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RIMINI

CPU : INTEL YONAH-ULV
Chip Set : INTEL 945GMS
Remarks : 1 Spindle

Model Name : RIMINI MAIN

With Docking / Without Docking

PCB Part No : BA41-00680A (TPT)
BA41-00683A (GCE)

Dev. Step : SR

Revision : 1.0

T.R. Date : 2006.05.11

DRAW	CHECK	APPROVAL
JULIO	HK PARK	JS EUH

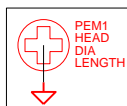
Table of Contents

Page. 1	----	COVER
Page. 2	----	OPERATION BLOCK DIAGRAM
Page. 3	----	POWER SEQUENCE
Page. 4	----	CLOCK DISTRIBUTION
Page. 5	----	BOARD INFORMATION
Page. 6	----	CLOCK GENERATOR (CK-410M+)
Page. 7~8	---	YONAH-ULV
Page. 9	----	THERMAL MONITOR
Page. 10~13	-	CALISTOGA-SFF (INTEL945GMS)
Page. 14~15	-	DDR2 ON BOARD
Page. 16	---	DDR2 TERMINATION
Page. 17	---	DDR2 SODIMM
Page. 18~21	-	ICH7-M
Page. 22	---	BIOS CODE
Page. 23	---	LCD(LVDS) CONN.
Page. 24	---	CRT CONN.
Page. 25	---	HDD CONNECTOR
Page. 26	---	MICOM
Page. 27~29	-	LAN (GIGABIT) & MDC
Page. 30	---	USB,BLUE TOOTH & DMB
Page. 31	---	MINI-CARD (GOLAN,WIBRO,SIM CARD)
Page. 32~33	-	CARDBUS CONTROLLER (R5C843)
Page. 34	---	CF SOCKET & 3IN1 SUB
Page. 35	---	AZALIA AUDIO CODEC
Page. 36	---	AUDIO AMP & JACK
Page. 37	---	KBD CONN & DEBUG PORT
Page. 38	---	CHARGER
Page. 39	---	P3.3V AUX & P5V_AUX
Page. 40	---	DDR2 POWER
Page. 41	---	1.5V AUX & VCCP POWER
Page. 42	---	CPU VRM POWER (VCC_CORE)
Page. 43	---	SWITCHED POWER
Page. 44	---	LED FPC CONNECTOR POWER S/W
Page. 45	---	X series DOCKING CONN
Page. 46	---	DOCKING LPC
Page. 47	---	PANEL LINK TRANSMITTER
Page. 48	---	MOUNT HOLE
Page. 49~50	-	TEST POINTS

DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI	SAMSUNG
CHECK	HK, PARK	DEV. STEP	SR	MAIN		ELECTRONICS
APPROVAL	JS, EUR	REV	1.0	COVER		PART NO.
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	1	OF 50


YONAH-ULV CPU S-SPEC	
1.2GHz (C1)	QKGD
1.06GHz (C1)	QKGE
933MHz (C1)	Q5XY

0902-002031



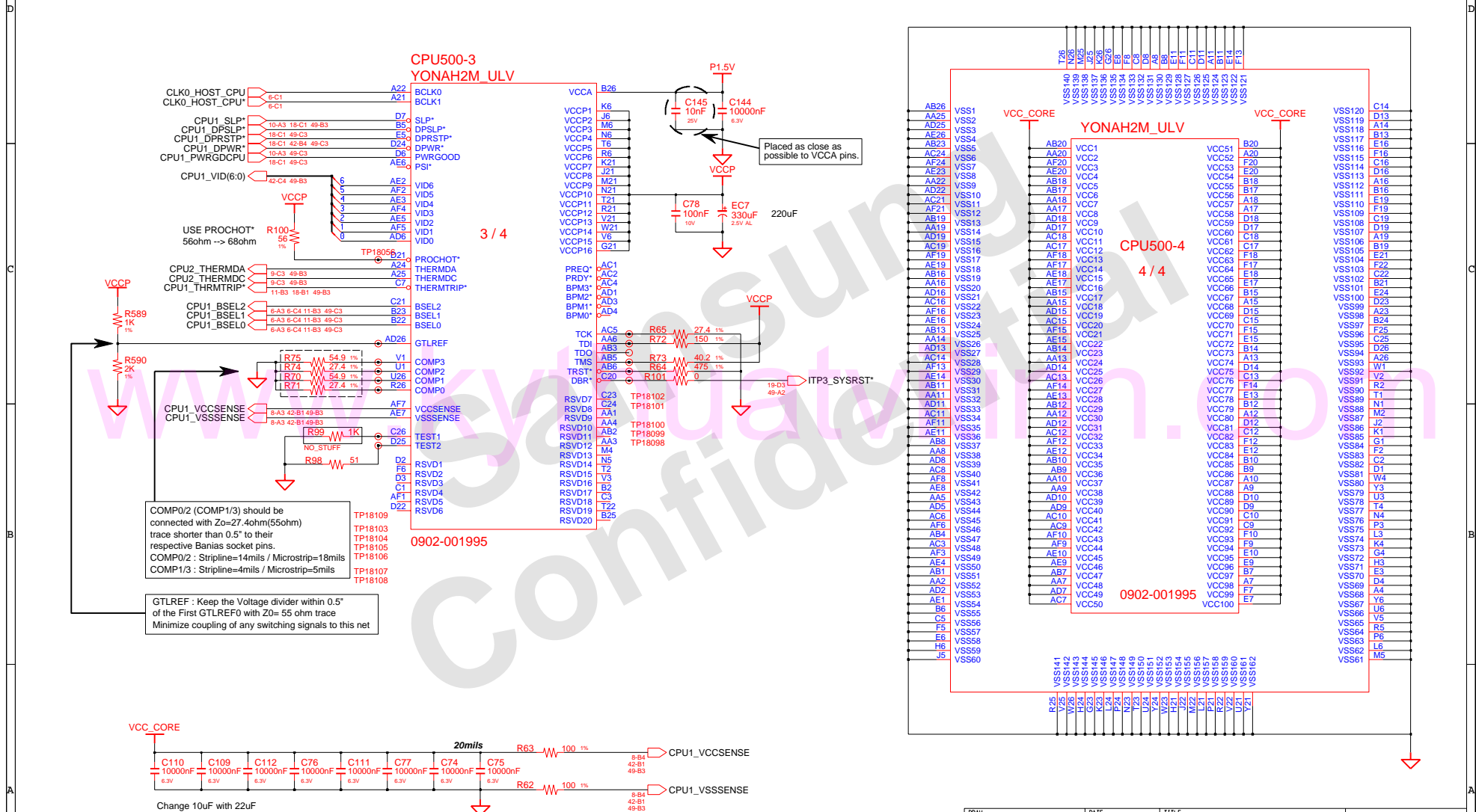
TOP : 5.5mm PAD
BOTTOM : 4.5mm PAD (SMT)
HOLE size : 2.95mm
Height : 1.5mm

BA61-01090A|screw-gap130-4t-h0250

DATE	JUL10	5/11/2006	TITLE	RIMINI MAIN YONAH-ULV (1/2)			
CHECK	HK, PARK	DEV. STEP	SR			PART NO.	BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0				
MODULE CODE	LAST EDIT		May 11, 2006 10:24:27 PM			PAGE	7 OF 50

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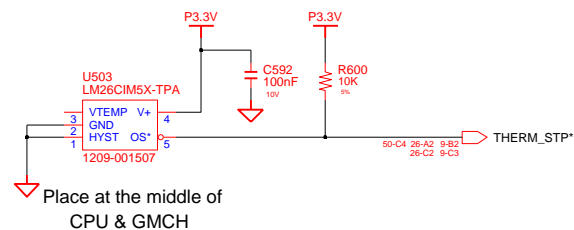
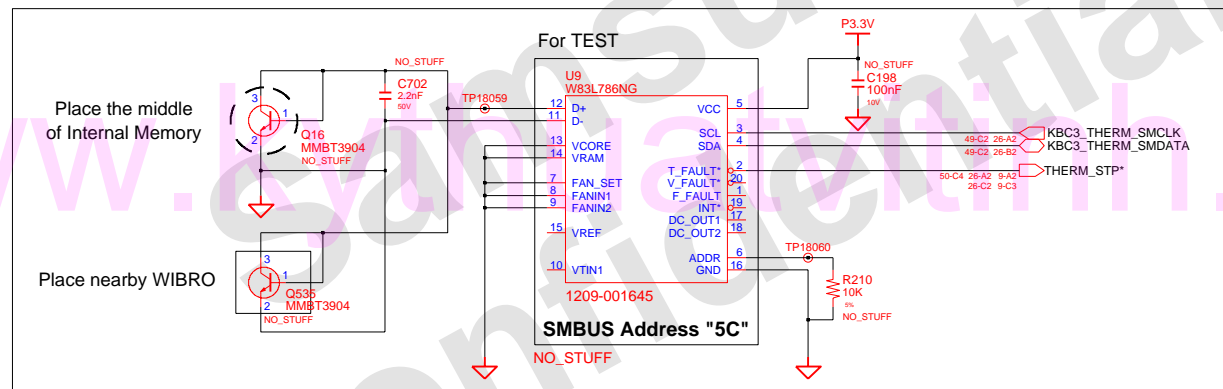
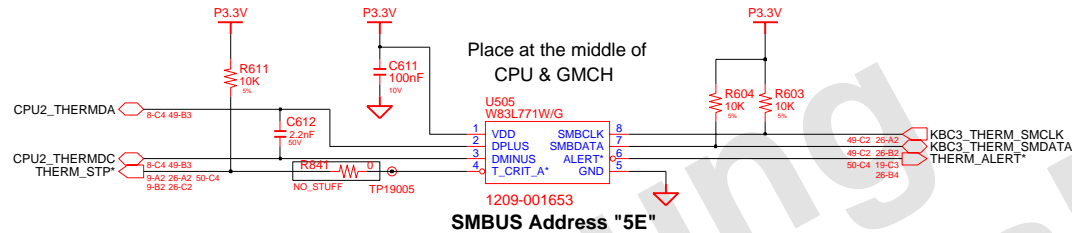
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YONAH-ULV CPU (Single Core)

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Thermal Monitor



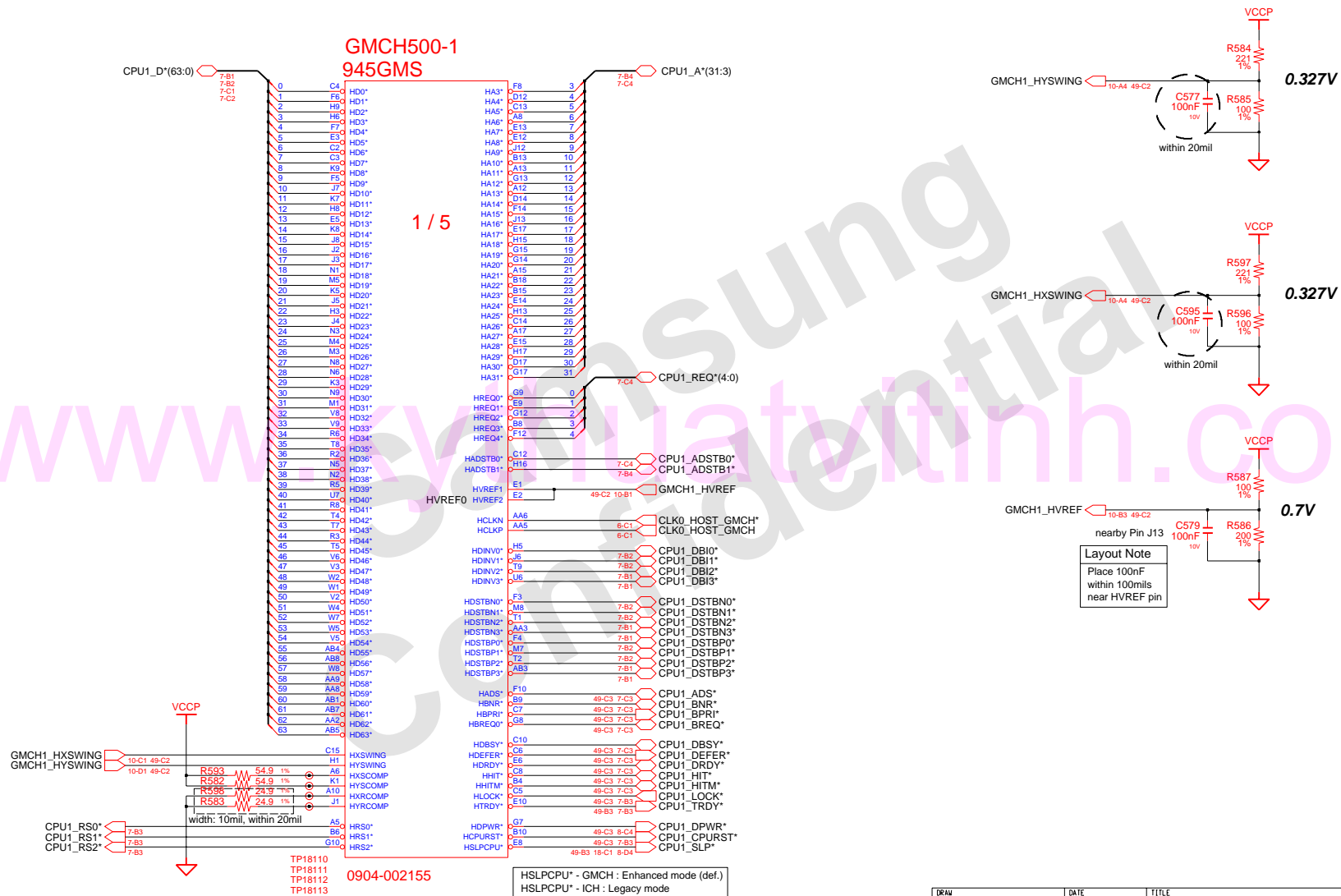
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CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	9	OF 50

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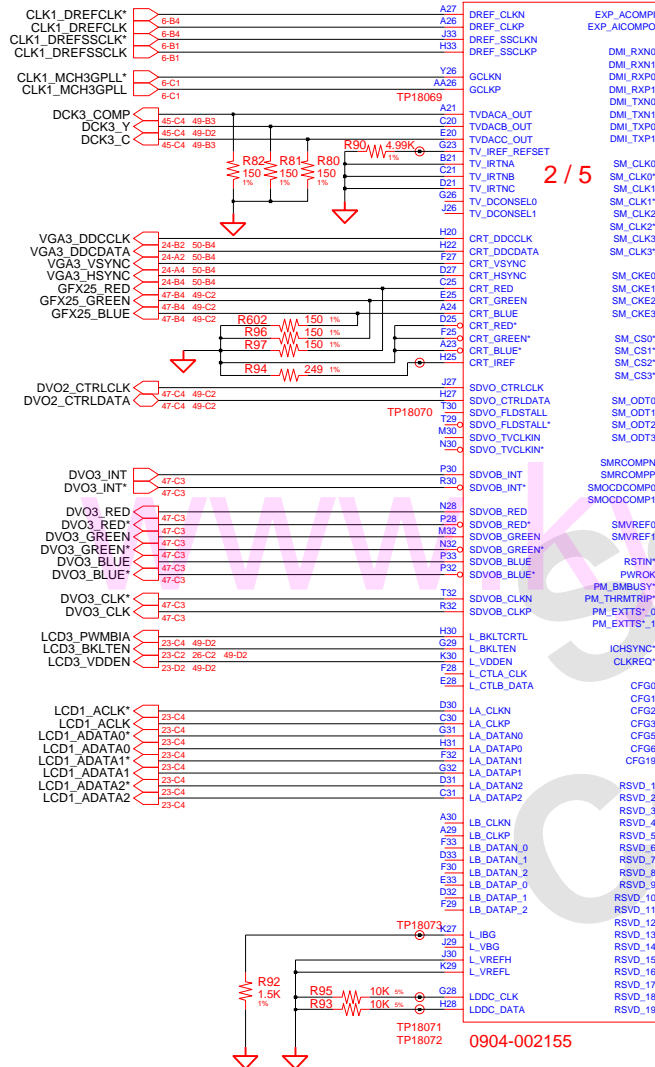
CALISTOGA-SFF

A3 Stepping : QK64

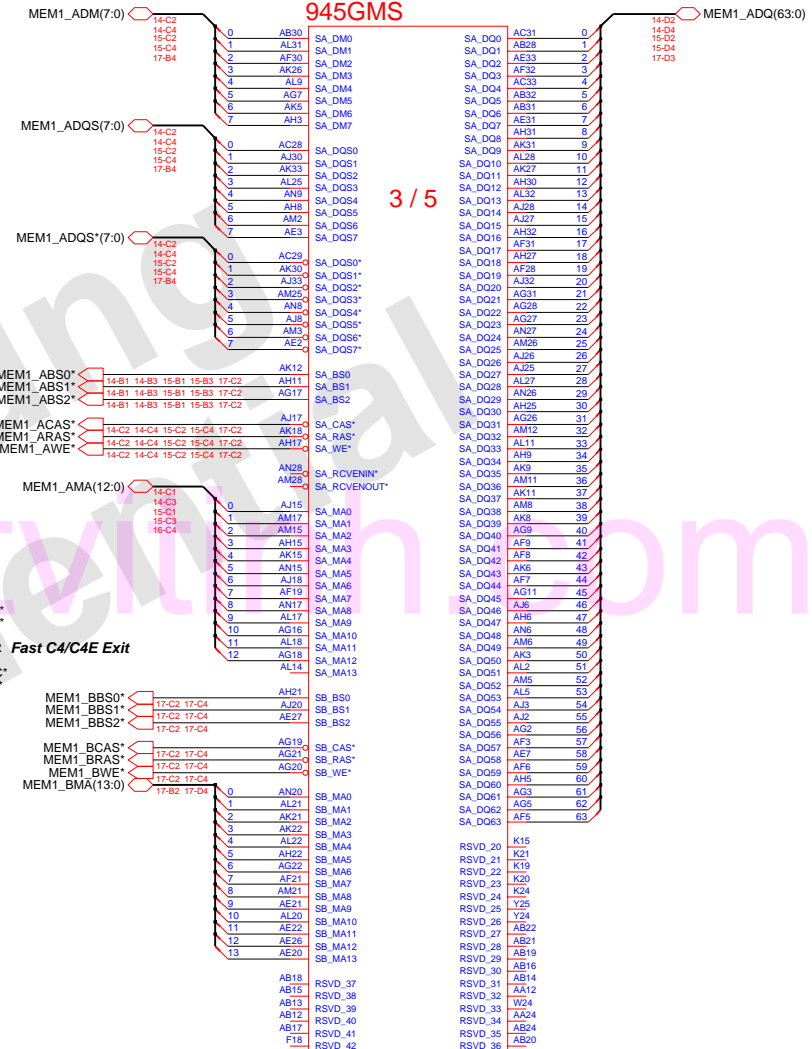


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CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0		CALISTOGA-SFF (1/4)	
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	10	OF 50

