

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

DRESDEN-INT

PCB Thickness:1.1mm

CPU : AMD GRIFFIN
 Chip Set : AMD RS780MN + SB700
 Remarks : AMD PUMA Platform w/ IGP
 2 SODIMMs DDR2

Model Name : DRESDEN-INT
 PBA Name : MAIN
 PCB Code : BA41-01024A (GCE)
 BA41-01025A (NY)
 BA41-01026A (HST)
 Dev. Step : MP(PR)
 Revision : 1.00
 T.R. Date : 2008.12.24

DRAW	CHECK	APPROVAL
-	-	-

Table of Contents

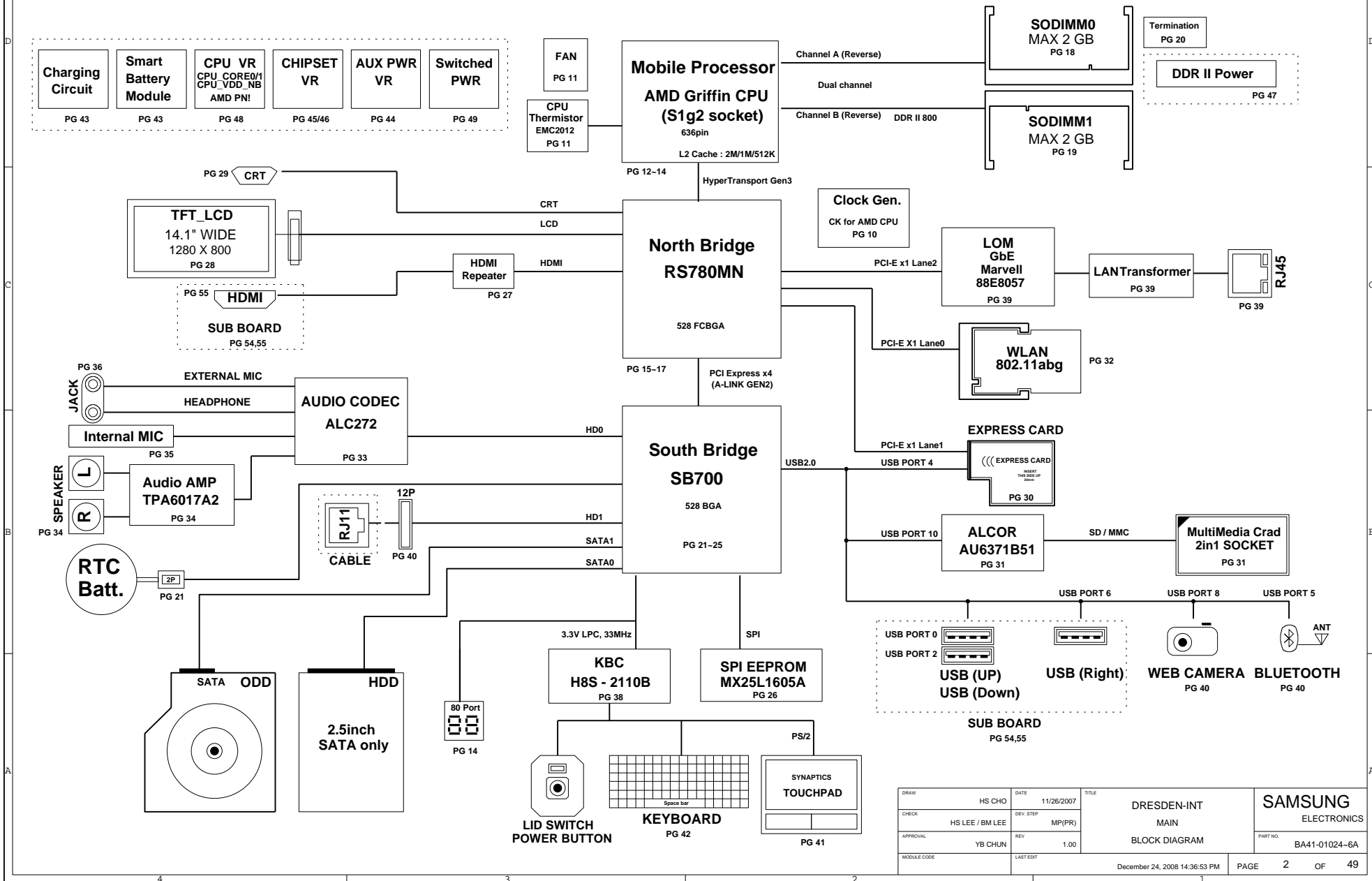
Page. 1 ----	COVER	
Page. 2 ----	OPERATION BLOCK DIAGRAM] DIAGRAM
Page. 3 ----	POWER DIAGRAM	
Page. 4 ----	POWER SEQUENCE	
Page. 5 ----	TIMING DIAGRAM, POWER ON	
Page. 6 ----	CLOCK DISTRIBUTION	
Page. 7 ----	BOARD INFORMATION	
Page. 8~9 --	BLOCKS	
Page. 10 ---	CLOCK GEN.	
Page. 11 ---	THERMAL SENSOR&FAN CONTROL	
Page. 12~14 -	S1g2 CPU	
Page. 15~17 -	RS780MN	
Page. 18~20 -	SODIMM DDR2	
Page. 21~24 -	SB700	
Page. 25 ---	HW STRAP	
Page. 26 ---	SPI ROM (BIOS)	
Page. 27 ---	HDMI REPEATER	
Page. 28 ---	LVDS (LCD CONNECTOR)	
Page. 29 ---	CRT CONNECTOR	
Page. 30 ---	EXPRESS CARD	
Page. 31 ---	MEMORY CARD (2 IN 1)	
Page. 32 ---	WLAN	
Page. 33~36 -	HD AUDIO (MIC / SPK / HP)	
Page. 37 ---	HDD / ODD	
Page. 38 ---	MICOM	
Page. 39 ---	LOM(88E8057)	
Page. 40 ---	CAMERA, MDC CONN. & BLUETOOTH	
Page. 41 ---	LEDS & TOUCHPAD	
Page. 42 ---	SUB, DEBUG & KEYBOARD CONN.	
Page. 43 ---	CHARGER	
Page. 44 ---	P3.3V_AUX / P5.0V_AUX / P12V_ALW	
Page. 45 ---	CS POWER(P1.2V / VCC_NB)	
Page. 46 ---	CS POWER(P2.5V,P1.5V,P1.1V,P1.2V_AUX)	
Page. 47 ---	DDR2 POWER	
Page. 48 ---	CPU VRM	
Page. 49 ---	SWITCHED POWER (5.0V, 3.3V, 1.8V)	
Page. 50 ---	POWER DISCHARGER	
Page. 51 ---	EMC	
Page. 52 ---	MOUNT HOLE & ICT	
Page. 53 ---	TP PAGE	
Page. 54~55 -	SUB BOARD	
Page. 56 ---	INDEX PAGE	

DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT	SAMSUNG
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)		COVER	ELECTRONICS
APPROVAL	YB CHUN	REV	1.00		CONTENTS	PART NO.
MODULE CODE		LAST EDIT				BA41-01024-6A
				December 24, 2008 14:36:53 PM	PAGE	1 OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

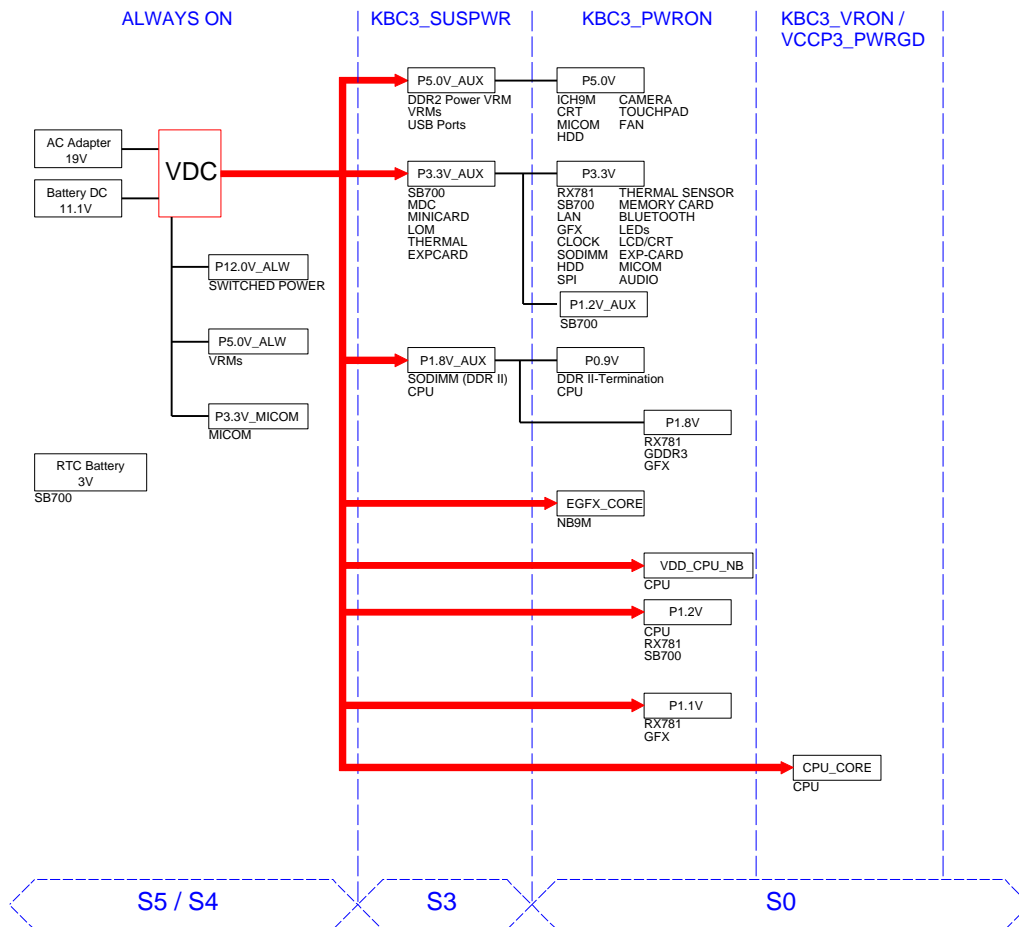
OPERATION BLOCK DIAGRAM



SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

POWER DIAGRAM

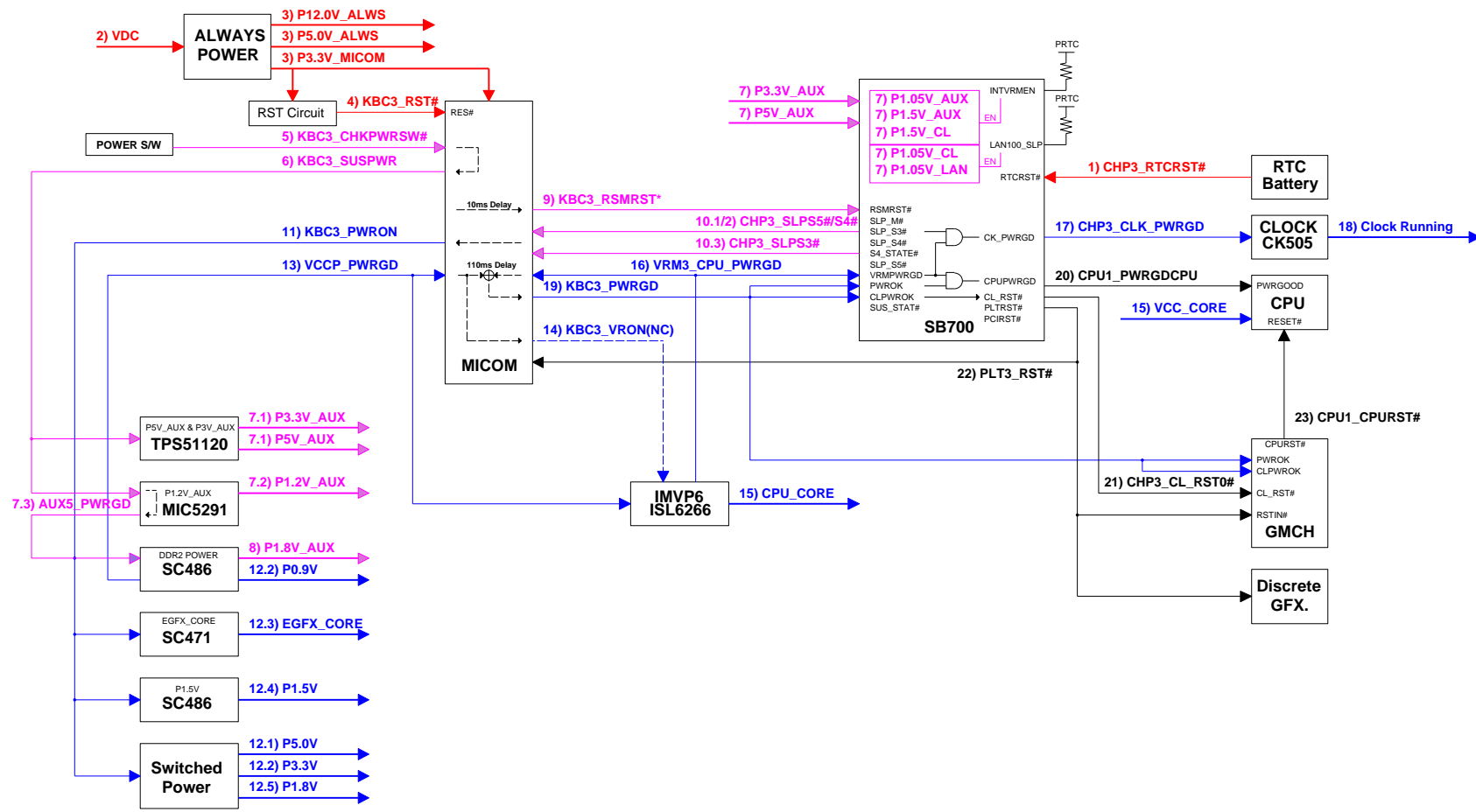


Rail State	+V*Always	+V*AUX	+V	SUSPWR	PWRON	VRON
Full On	ON	ON	ON	H	H	H
S3	ON	ON	OFF	H	L	L
S4	ON	OFF	OFF	H	L	L
S5	ON	OFF	OFF	L	L	L

DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT MAIN POWER DIAGRAM	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	PART NO.	BA41-01024-6A	
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM	PAGE	3 OF 49
MODULE CODE	LAST EDIT					

SAMSUNG PROPRIETARY
 THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

POWER SEQUENCE Rev. 0.1



DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	POWER SEQUENCE	PART NO. BA41-01024-6A	
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PAGE 4 OF 49
MODULE CODE		LAST EDIT				

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

D

C

B

A

D

C

B

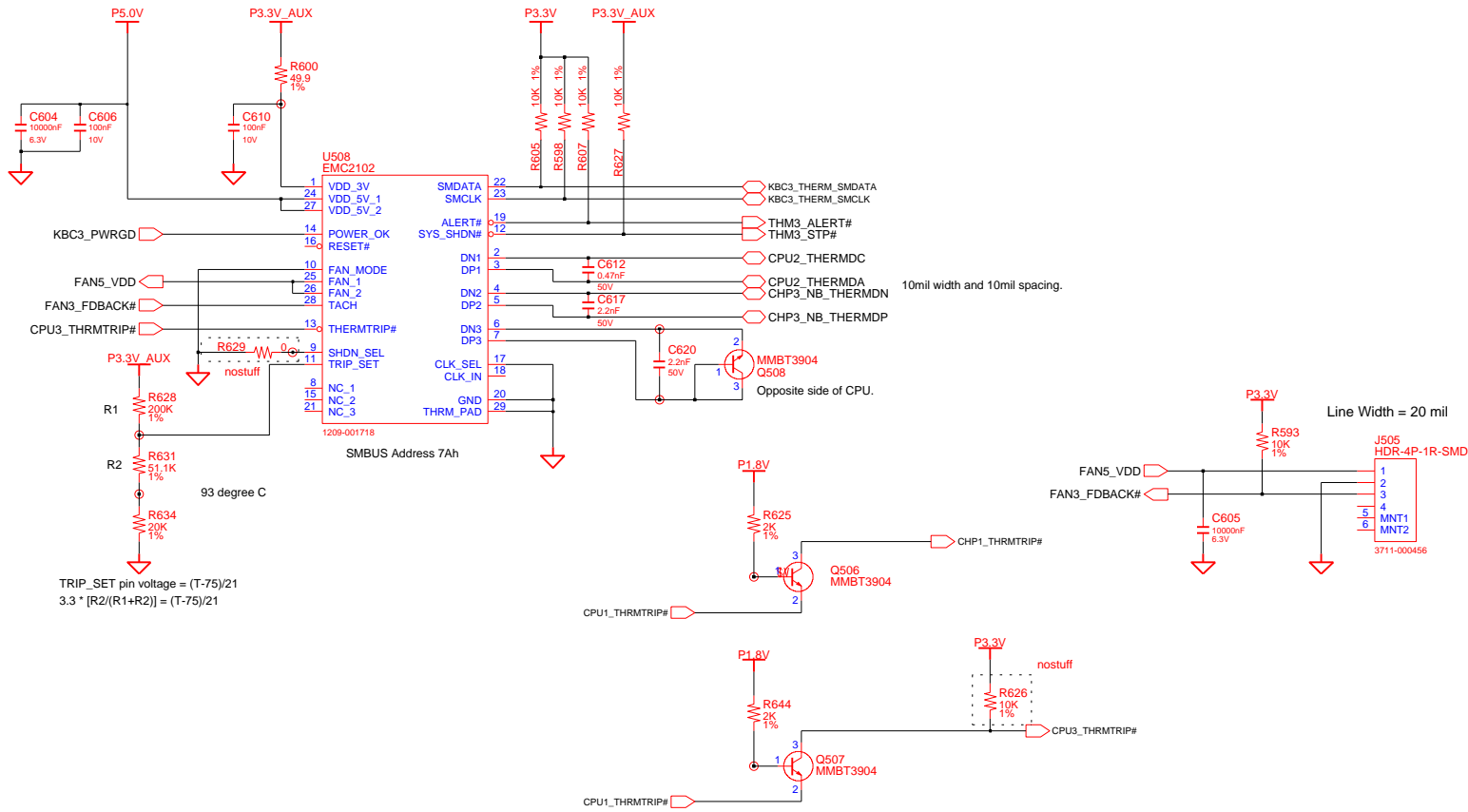
A

DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT MAIN BLOCKS (1/2)	SAMSUNG ELECTRONICS		
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)					
APPROVAL	YB CHUN	REV	1.00					
MODULE CODE	LAST ENT			December 24, 2008 14:36:53 PM	PAGE	8	OF	49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

THERMAL SENSOR & FAN CONTROL



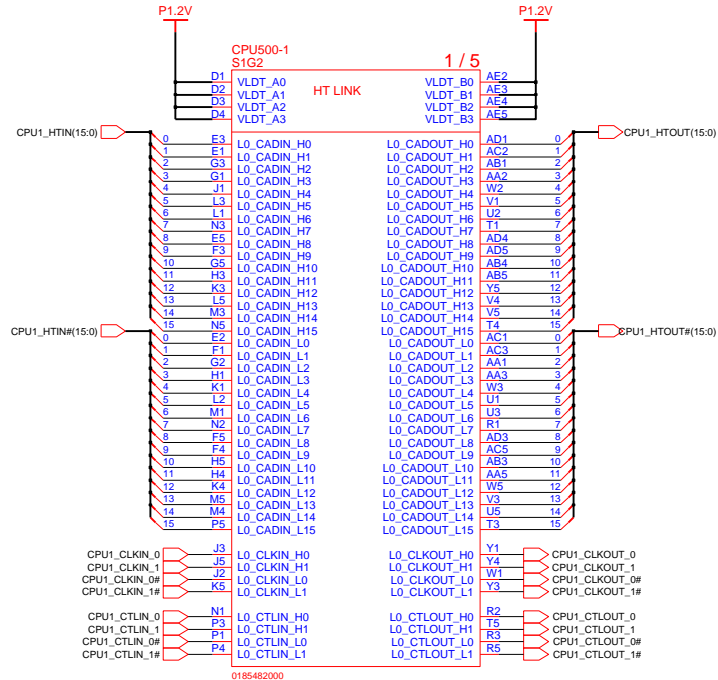
TRIP_SET pin voltage = $(T-75)/21$
 $3.3 * [R2/(R1+R2)] = (T-75)/21$

DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	MAIN		
APPROVAL	YB CHUN	REV	1.00	THERMAL SENSOR&FAN CONTROL	PART NO.	BA41-01024-6A
MODULE CODE		LAST ENT		December 24, 2008 14:36:53 PM	PAGE	11 OF 49

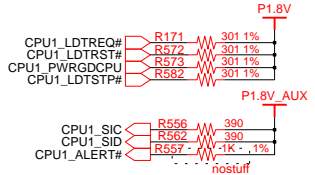
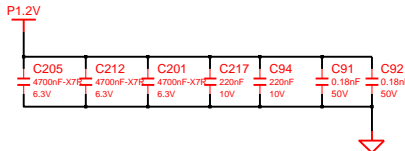
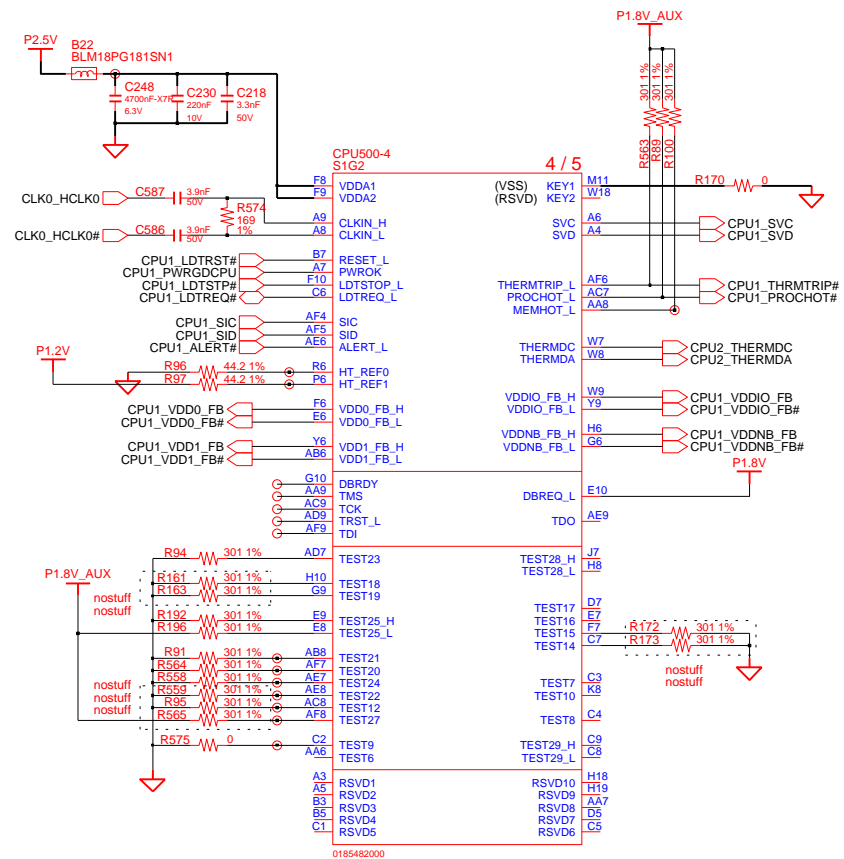
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

