

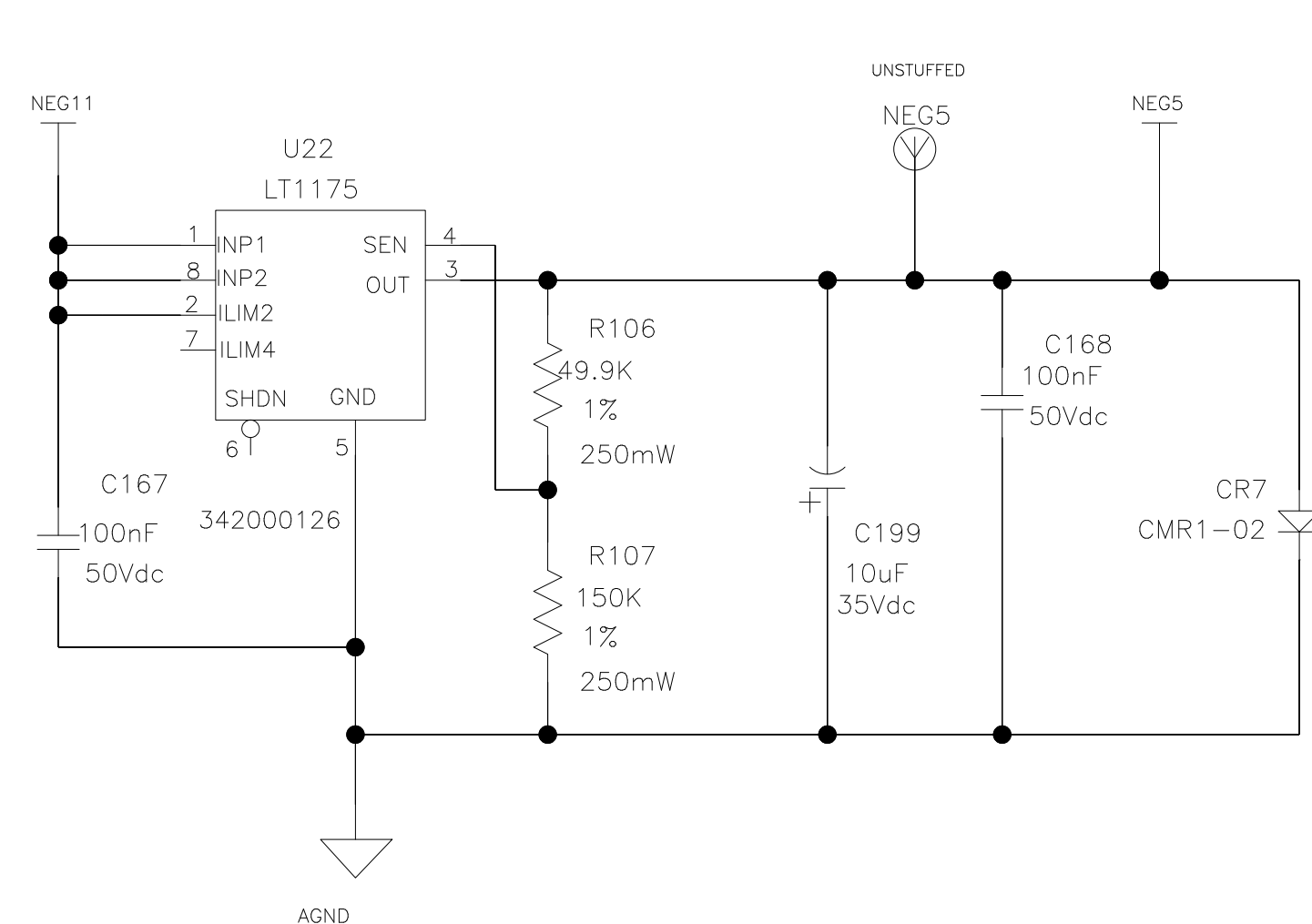
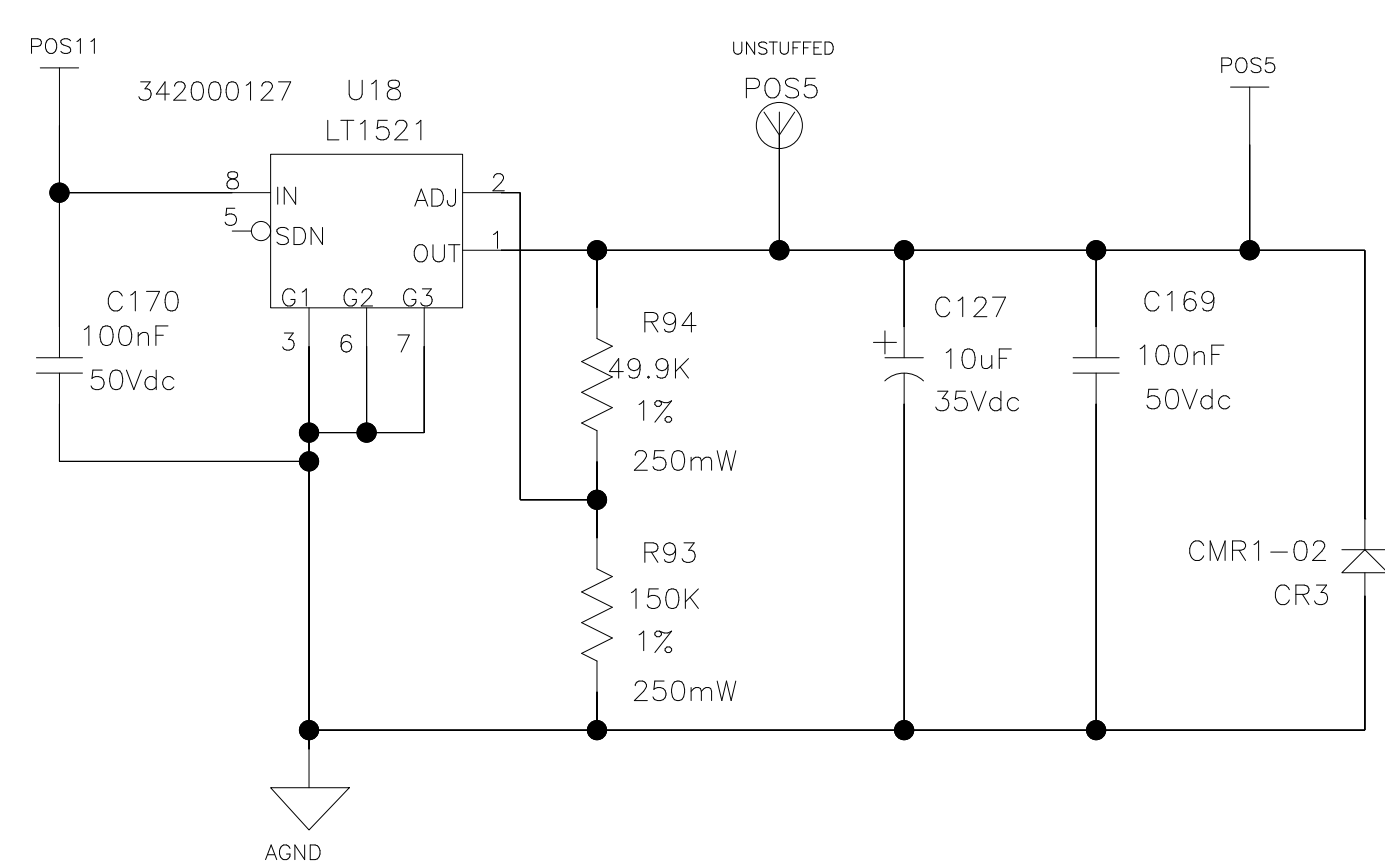
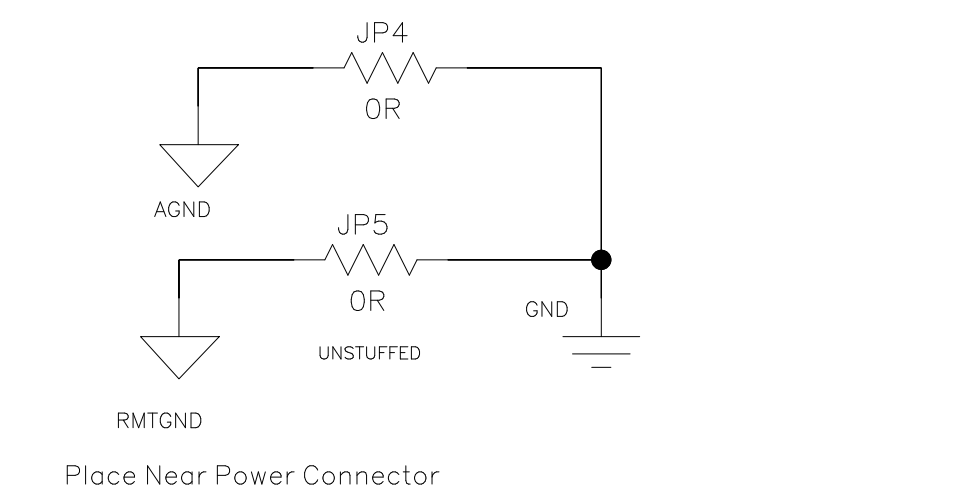
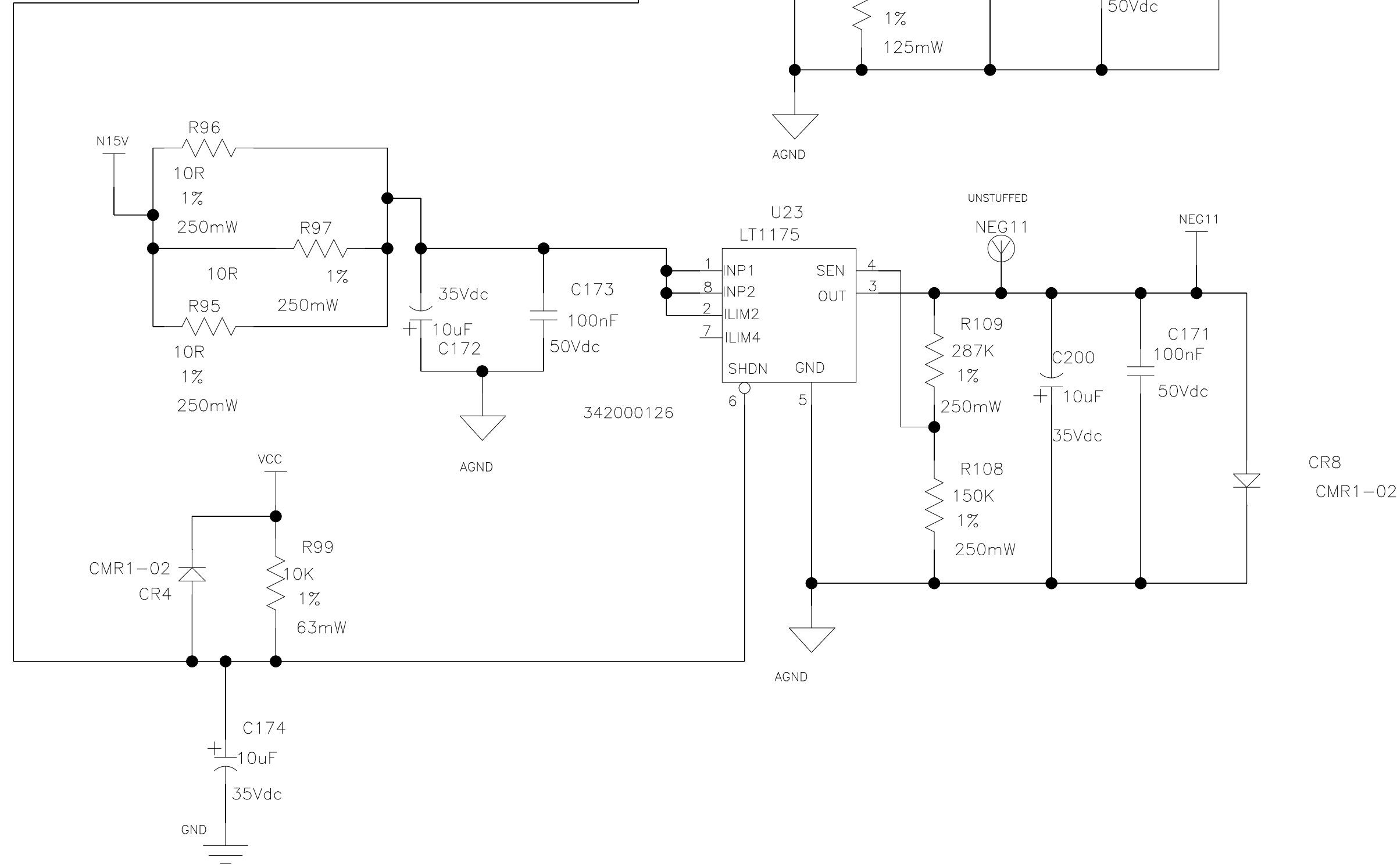
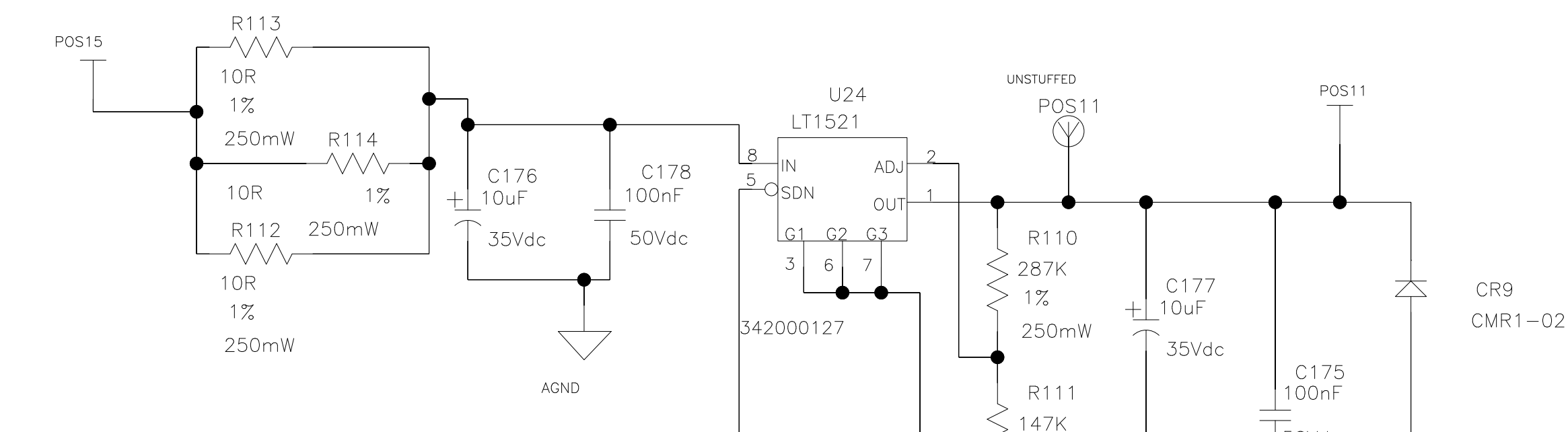
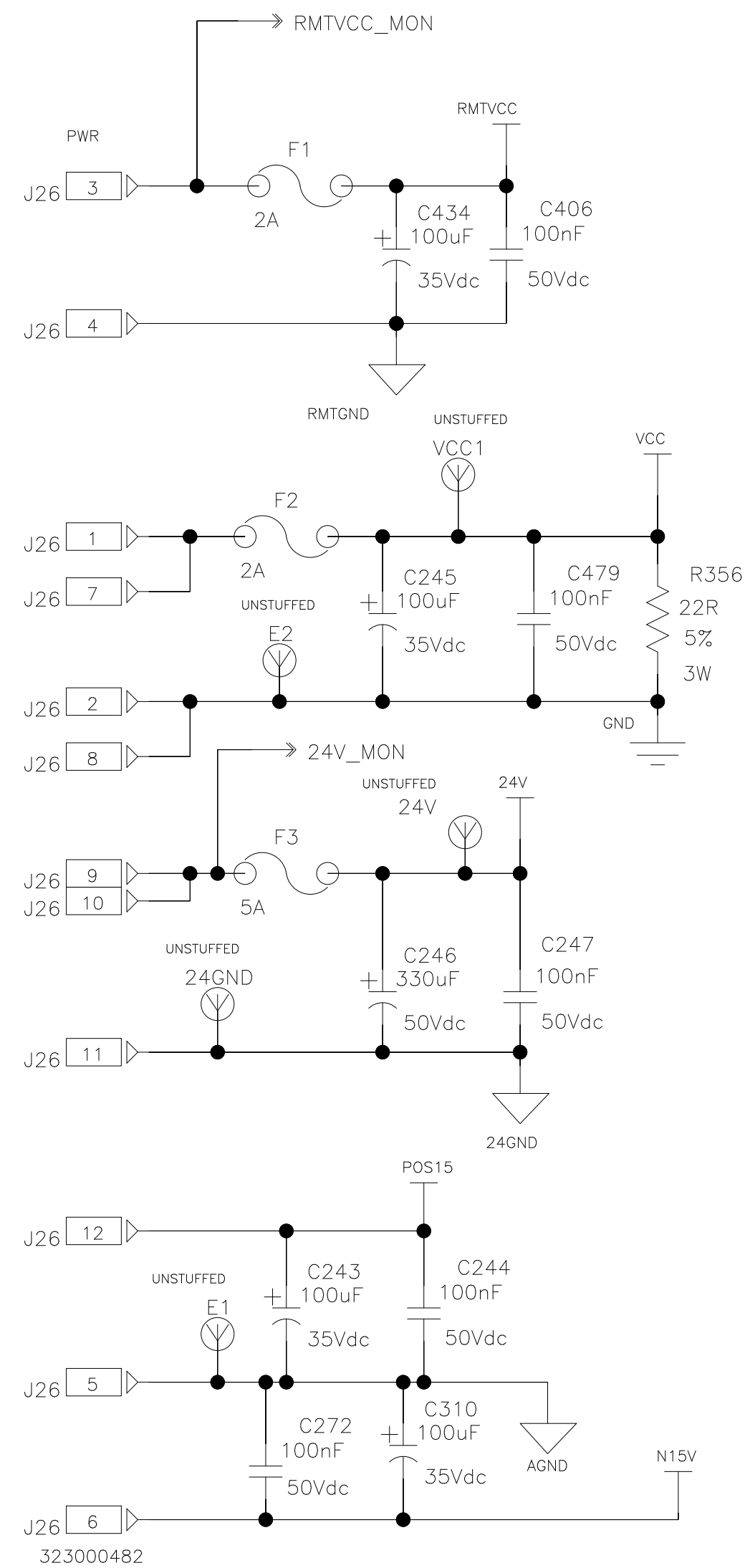
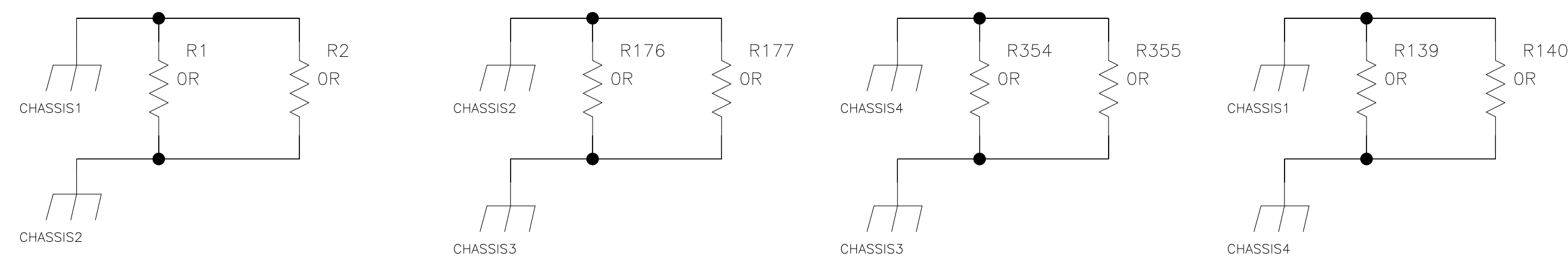


