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## 10.

### 10-1 MAIN BOARD

#### 10-1-1 Schematic Diagrams

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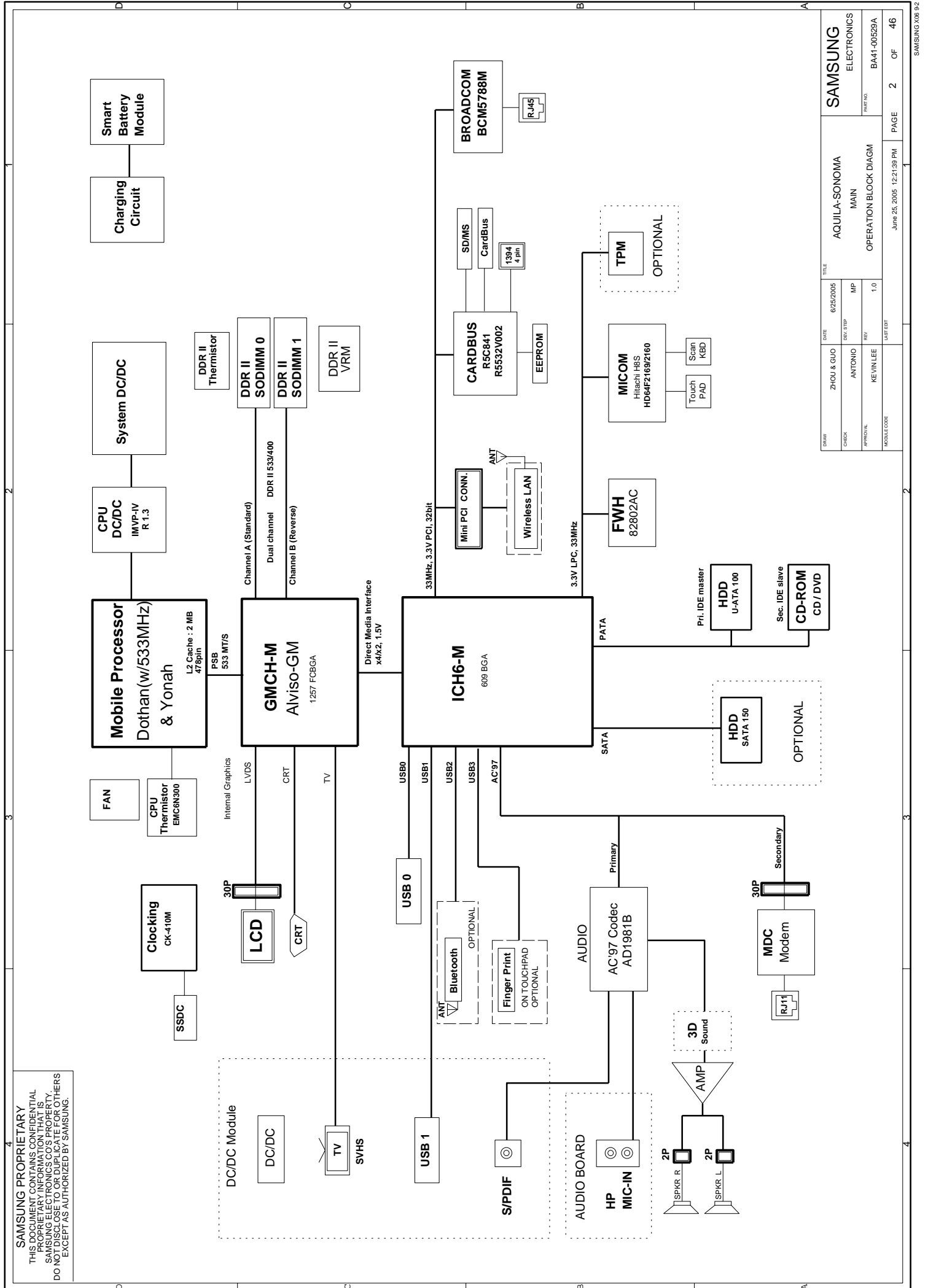
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## Aquila-So

CPU : Dothan  
Chip Set : Intel Alviso + ICH6-M  
Remarks : Internal Gfx.

Model Name : X06  
PBA Name : BA92-03859A  
PCB Code : BA41-00529A  
Dev. Step : MP  
Revision : 1.0  
T.R. Date : 2005-6-25

DRAW	CHECK	APPROVAL
ZHOU JUN GUO LEI	CHEN TAO	KEVIN LEE



## SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

## External PCI Devices

Devices	IDSEL#	REQ/GNT#	Interrupts
Cardbus MiniPCI SLOT LOM	AD25	0	A B C
	AD23	1	E F
	AD21	2	G

I<sup>2</sup>C / SMBus Address

Devices	Address	Hex	Bus
ICH6-M CK-410 (Clock Generator) C729532C(Spread Spectrum) C729532C(Spread Spectrum) SODIMM1	Master	-	SBUS Master
		1101 001x	D2h
		1101 010x	D4h
		1101 011x	D6h
		1010 010x	A4h
MICOM EMC6N300(Termal Sensor) BATTERY	Master	-	SBUS Master
	0001 011x	5Eh	SBUS Slave
	0001 011x	16h	BATTERY INFORMATION

## USB PORT Assign

PORT NUMBER	ASSIGNED TO
0	SYSTEM PORT A
1	SYSTEM PORT B
2 (OPTION)	BLUETOOTH (OPTION)
3 (OPTION)	FINGER PRINTER (OPTION)

# Voltage Rails

VDC	Primary/DC system power supply (7 to 21V)
DC_CORE	Core voltage for D1/D2/GPU (1.356 to 1.44V)
VTT	Processor System Bus/FSB Termination (1.05V)/MCHM Core Voltage (1.05V)
P1.5V	1.5V switched power rail (off in S3-S5)
P1.5V_AUX	1.5V power rail (off in S4-S5)
P0.9V	0.9V power rail (off in S3-S5)
P1.8V_AUX	1.8V power rail/off in S4-S5)
MICOM_P3V	3.3V always on power rail for MICOM
P3.3V	3.3V switched power rail (off in S3-S5)
P3.3V_AUX	3.3V power rail (off in S4-S5)
P3.3V_ALWAYS	3.3V power rail (Always on)/AC-IN mode & off in S4-S5@BATT mode)
P5V	5.0V switched power rail (off in S3-S5)
P3V_AUX	5V power rail (off in S4-S5)
P2.5V	2.5V switched power rail (off in S3-S5)

## REVISION HISTORY

See revision notes in the changes file for more information.

## CPU Core Voltage Table

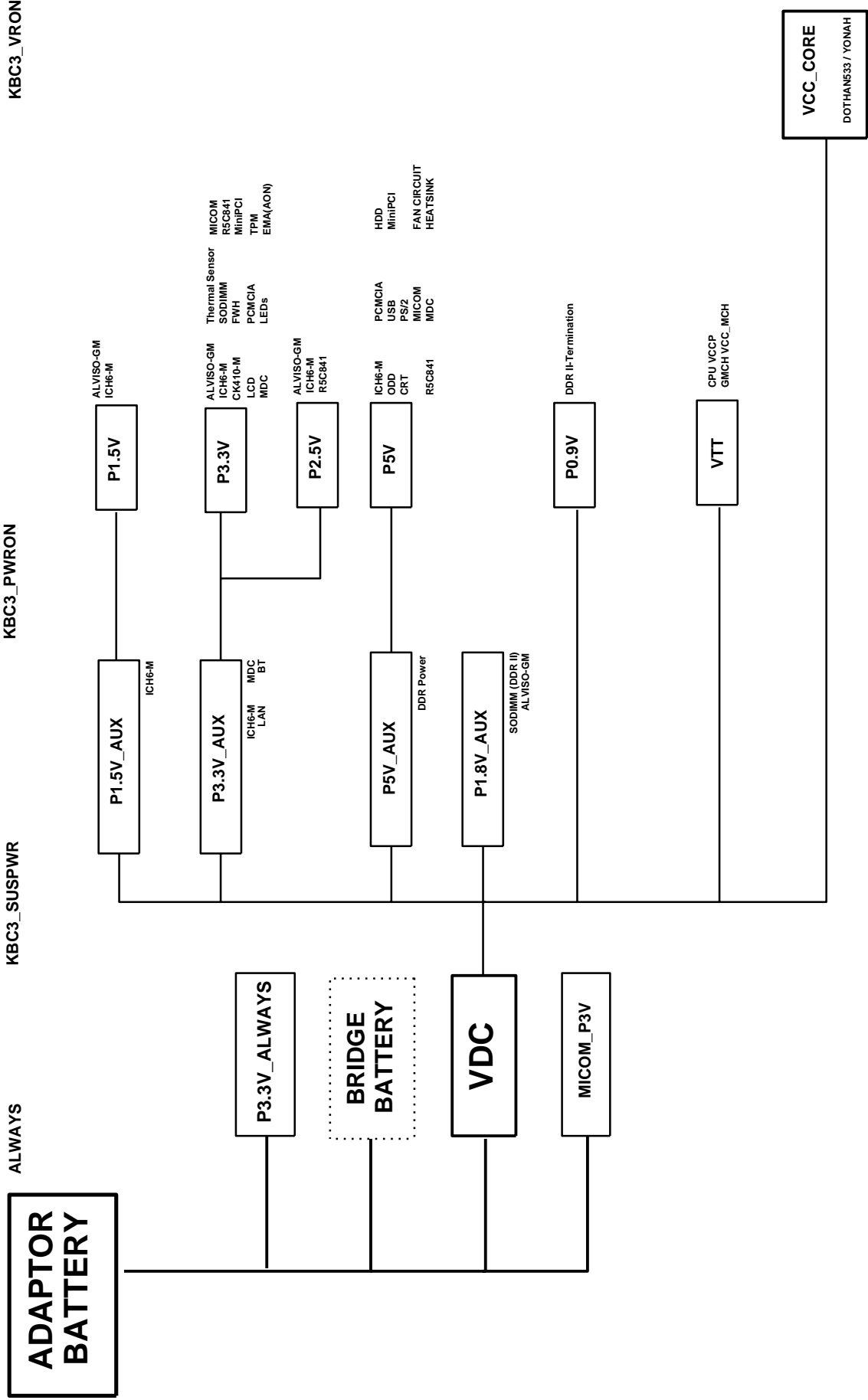
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VID5	VID4	VID3	VID2	VID1	VID0	Voltage	VID Hex	Voltage	VID Hex
0	0	0	0	0	0	1.708 V	3Fh	1.196 V	1Fh
0	0	0	0	0	0	1.692 V	3Eh	1.180 V	1Eh
0	0	0	0	0	0	1.676 V	3Dh	1.164 V	1Dh
0	0	0	0	0	0	1.660 V	3Ch	1.148 V	1Ch
0	0	0	0	0	0	1.644 V	3Bh	1.132 V	1Bh
0	0	0	0	0	0	1.628 V	3Ah	1.116 V	1Ah
0	0	0	0	0	0	1.612 V	39h	1.100 V	19h
0	0	0	0	0	0	1.596 V	38h	1.084 V	18h
0	0	0	0	0	0	1.580 V	37h	1.068 V	17h
0	0	0	0	0	0	1.564 V	36h	1.052 V	16h
0	0	0	0	0	0	1.548 V	35h	1.036 V	15h
0	0	0	0	0	0	1.532 V	34h	1.020 V	14h
0	0	0	0	0	0	1.516 V	33h	1.004 V	13h
0	0	0	0	0	0	1.500 V	32h	988 V	12h
0	0	0	0	0	0	1.484 V	31h	972 V	11h
0	0	0	0	0	0	1.468 V	30h	956 V	10h
0	0	0	0	0	0	1.452 V	2Fh	940 V	0Fh
0	0	0	0	0	0	1.436 V	2Eh	924 V	0Eh
0	0	0	0	0	0	1.420 V	2Dh	908 V	0Dh
0	0	0	0	0	0	1.404 V	2Ch	892 V	0Ch
0	0	0	0	0	0	1.388 V	2Bh	876 V	0Bh
0	0	0	0	0	0	1.372 V	2Ah	860 V	0Ah
0	0	0	0	0	0	1.356 V	29h	844 V	09h
0	0	0	0	0	0	1.340 V	28h	828 V	08h
0	0	0	0	0	0	1.324 V	27h	812 V	07h
0	0	0	0	0	0	1.308 V	26h	796 V	06h
0	0	0	0	0	0	1.292 V	25h	780 V	05h
0	0	0	0	0	0	1.276 V	24h	764 V	04h
0	0	0	0	0	0	1.260 V	23h	748 V	03h
0	0	0	0	0	0	1.244 V	22h	732 V	02h
0	0	0	0	0	0	1.228 V	21h	716 V	01h
0	0	0	0	0	0	1.212 V	20h	700 V	00h

## System Power States

Signal	SIP_S3#	SIP_S4#	SIP_S5#	+V* <sub>ALW</sub>	+V*	+V*	Clocks
S0 (Full On)	HIGH	HIGH	HIGH	ON	ON	ON	ON
S3-Hot (STR)	LOW	HIGH	HIGH	ON	ON	ON	LOW
S3-Cold (STR)	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (STD)	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft Off)	LOW	LOW	LOW	ON	OFF	OFF	OFF

DRAW		DATE		AQUILA-SONOMA MAIN BOARD INFORMATION		SAMSUNG	
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APPROVAL		MP				PART NO.	
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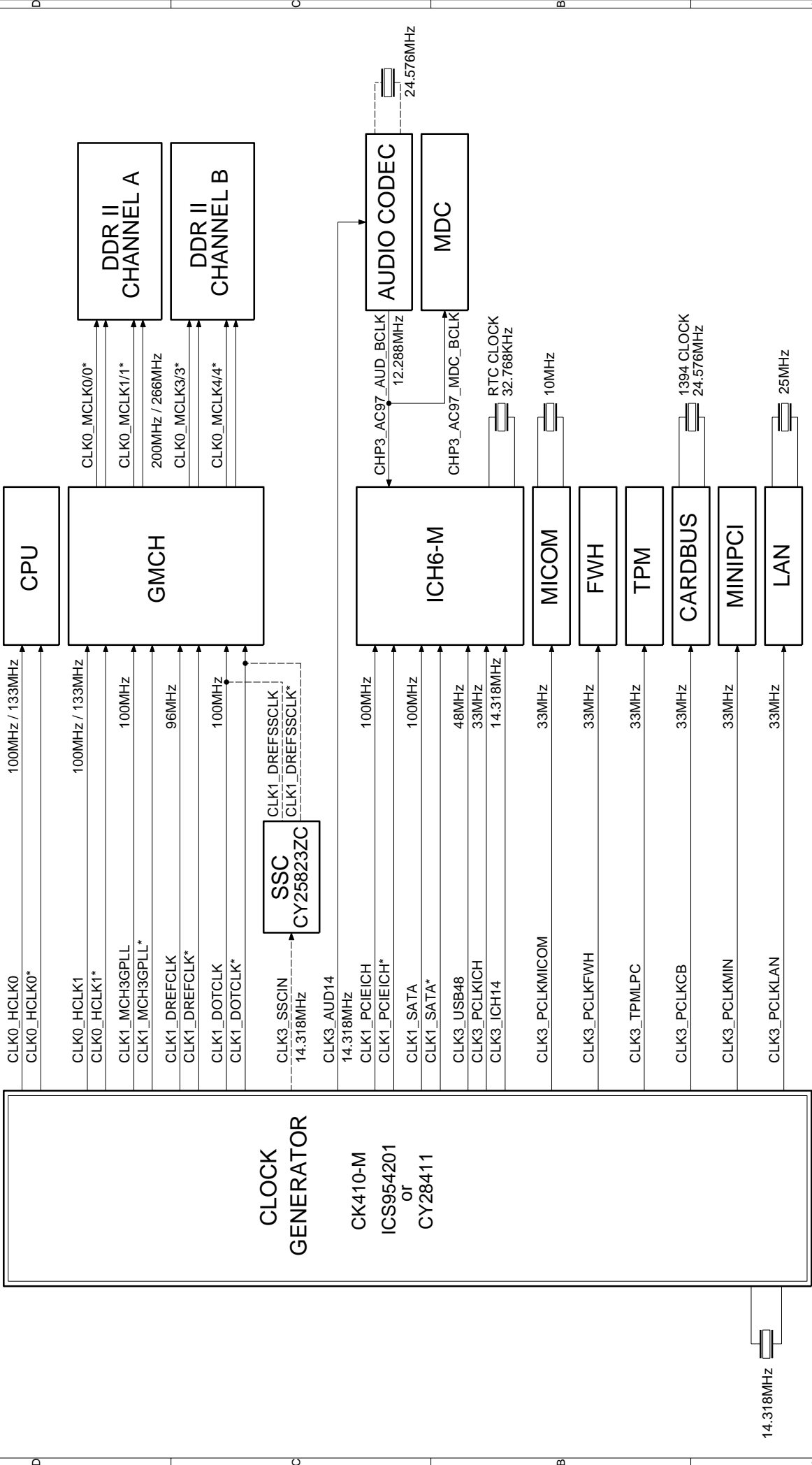
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	KEVIN LEE		POWER DIAGRAM		
MODULE CODE		LAST EDIT		PAGE 4 OF 46	
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SAMSUNG ELECTRONICS	
PART NO. BA41-00529A	
AQUILA-SONOMA MAIN	
POWER DIAGRAM	



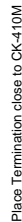
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APPROVAL	REV	MAIN	PART NO.
MODULE CODE	REV	CLOCK DIAGRAM	BA41-00529A
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**▲**