S1g2 CPU (1/3)



CPU Socket : 0185482000 (3704-001228)

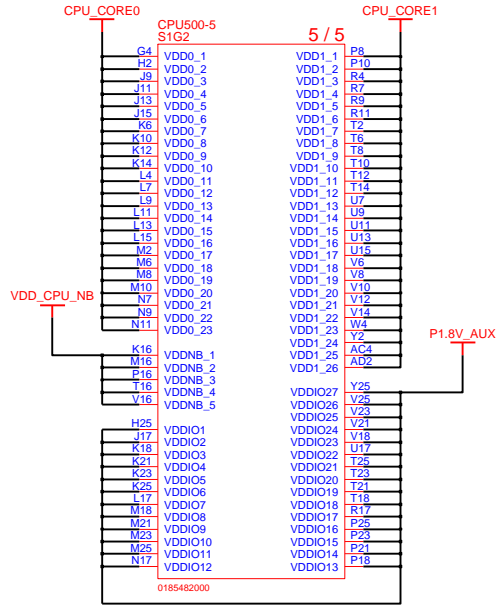


DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	MAIN		
APPROVAL	YB CHUN	REV	1.00	S1G2 CPU 1/3	PART NO.	BA41-01024-6A
MODULE CODE		LAST ENT		December 24, 2008 14:36:53 PM	PAGE	12 OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

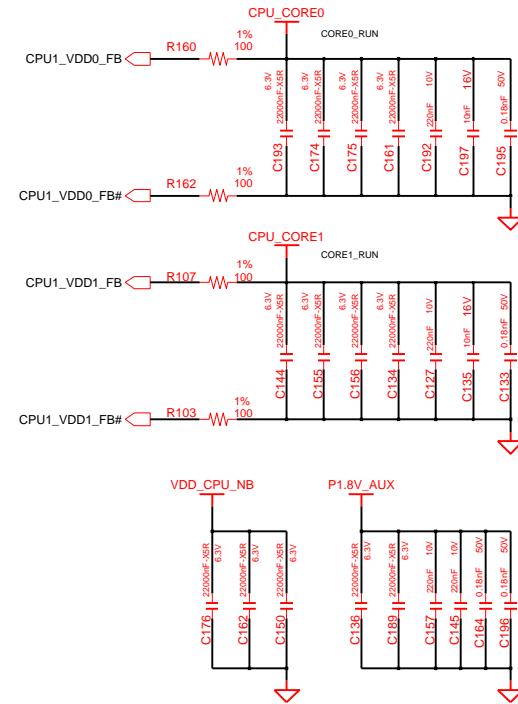
S1g2 CPU (3/3)



CPU Socket : 0185482000

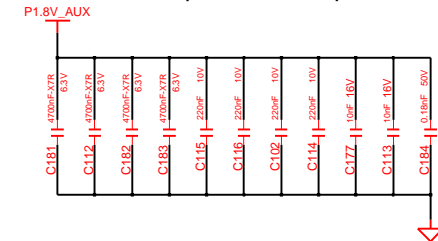
AA4	VSS1	VSS66	J6
AA11	VSS2	VSS67	J9
AA13	VSS3	VSS68	J10
AA15	VSS4	VSS69	J12
AA17	VSS5	VSS70	J14
AA19	VSS6	VSS71	J16
AB2	VSS7	VSS72	J18
AB7	VSS8	VSS73	K2
AB9	VSS9	VSS74	K7
AB23	VSS10	VSS75	K9
AB25	VSS11	VSS76	K11
AC11	VSS12	VSS77	K13
AC13	VSS13	VSS78	K15
AC15	VSS14	VSS79	K17
AC17	VSS15	VSS80	L6
AC19	VSS16	VSS81	L10
AC21	VSS17	VSS82	L12
AD6	VSS18	VSS83	L14
AD8	VSS19	VSS84	L16
AD25	VSS20	VSS85	L18
AE11	VSS21	VSS86	M7
AE13	VSS22	VSS87	M9
AE15	VSS23	VSS88	AC6
AE17	VSS24	VSS89	AC7
AE19	VSS25	VSS90	N4
AE21	VSS26	VSS91	N8
AE23	VSS27	VSS92	N10
B4	VSS28	VSS93	N16
B6	VSS29	VSS94	N18
B8	VSS30	VSS95	P2
B11	VSS31	VSS96	P7
B13	VSS32	VSS97	P9
B15	VSS33	VSS98	P11
B17	VSS34	VSS99	P17
B19	VSS35	VSS100	R8
B21	VSS36	VSS101	R10
B23	VSS37	VSS102	R16
B25	VSS38	VSS103	R18
D6	VSS39	VSS104	T7
D8	VSS40	VSS105	T9
D9	VSS41	VSS106	T11
D11	VSS42	VSS107	T13
D13	VSS43	VSS108	T15
D15	VSS44	VSS109	T17
D17	VSS45	VSS110	U4
D19	VSS46	VSS111	U6
D21	VSS47	VSS112	U8
D23	VSS48	VSS113	U10
D25	VSS49	VSS114	U12
E4	VSS50	VSS115	U14
F2	VSS51	VSS116	U16
F11	VSS52	VSS117	U18
F13	VSS53	VSS118	V2
F15	VSS54	VSS119	V7
F17	VSS55	VSS120	V9
F19	VSS56	VSS121	V11
F21	VSS57	VSS122	V13
F23	VSS58	VSS123	V15
F25	VSS59	VSS124	V17
H7	VSS60	VSS125	V19
H9	VSS61	VSS126	V21
H21	VSS62	VSS127	Y23
H23	VSS63	VSS128	Y25
J4	VSS64	VSS129	N6
	VSS65		

Bottom side decoupling



Decoupling between processor and Memory

Place close to processor as possible

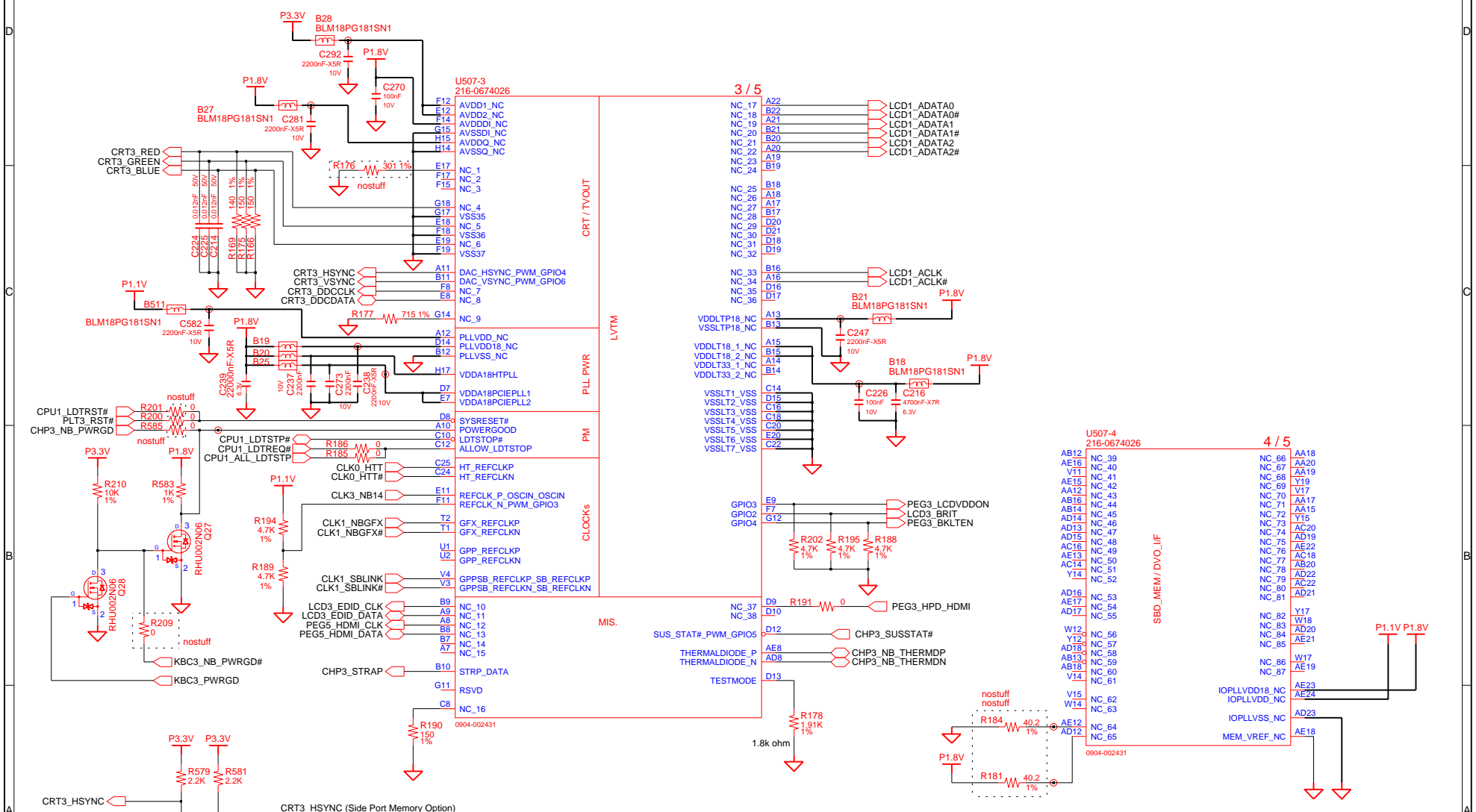


DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	MAIN		
APPROVAL	YB CHUN	REV	1.00	S1G2 CPU 3/3		PART NO. BA41-01024-6A
MODULE CODE		LAST ENT		December 24, 2008 14:36:53 PM	PAGE	14 OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

RS780MN(2/3)



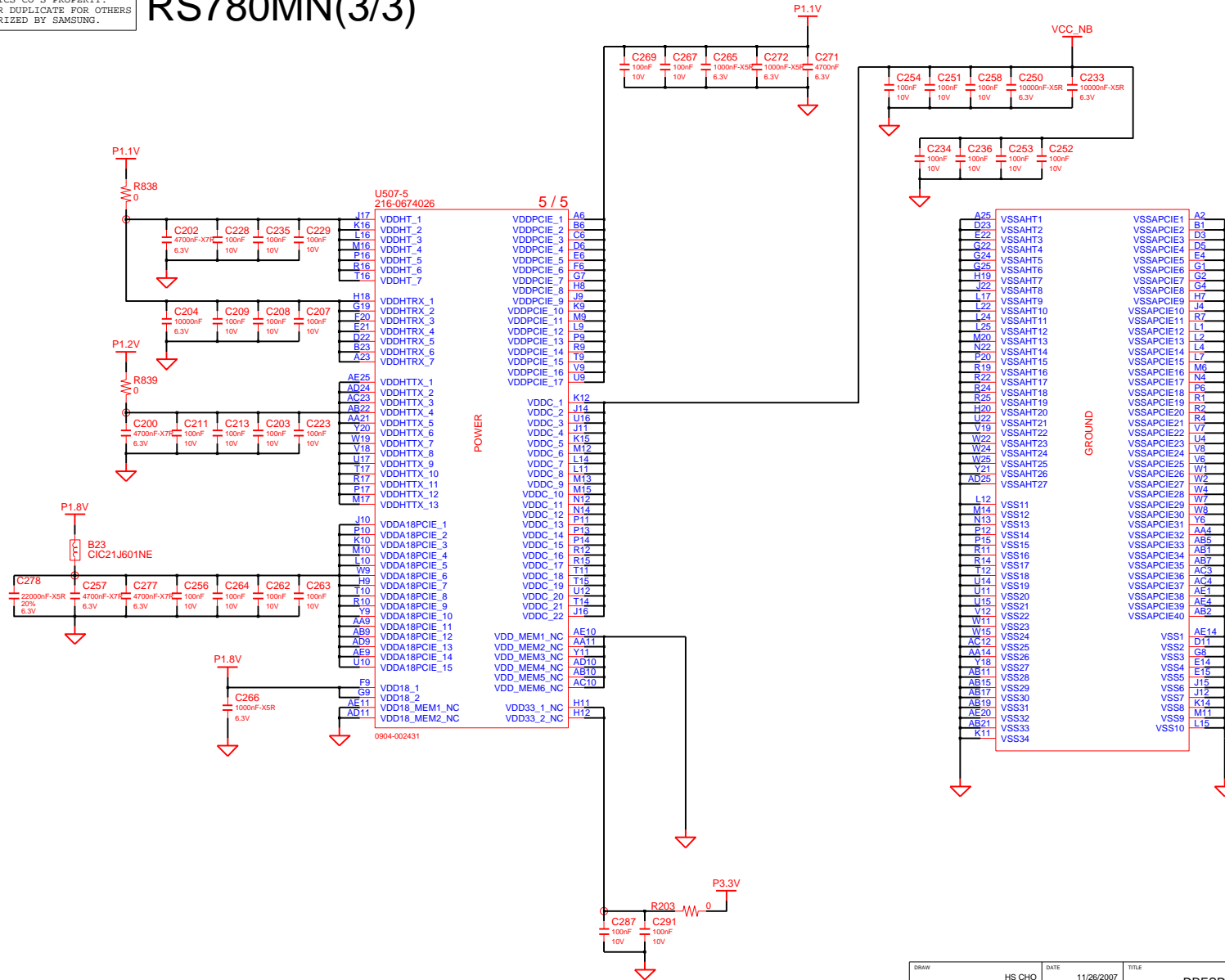
CRT3_HSYNC (Side Port Memory Option)
High : Not Available *
Low : Available

CRT3_VSYNC (Debug Bus Access)
High : Disable *
Low : Enable

DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	MAIN	RS780MN 2/3	
APPROVAL	YB CHUN	REV	1.00			PART NO. BA41-01024-6A
MODULE CODE		LAST EDIT		December 24, 2008 14:36:53 PM	PAGE	16 OF 49

SAMSUNG PROPRIETARY
 THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

RS780MN(3/3)



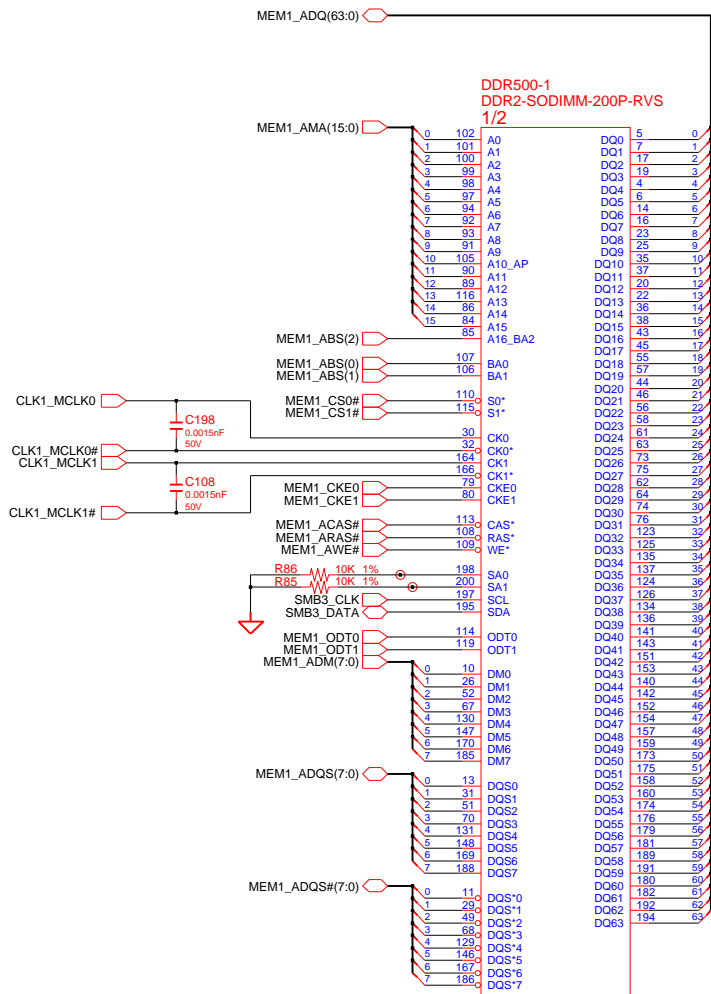
DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	MAIN		
APPROVAL	YB CHUN	REV	1.00	RS780MN 3/3	PART NO.	BA41-01024-6A
MODULE CODE		LAST ENT			December 24, 2008 14:36:53 PM	PAGE 17 OF 49

SAMSUNG PROPRIETARY

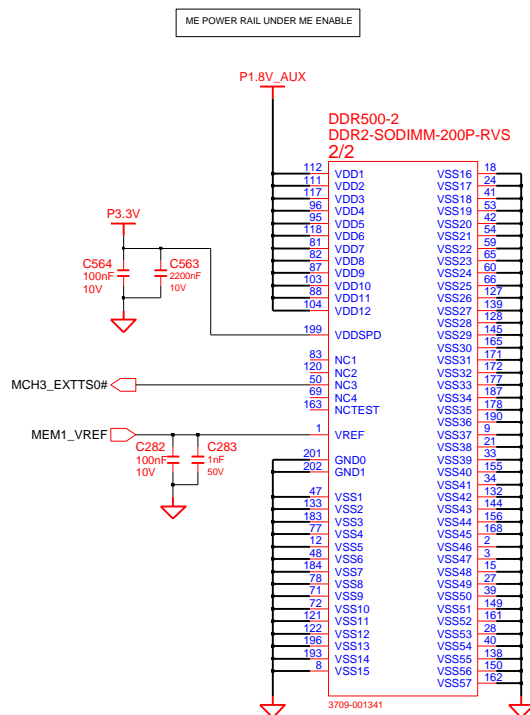
THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

DDR SO-DIMM #0

Height : 5.2mm (Reverse)



3709-001341
 Tyca/Foxcn : 3709-001341
 Suyin : 3709-001502



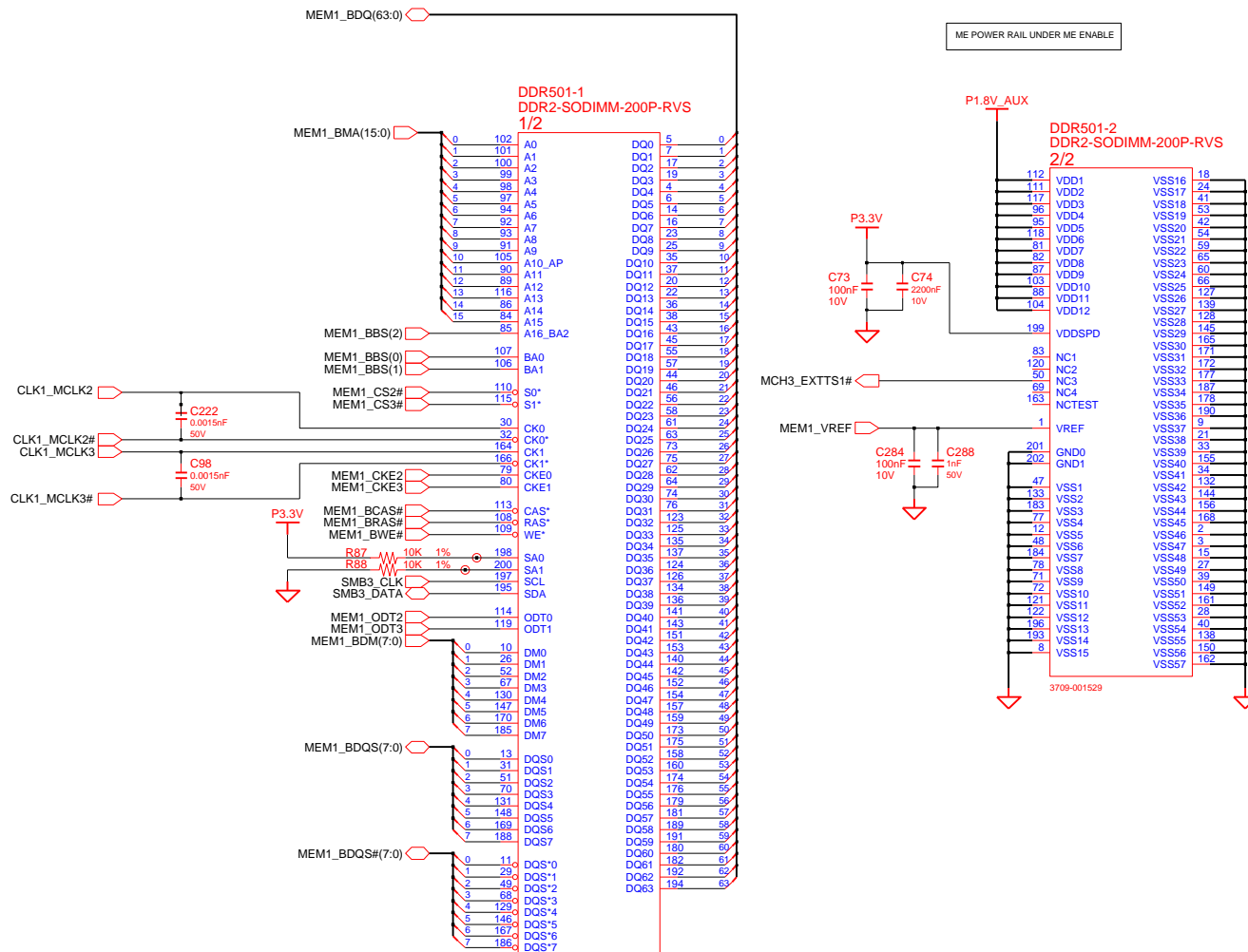
DESIGN	HS CHO	DATE	9/1/2008	TITLE	DRESDEN-INT MAIN SODIMM DDR2	SAMSUNG ELECTRONICS	
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	PART NO.			BA41-01024v6A
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM			PAGE 18 OF 49
MODULE CODE		LAST EDIT					

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

DDR SO-DIMM #1

Height : 9.2mm (Reverse)

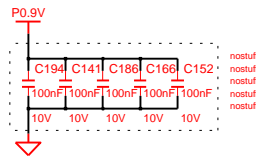
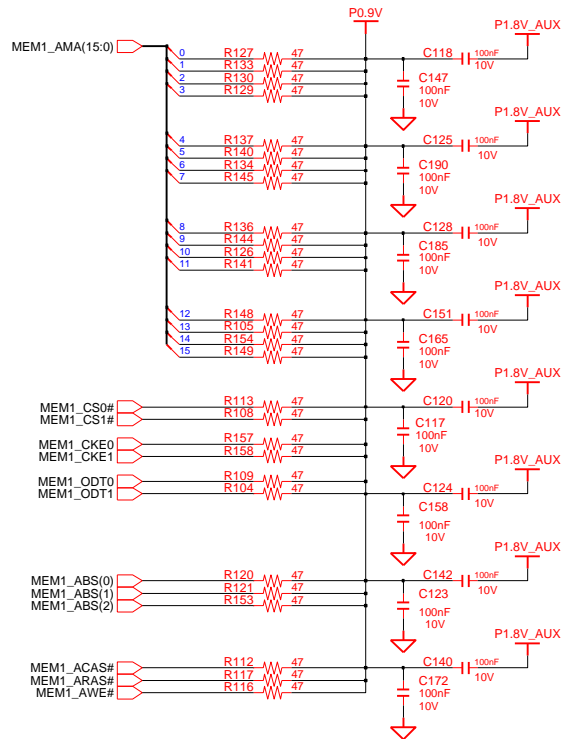