GMCH500-2
945GMS



0904-002155



0904-002155

Current Setting (def. : default Option)		
CFG#	Low	High
CFG(5)	DMIx2 (default)	DMIx4
CFG(6)	Reserved	
CFG(19)	DMI Lane Normal	DMI Lane Reversa

DRAM	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN CALISTOGA-SFF (2/4)	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE	LAST EDIT		May 11, 2006 10:24:27 PM			
				PART NO. BA41-00680(3)A		

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**GMCH500-4
945GMS**

CALISTOGA-SFF

4 / 5

0904-002155

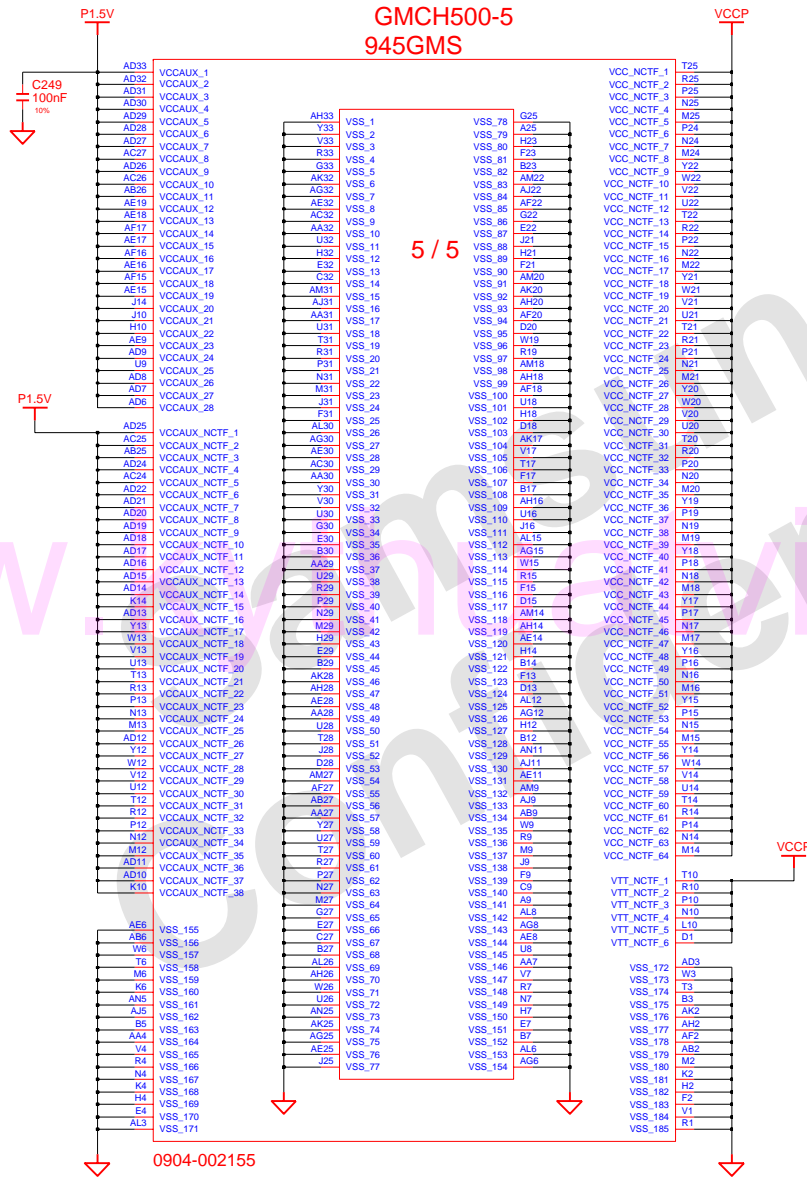
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CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	12	OF 50

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CALISTOGA-SFF

**GMCH500-5
945GMS**



0904-002155

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CHECK	HK, PARK	DEV. STEP	SR	REV	1.0	
APPROVAL	JS, EUR	LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	13	OF 50
MODULE CODE						

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On Board MEMORY

1105-001680 : 512Mbit C-die

1105-001717 : 1Gbit C-die

DDR2 ON BOARD MEMORY

1. 512Mbit DDR2-533MHz x16 I/O

SAMSUNG: K4T51163QB-ZCD5

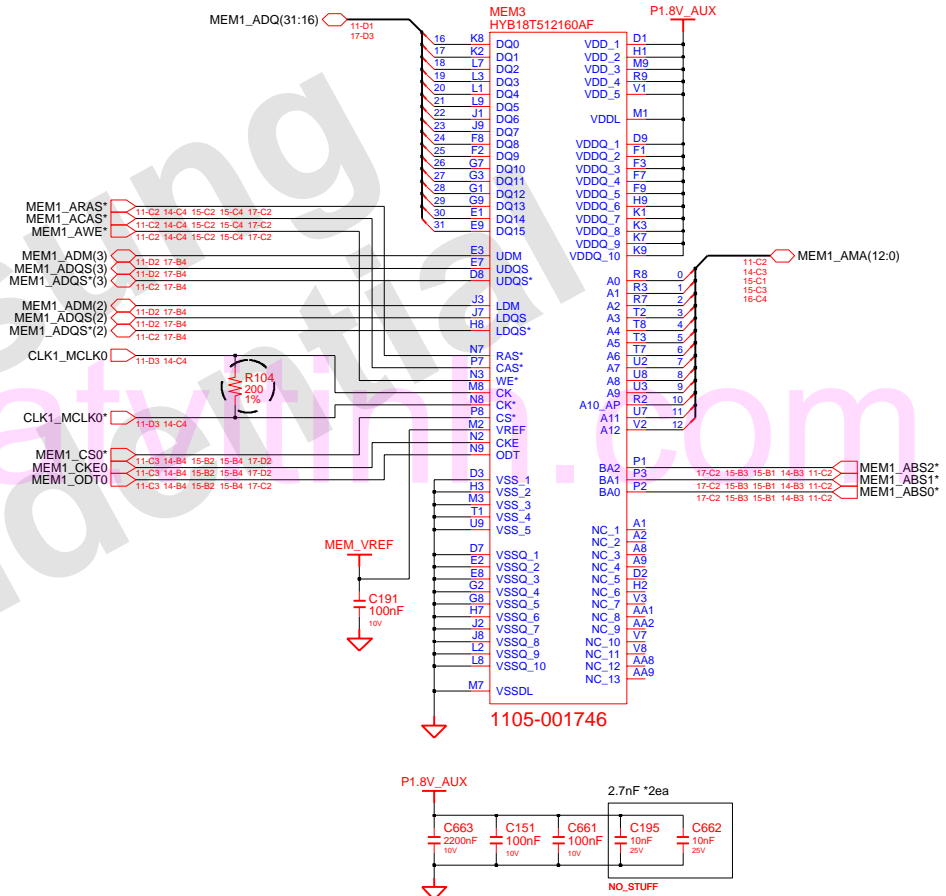
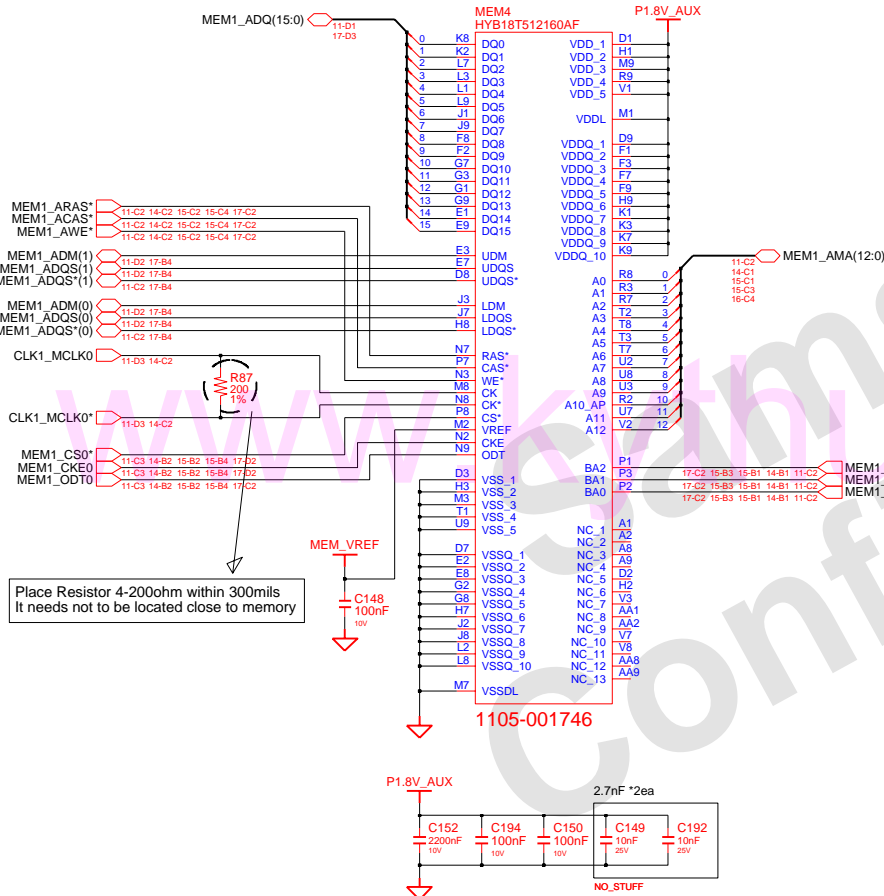
1105-001680

INFINEON: HYB18T512160AF-3.7

1105-001746

D0

D1



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR		MAIN	
APPROVAL	JS, EUR	REV	1.0		DDR2 ON BOARD (1/2)	PART NO. BA41-00680(3)A
MODULE CODE		LAST EDIT		May 11, 2006 10:24:27 PM	PAGE 14 OF 50	

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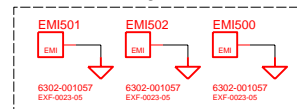


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CHECK	HK, PARK	DEV. STEP	SR			
APPROVAL	JS, EUR	REV	1.0	DDR2 TERMINATION		PART NO. BA41-00680(3)A
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	16	OF 50

The diagram illustrates a memory module layout with two rows of memory chips, DDR500-1 and DDR500-2, connected to a central controller. The layout includes various components and their values:

- DDR500-1 (Left):** DDR2-SODIMM-STD 1/2. Pins include MEM1_BMA(13:0), MEM1_BBS2*, MEM1_BBS0*, MEM1_BBS1*, MEM1_CS2*, MEM1_CS3*, CLK1_MCLK3, CLK1_MCLK3*, CLK1_MCLK2, CLK1_MCLK2*, MEM1_CKE2, MEM1_CKE3, MEM1_BCAS*, MEM1_BRAS*, MEM1_BWE*, R61, CLK3_SMBCLK, CLK3_SMBDATA, MEM1_ODT2, MEM1_ODT3, MEM1_ADM(7:0), MEM1_ADQS(7:0), MEM1_ADQS*(7:0), and DQS*0 through DQS*7.
- DDR500-2 (Right):** DDR2-SODIMM-STD 2/2. Pins include VDD1 through VDD12, VDDSPD, NC1 through NC4, NC4TEST, VREF, GND0, GND1, VSS1 through VSS15, VSS16 through VSS57, and MEM1_CS0* through MEM1_BWE*.
- Central Controller:** GMCH3_EXTTS0*. Pins include P3.3V, MEM_VREF, C556, C557, C197, C196, C119, C118, C98, C85, C86, C92, C123, and 2.2uF * 5ea, 100nF * 4ea, 2.2uF : 1608 size.
- Other Components:** R61 (10K 5%, 1K 5%), TP18057, TP18058, R86, RA9-1, RA10-1, RA10-2, RA10-3, RA14-1, RA14-2, RA14-3, RA14-4, RA14-5, RA14-6, RA14-7, RA14-8, RA14-9, RA14-10, RA14-11, RA14-12, RA14-13, RA14-14, RA14-15, RA14-16, RA14-17, RA14-18, RA14-19, RA14-20, RA14-21, RA14-22, RA14-23, RA14-24, RA14-25, RA14-26, RA14-27, RA14-28, RA14-29, RA14-30, RA14-31, RA14-32, RA14-33, RA14-34, RA14-35, RA14-36, RA14-37, RA14-38, RA14-39, RA14-40, RA14-41, RA14-42, RA14-43, RA14-44, RA14-45, RA14-46, RA14-47, RA14-48, RA14-49, RA14-50, RA14-51, RA14-52, RA14-53, RA14-54, RA14-55, RA14-56, RA14-57, RA14-58, RA14-59, RA14-60, RA14-61, RA14-62, RA14-63, RA14-64, RA14-65, RA14-66, RA14-67, RA14-68, RA14-69, RA14-70, RA14-71, RA14-72, RA14-73, RA14-74, RA14-75, RA14-76, RA14-77, RA14-78, RA14-79, RA14-80, RA14-81, RA14-82, RA14-83, RA14-84, RA14-85, RA14-86, RA14-87, RA14-88, RA14-89, RA14-90, RA14-91, RA14-92, RA14-93, RA14-94, RA14-95, RA14-96, RA14-97, RA14-98, RA14-99, RA14-100, RA14-101, RA14-102, RA14-103, RA14-104, RA14-105, RA14-106, RA14-107, RA14-108, RA14-109, RA14-110, RA14-111, RA14-112, RA14-113, RA14-114, RA14-115, RA14-116, RA14-117, RA14-118, RA14-119, RA14-120, RA14-121, RA14-122, RA14-123, RA14-124, RA14-125, RA14-126, RA14-127, RA14-128, RA14-129, RA14-130, RA14-131, RA14-132, RA14-133, RA14-134, RA14-135, RA14-136, RA14-137, RA14-138, RA14-139, RA14-140, RA14-141, RA14-142, RA14-143, RA14-144, RA14-145, RA14-146, RA14-147, RA14-148, RA14-149, RA14-150, RA14-151, RA14-152, RA14-153, RA14-154, RA14-155, RA14-156, RA14-157, RA14-158, RA14-159, RA14-160, RA14-161, RA14-162, RA14-163, RA14-164, RA14-165, RA14-166, RA14-167, RA14-168, RA14-169, RA14-170, RA14-171, RA14-172, RA14-173, RA14-174, RA14-175, RA14-176, RA14-177, RA14-178, RA14-179, RA14-180, RA14-181, RA14-182, RA14-183, RA14-184, RA14-185, RA14-186, RA14-187, RA14-188, RA14-189, RA14-190, RA14-191, RA14-192, RA14-193, RA14-194, RA14-195, RA14-196, RA14-197, RA14-198, RA14-199, RA14-200, RA14-201, RA14-202, RA14-203, RA14-204, RA14-205, RA14-206, RA14-207, RA14-208, RA14-209, RA14-210, RA14-211, RA14-212, RA14-213, RA14-214, RA14-215, RA14-216, RA14-217, RA14-218, RA14-219, RA14-220, RA14-221, RA14-222, RA14-223, RA14-224, RA14-225, RA14-226, RA14-227, RA14-228, RA14-229, RA14-230, RA14-231, RA14-232, RA14-233, RA14-234, RA14-235, RA14-236, RA14-237, RA14-238, RA14-239, RA14-240, RA14-241, RA14-242, RA14-243, RA14-244, RA14-245, RA14-246, RA14-247, RA14-248, RA14-249, RA14-250, RA14-251, RA14-252, RA14-253, RA14-254, RA14-255, RA14-256, RA14-257, RA14-258, RA14-259, RA14-260, RA14-261, RA14-262, RA14-263, RA14-264, RA14-265, RA14-266, RA14-267, RA14-268, RA14-269, RA14-270, RA14-271, RA14-272, RA14-273, RA14-274, RA14-275, RA14-276, RA14-277, RA14-278, RA14-279, RA14-280, RA14-281, RA14-282, RA14-283, RA14-284, RA14-285, RA14-286, RA14-287, RA14-288, RA14-289, RA14-290, RA14-291, RA14-292, RA14-293, RA14-294, RA14-295, RA14-296, RA14-297, RA14-298, RA14-299, RA14-300, RA14-301, RA14-302, RA14-303, RA14-304, RA14-305, RA14-306, RA14-307, RA14-308, RA14-309, RA14-310, RA14-311, RA14-312, RA14-313, RA14-314, RA14-315, RA14-316, RA14-317, RA14-318, RA14-319, RA14-320, RA14-321, RA14-322, RA14-323, RA14-324, RA14-325, RA14-326, RA14-327, RA14-328, RA14-329, RA14-330, RA14-331, RA14-332, RA14-333, RA14-334, RA14-335, RA14-336, RA14-337, RA14-338, RA14-339, RA14-340, RA14-341, RA14-342, RA14-343, RA14-344, RA14-345, RA14-346, RA14-347, RA14-348, RA14-349, RA14-350, RA14-351, RA14-352, RA14-353, RA14-354, RA14-355, RA14-356, RA14-357, RA14-358, RA14-359, RA14-360, RA14-361, RA14-362, RA14-363, RA14-364, RA14-365, RA14-366, RA14-367, RA14-368, RA14-369, RA14-370, RA14-371, RA14-372, RA14-373, RA14-374, RA14-375, RA14-376, RA14-377, RA14-378, RA14-379, RA14-380, RA14-381, RA14-382, RA14-383, RA14-384, RA14-385, RA14-386, RA14-387, RA14-388, RA14-389, RA14-390, RA14-391, RA14-392, RA14-393, RA14-394, RA14-395, RA14-396, RA14-397, RA14-398, RA14-399, RA14-400, RA14-401, RA14-402, RA14-403, RA14-404, RA14-405, RA14-406, RA14-407, RA14-408, RA14-409, RA14-410, RA14-411, RA14-412, RA14-413, RA14-414, RA14-415, RA14-416, RA14-417, RA14-418, RA14-419, RA14-420, RA14-421, RA14-422, RA14-423, RA14-424, RA14-425, RA14-426, RA14-427, RA14-428, RA14-429, RA14-430, RA14-431, RA14-432, RA14-433, RA14-434, RA14-435, RA14-436, RA14-437, RA14-438, RA14-439, RA14-440, RA14-441, RA14-442, RA14-443, RA14-444, RA14-445, RA14-446, RA14-447, RA14-448, RA14-449, RA14-450, RA14-4