500mils of CK-410M

→

51

R5

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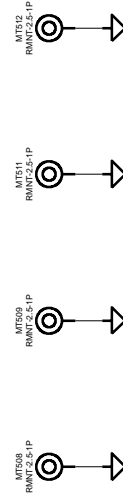
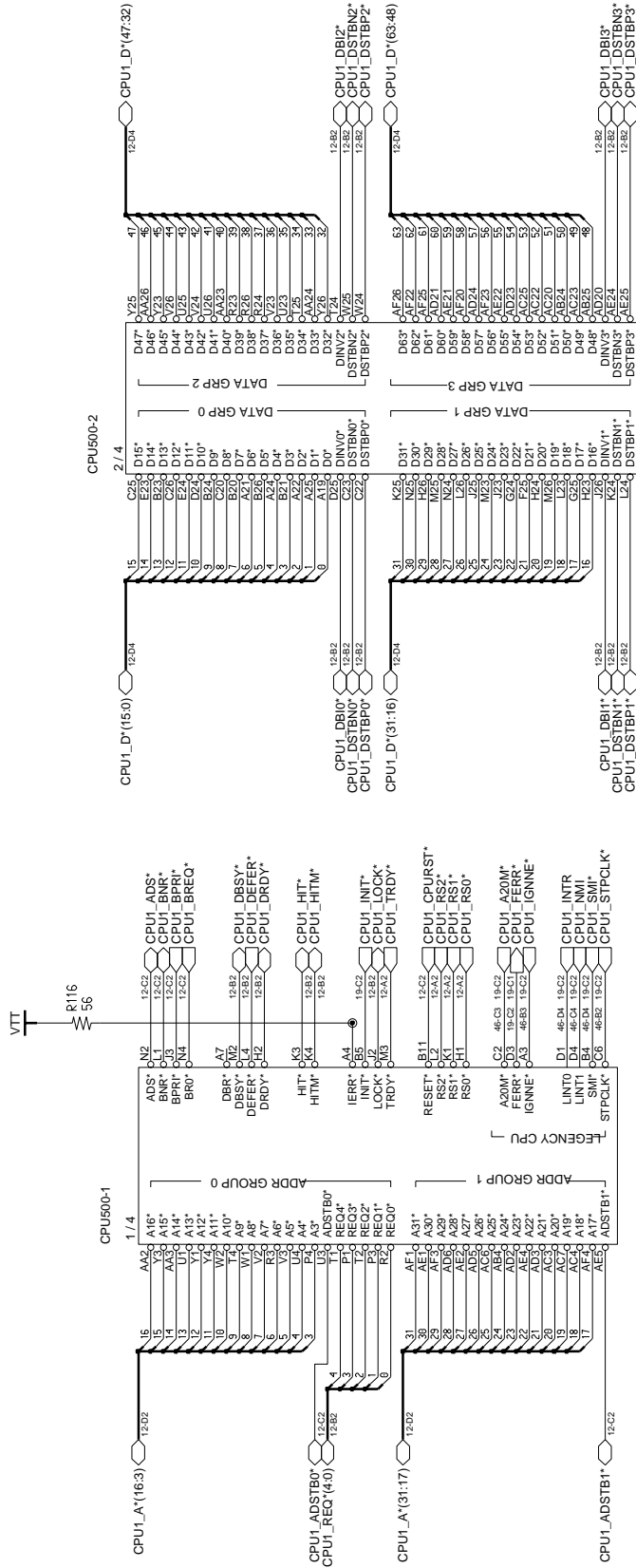
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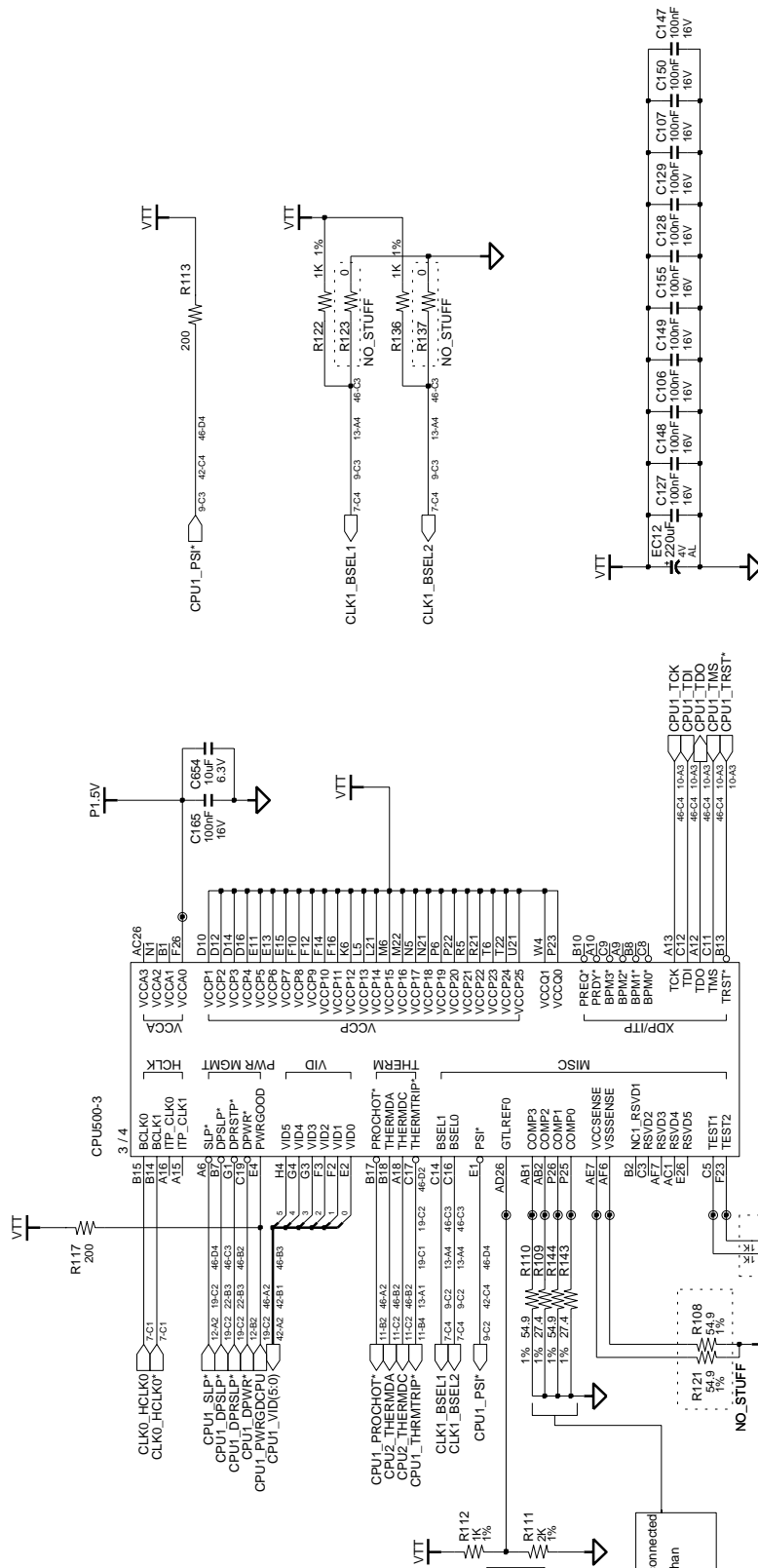
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	CHKD		MP	
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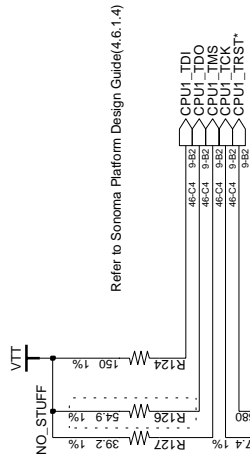


**THERTRIP\* should connect to ICH6M & Alviso  
OD signal driven by CPU and GMCH**

**GTLREF** : Keep the Voltage divider within 0.5" of the First GTLREF0 with Z0= 55 ohm trace  
Minimize coupling of any switching signals to this

COMP 0, 2 < (COMP 1, 3) should be connected  
Z0=27.4 ohm (55 ohm) trace shorter than  
1/2" to their respective Banias Pins

DATE	6/25/2005	TITLE		SAMSUNG	
DESIGN	DEV. STEP	MP		ELECTRONICS	
DESIGN	ANTONIO	MAIN		PART NO.	
APPROVAL	KEVINLEE	CPU (2/3)		BA41-00529A	
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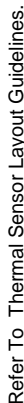


Refer to Sonoma Platform Design Guide(4.6.1.4)

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REV	1.0					
LAST EDIT						
DRAWN	ZHOU & GUO					
CHECK	ANTONIO					
APPROVAL	KEVIN LEE					
MODULE CODE						
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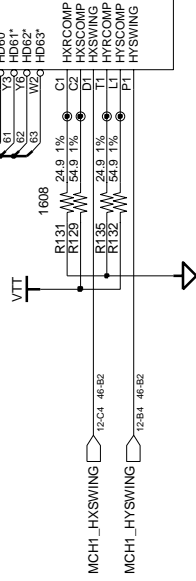
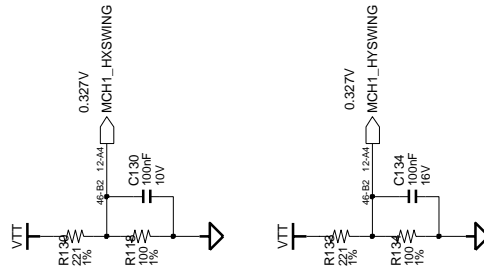
- Place the Thermal Sensor close to a remote diode.
- Keep traces away from high voltage (+12V bus)
- Keep traces away from fast data buses and CRT signal.
- Use recommended trace widths and spacings (10mil)
- Place a ground plane under the traces.
- Use guard traces flanking DXP and DXN and connecting to GND

DRAWN	DATE		TITLE		SAMSUNG ELECTRONICS
CHECK	6/25/2005		AQUILA-SONOMA MAIN		
APPROVAL	DEV. STEP		MP		
	REV		1.0		
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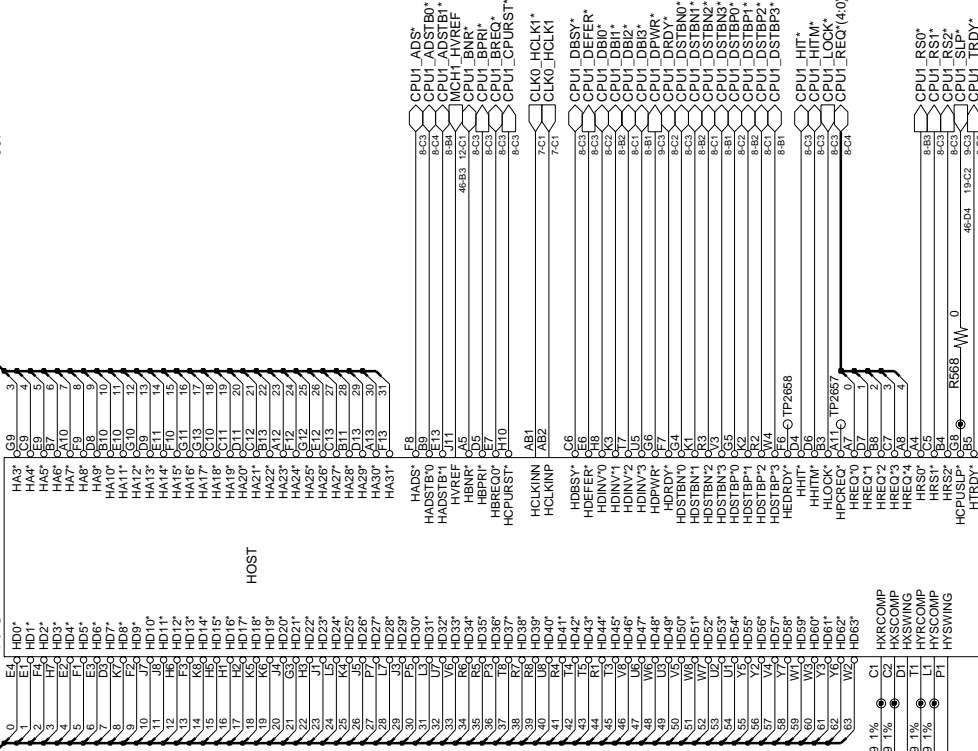
ALVISO500-1  
ALVISO-GMCH

CPU1\_D\*(63:0) 8C1 8C2

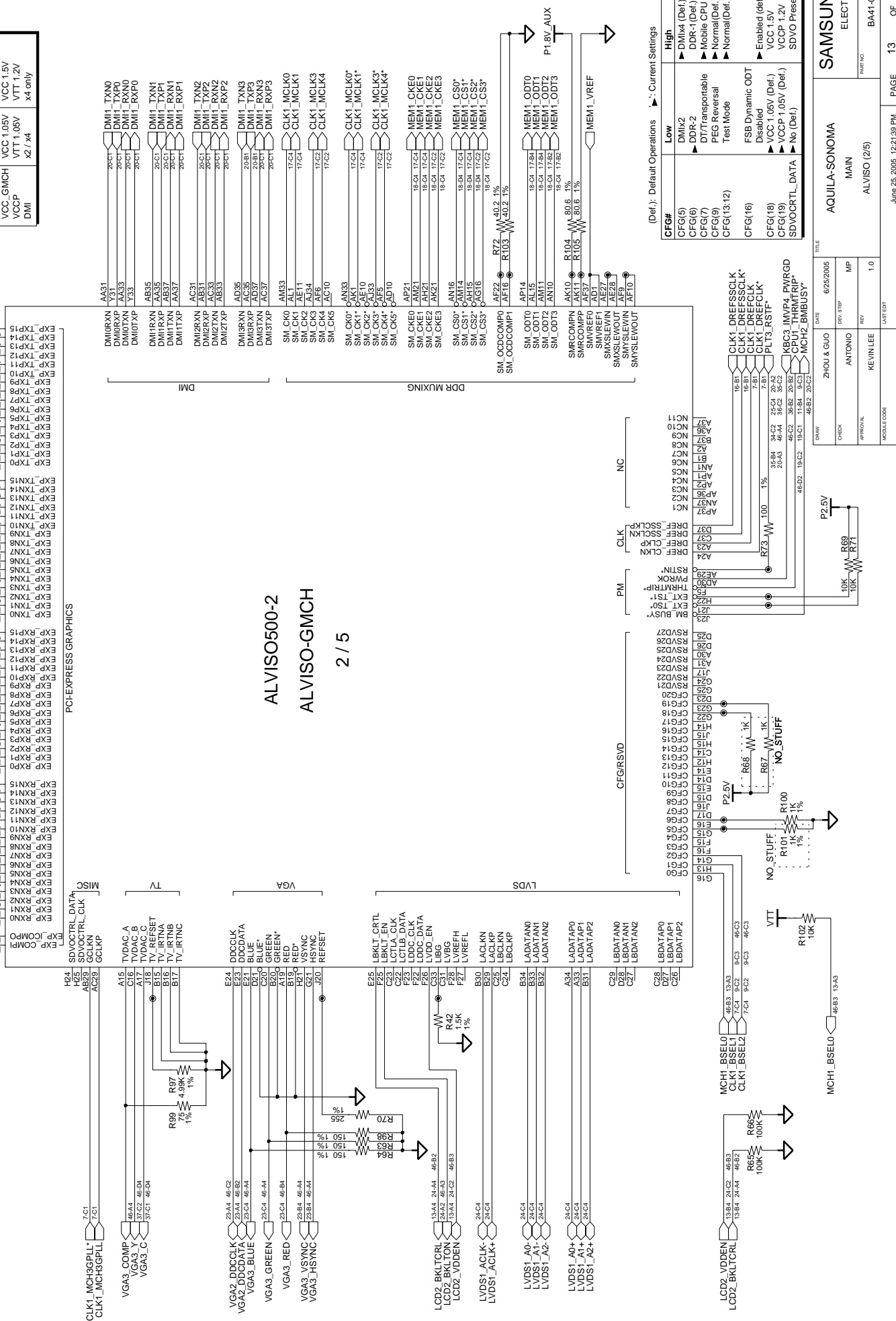
CPU1\_A\*(31:3) 8C4



## HOST

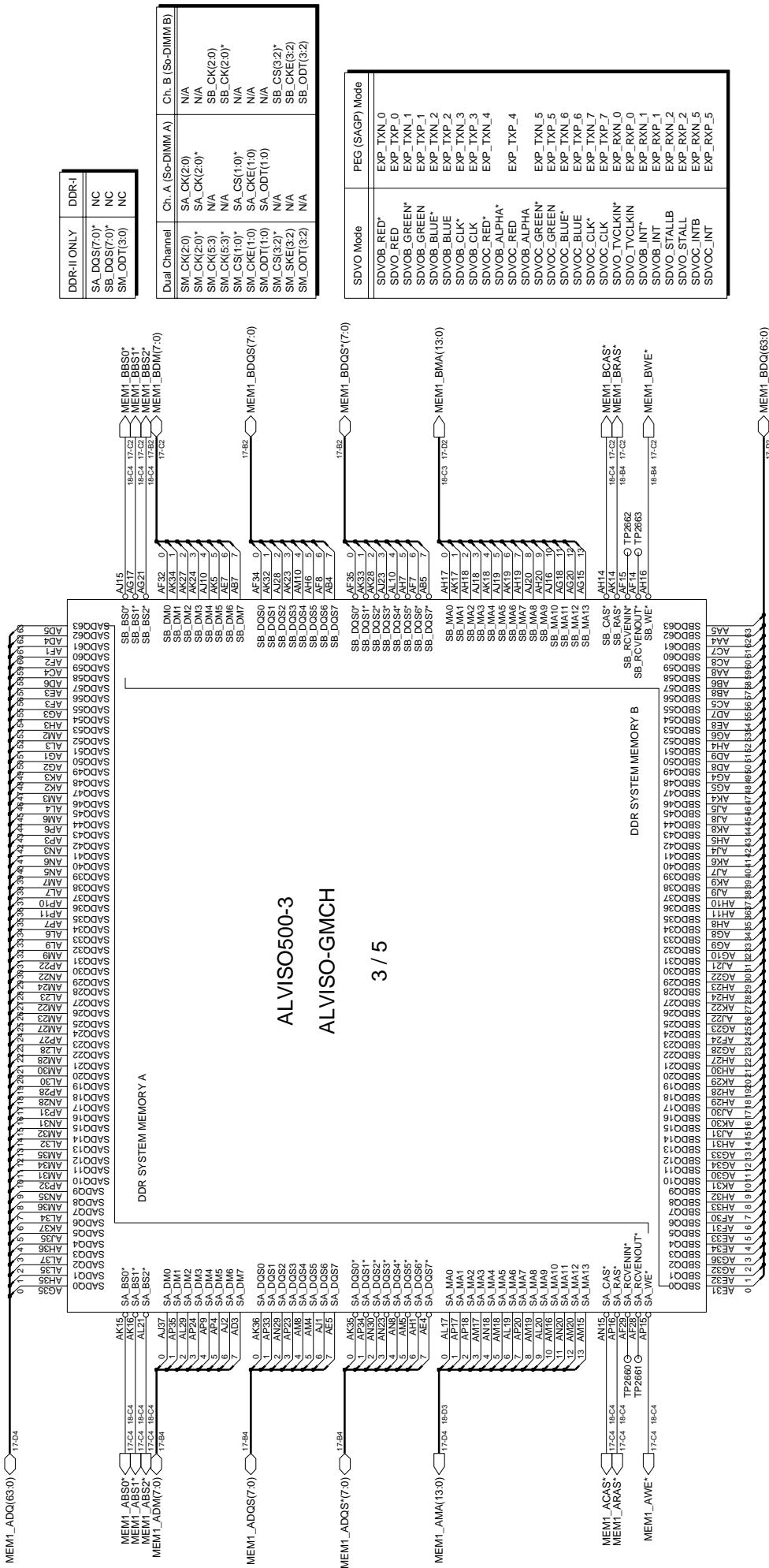


Feature	Alviso	Iris(Grantsdale)
VCC_GMCH	VCC 1.05V	VCC 1.5V
VCCP	VTT 1.05V	VTT 1.2V
DMI	x2 / x4	x4 only