Foxcn : 3709-001390
 Suyin : 3709-001503

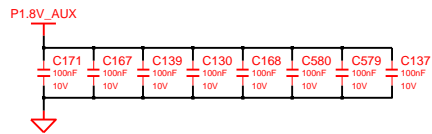
DESIGN	HS CHO	DATE	9/1/2008	TITLE	DRESDEN-INT MAIN SODIMM DDR2	SAMSUNG ELECTRONICS	
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	PART NO.			BA41-01024x6A
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM			PAGE 19 OF 49
MODULE CODE		LAST EDIT					

SAMSUNG PROPRIETARY
 THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

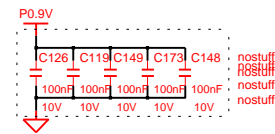
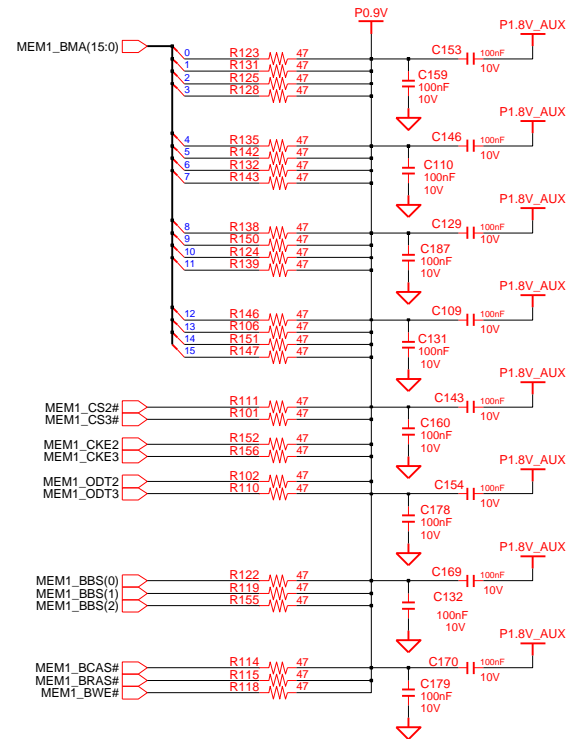
SODIMM TERMINATION



Place near SO-DIMM0



Place near SO-DIMM1

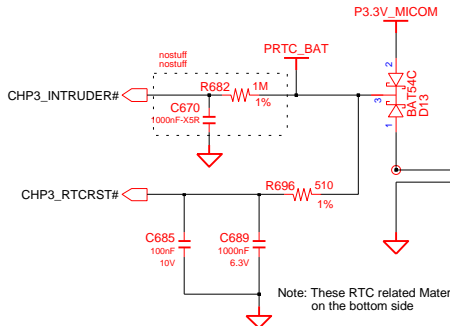
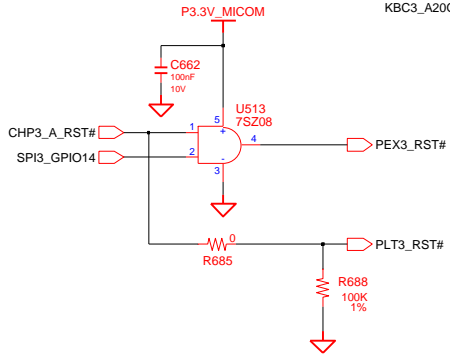
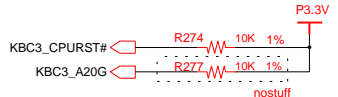
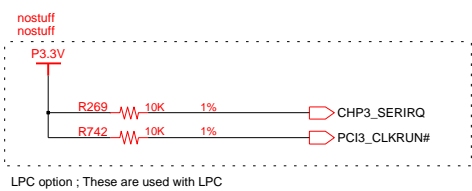
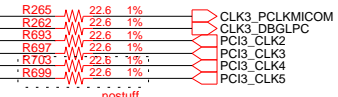
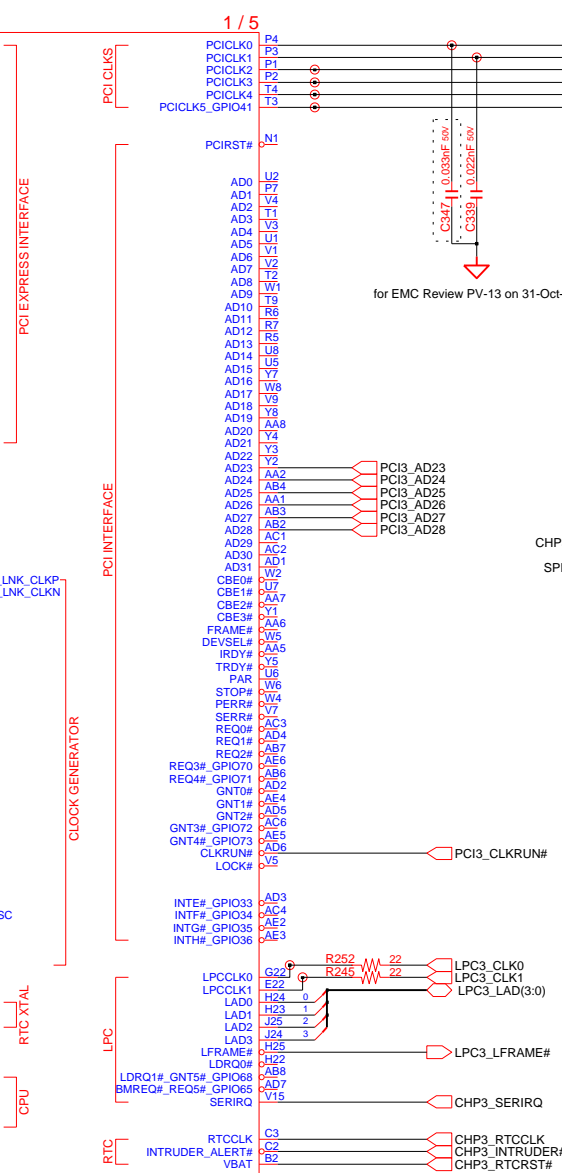
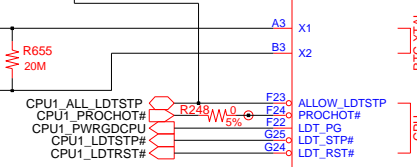
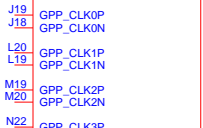
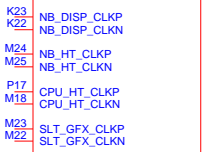
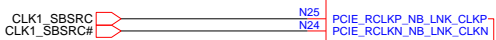
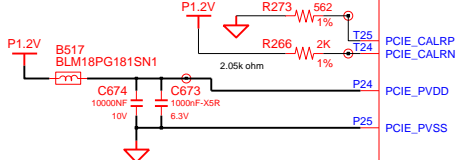
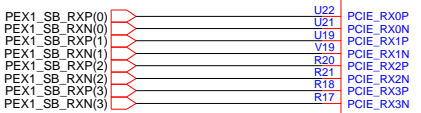
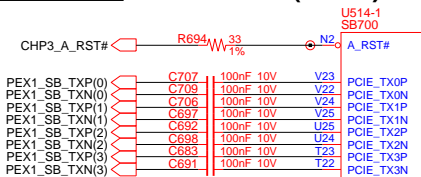


DRAW	HS CHO	DATE	5/28/2007	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	SODIMM TERMINATION		
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PART NO. BA11-01024v6A
MODULE CODE	undef ined	LAST EDIT		PAGE	20	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

SB700(1/4)

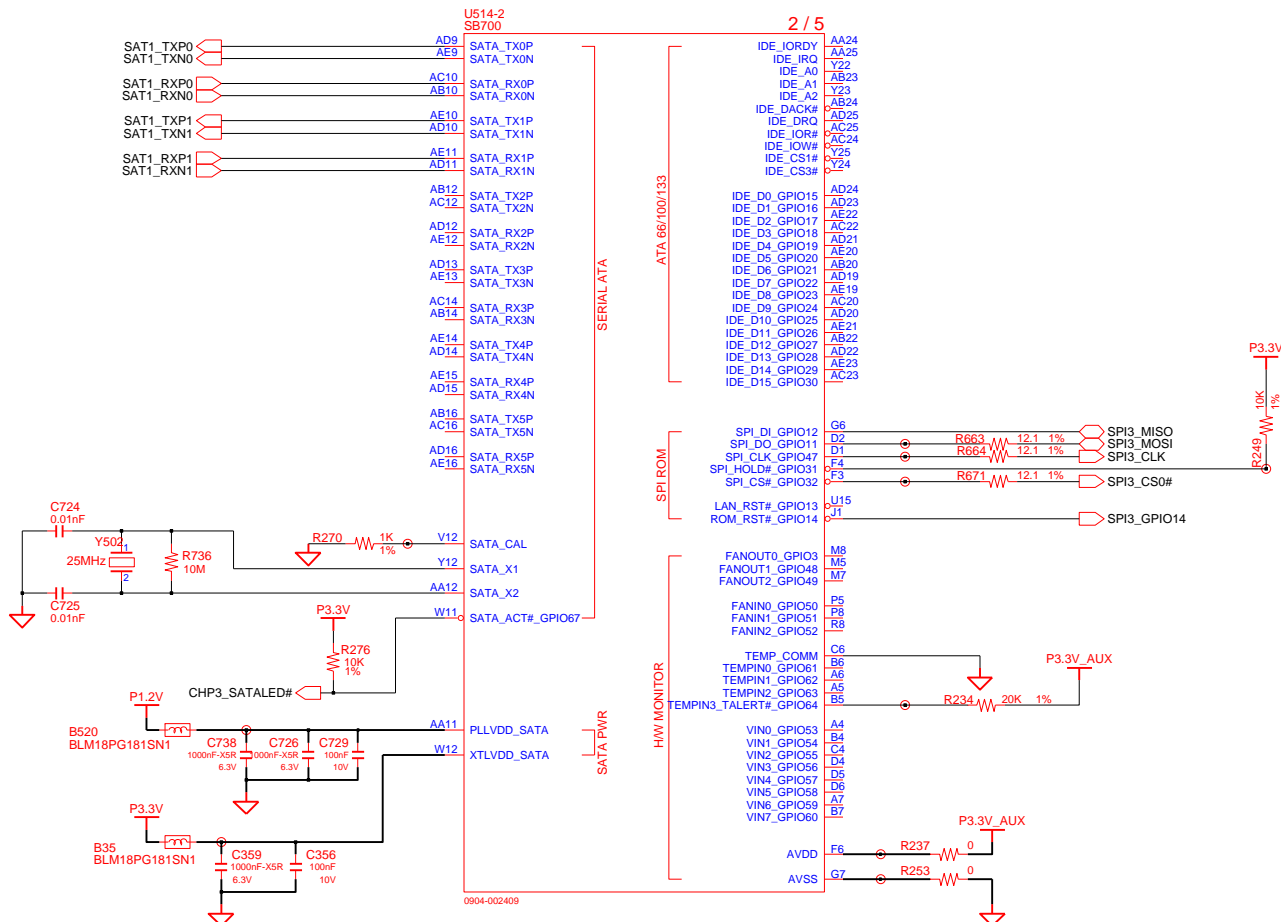


DESIGN	HS CHO	DATE	3/19/2008	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS PART NO. BA41-01024*6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	REV	1.00	
APPROVAL	YB CHUN	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	21	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

SB700(2/4)



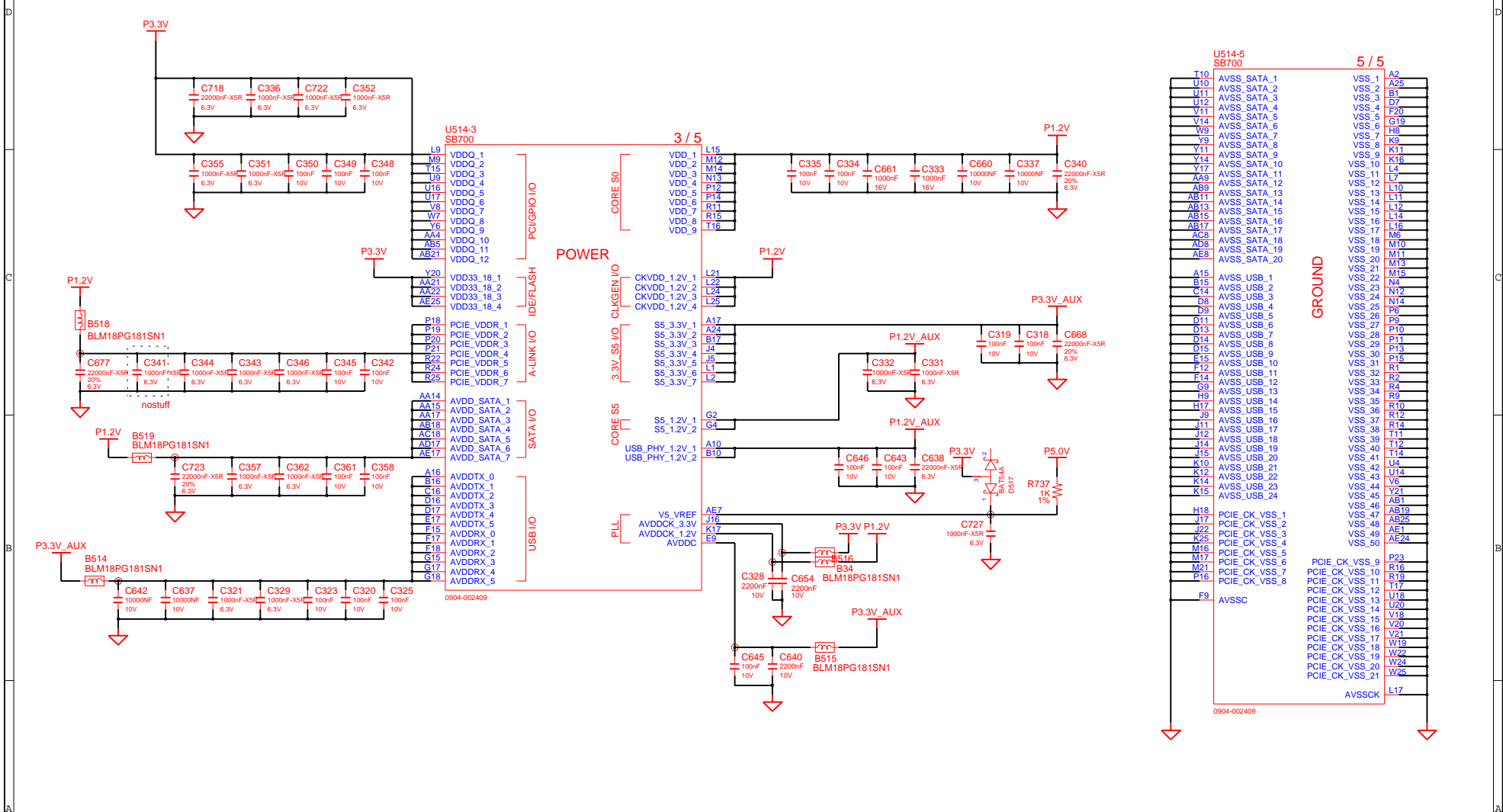
0904-002409

DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS PART NO. BA41-01024*6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	REV	1.00	
APPROVAL	YB CHUN	REV	1.00	DATE	December 24, 2008 14:36:53 PM	PAGE 22 OF 49
MODULE CODE	undef:ined	LAST EDIT				

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

SB700(3/4)



U514-5 SB700		5 / 5	
T10	AVSS_SATA_1	VSS_1	A2
U10	AVSS_SATA_2	VSS_2	B1
U11	AVSS_SATA_3	VSS_3	D7
U12	AVSS_SATA_4	VSS_4	F20
V11	AVSS_SATA_5	VSS_5	G19
V14	AVSS_SATA_6	VSS_6	H8
W9	AVSS_SATA_7	VSS_7	K9
Y9	AVSS_SATA_8	VSS_8	K11
Y11	AVSS_SATA_9	VSS_9	K16
Y14	AVSS_SATA_10	VSS_10	L4
Y17	AVSS_SATA_11	VSS_11	L7
AA9	AVSS_SATA_12	VSS_12	L10
AB9	AVSS_SATA_13	VSS_13	L11
AB11	AVSS_SATA_14	VSS_14	L12
AB13	AVSS_SATA_15	VSS_15	L14
AB15	AVSS_SATA_16	VSS_16	L16
AB17	AVSS_SATA_17	VSS_17	L18
AC8	AVSS_SATA_18	VSS_18	M6
AD8	AVSS_SATA_19	VSS_19	M10
AE8	AVSS_SATA_20	VSS_20	M13
A15	AVSS_USB_1	VSS_21	M15
B15	AVSS_USB_2	VSS_22	N4
C14	AVSS_USB_3	VSS_23	N4
D8	AVSS_USB_4	VSS_24	N12
D9	AVSS_USB_5	VSS_25	P6
D11	AVSS_USB_6	VSS_26	P9
D13	AVSS_USB_7	VSS_27	P10
D15	AVSS_USB_8	VSS_28	P11
E15	AVSS_USB_9	VSS_29	P13
F12	AVSS_USB_10	VSS_30	P15
F14	AVSS_USB_11	VSS_31	R1
G9	AVSS_USB_12	VSS_32	R2
H9	AVSS_USB_13	VSS_33	R4
H17	AVSS_USB_14	VSS_34	R9
H17	AVSS_USB_15	VSS_35	R10
J9	AVSS_USB_16	VSS_36	R12
J11	AVSS_USB_17	VSS_37	R12
J12	AVSS_USB_18	VSS_38	R14
J14	AVSS_USB_19	VSS_39	R14
J15	AVSS_USB_20	VSS_40	T11
K10	AVSS_USB_21	VSS_41	T12
K12	AVSS_USB_22	VSS_42	T14
K14	AVSS_USB_23	VSS_43	U4
K15	AVSS_USB_24	VSS_44	U14
H18	PCIE_CK_VSS_1	VSS_45	Y21
J17	PCIE_CK_VSS_2	VSS_46	AB1
J22	PCIE_CK_VSS_3	VSS_47	AB19
K25	PCIE_CK_VSS_4	VSS_48	AB25
M16	PCIE_CK_VSS_5	VSS_49	AE1
M17	PCIE_CK_VSS_6	VSS_50	AE24
M21	PCIE_CK_VSS_7	PCIE_CK_VSS_9	P23
P16	PCIE_CK_VSS_8	PCIE_CK_VSS_10	R16
F9	AVSSC	PCIE_CK_VSS_11	R19
		PCIE_CK_VSS_12	T17
		PCIE_CK_VSS_13	U18
		PCIE_CK_VSS_14	U20
		PCIE_CK_VSS_15	V20
		PCIE_CK_VSS_16	V21
		PCIE_CK_VSS_17	W19
		PCIE_CK_VSS_18	W22
		PCIE_CK_VSS_19	W24
		PCIE_CK_VSS_20	W25
		AVSSCK	L17

DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)		MAIN	
APPROVAL	YB CHUN	REV	1.00		SB700 3/4	PART NO. BA41-01024*6A
MODULE CODE	undef ined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	23	OF 49

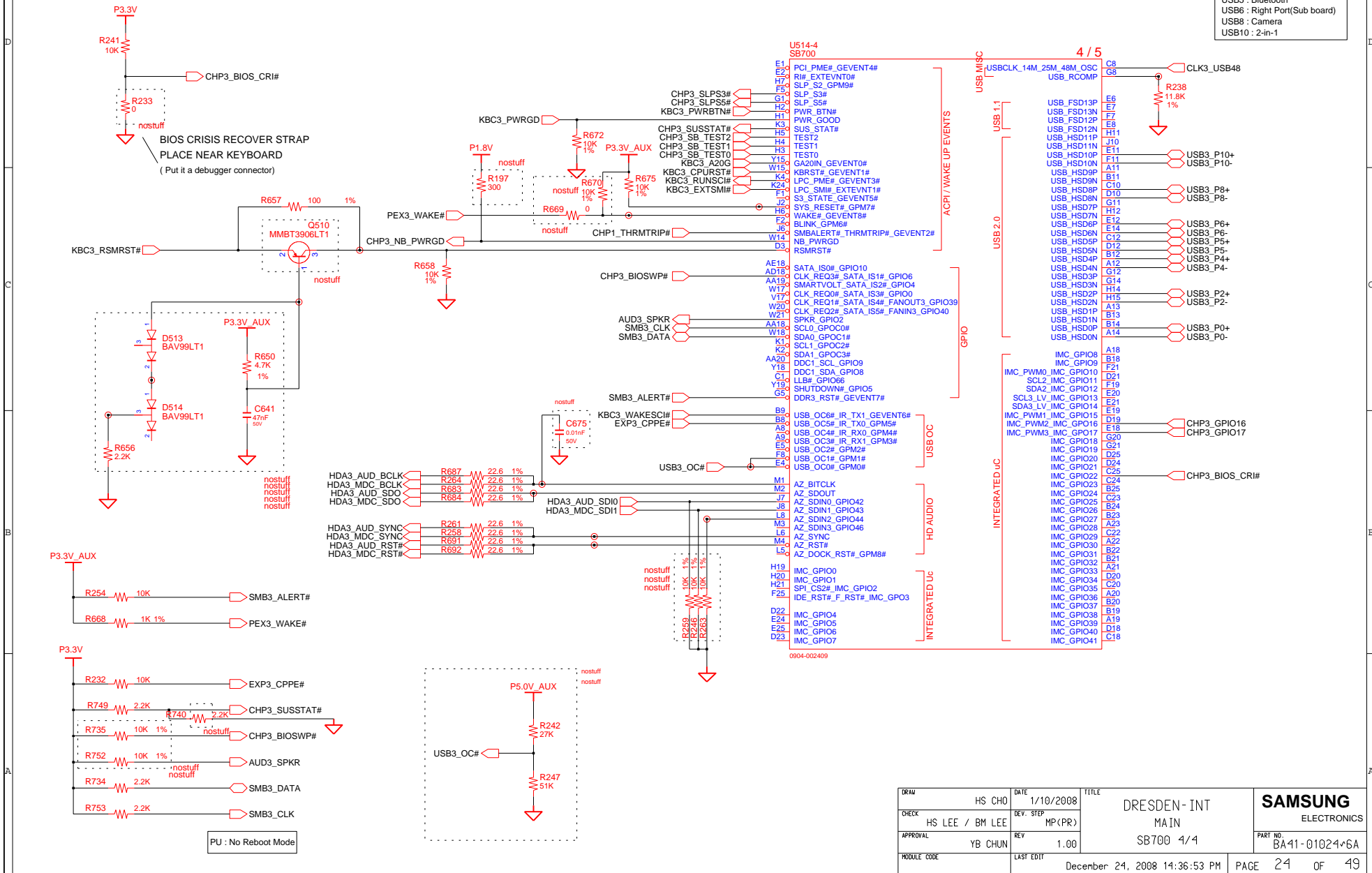
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