3709-001325
SMBUS ADDR "A2h"

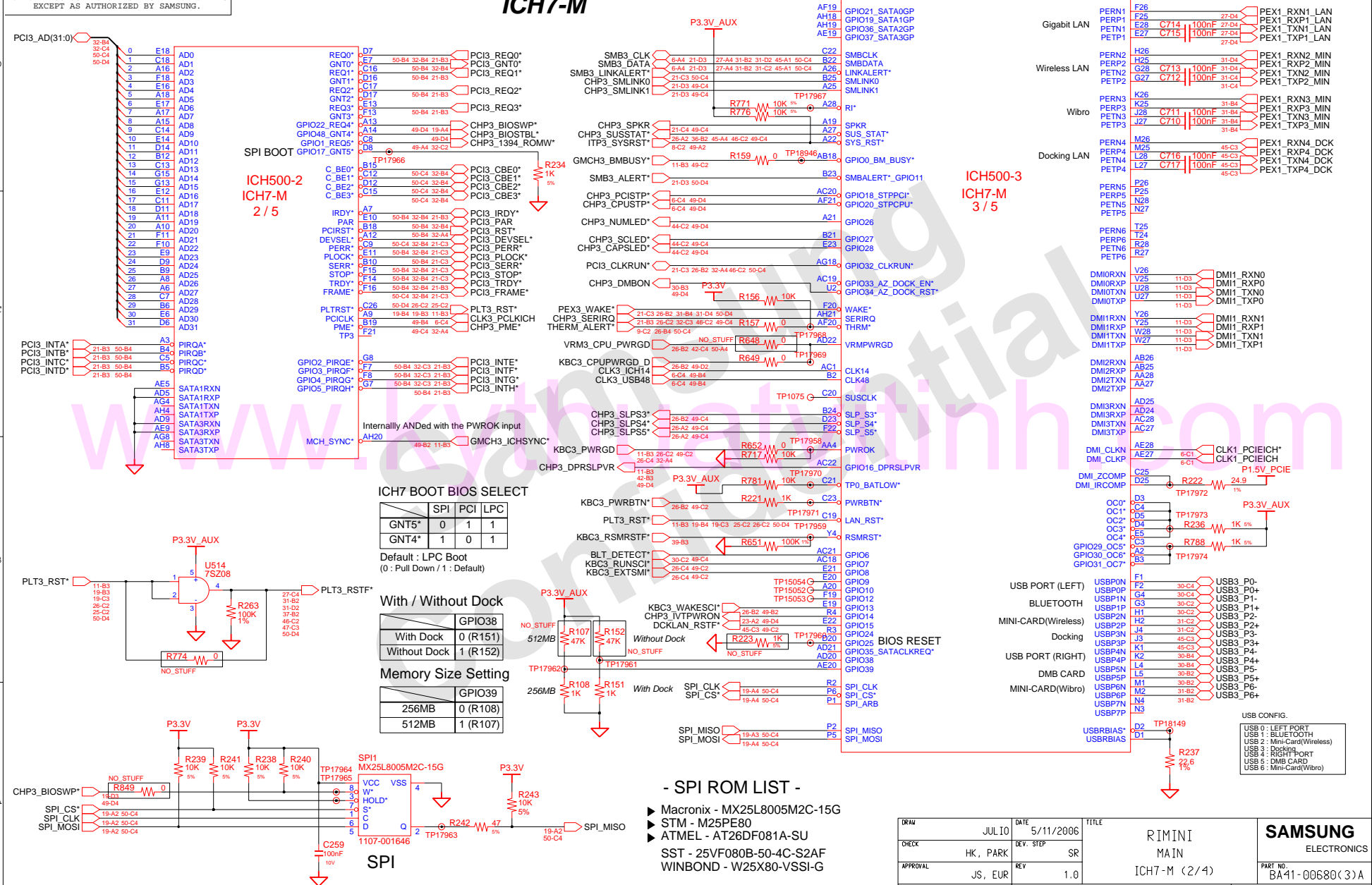


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CHECK	HK, PARK	DEV. STEP	SR				
APPROVAL	JS, EUR	REV	1.0	DDR2 SODIMM		PART NO.	BA11-00680(3)A
MODULE CODE	LAST EDIT		May 11, 2006 10:24:27 PM		PAGE	17	OF 50

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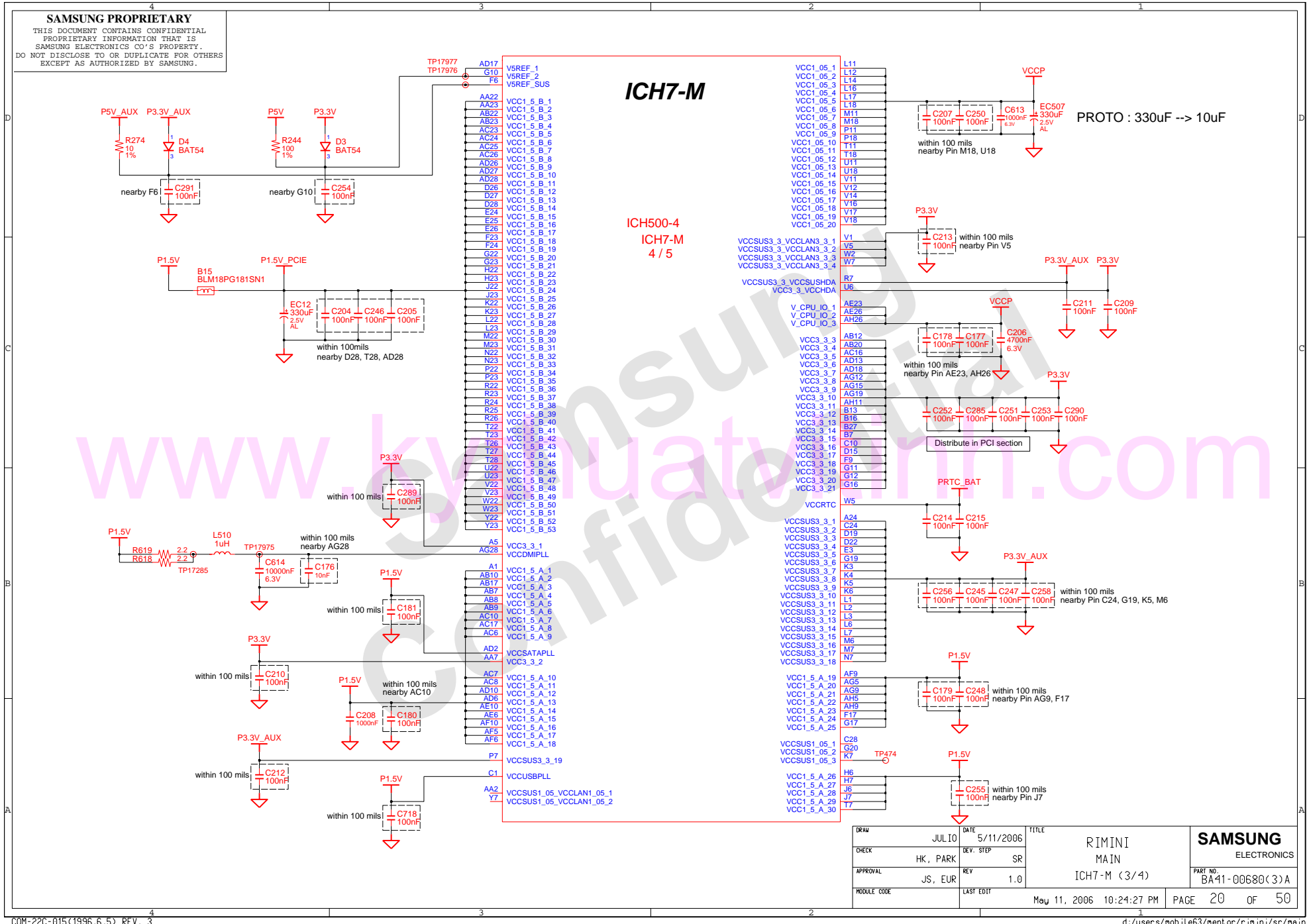
ICH7-M

AC caps : PCIE need to be within 250mils of the driver
Resistor for Test : Place Stuffed Option to minimize stubs



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI
CHECK	HK, PARK	DEV. STEP	SR	MAIN	ICH7-M (2/4)
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MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	19 OF 50

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ELECTRONICS
PART NO. BA41-00680(3)A



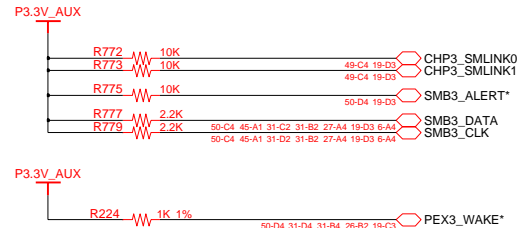
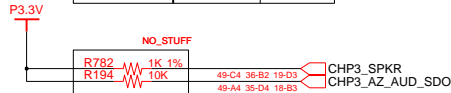
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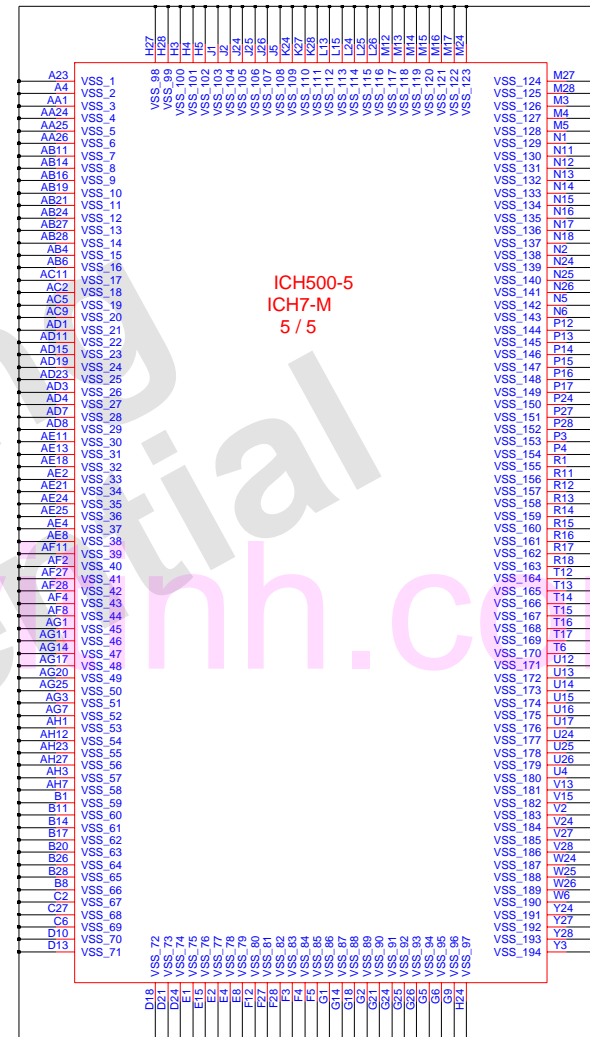
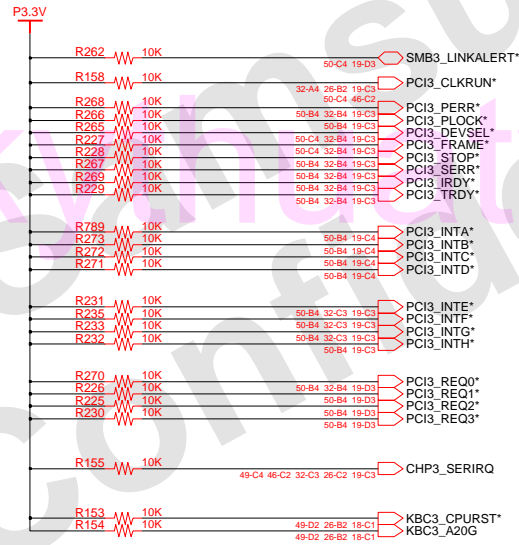
ICH7-M

ICH7-M Options

	Function	Default
CHP3_SPKR	No Reboot	No Stuff
AC97_SDOUT	Safe Mode	TBD



Wake on PCI-E, OD, Pull-up to ALWAYS power



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI	SAMSUNG ELECTRONICS
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APPROVAL	JS, EUR	REV	1.0		ICH7-M (4/4)	PART NO. BA41-00680(3)A
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	21	OF 50

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BIOS CODE

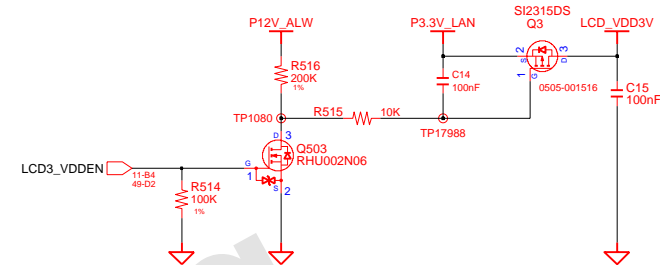
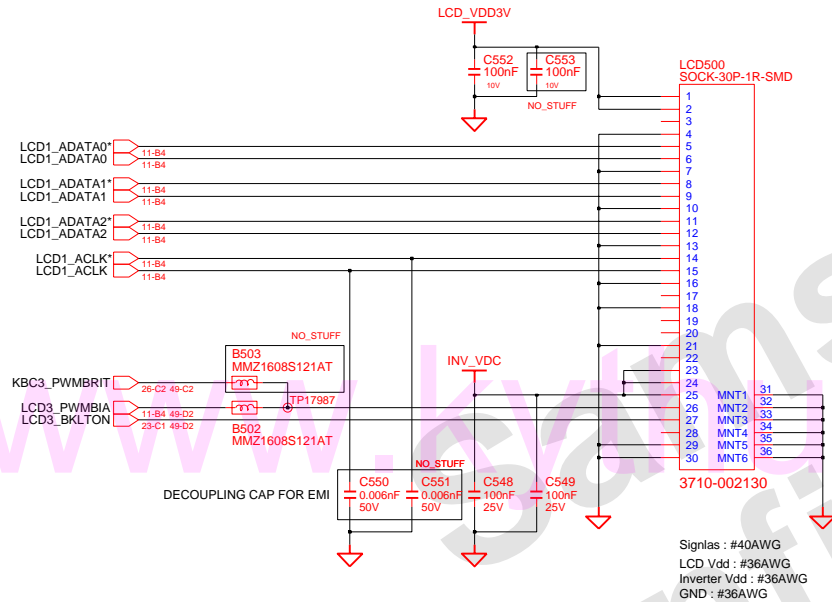
02	VERIFY REAL MODE	66	CONFIGURE ADVANCE CACHE REG.
03	DISABLE NMI	6A	DISPLAY EXTERNAL CACHE SIZE
04	GET CPU TYPE	6C	DISPLAY SHADOW MESSAGE
06	INIT. SYSTEM H/W	6E	DISPLAY NON-DISPOSABLE SEGMENT
08	INIT. CHIPSET REG.	70	DISPLAY ERROR MESSAGE
09	SET IN POST FLAG	72	CHECK FOR CONFIGURATION ERROR
0A	INIT CPU.REG	74	TEST REAL-TIME CLOCK
0B	CPU CACHE ON	76	CHECK FOR KEYBOARD EERROR
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	TESET 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 COPYRIGHT NOTICE	C0	TRY BOOT WITH INT19
47	INIT. I2O 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		

DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN BIOS CODE	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	22	OF 50

