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# DRESDEN\_EXT

PCB Thickness:1.1mm

CPU : AMD GRIFFIN  
 Chip Set : AMD RX781M + SB700  
 Remarks : ATI M82 SCE-XT GFX  
 2 SODIMMs DDR2

Model Name : DRESDEN\_EXT  
 PBA Name : MAIN  
 PCB Code : \*\*\*\*\_\*\*\*\*\*  
 Dev. Step : PR  
 Revision : 0.98  
 T.R. Date : 2008.10.07

DRAW	CHECK	APPROVAL
-	-	-

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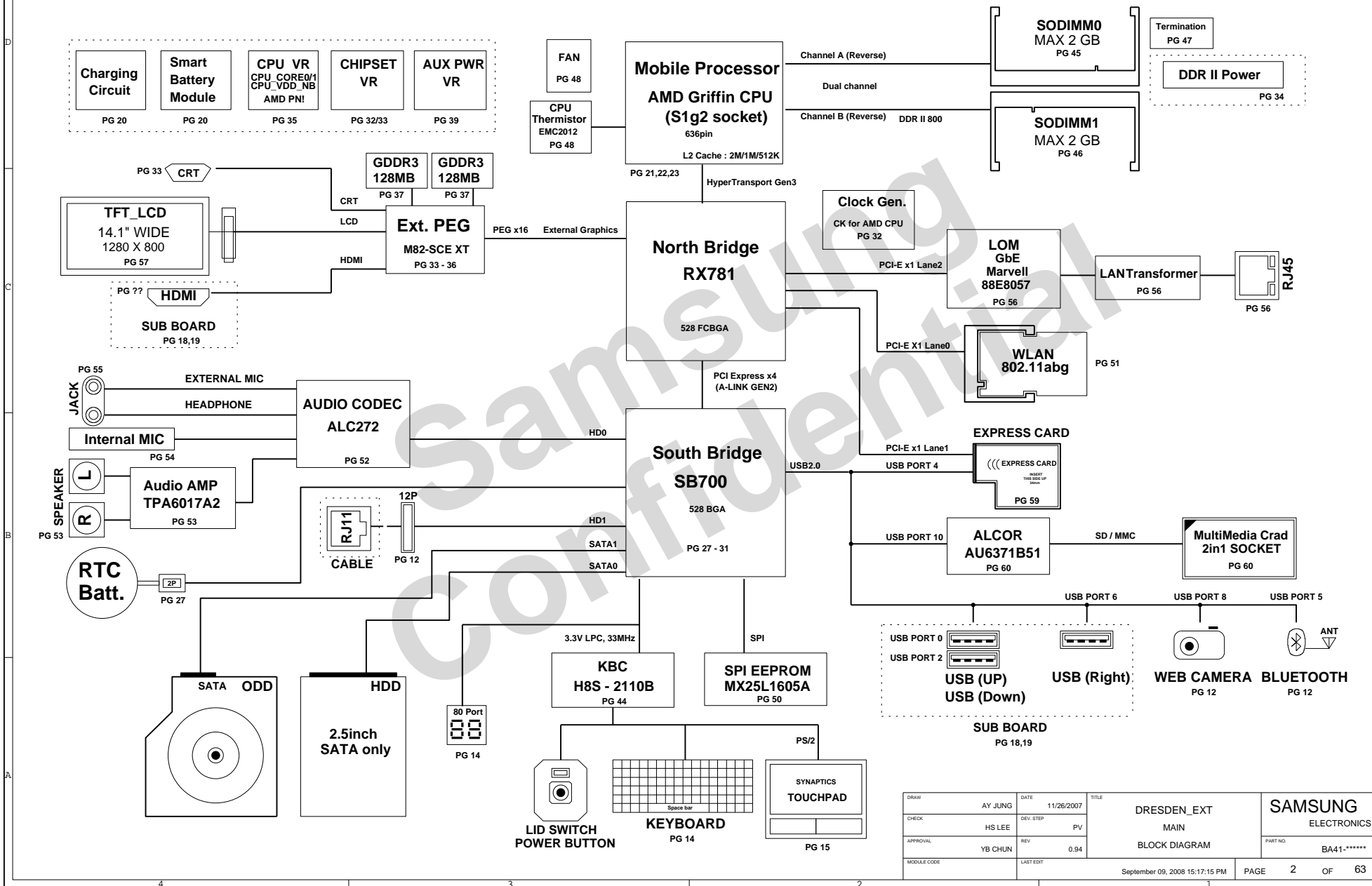
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DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT	SAMSUNG
CHECK	HS LEE	DEV. STEP	PV		COVER	ELECTRONICS
APPROVAL	YB CHUN	REV	0.94		CONTENTS	PART NO. BA41.*****
MODULE CODE		LAST EDIT		September 09, 2008 15:17:15 PM	PAGE	1 OF 63

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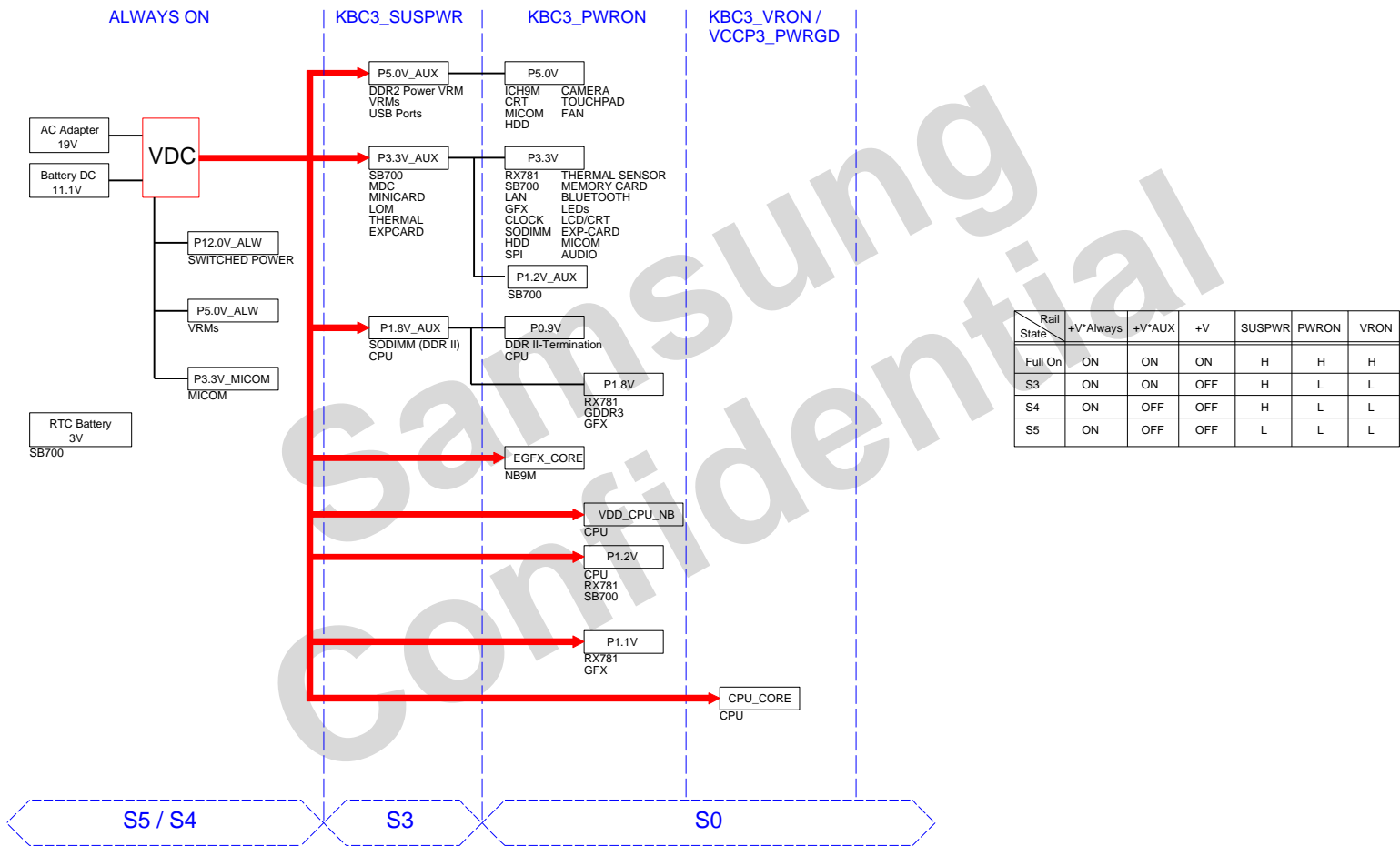
# OPERATION BLOCK DIAGRAM



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# POWER DIAGRAM

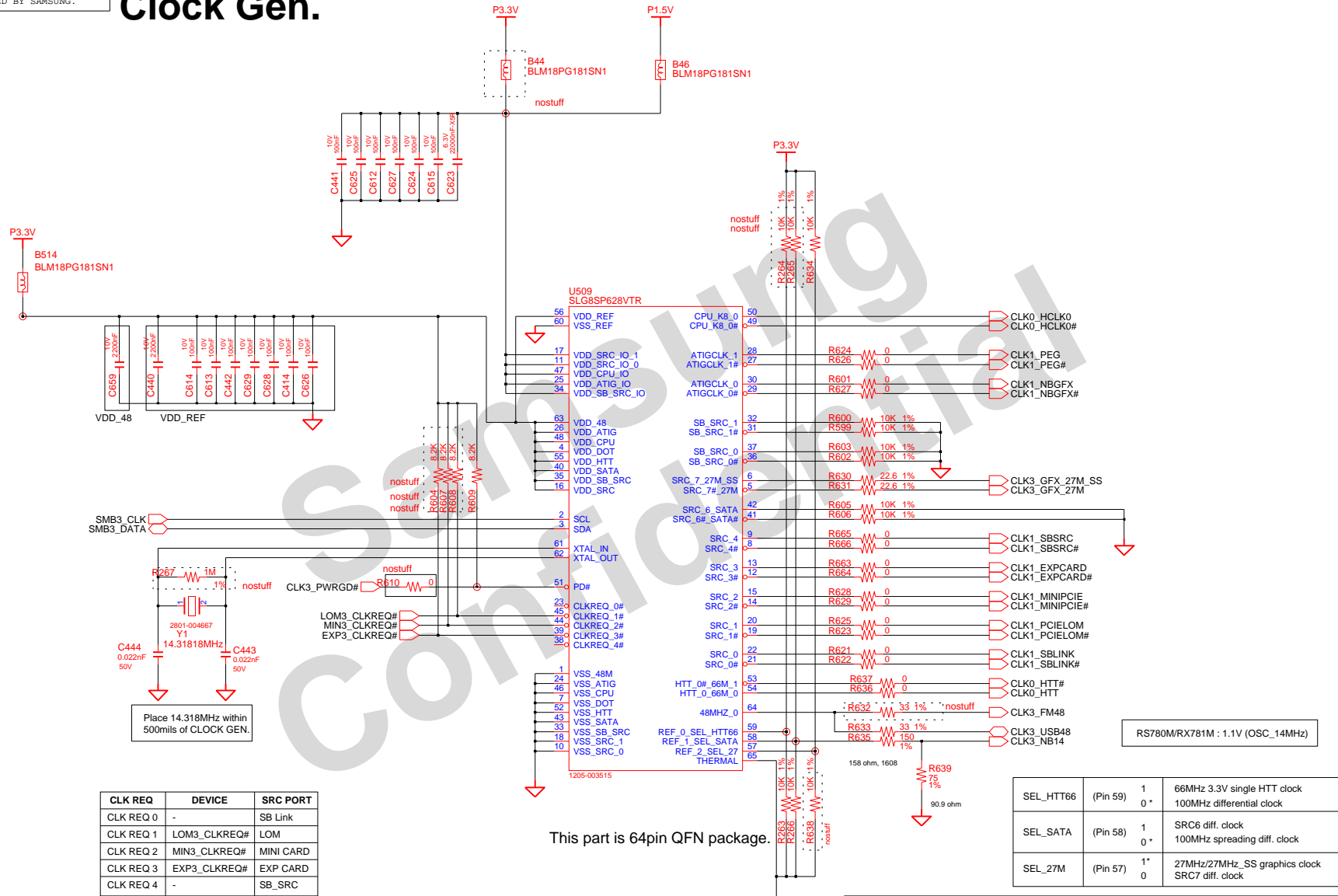


DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT MAIN POWER DIAGRAM	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV			PART NO. BA41.*****
APPROVAL	YB CHUN	REV	0.94			
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# Clock Gen.



This part is 64pin QFN package.

CLK REQ	DEVICE	SRC PORT
CLK REQ 0	-	SB Link
CLK REQ 1	LOM3_CLKREQ#	LOM
CLK REQ 2	MIN3_CLKREQ#	MINI CARD
CLK REQ 3	EXP3_CLKREQ#	EXP CARD
CLK REQ 4	-	SB_SRC

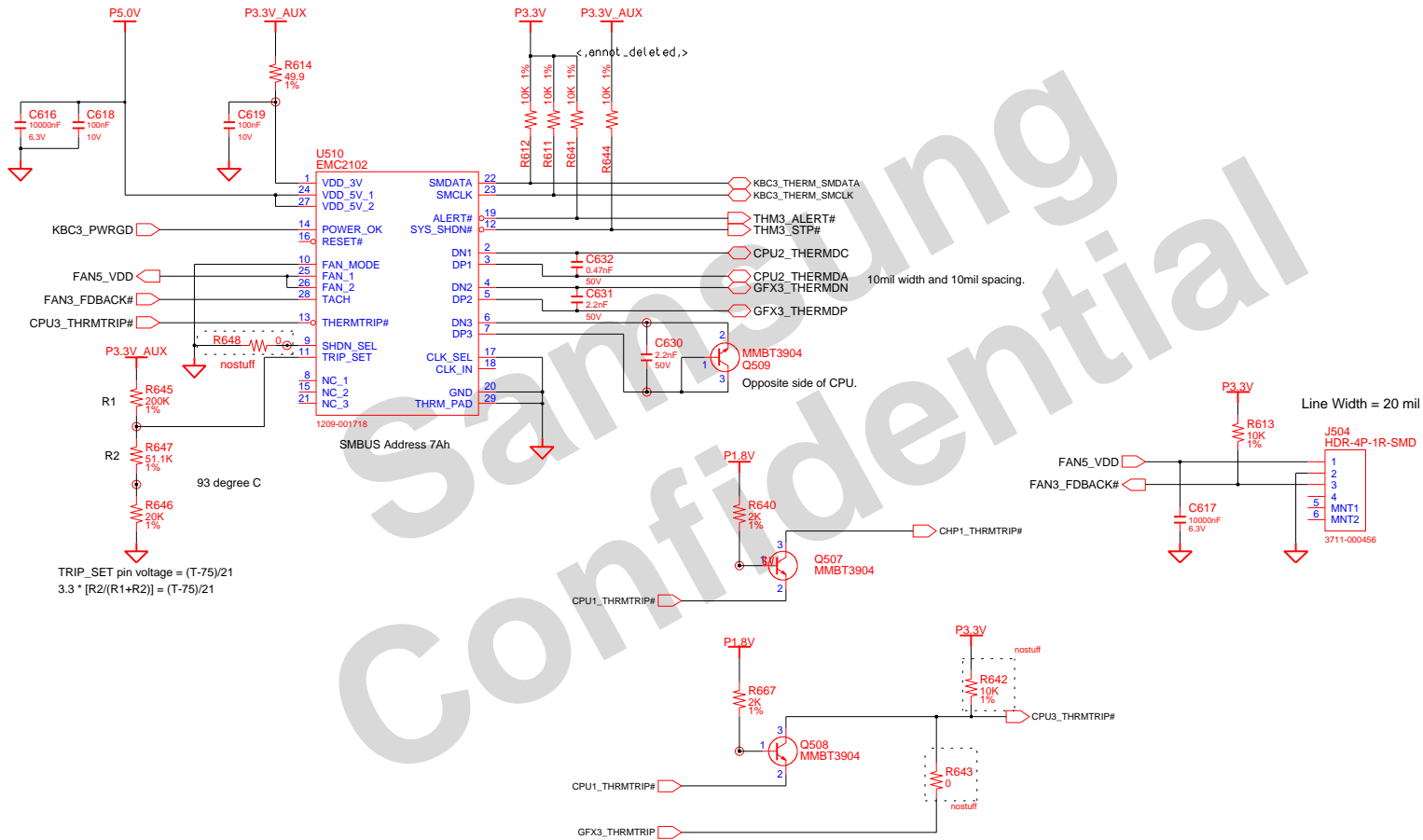
SEL_HTT66	(Pin 59)	1 0 *	66MHz 3.3V single HTT clock 100MHz differential clock
SEL_SATA	(Pin 58)	1 0 *	SRC6 diff. clock 100MHz spreading diff. clock
SEL_27M	(Pin 57)	1* 0	27MHz/27MHz_SS graphics clock SRC7 diff. clock

DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT	SAMSUNG
CHECK	HS LEE	DEV_STEP	PV	MAIN	ELECTRONICS	
APPROVAL	YB CHUN	REV	0.94	CLOCK GEN	PART NO.	BA41-*****
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# THERMAL SENSOR & FAN CONTROL

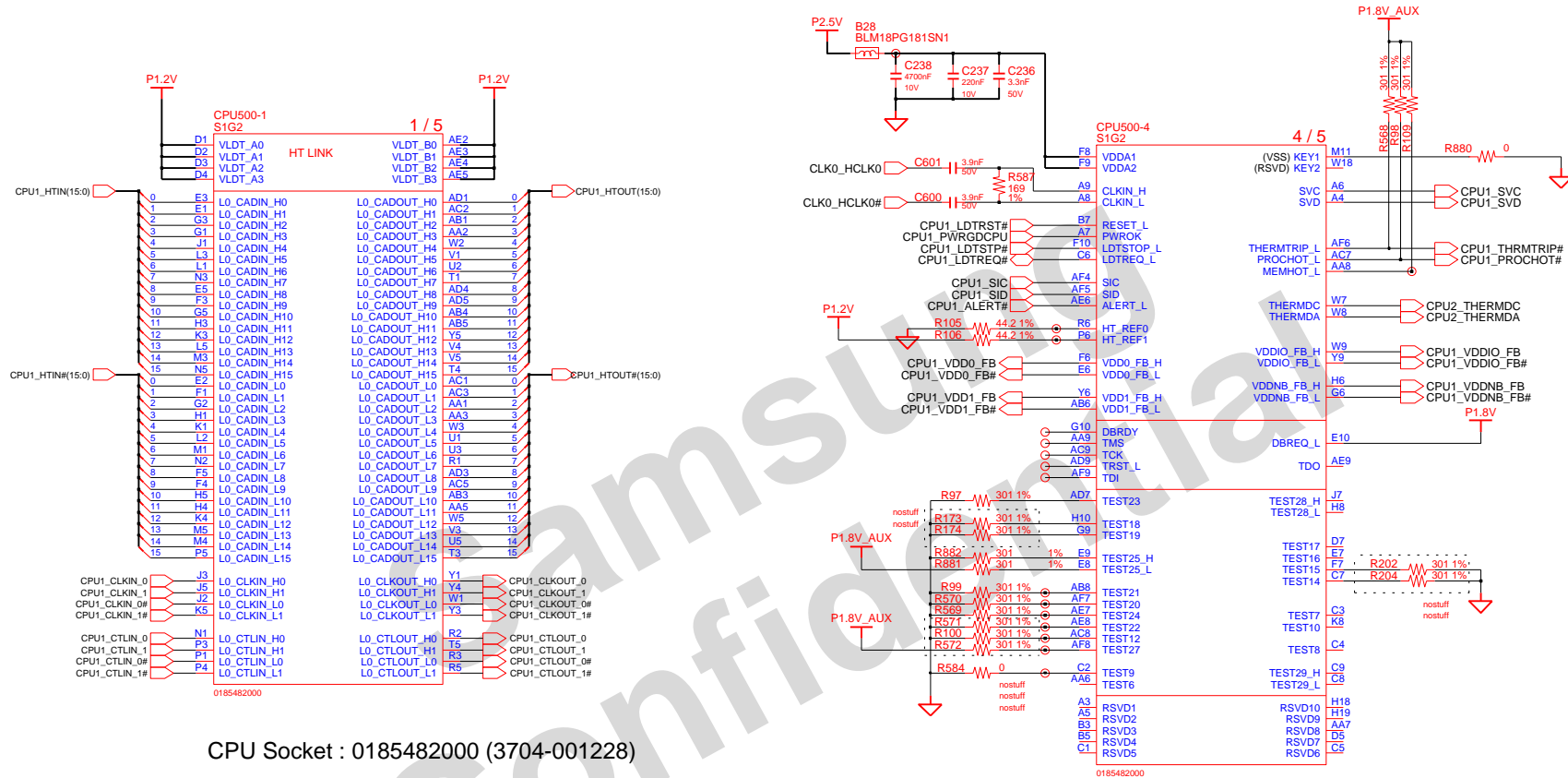


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CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	THERMAL SENSOR&FAN CONTROL	PART NO.	BA41-*****
MODULE CODE		LAST ENT		September 09, 2008 15:17:15 PM	PAGE	11 OF 63

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# S1g2 CPU (1/3)

