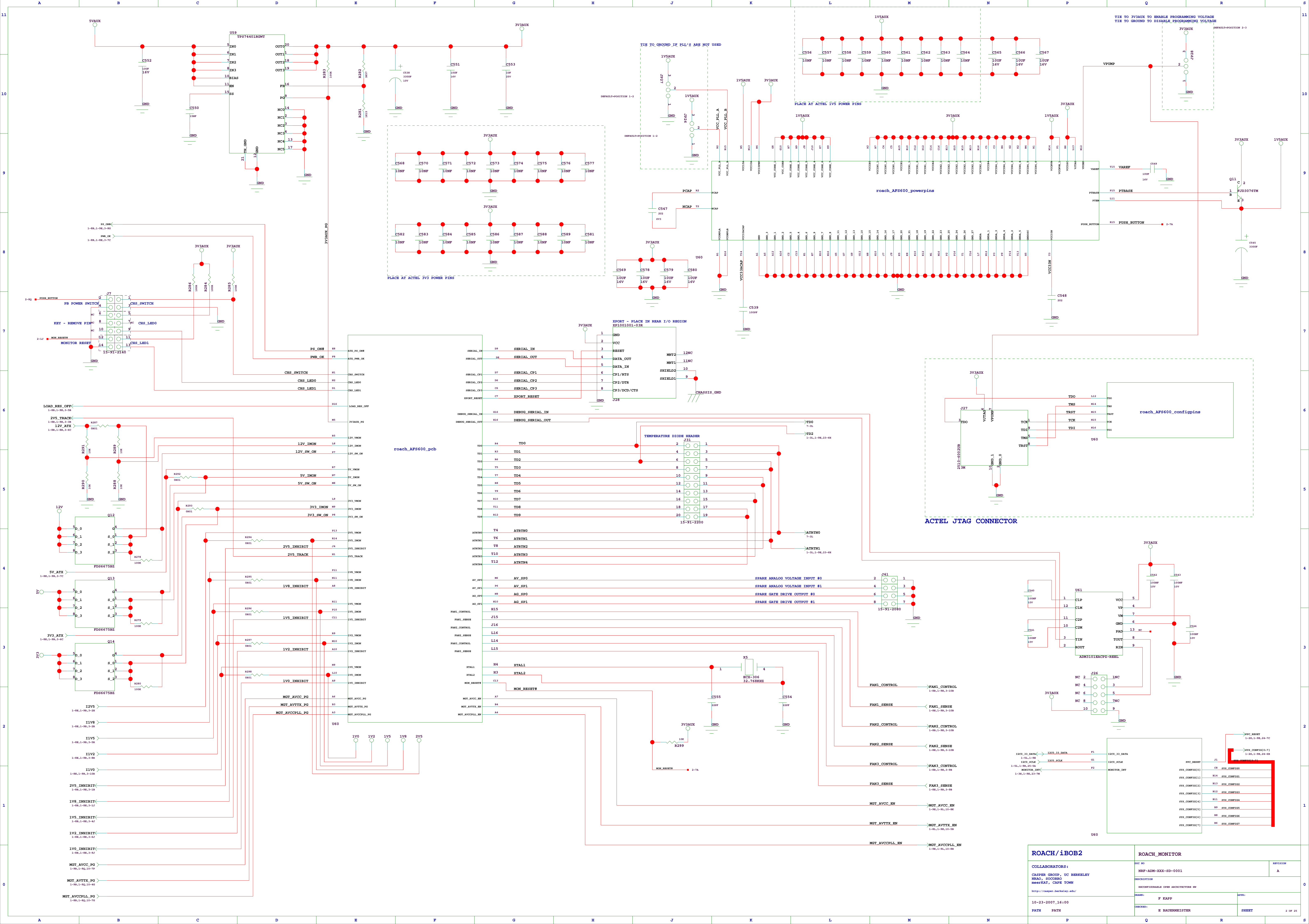
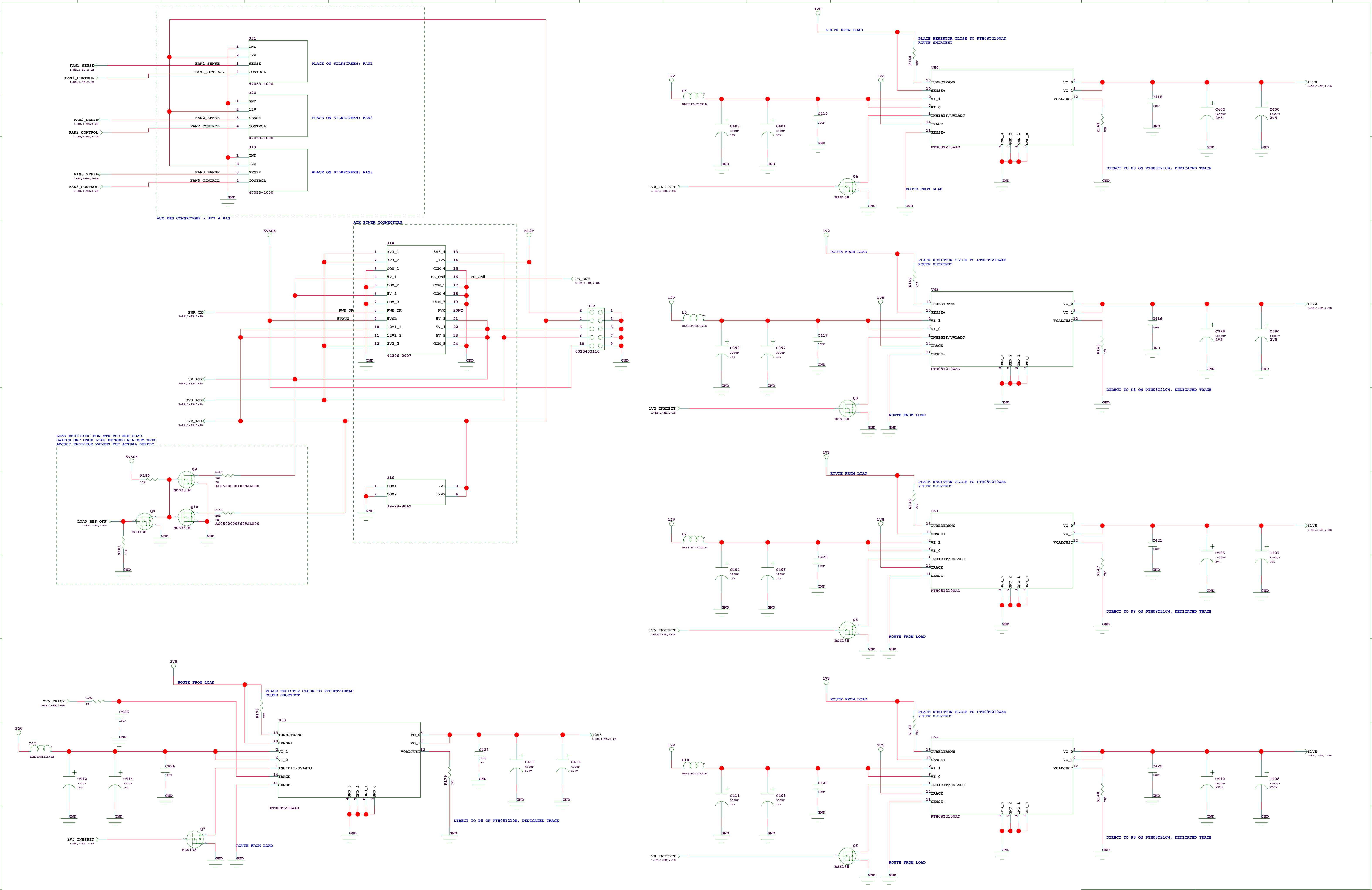


[illegible]

ETIENNE BAUDENMEISTER
HENRY CHEN
STEVE DURAND
FRANCOIS KAPP
ALAN LANGMAN
GEORGE PECK
MIKE REYNELL
HAYDEN SO
DAN WERTHIMER

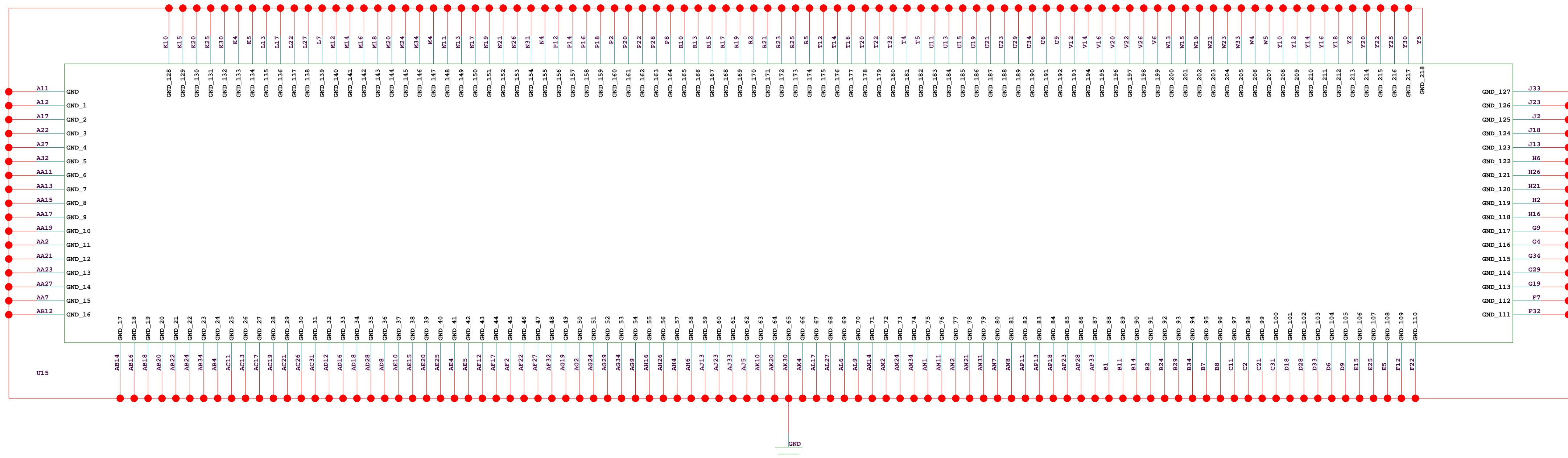
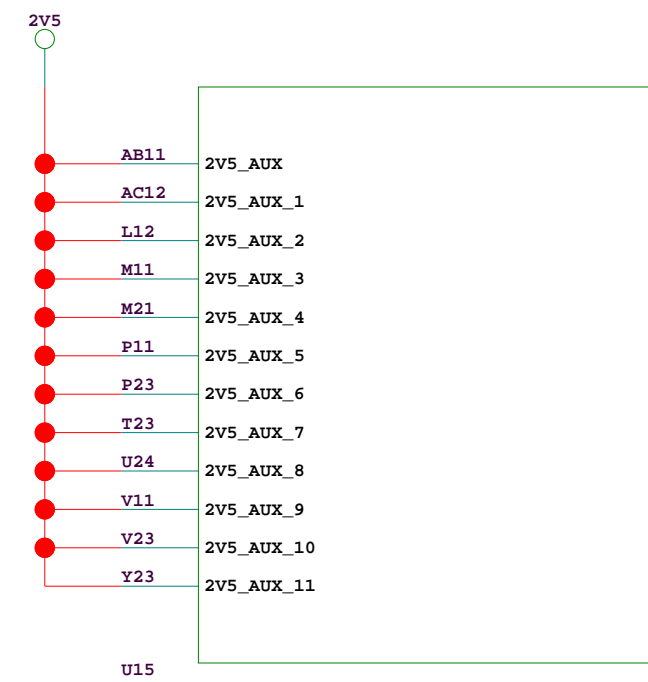
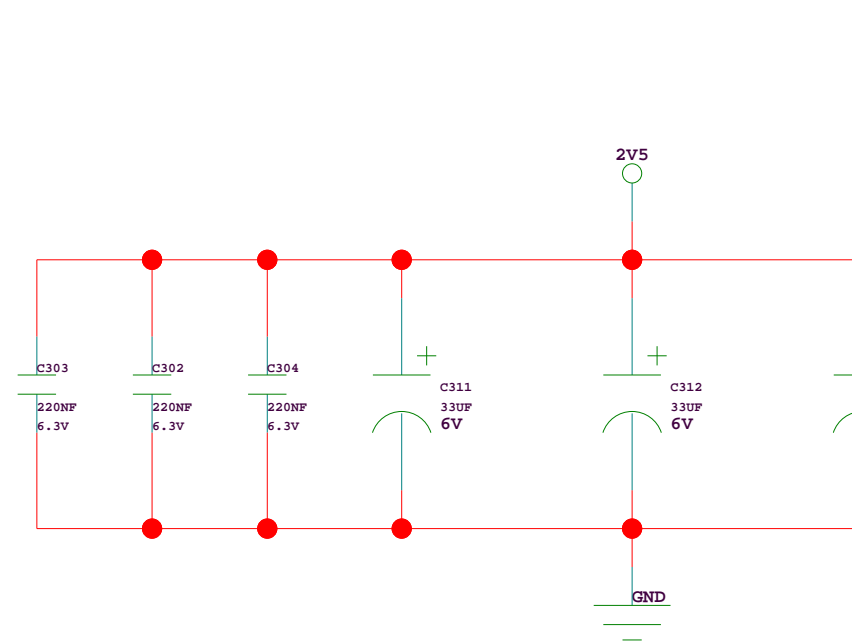
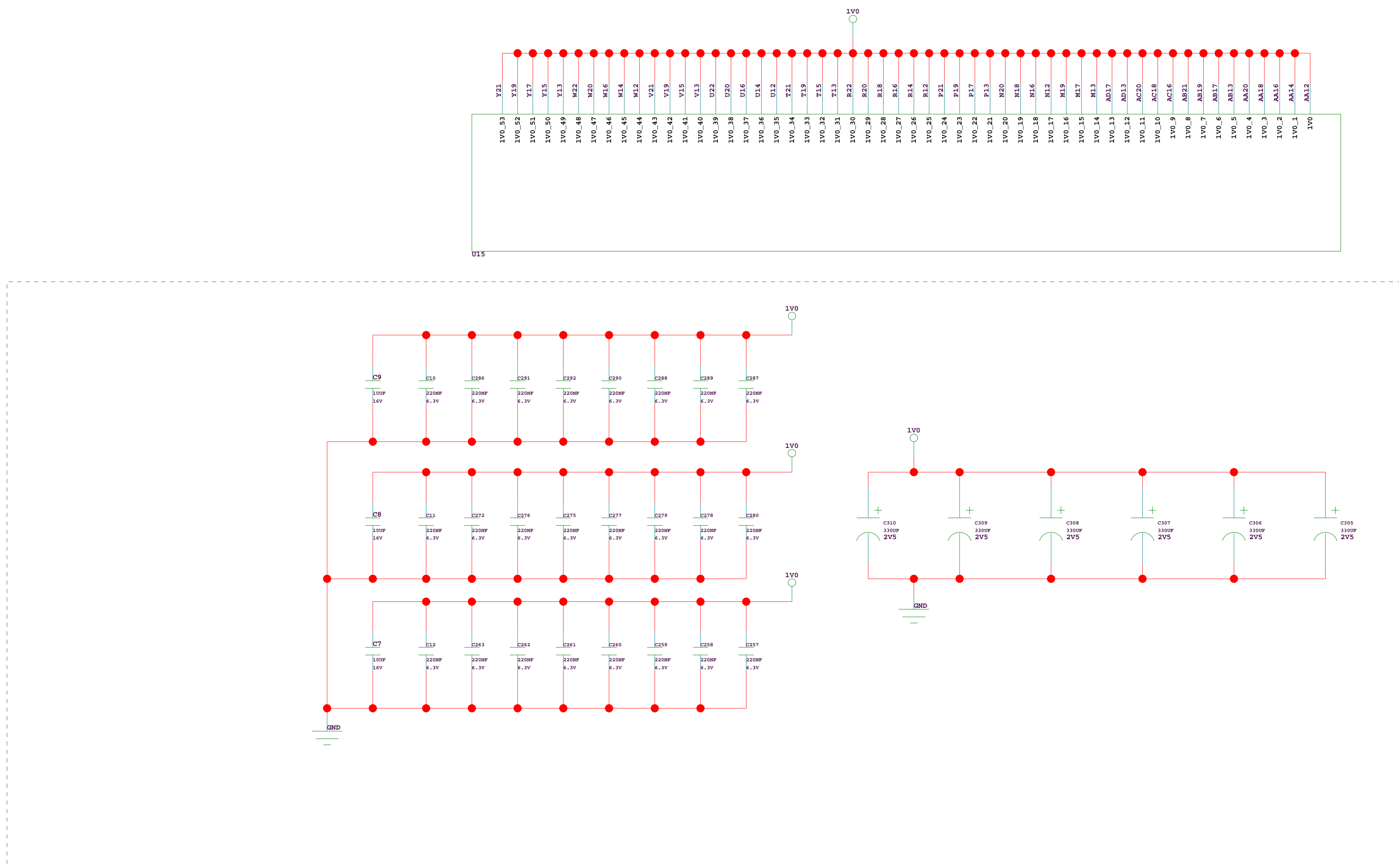
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CASPER GROUP, UC BERKELEY		NRF-ADM-XXX-SD-0001			
HEAD, SCSOCS		SECTION			
MEETKAT, CAPE TOWN		RECONFIGURABLE OPEN ARCHITECTURE HW			
http://casper.berkeley.edu/		REVISION		APPR:	
10-23-2007-16:00		DRAWN: F KAPP			
PATH PATH		CHECKED: E BAUMERMEISTER		SHEET	
				1 OF 2	