SB700(4/4)

USB0 and 6 ports should be connected with external ports

- USB0 : 2 : Rear Port(Sub board)
- USB4 : Express USB
- USB5 : Bluetooth
- USB6 : Right Port(Sub board)
- USB8 : Camera
- USB10 : 2-in-1

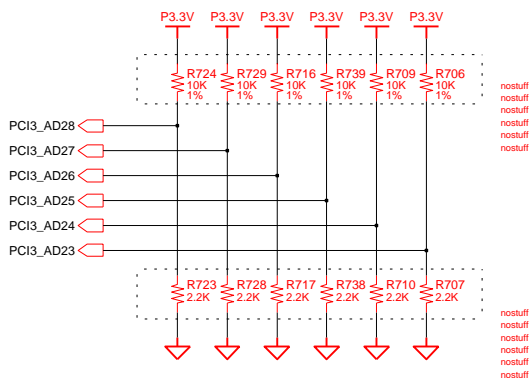


DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	SB700 4/4	PART NO. BA41-01024*6A	
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM	PAGE	24 OF 49
MODULE CODE		LAST EDIT				

SAMSUNG PROPRIETARY

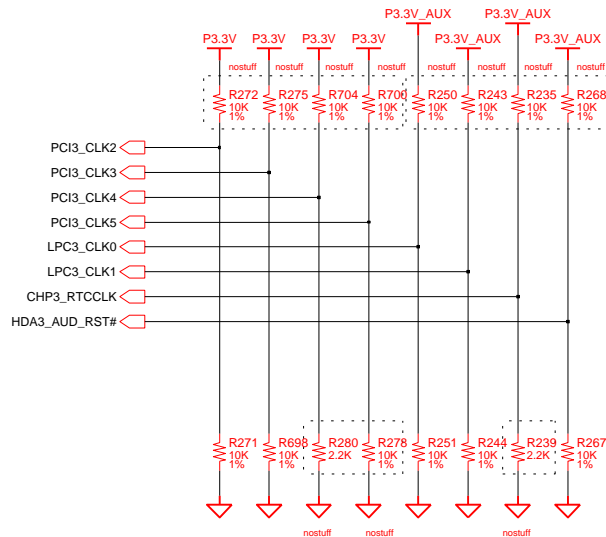
THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

SB700 HW STRAP

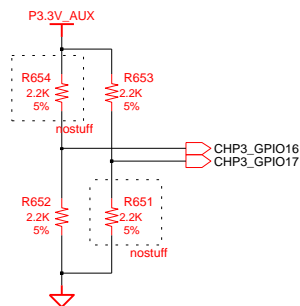
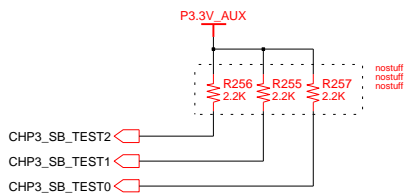


DEBUG STRAPS

STRAP	PCI3_AD(28)	PCI3_AD(27)	PCI3_AD(26)	PCI3_AD(25)	PCI3_AD(24)	PCI3_AD(23)
STRAP HIGH	USE LONG RESET	USE PCI PLL	USE ACPI BCLK	USE IDE PLL	USE DEFAULT PCIE STRAPS	BOOTFAILTIMER DISABLED
STRAP LOW	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	BOOTFAILTIMER ENABLED



STRAP	PCI3_CLK2	PCI3_CLK3	PCI3_CLK4	PCI3_CLK5	LPC3_CLK0	LPC3_CLK1	RTC_CLK	AUD_RST#
STRAP HIGH	BOOTFAIL TIMER ENABLED	USER DEBUG STRAPS	RESERVED	RESERVED	EC ENABLED	CLKGEN ENABLED	INTERNAL RTC	ENABLE PCI MEM BOOT
STRAP LOW	BOOTFAIL TIMER DISABLED	IGNORE DEBUG STRAPS	RESERVED	RESERVED	EC DISABLED	CLKGEN DISABLED	EXRERNAL RTC (PD on X1. Apply 32KHz to RTC_CLK)	DISABLE PCI MEM BOOT



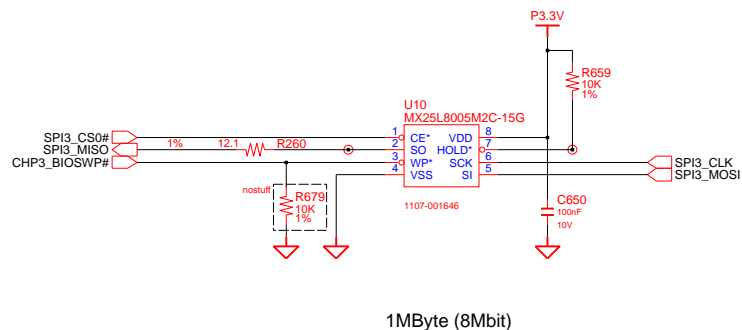
GPIO17	GPIO16
ROM TYPE	
H, H = PCI ROM	
H, L = SPI ROM	
L, H = LPC ROM	
L, L = FWH ROM	

DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS PART NO. BA41-01024v6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)			
APPROVAL	YB CHUN	REV	1.00			
MODULE CODE		LAST EDIT				
					December 24, 2008 14:36:53 PM	PAGE 25 OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

BIOS ROM



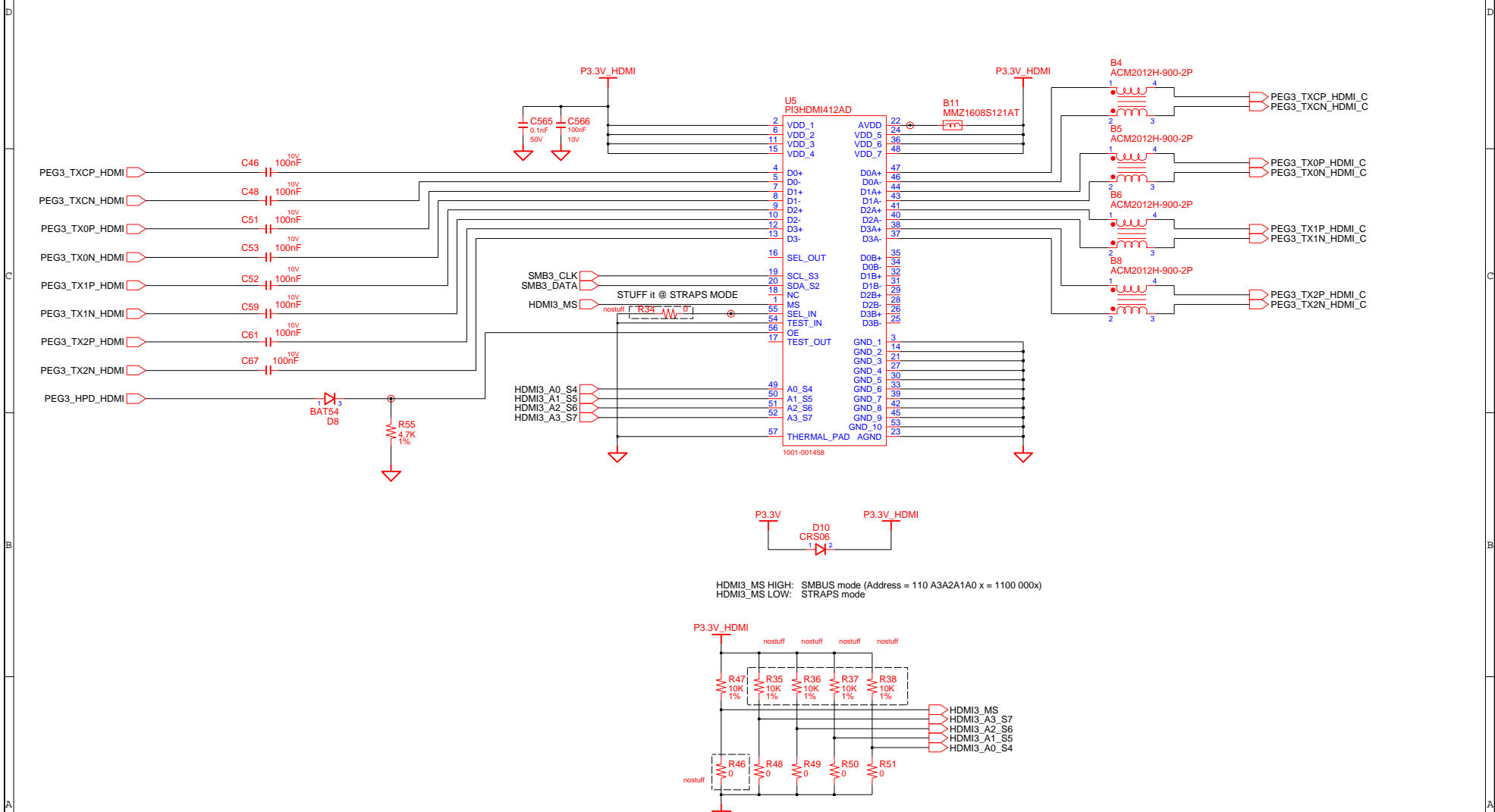
02	VERIFY REAL MODE	66	CONFIGURE ADVANCE CACHE REG.
03	DISABLE NMI	6A	DISPLAY EXTERNAL CACHE SIZE
04	GET CPU TYPE	6C	DISPLAY SHADOW MESSAGE
06	INIT. SYSTEM H/W	6E	DISPLAY NON-DISPOSABLE SEGMENT
08	INIT. CHIPSET REG.	70	DISPLAY ERROR MESSAGE
09	SET IN POST FLAG	72	CHECK FOR CONFIGURATION ERROR
0A	INIT 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 WITH INITIAL POST VALUE	86	RE-INIT. ON-BOARD I/O PORT
14	INIT. KEYBOARD CONTROLLER	88	INIT. BIOS DATA ROM
16	CHECK CHECKSUM	8A	INIT.EXTENDED BIOS DATA AREA
18	8254 TIMER INIT.	8C	INIT. FDD CONTROLLER
1A	8237 DMA CONTROLLER INIT.	9A	SHADOW OPTION ROMS
1C	RESET INTERRUPT CONTROLLER	9C	SETUP POWER MANAGEMENT
20	TEST DRAM REFRESH	9E	ENABLE H/W INTERRUPT
22	TEST 8742 KEYBOARD CONTROLLER	A0	SET TIME OF DAY
24	SET ES SEGMENT REG. TO 4GB	A4	INIT. TYPOMATIC RATE
26	ENABLE A20	A8	ERASE F2 PROMPT
28	AUTO SIZING DRAM	AA	SCAN FOR F2 KEY STROKE
32	COMPUTE THE CPU SPEED	AC	ENTER SETUP
34	TESET CMOS RAM	AE	CLEAR IN POST FLAG
38	SHADOW SYSTEM BIOS ROM	B0	CHECK FOR ERRORS
3A	AUTO SIZING CACHE	B2	POST DONE-PREPARE TO BOOT O/S
3C	CONFIGURE ADVANCED CHIPSET REG.	B4	ONE BEEP
3D	LOAD ALTER REG. WITH CMOS VALUE	B6	CHECK PASSWORD (OPTION)
42	INIT. INTERRUPT VECTOR	B7	ACPI INIT
44	INIT. BIOS INTERRUPT	BA	DMI INIT
46	CHECK ROM COPYRIGHT NOTICE	BE	CLEAR SCREEN
47	INIT. I20 SUPPORT IF INSTALLED	C0	TRY BOOT WITH INT19
48	CHECK VIDEO CONFIGURE AGAINST CMOS	D0	INTERRUPT HANDLER ERROR
49	INIT. PCI BUS AND DEVICE	D2	UNKNOWN INTERRUPT ERROR
4A	INIT. ALL VIDEO BIOS ROM	D4	PENDING INTERRUPT ERROR
4C	SHADOW VIDEO BIOS ROM	D6	SHUTDOWN 5
50	DISPLAY CPU TYPE AND SPEED	D8	SHUTDOWN ERROR
52	TEST KEYBOARD	DA	EXTENDED BLOCK MOVE
54	SET KEYCLICK IF ENABLED	DC	SHUTDOWN 10
56	ENABLE KEYBOARD	89	ENABLE NMI
58	TEST FOR UNEXPECTED INTERRUPTS	90	INIT. HDD CONTROLLER
5A	DISPLAY * PRESS SETUP*	91	INIT. LOCAL BUS HDD CONTROLLER
5C	TEST RAM BETWEEN 512K AND 640K	92	JUMP TO USER PATCH 2
60	TEST EXTENDED MEMORY	94	DISABLE A20 ADDRESS LINE
62	TEST EXTENDED MEMORY ADDRESS LINE	96	CLEAR HUGE ES SEGMENT REG.
64	JUMP TO USER PATCH 1	98	SEARCH FOR OPTION ROMS

DRAW	HS CHO	DATE	8/12/2006	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV.STEP	MP(PR)	SPI_BIOS_ROM	PART NO.	
APPROVAL	YB CHUN	REV	1.00	BIOS_ROM (1M)	BA41-01024-6A	
MODULE CODE		LAST EDIT		December 24, 2008 14:36:53 PM	PAGE	32 OF 60

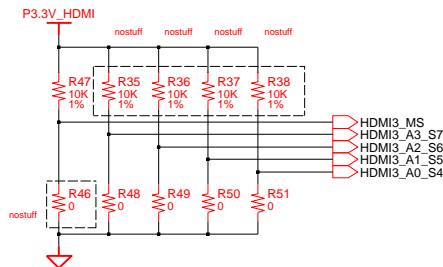
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

HDMI REPEATER



HDMI3_MS HIGH: SMBUS mode (Address = 110 A3A2A1A0 x = 1100 000x)
 HDMI3_MS LOW: STRAPS mode



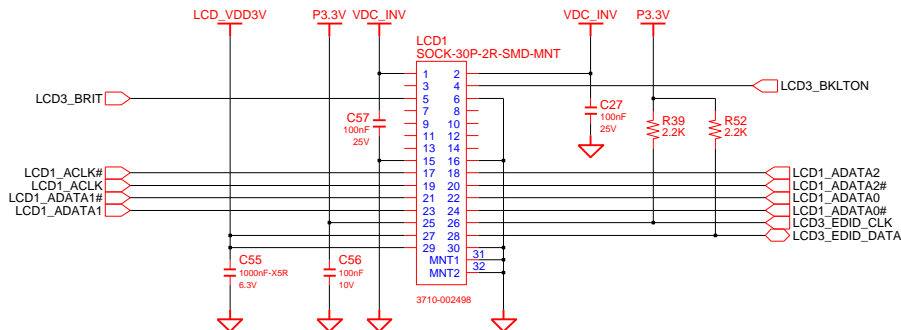
DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	HDMI REPEATER		
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PART NO. BA41-01024v6A
MODULE CODE	undef ined	LAST EDIT		PAGE	26	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

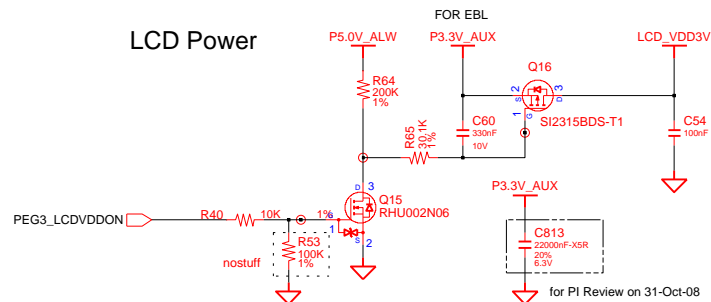
LVDS

1CH WXGA LCD CONNECTOR

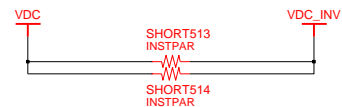


Signals : #40AWG
 LCD Vdd : #36AWG
 Inverter Vdd : #36AWG
 GND : #36AWG

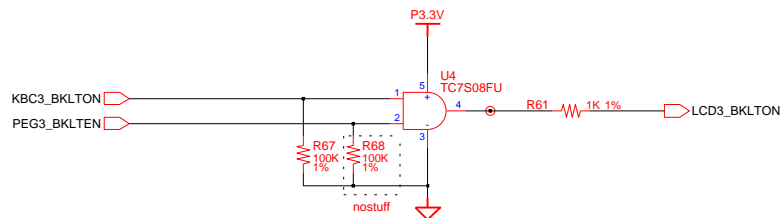
LCD Power



Inverter Power



Backlight ON

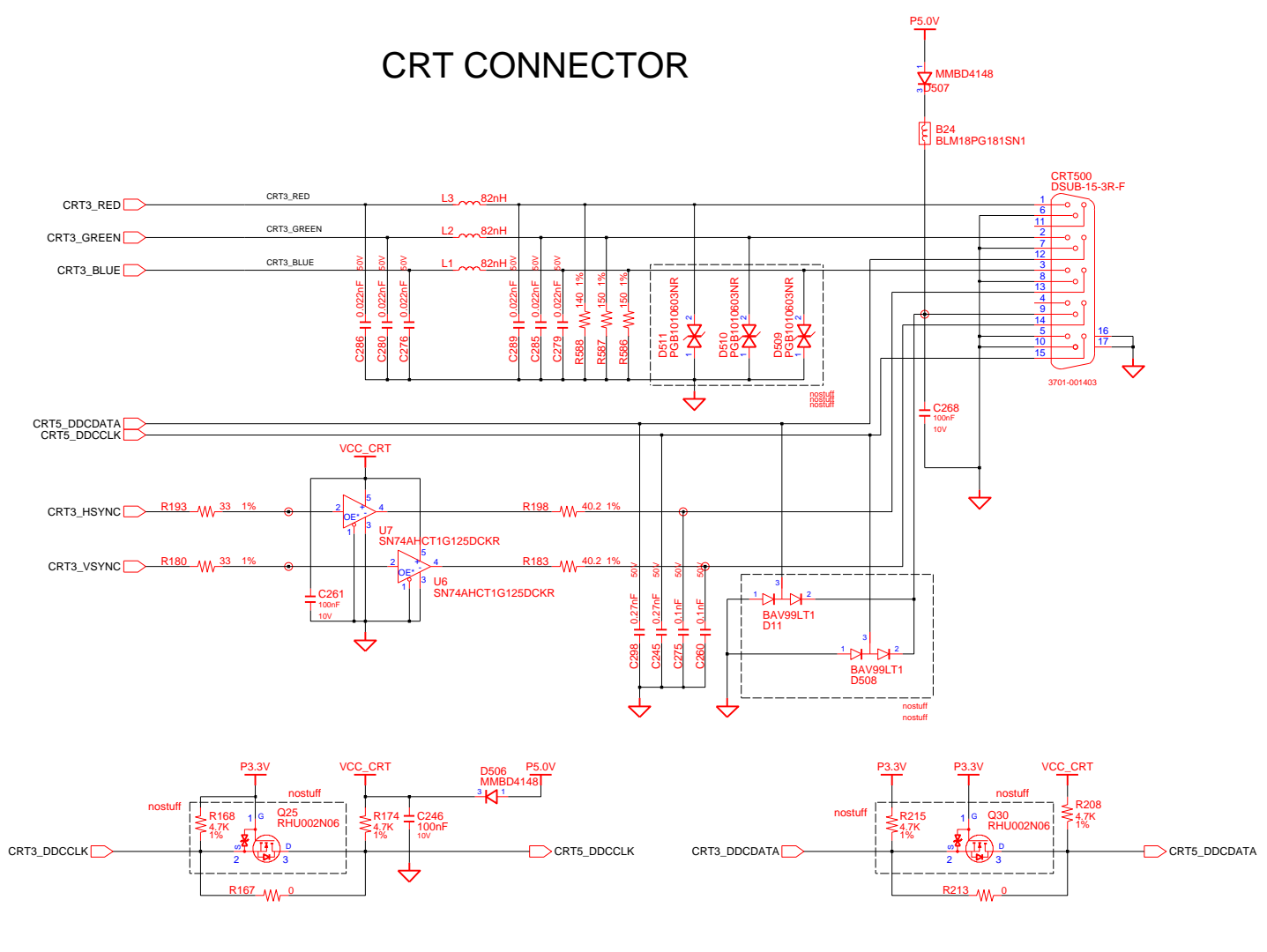


DRAW	HS CHO	DATE	8/12/2006	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	LCD_IF		
APPROVAL	YB CHUN	REV	1.00	LVDS		PART NO. BA41-01024-6A
MODULE CODE	undefined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	34	OF 63

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

CRT CONNECTOR

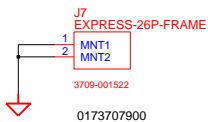
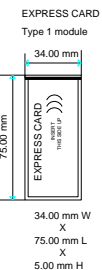
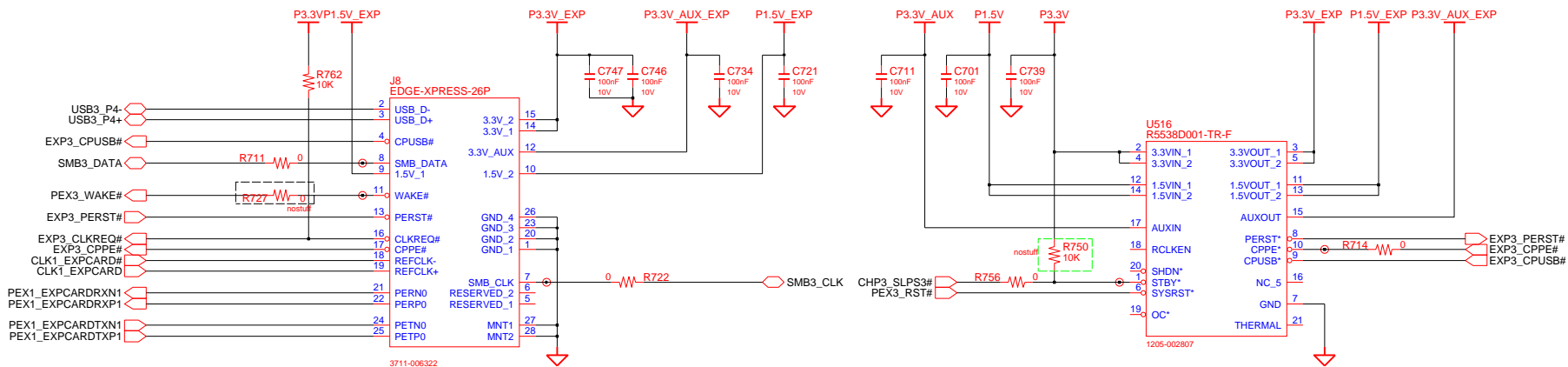


