

HOUSTON

CPU : Arrandale BGA
Chip Set : Intel Ibex Peak
GFX : N11P / N11M / INT.GFX
Remarks : Calpella Platform

Model Name : Houston 14"/15"
PBA Name : MAIN
PCB Code : BA41-01278A (GCE)
BA41-01279A (NY)
BA41-01280A (HAN)

Dev. Step : PR
Revision : 1.0
T.R. Date : 2010.04.28

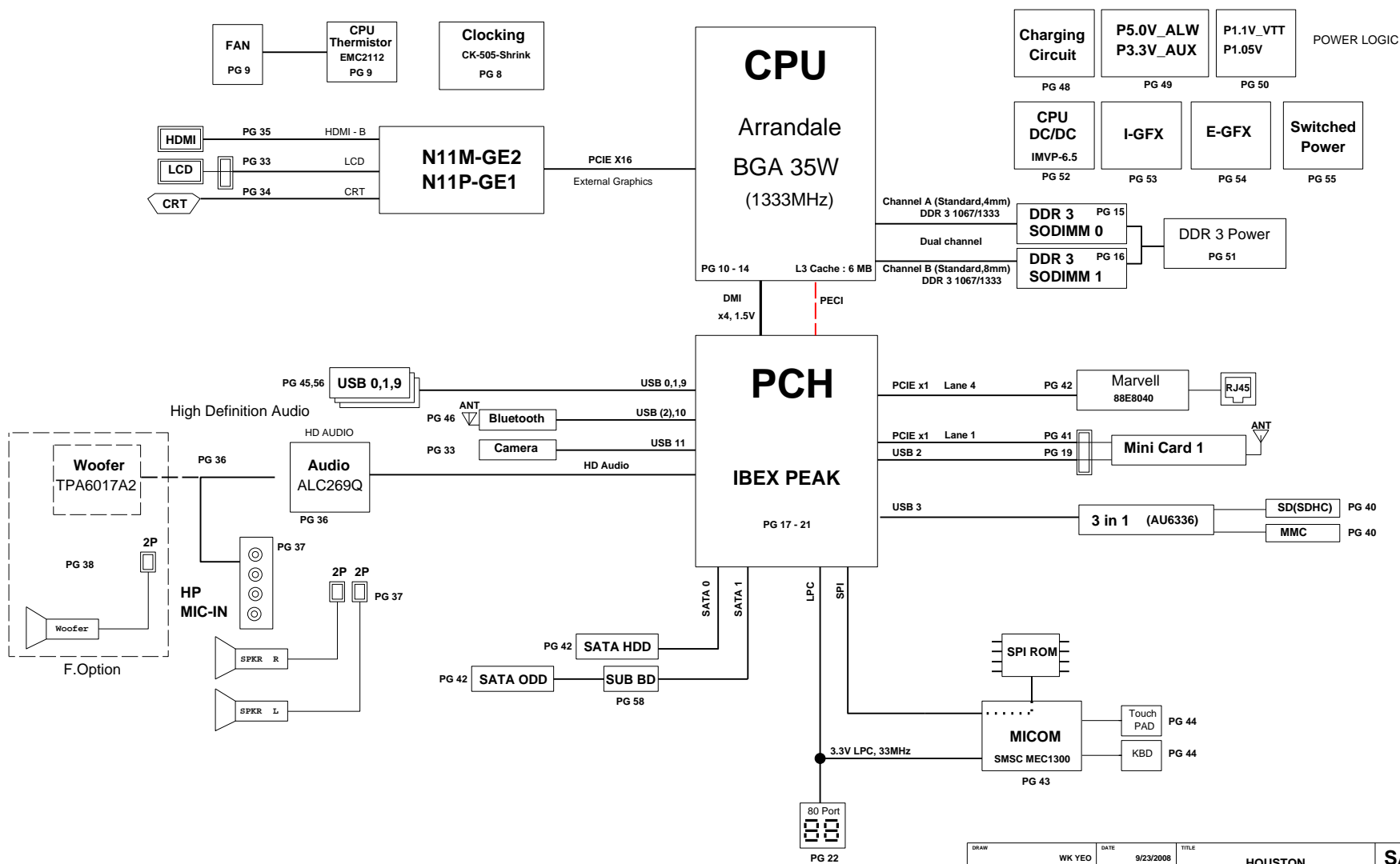
Design	CHECK	APPROVAL

Owner : SEC Mobile R & D Signature : X

sheet01 : Cover	sheet31 : GFX memory
sheet02 : BLOCK DIAGRAM	sheet32 : N11X STRAP
sheet03 : BOARD INFORMATION	sheet33 : LVDS / CAMERA
sheet04 : POWER DIAGRAM	sheet34 : CRT
sheet05 : POWER RAILS	sheet35 : HDMI
sheet06 : POWER SEQUENCE	sheet36 : Audio - ALC269
sheet07 : CLOCK DISTRIBUTION	sheet37 : Audio - HP/MIC
sheet08 : CK505-SHRINK	sheet38 : WOOFER(2.1CH)
sheet09 : Thermal Sensor	sheet39 : LAN (Marvell 88E8040)
sheet10 : CPU	sheet40 : 3-in-1 card (AU6336)
sheet11 : CPU	sheet41 : WLAN
sheet12 : CPU	sheet42 : SATA interface
sheet13 : CPU	sheet43 : MICOM / BIOS
sheet14 : CPU	sheet44 : MICOM Glue Logic (KBD / TP)
sheet15 : DDR3 SODIMM #0	sheet45 : LED
sheet16 : DDR3 SODIMM #1	sheet46 : USB connector
sheet17 : PCH-IbexPeak	sheet47 : Bluetooth
sheet18 : PCH-IbexPeak	sheet48 : Power - charger
sheet19 : PCH-IbexPeak	sheet49 : Power - P3.3V_AUX / P5.0V_AUX
sheet20 : PCH-IbexPeak	sheet50 : Power - P1.05V (Chipset Power)
sheet21 : PCH-IbexPeak	sheet51 : Power - DDR3
sheet22 : 80 port	sheet52 : Power - CPU VRM
sheet23 : N11X-GE2/GE1	sheet53 : Power - IGFX_CORE
sheet24 : N11X-GE2/GE1	sheet54 : Power - EGFX_CORE
sheet25 : N11X-GE2/GE1	sheet55 : Power - Switched Power 1
sheet26 : N11X-GE2/GE1	sheet56 : Power - Power Discharge
sheet27 : N11X-GE2/GE1	sheet57 : USB/POWER SW SUB BD
sheet28 : GFX memory	sheet58 : ODD Sub B'd / Battery Sub B'd(for 15")
sheet29 : GFX memory	sheet59 : ICT FREE
sheet30 : GFX memory	

DRAW	WK YEO	DATE	10/10/2008	TITLE	HOUSTON	SAMSUNG
CHECK	BW YOO	DEV. STEP	PR1		MAIN	ELECTRONICS
APPROVAL	SH LEE	REV	REV 1.0		COVER	PART NO. BA41-####A
MODULE CODE	LAST EDIT		April 28, 2010 12:02:14 PM		PAGE	1 OF 59

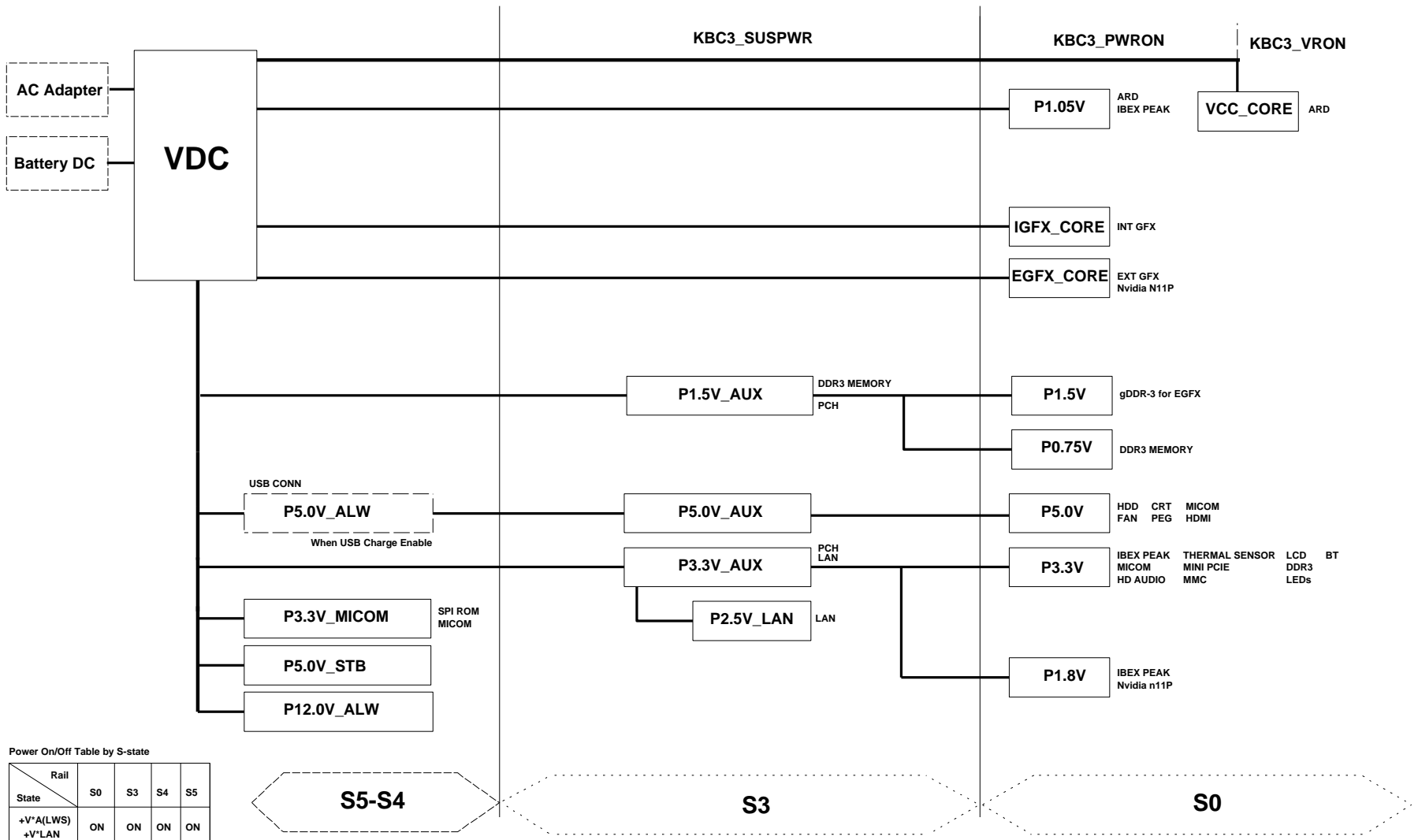
BLOCK DIAGRAM



DRAW	WK YEO	DATE	9/23/2008	TITLE	HOUSTON MAIN BLOCK DIAGRAM	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1			PART NO.
APPROVAL	SH LEE	REV	REV 1.0			BA41-####A
MODULE CODE	undefined	LAST EDIT		April 28, 2010 12:02:14 PM	PAGE 2 OF 59	