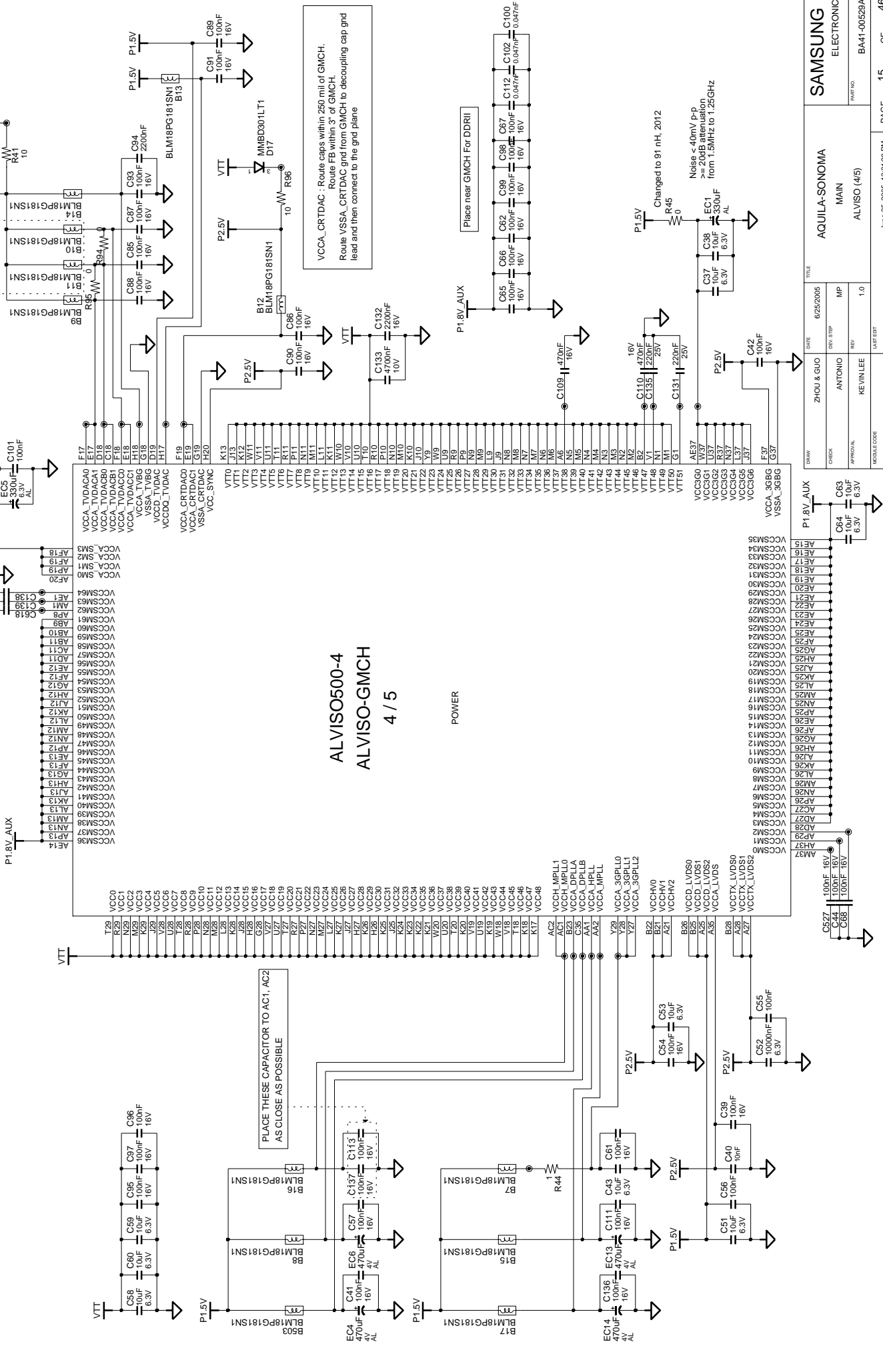
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APPROVAL									
MOBILE CODE								PAGE 13 OF 46	
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AQUILA-SONOMA		MAIN	
ALVISO (3/5)		BA41-00529A	
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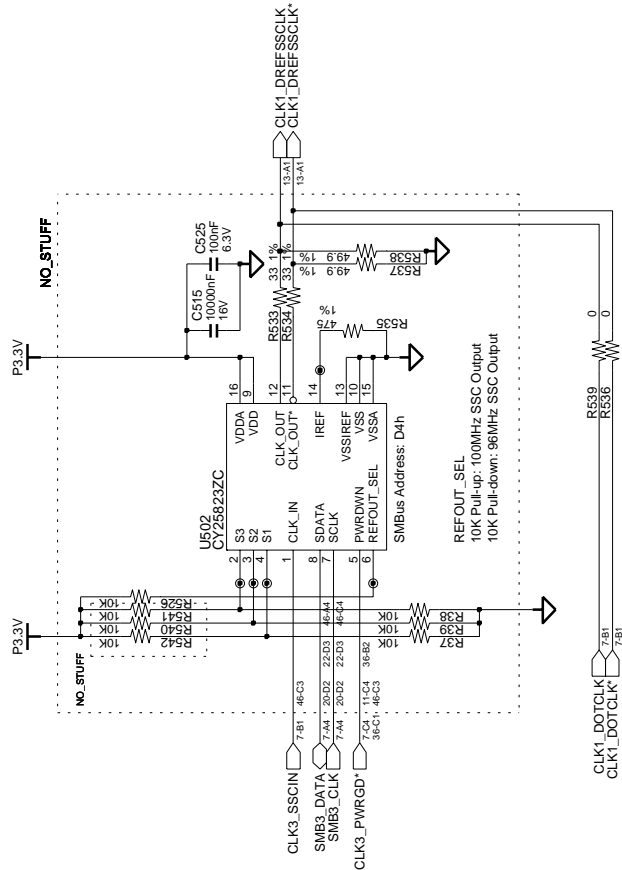
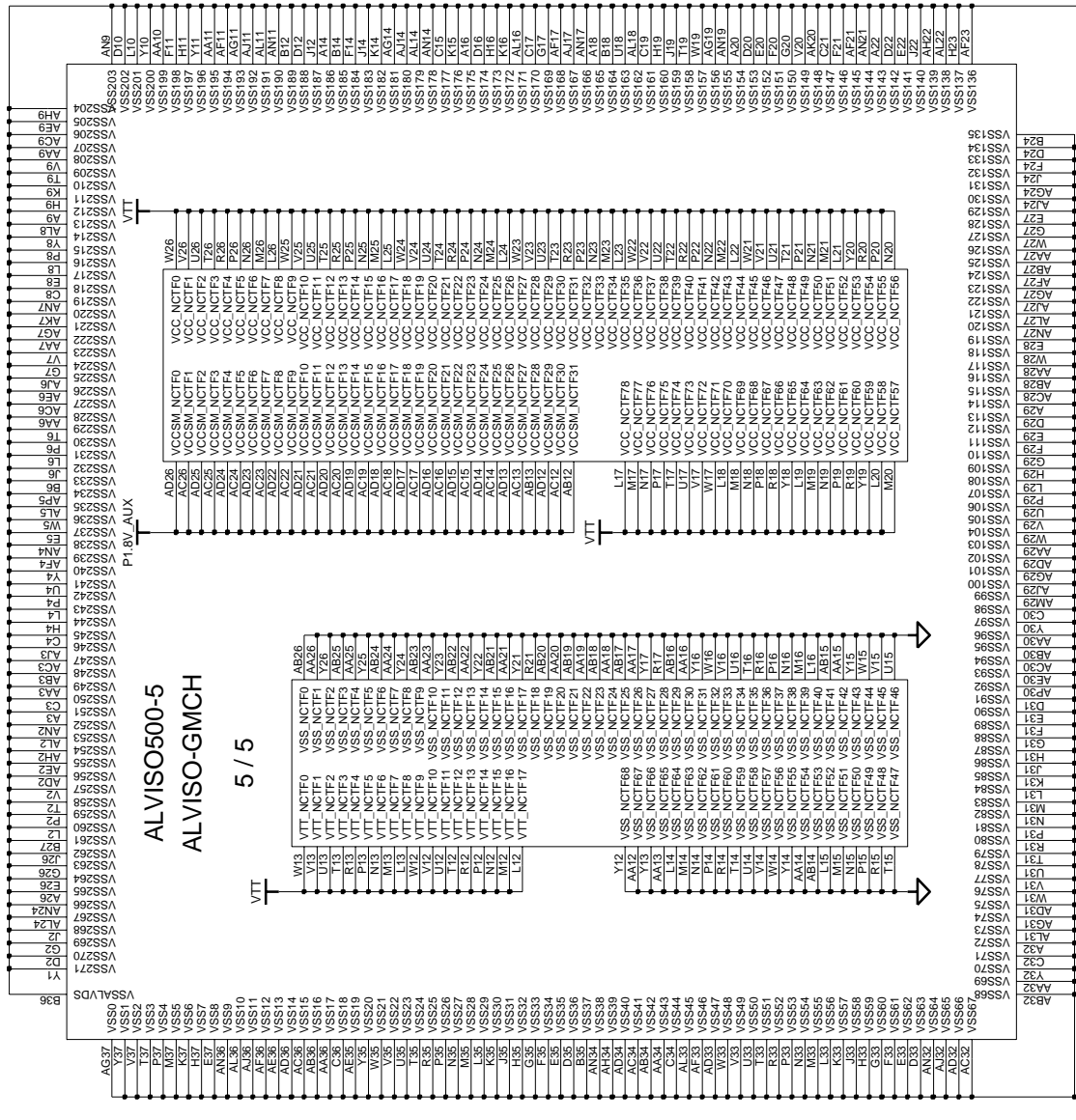
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AQUILA-SONOMA		MAIN	
ALVISO (4/5)		BA41-00529A	
DATE	6/25/2005	REV	1.0
CHKD	ANTONIO	APPROVAL	KEVIN LEE
DESIGN	ZHOU & GUO	MODULE CODE	
DATE	6/25/2005	REV	1.0
CHKD	ANTONIO	APPROVAL	KEVIN LEE
DESIGN	ZHOU & GUO	MODULE CODE	
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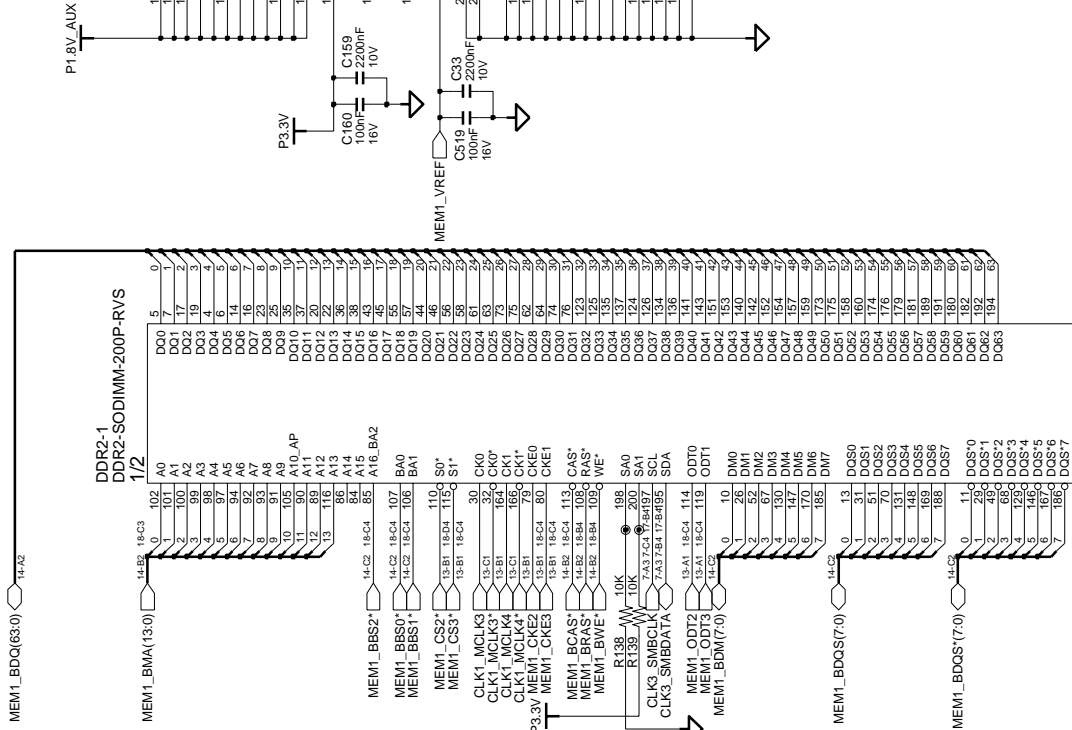


NCTF: Non-Critical to Function  
VTT\_NCTF : NCTF FSB power supply (1.05V or 1.2V)  
VCC\_NCTF : NCTF Core Vcd(1.05V or 1.5V)



DATE	DATE	TITLE	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-00529A
DRAWN	ZHOU & GUO	AQUILA-SONOMA	
CHECK	CDWG STEP	MP	
APPROVAL	ANTONIO	MAIN	
	REV	ALVISO (5/5)	
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			PAGE 16 OF 46 June 25, 2005 12:21:39 PM

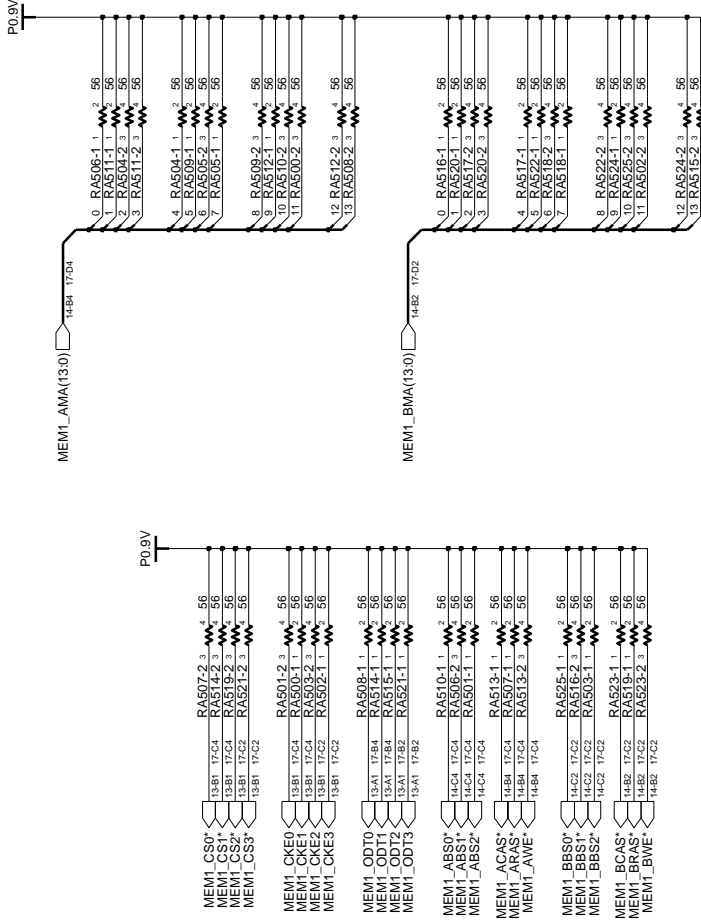




DESIGN	ZHOU & GUO	DATE	6/25/2005	TITLE	AQUILA-SONOMA MAIN DDR II SODIMM	SAMSUNG ELECTRONICS PART NO. BA1-00529A
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APPROVAL	KEVIN LEE	REV	1.0			
MODULE CODE		LAST EDIT				

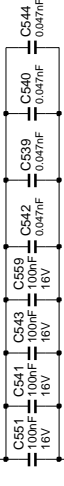
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Place one cap close to every 2 pull-up resistors terminated to P0.9V