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SHEET 5	ANALOG OUTPUTS; ONE WITH SELECTABLE DATA RATE
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SHEET 7	PRE-AMP INTERFACE AND OPTO-ISOLATORS
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SHEET 22	ESD GUARD & ESD CAPS
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Power Distribution

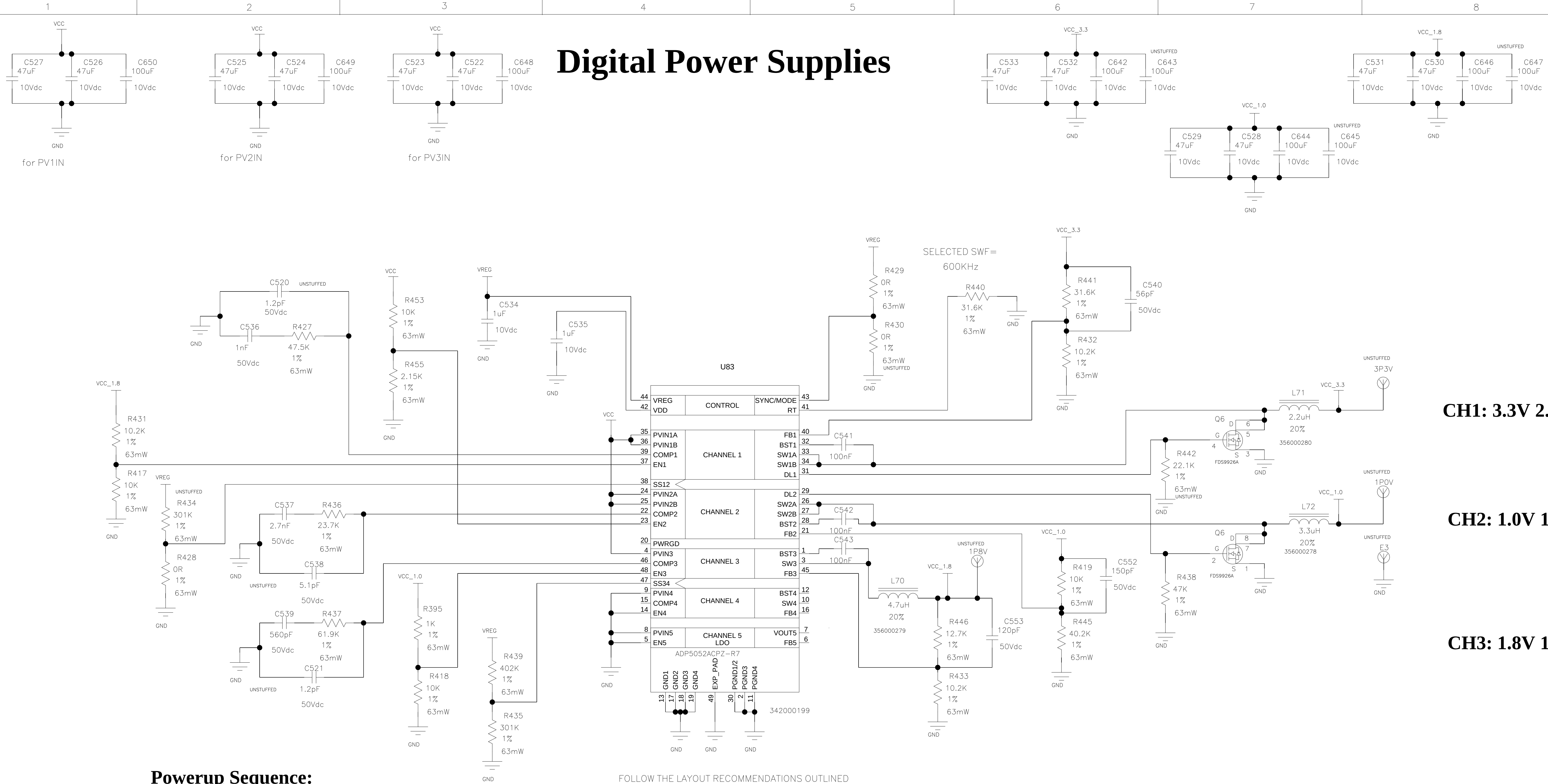
NOTES:

1. UNLESS OTHERWISE SPECIFIED RESISTOR VALUES ARE EXPRESSED IN OHMS.

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DRAWN BY Ziad ElMossih		2489 TUV PERSONALITY			
DATE 22-JAN-2018		SIZE D	DWG NO 710000355		REV H
TIME 19:12:09 UTC					
CHANGE NO. SEE SAP		SCALE 1:1	MENTOR DX DESIGNER		SHEET 1 of 23

Digital Power Supplies

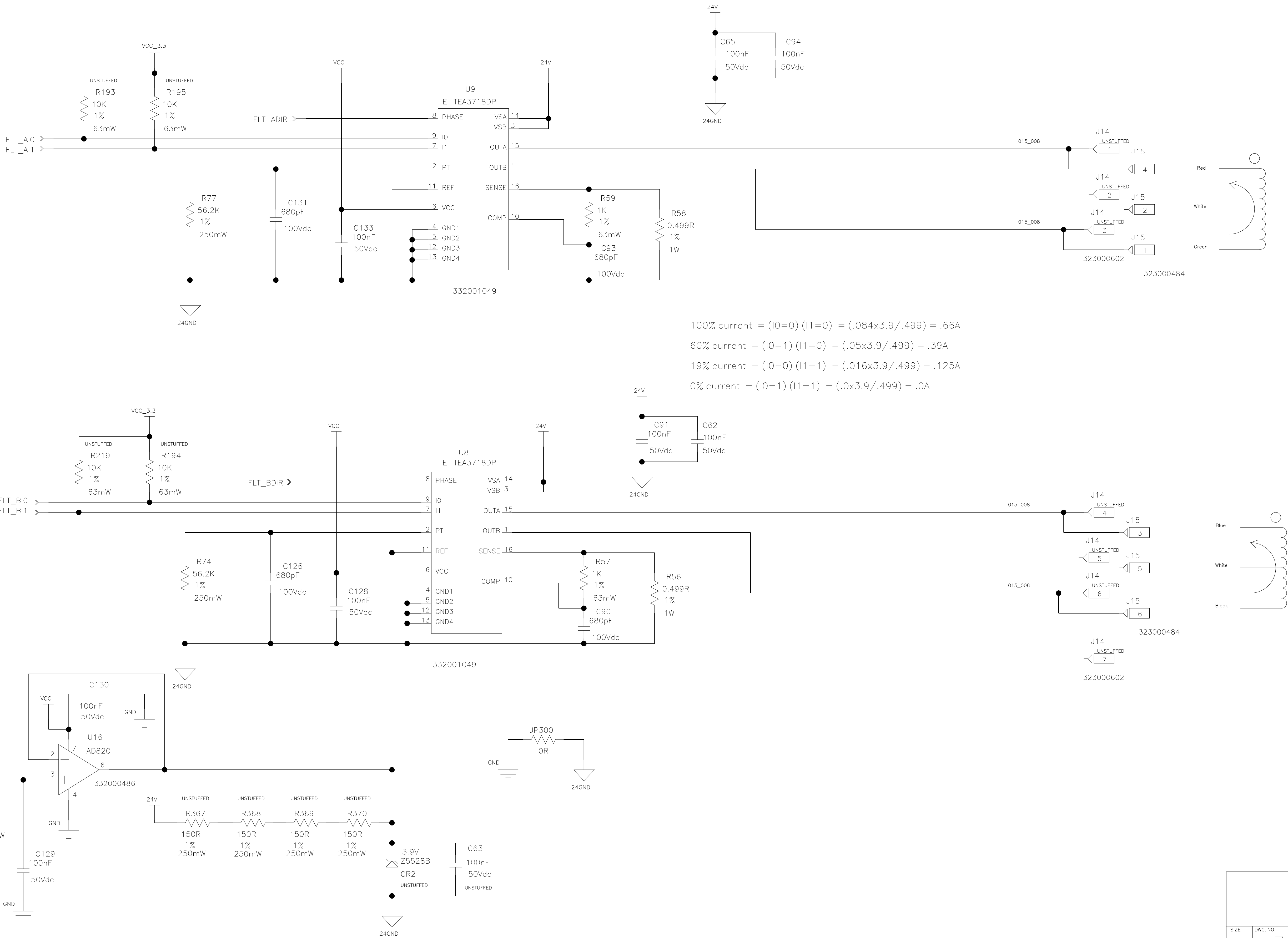


Powerup Sequence:
1- VCC (5V)
2- CH2 (1.0V)
3- CH3 (1.8V)
4- CH1 (3.3V)

Soft Start Time Selected:
CH1 (3.3V): 8msec
CH2 (1.0V): 8msec
CH3 (1.8V): 4msec

FOLLOW THE LAYOUT RECOMMENDATIONS OUTLINED
IN THE DATASHEET AND DESIGN TOOL ADP505X_BuckDesigner_Release

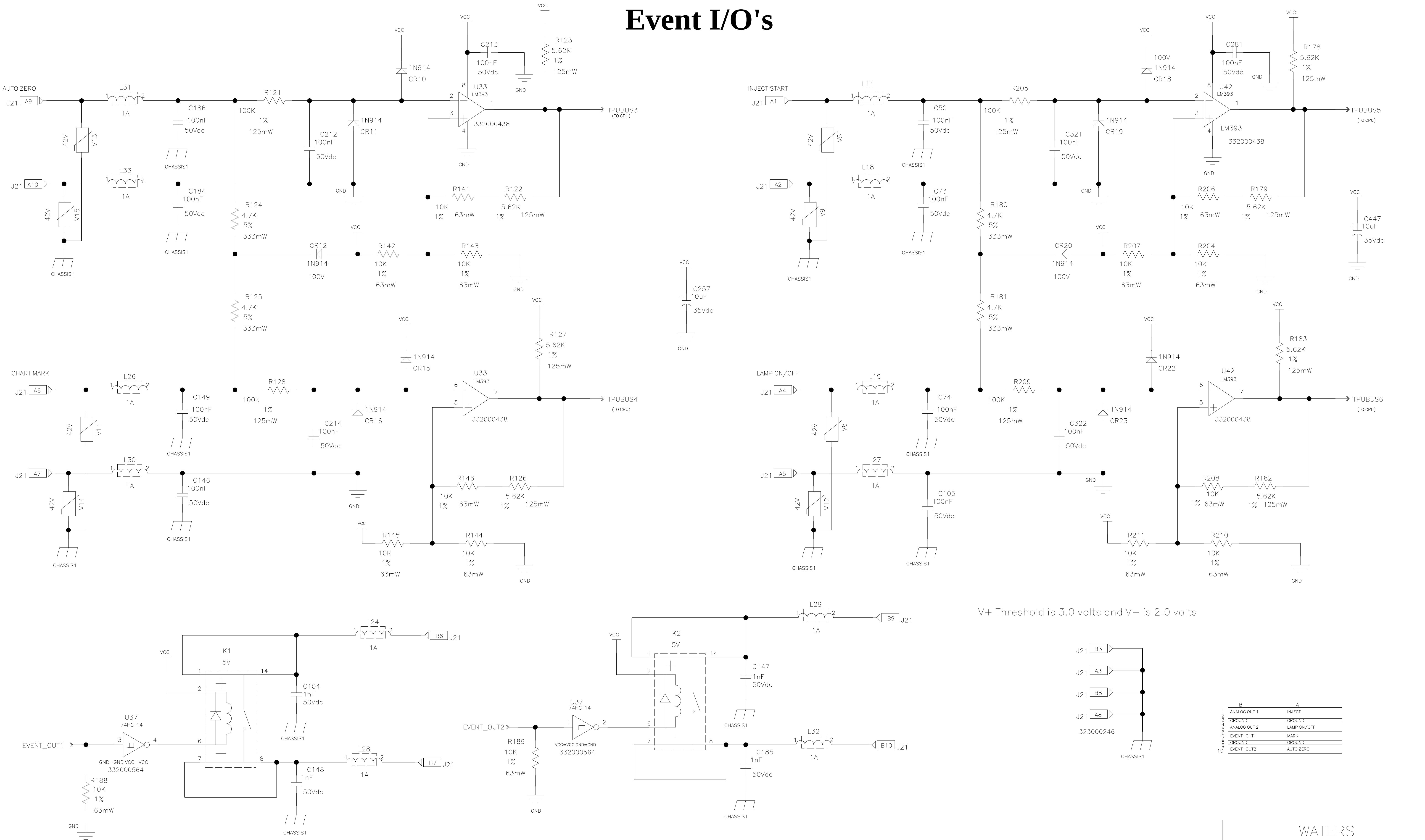
Filter Wheel Driver



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WATERS 34 MAPLE STREET MILFORD, MA 01757 USA		
SIZE D	DWG. NO. 710000355	REV H
SCALE 1:1	MENTOR DX DESIGNER	SHEET 3 of 23

Event I/O's



V+ Threshold is 3.0 volts and V- is 2.0 volts

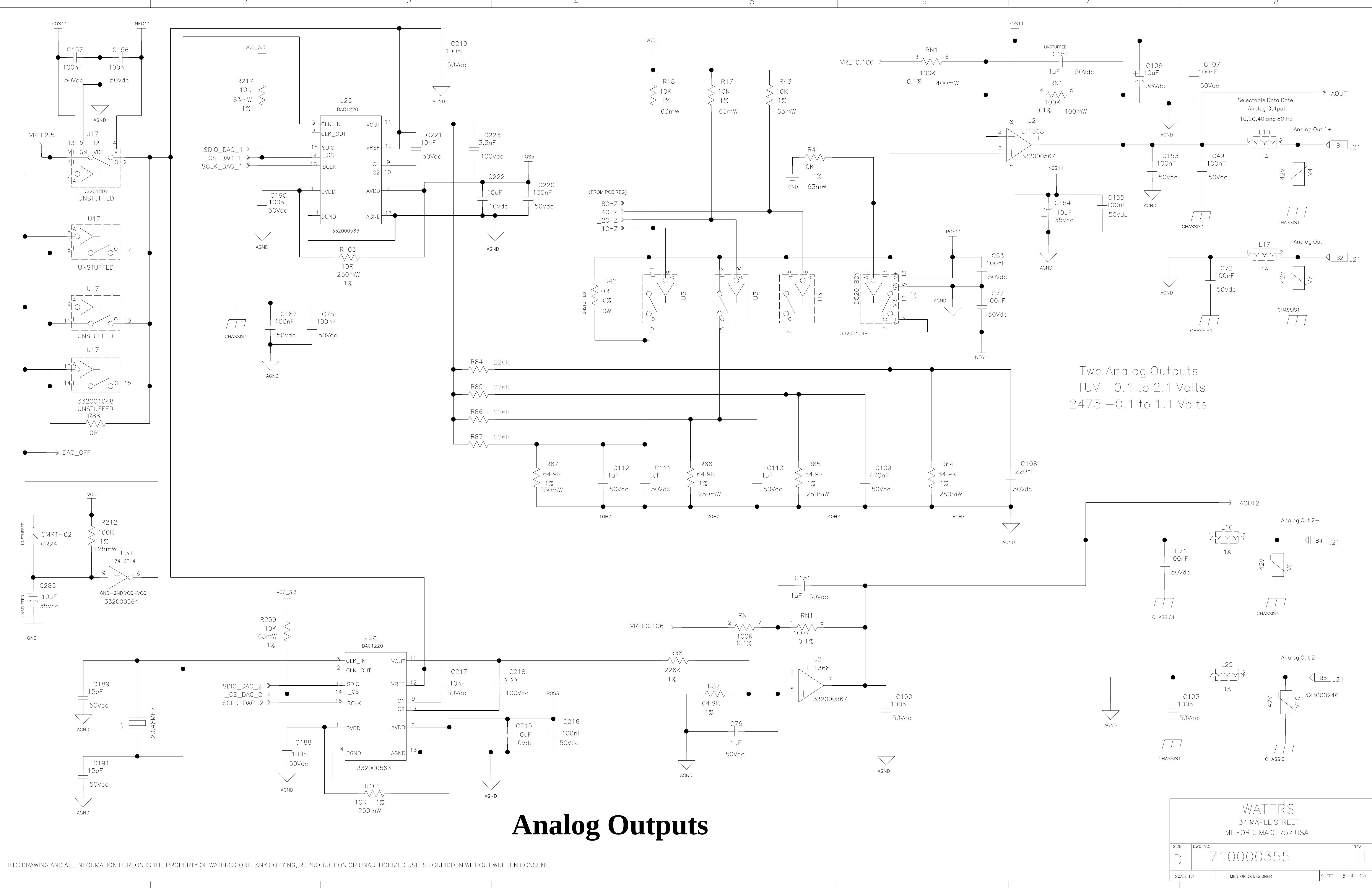
B		A
1	ANALOG OUT 1	INJECT
2	GROUND	GROUND
3	ANALOG OUT 2	LAMP ON/OFF
4	EVENT_OUT1	MARK
5	GROUND	GROUND
6	EVENT_OUT2	AUTO ZERO