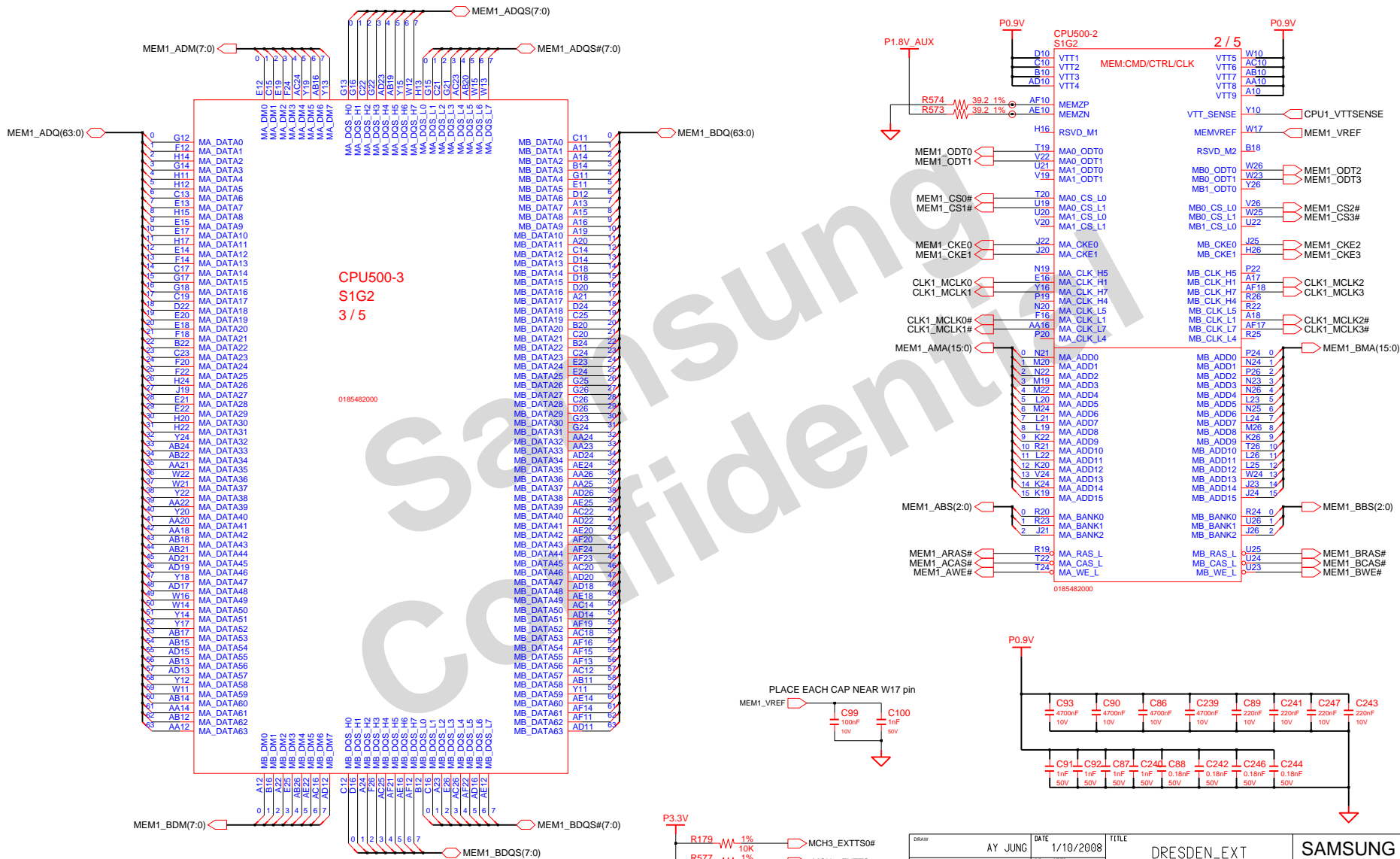


CPU Socket : 0185482000 (3704-001228)

DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	S1G2 CPU 1/3	PART NO.	BA41-*****
MODULE CODE		LAST ENT		September 09, 2008 15:17:15 PM	PAGE	12 OF 63

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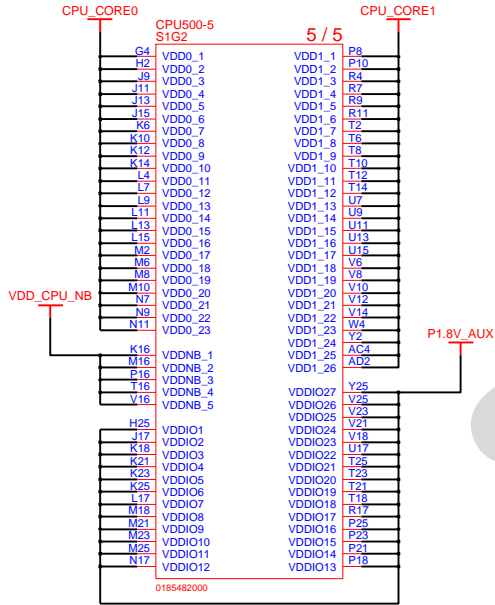
# S1g2 CPU (2/3)



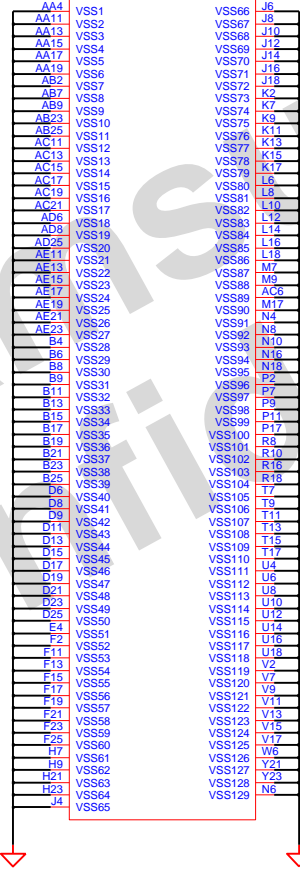
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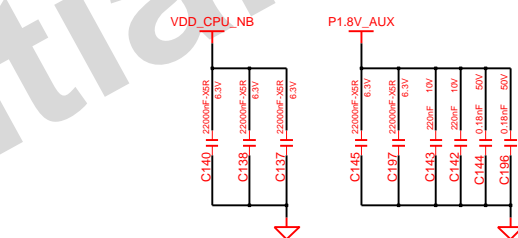
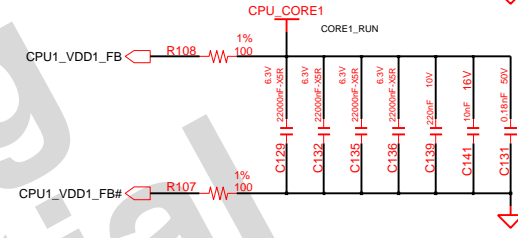
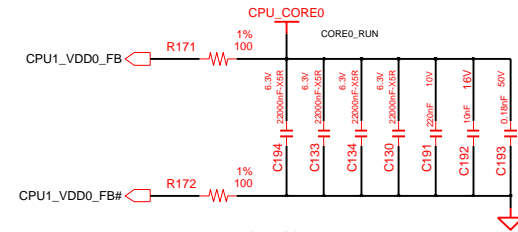
# S1G2 CPU (3/3)



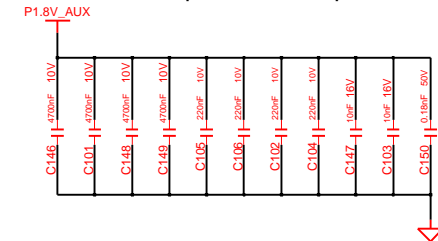
CPU Socket : 0185482000



### Bottom side decoupling



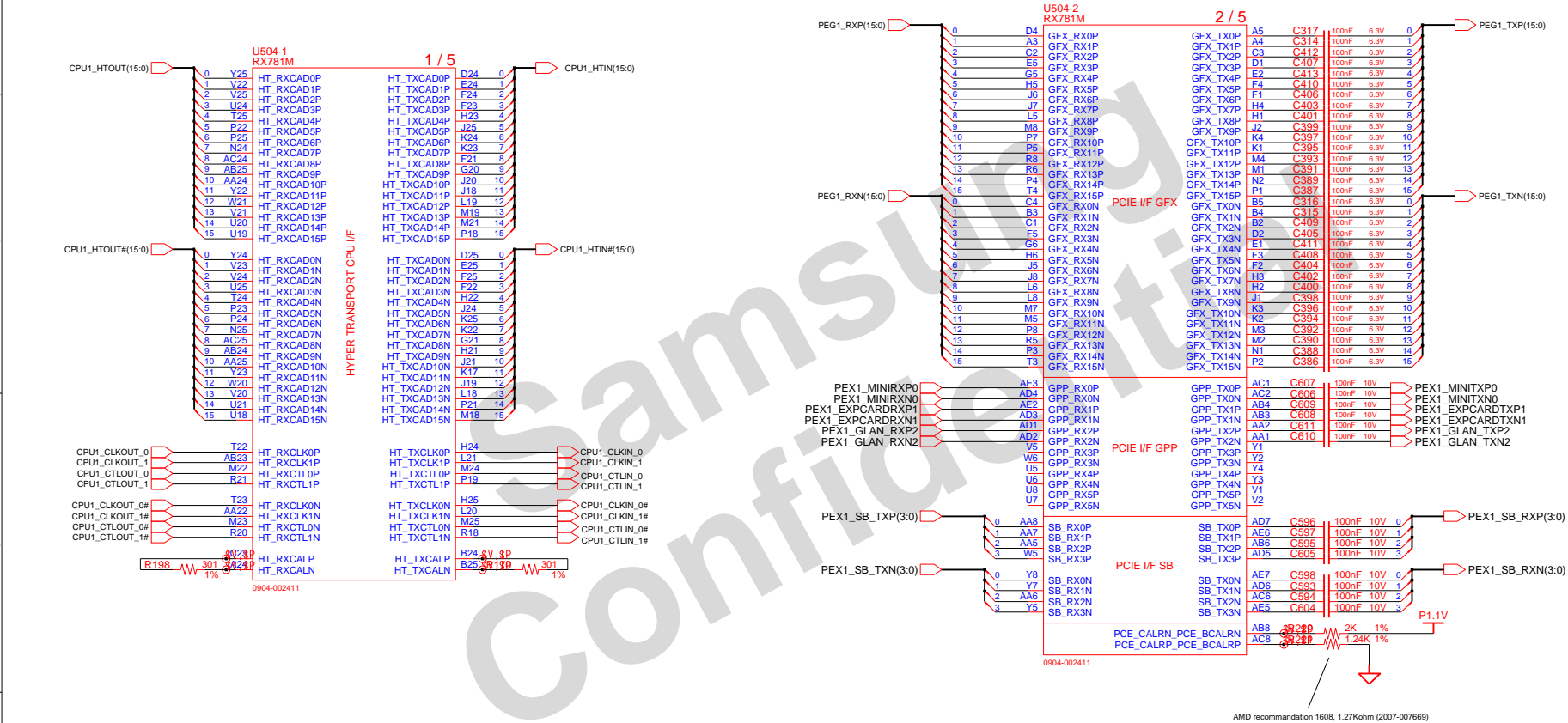
### Decoupling between processor and Memory Place close to processor as possible



DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	S1G2 CPU 3/3		PART NO. BA41-*****
MODULE CODE	LAST ENT		September 09, 2008 15:17:15 PM		PAGE	14 OF 63



# RX781(1/3)

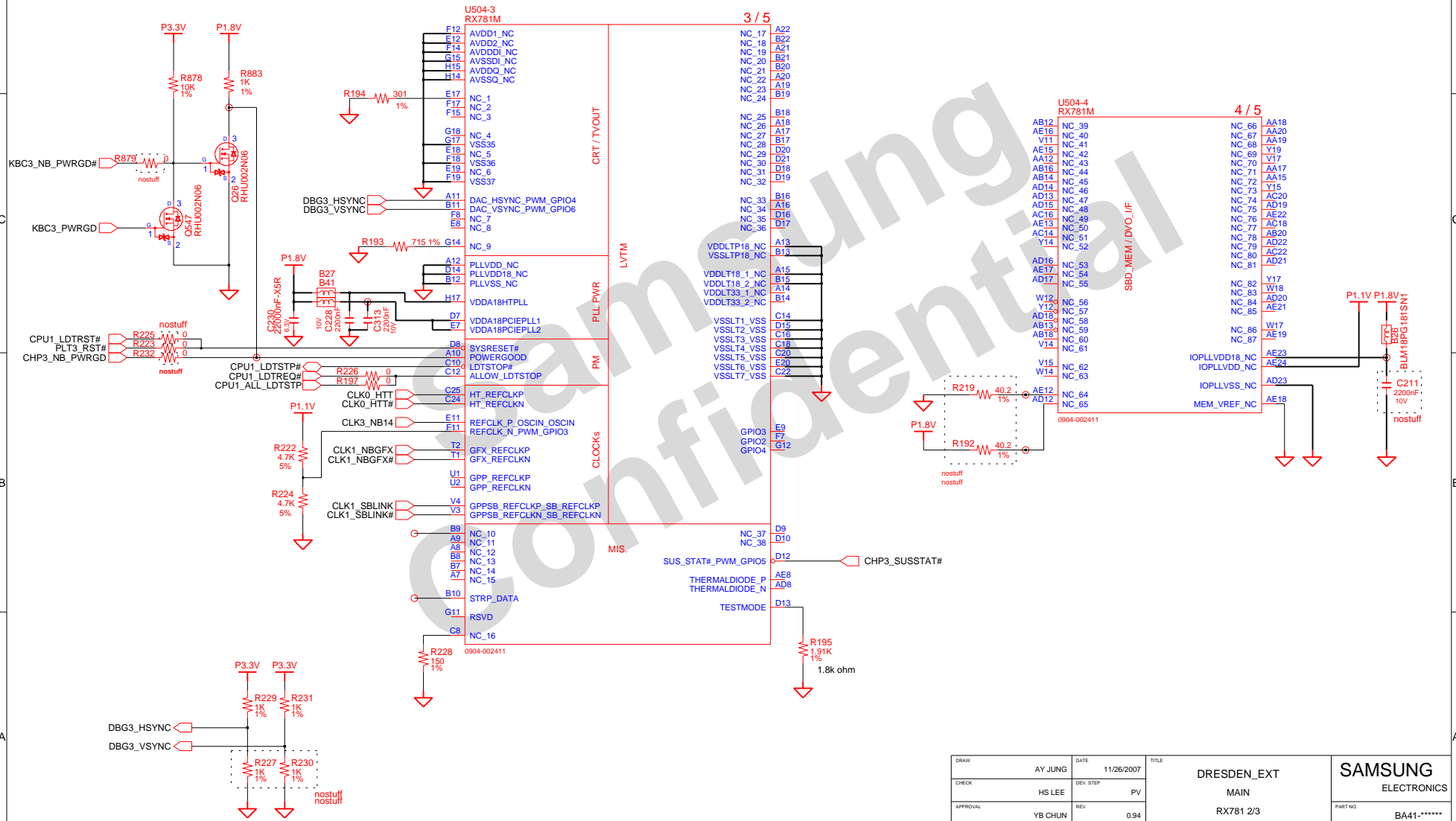


DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV		MAIN	
APPROVAL	YB CHUN	REV	0.94		RX781 1/3	PART NO. BA41-*****
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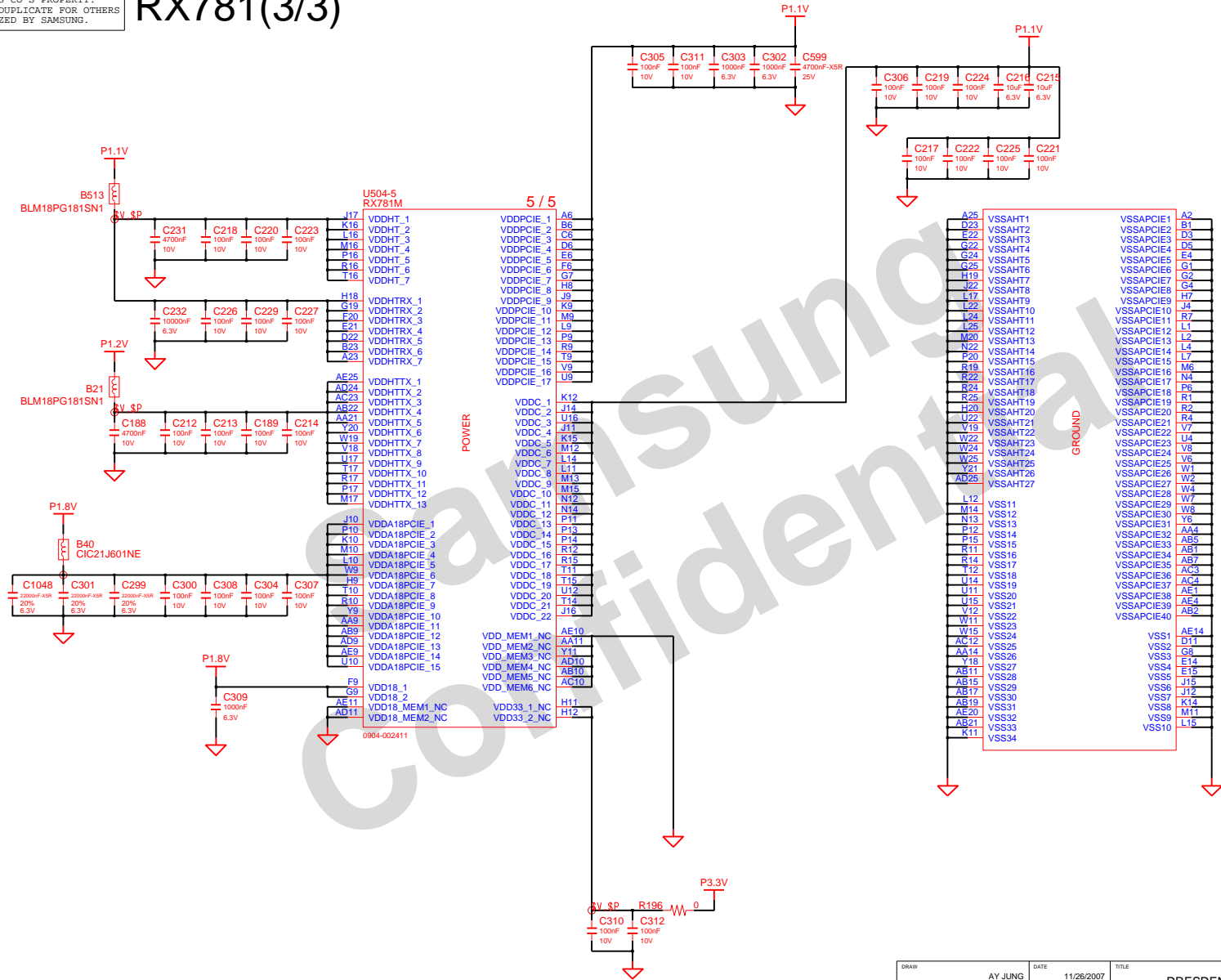
# RX781(2/3)



DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	RX781 2/3	PART NO.	BA41-*****
MODULE CODE		LAST ENT		September 09, 2008 15:17:15 PM	PAGE	16 OF 63

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# RX781(3/3)



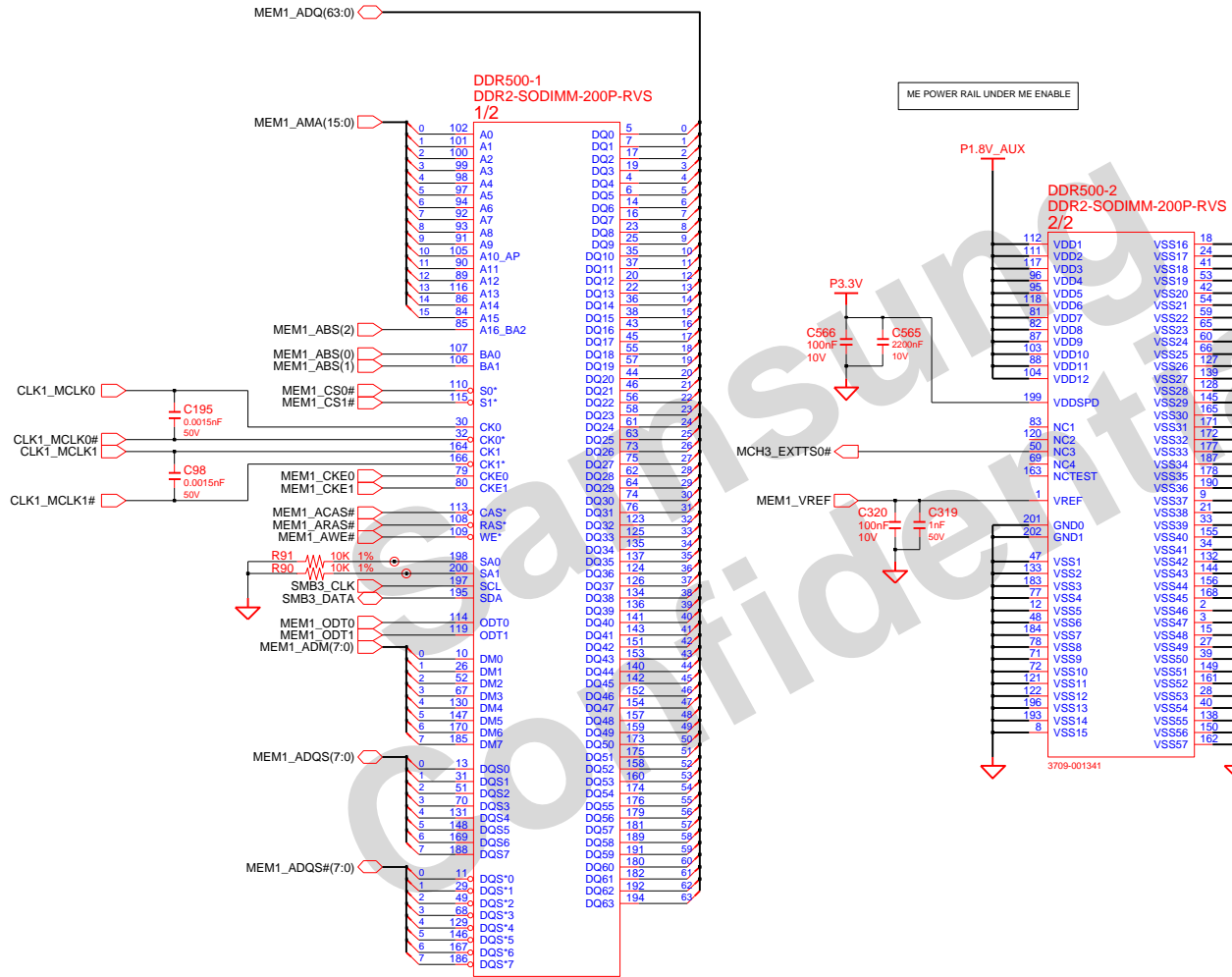
DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94		RX781 3/3	PART NO. BA41-*****
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# DDR SO-DIMM #0