DRAW	HS CHO	DATE	8/12/2006	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS	
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	CRT_IF	CRT		
APPROVAL	YB CHUN	REV	1.00			PART NO. BA41-01024-6A	
MODULE CODE		LAST EDIT				December 24, 2008 14:36:53 PM	
						PAGE	35
						OF	63

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

EXPRESS CARD



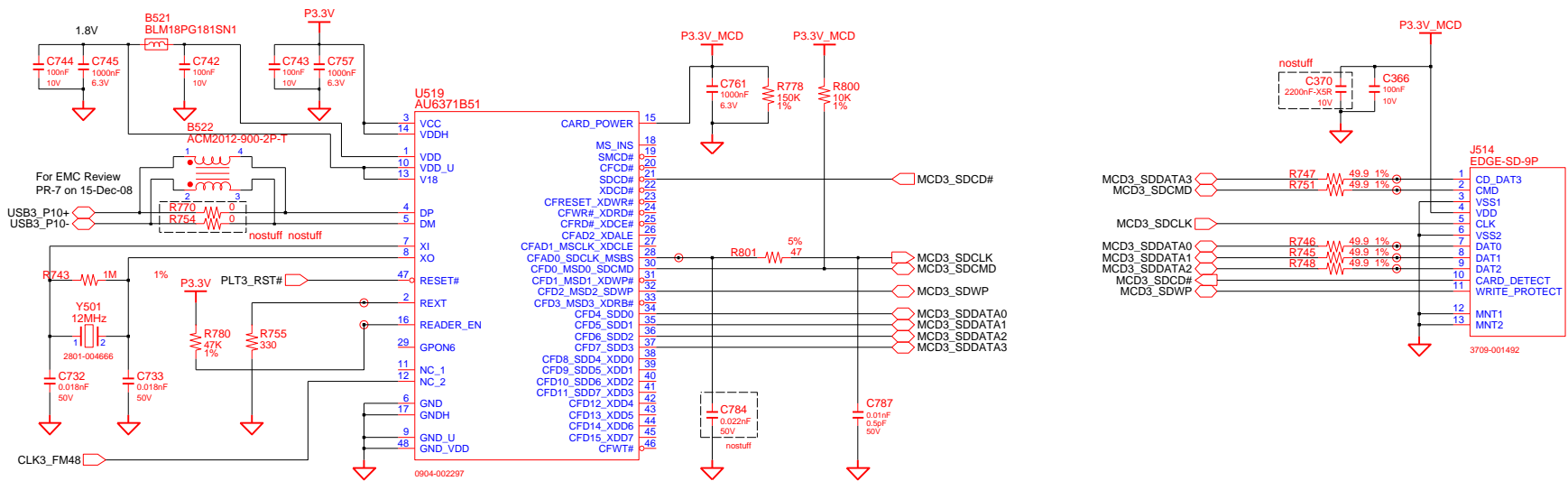
DRAW	HS CHO	DATE	8/17/2007	TITLE	DRESDEN-INT EXPRESS_CARD	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)		EXPRESS_CARD (34mm)	
APPROVAL	YB CHUN	REV	1.00			PART NO. BA41-01024-6A
MODULE CODE		LAST EDIT				

December 24, 2008 14:36:53 PM PAGE 42 OF 60

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

MEMORY CARD (2 IN 1)



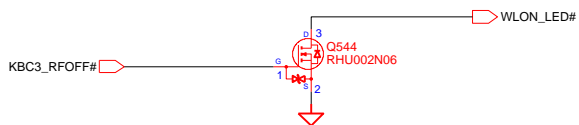
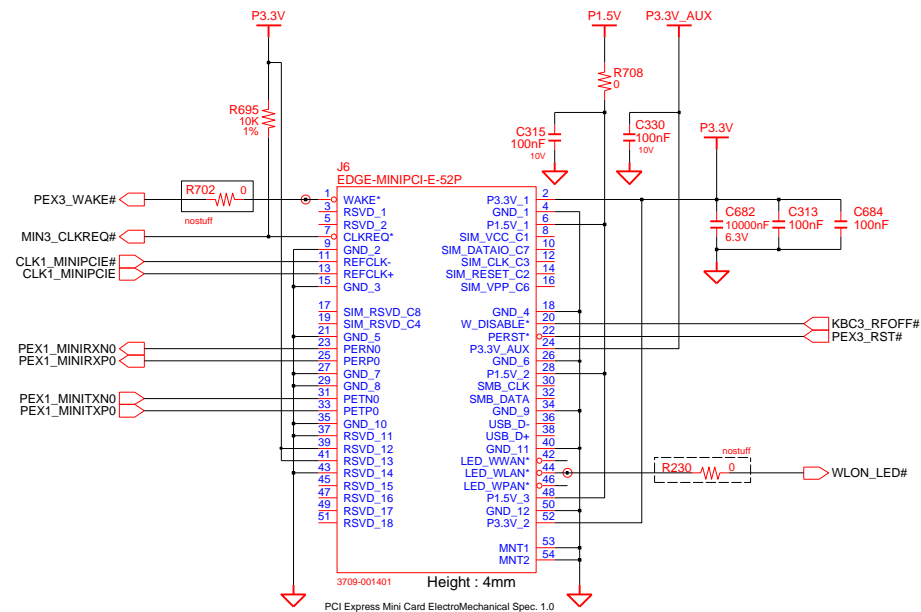
DRAW	HS CHO	DATE	8/17/2007	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS PART NO. BA41-01024-6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)		MEMORY CARD	
APPROVAL	YB CHUN	REV	1.00		MMC (2-IN-1)	
MODULE CODE		LAST EDIT				

December 24, 2008 14:36:53 PM PAGE 41 OF 60

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

Mini PCI-E Card (WLAN)



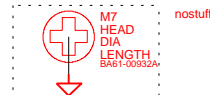
WLAN MINICARD NUT
Height : 4mm



For Full size minicard

(Top)

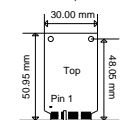
WLAN MINICARD NUT
Height : 4mm



For half size minicard

(Top)

Mini PCI Express Card



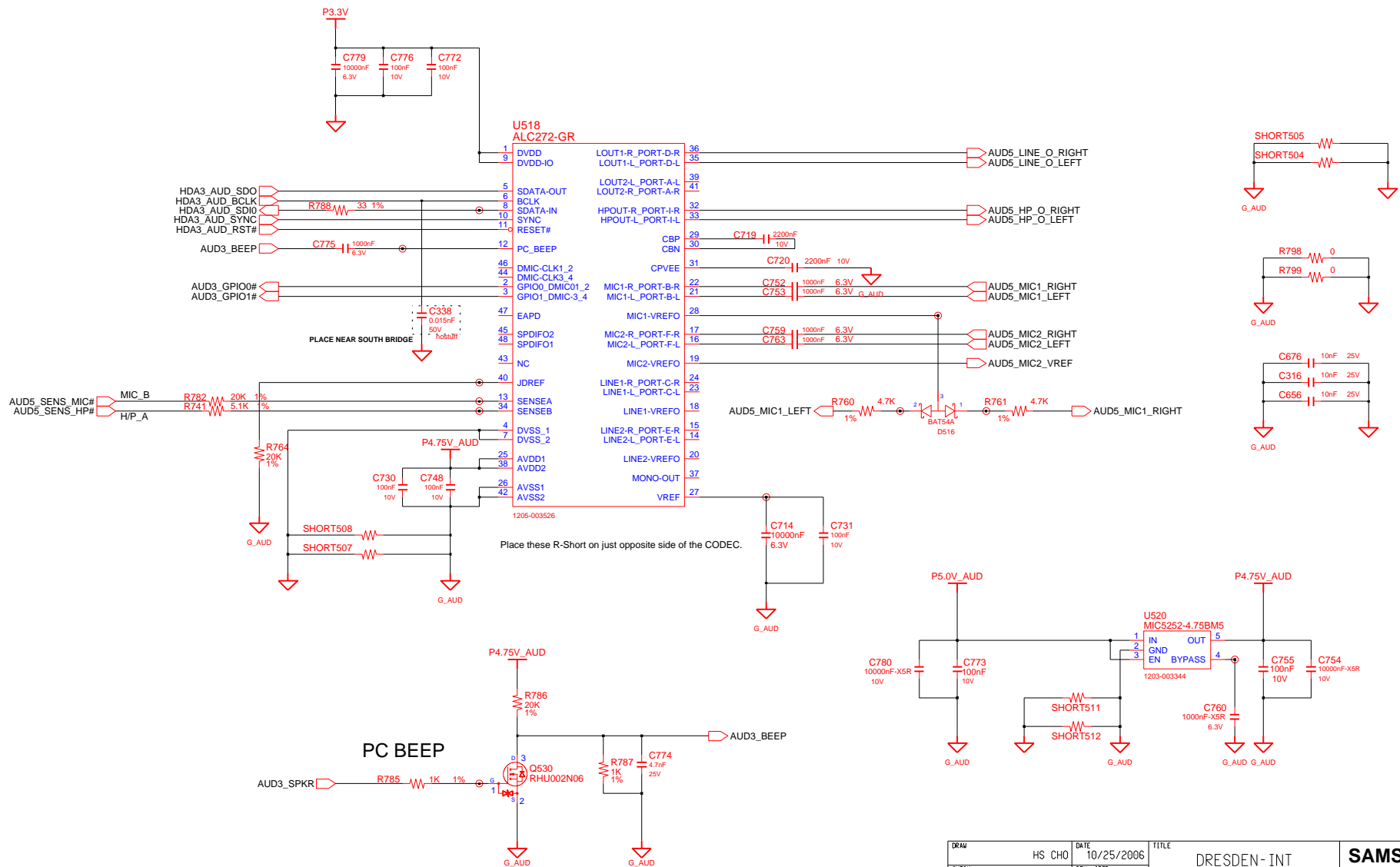
Odd Pins : Top side
Even Pins : Bottom Side

DRAW	HS CHO	DATE	8/12/2006	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	PCIE_MINICARD	PART NO.	
APPROVAL	YB CHUN	REV	1.00	WLAN	BA41-01024-6A	
MODULE CODE	undefined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	40	OF 60

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

HDA CODEC ALC272

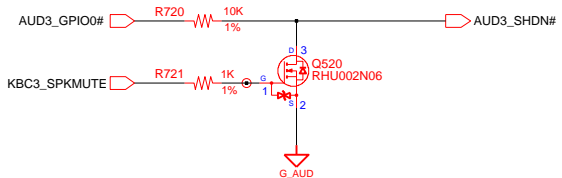
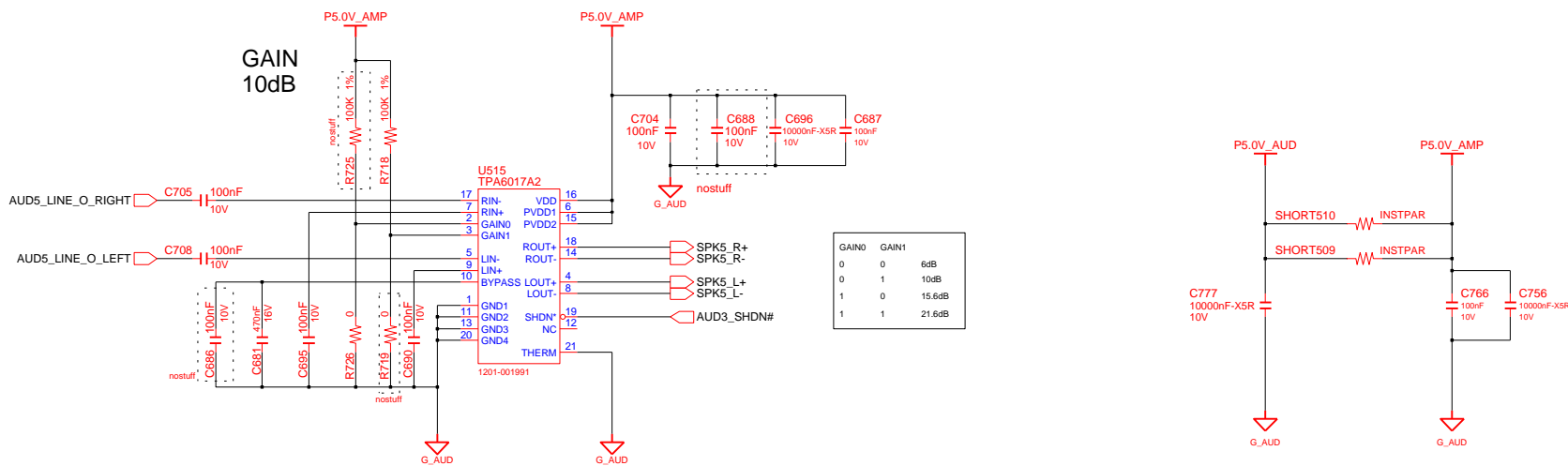


DRAW	HS CHO	DATE	10/25/2006	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	HDA CODEC		
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PART NO. BA41-01024v6A
MODULE CODE		LAST EDIT		PAGE 27 OF 49		

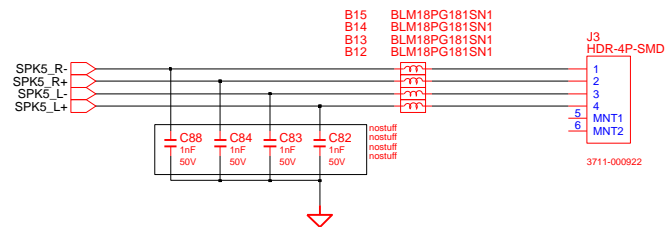
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

AUDIO AMP & INT. SPEAKER



INTERNAL STEREO SPEAKERS

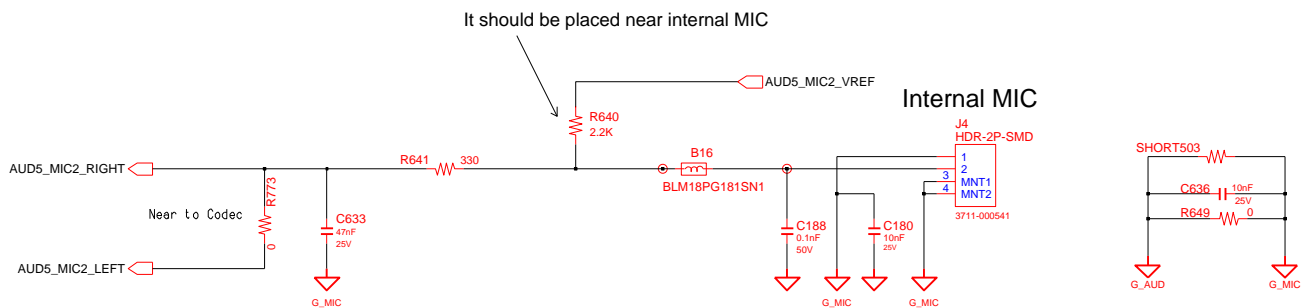


DRAW	HS CHO	DATE	10/25/2006	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	REV	1.00	
APPROVAL	YB CHUN	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	28	OF 49
MODULE CODE						PART NO. BA41-01024v6A

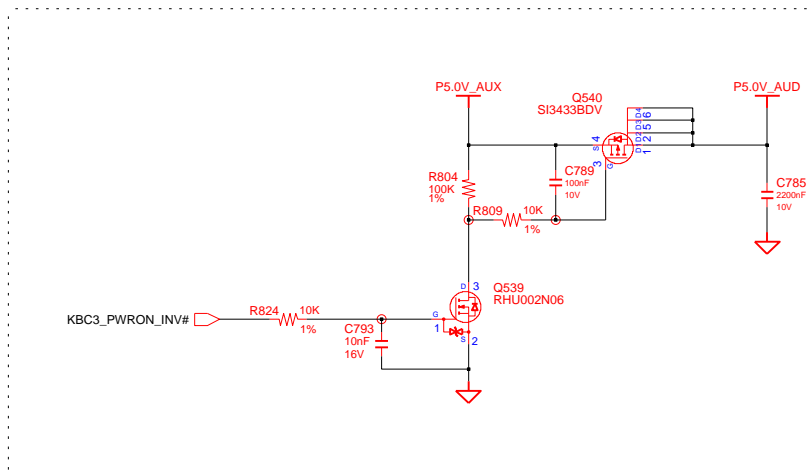
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

AUDIO POWER & INT. MIC



Audio Power (nostuff)



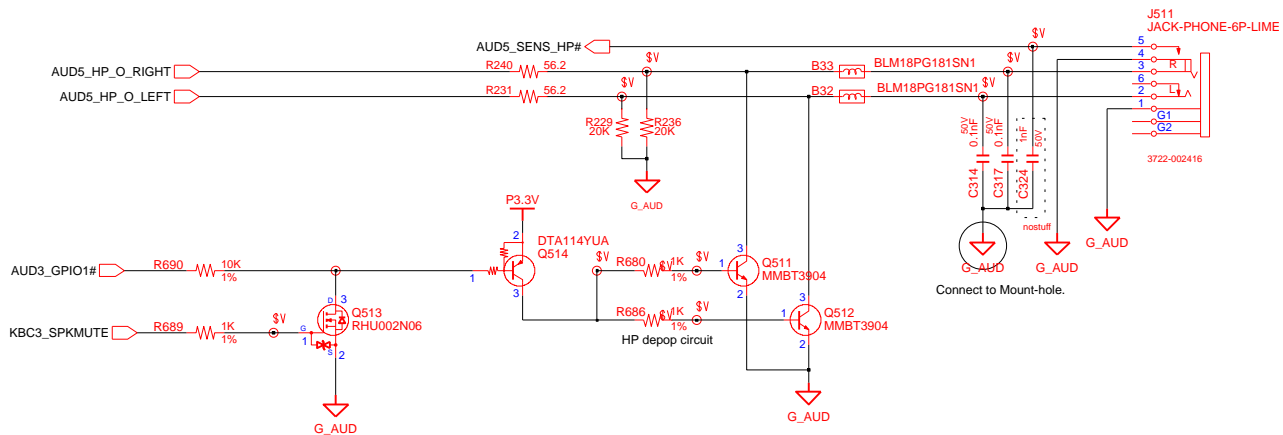
DRAW	HS CHO	DATE	10/25/2006	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	AUDIO POWER & INT.MIC		
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PART NO. BA41-01024v6A
MODULE CODE		LAST EDIT		PAGE	29	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

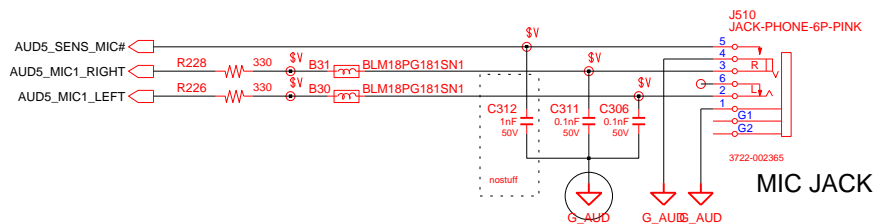
HEADPHONE & EXT. MIC

HEADPHONE



Connect to Mount-hole.

MIC JACK



The traces led to Audio Jacks have the width over 10mil

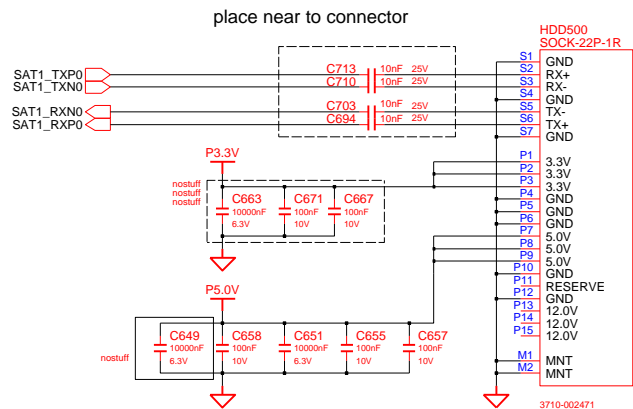
DRAW	HS CHO	DATE	10/25/2006	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS PART NO. BA41-01024v6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	REV	1.00	
APPROVAL	YB CHUN	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	30	OF 49

SAMSUNG PROPRIETARY

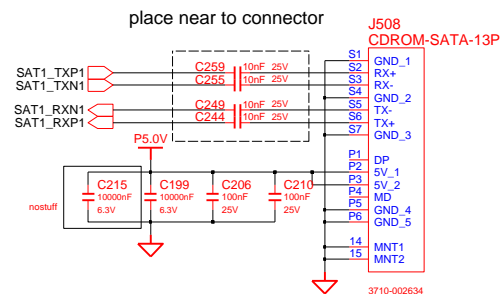
THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

SATA IF CONNECTOR

Main to HDD



Main to ODD



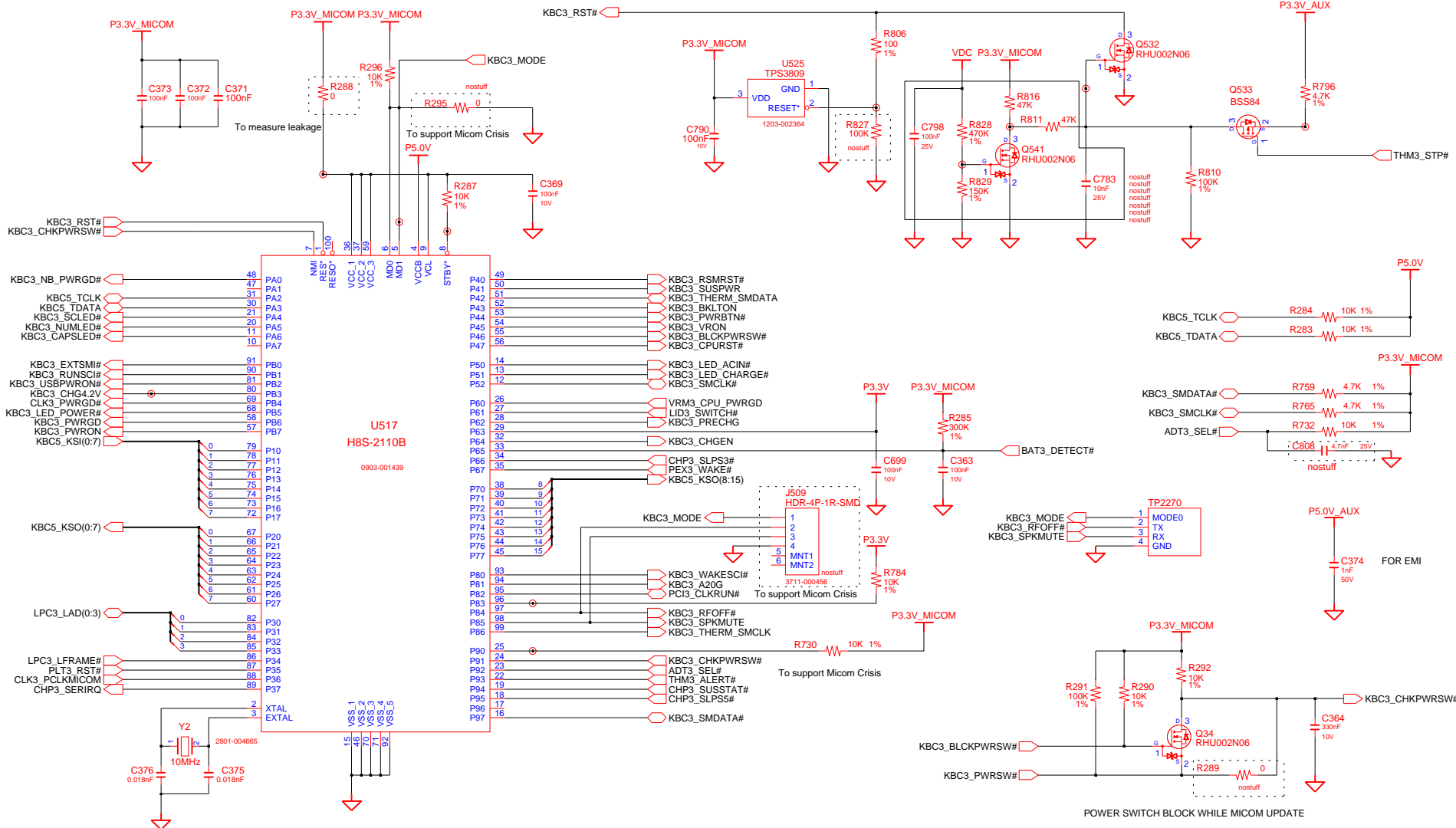
DRAW	HS CHO	DATE	8/12/2006	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS PART NO. BA41-01024*6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	REV	1.00	
APPROVAL	YB CHUN	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	31	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