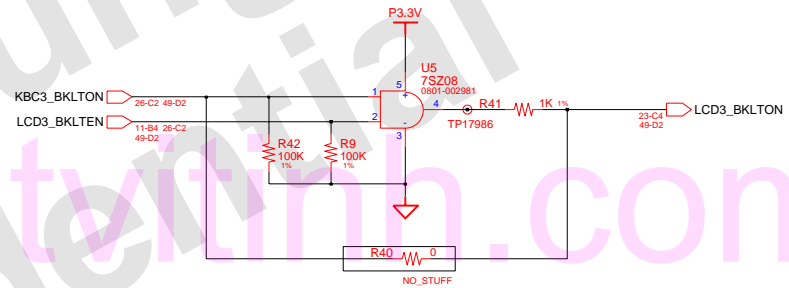
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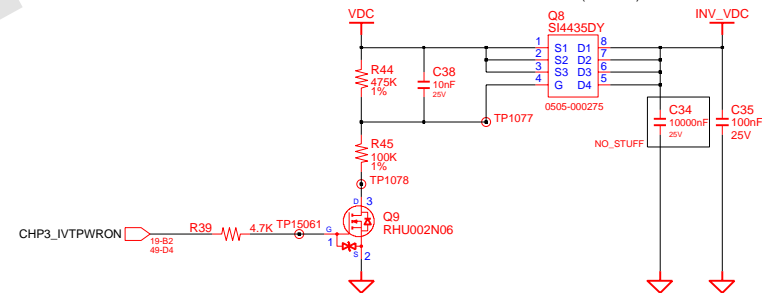
WXGA LCD CONNECTOR



Remove AND Gate : MICOM Control



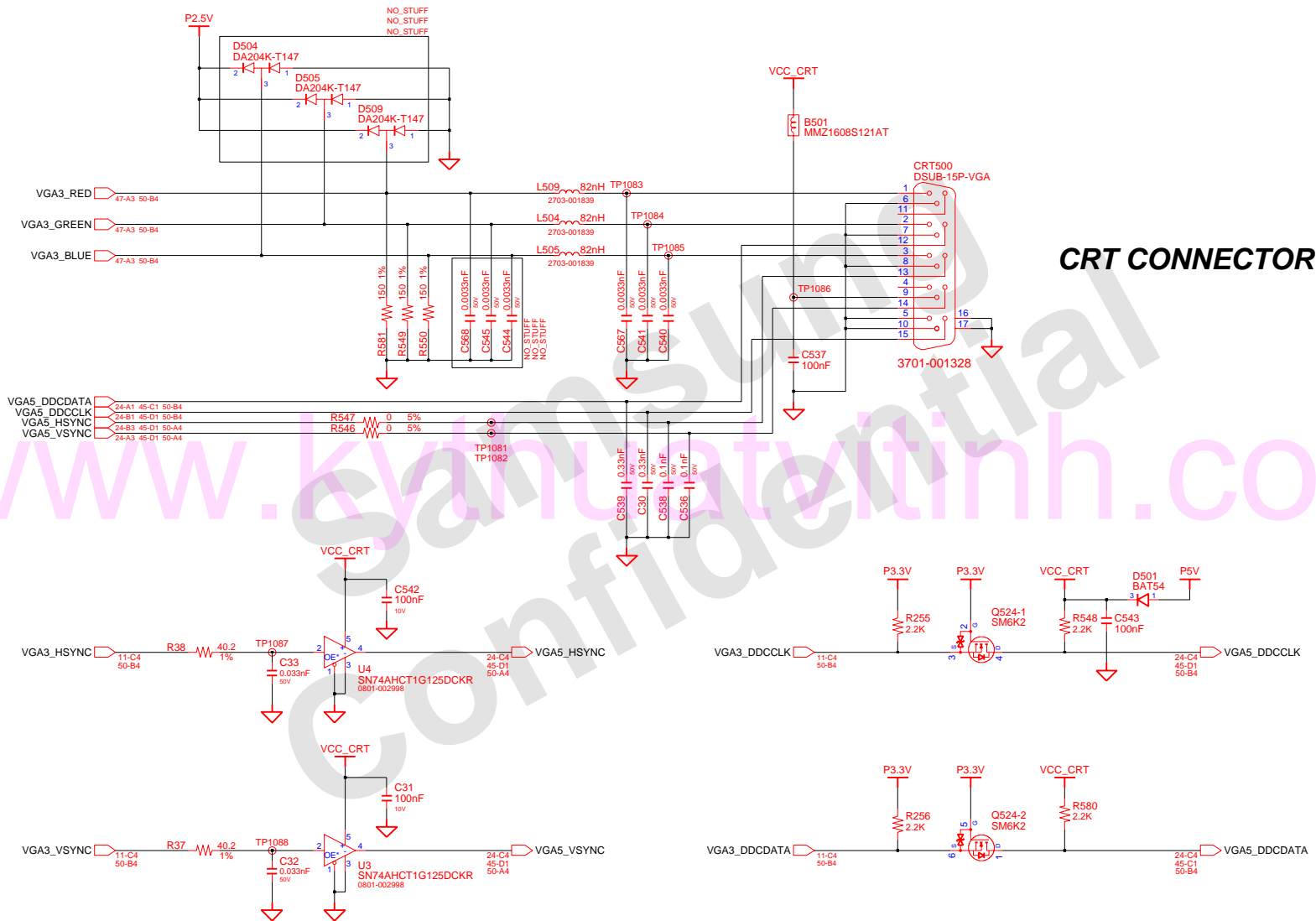
After DV, check Habana INV_VDC circuit.
SI2307DS-T1-E3 (HABANA)



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN LCD(LVDS) CONN.	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT		May 11, 2006 10:24:27 PM	PAGE 23 OF 50	

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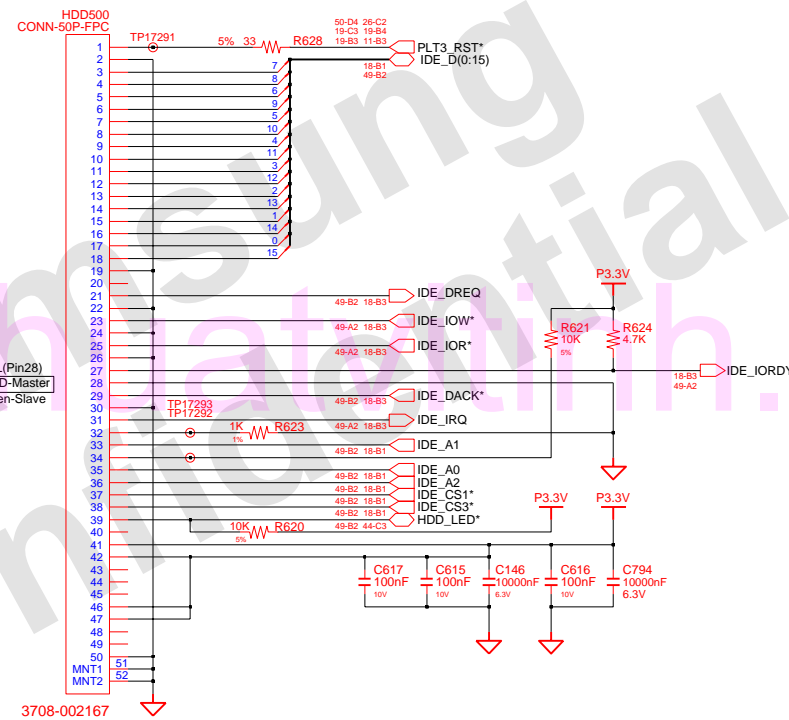
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CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	24	OF 50

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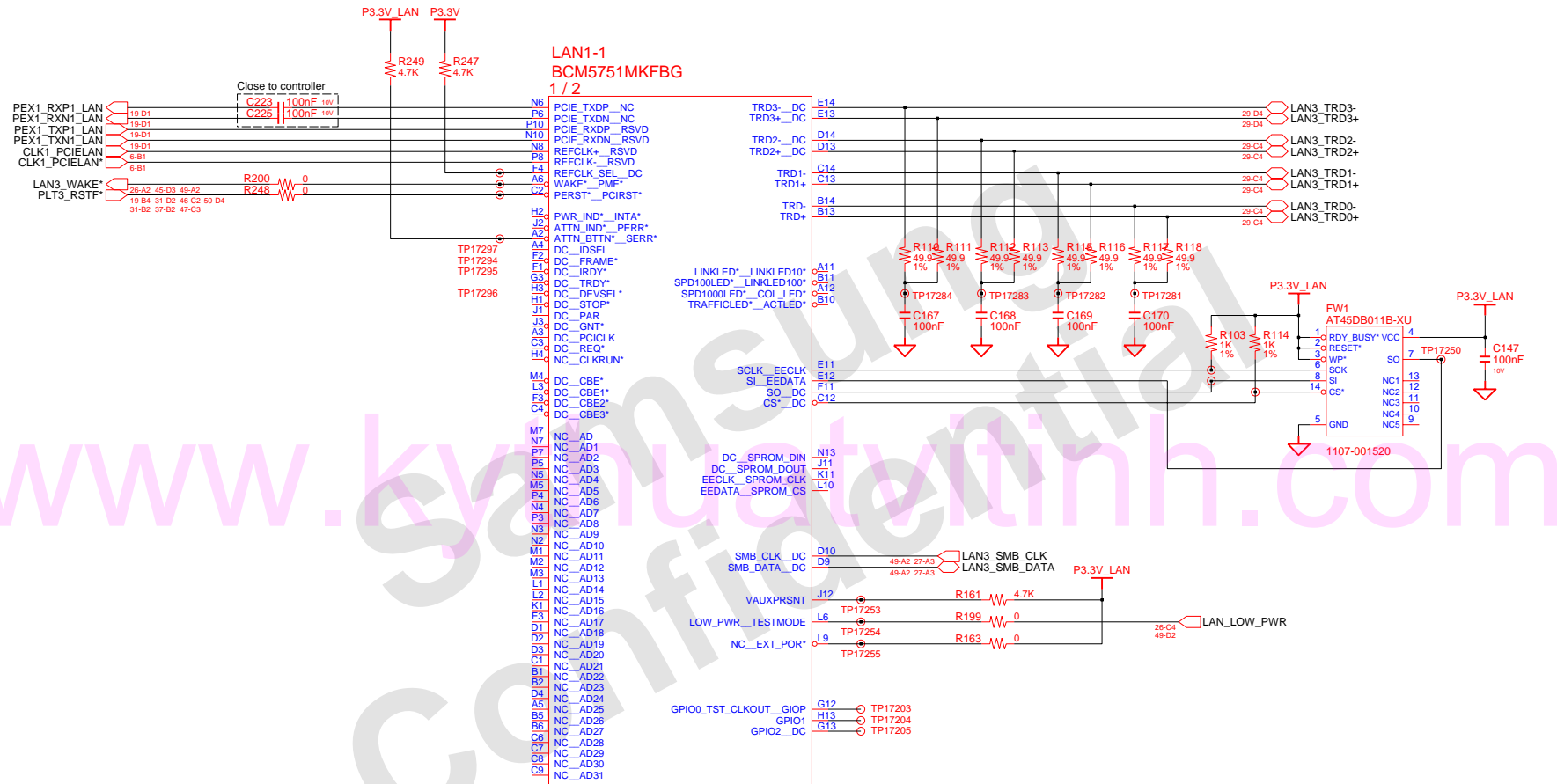
Main to HDD (Locking Type)

IDE Pin Assignment				
1.8 SFF HDD		Main Board		
SIGNALS	No.	No.	SIGNALS	
RESERVED	1	-	N.C	
RESERVED	2	-	N.C	
RESET	3	1	RESET	
GROUND	4	2	GROUND	
DD7	5	3	DD7	
DD8	6	4	DD8	
DD6	7	5	DD6	
DD9	8	6	DD9	
DD5	9	7	DD5	
DD10	10	8	DD10	
DD4	11	9	DD4	
DD11	12	10	DD11	
DD3	13	11	DD3	
DD12	14	12	DD12	
DD2	15	13	DD2	
DD13	16	14	DD13	
DD1	17	15	DD1	
DD14	18	16	DD14	
DD0	19	17	DD0	
DD15	20	18	DD15	
GROUND	21	19	GROUND	
DMARQ	22	21	IDE_DREQ	
GROUND	23	22	GROUND	
D1OW	24	23	D1OW	
D1OR	25	25	D1OR	
GROUND	26	26	GROUND	
IORDY	27	27	IDE_IORDY	
GROUND	28	28	GROUND (CSEL)	
DMACK	29	29	IDE_DACK	
INTRQ	30	31	IDE_IRQ	
DA1	31	33	IDE_A1	
PDIAG	32	34	PDIAG (Pull-Up)	
DA0	33	35	IDE_A0	
DA2	34	36	IDE_A2	
CS0	35	37	IDE_CS1	
CS1	36	38	IDE_CS3	
DASP	37	39	IDE_LED	
+3.3V	38	41,42	+3.3V	
+3.3V	39	46,47	+3.3V	
Reserved (Toshiba) DevAdn(HGST) - 0(open): Master - 1(PullUp): Slave	40	-	N.C	

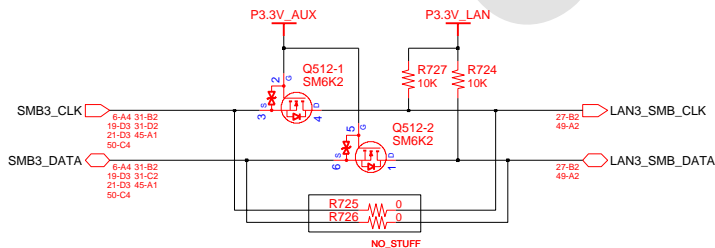


DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN HDD CONNECTOR	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	25	OF 50

LAN1-1
BCM5751MKFBG
1 / 2



1205-002749



DRAW	JULIO	DATE	5/11/2006	TITLE		SAMSUNG ELECTRONICS	
CHECK	HK, PARK	DEV. STEP	SR				
APPROVAL	JS, EUR	REV	1.0	RIMINI MAIN LAN CONTROLLER (1/2)		PART NO.	
MODULE CODE		LAST EDIT				BA41-00680(3)A	
			May 11, 2006 10:24:27 PM		PAGE	27	OF 50

The schematic diagram illustrates the LAN section of the T1020 board, showing the power planes (P1.2V LAN, P2.5V LAN, P3.3V LAN) and the decoupling capacitors (C218-C264, C271-C299, C184-C186, C158-C166, C185-C163). The diagram also shows the connections to the VDDIO, VESD, VDDP, BIASVDD, XTALVDD, and DC_VREF pins. The components are labeled as follows:

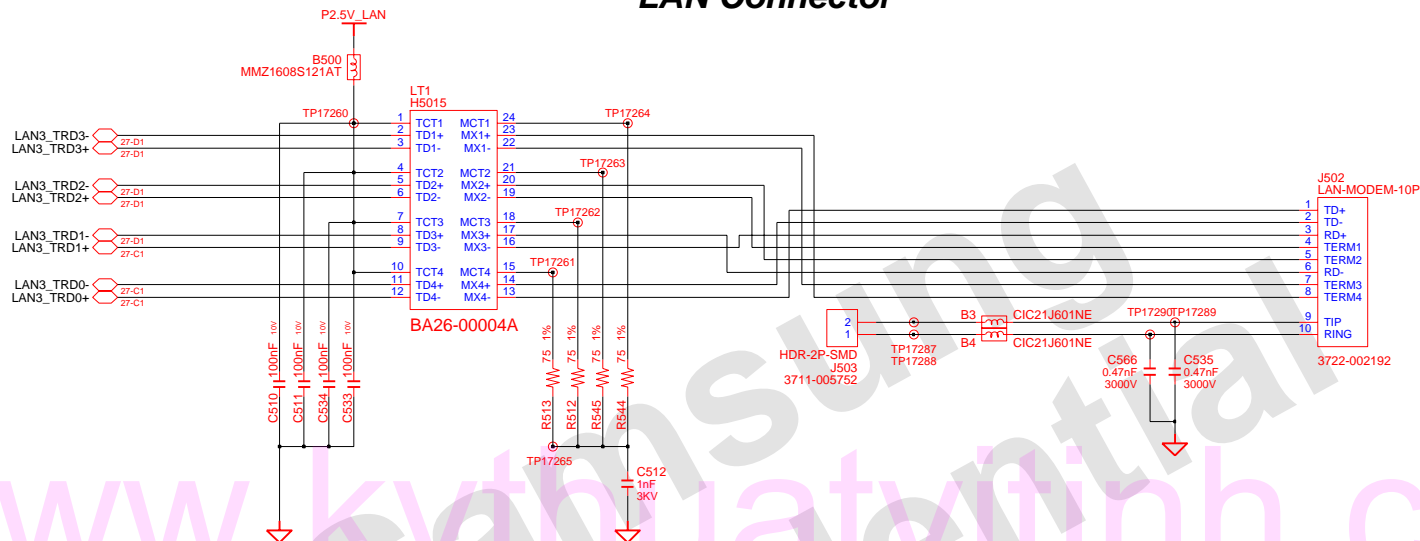
- Power Planes:** P1.2V LAN, P2.5V LAN, P3.3V LAN
- Decoupling Capacitors:** C218, C263, C265, C266, C220, C228, C222, C219, C230, C226, C264, C271, C267, C268, C270, C269, C187, C186, C184, C159, C158, C156, C185, C157, C161, C163
- Components:** TP17990, TP17278, TP17279, TP17280, TP17276, TP17277, Q17 QST5TR
- Other Components:** B24 MMZ1608S121AT, B17 MMZ1608S121AT, B11 BLM18PG181SN1, B18 MMZ1608S121AT
- Pin Connections:** VDDIO_PCI_1, VDDIO_PCI_2, VDDIO_PCI_3, VDDIO_PCI_4, VDDIO_PCI_5, VDDIO_PCI_6, VDDIO_PCI_7, VDDIO_PCI_8, VDDIO_PCI_9, VESD_1, VESD_2, VESD_3, VDDIO_1, VDDIO_2, VDDIO_3, VDDP_DC_1, VDDP_DC_2, VDDP_DC_3, BIASVDD, XTALVDD, AVDD_DC_1, AVDD_DC_2, UP25_REGSUP18, UT25_REGSUP18, EN12_REG18OUT, WL_ACTIVIY_DC, WL_LINKS5_DC, WL_LINK2.4G_DC, DC_VREF

