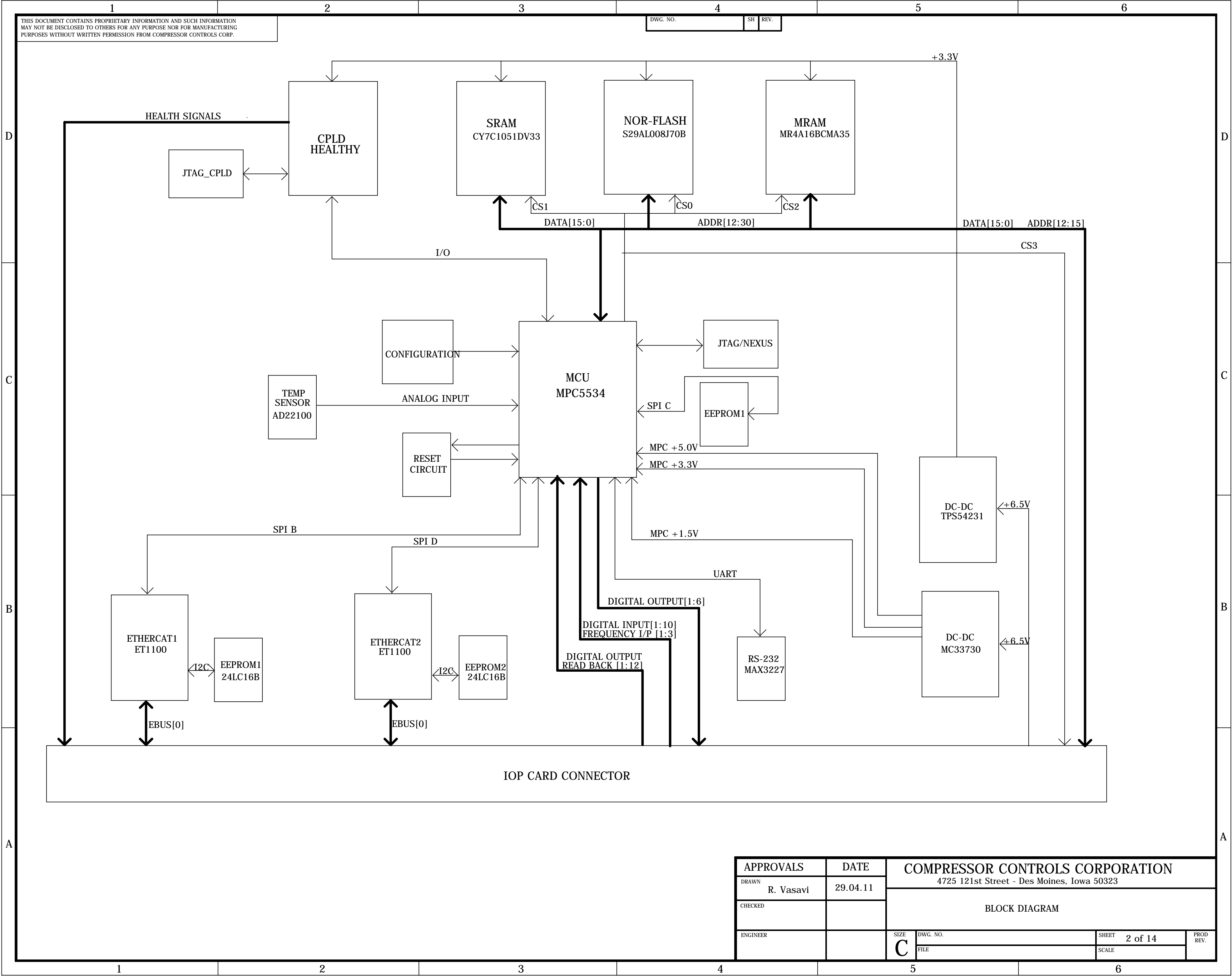


1	2	3	4	5	6																									
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<div>NEXT GENERATION PLATFORM</div> <div>MPC5534 MICROCONTROLLER BOARD</div>																														
<div>REVISION HISTORY</div> <table><thead><tr><th>REV</th><th>DATE</th><th>AUTHOR</th><th>DESCRIPTION/MODIFICATIONS</th></tr></thead><tbody><tr><td>1.0</td><td>29.04.11</td><td>R. Vasavi</td><td>Preliminary release</td></tr><tr><td>1.1</td><td>06.06.11</td><td>R. Vasavi</td><td>Added IOP board connectors Changed the JTAG/Nexus, CPLD & RS232 to right angled type</td></tr><tr><td>1.2</td><td>30.06.11</td><td>R. Vasavi</td><td>Changed the RS232 debug console to RS485 Moved the second SPI EEPOM to IOP board eTPU & eMIOS interfaces support for 16 DI & 16 DO Addition of mictor connectors</td></tr><tr><td>2.0</td><td>3.10.2011</td><td>AJM</td><td>Added Termination on ECAT RX Lines Changed value of C218-C220</td></tr></tbody></table>						REV	DATE	AUTHOR	DESCRIPTION/MODIFICATIONS	1.0	29.04.11	R. Vasavi	Preliminary release	1.1	06.06.11	R. Vasavi	Added IOP board connectors Changed the JTAG/Nexus, CPLD & RS232 to right angled type	1.2	30.06.11	R. Vasavi	Changed the RS232 debug console to RS485 Moved the second SPI EEPOM to IOP board eTPU & eMIOS interfaces support for 16 DI & 16 DO Addition of mictor connectors	2.0	3.10.2011	AJM	Added Termination on ECAT RX Lines Changed value of C218-C220					
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CHECKED			TITLE																											
ENGINEER			SIZE C	DWG. NO. FILE	SHEET 1 of 14 SCALE	PROD REV.																								
1	2	3	4	5	6																									



APPROVALS		DATE	COMPRESSOR CONTROLS CORPORATION			
DRAWN		R. Vasavi	29.04.11		BLOCK DIAGRAM	
CHECKED						
ENGINEER			SIZE	DWG. NO.	SHEET	PROD
			C	FILE	2 of 14	REV.
					SCALE	

APPROVALS		DATE		COMPRESSOR CONTROLS CORPORATION			
DRAWN R. Vasavi		29.04.11		4725 121st Street - Des Moines, Iowa 50323			
CHECKED				MPC5534 Configurations			
ENGINEER				SIZE C	DWG. NO.	SHEET 4 of 14	PROD REV.
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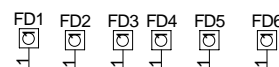
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DWG. NO.

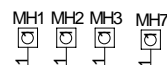
SH

REV.

FIDUCIALS

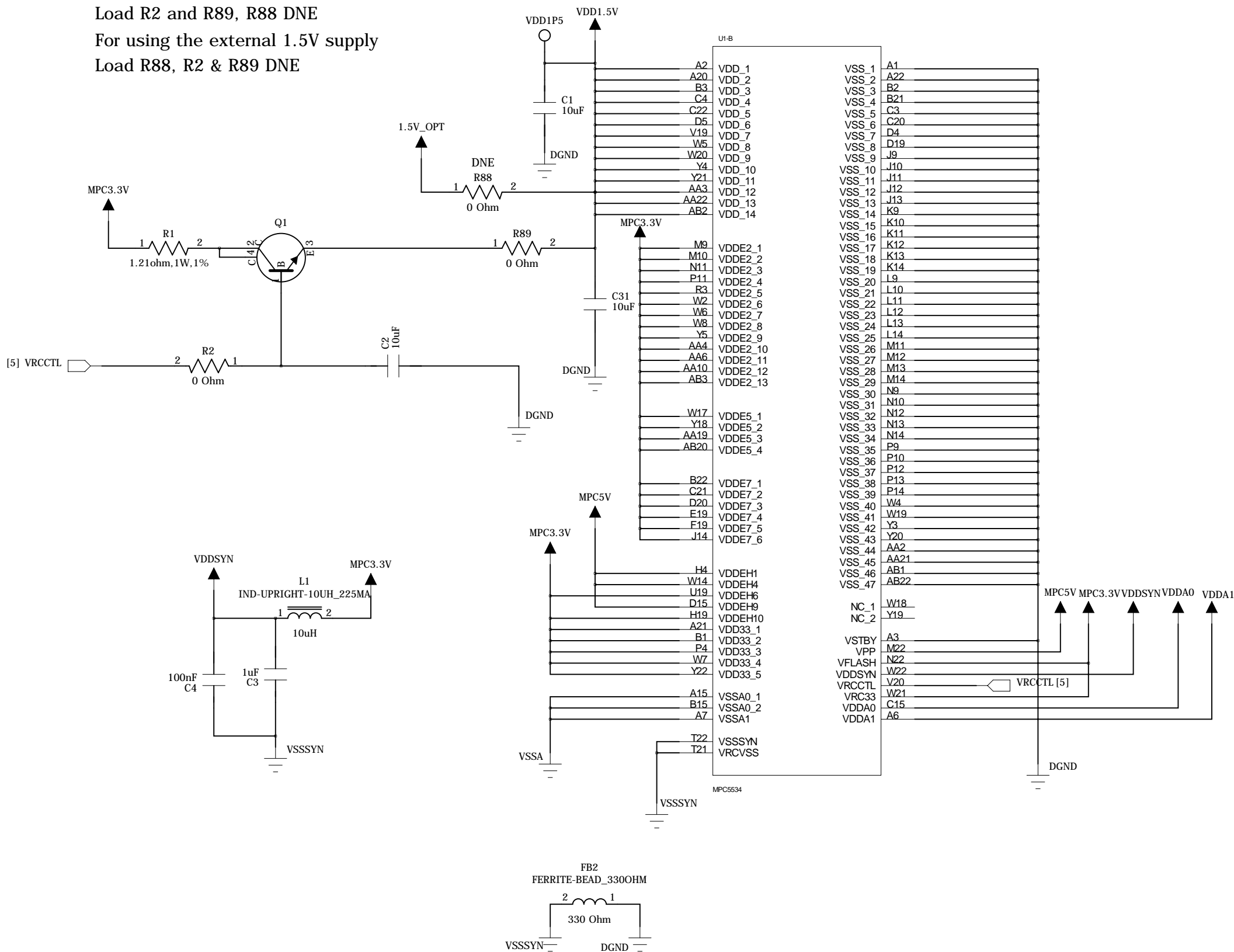


MOUNTING HOLES



For using internal 1.5V LDO
Load R2 and R89, R88 DNE
For using the external 1.5V supply
Load R88, R2 & R89 DNE

