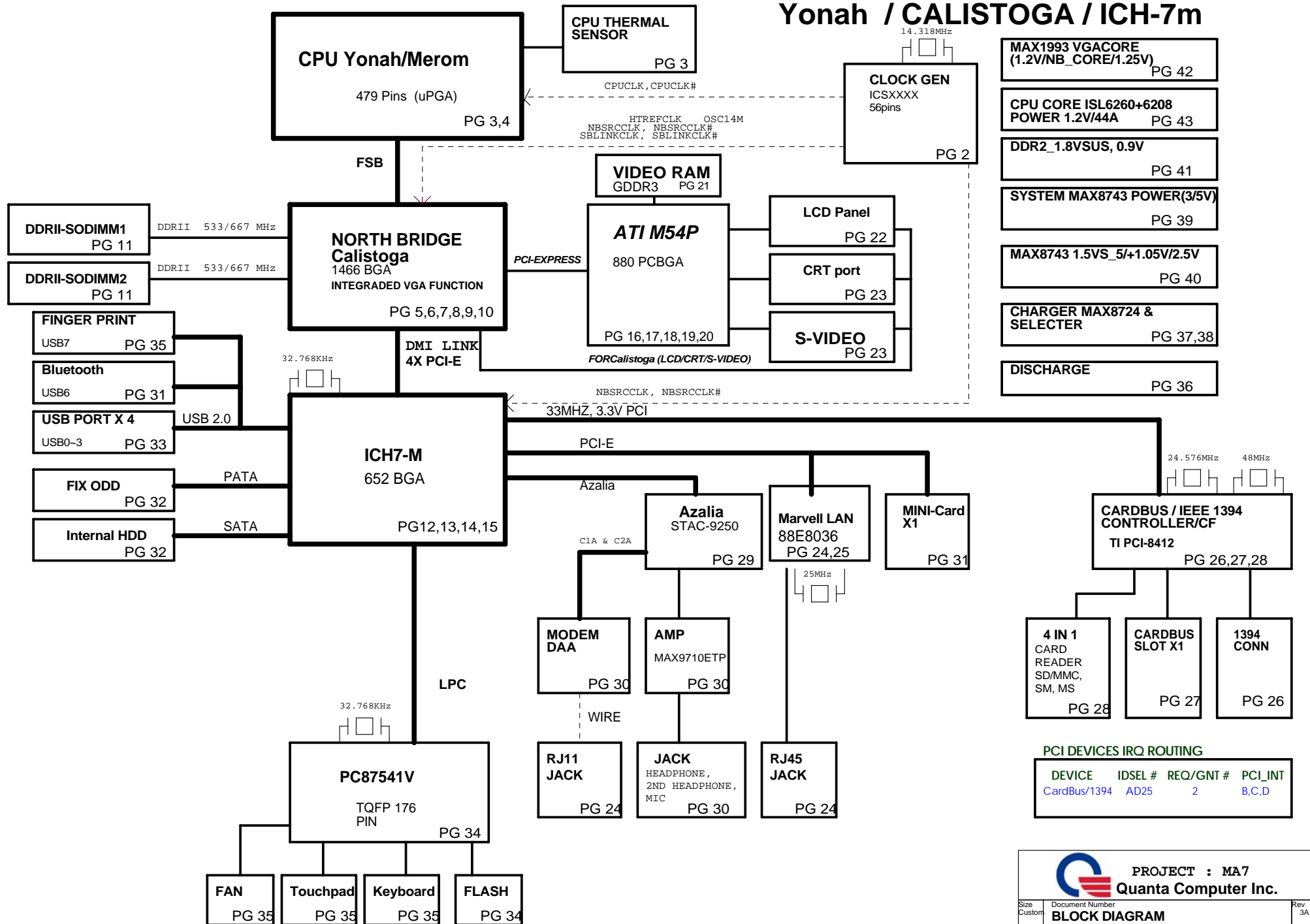


MA7 BLOCK DIAGRAM

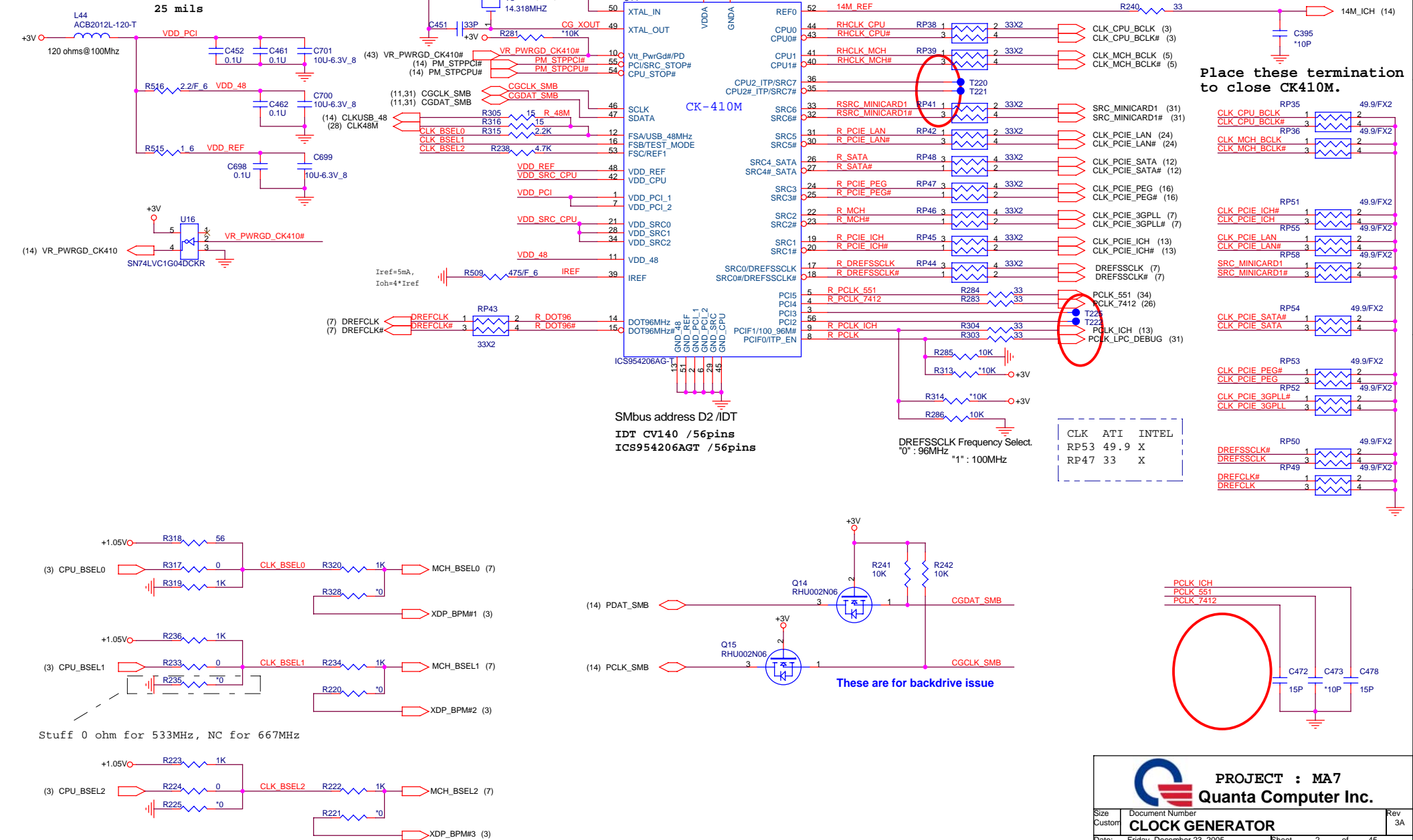
Yonah / CALISTOGA / ICH-7m

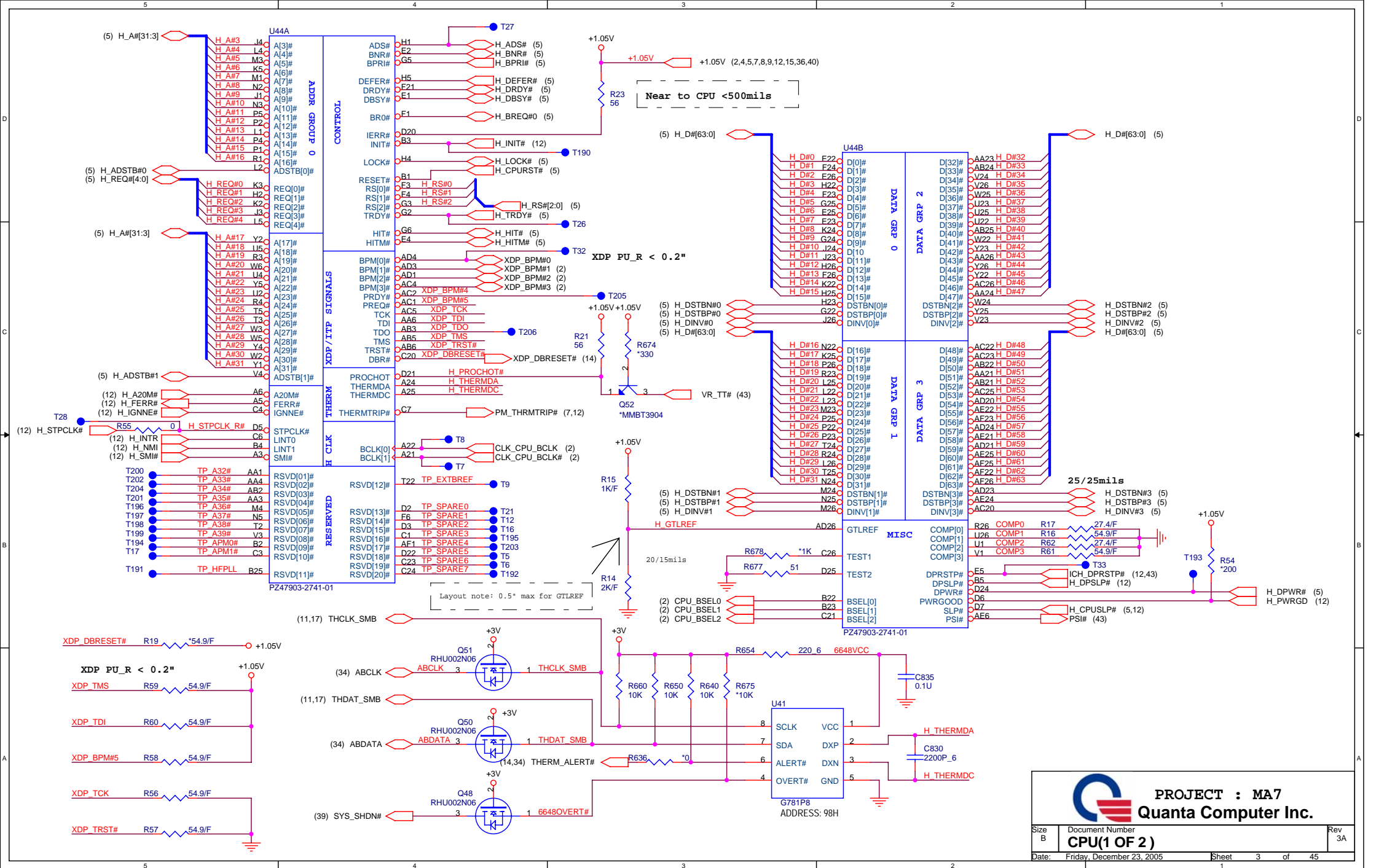


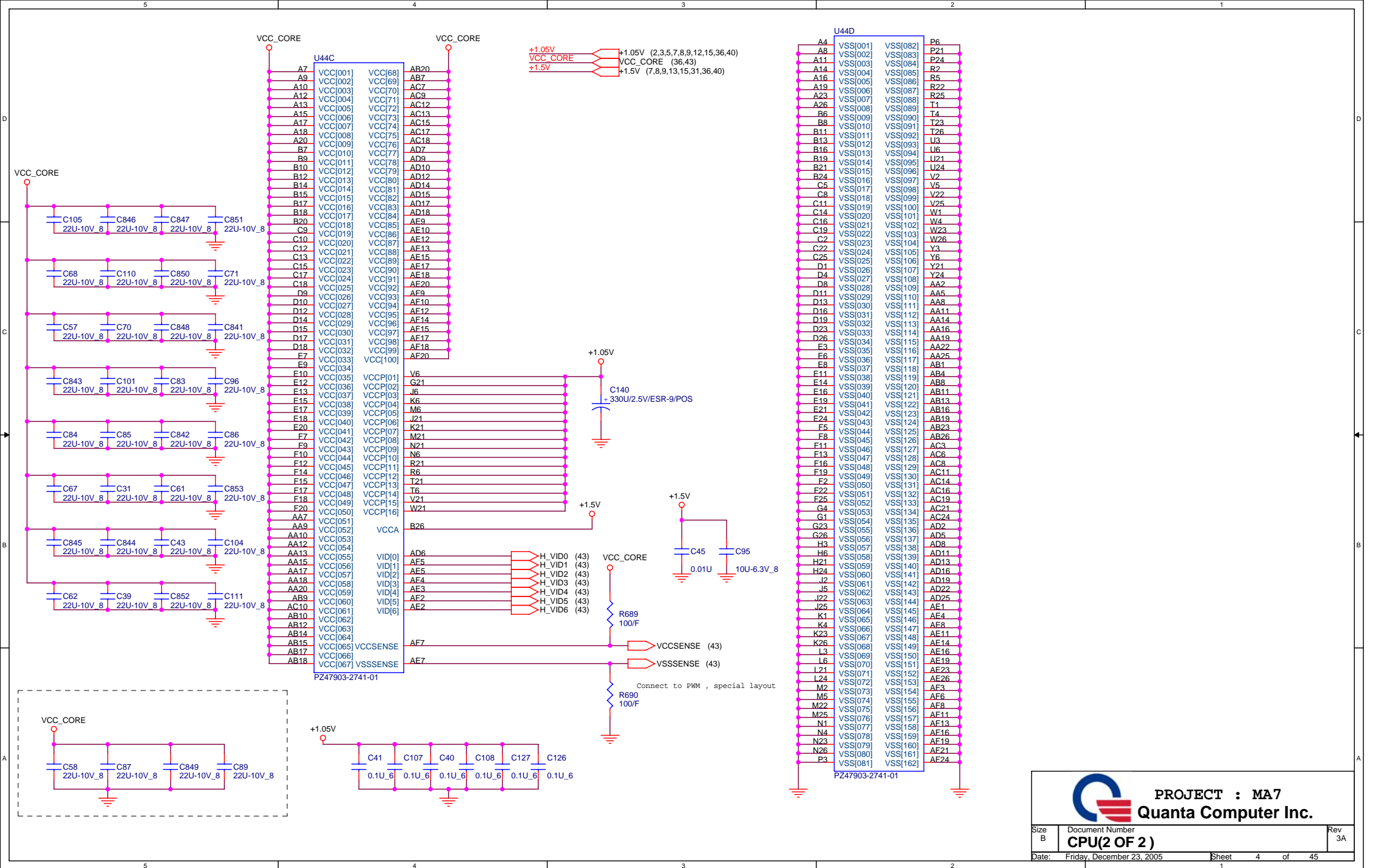
PROJECT : MA7
Quanta Computer Inc.

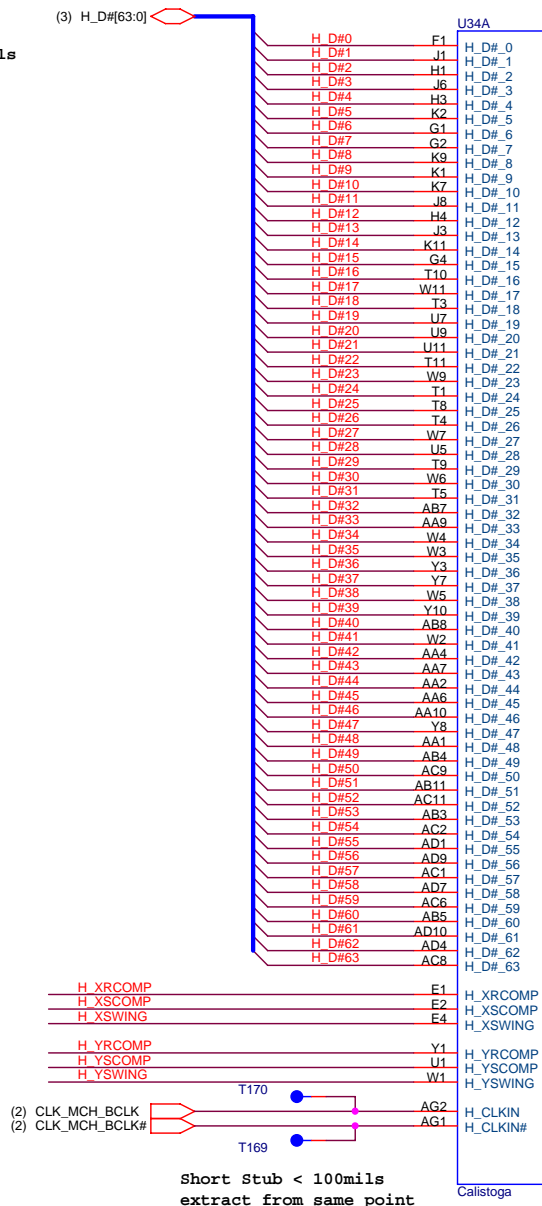
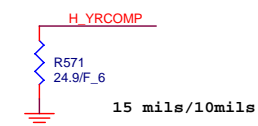
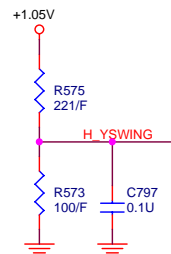
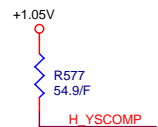
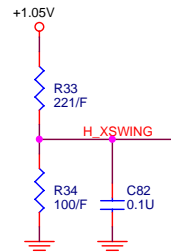
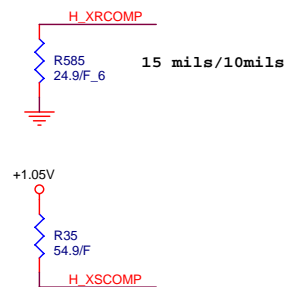
FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
0	0	1	133	100	33
0	1	1	166	100	33
0	1	0	200	100	33
0	0	0	266	100	33
1	0	0	333	100	33
1	1	0	400	100	33
1	1	1	200	100	33

