Lampard-AMD INT

CPU : AMD ZACATE
Chip Set : FCH(Hudson-M3L)
Remarks : Brazos2.0 Platform

Model Name : Lampard-AMD
PBA Name : MAIN
PCB Code : BA41-XXXXXX(PTC)
BA41-XXXXXX(HST)
BA41-XXXXXX(GCE)
Dev. Step : PR
Revision : 1.0
T.R. Date : 2013.01.23

Design	CHECK	APPROVAL
Zhou Pei	XIE BIN	BL LEE

■ *Owner : SESC R & D* *Signature :* *X*

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sheet02 : BLOCK DIAGRAM
sheet03 : BOARD INFORMATION
sheet04 : POWER DIAGRAM
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sheet06 : Green Clock
sheet07 : Thermal Sensor
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sheet09 : CPU-ZACATE (2/3)
sheet10 : CPU-ZACATE (3/3)
sheet11 : DDR3 SODIMM1
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sheet13 : PCH-A68M (1/5)
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sheet20 : HDMI
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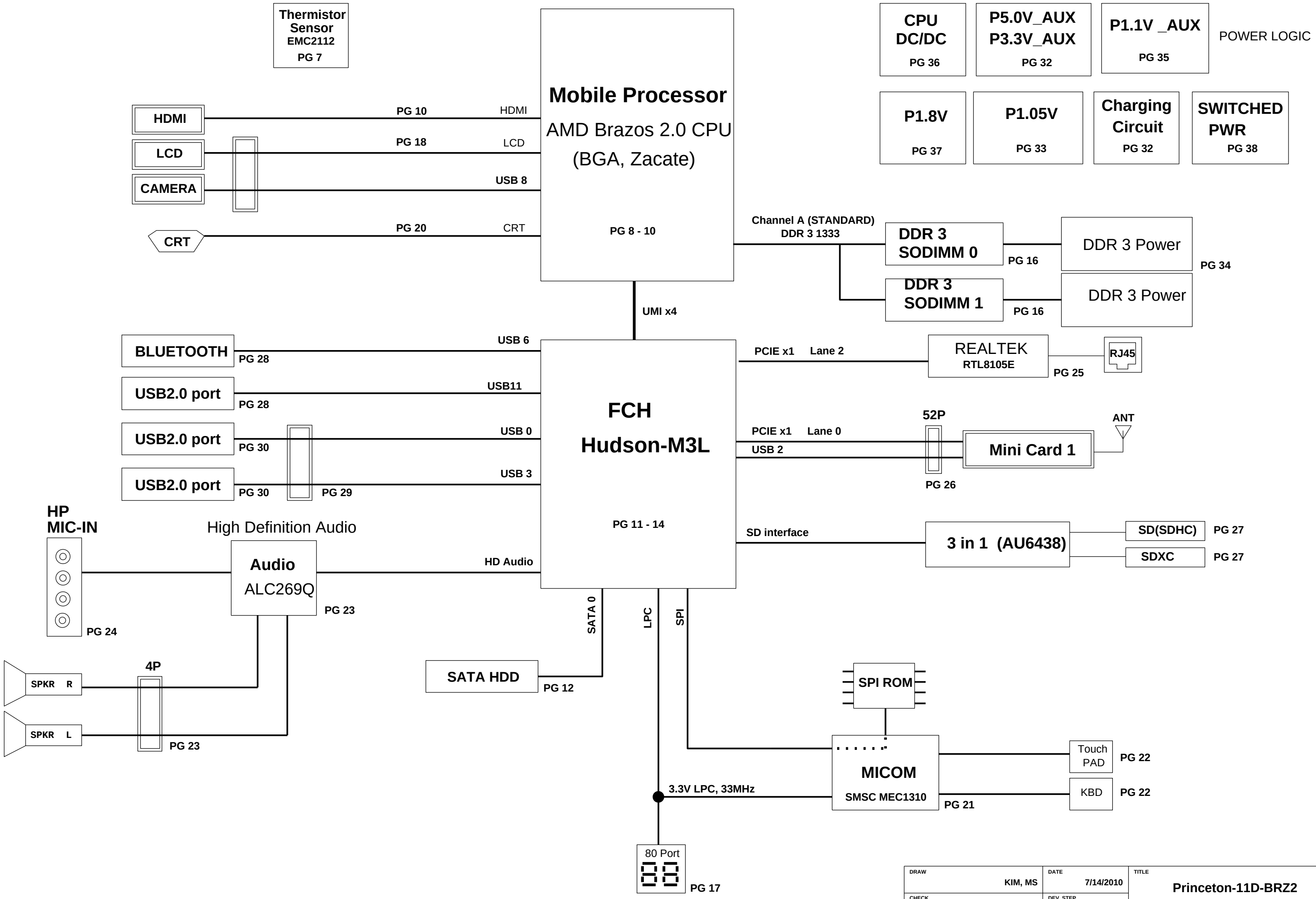
sheet23 : 3IN1/TPM
sheet24 : LAN (Realtek RTL8105E)
sheet25 : WLAN
sheet26 : SATA interface (HDD/ODD I/F)
sheet27 : MICOM / BIOS(MEC1310)
sheet28: MICOM Glue Logic
sheet29 : USB3.0 connector
sheet30 : MAIN TO SUB CONNECTOR
sheet31 : Power - charger
sheet32 : Power - P3.3V_AUX / P5.0V_ALW
sheet33: Power - P1.05V (Chipset Power)
sheet34 : Power - P1.1V_AUX/P1.8V
sheet35 : Power - DDR3
sheet36: Power - CPU VRM
sheet37 : Power - Switched Power 1
sheet38 : Power - Power Discharge
sheet39 : Mount Hole
sheet40: SUB (TOUCHPAD)

DRAW	LI CHEN	DATE	08/03/2012	TITLE Lampard-14/15-INT MAIN COVER	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		
APPROVAL	LEI GUO	REV	REV 1.0		PART NO. BA41-*****A
MODULE CODE		LAST EDIT	September 25, 2012 07:52:37 AM	PAGE 1 OF 42	

BLOCK DIAGRAM



DRAW	KIM, MS	DATE	7/14/2010	TITLE	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1	Princeton-11D-BRZ2 MAIN BLOCK DIAGRAM	
APPROVAL	CHO, KS	REV	REV 0.23		PART NO. BA41-#####A
MODULE CODE	undefined	LAST EDIT	February 28, 2012 13:33:37 PM	PAGE 2 OF 40	

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D:/Users/KMS/princeton-D_main/20120228_V0.23/PRINCETON-11D-BRZ2

BOARD INFORMATION

SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

Voltage Rails

Voltage Rails		Active in
VDC	Primary DC system power supply (7 to 21V)	S4 - S5
P3.3V_MICOM	3.3V always power rail (for Micom)	
P5.0V_LDO	5.0V always power rail	
P5.0V_ALW	5.0V switched on power rail (off in S4-S5)	S3
P3.3V_AUX	3.3V switched on power rail (off in S4-S5)	
P1.1V_AUX	1.5V power rail for DDR3 (off in S4-S5)	
P5.0V	5.0V switched power rail (off in S3-S5)	S0
P3.3V	3.3V switched power rail (off in S3-S5)	
P1.8V	1.8V switched power rail (off in S3-S5)	
P0.75V	0.75V power rail for DDR3 (off in S3-S5)	
P1.1V	1.1V switched power rail (off in S3-S5)	
VCC_CORE	Core Voltage for CPU	S0
EGFX_CORE	Core Voltage for GPU	
P1.05V (VCCP)	VCC for FCH	

USB PORT Assign

PORT #	ASSIGNED TO
0	SYSTEM PORT 0
1	SYSTEM PORT 1
2	Mini PCI Express (WLAN)
3	SYSTEM PORT 2
4	Multi Memory Card Controller
5	Camera 1
6	NC (N/A WITH FCH)
7	NC (N/A WITH FCH)
8	NC
9	NC
10	NC
11	Camera 2
12	NC
13	NC

PCI Express Assign

PORT #	ASSIGNED TO
1	Mini Card 1 (WLAN)
2	NC
3	NC
4	LAN CONTROLLER
5	NC
6	NC
7	NC
8	NC

SATA PORT Assign

PORT #	ASSIGNED TO
0	HDD/SSD
1	ISSD
2	ODD (14" ONLY)
3	
4	
5	

Crystal / Oscillator

TYPE	FREQUENCY	DEVICE	USAGE
Crystal	32.768KHz	FCH	Real Time Clock
Crystal	25MHz	LAN	REALTEK
Crystal	25MHz	FCH	
Crystal	27MHz	MARS	
Crystal	48MHz	SD	

LCD Pannel Detect (TBD)

Devices	Resolution	PANNEL_DETECT_0

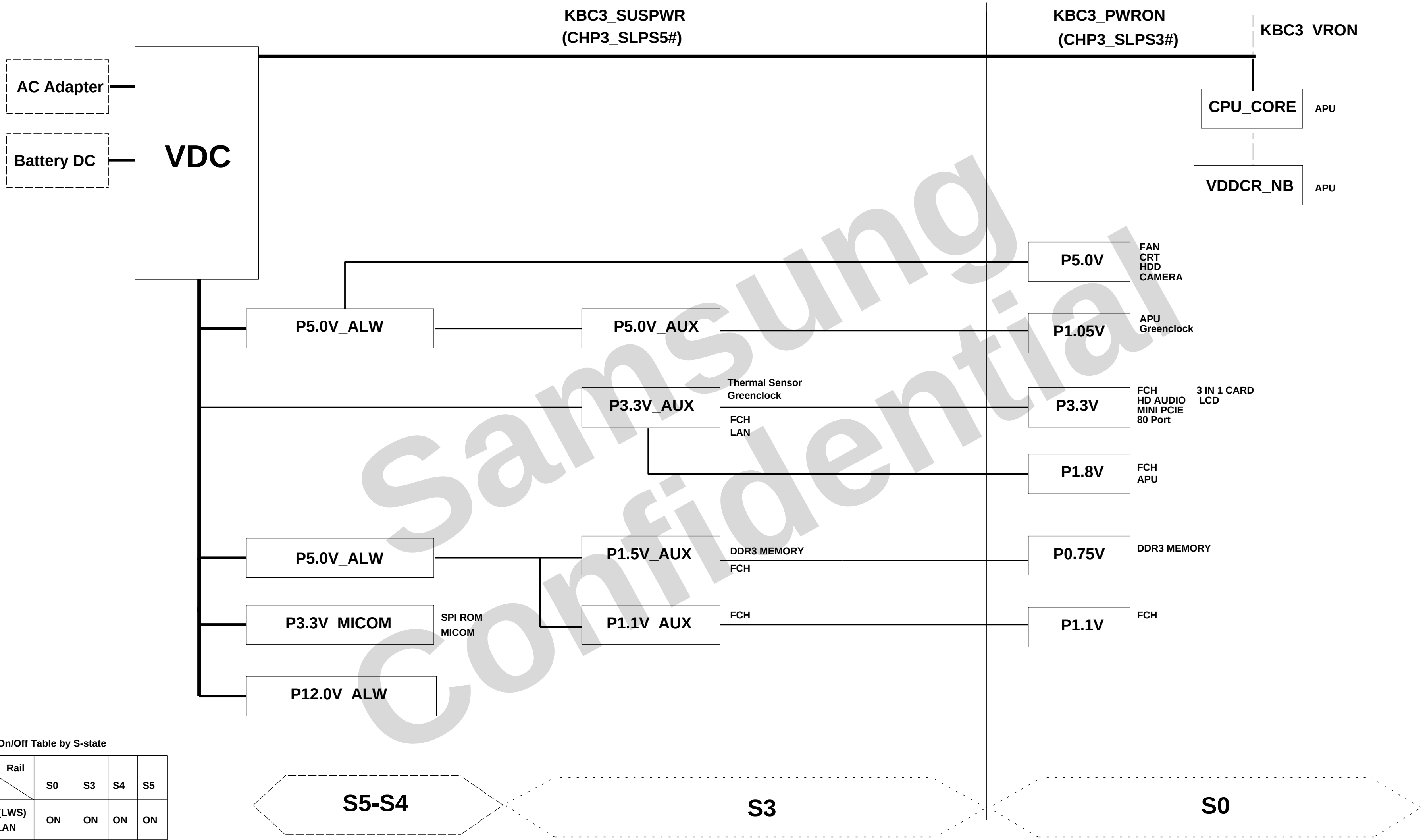
I^2C / SMB Address

Devices	Address	Hex	Bus
PANTHERPOINT	Master	-	SMBUS Master
CPU Thermal Sensor	0011 000X	30h	Thermal Sensor
SODIMM0	1010 000x	A0h	-
SODIMM1	1010 010x	A4h	-
Thermal Sensor on SODIMM0	0011 000x	30h	-
Thermal Sensor on SODIMM1	0011 010x	34h	-
on board DDR3 thermal Sensor	1001 100x	98h	
Platform thermal management TS	1001 011x	96h	

DRAW	DATE	TITLE	
LI CHEN	08/03/2012	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK: XIAO SUN	DEV. STEP: PV	MAIN	
APPROVAL: LEI GUO	REV: REV 1.0	BOARD INFO	PART NO. BA41-*****A
MODULE CODE: undefined	LAST EDIT: September 25, 2012 07:52:37 AM	PAGE 3 OF 42	

POWER DIAGRAM

Rev 0.1

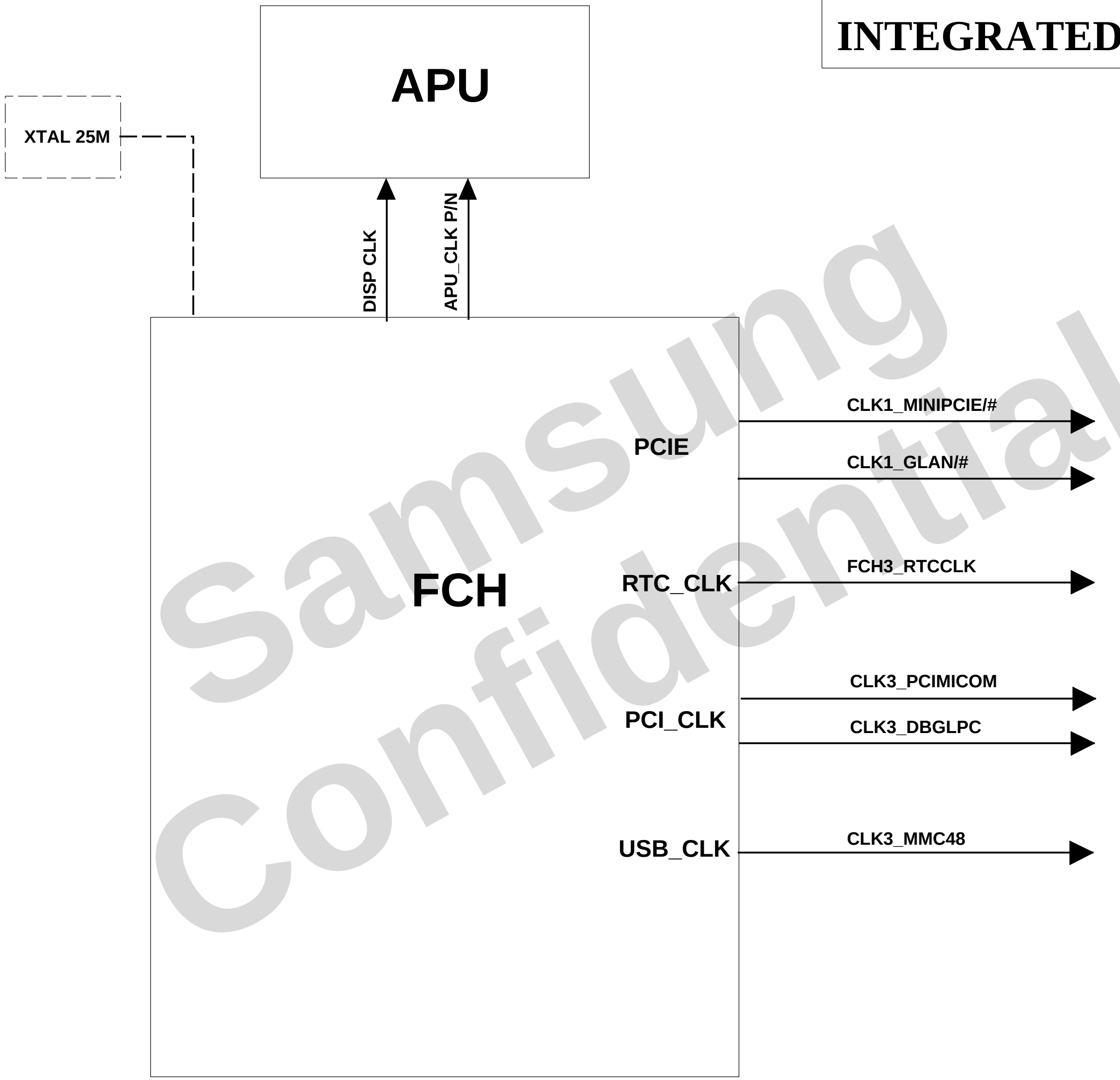


Power On/Off Table by S-state

Rail / State	S0	S3	S4	S5
+V*A(LWS) +V*LAN	ON	ON	ON	ON
+1.8V_AUX +0.9V	ON	ON	—	—
+V*AUX	ON	ON	—	—
+V	ON	—	—	—
+V* (CORE)	ON	—	—	—

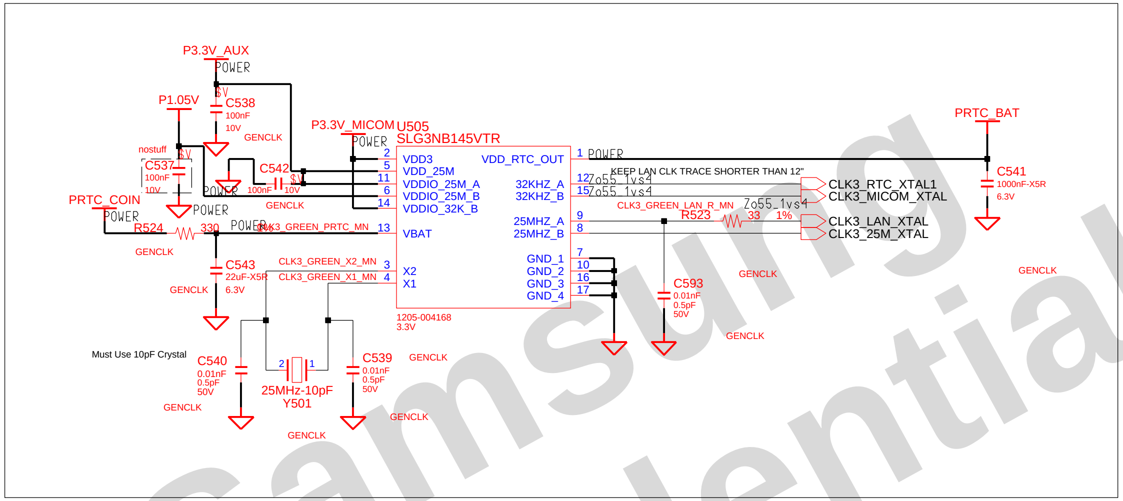
DRAW KIM, MS	DATE 7/14/2010	TITLE Princeton-11D-BRZ2	SAMSUNG ELECTRONICS		
CHECK PARK, CH	DEV. STEP ADV1	MAIN			
APPROVAL CHO, KS	REV REV 0.23	POWER DIAGRAM	PART NO. BA41-#####A		
MODULE CODE undefined	LAST EDIT	February 28, 2012 13:33:37 PM	PAGE 4	OF	40

CLOCK DISTRIBUTION Rev. 1.0
INTEGRATED CLOCK MODE



DRAW	KIM, MS	DATE	7/14/2010	TITLE Princeton-11D-BRZ2 MAIN CLOCK DIAGRAM	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1		
APPROVAL	CHO, KS	REV	REV 0.23		PART NO. BA41-#####A
MODULE CODE	undefined	LAST EDIT	February 28, 2012 13:33:37 PM	PAGE 5 OF 40	