MPC5534 Power



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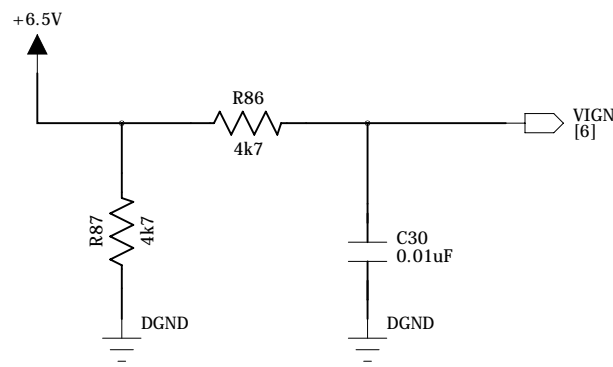
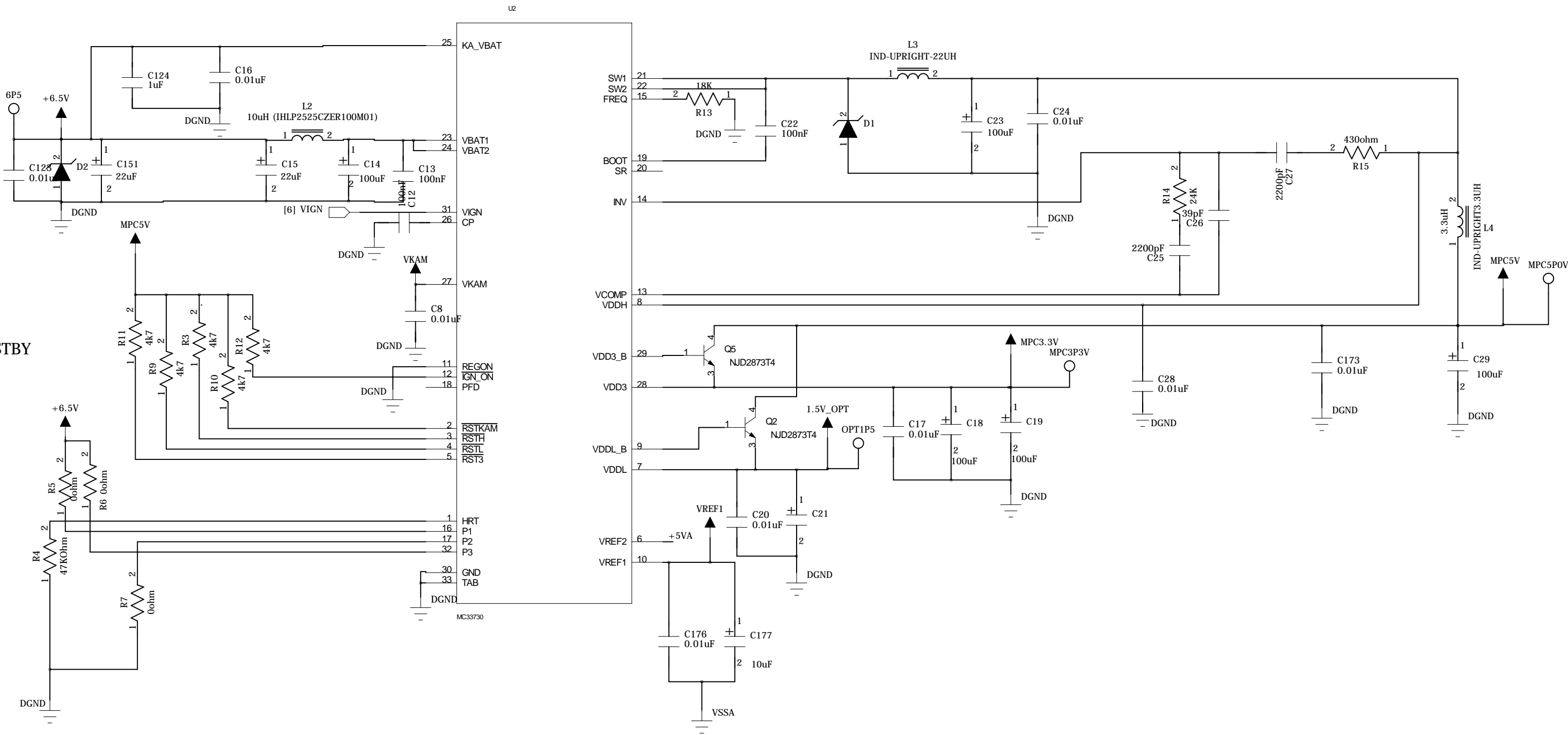
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SH

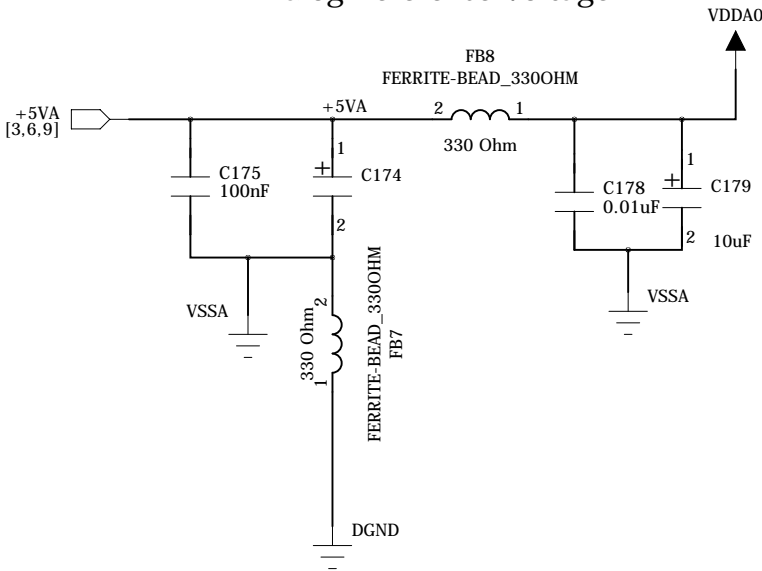
REV.

MC33730 - Switching regulator with LDO output- 3.3V, 1.5V

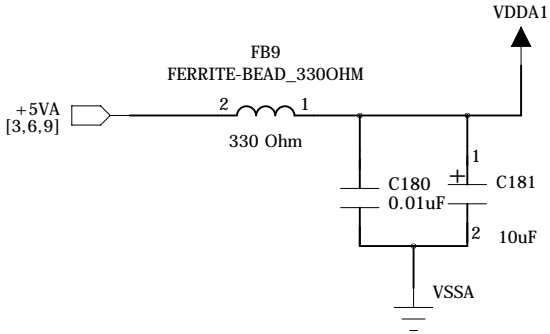
For J2
Short 1 & 2 for VSTBY
Short 2 & 3 for disable VSTBY



Analog Reference Voltage



Analog Reference Voltage

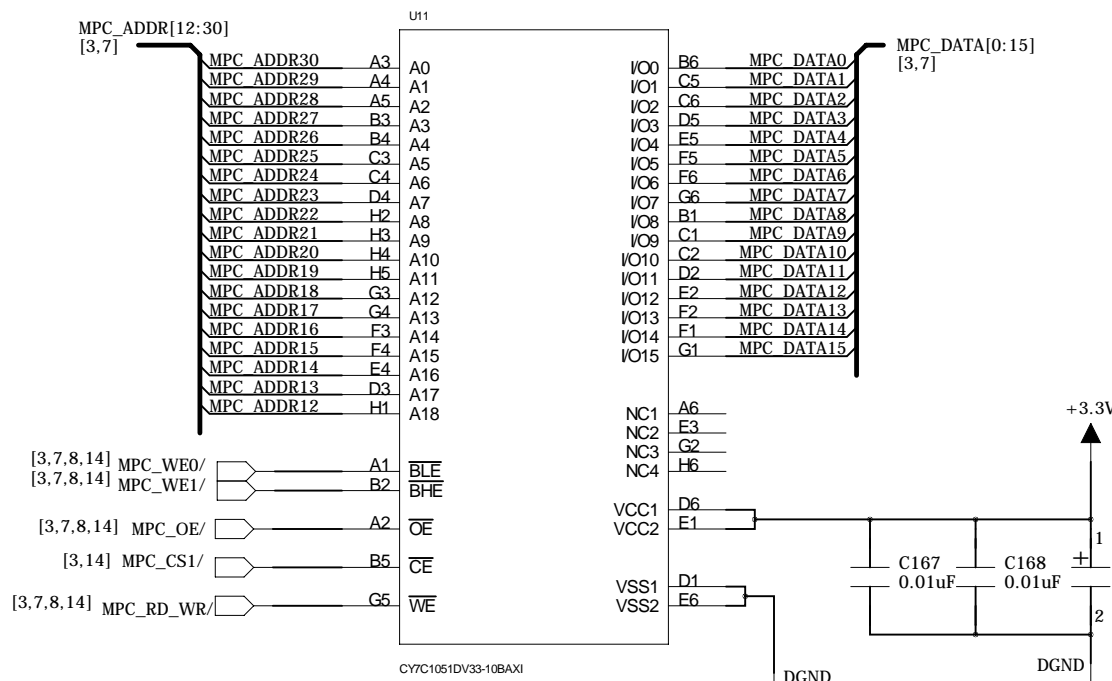


APPROVALS		DATE	COMPRESSOR CONTROLS CORPORATION		
DRAWN	R. Vasavi	29.04.11	4725 121st Street - Des Moines, Iowa 50323		
CHECKED			MC33730-Power outputs to MPC5534		
ENGINEER			SIZE	DWG. NO.	SHEET 6 of 14
			C	FILE	SCALE
					PROD REV.

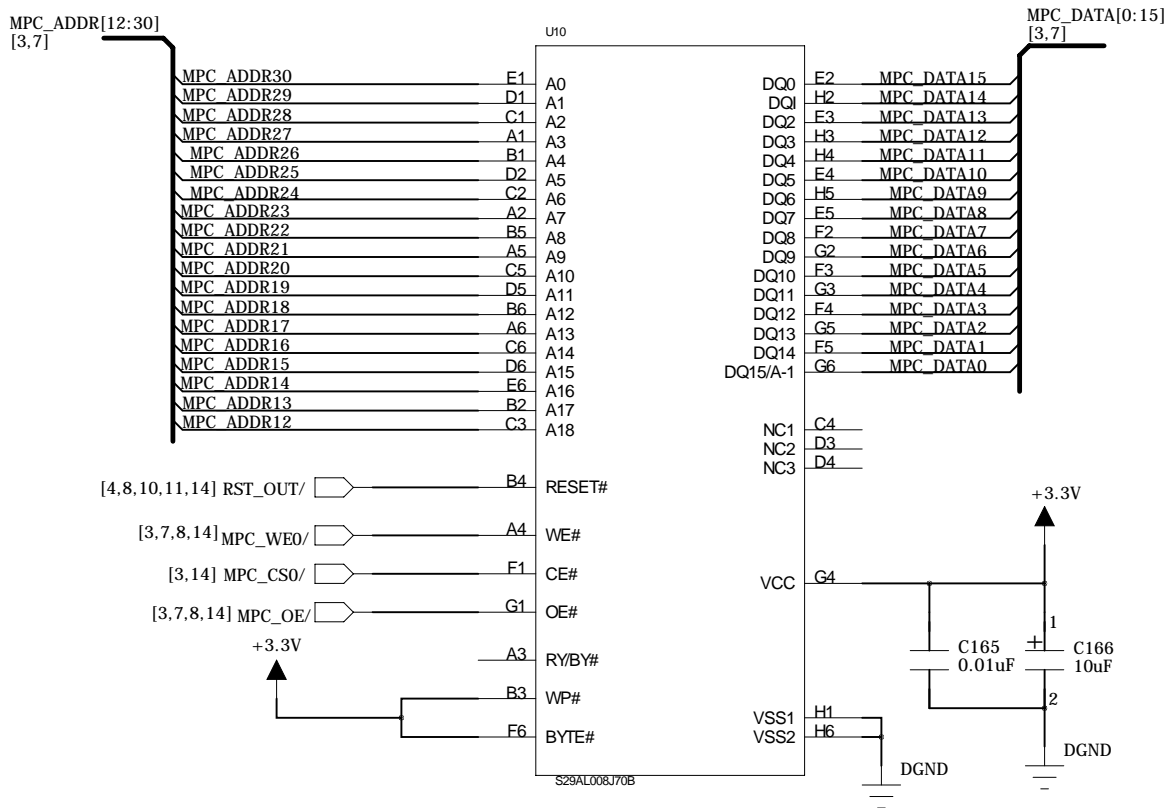
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DWG. NO. SH REV.

