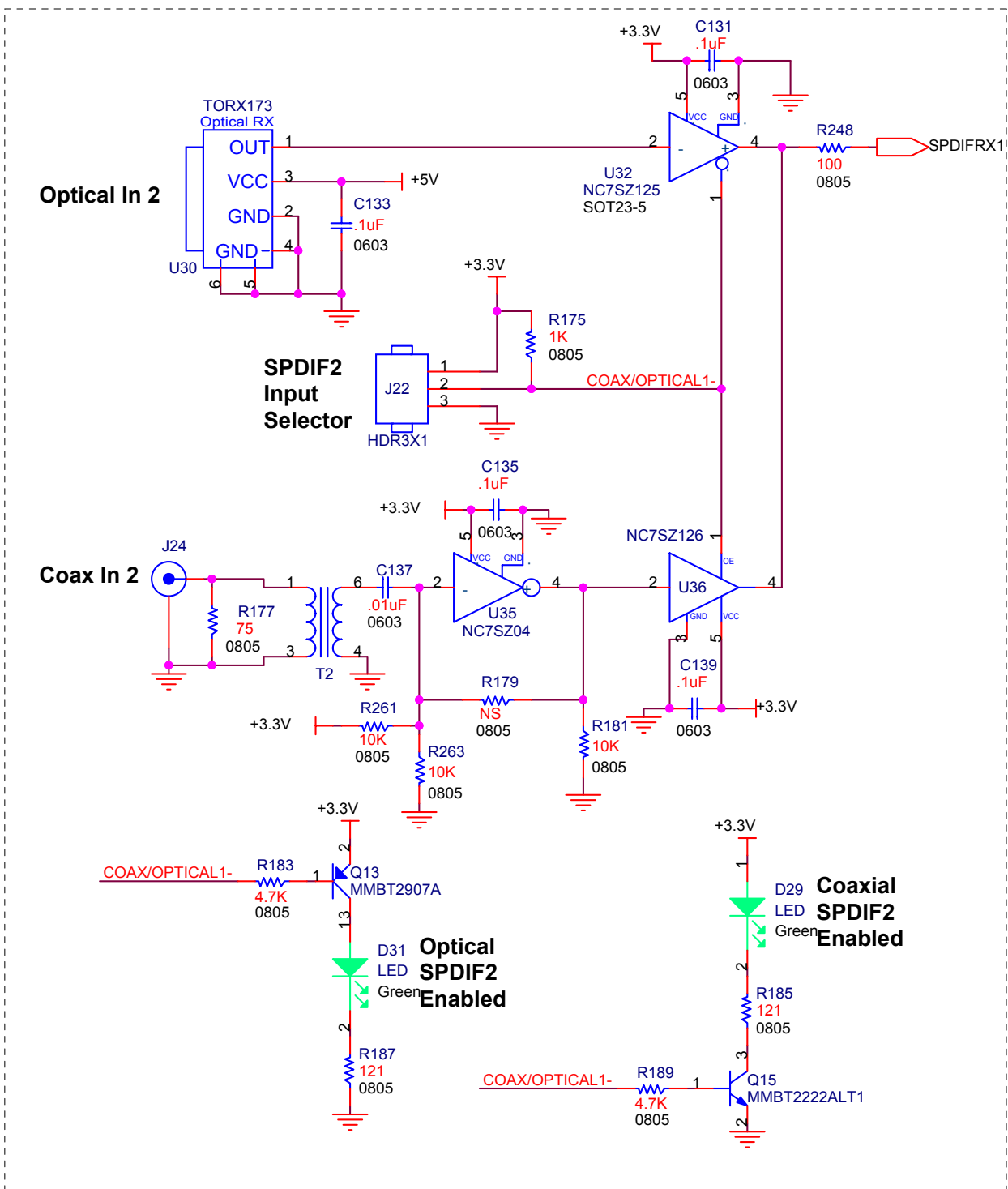
Size B	Document Number 0070-C00036-000	<b>Small Signal HDRs &amp; LEDs</b>	Rev 02
Date:	Thursday, May 20, 2004	Sheet 6 of 11	



