Tsi382 (LQFP) Evaluation Board Schematics

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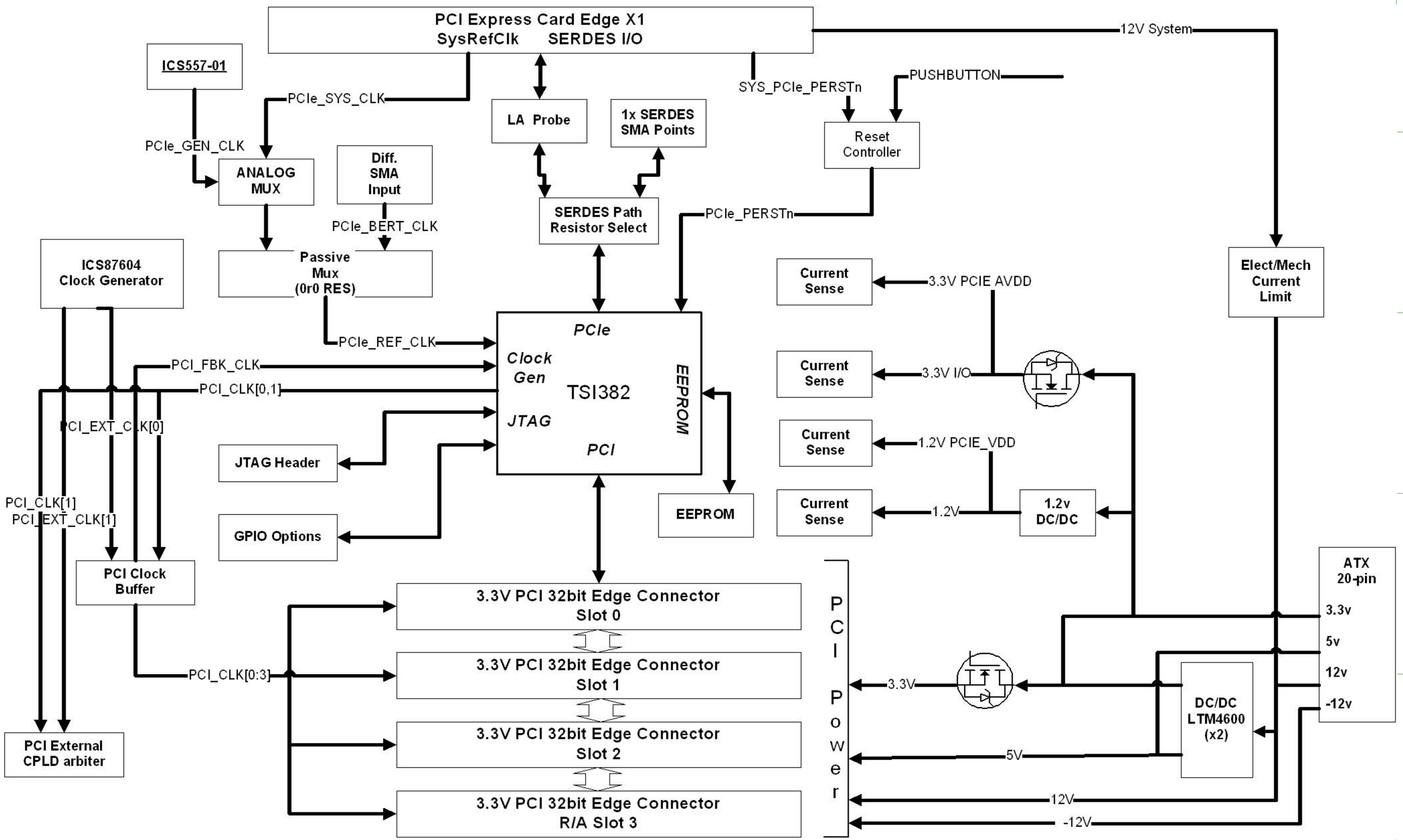
BLOCK DIAGRAM



TITLE : BLOCK DIAGRAM			
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TSI382 PCIE/MISC INTERFACE

TSI382 STRAPS

S1 Default Configuration

Signal	(1=High,0=Low)
N/C	
PWRUP_EN_ARB	0
N/C	
PLL_BYPASS	0

3.3V

R70 10K
R71 10K
R137 8.2K
R157 8.2K

1-1435790-4
S6

TST_SPARE1
PWRUP_EN_ARB
TST_SPARE2
PWRUP_PLL_BYPASS

3-F2
3-E3,15-C3
3-F2
3-D3

TSI382 PCIE, MISC 1 OF 3

U11

4-D7	PCIE_RXD_P0	26	PCIE_RXD_N
4-D7	PCIE_RXD_N0	27	PCIE_RXD_P
10-C7	PCIE_REFCLK_P	22	PCIE_REFCLK_N
10-C7	PCIE_REFCLK_N	21	PCIE_REFCLK_P
3-B7,3-C4	TSI382_PERST#	174	PCIE_PERST#
3-F2,15-C3	PWRUP_EN_ARB	140	PWRUP_EN_ARB
3-F2	PWRUP_PLL_BYPASS	93	PWRUP_PLL_BYPASS
	TSI382_SR_CLK	48	SR_CLK
	TSI382_SR_CSN	38	SR_CS#
	TSI382_SR_DIN	37	SR_DIN
	TSI382_SR_DOUT	47	SR_DOUT
3-B5	TSI382_TCK	97	JTAG_TCK
3-B5	TSI382_TDI	98	JTAG_TDI
3-B4	TSI382_TDO	86	JTAG_TDO
3-B5	TSI382_TMS	129	JTAG_TMS
3-B5	TSI382_TRST#	127	JTAG_TRST#
3-D6	TSI382_TEST_BCE	15	TEST_BCE
3-D6	TSI382_TEST_BIDR_CTRL	49	TEST_BIDR_CTL
3-D6	TSI382_TEST_ON	35	TEST_ON
	PCIE_TXD_N	30	PCIE_TXD_N
	PCIE_TXD_P	29	PCIE_TXD_P
	PCIE_REXT	24	PCIE_REXT
	TEST_SPARE[0]	128	TST_SPARE1
	TEST_SPARE[1]	12	TST_SPARE2
	TEST_SPARE[2]	84	TST_SPARE3