DATE	JULIO	5/11/2006	TITLE		RIMINI MAIN		SAMSUNG ELECTRONICS	
CHECK	HK, PARK	REV. STEP	SR	LAN CONTROLLER (2/2)		PART NO. BA11-00680(3)A		
APPROVAL	JS, EUR	REV	1.0					
MODULE CODE	LAST EDIT		May 11, 2006 10:24:27 PM		PAGE	28	OF	50

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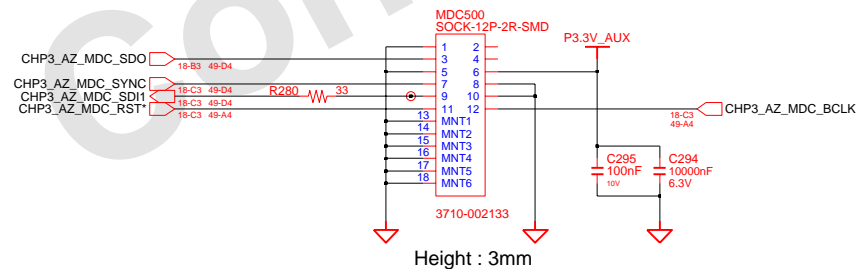
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LAN Connector



MDC Connector

MDC Module : BA59-01272A



Height : 3mm

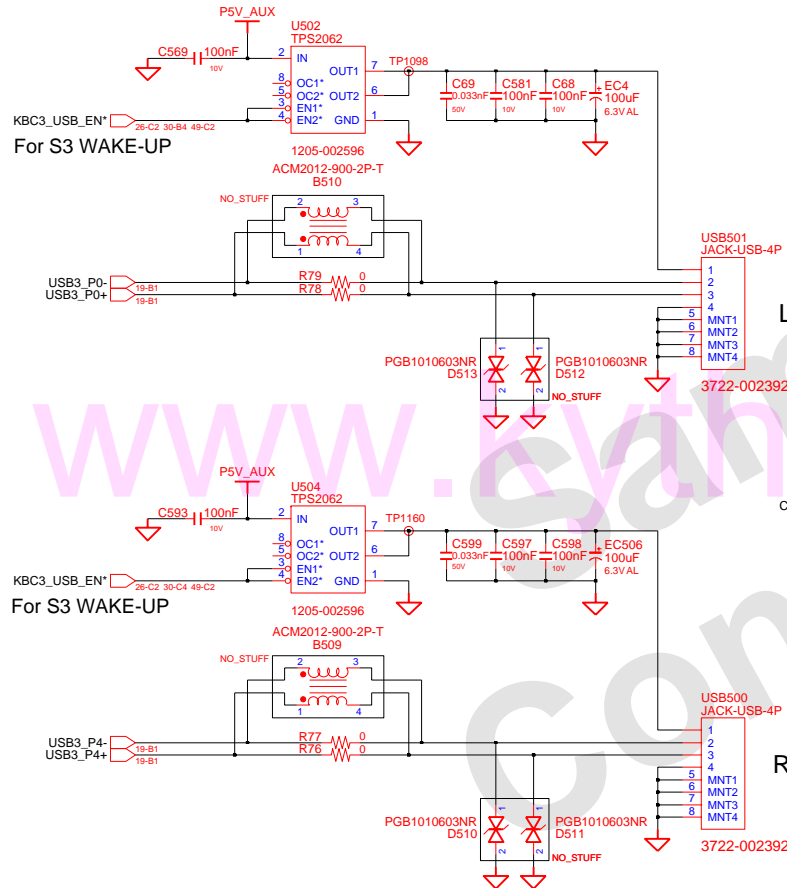


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CHECK	HK., PARK	DEV. STEP	SR				
APPROVAL	JS, EUR	REV	1.0	PART NO. BA411-00680(3)A			
MODULE CODE	LAST EDIT		May 11, 2006 10:24:27 PM			PAGE	29 OF 50

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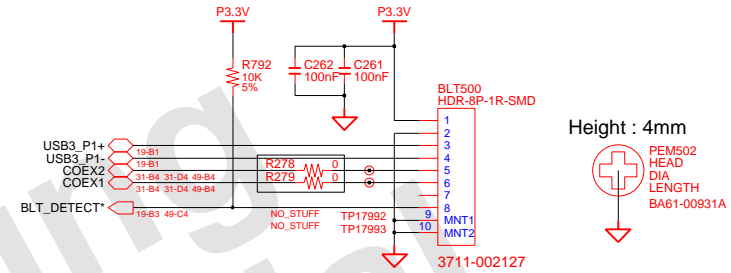
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USB Port

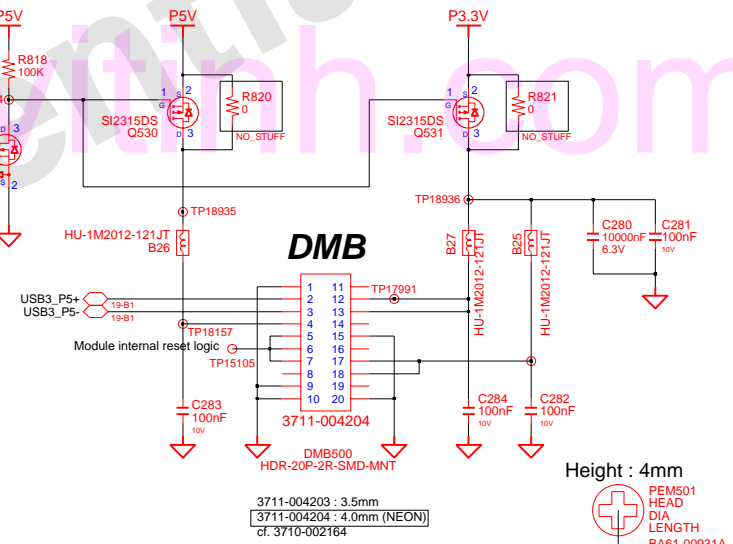


BLUETOOTH

INTEL F/W : PIN5-COEX2
BROADCOM F/W : PIN7-COEX2

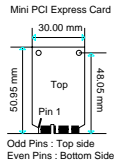


DMB



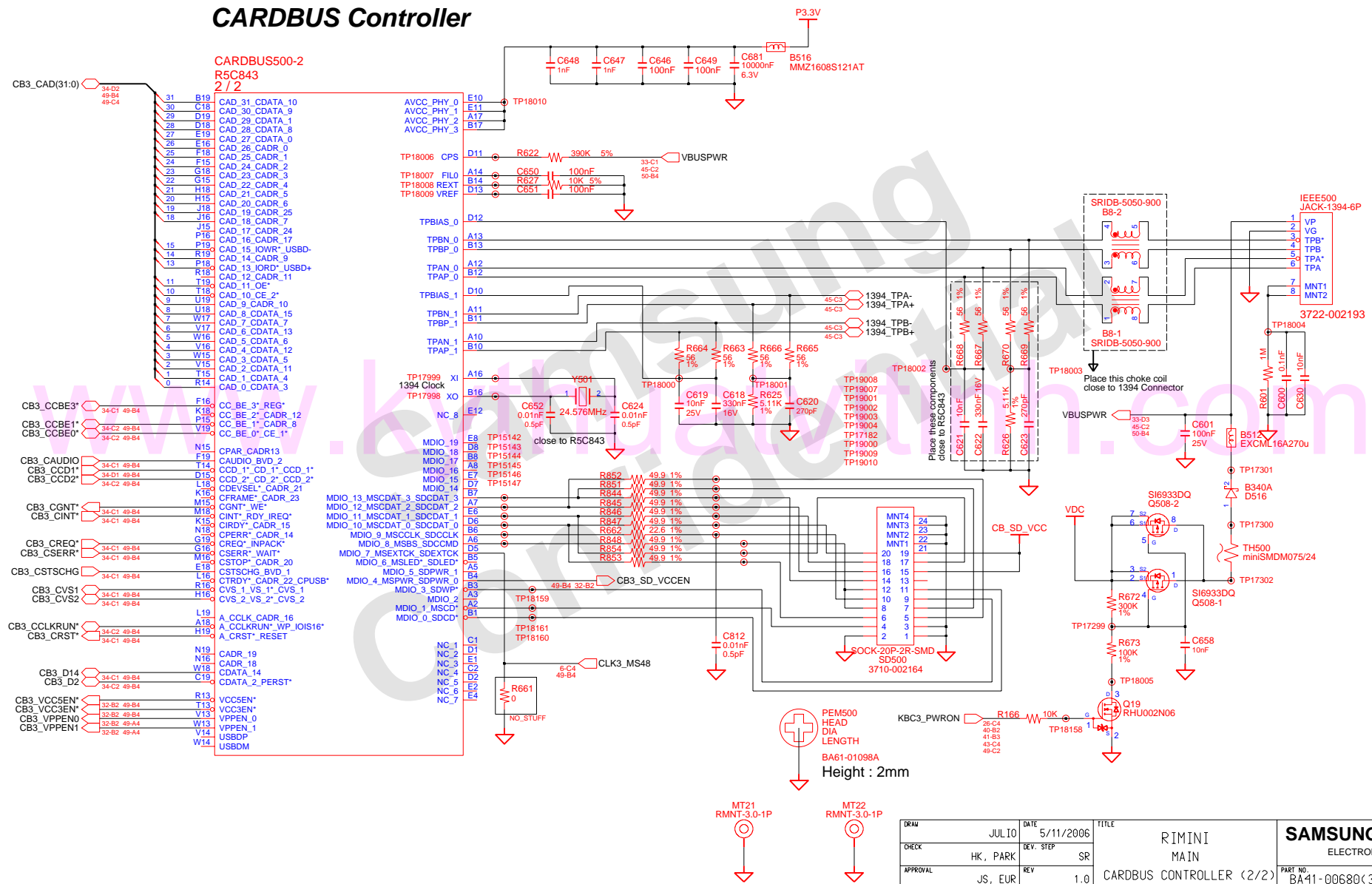
DMB Module : BA59-01869A

DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			
APPROVAL	JS, EUR	REV	1.0	USB, DMB & BLUETOOTH		PART NO. BA41-00680(3)A
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	30	OF 50



DRAM	JULIO	DATE	5/11/2006	TITLE		RIMINI MAIN		SAMSUNG ELECTRONICS	
CHECK	HK, PARK	DEV. STEP	SR						
APPROVAL	JS, EUR	REV	1.0	MINI CARD (GOLAN,WIBRO)		PART NO.		BA41-00680(3)A	
MODULE CODE	LAST EDIT		May 11, 2006 10:24:27 PM			PAGE	31	OF	50

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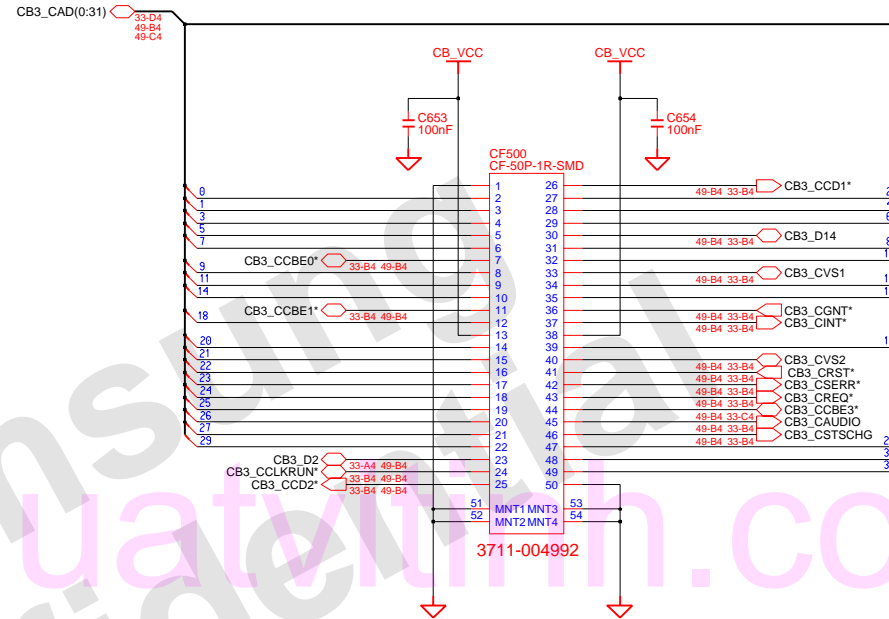
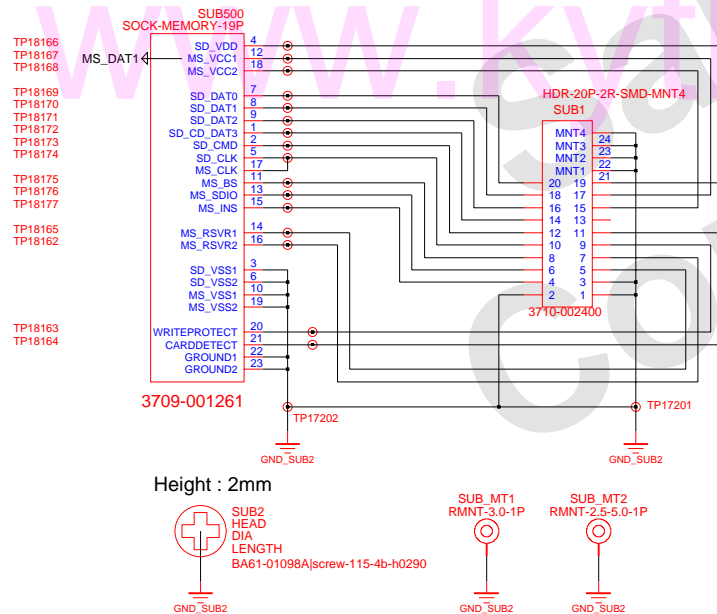
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CHECK		HK, PARK		REV.	STEP		SR				PART NO.	
APPROVAL		JS, EUR		REV	1.0		CARDBUS CONTROLLER (2/2)				BA41-00680(3)A	
MODULE CODE				LAST EDIT		May 11, 2006 10:24:27 PM			PAGE		33 OF 50	

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CF CARD

3in1 Sub Board



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR	MAIN	MAIN	
APPROVAL	JS, EUR	REV	1.0	CF CARD & 3IN1 SUB B'D	PART NO.	BA41-00680(3)A
MODULE CODE		LAST EDIT		May 11, 2006 10:24:27 PM	PAGE	34 OF 50

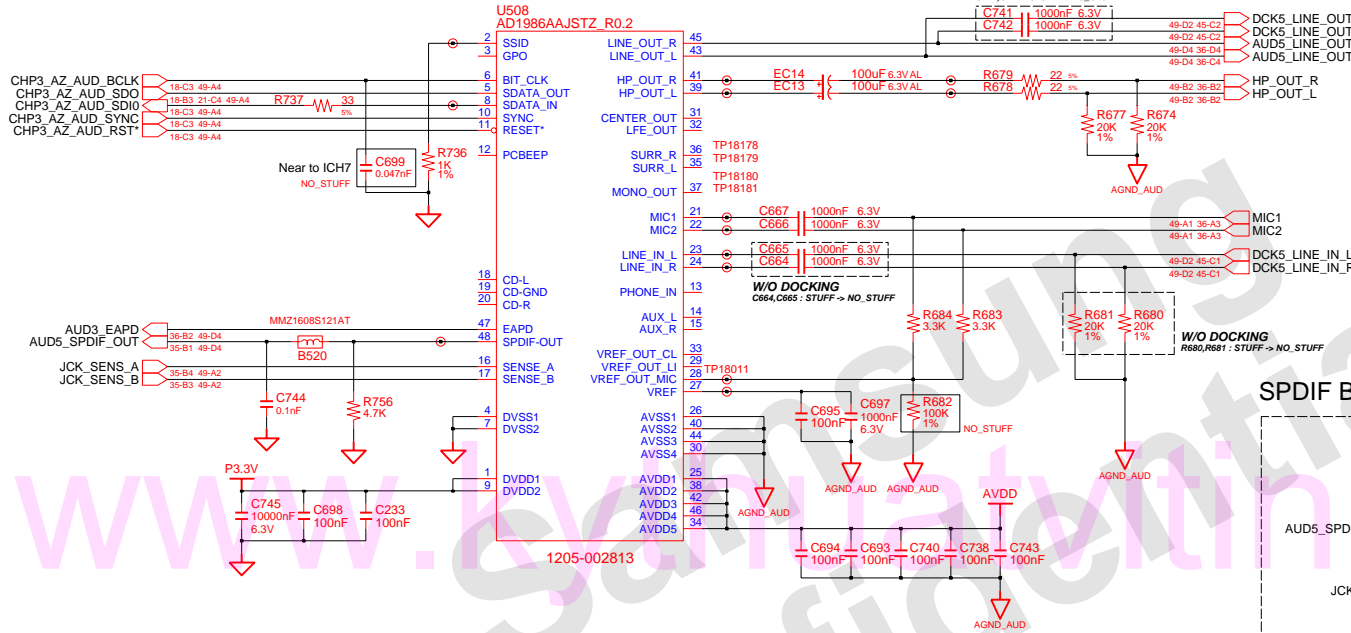
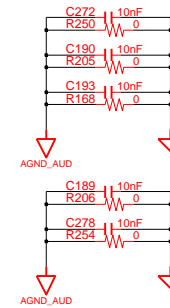
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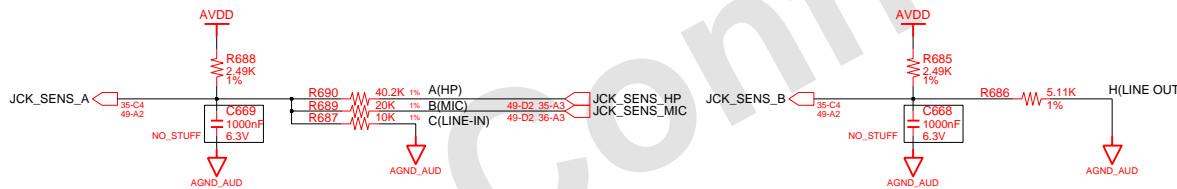
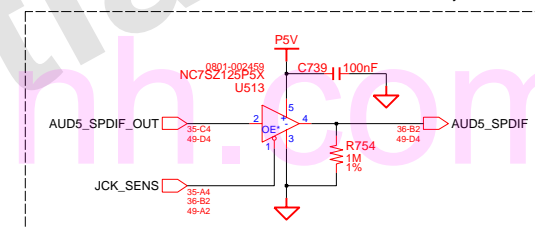
AUDIO CODEC