POWER DIAGRAM

Rev 0.1



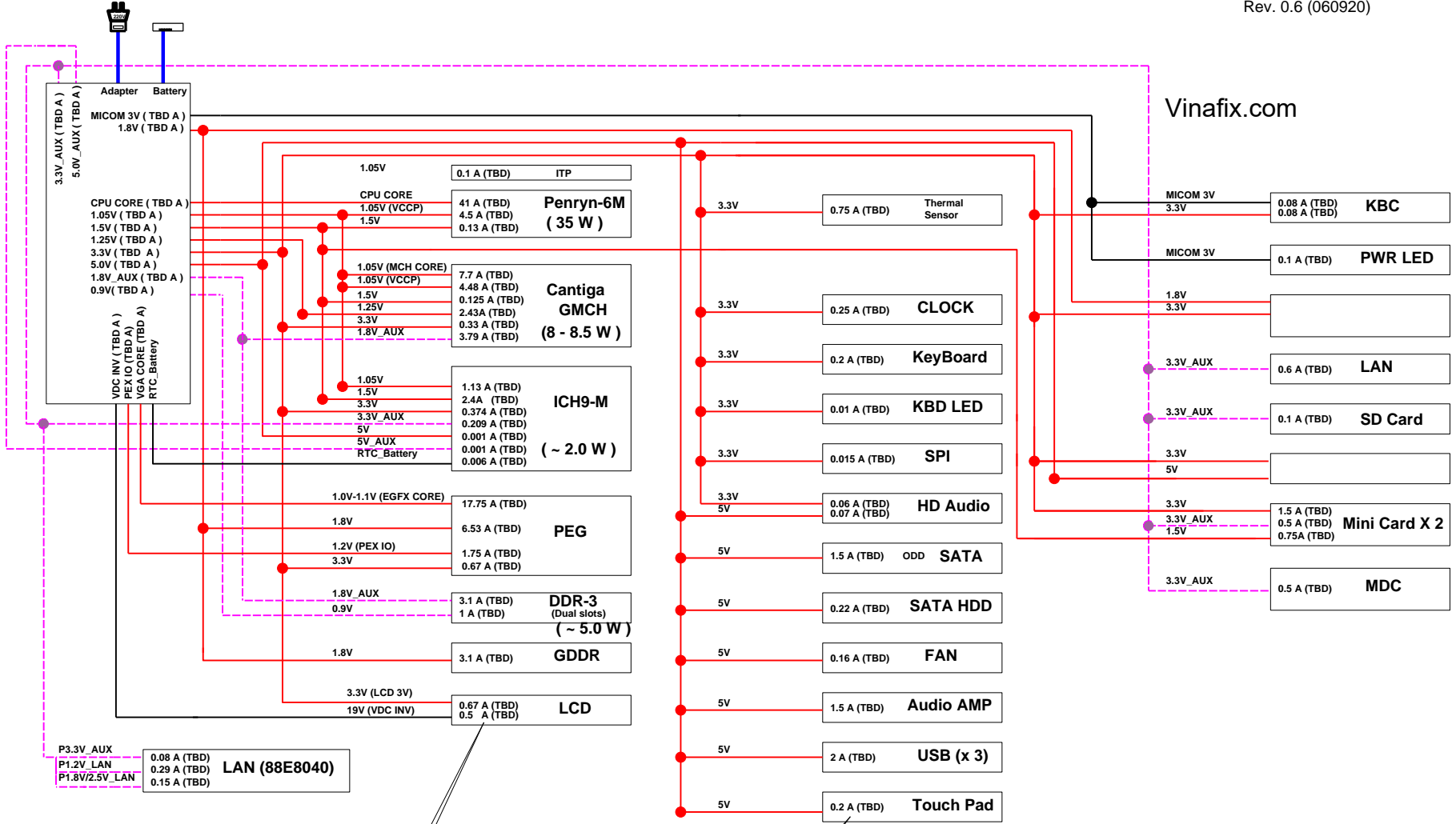
Power On/Off Table by S-state

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	—	—	—

POWER RAILS ANALYSIS

Rev. 0.6 (060920)

Vinafix.com



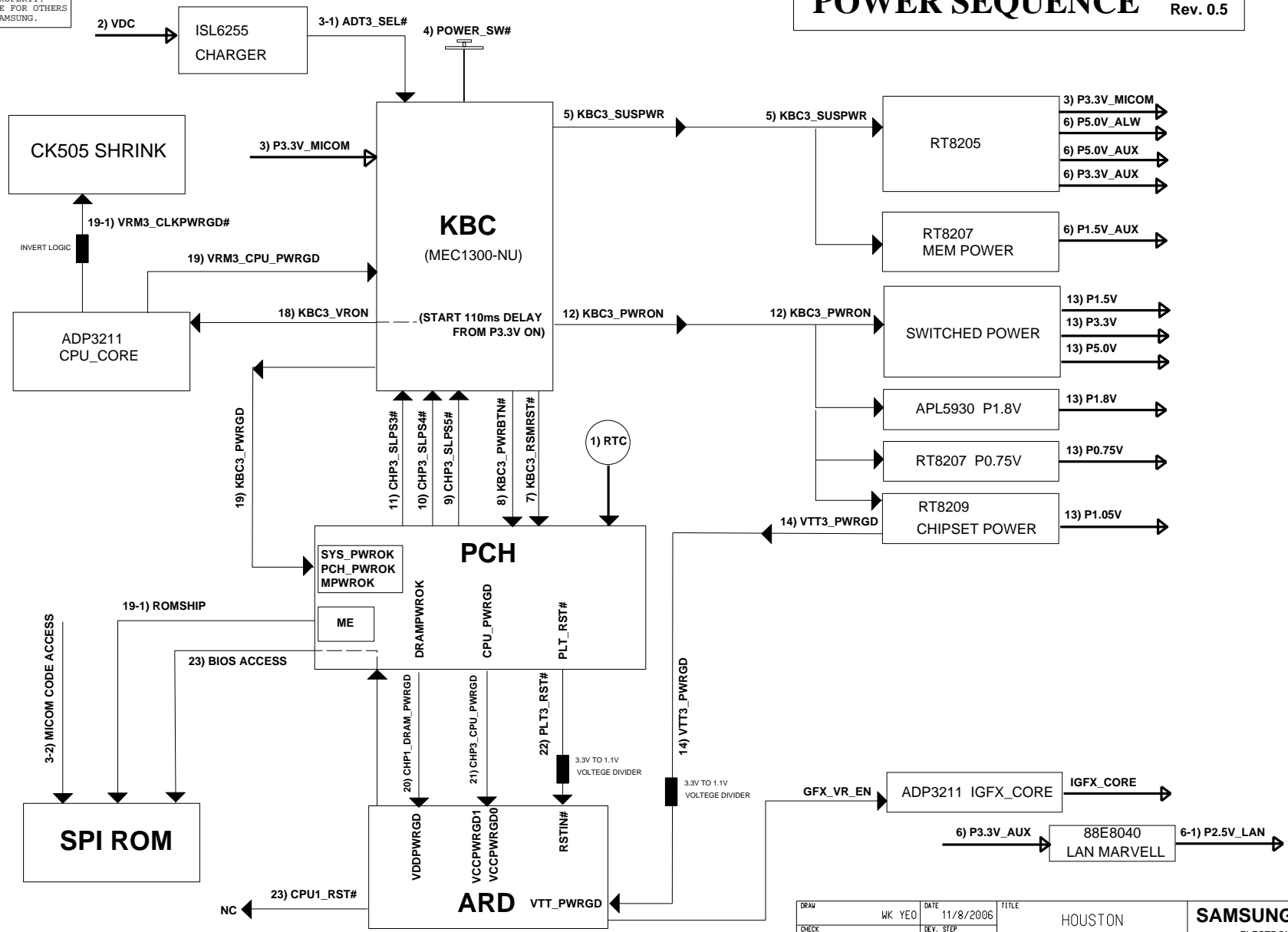
Value by Datasheet/Application notes (Value by measurement)

DRAW	WK YEO	DATE	9/23/2008	TITLE	HOUSTON MAIN POWER RAILS	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1	REV	REV 1.0	PART NO. BA41-####A
APPROVAL	SH LEE	LAST EDIT	April 28, 2010 12:02:14 PM	PAGE	5	OF 59
MODULE CODE	undefined					

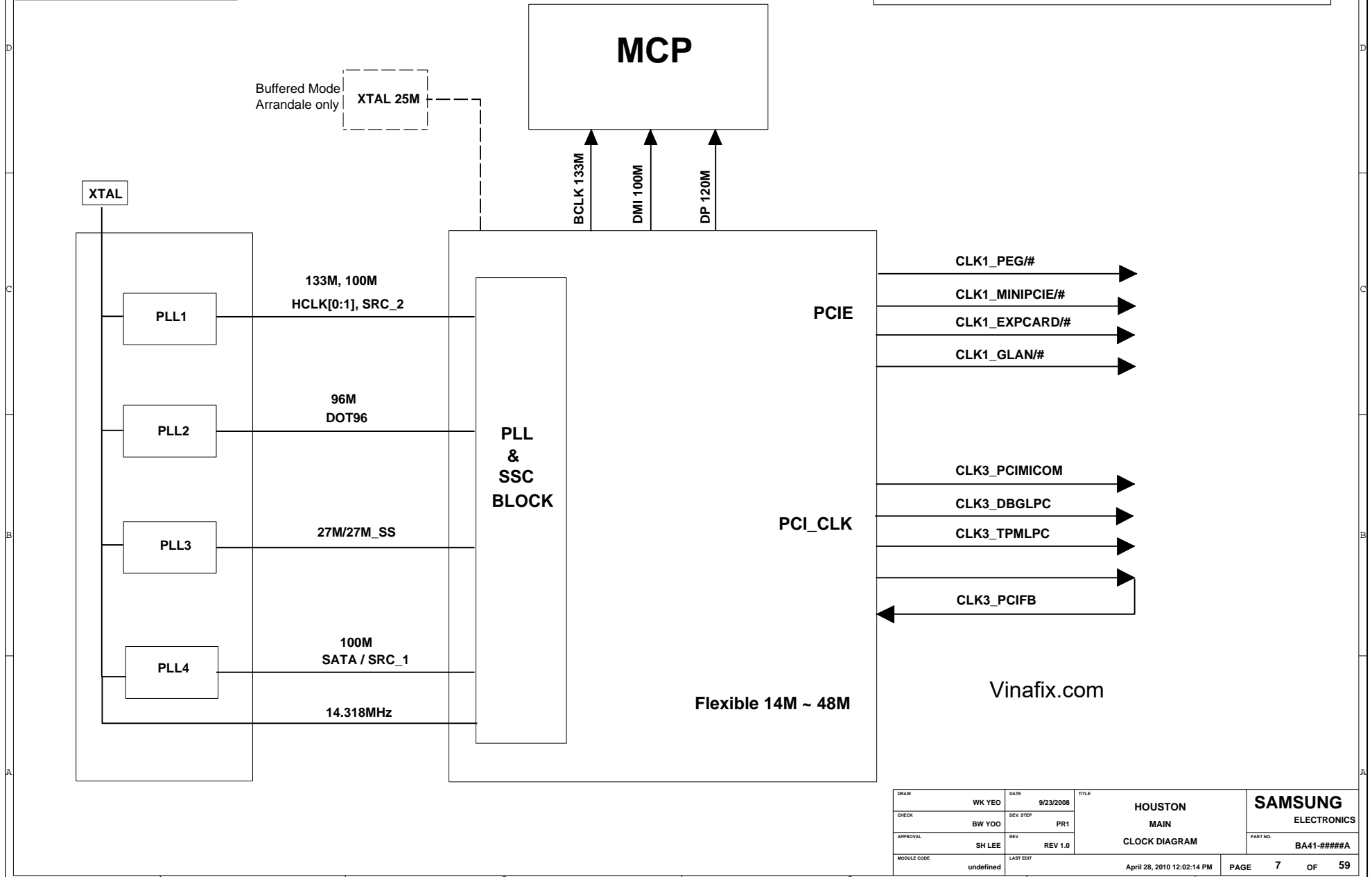
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