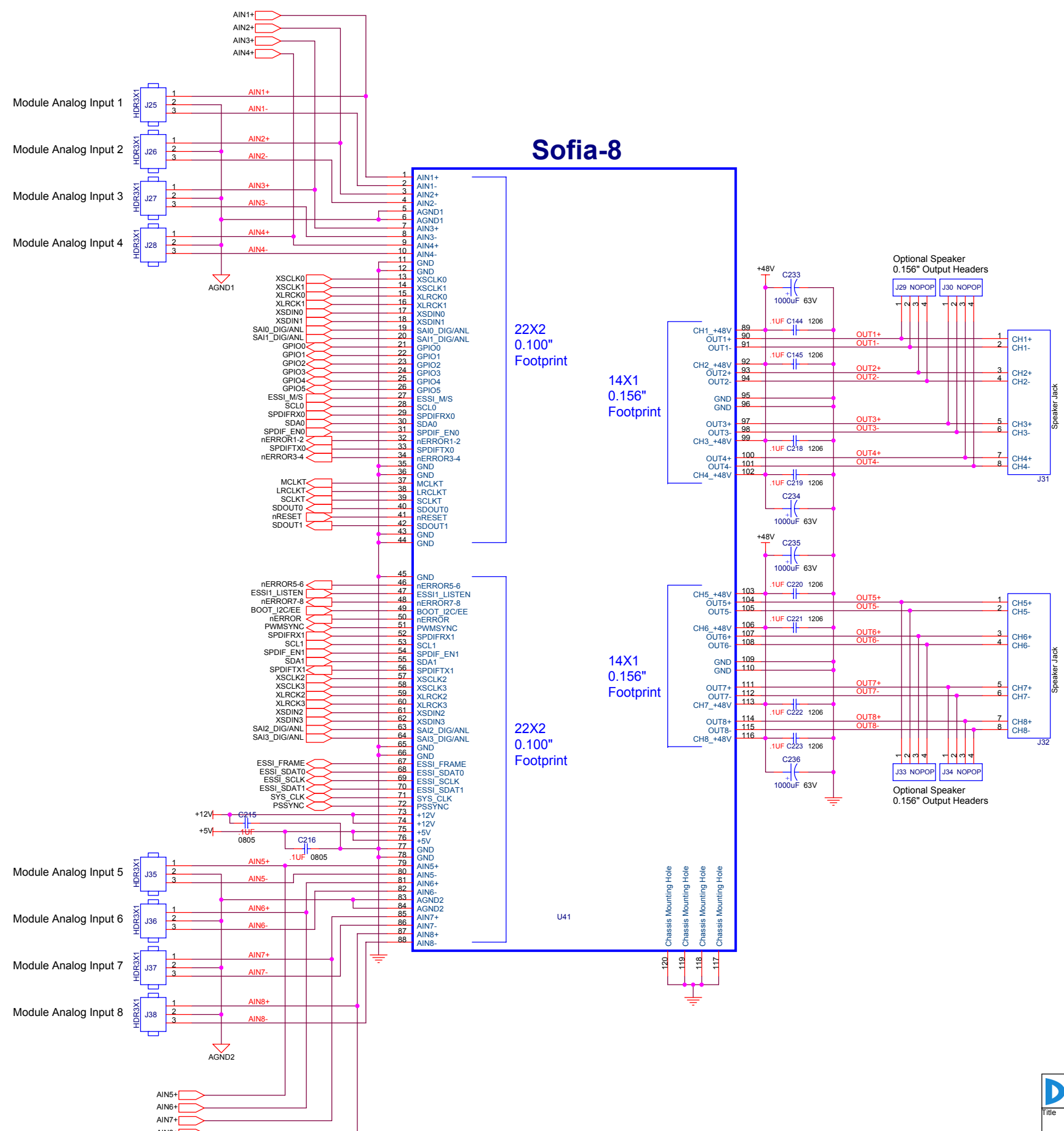
# SPDIF Receive 1



# SPDIF Receive 2



<b>D2AUDIO</b>		D2Audio 7600 B Capital Of Texas HWY N Suite 130 Austin, TX 78731	
Title		Sofia-8 EEBUB 2nd Cut	
Author		Dennis Caldwell	
Size B	Document Number	SPDIF Inputs & Outputs	
	0070-C00036-000		Rev 02
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# Sofia-8