ADJUSTMENT AND T2 RESISTOR VALUES TBD
SOURCE VOLTAGES TO BE SELECTED

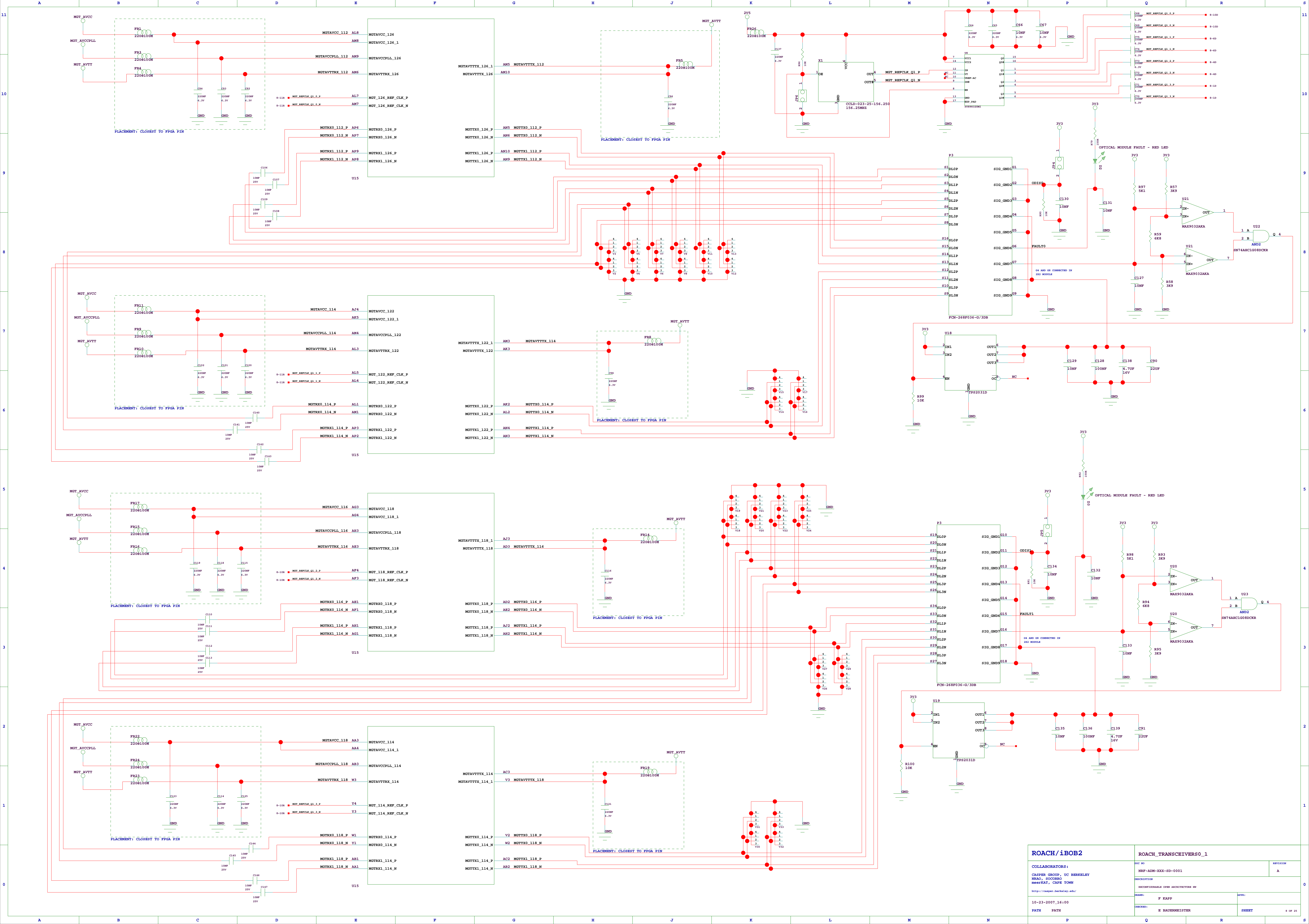
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NRAO, SOONERO		DESCRIPTION	
MesaCAT, CAPE TOWN		RECONFIGURABLE OPEN ARCHITECTURE HW	
http://casper.berkeley.edu/		DRWN:	APPD:
10-23-2007_16:00		F KAPP	
PATH	PATH	CHECKED:	SHEET
		R BAUERNISTE	3 OF 25

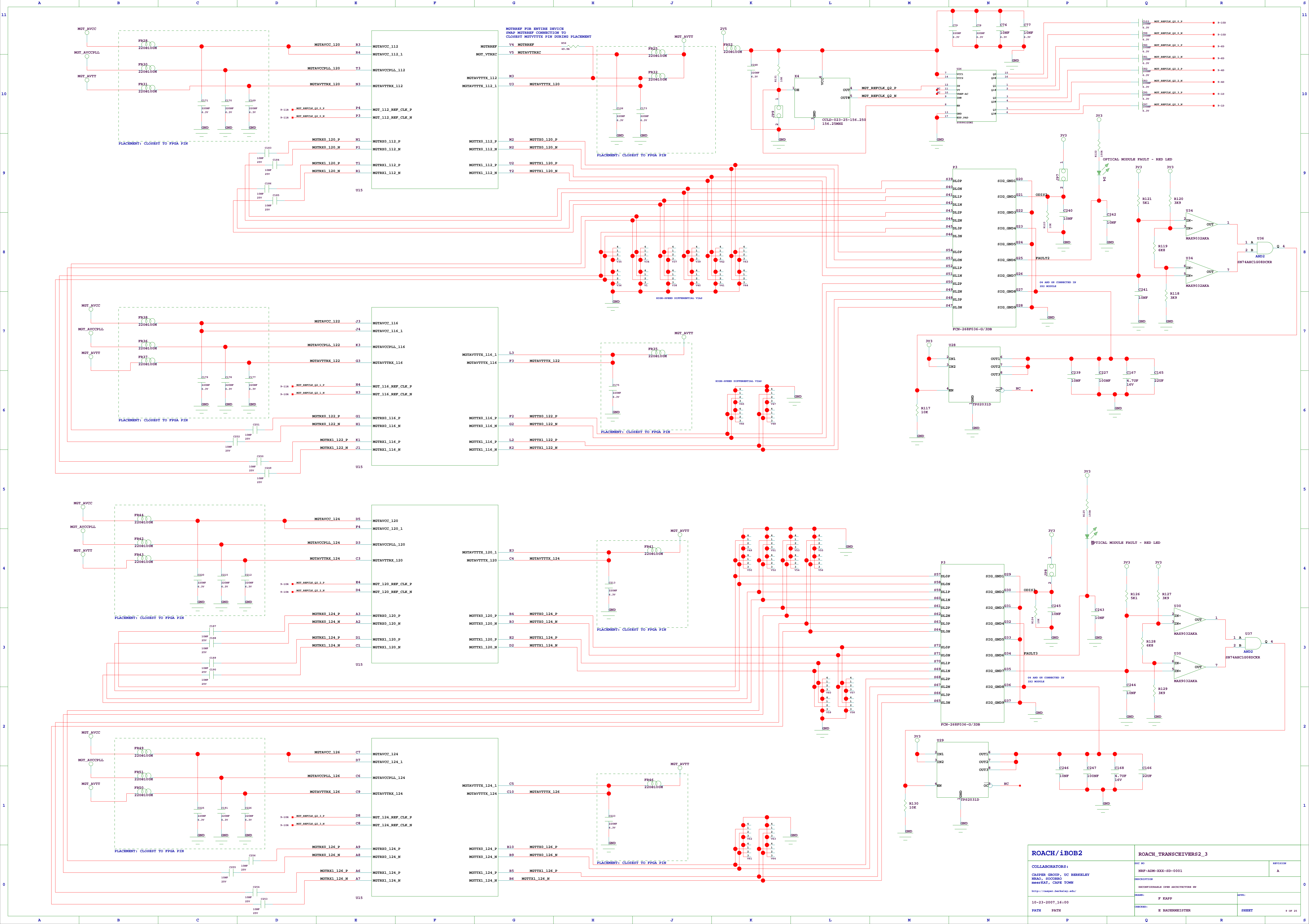


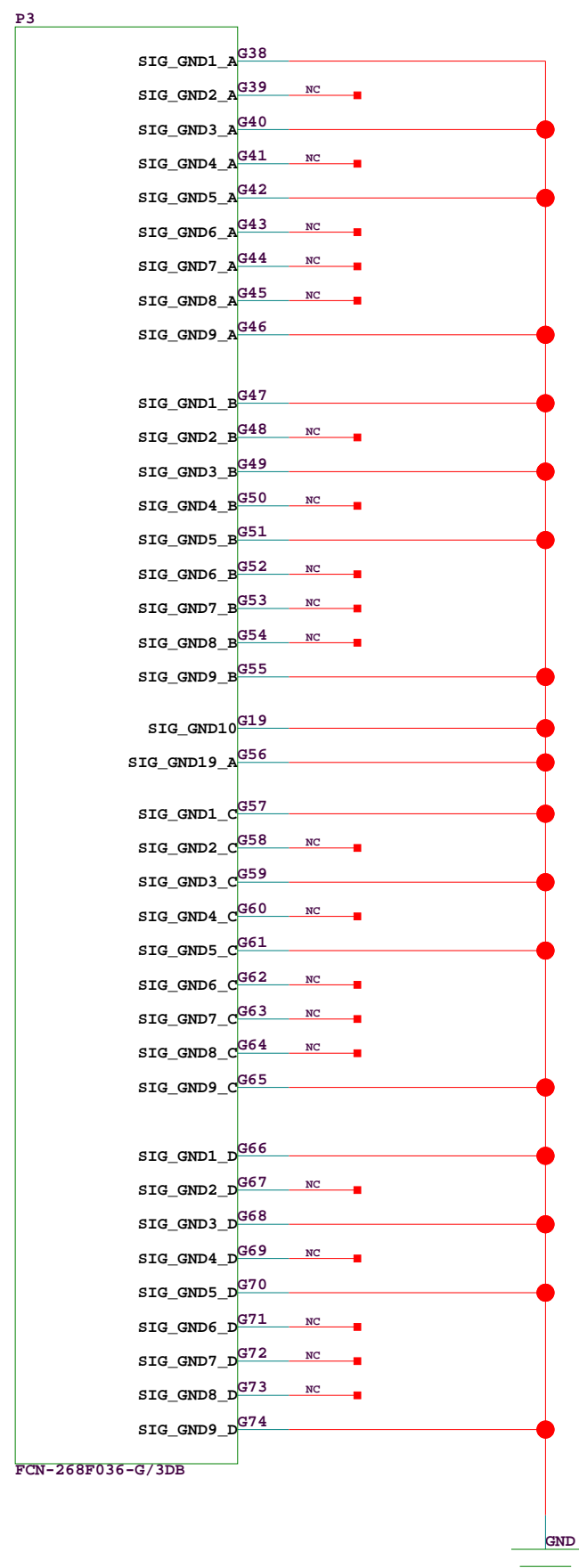
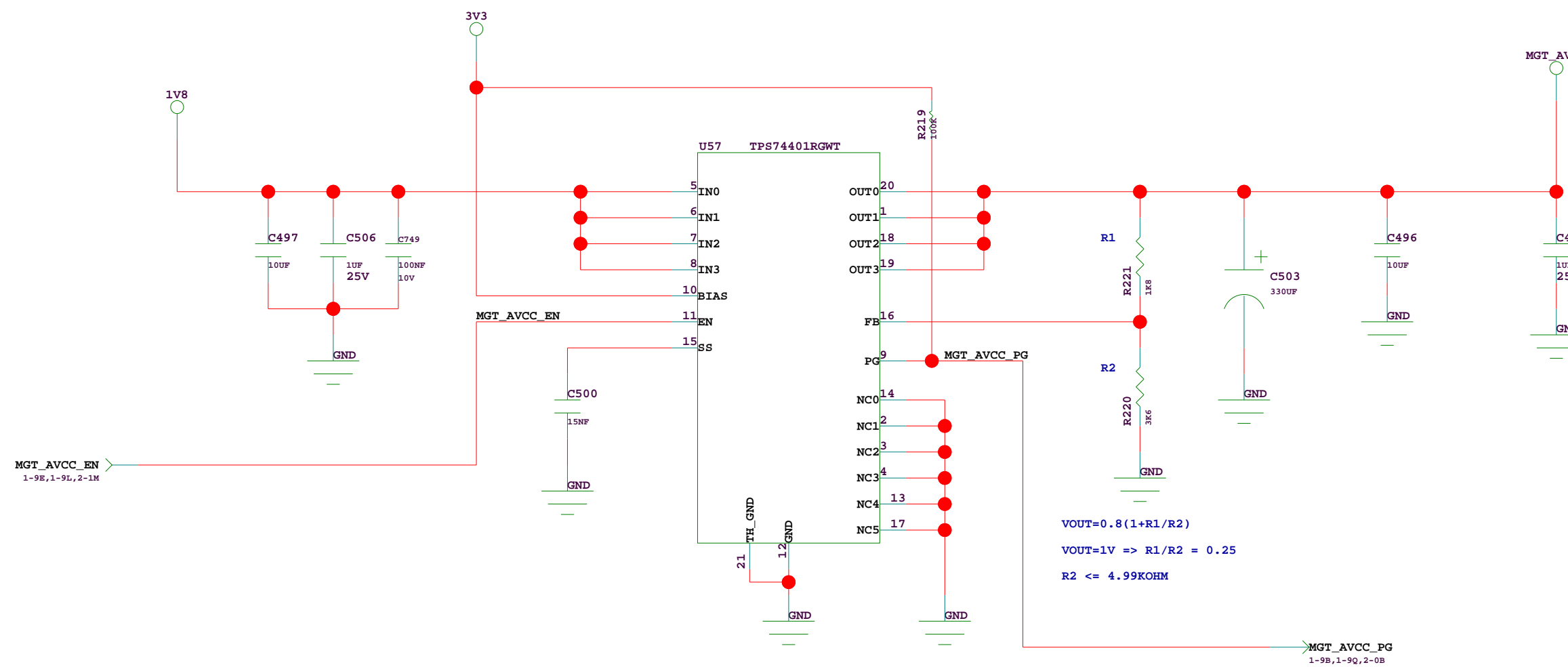
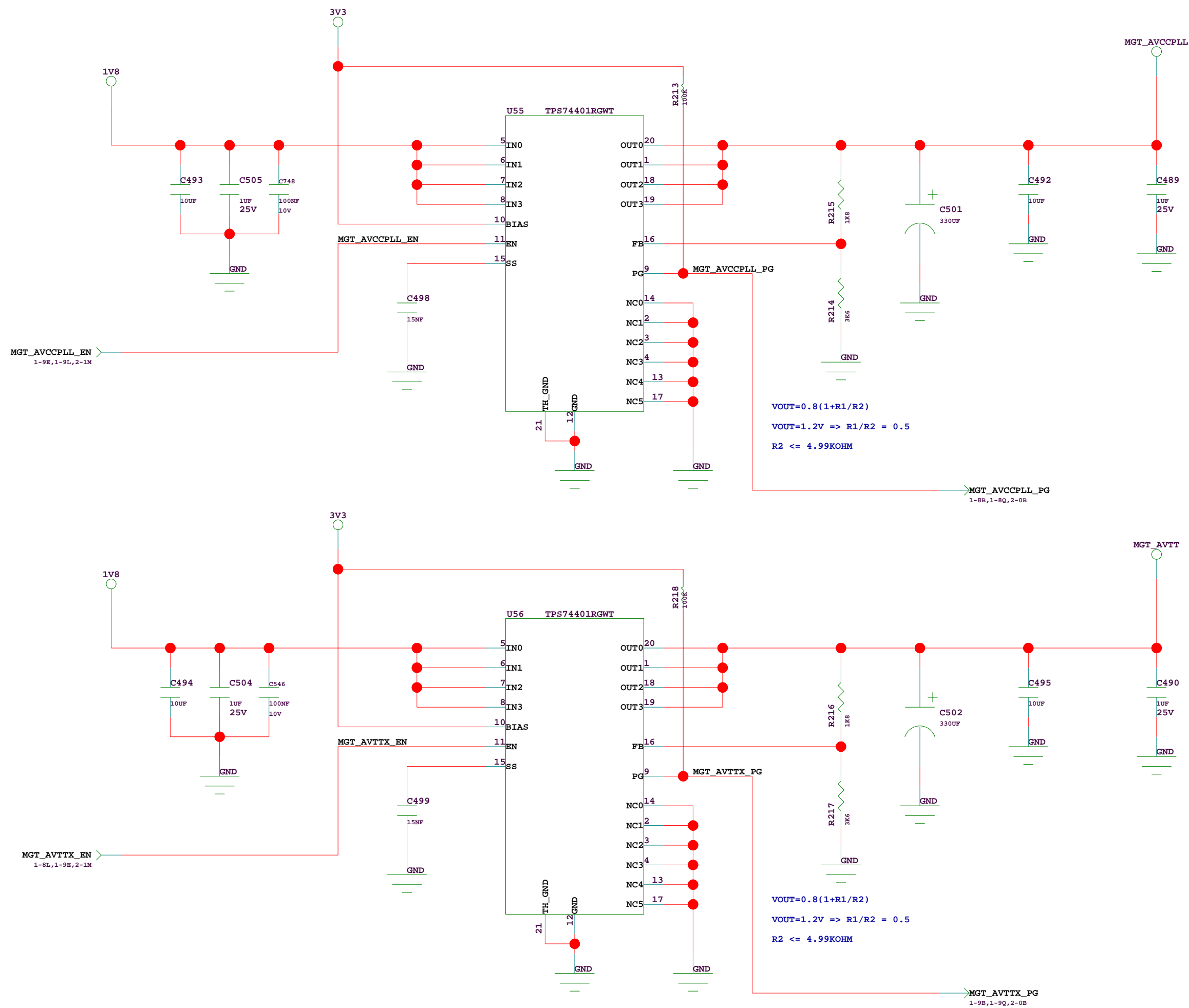
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10-23-2007-16:00		DRAWN: F KAPP CHECKED: E BAUERHEISTER	APPR:	
PATH	PATH		SHEET	4 OF 2