POWER SEQUENCE

Rev. 0.5



DRAW	WK YEO	DATE	11/8/2006	TITLE	HOUSTON MAIN	SAMSUNG ELECTRONICS
CHECK	BW YOO	REV. STEP	PR1			PART NO. BA41-#####A
APPROVAL	SH LEE	REV	REV 1.0		POWER SEQUENCE	
MODULE CODE	undefined	LAST EDIT	April 28, 2010 12:02:14 PM	PAGE	6	OF 59



DRAW	WK YEO	DATE	9/23/2008	TITLE	HOUSTON	SAMSUNG
CHECK	BW YOO	DEV. STEP	PR1	MAIN	ELECTRONICS	
APPROVAL	SH LEE	REV	REV 1.0	CLOCK DIAGRAM	PART NO.	BA41-####A
MODULE CODE	undefined	LAST EDIT	April 28, 2010 12:02:14 PM	PAGE	7	OF 59

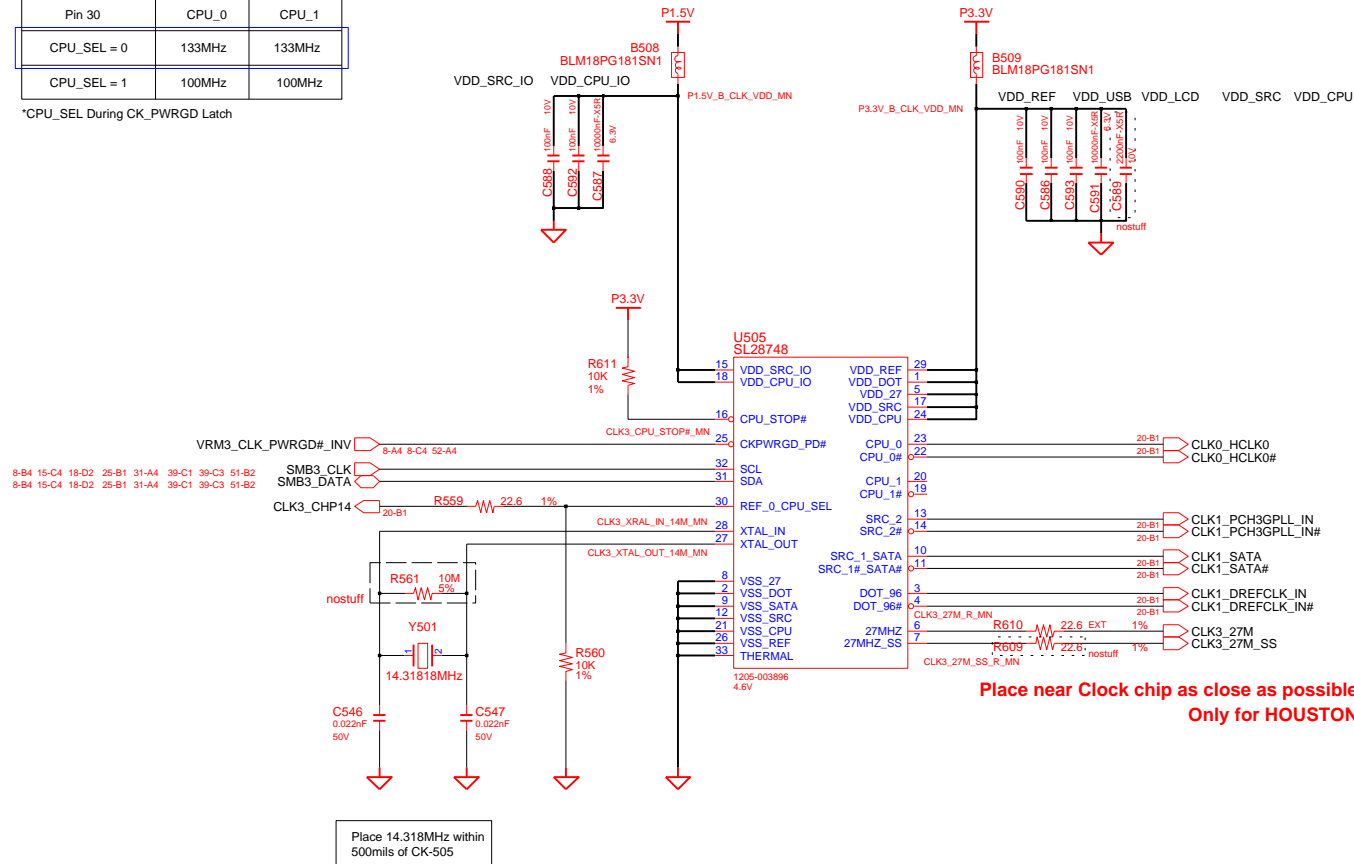
CK505M SHRINK VERSION

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.

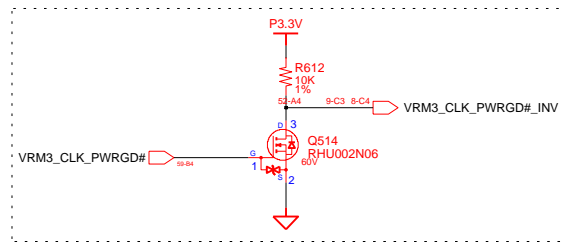
CPU_MODE SEL

Pin 30	CPU_0	CPU_1
CPU_SEL = 0	133MHz	133MHz
CPU_SEL = 1	100MHz	100MHz

*CPU_SEL During CK_PWRGD Latch



Place near Clock chip as close as possible
Only for HOUSTON



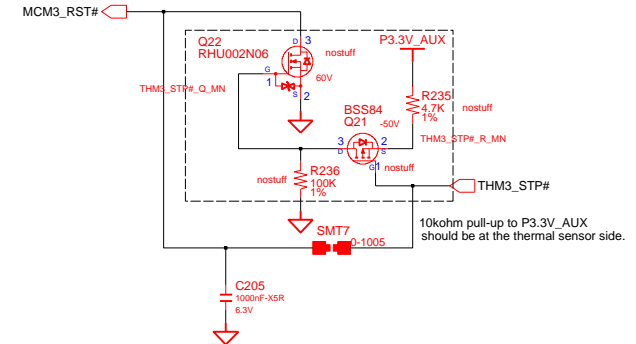
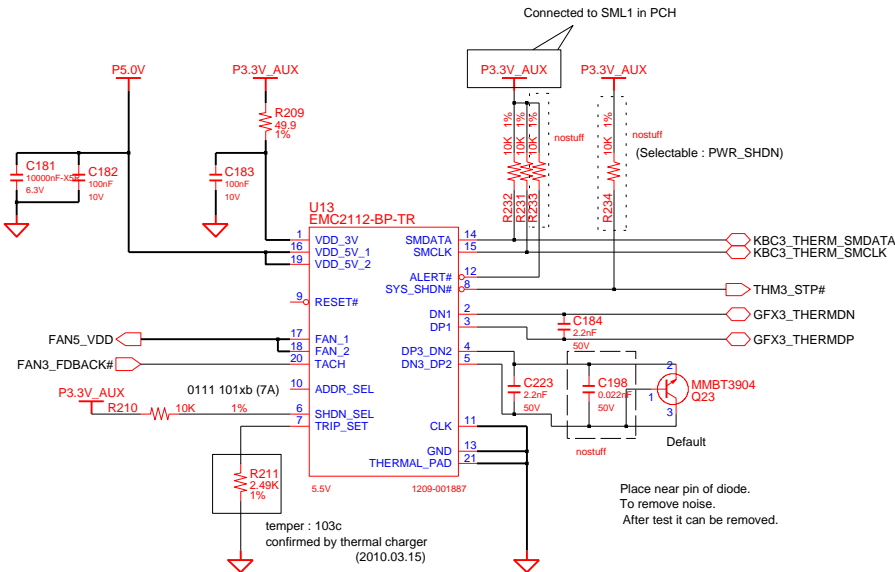
DESIGN	WK YEO	DATE	2/27/2008	TITLE	HOUSTON CLOCK	SAMSUNG ELECTRONICS
CHECK	BW YOO	REV. STEP	PR1	REV	CK505-SHRINK	
APPROVAL	SH LEE	REV	REV 1.0	LAST EDIT	April 28, 2010 12:02:14 PM	PART NO. BA41-#####
MODULE CODE						PAGE 8 OF 59

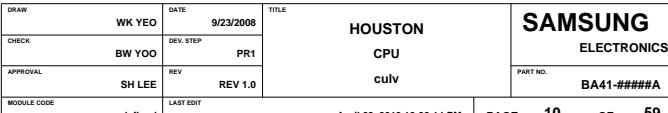
SAMSUNG PROPRIETARY

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

MICOM RESET







DRAW	WK YEO	DATE	9/23/2008	HOUSTON CPU culv	SAMSUNG ELECTRONICS			
CHECK	BW YOO	DEV STEP	PR1					
APPROVAL	SH LEE	REV	REV 1.0				PART NO.	BA41-####A
MODULE CODE	undefined	LAST EDIT	April 28, 2010 12:02:14 PM				PAGE 11 OF 59	