Default








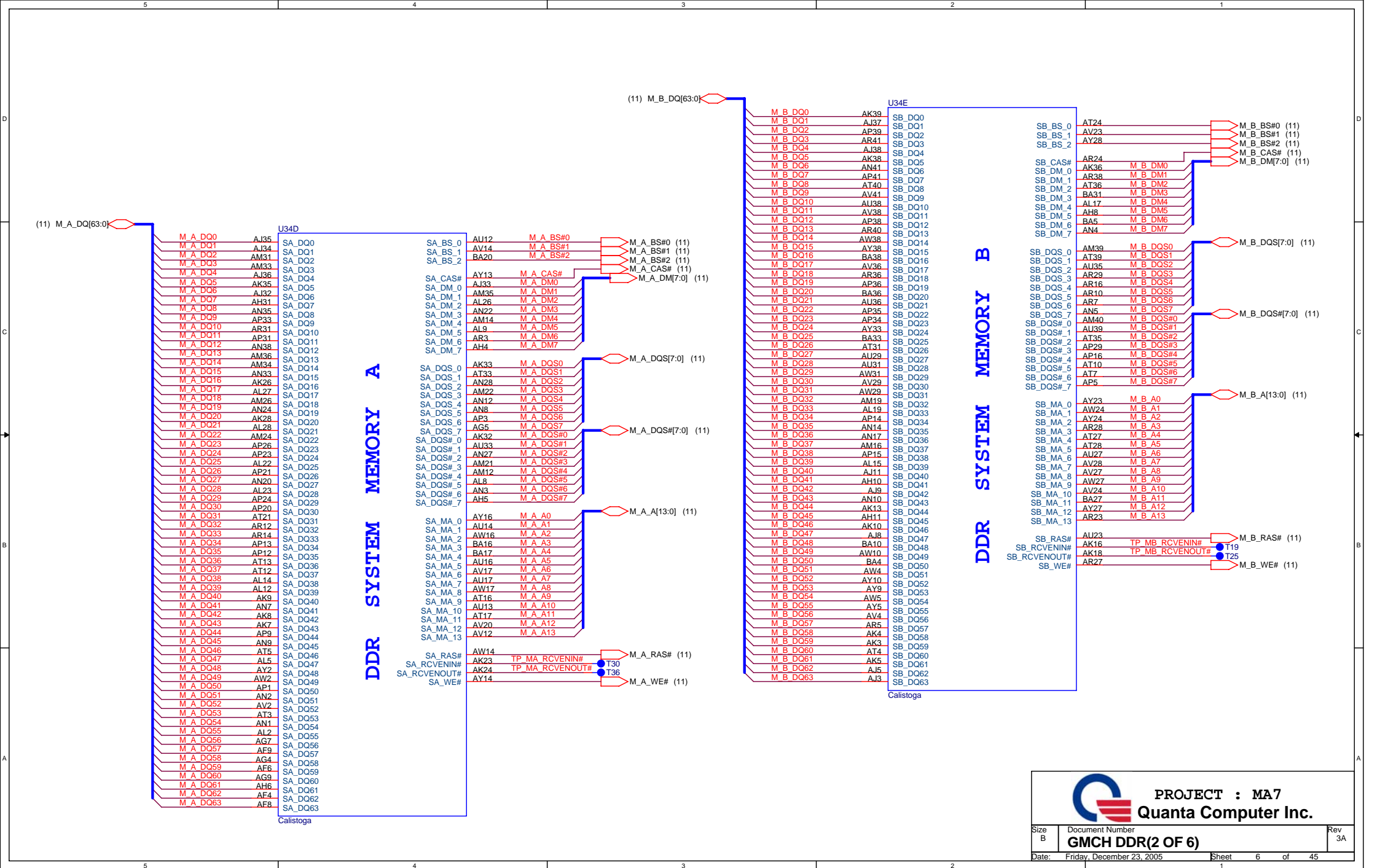


HOST



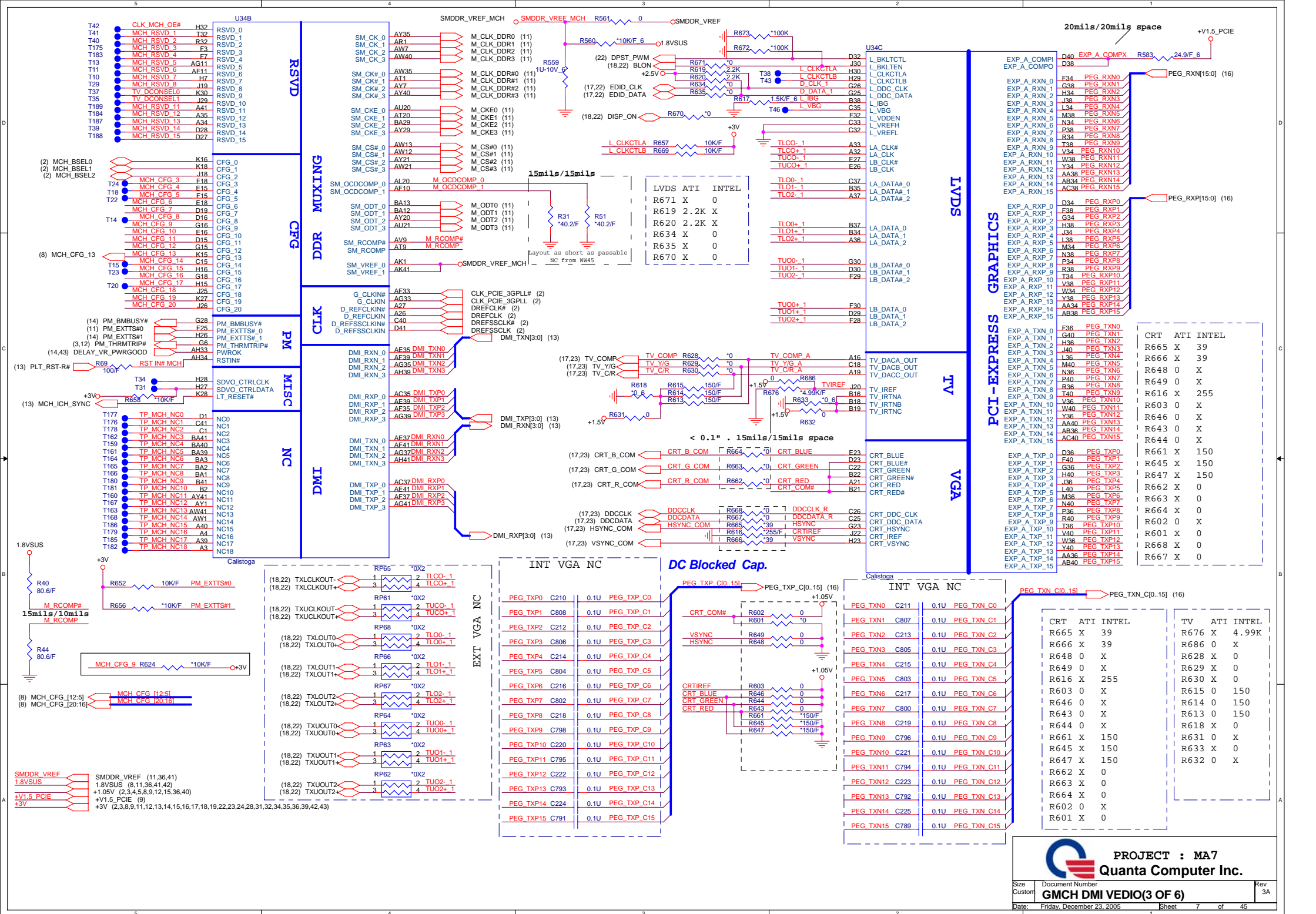
PROJECT : MA7
Quanta Computer Inc.

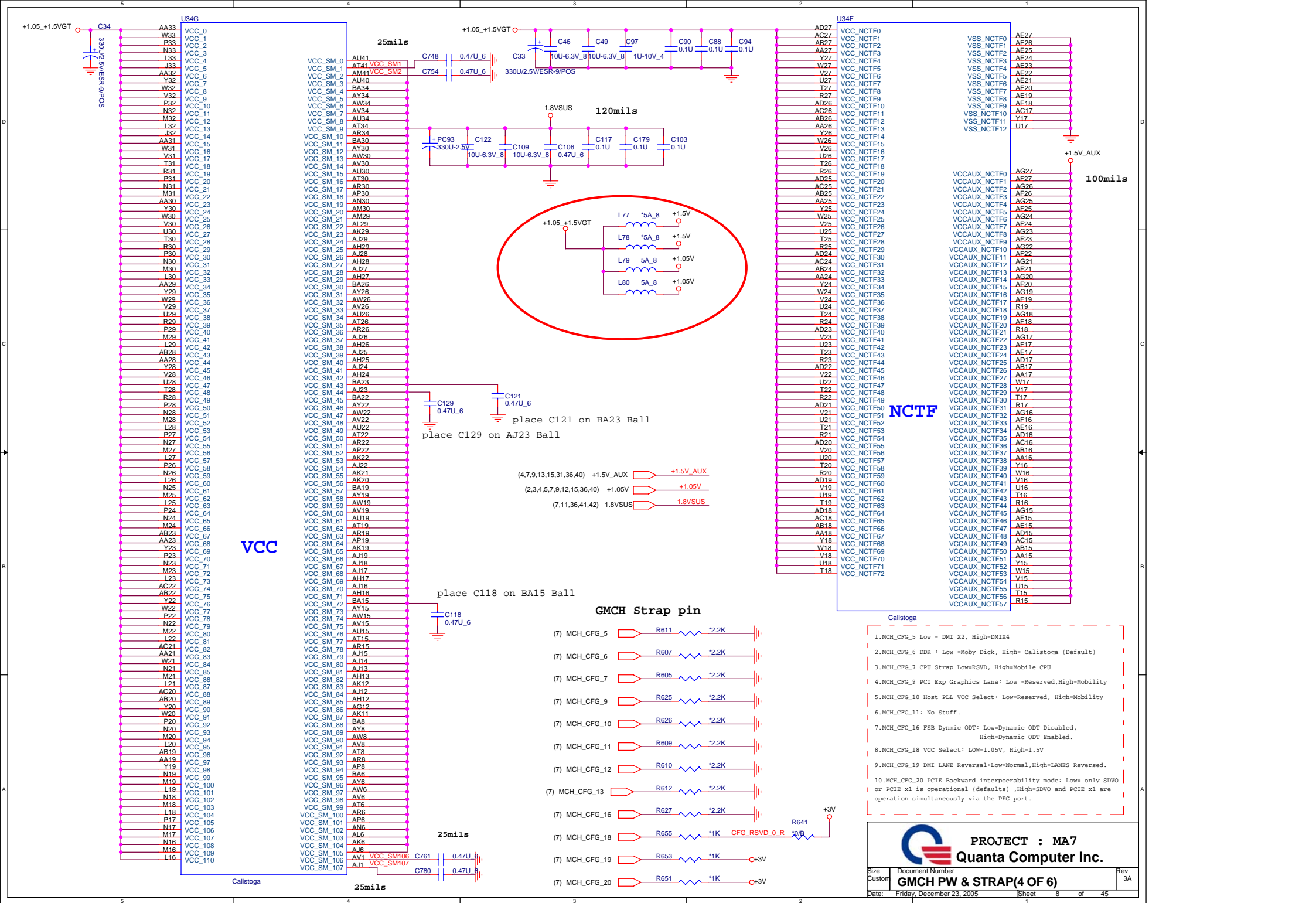
Size B	Document Number GMCH HOST(1 OF 6)	Rev 3A
Date: Friday, December 23, 2005		Sheet 5 of 45

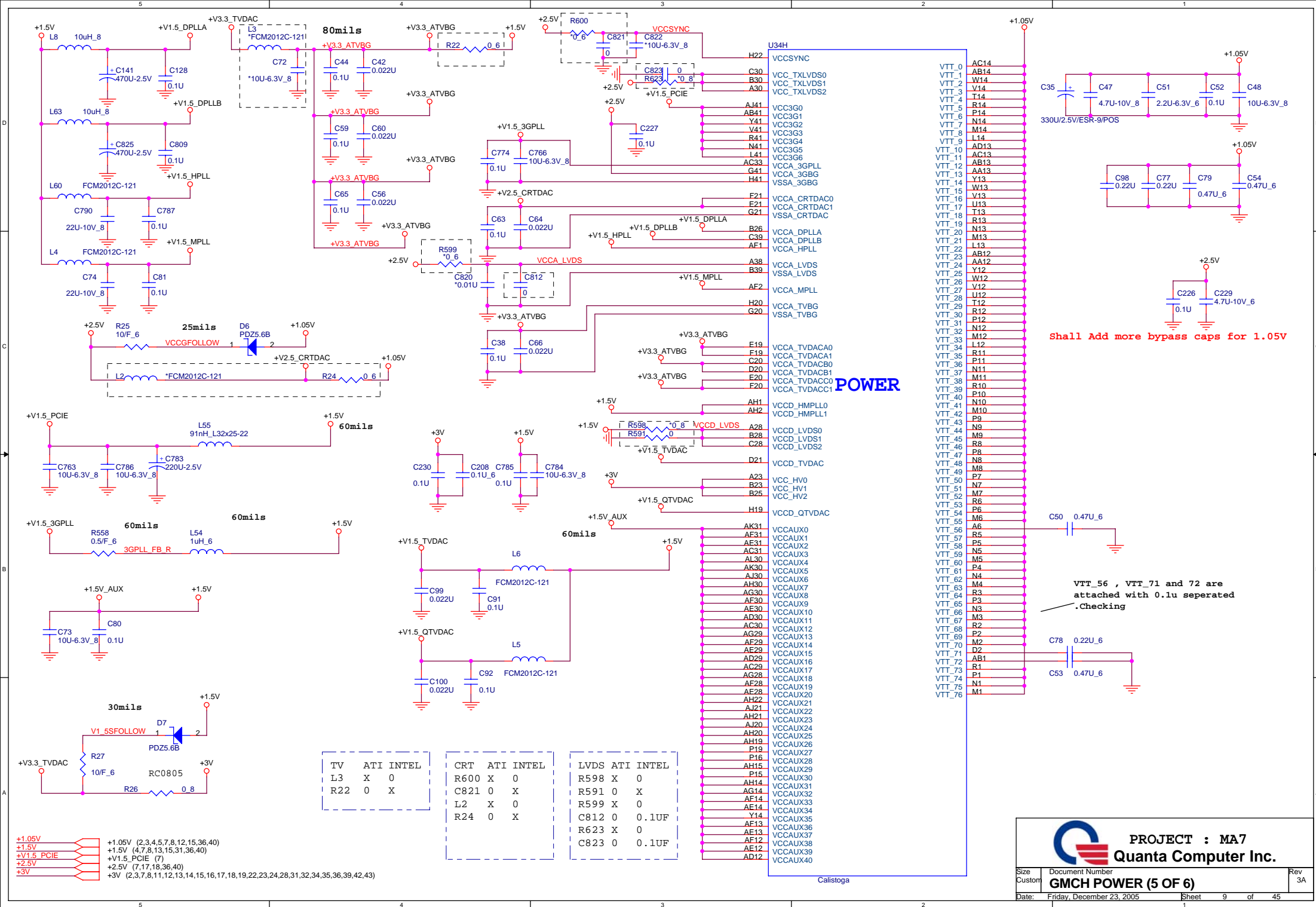


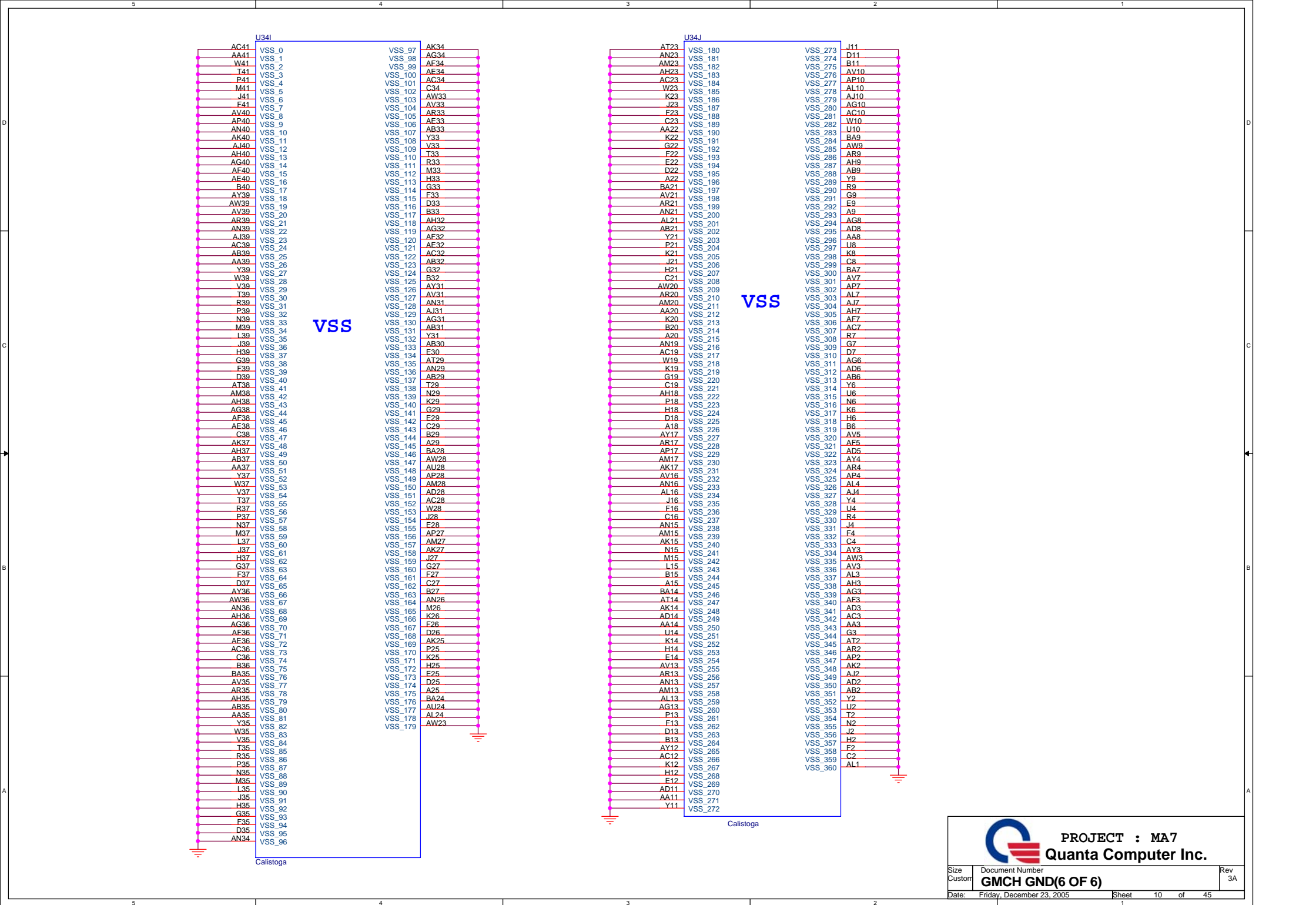
PROJECT : MA7
Quanta Computer Inc.

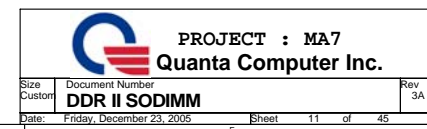
Size B	Document Number	Rev 3A
	GMCH DDR(2 OF 6)	
Date:	Friday, December 23, 2005	Sheet 6 of 45



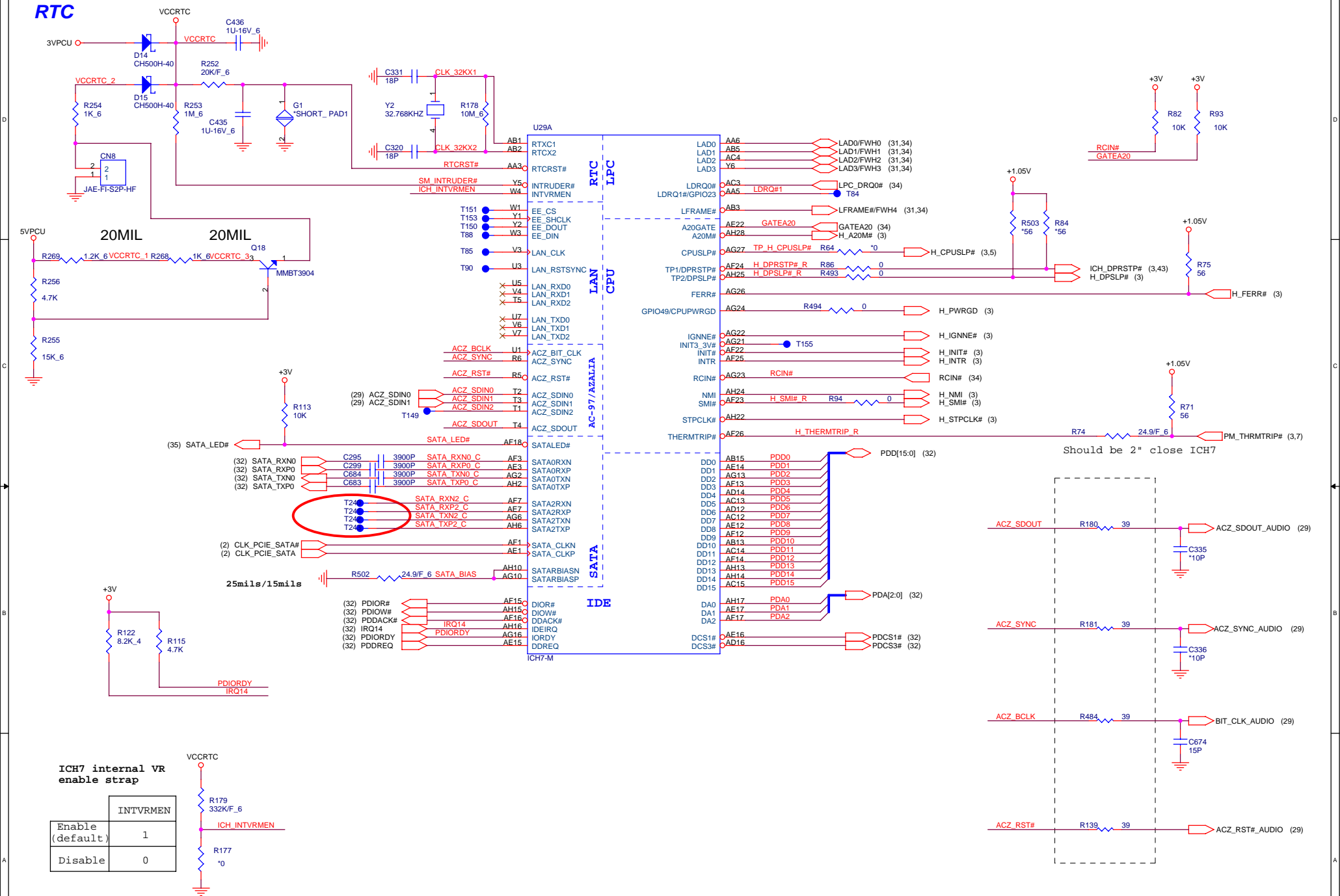








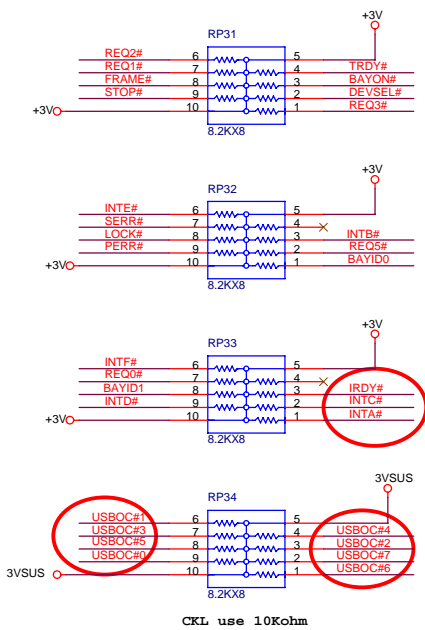
RTC



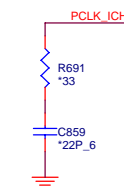
PROJECT : MA7
Quanta Computer Inc.