Height : 5.2mm (Reverse)



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

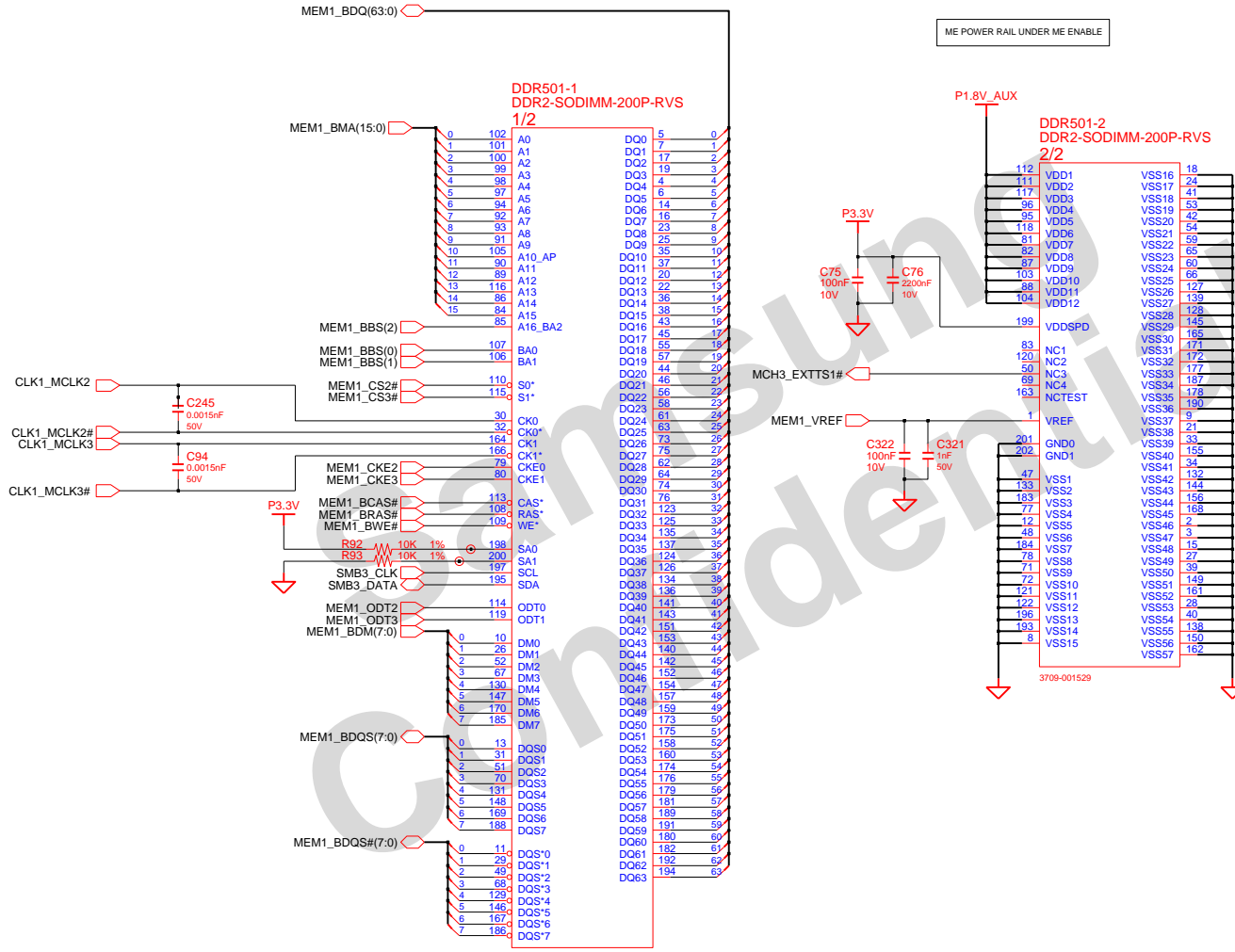
DESIGN	DATE	TITLE	<b>SAMSUNG</b> ELECTRONICS PART NO.
CHECK	DEV. STEP		
APPROVAL	REV		
MODULE CODE	LAST EDIT		
PAGE			OF

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# DDR SO-DIMM #1

Height : 9.2mm (Reverse)

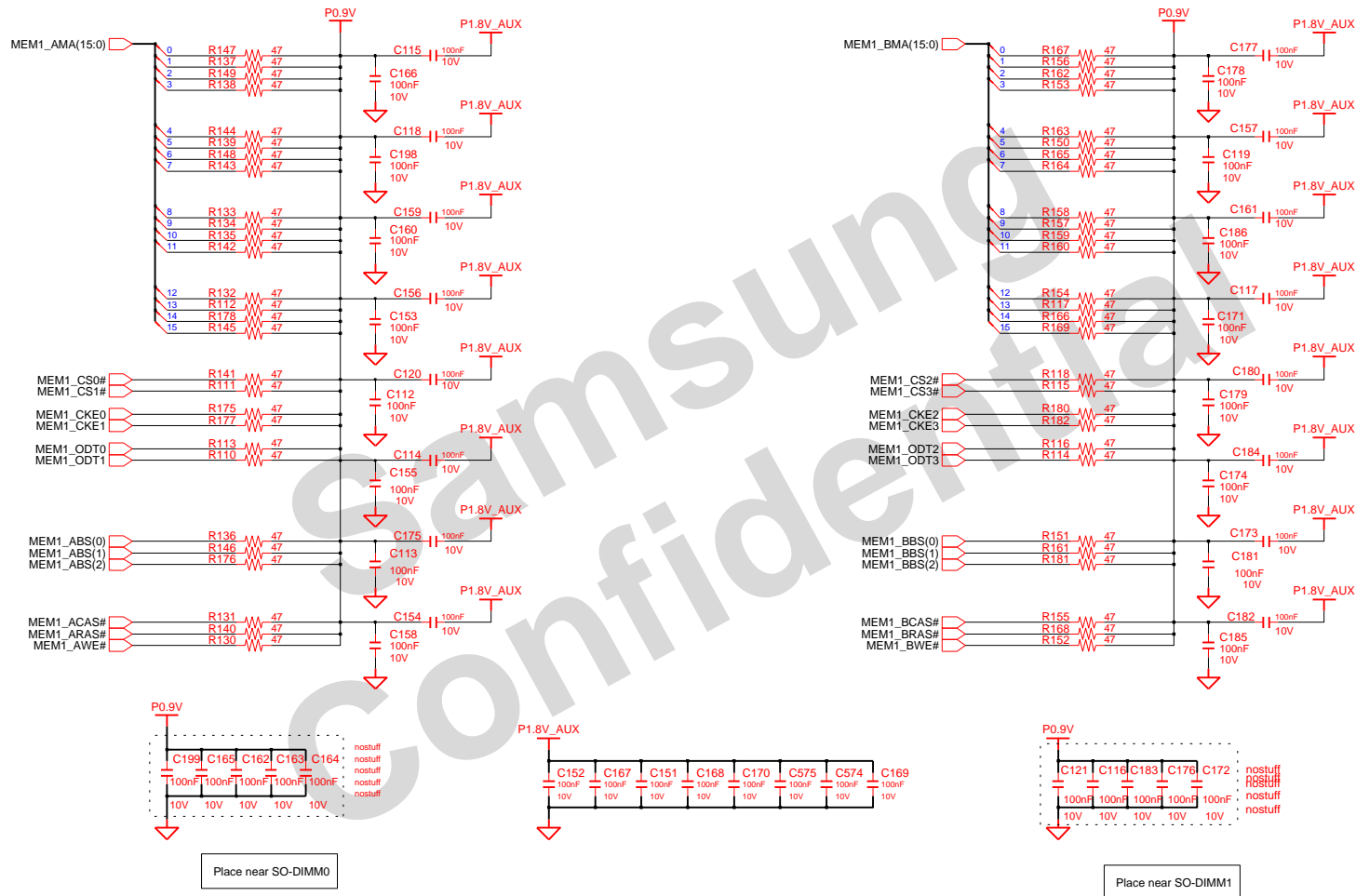


Foxcon : 3709-001529  
 Suyin : 3709-001503

DESIGN	DATE	TITLE	<b>SAMSUNG</b> ELECTRONICS PART NO. PAGE 0F
CHECK	DEV. STEP		
APPROVAL	REV		
MODULE CODE	LAST EDIT		

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# SODIMM TERMINATION

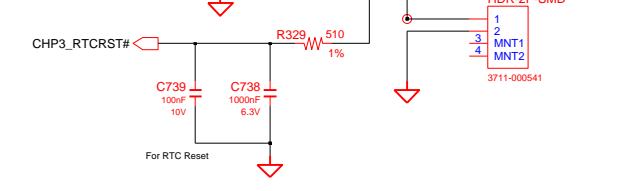
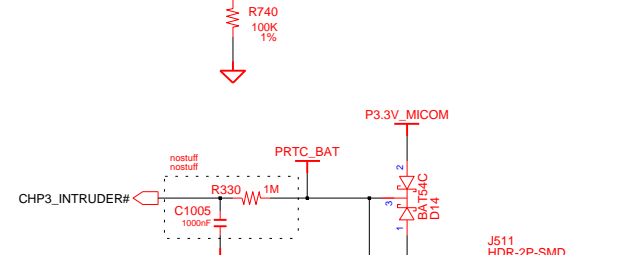
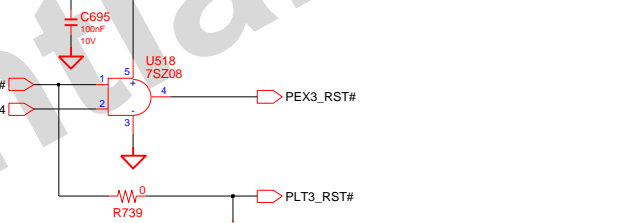
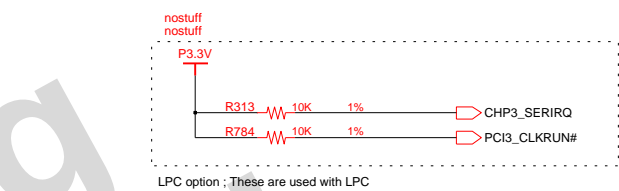
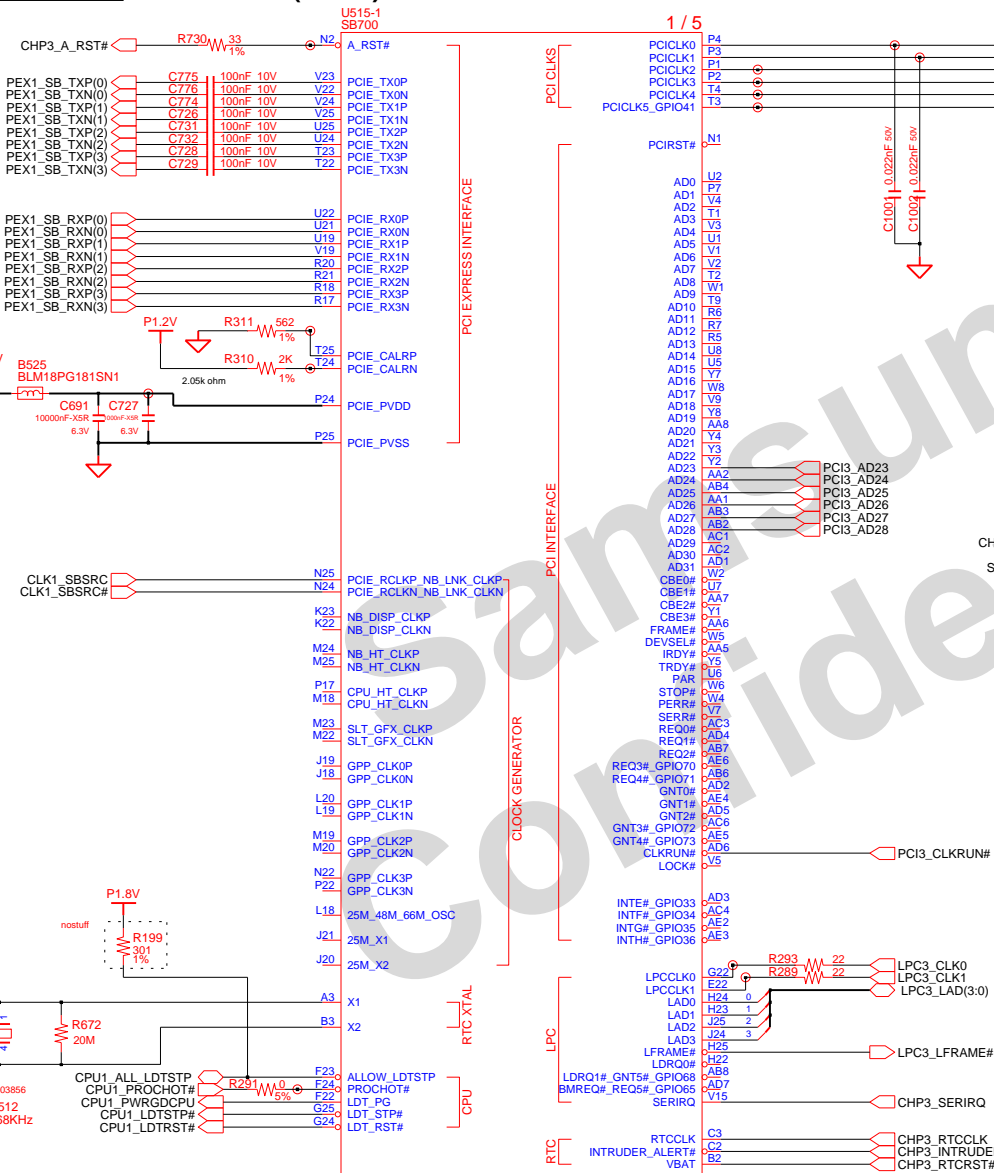


DRAW	AY JUNG	DATE	5/28/2007	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	SODIMM TERMINATION		
APPROVAL	YB CHUN	REV	0.94	September 09, 2008 15:17:15 PM		PART NO. BA41-*****
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# SB700(1/4)

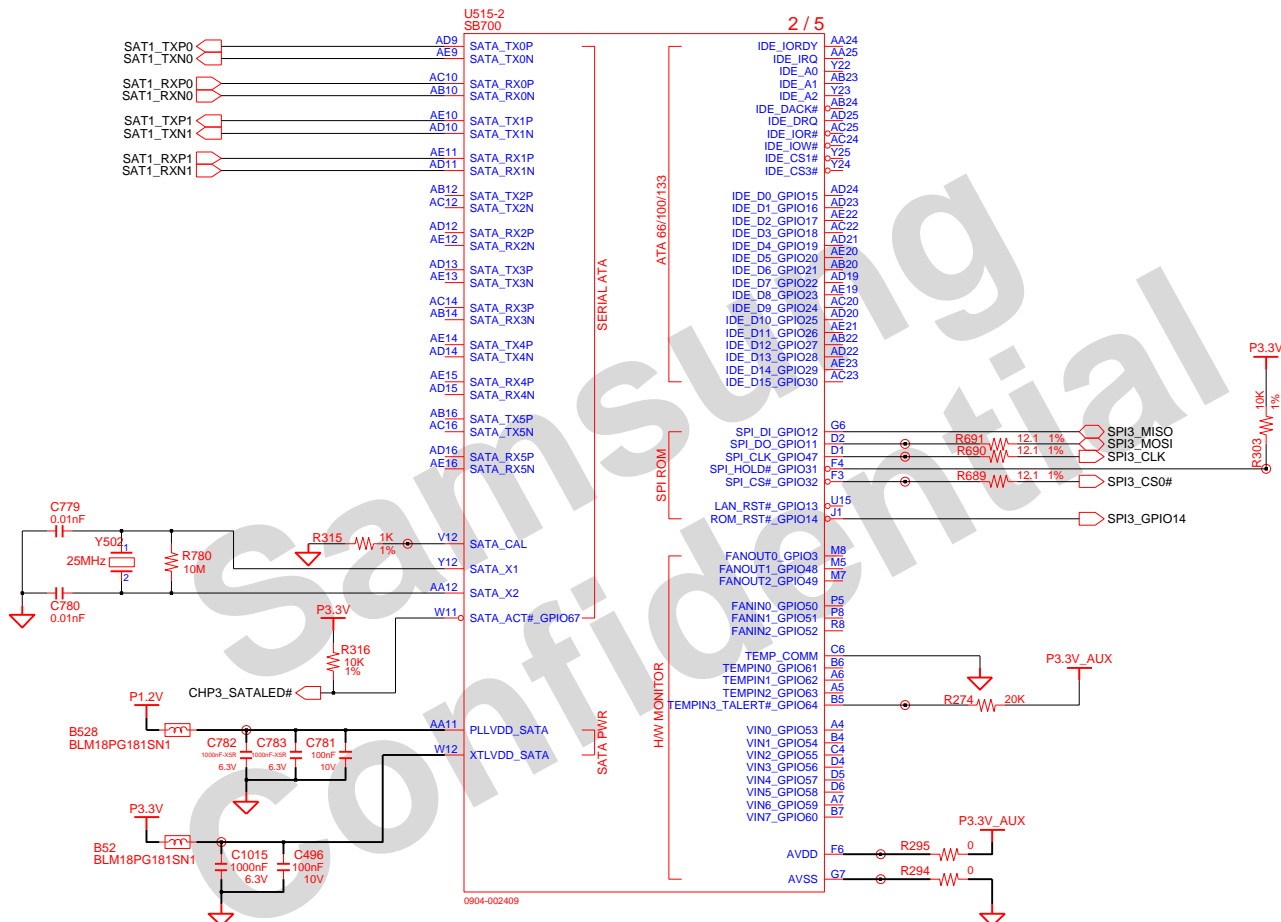


DESIGN	AY JUNG	DATE	3/19/2008	TITLE	DRESDEN_EXT MAIN	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV		SB700 1/4	
APPROVAL	YB CHUN	REV	0.94			PART NO. BA41-*****
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# SB700(2/4)



DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT MAIN SB700 2/4	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-*****
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94			
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE 22 OF 63		





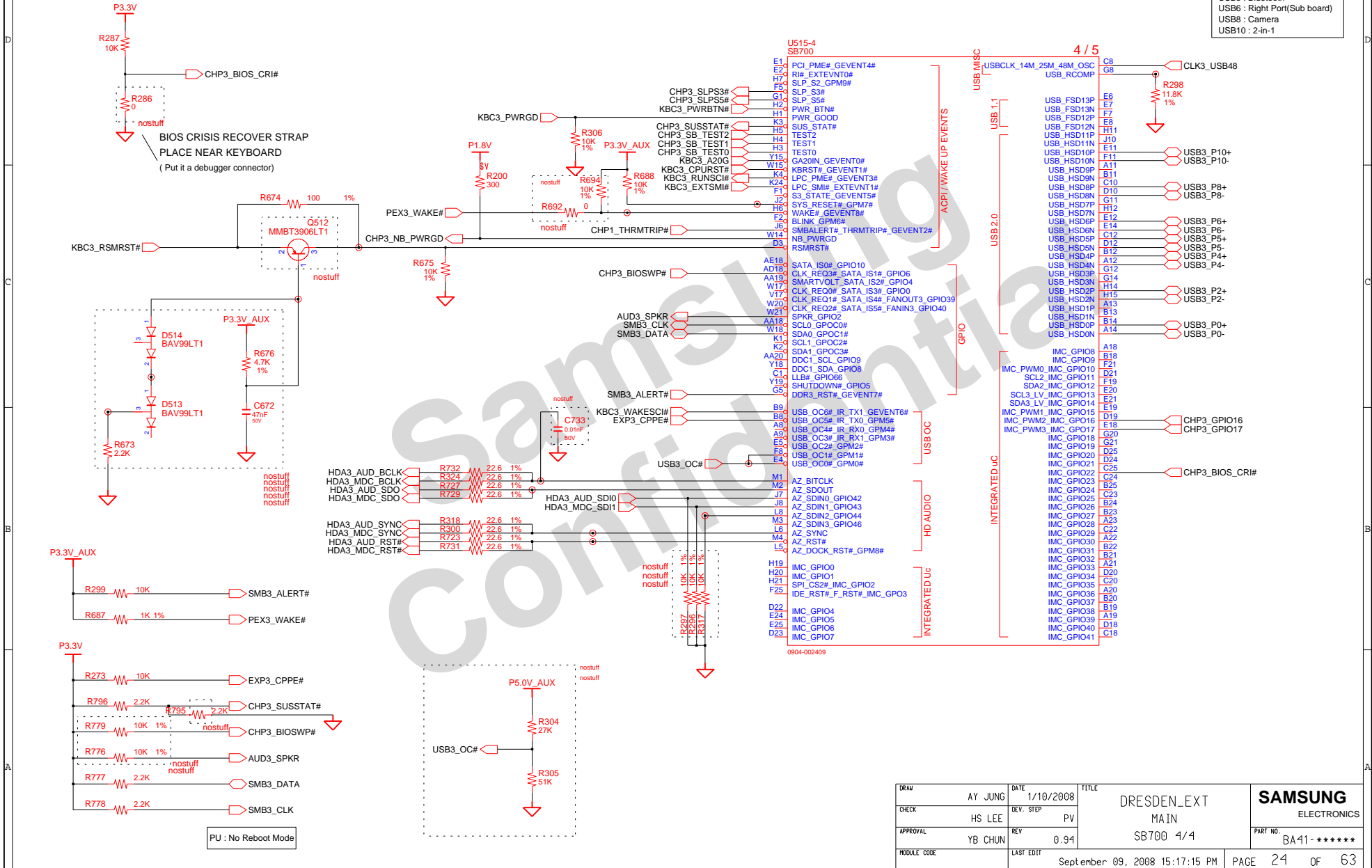
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# SB700(4/4)