22X2  
0.100"  
Footprint

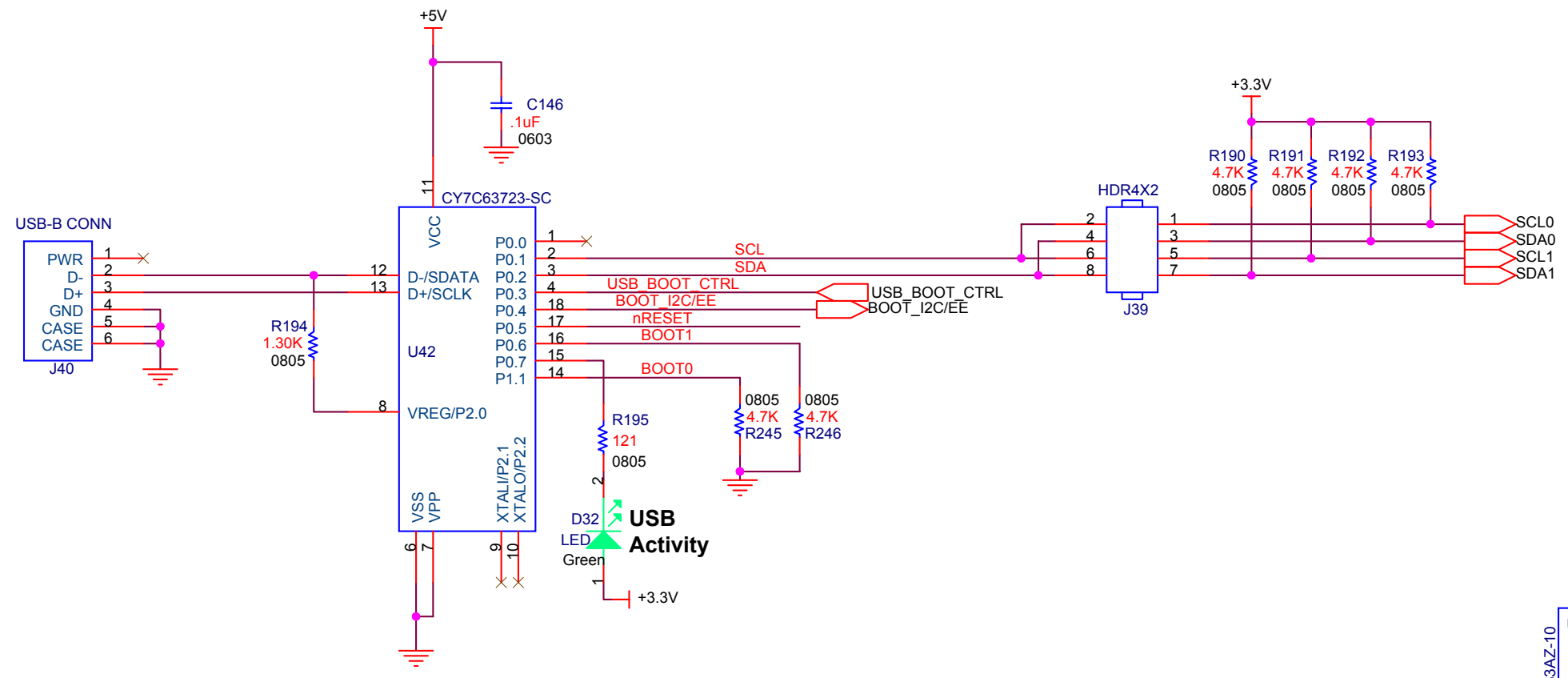
14X1  
0.156"  
Footprint

14X1  
0.156"  
Footprint

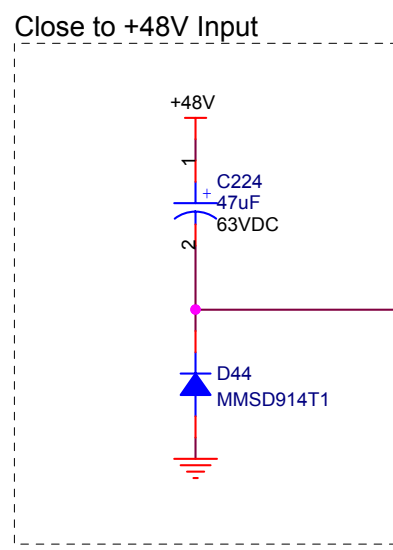
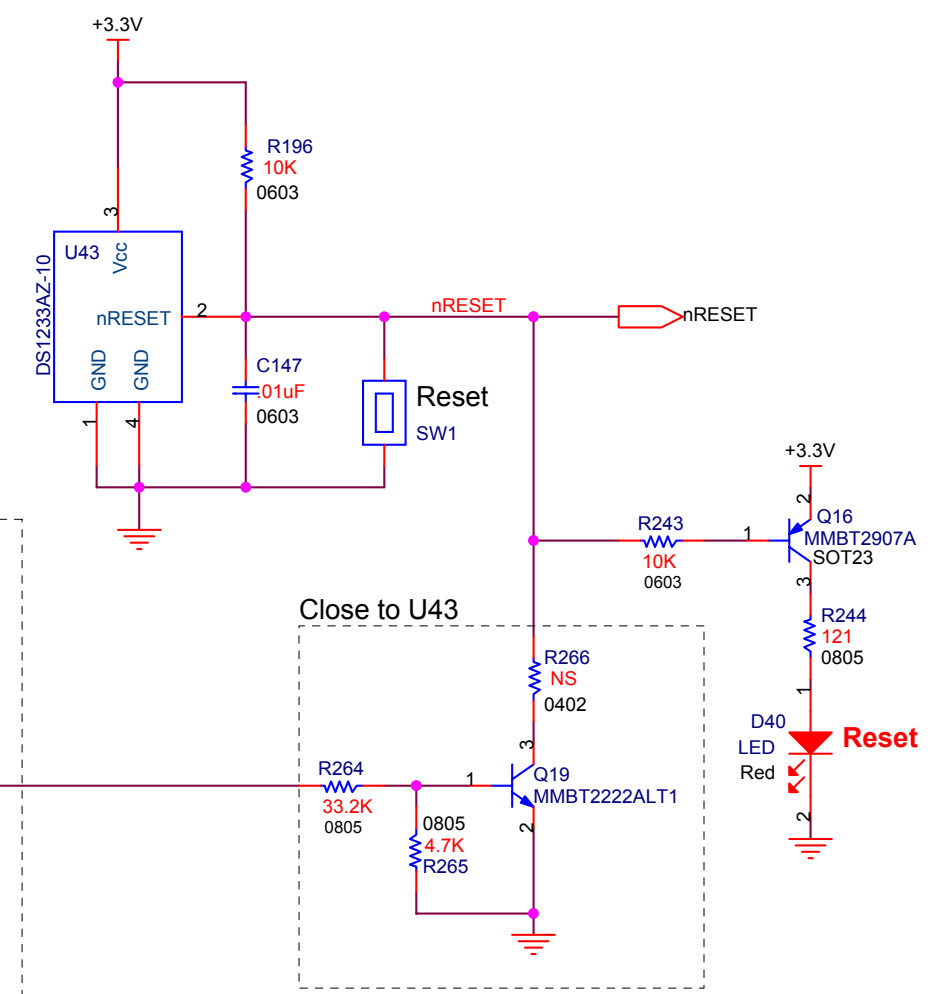
22X2  
0.100"  
Footprint

U41

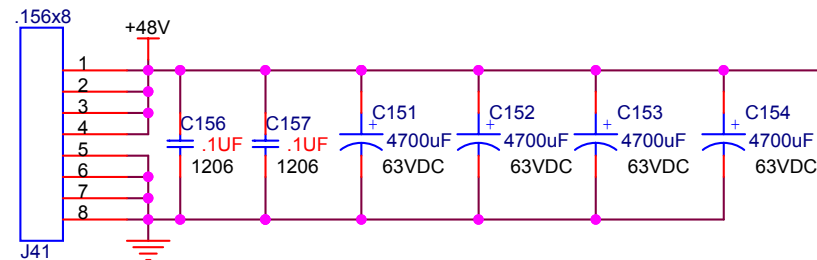




**USB\_BOOT\_CTRL**  
 HI - Cypress uP wants to control BOOTn lines  
 (must leave BOOTn jumpers unconnected)  
 LO - BOOTn jumpers control boot mode