MICOM

MICOM RESET



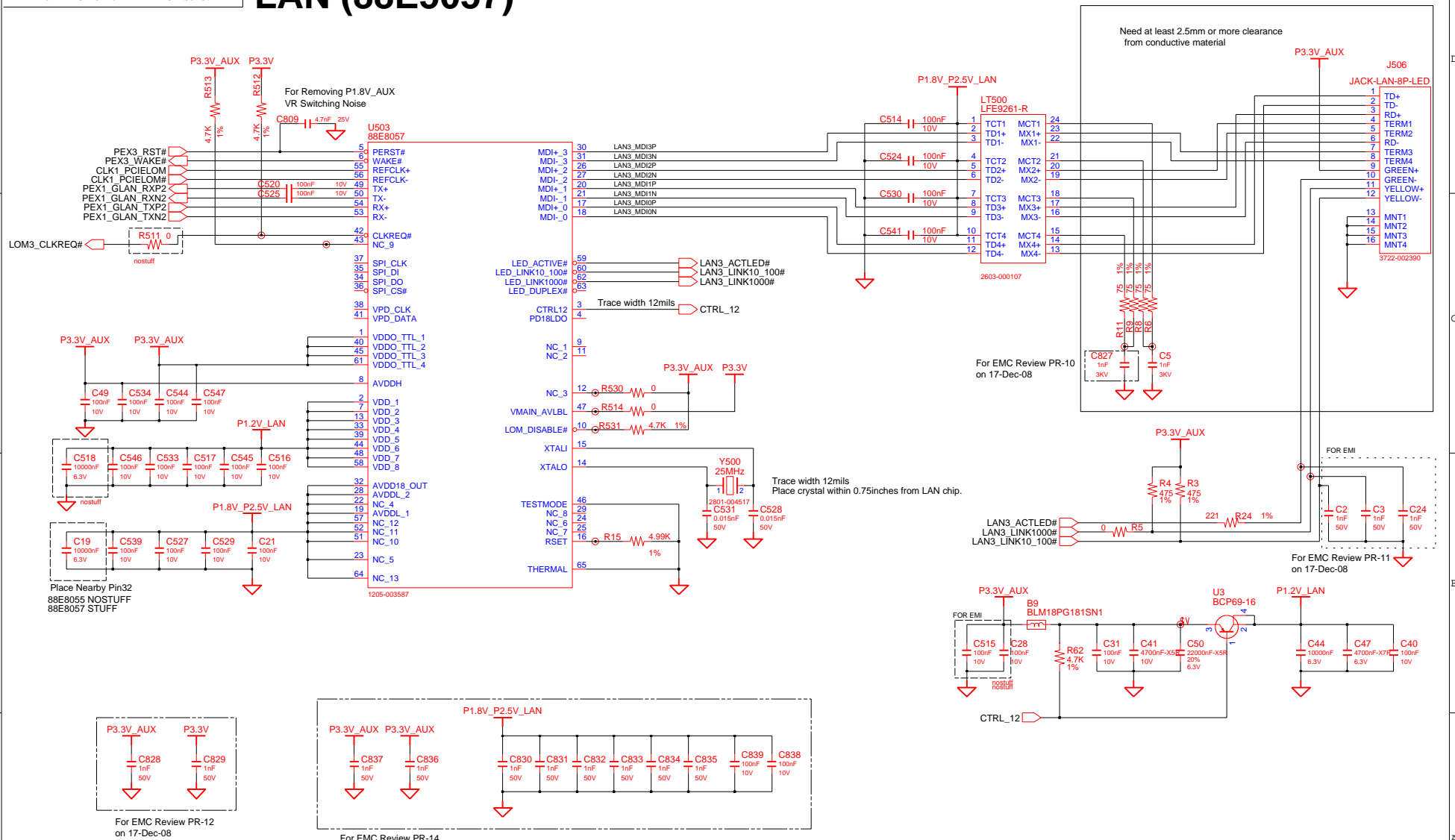
MICOM Crisis Update
 Condition: P90=P91=P92=High(MICOM_P3V)
 MD0=MD1=Low(0V)
 Serial Port: P84 & P85

DRAW	HS CHO	DATE	10/26/2006	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	DRESDEN-INT MAIN		
APPROVAL	YB CHUN	REV	1.00	MICOM		PART NO. BA41-01024*6A
MODULE CODE		LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	32	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

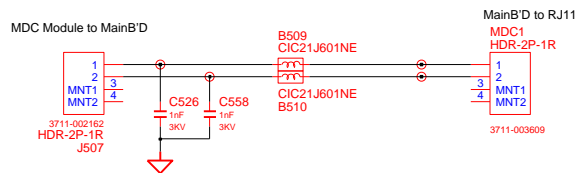
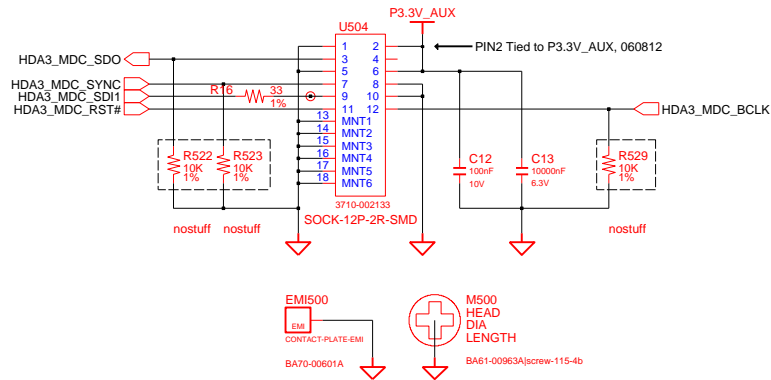
LAN (88E5057)



DRAW	HS CHO	DATE	11/8/2006	TITLE	DRESDEN-INT MAIN LAN (88E5057)	SAMSUNG ELECTRONICS PART NO. BA41-01024*6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)			
APPROVAL	YB CHUN	REV	1.00			
MODULE CODE	undefined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	33 OF 49	

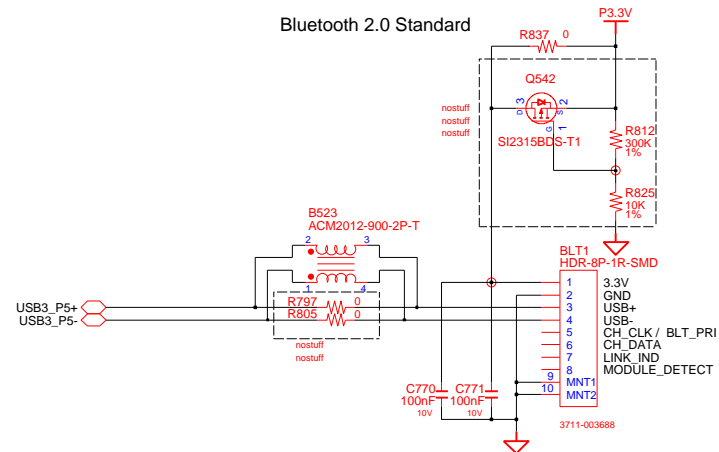
SAMSUNG PROPRIETARY
 THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

MDC connector

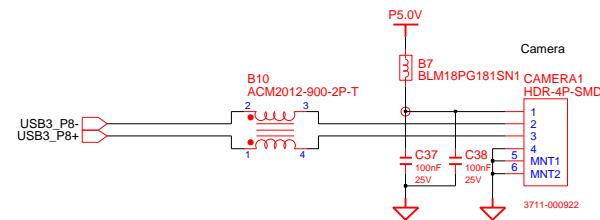


BLUETOOTH

Bluetooth 2.0 Standard



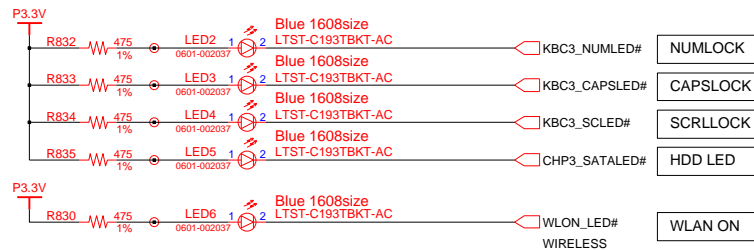
CAMERA



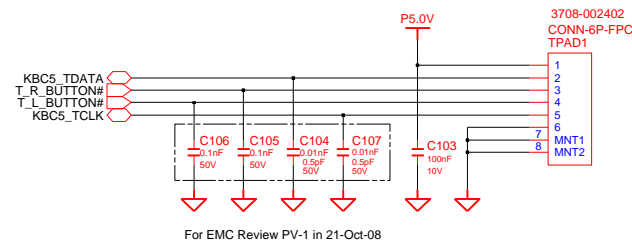
DRAW	HS CHO	DATE	8/14/2007	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	REV	1.00	
APPROVAL	YB CHUN	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	34	OF 49
MODULE CODE	undef ined					PART NO. BA11-01024v6A

SAMSUNG PROPRIETARY
 THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

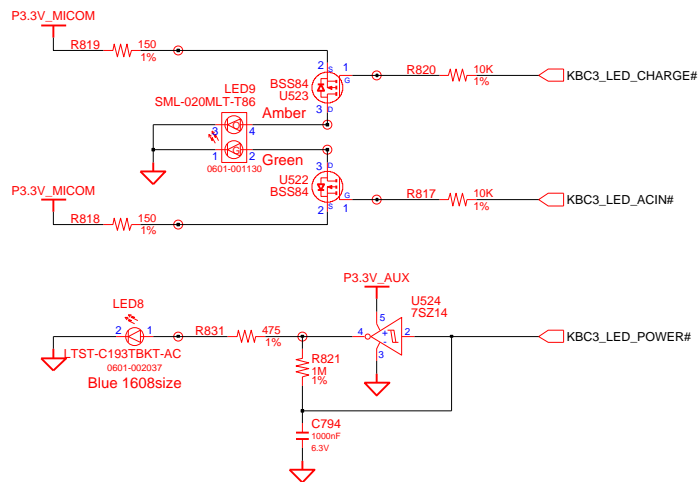
LEDS



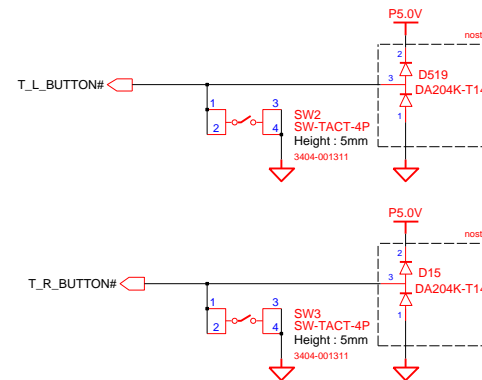
TOUCH PAD



Adaptor-In / Charging LED



TP_SWITCH

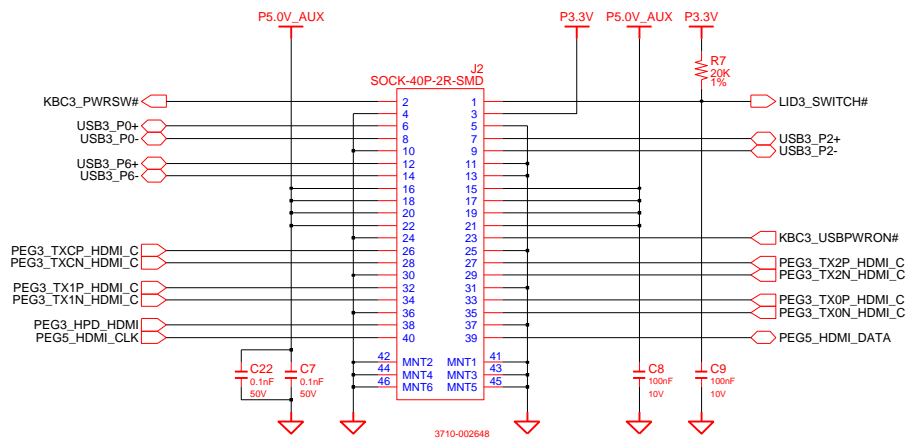


DRAW	HS CHO	DATE	8/14/2007	TITLE	DRESDEN-INT MAIN LED/TOUCH PAD	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	PART NO.		
APPROVAL	YB CHUN	REV	1.00	BA41-01024v6A		
MODULE CODE	undef ined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE 35 OF 49		

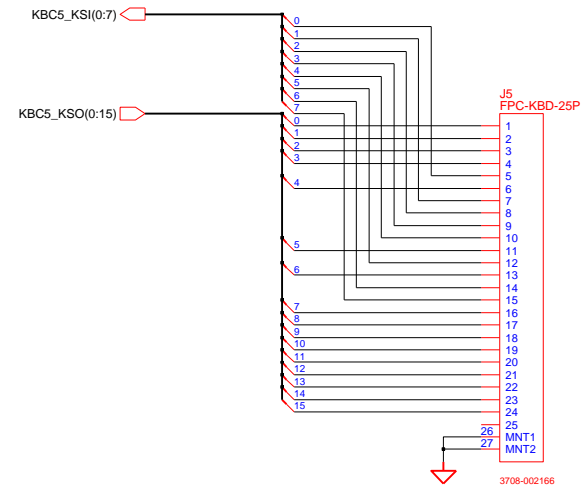
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

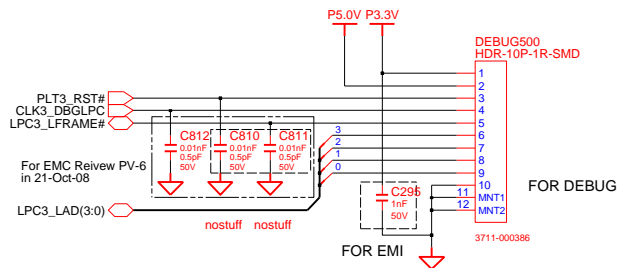
Main to SUB Connector



KEYBOARD



DEBUG PORT

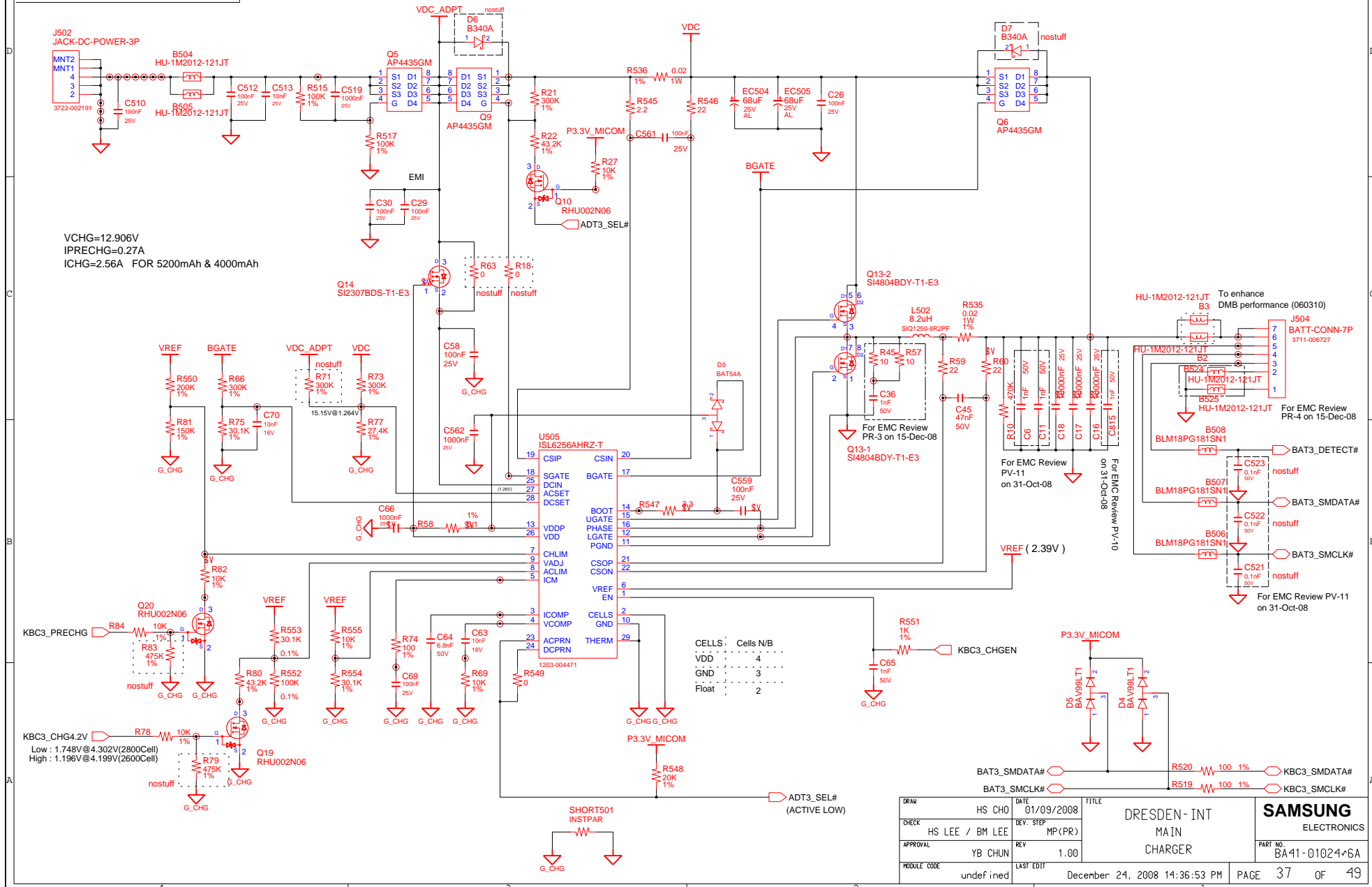


DRAW	HS CHO	DATE	12/5/2007	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)			
APPROVAL	YB CHUN	REV	1.00		SUB/DEBUG/KBD	PART NO. BA41-01024v6A
MODULE CODE	undefined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	36	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

CHARGER & POWER MANAGEMENT

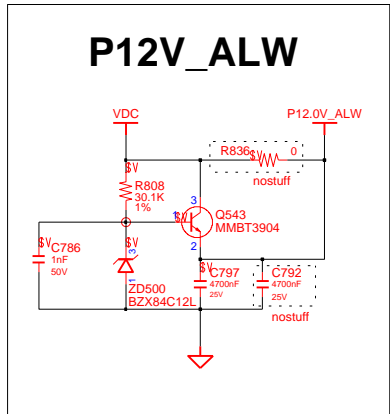
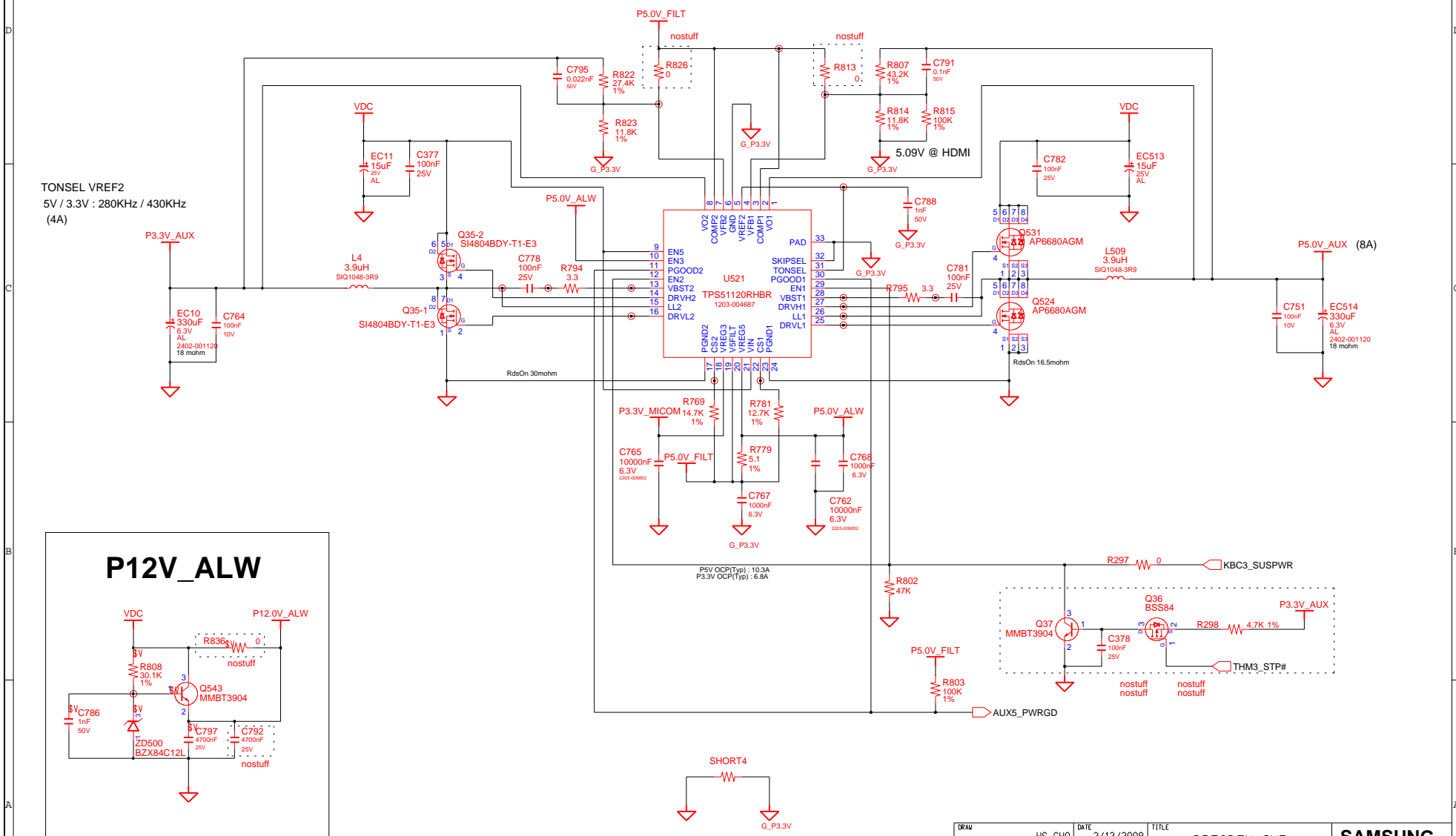