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



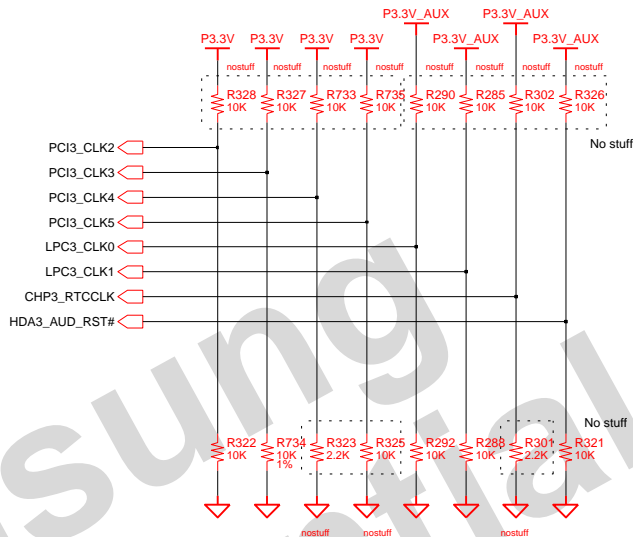
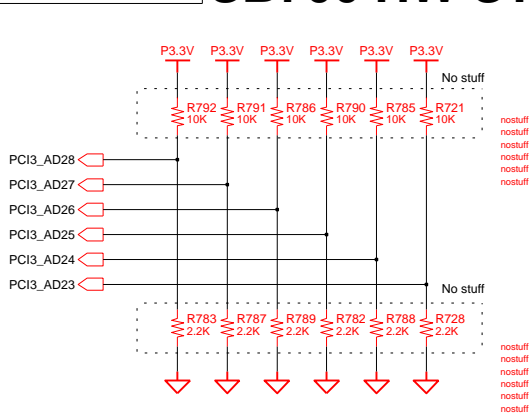
PU : No Reboot Mode

DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT MAIN	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	REV	0.94	
APPROVAL	YB CHUN	REV	0.94	SB700 4/4	PART NO.	BA41-*****
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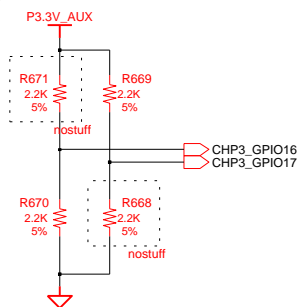
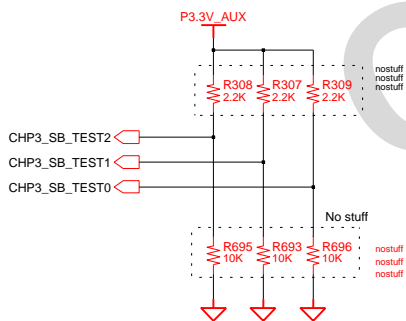
# SB700 HW STRAP



## 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



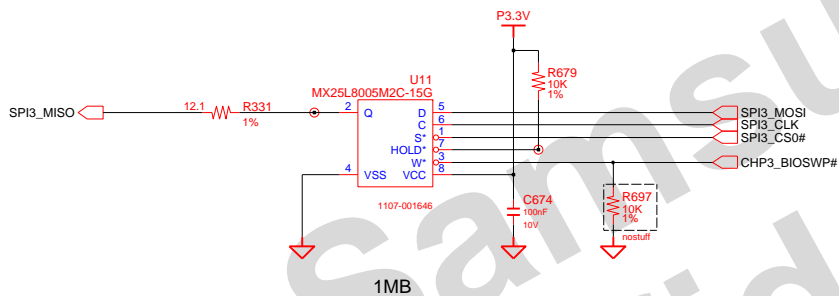
GPIO17	GPIO16
ROM TYPE	
H, H = PCI ROM	
H, L = SPI ROM	
L, H = LPC ROM	
L, L = FWH ROM	

DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94		SB700 HW STRAP	PART NO. BA41-*****
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**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 COPROCESSER 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	AY JUNG	DATE	8/12/2006	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV.STEP	PV	SPI_BIOS_ROM	PART NO.	
APPROVAL	YB CHUN	REV	0.94	BIOS_ROM (2M)	BA41.*****	
MODULE CODE		LAST EDIT		September 09, 2008 15:17:15 PM	PAGE	26 OF 63

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**reserved for future use**

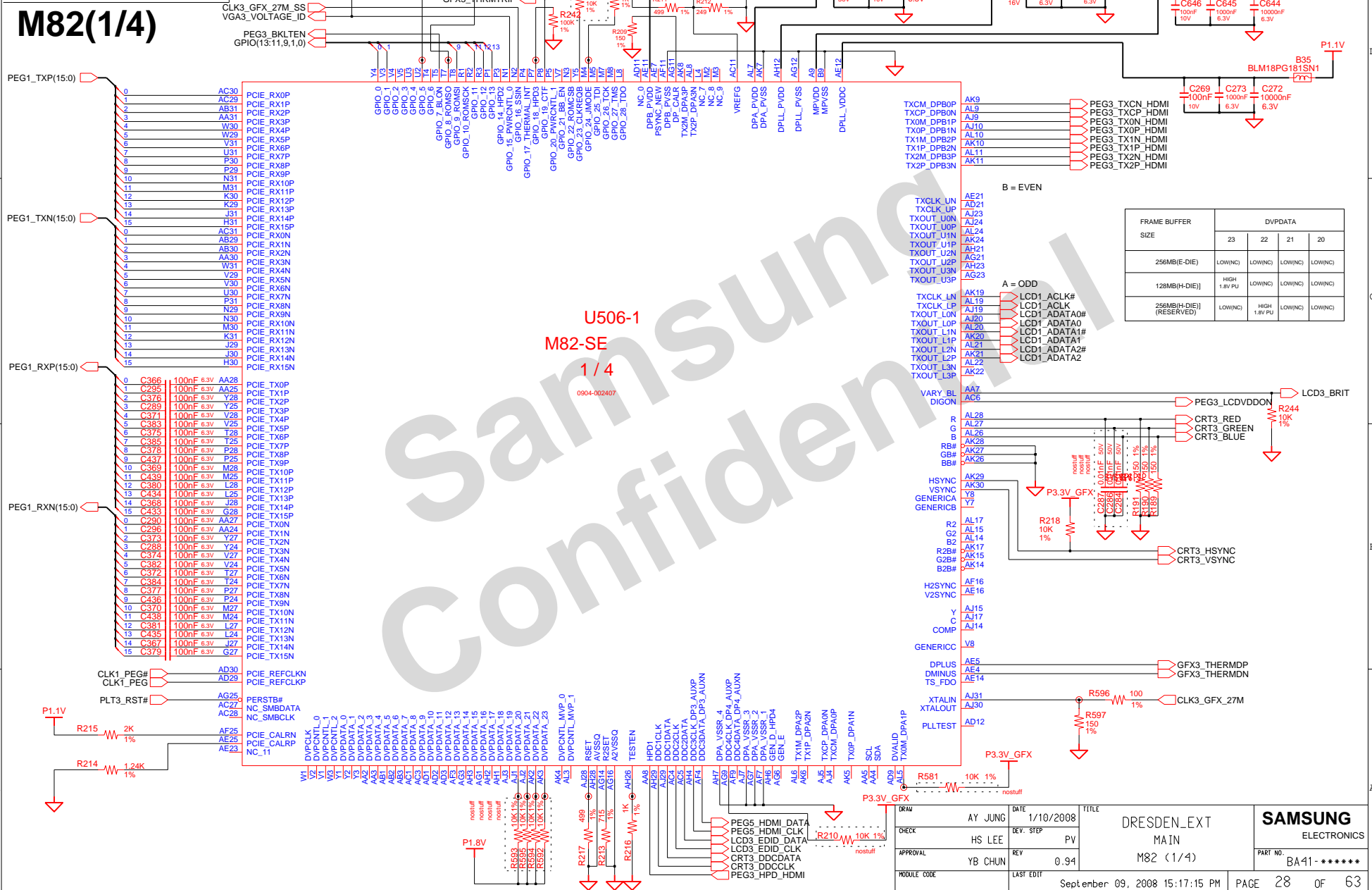
Samsung  
 Confidential

DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT MAIN RESERVED	<b>SAMSUNG</b> ELECTRONICS	
CHECK	HS LEE	DEV. STEP	PV	PART NO.			BA41-*****
APPROVAL	YB CHUN	REV	0.94				
MODULE CODE		LAST EDIT	September 09, 2008 15:17:15 PM		PAGE	27 OF 63	

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M82(1/4)



FRAME BUFFER SIZE	DVPDATA			
	23	22	21	20
256MB(E-DIE)	LOW(NC)	LOW(NC)	LOW(NC)	LOW(NC)
128MB(H-DIE)	HIGH 1.8V PU	LOW(NC)	LOW(NC)	LOW(NC)
256MB(H-DIE) (RESERVED)	LOW(NC)	HIGH 1.8V PU	LOW(NC)	LOW(NC)

B = EVEN

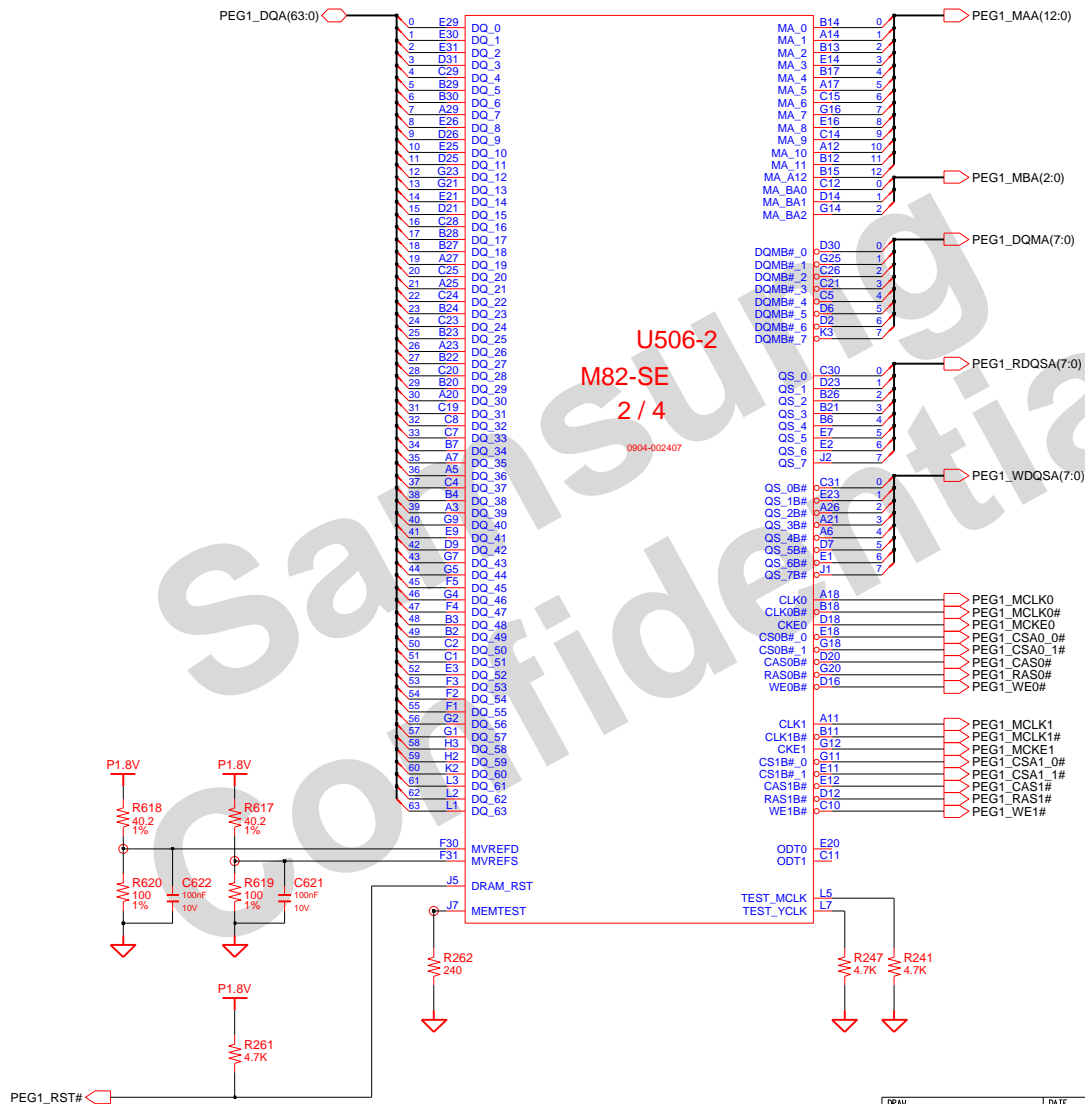
A = ODD

DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT MAIN	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	M82 (1/4)		
APPROVAL	YB CHUN	REV	0.94	September 09, 2008 15:17:15 PM		PART NO. BA41-*****
MODULE CODE	LAST EDIT		PAGE 28 OF 63			

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**M82 (2/4)**



DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS	
CHECK	HS LEE	DEV. STEP	PV		MAIN		
APPROVAL	YB CHUN	REV	0.94		M82 (2/4)	PART NO.	
MODULE CODE		LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	29	OF	63

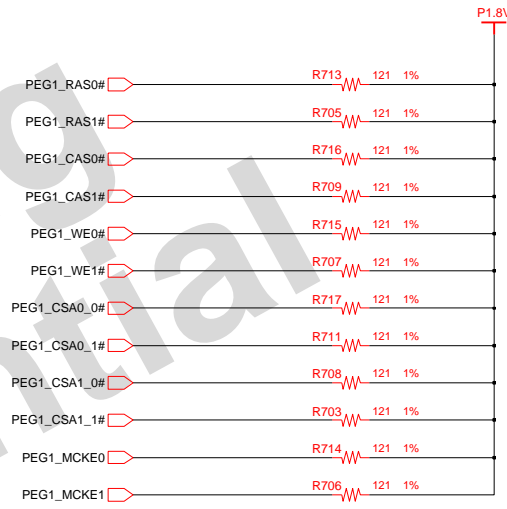
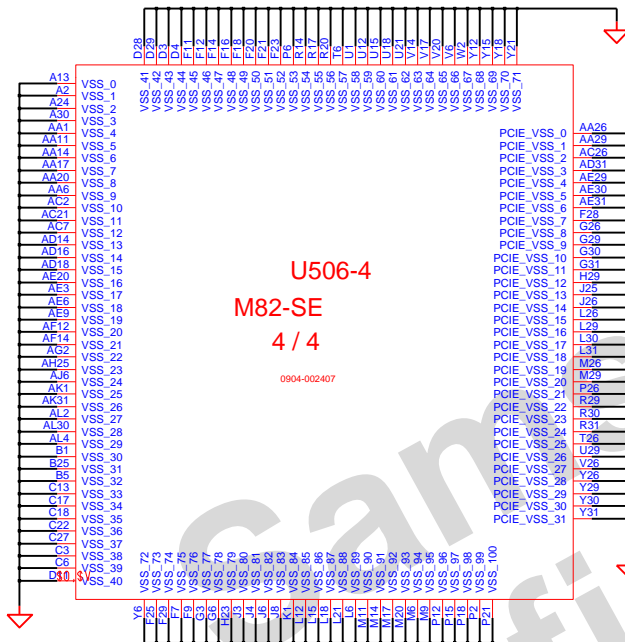




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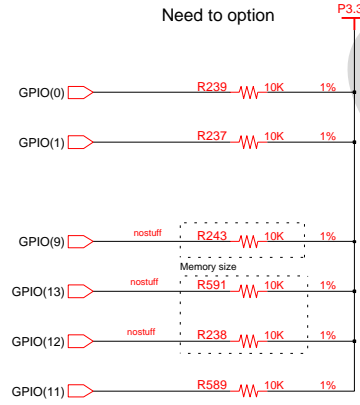
# M82 (4/4)



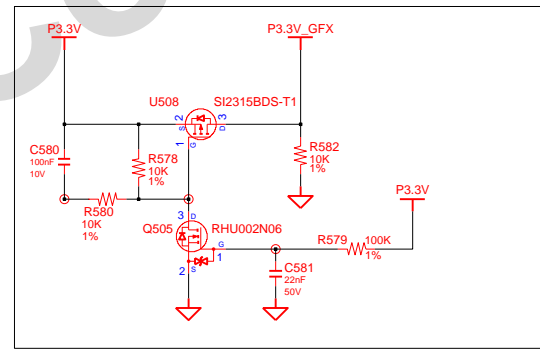
(DEFAULT : pull-down)

STRAP	PIN	DESCRIPTION
TX_PWRS_ENB	GPIO[0]	Transmitter Power Saving Enable 0: 50% Tx output swing 1: full Tx output swing
TX_DEEMPH_EN	GPIO[1]	Transmitter De-emphasis Enable 0: Tx De-emphasis disabled 1: Tx de-emphasis enabled
DEBUG_ACCESS	GPIO[4]	Strap to set the debug muxes to bring out DEBUG signals even if registers are inaccessible.
ROMIDCFG[3:0]	GPIO[9,13:11]	When no ROM is attached, GPIO[9] is set to 0. GPIO[13:11] is used to select the frame buffer aperture size. GPIO[13:11] = 000: 128M aperture size GPIO[13:11] = 001: 256M aperture size

Need to option



## P3.3V\_GFX CONTROL CIRCUIT

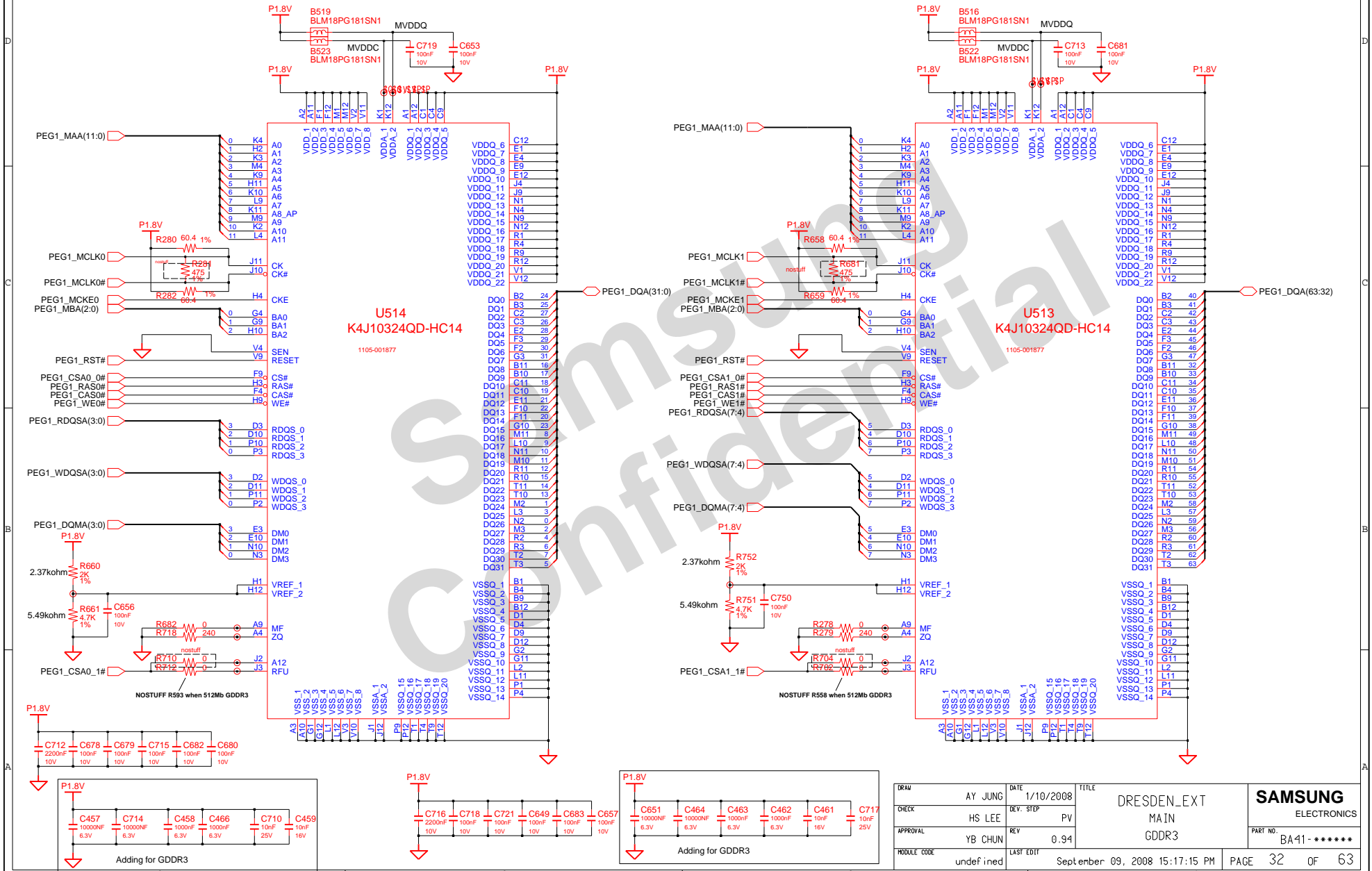


DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT MAIN M82 (4/4)	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94			PART NO. BA41 - *****
MODULE CODE		LAST EDIT		September 09, 2008 15:17:15 PM	PAGE	31 OF 63