P0.9V Decoupling Caps

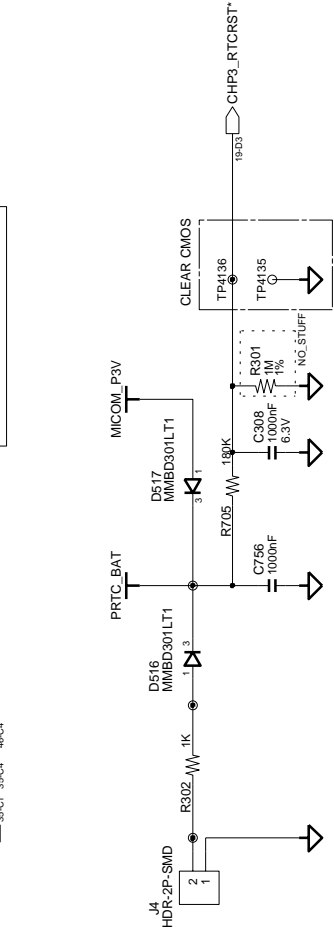
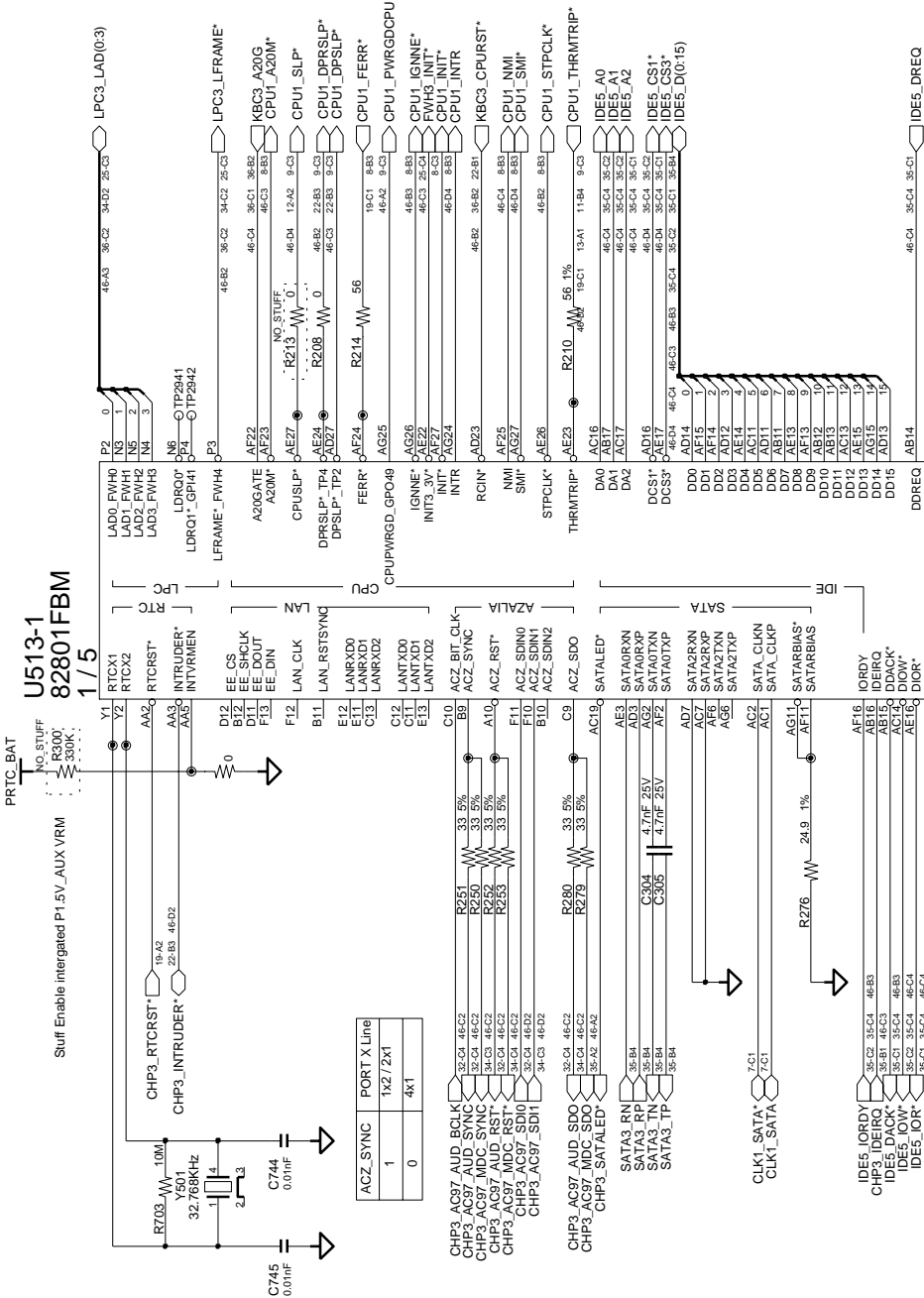


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REV	1.0	MP	MAIN
LAST EDIT	KEVIN LEE	MP	BA41-00529A
MODULE CODE	DDR II TERMINATIONS	PAGE	18 OF 46
	June 25, 2005 12:21:39 PM		SAMSUNG X06 9:16

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CPU\_SLP\*  
Dothan A stepping : Stuff resistor on SLP\* of ICH6  
Dothan B stepping ~ : Stuff resistor on SLP\* of Alviso

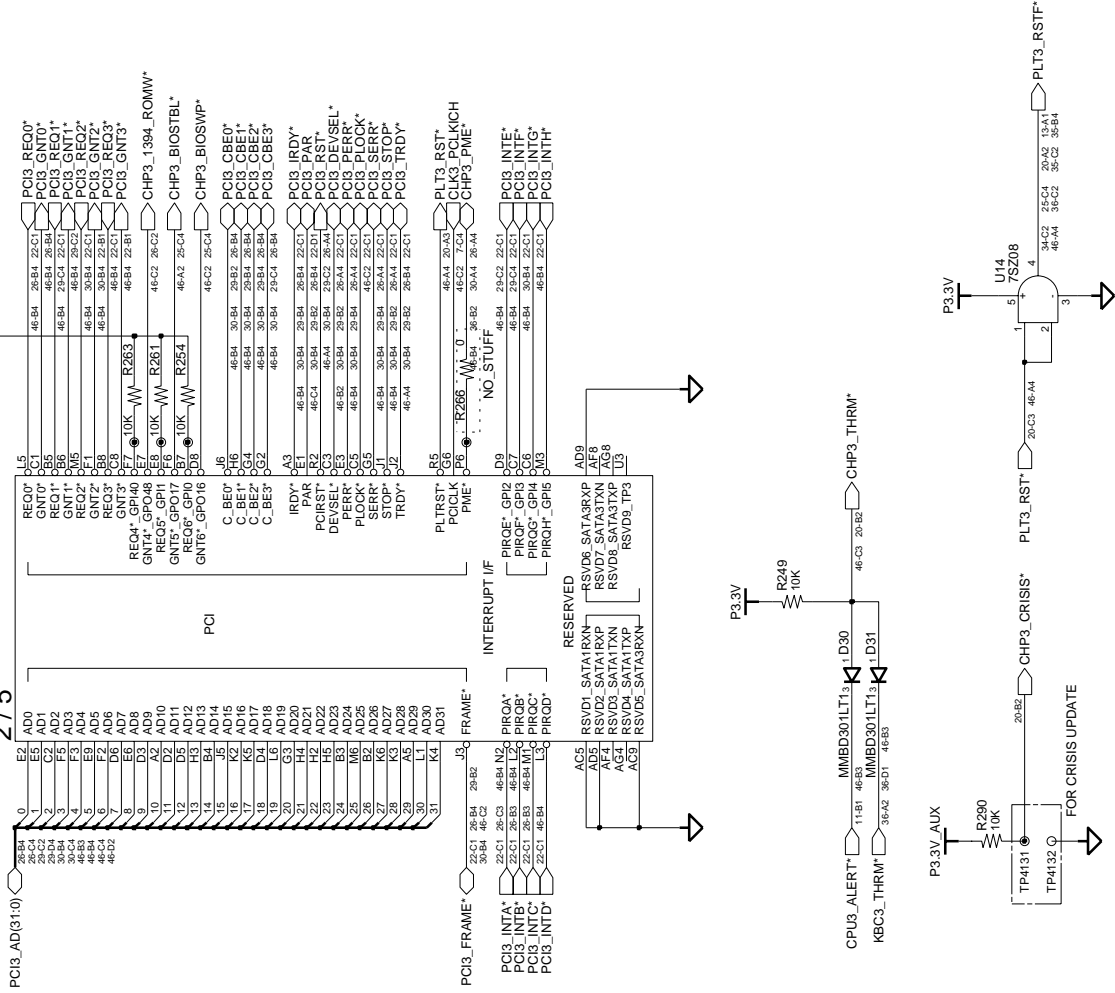
DPRS\_SLP\*  
Dothan A stepping : No Stuff  
Dothan B stepping ~ : Stuff



DATE	6/25/2005	TITLE	SAMSUNG
CHKD	STOP	MP	ELECTRONICS
REV	1.0	IC6M (1/4)	BA41-00529A
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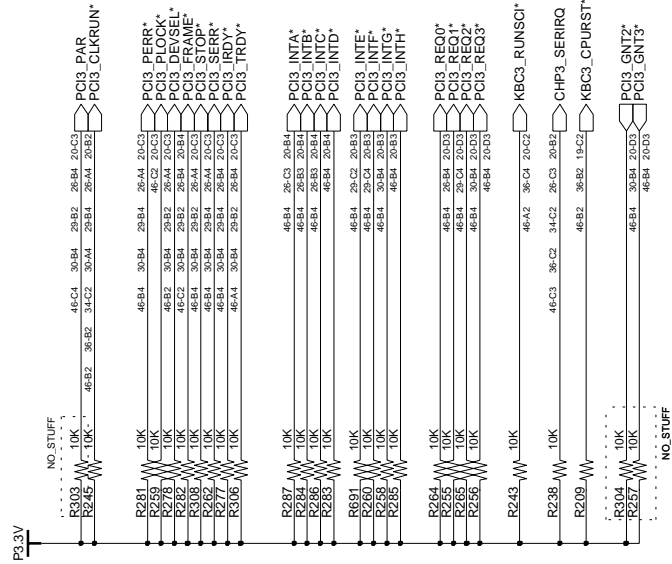
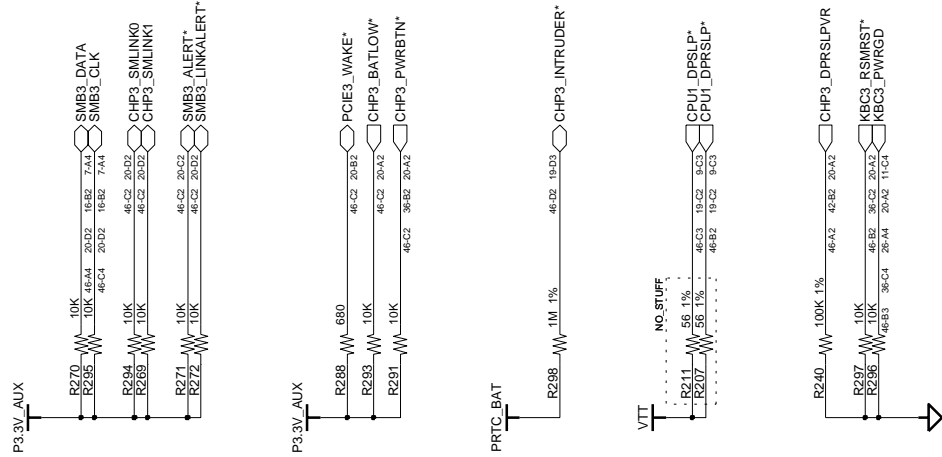
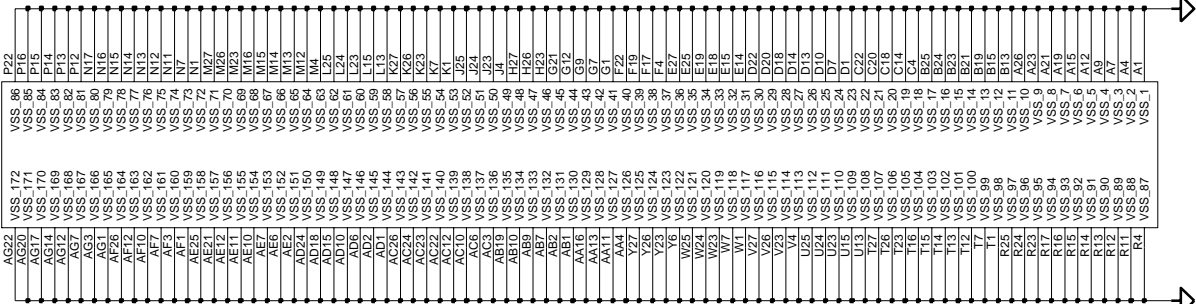
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### U513-2 82801FBM 2 / 5



[illegible]

U513-5  
82801FBM  
5 / 5



ICH6-M Strapping Options

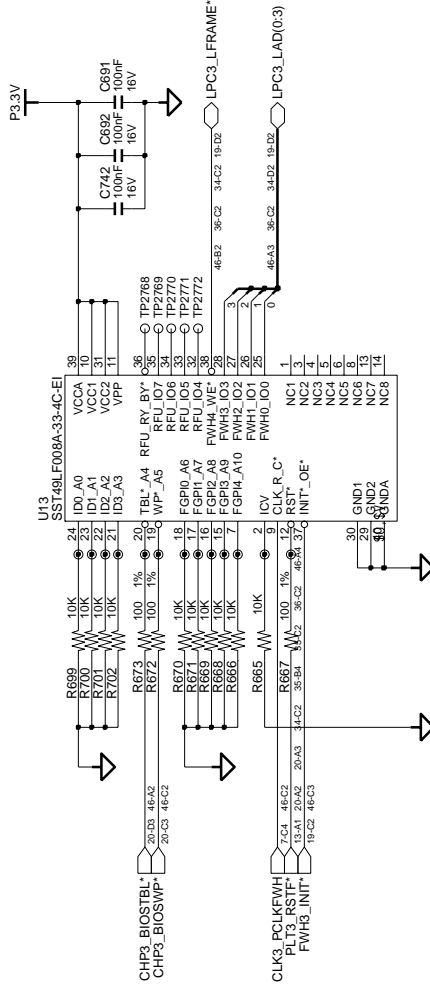
Function	Default
CHP3_SPKR	No Stuff
CHP3_BIOSWP*	No Stuff
PC/PCI_GNTA*	No Stuff
AC97_SDOUT	TBD
EEP_DOUT	TBD

SAMSUNG ELECTRONICS	
PART NO. BA41-00529A	
SAMSUNG	
AQUILA-SONOMA	
MAIN	
ICH6-M (4/4)	
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SAMSUNG X06 8-22	

DATE	6/25/2005	TITLE		SAMSUNG			
CHK. STEP	MP	AQUILA-SONOMA		ELECTRONICS			
DESIGNER	ANTONIO	MAIN					
REV	1.0	CRT					
APPROVAL	KEVIN LEE	LAST EDIT		PART NO. BA41-00529A			
MODULE CODE		JUNE 25, 2005 12:13 PM		PAGE	23	OF	46