WATERS

34 MAPLE STREET

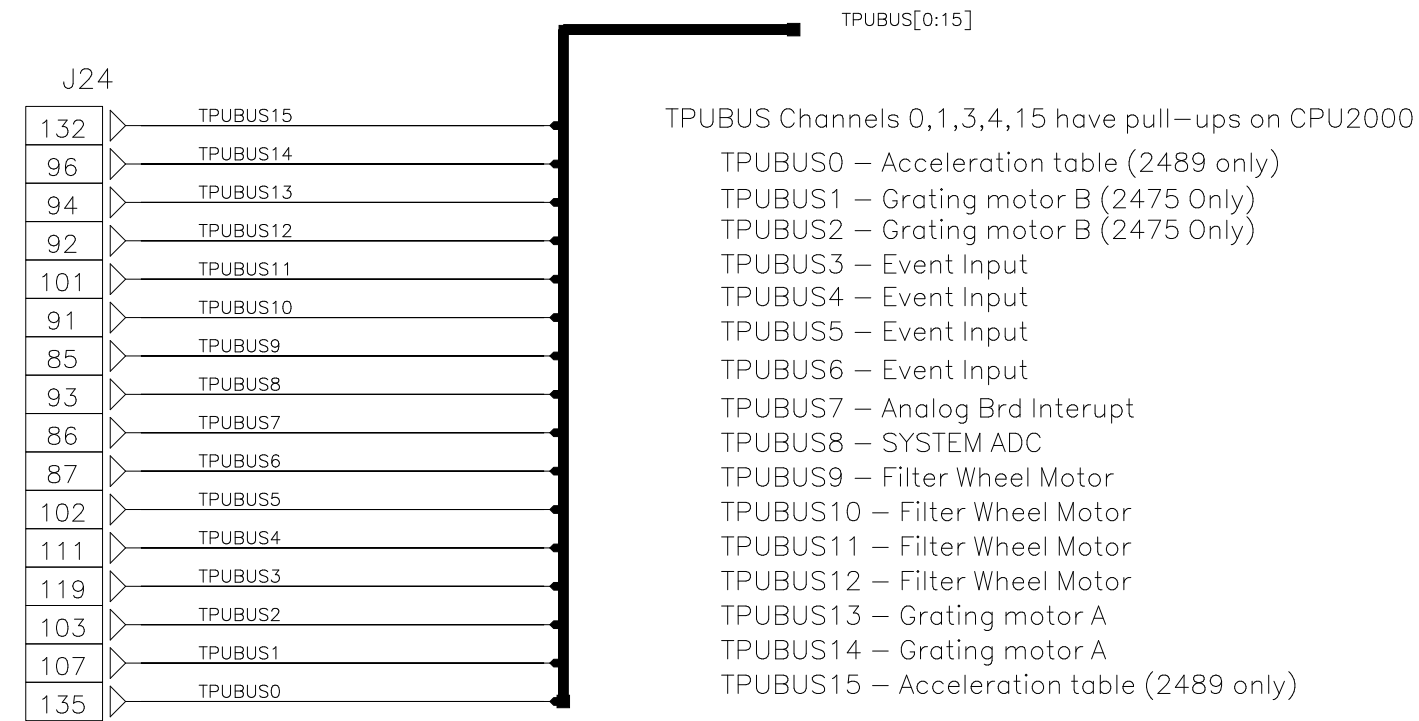
MILFORD, MA 01757 USA

SIZE	DWG. NO.	REV
D	710000355	H
SCALE 1:1	MENTOR DX DESIGNER	SHEET 4 of 23

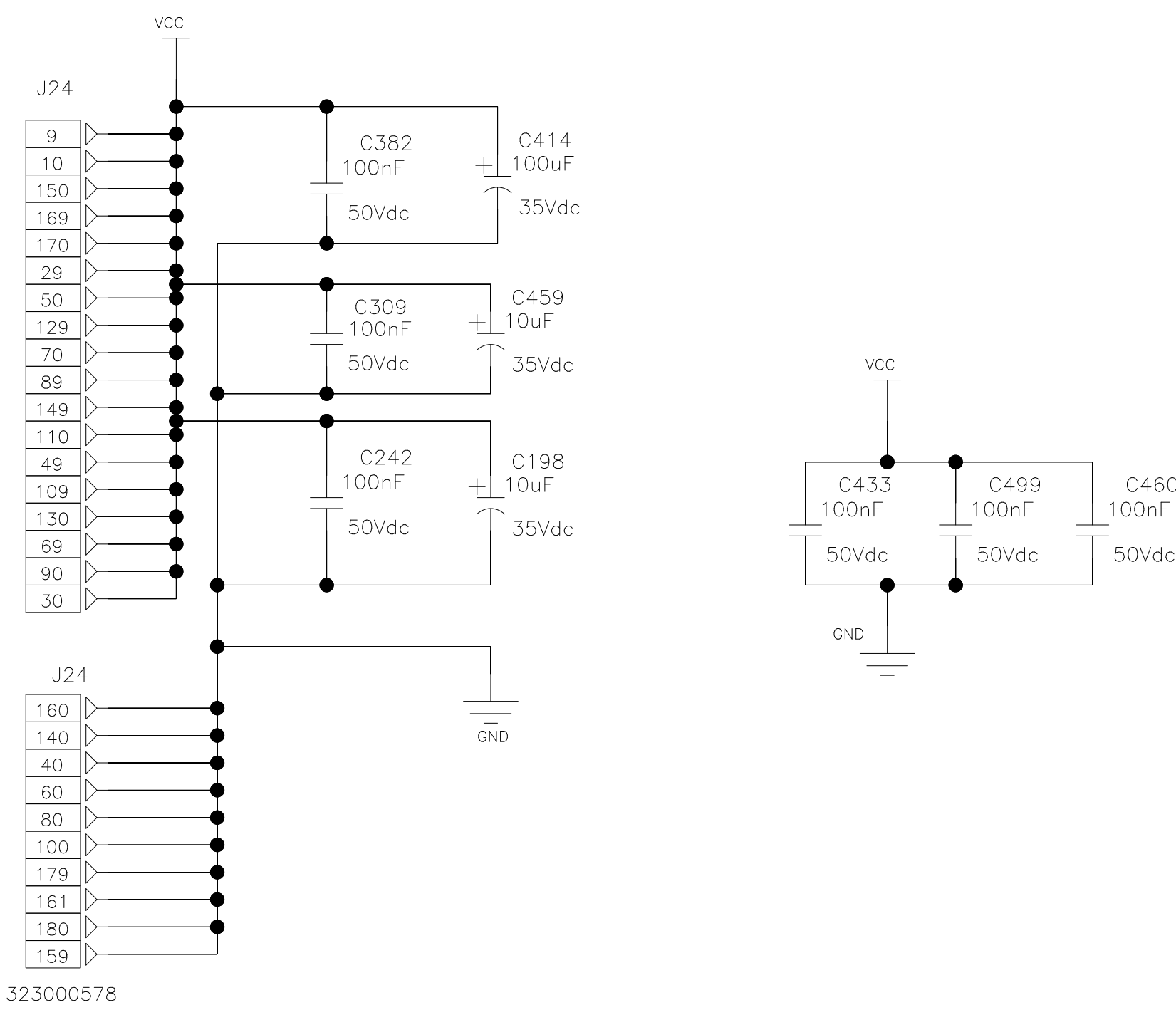


CPU2000 Interface

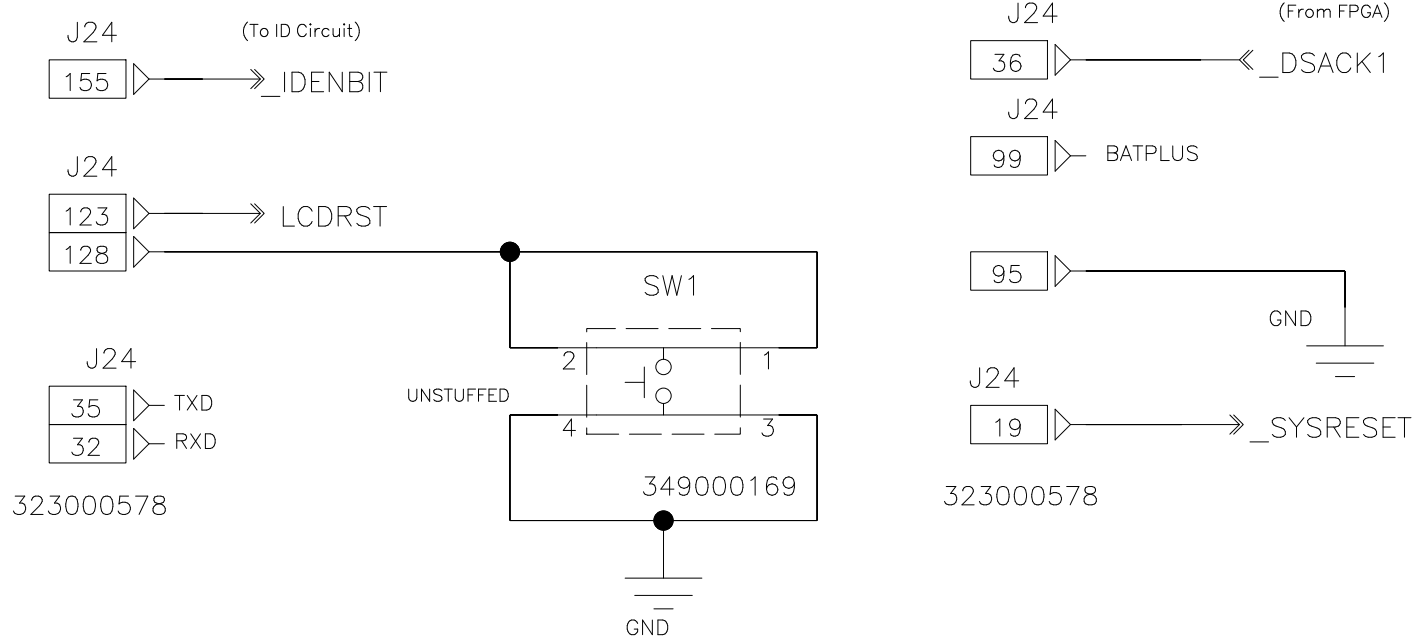
TPUBUS Interface



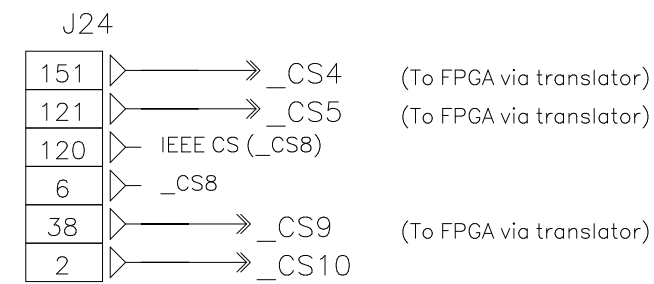
POWER INTERFACE



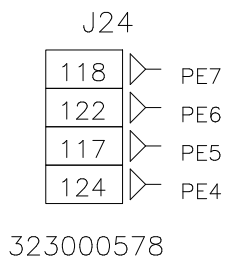
OTHER INTERFACES



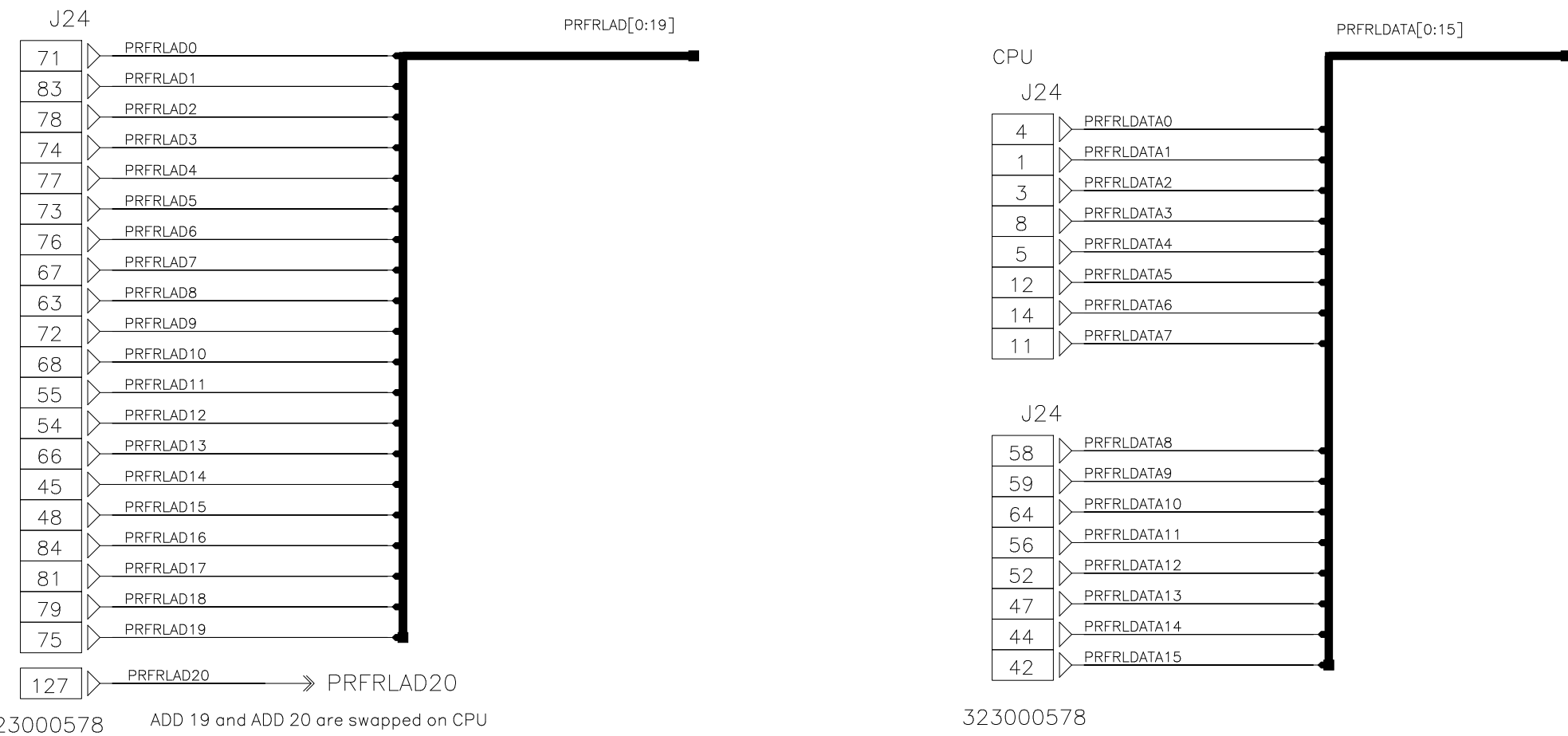
CHIP SELECT & R/W INTERFACE



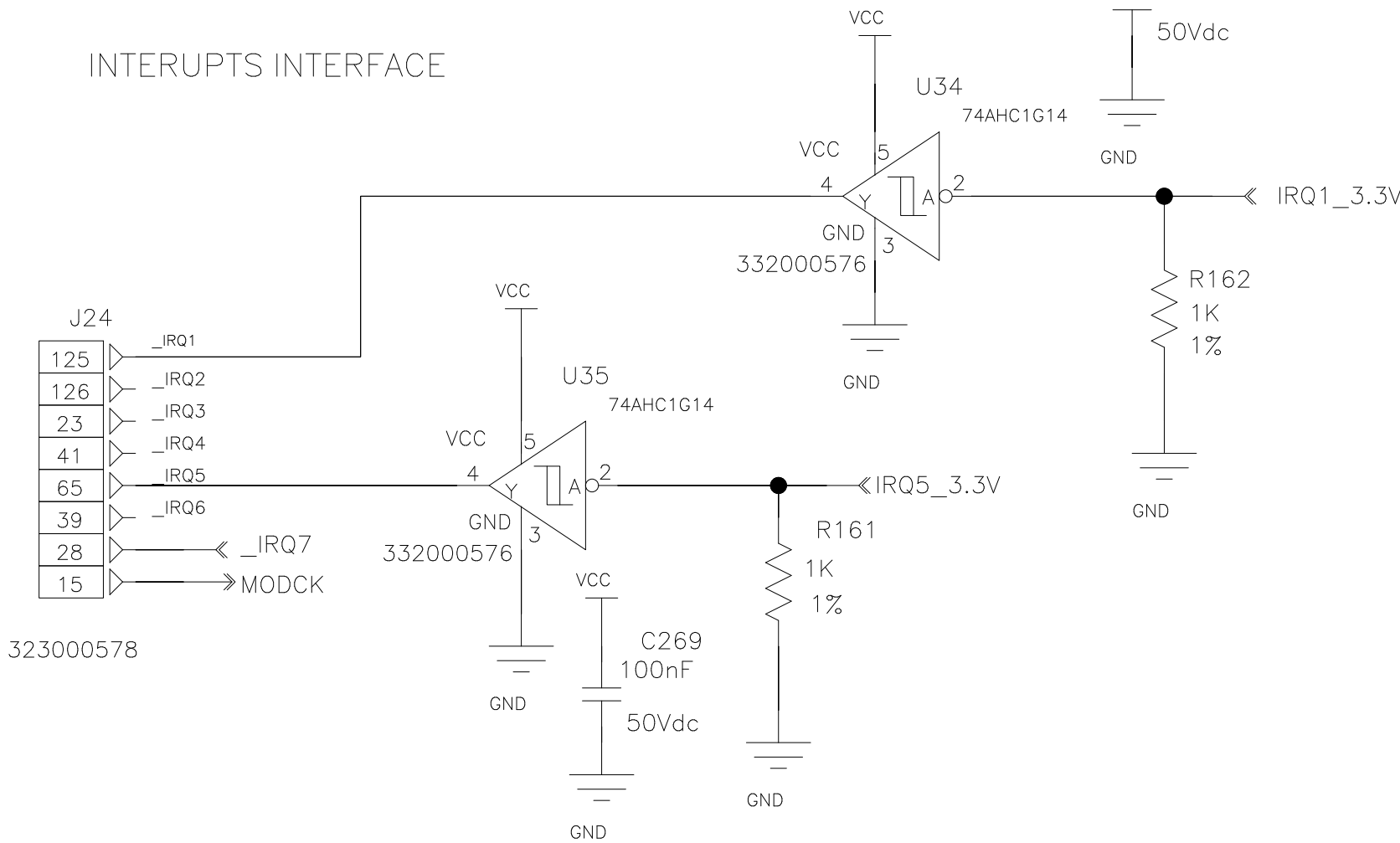