Size Custom	Document Number ICH7-M HOST (1 OF 4)	Rev 3A
Date:	Friday, December 23, 2005	Sheet 12 of 45

PCI-E Mini Card



	STRAP	GNT5# R1	GNT4# R2
LPC (default)	11	UNSTUFF	UNSTUFF
PCI	10	UNSTUFF	STUFF
SPI	01	STUFF	UNSTUFF



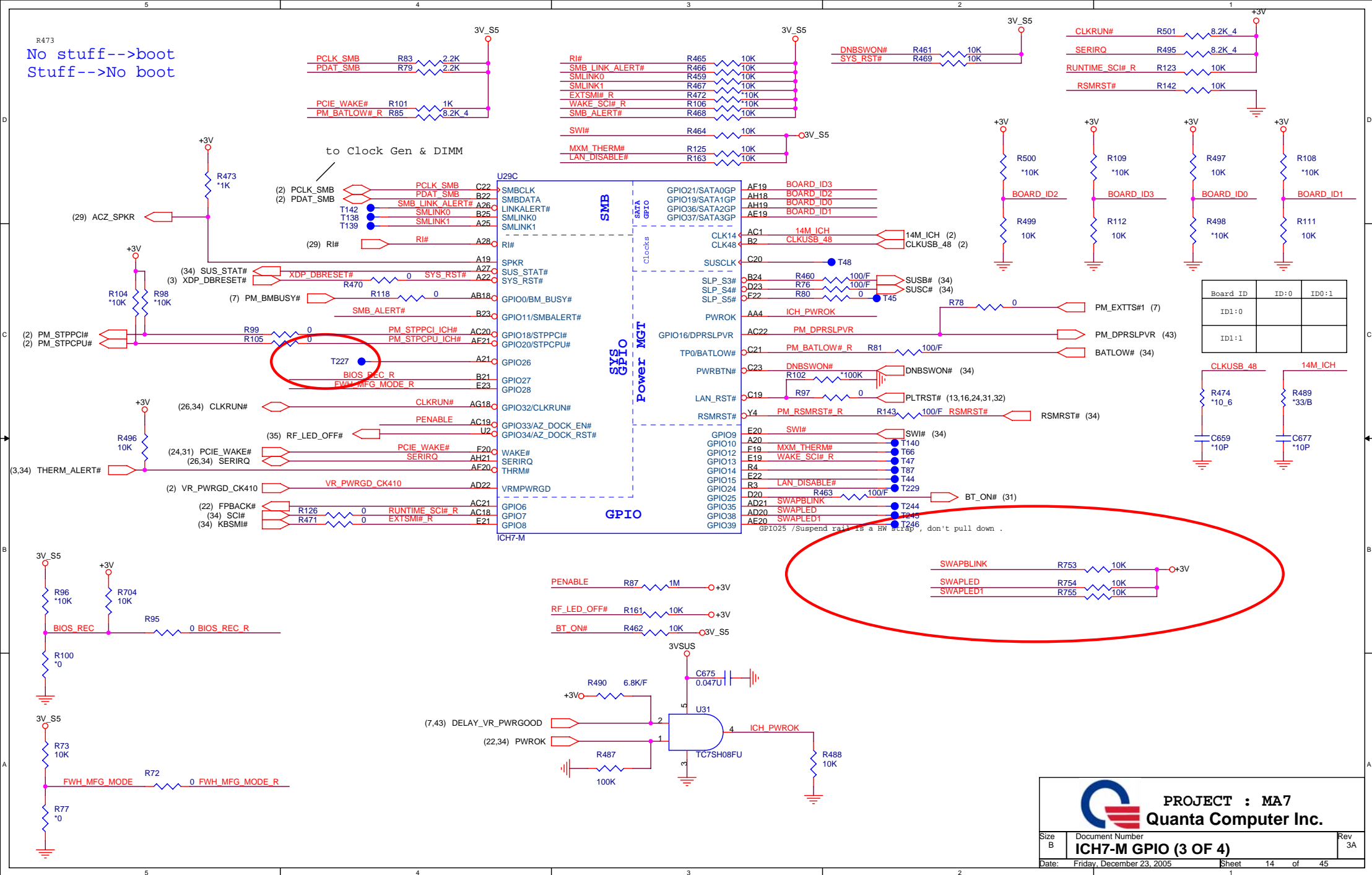
PCI DEVICE	IDSEL#	REQ# / GNT#	Interrupts
PCI7412	AD25	REQ2# / GNT2#	INT B/C/D#

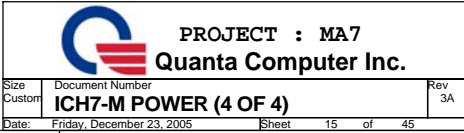


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R473

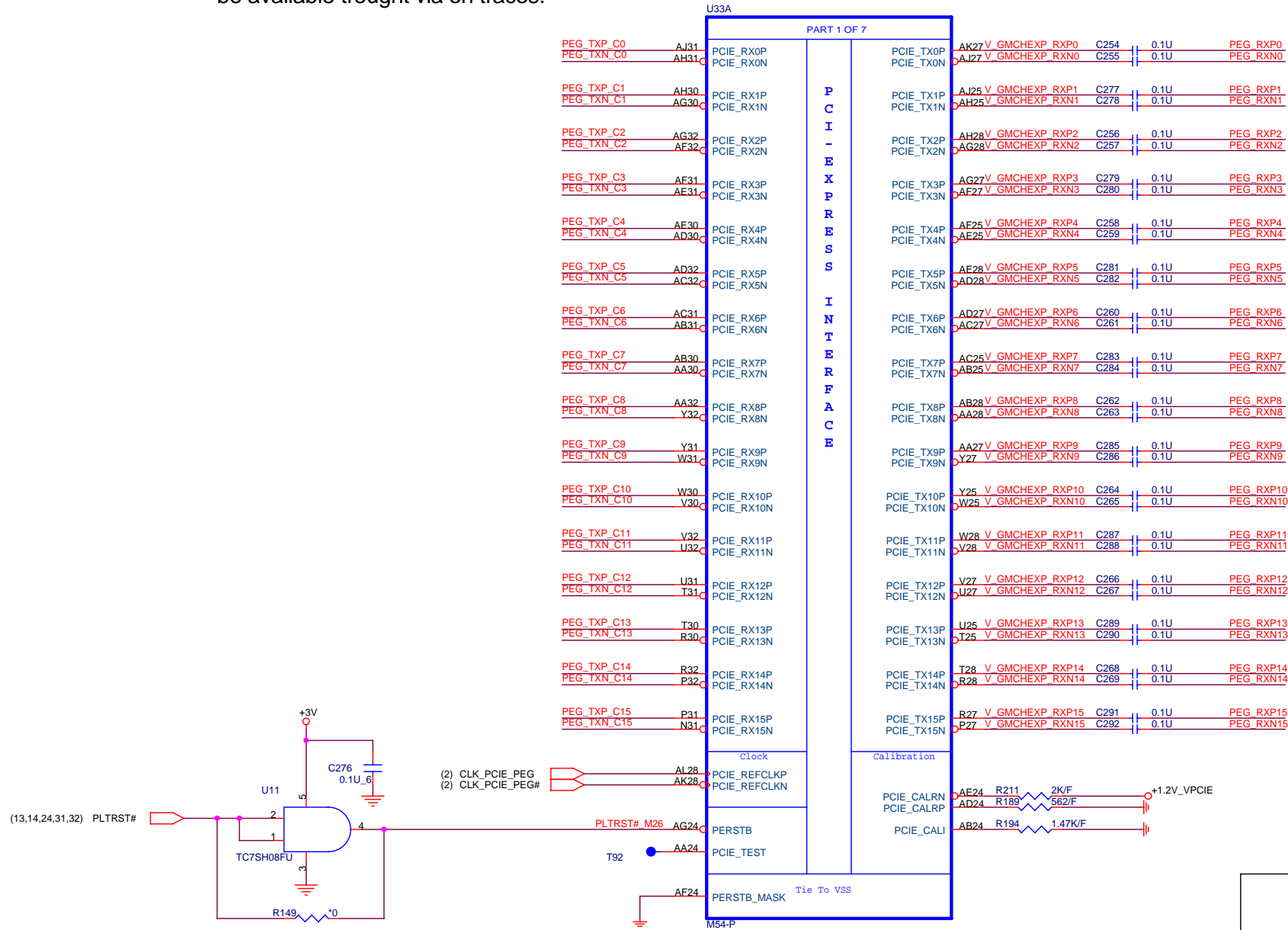
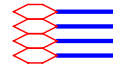
No stuff-->boot
Stuff-->No boot

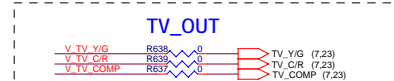
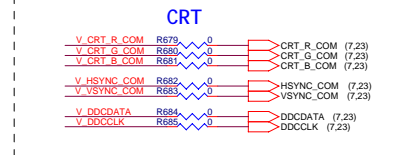
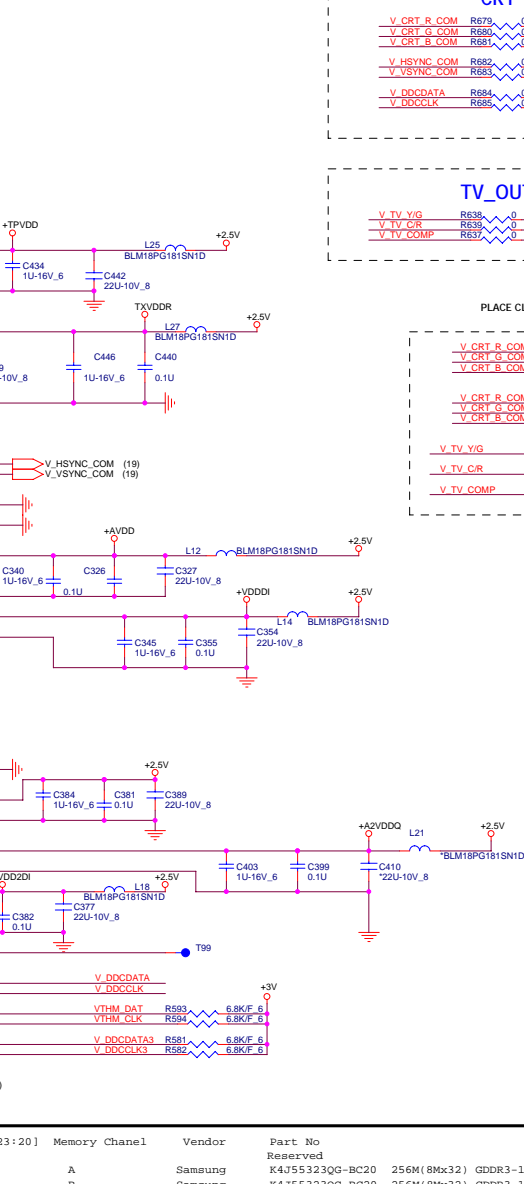
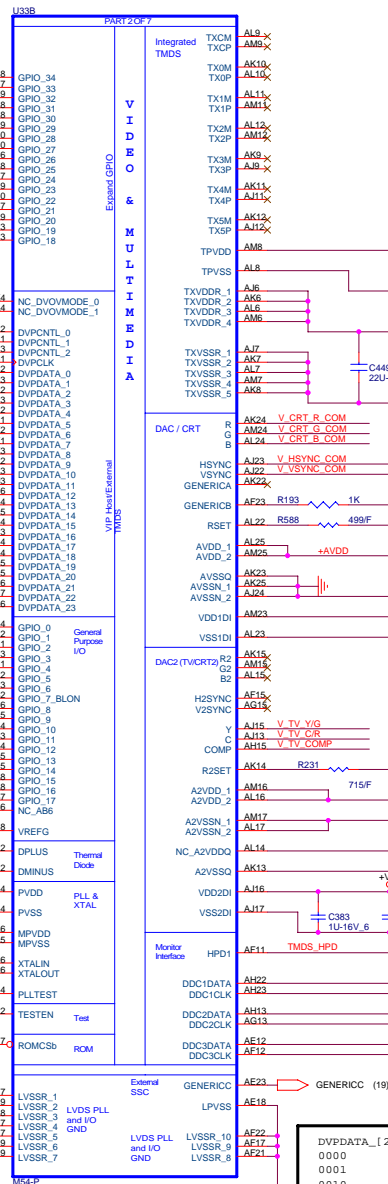
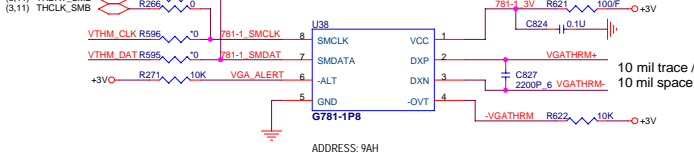
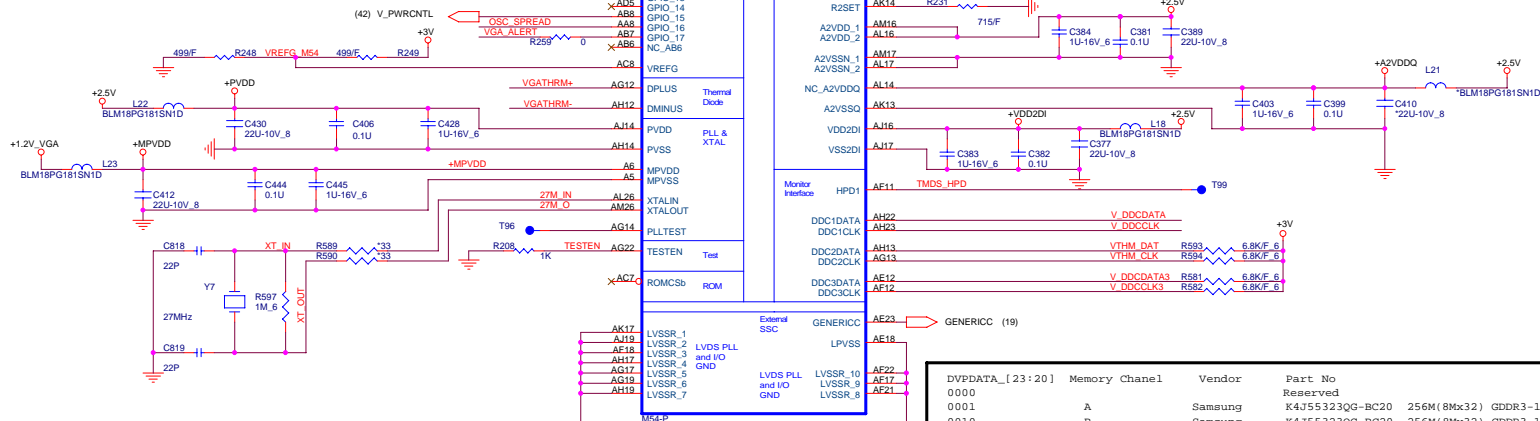
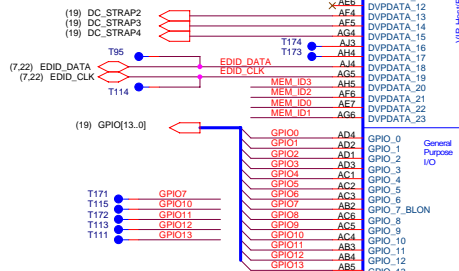
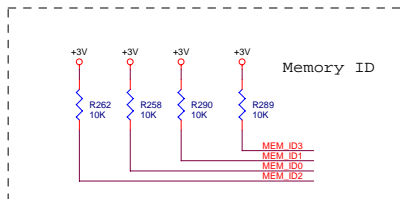




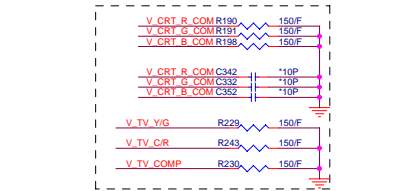
NOTE: some of the PCIE testpoints will be available through via on traces.