TSI382QFP

TX Compliance Testing

PCIE_TXD_N
PCIE_TXD_P
0.1U C112
0.1U C111
R162 DNP 49.9
R159 DNP 49.9
PCIE_TXD_TSI_P0 4-D1
PCIE_TXD_TSI_N0 4-D1

TSI382 JTAG

3.3V
R72 10K DNP
R63 191
R69 0

Test for IDT Only

3-D2 TSI382_TEST_BCE
3-D2 TSI382_TEST_ON
3-D2 TSI382_TEST_BIDR_CTRL

R150 2K DNP
R148 2K DNP
R158 2K
R156 2K
R153 2K
J21 69190-102H

3.3V
R207 8.2K
R198 8.2K
R187 8.2K
C233 0.1U

U23
8 VCC
4 GND
3 WP#
6 SCK
1 CS#
5 SI
2 SO
7 HOLD#

AT25640A-10PU-2
DNP

AP_U1
115-13-308-41-001

RESET CONTROLLER

5V
R172 1K
B1
B2
SW2
EVQPAC07K
A1
A2

3.3V
5V
2.6V Threshold on SENSE

U15
8 VCC
7 SENSE
2 RESIN#
3 CT
5 RESET#
6 RESET
1 REF
4 GND
TL7702BCD

R173 1K
C231 10U
0.1U C73

3.3V
R136 1K

U16
1 5VCC
2
3 GND
4 TSI382_PERST#
NC7SZ08

3-B7,3-E3
3-D2 TSI382_TDO
R296 33.2
4-E5 PCIE_PERST#

3.3V
R295 10K
R293 10K
R288 10K
R294 10K

J22
5103309-3
NC
C228 0.1U

3.3V
U18
VCC5
GND 3
1
2 TSI382_PERST# 3-C4,3-E3
NC7SZ08

3-D2 TSI382_TDI
3-D2 TSI382_TCK
3-D2 TSI382_TMS
3-D2 TSI382_TRST#

TITLE : TSI382 PCIE/MISC			
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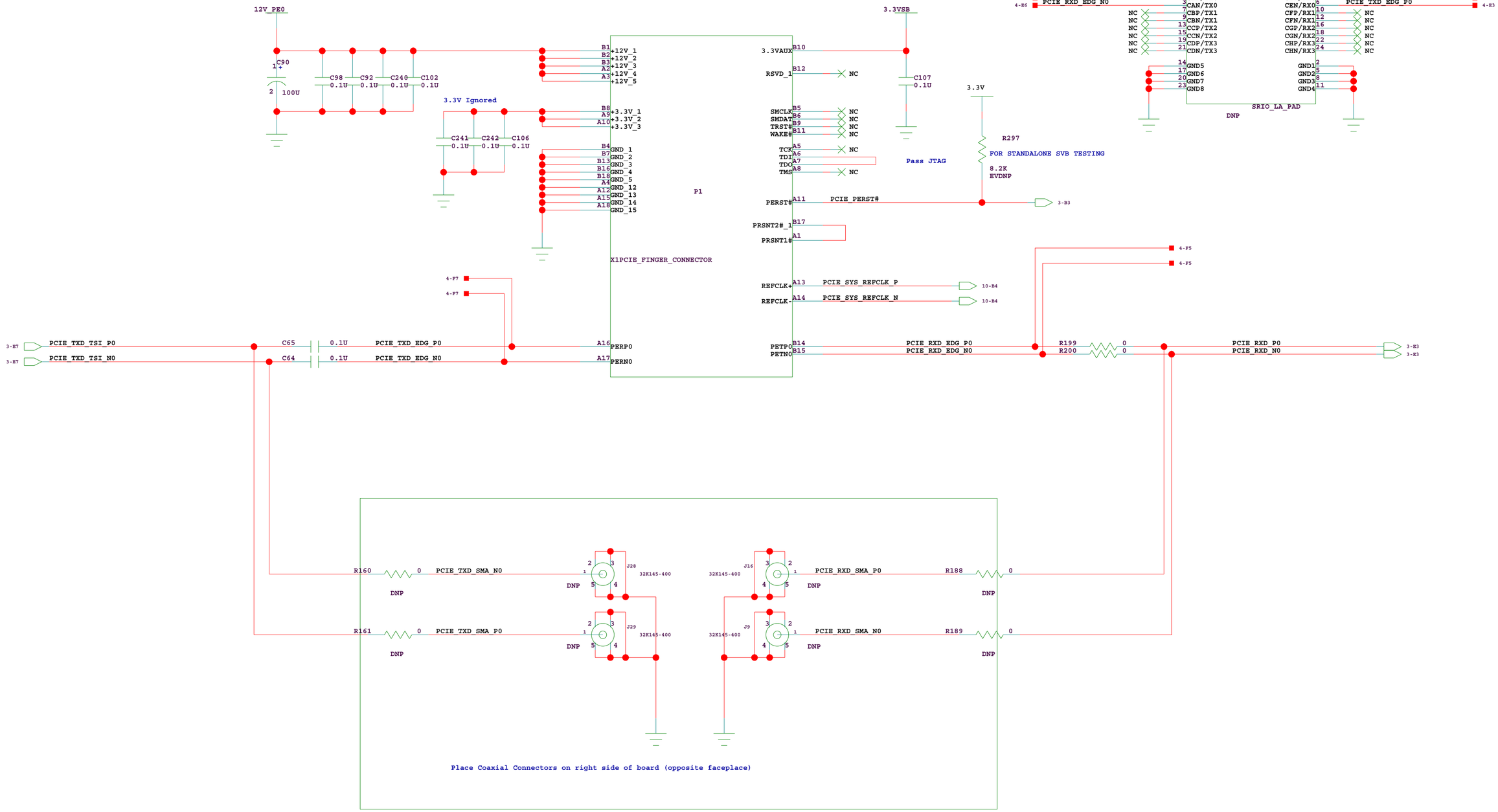
PCIE CONNECTORS



TITLE : PCIE CONNECTORS			
SIZE C	DRAWING NUMBER : 60E2020_SC001	Version: 1.0	DESIGNER : PHILIP LAUZON
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TSI382 PCI INTERFACE

VIO_PCI

R12 1K, R11 1K, R10 1K, R9 1K, R13 1K

8.2K: R283, R16, R25, R23, R24, R22, R21, R20, R19, R18, R120, R15, R256, R14, R118, R242, R241, R17

U11

6-C5,7-C5,8-C5,9-C5	PCI_CBE0	66	PCI_CBE#[0]
6-C3,7-D3,8-C2,9-C2	PCI_CBE1	79	PCI_CBE#[1]
6-D3,7-D3,8-D2,9-D2	PCI_CBE2	103	PCI_CBE#[2]
6-D3,7-D3,8-D2,9-D2	PCI_CBE3	120	PCI_CBE#[3]
9-D2,15-C2	PCI_REQ0#	153	PCI_REQ#[0]
6-D3,15-C2	PCI_REQ1#	138	PCI_REQ#[1]
7-B3,15-C2	PCI_REQ2#	154	PCI_REQ#[2]
8-D2,15-C2	PCI_REQ3#	148	PCI_REQ#[3]
9-D5,15-C2	PCI_GNT0#	152	PCI_GNT#[0]
6-D5,15-C2	PCI_GNT1#	155	PCI_GNT#[1]
7-E5,15-C2	PCI_GNT2#	157	PCI_GNT#[2]
8-D5,15-C2	PCI_GNT3#	163	PCI_GNT#[3]
6-D5,7-D5,8-D5,9-D5,15-C2	PCI_FRAME#	106	PCI_FRAME#
6-D3,7-D3,8-D2,9-D2,15-B2	PCI_IRDY#	105	PCI_IRDY#
6-D5,7-D5,8-D5,9-D5	PCI_TRDY#	104	PCI_TRDY#
6-D3,7-D3,8-D2,9-D2	PCI_DEVSEL#	96	PCI_DEVSEL#
6-D5,7-D5,8-D5,9-D5	PCI_STOP#	102	PCI_STOP#
6-D3,7-D3,8-C2,9-D2	PCI_SERR#	83	PCI_SERR#
6-D3,7-D3,8-D2,9-D2	PCI_PERR#	85	PCI_PERR#
6-D5,7-D5,8-C5,9-D5	PCI_PAR	82	PCI_PAR
6-D5,7-E5,8-D5,9-D5	PCI_PME#	149	PCI_PME#
6-D3,7-D3,8-D2,9-D2	PCI_LOCK#	94	PCI_LOCK#
	PCI_M66EN	169	PCI_M66EN
6-E5,7-E5,8-D5,9-E5,15-D3	PCI_RST#	158	PCI_RST#
6-E5,7-E3,8-E5,9-E2	PCI_INTA#	162	PCI_INTA#
6-E3,7-E5,8-E2,9-E5	PCI_INTB#	161	PCI_INTB#
6-E5,7-E3,8-E5,9-E2	PCI_INTC#	168	PCI_INTC#
6-E3,7-E5,8-E2,9-E5	PCI_INTD#	164	PCI_INTD#
10-B3	PCI_FBK_CLK	167	PCI_CLK
10-B1	PCI_INT_CLK0	146	PCI_CLKO[0]
10-A1	PCI_INT_CLK1	51	PCI_CLKO[1]
	PCI_INT_CLK2	134	PCI_CLKO[2]
	PCI_INT_CLK3	137	PCI_CLKO[3]
	PCI_INT_CLK4	170	PCI_CLKO[4]
15-B7	GPIO0	6	GPIO[0]
15-B7	GPIO1	11	GPIO[1]
15-B7	GPIO2	9	GPIO[2]
15-B7	GPIO3	10	GPIO[3]

PCI 2 OF 3

TSI382QFP

PCI_AD[0]	56	PCI_AD0	
PCI_AD[1]	53	PCI_AD1	
PCI_AD[2]	60	PCI_AD2	
PCI_AD[3]	57	PCI_AD3	
PCI_AD[4]	64	PCI_AD4	
PCI_AD[5]	62	PCI_AD5	
PCI_AD[6]	61	PCI_AD6	
PCI_AD[7]	52	PCI_AD7	
PCI_AD[8]	67	PCI_AD8	
PCI_AD[9]	70	PCI_AD9	
PCI_AD[10]	65	PCI_AD10	
PCI_AD[11]	72	PCI_AD11	
PCI_AD[12]	73	PCI_AD12	
PCI_AD[13]	76	PCI_AD13	
PCI_AD[14]	77	PCI_AD14	
PCI_AD[15]	78	PCI_AD15	
PCI_AD[16]	92	PCI_AD16	
PCI_AD[17]	114	PCI_AD17	
PCI_AD[18]	113	PCI_AD18	
PCI_AD[19]	112	PCI_AD19	
PCI_AD[20]	109	PCI_AD20	
PCI_AD[21]	115	PCI_AD21	
PCI_AD[22]	118	PCI_AD22	
PCI_AD[23]	119	PCI_AD23	
PCI_AD[24]	121	PCI_AD24	
PCI_AD[25]	125	PCI_AD25	
PCI_AD[26]	123	PCI_AD26	
PCI_AD[27]	124	PCI_AD27	
PCI_AD[28]	142	PCI_AD28	
PCI_AD[29]	143	PCI_AD29	
PCI_AD[30]	147	PCI_AD30	
PCI_AD[31]	141	PCI_AD31	

PCI_AD[0:31] → 6-D2,6-D6,6-D7,7-D2,7-D6,8-D2,8-D6,9-D2 9-D6

J8 DNP 1 2 69190-102H

J19 DNP 1 2 69190-102H

J20 DNP 1 2 69190-102H

R59 49.9, R58 49.9, R53 49.9

R285 33.2, R284 33.2, R60 33.2, R61 33.2, R62 33.2

place close to U11 & corresponding 49.9 resistor

PLX has L11 PU to indicate forward bridge

3.3V_PCI

R282 392

REMC-C1S05 D18

VIO_PCI

R85 8.2K

1-1435790-4 S1

6-C2,7-C2,8-C2,9-C2 SLOT_M66EN

1 OPEN 8, 2 7, 3 NC 6 NC, 4 NC 5 NC

PCI_M66EN

U3 NC7SZ08

3.3V, 5VCC, 1, 2, 3 GND, 4

VIO_PCI

5.1K R50 PCI_REQ64# 6-C5,7-C5,8-C5,9-C5

5.1K R51 PCI_ACK64# 6-C3,7-C3,8-C2,9-C2

TITLE : TSI382 PCI INTERFACE

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PCI SLOT 0 (R/A)