I/O PORTS INTERFACE



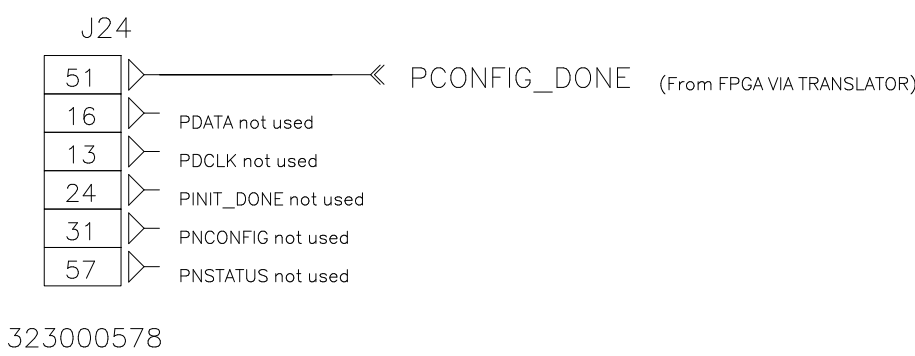
DATA & ADDRESS INTERFACE



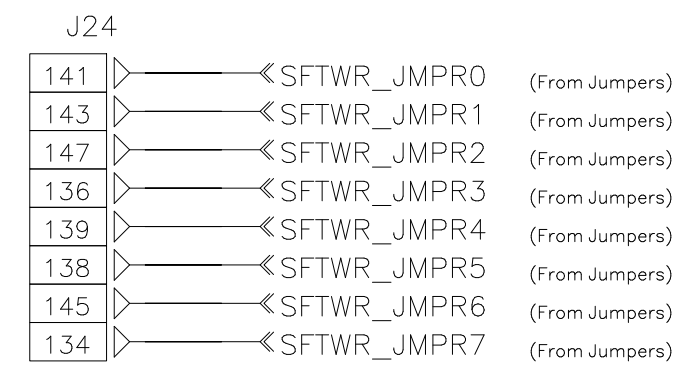
INTERUPTS INTERFACE



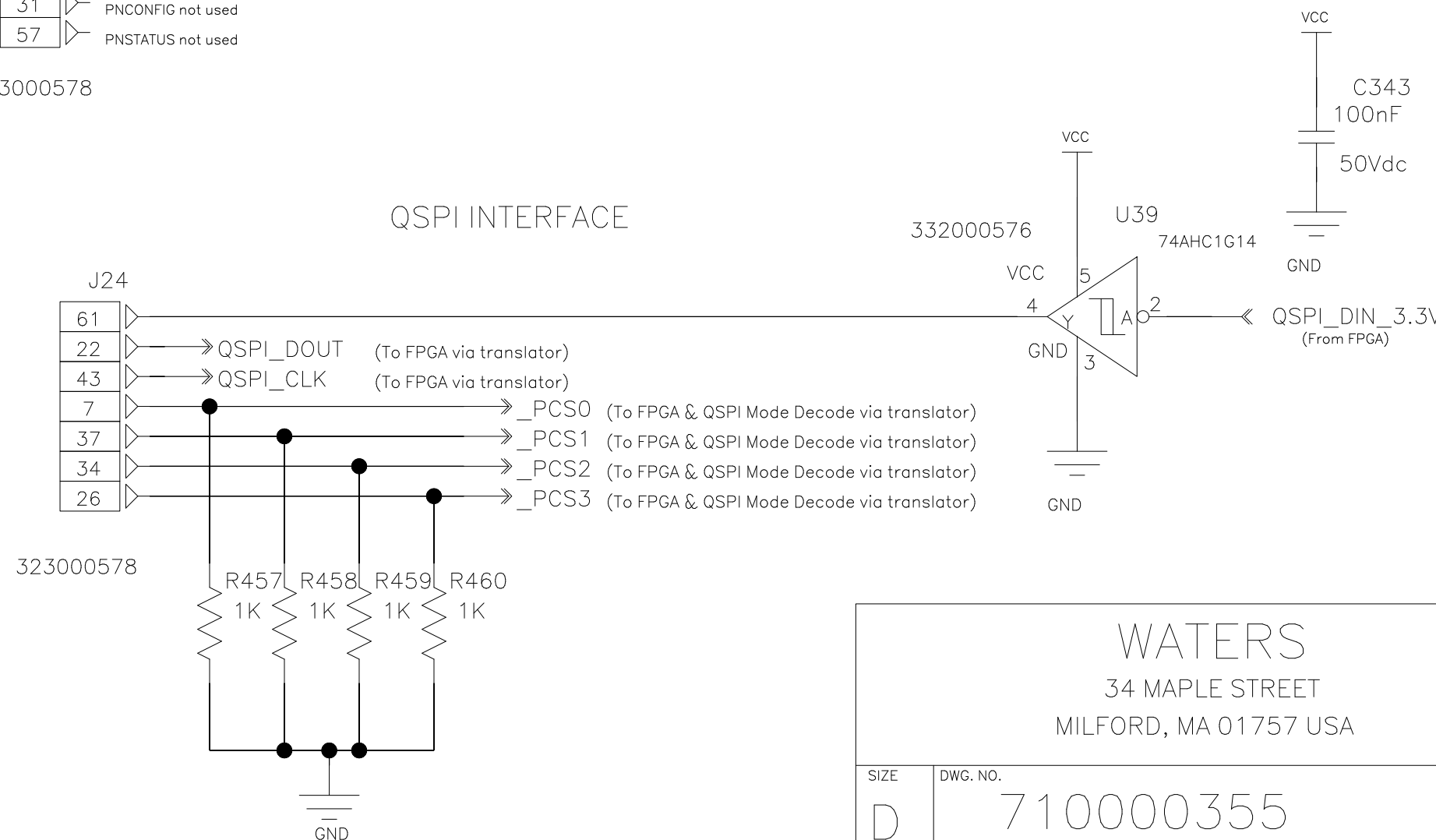
FPGA IMAGE DOWNLOAD



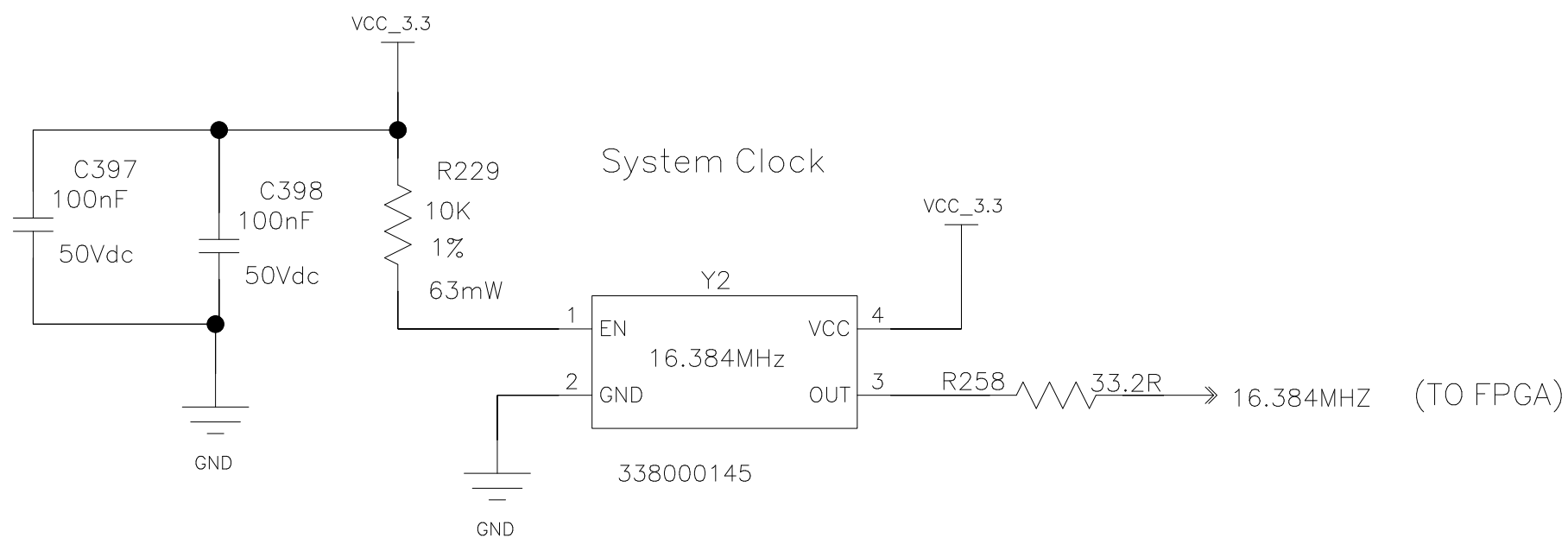
SOFTWARE JUMPER INTERFACE



QSPI INTERFACE

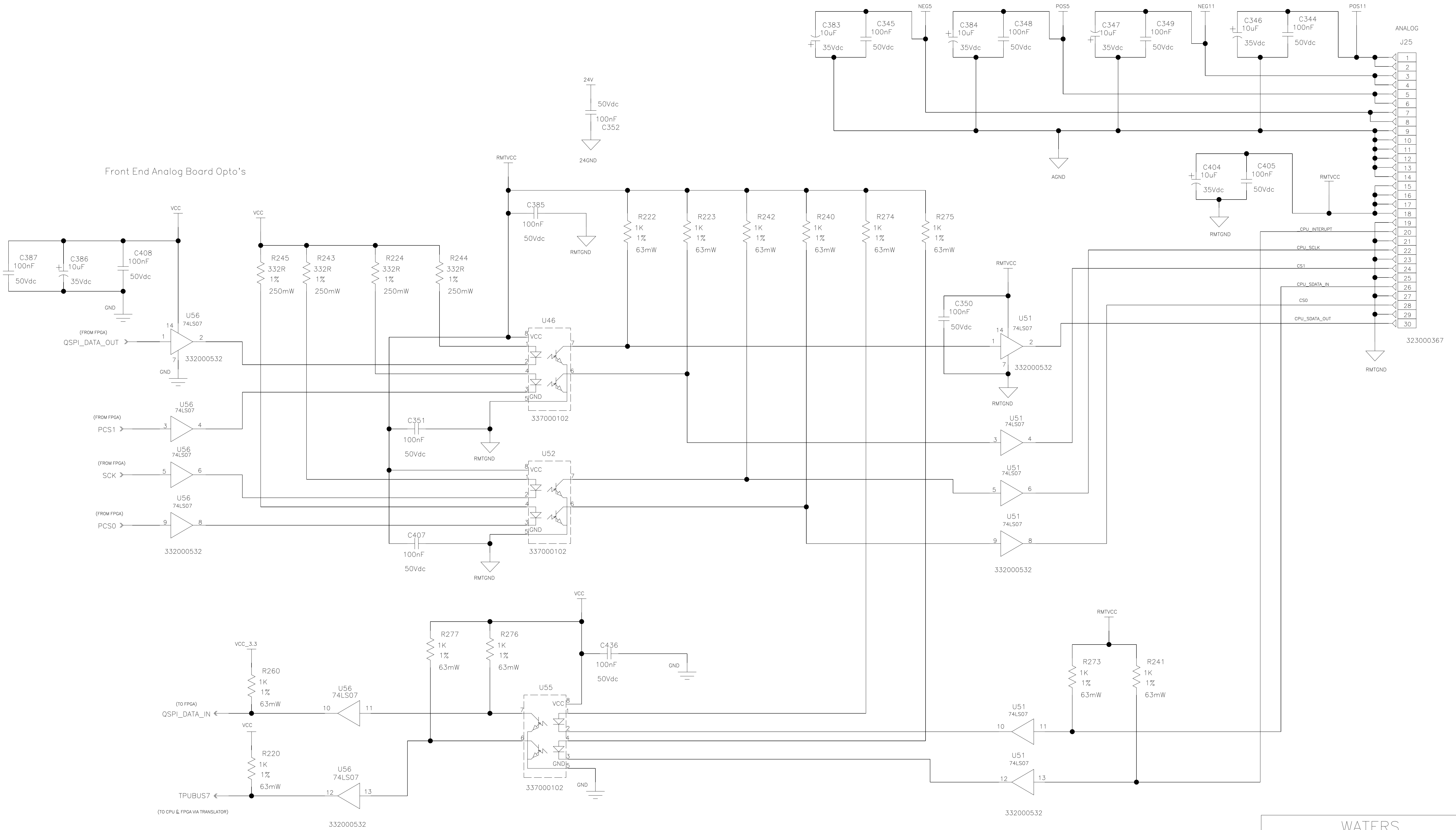


System Clock

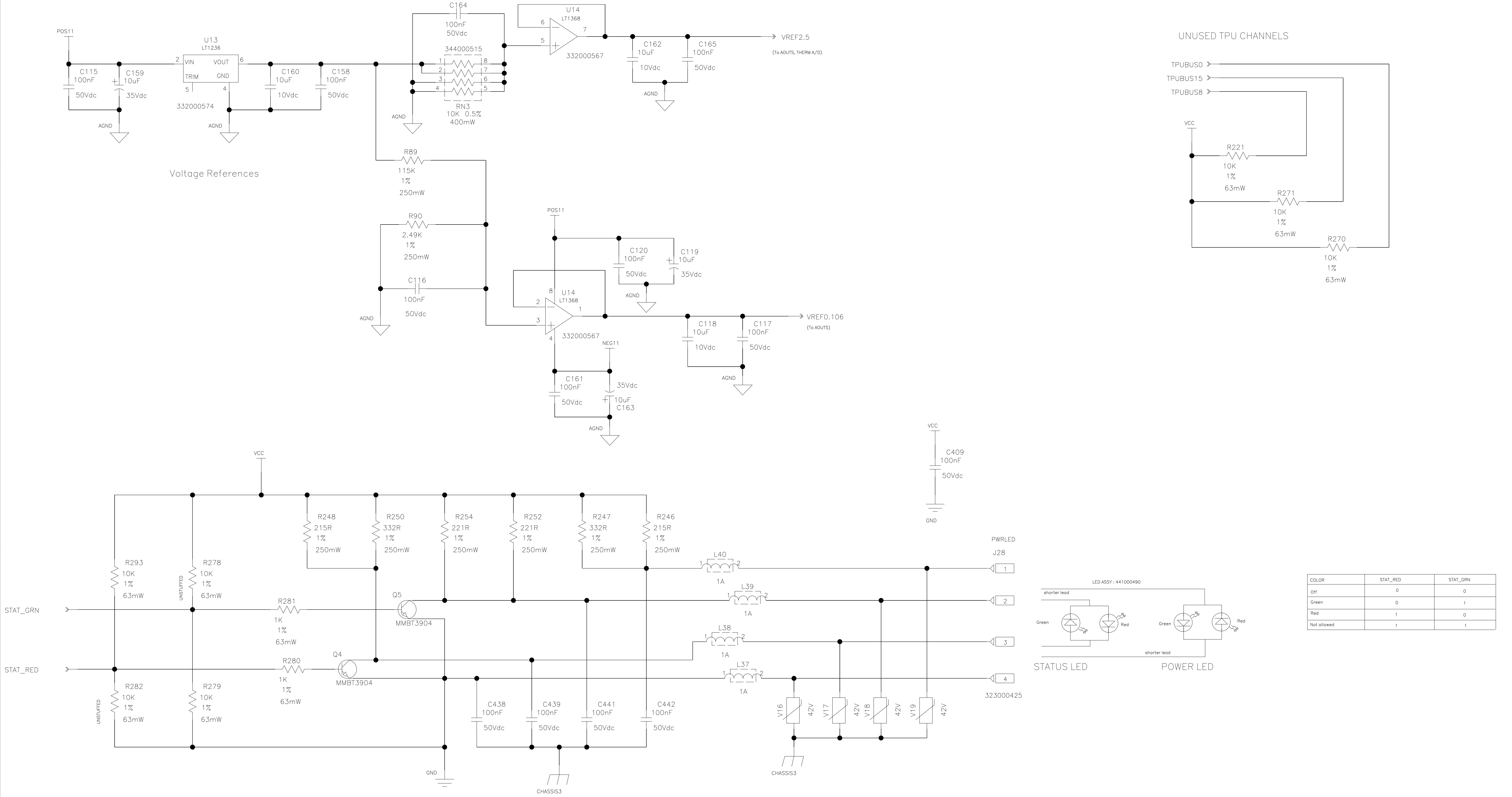


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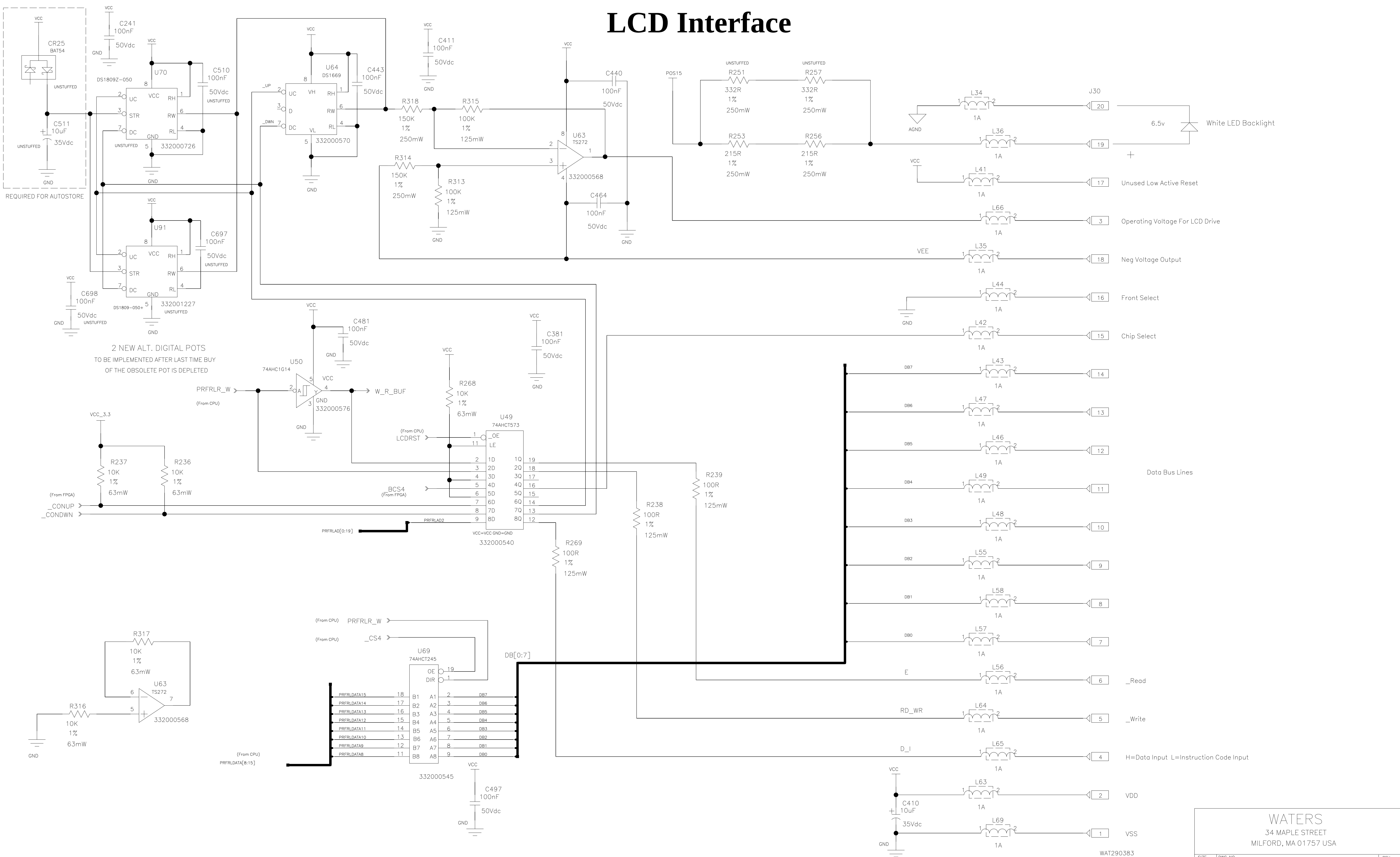
Pre-Amp PCB Interface