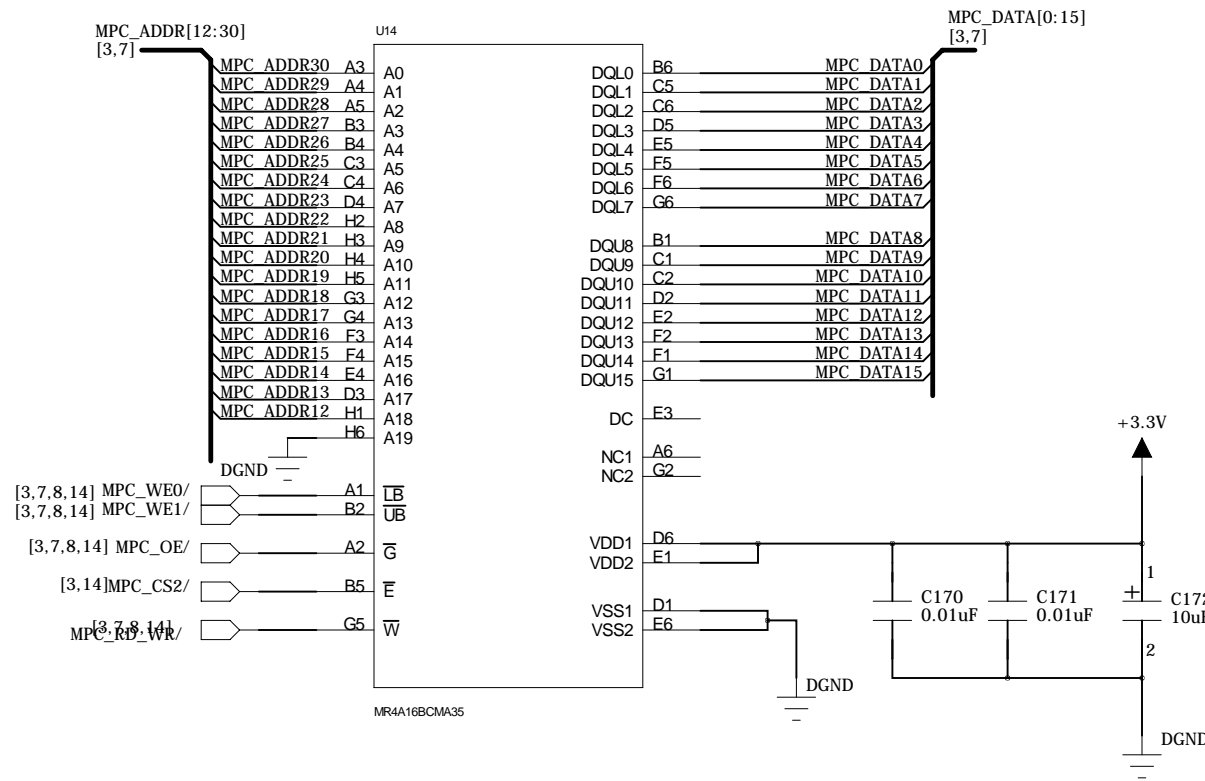
SRAM



NOR-FLASH



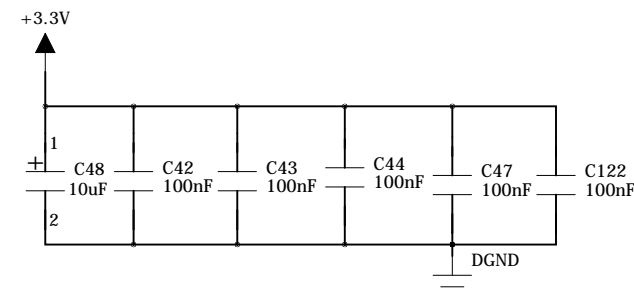
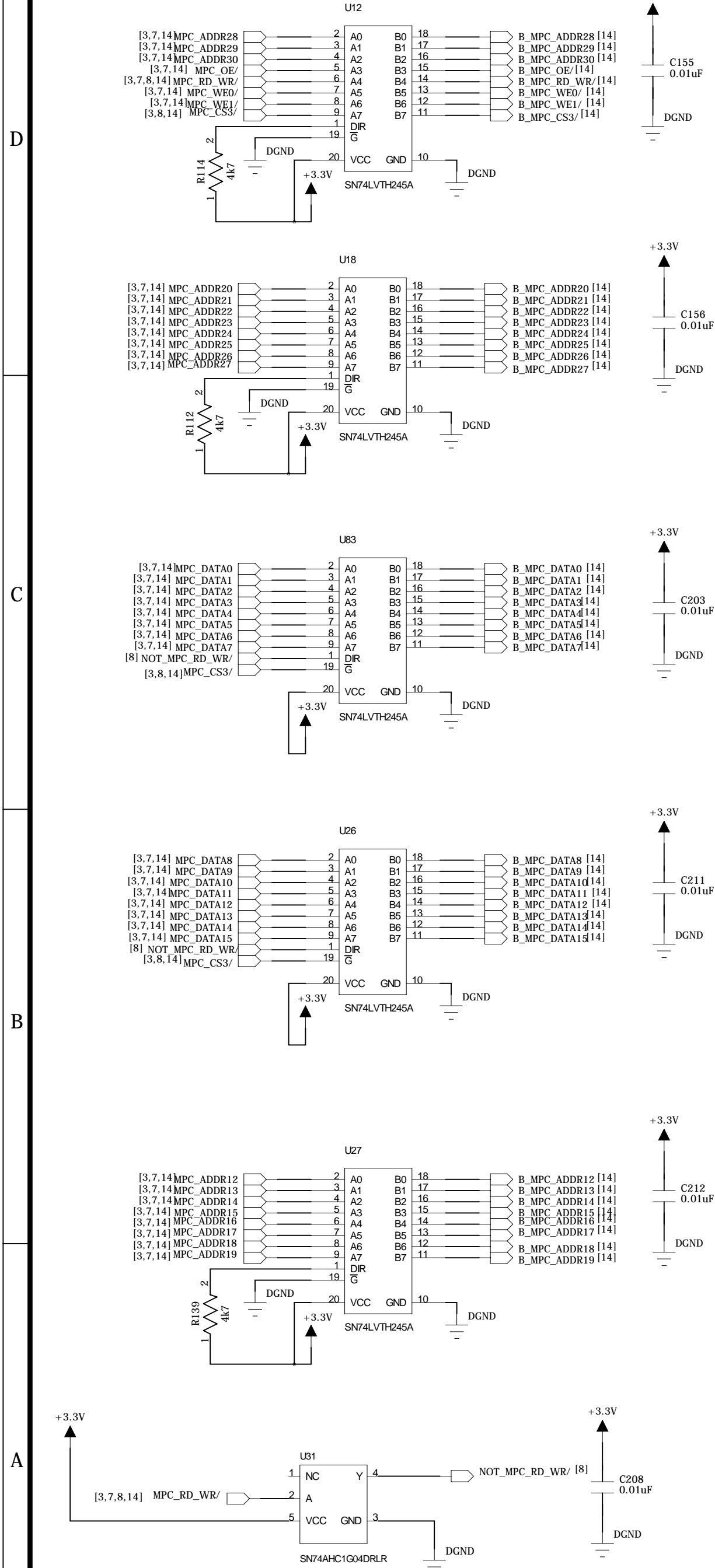
MRAM



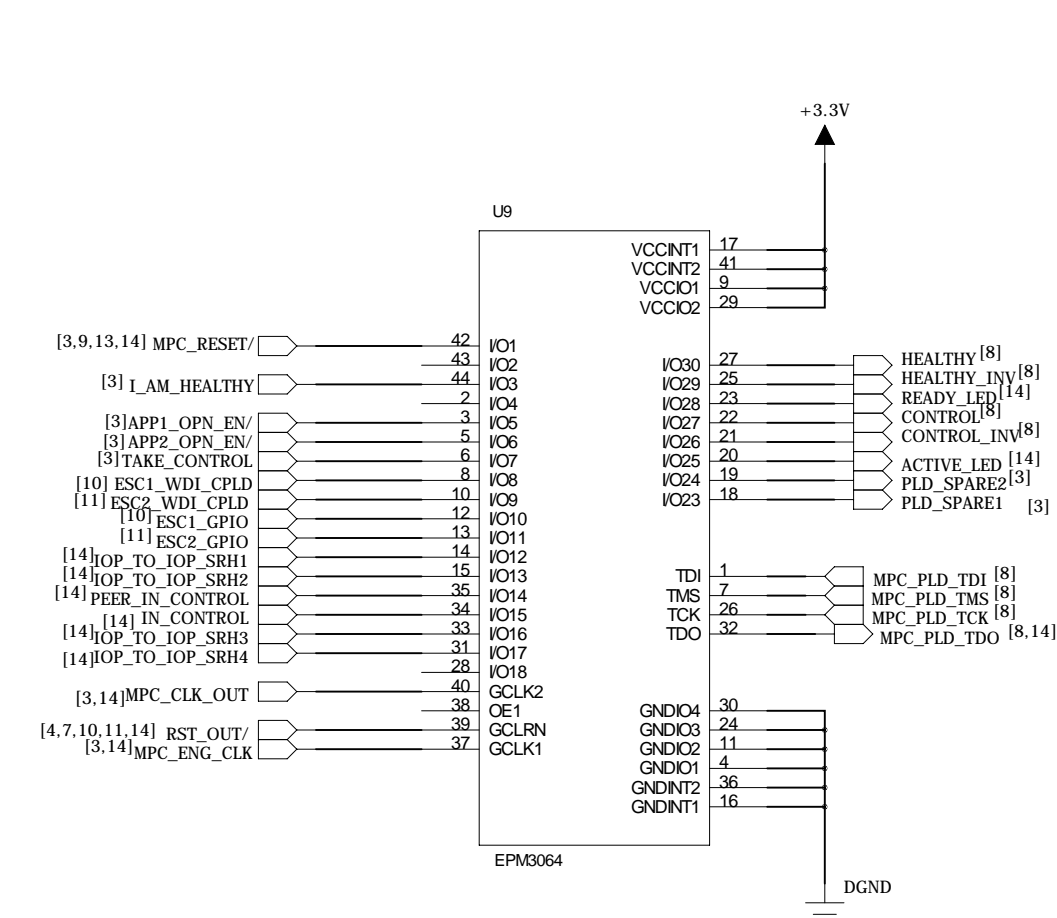
APPROVALS		DATE	COMPRESSOR CONTROLS CORPORATION		
DRAWN	R.Vasavi	29.04.11	4725 121st Street - Des Moines, Iowa 50323		
CHECKED			NOR-Flash, SRAM & MRAM		
ENGINEER			SIZE C	DWG. NO. FILE	SHEET 7 of 14 SCALE
					PROD REV.