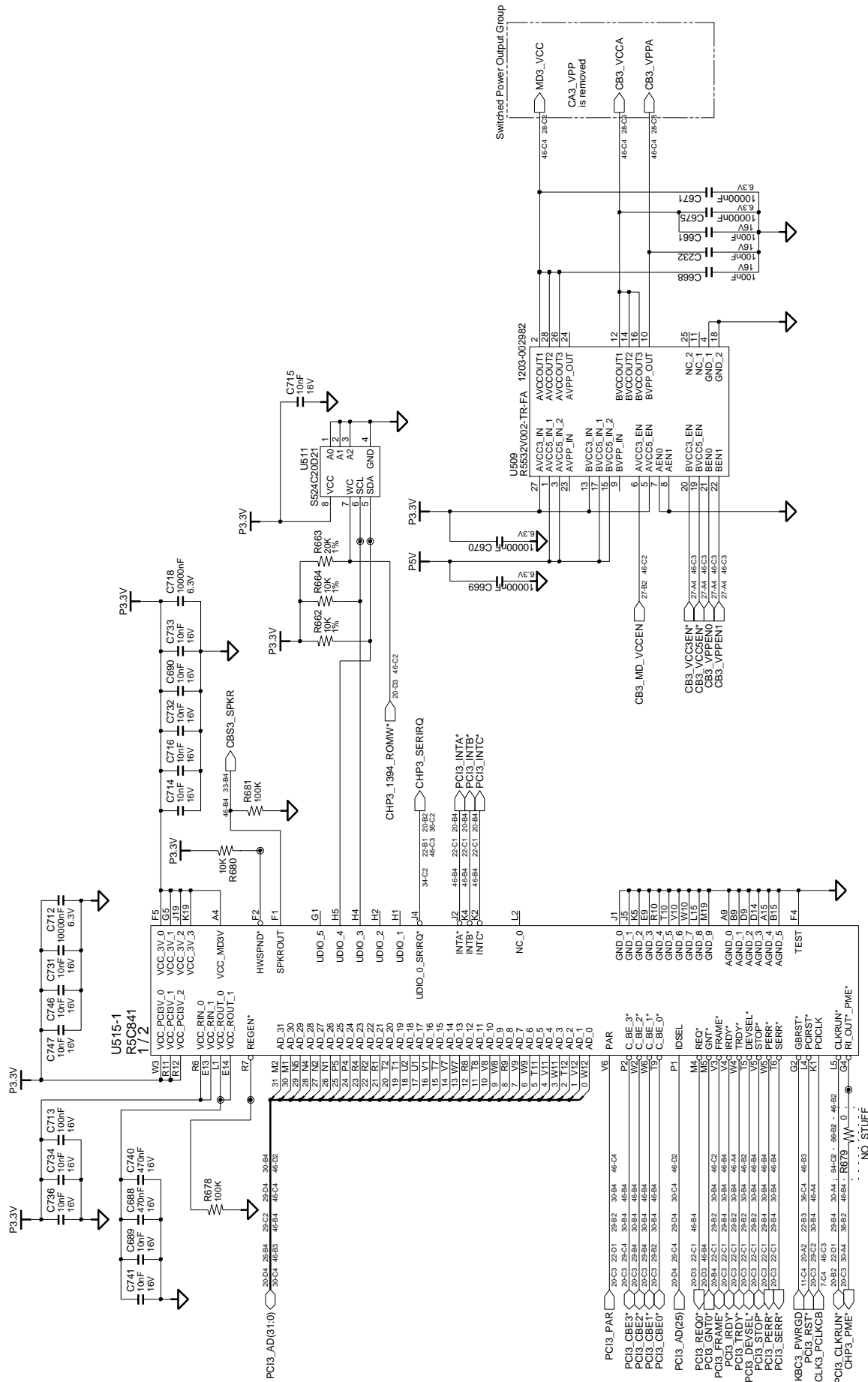




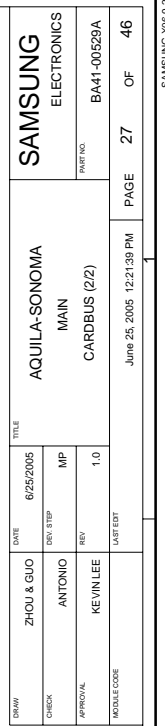


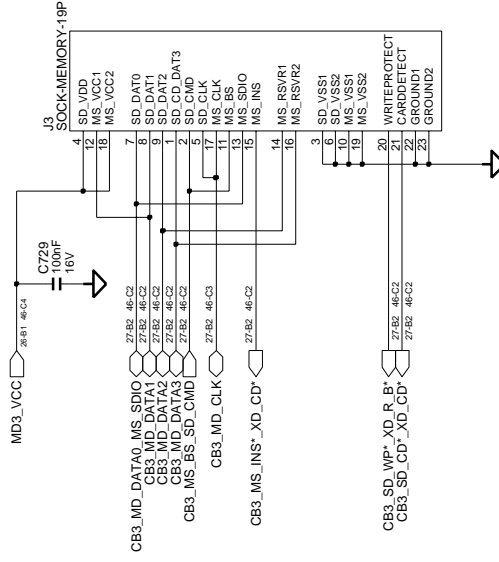
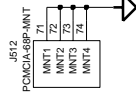
02	VERIFY REAL MODE	66	CONFIGURE ADVANCE CACHE REG.
03	DISABLE NMI	6A	DISPLAY EXTERNAL CACHE SIZE
04	GET CPU TYPE	6C	DISPLAY SHADOW MESSAGE
06	INIT. SYSTEM H/W	6E	DISPLAY NON-DISPOSABLE SEGMENT
08	INIT. CHIPSET REG.	70	DISPLAY ERROR MESSAGE
09	SET IN POST FLAG	72	CHECK FOR CONFIGURATION ERROR
0A	INIT CPU REG	74	TEST REAL-TIME CLOCK
0B	CPU CACHE ON	76	CHECK FOR KEYBOARD ERROR
0C	INIT.CACHE TO POST	7C	SETUP HARDWARE INTERRUPT VECTOR
0E	INIT. I/O VALUE	7E	TEST COPROCESSOR IF PRESENT
0F	ENABLE THE L-BUS IDE	80	DISABLE ON-BOARD I/O PORT
10	INIT. POWER MANAGER	82	DETECT AND INSTALL EXT.RS232C
11	LOAD ALTERNATE REG.	84	DETECT AND INSTALL EXT PARALLEL
13	PCI BUS MASTER RESET	86	RE-INIT. ON-BOARD I/O PORT
	WITH INITIAL POST VALUE	88	INIT. BIOS DATA ROM
14	INIT. KEYBOARD CONTROLLER	8A	INIT. EXTENDED BIOS DATA AREA
16	CHECK CHECKSUM	8C	INIT. FDD CONTROLLER
18	8254 TIMER INIT.	9A	SHADOW OPTION ROMS
1A	8237 DMA CONTROLLER INIT.	9C	SETUP POWER MANAGEMENT
1C	RESET INTERRUPT CONTROLLER	9E	ENABLE H/W INTERRUPT
20	TEST DRAM REFRESH	A0	SET TIME OF DAY
22	TEST 8742 KEYBOARD CONTROLLER	A4	INIT. TYPEMATIC RATE
24	SET ES SEGMENT REG. TO 4GB	A8	ERASE F2 PROMPT
26	ENABLE A20	AA	SCAN FOR F2 KEY STROKE
28	AUTO SIZING DRAM	AC	ENTER SETUP
32	COMPUTE THE CPU SPEED	AE	CLEAR IN POST FLAG
34	TEST CMOS RAM	B0	CHECK FOR ERRORS
38	SHADOW SYSTEM BIOS ROM	B2	POST DONE-PREPARE TO BOOT O/S
3A	AUTO SIZING CACHE	B4	ONE BEEP
3C	CONFIGURE ADVANCED CHIPSET REG.	B6	CHECK PASSWORD (OPTION)
3D	LOAD ALTER REG. WITH CMOS VALUE	B7	ACPI INIT
42	INIT. INTERRUPT VECTOR	BA	DMI INIT
44	INIT. BIOS INTERRUPT	BE	CLEAR SCREEN
46	CHECK ROM COPY/RIGHT NOTICE	C0	TRY BOOT WITH INT'9
47	INIT. I20 SUPPORT IF INSTALLED	D0	INTERRUPT HANDLER ERROR
48	CHECK VIDEO CONFIGURE AGAINST CMOS	D2	UNKNOWN INTERRUPT ERROR
49	INIT. PCI BUS AND DEVICE	D4	PENDING INTERRUPT ERROR
4A	INIT. ALL VIDEO BIOS ROM	D6	SHUTDOWN 5
4C	SHADOW VIDEO BIOS ROM	D8	SHUTDOWN ERROR
50	DISPLAY CPU TYPE AND SPEED	DA	EXTENDED BLOCK MOVE
52	TEST KEYBOARD	DC	SHUTDOWN 10
54	SET KEYCLICK IF ENABLED	89	ENABLE NMI
56	ENABLE KEYBOARD	90	INIT. HDD CONTROLLER
58	TEST FOR UNEXPECTED INTERRUPTS	91	INIT. LOCAL BUS HDD CONTROLLER
5A	DISPLAY * PRESS ..... SETUP*	92	JUMP TO USER PATCH 2
5C	TEST RAM BETWEEN 512K AND 640K	94	DISABLE A20 ADDRESS LINE
60	TEST EXTENDED MEMORY	96	CLEAR HUGE ES SEGMENT REG.
62	TEST EXTENDED MEMORY ADDRESS LINE	98	SEARCH FOR OPTION ROMS
64	JUMP TO USER PATCH 1		

DRAWN		DATE	6/25/2005	TITLE		SAMSUNG	
CHECK		REV. STEP		AQUILA-SONOMA		ELECTRONICS	
APPROVAL		REV	1.0	MAIN		PART NO.	
MODULE CODE		KEVIN LEE		FWH		BA41-00529A	
		LAST EDIT		June 25, 2005 12:21:39 PM		PAGE 25 OF 46	



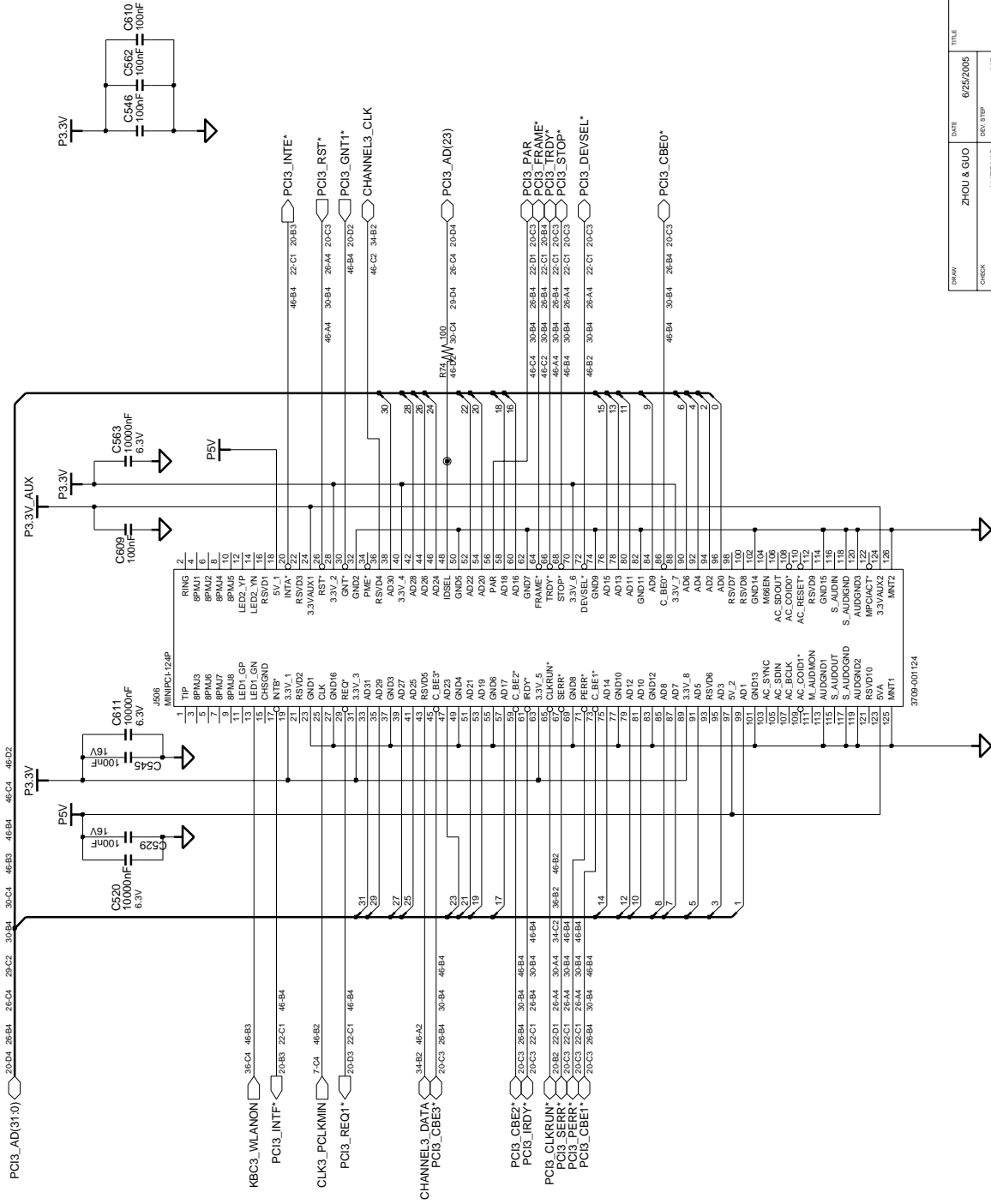
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CHECKED	ANTONIO	DEL. STEP	MP			PART NO.
APPROVAL	KEVIN LEE	REV	1.0		CARDBUS (1/2) & 1394	BA41-000529A
MATERIAL CODE		LAST EDIT				
					PAGE	26 OF 46
						June 25, 2005 12:21:39 PM
						SAMSRING_V06.0.0



[illegible]

DESIGN	ZHOU & GUO	DATE	6/25/2005	TITLE		SAMSUNG ELECTRONICS	
CHECK	ANTONIO	CHK/STEP	MP	MAIN			
APPROVAL	KEVIN LEE	REV	1.0	POMCIA / MEDIA CARD SOCKET		PART NO. BA41-00529A	
MODULE CODE		LAST EDIT		PAGE 28		OF 46	
				June 25, 2005 12:21:39 PM			
				1			
SAMSUNG 2005 9							

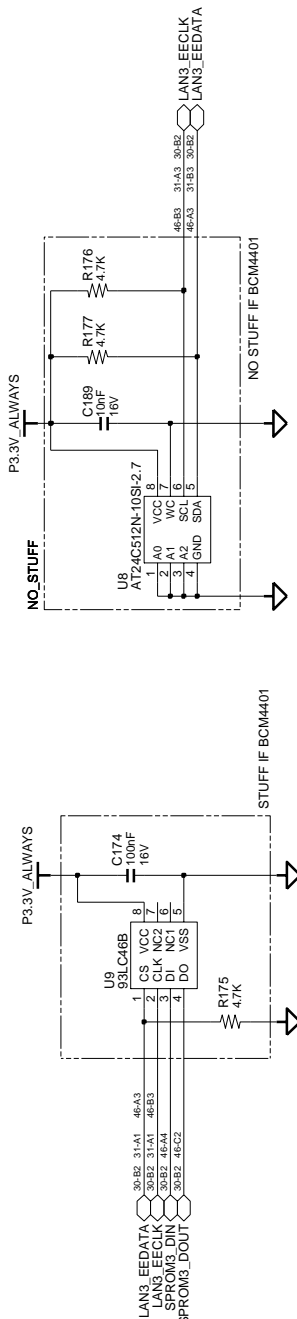
## MINI PCI



DRAWN	ZHOU & GUO	DATE	6/25/2005	TITLE	AQUILA-SONOMA	SAMSUNG
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APPROVAL	KEVIN LEE	REV	1.0	1.0	MINI PCI	
MODULE CODE		LAST EDIT	June 25, 2005 12:21:39 PM	PAGE	29	OF 46

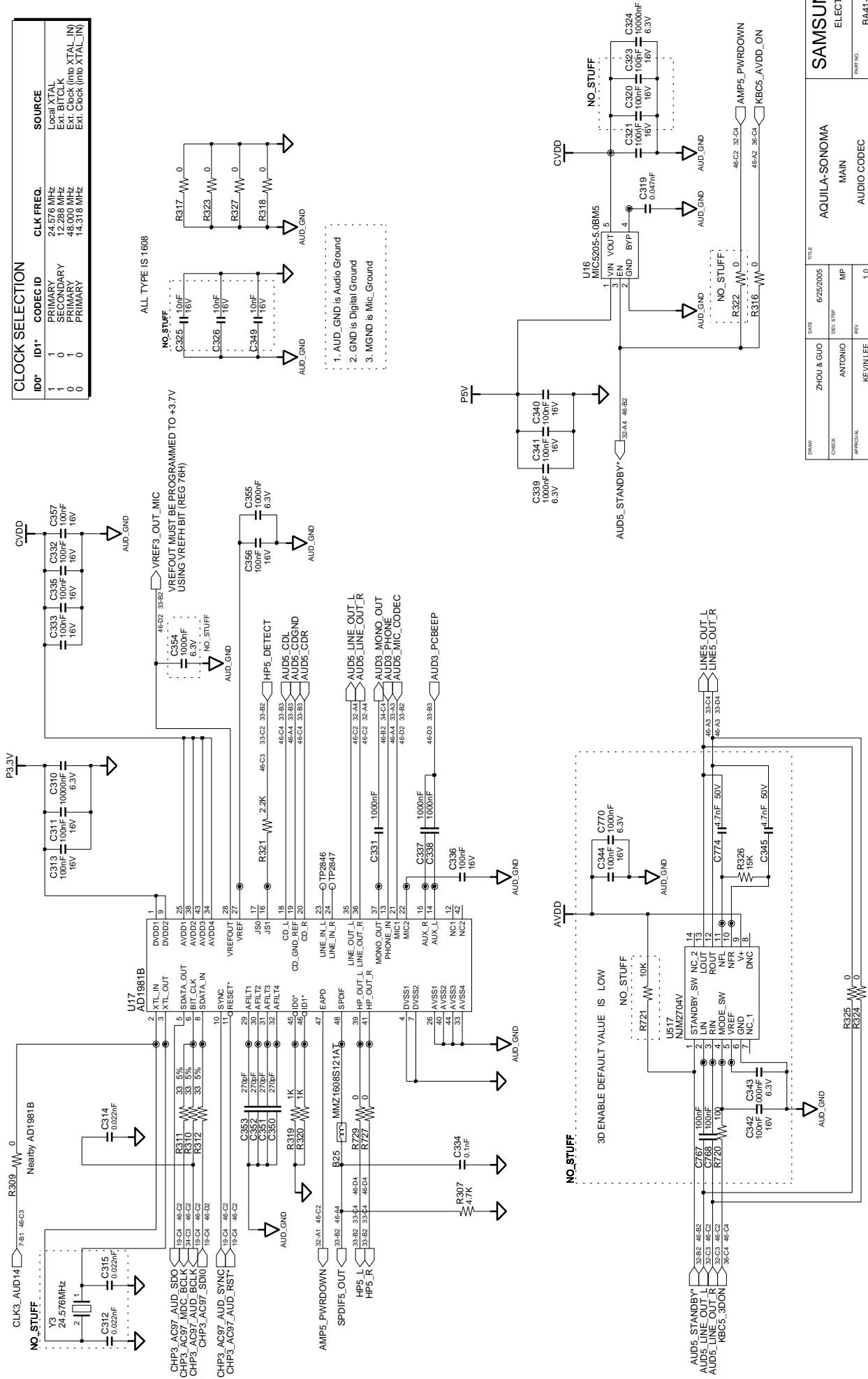


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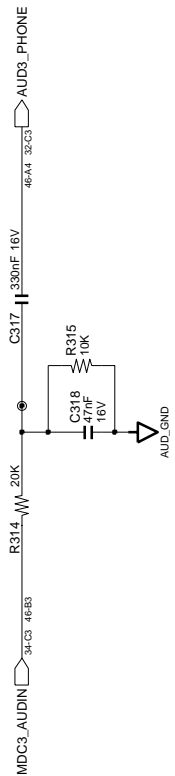
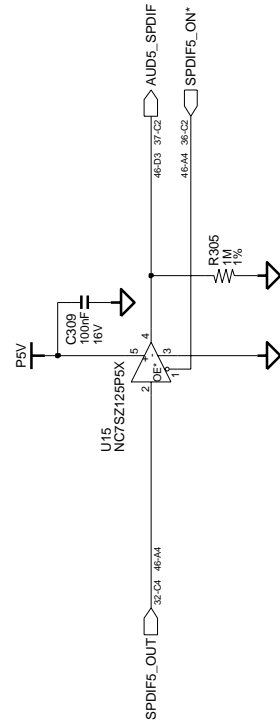
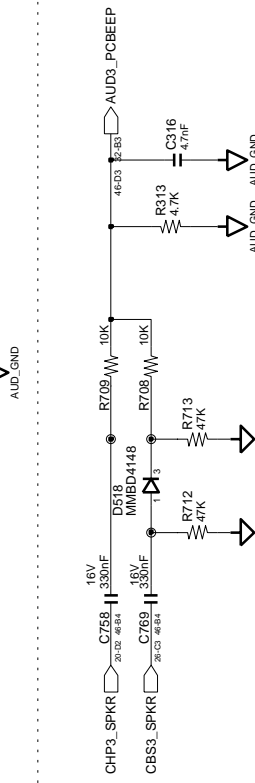
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CHECK	6/25/2005	AQUILA-SONOMA	
APPROVAL	DEV. STOP	MAIN	
	REC'D	LOM (2/2)	
MODULE CODE	REV	1.0	
LATE EST			PAGE 31 OF 46
June 25, 2005 12:21:39 PM			

CLOCK SELECTION			
ID0*	ID1*	CODEC ID	SOURCE
1	0	PRIMARY	24.576 MHz
1	0	SECONDARY	12.288 MHz
0	1	PRIMARY	48.000 MHz
0	0	PRIMARY	14.318 MHz



SWAMP	DATE	TITLE		<b>SAMSUNG</b> <b>ELECTRONICS</b> PART NO. BA41-00529A
CHECK	6/25/2005			
APPROVAL	REV. 01/02	MAIN		
	REV.	1.0		
MODULE CODE		AUDIO CODEC		PAGE 32 OF 46 June 25, 2005 12:21:39 PM