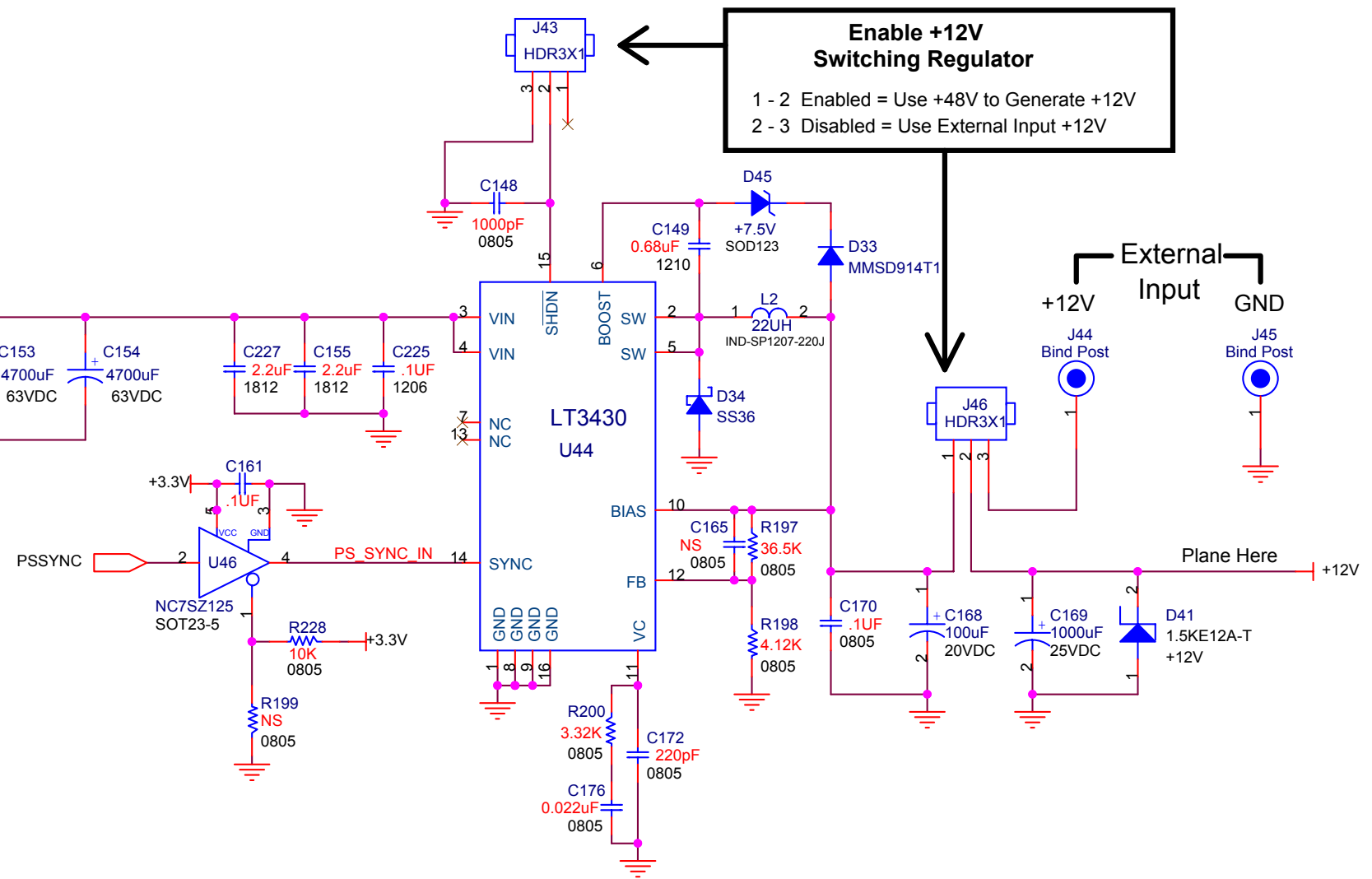
**High Voltage Input**



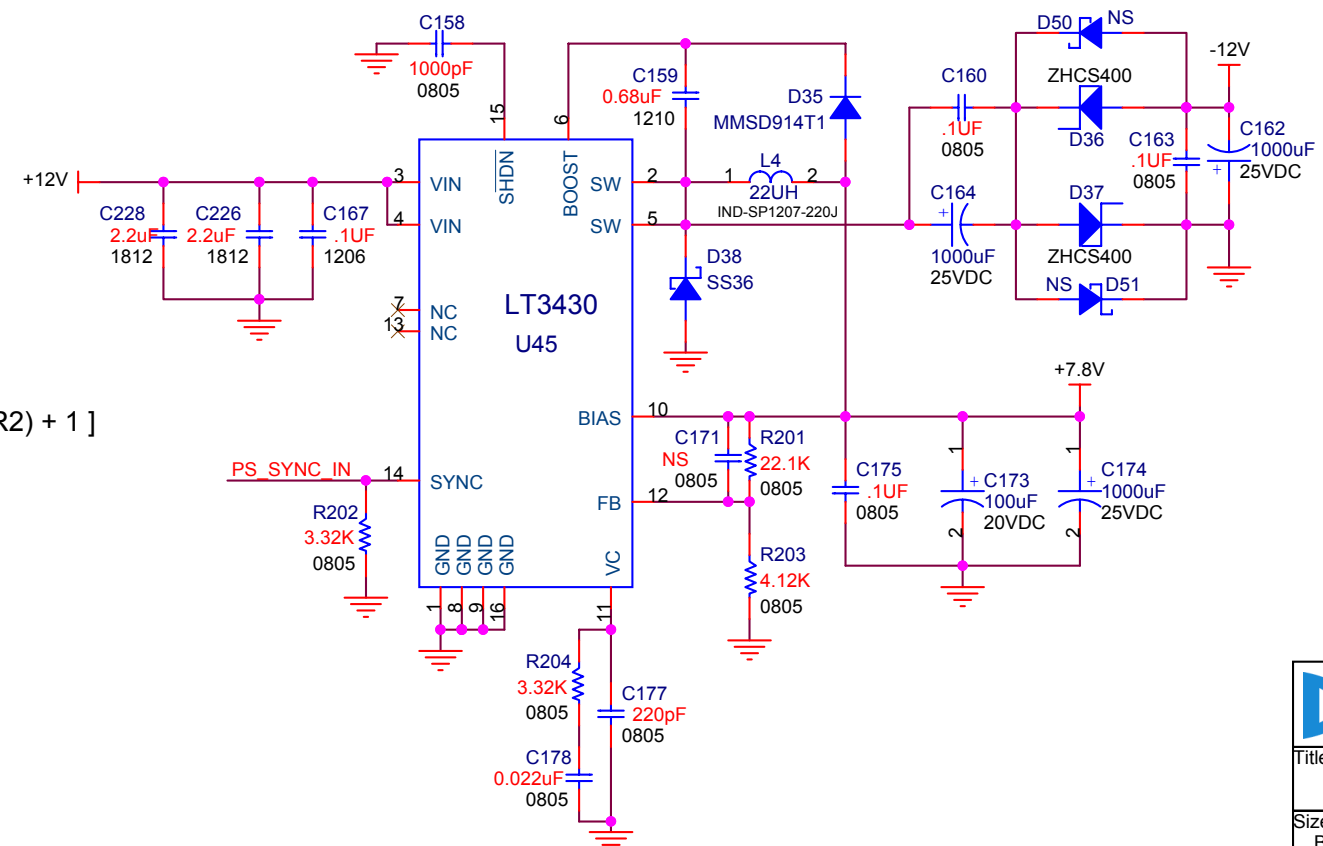
**Optional High Voltage Bleed Resistors**  
 Effective R = 5K  
 Power per R @ 50V = 125mW  
 Current from 50V rail = 10mA  
 Discharge Time Constant = 94s



**Enable +12V Switching Regulator**  
 1 - 2 Enabled = Use +48V to Generate +12V  
 2 - 3 Disabled = Use External Input +12V