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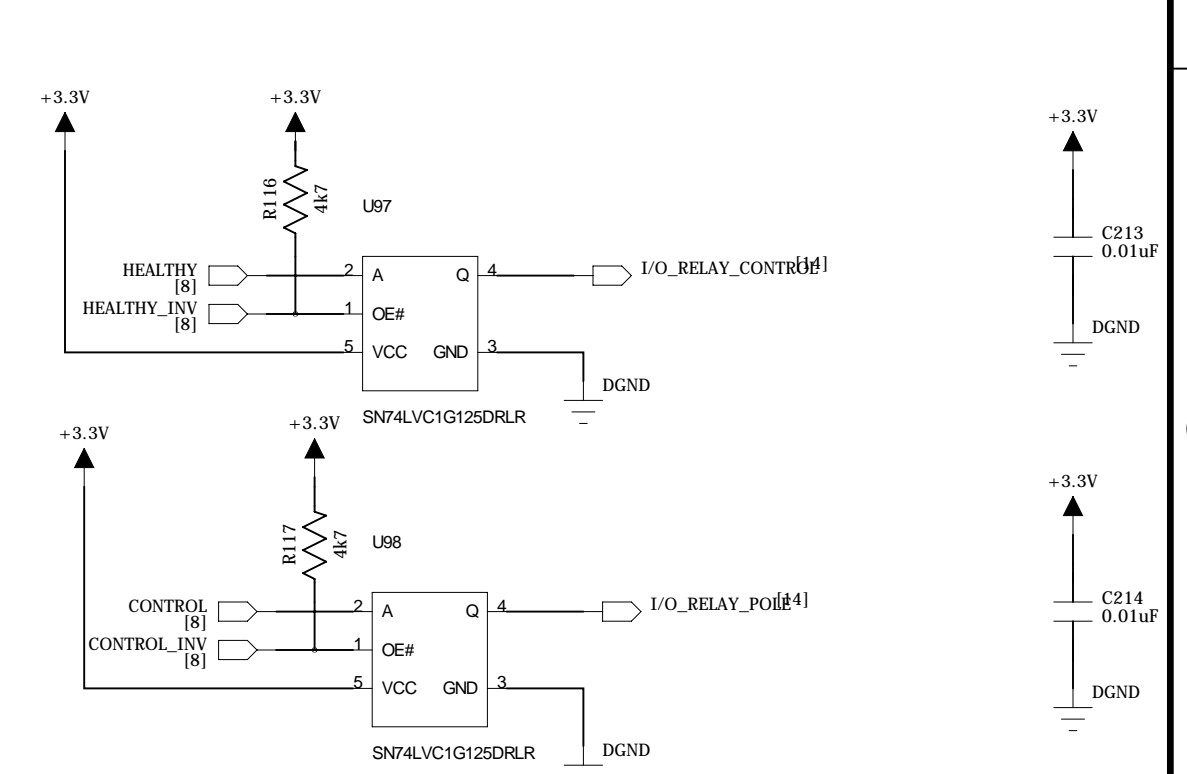
Buffers on MPC Addr, data bus going to connector



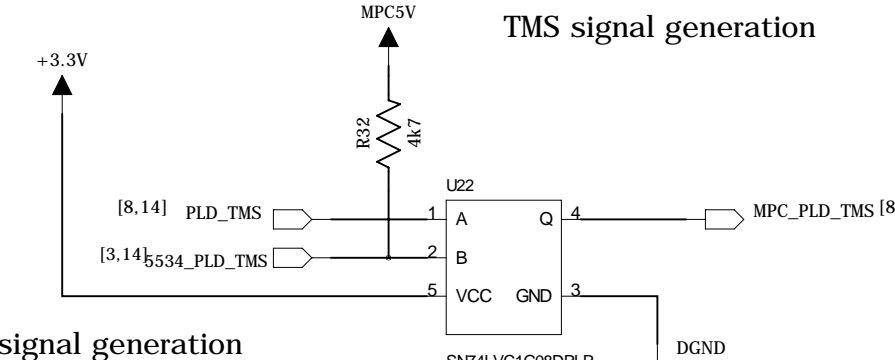
Health monitor CPLD



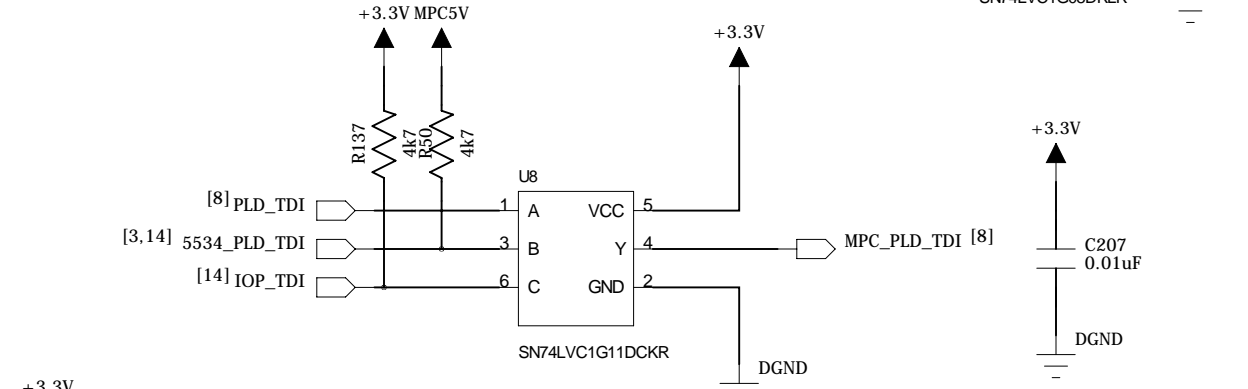
Buffers for Health signals



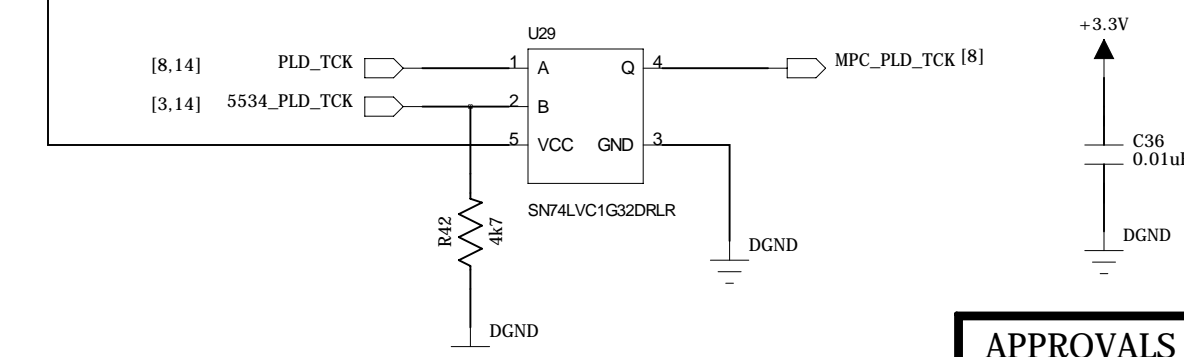
TMS signal generation



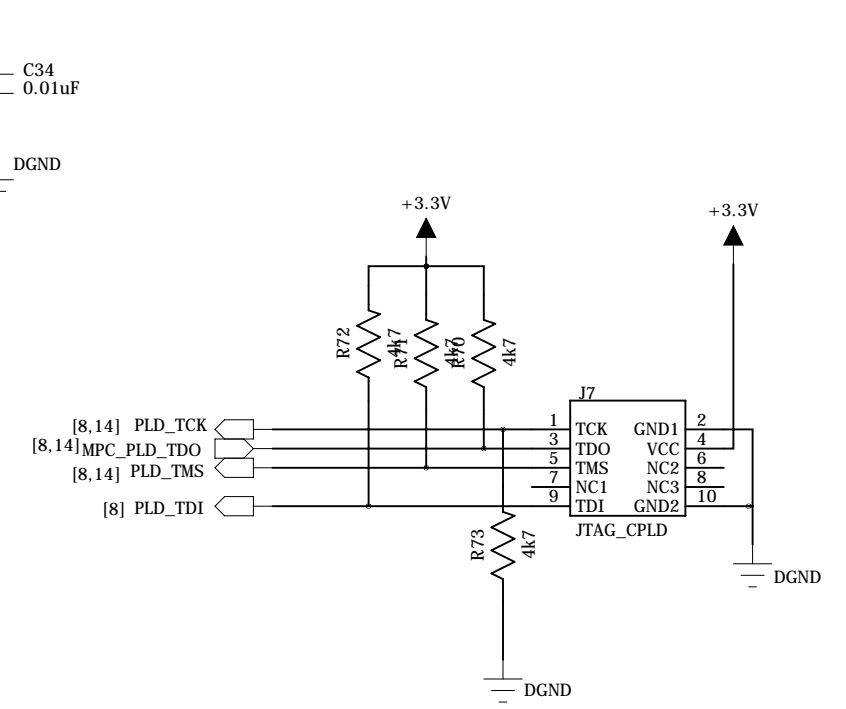
TDI signal generation



TCK signal generation



JTAG programming for CPLD



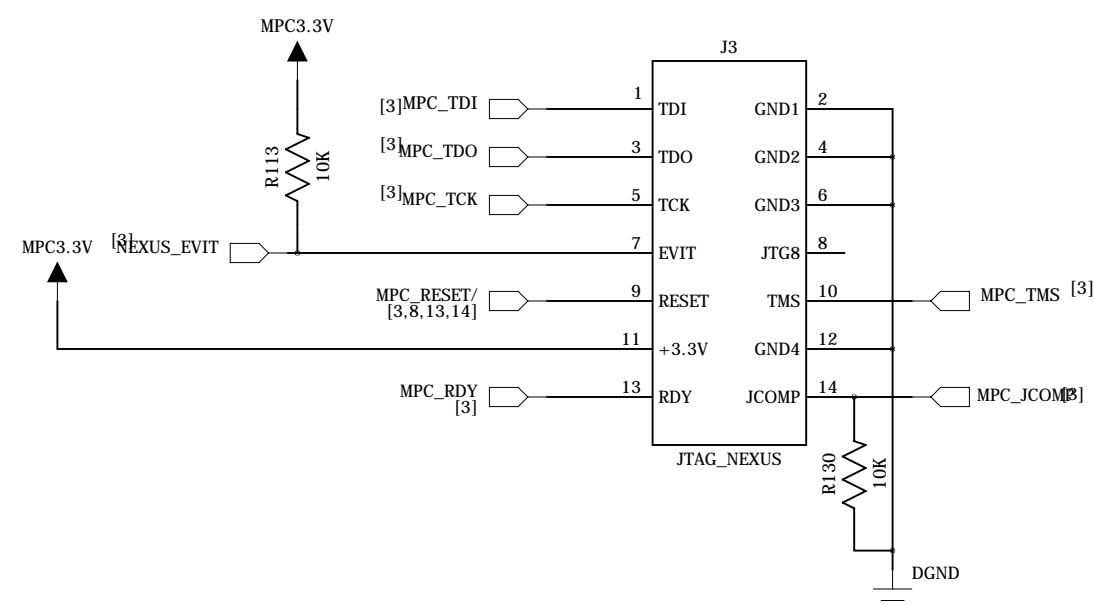
APPROVALS		DATE	COMPRESSOR CONTROLS CORPORATION		
DRAWN	R.Vasavi	29.04.11	4725 121st Street - Des Moines, Iowa 50323		
CHECKED			HEALTH CPLD & EBI-BUFFERS		
ENGINEER			SIZE	DWG. NO.	SHEET 8 of 14
			FILE		SCALE
					PROD REV.