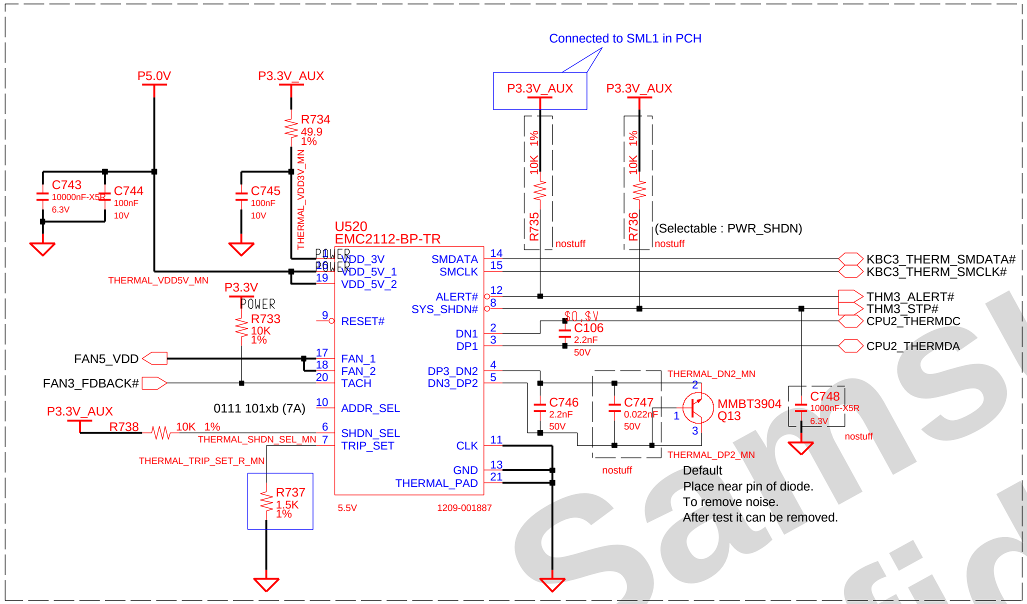
CLOCK DISTRIBUTOR

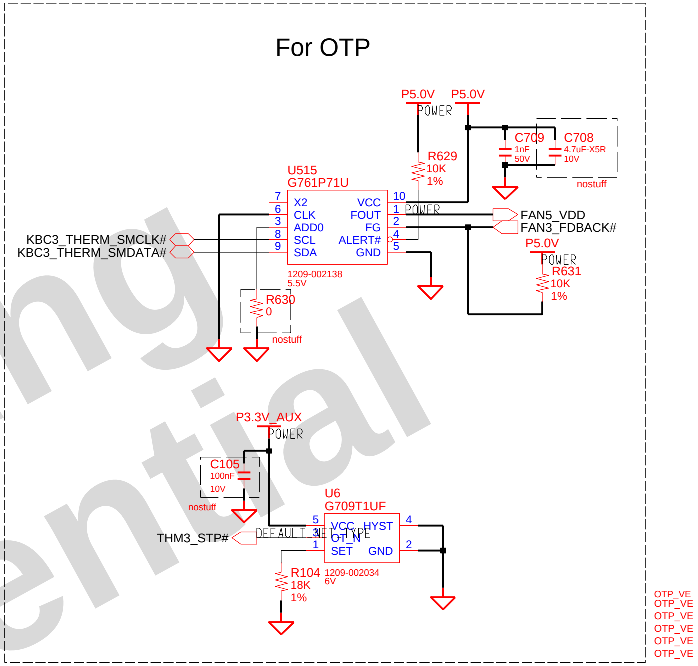


Multi Assy	Function Description	SCHEMATIC MARK
ADT_40W	40W ADAPTER SELECT	ADT_40W
ADT_60W	60W ADAPTER SELECT	ADT_60W
EMC2112	SUPPORT EMC2112	EMC2112
ATHEROS	ATHEROS SELECT	ATHEROS
BROADCOM	BROADCOM SELECT	BROADCOM
OTP_VE	THERMAL VE	OTP_VE
INT_SD	SUPPORT FCH SD	INT_SD
EXT-SD	SUPPORT EXT SD FUNCTION	EXT-SD
GENCLK	SUPPORT GREENCLK FUNCTION	GENCLK
TPM	SUPPORT TPM FUNCTION	TPM
CRYSTAL	SUPPORT EXT CRYSTAL FUNCTION	CRYSTAL
USB30	USB30 SELECT	USB30

DESIGN: LI CHEN	DATE: 08/03/2012	TITLE: Lampard-14/15-INT	SAMSUNG ELECTRONICS	
CHECK: XIAO SUN	DEV. STEP: PV	CLOCK		
APPROVAL: LEI GUO	REV: REV 1.0	CLOCK DISTRIBUTION	PART NO. BA41-*****A	
MODULE CODE	LAST EDIT: September 25, 2012 07:52:37 AM		PAGE 6 OF 42	

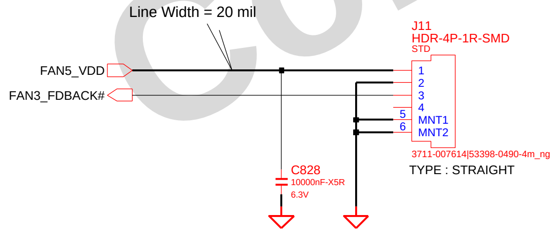
THERMAL SENSOR & FAN CONTROL



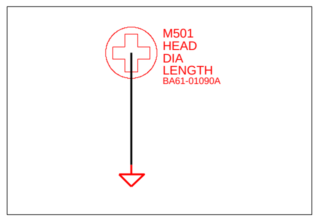


Temperature : 95.78c
confirmed by thermal charger
(2011.05.02)
R (kohm) = 0.0012T - 0.9308T + 96.147

TEMPERATURE	103c	99c	95c
TRIP_SET resistor value	2.49K	2.0K	1.5K



FAN PEM



ADDRESSS_SEL MODE	
0	0101 111xb
✓ HIGH Z	0111 101xb (7A)
1	0101 110xb

SHDN_SEL MODE	
0	INTEL TR MODE
HIGH Z	AMD CPU/DIODE MODE
✓ 1	EXT.DIODE 2 MODE

DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		THERMAL SENSOR	
APPROVAL	LEI GUO	REV	REV 1.0		THERMAL SENSOR EMC2112	PART NO. BA41-*****A
MODULE CODE		LAST EDIT	September 25, 2012 07:52:37 AM		PAGE 7	OF 42

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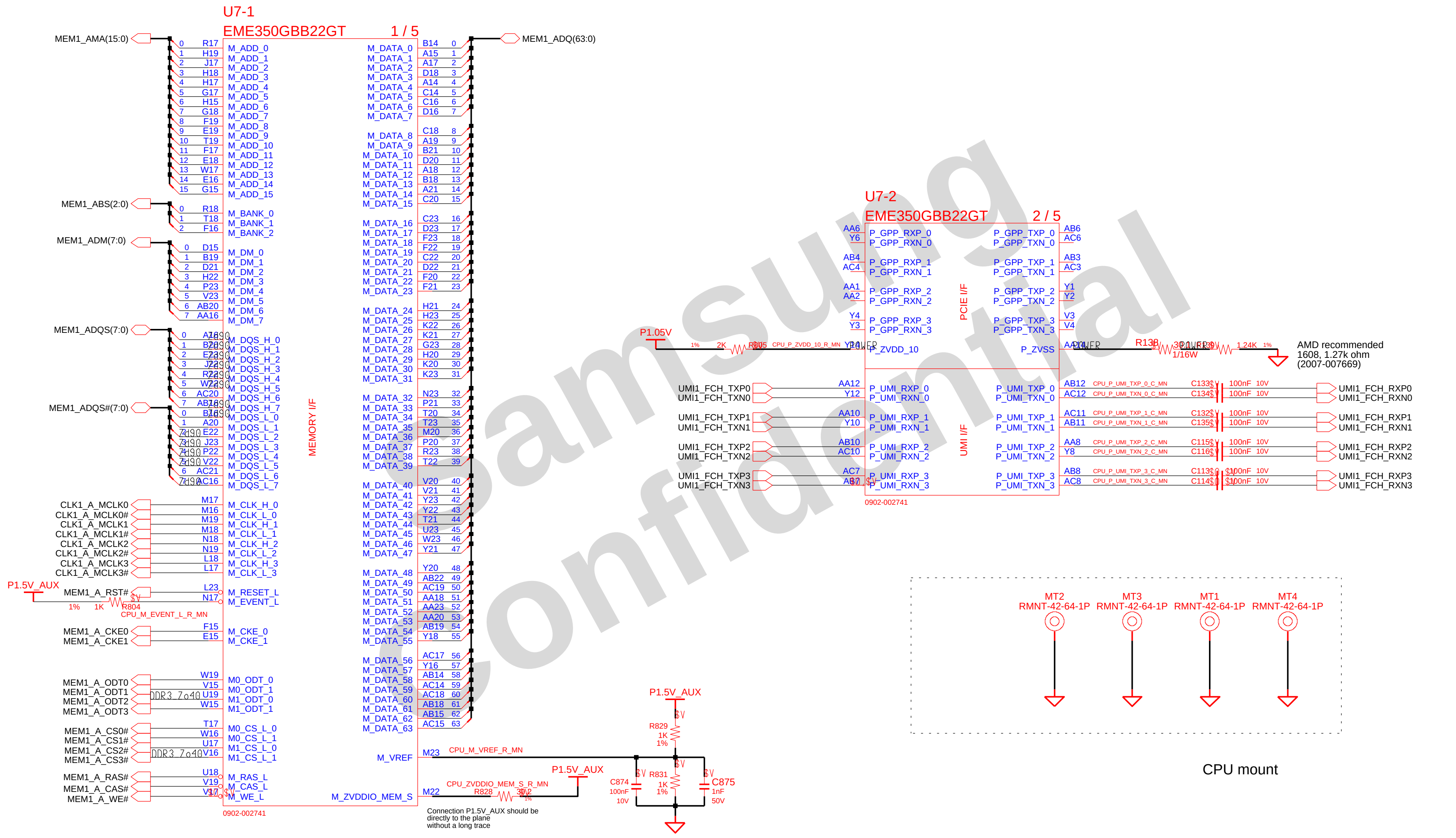
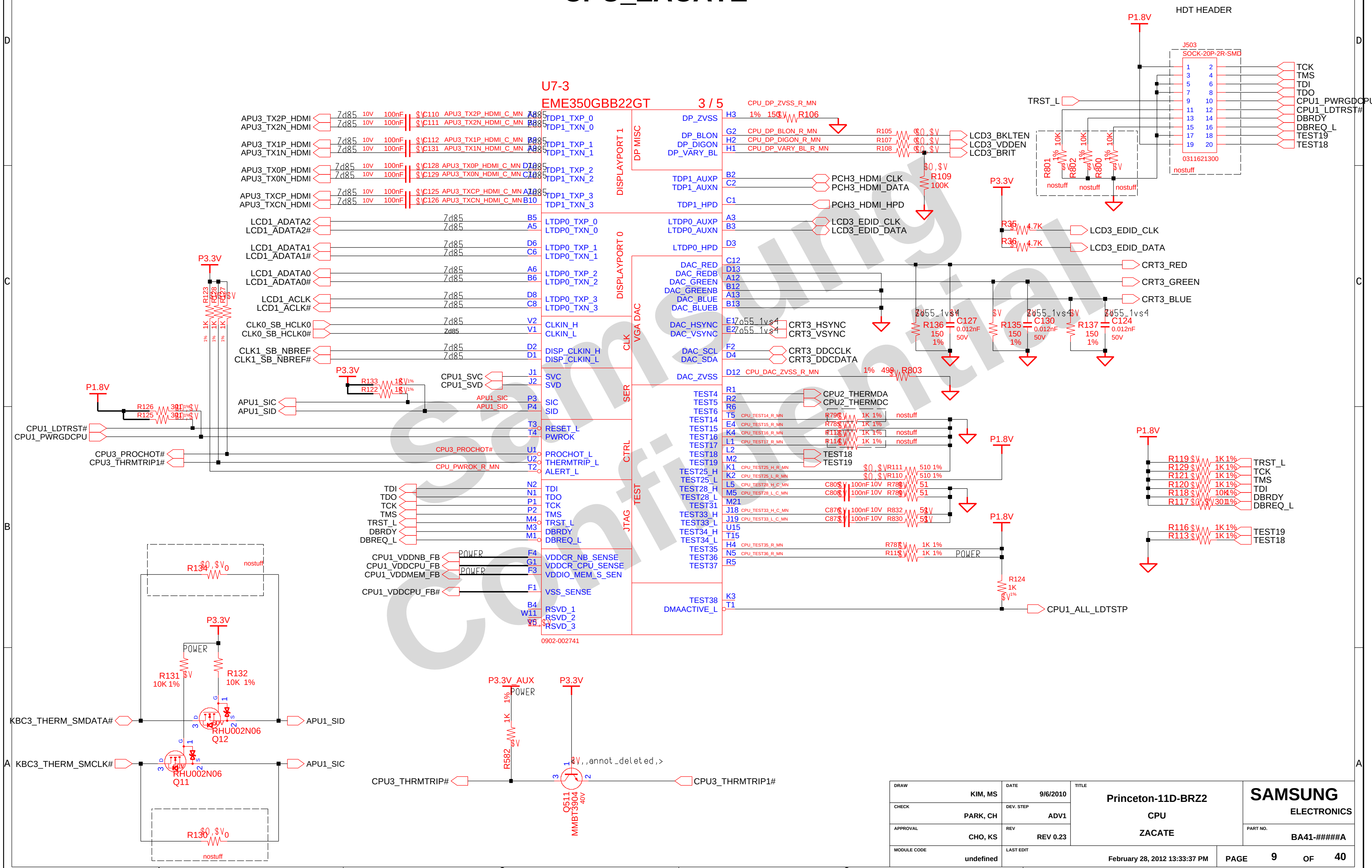
CPU_ZACATE



DRAW	KIM, MS	DATE	9/6/2010	TITLE	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1	Princeton-11D-BRZ2	
APPROVAL	CHO, KS	REV	REV 0.23	CPU	PART NO. BA41-#####A
MODULE CODE	undefined	LAST EDIT	February 28, 2012 13:33:37 PM	ZACATE	PAGE 8 OF 40

CPU_ZACATE



DRAW	KIM, MS	DATE	9/6/2010	TITLE	Princeton-11D-BRZ2	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1		CPU	
APPROVAL	CHO, KS	REV	REV 0.23		ZACATE	PART NO. BA41-#####A
MODULE CODE	undefined	LAST EDIT	February 28, 2012 13:33:37 PM		PAGE 9 OF 40	

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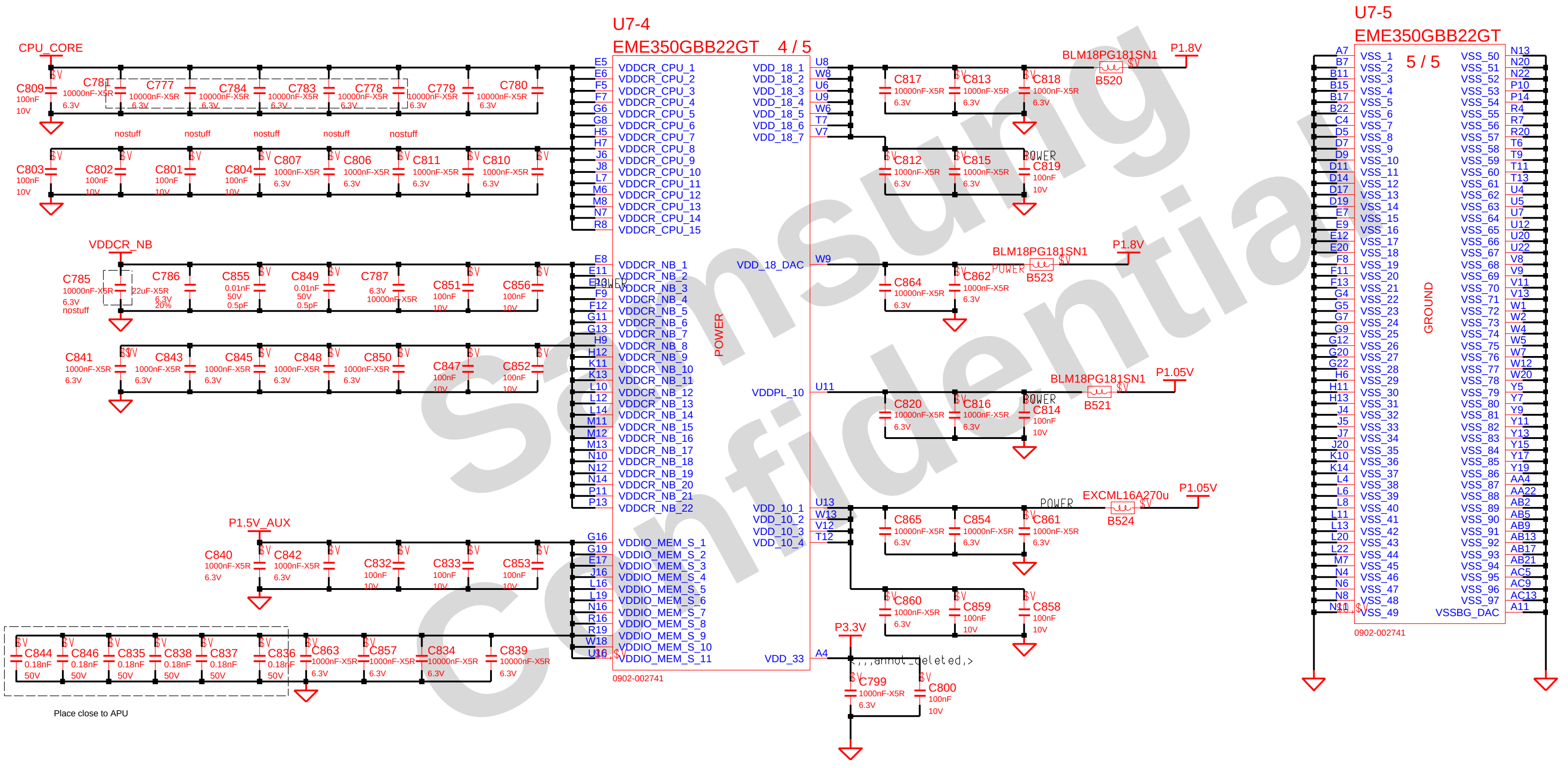
D:/Users/KMS/princeton-D_main/20120228_V0.23/PRINCETON-11D-BRZ2