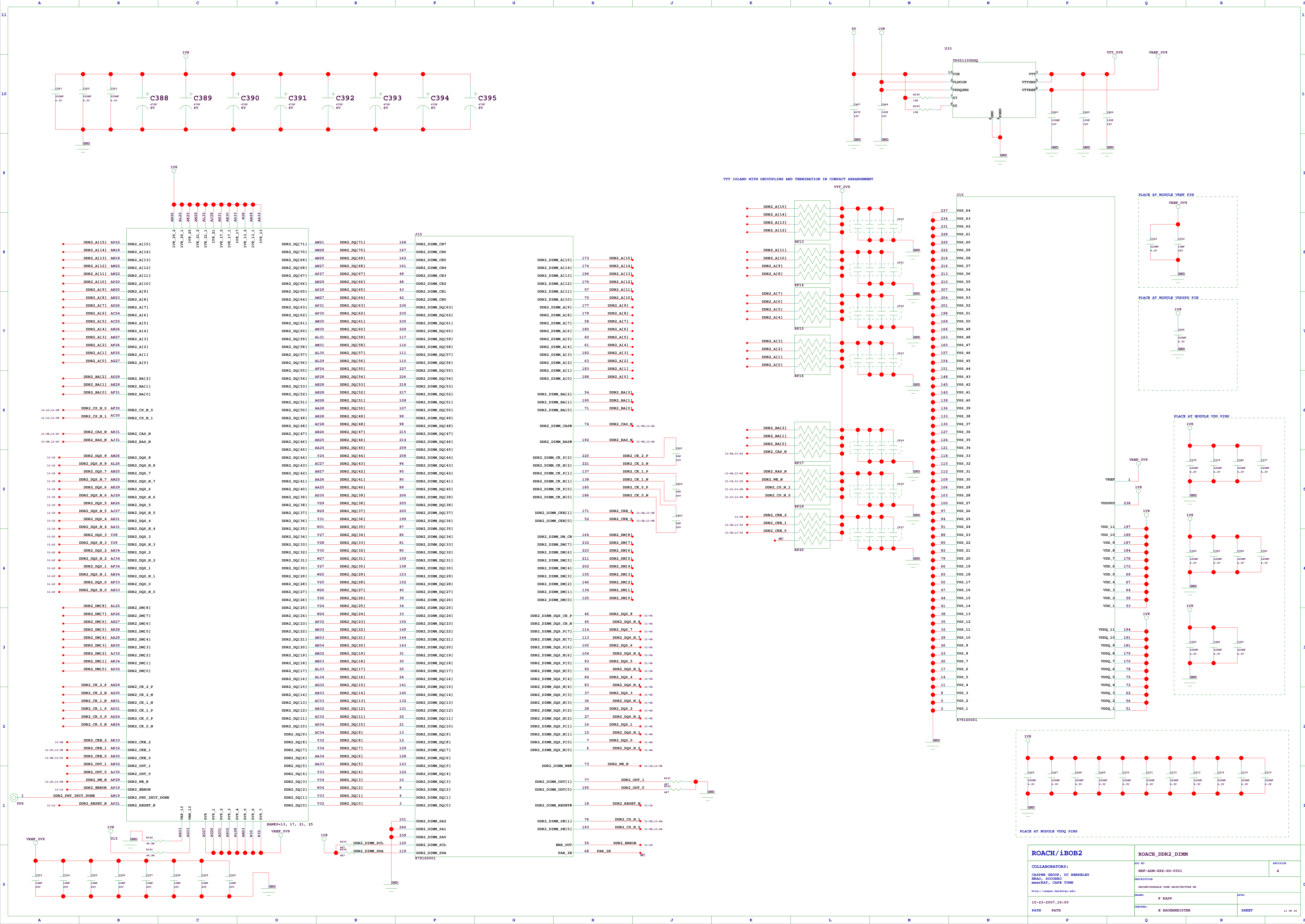


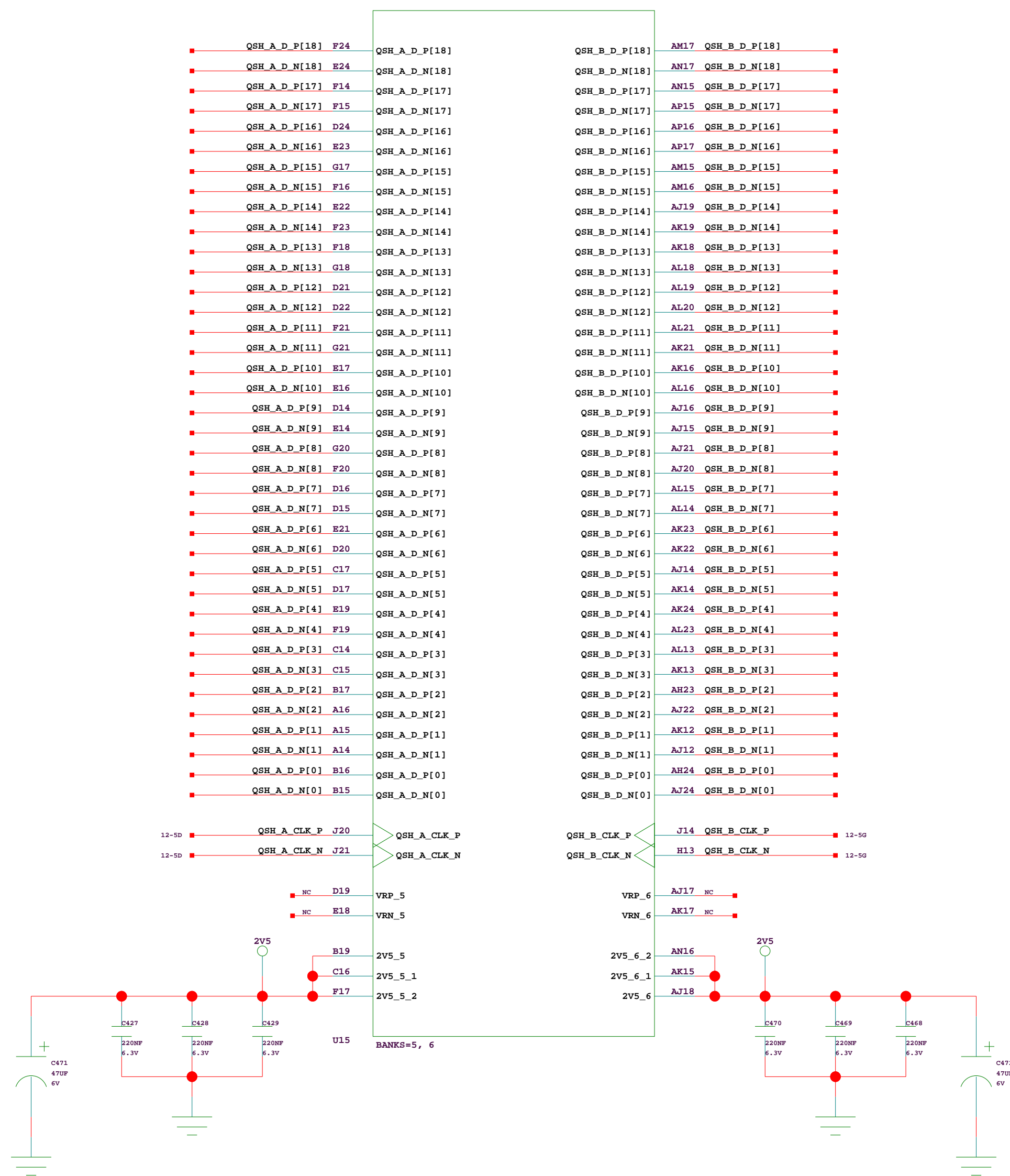
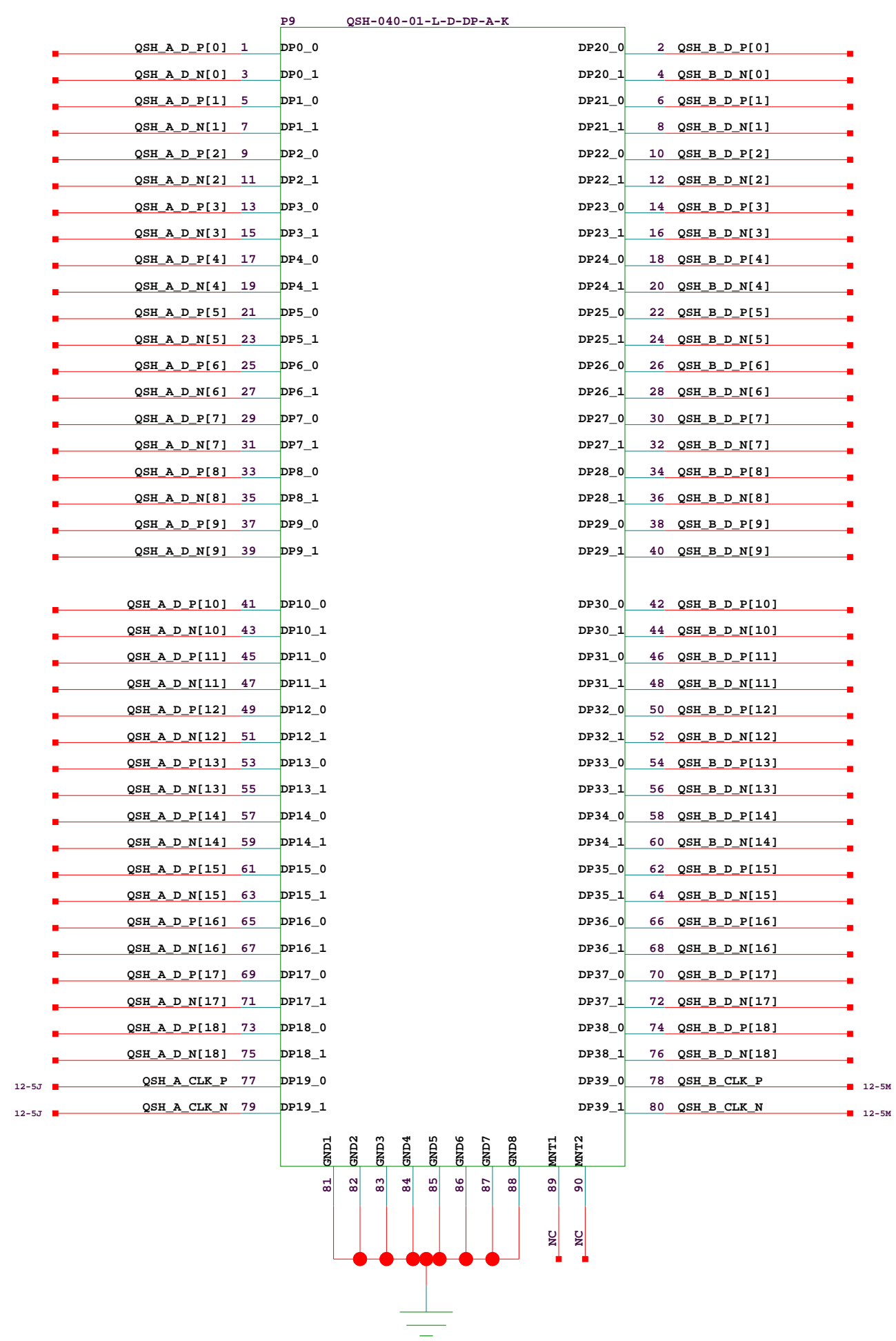




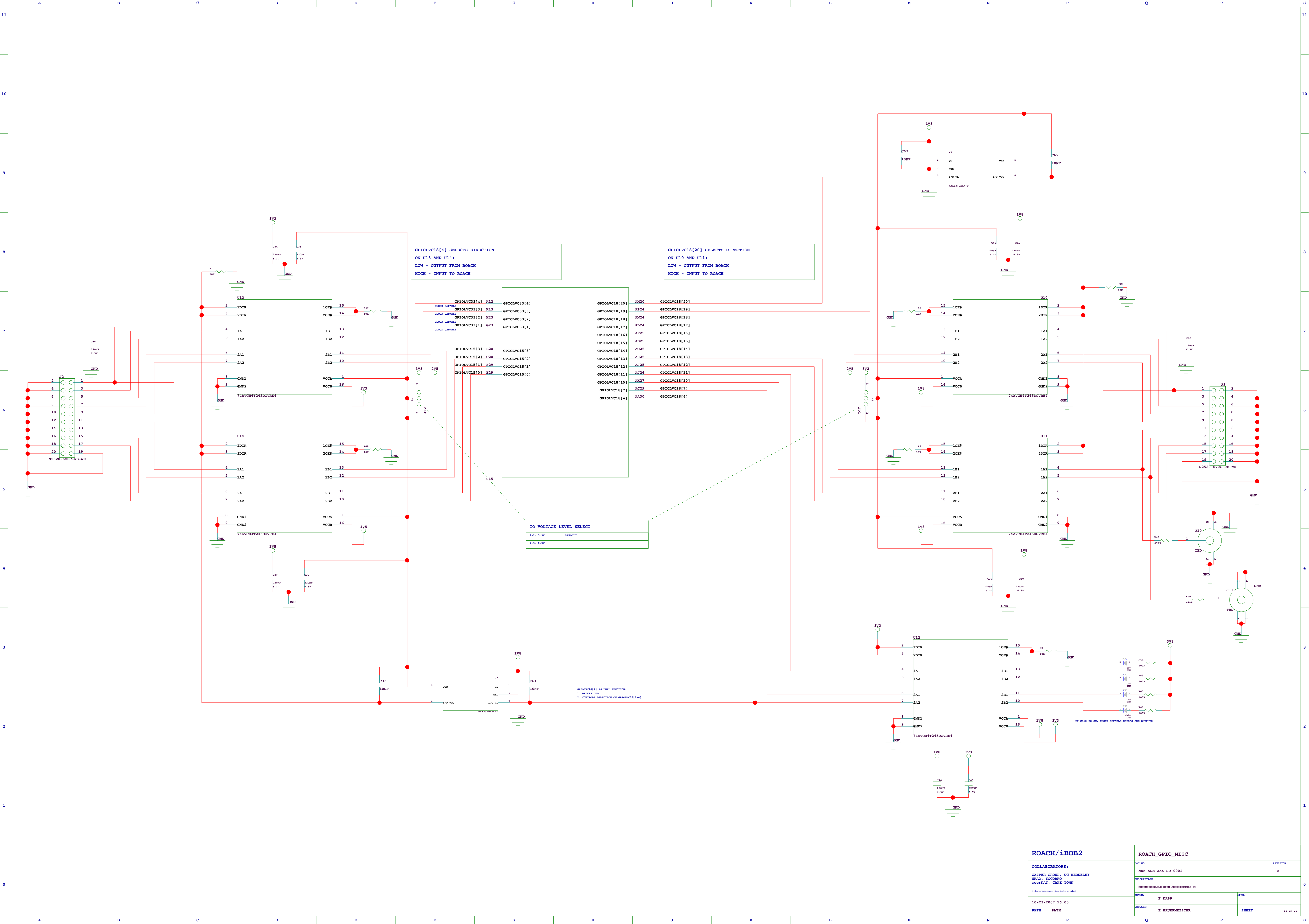


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CASPER GROUP, UC BERKELEY				NRF-ADM-XXX-SD-0001	A		
NRAO, SOCORRO				DESCRIPTION			
BARRACAT, CAPE TOWN				RECONFIGURABLE OPEN ARCHITECTURE HW			
http://casper.berkeley.edu/				DRWN:	F KAPP		APP:
10-23-2007_16:00				CHECKED:	R BAUERMBISTER		SHEET
PATH	PATH						10 OF 25