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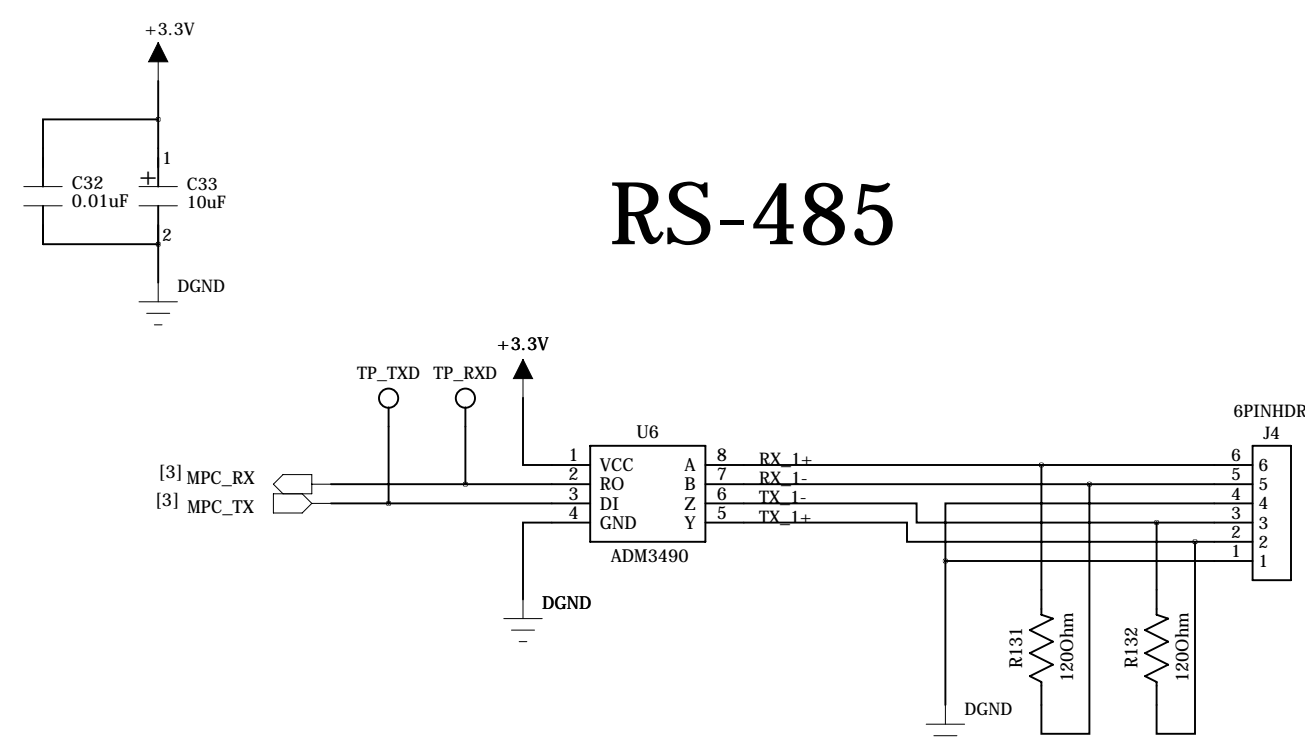
SH	REV.
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SH	REV.
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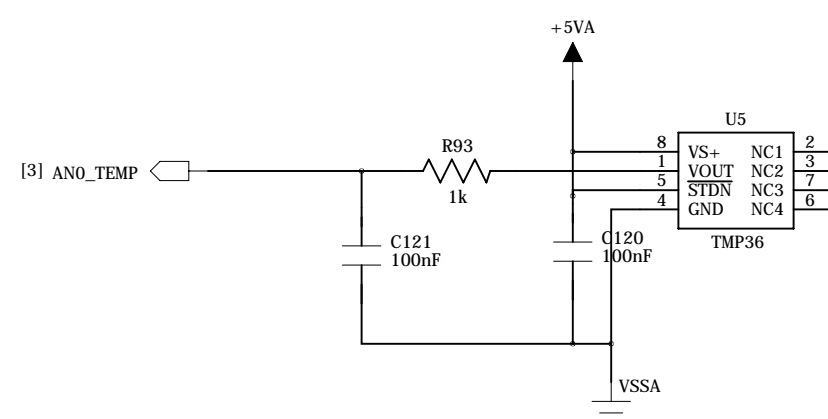
JTAG/NEXUS



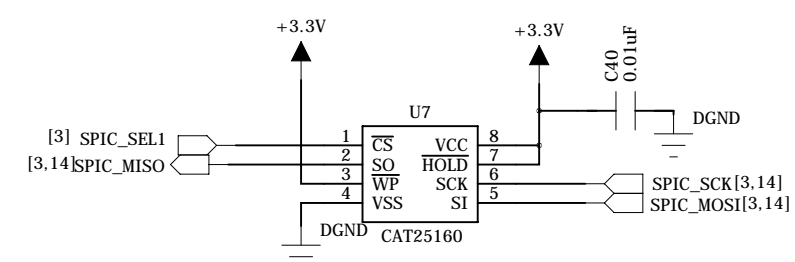
RS-485



Temperature Sensor

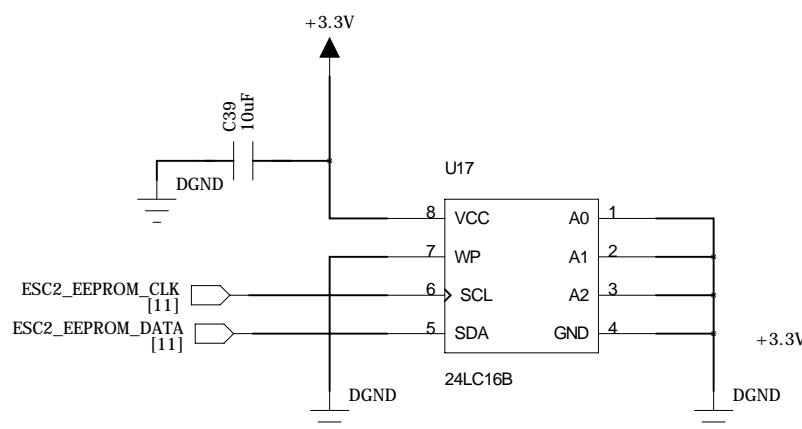


SPI-EEPROM1

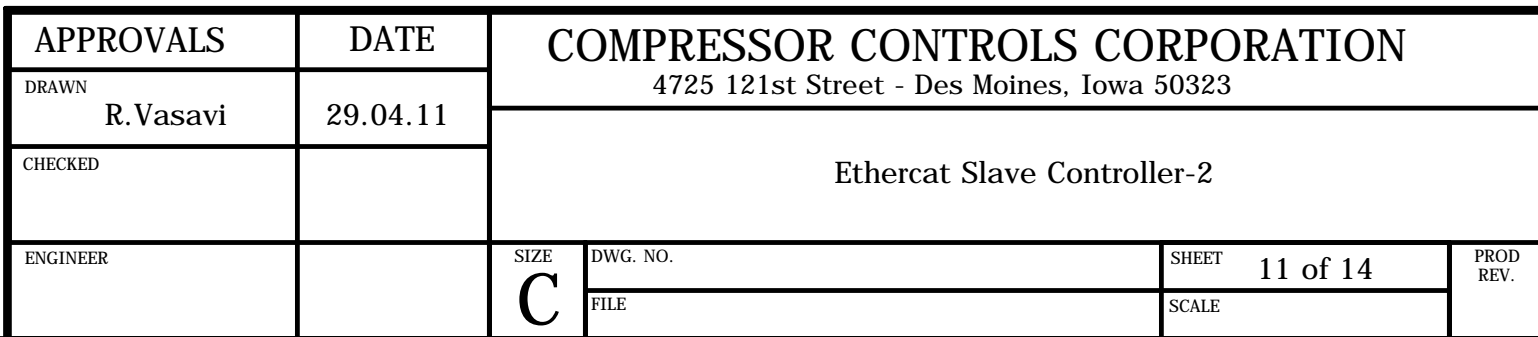


APPROVALS		DATE		COMPRESSOR CONTROLS CORPORATION			
DRAWN R. Vasavi		29.04.11		4725 121st Street - Des Moines, Iowa 50323			
CHECKED				JTAG/Nexus, RS-485, SPI-EEPROM, TEMP-SENSOR			
ENGINEER				SIZE C	DWG. NO. FILE	SHEET 9 of 14	PROD REV.

U19-A



EBUS traces must be controlled impedance traces
EBUS is strictly 100 ohm use thin traces for these signals



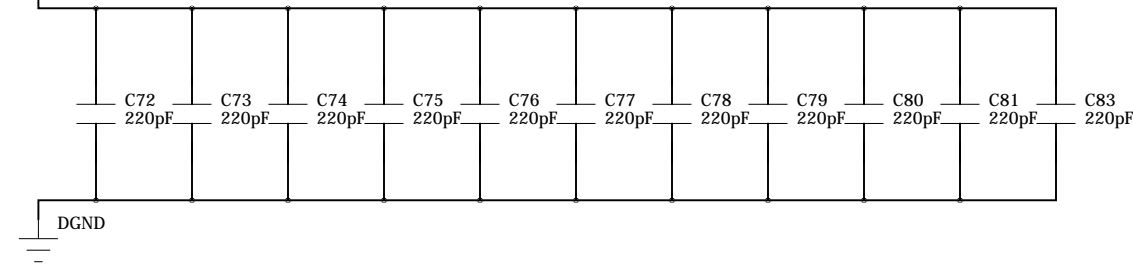
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DWG. NO.

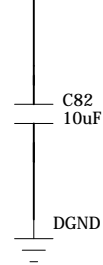
SH

REV.