IDSEL AD16

- Required Interrupt Routing

  SLOT : BRIDGE

  INTA -> INTA

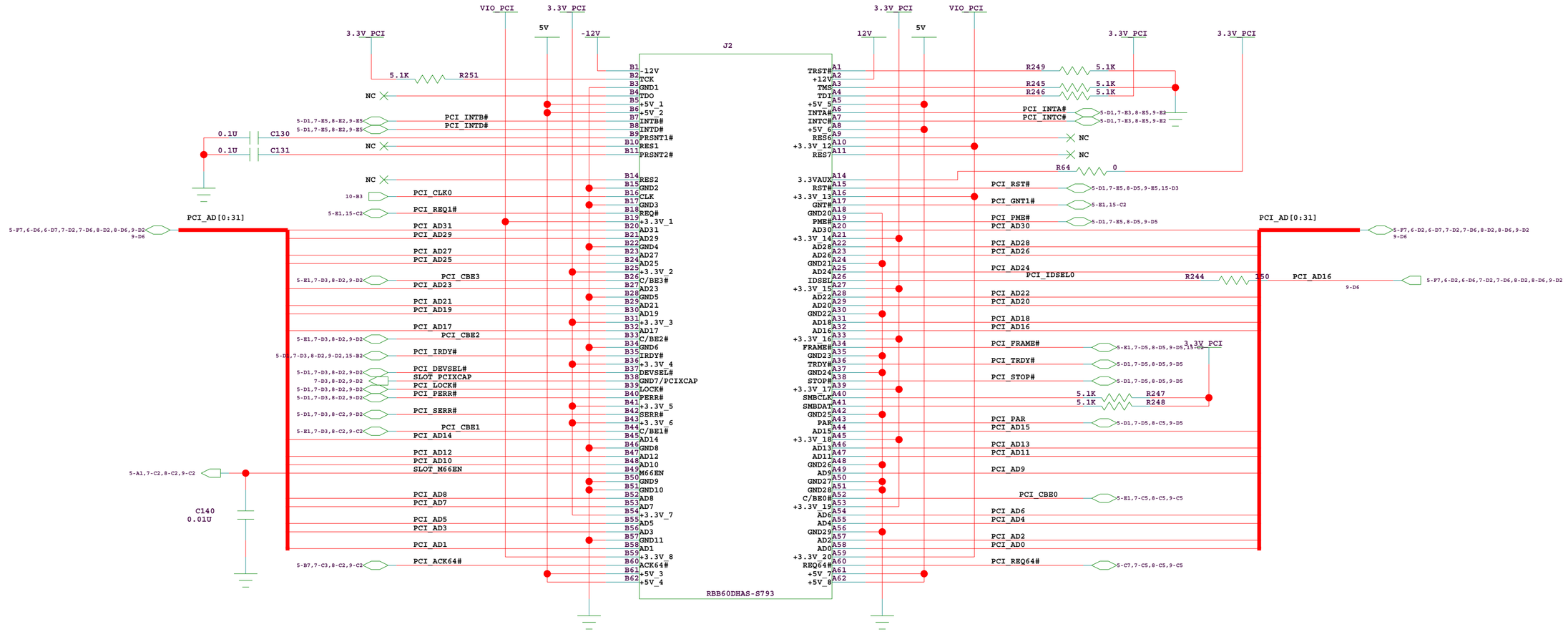
  INTB -> INTB

  INTC -> INTC

  INTD -> INTD

- PCI Clock PCI_CLK0

- PCI Arbitration PCI_GNT#1/PCI_REQ#1



TITLE : PCI SLOT 0			
SIZE: C	DRAWING NUMBER : 60E2020_SC001	Version: 1.0	DESIGNER : PHILIP LAUZON
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PCI SLOT 1 (Vertical)

IDSEL AD17

- Required Interrupt Routing

  SLOT : BRIDGE

  INTA -> INTB

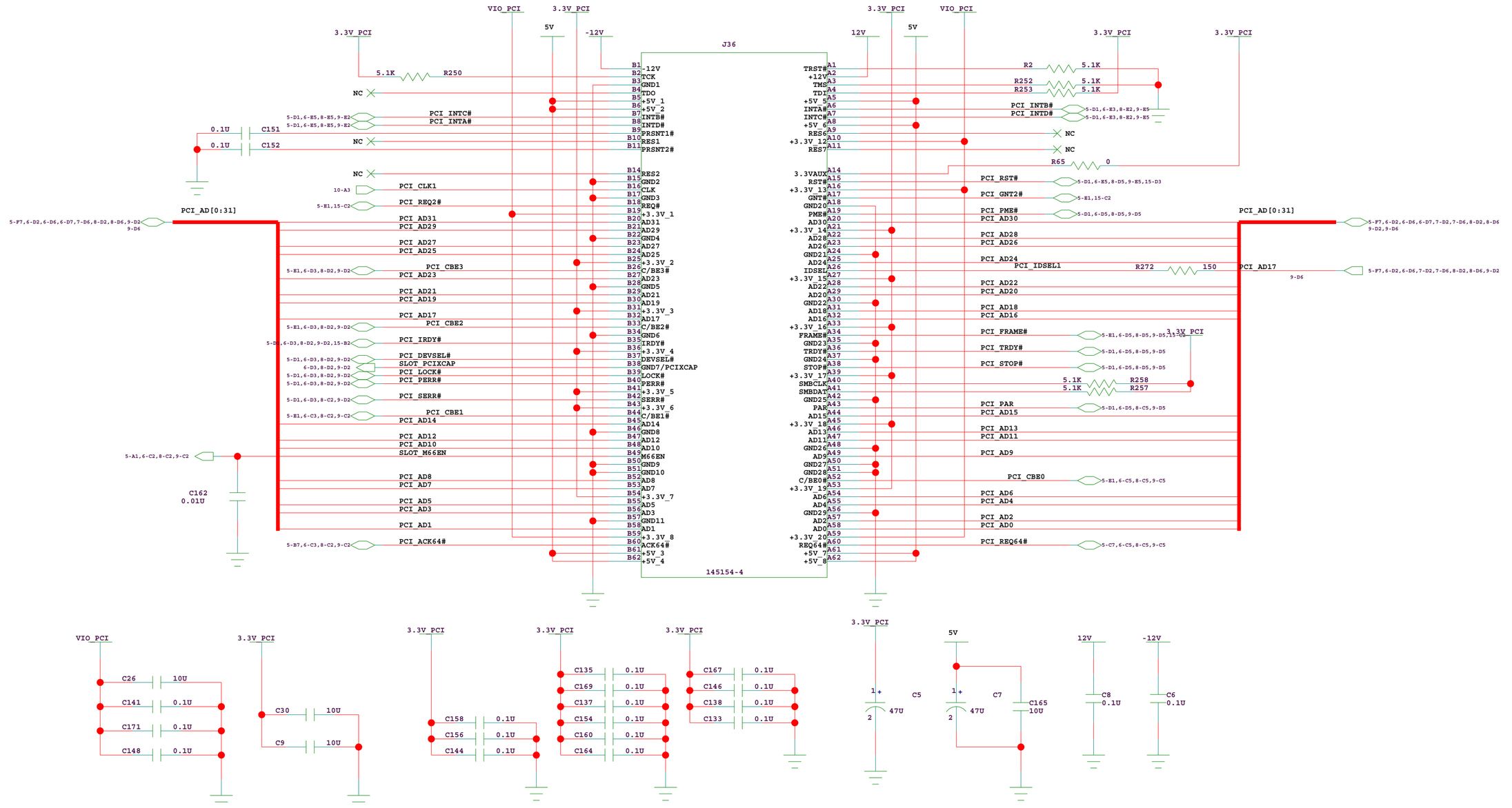
  INTB -> INTC

  INTC -> INTD

  INTD -> INTA

- PCI Clock PCI_CLK1

- PCI Arbitration PCI_GNT#2/PCI_REQ#2



TITLE : PCI SLOT 1			
SIZE: C	DRAWING NUMBER : 60E2020_SC001	Version: 1.0	DESIGNER : PHILIP LAUZON
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PCI SLOT 3 (Vertical)