(7) PEG_RXP[15:0]
(7) PEG_RXN[15:0]
(7) PEG_TXP_C[0..15]
(7) PEG_TXN_C[0..15]

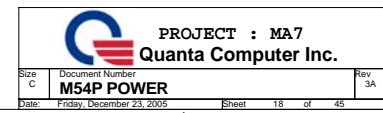


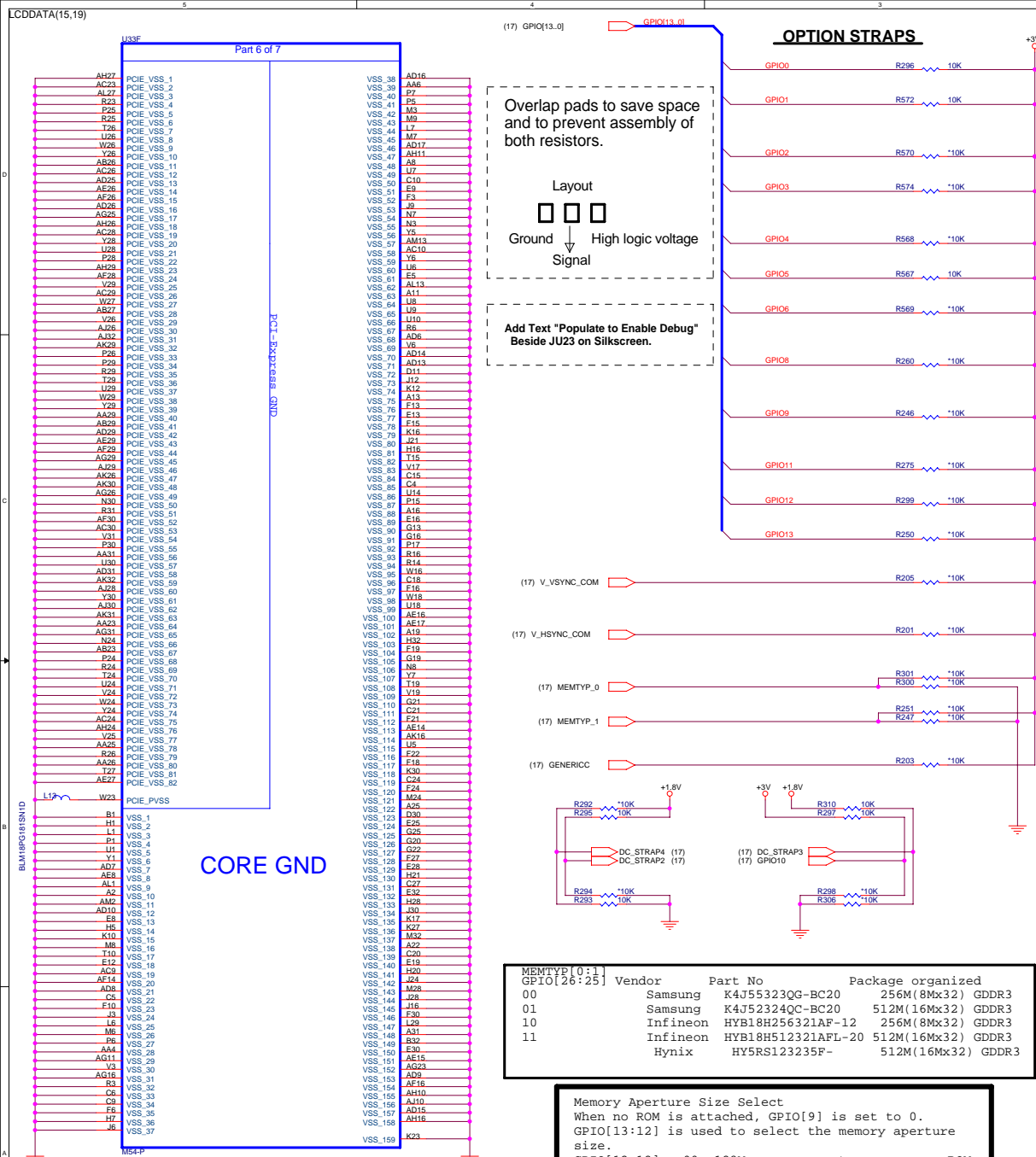
[illegible]

PLACE CLOSE TO ASIC



DVDPDATA_[23:20]	Memory Channel	Vendor	Part No	Package organized
0000			Reserved	
0001	A	Samsung	K4J53320Q-BC20	256M(8Mx32) GDDR3-136P
0010	B	Samsung	K4J53320Q-BC20	256M(8Mx32) GDDR3-136P
0011	A& B	Samsung	K4J53320Q-BC20	256M(8Mx32) GDDR3-136P
0100	A	Hynix	HY5RS8573225AFP-2	256M(8Mx32) GDDR3-136P
0101	B	Hynix	HY5RS8573225AFP-2	256M(8Mx32) GDDR3-136P
0110	A& B	Hynix	HY5RS8573225AFP-2	256M(8Mx32) GDDR3-136P
0111	A	Infineon	HY1B8H256321AF-12	256M(8Mx32) GDDR3-136P
1000	B	Infineon	HY1B8H256321AF-12	256M(8Mx32) GDDR3-136P
1001	A& B	Infineon	HY1B8H256321AF-12	256M(8Mx32) GDDR3-136P
1010			Reserved	
1011			Reserved	
1100			Reserved	
1101	A	Infineon	HY1B8H512321AFL-20	512M(16Mx32)GDDR3-136P
1110	B	Infineon	HY1B8H512321AFL-20	512M(16Mx32)GDDR3-136P
1111	A& B	Infineon	HY1B8H512321AFL-20	512M(16Mx32)GDDR3-136P





M54-P Strap

STRAPS	PIN	DESCRIPTION	ASIC DEFAULT
TX_PWRS_ENB	GPIO0	Transmitter Power Saving Enable 0: 50% Tx output swing 1: full Tx output swing	
TX_DEEMPH_EN	GPIO1	Transmitter De-emphasis Enable 0: Tx de-emphasis disabled 1: Tx de-emphasis enabled	
	GPIO(3:2)	RSVD	
DEBUG_ACCESS	GPIO4	Strap to set the debug muxes to bring out DEBUG signals even if registers are inaccessible	0
	GPIO5	RSVD	
	GPIO6	RSVD	
Force_Compliance	GPIO8	Force chip to get to compliance state quickly for Tester purposes	0
ROMIDCFG(3:0)	GPIO(9,13:11)	If no ROM attached, controls chip IDIs. If rom attached identifies ROM type 000x - No ROM, MEM_AP_SIZE=00 010x - No ROM, MEM_AP_SIZE=01 011x - No ROM, MEM_AP_SIZE=10 011x - No ROM, MEM_AP_SIZE=11 1000 - Parallel ROM, chip IDIs from ROM 1001 - Serial AT25F1024 ROM (Amel), chip IDIs from ROM 1010 - Serial AT45DB011 ROM (Amel), chip IDIs from ROM 1011 - Serial M25P10 ROM (ST), chip IDIs from ROM 1100 - Serial M25P05 ROM (ST), chip IDIs from ROM 1101 - Serial N25F01B ROM (ISS), chip IDIs from ROM	
VIP_DEVICE	VSYN	Indicates if any slave VIP host devices drove this pin low during reset. 0- Slave VIP host port devices present. 1-No slave VIP port devices reporting presence during reset	No default
	H2SYN, V2SYN, GENERICC	RSVD	
	VSYN	RSVD	
	HSYN	RSVD	
	PCIE_TEST	RSVD	

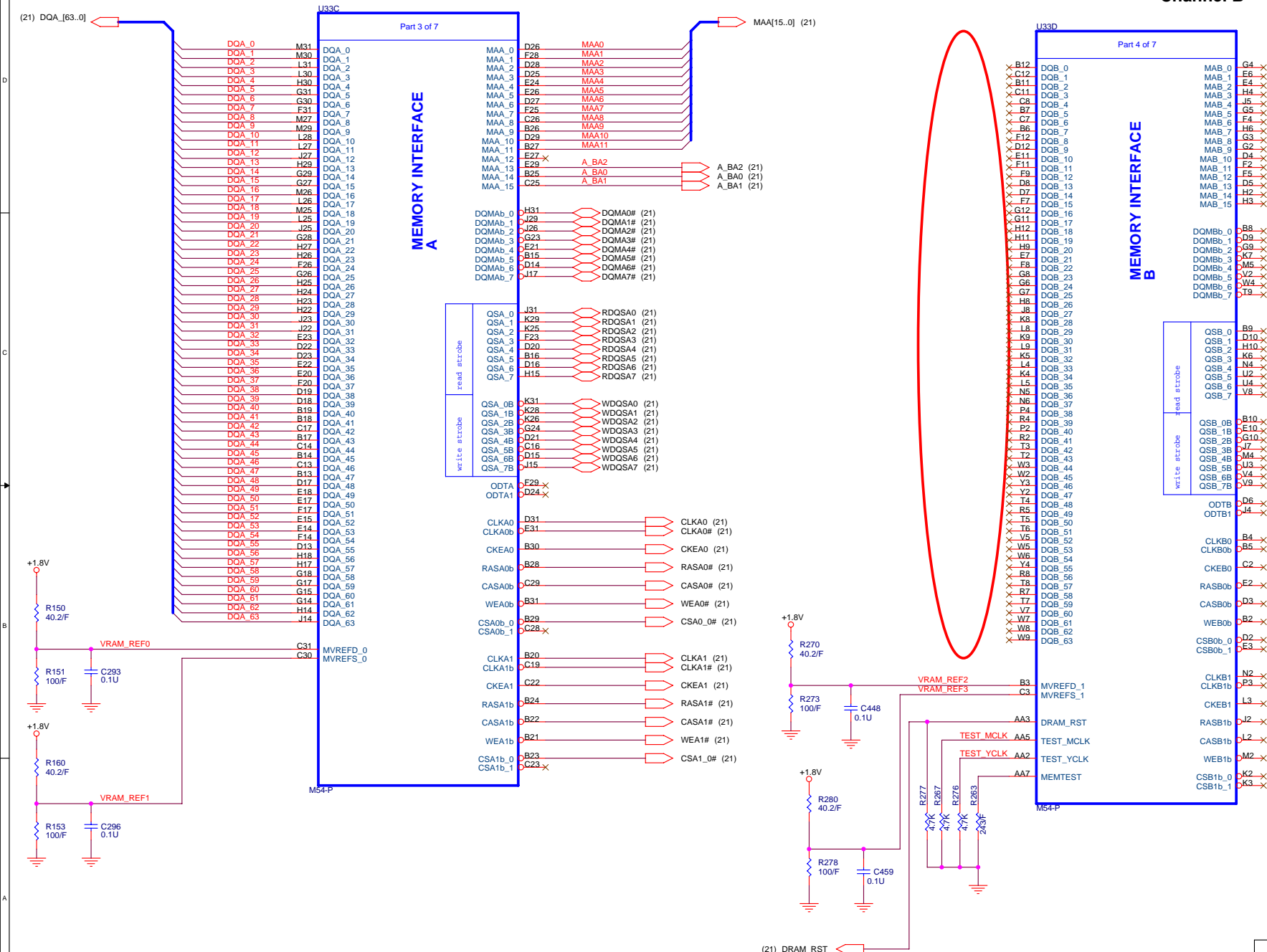
Board Straps

REV. 0.3

STRAPS	PIN	DESCRIPTION	VALUE
MEMTYPE(1:0)	DVALID, PSYN.	Memory connected to R420 identification for BIOS 00 - Samsung GDDR3 memory 144 Ball BGA package 01 - TBD 10 - TBD 11 - TBD	000
DC_Strap1	GPIO(10)	Internal TMDs Enabled 0 - Disabled 1 - Enabled	1
DC_Strap2	LCDDATA(13)	Video Capture Enabled 0 - Disabled 1 - Not detected	0
DC_Strap3	LCDDATA(14)	HDTV out detect 0 - Detected 1 - Enabled	1
DC_Strap4, DEMUX_SEL	LCDDATA(15,19)	Video capture enable 00 - DAC2 Off 01 - DAC2 On as CRT 10 - DAC2 On as TVOUT 11 - DAC2 On as TVOUT and CRT	01
PAL/NTSC	LCDDATA(18)	TV0 Standard Default (Resistor pull-up and switch short to GND) 0 - PAL (on board resistor pull-down and switch closed) 1 - NTSC (on board resistor pull-up)	1

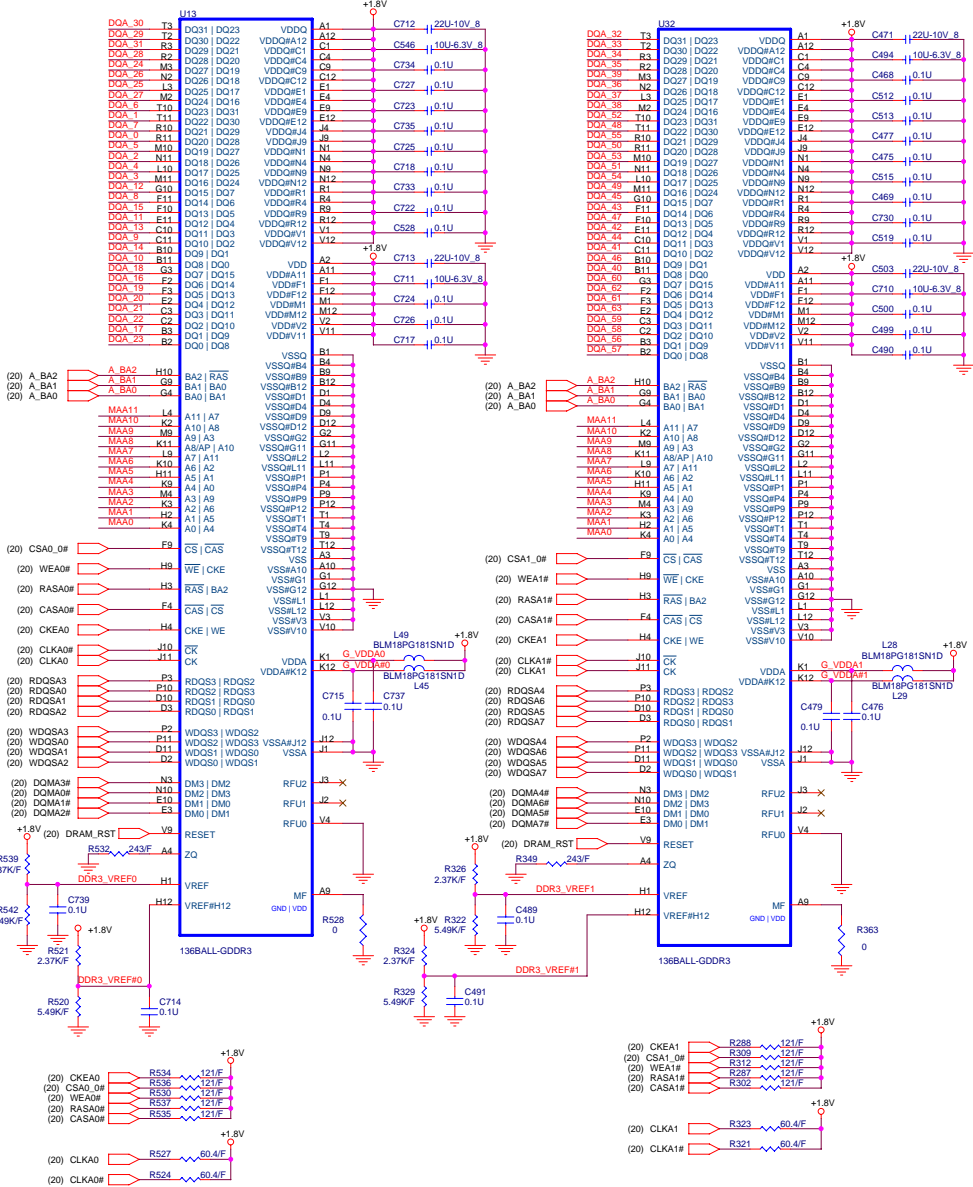
Channel A RV410 MEMORY CHANNELS A and B

Channel B

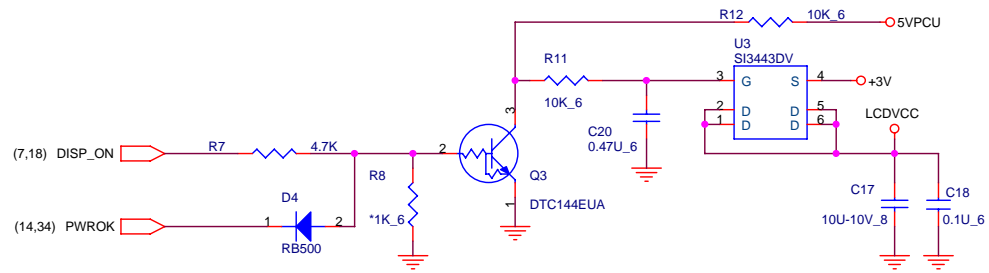


(20) MAA[15..0]  MAA[15..0]
(20) DQA[63..0]  DQA[63..0]

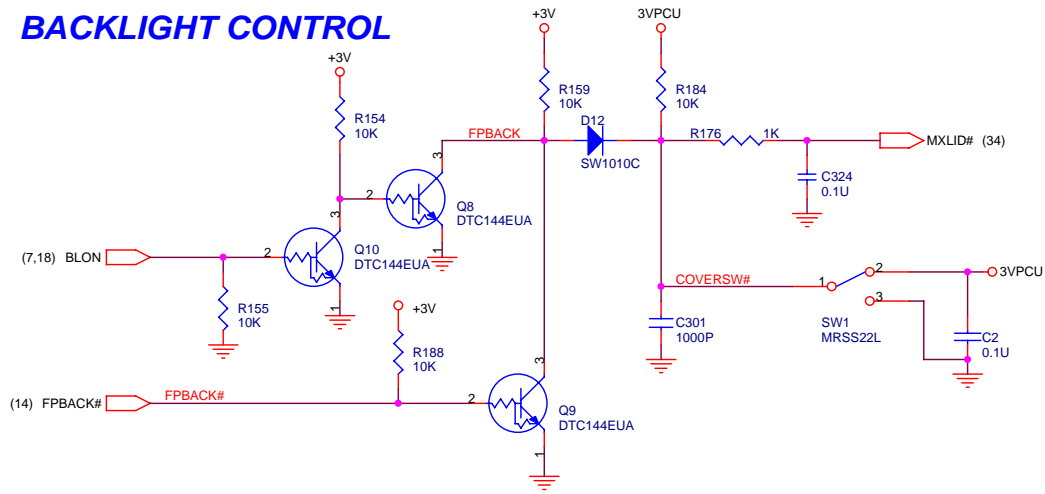
Channel A



BACKLIGHT CONTROL



BACKLIGHT CONTROL

[illegible]

PROJECT : MA7
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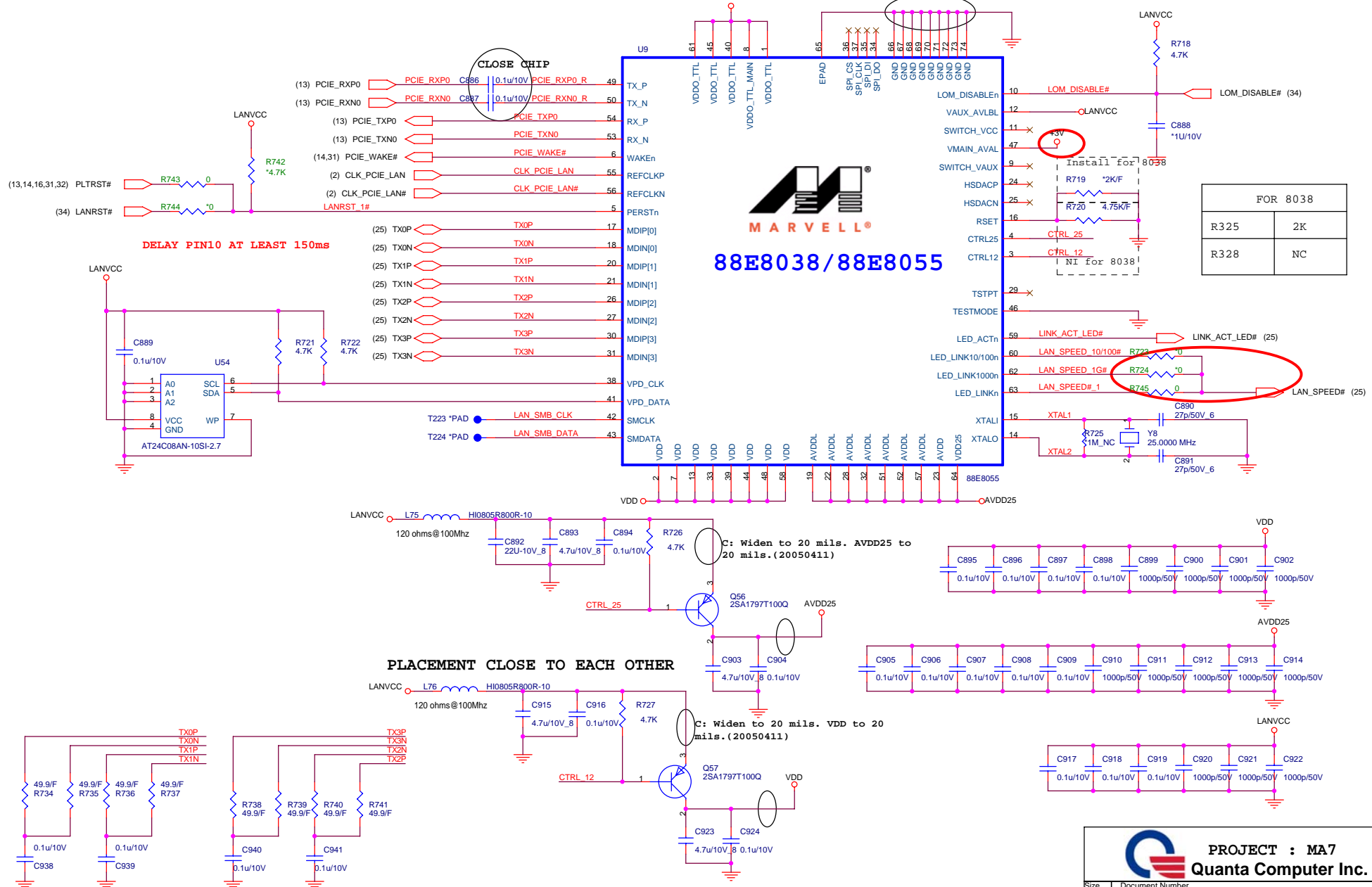
Size B	Document Number LCD CONN	Rev 3A
Date:	Friday, December 23, 2005	Sheet 22 of 45