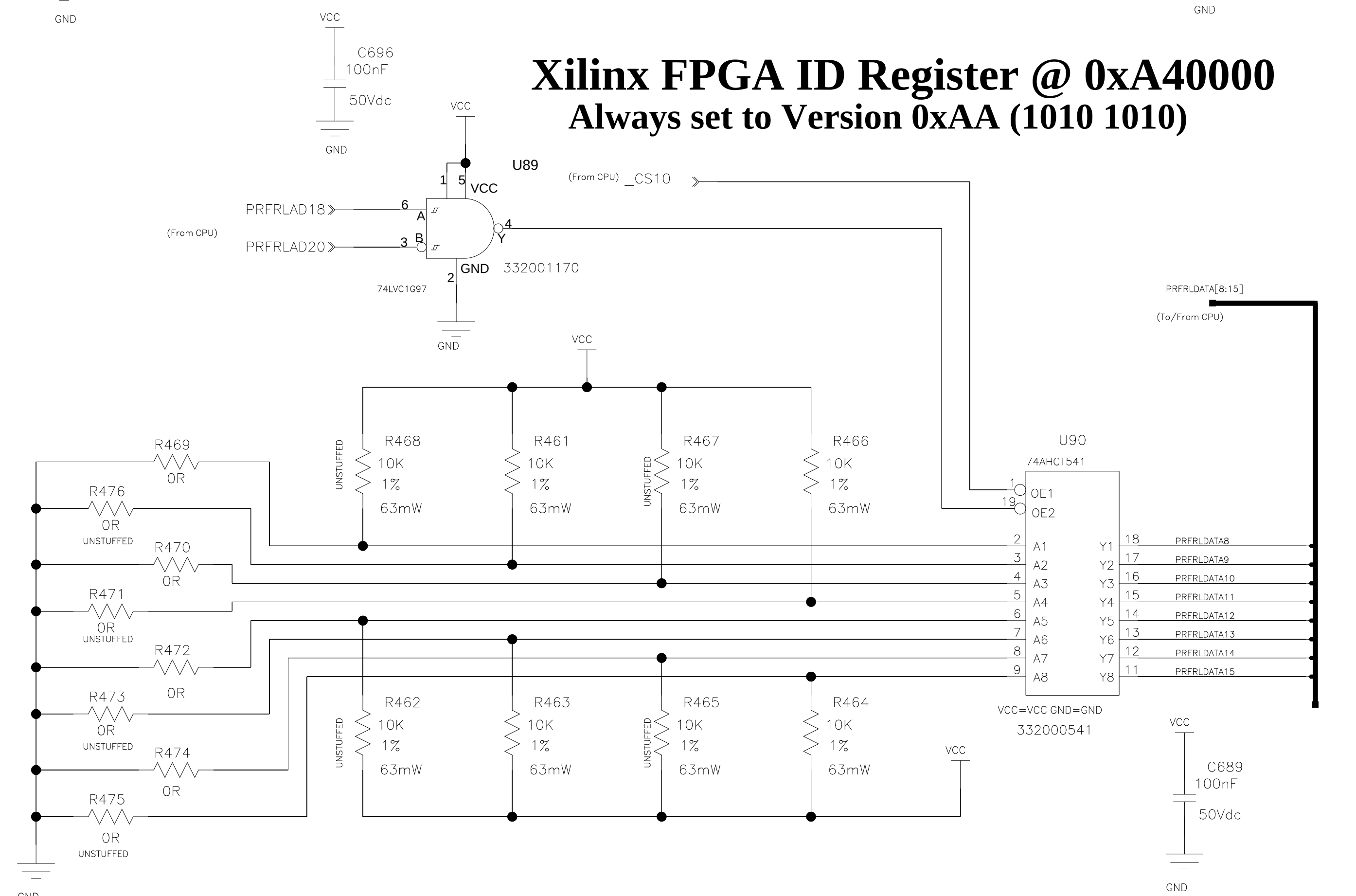
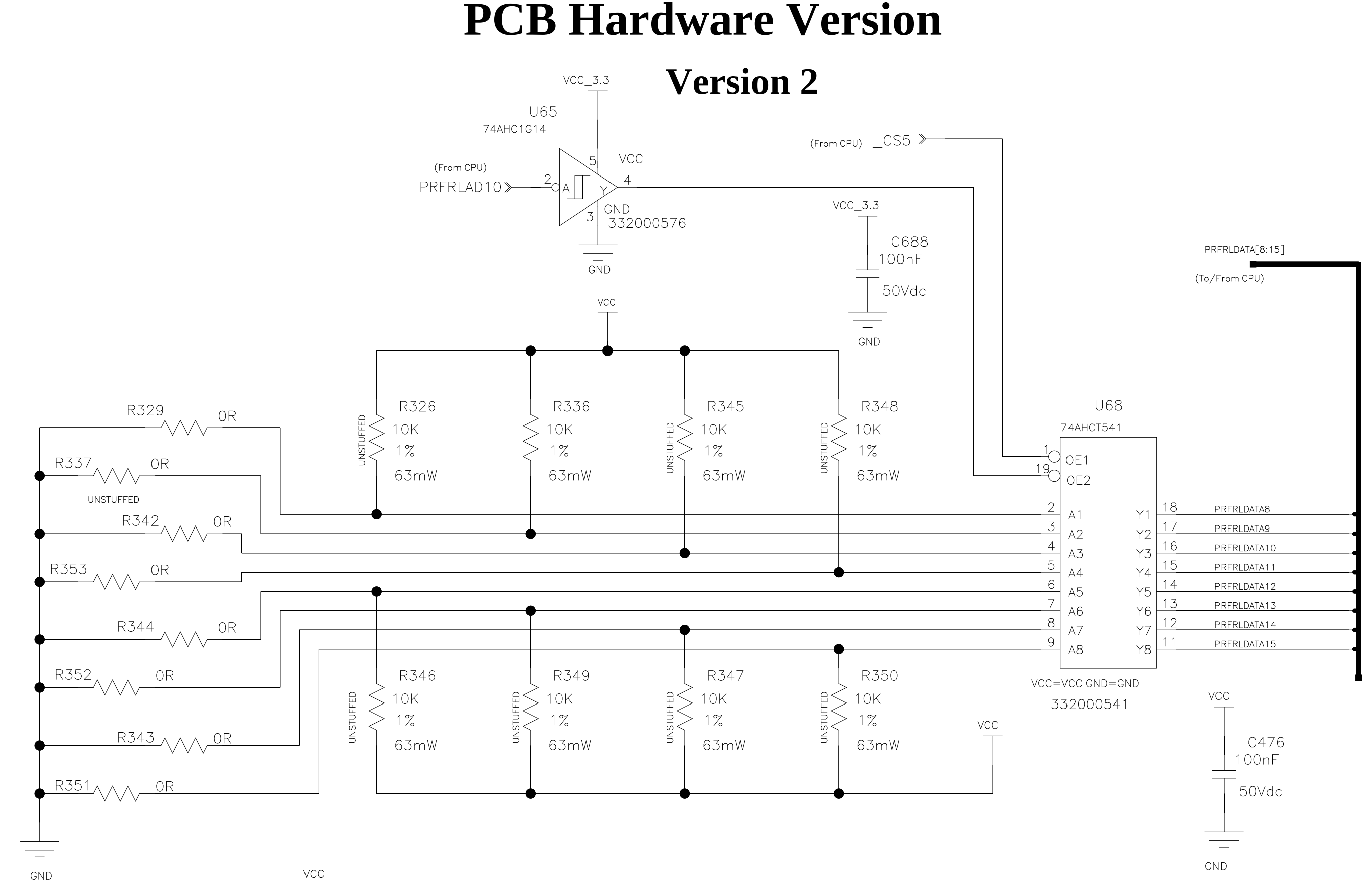
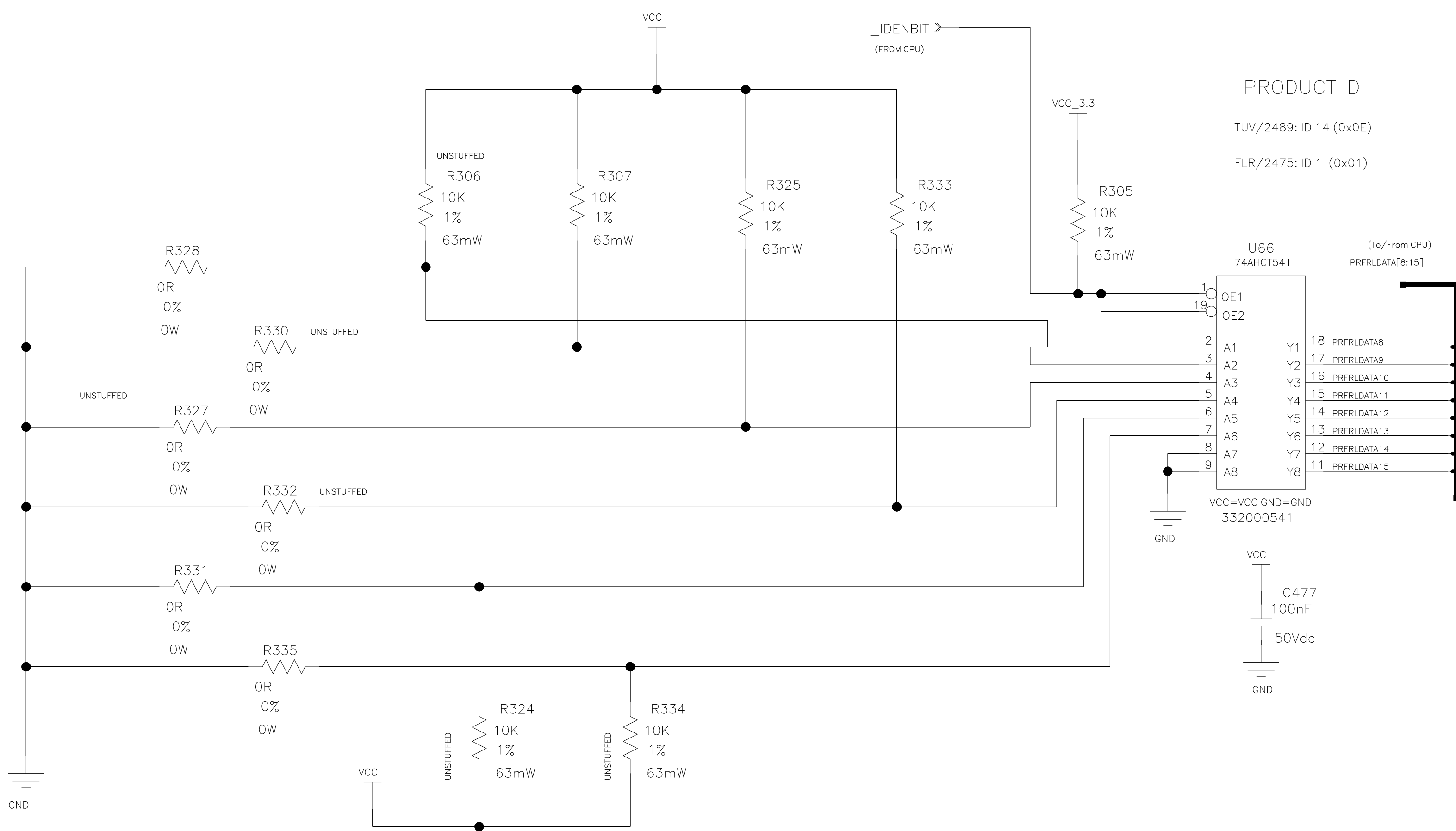
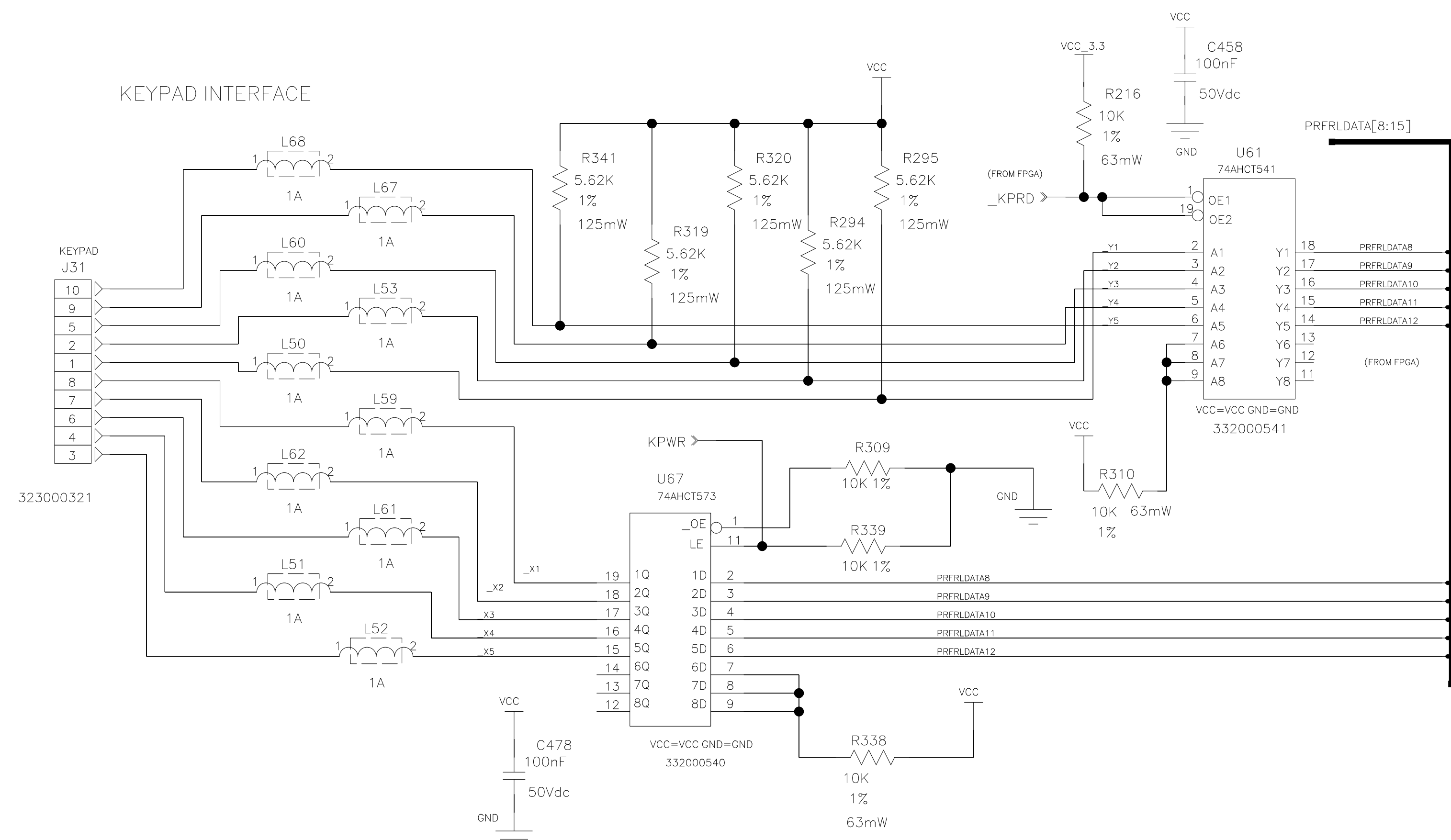
Voltage References & Status LED's