IDSEL AD18

- Required Interrupt Routing

  SLOT : BRIDGE

  INTA -> INTC

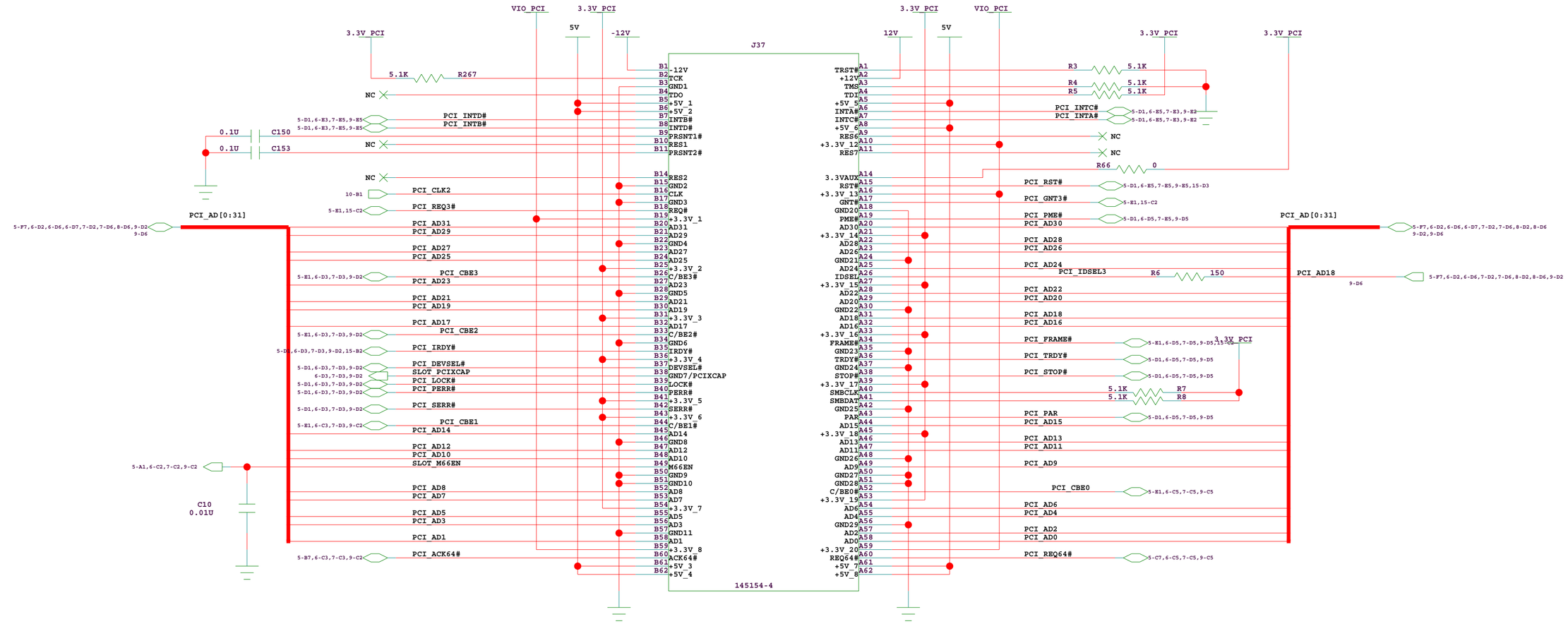
  INTB -> INTD

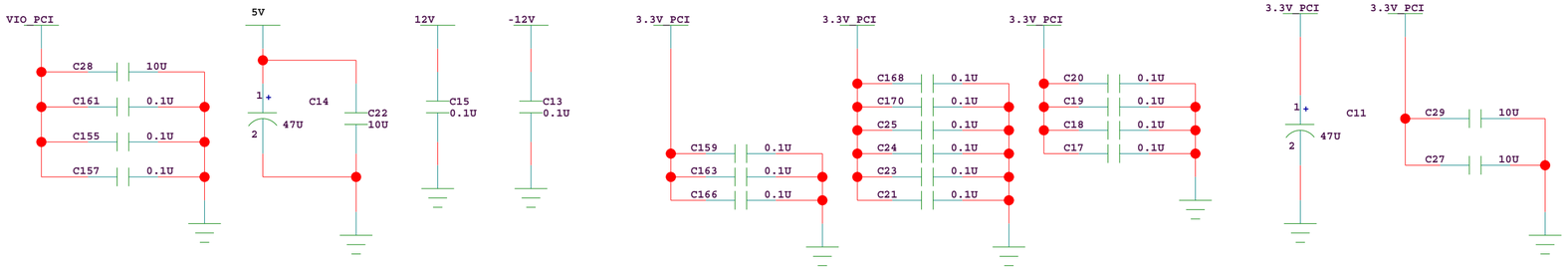
  INTC -> INTA

  INTD -> INTB

- PCI Clock PCI_CLK2

- PCI Arbitration PCI_GNT#3/PCI_REQ#3





TITLE : PCI SLOT 3

SIZE	DRAWING NUMBER :	Version:	DESIGNER :
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PCI SLOT 2 (Vertical)

IDSEL AD19

- Required Interrupt Routing

  SLOT : BRIDGE

  INTA -> INTD

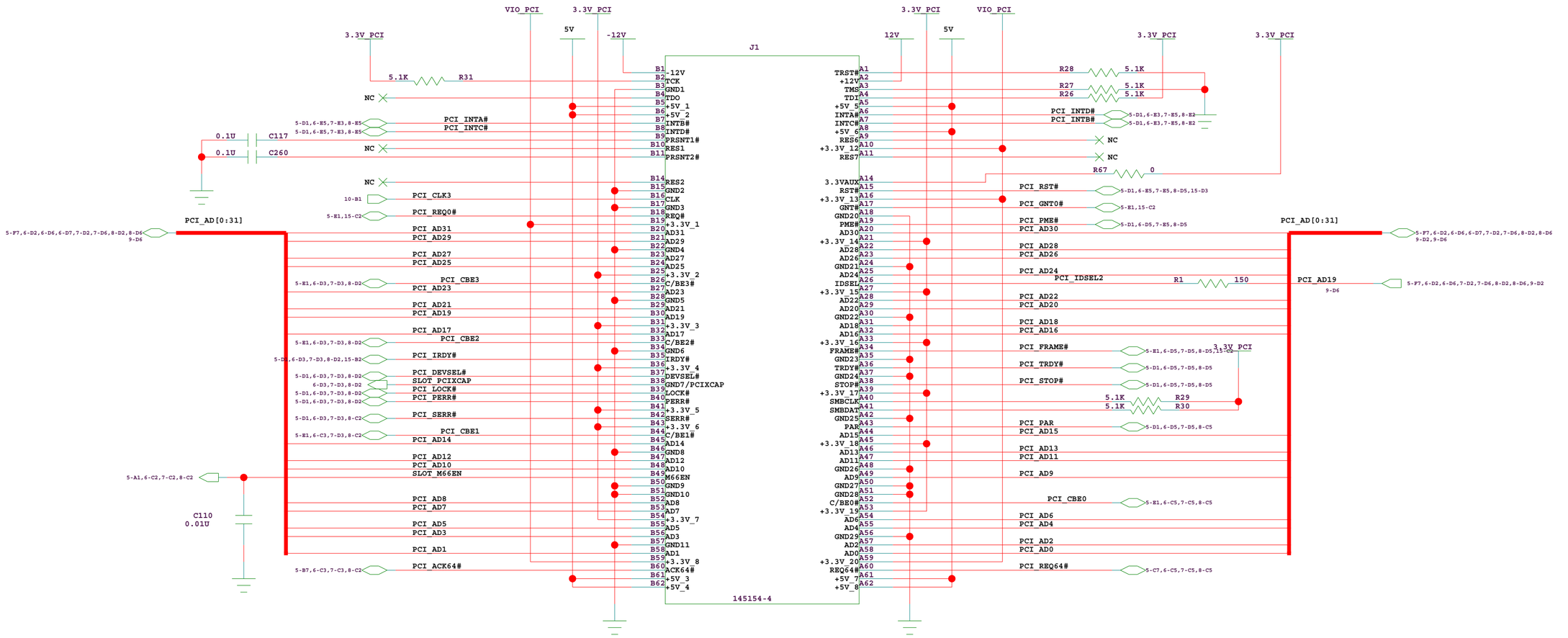
  INTB -> INTA

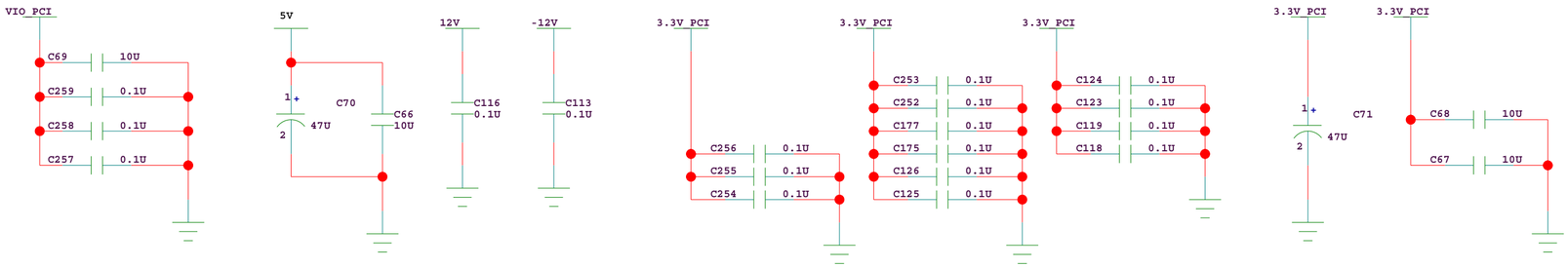
  INTC -> INTB

  INTD -> INTC

- PCI Clock PCI_CLK3

- PCI Arbitration PCI_GNT#0/PCI_REQ#0





TITLE :

PCI SLOT 2

SIZE	DRAWING NUMBER :	Version:	DESIGNER :
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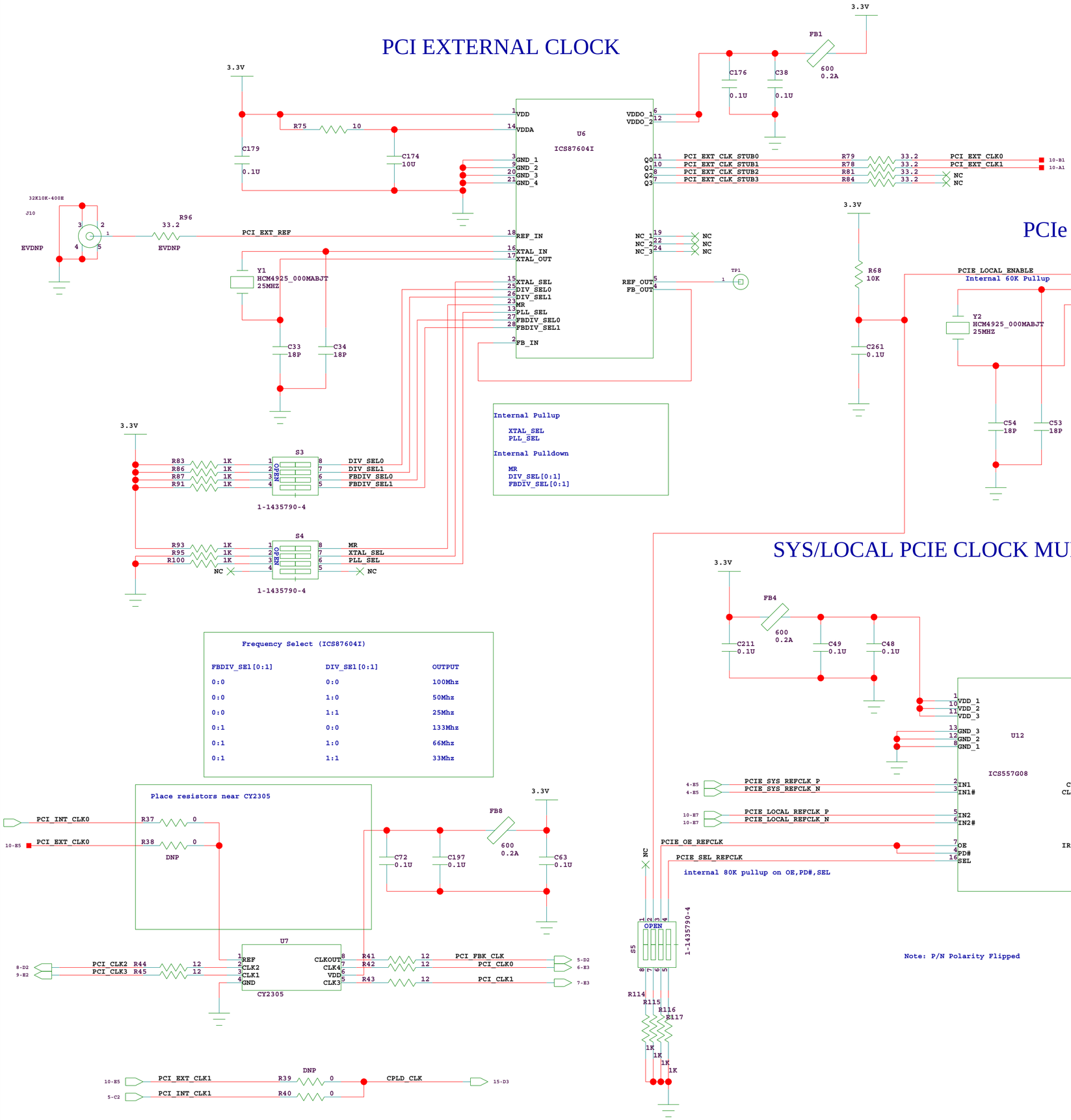
CLOCK DISTRIBUTION