LT3430  
 $V_{out} = 1.22 * [(R1 / R2) + 1]$



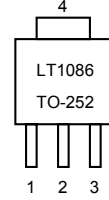
## Digital Supplies

### LT1086 Positive Adj Regulator

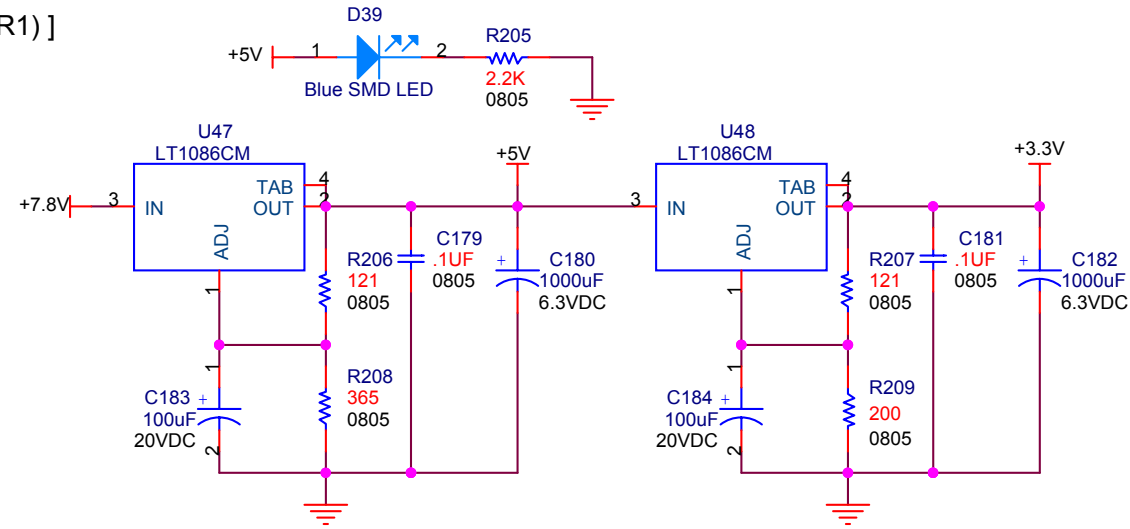
$$V_{out} = V_{ref} * [1 + (R2 / R1)]$$

$$V_{ref} = 1.25V$$

$$R1 = 121 \text{ Ohms}$$



- 1 = ADJ
- 2 = OUT
- 3 = IN
- 4 = Tab = OUT



Both U5 and U6 linear voltage regulators require 1.25 sq" copper for heat sink Pin 2.