1Mbits

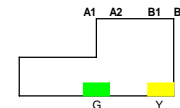
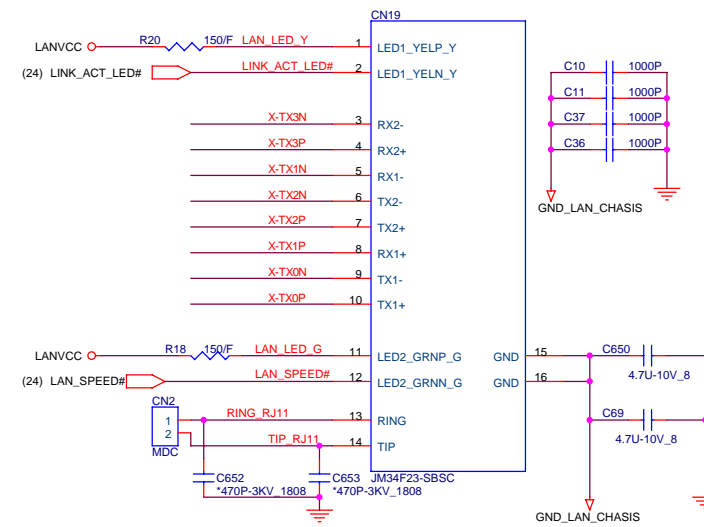
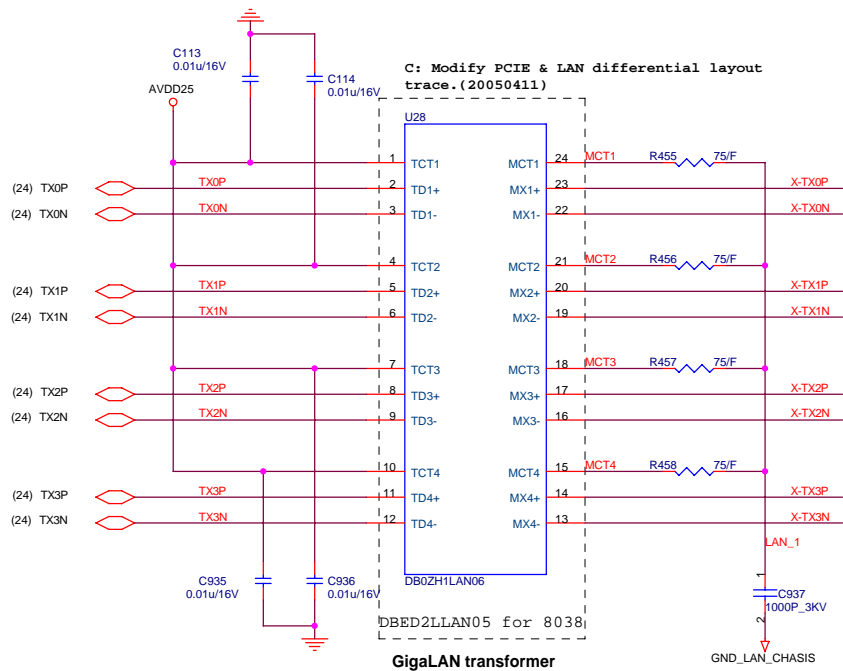
C: Add 9 X GND Pad for LAN controller.
(20050411)

LANVCC

C: Add these GND pin for via hole to GND Plane.

C: Add RC (R37 change to 200K, Add C101) delay to
control LOM_DISABLE#. (20050411)

PROJECT : MA7
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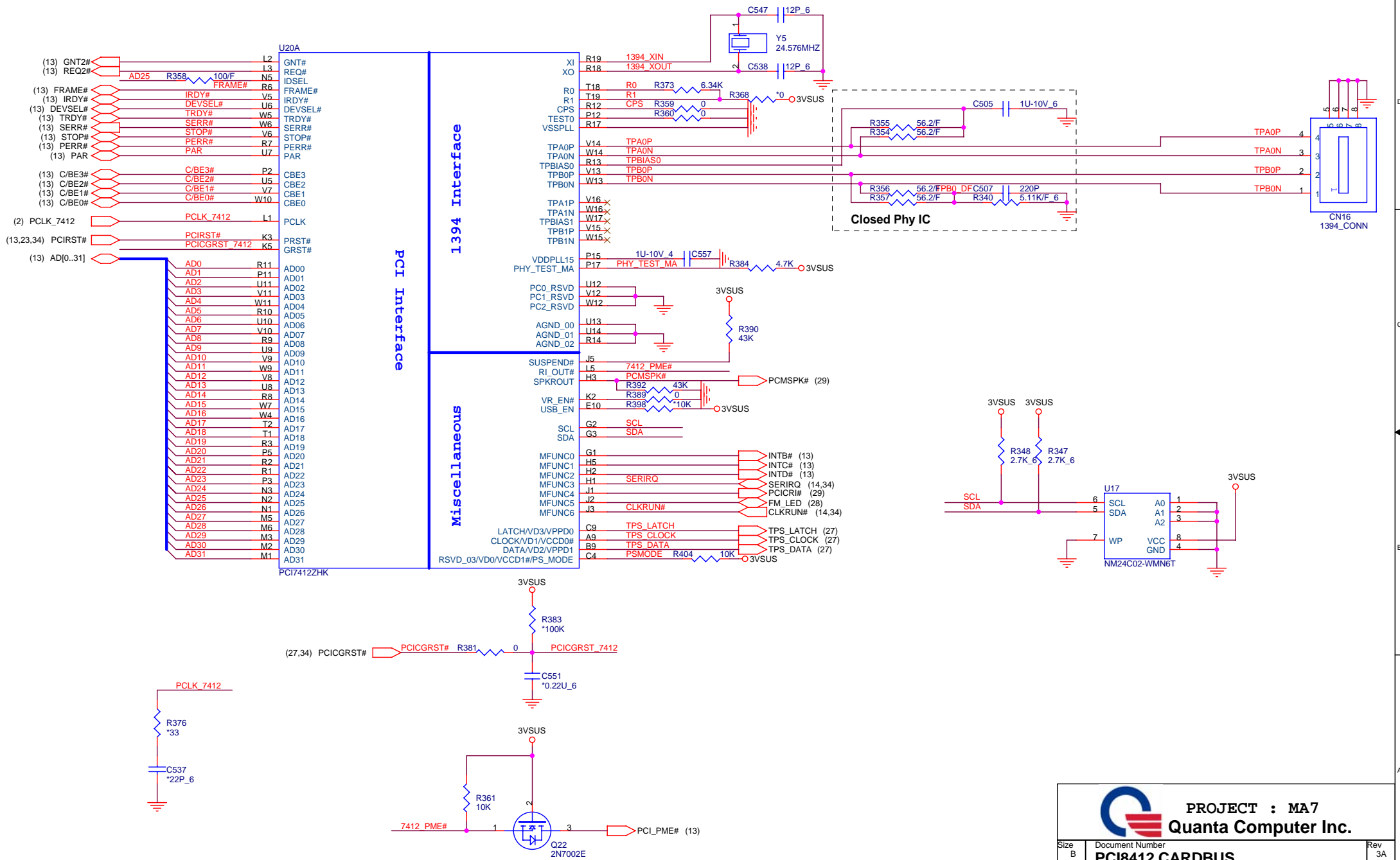


LED1	A1(+) A2(-)	ACT (Tx/Rx)	YELLOW BLINKING
LED2	B1(+) B2(-)	LINK 10/100/1000	GREEN

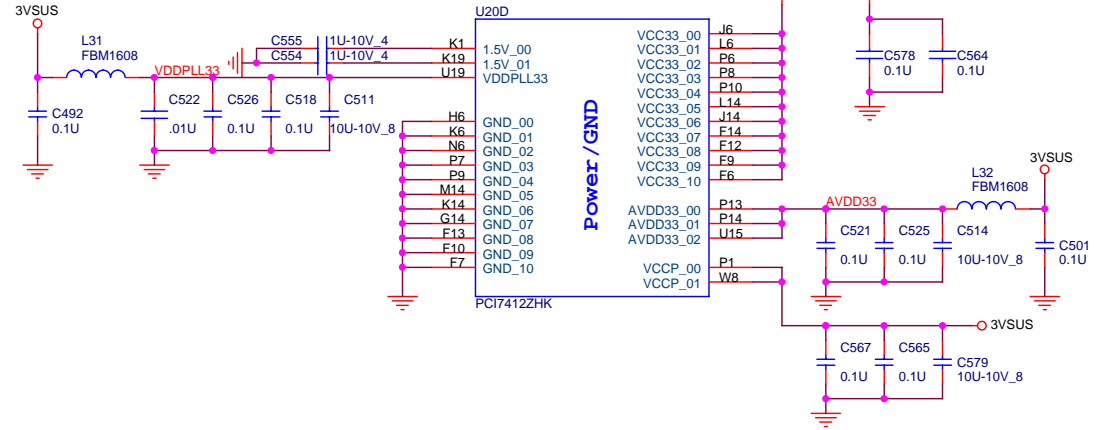
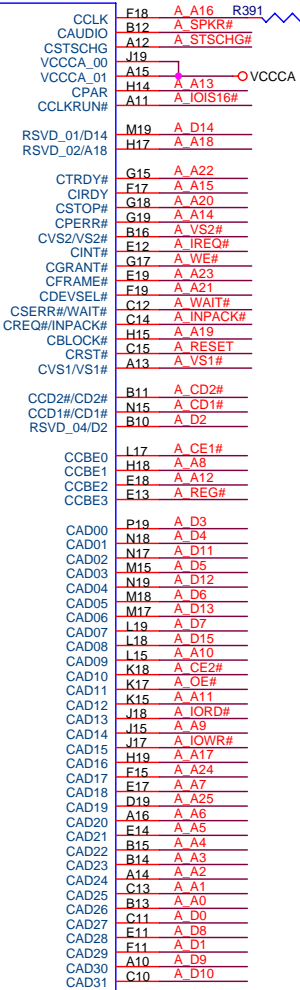


PROJECT : MA7
Quanta Computer Inc.

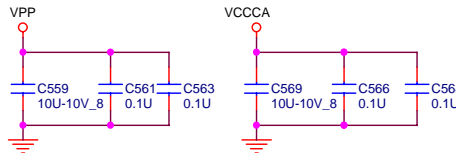
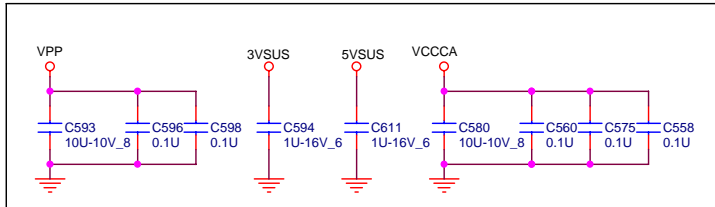
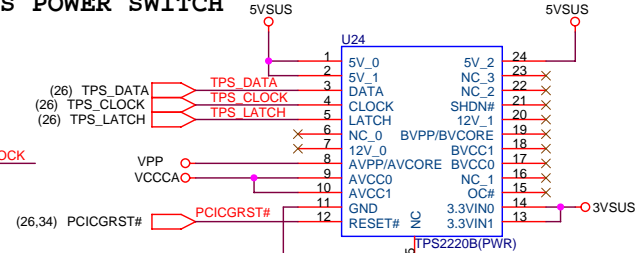
Size	Document Number	Rev
Custom	LAN Power	3A
Date:	Friday, December 23, 2005	Sheet 25 of 45



CardBus Interface



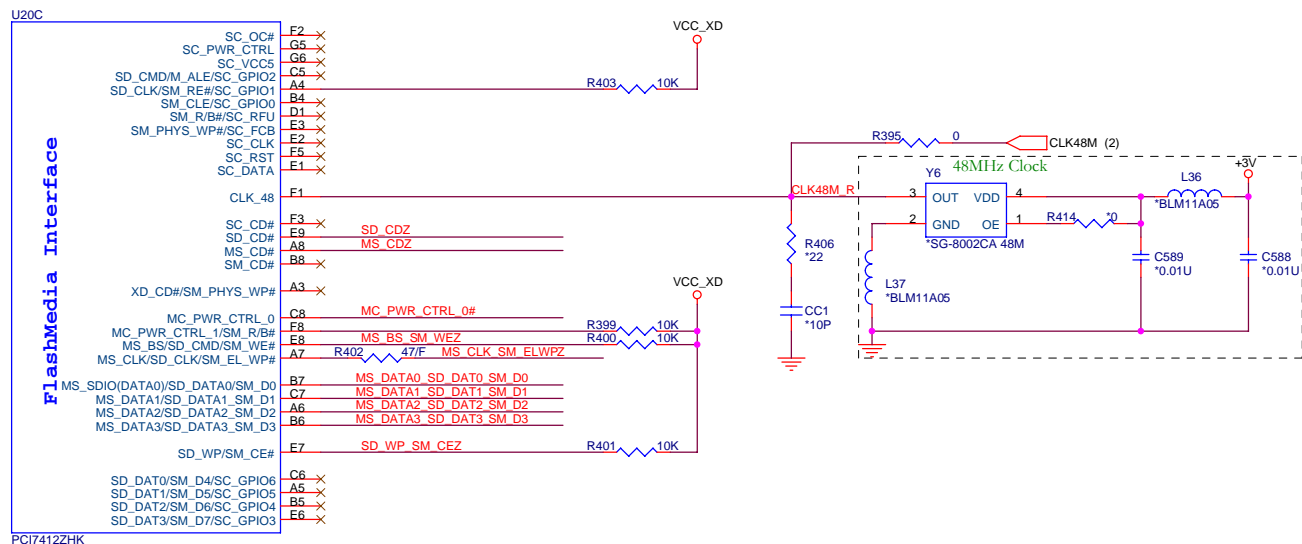
CARDBUS POWER SWITCH



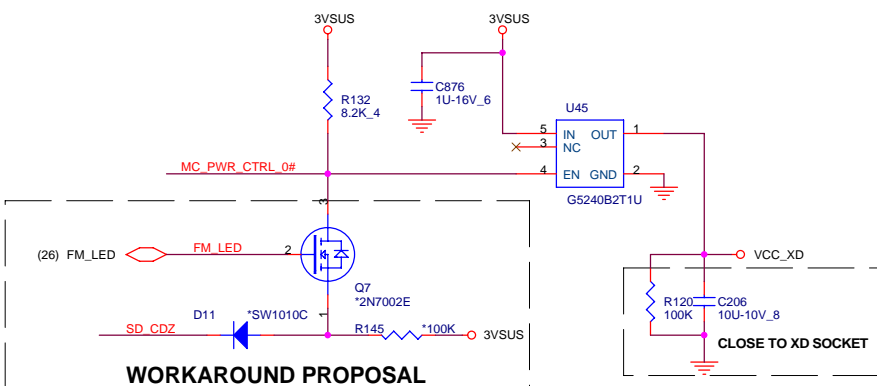
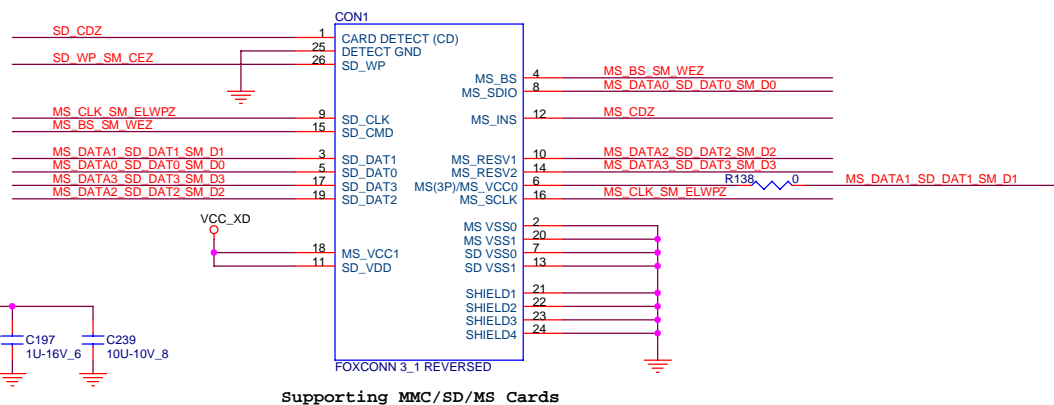
PROJECT : MA7
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Size	Document Number	Rev
B	PCI8412 CardBus Connector	3A

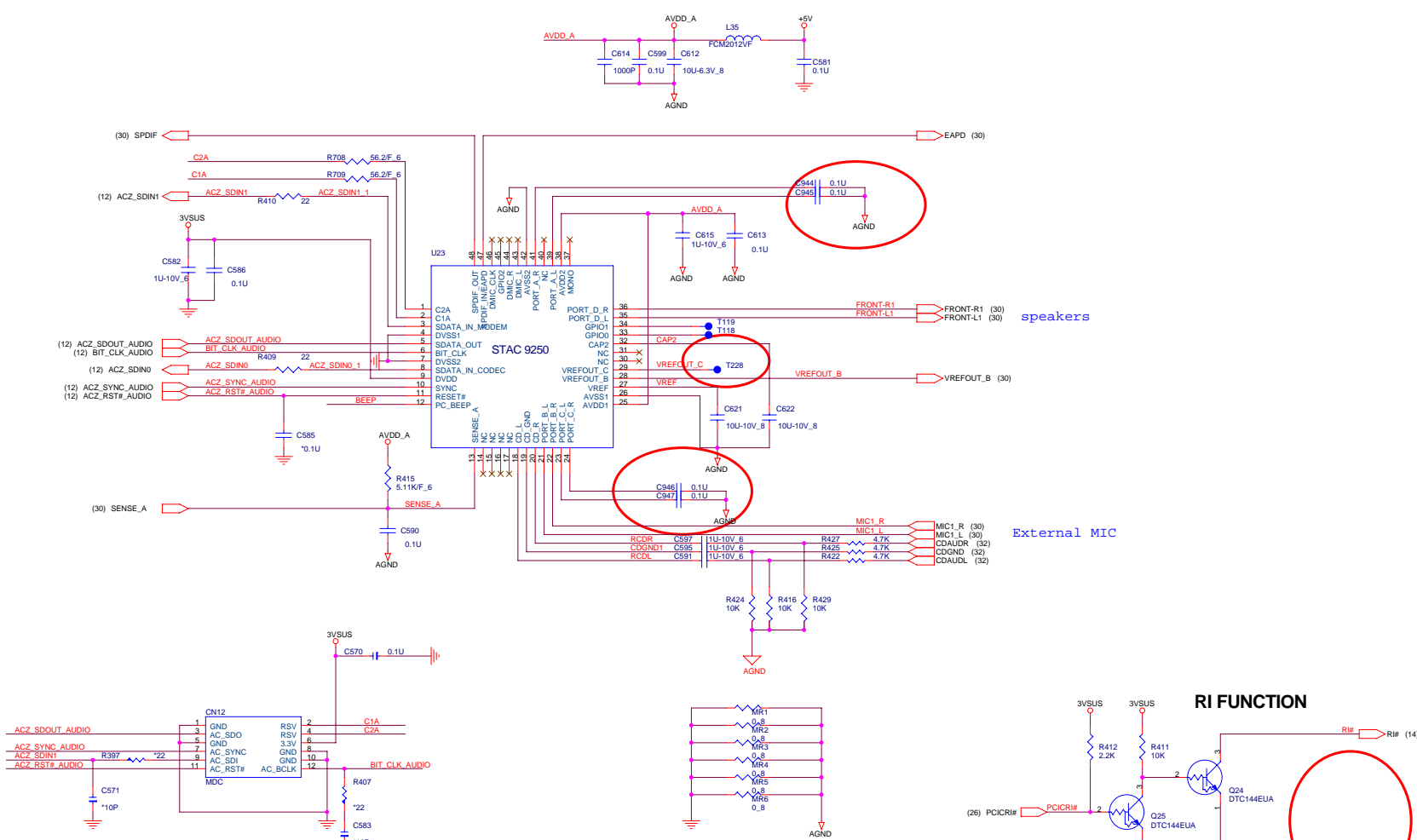
Date: Friday, December 23, 2005 Sheet 27 of 45