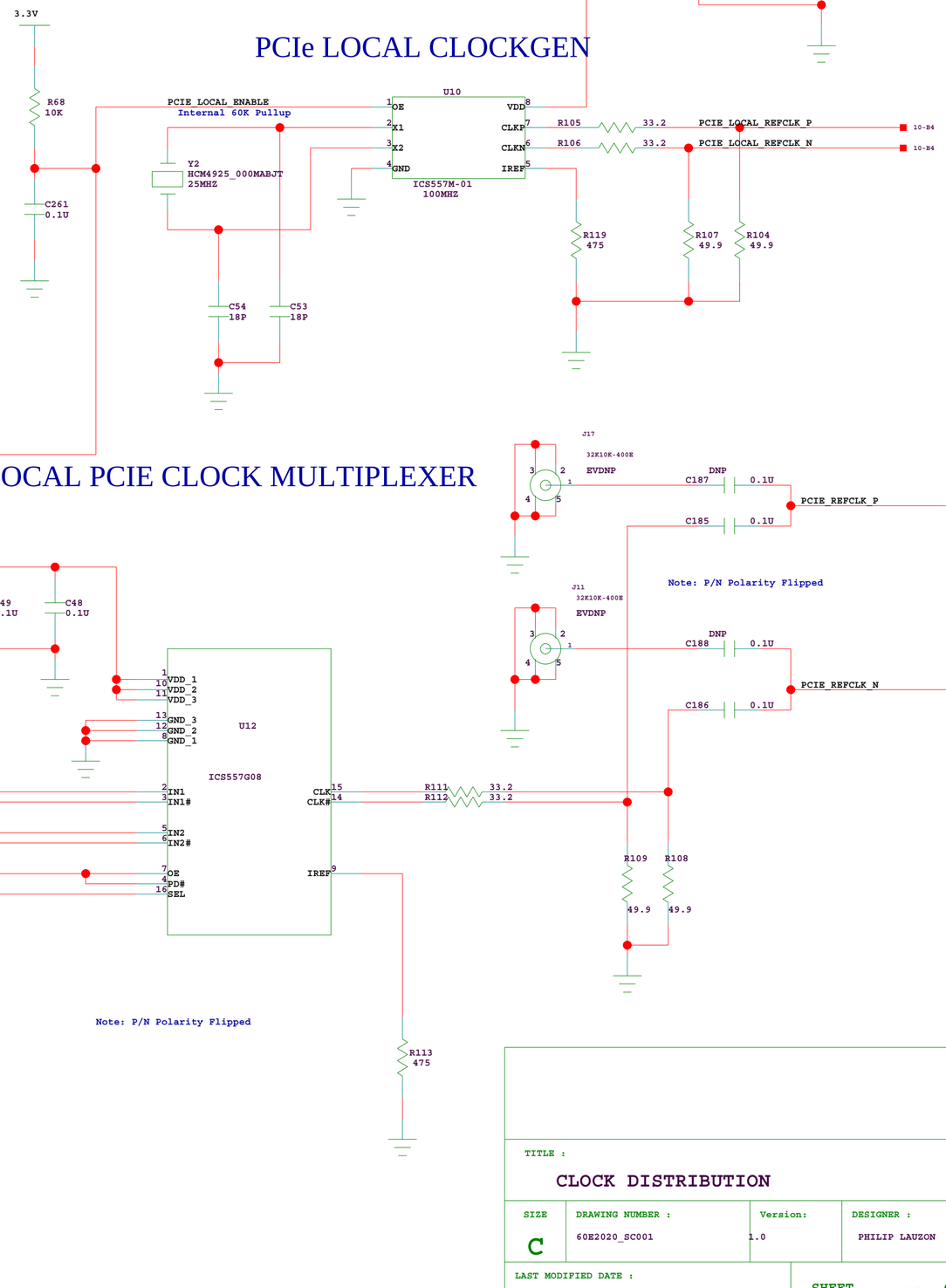
PCI EXTERNAL CLOCK



Frequency Select (ICS87604I)

FBDIV_SEl[0:1]	DIV_SEl[0:1]	OUTPUT
0:0	0:0	100Mhz
0:0	1:0	50Mhz
0:0	1:1	25Mhz
0:1	0:0	133Mhz
0:1	1:0	66Mhz
0:1	1:1	33Mhz

PCIe LOCAL CLOCKGEN



SYS/LOCAL PCIE CLOCK MULTIPLEXER

TITLE : CLOCK DISTRIBUTION			
SIZE: C	DRAWING NUMBER : 60E2020_SC001	Version: 1.0	DESIGNER : PHILIP LAUZON
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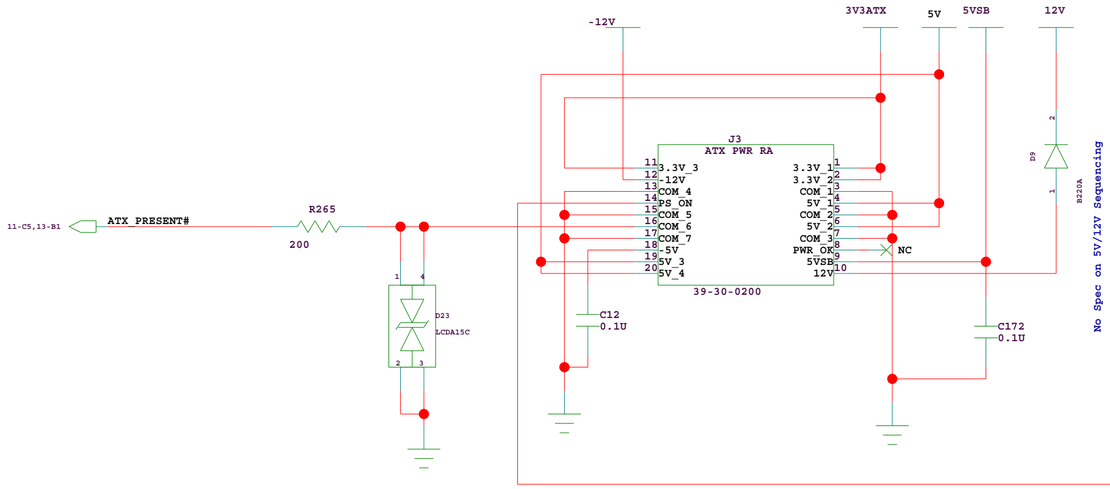
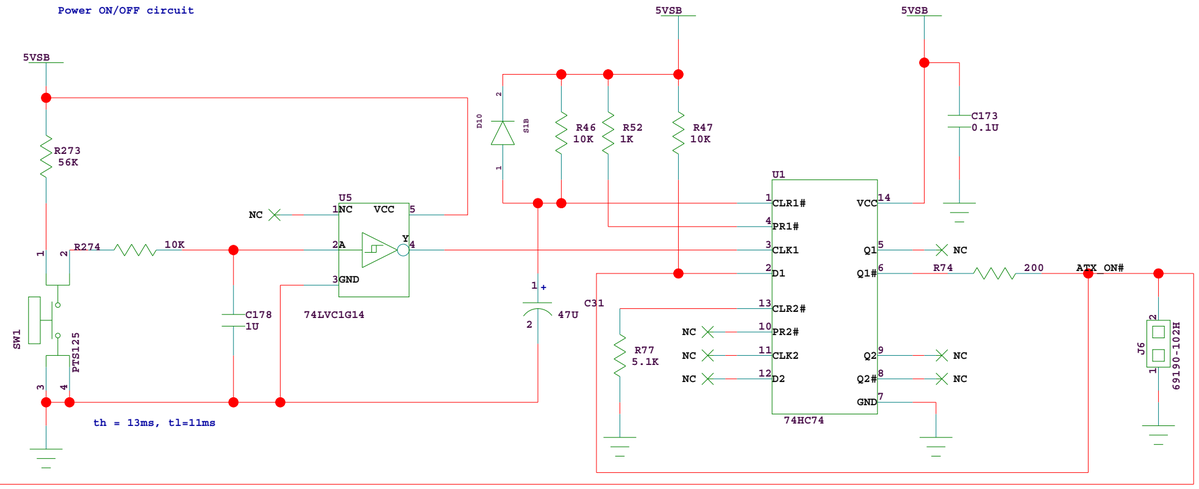
POWER SOURCES