D

C

B

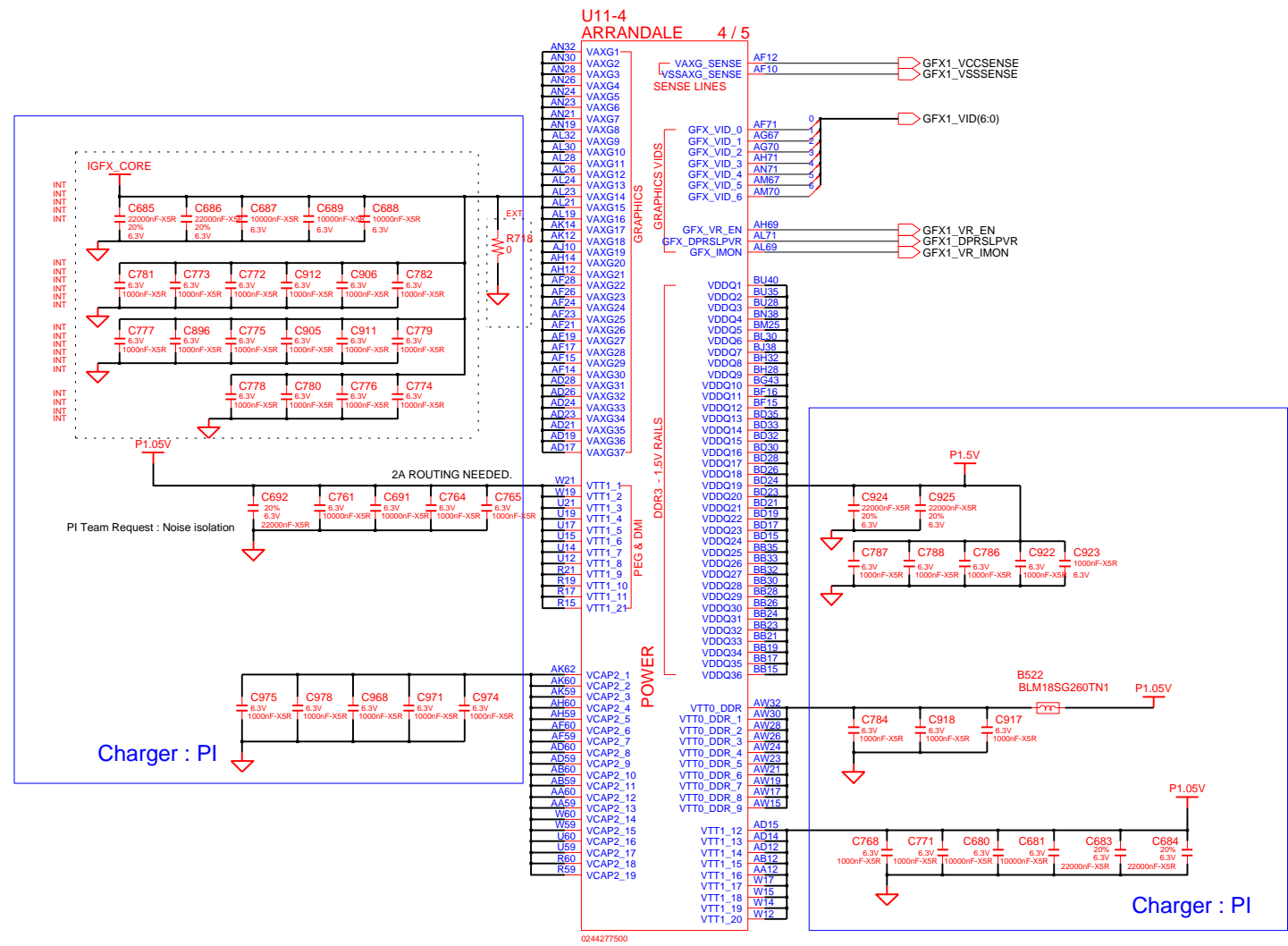
A

D

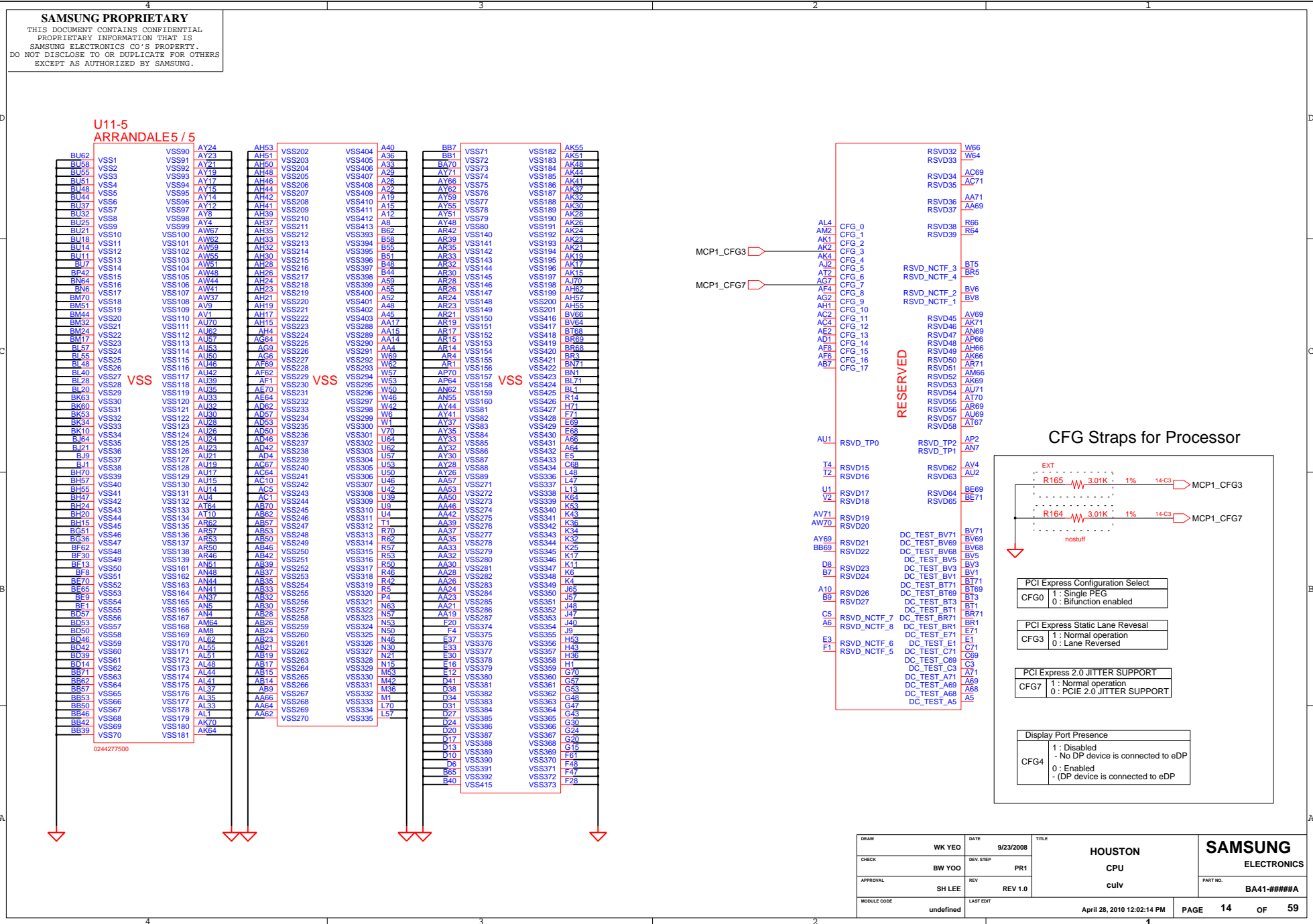
C

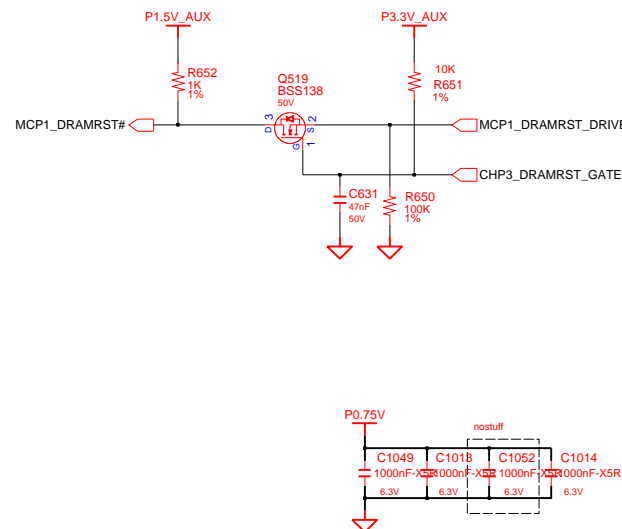
B

A



DESIGN	WK YEO	DATE	8/19/2009	TITLE	HOUSTON CPU culv	SAMSUNG ELECTRONICS PART NO. BA41-#####
CHECK	BW YOO	REV. STEP	PR1			
APPROVAL	SH LEE	REV	REV 1.0			
MODULE CODE		LAST EDIT				
April 28, 2010 12:02:14 PM						PAGE 13 OF 59





P1.5V_AUX

EC506 220uF 2.5V

C933 1000nF-XSR 6.3V

C699 1000nF-XSR 6.3V

C698 1000nF-XSR 6.3V

C792 1000nF-XSR 6.3V

C931 1000nF-XSR 6.3V

C932 1000nF-XSR 6.3V

C928 100nF 10V

C791 100nF 10V

C929 100nF 10V

C790 100nF 10V

Place near SO-DIMM0

nostuff

Vinafix.com

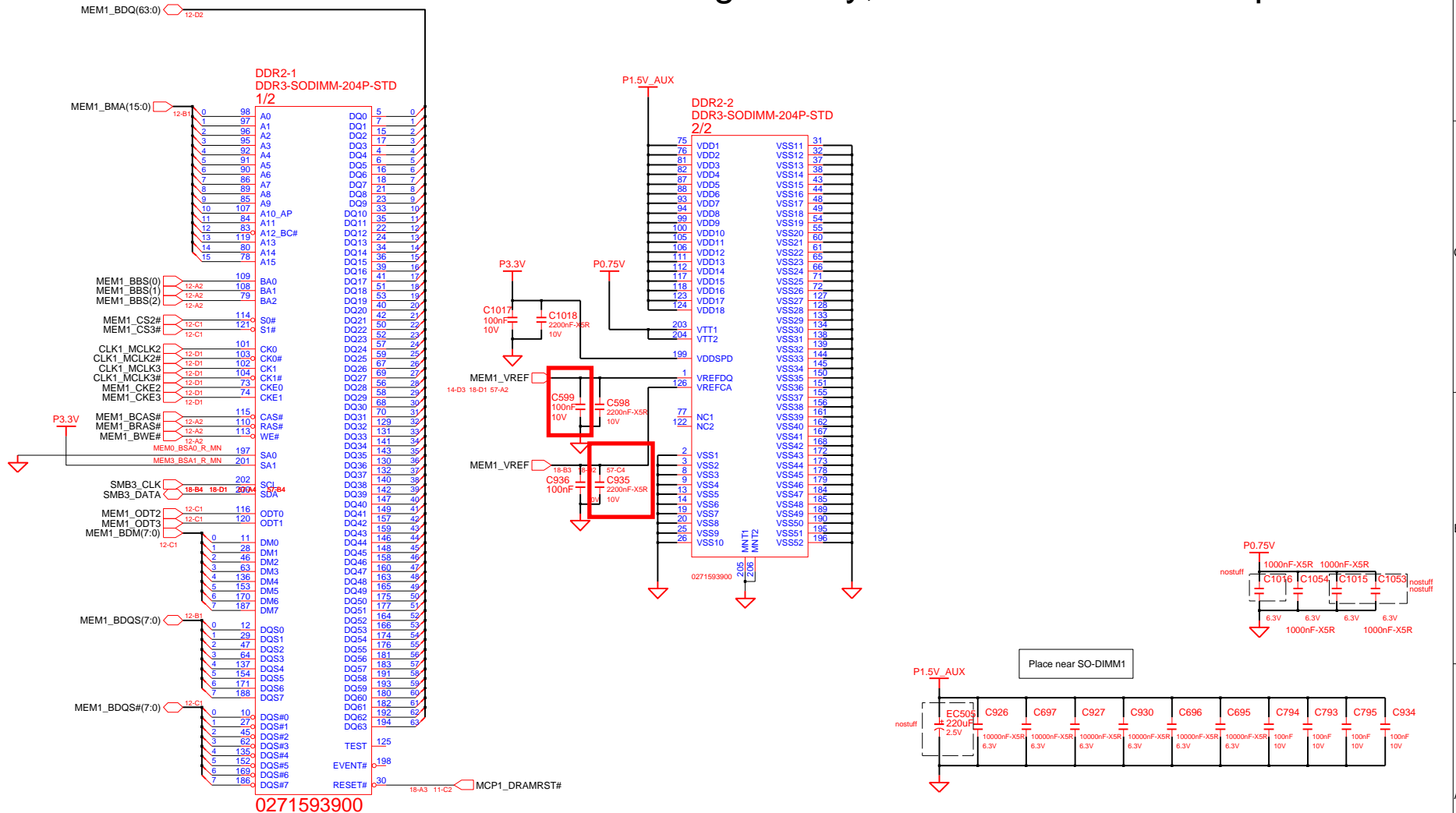
DDR SO-DIMM #1

Height : 8 mm (STANDARD)