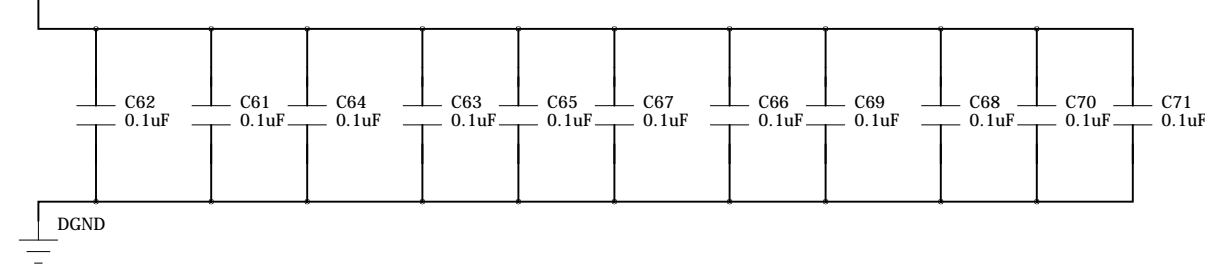
+3.3V



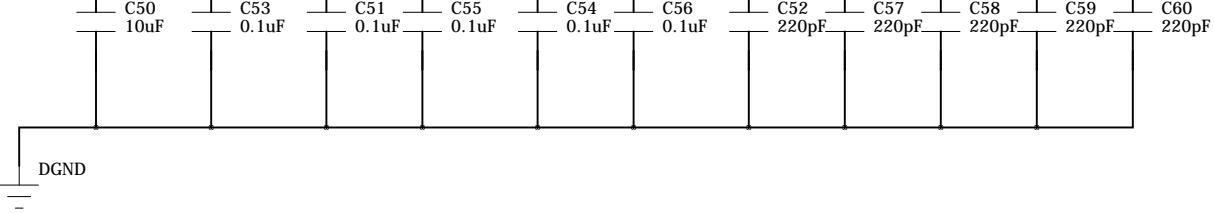
+3.3V



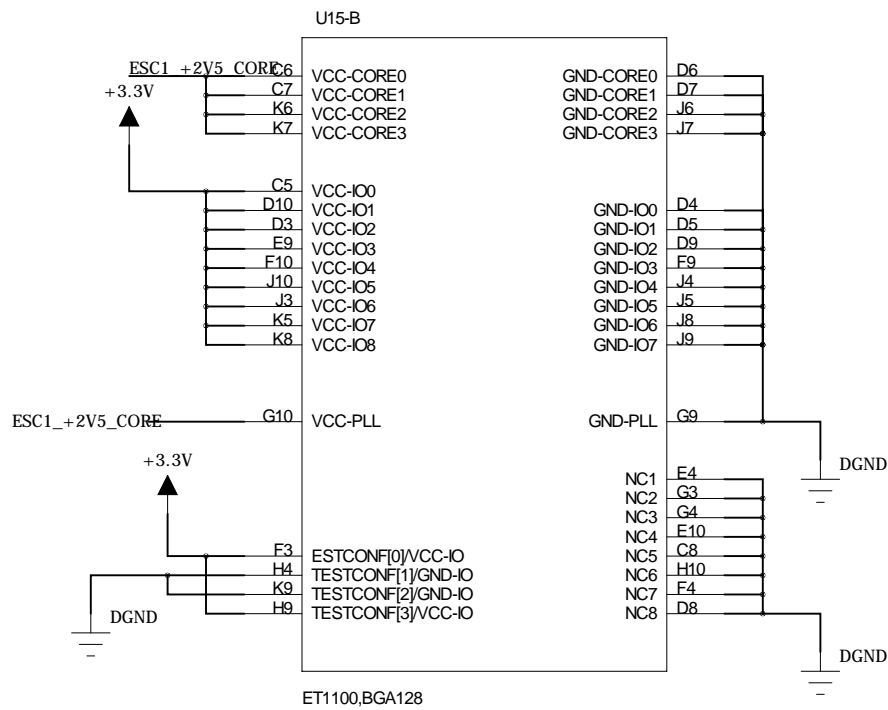
+3.3V



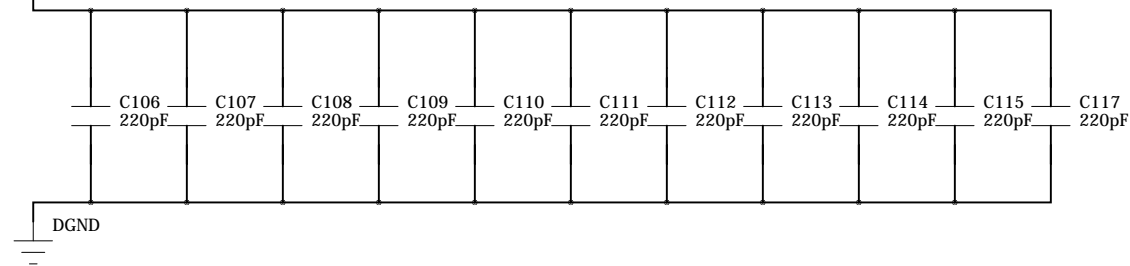
ESC1_+2V5_CORE



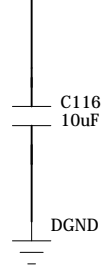
EtherCAT Slave Controller 1- Power



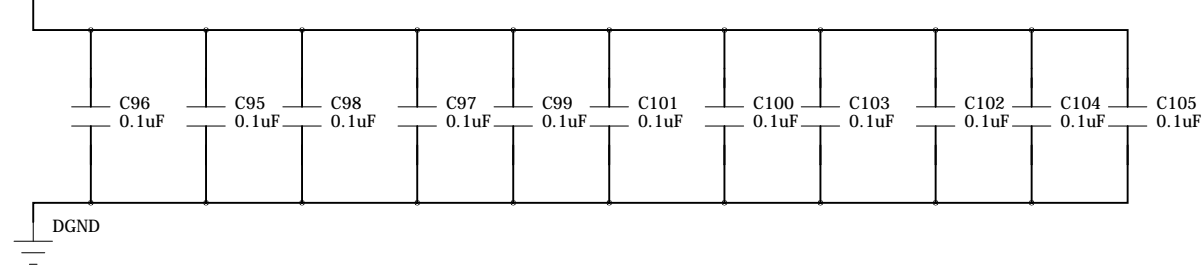
+3.3V



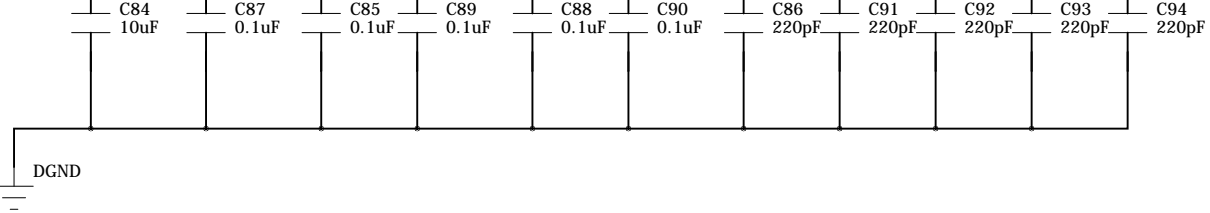
+3.3V



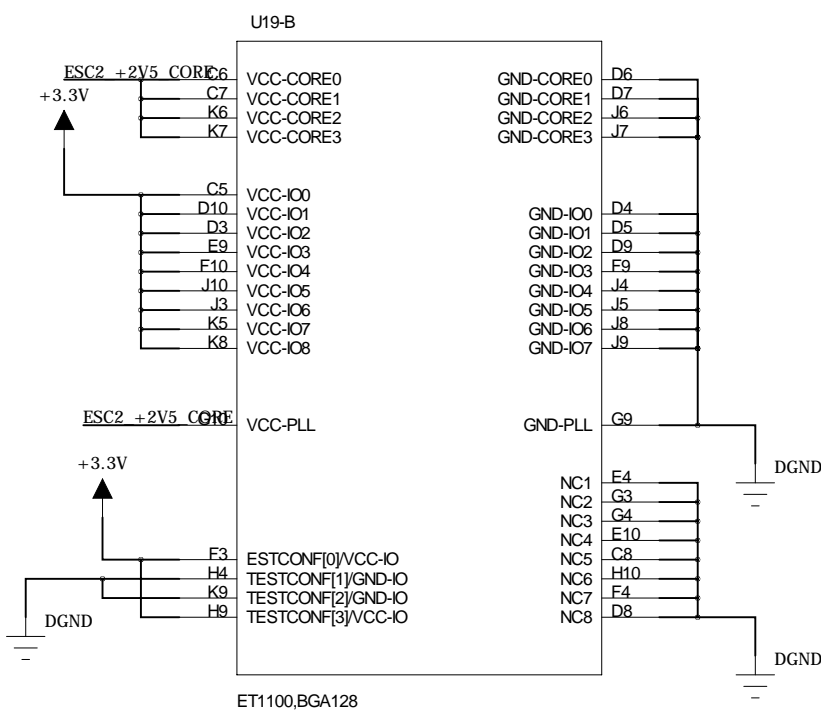
+3.3V



ESC2_+2V5_CORE

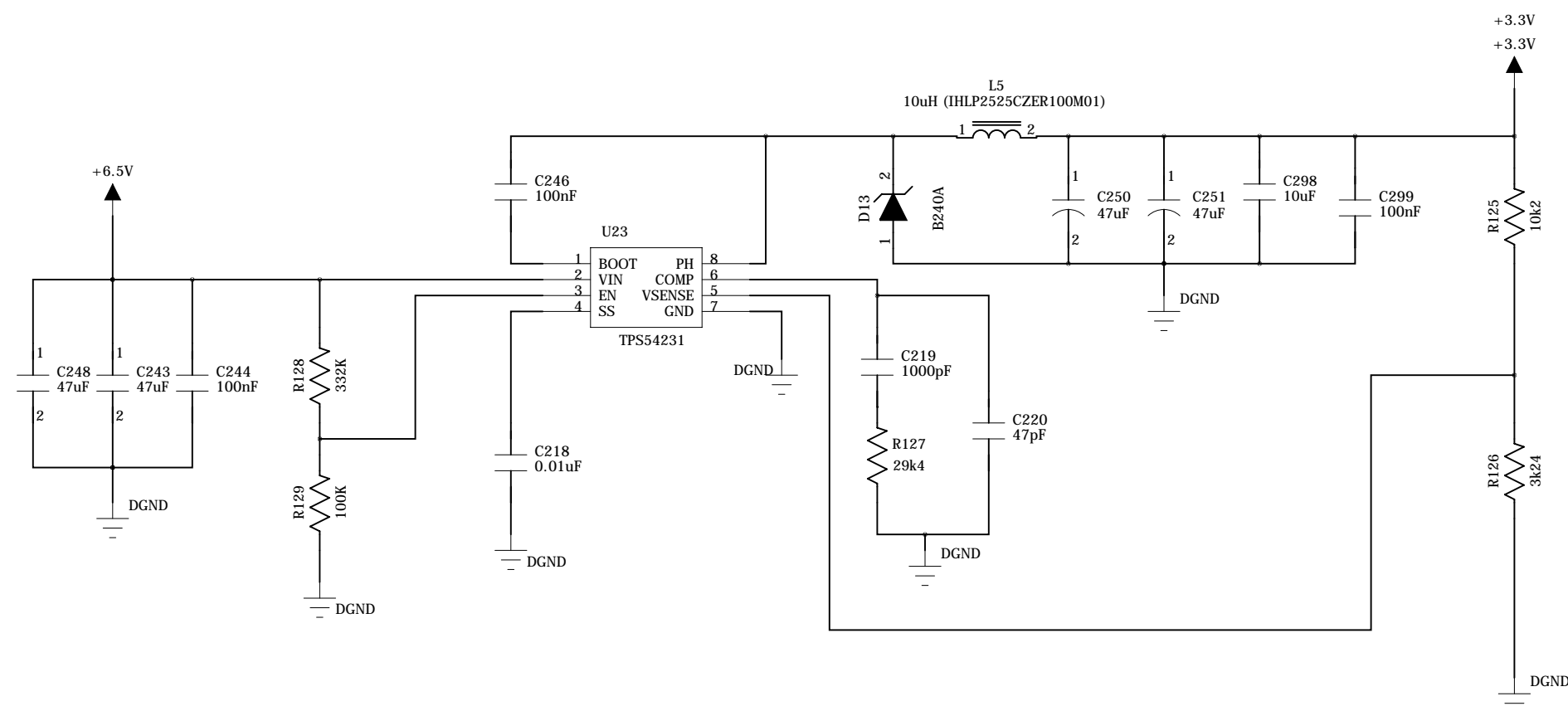


EtherCAT Slave Controller 2- Power

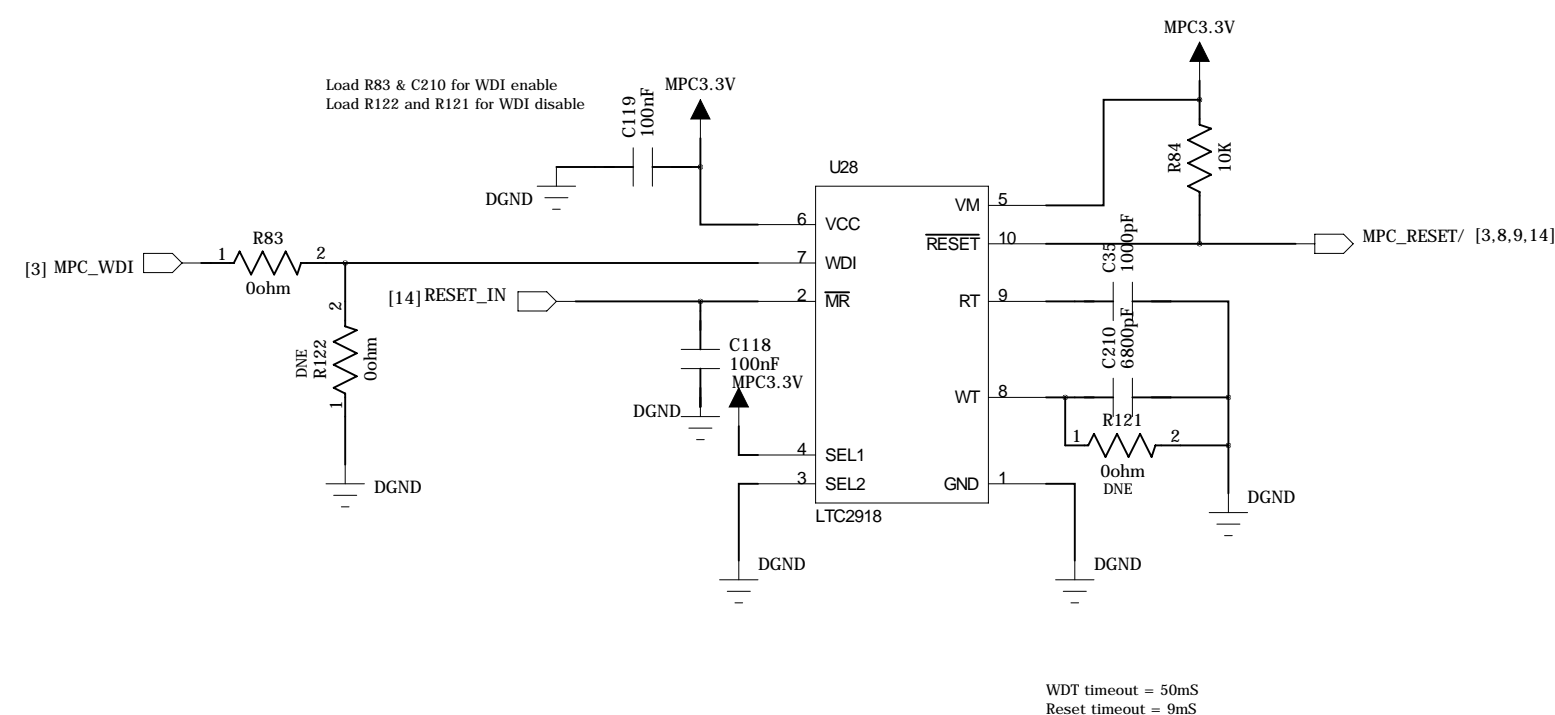


APPROVALS		DATE	COMPRESSOR CONTROLS CORPORATION		
DRAWN	R. Vasavi	29.04.11	4725 121st Street - Des Moines, Iowa 50323		
CHECKED			Ethercat Controllers Power		
ENGINEER			SIZE	DWG. NO.	SHEET 12 of 14
			FILE		SCALE
					PROD REV.