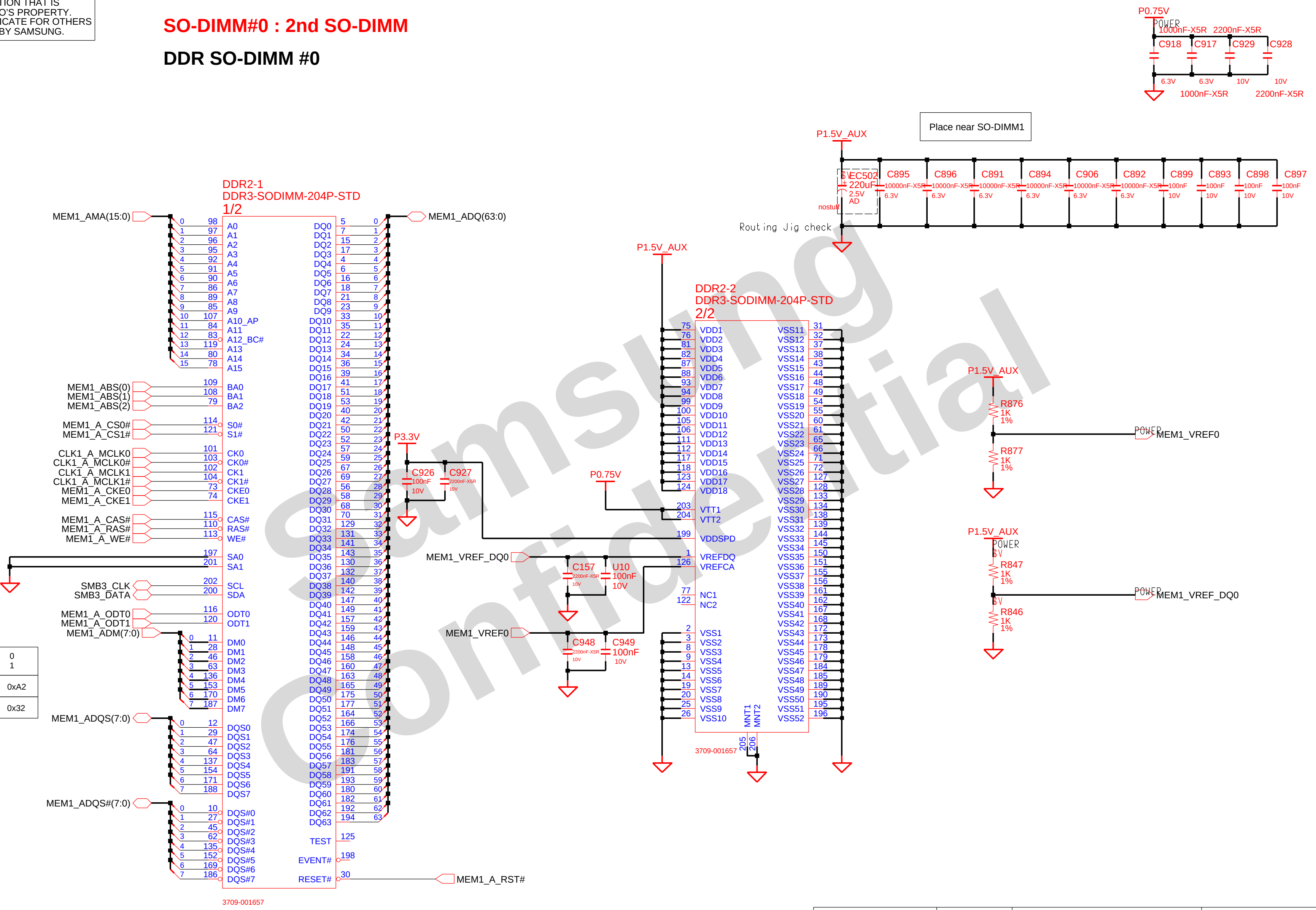
CPU_ZACATE



DESIGN	KIM, MS	DATE	9/6/2010	TITLE	Princeton-11D-BRZ2	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1		CPU	
APPROVAL	CHO, KS	REV	REV 0.23		ZACATE	PART NO. BA41-#####A
MODULE CODE		LAST EDIT	February 28, 2012 13:33:37 PM			PAGE 10 OF

SO-DIMM#0 : 2nd SO-DIMM

DDR SO-DIMM #0



SA0 SA1	0 0	0 1
SPD ADD	0xA0	0xA2
TS ADD	0x30	0x32

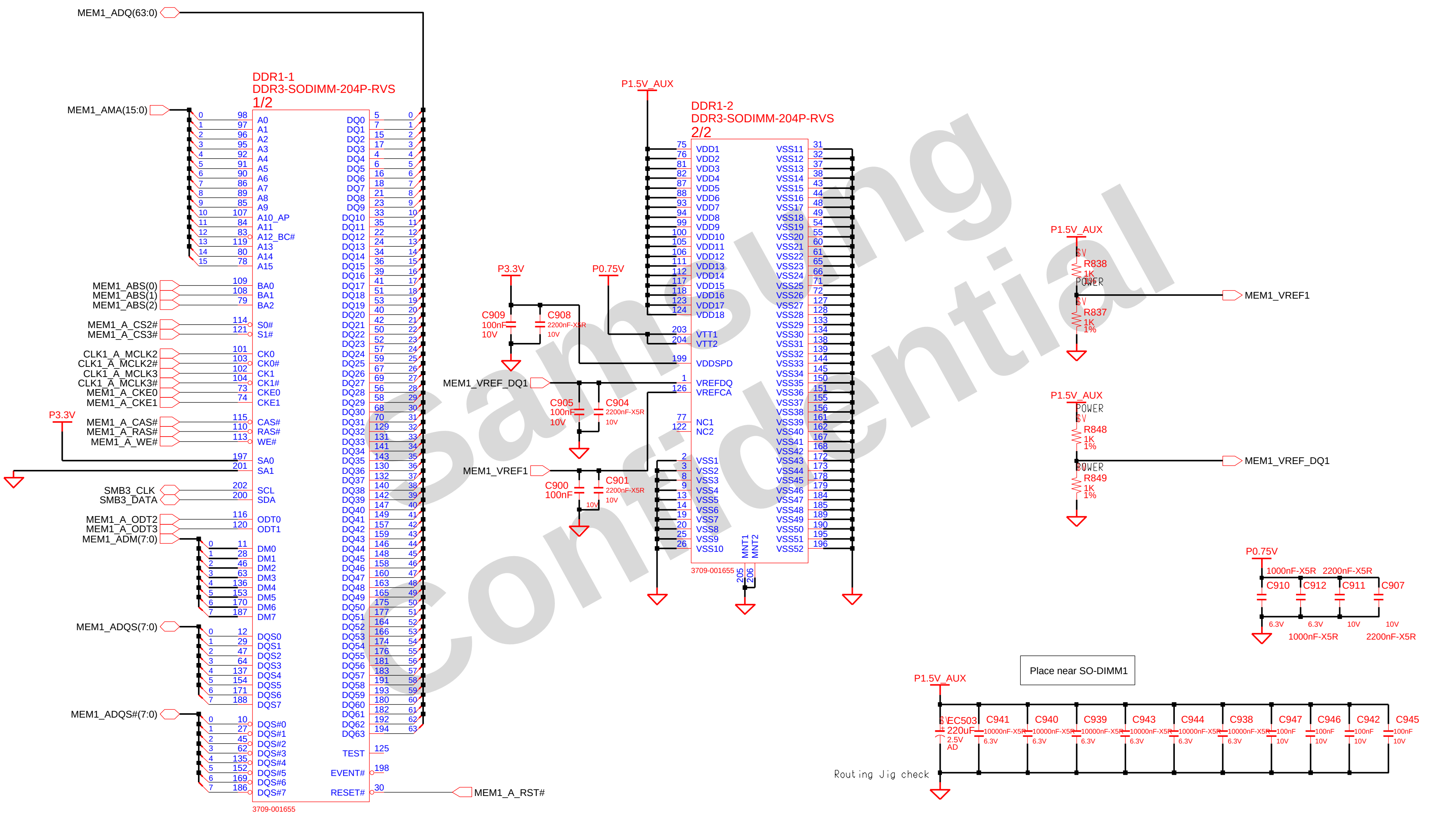
DRAW: RM LI	DATE: 08/03/2012	TITLE: Ramos-14/15-2SP MEMORY #0 2 RANK(4/4) DDR3 2Gb	SAMSUNG ELECTRONICS
CHECK: XIAO SUN	DEV. STEP: DV		PART NO. BA41-*****A
APPROVAL: LEI GUO	REV: REV 1.0		
MODULE CODE: undefined	LAST EDIT: August 11, 2012 09:48:52 AM	PAGE 13 OF 56	

SO-DIMM #1 : 1st SO-DIMM

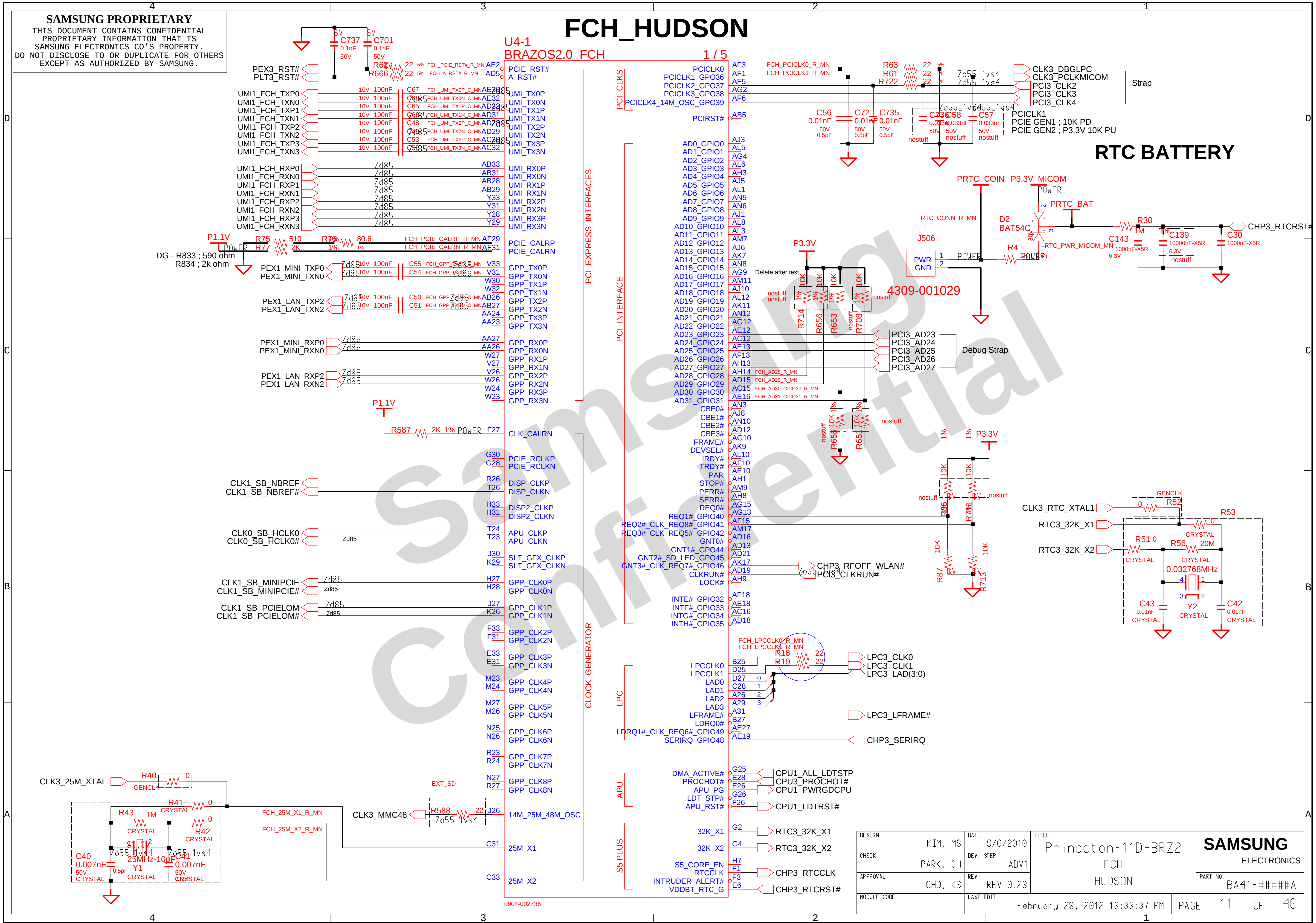
DDR SO-DIMM #1

Height : 8 mm (STANDARD)

P/N : 3709-001615 (FOXCONN)
P/N : 3709-001622 (CONCRAFT)



DRAW	RM LI	DATE	08/03/2012	TITLE	Ramos-14/15-2SP	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	DV		SODIMM B	
APPROVAL	LEI GUO	REV	REV 1.0		DDR3 2Gb	PART NO. BA41-*****A
MODULE CODE		LAST EDIT			August 11, 2012 09:48:52 AM	PAGE 14 OF 56



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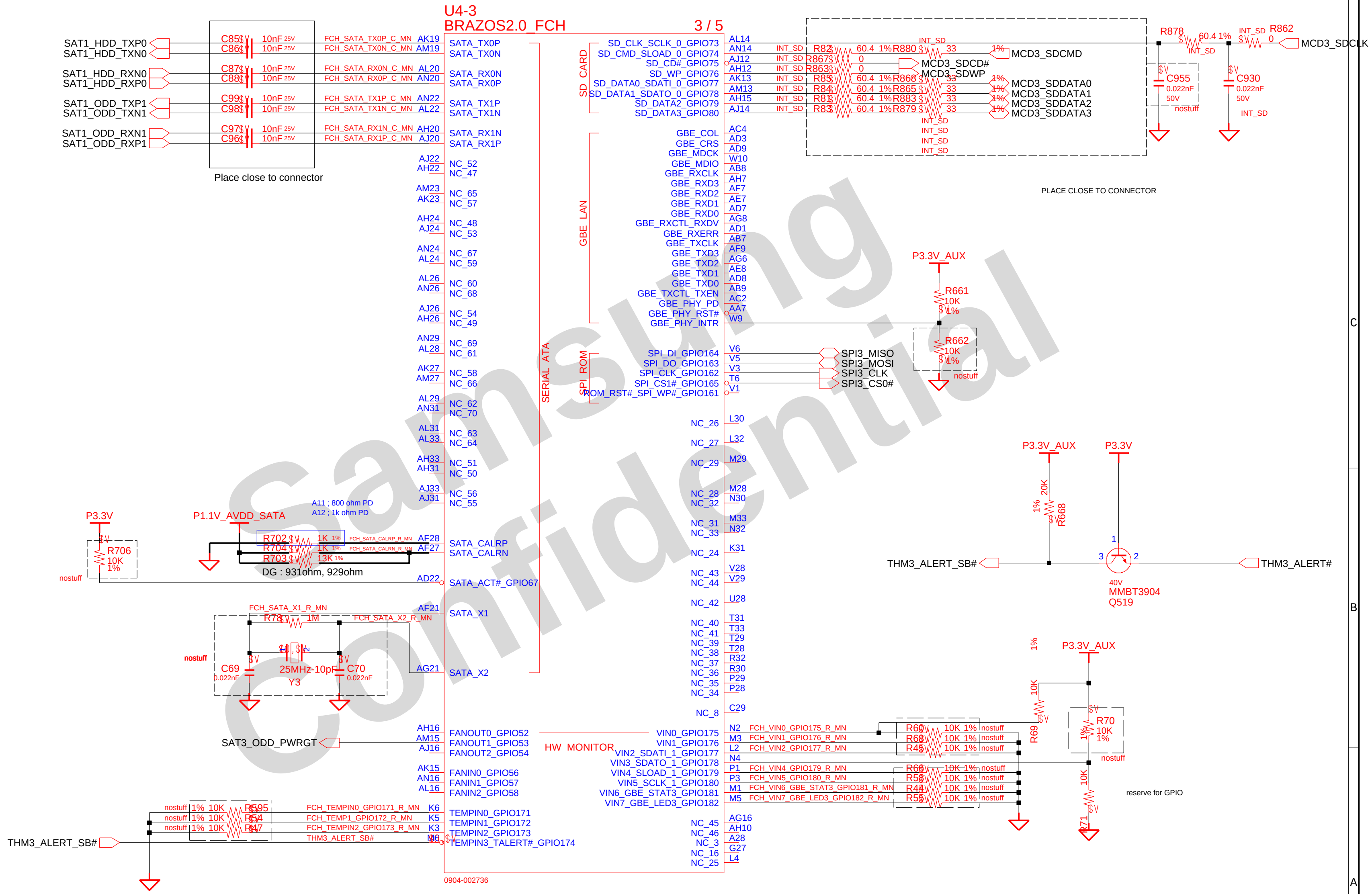
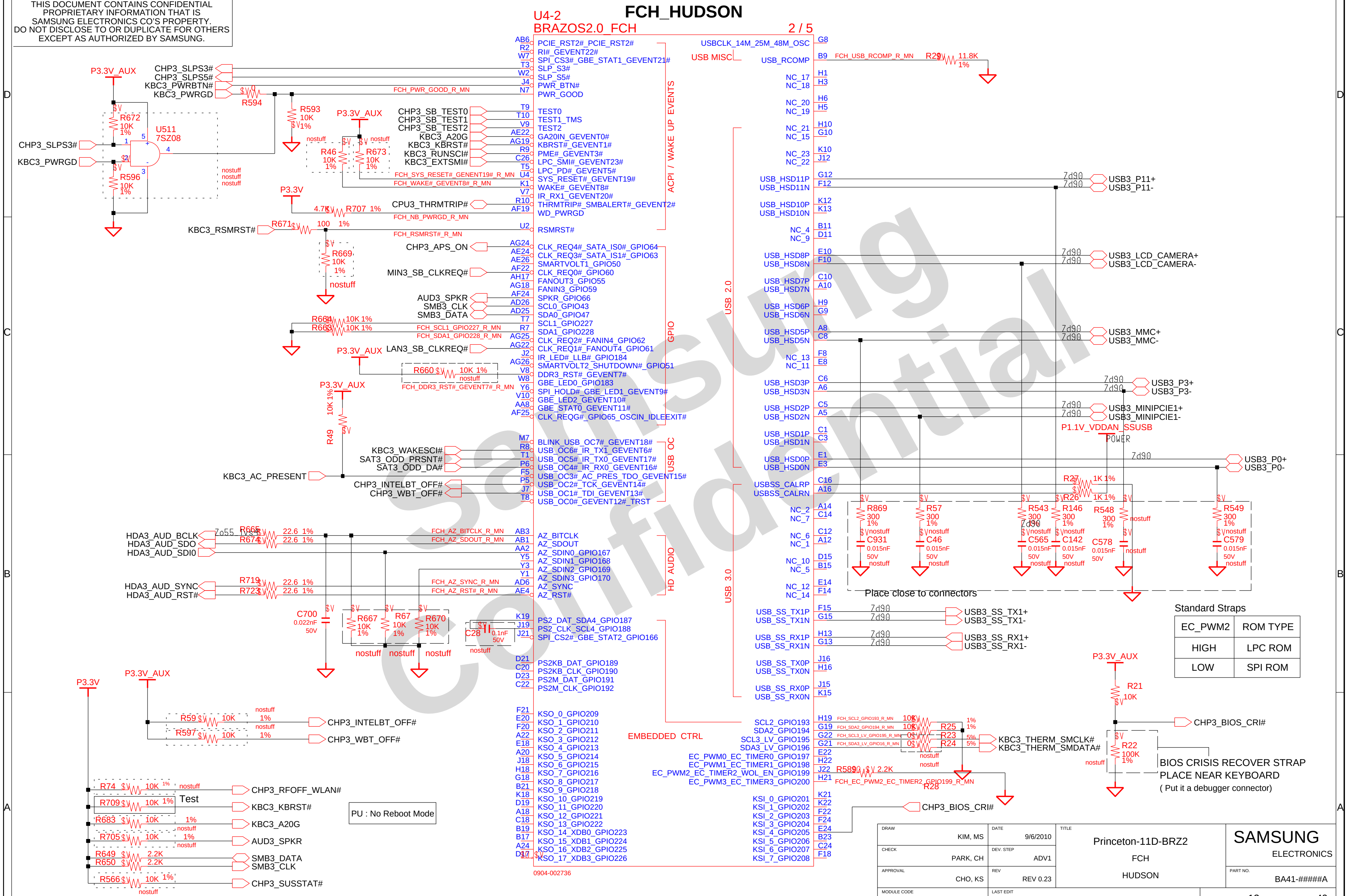


DESIGN	KIM, MS	DATE	9/6/2010	TITLE	Princeton-11D-BRZ2	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1		FCH	
APPROVAL	CHO, KS	REV	REV 0.23		HUDSON	PART NO. BA41-#####A
MODULE CODE		LAST EDIT	February 28, 2012 13:33:37 PM	PAGE	12	OF