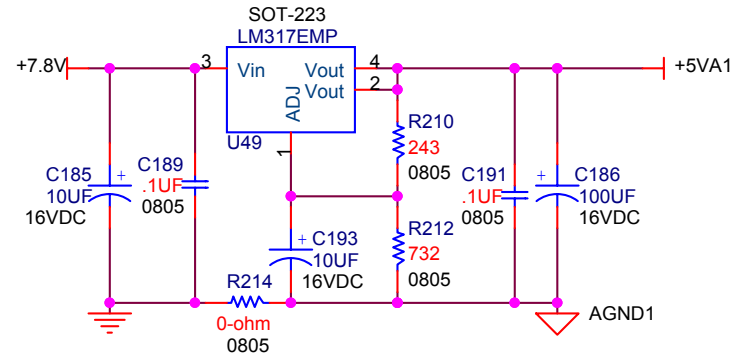
## Analog 1 Supplies

### LM317 Positive Adj Regulator

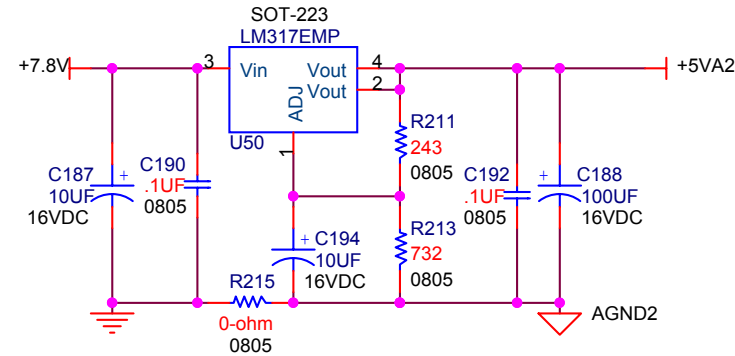
$$V_{out} = V_{ref} * [1 + (R2 / R1)]$$

$$V_{ref} = 1.25V$$

$$R1 = 243 \text{ Ohms}$$



## Analog 2 Supplies

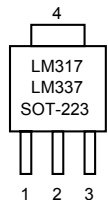


### LM337 Negative Adj Regulator

$$V_{out} = V_{ref} * [1 + (R2 / R1)]$$

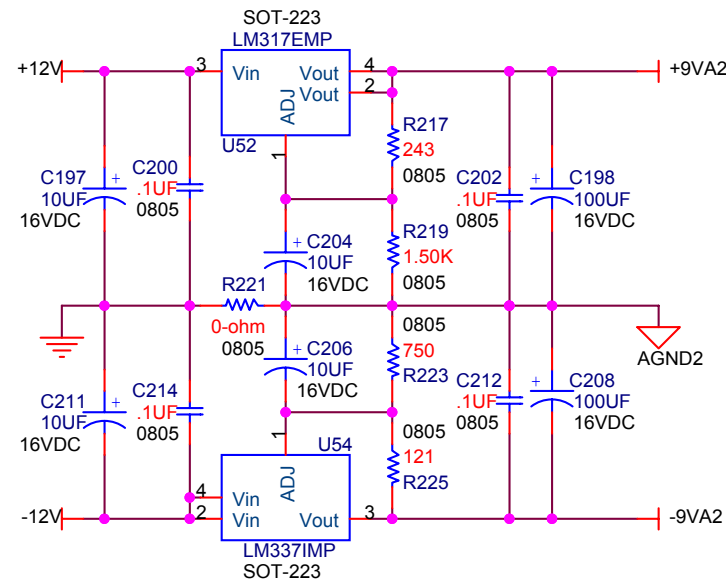
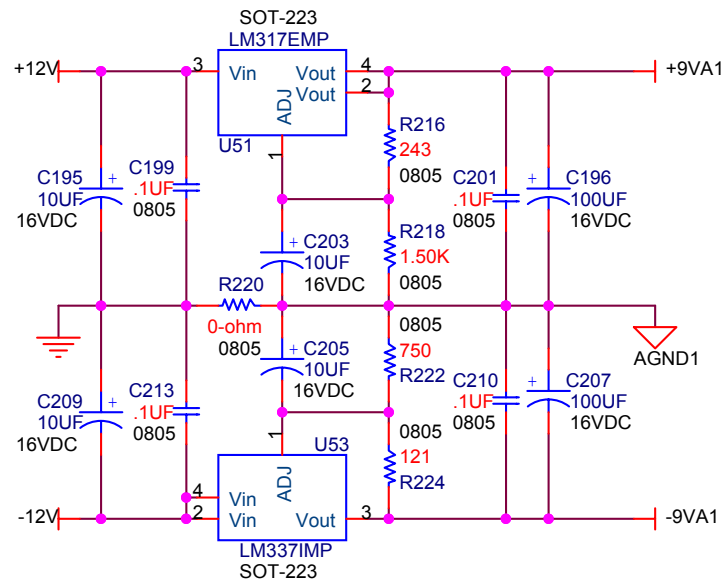
$$V_{ref} = -1.25V$$

$$R1 = 121 \text{ Ohms}$$

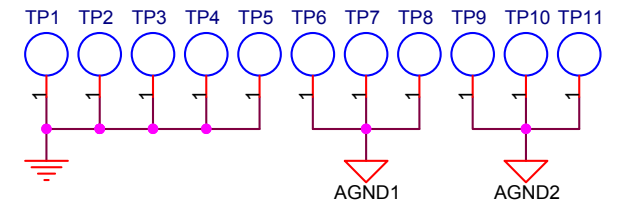


- LM317**
- 1 = ADJ
  - 2 = OUT
  - 3 = IN
  - 4 = Tab = OUT

- LM337**
- 1 = ADJ
  - 2 = IN
  - 3 = OUT
  - 4 = Tab = IN



## Ground Test Point Loops



**D2AUDIO**

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Suite 130  
Austin, TX 78731

Title: **Sofia-8 EEBUB 2nd Cut**

Dennis Caldwell

Size B Document Number  
0070-C00036-000

**Linear Regulators**

Rev  
02

Date: Thursday, May 20, 2004

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