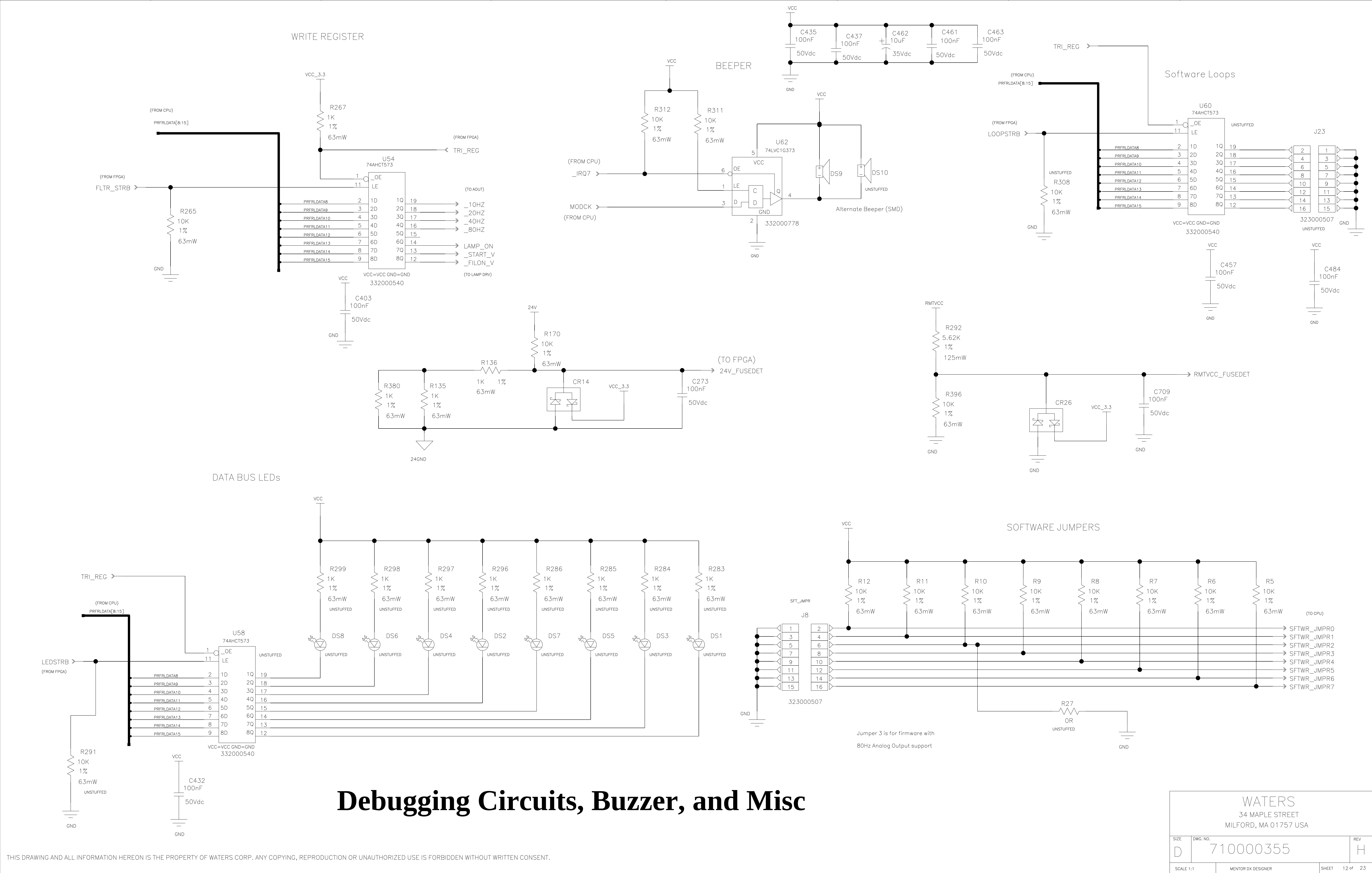
LCD Interface

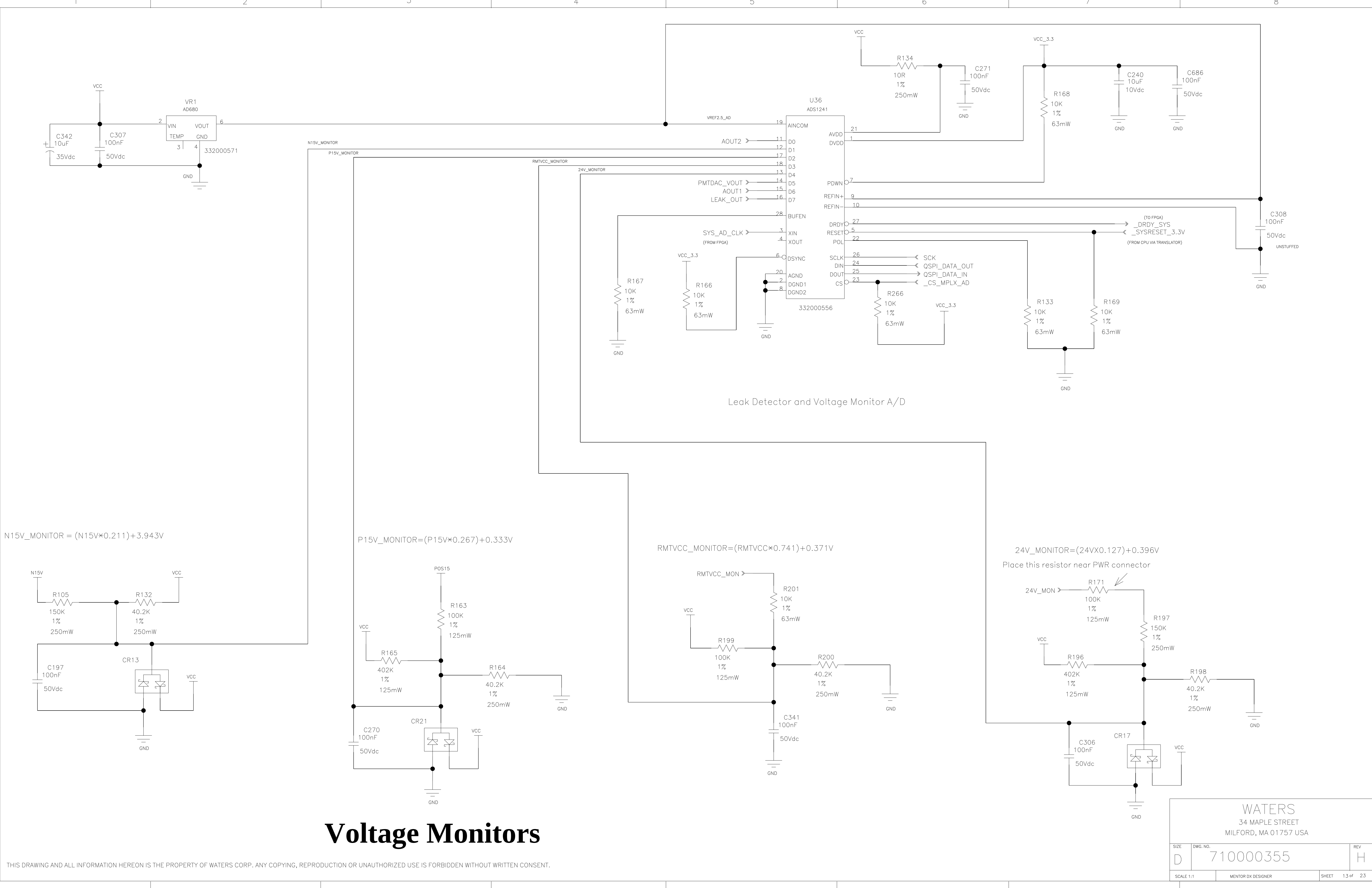


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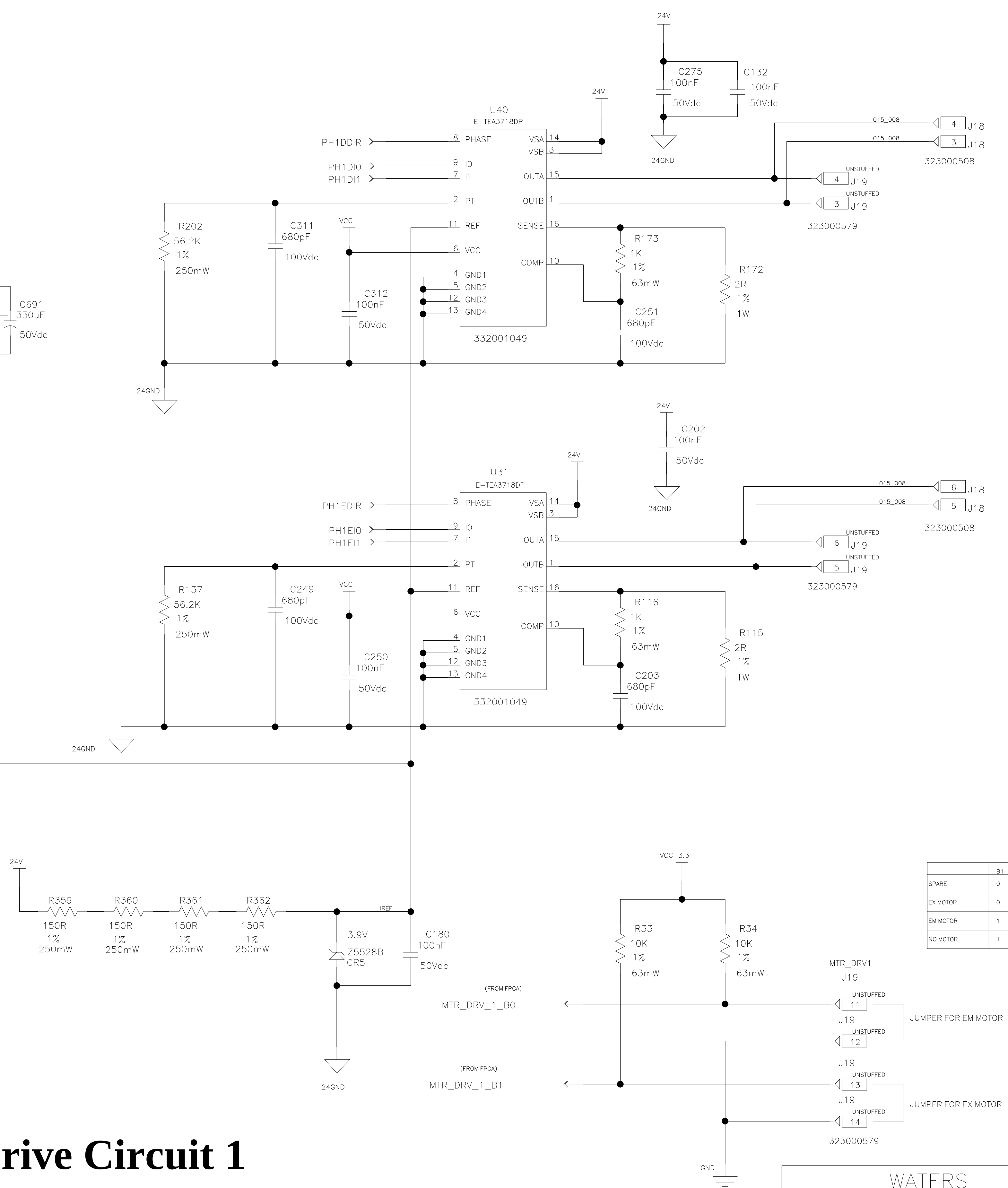
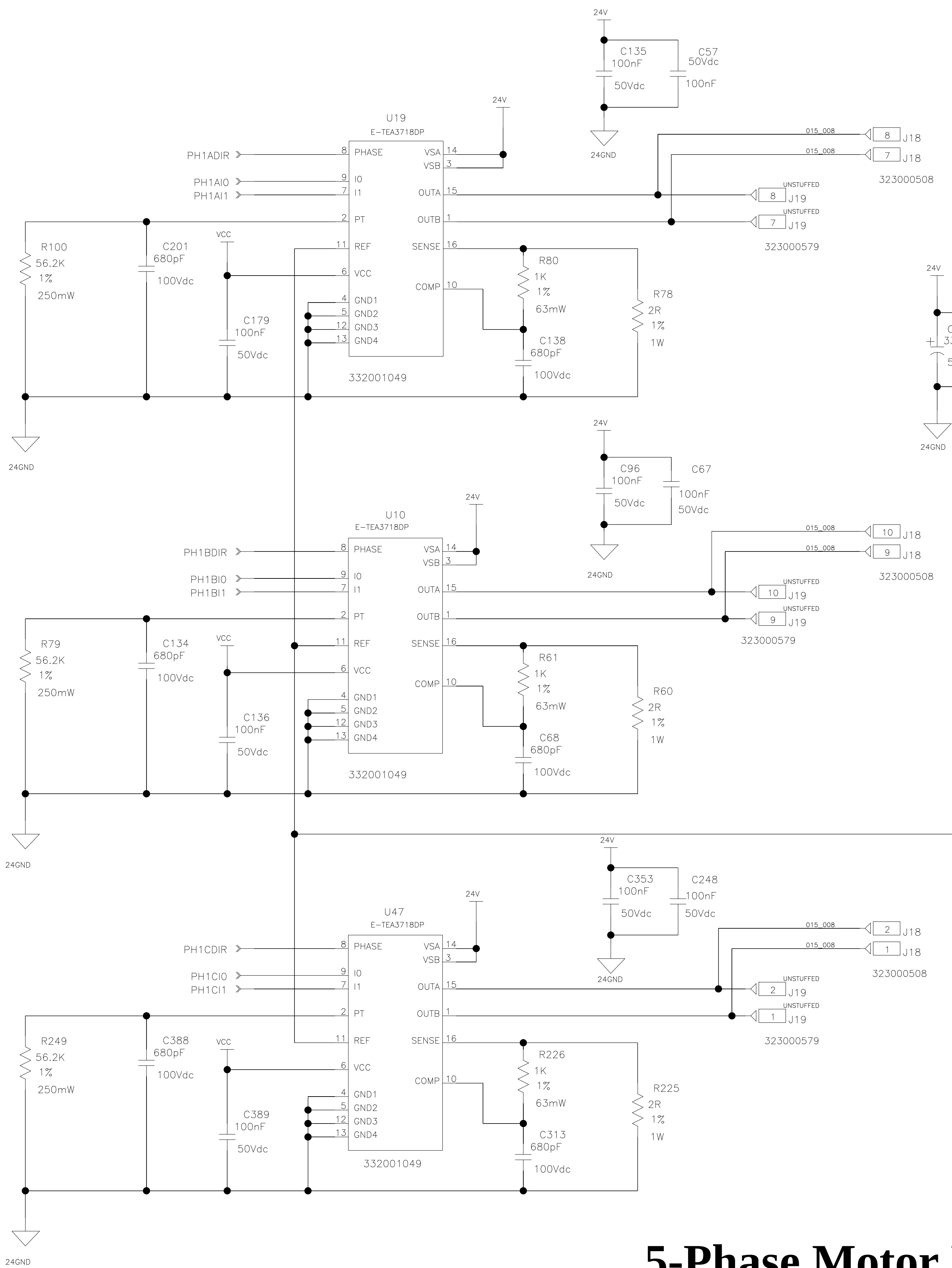




Voltage Monitors

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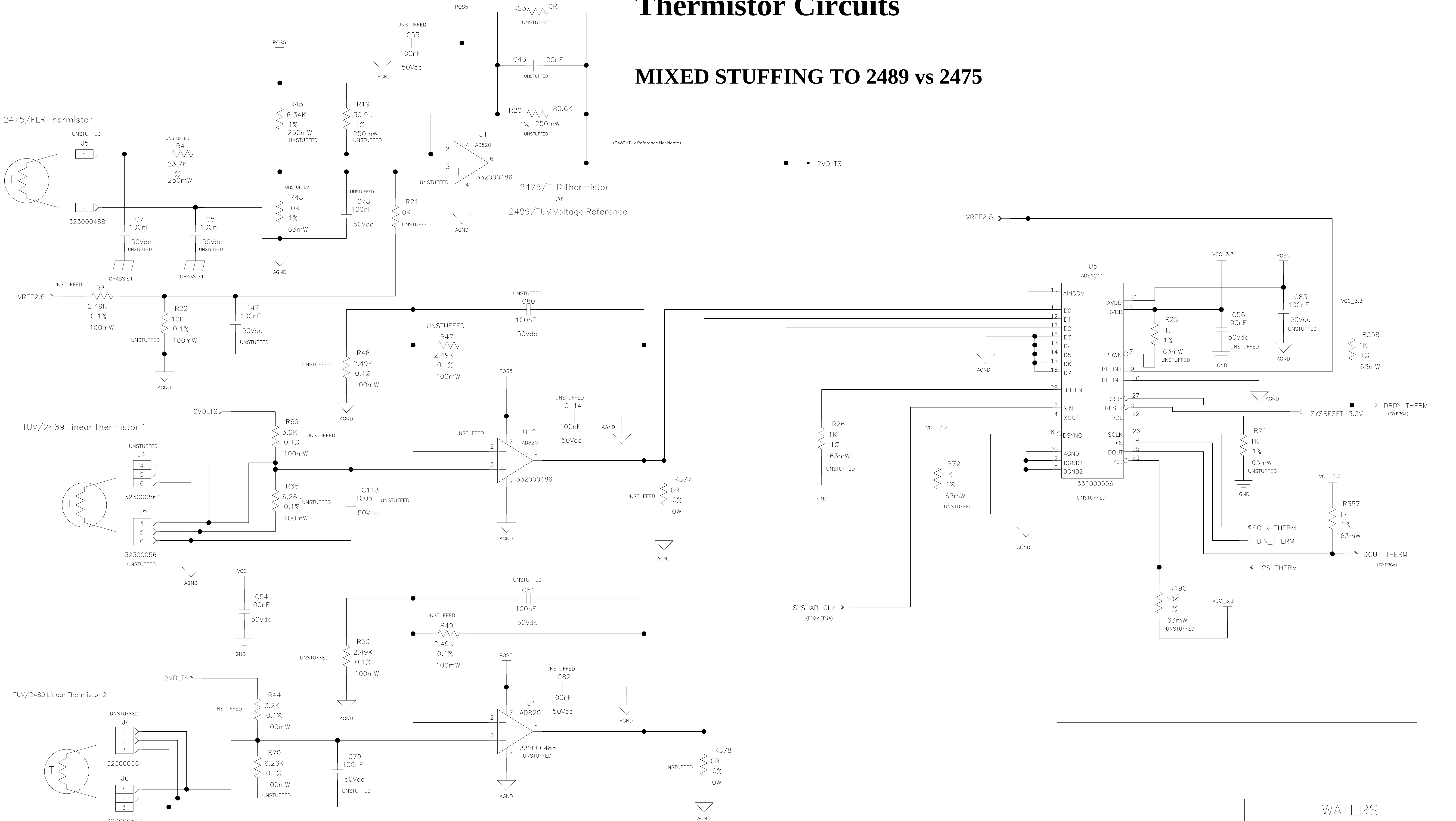
WATERS 34 MAPLE STREET MILFORD, MA 01757 USA		
SIZE D	DWG. NO. 710000355	REV H
SCALE 1:1	MENTOR DX DESIGNER	SHEET 13 of 23



WATERS 34 MAPLE STREET MILFORD, MA 01757 USA			
SIZE D	DWG. NO. 710000355	REV H	
SCALE 1:1	MENTOR DX DESIGNER	SHEET	14 of 23

Thermistor Circuits

MIXED STUFFING TO 2489 vs 2475

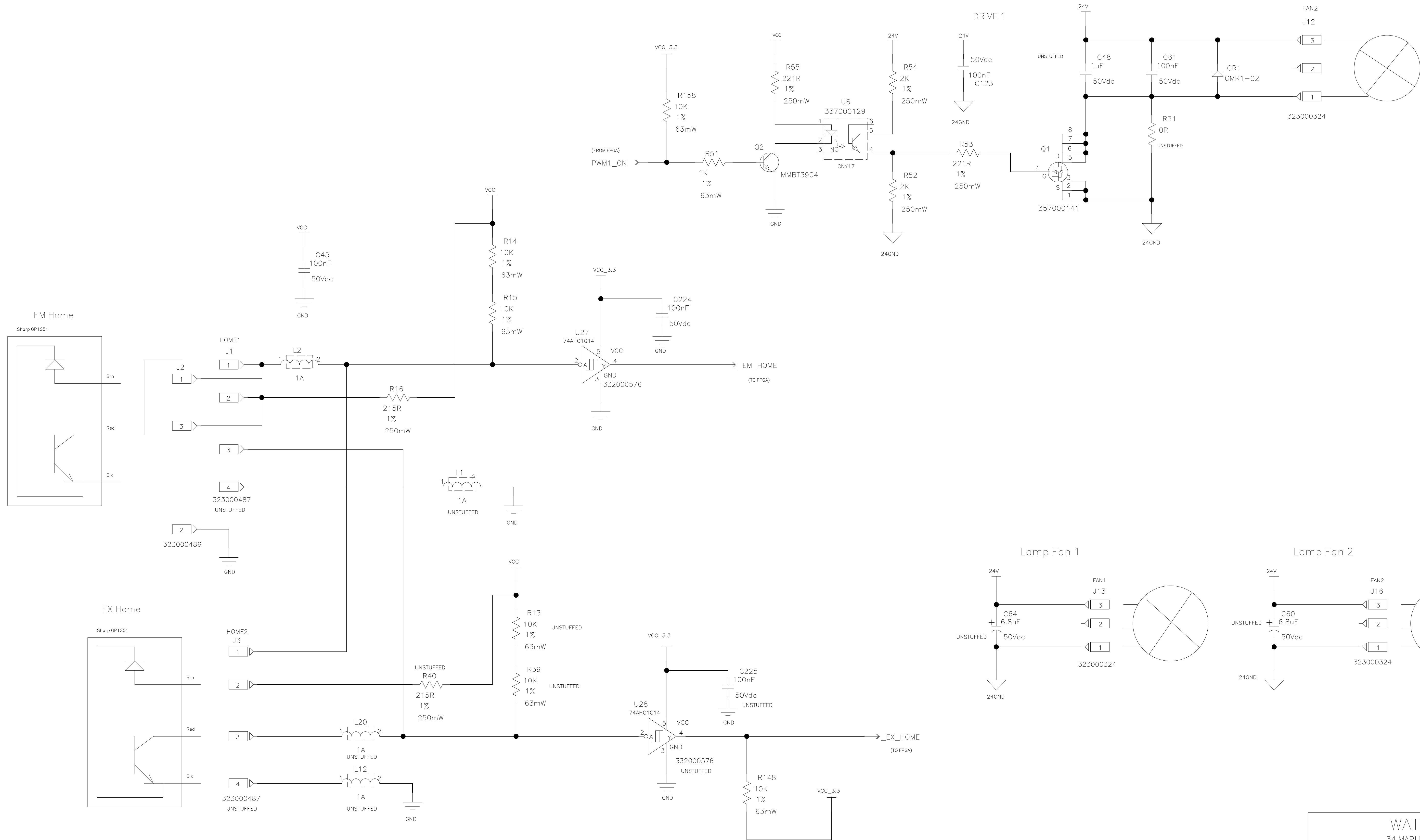


ENTIRE SHEET UNSTUFFED EXCEPT WHERE NOTED

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Fans & Motors Home Sensors



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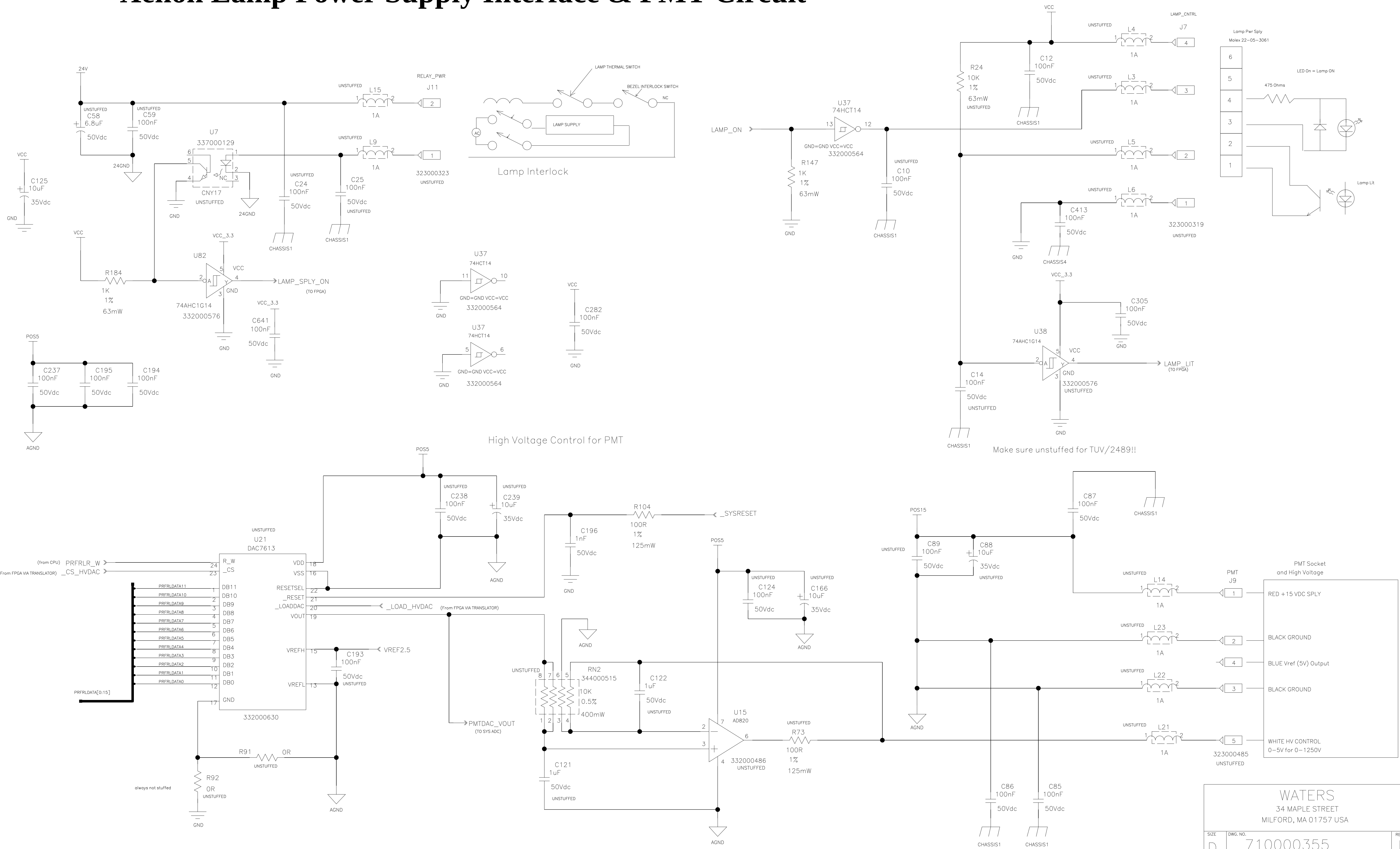
NEW HB LAMP POWER SUPPLY