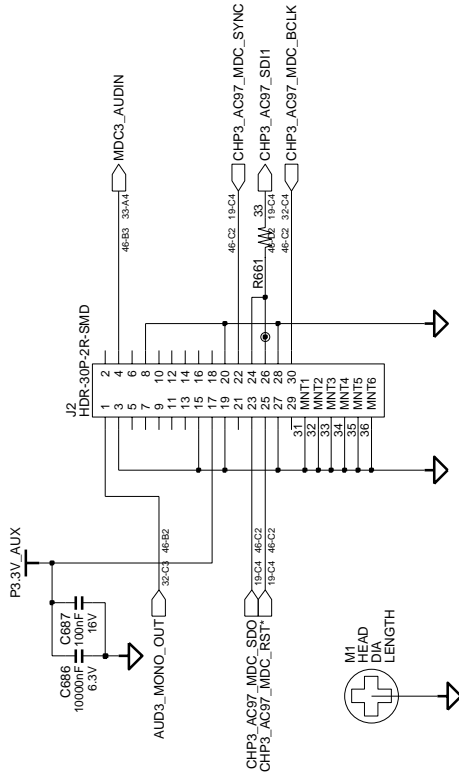




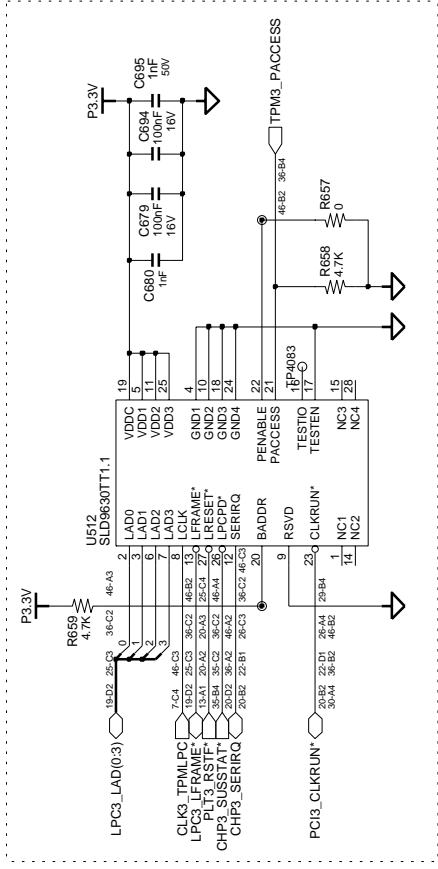
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CHECK	ZHOU & GUO	6/25/2005	AQUILA-SONOMA	
APPROVAL	DEV. STEP	MP	MAIN	
	ANTONIO	REV	AMP	
	KEVIN LEE	1.0		
MODULE CODE		LAST EDIT		PAGE 33 OF 46
		June 25, 2005 : 12:21:39 PM		

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## MDC Connector

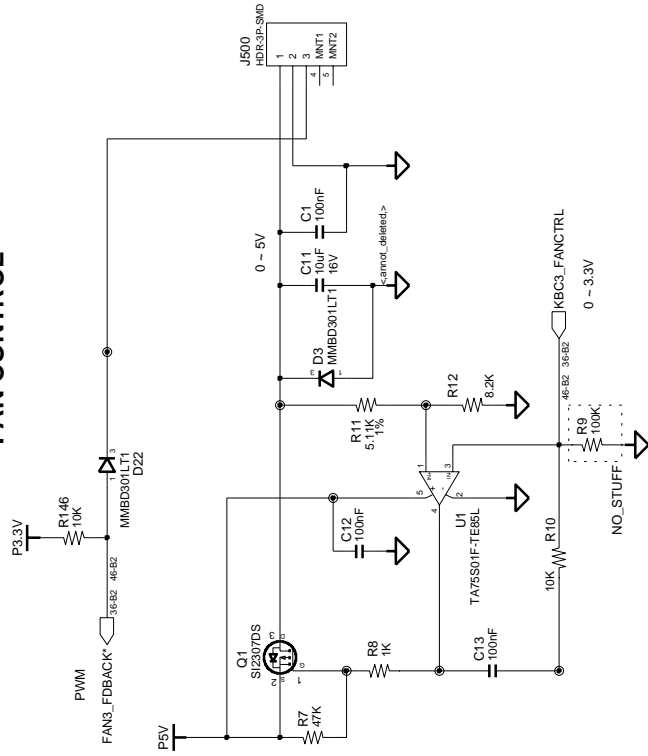


## TPM

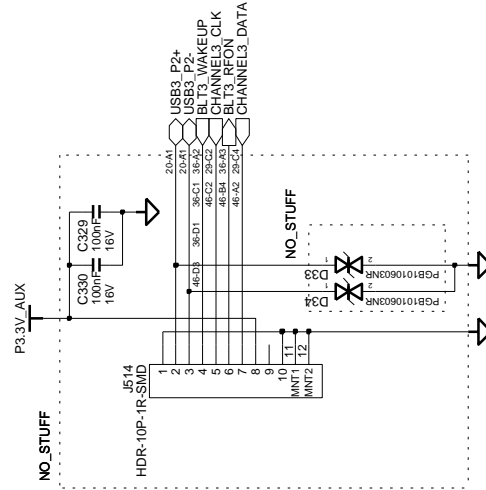


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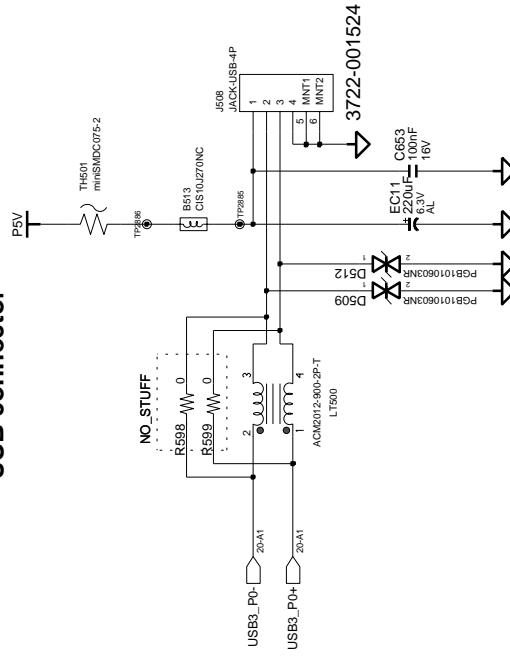
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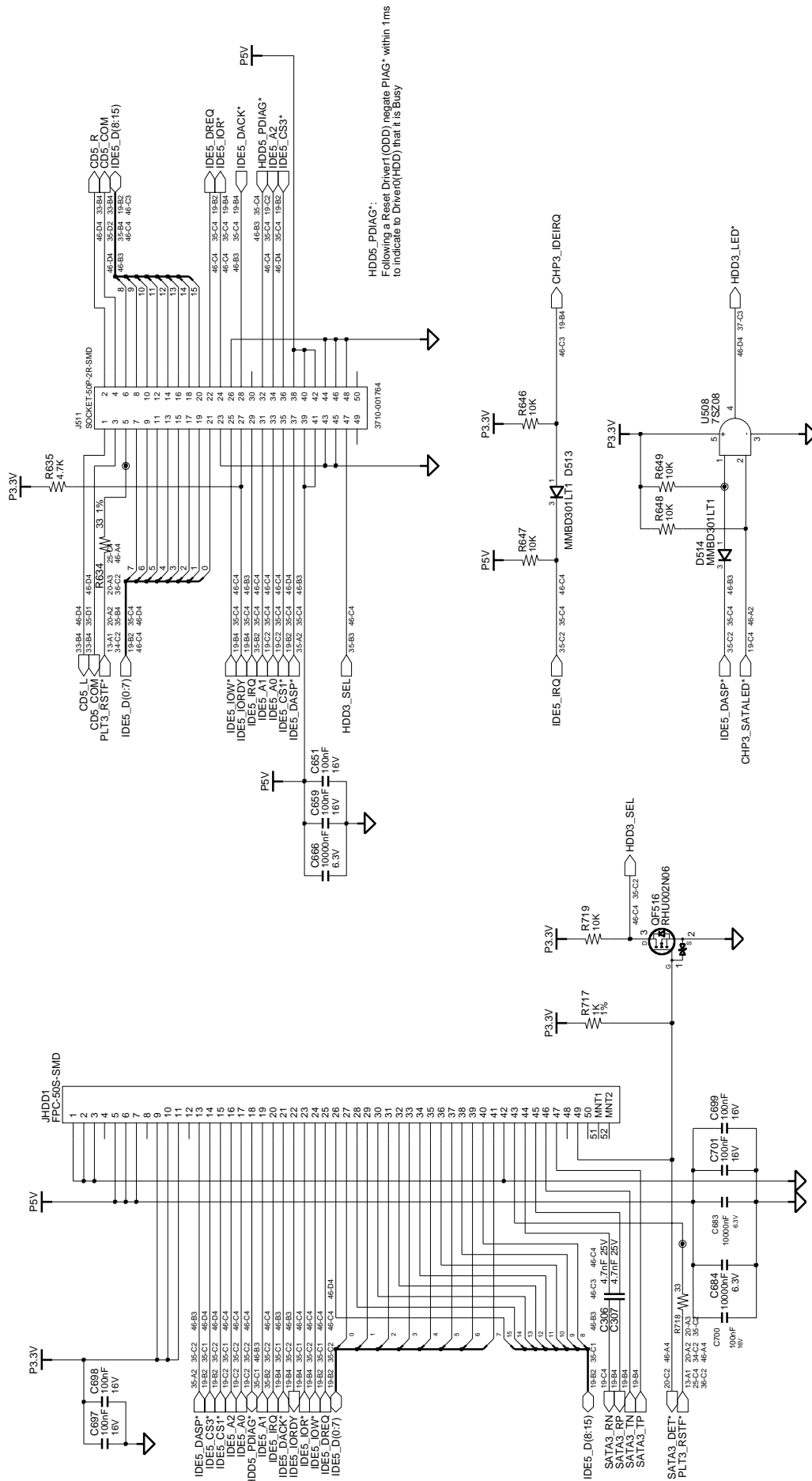
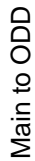
## BLUETOOTH CONNECTOR



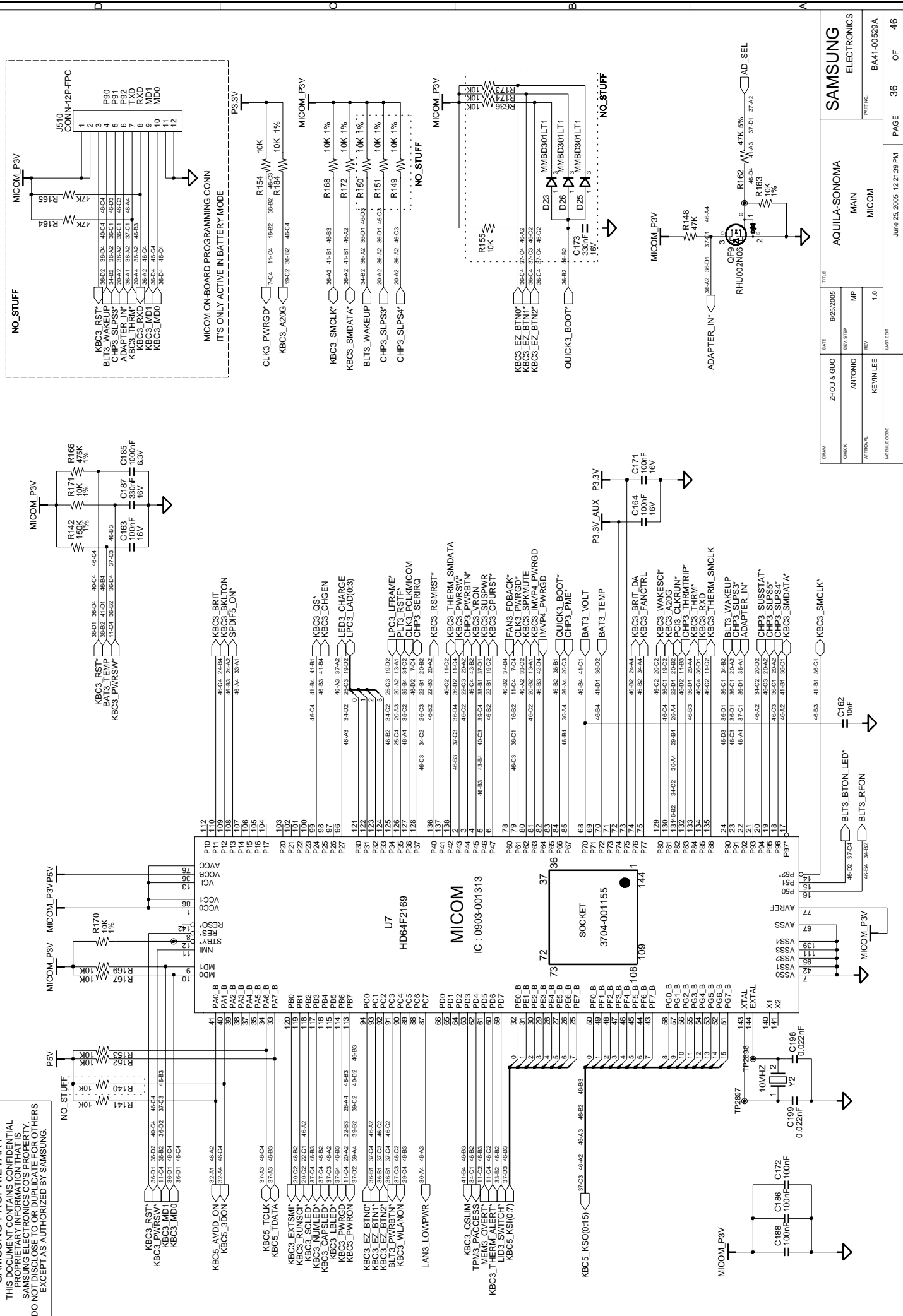
## USB connector



DRAWN	ZHOU & GUO	DATE	6/25/2005	TITLE	SAMSUNG AQUILA-SONOMA
CHECK	ANTONIO	REV	MP	MAIN	ELECTRONICS
APPROVAL	KEVIN LEE	REV	1.0	MDC/TPM/FAN/BLT/USB	BA41-00529A
MODULE CODE		LAST EDIT	June 25 2005 12:21:39 PM	PAGE	34 OF 46



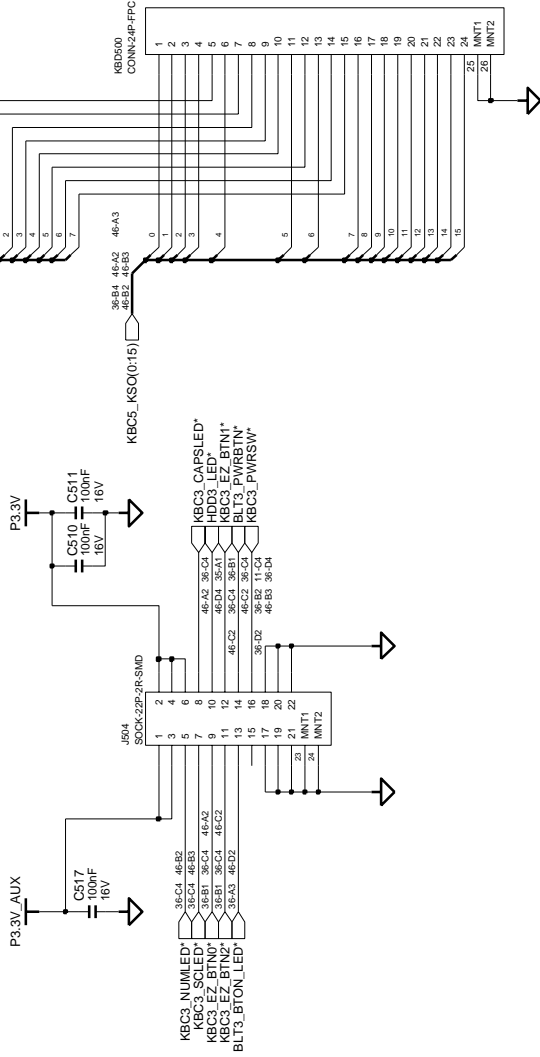
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CHECK	ANTONIO	CHK/STEP	MP			IDE CONNECTOR		PART NO.	
APPROVAL	KEVIN LEE	REV	1.0					BA41-00529A	
MOBILE CODE		DATE ERT		June 25, 2005 12:21:39 PM		PAGE		35 OF 46	



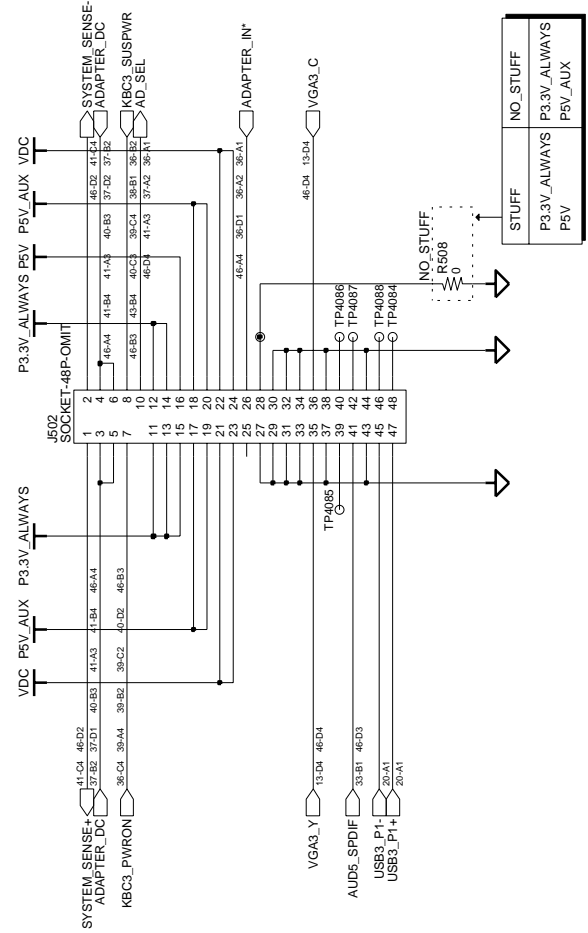
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## KEYBOARD