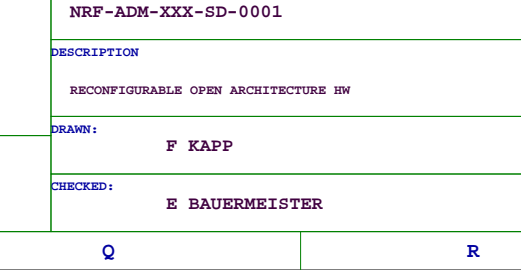
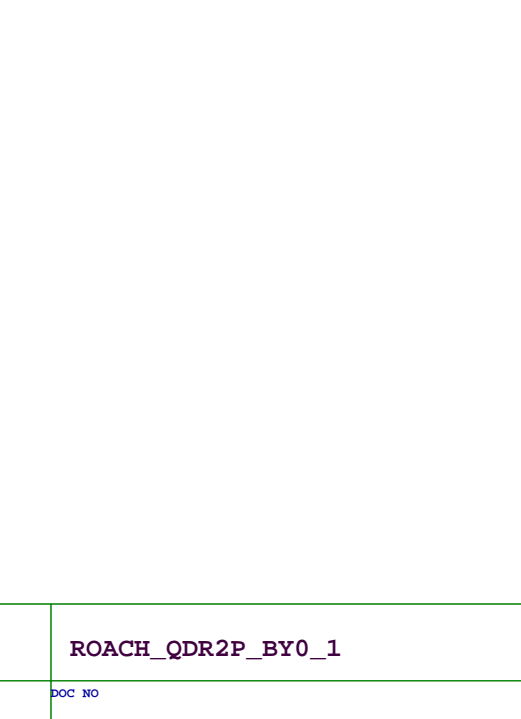
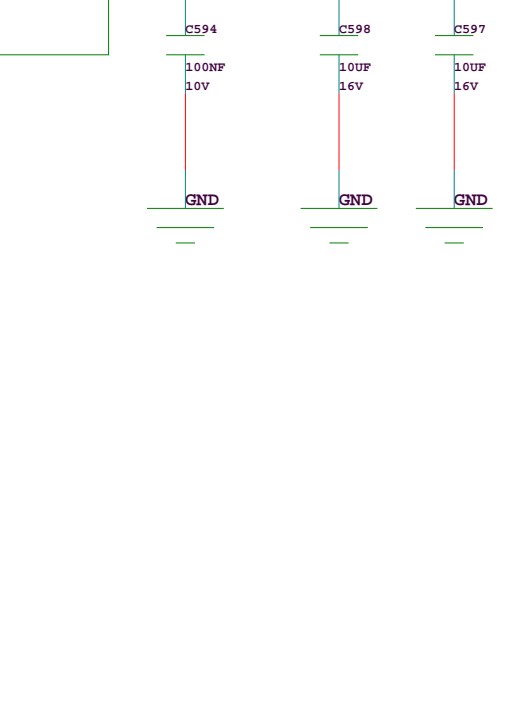
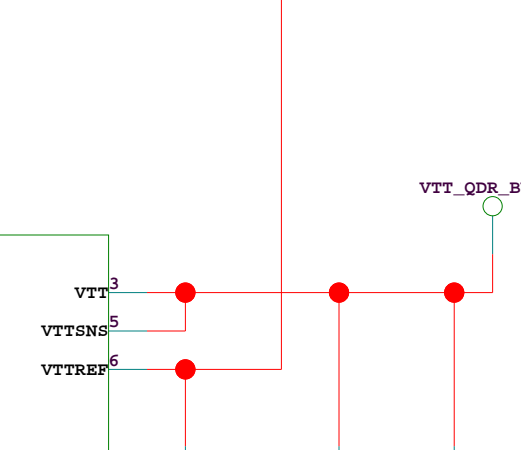
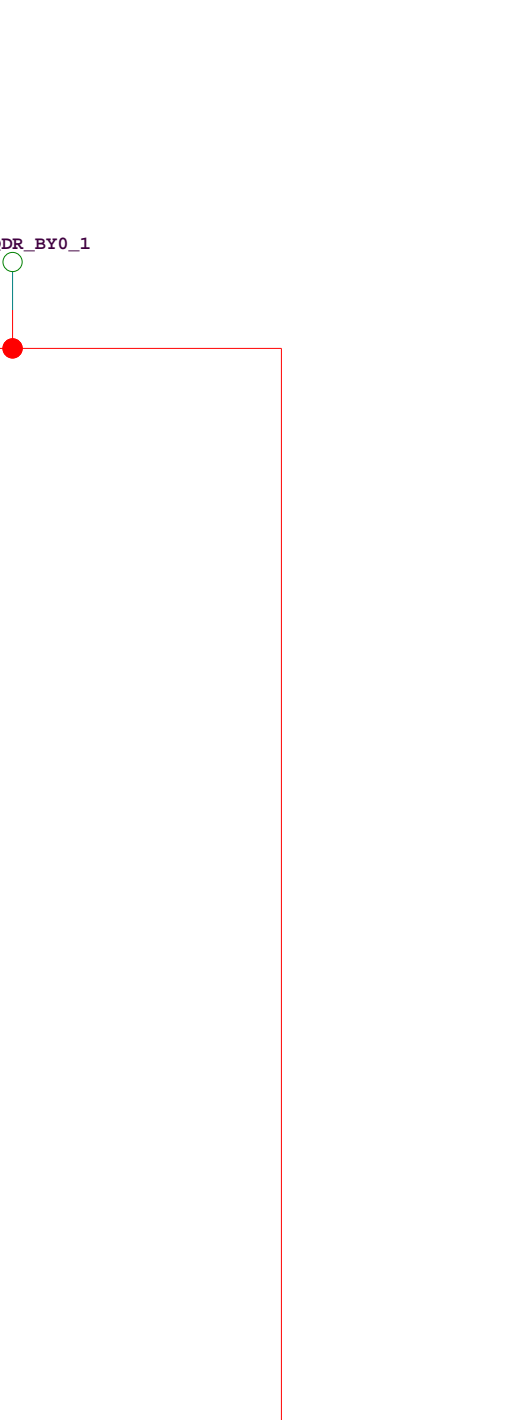
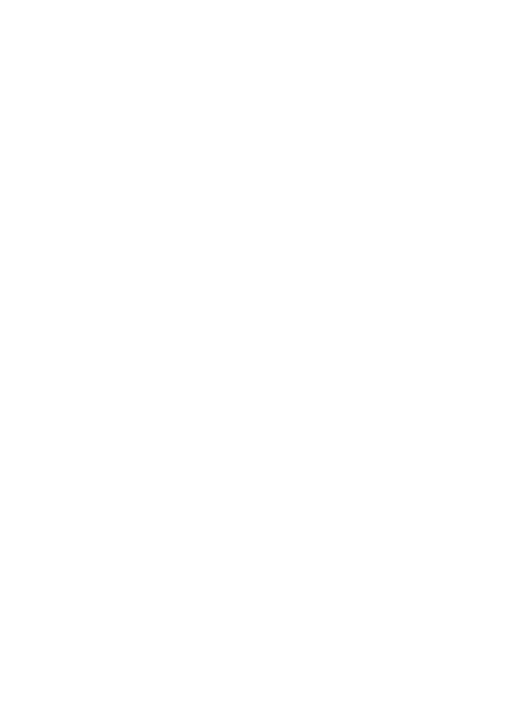
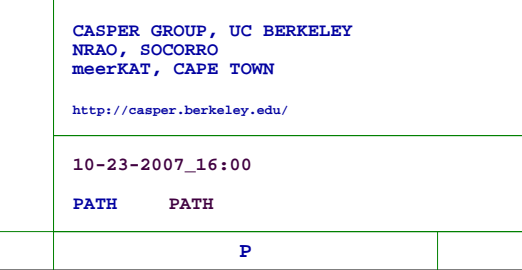
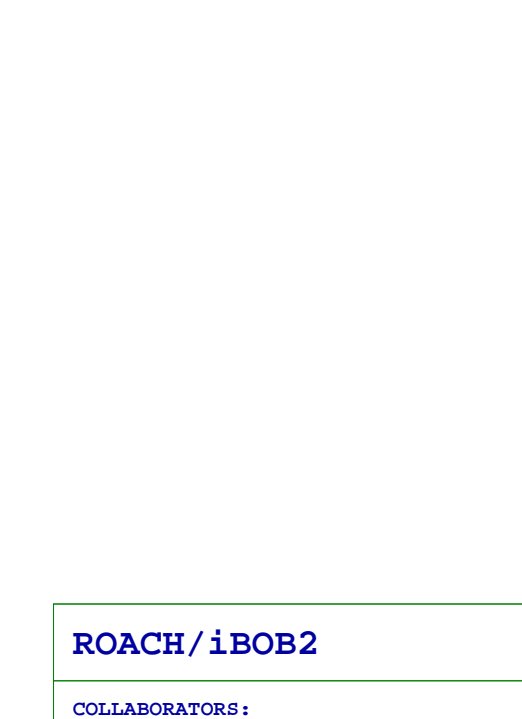
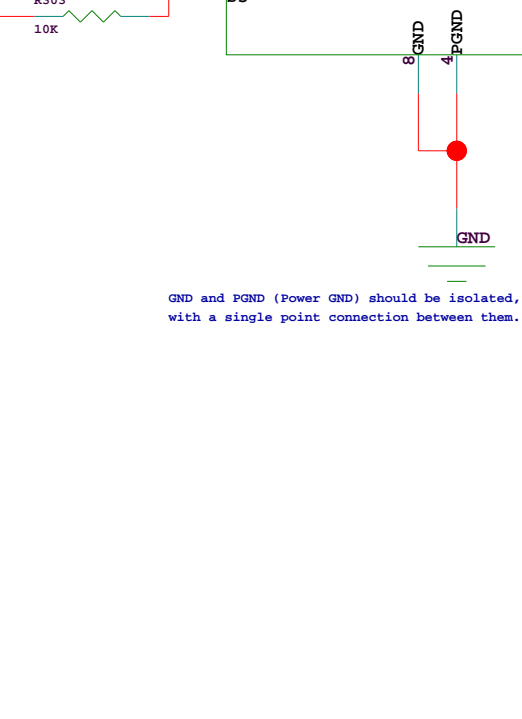
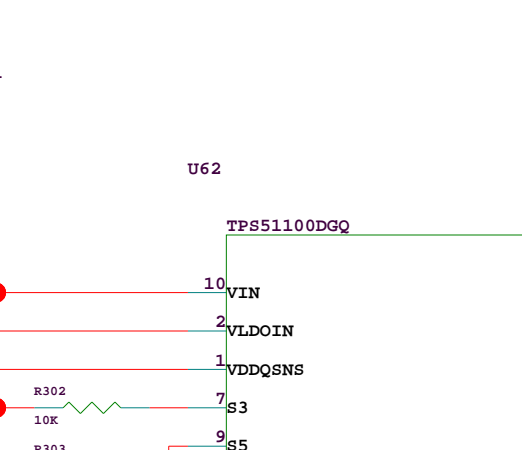
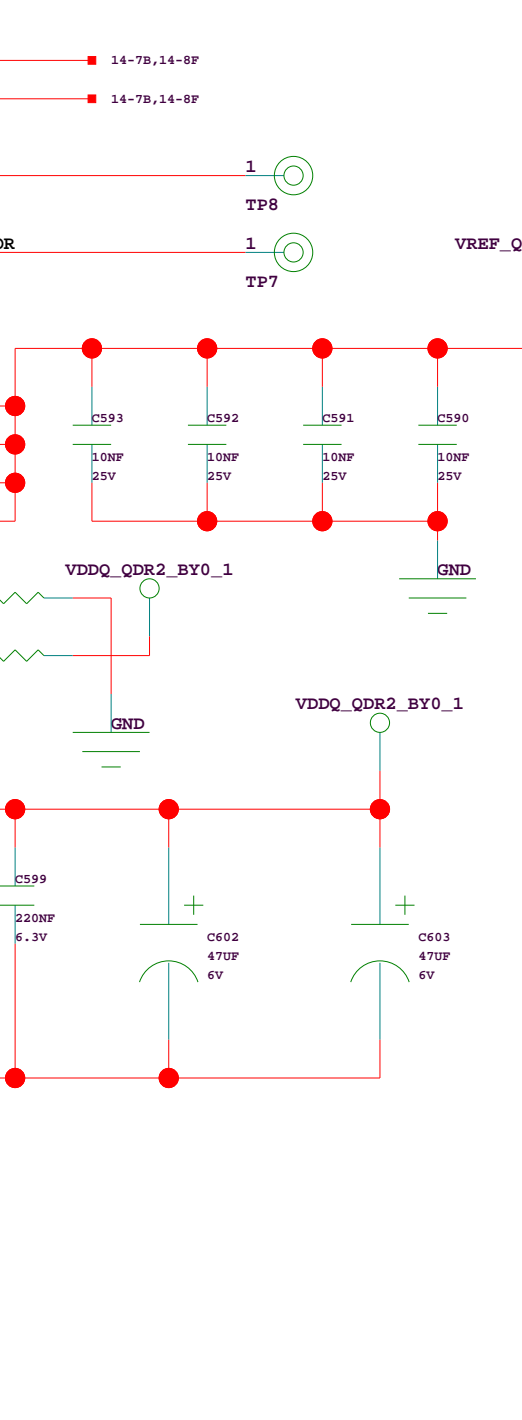
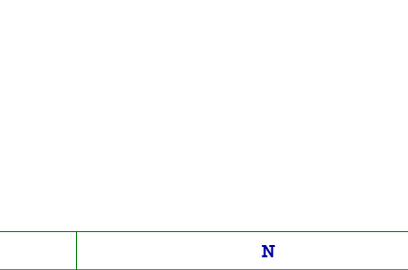
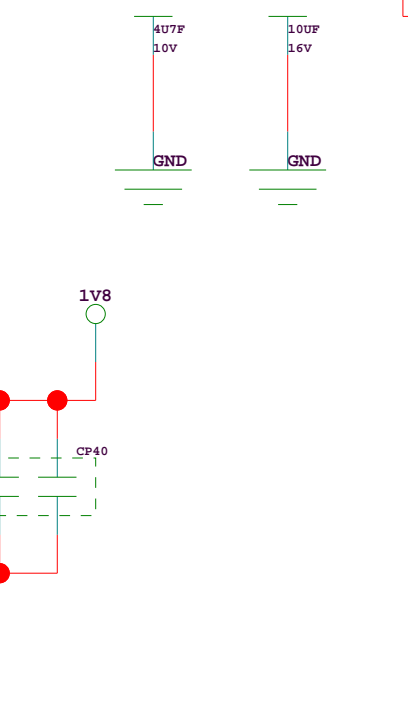
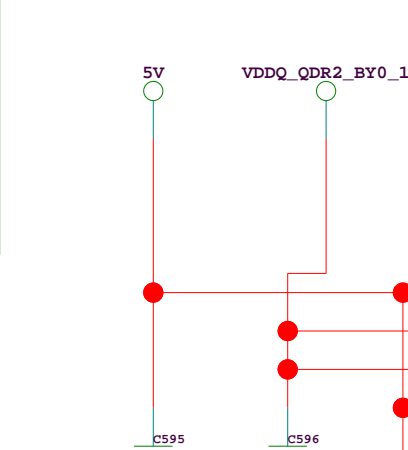
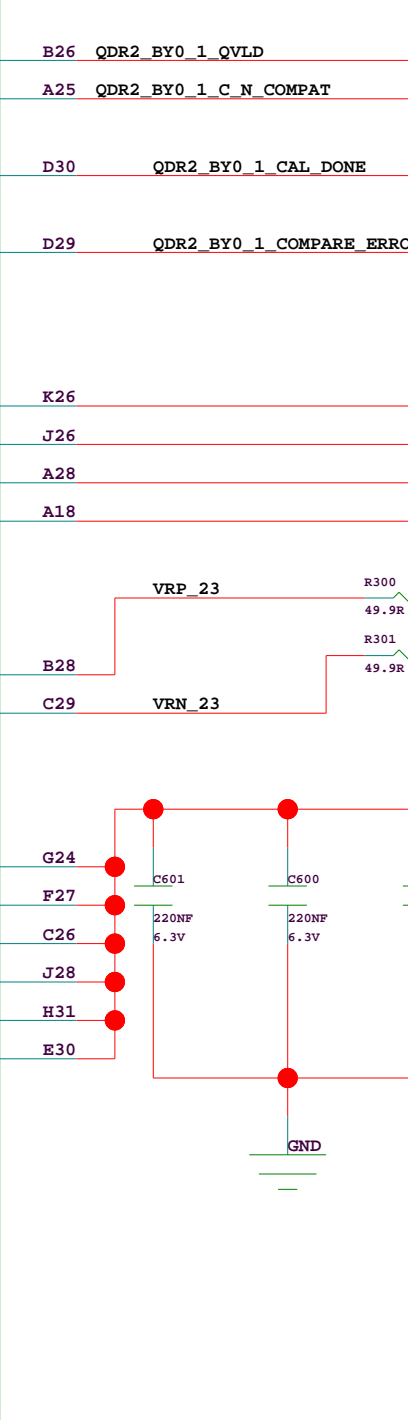
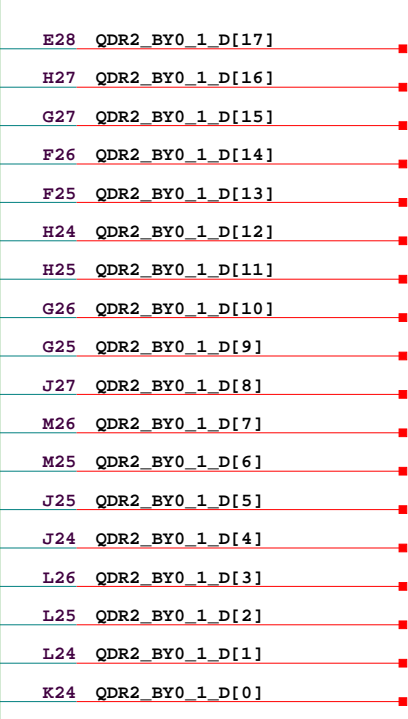
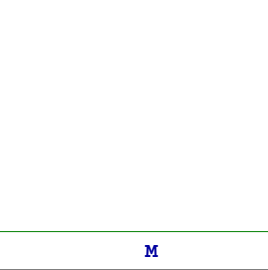
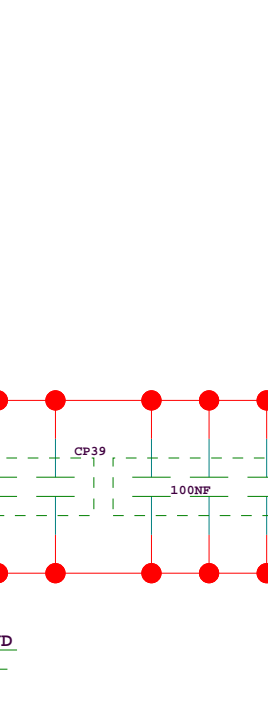
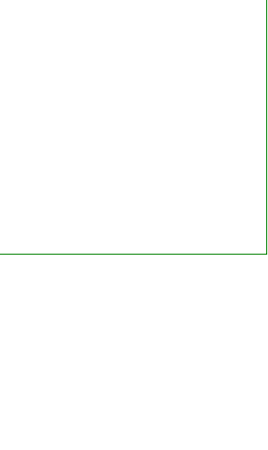
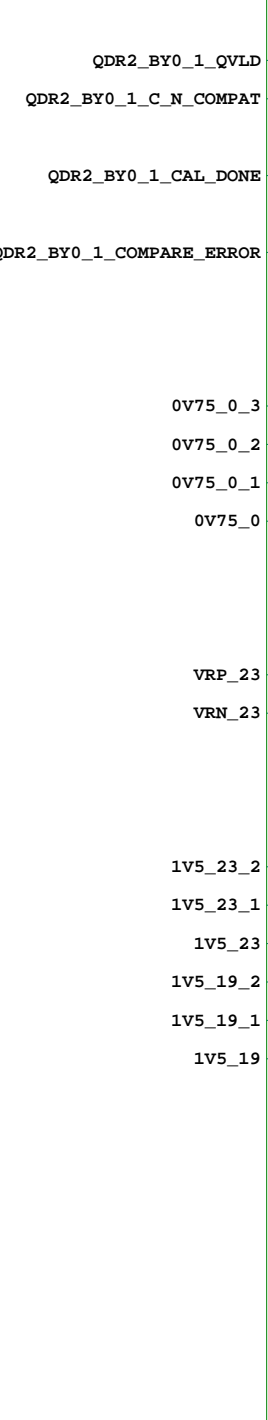