DRAW	HS CHO	DATE	01/09/2008	TITLE	DRESDEN-INT MAIN CHARGER	SAMSUNG ELECTRONICS PART NO. BA41-01024*6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)			
APPROVAL	YB CHUN	REV	1.00			
MODULE CODE	undef ined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	37 OF 49	

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

P3.3V_AUX & P5.0V_AUX



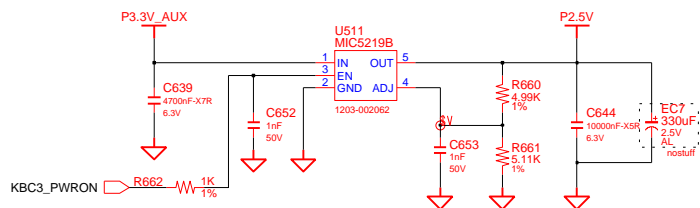
DRAW	HS CHO	DATE	2/13/2008	TITLE	DRESDEN-INT MAIN	SAMSUNG ELECTRONICS PART NO. BA41-01024*6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	AUX POWER		
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PAGE 38 OF 49
MODULE CODE		LAST EDIT				

SAMSUNG PROPRIETARY

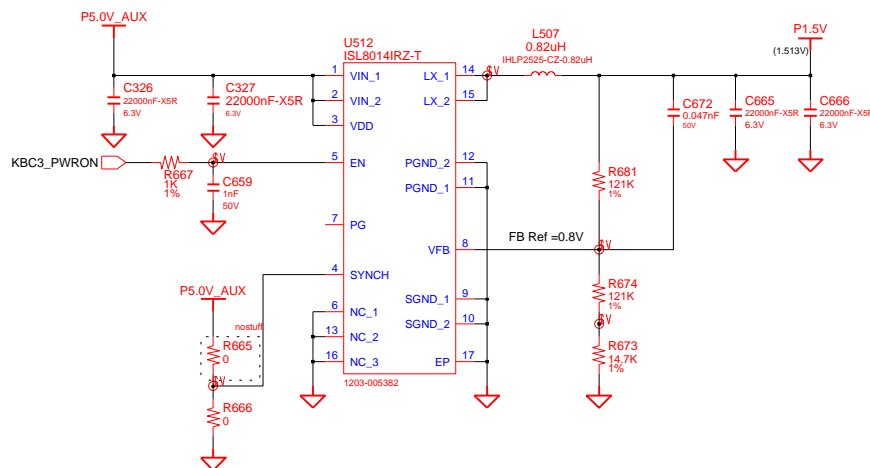
THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

CHIPSET POWER(P2.5V & P1.5V & P1.1V & P1.2V_AUX)

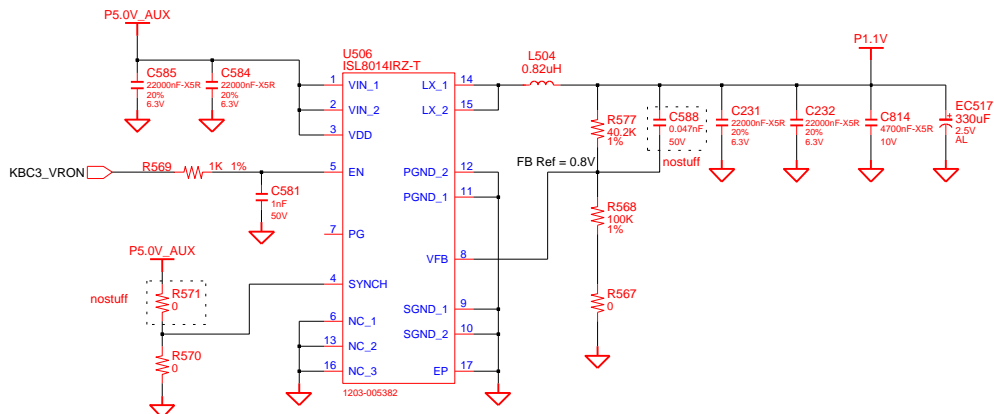
P2.5V



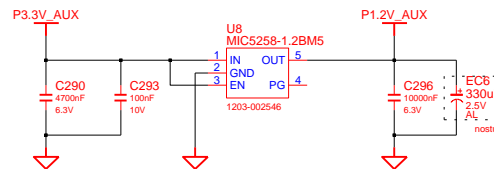
P1.5V



P1.1V



P1.2V_AUX

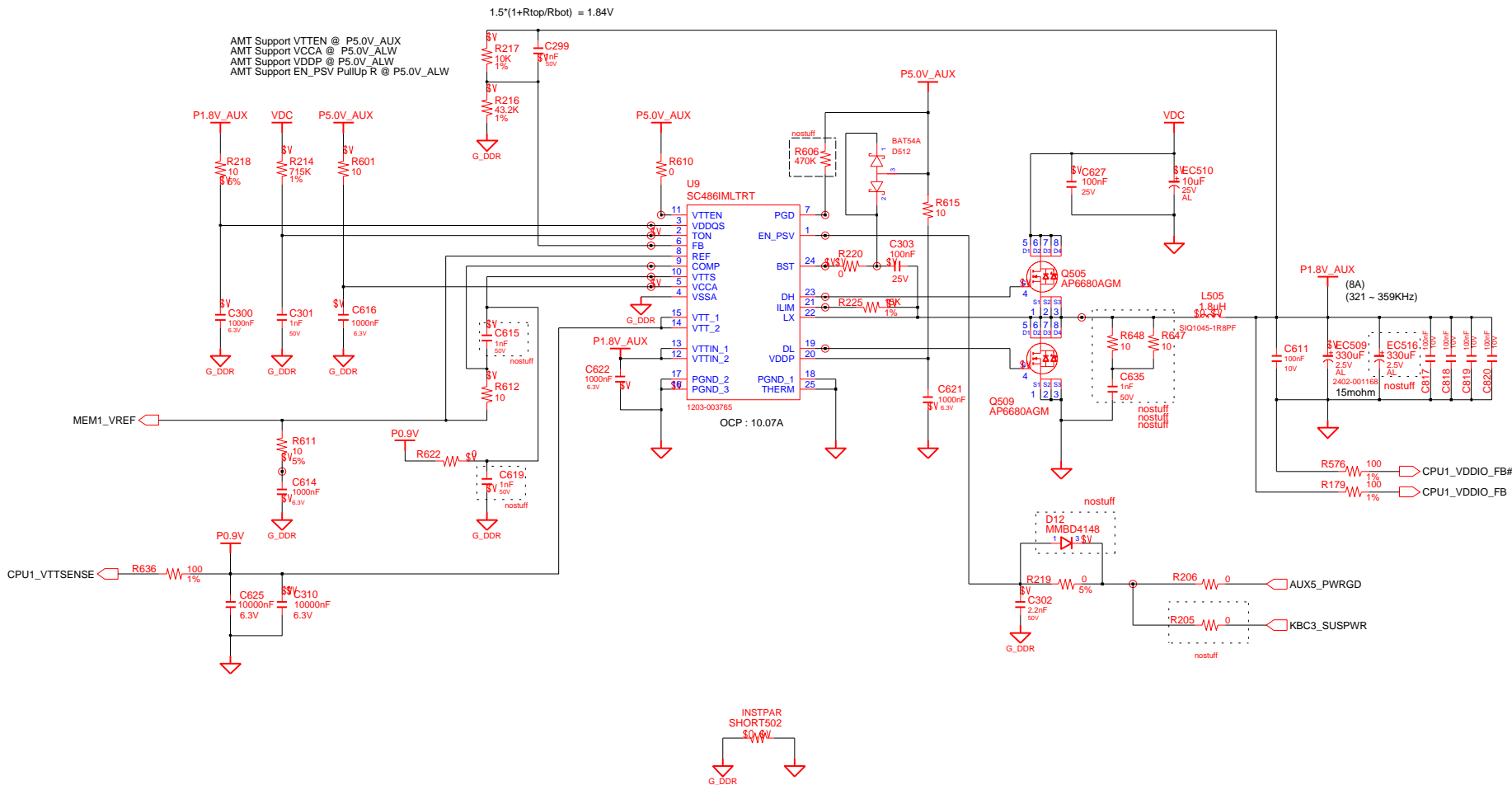


DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	CHIPSET POWER(2/2)		
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PART NO. BA41-01024*6A
MODULE CODE	LAST EDIT		December 24, 2008 14:36:53 PM		PAGE	40 OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

DDR2 Power



DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)			
APPROVAL	YB CHUN	REV	1.00		DDR2 POWER	PART NO. BA41-01024*6A
MODULE CODE		LAST EDIT		December 24, 2008 14:36:53 PM	PAGE	41 OF 49

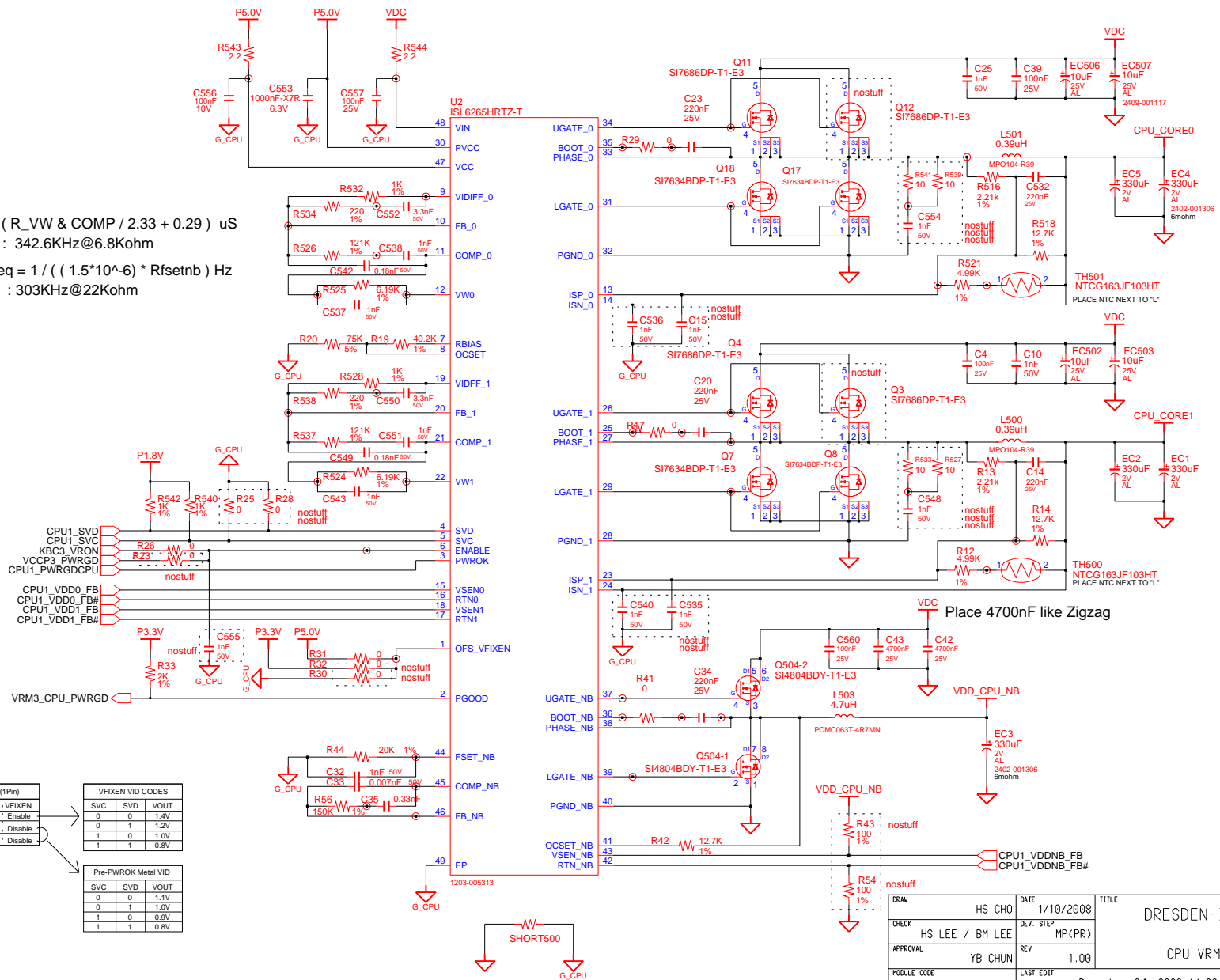
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

CPU VRM [INTERSIL]

VDD Freq = $(R_VW \& COMP / 2.33 + 0.29) \mu S$
 : 342.6KHz@6.8Kohm

VDD_NB Freq = $1 / ((1.5 \cdot 10^{-6}) \cdot Rfsetnb) \text{ Hz}$
 : 303KHz@22Kohm



OFS/VFIXEN(1Pin)		VFIXEN VID CODES		
OFS	-VFIXEN	SVC	SVD	VOUT
3.3V	Disable / Enable	0	0	1.4V
GND	Enable / Disable	0	1	1.2V
5V	Disable / Disable	1	0	1.0V
		1	1	0.8V

Pre-PWRK Metal VID			
SVC	SVD	VOUT	
0	0	1.1V	
0	1	1.0V	
1	0	0.9V	
1	1	0.8V	

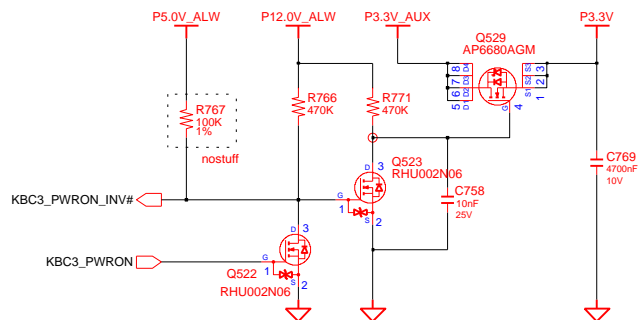
DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	CPU VRM		
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PART NO. BA41-01024*6A
MODULE CODE		LAST EDIT		PAGE		42 OF 49

SAMSUNG PROPRIETARY

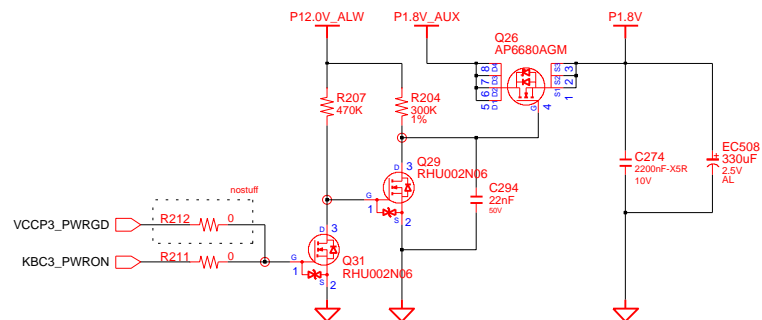
THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

Switched Power

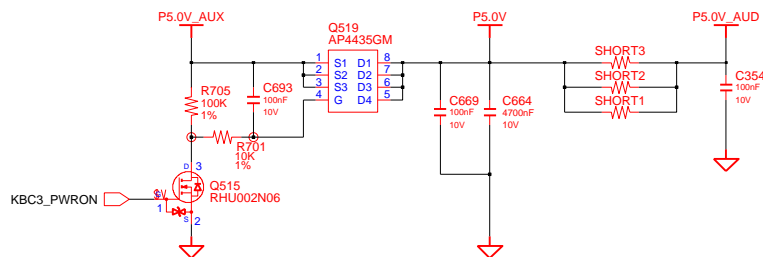
Switched Power On (P3.3V)



Switched Power On (P1.8V)



Switched Power On (P5.0V)

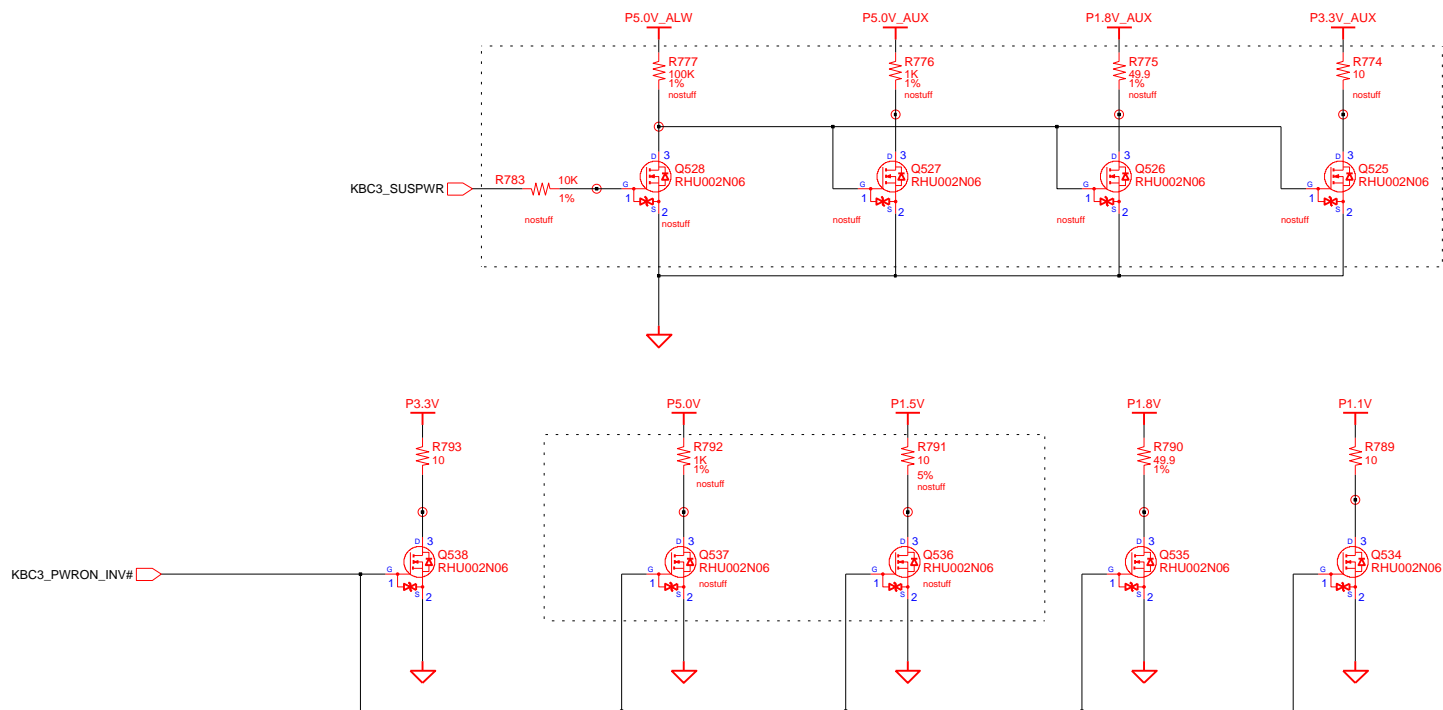


DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)			
APPROVAL	YB CHUN	REV	1.00		Switched Power	PART NO. BA41-01024v6A
MODULE CODE	undefined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	43	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

POWER DISCHARGER

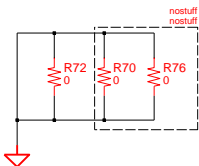
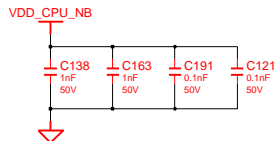
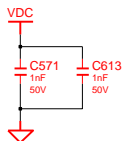
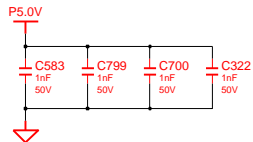
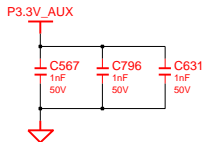


DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	POWER DISCHARGER		
APPROVAL	YB CHUN	REV	1.00	December 24, 2008 14:36:53 PM		PART NO. BA41-01024v6A
MODULE CODE	LAST EDIT		December 24, 2008 14:36:53 PM		PAGE	44 OF 49

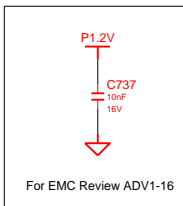
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

EMC

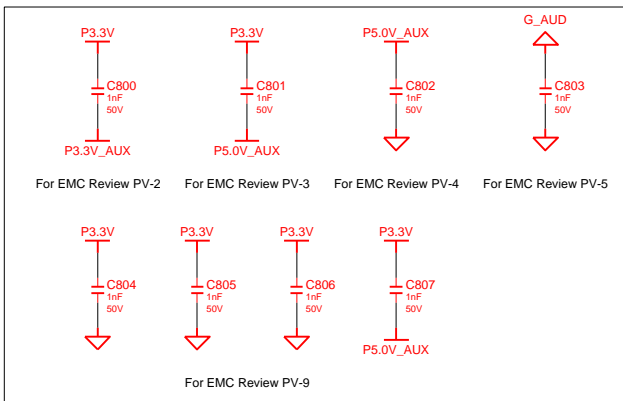


Added on 18-Sep-08

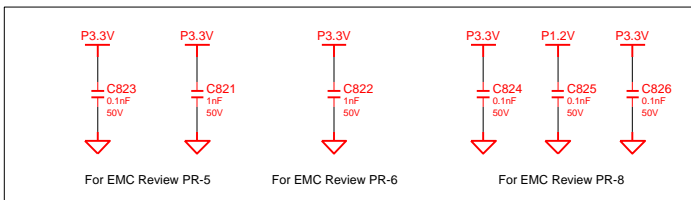


For EMC Review ADV1-16

Added on 21-Oct-08



Added on 15-Dec-08

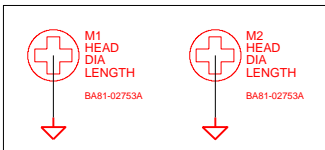


DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)			
APPROVAL	YB CHUN	REV	1.00		EMC	PART NO. BA41-01024*6A
MODULE CODE	undefined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	45	OF 49

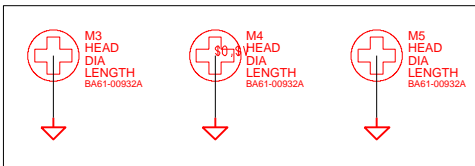
SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