FCH_HUDSON

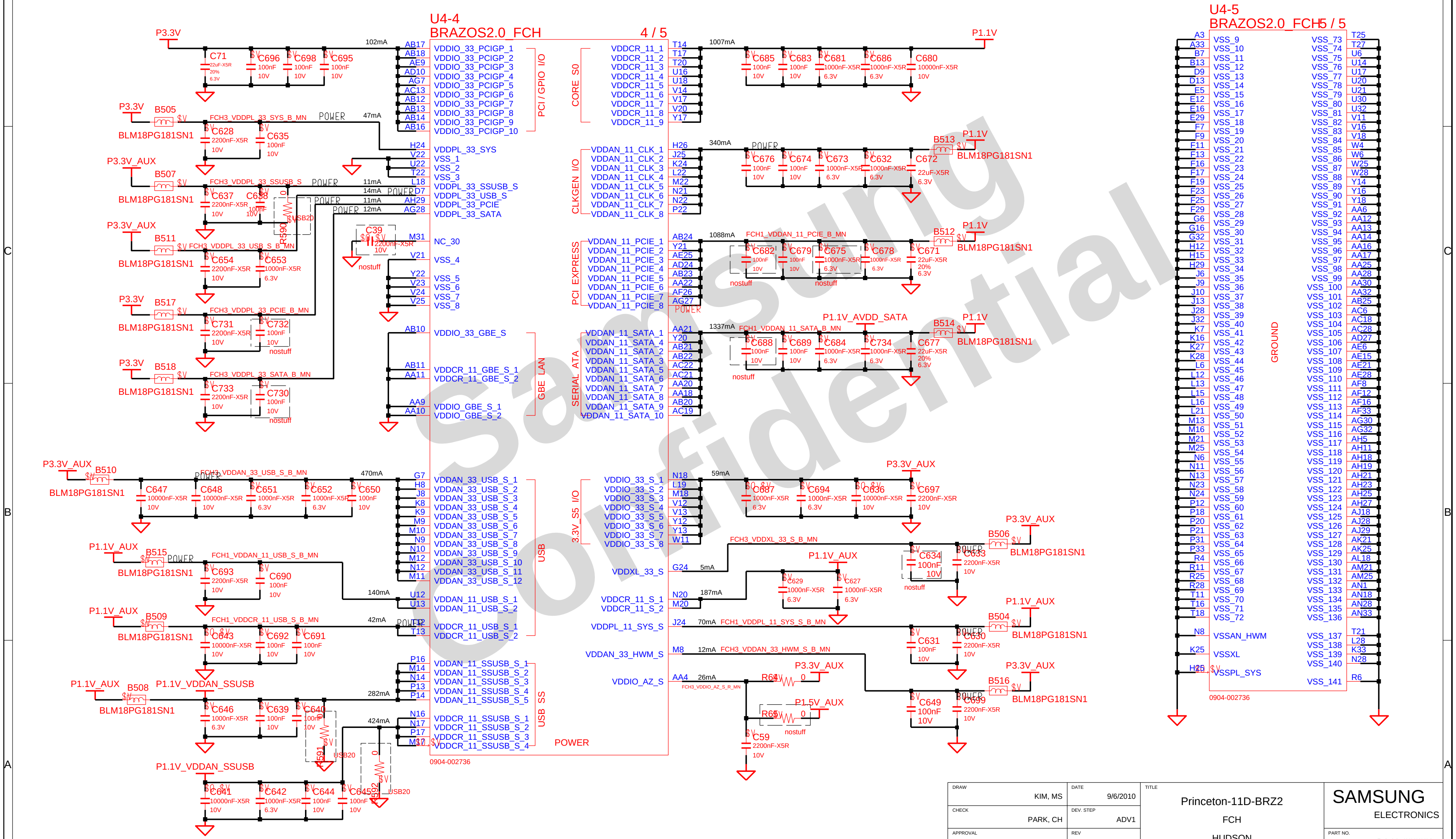


Standard Straps

EC_PWM2	ROM TYPE
HIGH	LPC ROM
LOW	SPI ROM

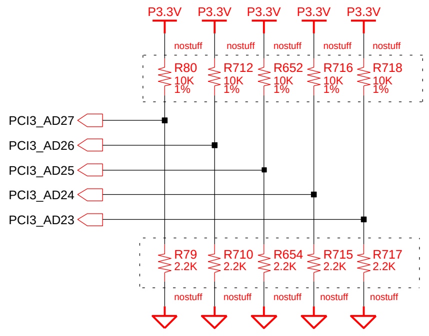
DRAW	KIM, MS	DATE	9/6/2010	TITLE	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1	Princeton-11D-BRZ2	
APPROVAL	CHO, KS	REV	REV 0.23	FCH	PART NO. BA41-#####A
MODULE CODE		LAST EDIT	February 28, 2012 13:33:37 PM	HUDSON	PAGE 13 OF 40

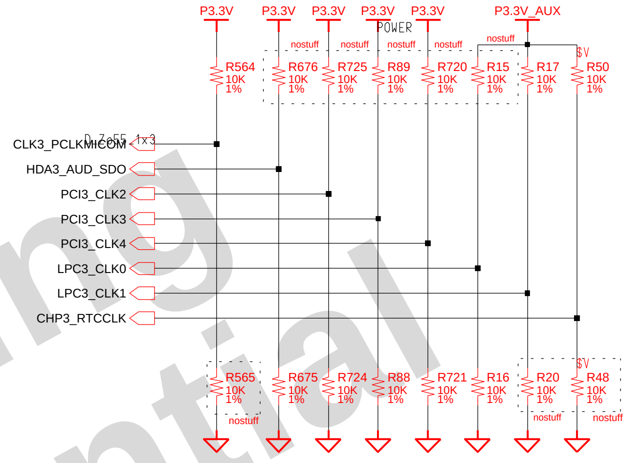
FCH_HUDSON



DRAW	KIM, MS	DATE	9/6/2010	TITLE	Princeton-11D-BRZ2	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1		FCH	
APPROVAL	CHO, KS	REV	REV 0.23		HUDSON	PART NO. BA41-#####A
MODULE CODE		LAST EDIT	February 28, 2012 13:33:37 PM		PAGE 14 OF 40	

Strap



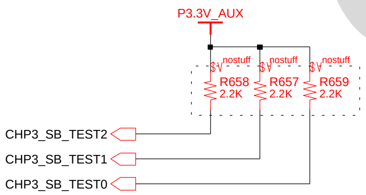


DEBUG STRAPS

	PCI3_AD(27)	PCI3_AD(25)	PCI3_AD(24)	PCI3_AD(23)
	PCI PLL	REFCLK	PCIe EEPROM	Booting from PCI memory
STRAP HIGH	USE PCI PLL	Normal REFCLK Termination	USE DEFAULT PCIE STRAPS	DISABLE PCI MEM BOOT
STRAP LOW	BYPASS PCI PLL	Inverted REFCLK Termination	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT

STANDARD STRAPS

	CLK3_PCLKMICOM	CHP3_RTCCLK	PCI3_CLK3	PCI_CLK4	LPC3_CLK0	LPC3_CLK1
PULL HIGH	ALLOW PCIE GEN2 DEFAULT	S5 PLUS MODE DISABLE DEFAULT	DEBUG STRAP MODE ENABLE	non_Fusion CLOCK MODE	IMC ENABLE	CLKGEN ENABLE DEFAULT
PULL LOW	FORCE PCIE GEN1	S5 PLUS MODE ENABLE	DEBUG STRAP MODE DISABLE DEFAULT	FUSION CLOCK MODE DEFAULT	IMC DISABLED DEFAULT	CLKGEN DISABLED



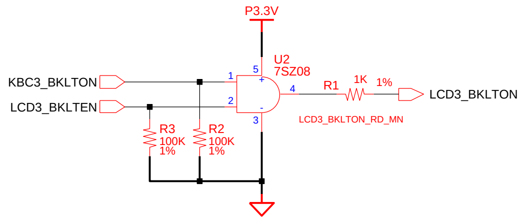
Remove SB_TEST pins for mass production. (For ASIC debug only - AMD)

DRAW	KIM, MS	DATE	9/6/2010	TITLE	Princeton-11D-BRZ2
CHECK	PARK, CH	DEV. STEP	ADV1		STRAP
APPROVAL	CHO, KS	REV	REV 0.23		STRAP
MODULE CODE	undefined	LAST EDIT	February 28, 2012 13:33:37 PM	PAGE	15 OF 40

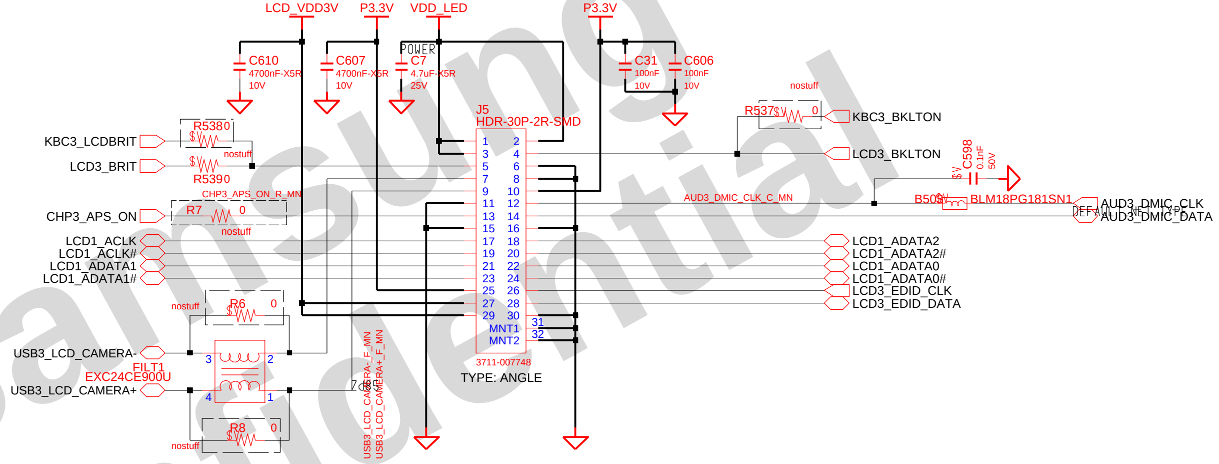
SAMSUNG ELECTRONICS
PART NO. BA41-#####A

LVDS LOGIC

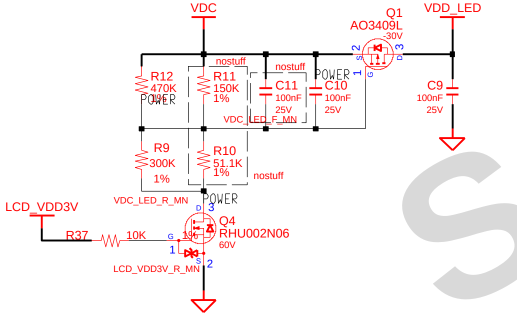
Backlight On



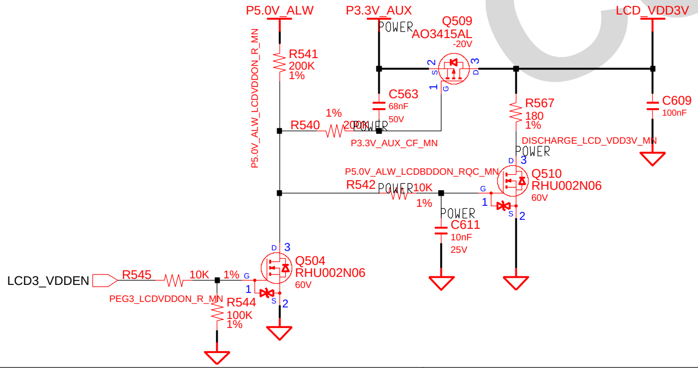
1Ch. LCD Connector + CAMERA + INT MIC



LED Power



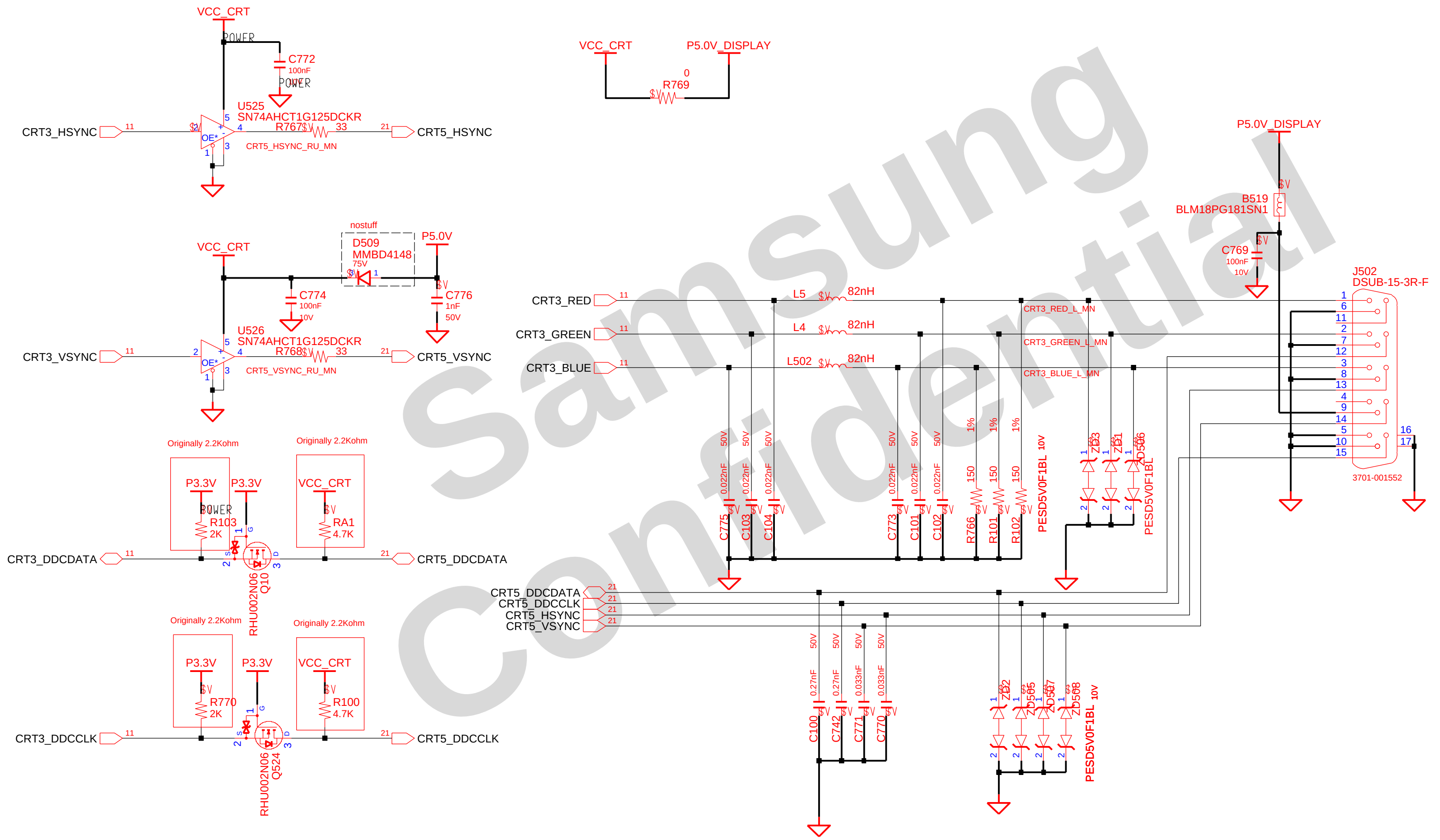
LCD Power



USB signal stub should be less than 100mil

DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		GRAPHICS_IF	
APPROVAL	LEI GUO	REV	REV 1.0		LVDS	PART NO. BA41-*****A
MODULE CODE		LAST EDIT	September 25, 2012 07:52:37 AM		PAGE 20 OF 42	

VGA

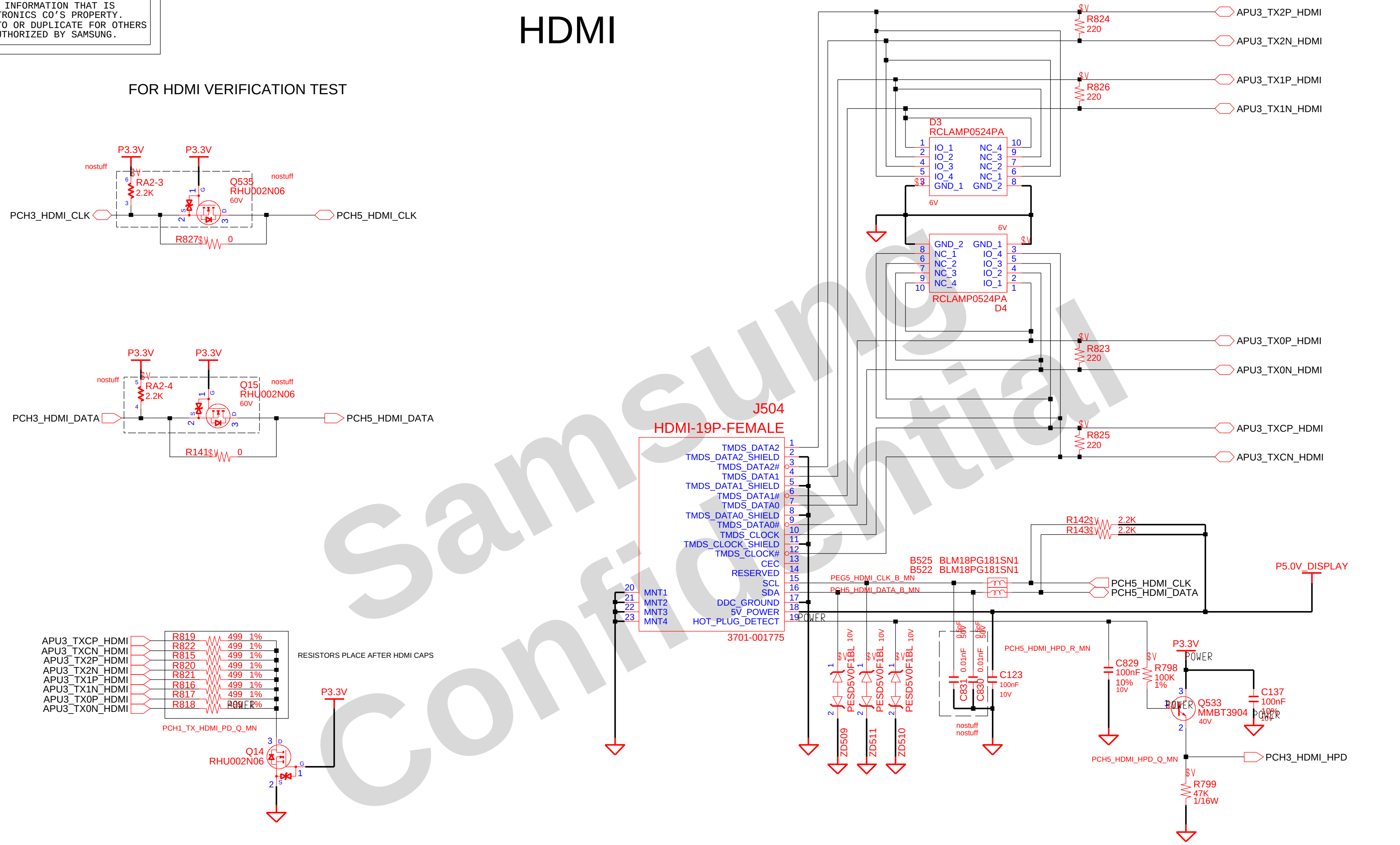


DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT GRAPHIC_IF CRT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV			
APPROVAL	LEI GUO	REV	REV 1.0			PART NO. BA41-*****A
MODULE CODE		LAST EDIT	September 25, 2012 07:52:37 AM			PAGE 21 OF 42

HDMI

After checking, Houston need to use CMC for each signal.