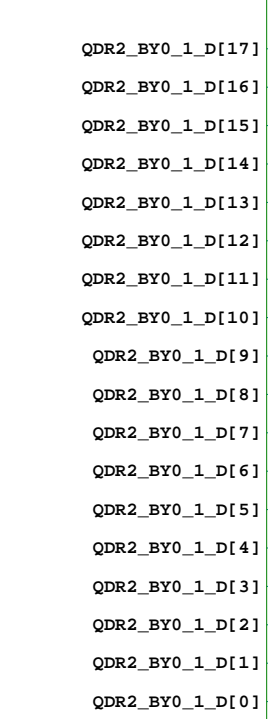
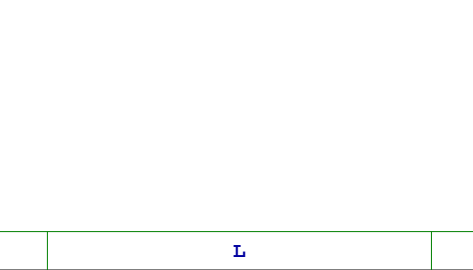
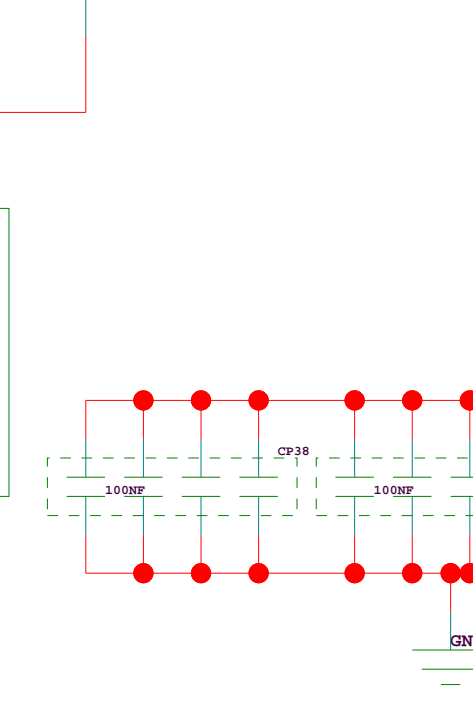
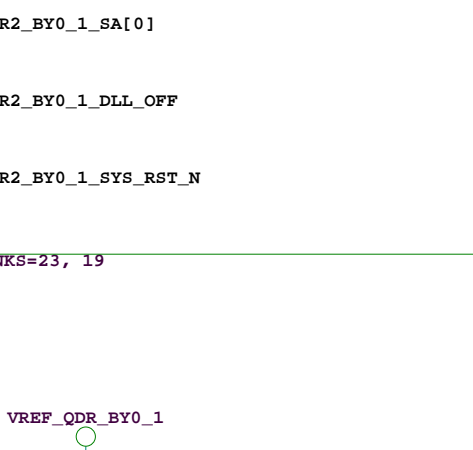
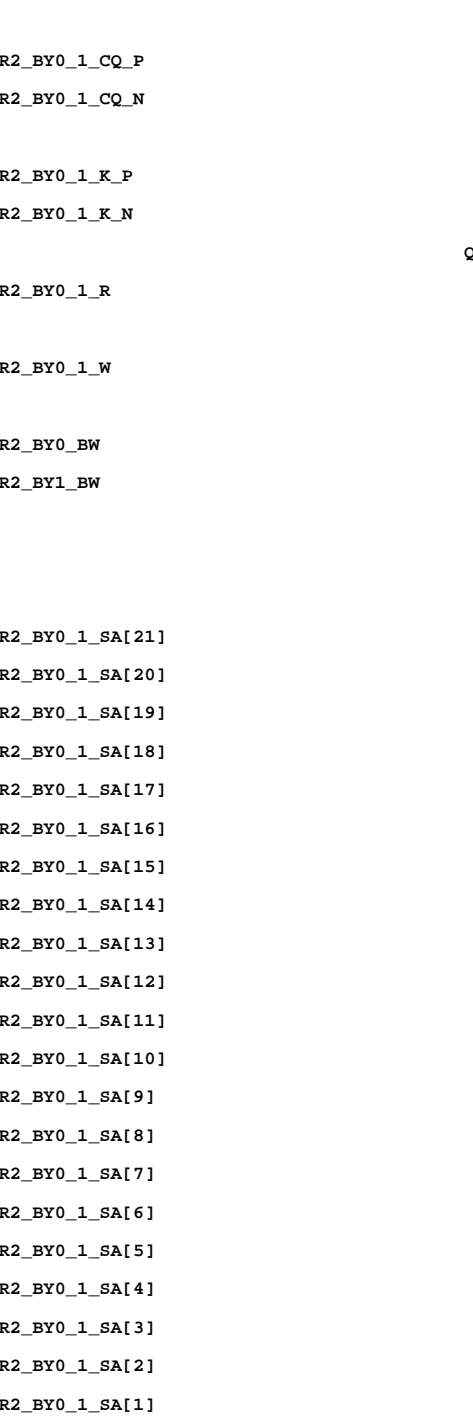
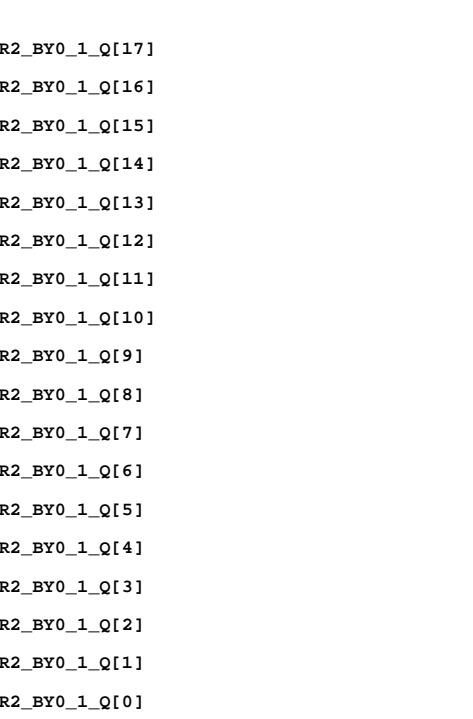
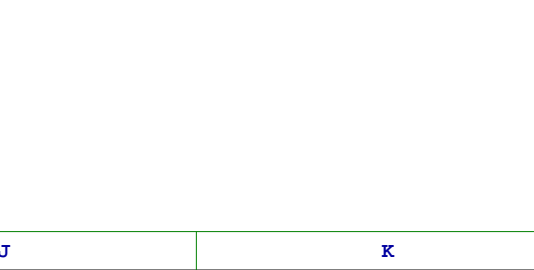
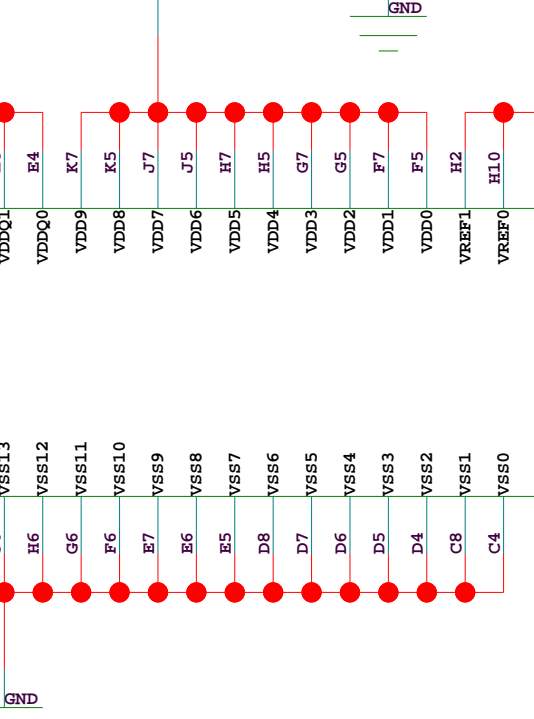
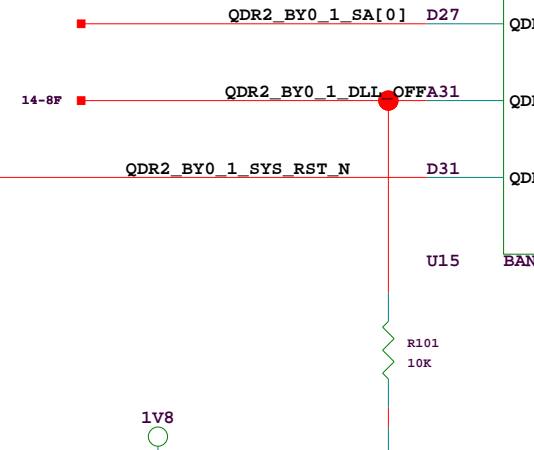
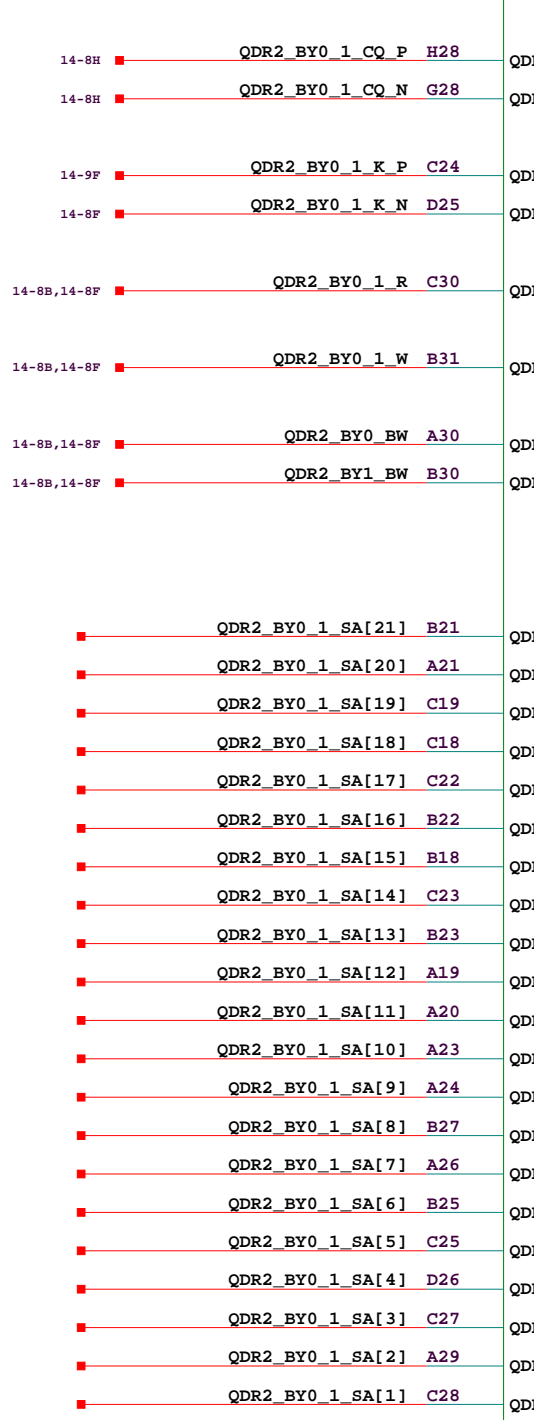
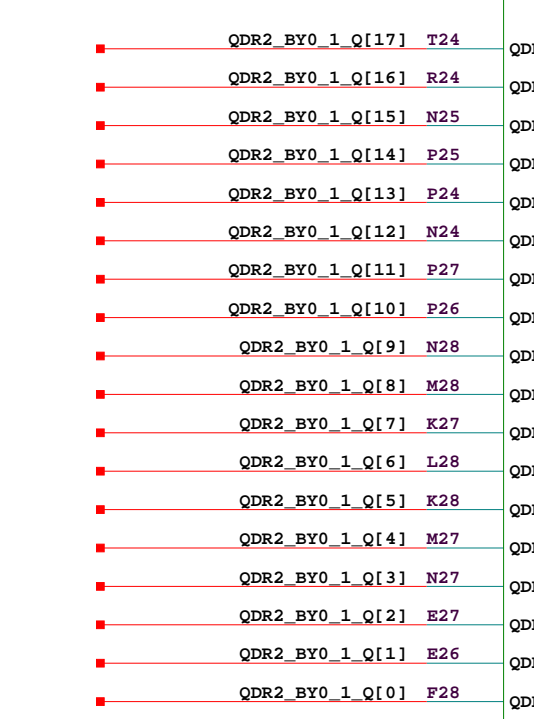
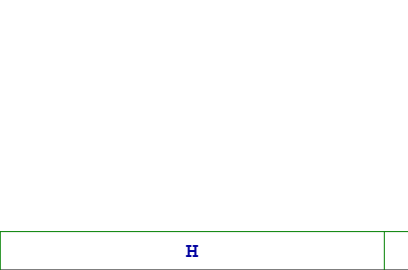
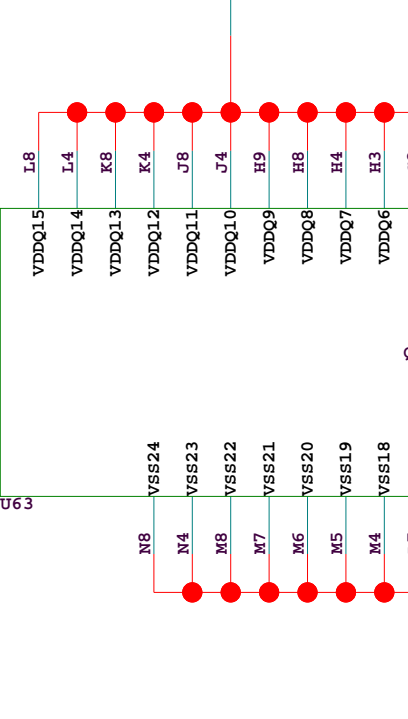
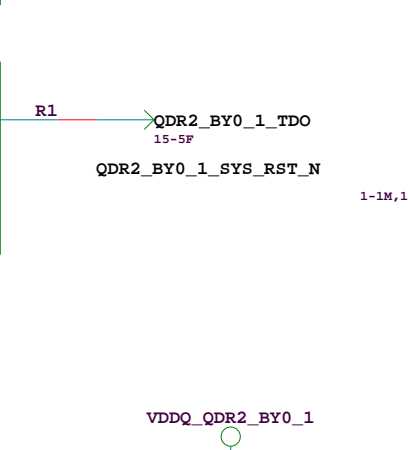
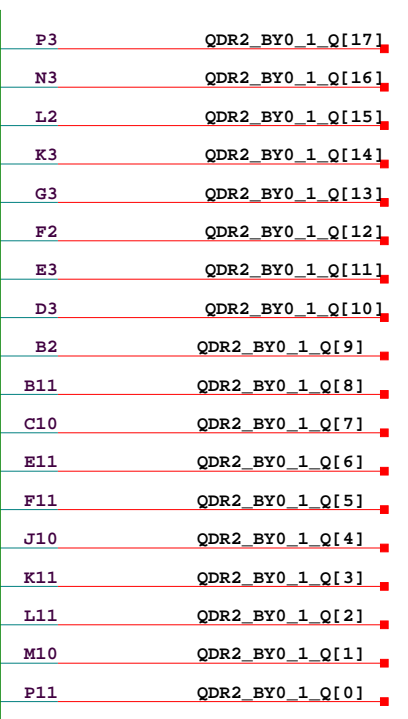
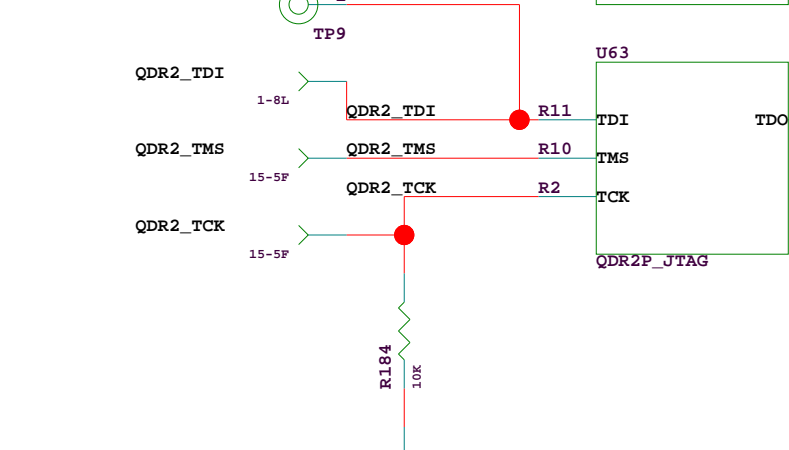
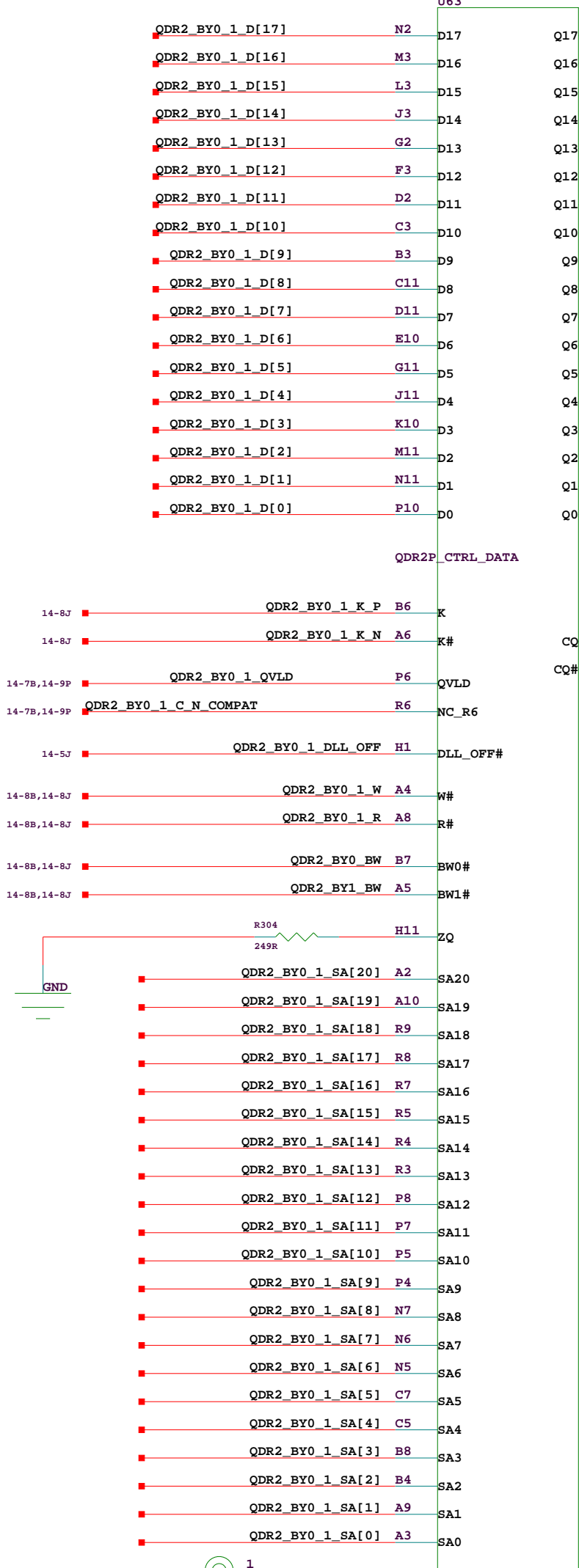
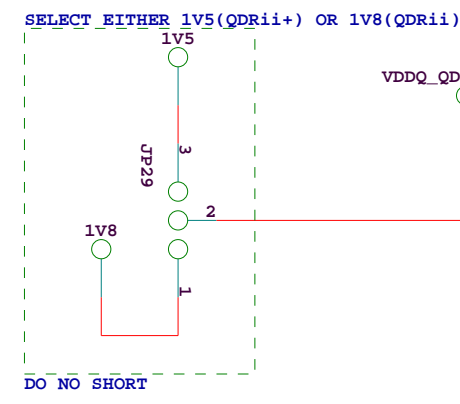
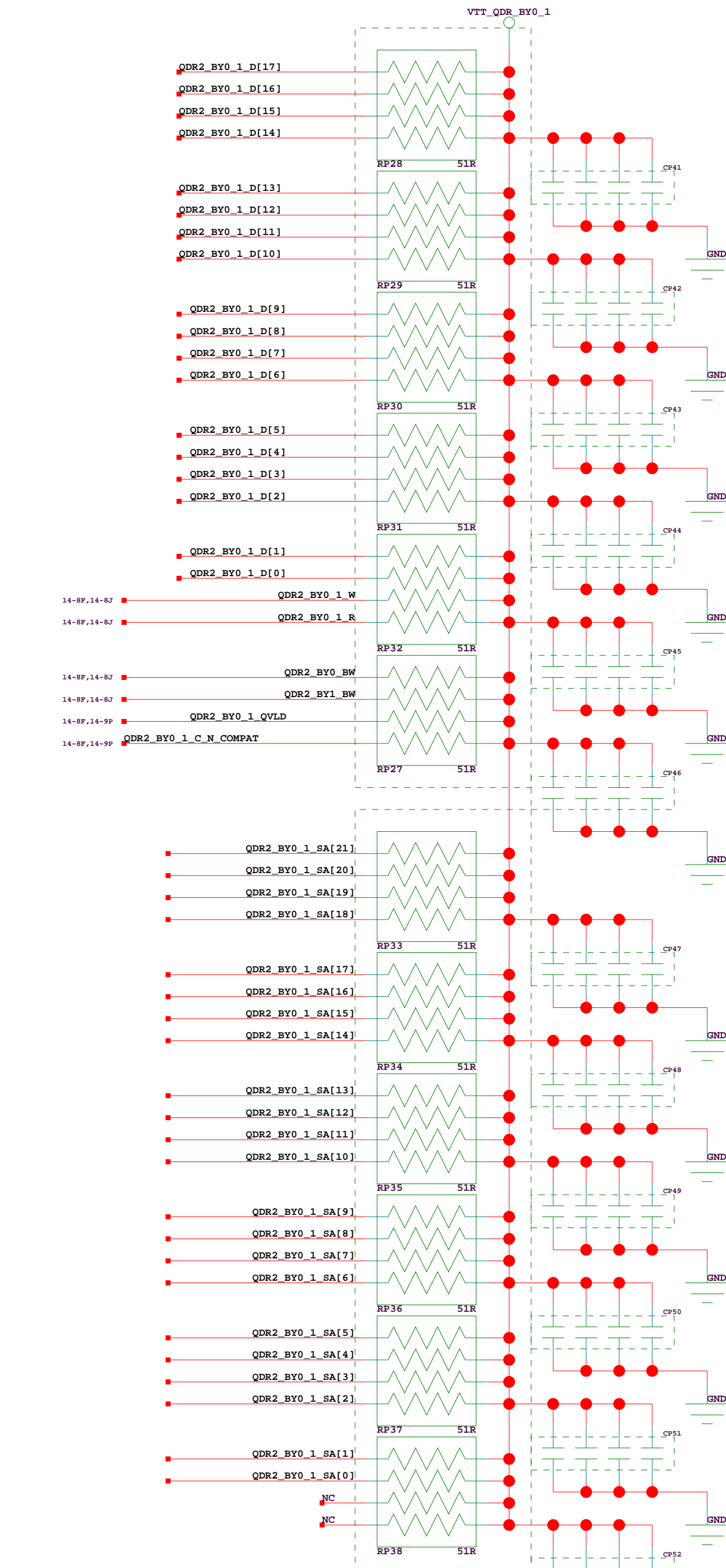