1.AGND_AUD	Audio Ground
2.GND	Digital Ground

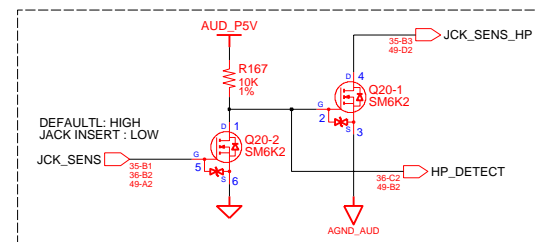
ALL 1608 SIZE



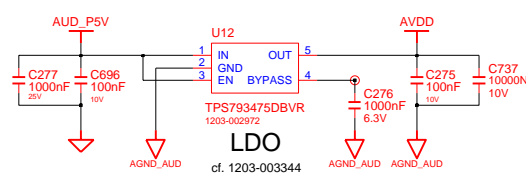
SPDIF BUFFER



SPDIF DETECT



AVDD

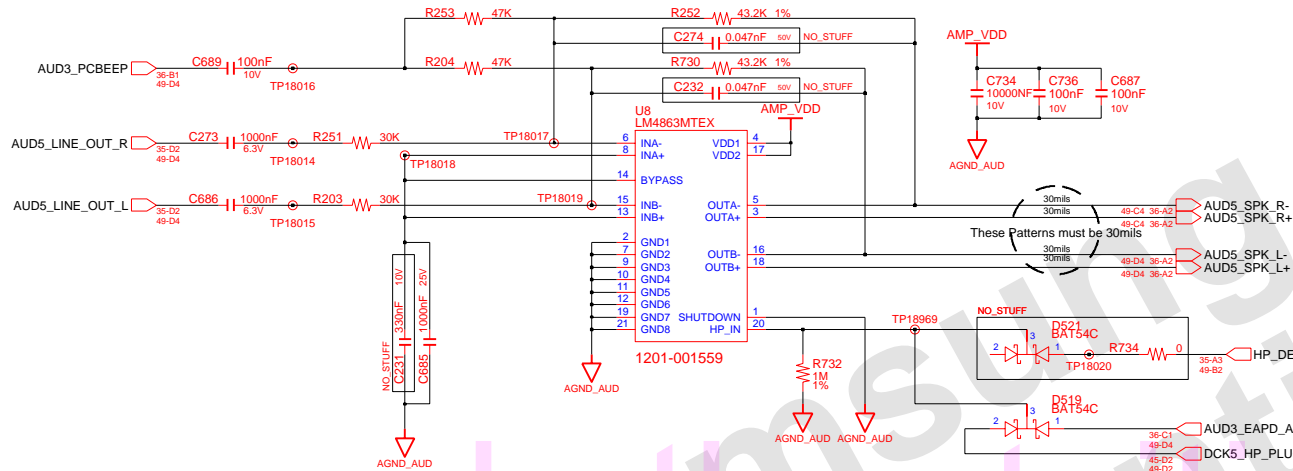


DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN AUDIO CODEC	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	35	OF 50

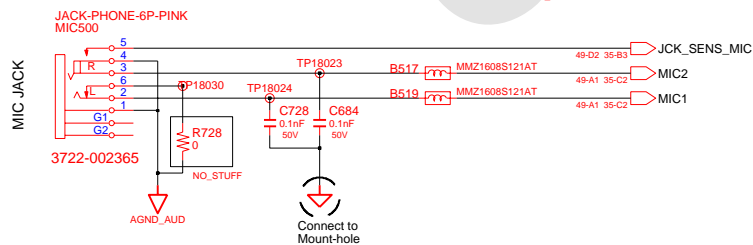
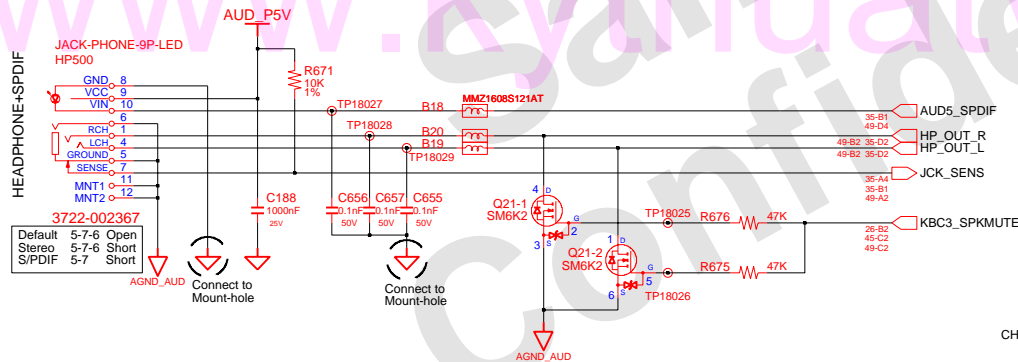
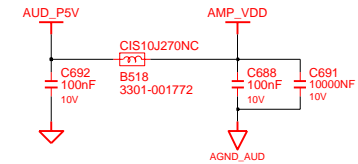
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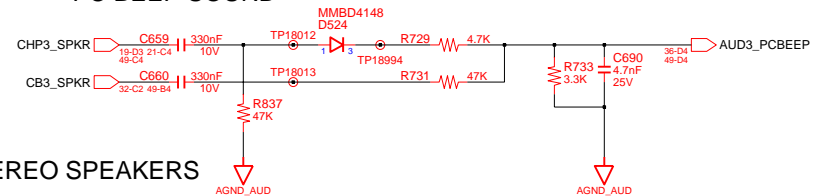
AUDIO AMP



AMP_VDD



PC BEEP SOUND



INTERNAL STEREO SPEAKERS

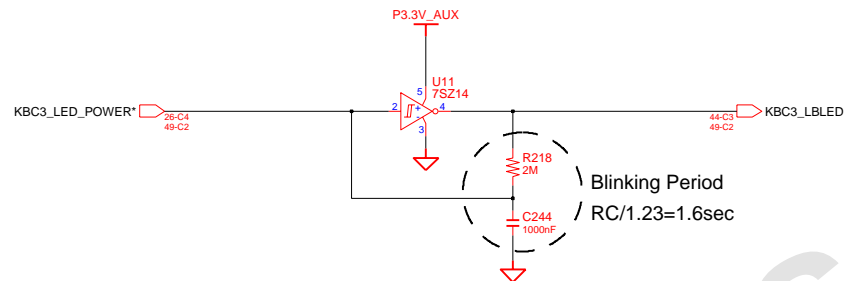


DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN AUDIO AMP & JACK	SAMSUNG ELECTRONICS		
CHECK	HK, PARK	DEV. STEP	SR					
APPROVAL	JS, EUR	REV	1.0					
MODULE CODE	LAST EDIT		May 11, 2006 10:24:27 PM				PAGE	36
						PART NO.	BA41-00680(3)A	

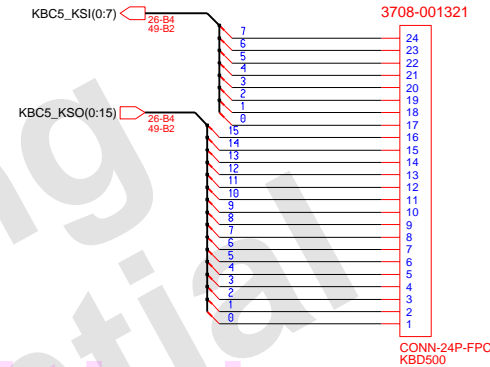
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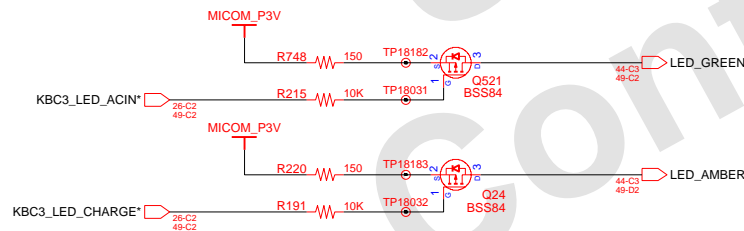
POWER_ON / LB LED



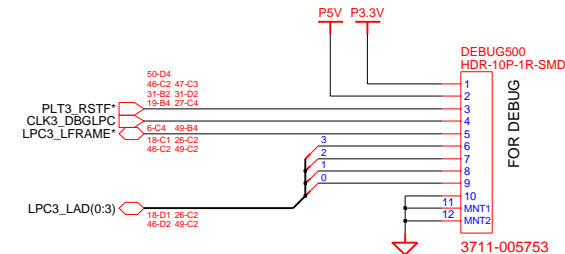
KEYBOARD



ADAPTERIN/CHARGING LED



DEBUG PORT



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN KBD CONN & DEBUG	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	37	OF 50

The schematic diagram illustrates the electrical layout of the Samsung RIMINI MAIN board. Key components and their connections include:

- Power Input:** JACK-DC-POWER-3P (J500) providing 19V input, connected to a 3722-002191 component.
- Regulation and Conversion:** Q500-1 (FDS4935A_NL) and Q500-2 (FDS4935A_NL) are used for power regulation. Q504 (Si4435DY) is a MOSFET driver. Q7 (FDS8958A) is another MOSFET.
- Control and Logic:** U501 (MAX1909ETI+T) is a precision centration controller. U505-1 and U505-2 (SM6K2) are comparators.
- Protection and Monitoring:** Q505-1 and Q505-2 (SM6K2) are used for overcurrent protection. Q504 (Si4435DY) is used for signal conditioning.
- Passive Components:** Numerous resistors (R1-R58) and capacitors (C1-C57) are used for timing, filtering, and signal conditioning.
- Connectors:** J501 (3711-005751) is a battery connector. J500 is a DC power jack.
- Other Components:** B505 and B506 (MMZ1608S121AT) are diodes. D507 and D508 (DA204K-T147) are diodes. R535 (475K) is a resistor.
- Labels and Markings:** Various labels like AD_DC, BATT_DC, CHG_REF, LDO_P5.4V, and BAT3_VOLTA are used to identify different sections of the board.

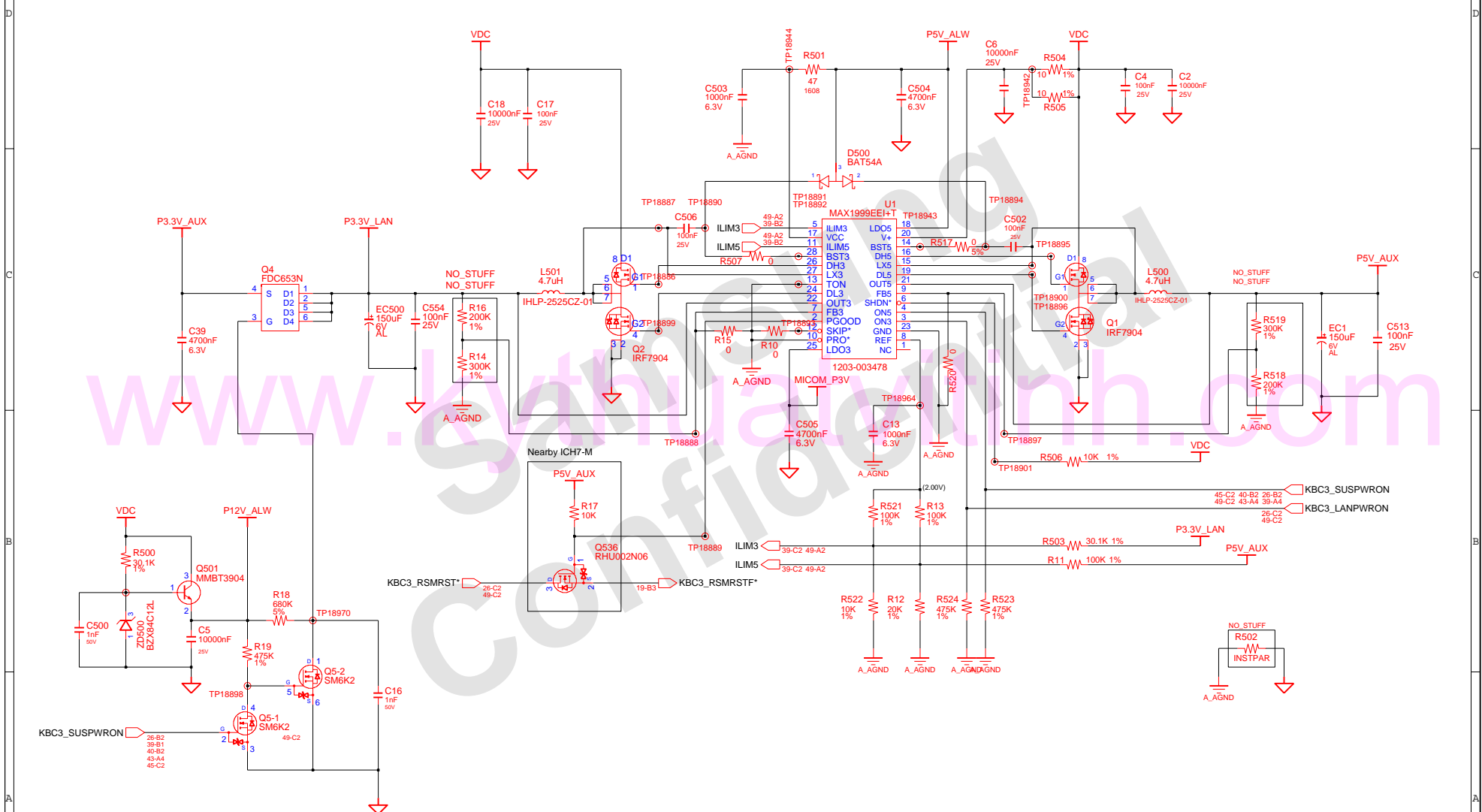
The diagram also includes a note for DMB (Digital Media Board) and a warning for the battery connection: "Nearby Battery Conn.".

DRAM	JULIO	DATE	5/11/2006	TITLE RIMINI MAIN CHARGER		SAMSUNG ELECTRONICS	
CHECK	HK, PARK	DEV. STEP	SR				
APPROVAL	JS, EUR	REV	1.0				
MODULE CODE	LAST EDIT						
		May 11, 2006 10:24:27 PM		PAGE	38	OF	50

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P5V_AUX & P3.3V_LAN(AUX)

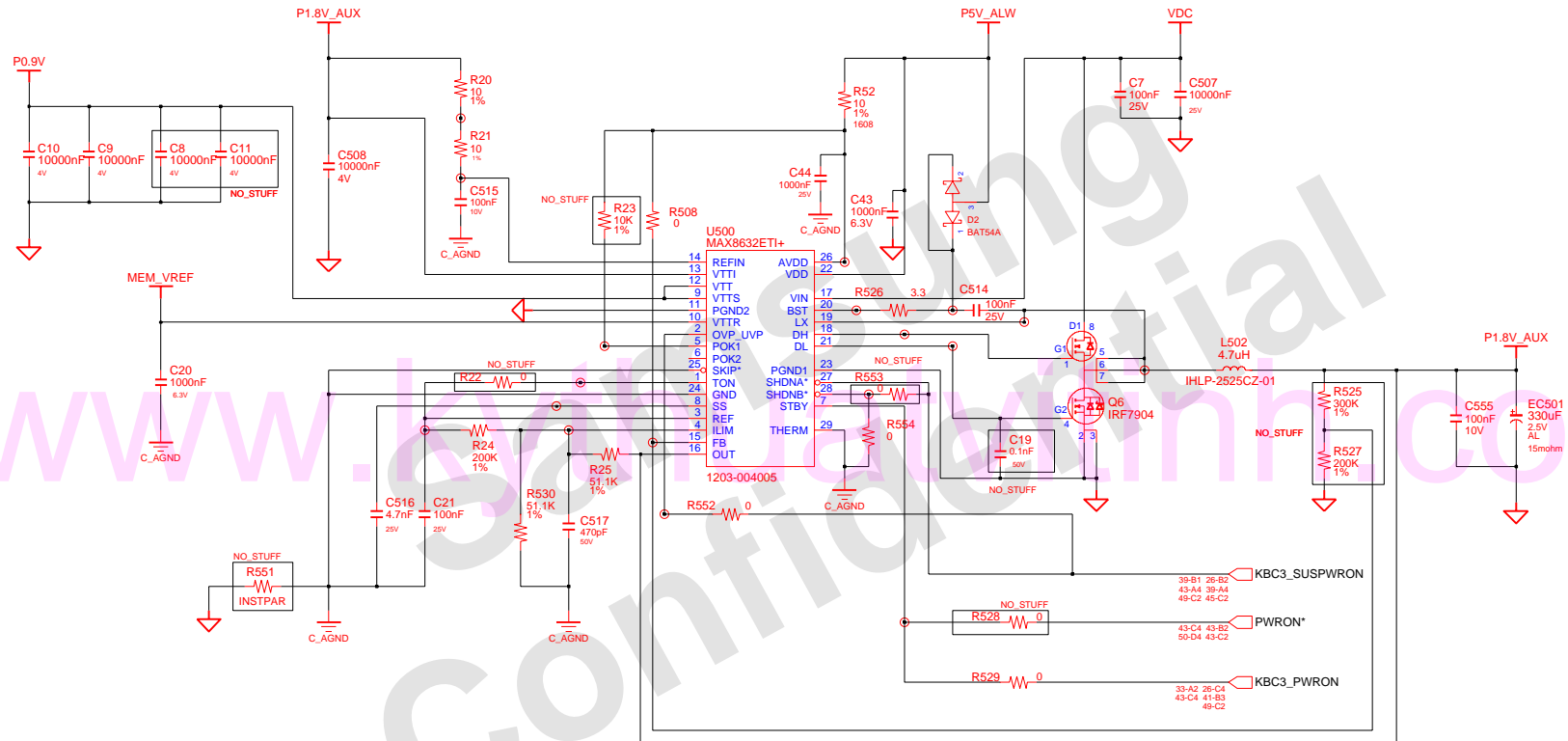


DATE	JUL10	5/11/2006	TITLE	RIMINI	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR	MAIN	
APPROVAL	JS, EUR	REV	1.0	P5V_AUX & P3.3V_LAN	
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE 39 OF 50	