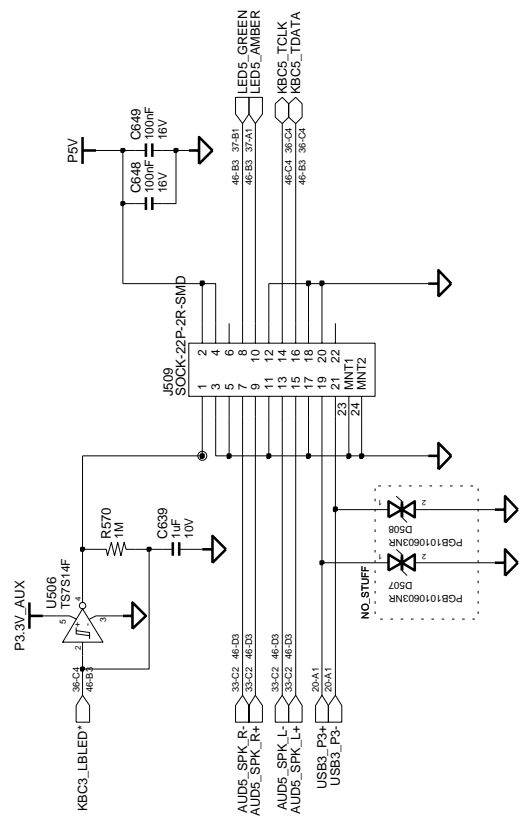
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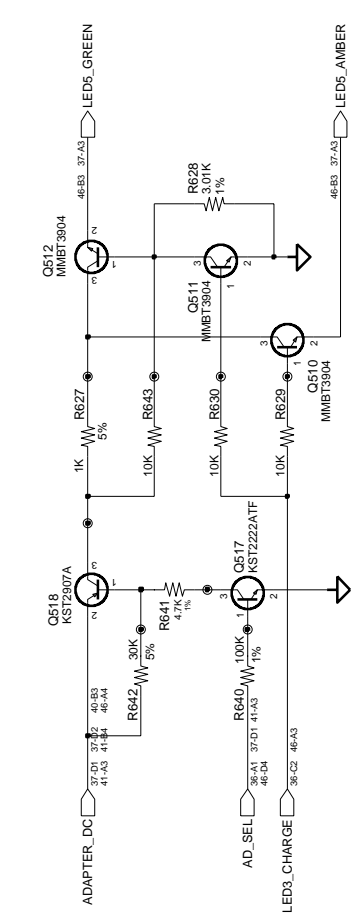
## Main to DC/DC BOARD



## TOUCHPAD CONNECTOR



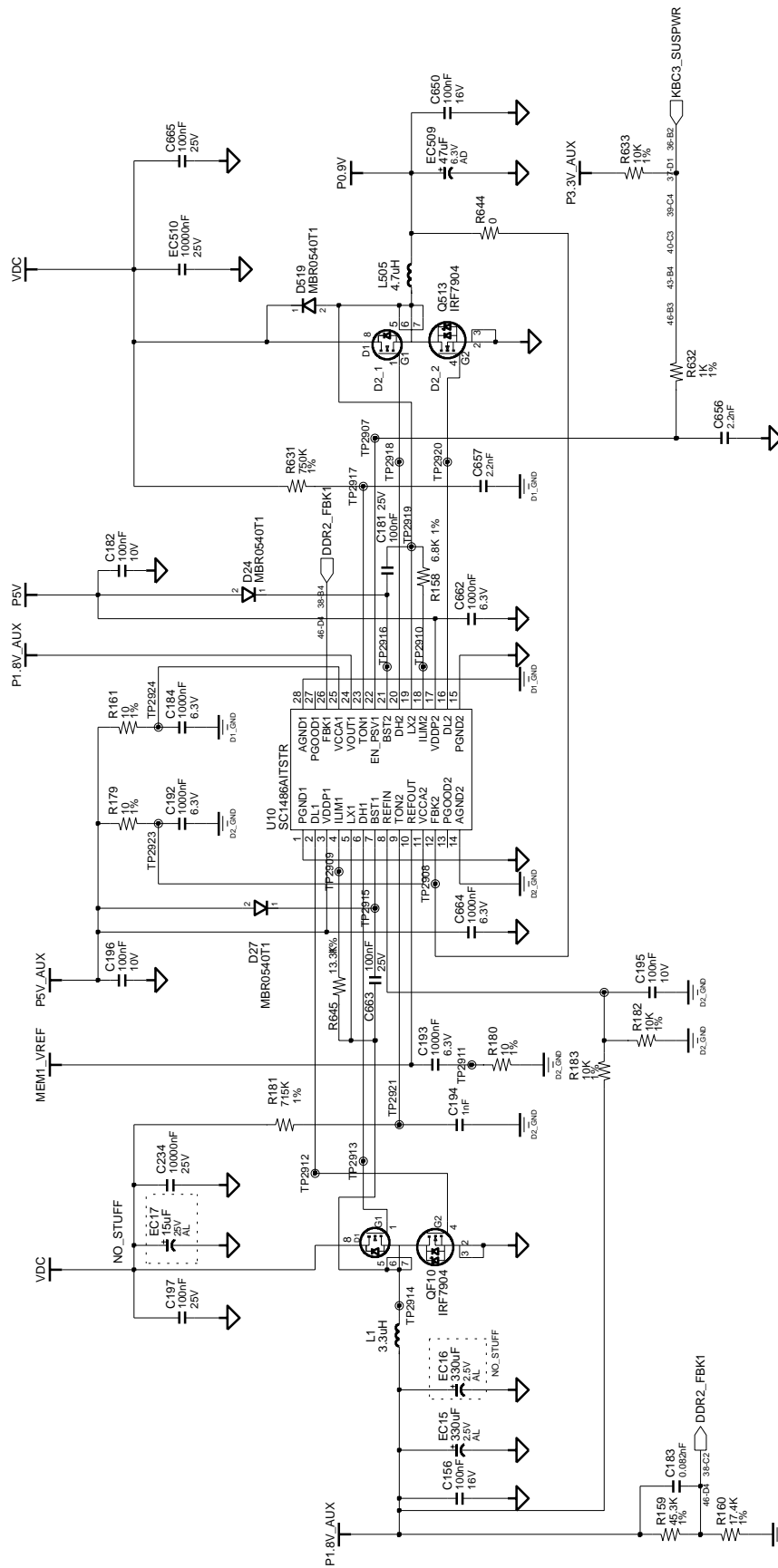
## ADAPTERIN/CHARGING LED



DRAWN		DATE		TITLE		SAMSUNG	
ZHOU & GUO		6/25/2005		AQUILA-SONOMA		ELECTRONICS	
CHECK		REV. STEP		MAIN		PART NO.	
ANTONIO		MP		B'd to B'd CONN		BA41-00529A	
APPROVAL		REV		1.0		PAGE	
KEVIN LEE		LAST EDIT		June 25, 2005 12:21:39 PM		37	
MODULE CODE		OF		46		SAMSUNG X06 8-37	

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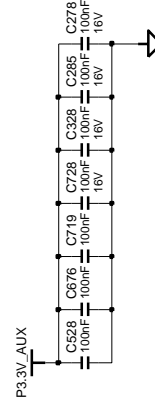
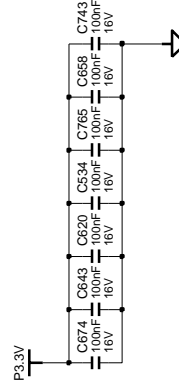
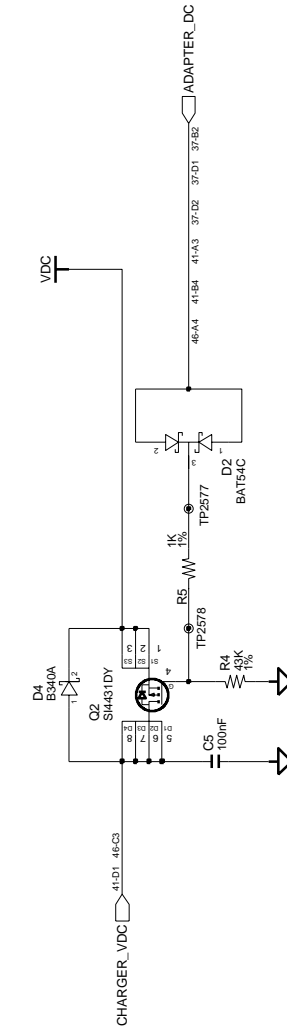
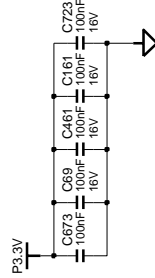
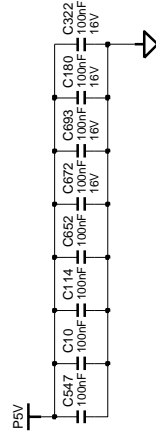
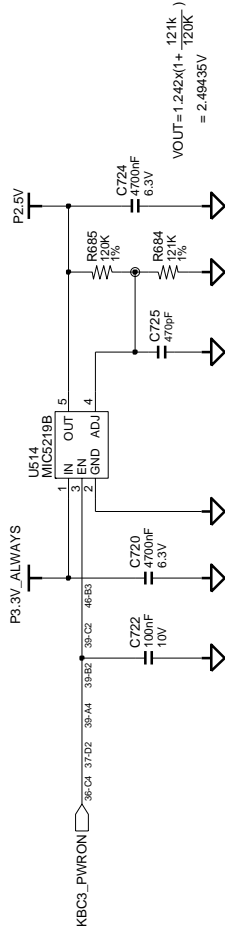
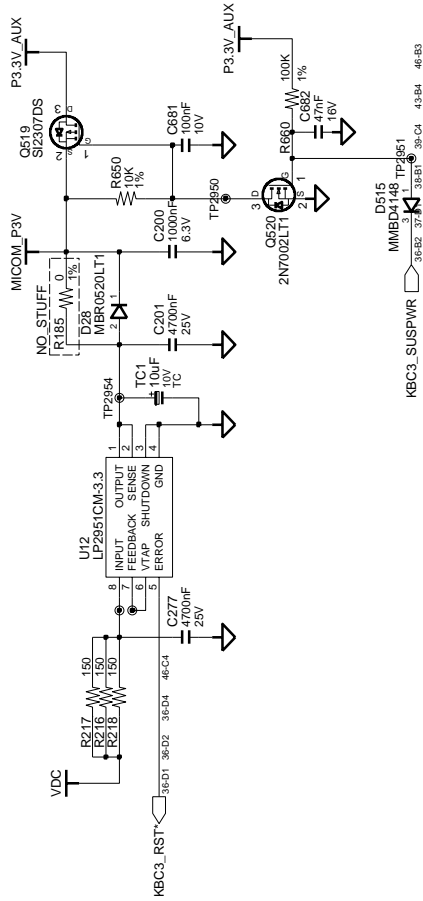
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DATE	DATE	TITLE	SAMSUNG ELECTRONICS
CHOU & GUO	6/25/2005	AQUILA-SONOMA	
CHK	REV: 1 STEP	MAIN	
APPROVAL	REV	DDR II POWER	
MODULE CODE	LAST EDIT		
			PAGE 38 OF 46
			June 25, 2005 12:21:39 PM

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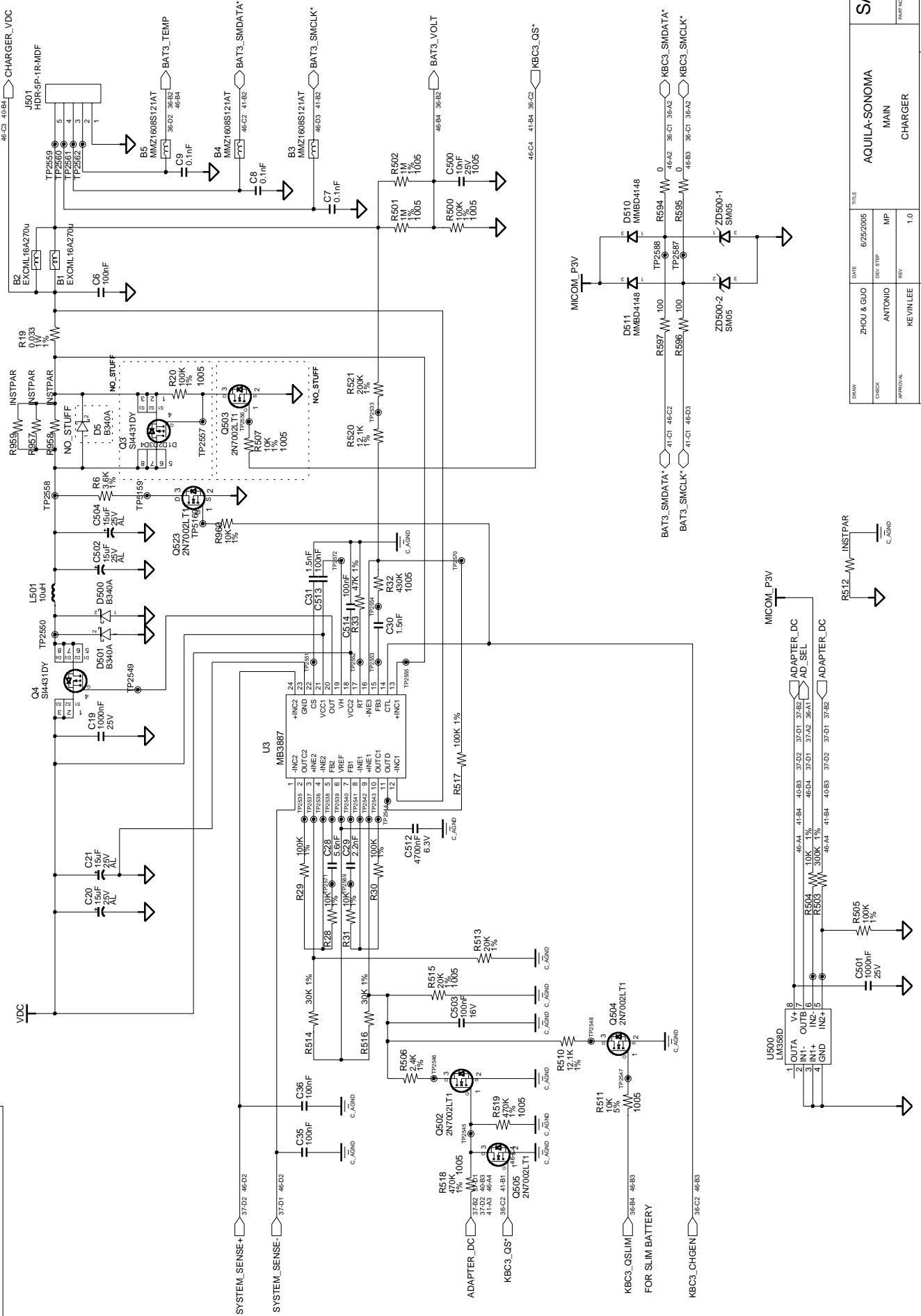
DESIGN	DATE	TITLE	SAMSUNG ELECTRONICS
CHECK	6/25/2005	AQUILA-SONOMA MAIN	
APPROVAL	MP	SWITCHED POWER	
REV	1.0	PART NO. BA41-00529A	
LAST EDIT		PAGE 39	OF 46
		June 25, 2005 12:13:38 PM	



SAMSUNG ELECTRONICS		TITLE		AQUILA-SONOMA MAIN	
DATE	6/25/2005	MP	MICOM_P3V / P2.5V		
CHECK	DEV. 1 STEP	ANTONIO	REV		
APPROVAL		KEVIN LEE	1.0		
MODULE CODE		LAST EDIT		PAGE 40 OF 46	
		June 25, 2005 12:21:39 PM		BA41-00529A	