P/N : 3709-001615 (FOXCONN)

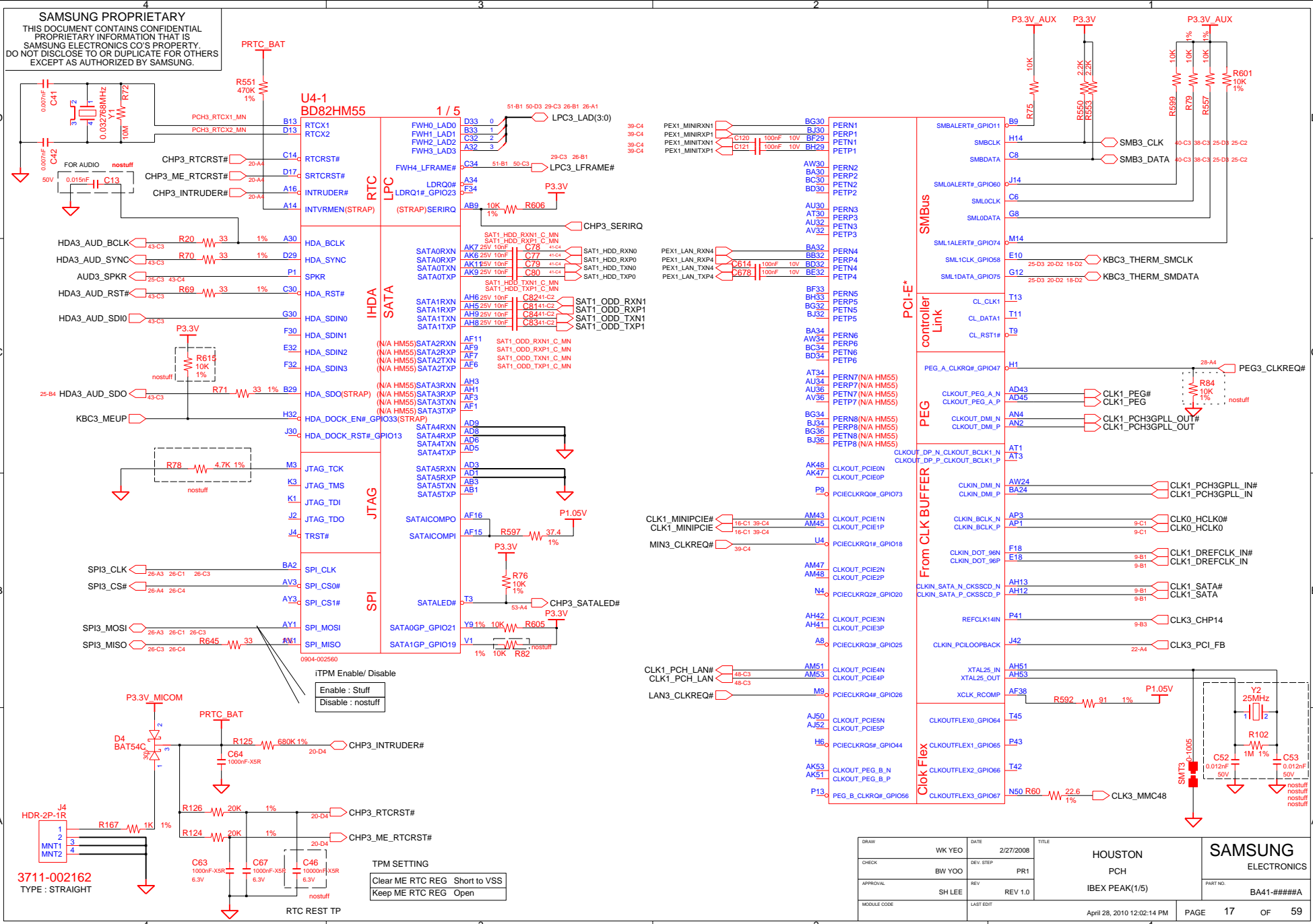
P/N : 3709-001622 (CONCRAFT)


After making Library, Sodimm need to be update!!!



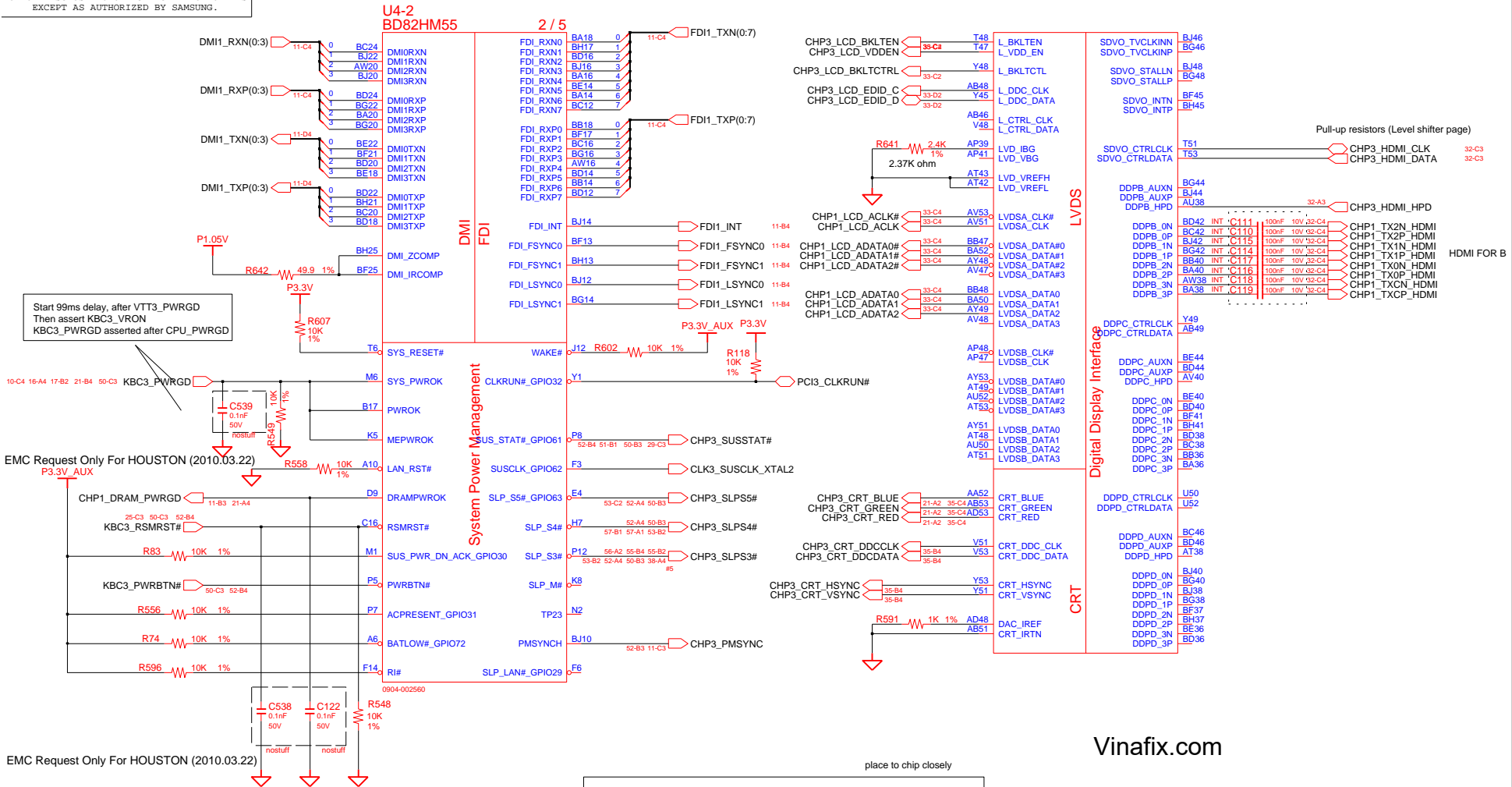
DRAW	WK YEO	DATE	2/27/2008	TITLE	HOUSTON SODIMM B	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1			
APPROVAL	SH LEE	REV	REV 1.0			
MODULE CODE		LAST EDIT	April 28, 2010 12:02:14 PM	PAGE	16	OF 59

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.



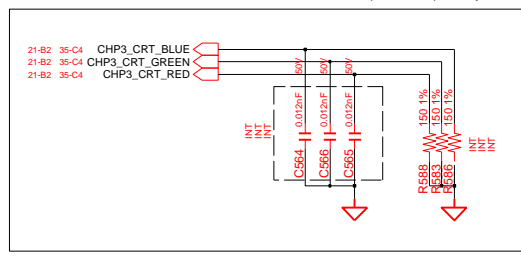
DRAW	WK YEO	DATE	2/27/2008	HOUSTON PCH IBEX PEAK(1/5)		
CHECK	BW YOO	DEV. STEP	PR1			
APPROVAL	SH LEE	REV	REV 1.0		PART NO.	BA41-####A
MODULE CODE	LAST EDIT		April 28, 2010 12:02:14 PM		PAGE	17 OF 59

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.