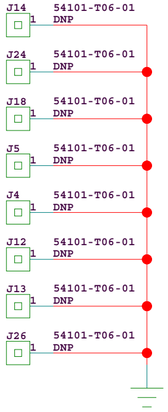
ATX

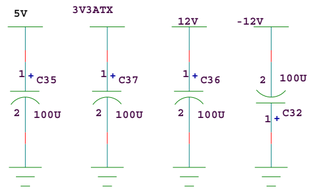


ATX SUPPLY TOGGLE

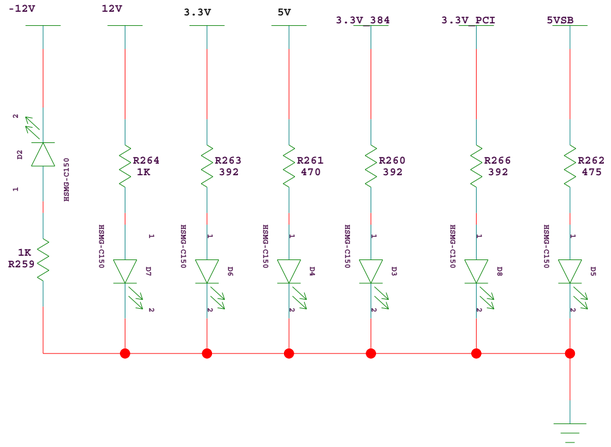


GND TESTPOINTS

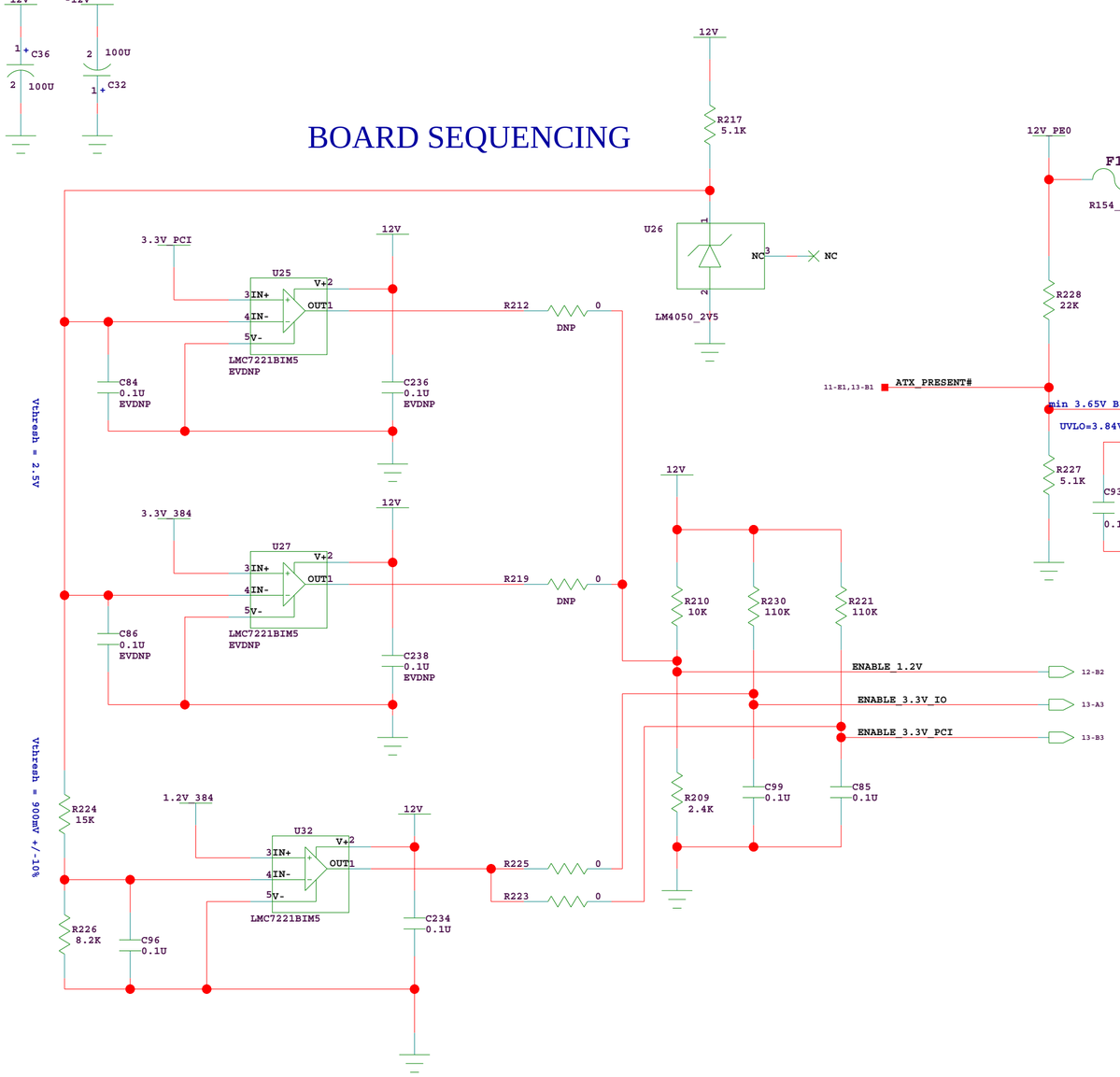




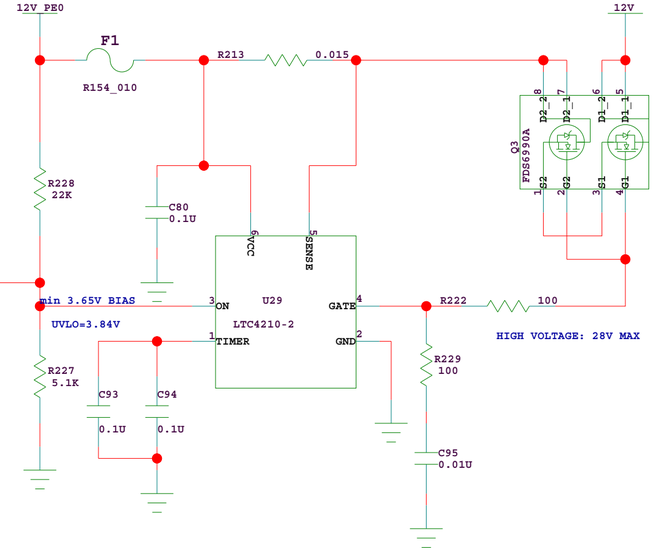
POWER STATUS



BOARD SEQUENCING



SYS SUPPLY SWITCH



TITLE : POWER SOURCES

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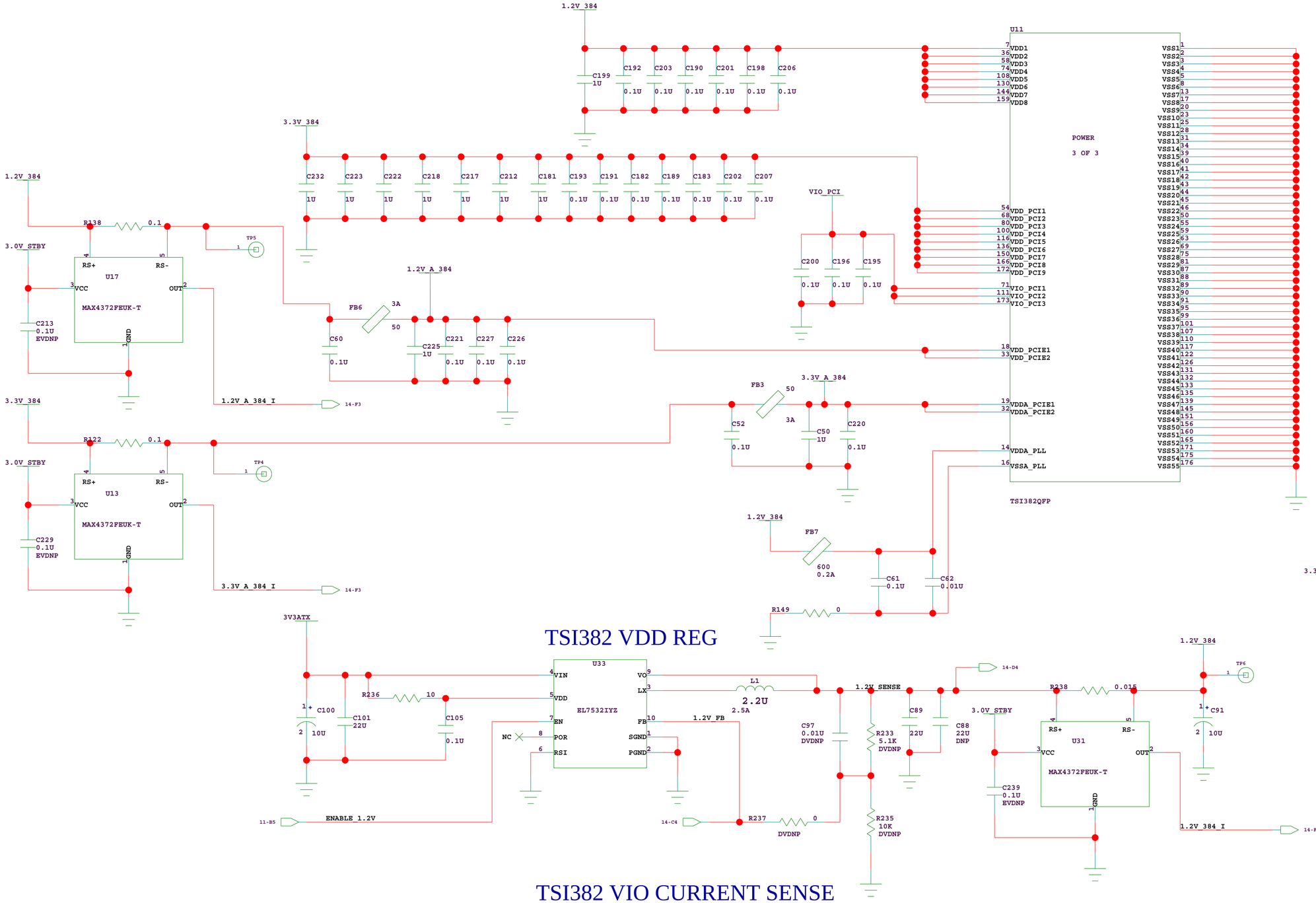
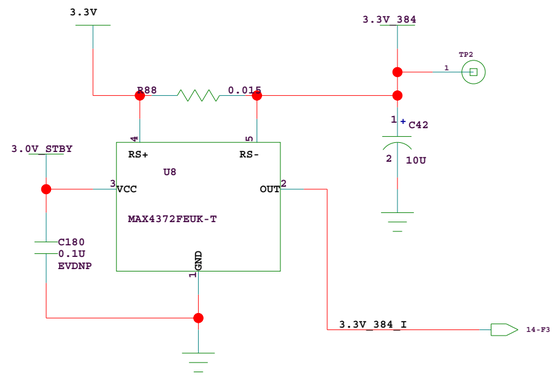
TSI382 POWER/REGULATORS