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# GDDR3 1Gbit x 2

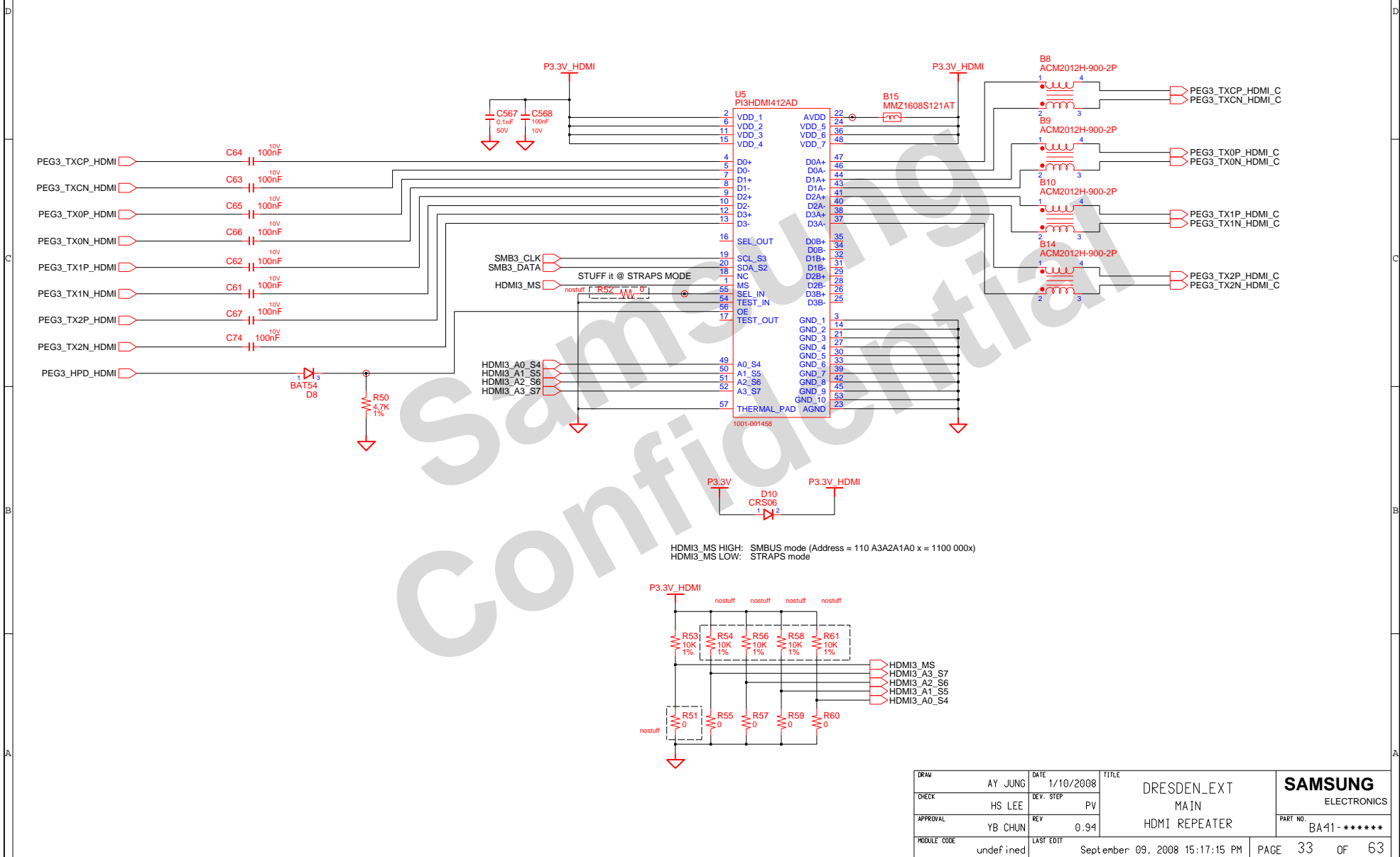


DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-*****
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	GDDR3		
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	32	OF 63

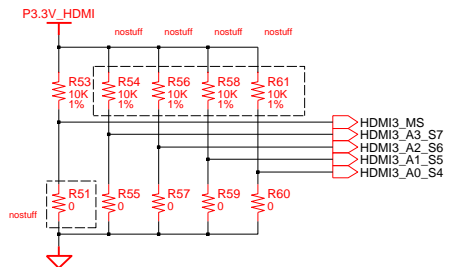
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# HDMI REPEATER



HDMI3\_MS HIGH: SMBUS mode (Address = 110 A3A2A1A0 x = 1100 000x)  
HDMI3\_MS LOW: STRAPS mode



DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT MAIN HDMI REPEATER	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-*****
CHECK	HS LEE	DEV. STEP	PV	REV	0.94	
APPROVAL	YB CHUN	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	33	OF 63

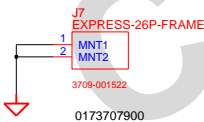
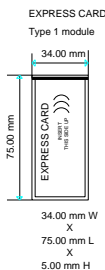
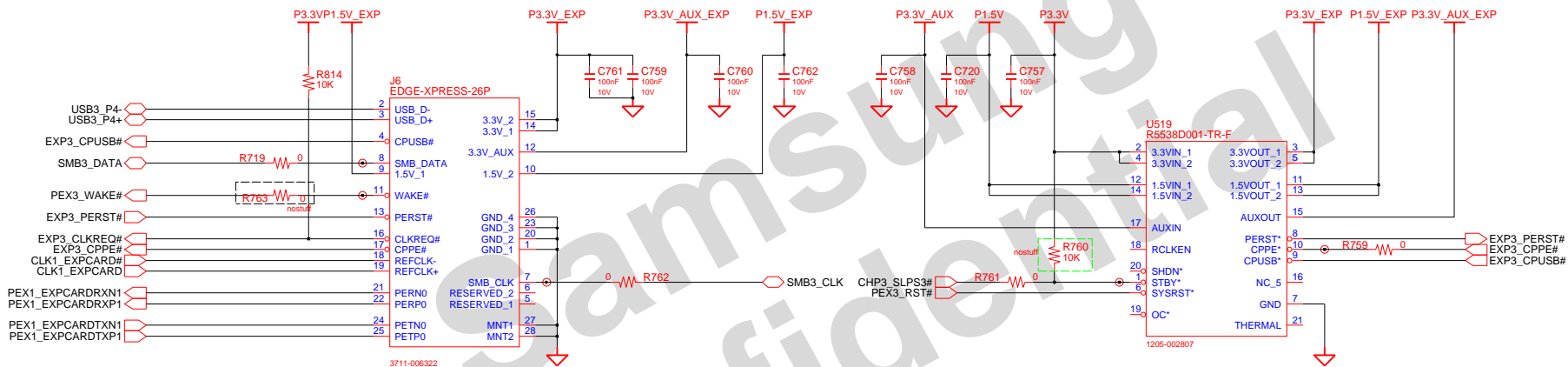




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# EXPRESS CARD

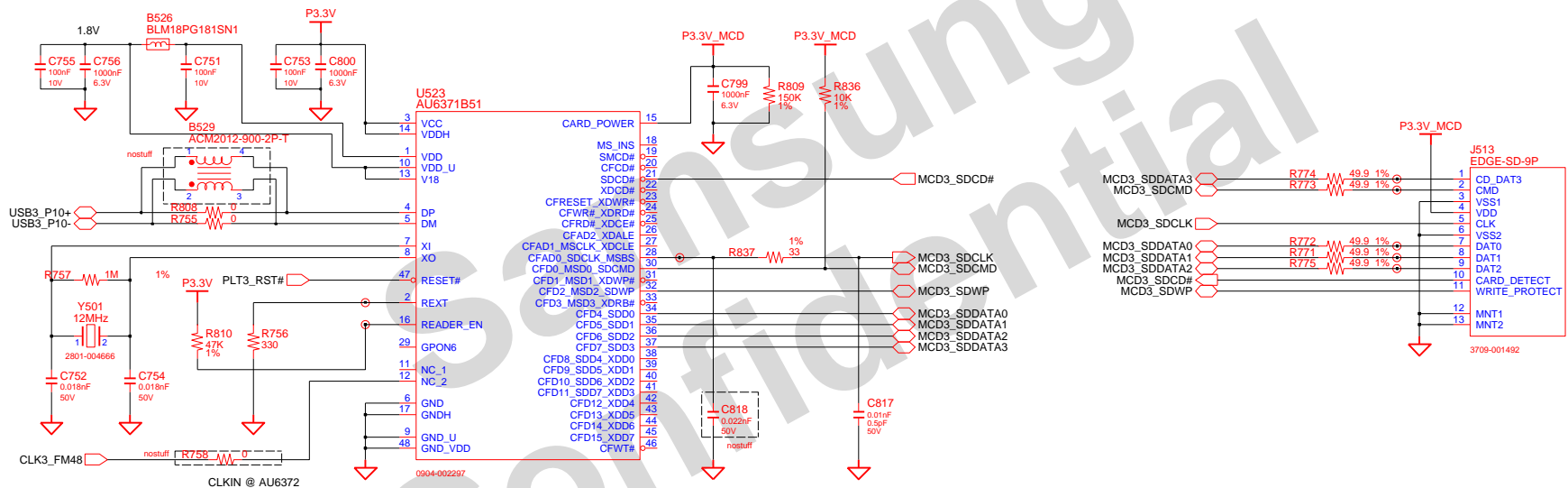


DRAW	AY JUNG	DATE	8/17/2007	TITLE	DRESDEN_EXT EXPRESS_CARD	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV		EXPRESS_CARD (34mm)	
APPROVAL	YB CHUN	REV	0.94			PART NO. BA41.*****
MODULE CODE		LAST EDIT				

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# MEMORY CARD (2 IN 1)

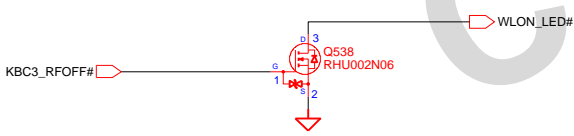
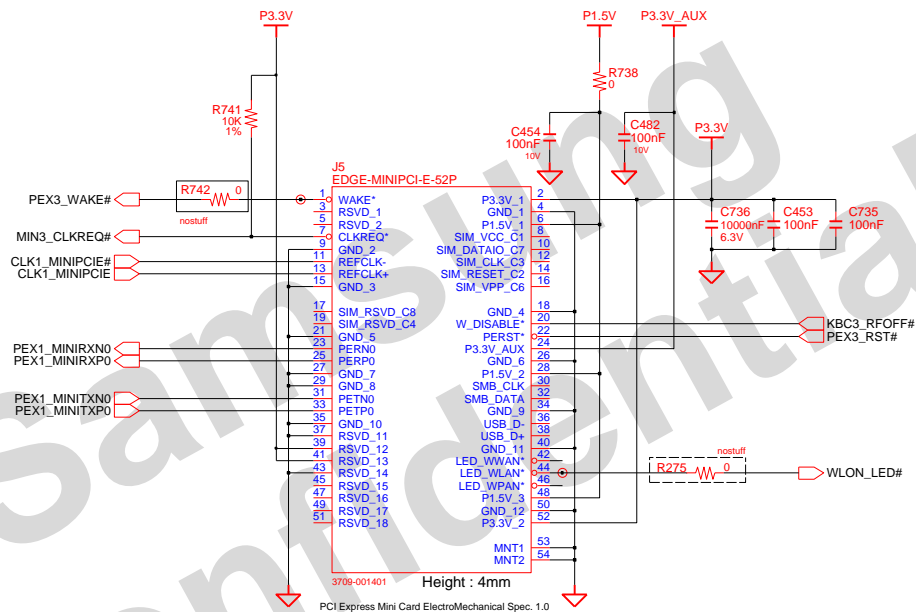


DRAW	AY JUNG	DATE	8/17/2007	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MEMORY CARD	PART NO.	
APPROVAL	YB CHUN	REV	0.94	MMC (2-IN-1)		
MODULE CODE		LAST EDIT			September 09, 2008 15:17:15 PM	PAGE 41 OF 60

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# Mini PCI-E Card (WLAN)



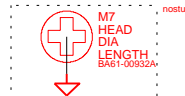
WLAN MINICARD NUT  
Height : 4mm



For Full size minicard

(Top)

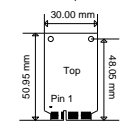
WLAN MINICARD NUT  
Height : 4mm



For half size minicard

(Top)

Mini PCI Express Card



Odd Pins : Top side  
Even Pins : Bottom Side

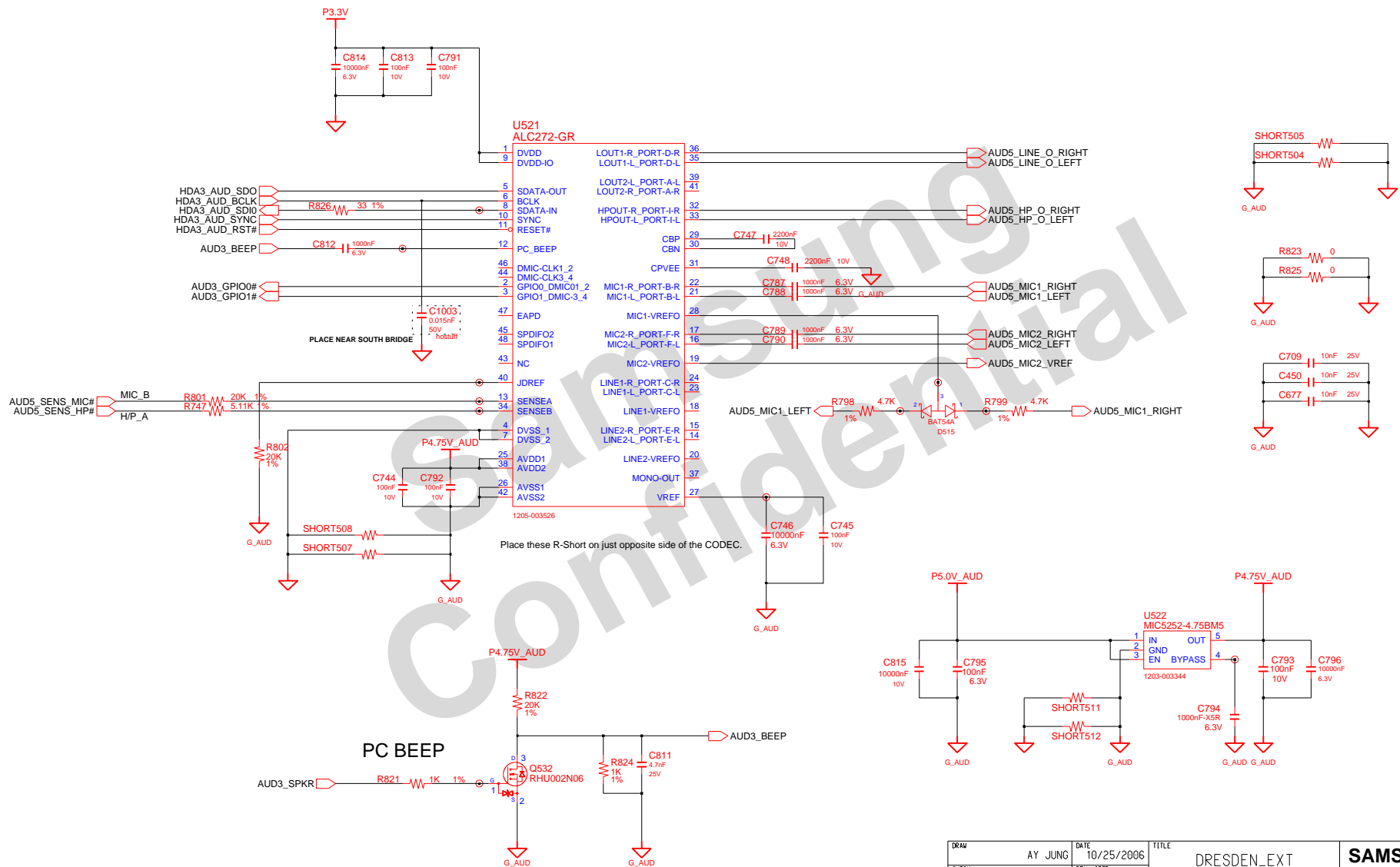
DRAW	AY JUNG	DATE	8/12/2006	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	PCIE_MINICARD	PART NO.	
APPROVAL	YB CHUN	REV	0.94	WLAN	BA41-*****	
MODULE CODE	undefined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	38	OF 63



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# HDA CODEC ALC272

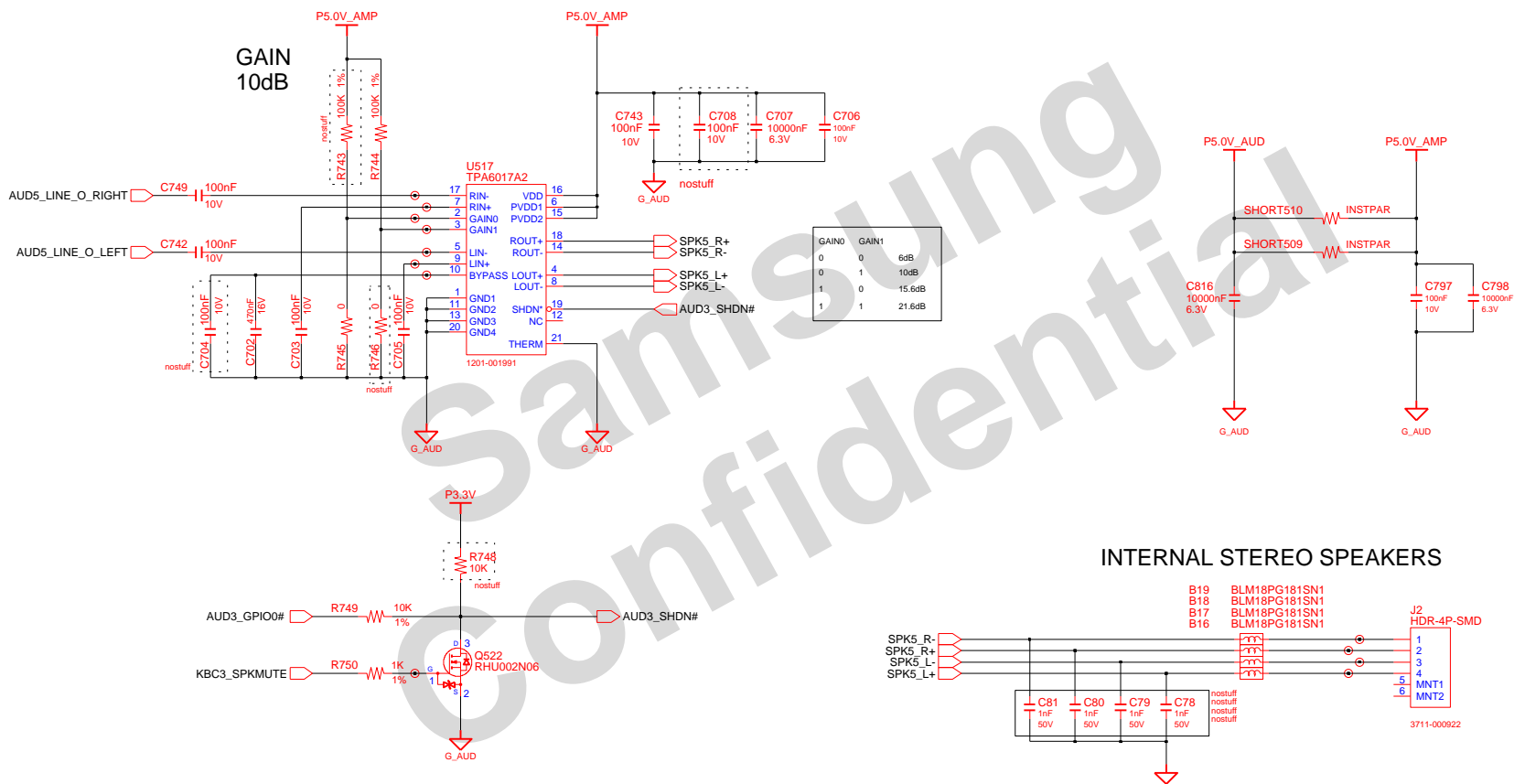


DRAW	AY JUNG	DATE	10/25/2006	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	HDA CODEC		PART NO. BA41-*****
MODULE CODE		LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	39	OF 63

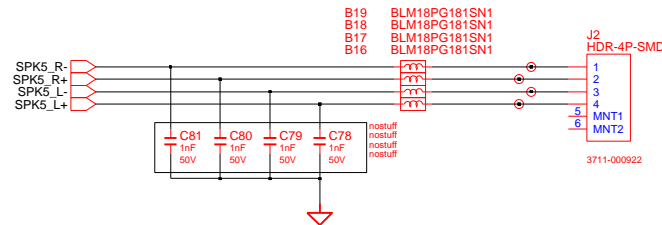
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# AUDIO AMP & INT. SPEAKER



## INTERNAL STEREO SPEAKERS

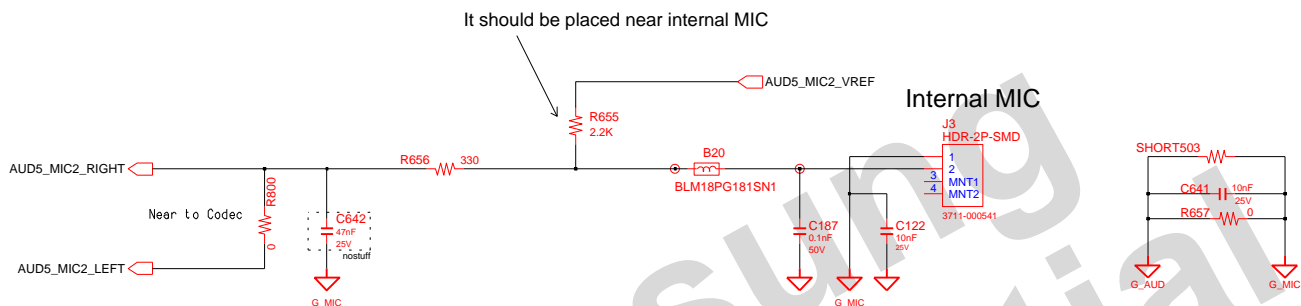


DRAW	AY JUNG	DATE	10/25/2006	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	AUDIO AMP & INT. SPEAKER		PART NO. BA41-*****
MODULE CODE		LAST EDIT		September 09, 2008 15:17:15 PM	PAGE	40 OF 63