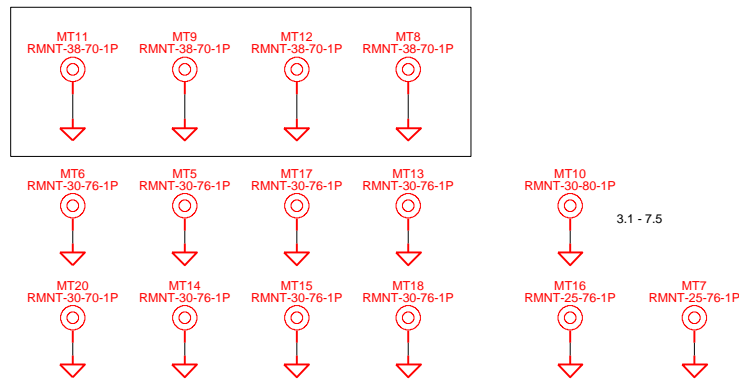
FAN-NUT



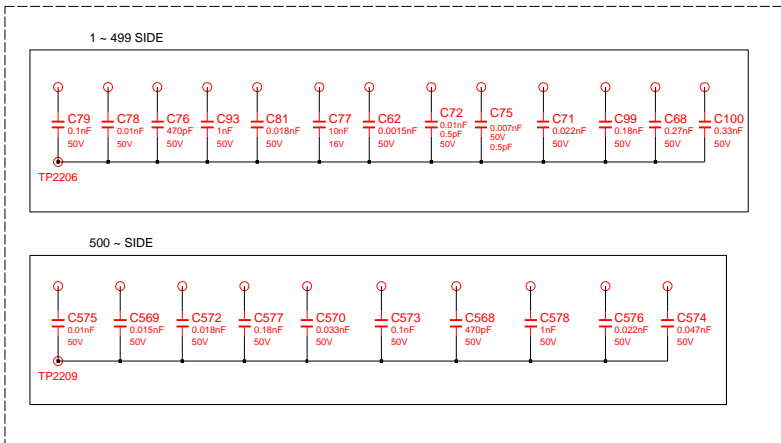
THERMAL-NUT



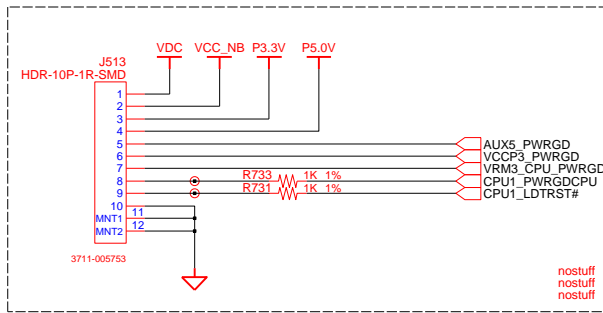
CPU RHE



ICT Cap : need to change with last BOM



ICT PORT



REV500
1
2

PCB REVISION CONTROL (ICT)				
NO	CONNECTION	DATE(Y/M/D)	REVISION	STEP
1	N.C.			ADV1
2	1-2			PV
3	2-3		1.0	MP(PR)
4	3-1			
5	1-2-3			
6	N.C.			
7	1-2			
8	2-3			
9	3-1			
10	1-2-3			

DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)			
APPROVAL	YB CHUN	REV	1.00		MTH/ICT	PART NO. BA41-01024*6A
MODULE CODE		LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	46	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

○MCD3_SDWP
 ○MEM1_VREF
 ○PC13_AD23
 ○PC13_AD24
 ○PC13_AD25
 ○PC13_AD26
 ○PC13_AD27
 ○PC13_AD28
 ○PEX3_WAKE#
 ○PEX3_RST#
 ○AUD3_GPIO0#
 ○AUD3_GPIO1#
 ○BAT3_SMCLK#
 ○CHP3_A_RST#
 ○CHP3_GPIO16
 ○CHP3_GPIO17
 ○CHP3_SERIRQ
 ○CHP3_SLPS3#
 ○CHP3_SLPS5#
 ○CLK3_DBG LPC
 ○CLK3_PWRGD#
 ○CPU1_ALERT#
 ○CRT3_DDCCLK
 ○CRT5_DDCCLK
 ○CRT3_DDCDATA
 ○CRT5_DDCDATA
 ○EXP3_CPURST#
 ○EXP3_PERST#
 ○SMB3_DATA
 ○SPI3_CS0#
 ○SPI3_MISO
 ○SPI3_MOSI
 ○THM3_STP#
 ○WLON_LED#
 ○AUD3_SHDN#
 ○AUX5_PWRGD
 ○CRT3_HSYNG
 ○CRT3_VSYNG

○EXP3_CPPE#
 ○KBC3_CHGEN
 ○KBC3_PWRGD
 ○KBC3_PWRON
 ○KBC3_PRECHG
 ○KBC3_PWRSW#
 ○KBC3_RFOFF#
 ○KBC3_SCLEP#
 ○KBC3_SMCLK#
 ○KBC3_SUSPWR
 ○KBC5_KSI(0)
 ○KBC5_KSI(1)
 ○KBC5_KSI(2)
 ○KBC5_KSI(3)
 ○KBC5_KSI(4)
 ○KBC5_KSI(5)
 ○KBC5_KSI(6)
 ○KBC5_KSI(7)
 ○KBC5_KSO(0)
 ○KBC5_KSO(1)
 ○KBC5_KSO(2)
 ○KBC5_KSO(3)
 ○KBC5_KSO(4)
 ○KBC5_KSO(5)
 ○KBC5_KSO(6)
 ○KBC5_KSO(7)
 ○KBC5_KSO(8)
 ○KBC5_KSO(9)
 ○MCD3_SDCD#
 ○MCD3_SDCLK
 ○MCD3_SDCMD
 ○LCD3_BKLTON
 ○LPC3_LAD(0)
 ○LPC3_LAD(1)
 ○LPC3_LAD(2)
 ○LPC3_LAD(3)
 ○CPU2_THERMDA
 ○CPU2_THERMDC

○EXP3_CLKREQ#
 ○FAN3_FDBACK#
 ○CHP3_NB_THERMDN
 ○CHP3_NB_THERMDP
 ○HDA3_AUD_SDO
 ○HDA3_MDC_SDO
 ○KBC3_CPURST#
 ○KBC3_EXTSMI#

○KBC3_NUMLED#
 ○KBC3_PWRBTN#
 ○KBC3_RSMRST#
 ○KBC3_RLNSO#
 ○KBC3_SMDATA#
 ○KBC3_SPKMUTE
 ○KBC5_KSO(10)
 ○KBC5_KSO(11)
 ○KBC5_KSO(12)
 ○KBC5_KSO(13)
 ○KBC5_KSO(14)
 ○KBC5_KSO(15)
 ○LAN3_ACTLED#
 ○LID3_SWITCH#

○LPC3_LFRAME#
 ○MCD3_SDDATA0
 ○MCD3_SDDATA1
 ○MCD3_SDDATA2
 ○MCD3_SDDATA3
 ○MCH3_EXTT50#

○THM3_ALERT#
 ○VCCP3_PWRGD
 ○BAT3_DETECT#
 ○BAT3_SMDATA#
 ○CHP3_RTORST#
 ○SMB3_ALERT#
 ○MIN3_CLKREQ#
 ○PC13_CLKRUN#
 ○CHP3_NB_PWRGD
 ○CHP3_SATALED#
 ○CHP3_SB_TEST0
 ○CHP3_SB_TEST2
 ○CHP3_SUSSTAT#
 ○PEG3_HPD_HDMI

○PEG5_HDMI_CLK
 ○AUD5_LINE_O_LEFT
 ○AUD5_HP_O_RIGHT
 ○AUD5_MIC1_RIGHT
 ○AUD5_MIC2_RIGHT
 ○AUD5_HP_O_LEFT
 ○AUD5_MIC1_LEFT
 ○AUD5_MIC2_LEFT
 ○AUD5_MIC2_VREF
 ○CHP1_THRMTRIP#
 ○CHP3_BIOS_CRI#
 ○CHP3_INTRUDER#

○CPU1_PROCHOT#

○CPU1_VDD0_FB#
 ○CPU1_VDD1_FB#
 ○CPU1_VDDIO_FB#
 ○CPU1_VDDNB_FB#
 ○HDA3_AUD_BCLK
 ○HDA3_AUD_RST#
 ○HDA3_AUD_SDI1
 ○HDA3_AUD_SYNC
 ○HDA3_MDC_BCLK
 ○HDA3_MDC_RST#
 ○HDA3_MDC_SDI1
 ○HDA3_MDC_SYNC
 ○KBC3_CAPSLED#
 ○KBC3_NB_PWRGD#
 ○VRM3_CPU_PWRGD#

○CPU1_ALL_LDTSTP
 ○KBC3_BLKPWRSW#
 ○KBC3_LED_POWER#
 ○KBC3_PWRON_INV#
 ○USB3_SUB_PWRON#
 ○CHP3_STRAP
 ○KBC3_LED_CHARGE#
 ○KBC3_THERM_SMCLK
 ○LAN3_LINK10_100#
 ○CPU1_THRMTRIP#
 ○CPU1_VDDIO_FB#
 ○CPU1_VDDNB_FB#
 ○CPU3_THRMTRIP#
 ○USB3_SUB_DISCHG#
 ○AUD5_LINE_O_RIGHT
 ○KBC3_THERM_SMDATA
 ○PEG3_HDMI_SUB_CLK

○PEG5_HDMI_SUB_CLK
 ○PEG3_HDMI_SUB_DATA

○KBC3_CHKPWRSW#
 ○KBC3_LED_ACINH#
 ○KBC3_USBPWRON#
 ○LAN3_LINK1000#
 ○PEG5_HDMI_DATA
 ○KBC3_WAKESCI#
 ○LCD3_EDID_CLK
 ○PEG5_HDMI_SUB_DATA

○HDMI3_MS
 ○SMB3_CLK
 ○SPI3_CLK
 ○AOT3_SEL#
 ○AUD3_BEEP
 ○AUD3_SPKR
 ○KBC3_A20G
 ○KBC3_VRON
 ○CTRL_12
 ○SPK5_L+
 ○SPK5_L-
 ○SPK5_R+
 ○SPK5_R-
 ○FAN5_VDD

○T_L_BUTTON#
 ○T_R_BUTTON#
 ○KBC3_BKLTON
 ○KBC3_RST#
 ○KBC5_TCLK
 ○KBC5_TDATA
 ○P3_3V_AUX_EXP
 ○P1_8V_P2_5V_LAN

○VDC
 ○VREF
 ○VDC_INV
 ○VDC_ADPT
 ○VDD_CPU_NB
 ○P1_1V
 ○P3_3V_MCD
 ○P5_0V_ALW
 ○P5_0V_AMP
 ○P5_0V_AUD
 ○P5_0V_AUX
 ○GROUND
 ○GROUND
 ○GROUND
 ○GROUND
 ○GROUND
 ○GROUND
 ○GROUND
 ○GROUND
 ○GROUND
 ○GATE
 ○CPU_CORE0
 ○CPU_CORE1
 ○G_AUD
 ○G_CHG
 ○G_CPU
 ○G_DDR
 ○G_MIC

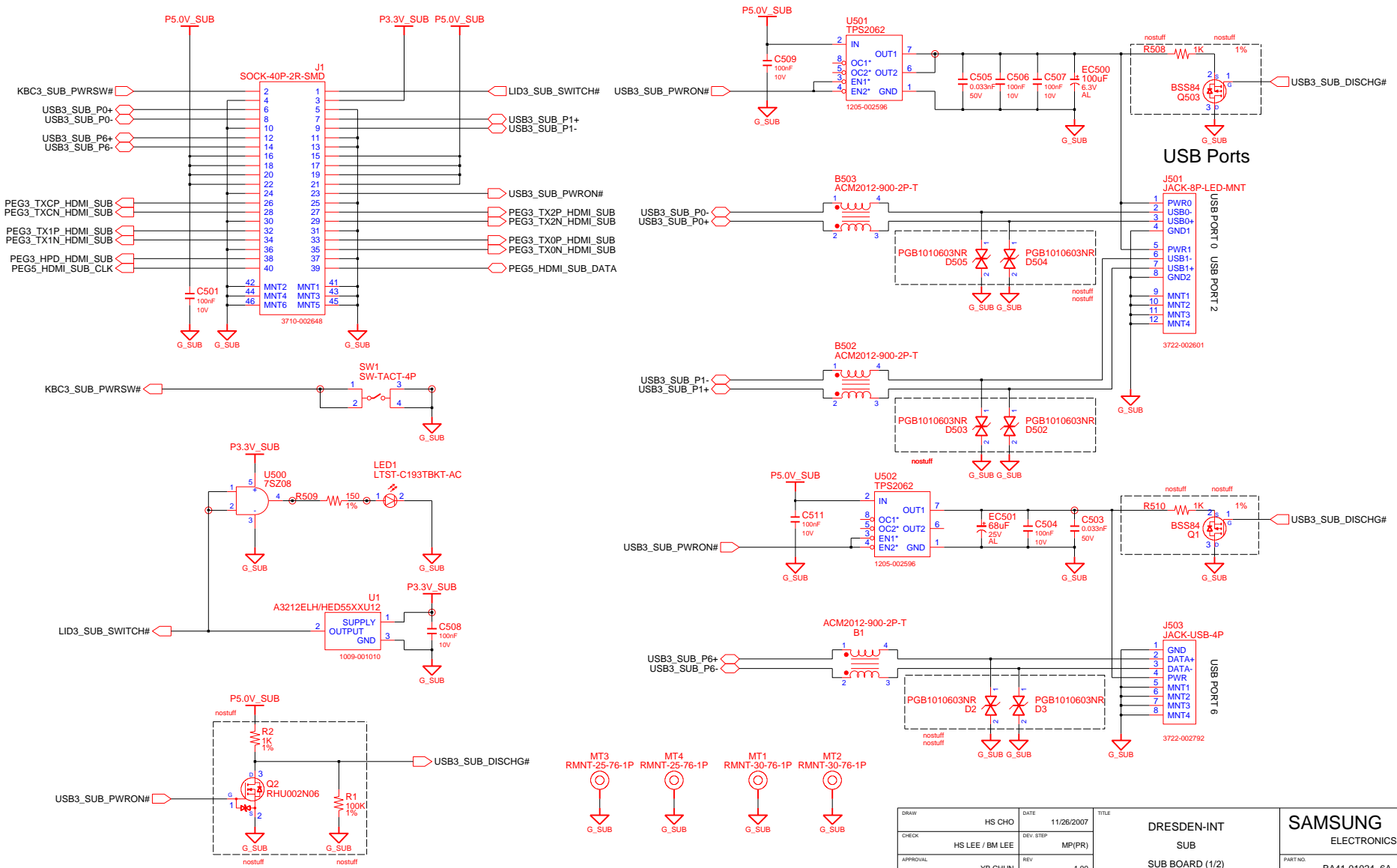
○G_P1_2V
 ○G_P3_3V
 ○LCD_VDD3V
 ○P0_9V
 ○P1_2V
 ○P1_5V
 ○P1_8V
 ○P2_5V
 ○P5_0V_SUB
 ○P12_0V_ALW
 ○P3_3V_HDMI
 ○P4_75V_AUD
 ○P5_0V_FILTER
 ○P3_3V_MICOM
 ○P3_3V
 ○PRTC_BAT
 ○P1_2V_AUX
 ○P1_2V_LAN
 ○P1_5V_EXP
 ○P1_8V_AUX
 ○P3_3V_AUX
 ○P3_3V_EXP
 ○VCC_NB
 ○P5_0V
 ○VCC_CRT

DRAW	HS CHO	DATE	1/10/2008	TITLE	DRESDEN-INT	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP (PR)			
APPROVAL	YB CHUN	REV	1.00		TP	PART NO. BA41-01024*6A
MODULE CODE	undef ined	LAST EDIT	December 24, 2008 14:36:53 PM	PAGE	47	OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.

Sub Board (1/2)

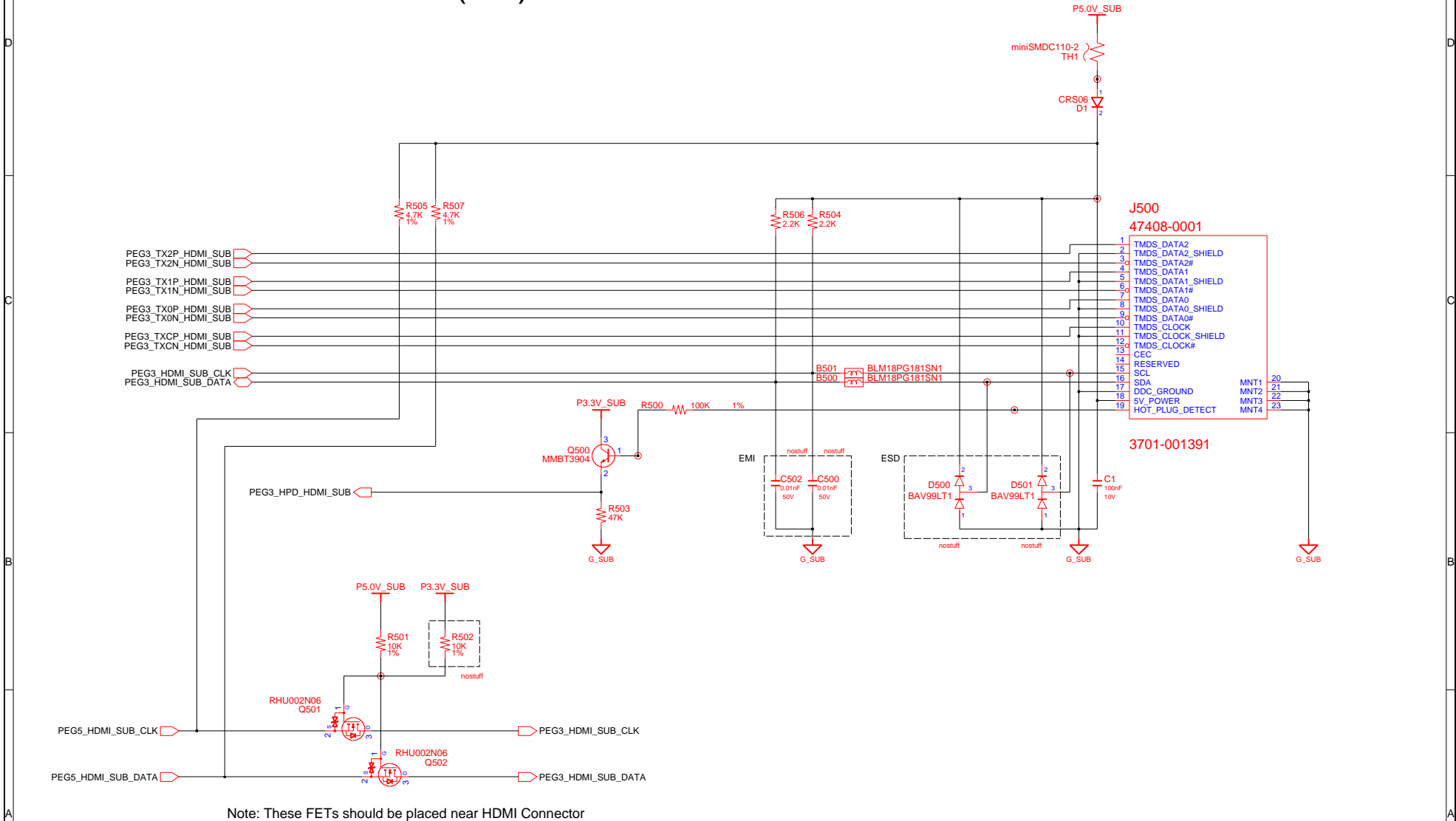


DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT SUB	SAMSUNG ELECTRONICS
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)		SUB BOARD (1/2)	
APPROVAL	YB CHUN	REV	1.00			PART NO. BA41-01024-6A
MODULE CODE		LAST ENT			December 24, 2008 14:36:53 PM	PAGE 48 OF 49

SAMSUNG PROPRIETARY

THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

Sub Board (2/2)



Note: These FETs should be placed near HDMI Connector

DRAW	HS CHO	DATE	11/26/2007	TITLE	DRESDEN-INT SUB	SAMSUNG ELECTRONICS PART NO. BA41-01024-6A
CHECK	HS LEE / BM LEE	DEV. STEP	MP(PR)	SUB BOARD (2/2)		
APPROVAL	YB CHUN	REV	1.00			
MODULE CODE		LAST ENT		December 24, 2008 14:36:53 PM	PAGE	49 OF 49

Index_Page

Sheet1 ----- Root[sheet1]
Sheet2 ----- Root[sheet2]
Sheet3 ----- Root[sheet3]
Sheet4 ----- Root[sheet4]
Sheet5 ----- Root[sheet5]
Sheet6 ----- Root[sheet6]
Sheet7 ----- Root[sheet7]
Sheet8 ----- Root[sheet8]
Sheet9 ----- Root[sheet9]
Sheet10 ----- Root[sheet10]
Sheet11 ----- Root[sheet11]
Sheet12 ----- Root[sheet12]
Sheet13 ----- Root[sheet13]
Sheet14 ----- Root[sheet14]
Sheet15 ----- Root[sheet15]
Sheet16 ----- Root[sheet16]
Sheet17 ----- Root[sheet17]
Sheet18 ----- Root[sheet18]
Sheet19 ----- Root[sheet19]
Sheet20 ----- Root[sheet20]
Sheet21 ----- Root[sheet21]
Sheet22 ----- Root[sheet22]
Sheet23 ----- Root[sheet23]
Sheet24 ----- Root[sheet24]
Sheet25 ----- Root[sheet25]
Sheet26 ----- SPL_BIOS_ROM_16Mbit[sheet1]
Sheet27 ----- Root[sheet26]
Sheet28 ----- LCD_IF_14p1[sheet1]
Sheet29 ----- Graphics_IF_CRT[sheet1]
Sheet30 ----- Express_Card[sheet1]
Sheet31 ----- Multi_MV_Au6371[sheet1]
Sheet32 ----- PCIE_Minicard_Slot[sheet1]
Sheet33 ----- Root[sheet27]
Sheet34 ----- Root[sheet28]
Sheet35 ----- Root[sheet29]
Sheet36 ----- Root[sheet30]
Sheet37 ----- Root[sheet31]
Sheet38 ----- Root[sheet32]
Sheet39 ----- Root[sheet33]
Sheet40 ----- Root[sheet34]
Sheet41 ----- Root[sheet35]
Sheet42 ----- Root[sheet36]
Sheet43 ----- Root[sheet37]
Sheet44 ----- Root[sheet38]
Sheet45 ----- Root[sheet39]
Sheet46 ----- Root[sheet40]
Sheet47 ----- Root[sheet41]
Sheet48 ----- Root[sheet42]
Sheet49 ----- Root[sheet43]
Sheet50 ----- Root[sheet44]

Sheet51 ----- Root[sheet45]
Sheet52 ----- Root[sheet46]
Sheet53 ----- Root[sheet47]
Sheet54 ----- Root[sheet48]
Sheet55 ----- Root[sheet49]

<http://mycomp.su/xl>