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COLLABORATORS:		DOC NO:	REVISION
CASPER GROUP, UC BERKELEY BRAD, SCOTT MACEKAT, CAPE TOWN		REF-ADM-XXX-ED-0001	A
http://casper.berkeley.edu/		DESCRIPTION:	
10-23-2007_16:00		RECONFIGURABLE OPEN ARCHITECTURE IN	
PATH PATH		NAME:	APP:
		F KAPP	
		CHECKED:	SHEET
		E BAUMHOLSTER	12 OF 2



ROACH/iBOE2		ROACH_GPIO_MISC	
COLLABORATORS: CASPER GROUP, UC BERKELEY NRAO, SOONERO BauerKAT, CAPE TOWN http://casper.berkeley.edu/		DCC NO: NRF-ADM-XXX-BD-0001	REVISION: A
10-23-2007_16:00		DESCRIPTION: RECONFIGURABLE OPEN ARCHITECTURE HW	13 OF 25
PATH	PATH	DRAWN: F KAPP	CHECKED: R BAUERMISTLER
		SHEET	



ROACH/iBOE2

COLLABORATORS:

CASPER GROUP, UC BERKELEY

NRAO, SOCCORO

RECONSTRUCTABLE OPEN ARCHITECTURE HW

10-23-2007_16:00

PATH PATH

ROACH_QDR2P_BY0_1

DOC NO

NRF-ADM-XXX-SD-0001

DESCRIPTION

RECONSTRUCTABLE OPEN ARCHITECTURE HW

10-23-2007_16:00

PATH PATH

REVISION

A

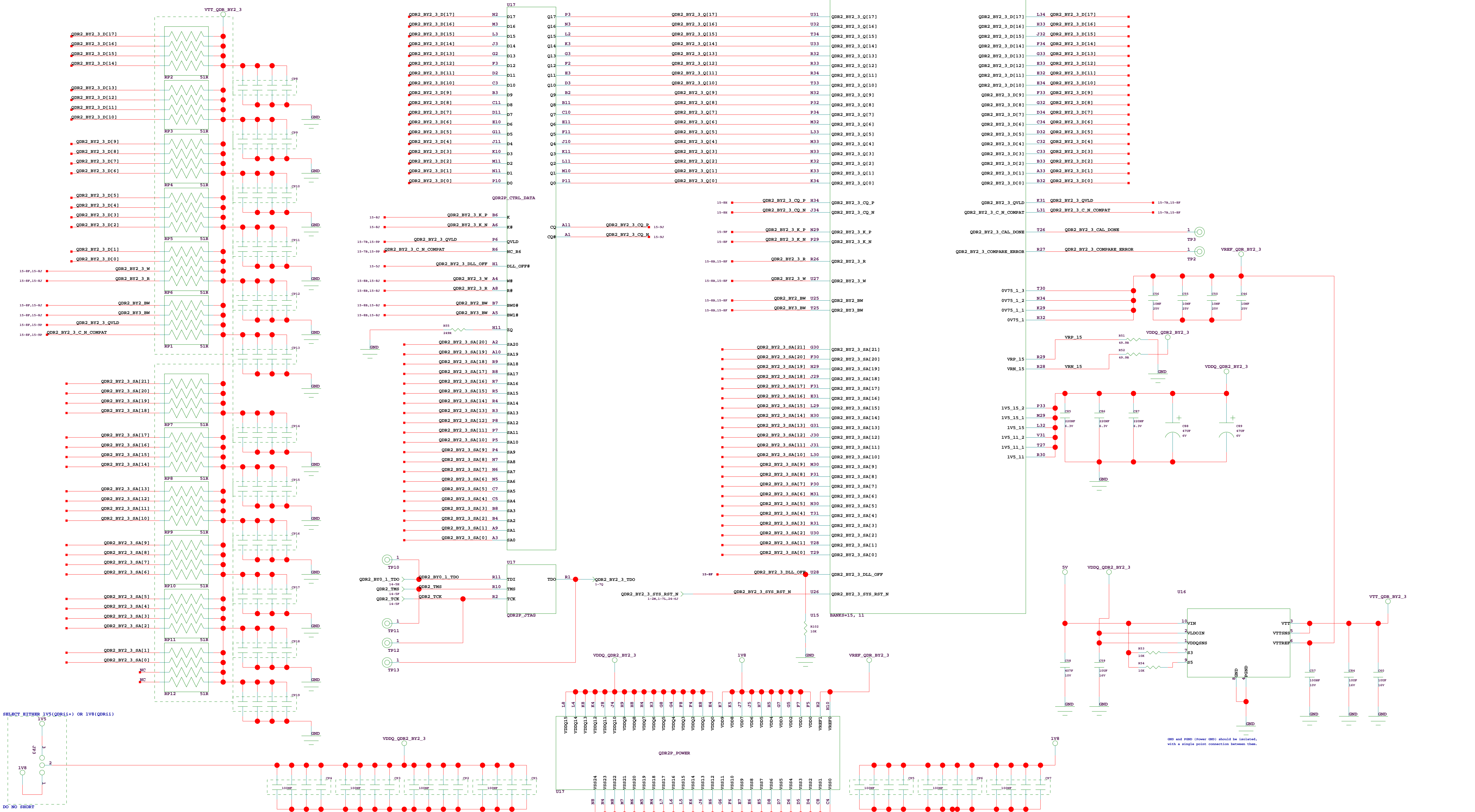
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RECONSTRUCTABLE OPEN ARCHITECTURE HW