3 IN1 CARD READER



PROJECT : MA7
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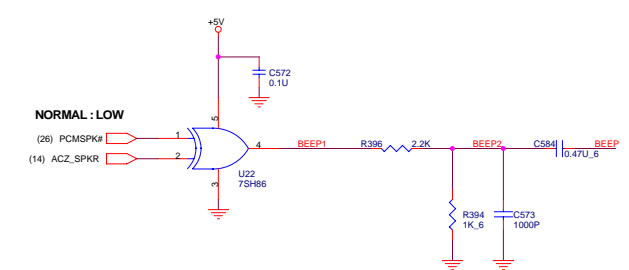


speakers

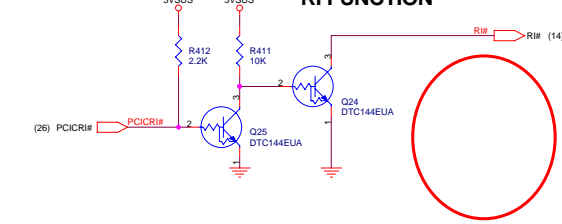
External MIC

For MDC/DAA Module

PC BEEP CONTROL

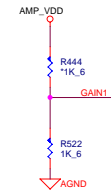
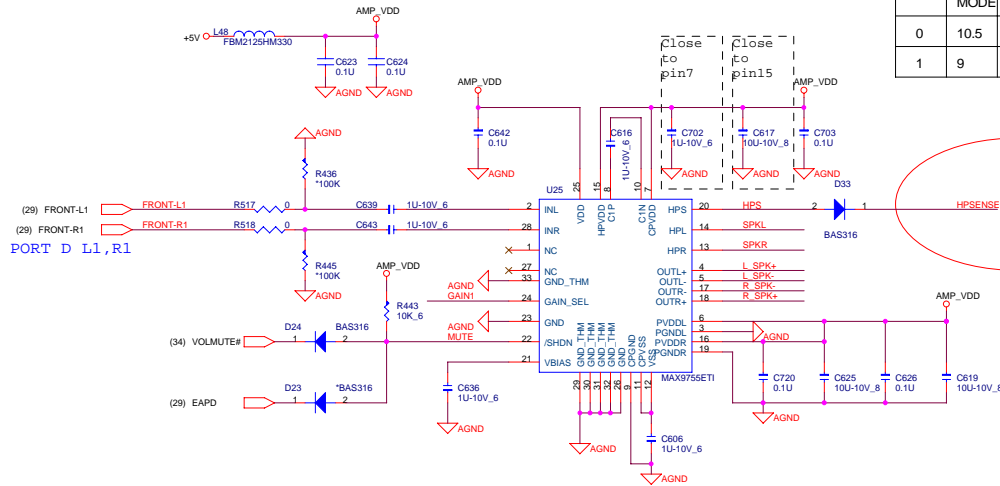


RI FUNCTION

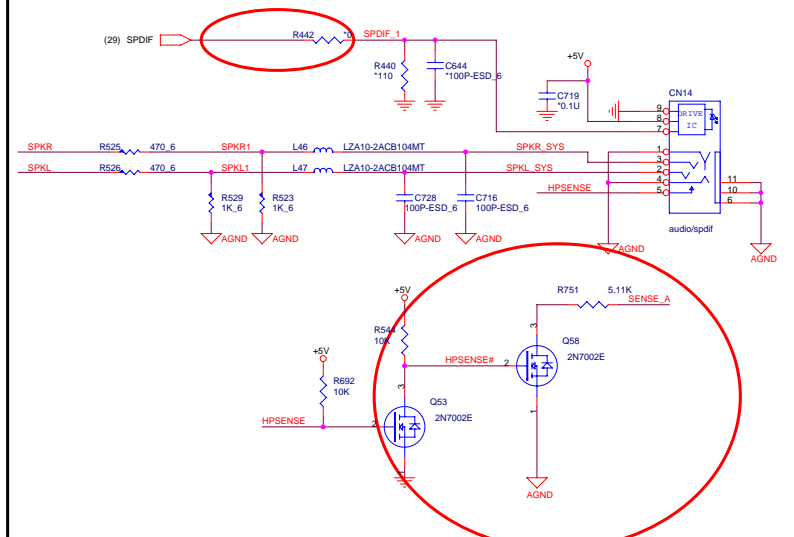


AUDIO AMPLIFIER-MAX9755

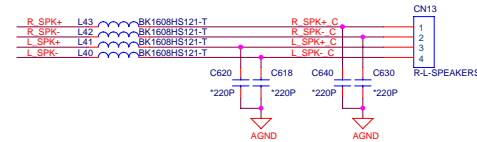
GAIN1	SPKR MODE	HP MODE
0	10.5	3
1	9	0



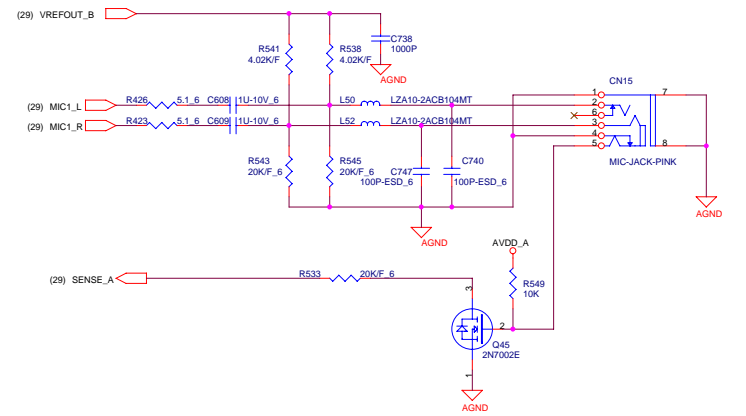
Headphone out



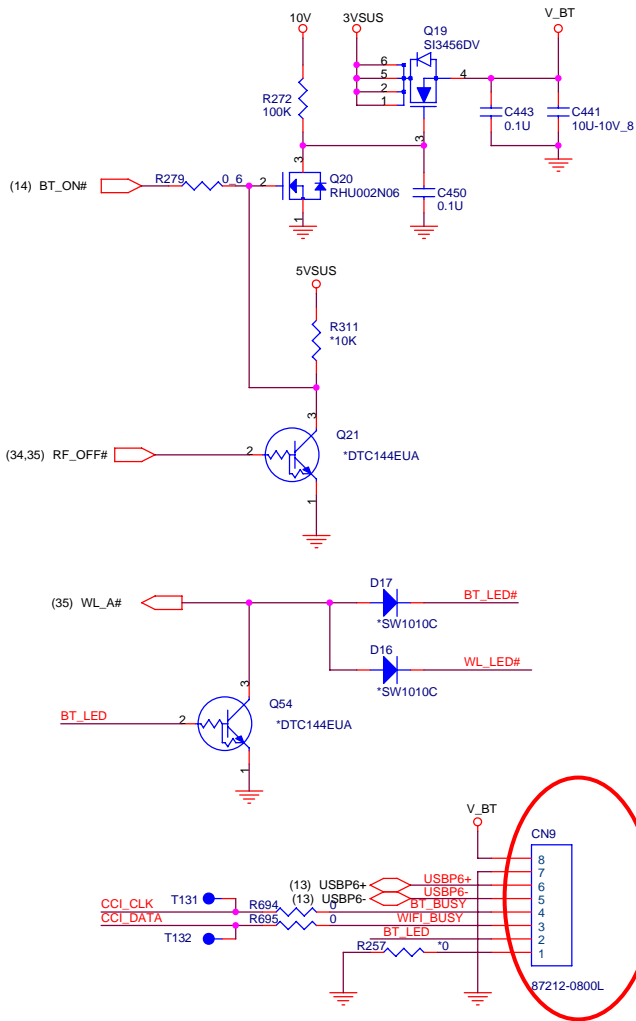
Int. Stereo Speakers



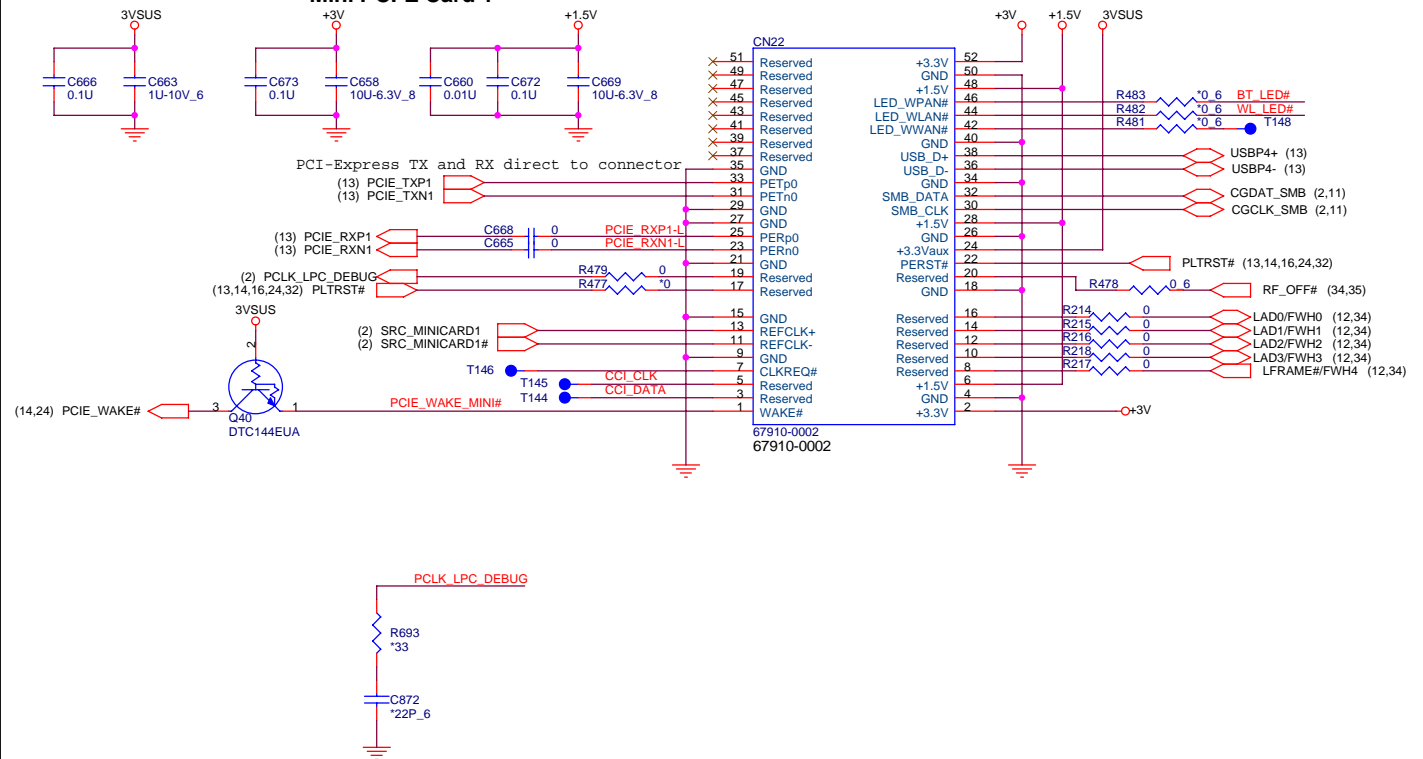
Mic in



BLUETOOTH CONNECTOR



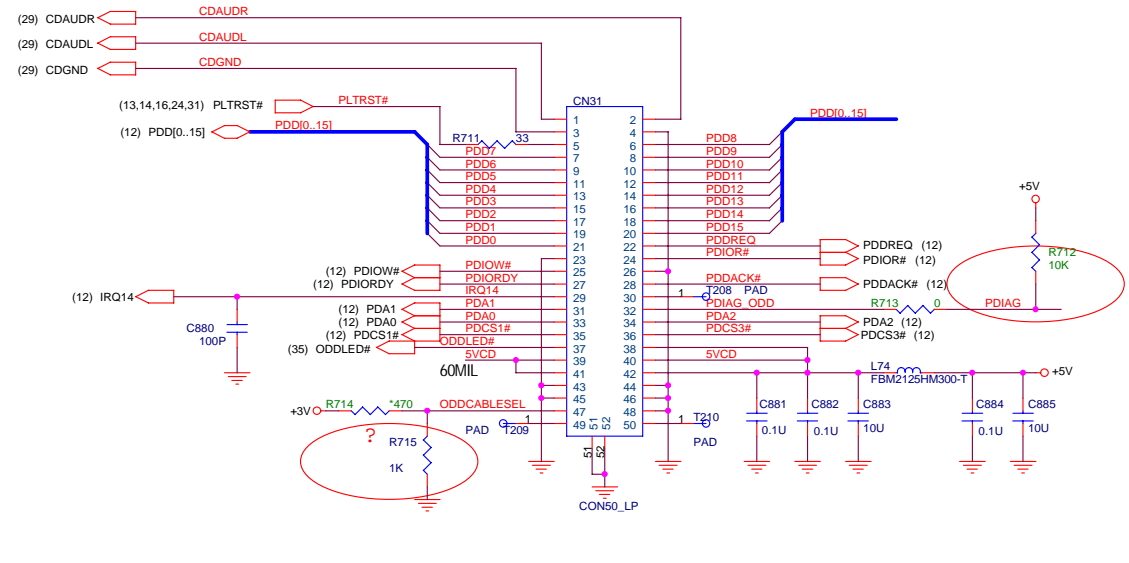
Mini PCI-E Card 1



PROJECT : MA7
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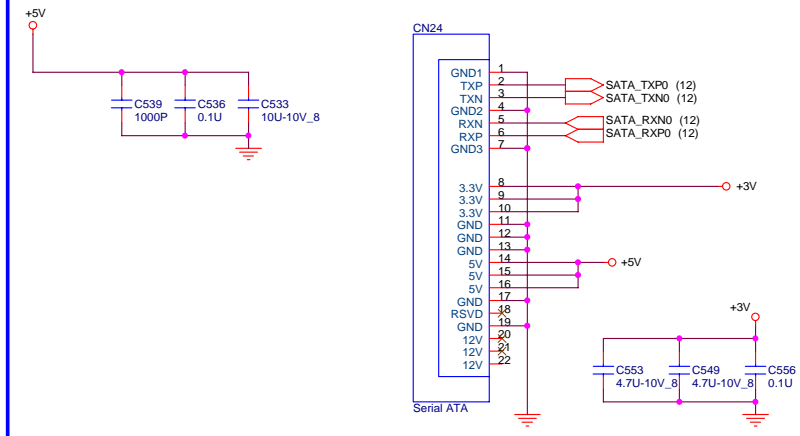
For fix ODD change 0427

CD-ROM connector



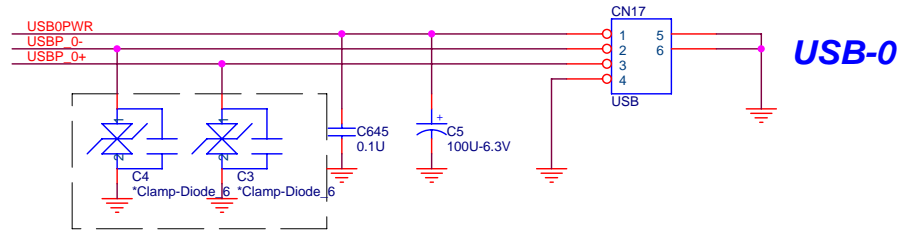
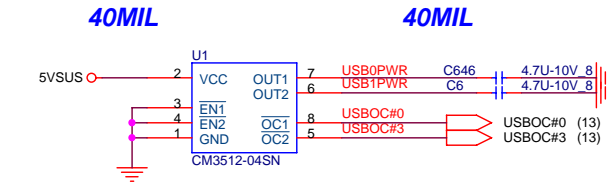
SATA CONNECTOR

MASTER

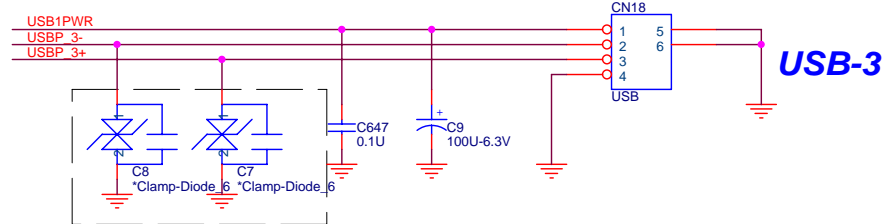
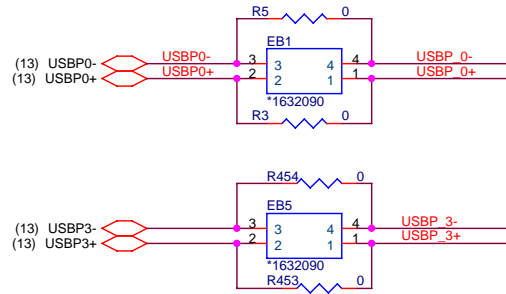


PROJECT : MA7
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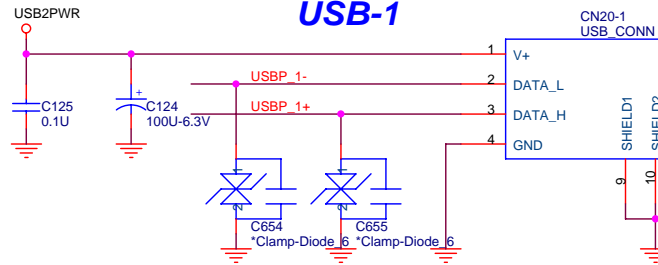
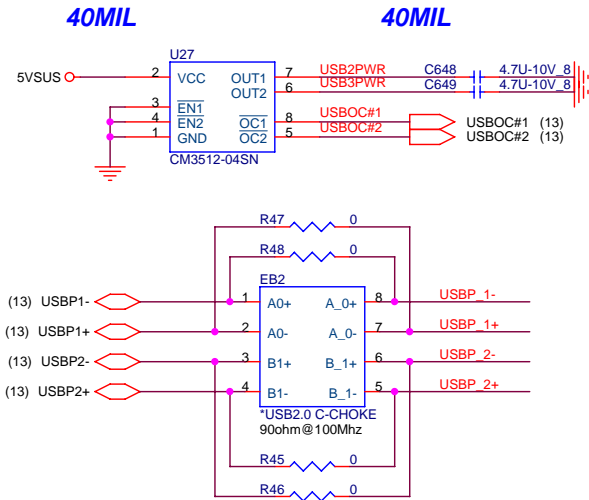
LEFT SIDE