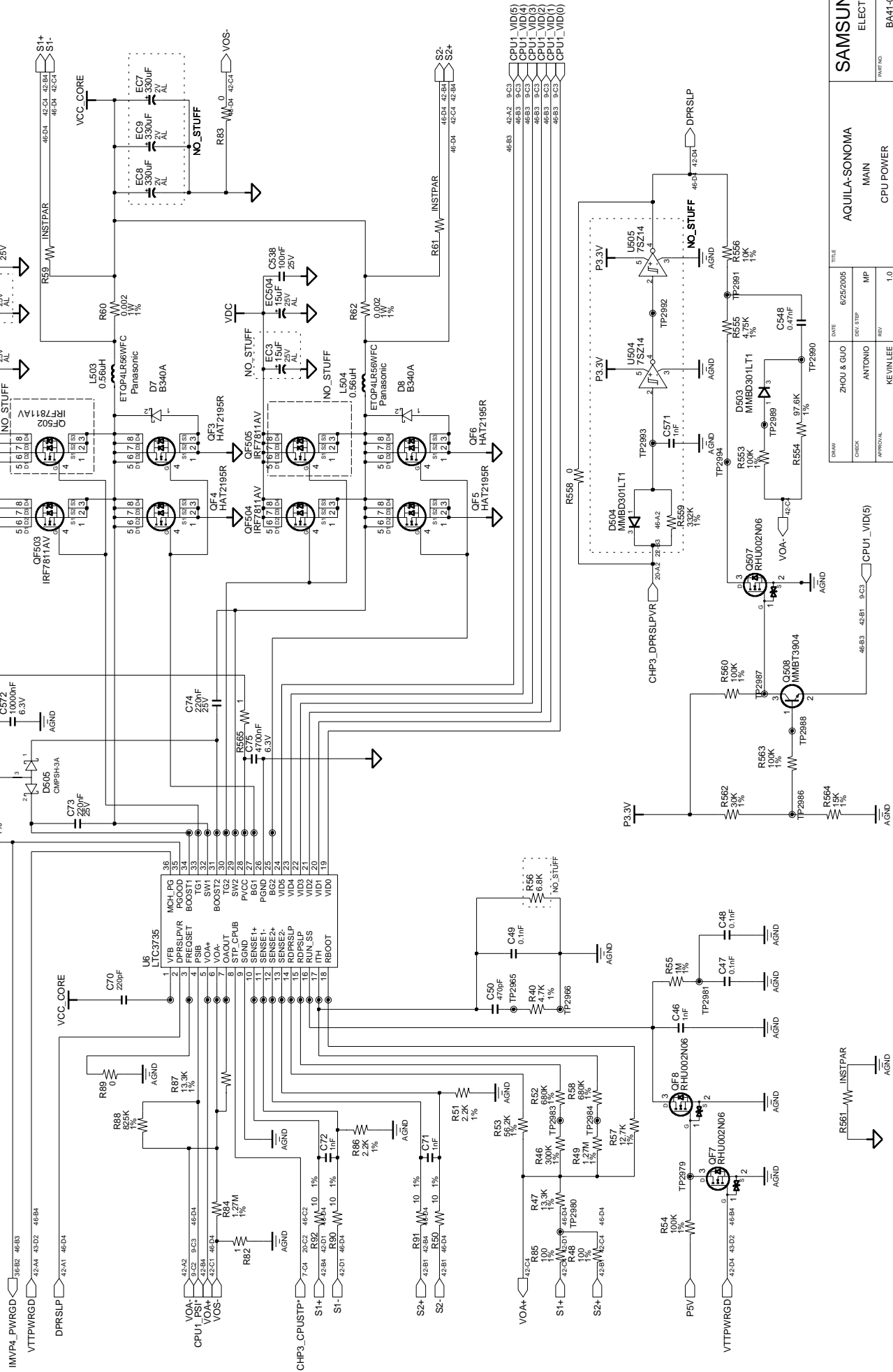


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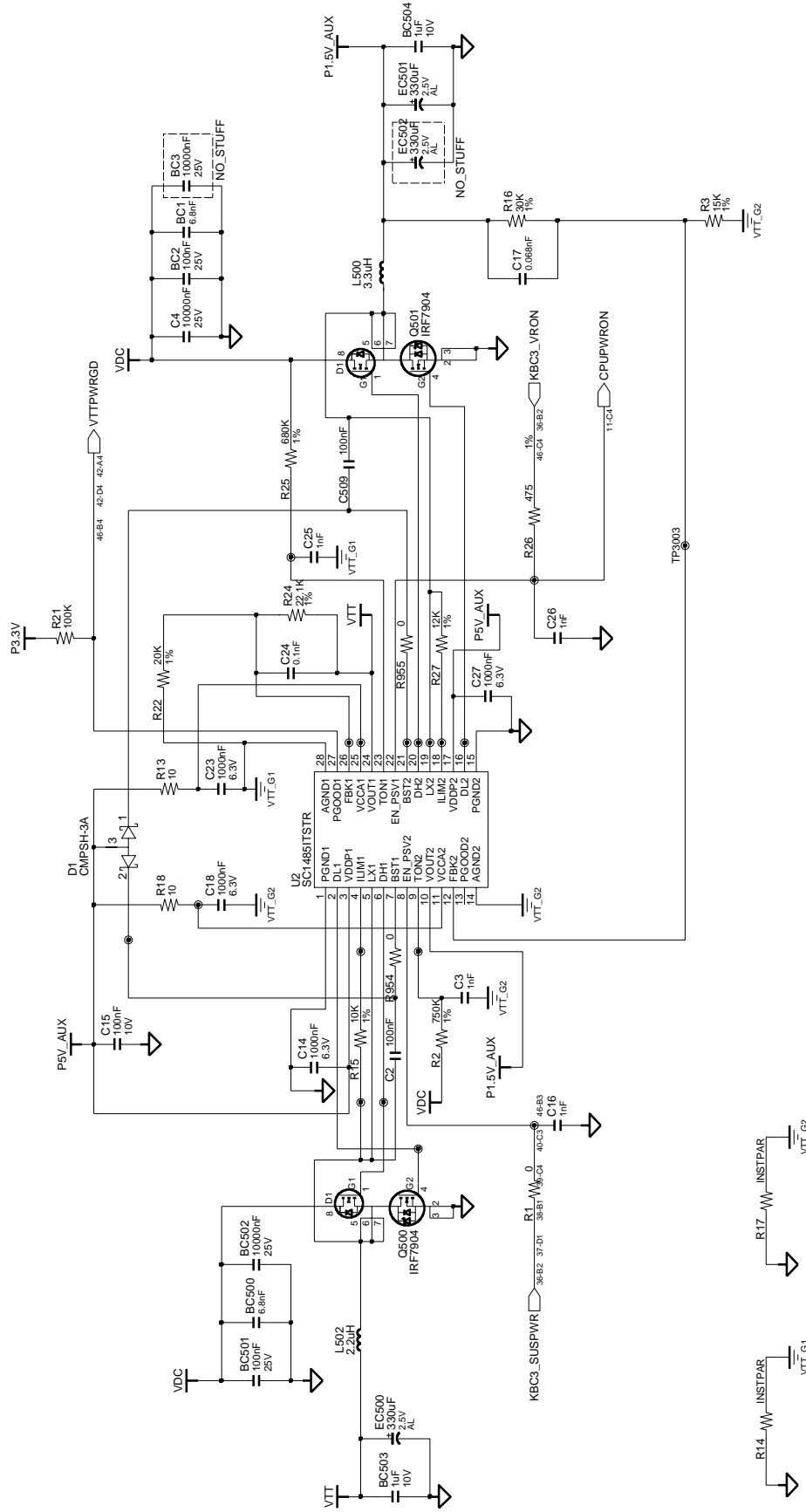


SAMSUNG		AQUILA-SONOMA		MAIN		CHARGER		PAGE 41 OF 46	
DRAWN		DATE		REV		PART NO.		JUNE 25 2005 12:21:39 PM	
CHECK		DEV. STEP		MP		BA41-00529A			
APPROVAL		REV		1.0					
MODULE CODE		LAST EDIT							
ZHOU & GUO		6/25/2005		ANTONIO		KEVIN LEE			
SAMSUNG ELECTRONICS		TITLE		MP		BA41-00529A			

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DRAWN		DATE		TITLE	
ZHOUI & GUO		6/25/2005		AQUILA-SONOMA	
CHECK		REV. STEP		MAIN	
APPROVAL		REV		VTT / P1.5V	
MODULE CODE		LAST EDIT		June 25, 2005 12:21:39 PM	
				PAGE 43 OF 46	
				SAMSUNG X06 8-45	

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TO COMPARE CAPACITORS WHICH ARE UNDER 100pF

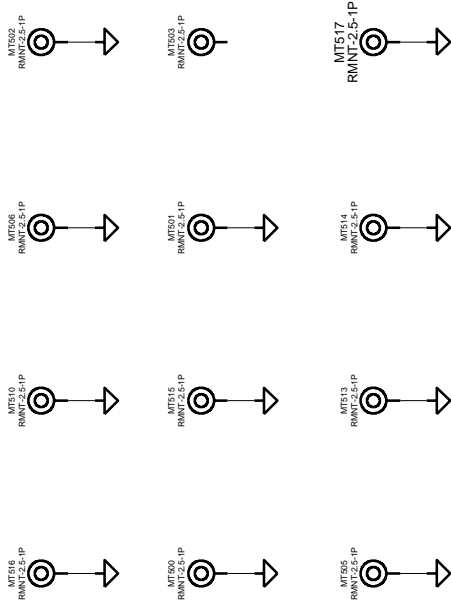
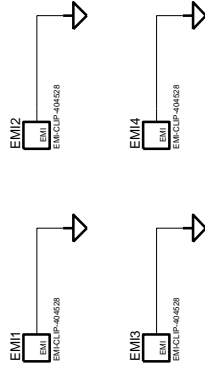
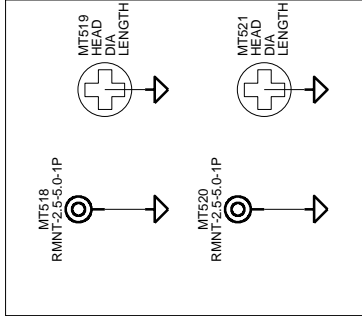
TOP

TP2512 ○ — C950 || 0.1nF — TP2513  
TP2466 ○ — C951 || 0.01nF — TP2465  
TP2467 ○ — C952 || 0.1nF — TP2468  
TP2481 ○ — C953 || 0.01nF 0.5pF — TP2482  
TP2485 ○ — C954 || 18pF — TP2486  
TP2489 ○ — C955 || 0.022nF — TP2490  
TP2497 ○ — C956 || 0.0033nF — TP2498  
TP2509 ○ — C957 || 0.0033nF — TP2510  
TP2503 ○ — C958 || 47pF — TP2504

BOTTOM

TP2531 ○ — C462 || 0.1nF — TP2532  
TP2516 ○ — C463 || 0.01nF — TP2516  
TP2517 ○ — C464 || 0.1nF — TP2518  
TP2519 ○ — C465 || 0.01nF 0.5pF — TP2520  
TP2521 ○ — C466 || 18pF — TP2522  
TP2523 ○ — C467 || 0.022nF — TP2524  
TP2525 ○ — C468 || 0.0033nF — TP2526  
TP2529 ○ — C469 || 0.0033nF — TP2530  
TP2527 ○ — C470 || 47pF — TP2528

FOR THERMAL



PCB REVISION CONTROL (ICT)			
NO	CONNECTION DATE(Y/M/MDD)	REVISION	STEP
1	N.C.	2005-6-25	1.0 MP
2	1-2		
3	2-3		
4	3-1		
5	1-2-3		
6	N.C.		
7	1-2		
8	2-3		
9	3-1		
10	1-2-3		

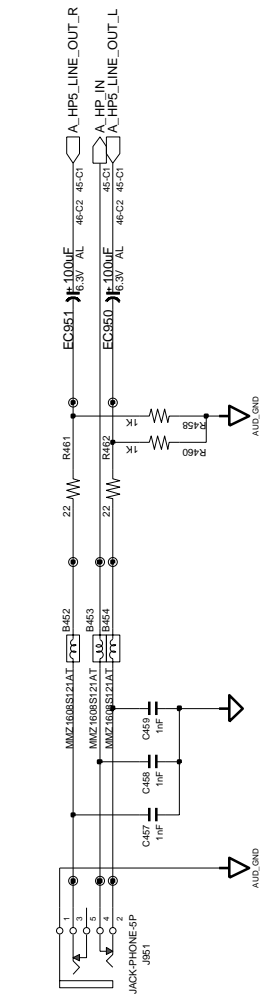
REV000  
1 ○  
2 ○ 3 ○

DRAWN	ZHOU & GUO		DATE		6/25/2005		TITLE		AQUILA-SONOMA		SAMSUNG ELECTRONICS	
	CHECK		ANTONIO		MP		REV		MAIN		PART NO.	
	APPROVAL		KEVIN LEE		1.0		REV		PCB STUFFS		BA41-00529A	
	MODULE CODE						LAST EDIT		June 25 2005 12:21:39 PM		PAGE 44 OF 46	

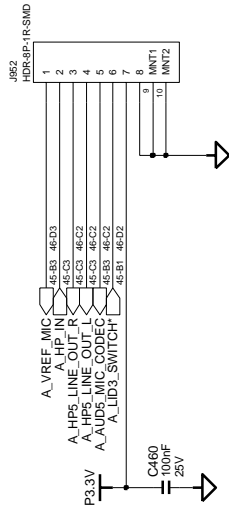
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## AUDIO BOARD

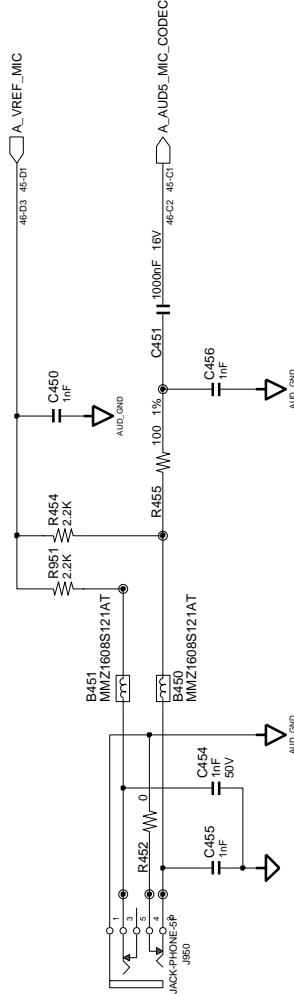
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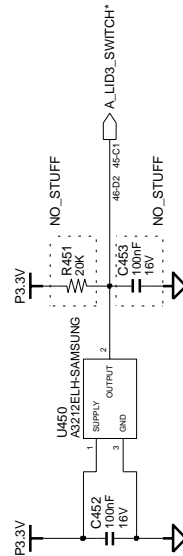
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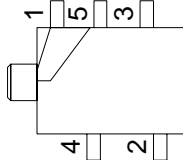
### EXTERNAL MIC



### LID SWITCH



### TOP VIEW



DATE	6/25/2005	TITLE	AQUILA-SONOMA SUB BOARD AUDIO BOARD	SAMSUNG ELECTRONICS
CHECK	ANTONIO	DEV. STEP	MP	
APPROVAL	KEVIN LEE	REV	1.0	PART NO. BA41-00529A
MODULE CODE		LAST EDIT	June 25, 2005 12:21:39 PM	PAGE 45 OF 46

[illegible]

DATE	6/25/2005	TITLE		SAMSUNG	
DEV. STEP	MP	MAIN		ELECTRONICS	
REV	1.0	TESTPOINT		PART NO.	
DATE	June 25, 2005	12:21:39 PM		PAGE	46 OF 46
DRW#	ZHOU, GUO	SAMSUNG_X06 5-46			
CHECK	ANTONIO,				
APPROVAL	KEVIN, LEE				
MOBILE CODE					

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10.

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10-2 ON-TOP BOARD

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DRAW	GUO, WICKY	DATE	5/25/2005	TITLE		AQUILA-SO ONTOP PCB ONTOP MAIN	SAMSUNG ELECTRONICS		
CHECK	ZHOU, PHIL	DEV. STEP	MP						
APPROVAL	CHEN, ANTONIO	REV	1.0						
MODULE CODE	LAST EDIT								
May, 25, 2005 10:00:07 AM						PAGE	1	OF	1



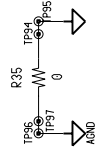
-  
- This Document can not be used without Samsung's authorization -

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10.

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10-3 DCDC BOARD

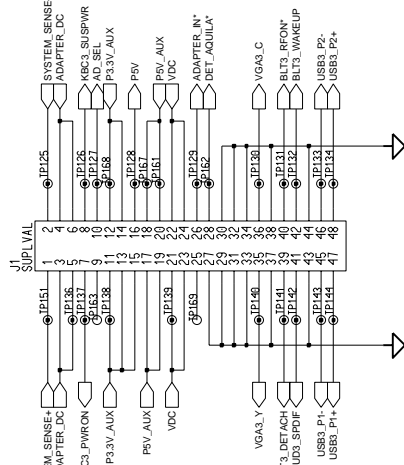


BRAN	DATE	TITLE	SAMSUNG	
CHECK	SEO, HJ	02/08/2003	AQUILA_C	ELECTRONICS
APPROVAL	HA, JS	PR	DC-DC BOARD	PART NO. BA41-####A
LEE, CH	REV	10	3.3V & 5V GENERATION	
MODULE CODE	LAST EDIT	March, 9, 2002 4:21:54 PM	PAGE 2 OF 3	

SAMSUNG PROPRIETARY

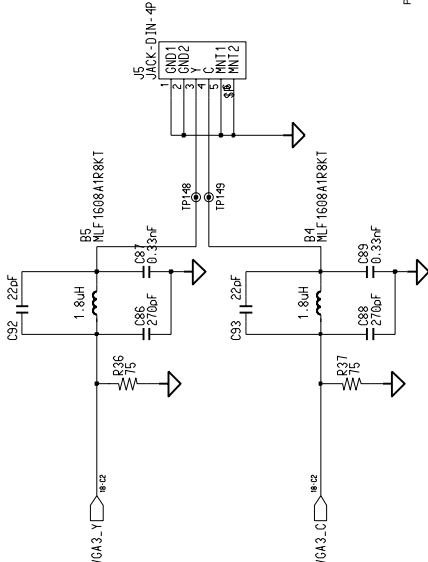
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CHANGE THIS CONNECTOR TO HEADER < 12809A-48G5T>  
FROM DCDC TO MAIN BOARD

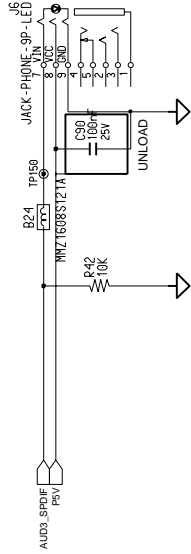


USB  
90ohm + - 10%

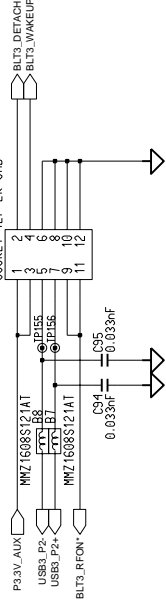
SUPER - VHS TV OUT



SPDIF OUT

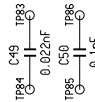
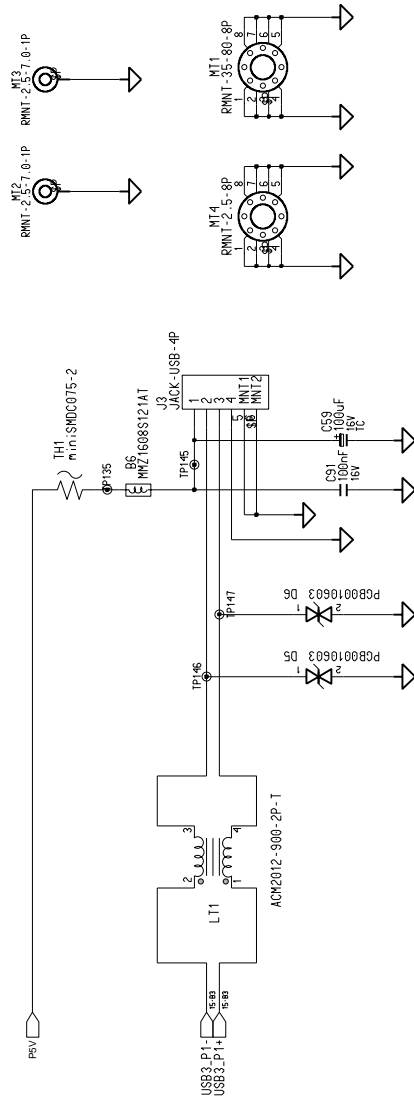


bluetooth connector



PCB REVISION CONTROL ( ICT )		
NO	CONNECTION	DATE (YY/MM/DD)   REVISION STEP
1	N.C.	
2	1-2	
3	2-3	
4	3-1	
5	1-2-3	
6	N.C.	
7	1-2	
8	2-3	
9	3-1	
10	1-2-3	

REV1  
b  
20 03



SAMSUNG		AQUILA_C	
ELECTRONICS		DC-DC BOARD	
PART NO.		CONNECTOR & PORT	
BA41 - #####A			
MODULE CODE		LAST EDIT	
		March, 9, 2002 4:23:55 PM	
		PAGE 3 OF 3	