FOR HDMI VERIFICATION TEST



N10x/N11x_40nm HDMI/DP/LVDS support only 3.3V voltage tolerance

DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		GRAPHICS_IF	
APPROVAL	LEI GUO	REV	REV 1.0		HDMI	PART NO. BA41-*****A
MODULE CODE		LAST EDIT			September 25, 2012 07:52:37 AM	PAGE 22 OF 42

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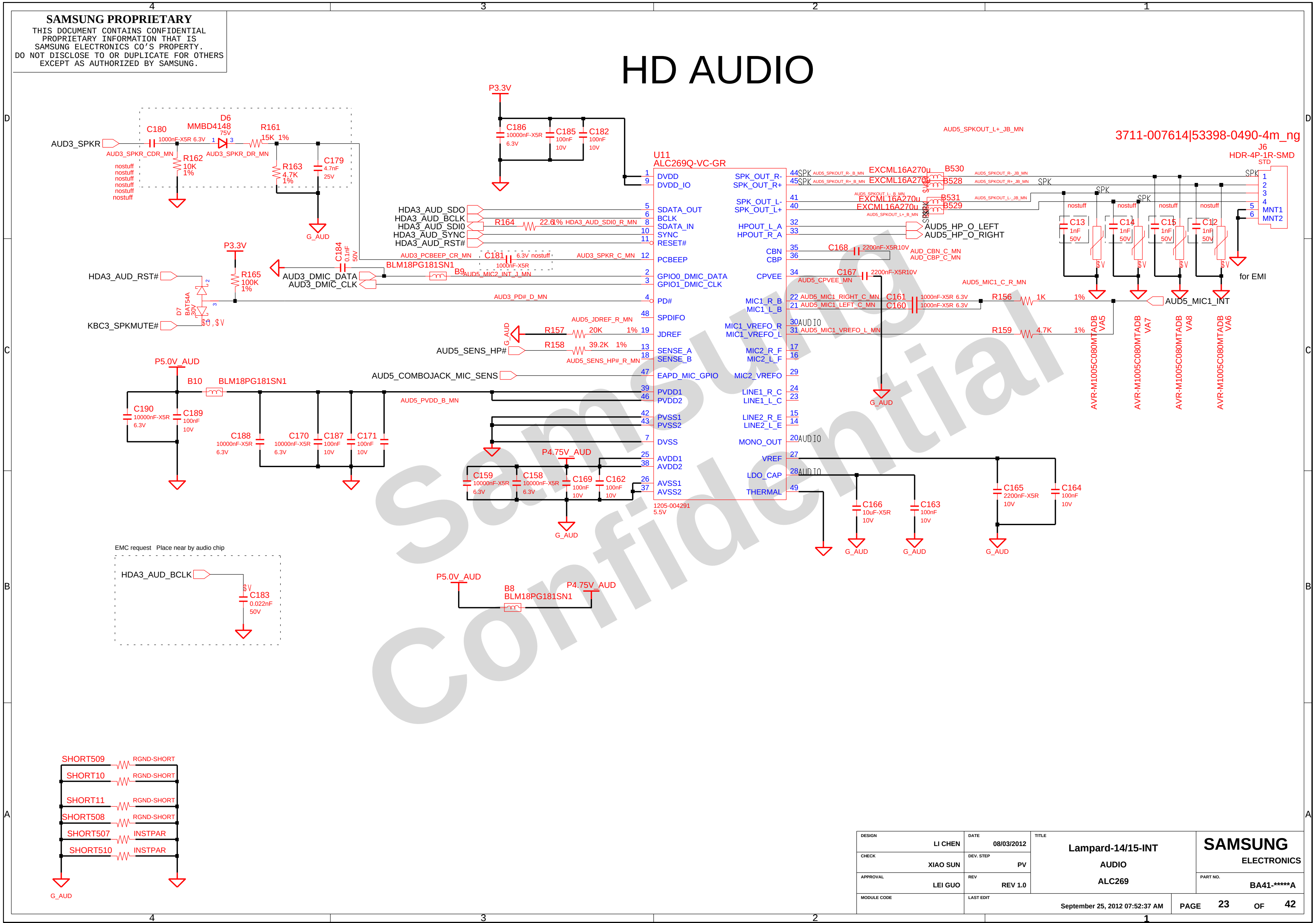
D:/users/ecad60/Lampard-Int/Lampard_14_15_INT_PV-0924



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HD AUDIO
U11
ALC269Q-VC-GR
DVDD
DVDD_IO
SDATA_OUT
BCLK
SDATA_IN
SYNC
RESET#
PCBEEP
GPIO0_DMIC_DATA
GPIO1_DMIC_CLK
PD#
SPDIFO
JDREF
SENSE_A
SENSE_B
EAPD_MIC_GPIO
PVDD1
PVDD2
PVSS1
PVSS2
DVSS
AVDD1
AVDD2
AVSS1
AVSS2
SPK_OUT_R-
SPK_OUT_R+
SPK_OUT_L-
SPK_OUT_L+
HPOUT_L_A
HPOUT_R_A
CBN
CBP
CPVEE
MIC1_R_B
MIC1_L_B
MIC1_VREFO_R
MIC1_VREFO_L
MIC2_R_F
MIC2_L_F
MIC2_VREFO
LINE1_R_C
LINE1_L_C
LINE2_R_E
LINE2_L_E
MONO_OUT
VREF
LDO_CAP
THERMAL
1205-004291
5.5V
P3.3V
P5.0V_AUD
P4.75V_AUD
G_AUD
AUD3_SPKR
HDA3_AUD_SDO
HDA3_AUD_BCLK
HDA3_AUD_SDI0
HDA3_AUD_SYNC
HDA3_AUD_RST#
AUD3_DMIC_DATA
AUD3_DMIC_CLK
KBC3_SPKMUTE#
AUD5_SENS_HP#
AUD5_COMBOJACK_MIC_SENS
AUD5_HP_O_LEFT
AUD5_HP_O_RIGHT
AUD5_MIC1_INT
3711-007614|53398-0490-4m_ng
J6
HDR-4P-1R-SMD
MNT1
MNT2
for EMI
EMC request Place near by audio chip
HDA3_AUD_BCLK
C183
0.022nF
50V
B8
BLM18PG181SN1
B10
BLM18PG181SN1
B9
EXCML16A270u
B528
B529
B530
B531
AVR-M1005C080MTADB
SHORT509
SHORT10
SHORT11
SHORT508
SHORT507
SHORT510
RGND-SHORT
INSTPAR
DESIGN LI CHEN
DATE 08/03/2012
CHECK XIAO SUN
DEV. STEP PV
APPROVAL LEI GUO
REV REV 1.0
TITLE Lampard-14/15-INT
AUDIO
ALC269
SAMSUNG ELECTRONICS
PART NO. BA41-*****A
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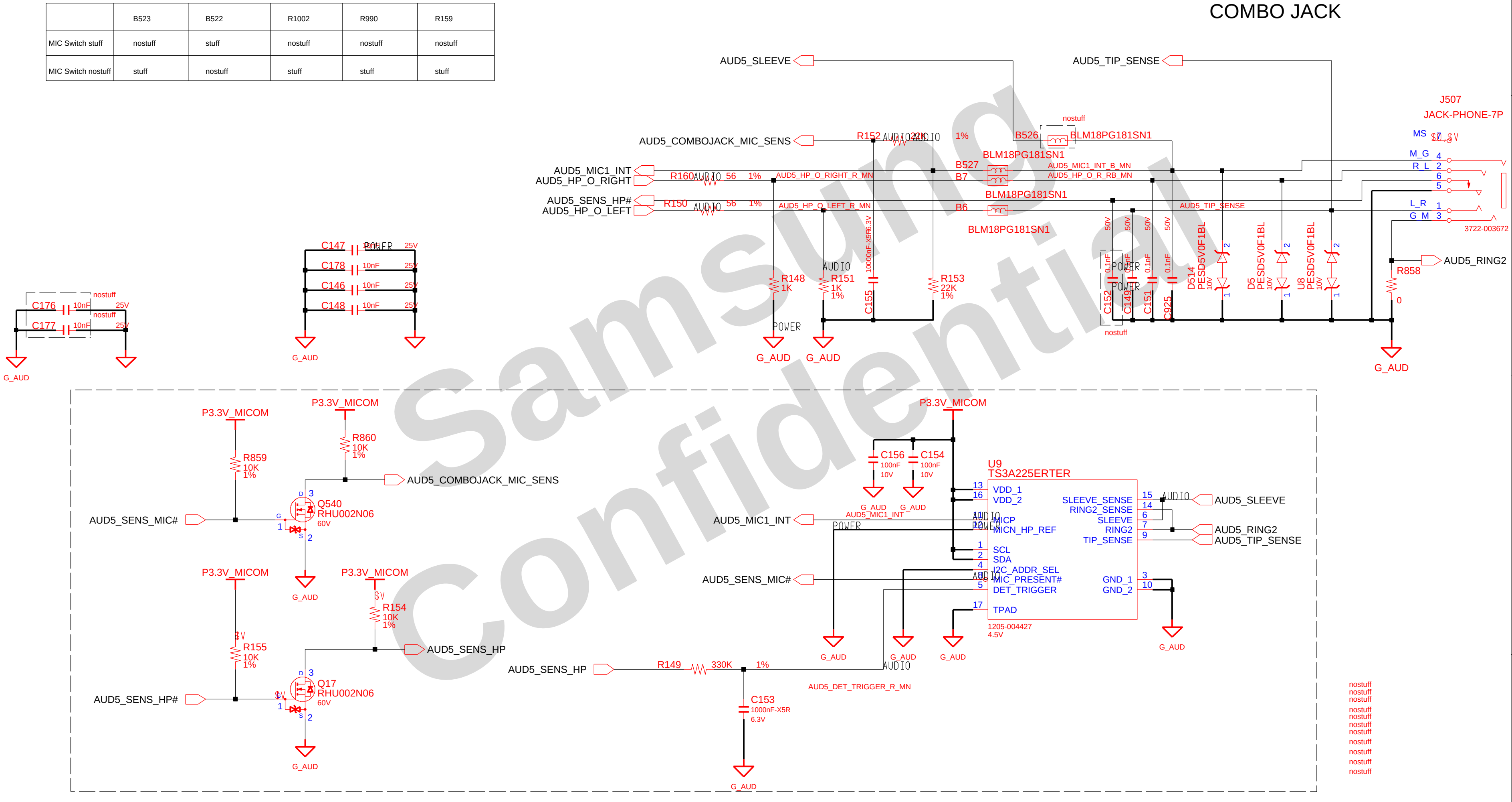
HD AUDIO

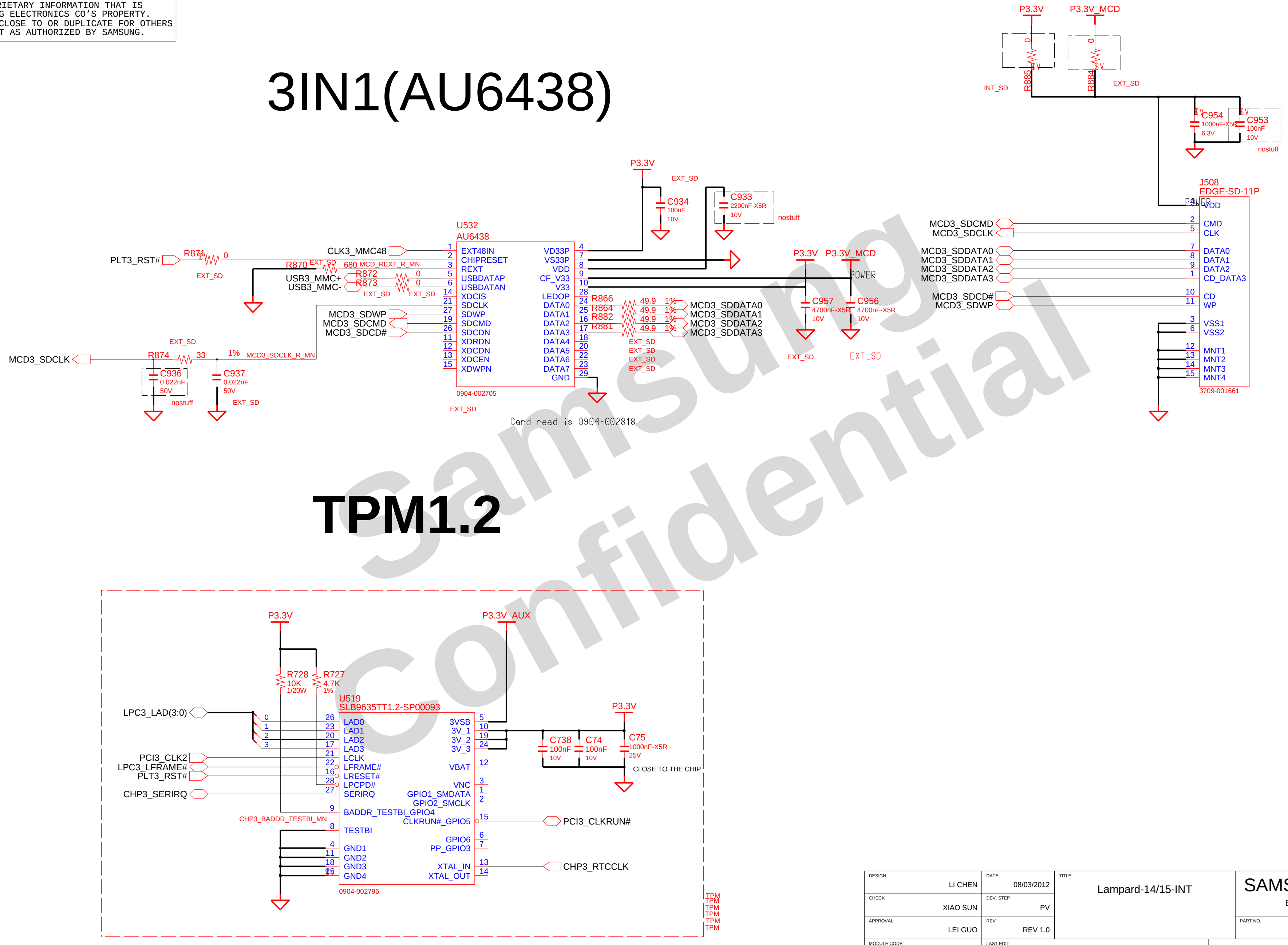
	B523	B522	R1002	R990	R159
MIC Switch stuff	nostuff	stuff	nostuff	nostuff	nostuff
MIC Switch nostuff	stuff	nostuff	stuff	stuff	stuff



DESIGN LI CHEN	DATE 08/03/2012	TITLE Lampard-14/15-INT AUDIO AUDIO COMBO JACK	SAMSUNG ELECTRONICS
CHECK XIAO SUN	DEV. STEP PV		PART NO. BA41-*****A
APPROVAL LEI GUO	REV REV 1.0		
MODULE CODE	LAST EDIT	September 25, 2012 07:52:37 AM	PAGE 24 OF 42

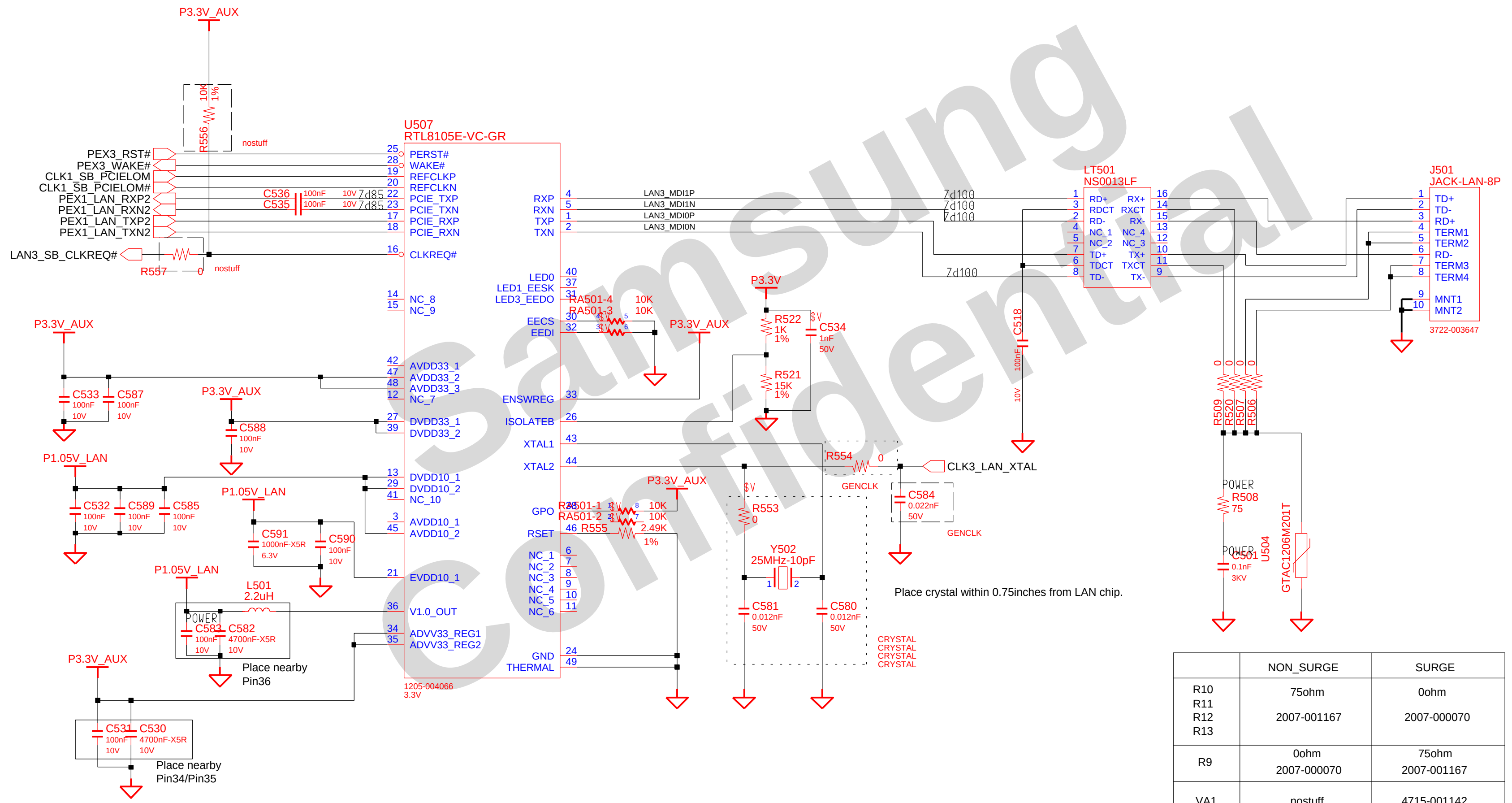
3IN1(AU6438)

TPM1.2



DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV			PART NO. BA41-*****A
APPROVAL	LEI GUO	REV	REV 1.0			
MODULE CODE		LAST EDIT		September 25, 2012 07:52:37 AM	PAGE 25 OF 42	

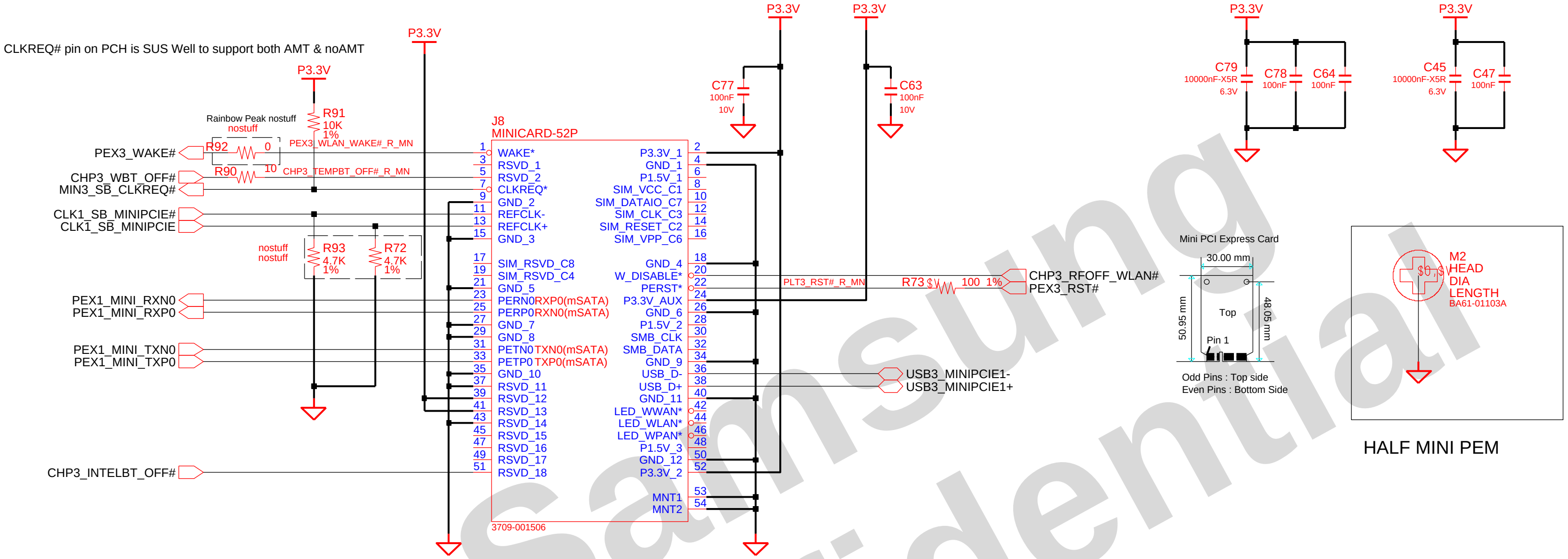
Realtek RTL8105E



	NON_SURGE	SURGE
R10 R11 R12 R13	75ohm 2007-001167	0ohm 2007-000070
R9	0ohm 2007-000070	75ohm 2007-001167
VA1	nostuff	4715-001142