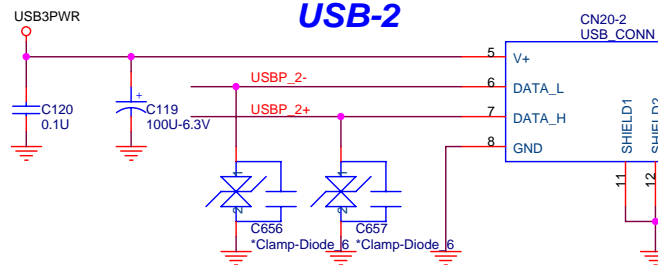
LEFT SIDE



USB-1



USB-2

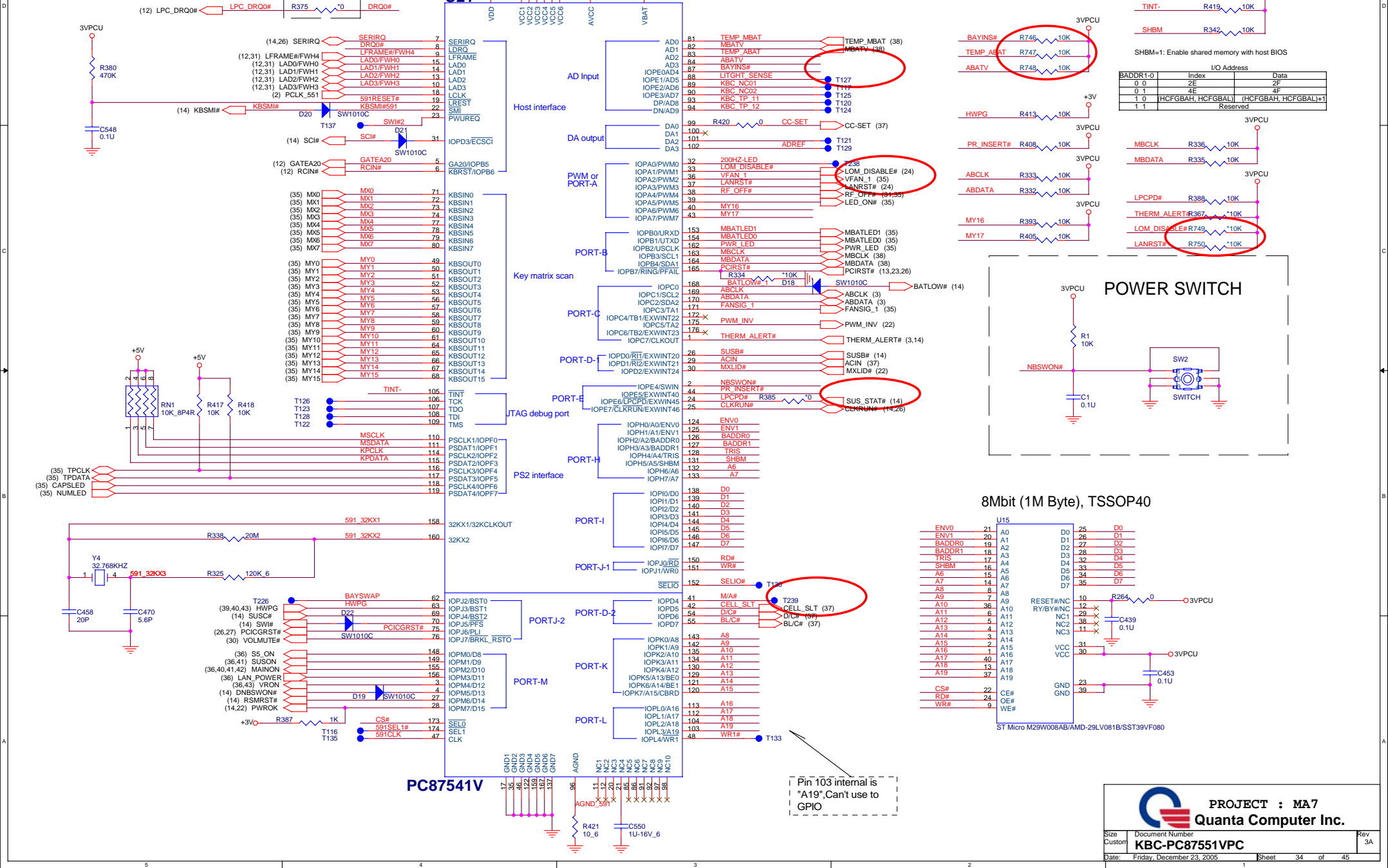


(27,31,36,39,41) 5VSUS

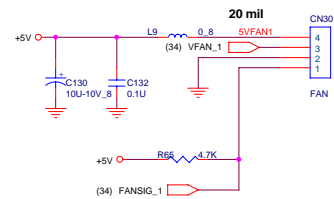


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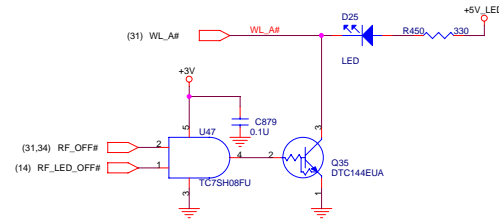
KBC-PC87541V



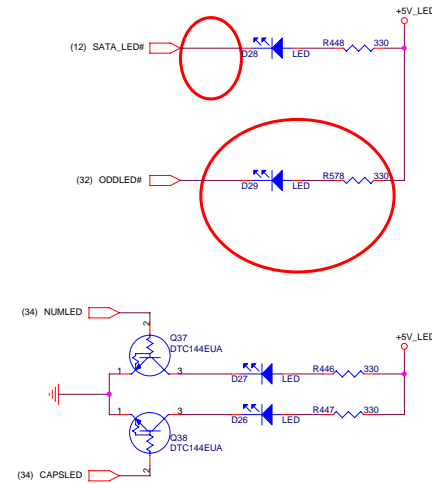
FAN OUT PWM CONNECTOR



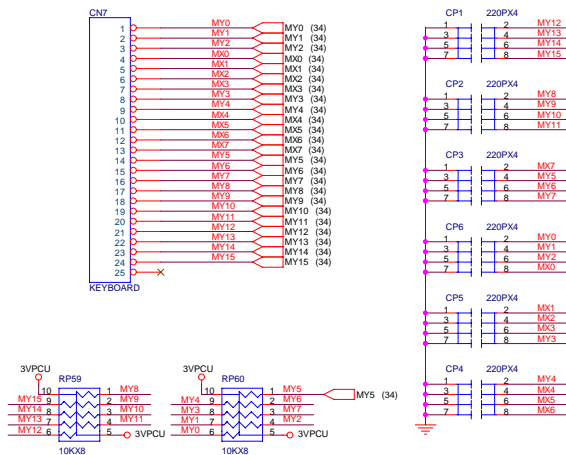
WIRELESS LED



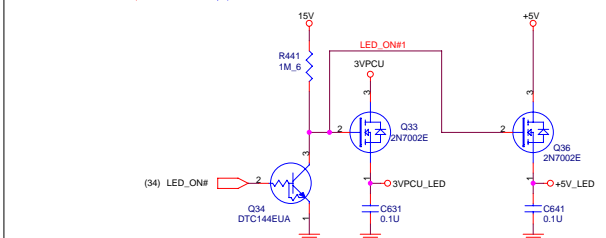
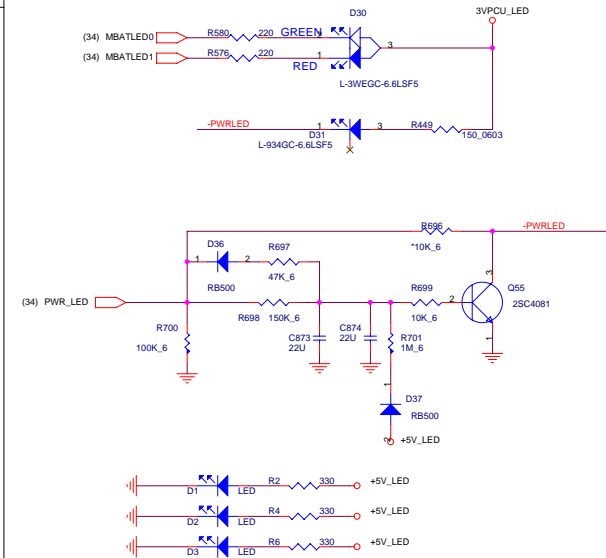
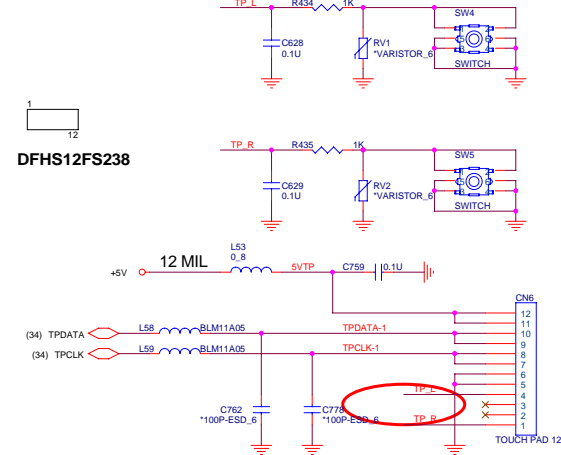
LED INDIATOR

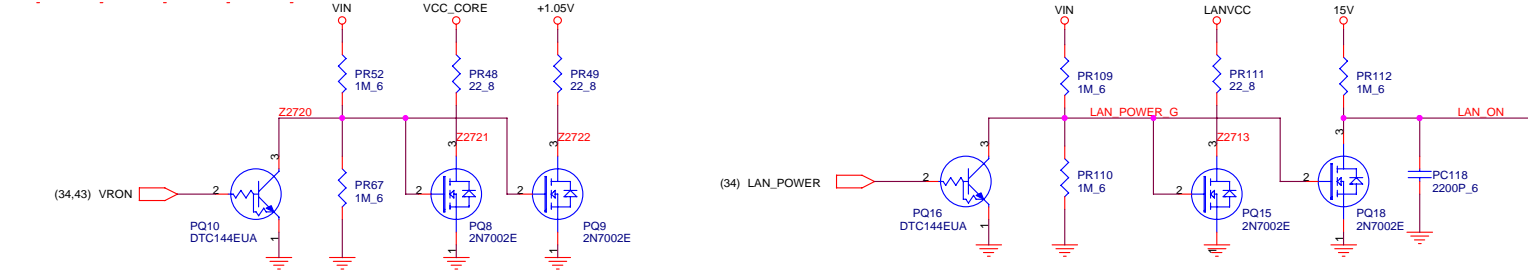
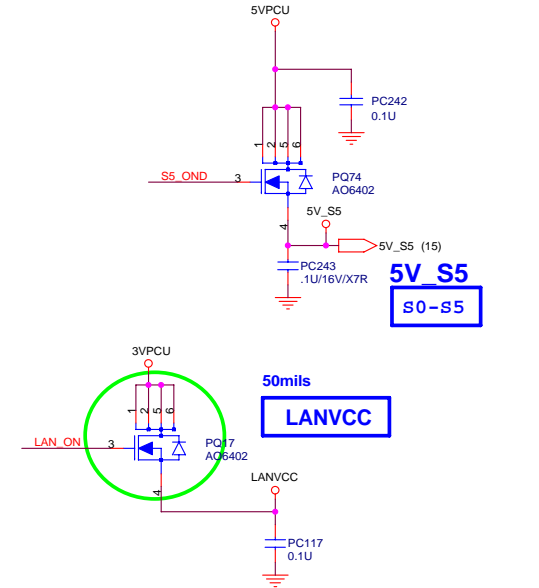
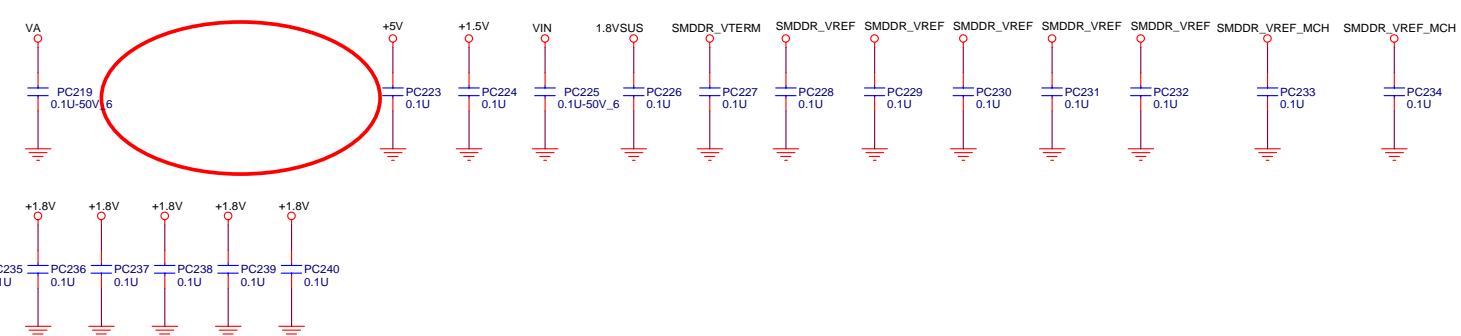
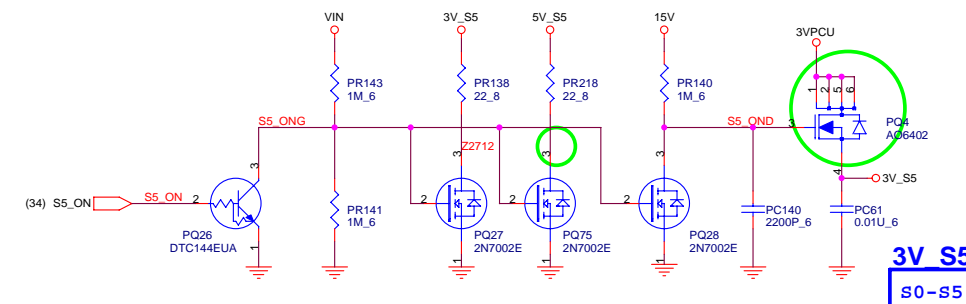
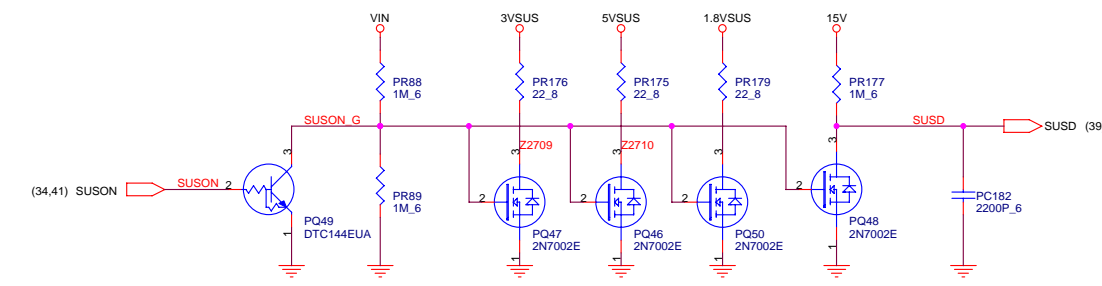
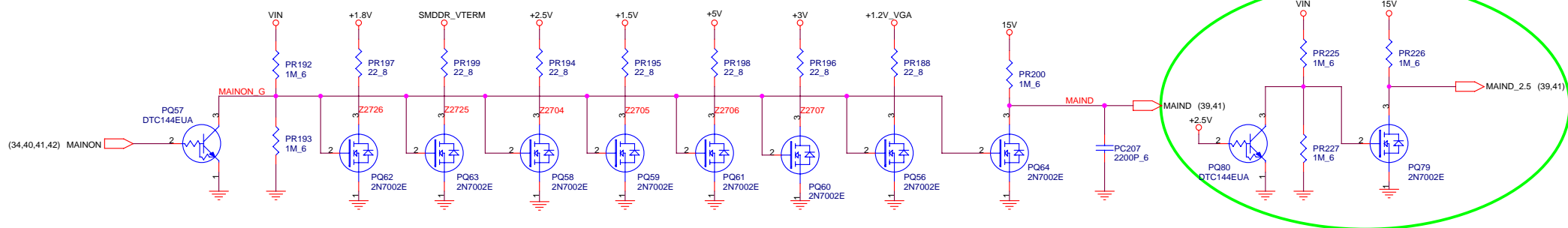