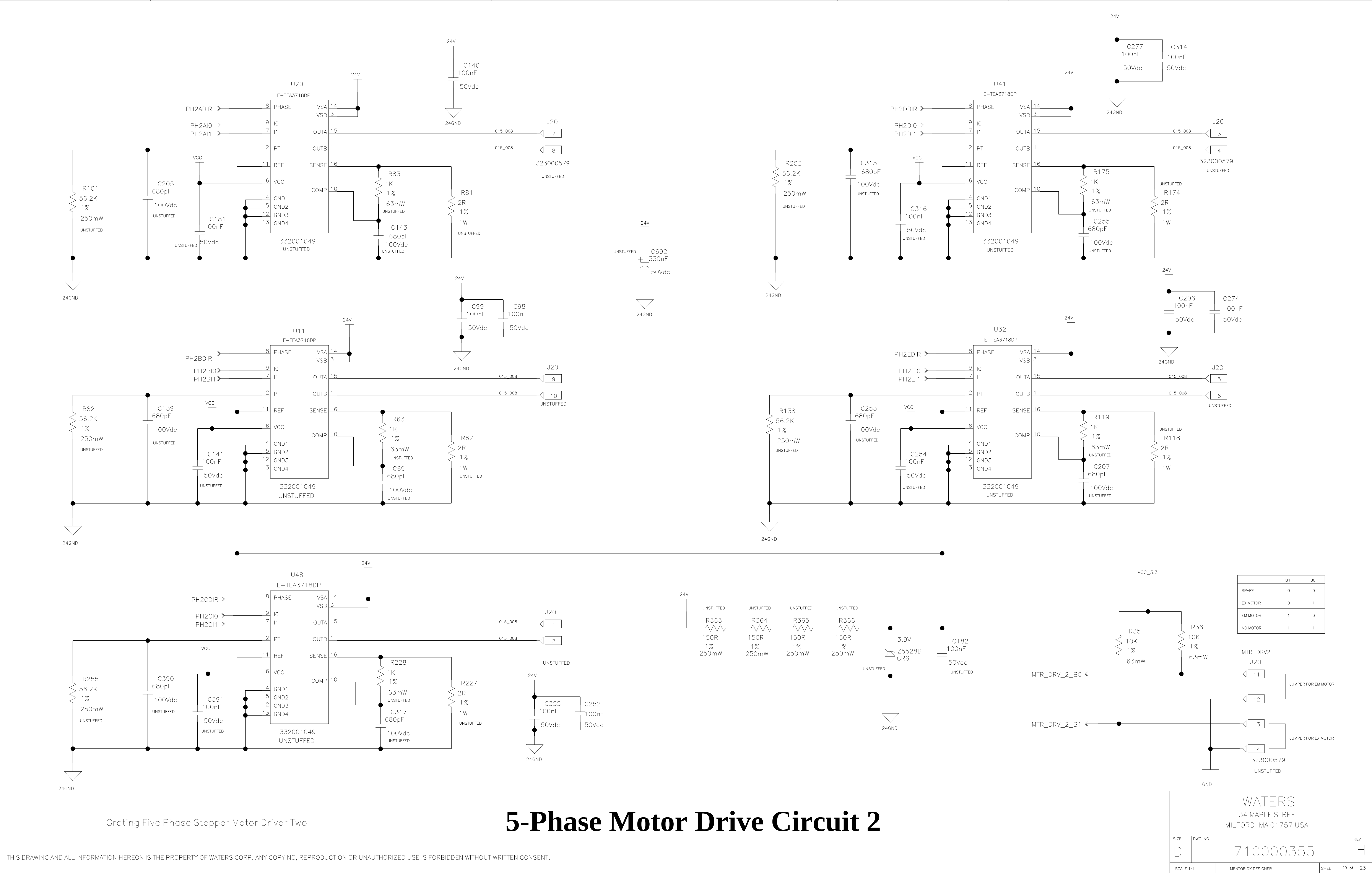
Deuterium Lamp Power Supply Interface

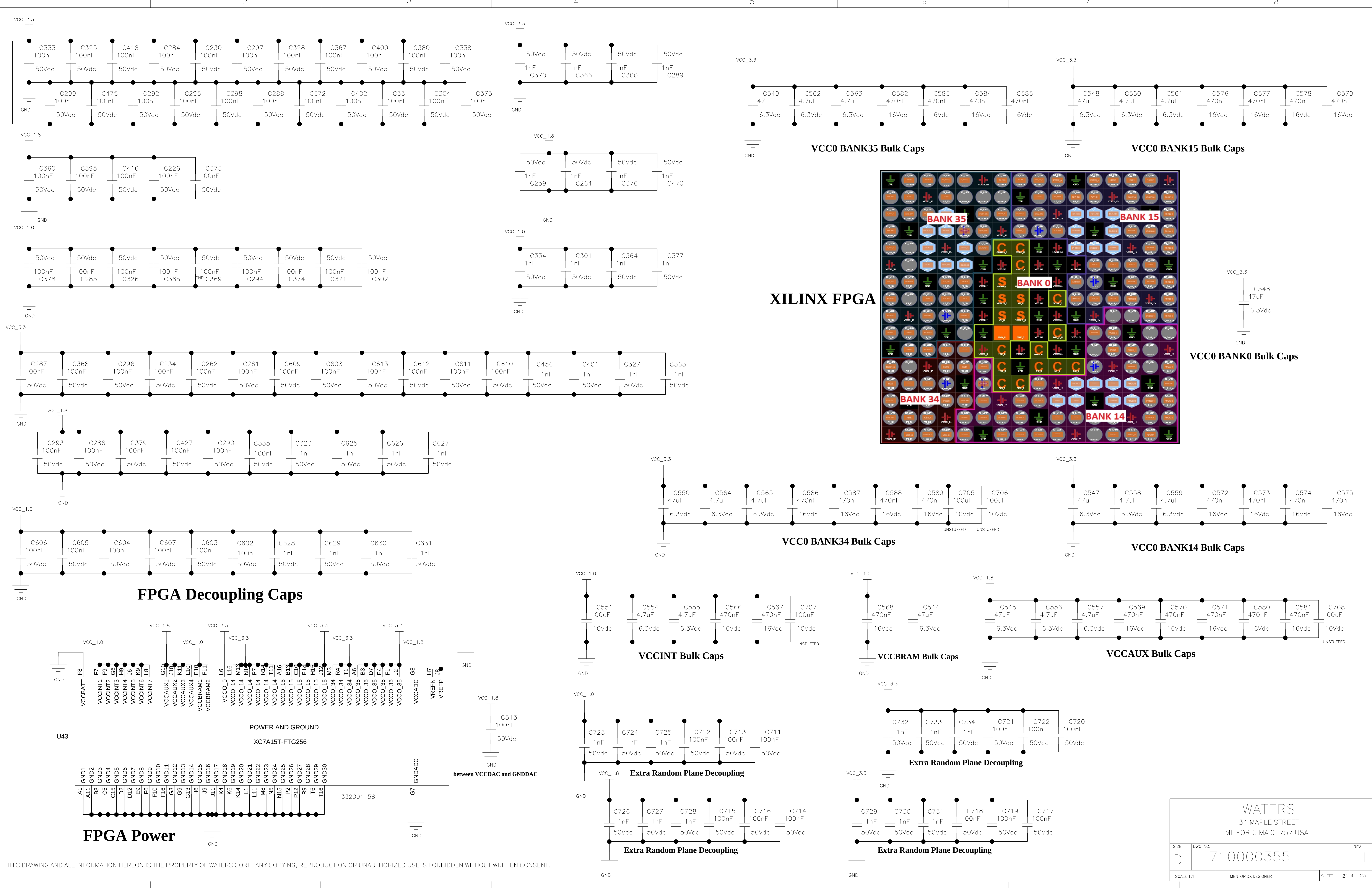
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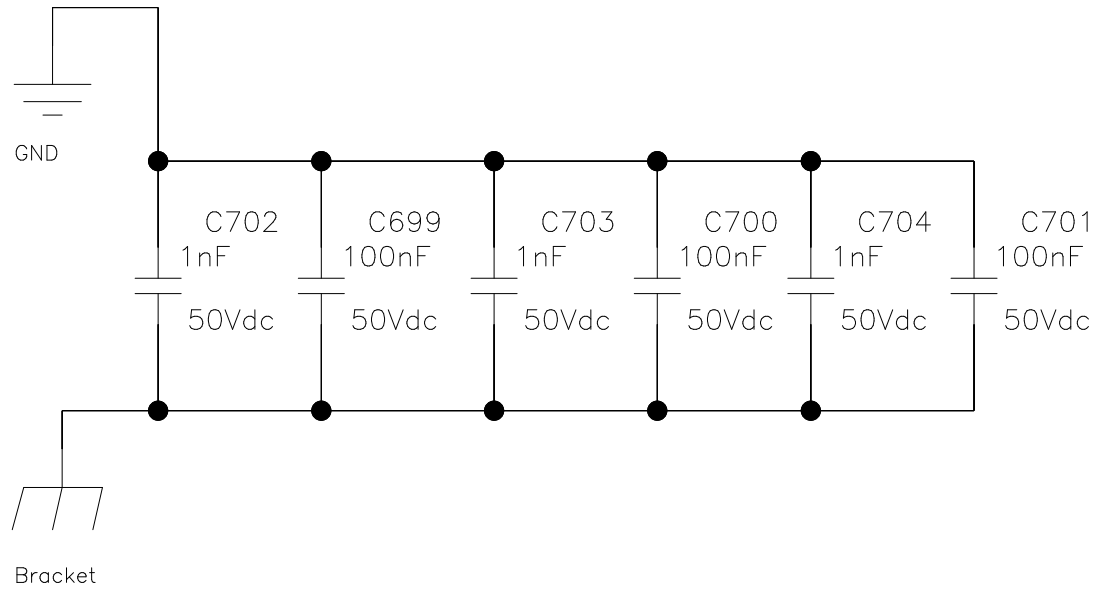
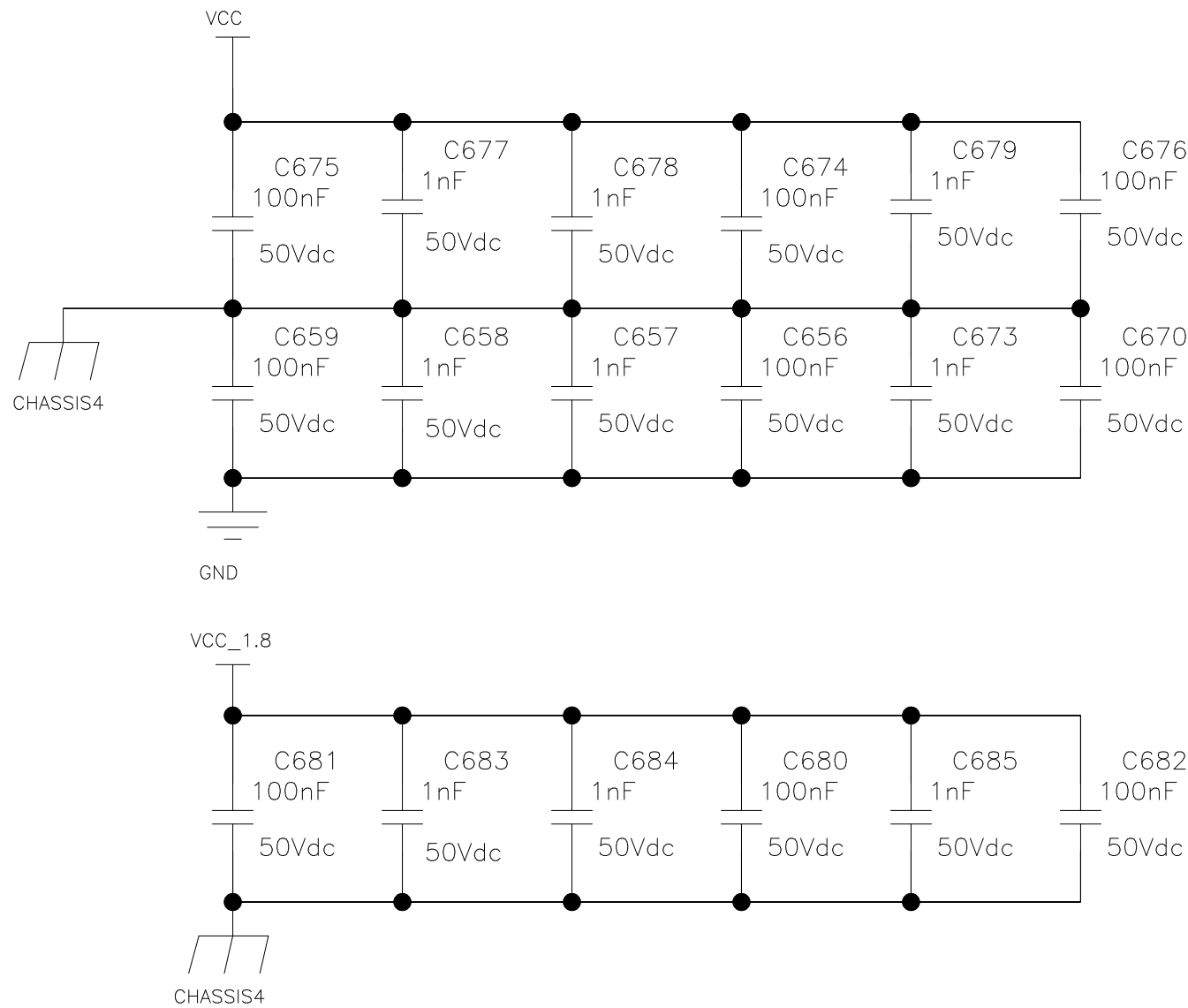
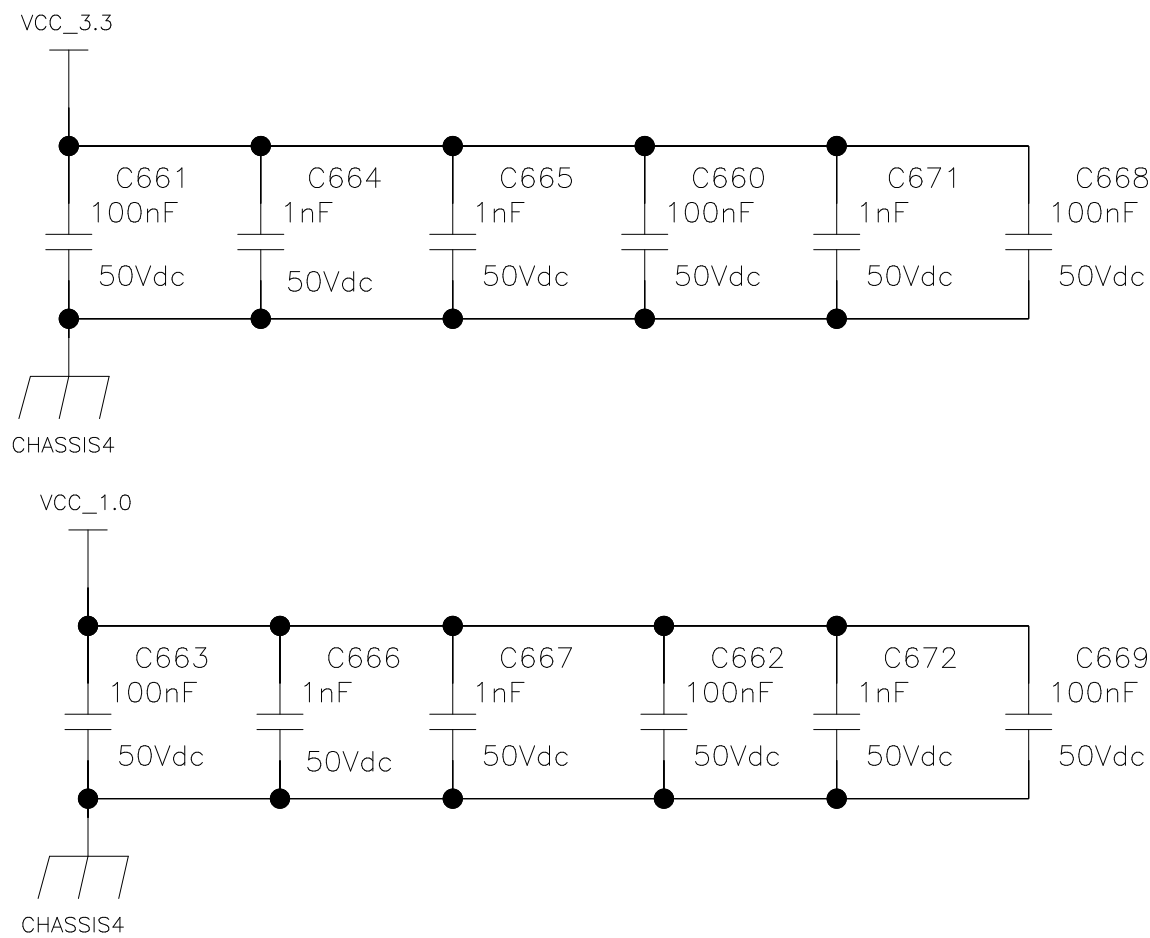
Xenon Lamp Power Supply Interface & PMT Circuit