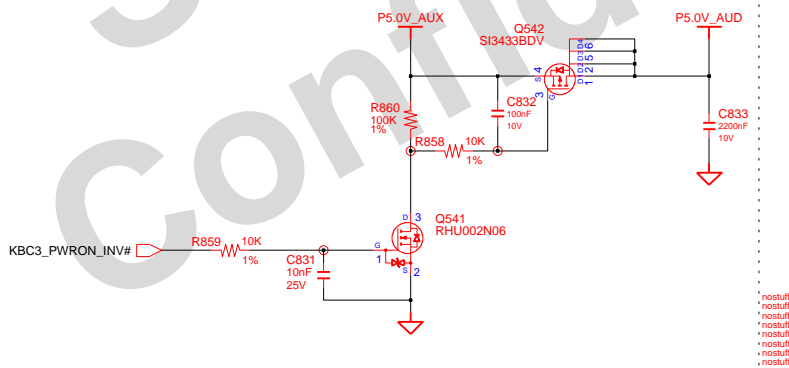
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# AUDIO POWER & INT. MIC



## Audio Power (nostuff)



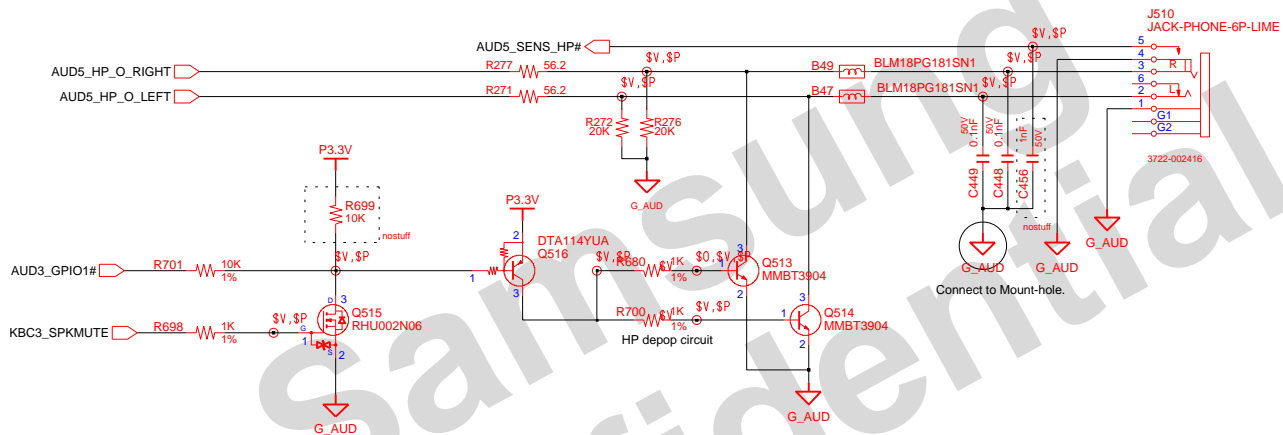
DRAW	AY JUNG	DATE	10/25/2006	TITLE	DRESDEN_EXT MAIN	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	AUDIO POWER & INT. MIC		
APPROVAL	YB CHUN	REV	0.94	PART NO. BA41-*****		PAGE 41 OF 63
MODULE CODE	LAST EDIT		September 09, 2008 15:17:15 PM			

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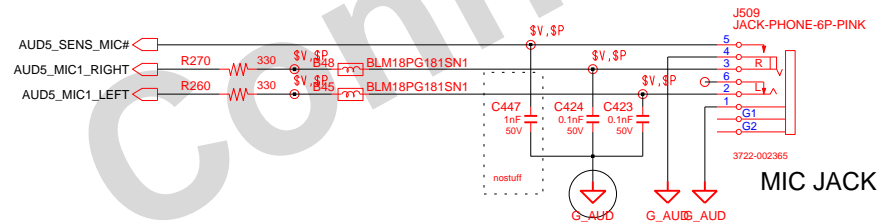
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# HEADPHONE & EXT. MIC

## HEADPHONE



## MIC JACK



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

DRAW	AY JUNG	DATE	10/25/2006	TITLE	DRESDEN_EXT MAIN	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-*****
CHECK	HS LEE	DEV. STEP	PV	HEADPHONE&EXT.MIC		
APPROVAL	YB CHUN	REV	0.94	September 09, 2008 15:17:15 PM		PAGE 42 OF 63
MODULE CODE		LAST EDIT				

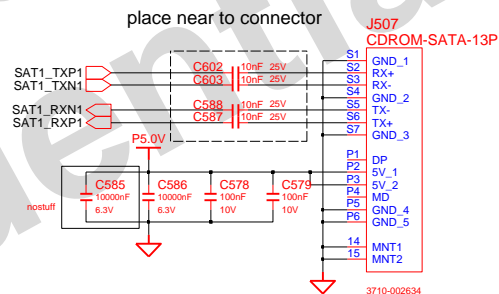
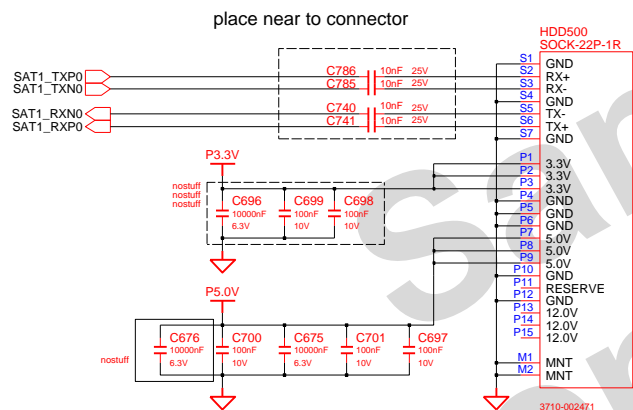
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# SATA IF CONNECTOR

## Main to HDD

## Main to ODD



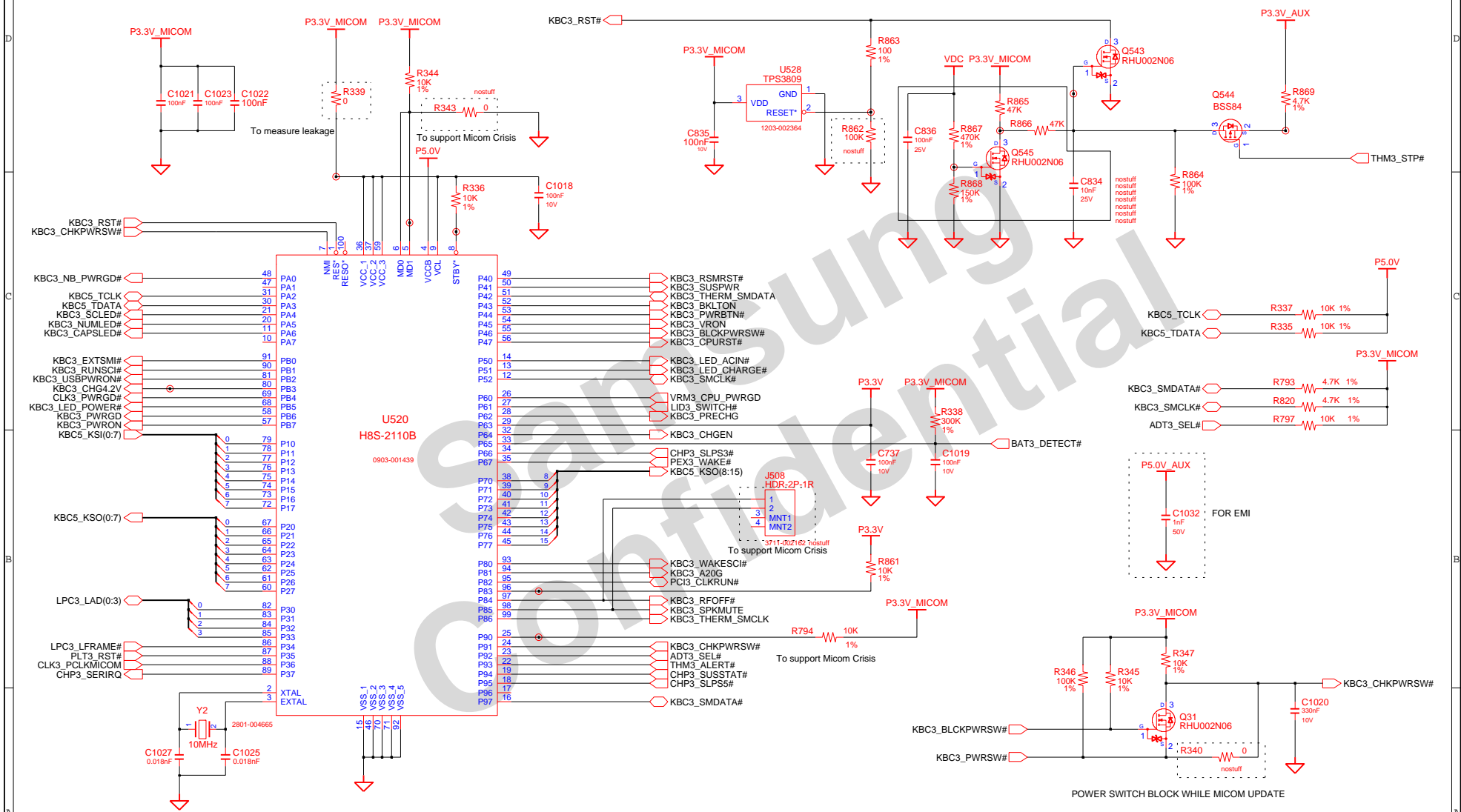
DRAW	AY JUNG	DATE	8/12/2006	TITLE	DRESDEN_EXT MAIN SATA IF CONN	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-*****
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94			
MODULE CODE		LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	43 OF 63	

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# MICOM

# MICOM RESET



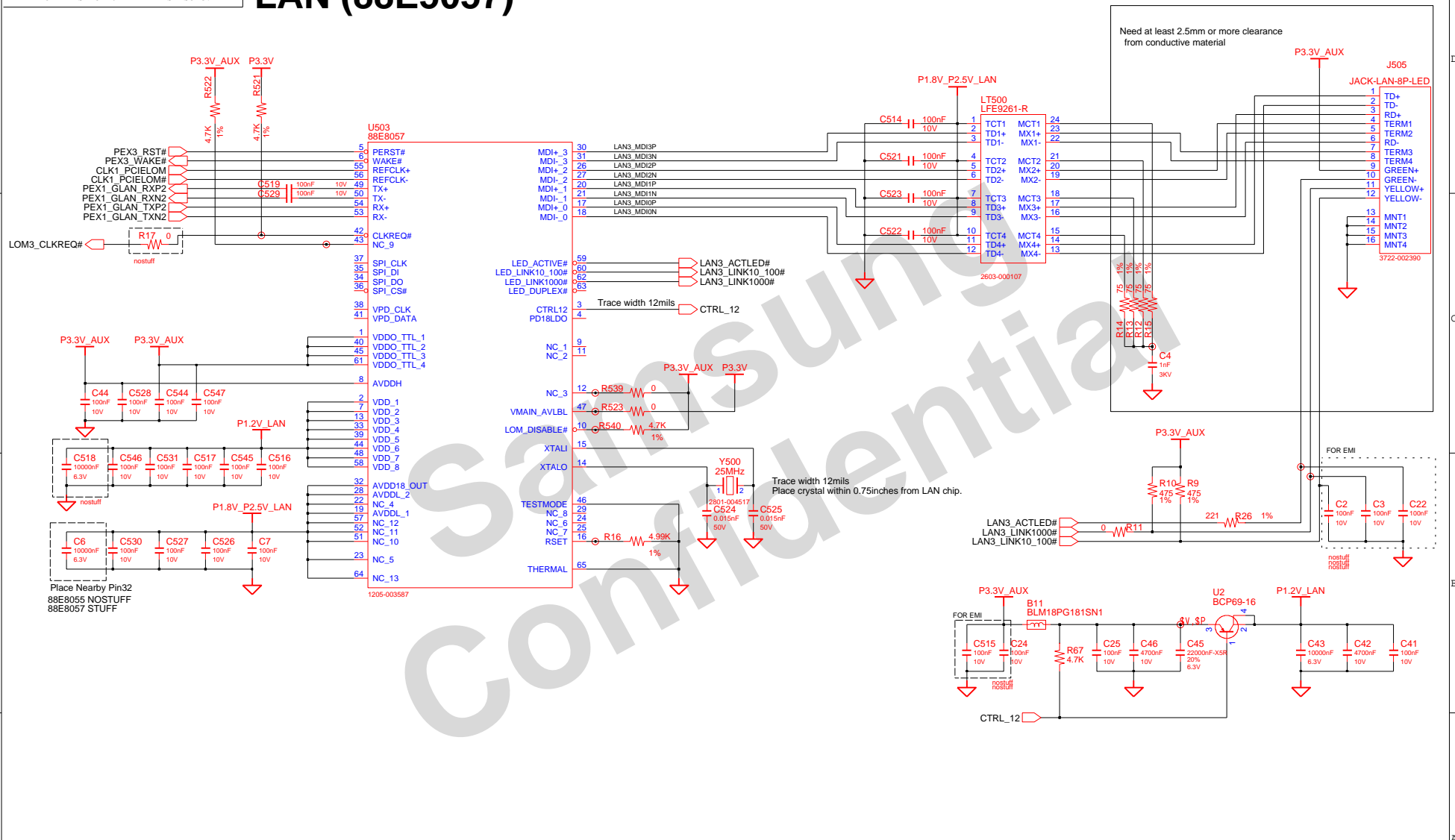
**MICOM Crisis Update**  
 Condition: P90=P91=P92=High(MICOM\_P3V)  
 MD0=MD1=Low(0V)  
 Serial Port: P84 & P85

DRAW	AY JUNG	DATE	10/26/2006	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	MICOM		PART NO. BA41-*****
MODULE CODE		LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	44	OF 63

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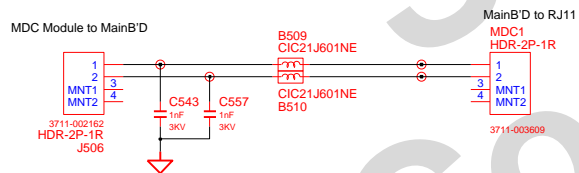
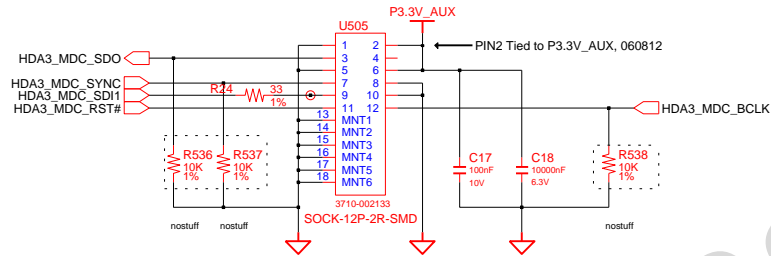
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# LAN (88E5057)



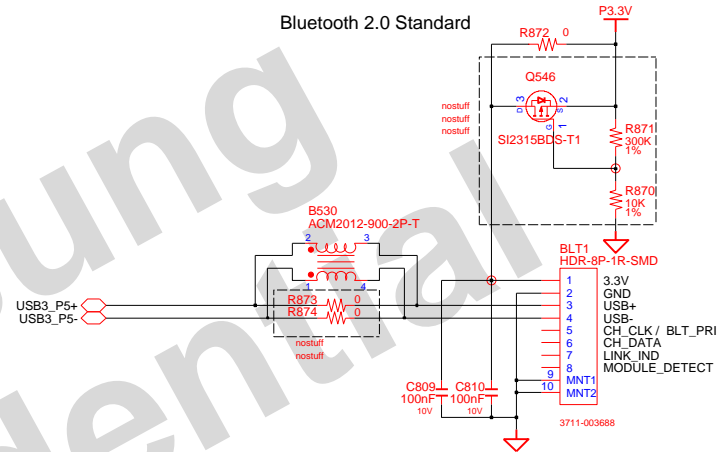
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## MDC connector

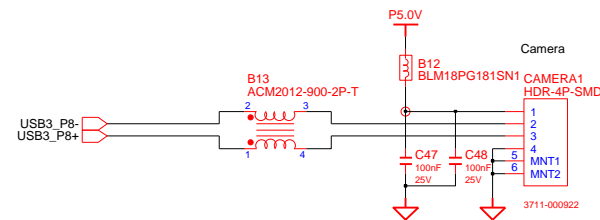


## BLUETOOTH

Bluetooth 2.0 Standard



## CAMERA

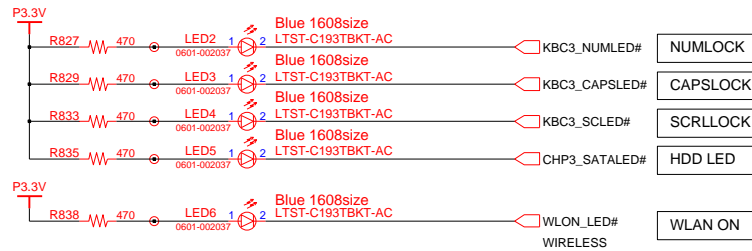


DRAW	AY JUNG	DATE	8/14/2007	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	CAMERA/BLUETOOTH/MDC		PART NO. BA41-*****
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	46	OF 63

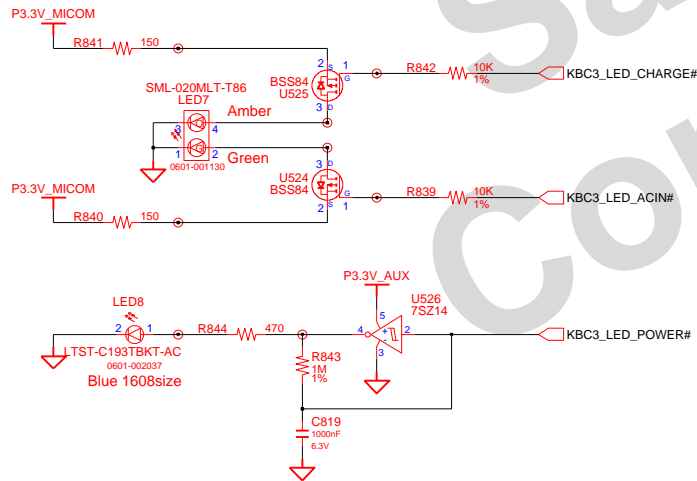


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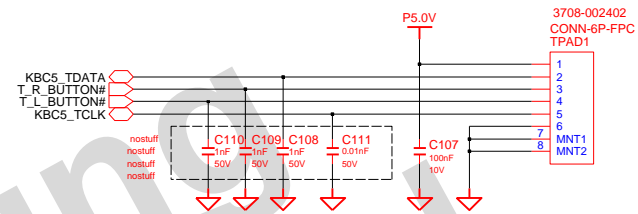
## LEDS



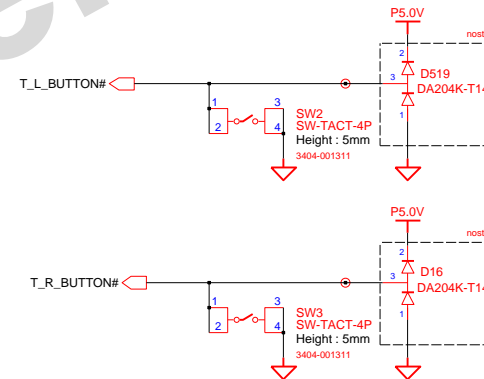
## Adaptor-In / Charging LED



## TOUCH PAD



## TP\_SWITCH

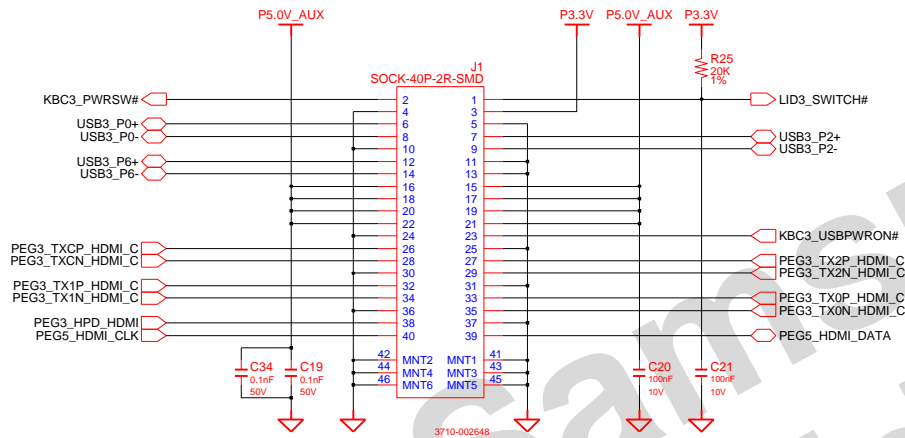


DRAW	AY JUNG	DATE	8/14/2007	TITLE	DRESDEN_EXT MAIN LED/TOUCH PAD	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94			PART NO. BA41-*****
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	47	OF 63