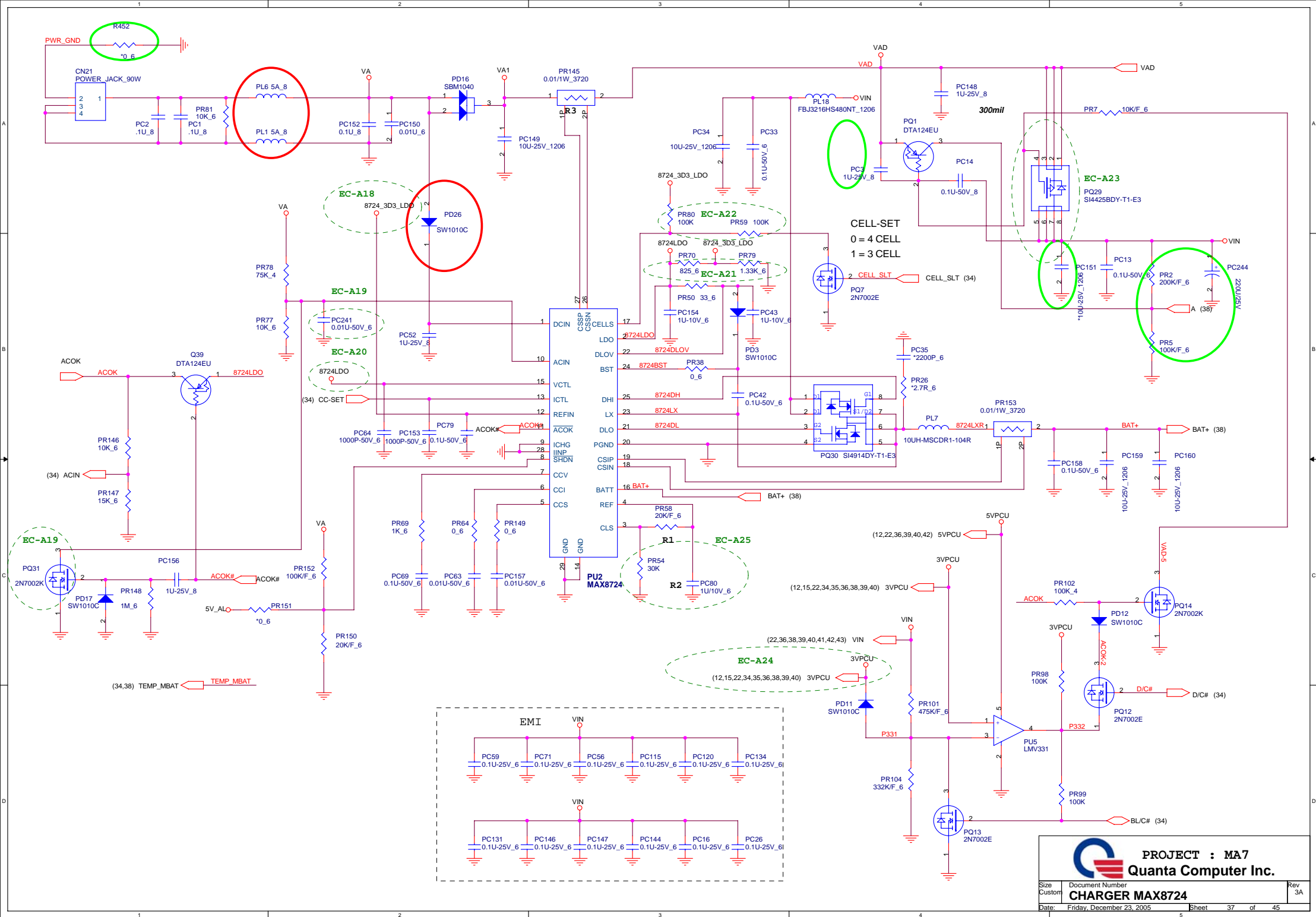
KEYBOARD

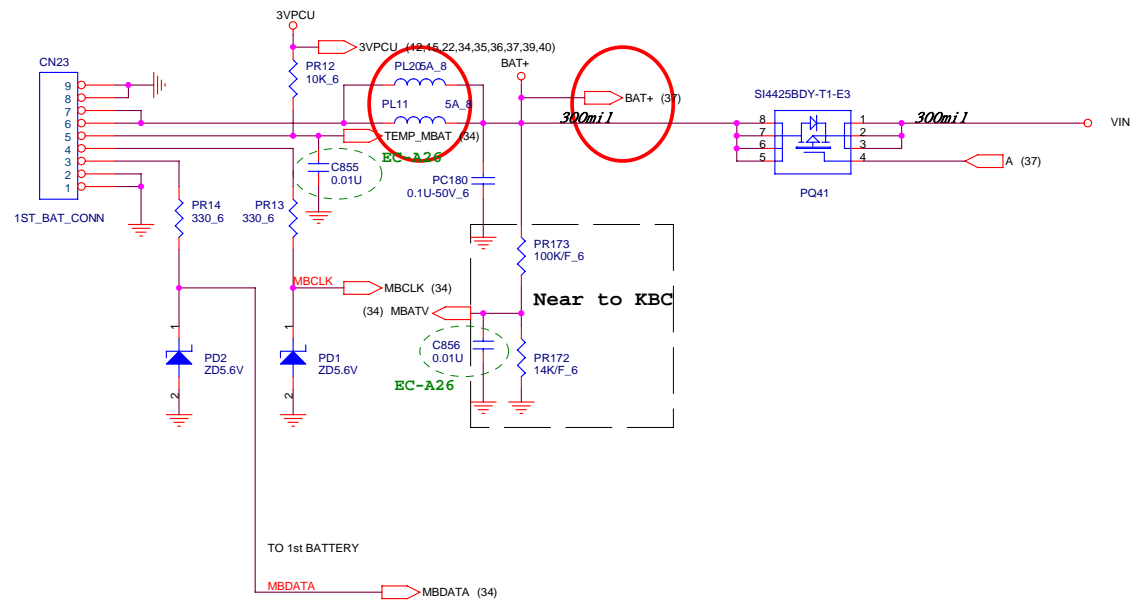


TOUCHPAD

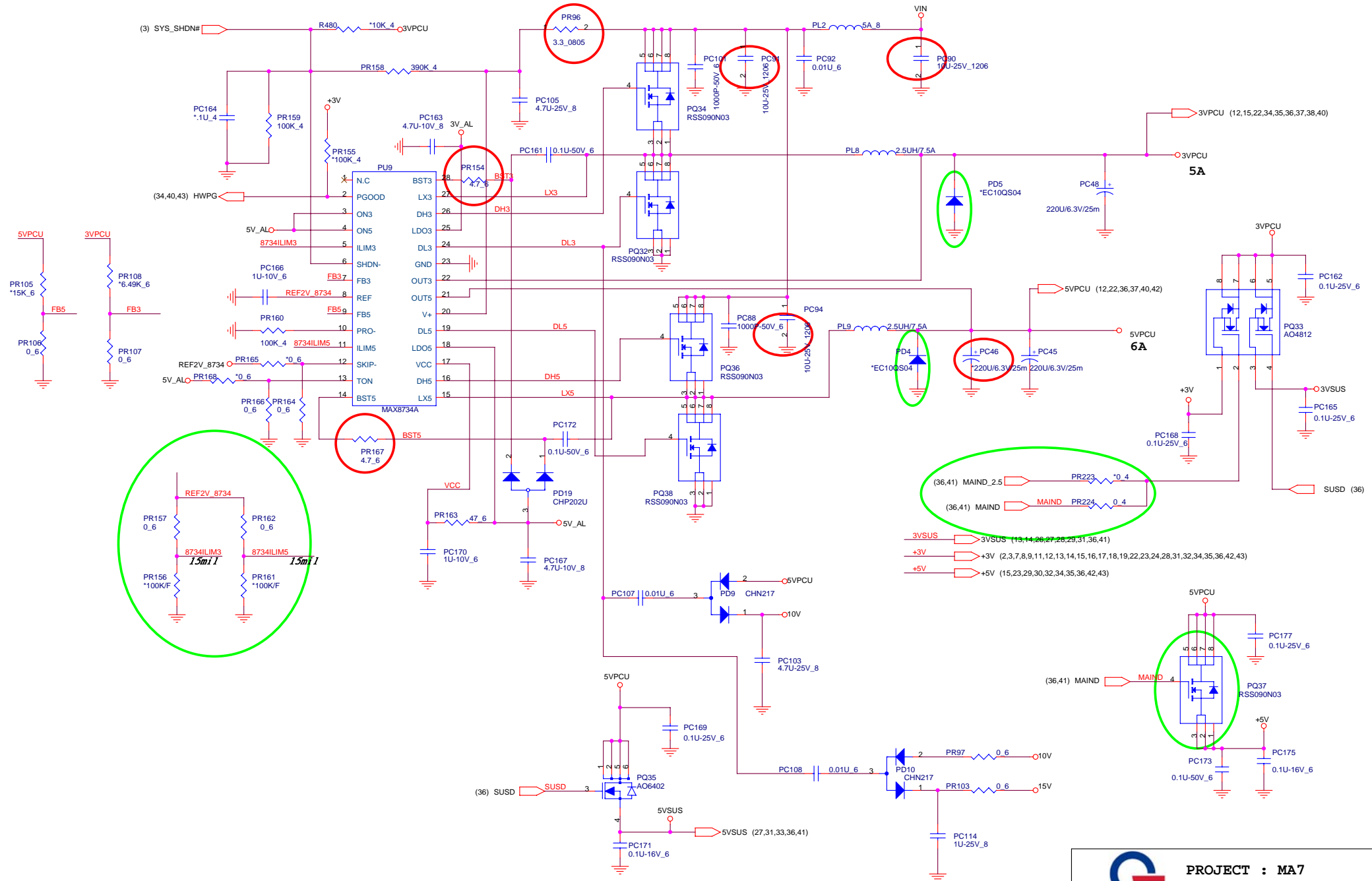




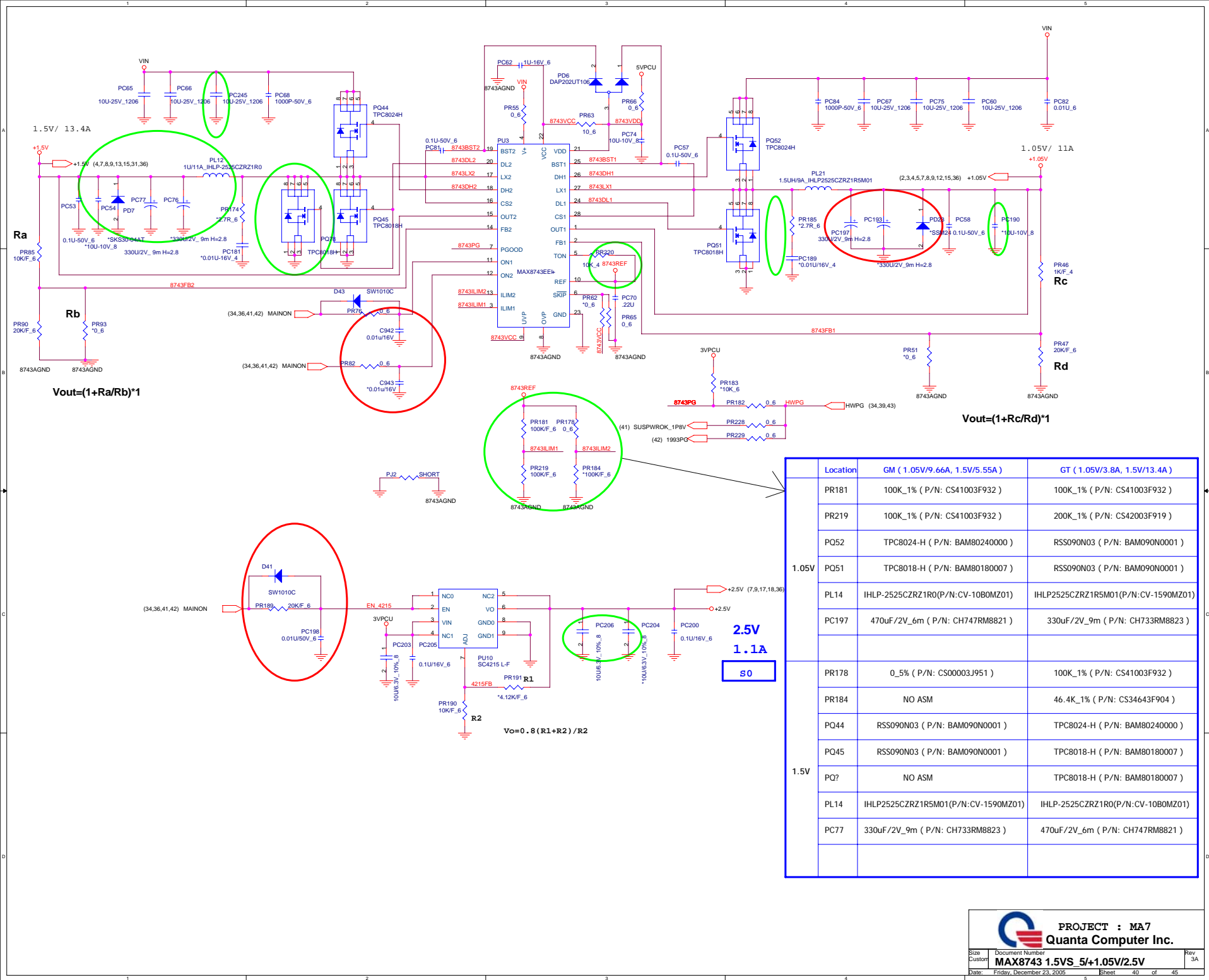




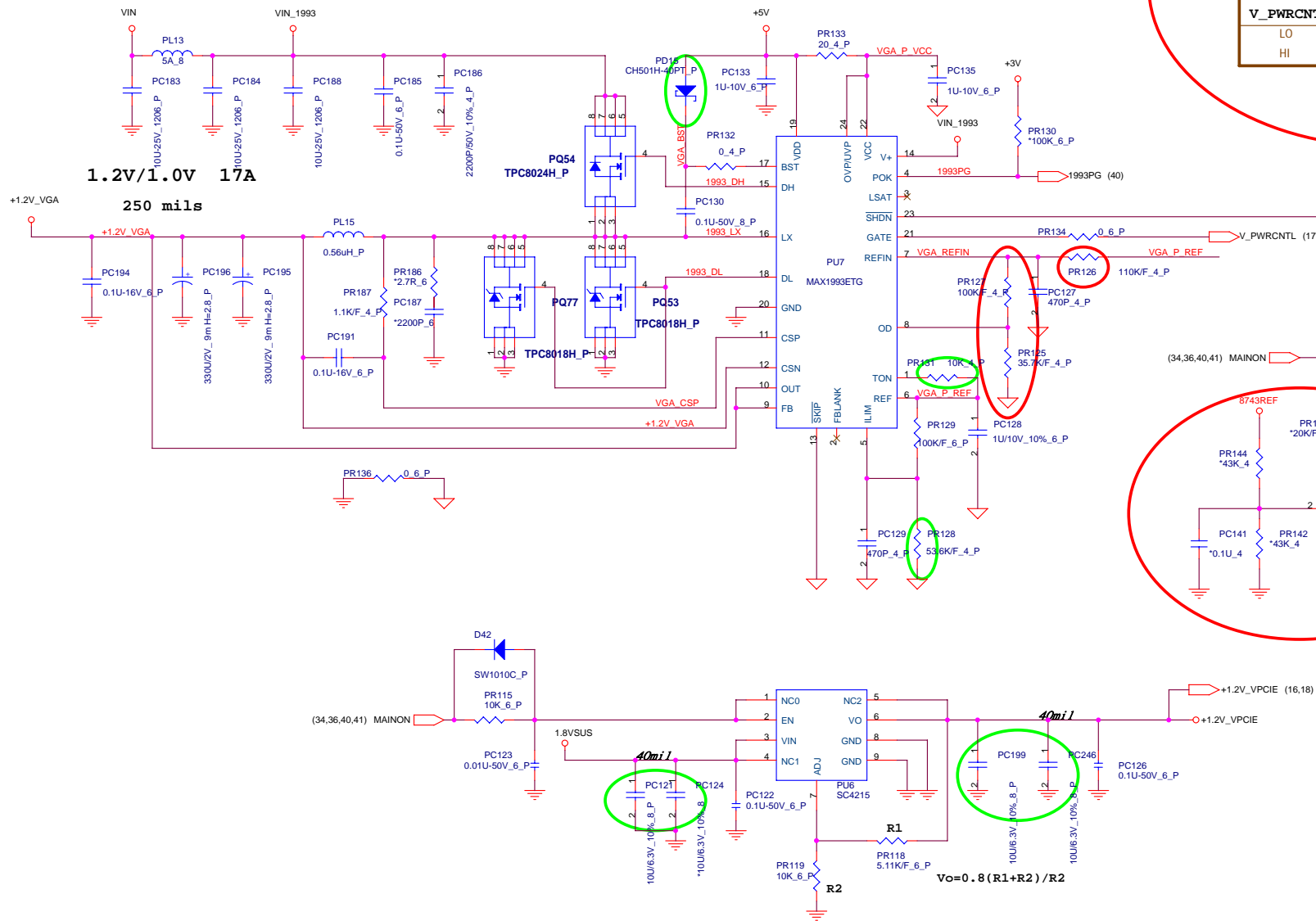
DC-DC (MAX8734A)



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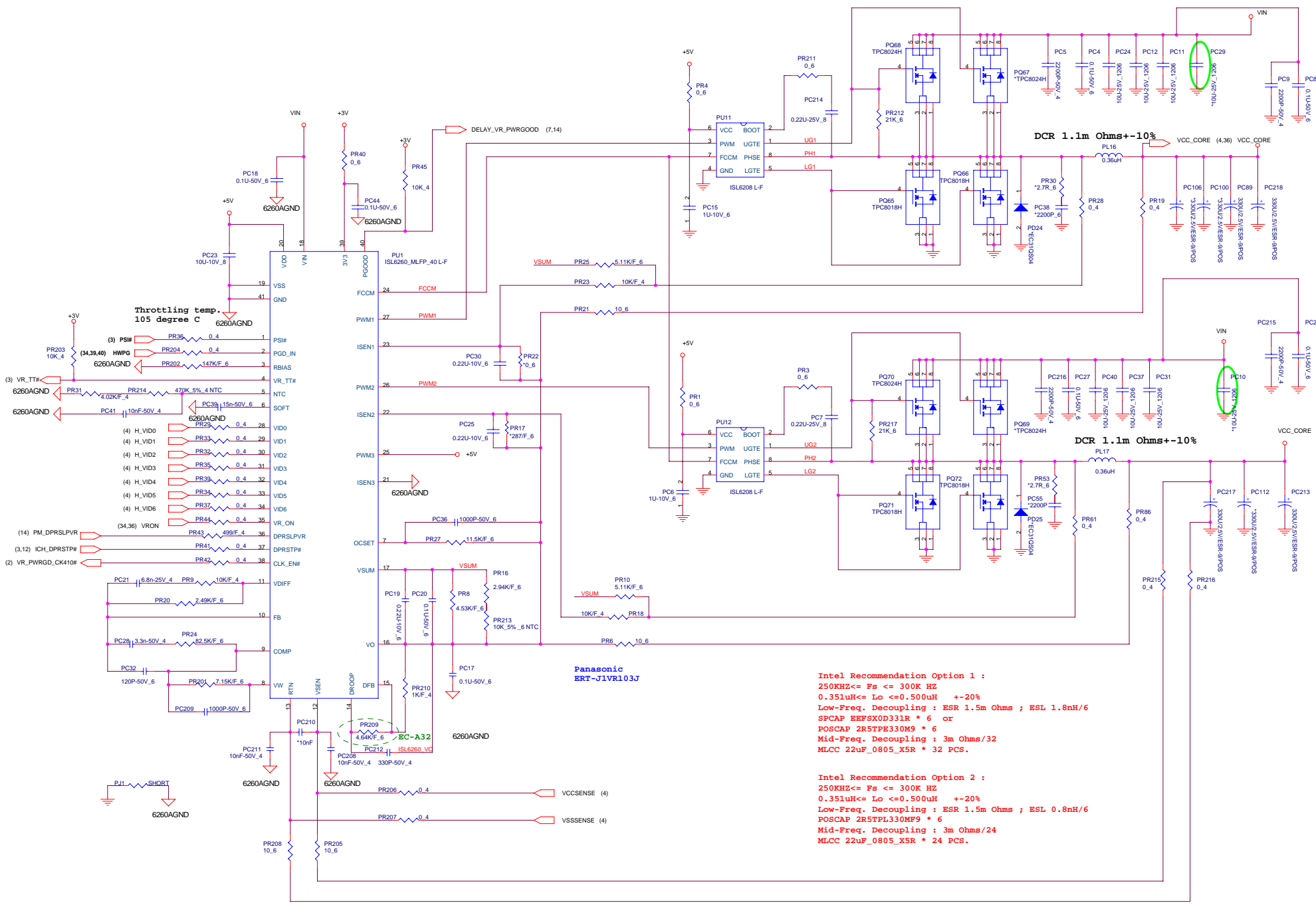


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V_PWRCNTL	XXX	PR125	PR126
LO	1.2V	51.1K_1%	100K_1%
HI	1.0V		

V_PWRCNTL	XXX	PR125	PR126
LO	1.1V	35.7K	110K_1%
HI	0.95V		



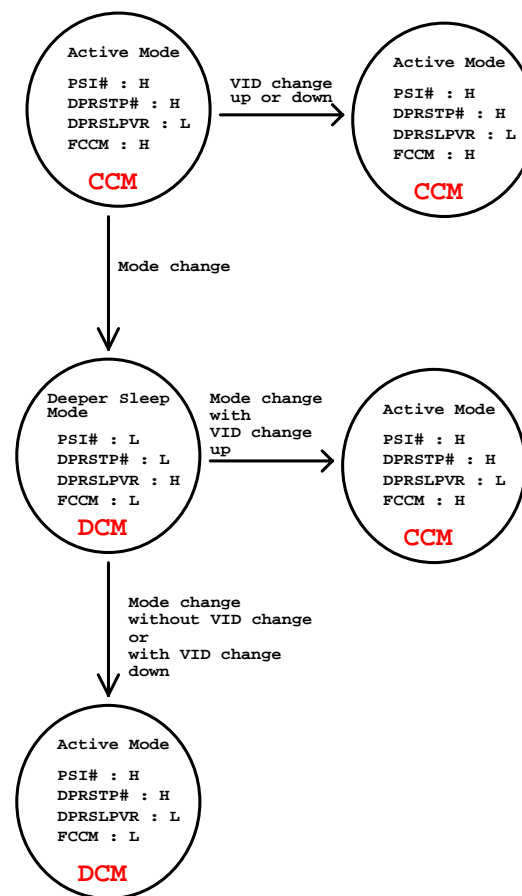
IMVP Spec. Rev. 0.8

(Nom.)	Yonah-2M	Meron
HFM	1.2875 V	1.1500 V
LFM	0.8375 V	0.8375 V
Deeper	0.7625 V	0.7625 V
VBOOT	1.2000 V	1.2000 V
SLOPE	-2.1 mV/A	-2.1 mV/A


(Max.)	Yonah-2M	Meron
HFM	36 A	44 A
LFM	9.5 A	12.5 A
Deeper	3.5 A	5.5 A
Dynamic	27 A	34.5 A
TDC	26 A	32 A

Vo	VID6	VID5	VID4	VID3	VID2	VID1	VID0
1.5000	0	0	0	0	0	0	0
1.4375	0	0	0	0	1	0	1
1.4000	0	0	0	1	0	0	0
1.3000	0	0	1	0	0	0	0
1.2875	0	0	1	0	0	0	1
1.2000	0	0	1	1	0	0	0
1.1500	0	0	1	1	1	0	0
1.1000	0	1	0	0	0	0	0
1.0000	0	1	0	1	0	0	0
0.9625	0	1	0	1	0	1	1
0.9000	0	1	1	0	0	0	0
0.8375	0	1	1	0	1	0	1
0.8000	0	1	1	1	0	0	0
0.7625	0	1	1	1	0	1	1
0.7500	0	1	1	1	1	0	0
0.7000	1	0	0	0	0	0	0
0.6000	1	0	0	1	0	0	0
0.5000	1	0	1	0	0	0	0
0.3000	1	1	0	0	0	0	0

CCM : Continuous Conduction Mode
DCM : Dis-Continuous Mode



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