10-23-2007_16:00

PATH PATH

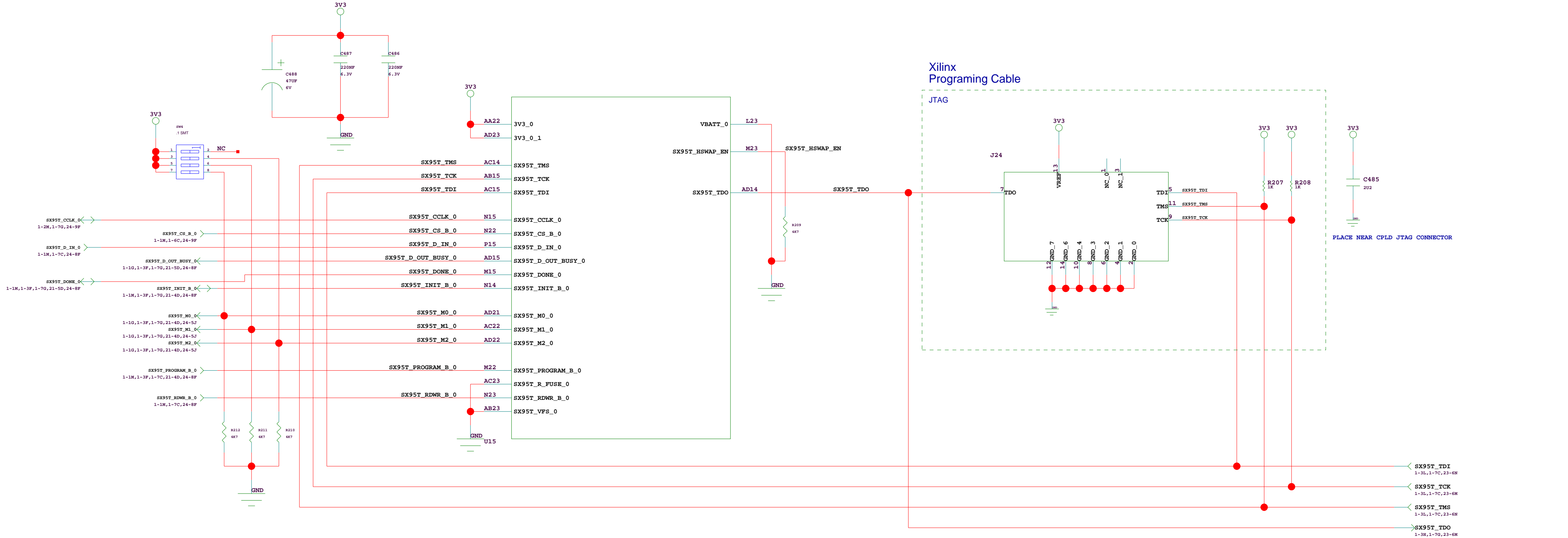
14 OF 25



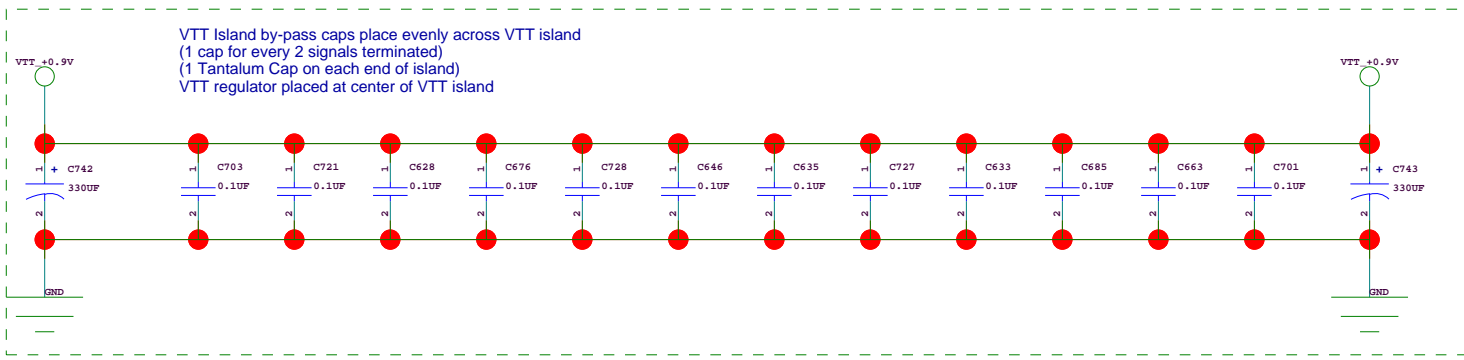
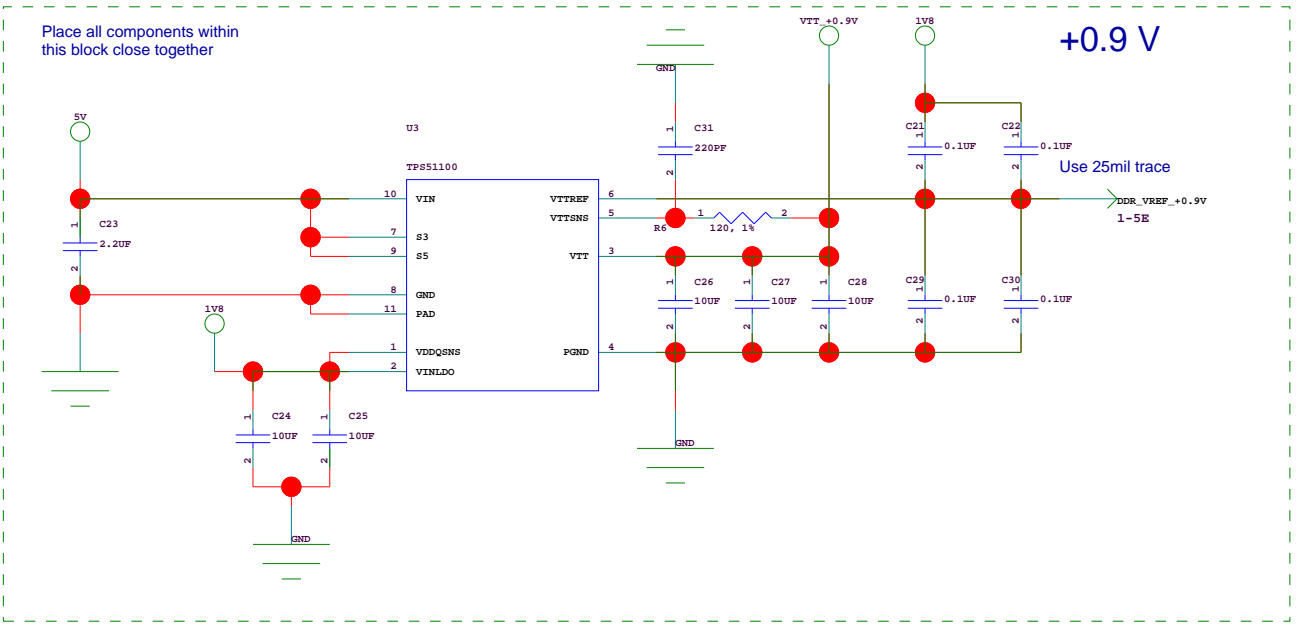
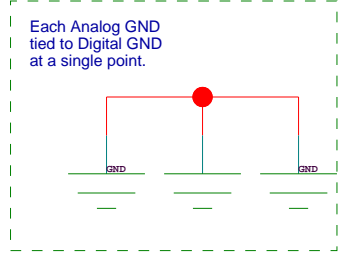
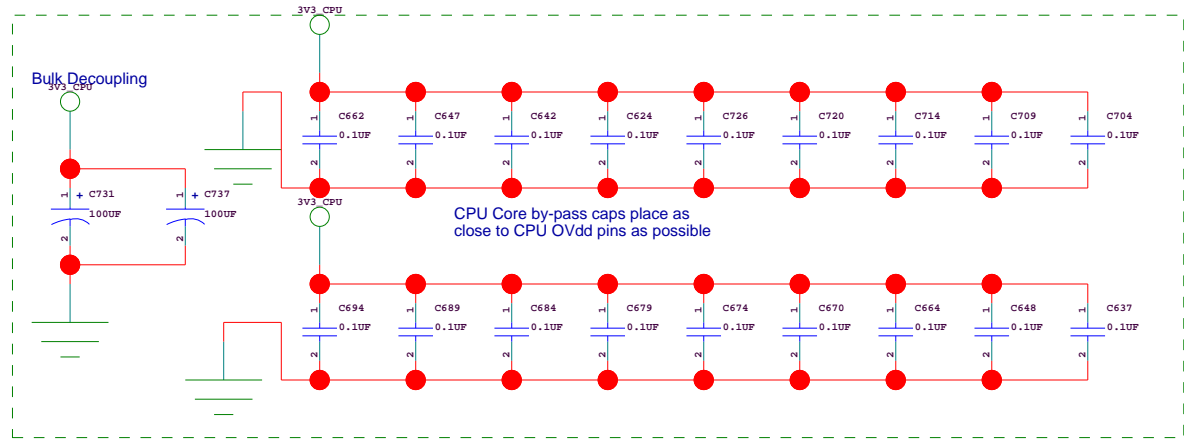
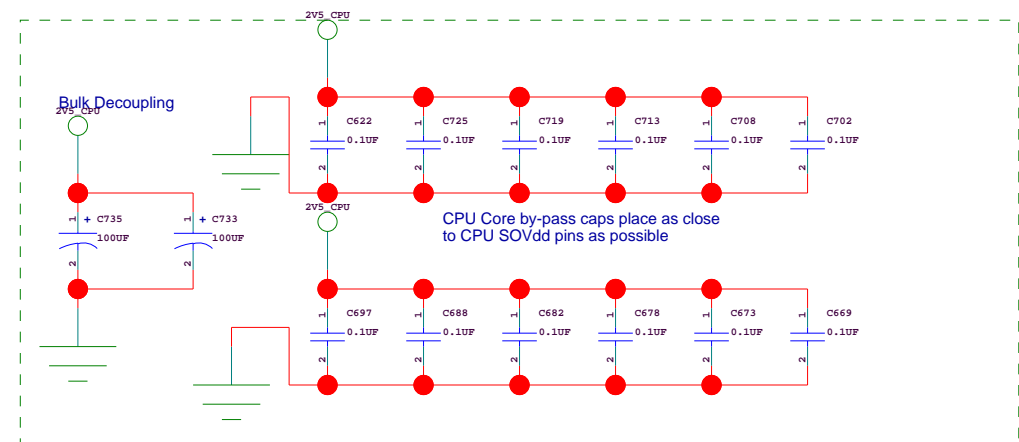
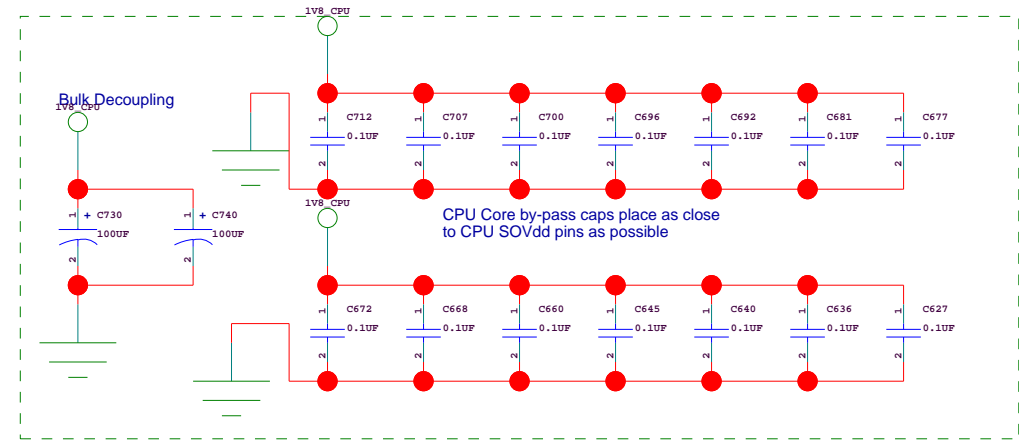
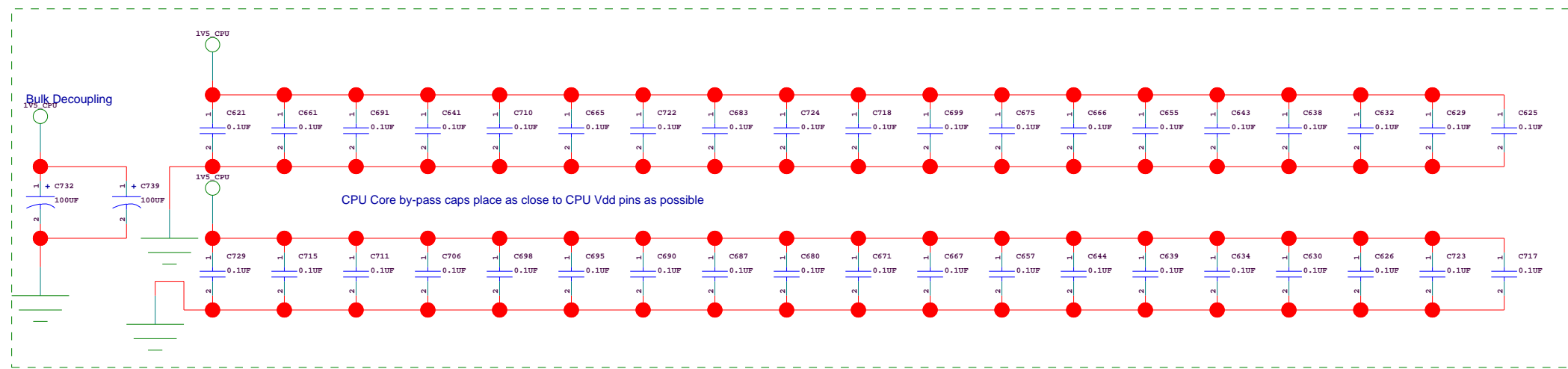
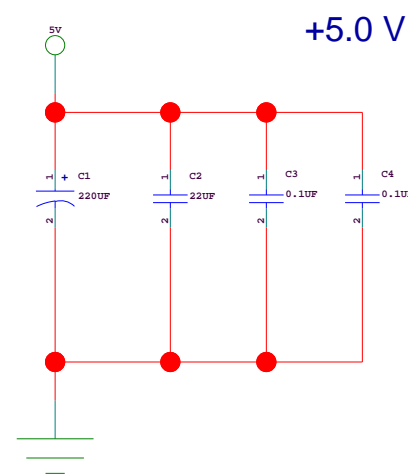
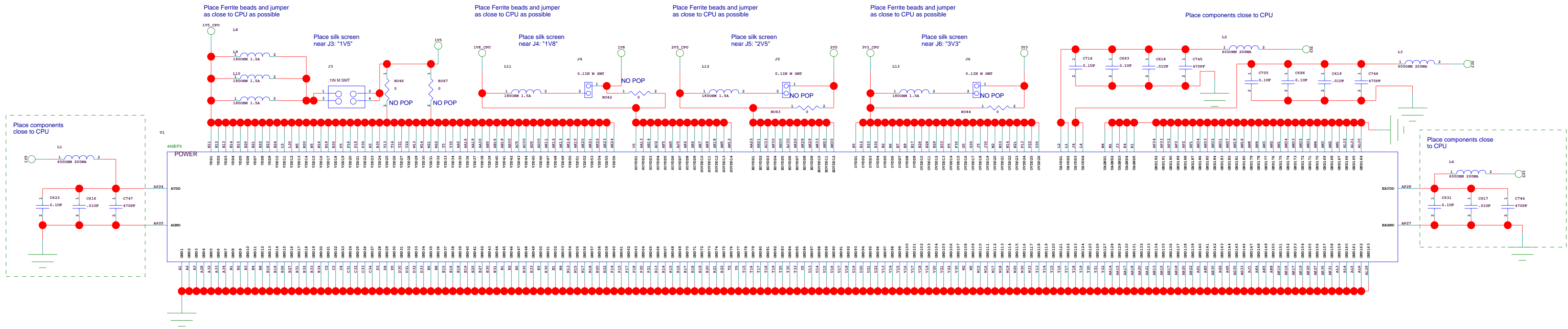
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CASPER GROUP, UC BERKELEY		NRF-ADM-XXX-SD-0001	A
DESCRIPTION		RECONFIGURABLE OPEN ARCHITECTURE HW	
http://casper.berkeley.edu/		BRN:	APP:
10-23-2007_16:00		F KAPP	
PATH		R BAUERMEISTER	
		CHECK:	SHEET

TBD

VALID CONFIGURATION MODES			
Configuration Mode	M[2:0]	Bus Width	CCLK Direction
Master Serial	000	1	Output
Master SPI	001	1	Output
Master BPI-Up	010	8, 16	Output
Master BPI-Down	011	8, 16	Output
Master SelectMAP	100	8, 16	Output
JTAG	101	1	Input (TCK)
Slave SelectMAP	110	8, 16, 32	Input
Slave Serial	111	1	Input



ROACH/iBOB2		ROACH_CONFIG	
COLLABORATORS: CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerKAT, CAPE TOWN http://casper.berkeley.edu/	DOC NO NRF-ADM-XXX-SD-0001		REVISION A
	DESCRIPTION RECONFIGURABLE OPEN ARCHITECTURE HW		
	10-23-2007_16:00	DRAWN: F KAPP	APPR:
PATH	PATH	CHECKED: E BAUERMEISTER	SHEET 16 OF 25



ROACH/iBOE2

COLLABORATORS:

CASPER GROUP, UC BERKELEY

NRAO, SOONERO

RECONFIGURABLE OPEN ARCHITECTURE HW

10-23-2007_16:00

ROACH_PPC_POWER_1

DOC NO

NRF-ADM-XXX-SD-0001

DESCRIPTION

RECONFIGURABLE OPEN ARCHITECTURE HW

10-23-2007_16:00

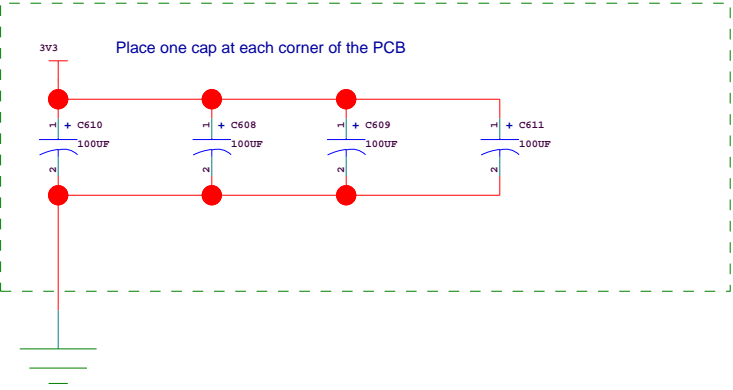
REVISION

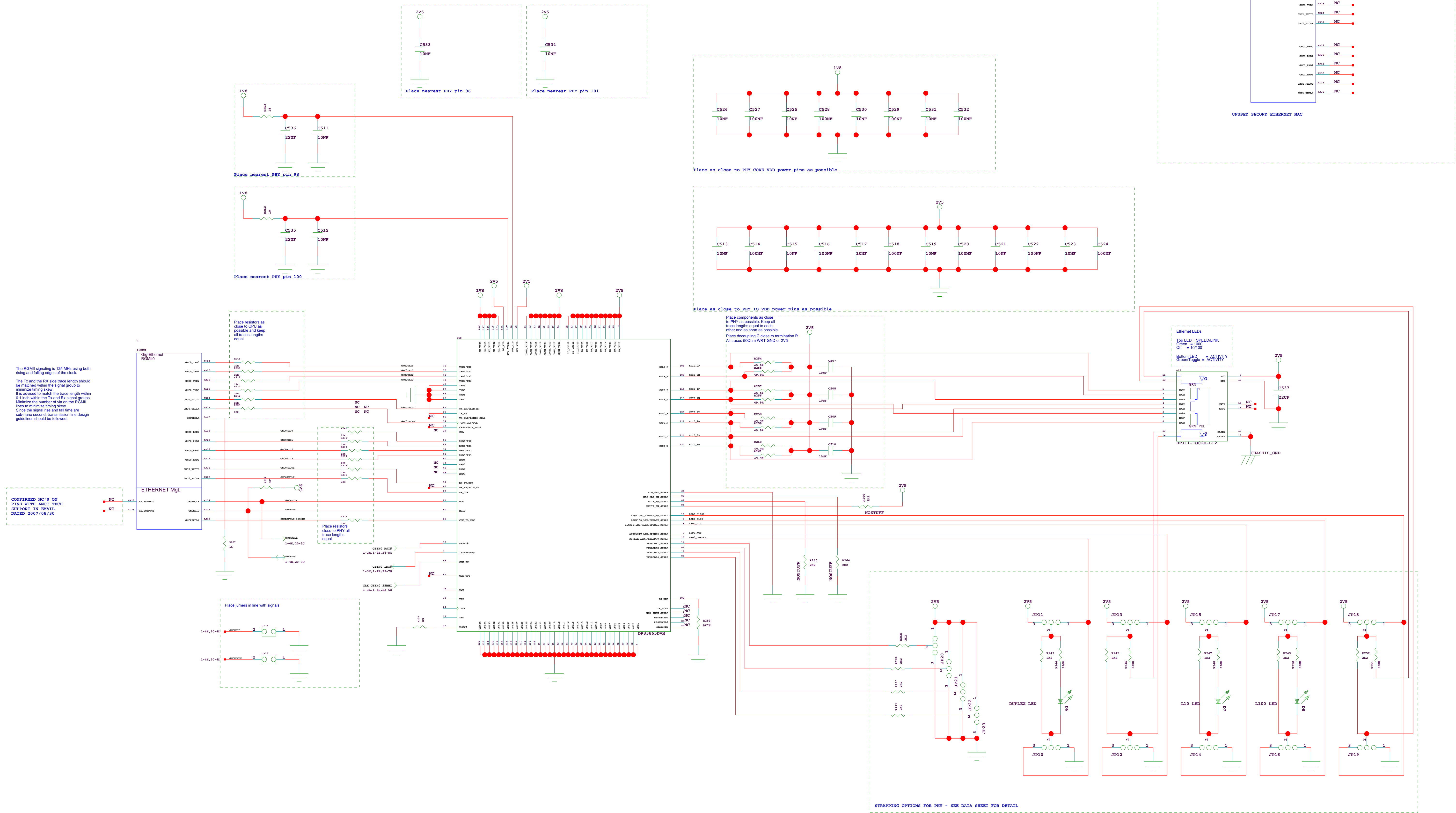
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BRANCH

F KAPP

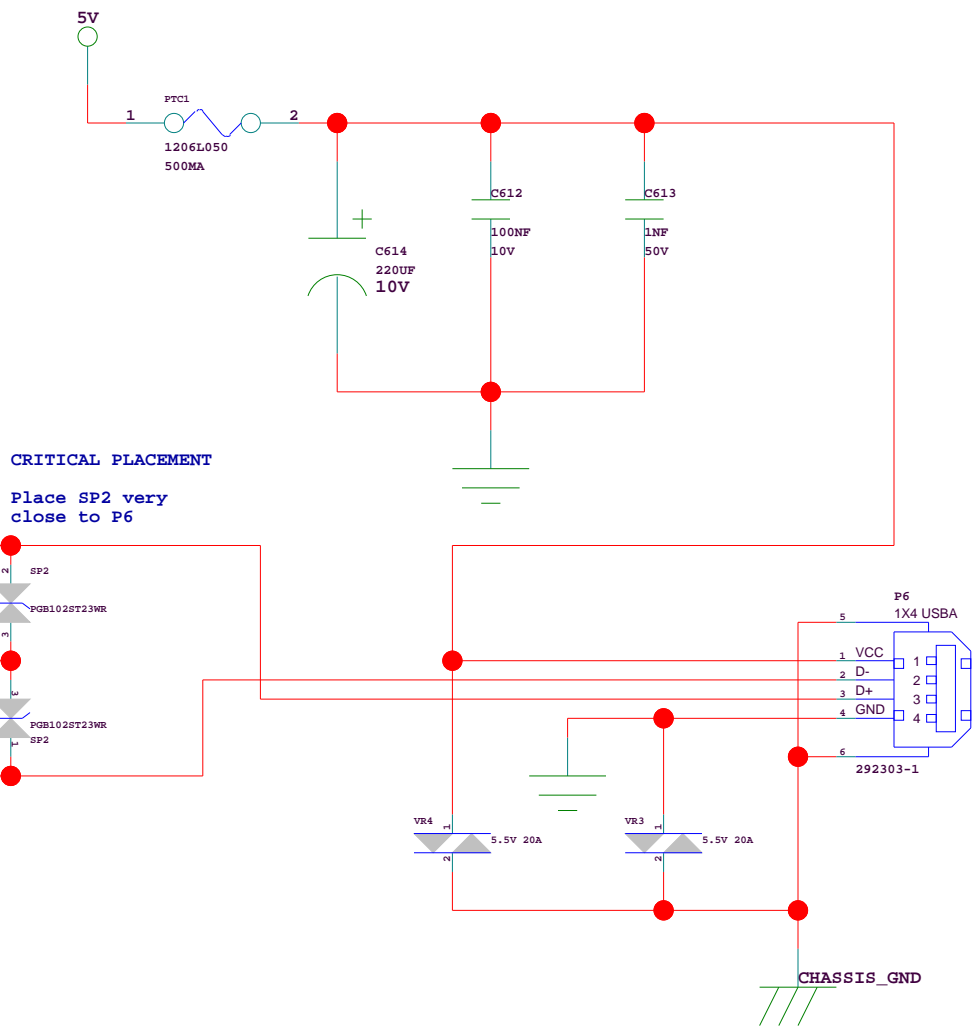
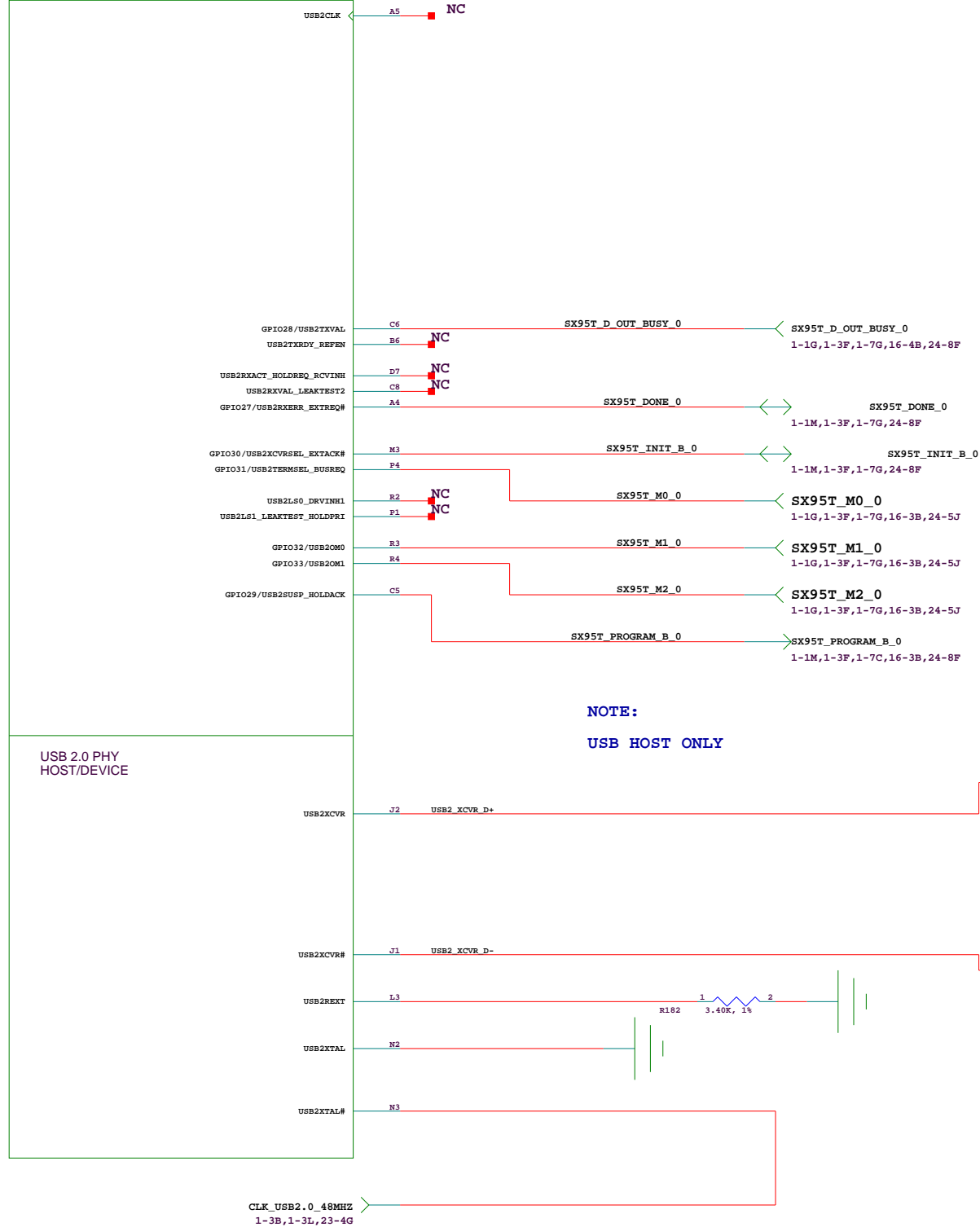
17 OF 25