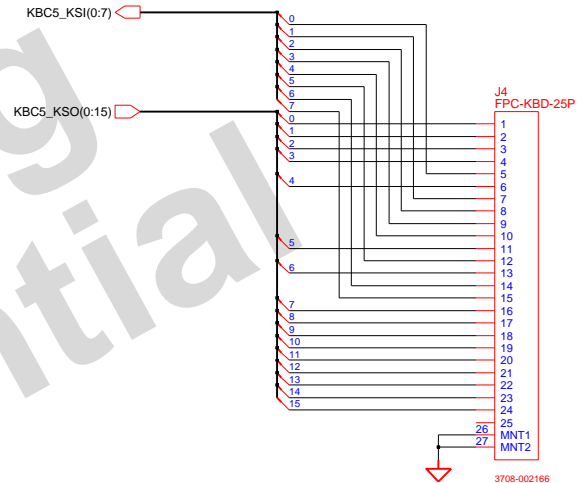
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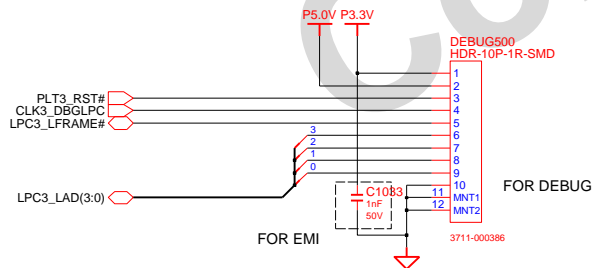
**Main to SUB Connector**



**KEYBOARD**



**DEBUG PORT**

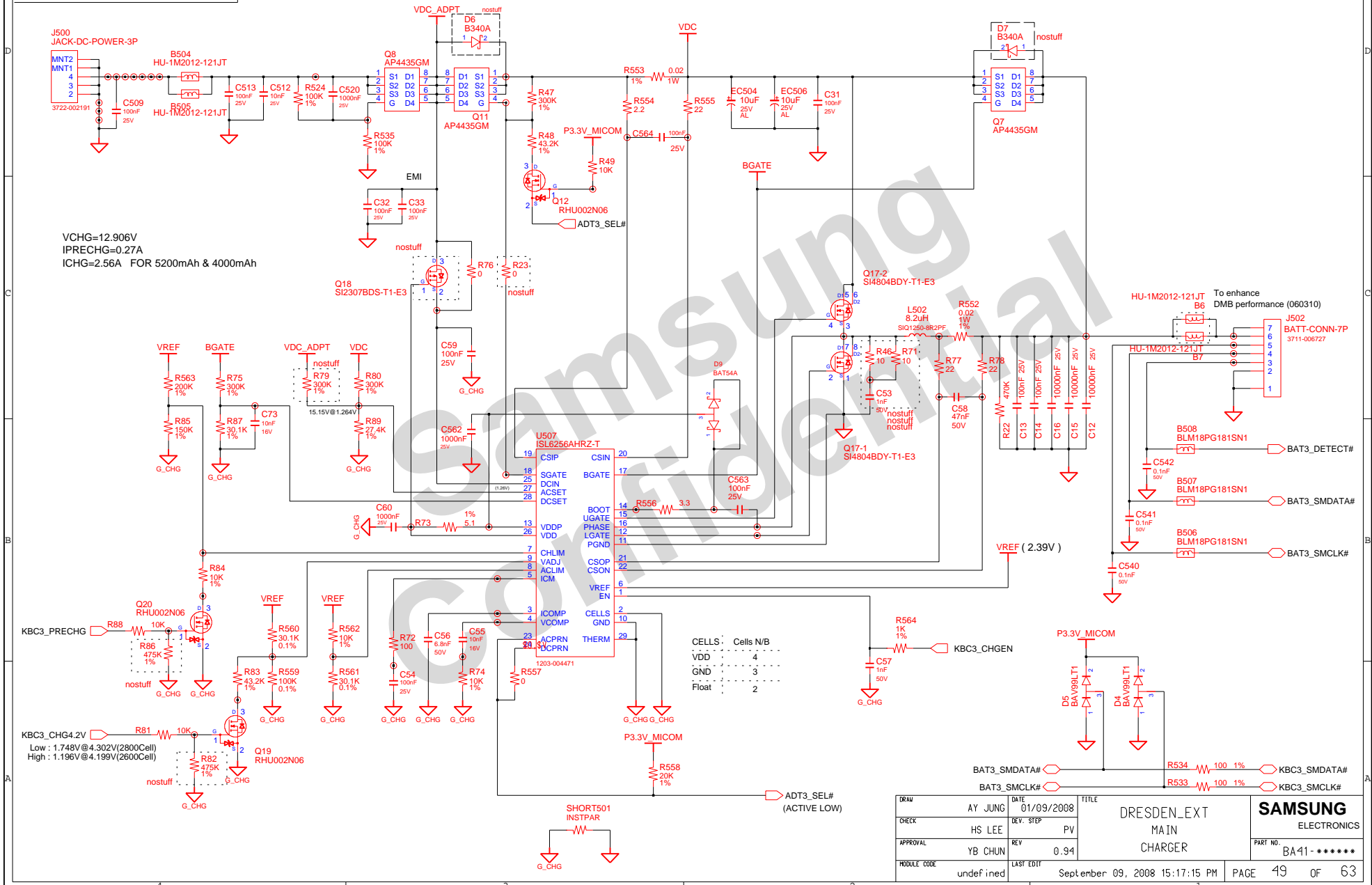


DRAW	AY JUNG	DATE	12/5/2007	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN	PART NO.	
APPROVAL	YB CHUN	REV	0.94	SUB/DEBUG/KBD	BA41-*****	
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	48 OF 63	

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# CHARGER & POWER MANAGEMENT

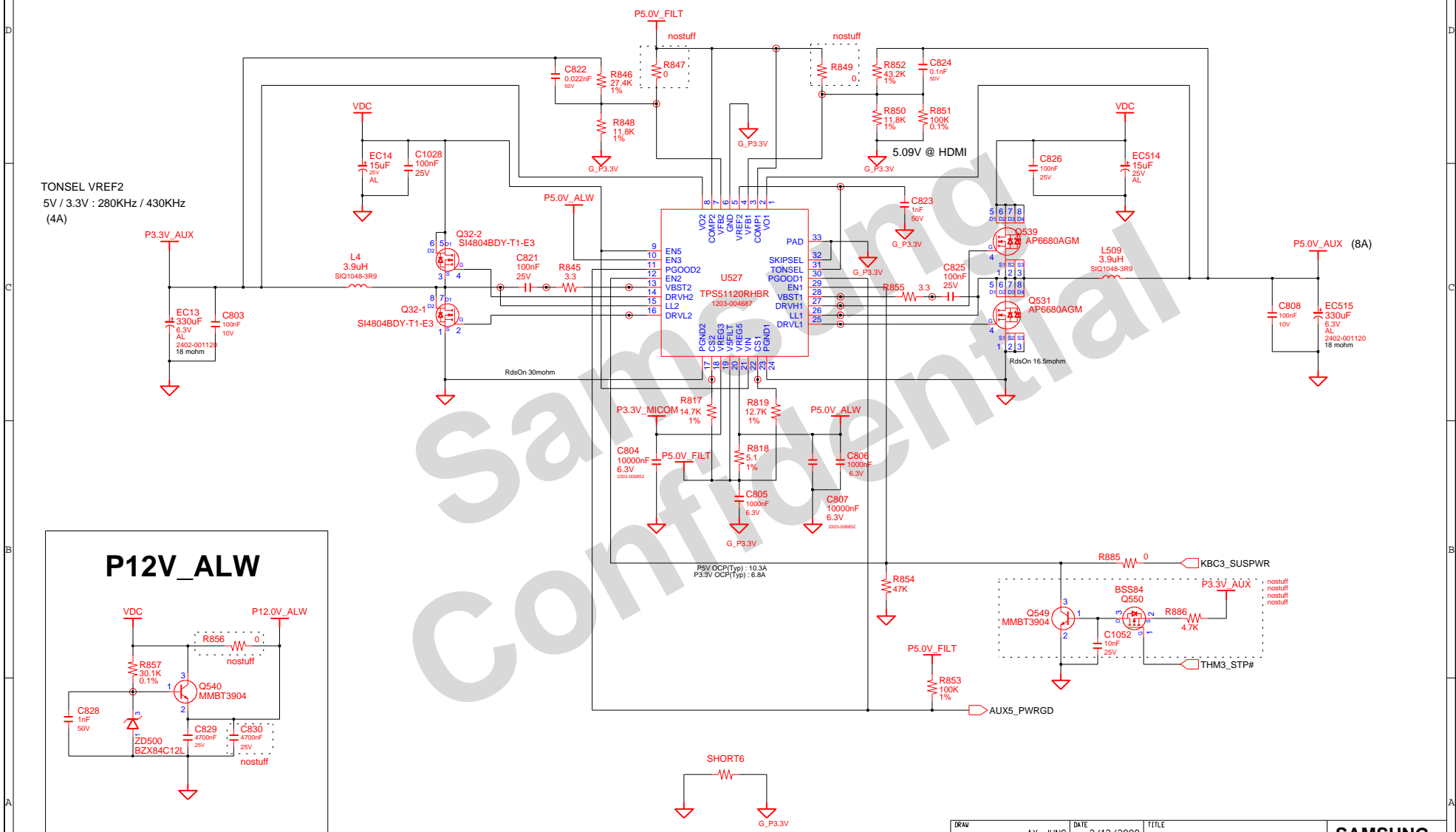


DRAW	AY JUNG	DATE	01/09/2008	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	CHARGER		PART NO. BA41-*****
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	49	OF 63

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# P3.3V\_AUX & P5.0V\_AUX



DRAW	AY JUNG	DATE	2/13/2008	TITLE	DRESDEN_EXT	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	MAIN		
APPROVAL	YB CHUN	REV	0.94	AUX POWER		PART NO. BA41-*****
MODULE CODE		LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	50	OF 63

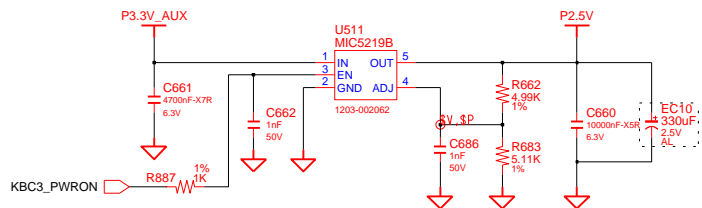


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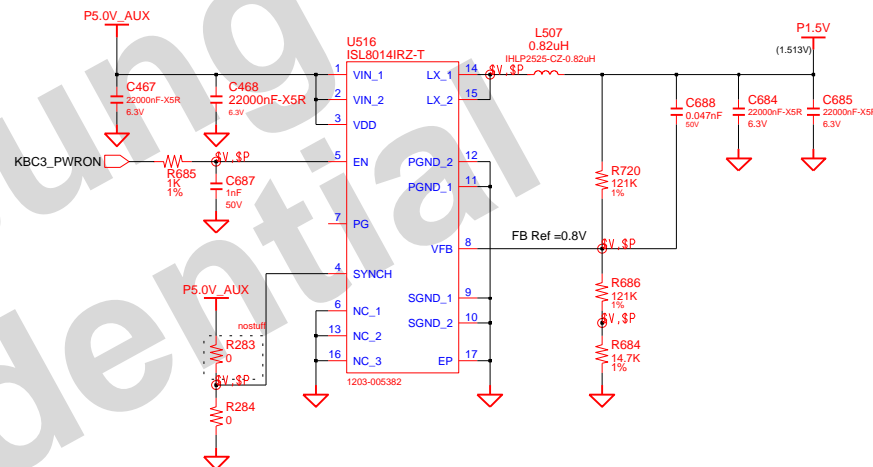
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# CHIPSET POWER(P2.5V & P1.5V & P1.2V\_AUX)

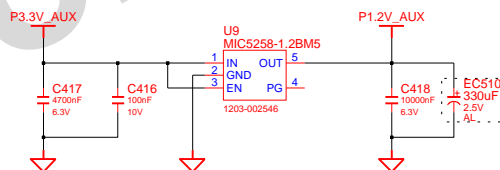
## P2.5V



## P1.5V



## P1.2V\_AUX

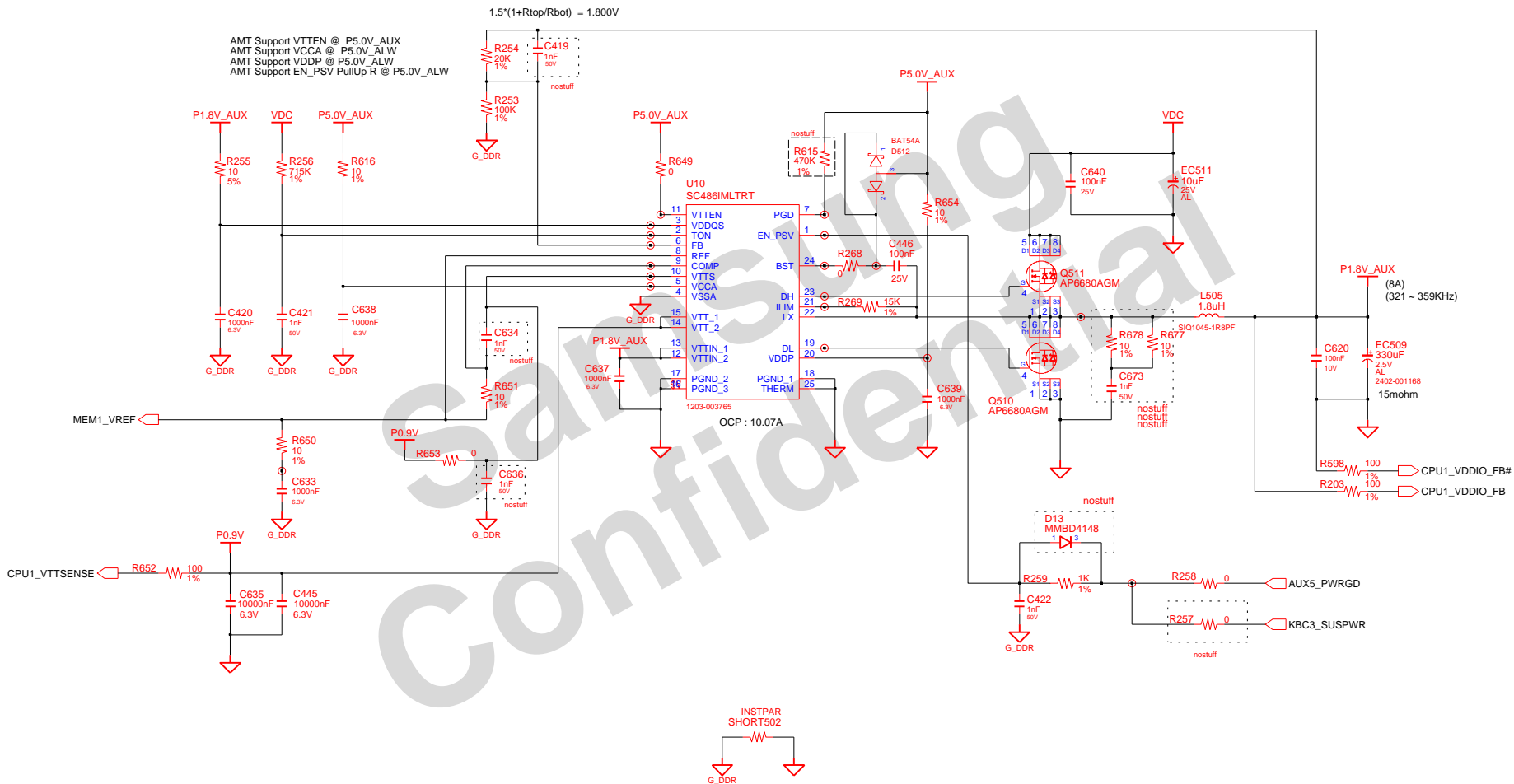


DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	CHIPSET POWER(2/2)		
APPROVAL	YB CHUN	REV	0.94	September 09, 2008 15:17:15 PM		PAGE 52 OF 63
MODULE CODE		LAST EDIT				PART NO. BA41-*****

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# DDR2 Power



DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94		DDR2 POWER	PART NO. BA41-*****
MODULE CODE		LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	53	OF 63



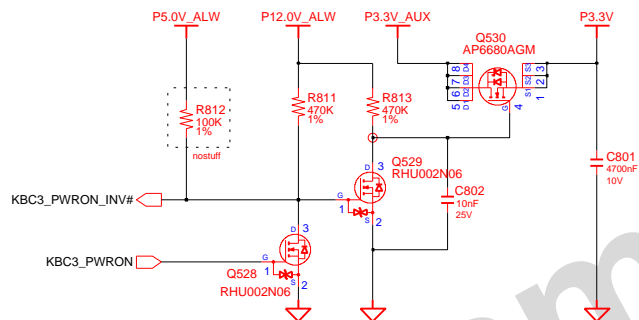


**SAMSUNG PROPRIETARY**

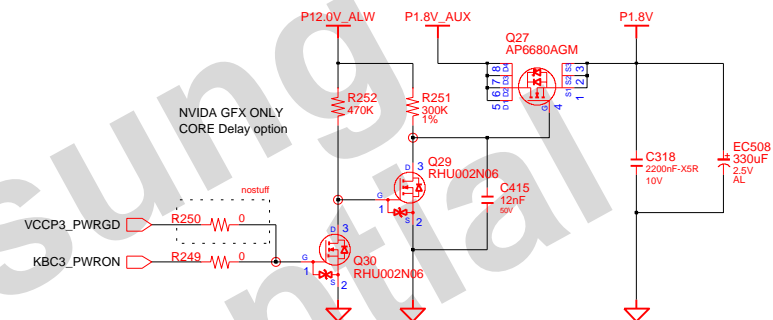
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# Switched Power

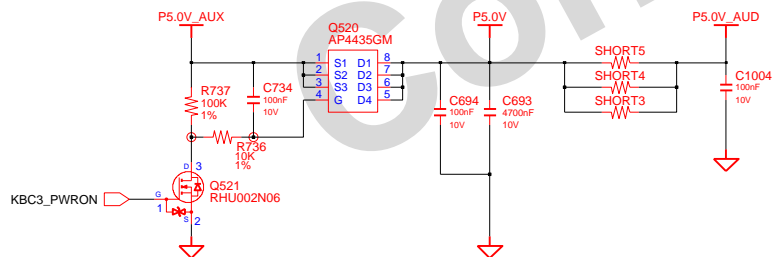
### Switched Power On (P3.3V)



### Switched Power On (P1.8V)



### Switched Power On (P5.0V)

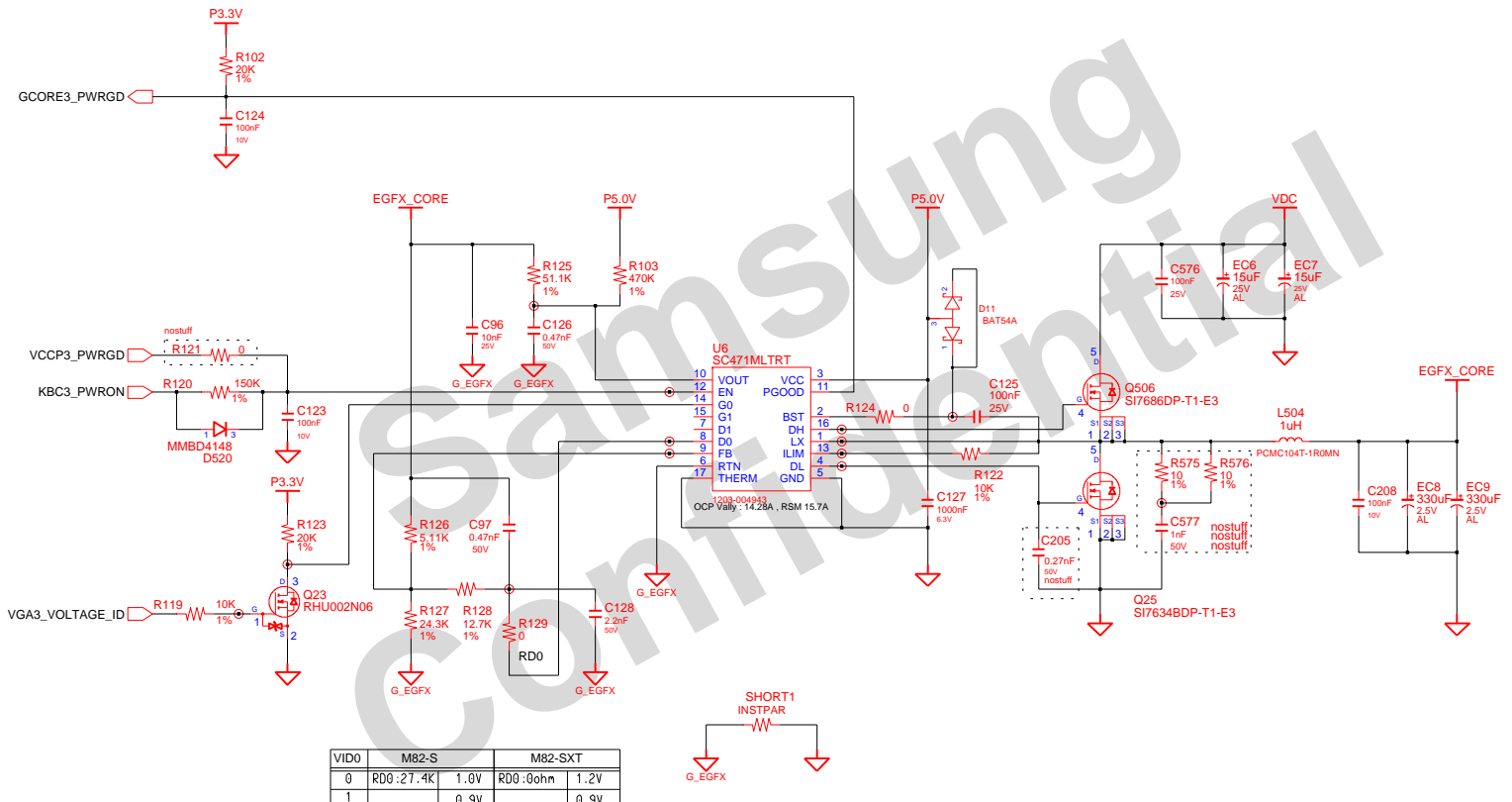


DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94		Switched Power	PART NO. BA41-*****
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	55	OF 63