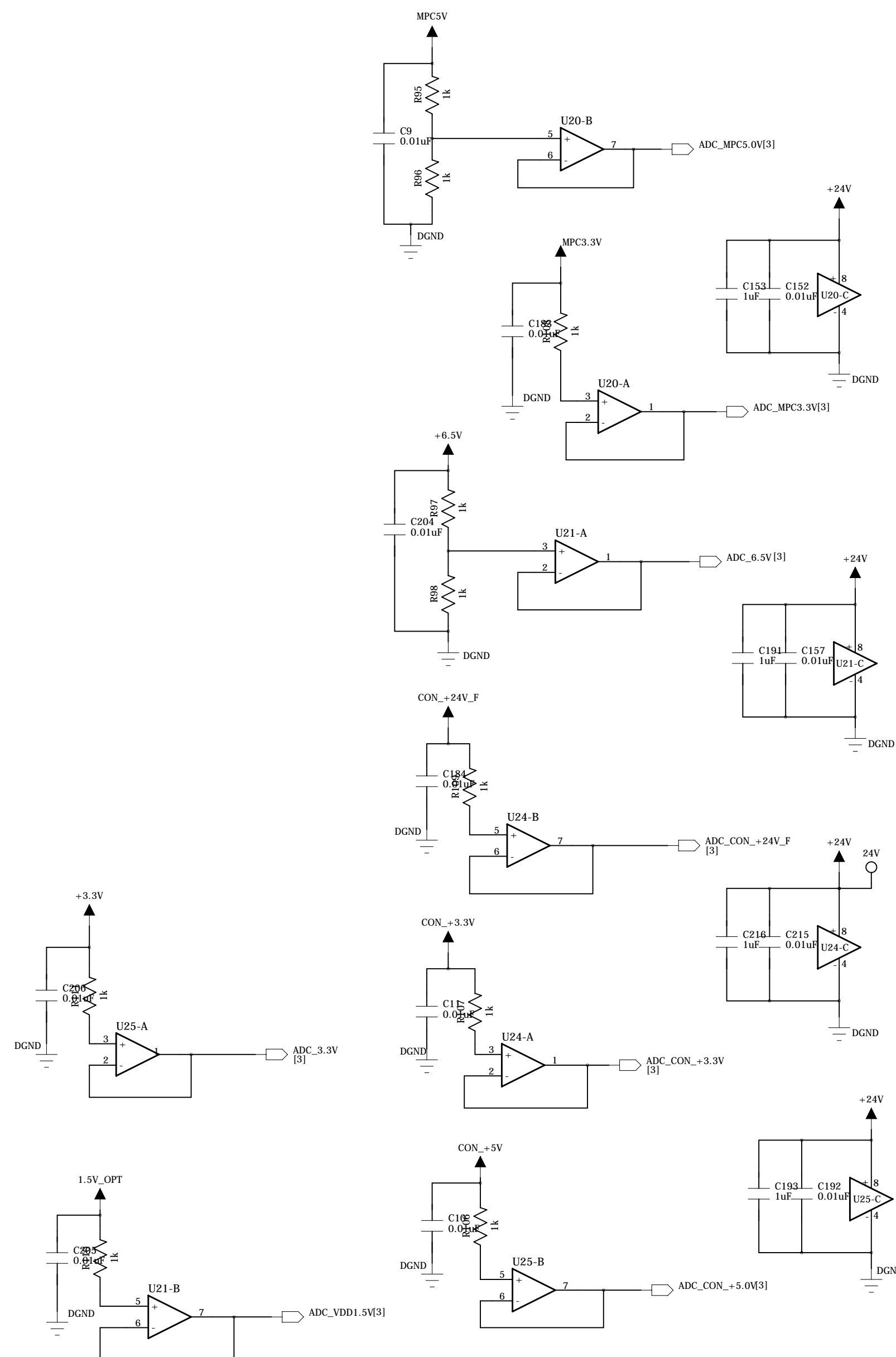
DC-DC converter 3.3V



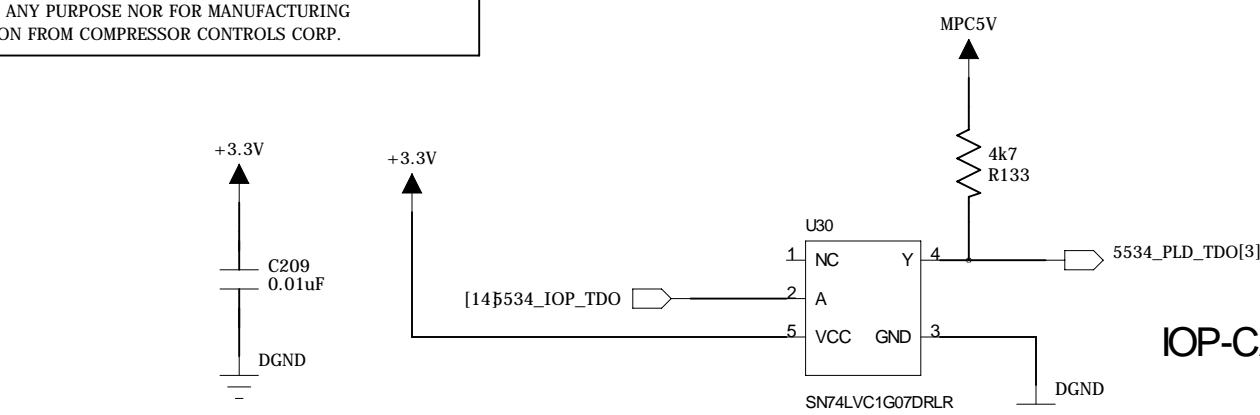
RESET circuit



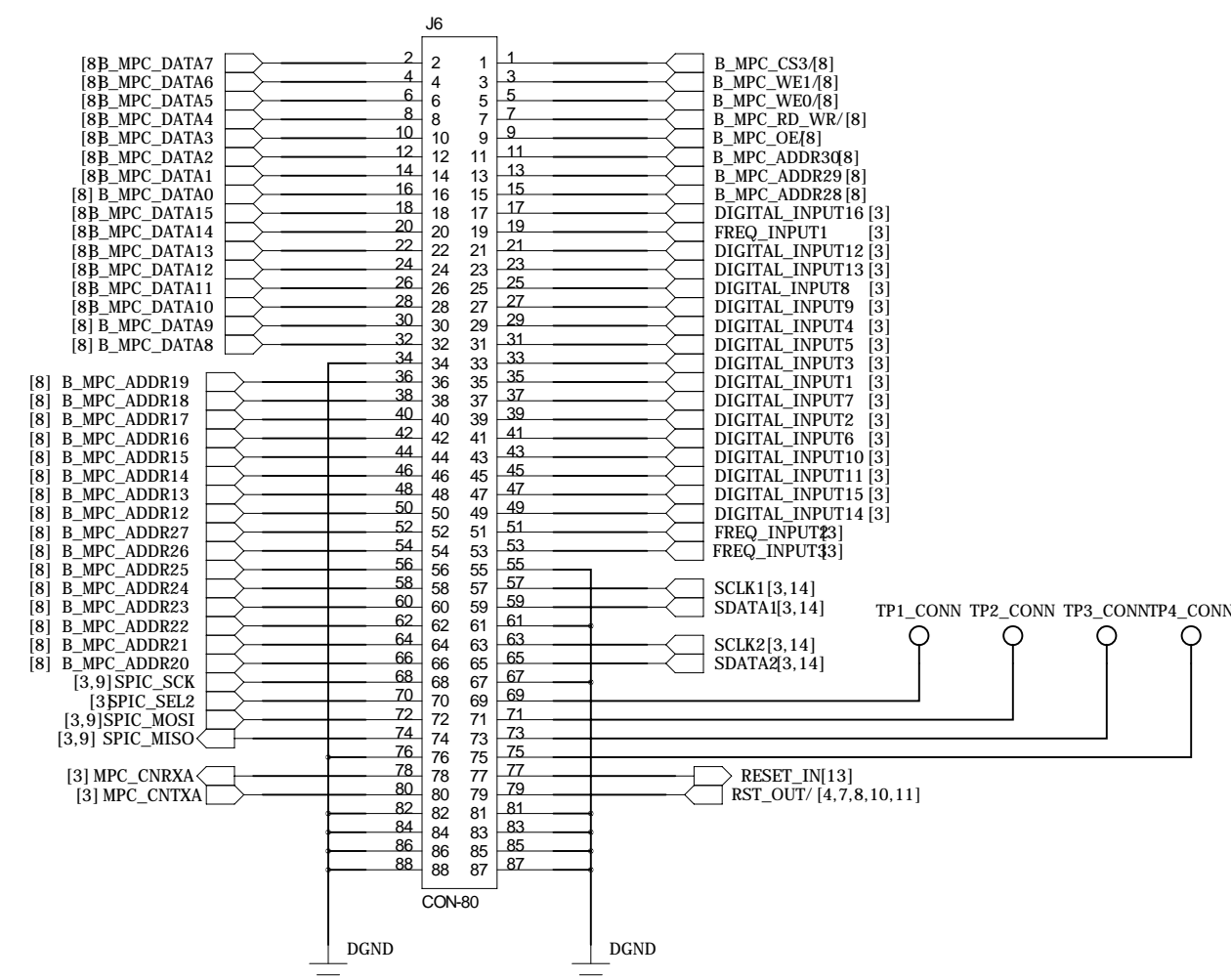
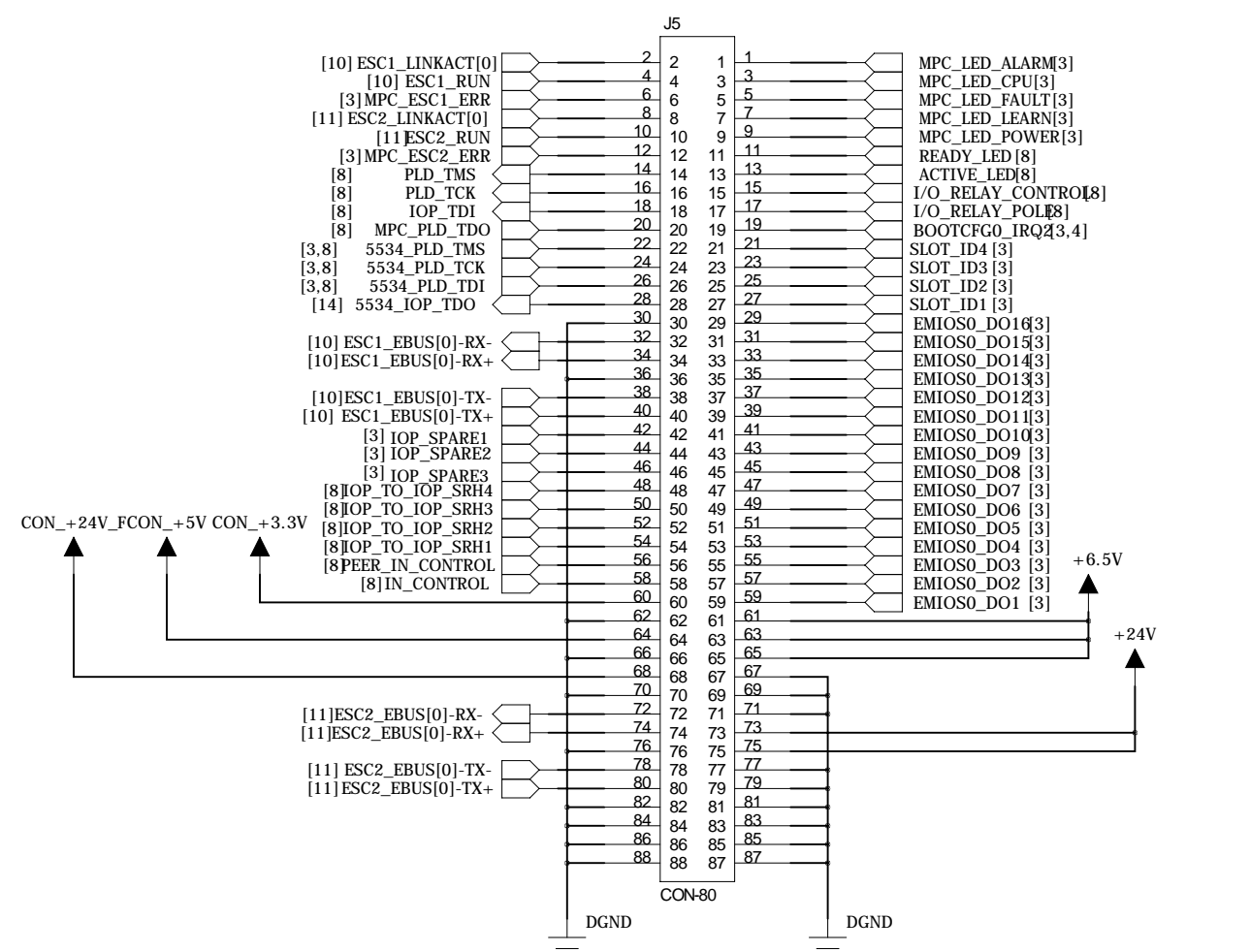
Unit gain OPAMP for Voltage monitor



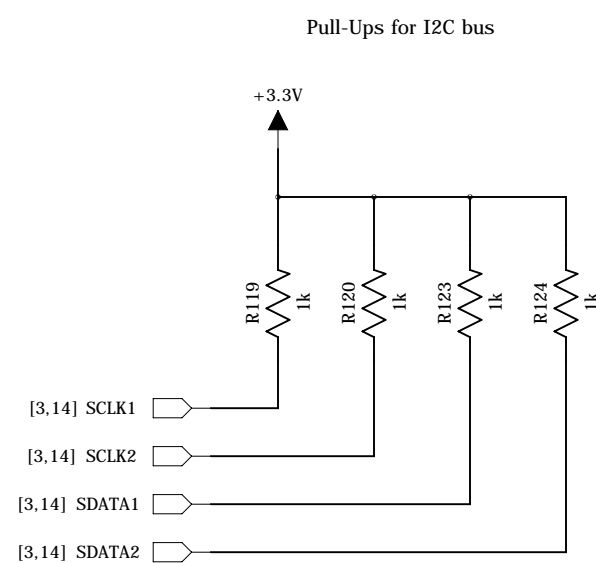
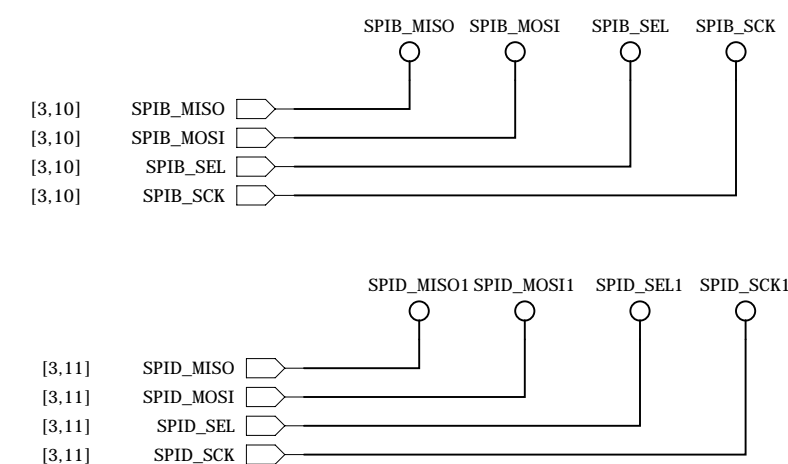
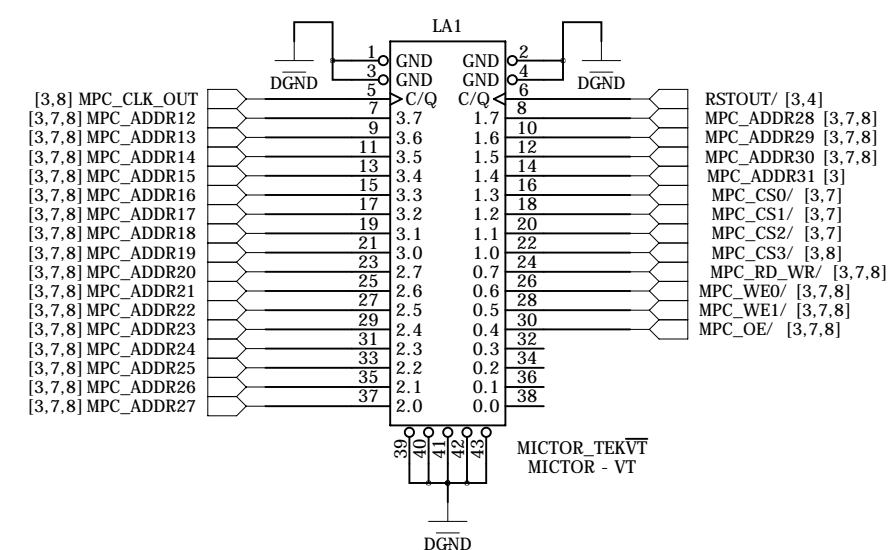
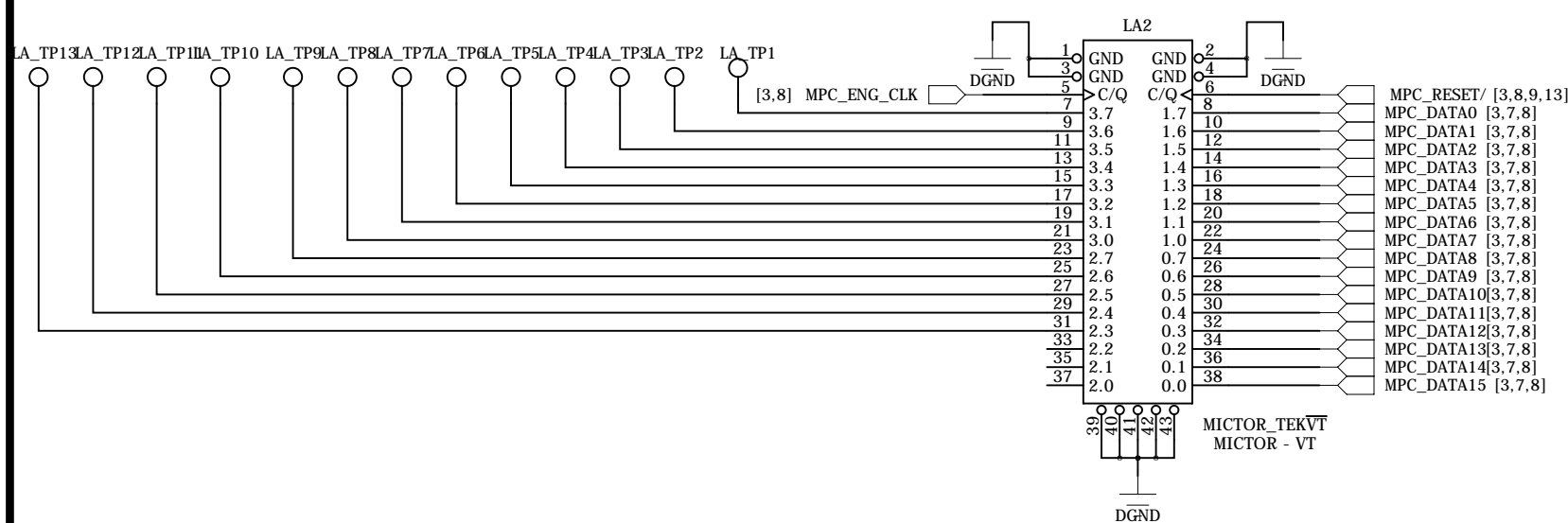
APPROVALS		DATE		COMPRESSOR CONTROLS CORPORATION			
DRAWN R. Vasavi		29.04.11		4725 121st Street - Des Moines, Iowa 50323			
CHECKED				Power-3.3v, Reset, Unit gain OPAMP			
ENGINEER				SIZE C	DWG. NO. FILE	SHEET 13 of 14	PROD REV.



IOP-CARD_CONNECTOR



MICTOR_CONNECTORS



APPROVALS	DATE	COMPRESSOR CONTROLS CORPORATION			
DRAWN R. Vasavi	29.04.11	4725 121st Street - Des Moines, Iowa 50323			
CHECKED		IOP board connector, MICTOR, Test points			
ENGINEER		SIZE C	DWG. NO. FILE	SHEET 14 of 14	PROD REV.