DESIGN: LI CHEN	DATE: 08/03/2012	TITLE: Lampard-14/15-INT LAN LAN_Realtek_RTL8111E)	SAMSUNG ELECTRONICS
CHECK: XIAO SUN	DEV. STEP: PV		PART NO.: BA41-*****A
APPROVAL: LEI GUO	REV: REV 1.0		
MODULE CODE	LAST EDIT: September 25, 2012 07:52:37 AM		PAGE 26 OF 42

WLAN



DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		WLAN	
APPROVAL	LEI GUO	REV	REV 1.0		WLAN	PART NO. BA41-*****A
MODULE CODE		LAST EDIT			September 25, 2012 07:52:37 AM	PAGE 27 OF 42

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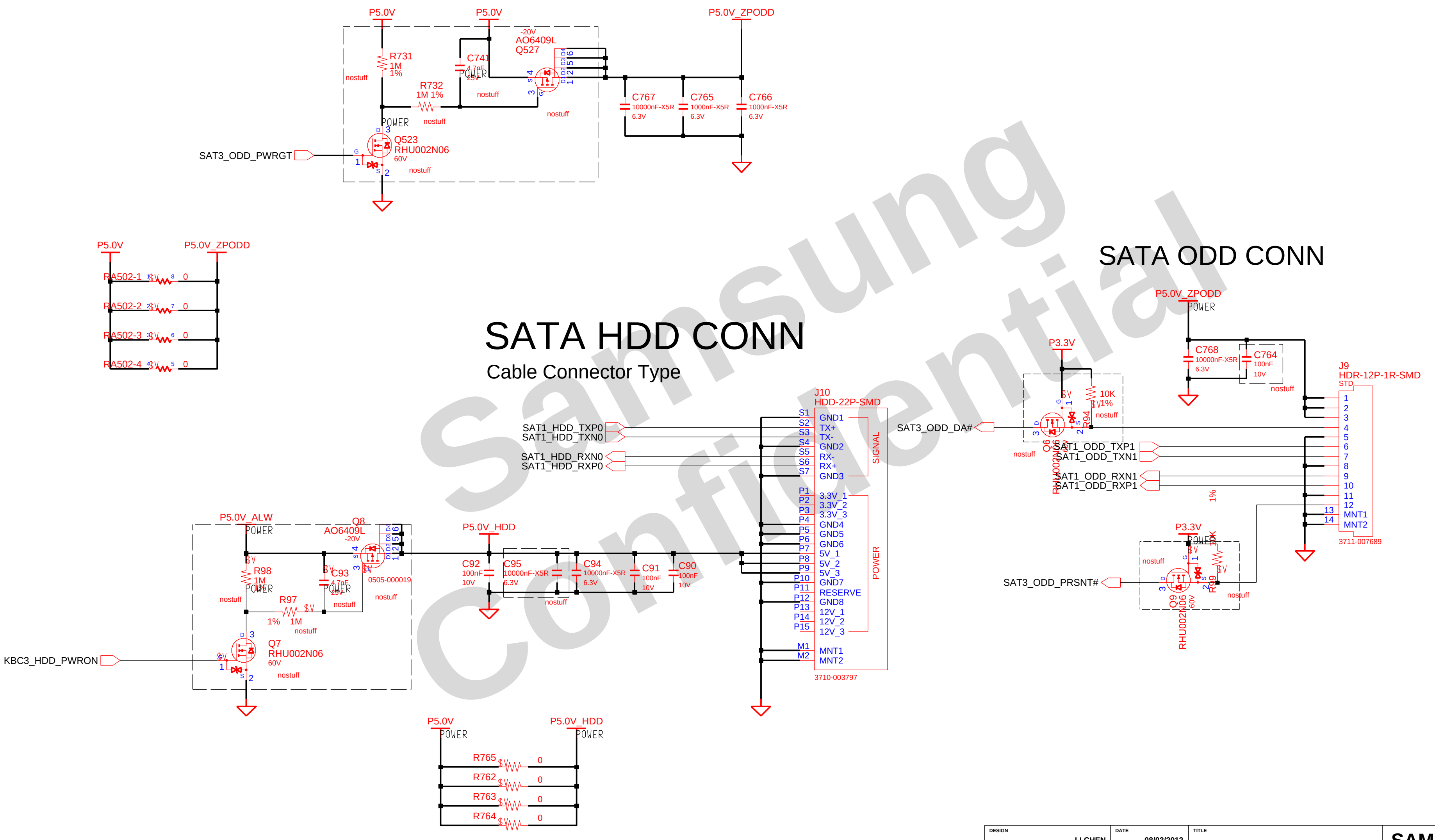
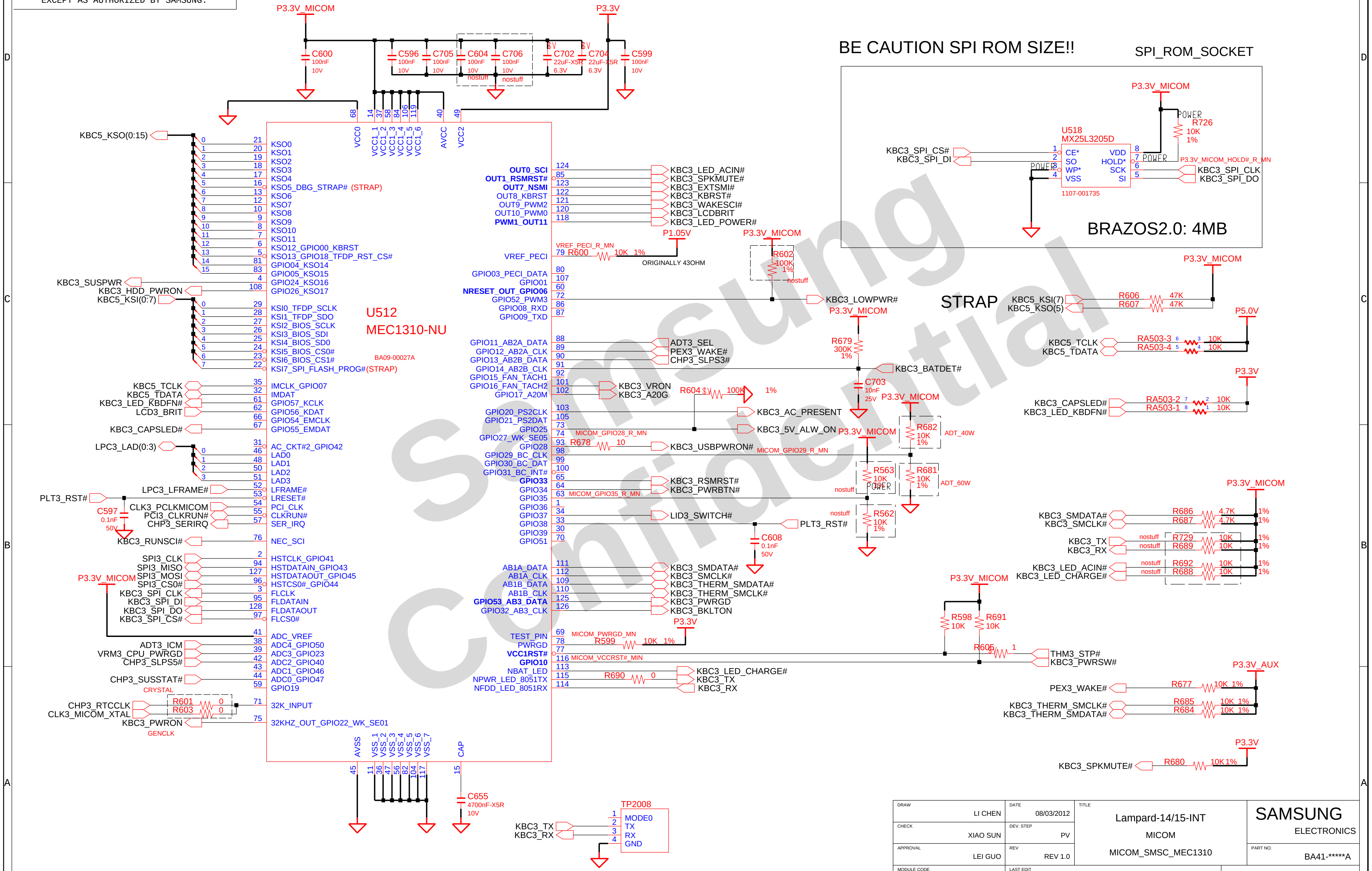
SATA I/F CONN



DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		SATA I/F	
APPROVAL	LEI GUO	REV	REV 1.0		SATA I/F	PART NO. BA41-*****A
MODULE CODE		LAST EDIT	September 25, 2012 07:52:37 AM	PAGE 28	OF 42	

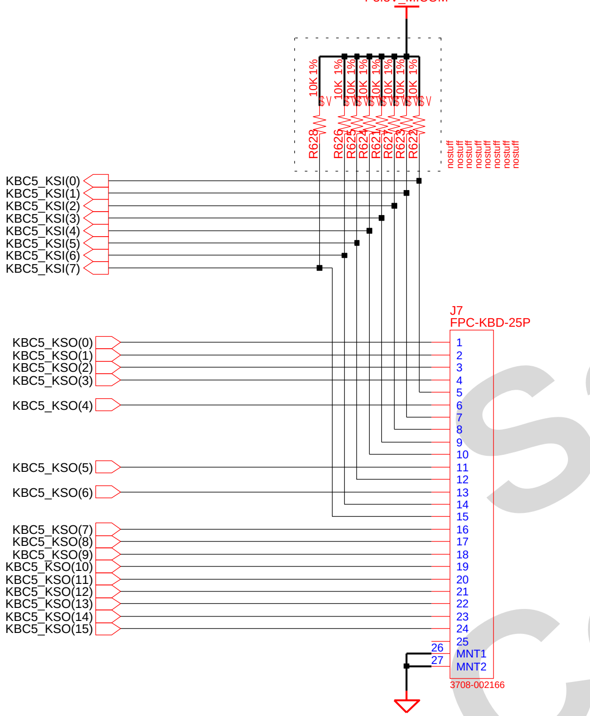
MAIN BOARD (MICOM)



DRAW	LI CHEN	DATE	08/03/2012	TITLE Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV	MICOM	
APPROVAL	LEI GUO	REV	REV 1.0	MICOM_SMSC_MEC1310	PART NO. BA41-*****A
MODULE CODE		LAST EDIT		September 25, 2012 07:52:37 AM	PAGE 29 OF 42

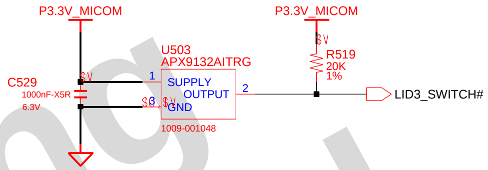
Micom Glue

KEYBOARD

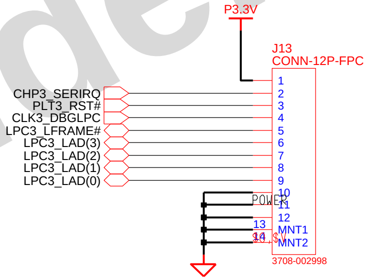


In bom J7 should use 3708-002883

LID3_SWITCH

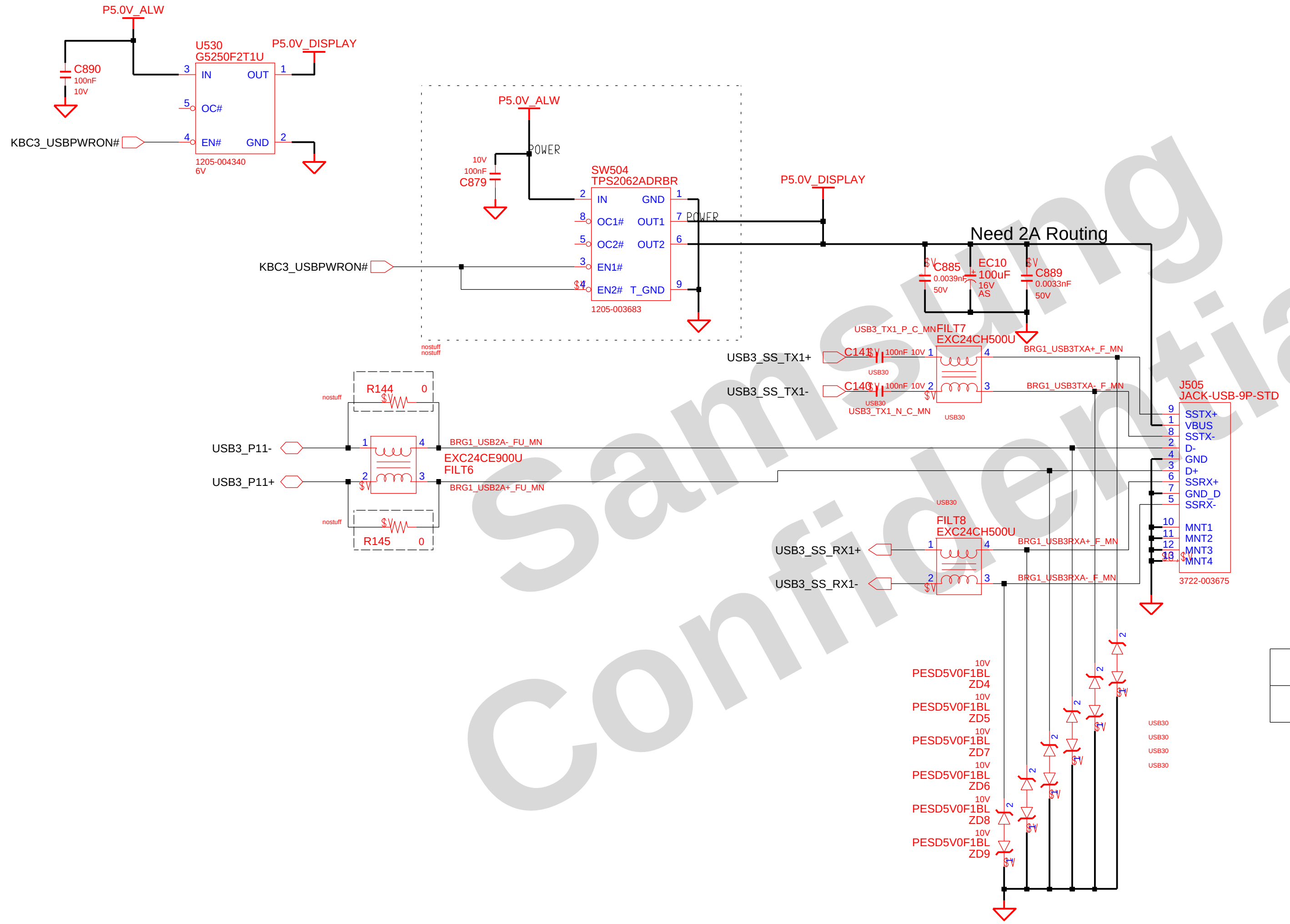


80H PORT DEBUG



DRAW: LI CHEN	DATE: 08/03/2012	TITLE: Lampard-14/15-INT		SAMSUNG ELECTRONICS
CHECK: XIAO SUN	DEV. STEP: PV	MICOM		
APPROVAL: LEI GUO	REV: REV 1.0	MICOM GLUE LOGIC		PART NO. BA41-*****A
MODULE CODE	LAST EDIT	September 25, 2012 07:52:37 AM	PAGE 30	OF 42

USB 3.0 CONNECTOR



	USB3.0(HM76&HM70)	USB2.0(HM75&NM70)
J504	3722-003330	3722-003302

DRAW: LI CHEN	DATE: 08/03/2012	TITLE: Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK: XIAO SUN	DEV. STEP: PV	USB3.0	
APPROVAL: LEI GUO	REV: REV 1.0	USB 3.0 CONNECTOR	PART NO. BA41-*****A
MODULE CODE	LAST EDIT: September 25, 2012 07:52:37 AM	PAGE 31 OF 42	

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D:/users/ecad60/Lampard-Int/Lampard_14_15_INT_PV-0924

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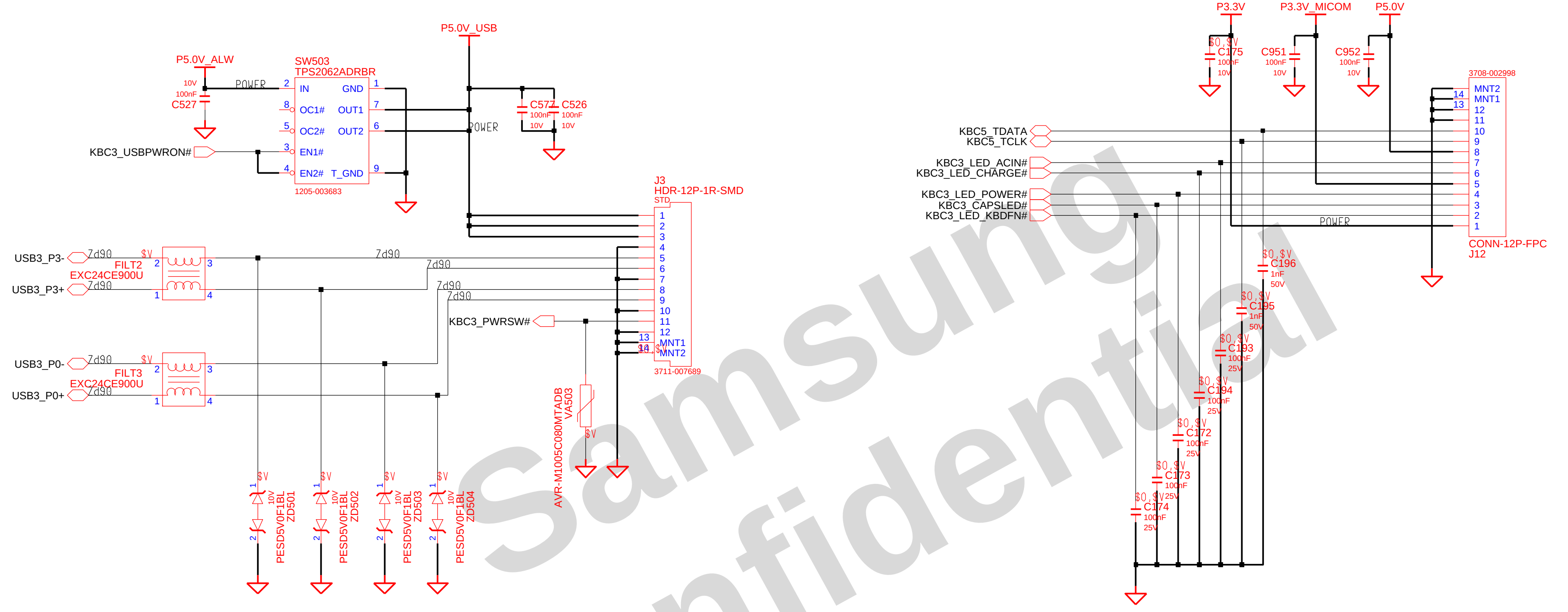
MAIN TO SUB