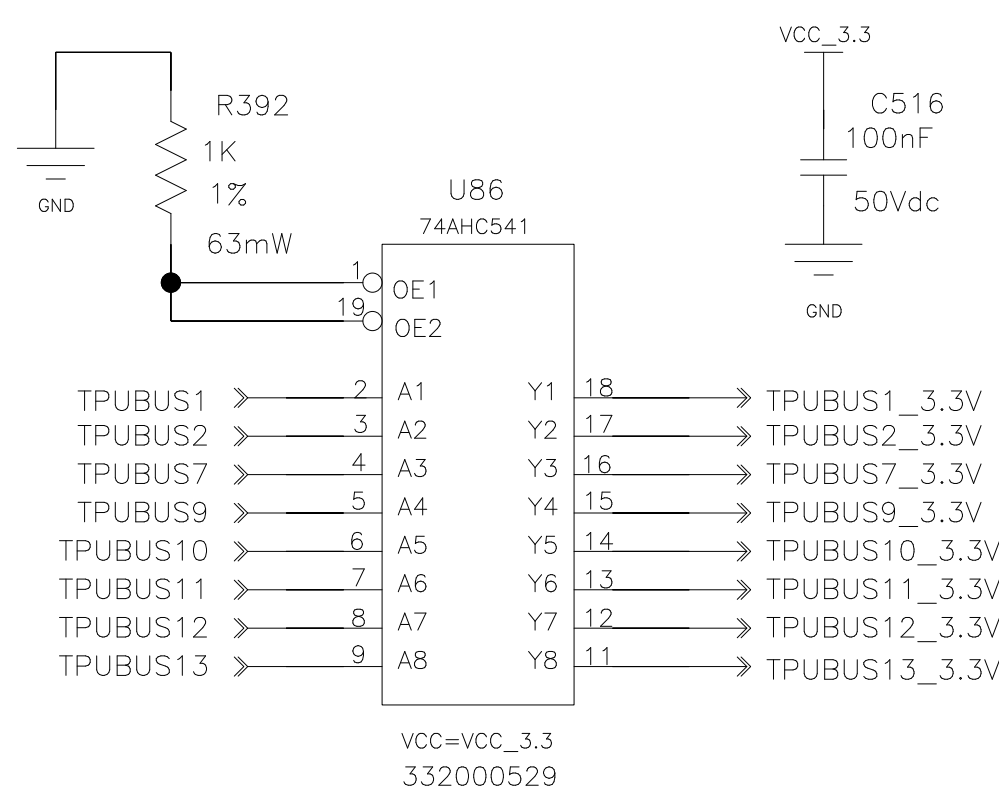
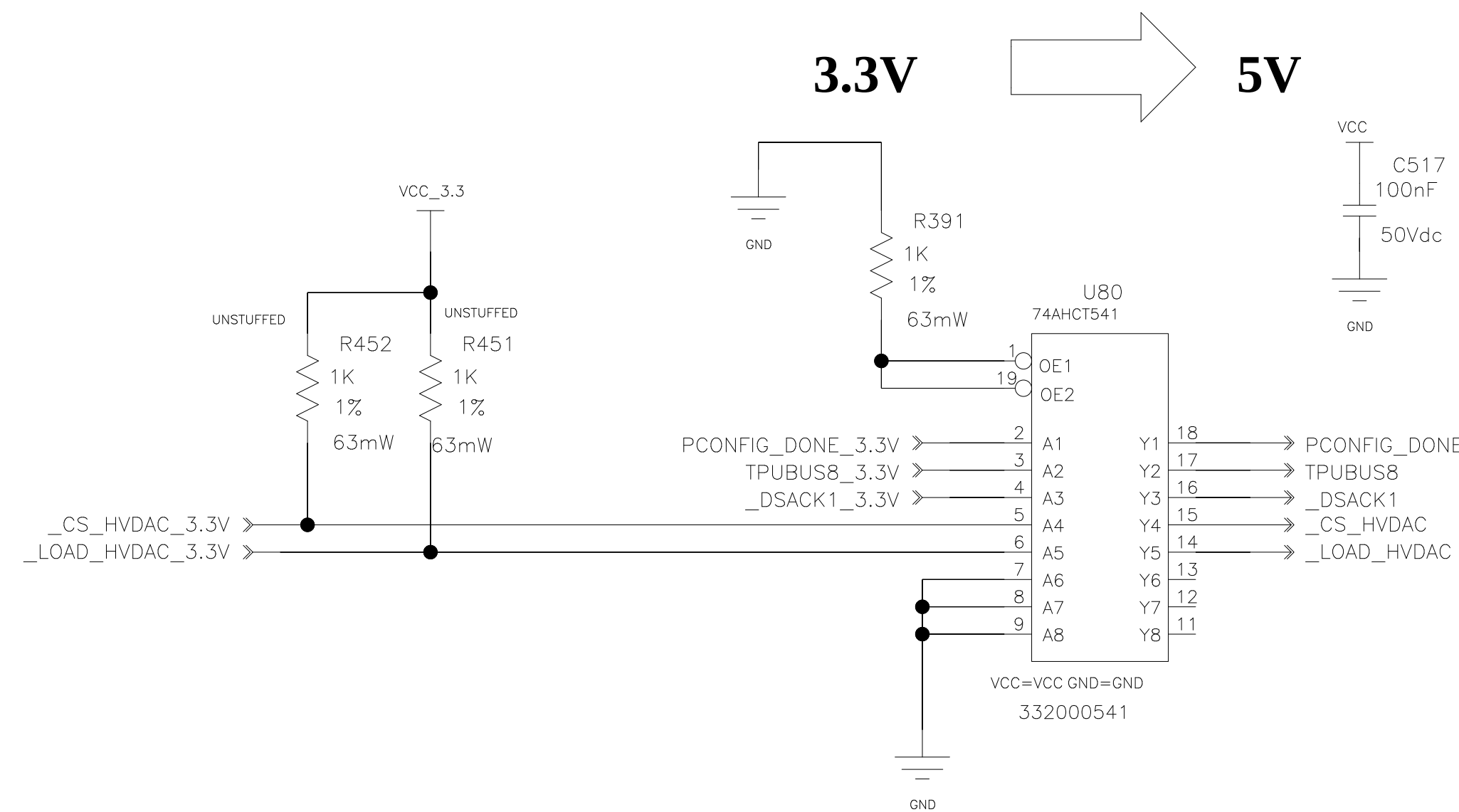
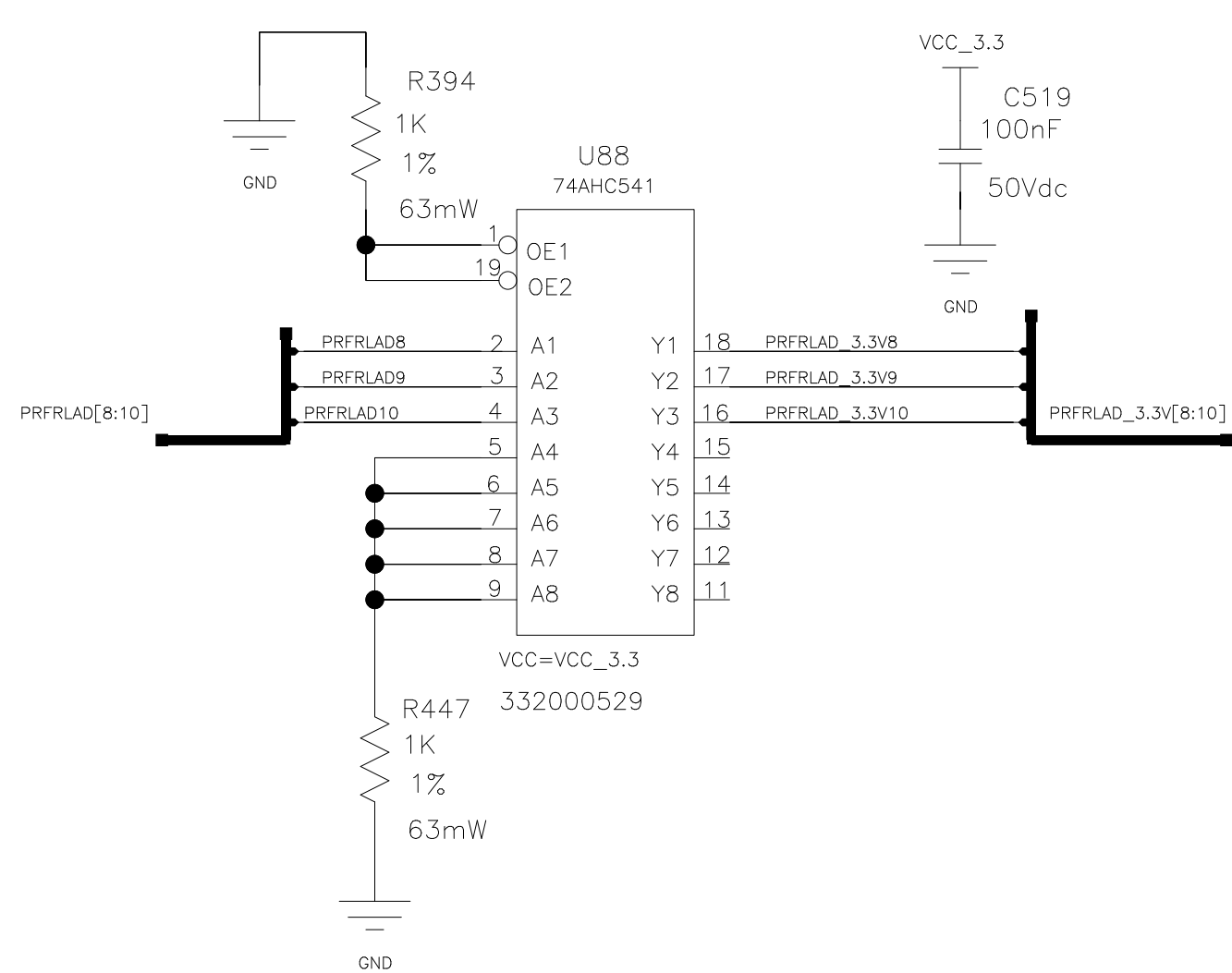
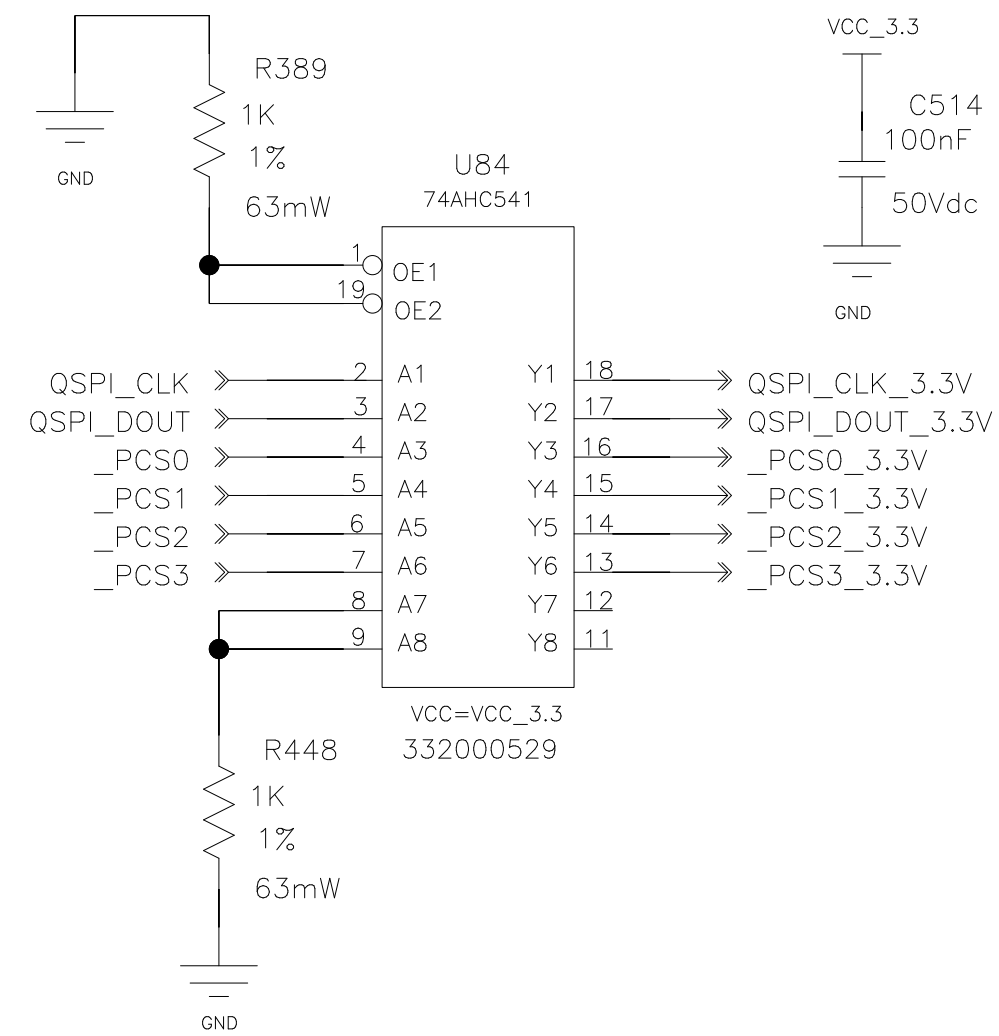
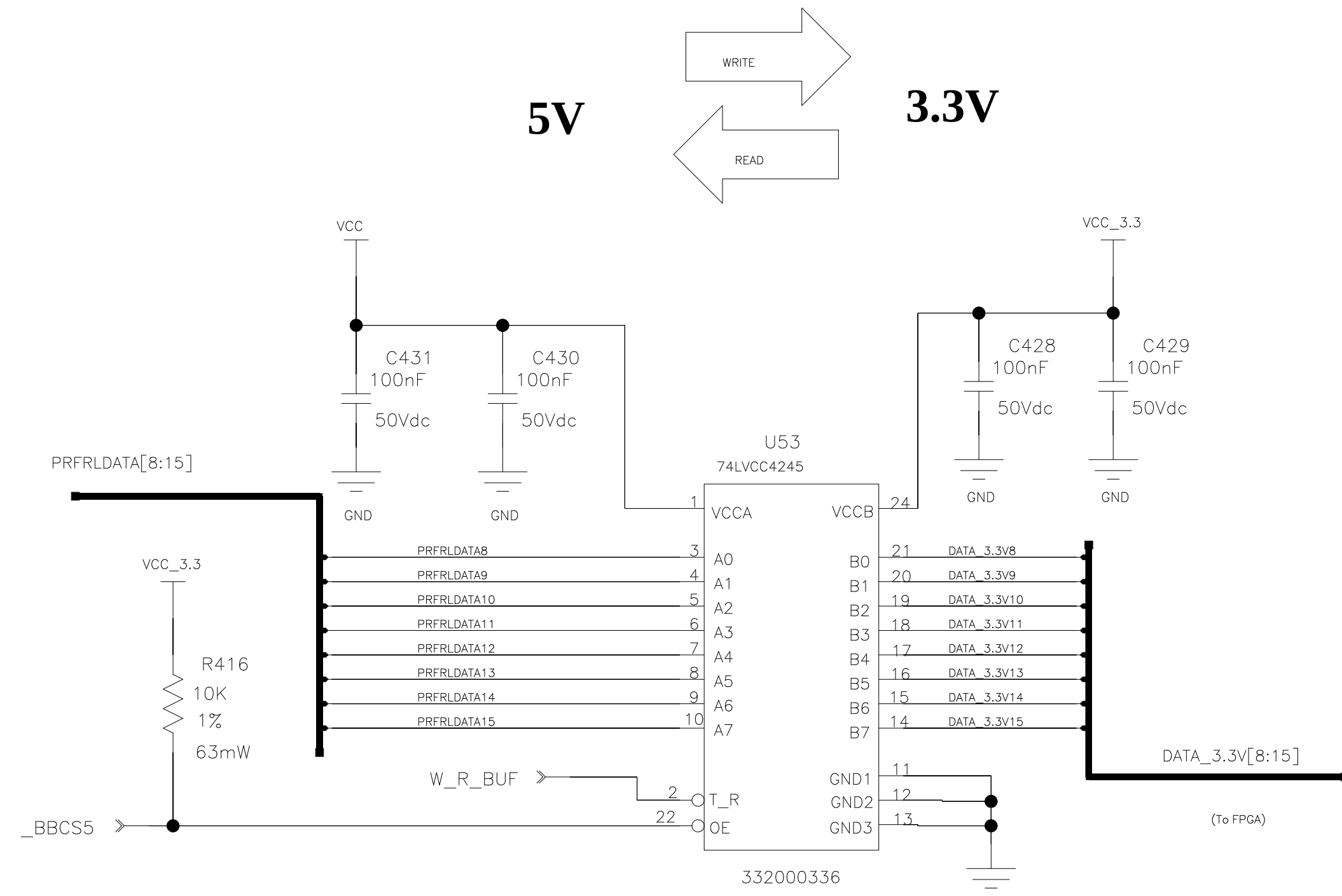
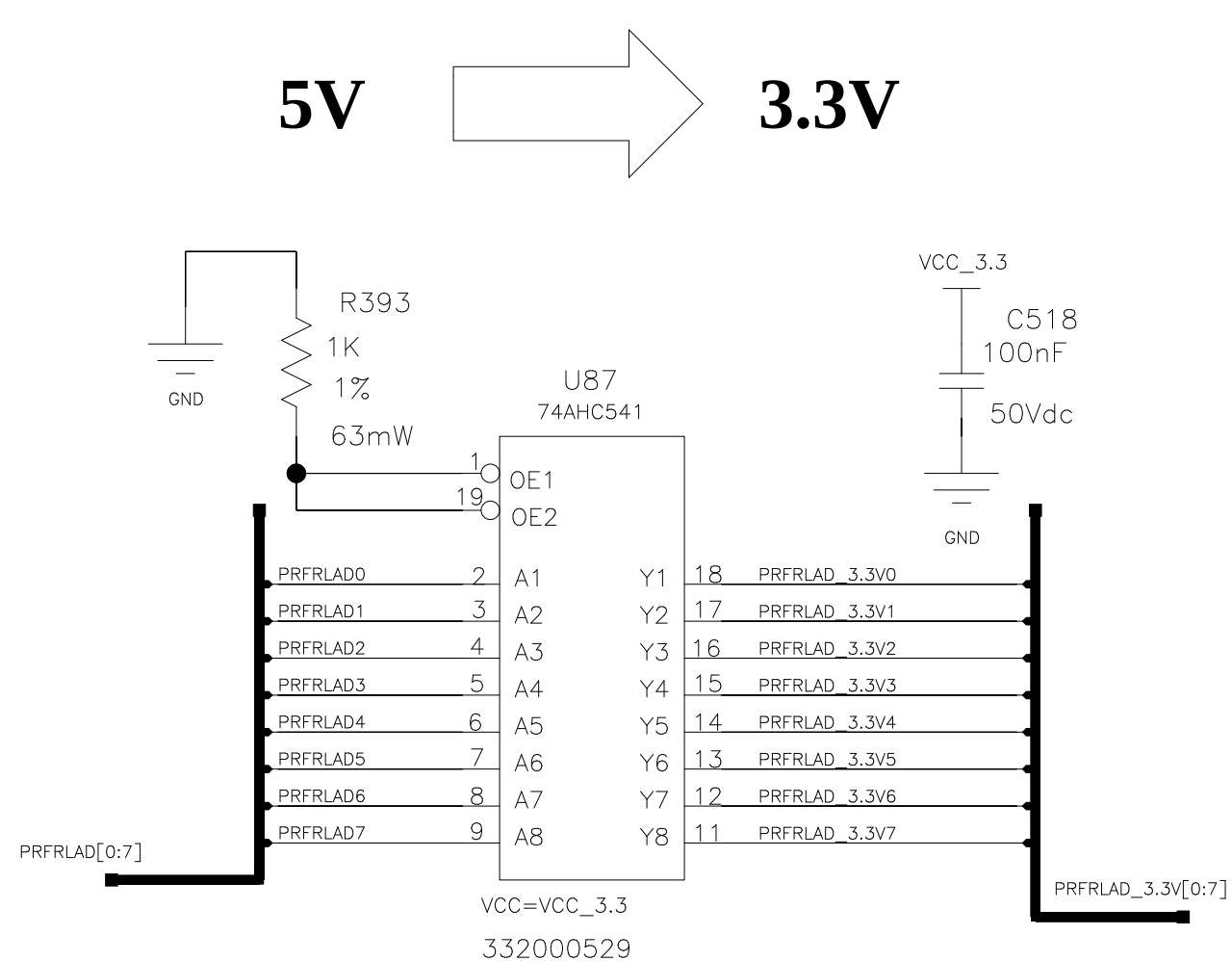
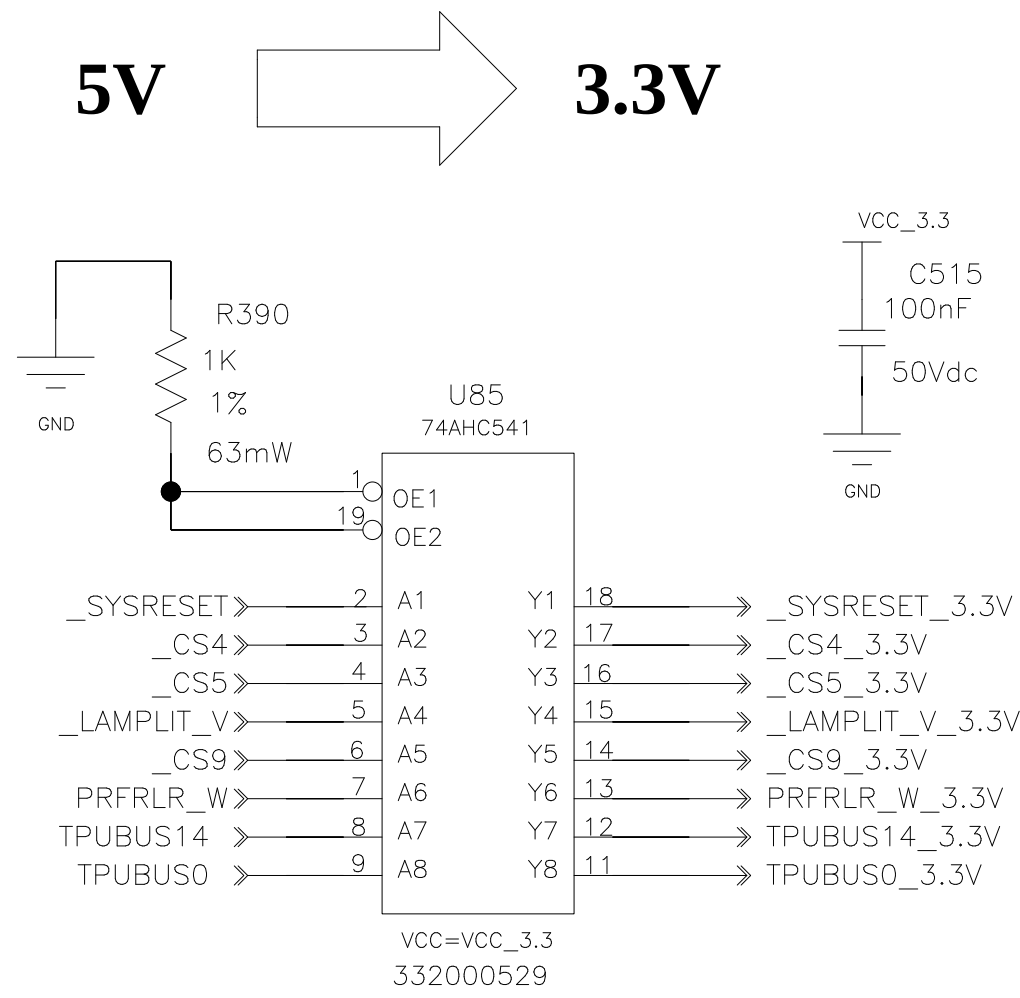
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ESD Caps



Level Shifters