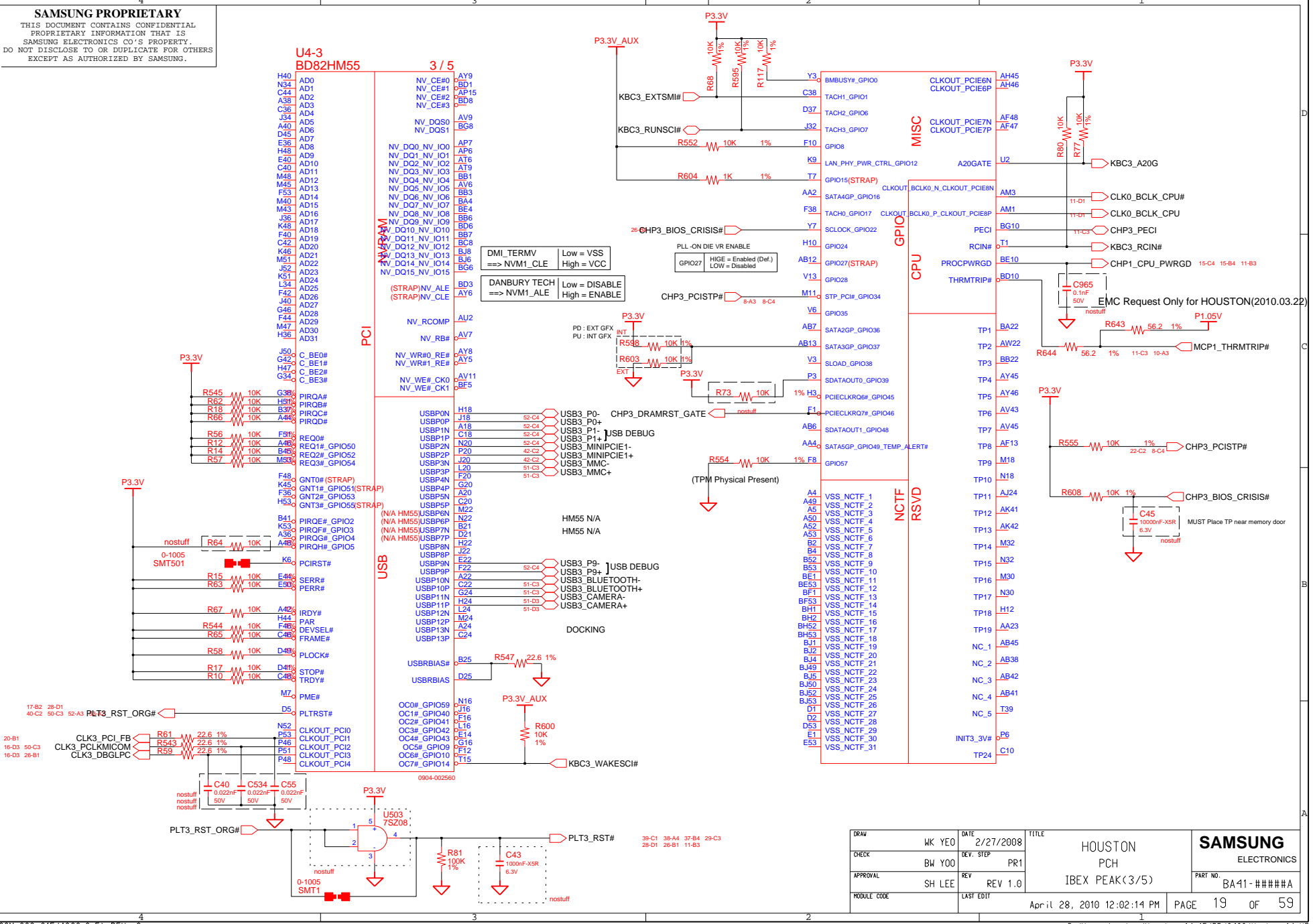


Vinafix.com

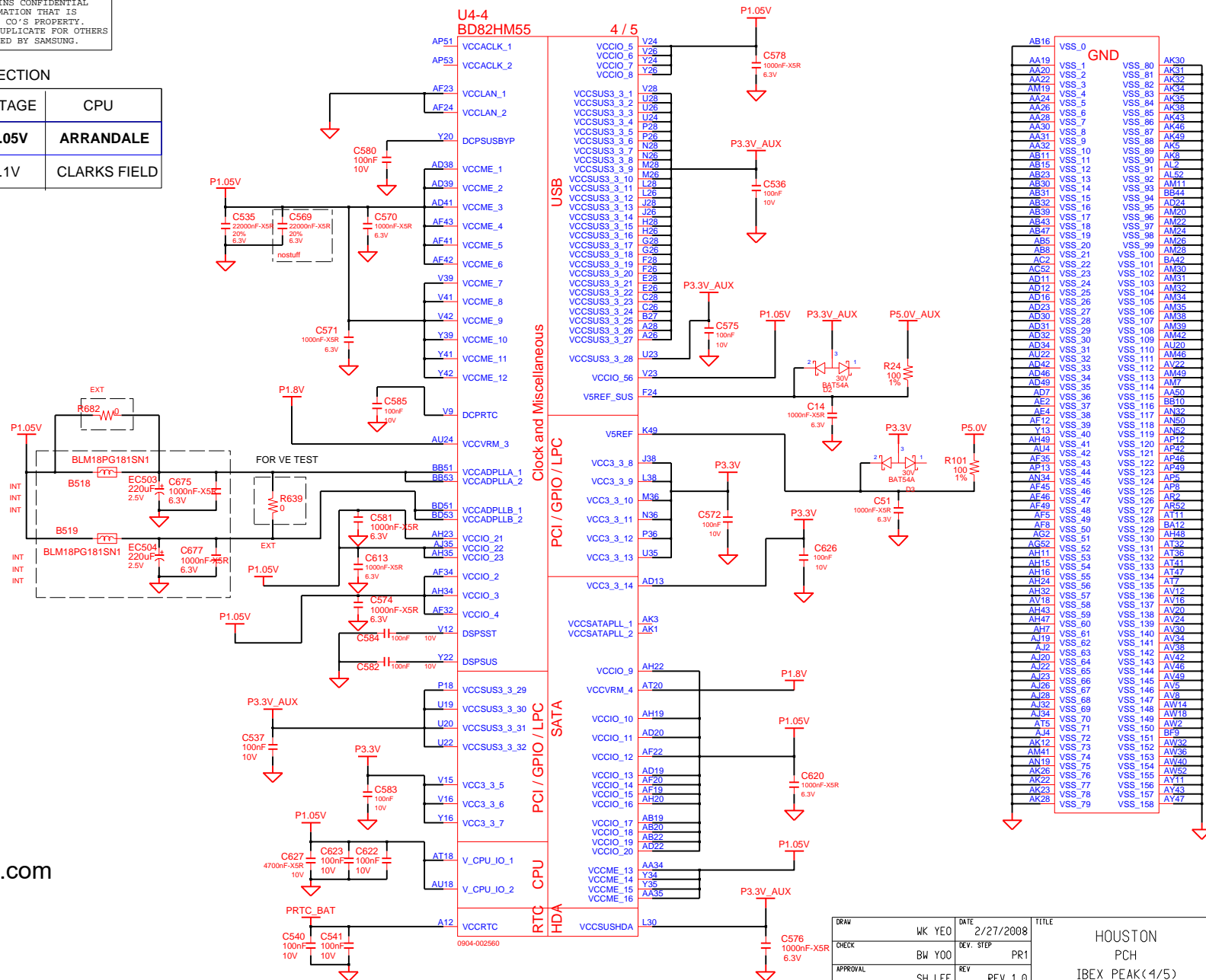
EMC Request Only For HOUSTON (2010.03.22)



DRAW	WK YEO	DATE	9/23/2008	TITLE	HOUSTON	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1		PCH	
APPROVAL	SH LEE	REV	REV 1.0		IBEX PEAK(2/5)	PART NO. BA41-####A
MODULE CODE		LAST EDIT			April 28, 2010 12:02:14 PM	PAGE 18 OF 59



VTT_SEL	VOLTAGE	CPU
1	P1.05V	ARRANDALE
0	P1.1V	CLARKS FIELD



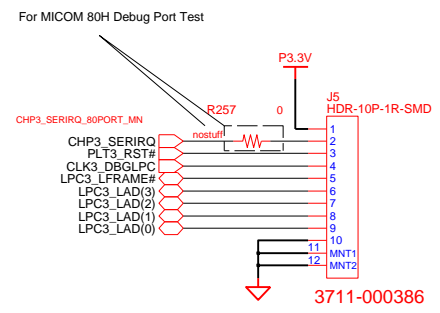
Vinafix.com

5R

DRAW	WK YE0	DATE	2/27/2008	TITLE	HOUSTON PCH IBEX PEAK(4/5)	SAMSUNG ELECTRONICS	
CHECK	BW Y00	DEV. STEP	PR1				
APPROVAL	SH LEE	REV	REV 1.0				
MODULE CODE	LAST EDIT		April 28, 2010 12:02:14 PM				PAGE
				PART NO.	BA11-#####A		

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.

80H PORT DEBUG



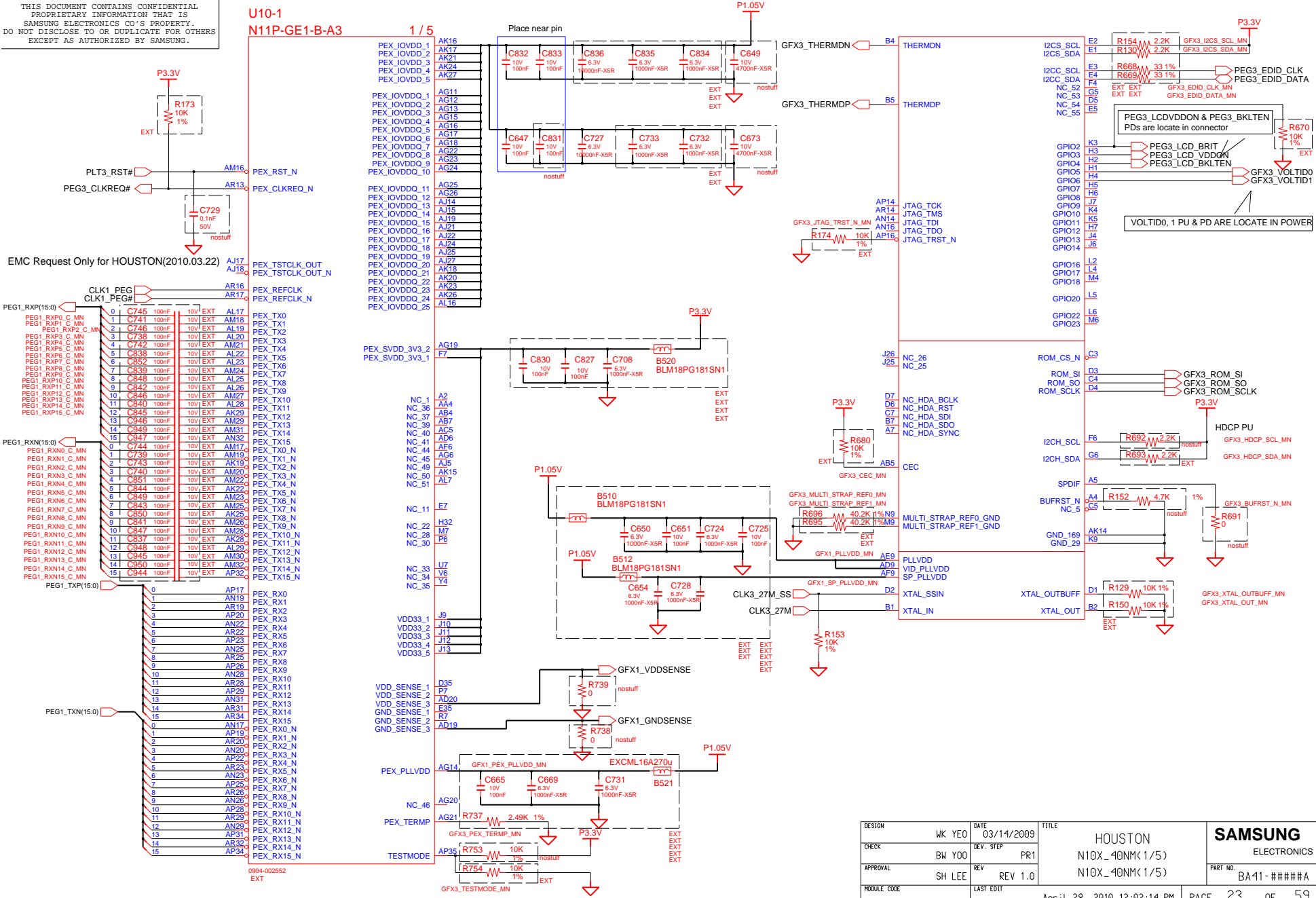
Vinafix.com

DESIGN	WK YEO	DATE	11/10/2008	TITLE	HOUSTON DEBUG PORT 80H DECODER	SAMSUNG ELECTRONICS
CHECK	BW YOO	REV. STEP	PR1			PART NO. BA41-#####
APPROVAL	SH LEE	REV	REV 1.0			
MODULE CODE		LAST EDIT	April 28, 2010 12:02:14 PM	PAGE	22	OF 59

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.