TSI382 VDD REG

TSI382 VIO CURRENT SENSE



TITLE :

TSI382 POWER/REGULATORS

SIZE	DRAWING NUMBER :	Version:	DESIGNER :
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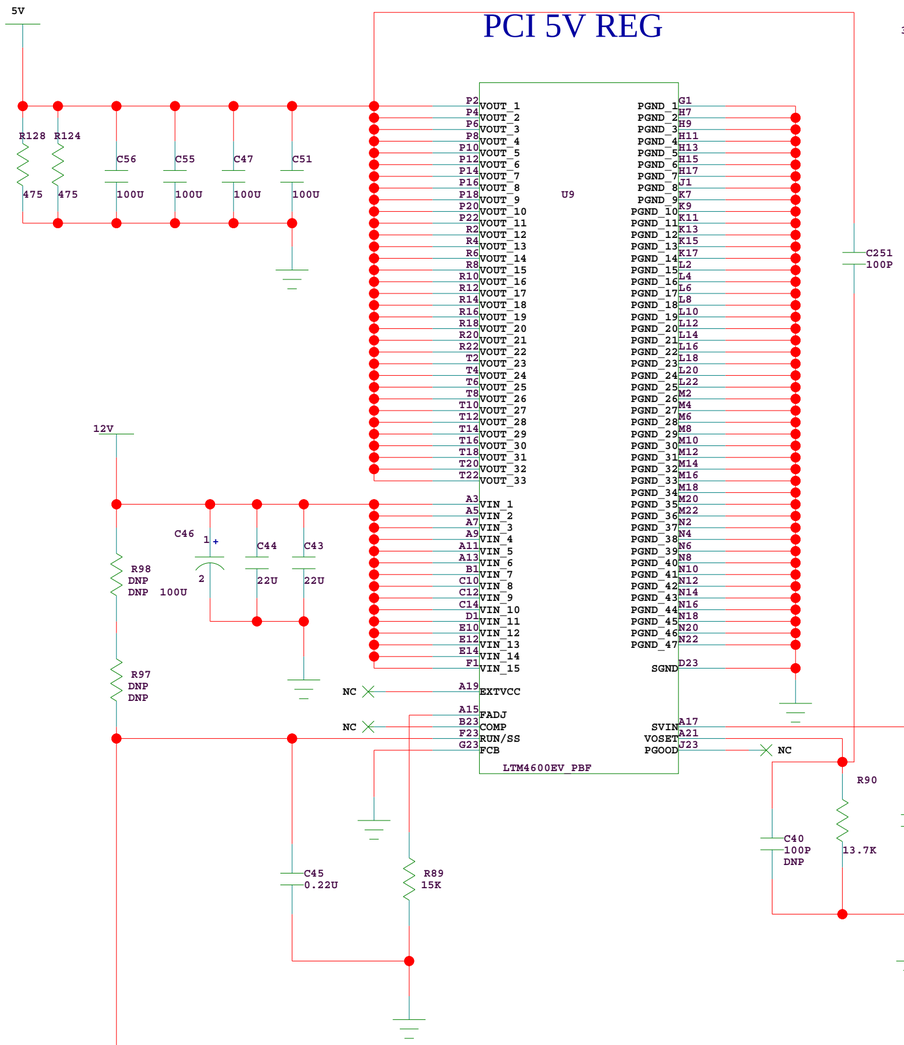
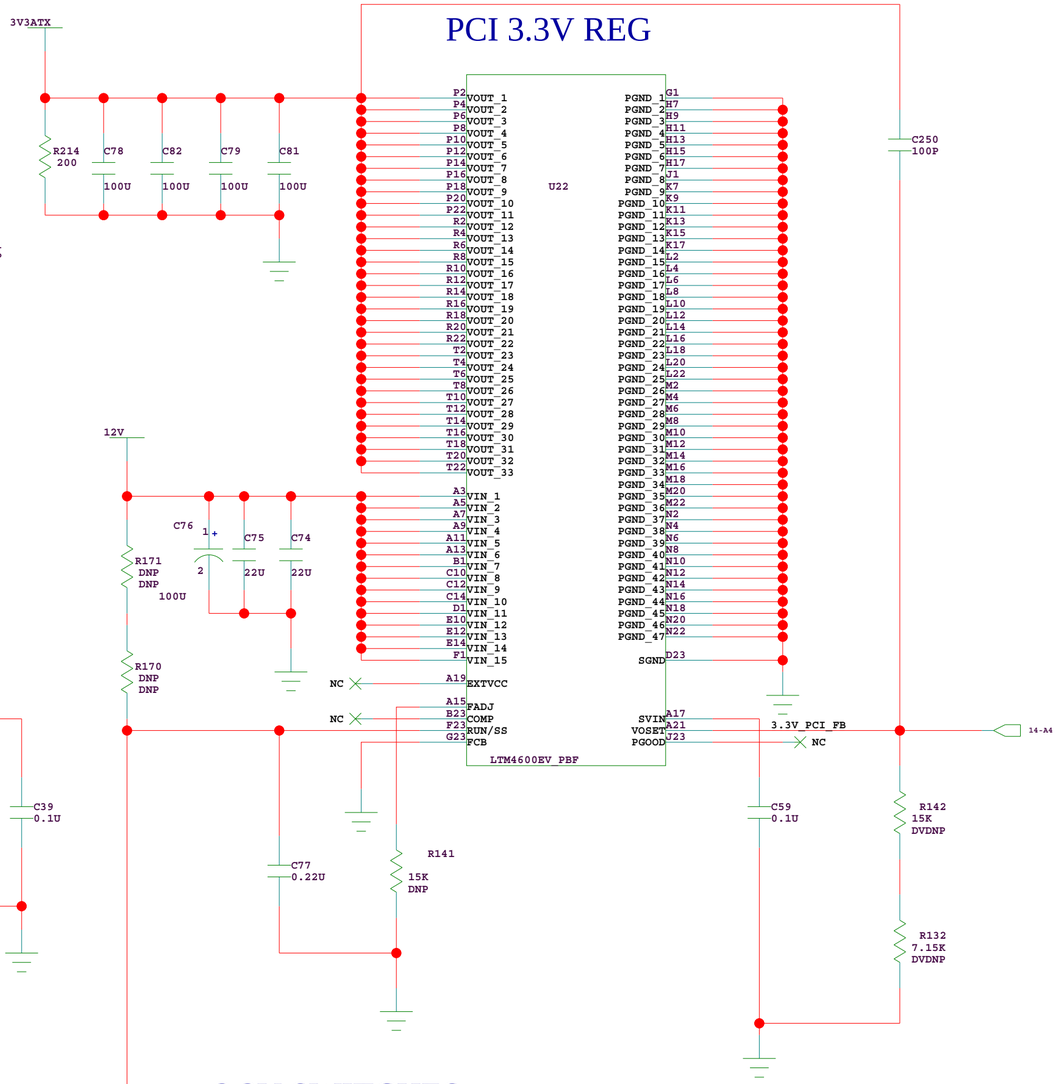
PCI POWER REGULATORS

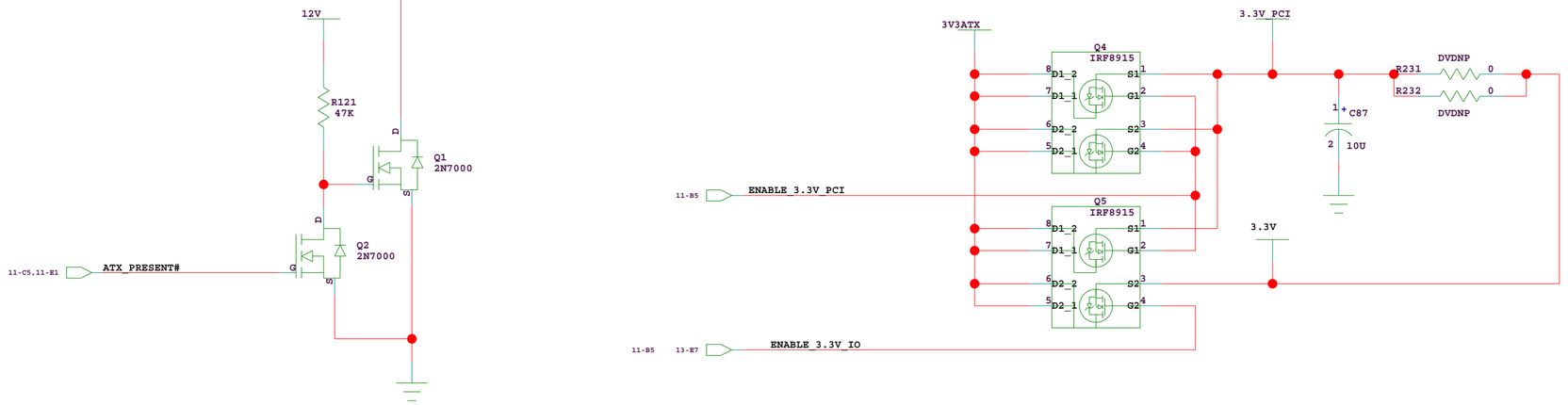
PCI 5V REG



PCI 3.3V REG



3.3V SWITCHES



TITLE :