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DDR2 POWER

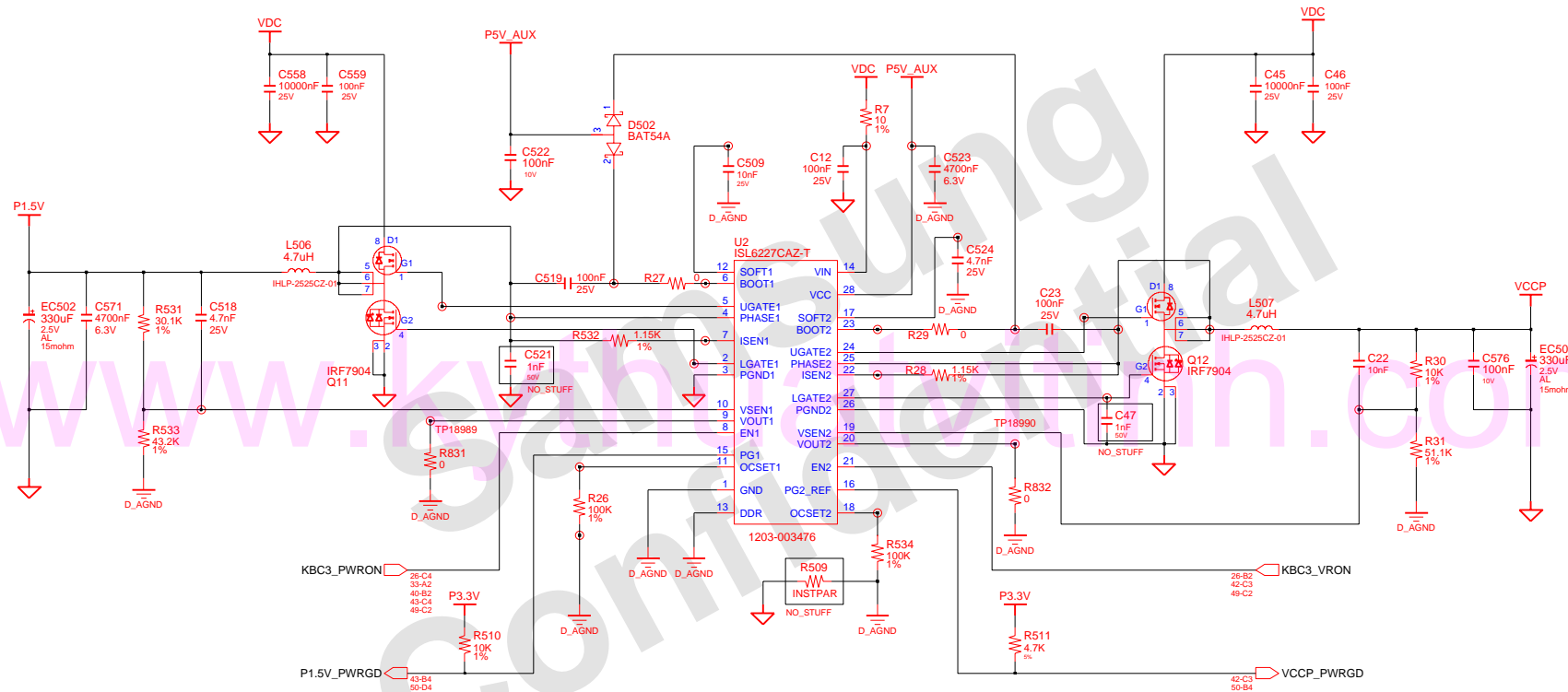


DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN DDR2 POWER	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT				
				May 11, 2006 10:24:27 PM	PAGE	40 OF 50

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P1.5V & VCCP

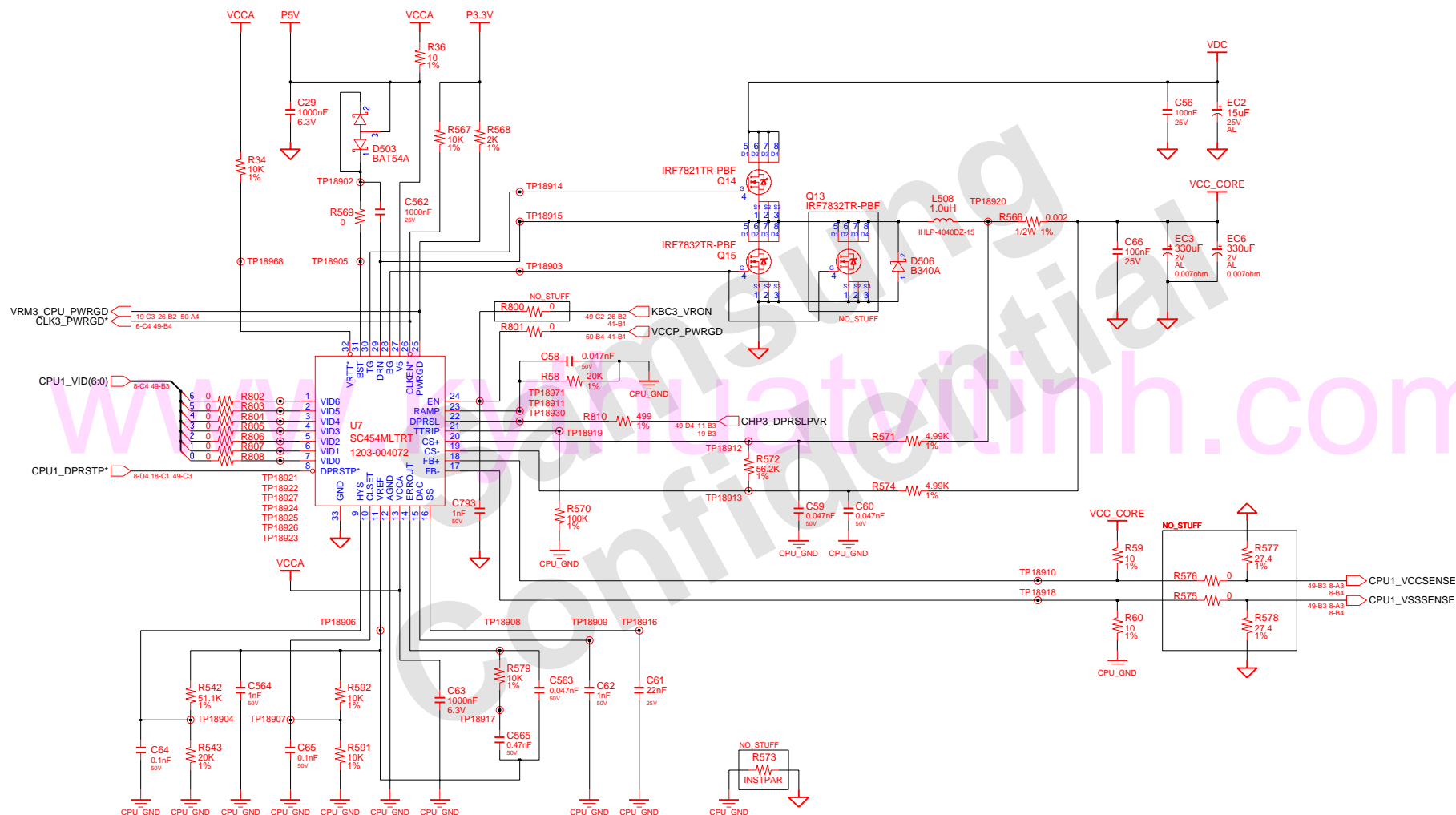



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN P1.5V & VCCP	SAMSUNG ELECTRONICS PART NO. BA41-00680(3)A
CHECK	HK, PARK	DEV. STEP	SR			
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	41 OF 50	

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CPU VRM POWER

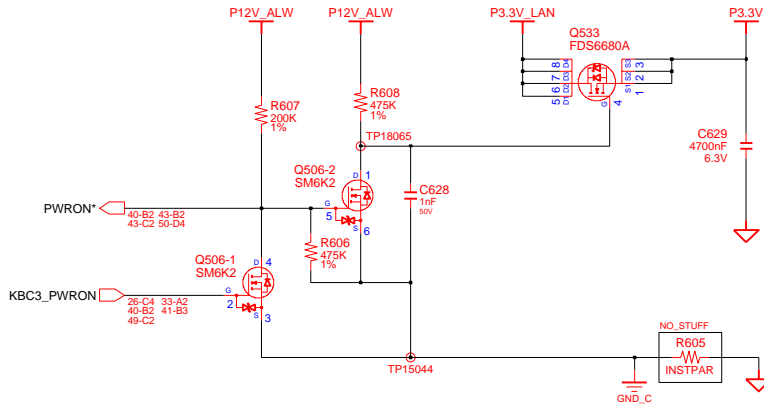


DATE	JUL 10	5/11/2006	TITLE		RIMINI MAIN VCC_CORE			
CHECK	HK, PARK	SR						
APPROVAL	JS, EUR	REV 1.0						
MODULE CODE			LAST EDIT		May 11, 2006 10:24:27 PM		PAGE	42 OF 50

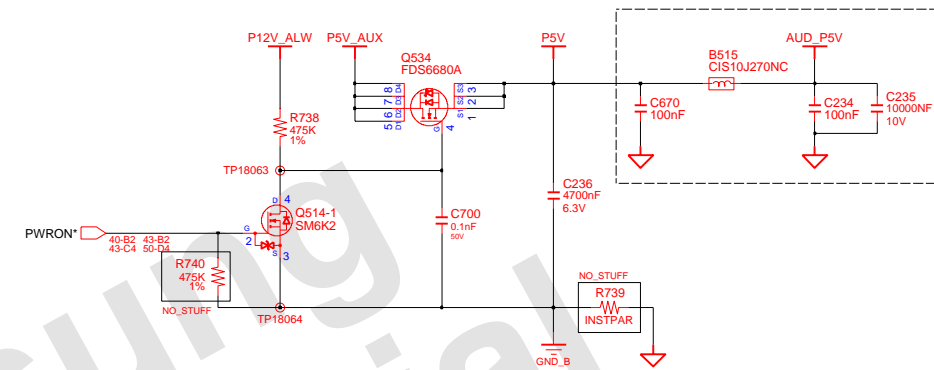
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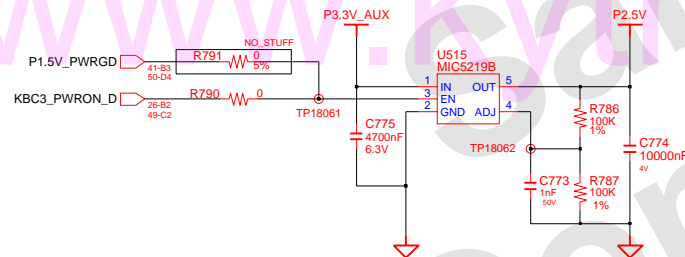
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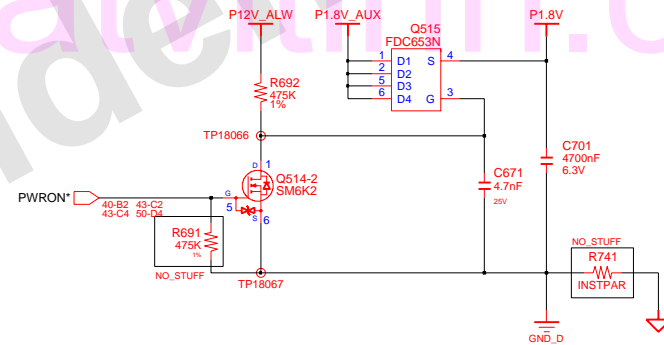
Switched Power On (P5V)



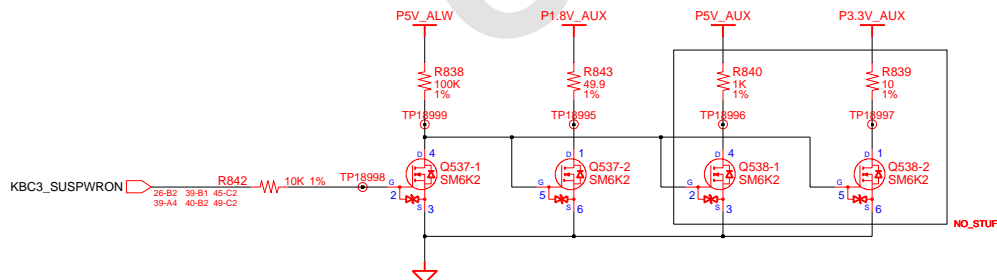
Switched Power On (P2.5V)



Switched Power On (P1.8V)



Discharge Circuit

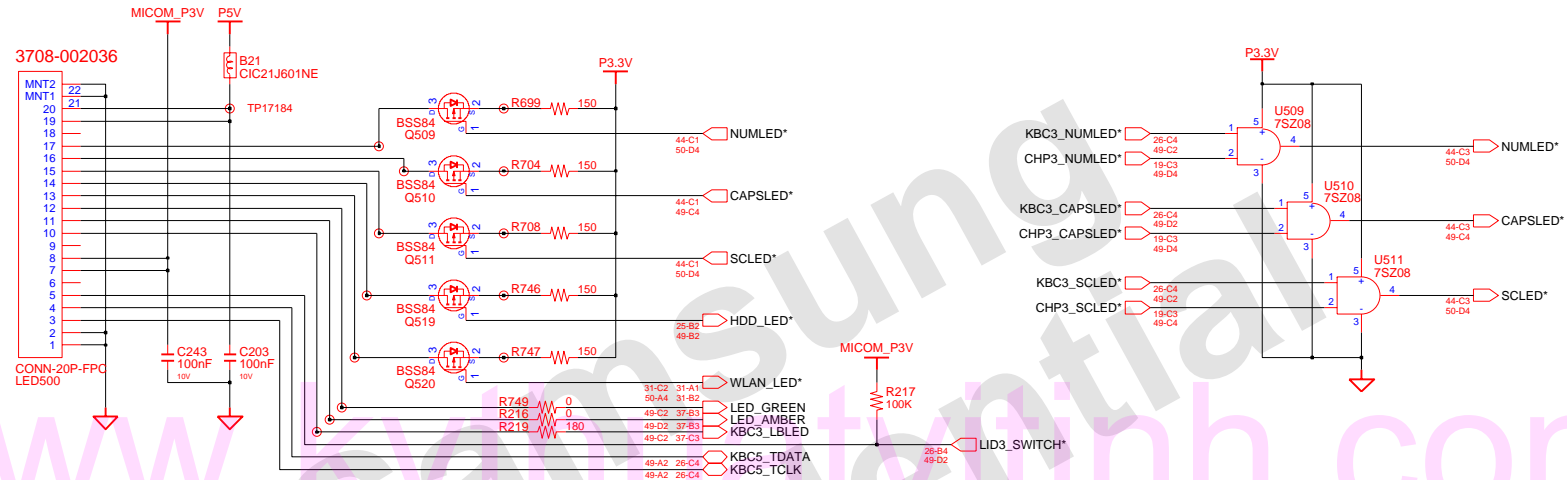


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CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	43	OF 50

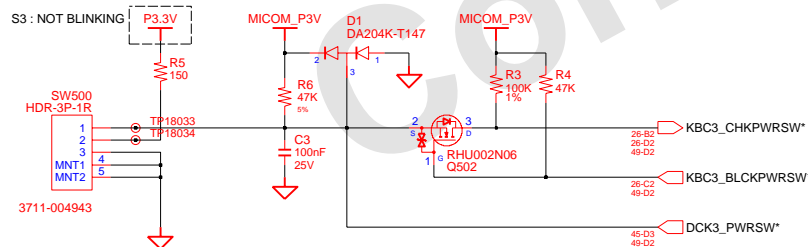
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LED & T/P FPC Conn.