A	B	C	D	E	F	G	H	J	K	L	M																						
7											7																						
6		REMOVED 3V3 GENERATION									6																						
5											5																						
4	REMOVED +12V GENERATION			REMOVED -12V GENERATION							4																						
3											3																						
2											2																						
1	REMOVED +1V GENERATION			REMOVED +2V5 GENERATION							1																						
0								<table><tr><td colspan="2">ROACH/iBOB2</td><td colspan="2">ROACH_PPC_POWER_2</td></tr><tr><td colspan="2" rowspan="3">COLLABORATORS: CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerKAT, CAPE TOWN http://casper.berkeley.edu/</td><td>DOC NO</td><td>REVISION</td></tr><tr><td>NRF-ADM-XXX-SD-0001</td><td>A</td></tr><tr><td colspan="2">DESCRIPTION RECONFIGURABLE OPEN ARCHITECTURE HW</td></tr><tr><td colspan="2">10-23-2007_16:00</td><td>DRAWN: F KAPP</td><td>APPR:</td></tr><tr><td colspan="2">PATH PATH</td><td>CHECKED: E BAUERMEISTER</td><td>SHEET 18 OF 25</td></tr></table>	ROACH/iBOB2		ROACH_PPC_POWER_2		COLLABORATORS: CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerKAT, CAPE TOWN http://casper.berkeley.edu/		DOC NO	REVISION	NRF-ADM-XXX-SD-0001	A	DESCRIPTION RECONFIGURABLE OPEN ARCHITECTURE HW		10-23-2007_16:00		DRAWN: F KAPP	APPR:	PATH PATH		CHECKED: E BAUERMEISTER	SHEET 18 OF 25					
ROACH/iBOB2		ROACH_PPC_POWER_2																															
COLLABORATORS: CASPER GROUP, UC BERKELEY NRAO, SOCORRO meerKAT, CAPE TOWN http://casper.berkeley.edu/		DOC NO	REVISION																														
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10-23-2007_16:00		DRAWN: F KAPP	APPR:																														
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A	B	C	D	E	F	G	H	J	K	L	M																						



ROACH/iBOB2		ROACH_PPC_ETH1	
COLLABORATORS:		DOC NO:	REVISION
CASPHER GROUP, UC BERKELEY		NRF-ADM-XXX-SD-0001	A
BRAC, EOCORE		DESCRIPTION:	
BEEFEAT, CAPE TOWN		RECONFIGURABLE OVER ARCHITECTURE HW	
http://casper.berkeley.edu/		NAME:	APPR:
10-23-2007 16:00		F KAPP	
PATH PATH		CHECKED:	SHEET
		E BAUERMEISTER	20 OF 2

U1
USB 2.0 DEVICE
40EPA



ROACH/iBOB2

COLLABORATORS:
CASPER GROUP, UC BERKELEY
NRAO, SOCORRO
meerKAT, CAPE TOWN
<http://casper.berkeley.edu/>

10-23-2007_16:00
PATH PATH

ROACH_PPC_USB

DOC NO
NRF-ADM-XXX-SD-0001

REVISION
A

DESCRIPTION
RECONFIGURABLE OPEN ARCHITECTURE HW

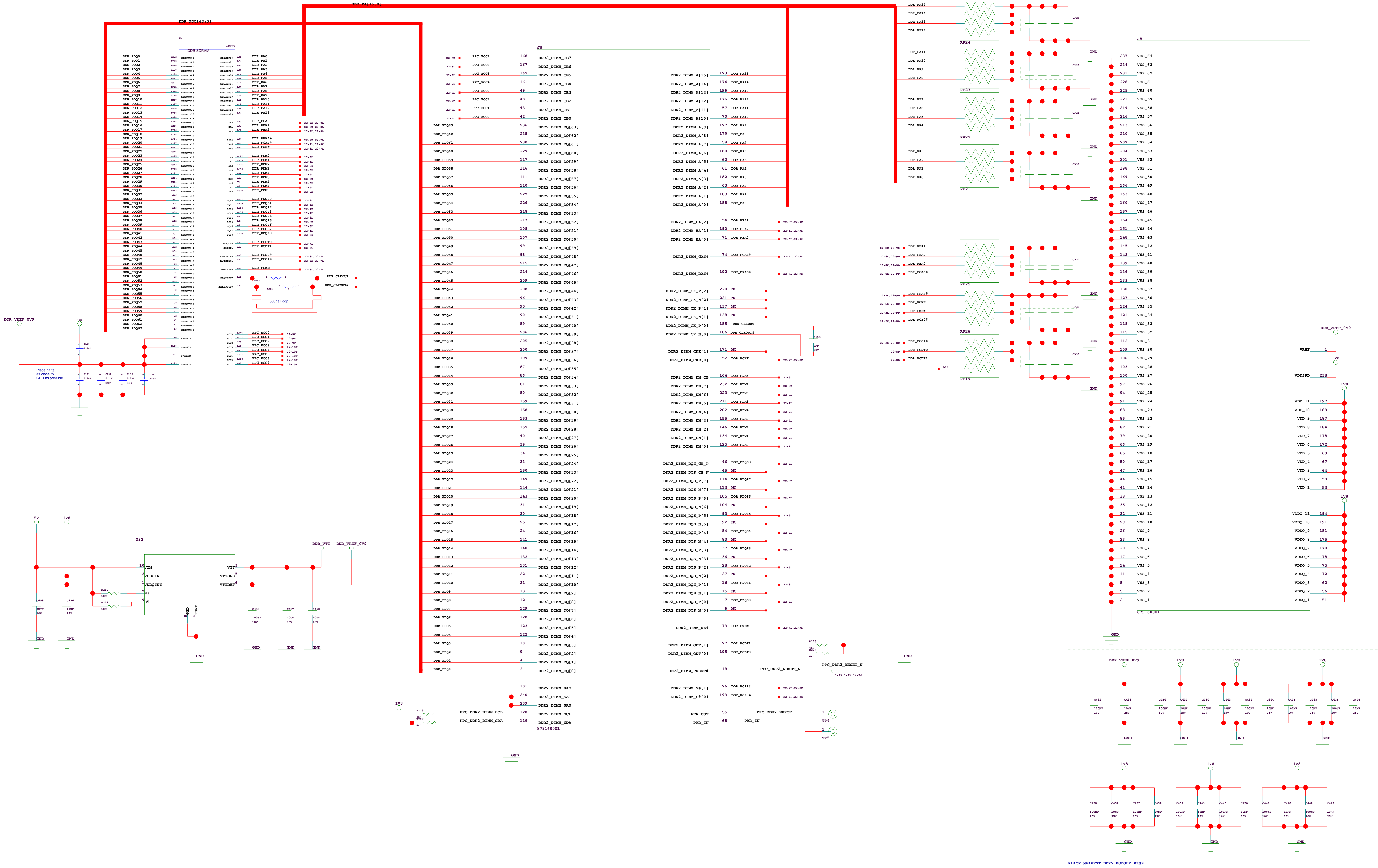
DRAWN: F KAPP

CHECKED: E BAUERMEISTER

APPR:

SHEET

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ROACH/iBOB2

COLLABORATORS:

CASPER GROUP, UC BERKELEY

NRAO, SOCCORRO

RECONSTRUCTION

10-23-2007_16:00

PATH

ROACH_PPC_DDR2

DOC NO

NRF-ADM-XXX-SD-0001

DESCRIPTION

RECONSTRUCTIBLE OPEN ARCHITECTURE HW

10-23-2007_16:00

PATH

REVISION

A

NAME

F KAPP

10-23-2007_16:00

PATH

8 BAUERMEISTER

SHEET

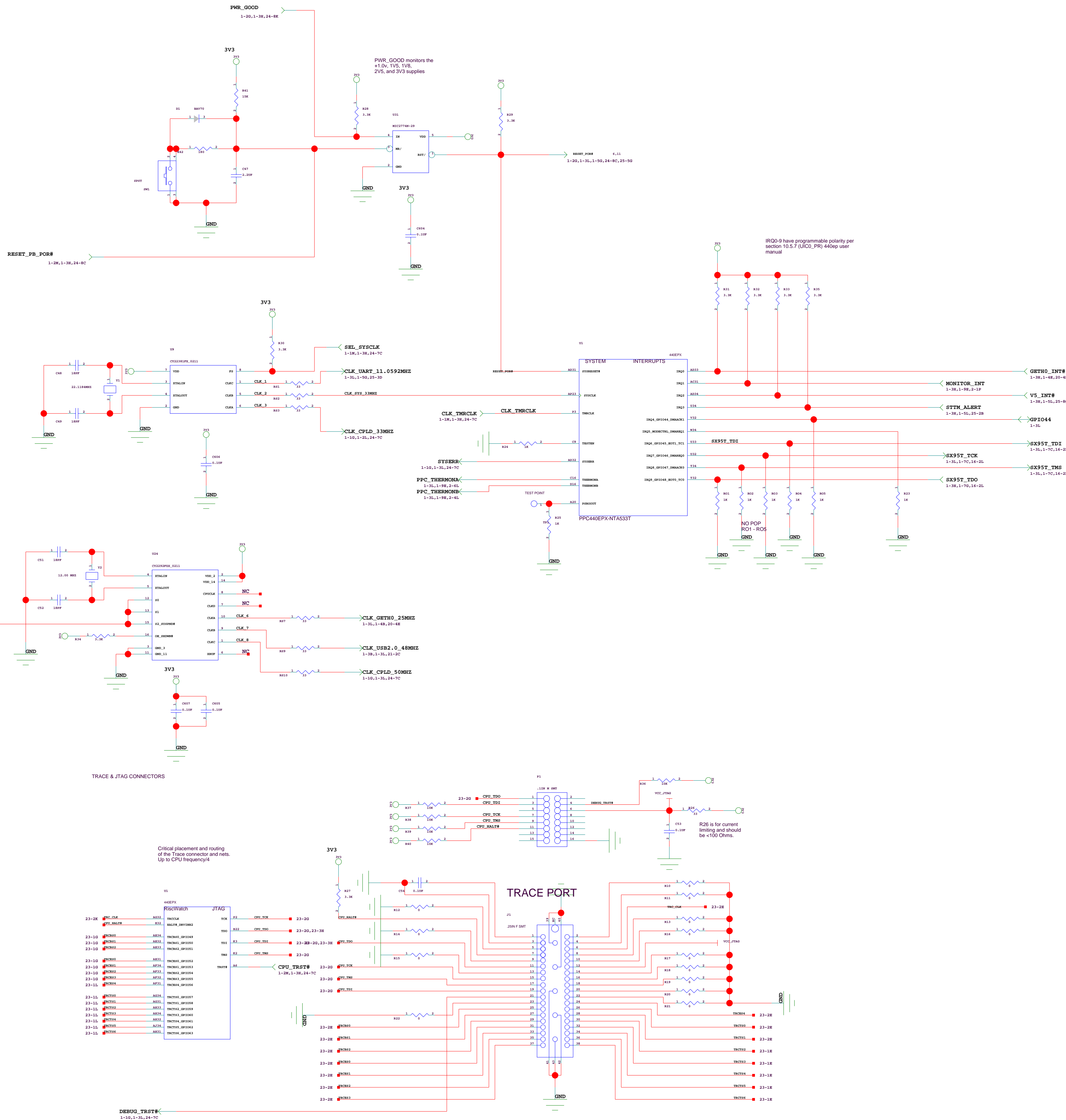
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Critical Placement and Route
Clock Rules:

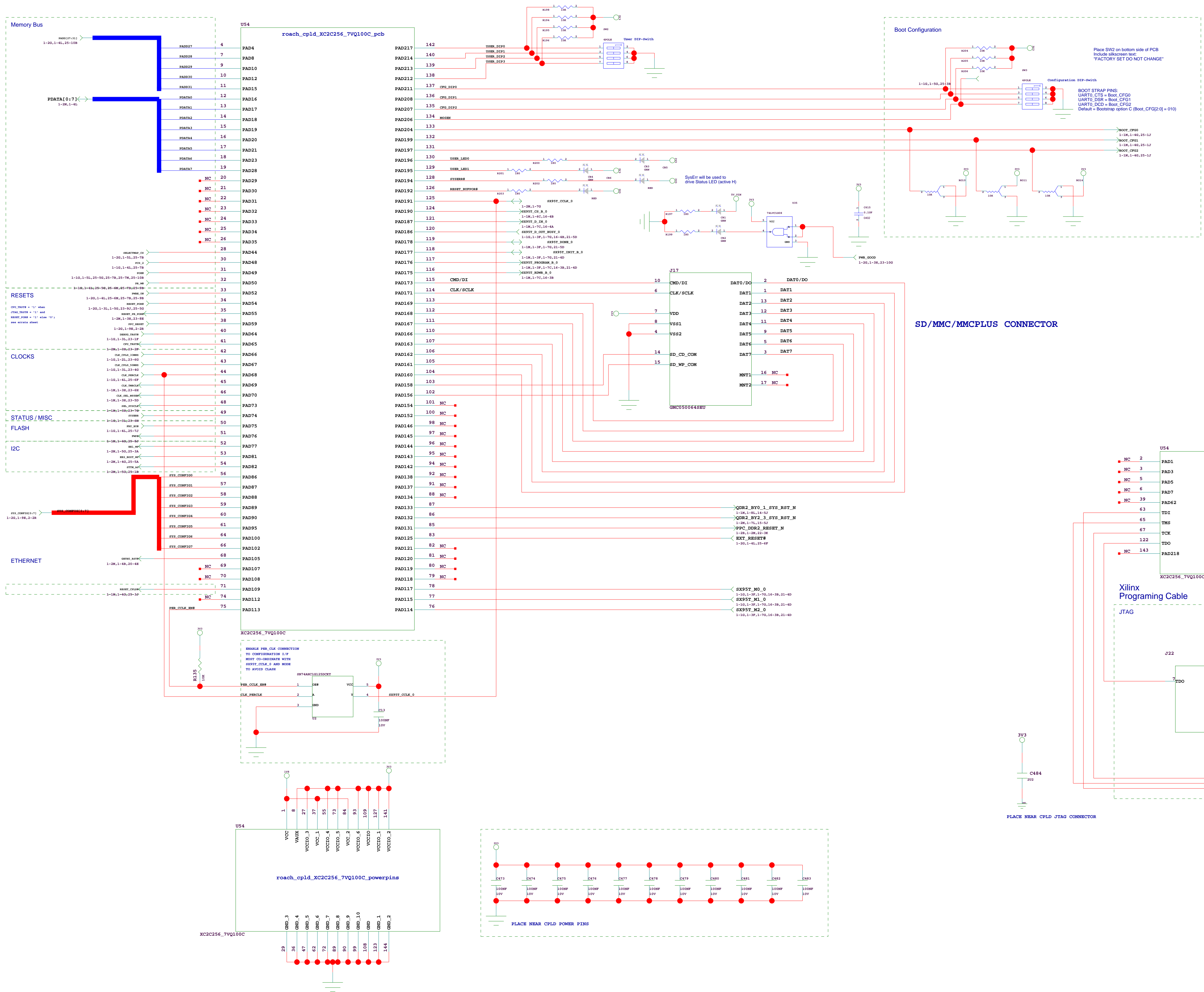
Clock Rules:
CLK_UART_11.0592MHz = as short as possible
CLK_SYS_33MHz = as short as possible
CLK_CPLD_33MHz = CLK_SYS_33MHz

Critical Placement and Route
Clock Rules:

Clock Rules:
CLK_PC13_66.33MHz = as short as possible
CLK_PC12_66.33MHz = CLK_PC13_66.33MHz
CLK_PC11_66.33MHz = CLK_PC12_66.33MHz + 2.5°
CLK_GETH0_25MHz = as short as possible
CLK_GETH1_25MHz = CLK_GETH0_25MHz
CLK_CPLD_50MHz = as short as possible
CLK_USB2_0_48MHz = as short as possible
CLK_USB2_0_12MHz = as short as possible



ROACH/iBOE2		ROACH_PPC_TST_CLK_IO	
COLLABORATORS:		DOC NO	REVISION
CASPER GROUP, UC BERKELEY		NRF-ADM-XXX-SD-0001	A
DESCRIPTION		RECONFIGURABLE OPEN ARCHITECTURE HW	
http://casper.berkeley.edu/		DESIGN	APPR:
10-23-2007_16:00		F KAPP	
PATH PATH		CHECKED: E BAUERMEISTER	SHEET 23 OF 2



ROACH/iBOB2		ROACH_PPC_CPLD	
COLLABORATORS: CASPER GROUP, UC BERKELEY M&A, COCORO BEEFAT, CAPE TOWN http://casper.berkeley.edu/		DOC NO NRP-ADM-XXX-SD-0001 DESCRIPTION RECONFIGURABLE OPEN ARCHITECTURE IM	REVISION A
10-23-2007.16:00		NAME: F KAPP	APP:
PATH	PATH	CHECKED: B BAUMENISTER	SHEET 14 OF 25