U10-1
N11P-GE1-B-A3

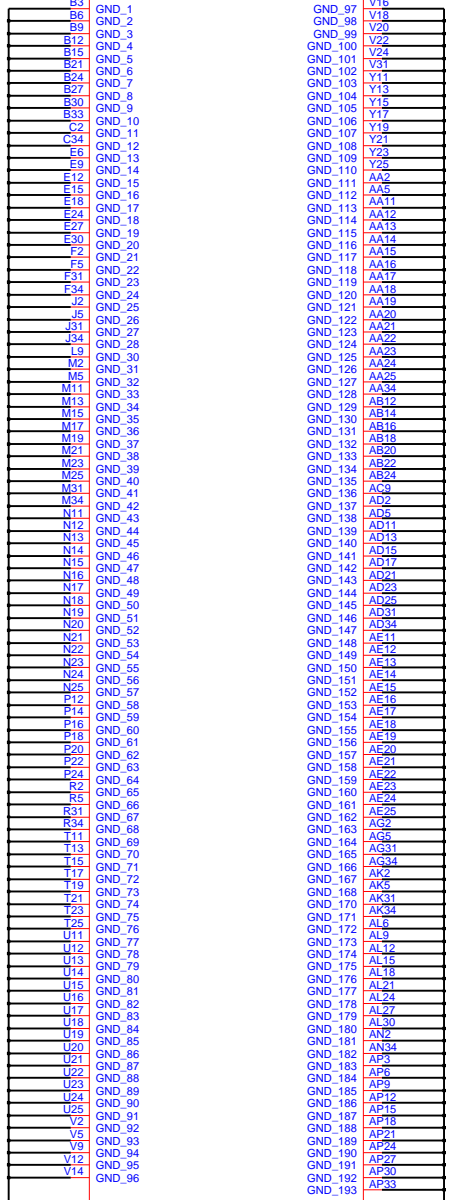
1 / 5



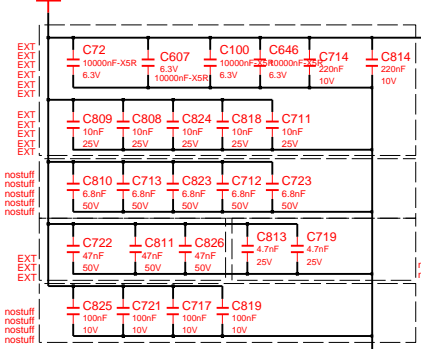
DESIGN	WK YEO	DATE	03/14/2009	TITLE	HOUSTON	SAMSUNG ELECTRONICS
CHECK	BW YOO	REV. STEP	PR1		N10X_40NM(1/5)	
APPROVAL	SH LEE	REV	REV 1.0		N10X_40NM(1/5)	
MODULE CODE		LAST EDIT				
				April 28, 2010 12:02:14 PM	PAGE 23	OF 59

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.

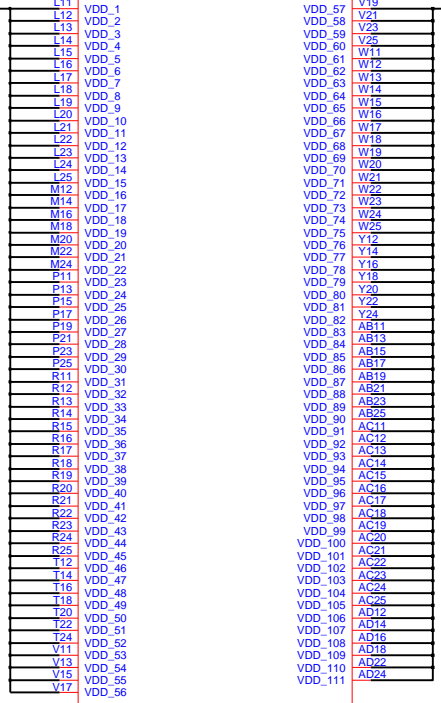
U10-3
N11P-GE1-B-A3 3 / 5



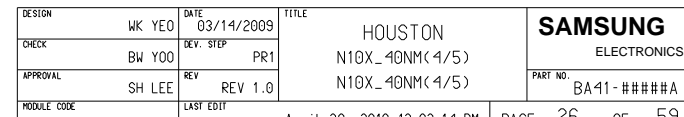
EGFX_CORE



EGFX_CORE

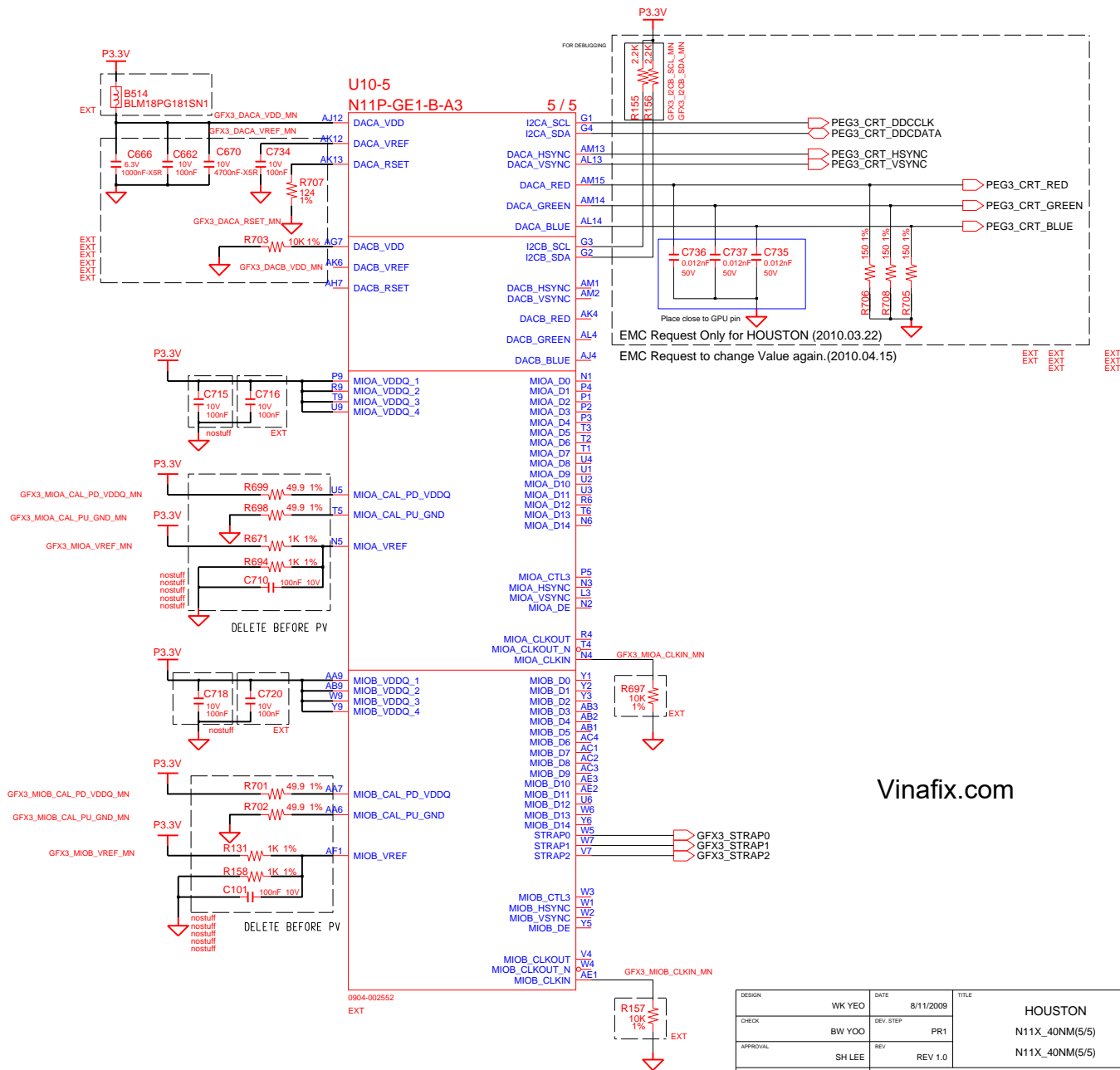


DESIGN	WK YEO	DATE	03/14/2009	TITLE	HOUSTON	SAMSUNG ELECTRONICS
CHECK	BW YOO	REV. STEP	PR1		N10X_40NM(3/5)	
APPROVAL	SH LEE	REV	REV 1.0		N10X_40NM(3/5)	PART NO.
MODULE CODE		LAST EDIT	April 28, 2010 12:02:14 PM	PAGE	25	BA41-#####
				OF	59	



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.

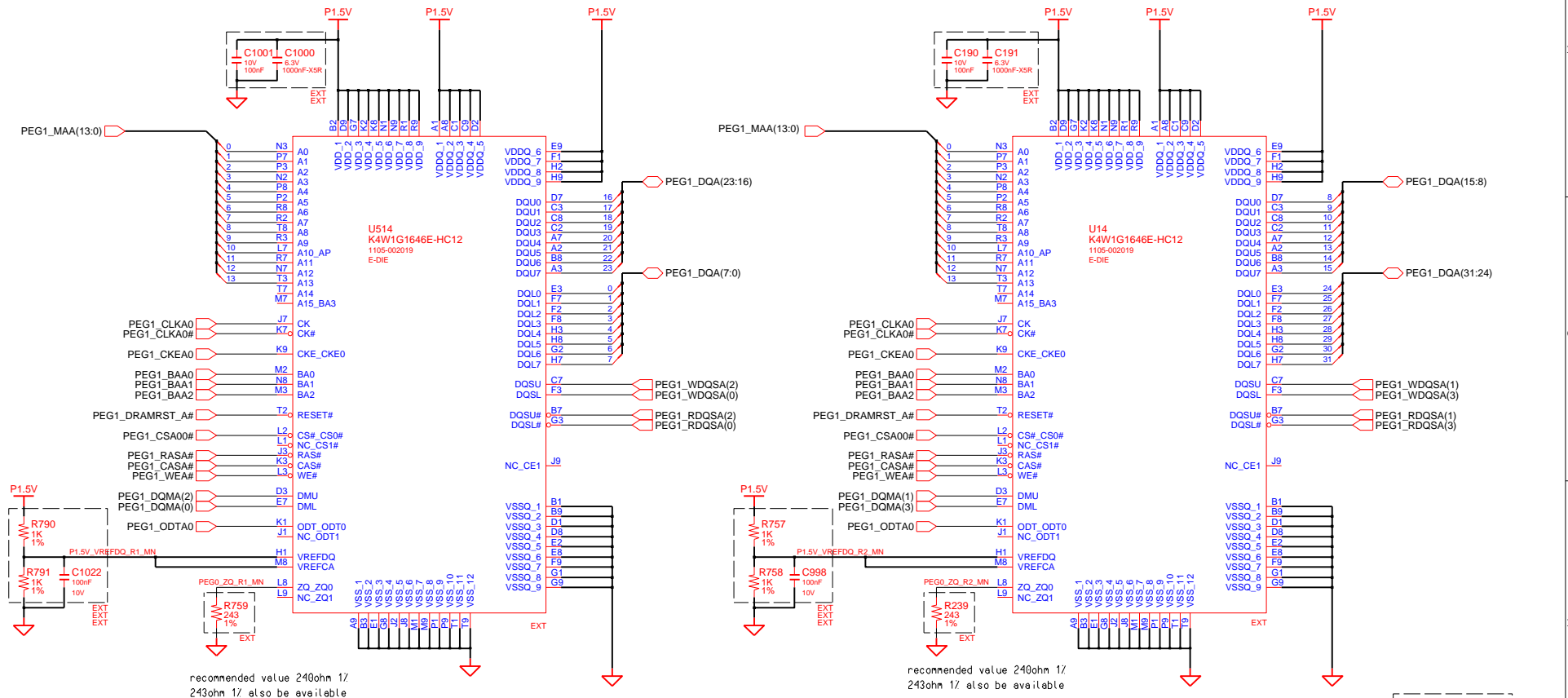


DESIGN	WK YEO	DATE	8/11/2009	TITLE	HOUSTON	SAMSUNG
CHECK	BW YOO	DEV. STEP	PR1		N11X_40NM(5/5)	ELECTRONICS
APPROVAL	SH LEE	REV	REV 1.0		N11X_40NM(5/5)	PART NO.
MODULE CODE		LAST EDIT				BA41-####A
April 28, 2010 12:02:14 PM						PAGE 27 OF 59