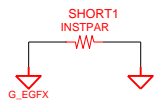
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# GFX CORE [SEMTECH]



VID0	M82-S	M82-SXT
0	RD0:27.4K 1.0V	RD0:0ohm 1.2V
1	0.9V	0.9V

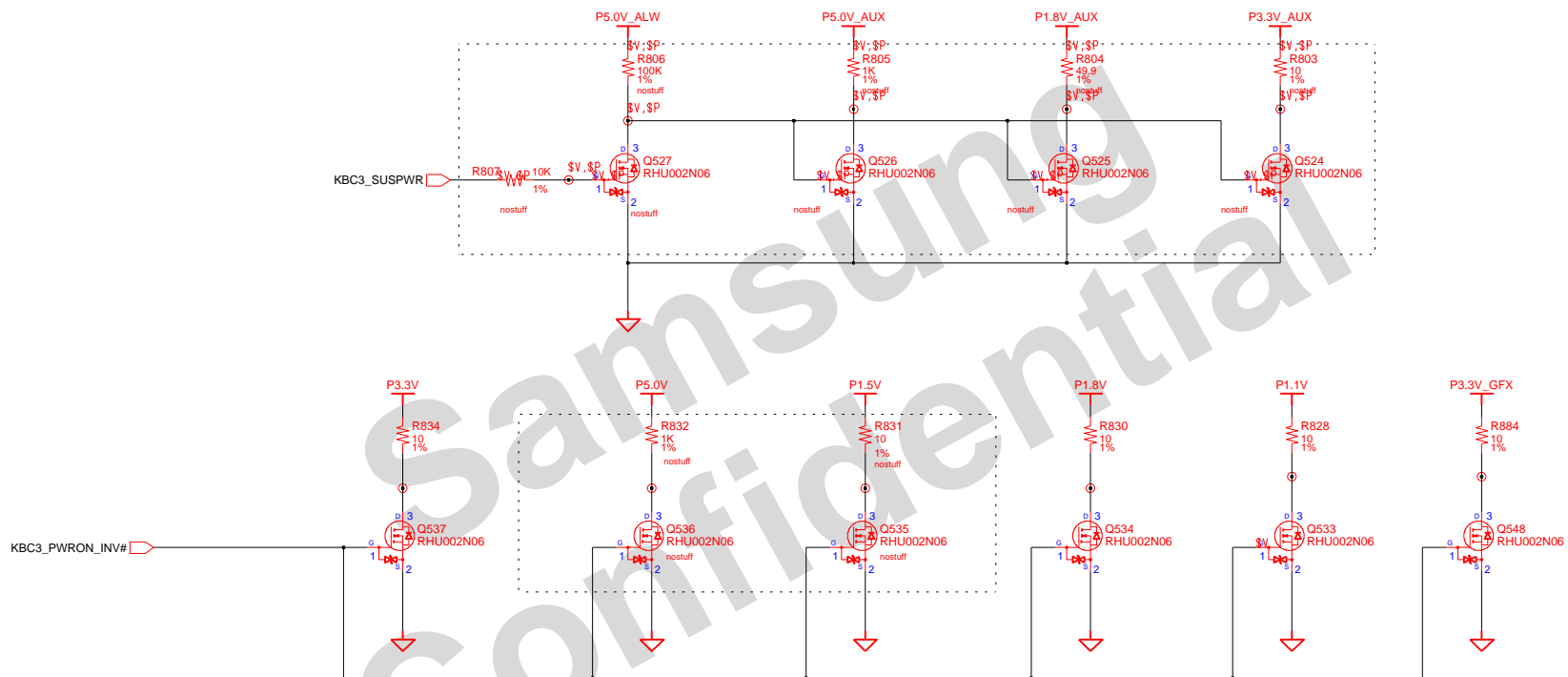


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CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94		GFX CORE POWER	
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	56	OF 63

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# POWER DISCHARGER

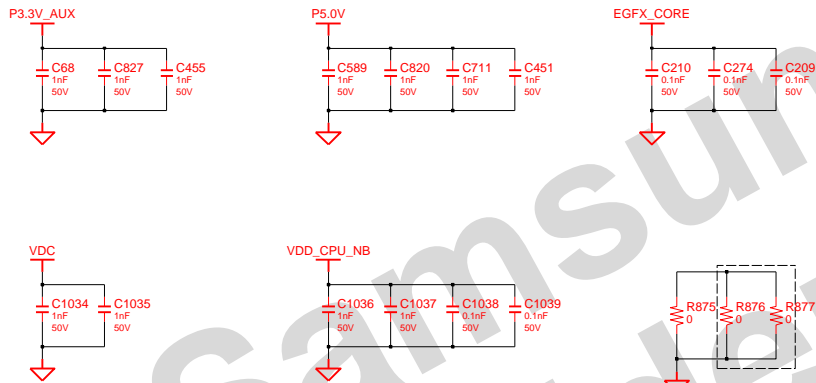


DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT POWER DISCHARGER	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94	PART NO. BA41-*****		
MODULE CODE	LAST EDIT		September 09, 2008 15:17:15 PM	PAGE	57	OF 63

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# EMC

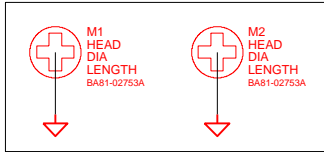


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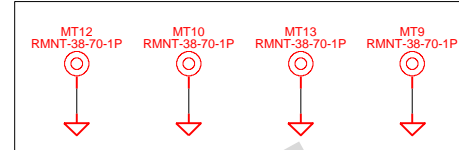
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CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94		EMC	PART NO. BA41-*****
MODULE CODE	undefined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	58	OF 63

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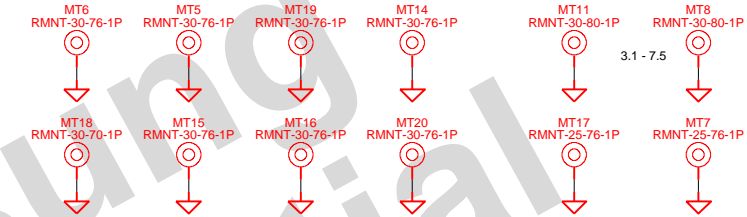
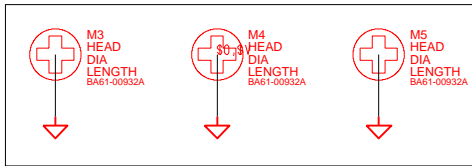
## FAN-NUT



## CPU RHE

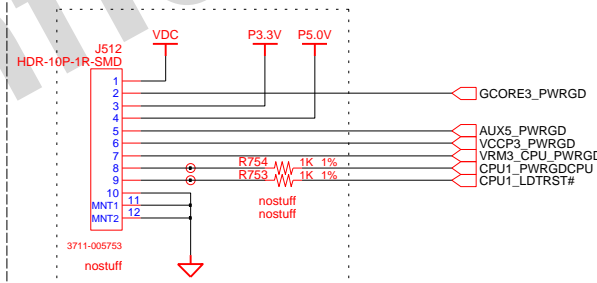
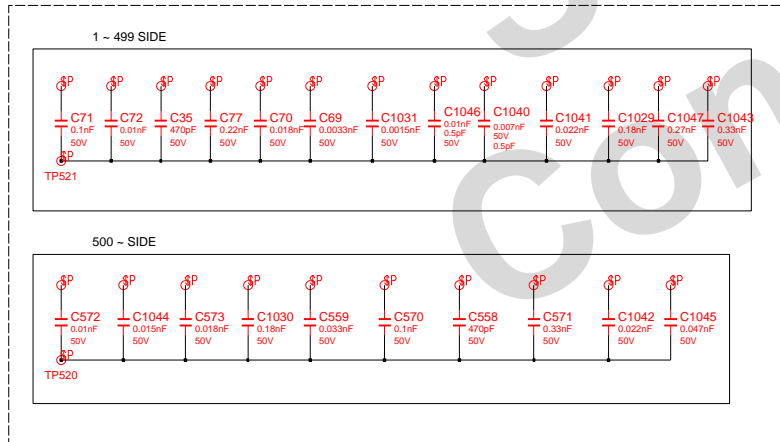


## THERMAL-NUT



ICT Cap : need to change with last BOM

## ICT PORT



REV3  
 1  
 2

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

DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV			
APPROVAL	YB CHUN	REV	0.94		MTH/ICT	PART NO. BA41-*****
MODULE CODE		LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	59	OF 63

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○MCD3\_SDWP  
 ○MEM1\_VREF  
 ○PC13\_AD23  
 ○PC13\_AD24  
 ○PC13\_AD25  
 ○PC13\_AD26  
 ○PC13\_AD27  
 ○PC13\_AD28  
 ○PE1\_RST#  
 ○PEX3\_RST#  
 ○AUD3\_GP100#  
 ○AUD3\_GP101#  
 ○BAT3\_SMCLK#  
 ○CHP3\_A\_RST#  
 ○CHP3\_GP1016  
 ○CHP3\_GP1017  
 ○CHP3\_SERIRQ  
 ○CHP3\_SLPS#  
 ○CHP3\_SLPS5#  
 ○CLK3\_DDBGLPC  
 ○CLK3\_PWRGD#  
 ○CPU1\_ALERT#  
 ○CPU1\_DDCCLK  
 ○CPU1\_DDCCLK  
 ○EXP3\_CPUSB#  
 ○EXP3\_PERST#  
 ○SMB3\_DATA  
 ○SP13\_CS0#  
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 ○SP13\_MOSI  
 ○THM3\_STP#  
 ○MLON\_LED#  
 ○AUD3\_SHDN#  
 ○AUX5\_PWRGD  
 ○CRT3\_HSYNC  
 ○CRT3\_HSYNC

○EXP3\_CPPF#  
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 ○KBC3\_PWRGD  
 ○KBC3\_PWRON  
 ○KBC3\_PRECHG  
 ○KBC3\_PWRSW#  
 ○KBC3\_RF0F#  
 ○KBC3\_SQLED#  
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 ○KBC3\_KSI(2)  
 ○KBC3\_KSI(3)  
 ○KBC3\_KSI(4)  
 ○KBC3\_KSI(5)  
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 ○MCD3\_SDDLK  
 ○MCD3\_SDCMD  
 ○LCD3\_BKLTON  
 ○PC3\_LAD(0)  
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 ○PC3\_LAD(2)  
 ○PC3\_LAD(3)  
 ○CPU2\_THERMDA  
 ○CPU2\_THERMDC  
 ○EXP3\_CLKREQ#  
 ○FAN3\_FDBACK#  
 ○GCORE3\_PWRGD  
 ○GFX3\_THERMDN  
 ○GFX3\_THERMDP  
 ○HDA3\_AUD\_SDO  
 ○HDA3\_MDC\_SDO  
 ○KBC3\_CPURST#  
 ○KBC3\_EXTSM1#

○KBC3\_NUMLED#  
 ○KBC3\_PWRBTN#  
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 ○KBC3\_KSO(10)  
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 ○CHP3\_SB\_TEST1  
 ○CHP3\_SUSTAT#  
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○PEG5\_HDMI\_CLK  
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 ○AUD5\_HP\_0\_RIGHT  
 ○AUD5\_MIC1\_RIGHT  
 ○AUD5\_MIC2\_RIGHT  
 ○AUD5\_HP\_0\_LEFT  
 ○AUD5\_MIC1\_LEFT  
 ○AUD5\_MIC2\_VREF  
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○CPU1\_PROCHOT#

○CPU1\_VDD0\_FB#  
 ○CPU1\_VDD1\_FB#  
 ○CPU1\_VDD10\_FB#  
 ○CPU1\_VDDNB\_FB#  
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 ○HDA3\_AUD\_RST#  
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 ○HDA3\_AUD\_SYNC  
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 ○PEG3\_HDMI\_SUB\_DATA

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 ○KBC3\_LED\_ACIN#  
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 ○LAN3\_LINK1000#

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 ○HDMI3\_MS  
 ○SMB3\_CLK  
 ○SP13\_CLK  
 ○ADT3\_SEL#  
 ○AUD3\_BEEP  
 ○AUD3\_SPKR  
 ○KBC3\_A20G  
 ○KBC3\_VRON

○CTRL\_12  
 ○GPI0(0)  
 ○GPI0(1)

○SPK5\_L+  
 ○SPK5\_L-  
 ○SPK5\_R+  
 ○SPK5\_R-  
 ○FAN5\_VDD  
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 ○GPI0(12)

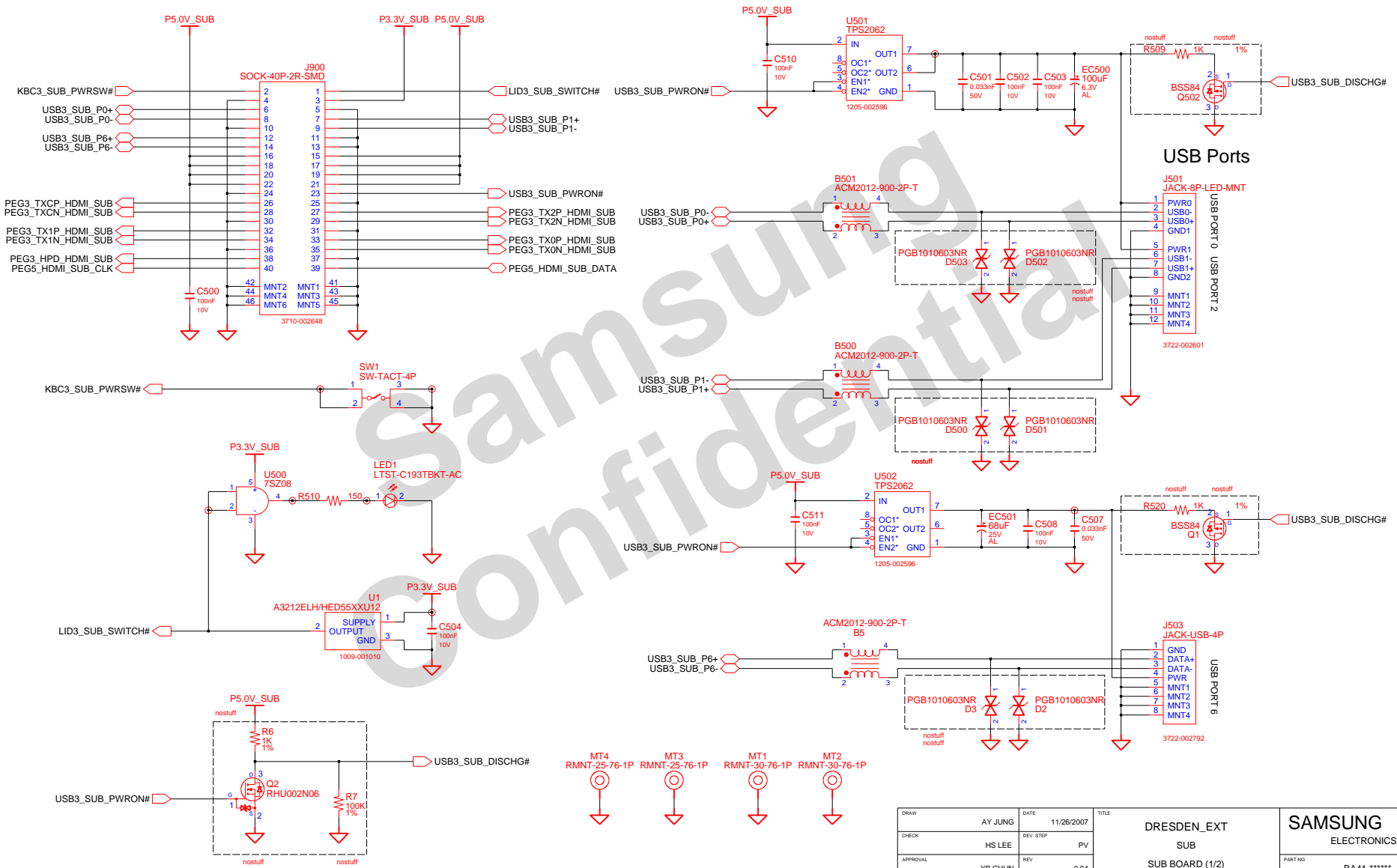
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 ○VREF  
 ○VDDC\_INV  
 ○VDDC\_ADPT  
 ○VDD\_CPU\_NB  
 ○P3.3V\_GFX  
 ○P3.3V\_MCD  
 ○P5.0V\_ALW  
 ○P5.0V\_AMP  
 ○P5.0V\_AUD  
 ○P5.0V\_AUX  
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 ○G\_AUD  
 ○G\_CHG  
 ○G\_CPU  
 ○G\_DDR  
 ○G\_MIC  
 ○G\_EGFX  
 ○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  
 ○P1.2V\_AUX  
 ○P1.2V\_LAN  
 ○P1.5V\_EXP  
 ○P1.8V\_AUX  
 ○P3.3V\_AUX  
 ○P3.3V\_EXP  
 ○EGFX\_CORE  
 ○P5.0V  
 ○VCC\_CRT

DRAW	AY JUNG	DATE	1/10/2008	TITLE	DRESDEN_EXT	<b>SAMSUNG</b> ELECTRONICS PART NO. BA41-*****
CHECK	HS LEE	DEV. STEP	PV		TP	
APPROVAL	YB CHUN	REV	0.94			
MODULE CODE	undef ined	LAST EDIT	September 09, 2008 15:17:15 PM	PAGE	60	OF 63

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# Sub Board (1/2)

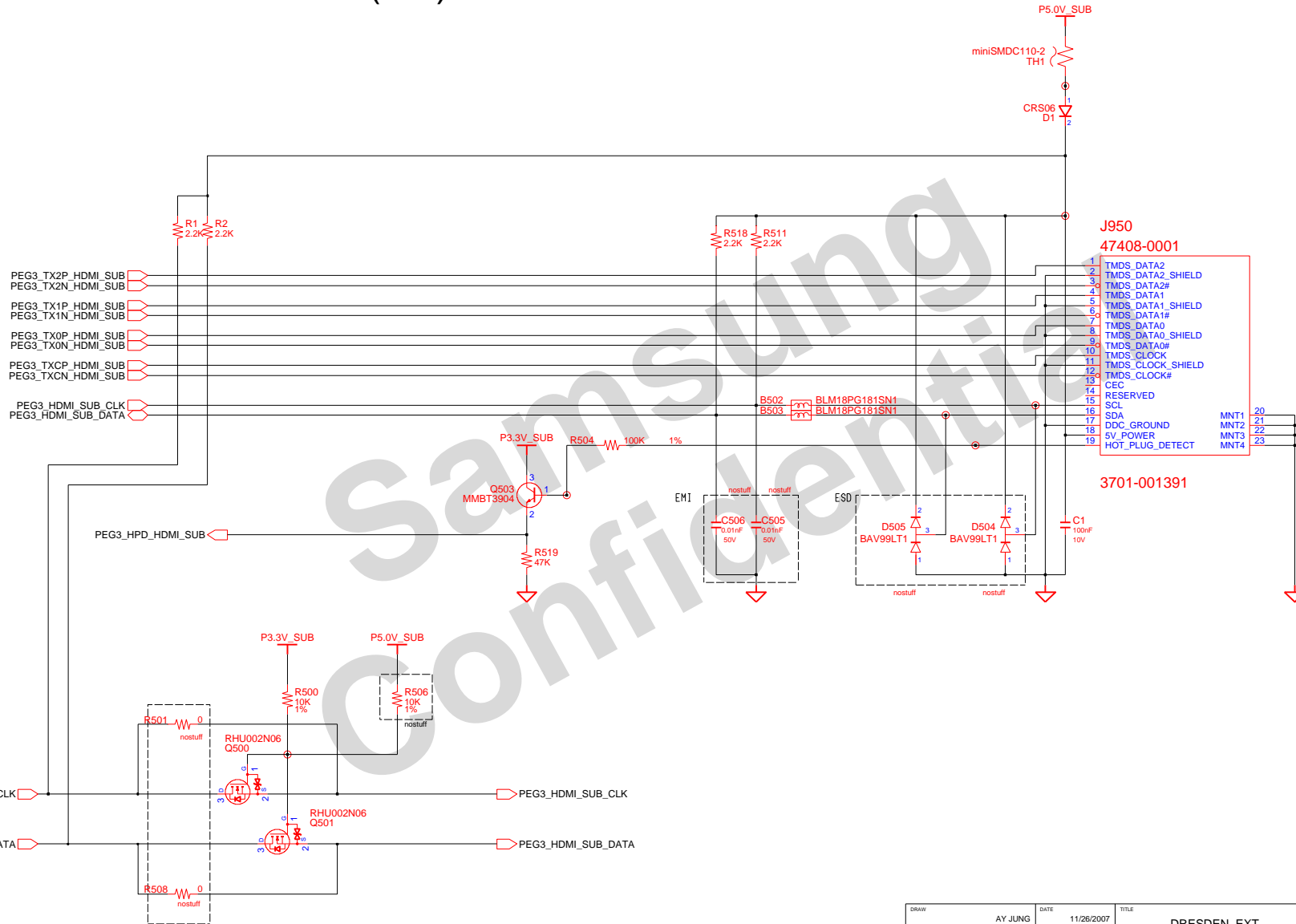


DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT SUB	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV		SUB BOARD (1/2)	
APPROVAL	YB CHUN	REV	0.94			PART NO. BA41-*****
MODULE CODE		LAST ENT				
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# Sub Board (2/2)



DRAW	AY JUNG	DATE	11/26/2007	TITLE	DRESDEN_EXT SUB	SAMSUNG ELECTRONICS
CHECK	HS LEE	DEV. STEP	PV	SUB BOARD (2/2)		
APPROVAL	YB CHUN	REV	0.94	PART NO. BA41-*****		
MODULE CODE		LAST ENT		September 09, 2008 15:17:15 PM	PAGE 62 OF 56	