Power Switch Connector



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			
APPROVAL	JS, EUR	REV	1.0	LED, TP CONN & POWER SW		PART NO. BA41-00680(3)A
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	44	OF 50

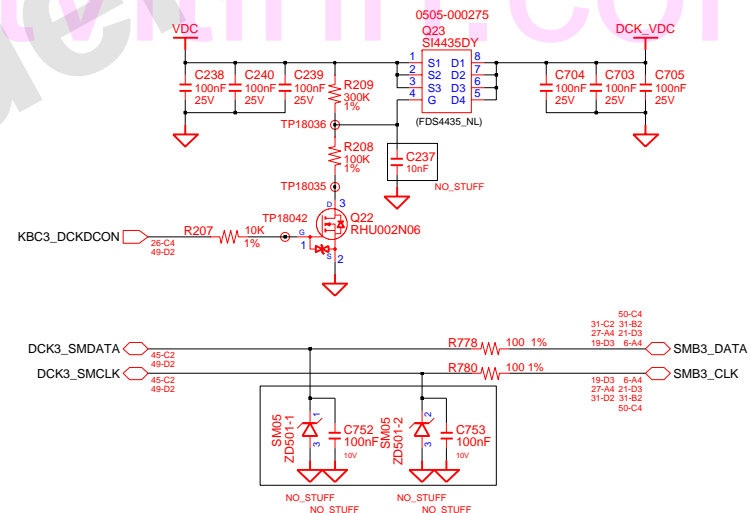
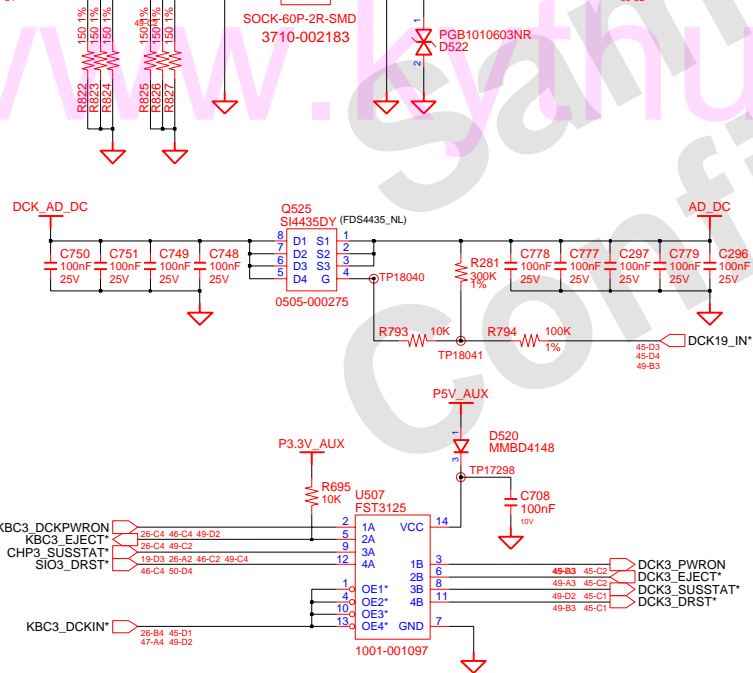
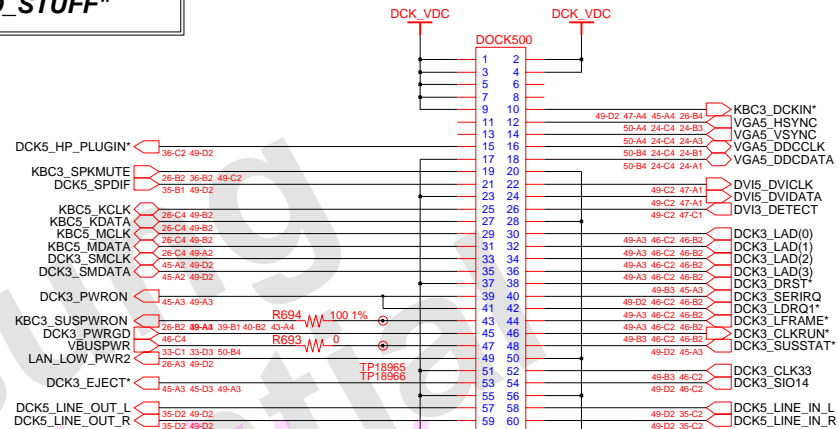
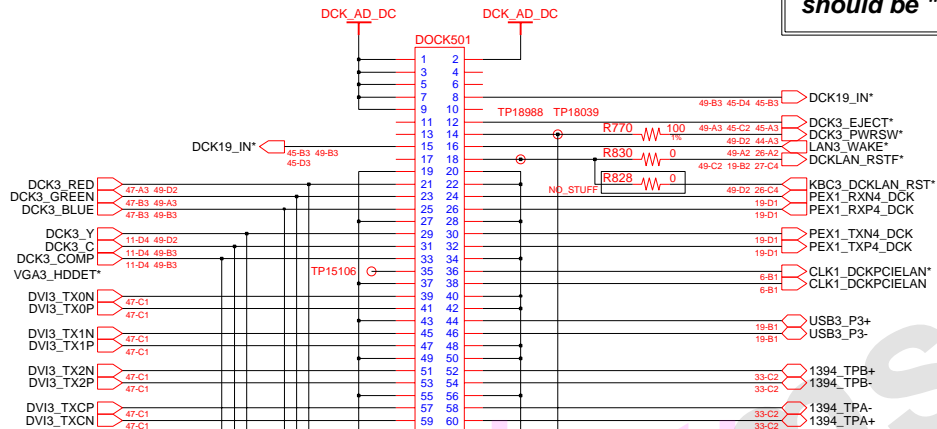
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DOCKING CONNECTOR (124PIN)

***In "Without Docking Model"
all components of this page
should be "NO_STUFF"***

Docking Placement

PWR1	1	119	PWR2
Top View			
PWR3	2	120	PWR4



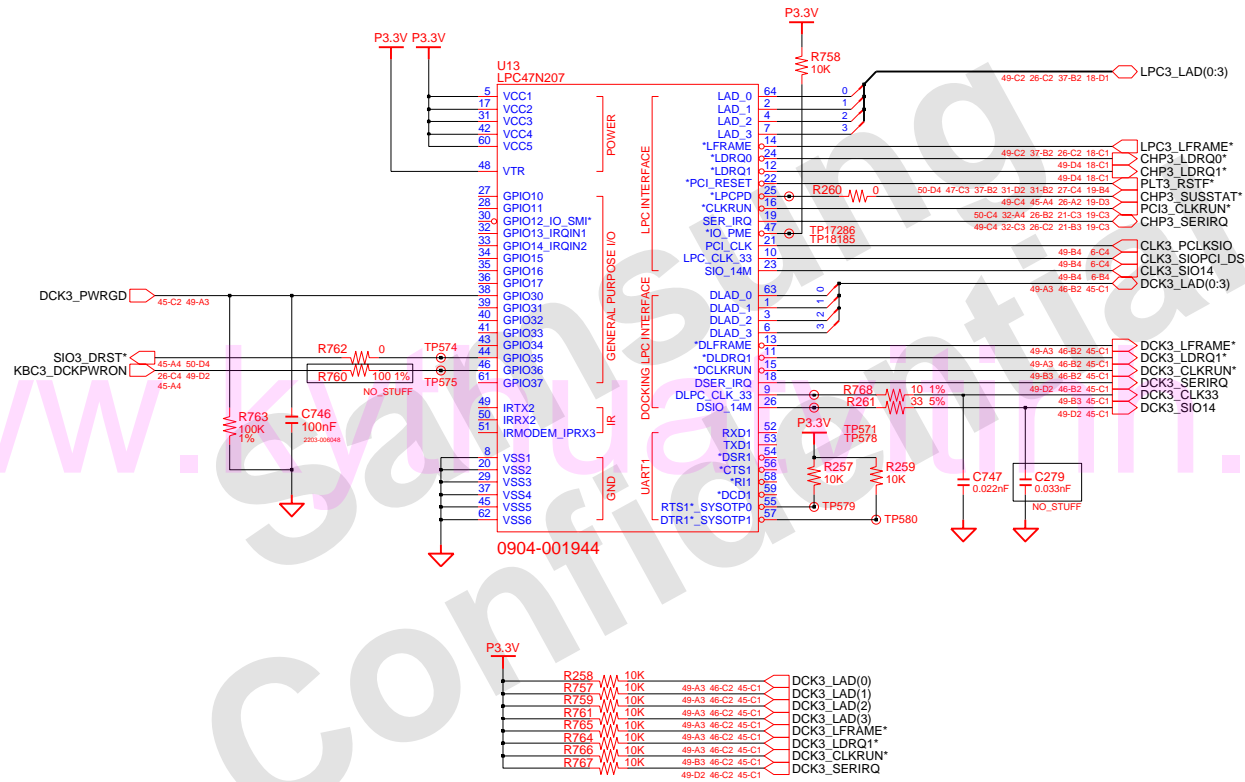
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CHECK	HK, PARK	DEV. STEP	SR				
APPROVAL	JS, EUR	REV	1.0				
MODULE CODE	LAST EDIT		May 11, 2006 10:24:27 PM				PAGE
				PART NO.		BA41-00680(3)A	

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DOCKING LPC SUPER I/O

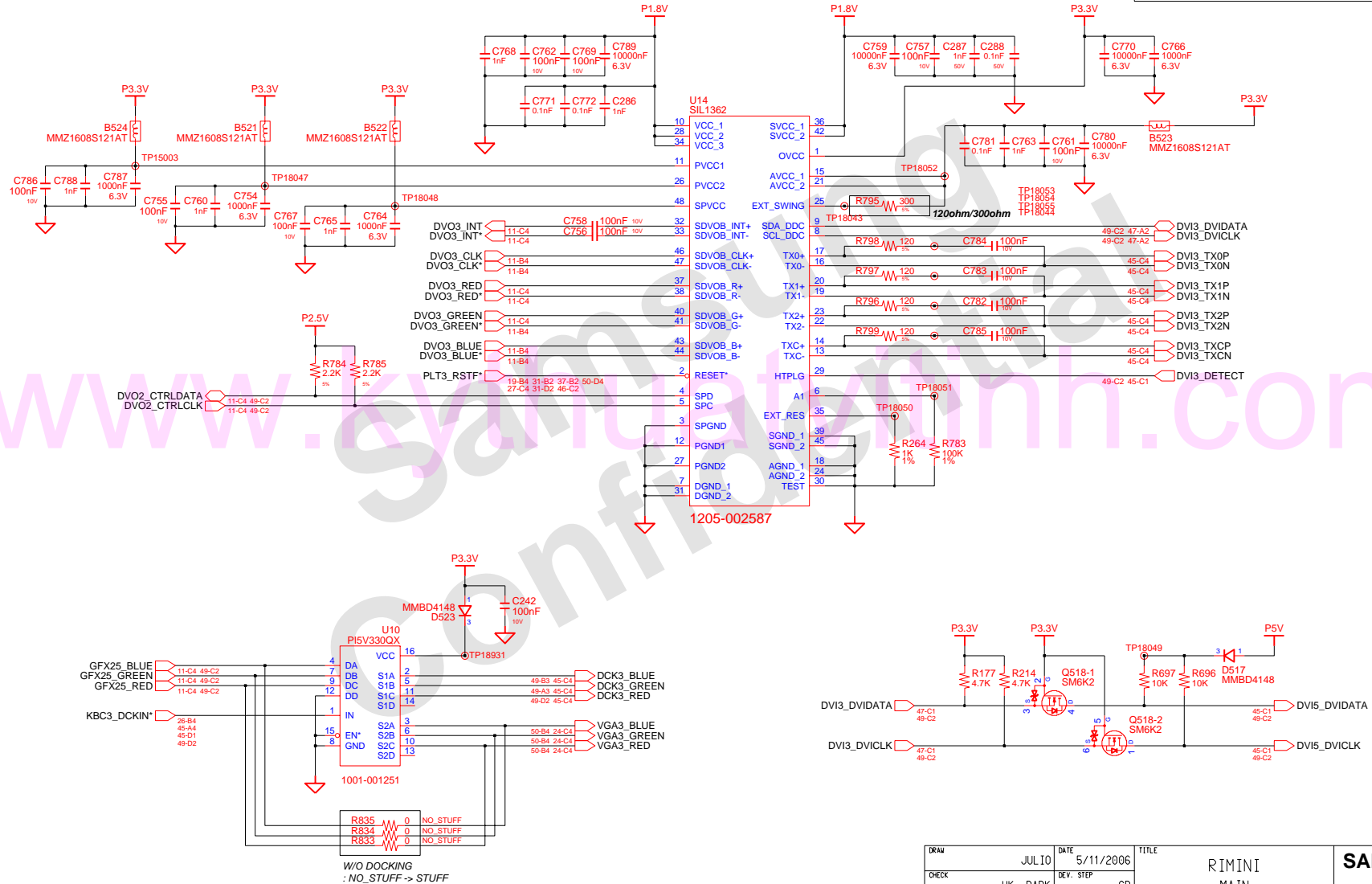


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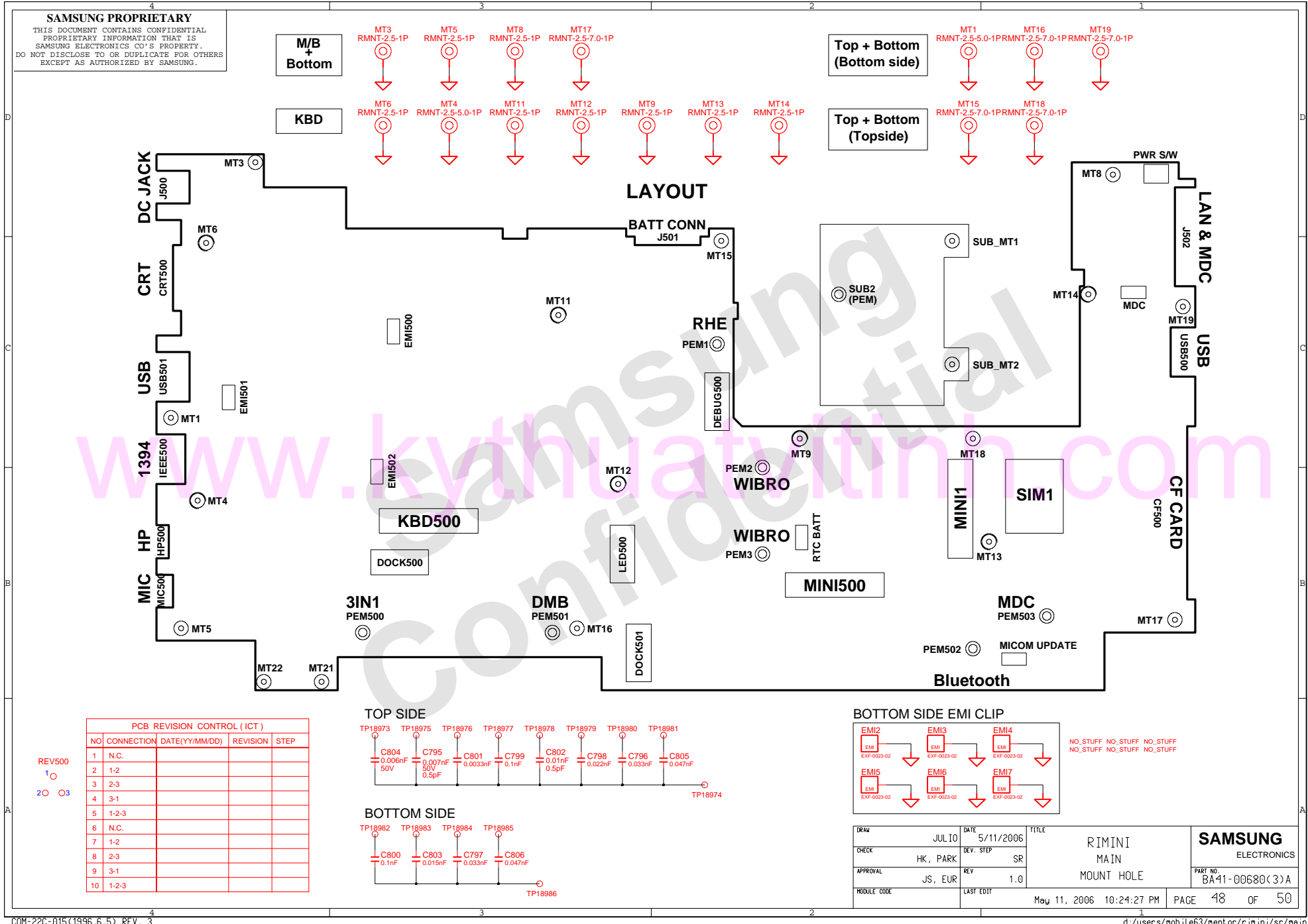
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DOCKING DVI

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(Except R833, R834, R835)**



DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI MAIN PANELLINK TRANSMITTER	SAMSUNG ELECTRONICS
CHECK	HK, PARK	DEV. STEP	SR			PART NO. BA41-00680(3)A
APPROVAL	JS, EUR	REV	1.0			
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	47	OF 50



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TP18817OPC13_AD(14)
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TP18819OPC13_AD(16)
TP18820OPC13_AD(17)
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TP18823OPC13_AD(2)
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TP18826OPC13_AD(22)
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TP18778OPC13_AD(9)
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TP18791OPC13_INTE+
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TP18794OPC13_INTH+
TP18795OPC13_TRDY+
TP18796OPC13_PAR+
TP18797OPC13_PERR+
TP18798OPC13_PLCK+
TP18799OPC13_RE0+
TP18800OPC13_RE01+
TP18801OPC13_RE02+
TP18802OPC13_RE03+
TP18803OPC13_RS1+
TP18804OPC13_SERR+
TP18805OPC13_STOP+
TP18806OPC13_TRDY+

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TP18776OTHERM_STP+

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TP18736OVGA3_HSYNC
TP18737OVGA3_RED

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TP18745OPLT3_RSTF+

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TP18762OSPI_CS+
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TP18962OGROUND

TP18963OGROUND

DRAW	JULIO	DATE	5/11/2006	TITLE	RIMINI	SAMSUNG
CHECK	HK, PARK	DEV. STEP	SR	MAIN	ELECTRONICS	
APPROVAL	JS, EUR	REV	1.0	TEST POINTS(2)	PART NO.	BA41-00680(3)A
MODULE CODE		LAST EDIT	May 11, 2006 10:24:27 PM	PAGE	50	OF 50