MAIN to 3-in-1 / USB SUB

TOUCHPAD & LED MAIN TO SUB



DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		SUB BOARD CONNECTOR	
APPROVAL	LEI GUO	REV	REV 1.0		MAIN TO SUB	PART NO. BA41-*****A
MODULE CODE		LAST EDIT			September 25, 2012 07:52:37 AM	PAGE 32 OF 42

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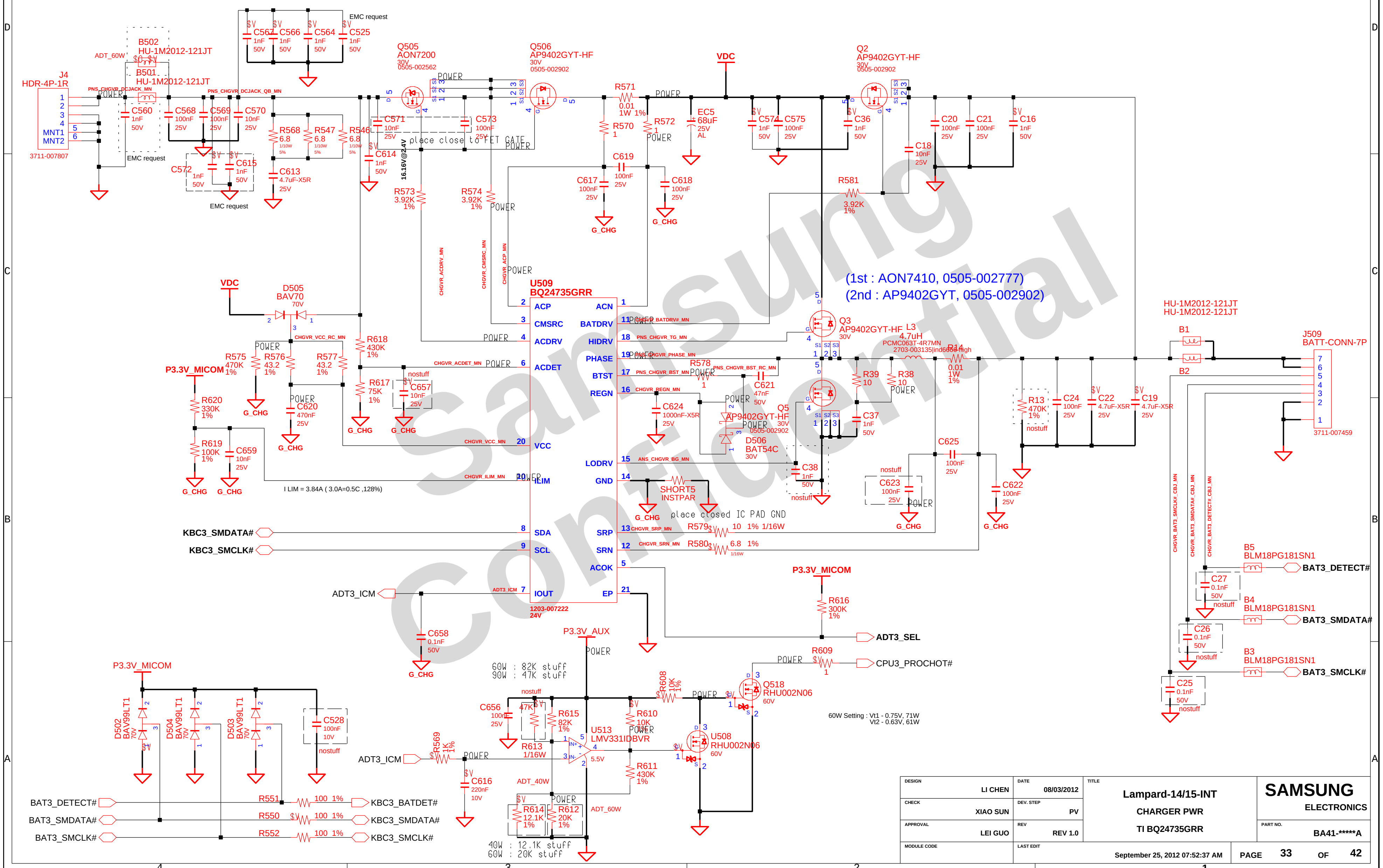
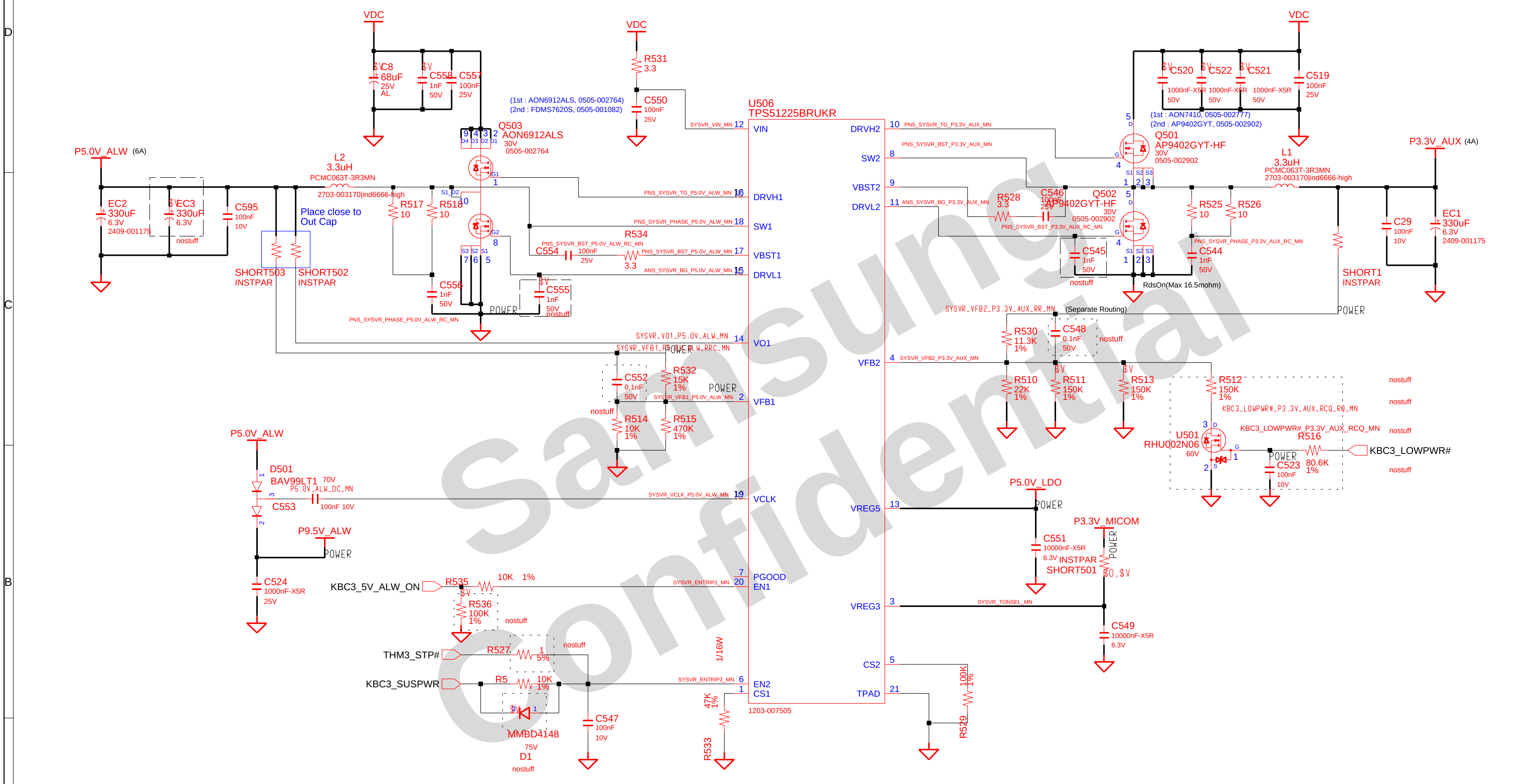
CHARGER & POWER MANAGEMENT



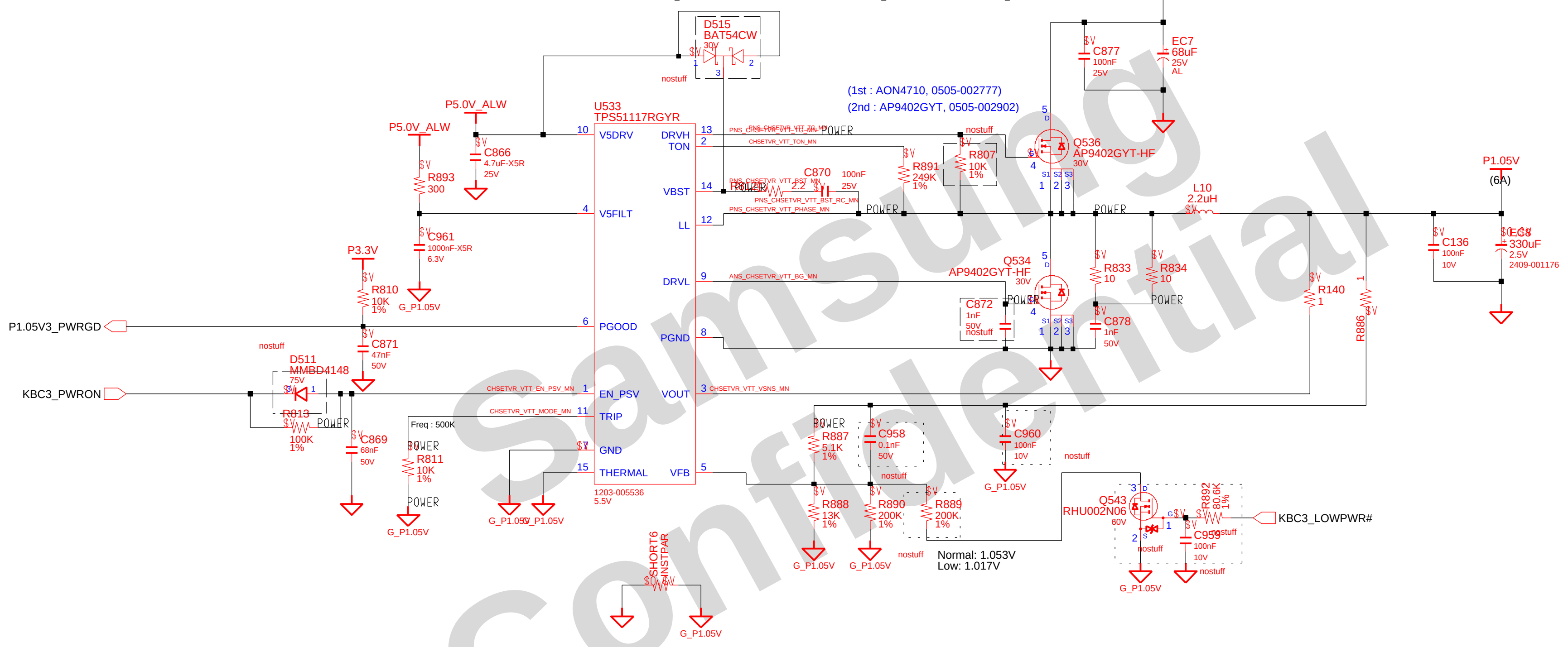
DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		CHARGER PWR	
APPROVAL	LEI GUO	REV	REV 1.0		TI BQ24735GRR	PART NO. BA41-*****A
MODULE CODE		LAST EDIT			September 25, 2012 07:52:37 AM	PAGE 33 OF 42

P3.3V_AUX & P5.0V_ALW



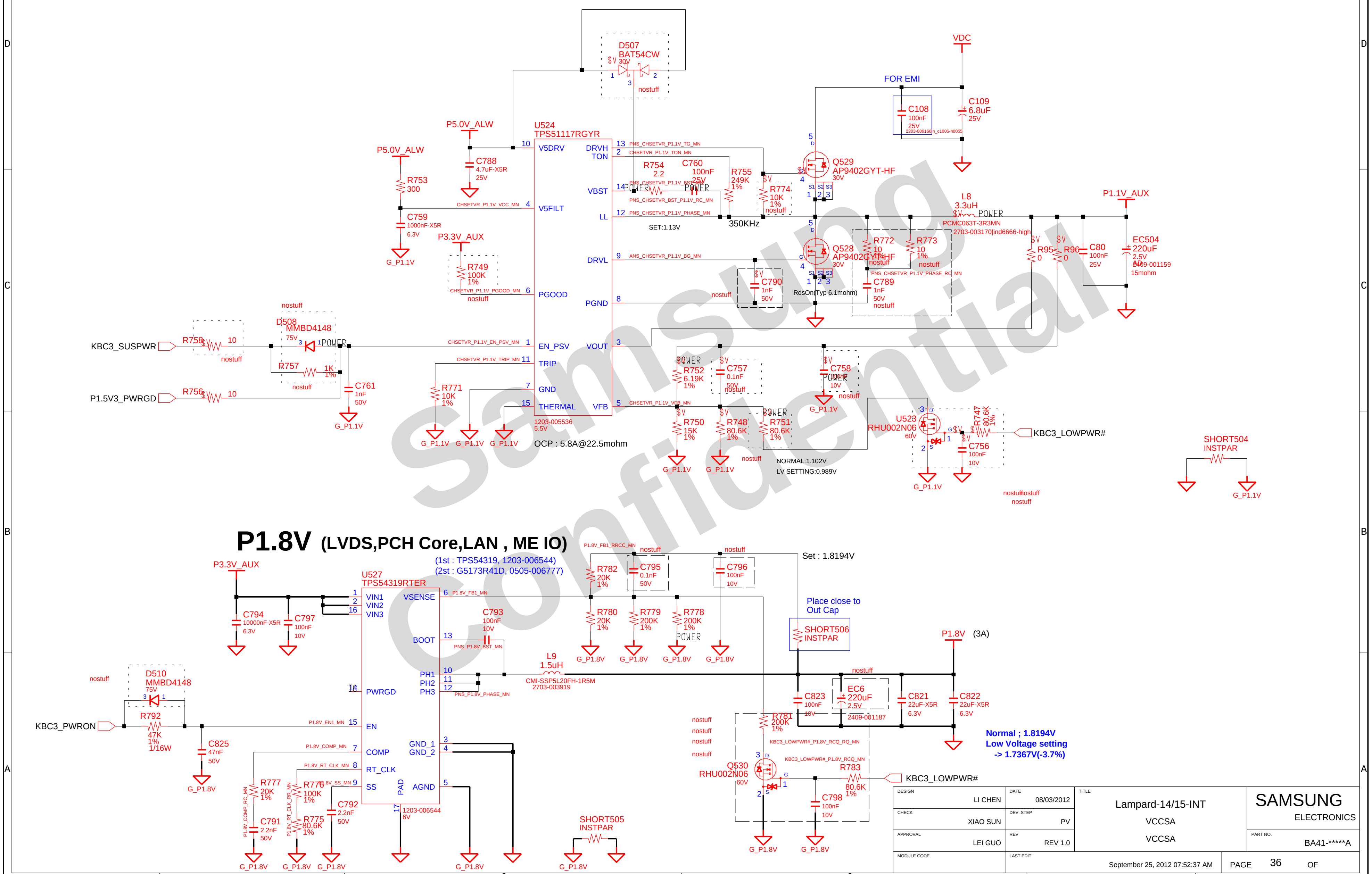
DRAW	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		P3.3V_AUX & P5.0V_ALW	
APPROVAL	LEI GUO	REV	REV 1.0		P3.3V_AUX & P5.0V_ALW	PART NO. BA41-*****A
MODULE CODE	undefined	LAST EDIT	September 25, 2012 07:52:37 AM		PAGE 34 OF 42	

Chipset Power (P1.05V)



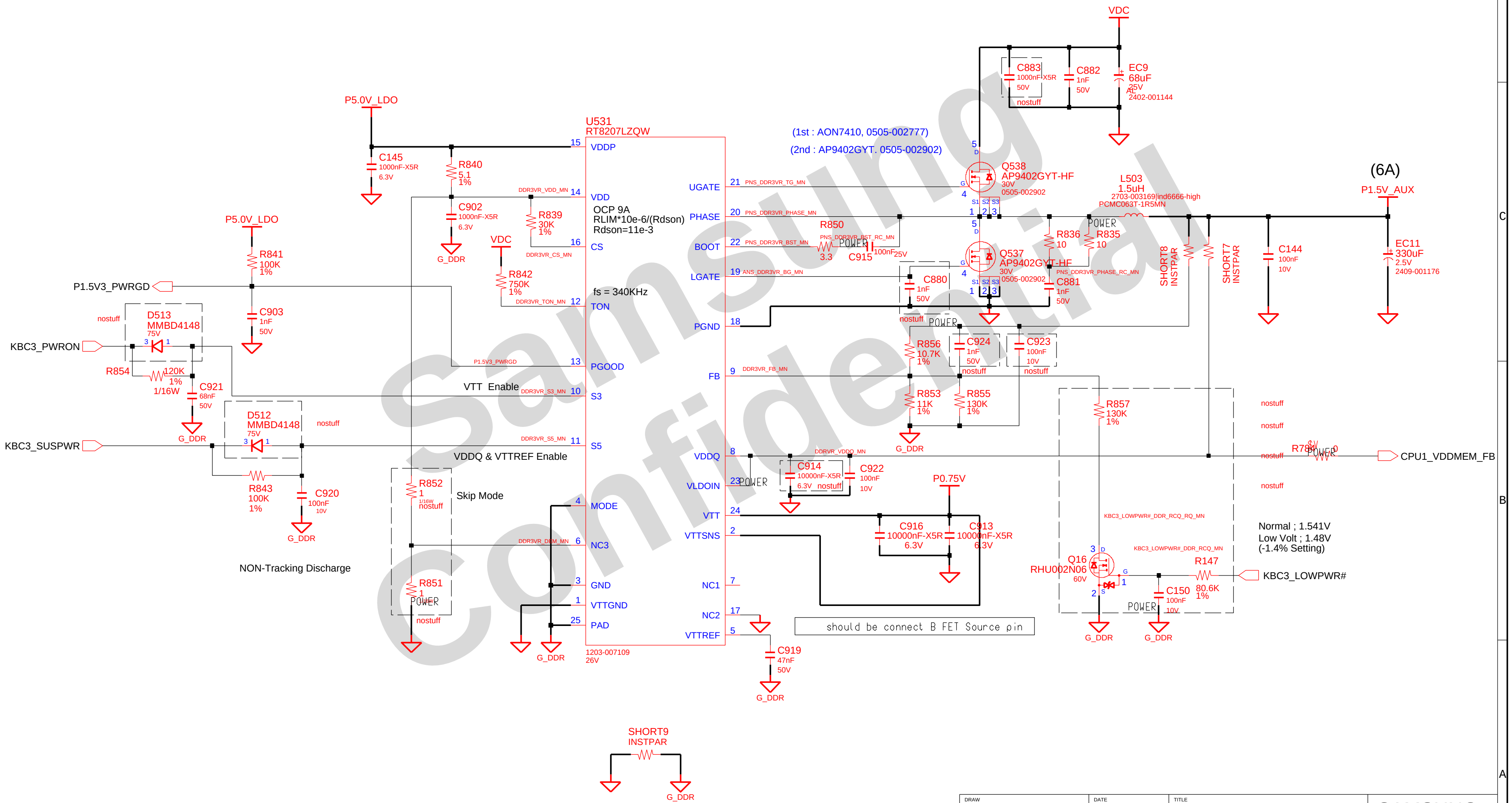
DESIGN	DATE	TITLE	SAMSUNG ELECTRONICS
LI CHEN	08/03/2012	Lampard-14/15-INT	
CHECK: XIAO SUN	DEV. STEP: PV	CHIPSET PWR	
APPROVAL: LEI GUO	REV: REV 1.0	P1.05V	PART NO. BA41-*****A
MODULE CODE	LAST EDIT: September 25, 2012 07:52:37 AM	PAGE 35 OF 42	

CHIPSET POWER(P1.1V_AUX)



DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		VCCSA	
APPROVAL	LEI GUO	REV	REV 1.0		VCCSA	PART NO. BA41-*****A
MODULE CODE		LAST EDIT			September 25, 2012 07:52:37 AM	PAGE 36 OF

DDR3 Power

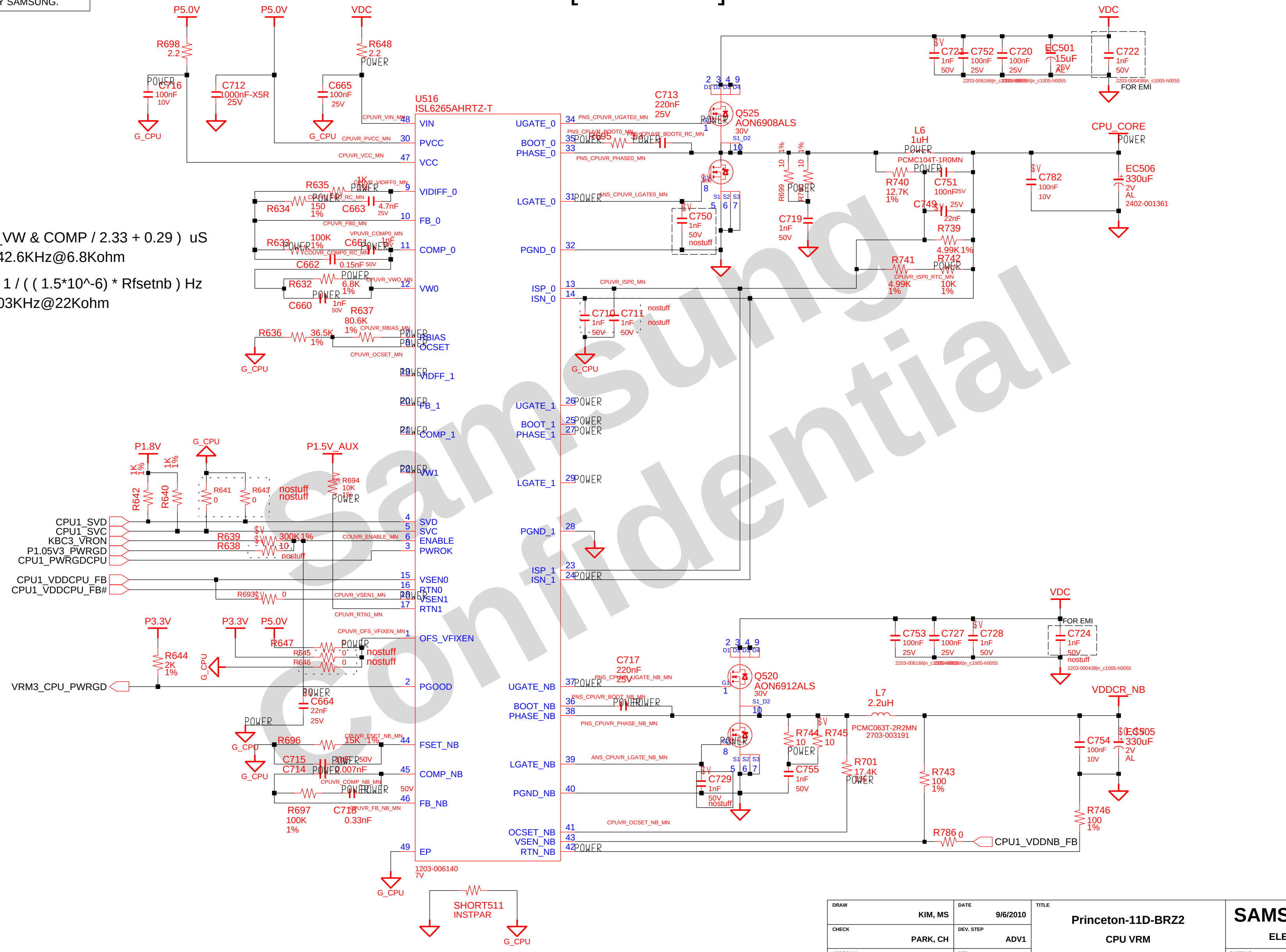


DRAW	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		P1.05V	
APPROVAL	LEI GUO	REV	REV 1.0		VT386FCX	PART NO. BA41-*****A
MODULE CODE	undefined	LAST EDIT			September 25, 2012 07:52:37 AM	PAGE 37 OF 42

CPU VRM [INTERSIL]

VDD Freq = (R_VW & COMP / 2.33 + 0.29) uS
: 342.6KHz@6.8Kohm

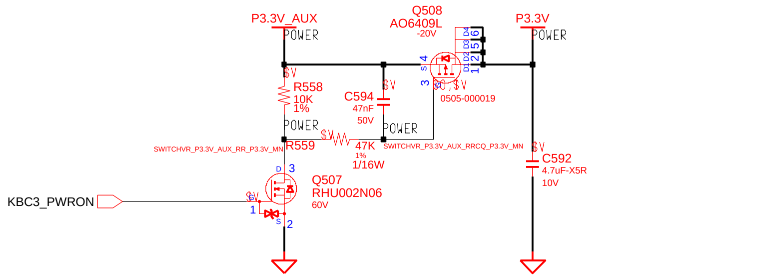
VDD_NB Freq = 1 / ((1.5*10^-6) * Rfsetnb) Hz
: 303KHz@22Kohm



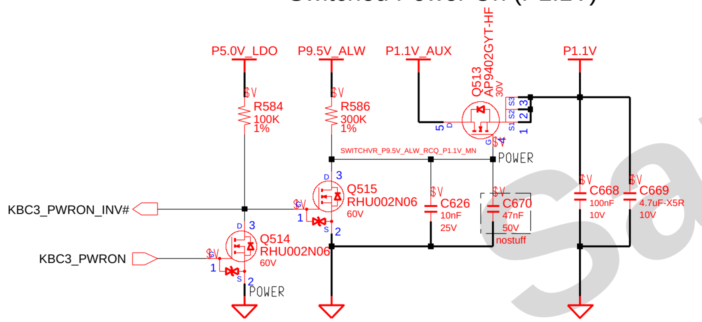
DRAW	KIM, MS	DATE	9/6/2010	TITLE	Princeton-11D-BRZ2	SAMSUNG ELECTRONICS
CHECK	PARK, CH	DEV. STEP	ADV1		CPU VRM	
APPROVAL	CHO, KS	REV	REV 0.23		ISL6265AHRTZ-T	PART NO. BA41-#####A
MODULE CODE		LAST EDIT			February 28, 2012 13:33:37 PM	PAGE 36 OF 40

Switched Power

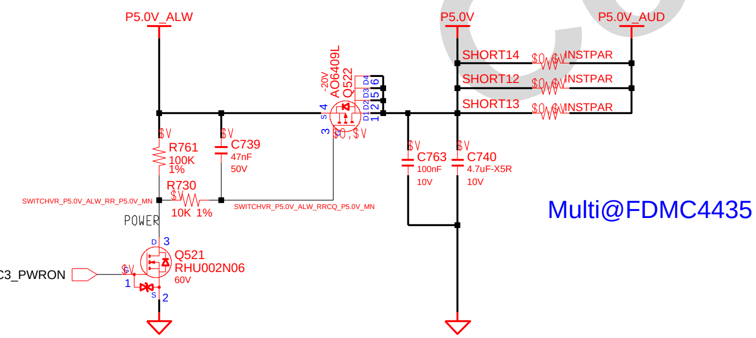
Switched Power On (P3.3V) Multi@AP2607GY



Switched Power On (P1.1V)

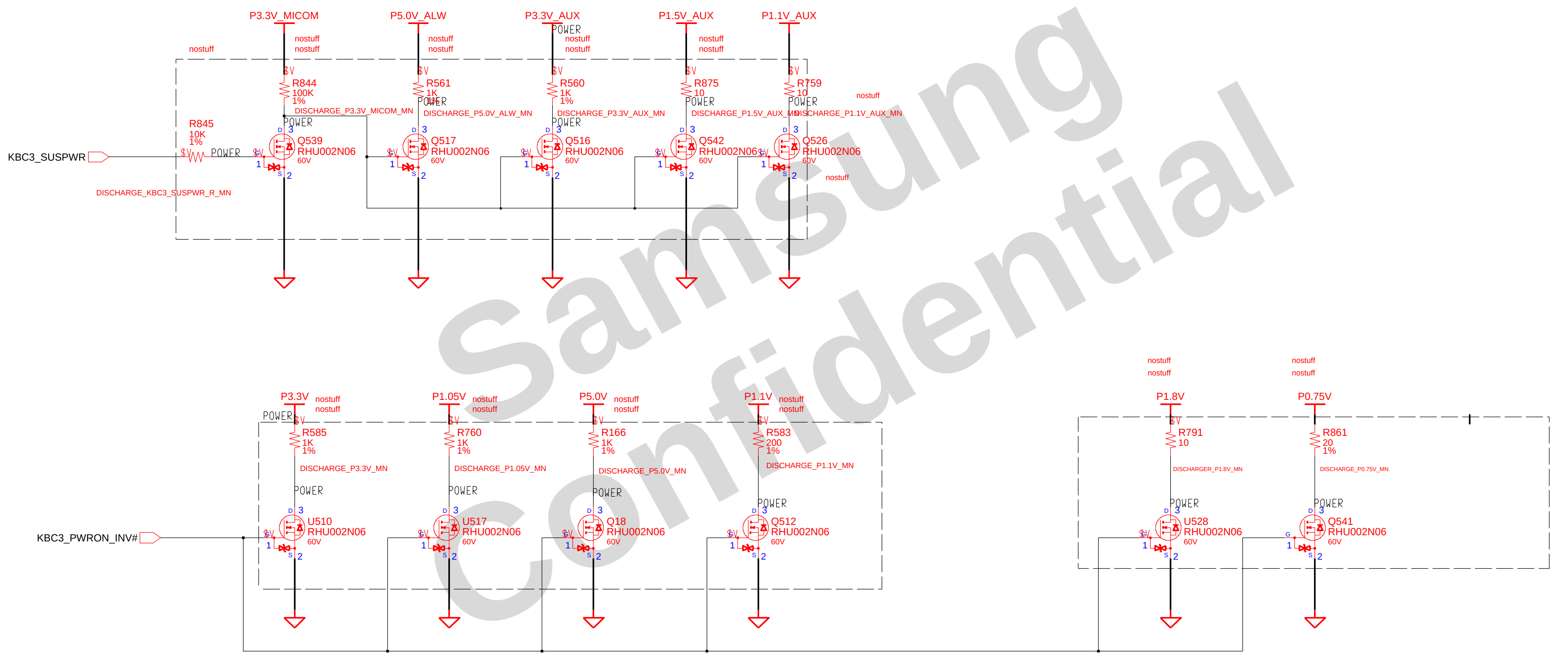


Switched Power On (P5.0V)



DRAW: LI CHEN	DATE: 08/03/2012	TITLE: Lampard-14/15-INT		SAMSUNG ELECTRONICS
CHECK: XIAO SUN	DEV. STEP: PV	PWR_MV_SWITCHED		
APPROVAL: LEI GUO	REV: REV 1.0	SWITCHED POWER		PART NO. BA41-*****A
MODULE CODE	LAST EDIT	September 25, 2012 07:52:37 AM	PAGE 39	OF 42

POWER DISCHARGER



DRAW	LI CHEN	DATE	08/03/2012	TITLE	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV	Lampard-14/15-INT PWR_MV_DISCHARGER	
APPROVAL	LEI GUO	REV	REV 1.0	DISCHARGING LOGIC	PART NO. BA41-*****A
MODULE CODE	undefined	LAST EDIT	September 25, 2012 07:52:37 AM	PAGE 40 OF 42	

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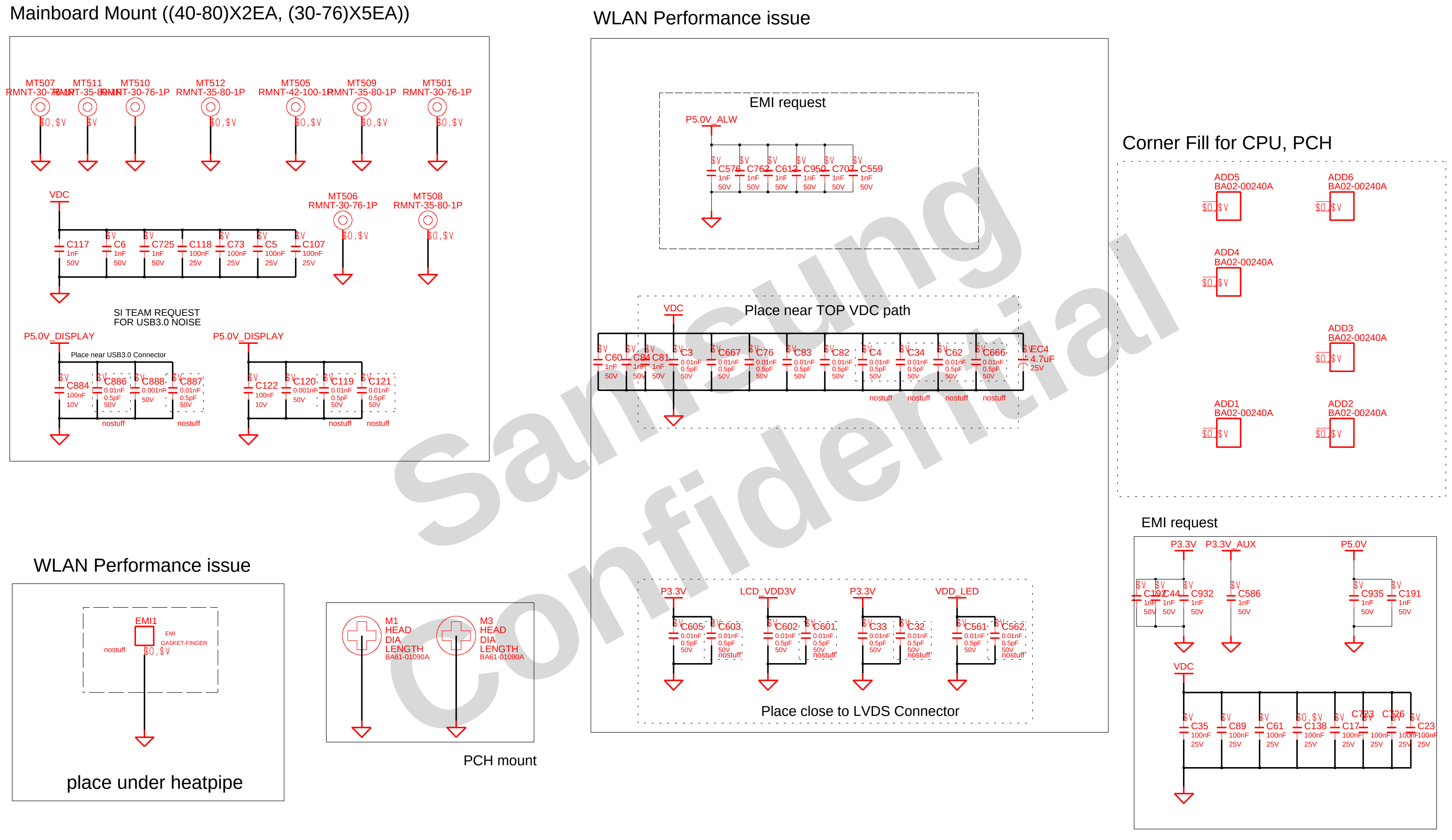

DESIGN	LI CHEN	DATE	08/03/2012	TITLE	Lampard-14/15-INT	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV		MOUNT HOLE	
APPROVAL	LEI GUO	REV	REV 1.0		MOUNT HOLE	PART NO. BA41-*****A
MODULE CODE		LAST EDIT	September 25, 2012 07:52:37 AM		PAGE 41	OF 42

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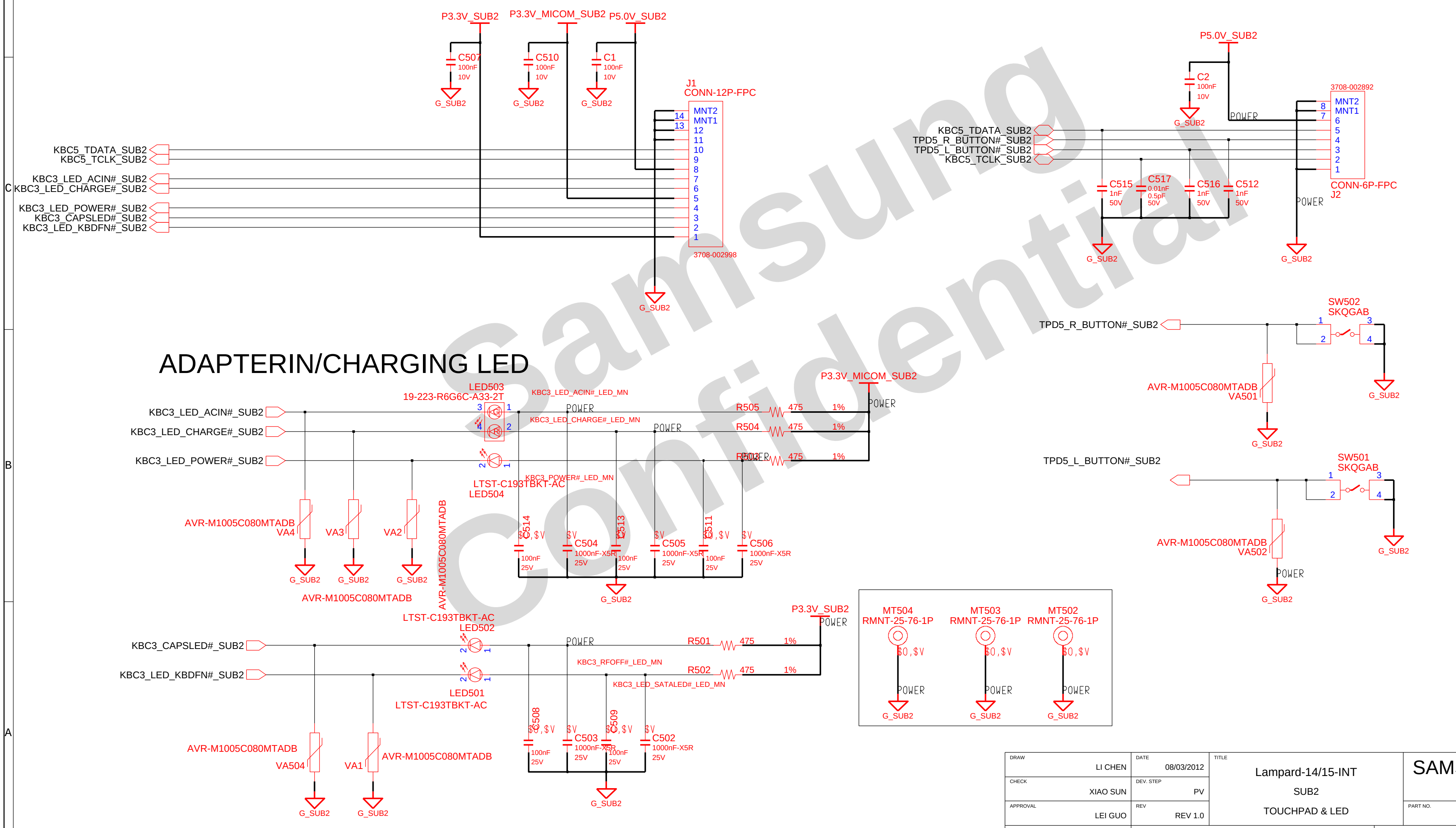
TP SUB BOARD

TOUCHPAD



DRAW	LI CHEN	DATE	08/03/2012	TITLE	SAMSUNG ELECTRONICS
CHECK	XIAO SUN	DEV. STEP	PV	Lampard-14/15-INT SUB2	
APPROVAL	LEI GUO	REV	REV 1.0	TOUCHPAD & LED	PART NO. BA41-*****A
MODULE CODE		LAST EDIT		September 25, 2012 07:52:37 AM	PAGE 42 OF 42