PCI POWER REGULATORS

SIZE	DRAWING NUMBER :	Version:	DESIGNER :
C	60E2020_SC001	1.0	PHILIP LAUZON

LAST MODIFIED DATE :

6-12-2008_15:42

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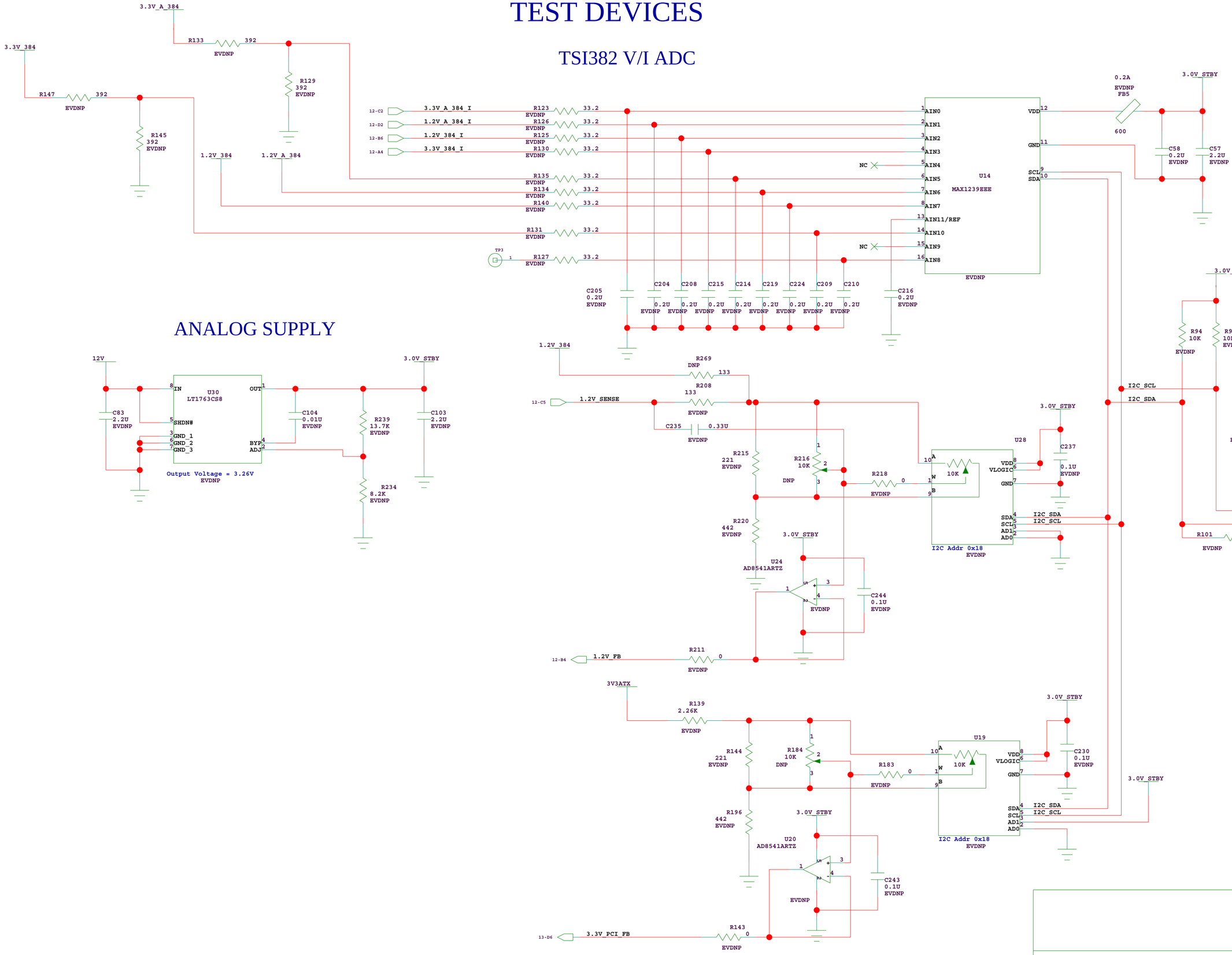
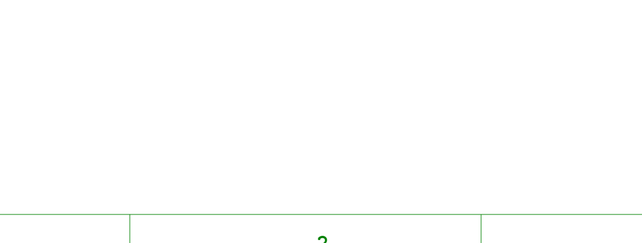
TEST DEVICES

TSI382 V/I ADC



ANALOG SUPPLY



I2C

TITLE :

TEST DEVICES

SIZE	DRAWING NUMBER :	Version:	DESIGNER :
C	60E2020_SC001	1.0	PHILIP LAUZON

LAST MODIFIED DATE : 6-12-2008_15:42

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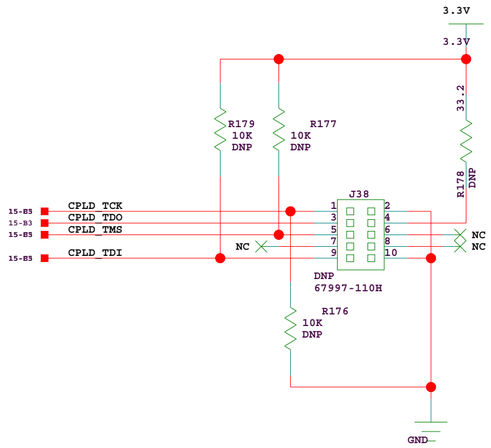
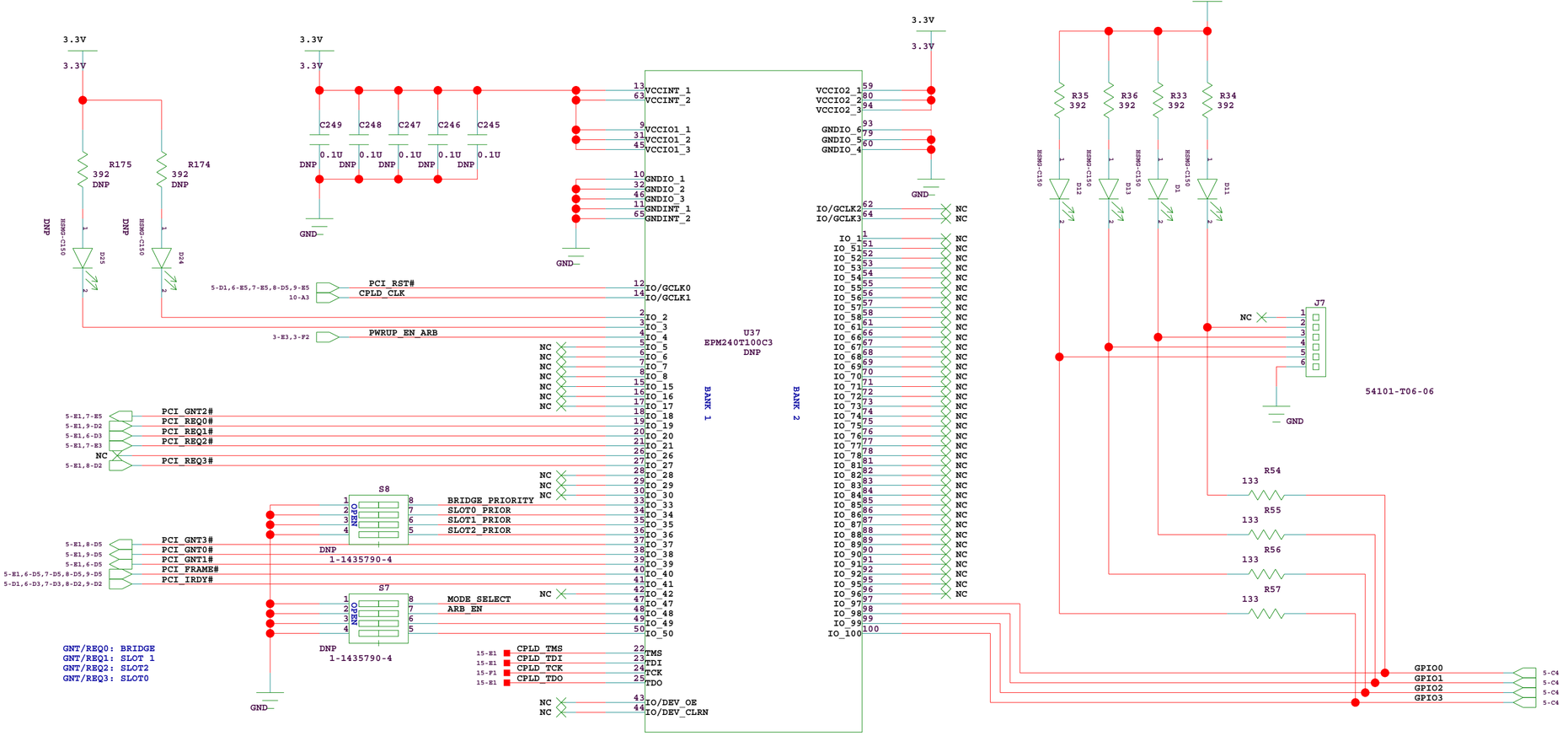
TEST DEVICES CONT'D



PCIARBITER/GPIO CONTROL



TITLE : TEST DEVICES CONT'D			
SIZE: C	DRAWING NUMBER : 60E2020_SC001	Version: 1.0	DESIGNER : PHILIP LAUZON
LAST MODIFIED DATE : 6-12-2008_15:42		SHEET 15 OF 15	