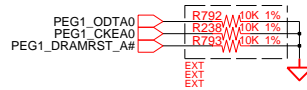
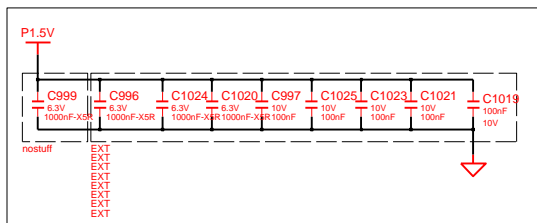
A-Channel #0 (gDDR3 512MB)

SAMSUNG PROPRIETARY

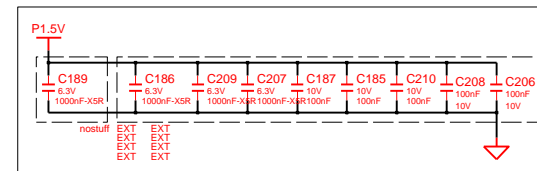
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



Place near to VDDQ



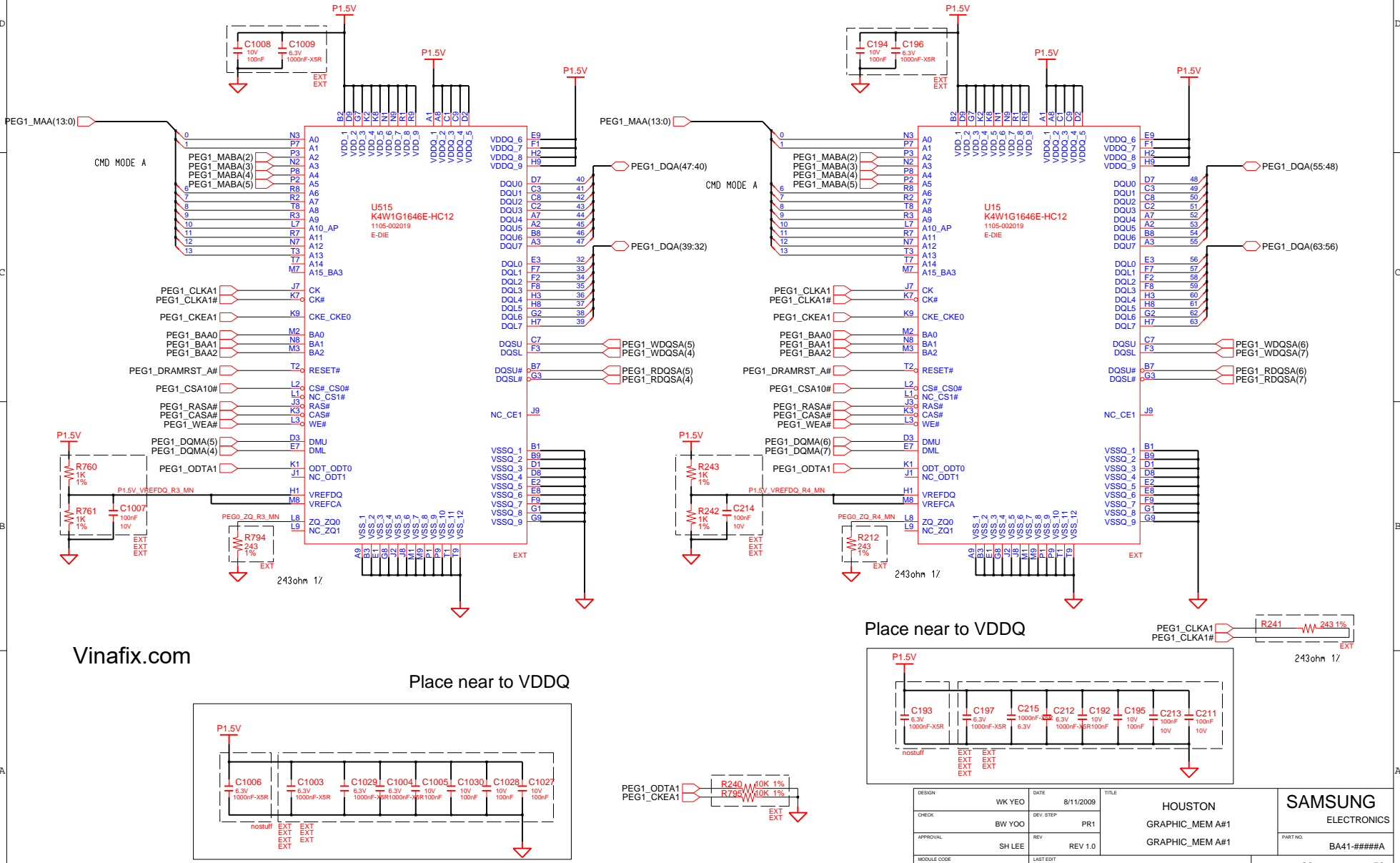
Place near to VDDQ



243ohm 1/7 also be available @ gDDR3 MCLK termination

DESIGN	WK YEO	DATE	8/11/2009	TITLE	HOUSTON	SAMSUNG
CHECK	BW YOO	DEV. STEP	PR1		GRAPHIC_MEM A#0	ELECTRONICS
APPROVAL	SH LEE	REV	REV 1.0		GRAPHIC_MEM A#0	PART NO.
MODULE CODE		LAST EDIT				BA41-####A
				April 28, 2010 12:02:14 PM	PAGE	28 OF 59

A-Channel #1 (gDDR3 512MB)



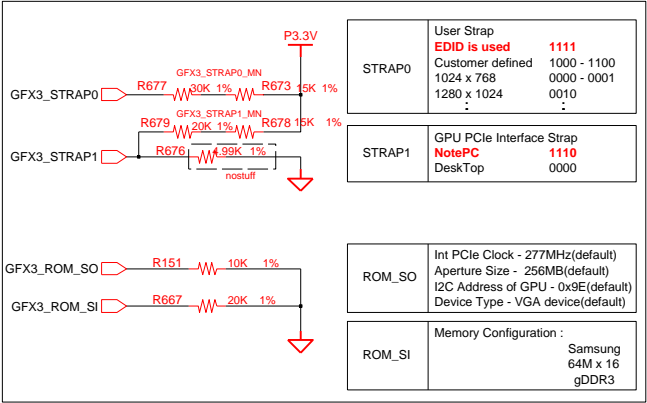
Vinafix.com

Place near to VDDQ

Place near to VDDQ

N11x_40nm STRAP

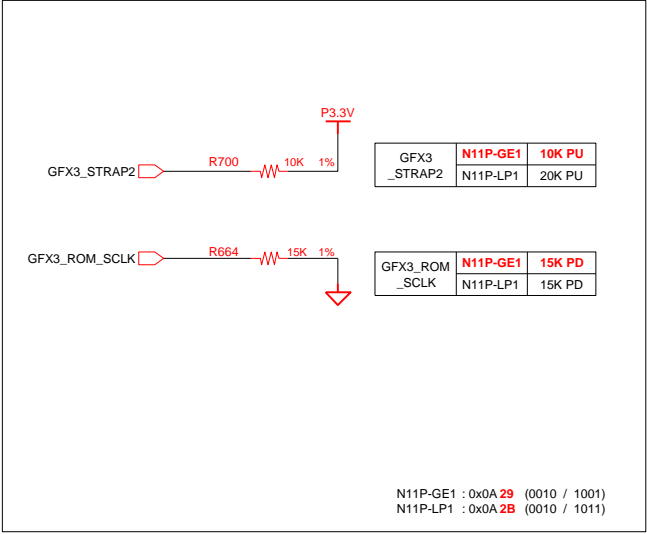
Function Straps



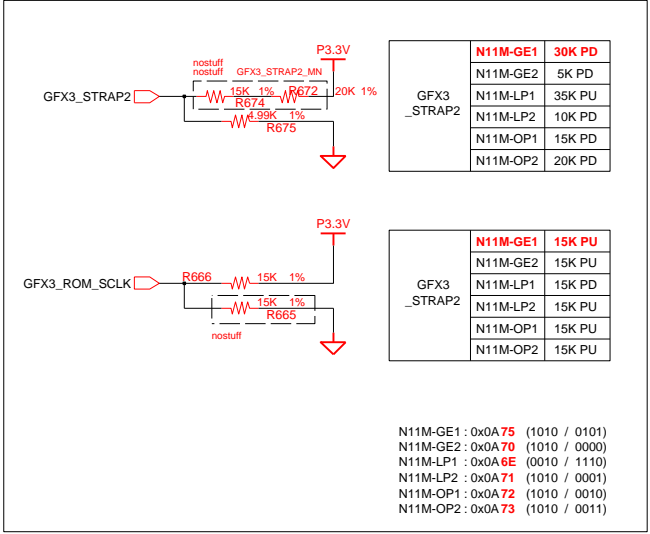
RESISTOR	PULL UP	PULL DOWN
5K	1000	0000
10K	1001	0001
15K	1010	0010
20K	1011	0011
25K	1100	0100
30K	1101	0101
35K	1110	0110
45K	1111	0111

STRAP PIN	BIT 3	BIT 2	BIT 1	BIT0
STRAP0	USER[3]	USER[2]	USER[1]	USER[0]
STRAP1	3GIO_PADCFG[3]	3GIO_PADCFG[2]	3GIO_PADCFG[1]	3GIO_PADCFG[0]
ROM_SO	XCLK_417	FB_0_BAR_SIZE	SMB_ALT_ADDR	VGA_DEVICE
ROM_SI	RAMCFG[3]	RAMCFG[2]	RAMCFG[1]	RAMCFG[0]
STRAP2	PCI_DEVID[3]	PCI_DEVID[2]	PCI_DEVID[1]	PCI_DEVID[0]
ROM_SCLK	PCI_DEVID[4]	SUB_VENDOR	SLOT_CLK_CFG	PEX_PLL_EN_TERM

Chip Select Straps (N11P)

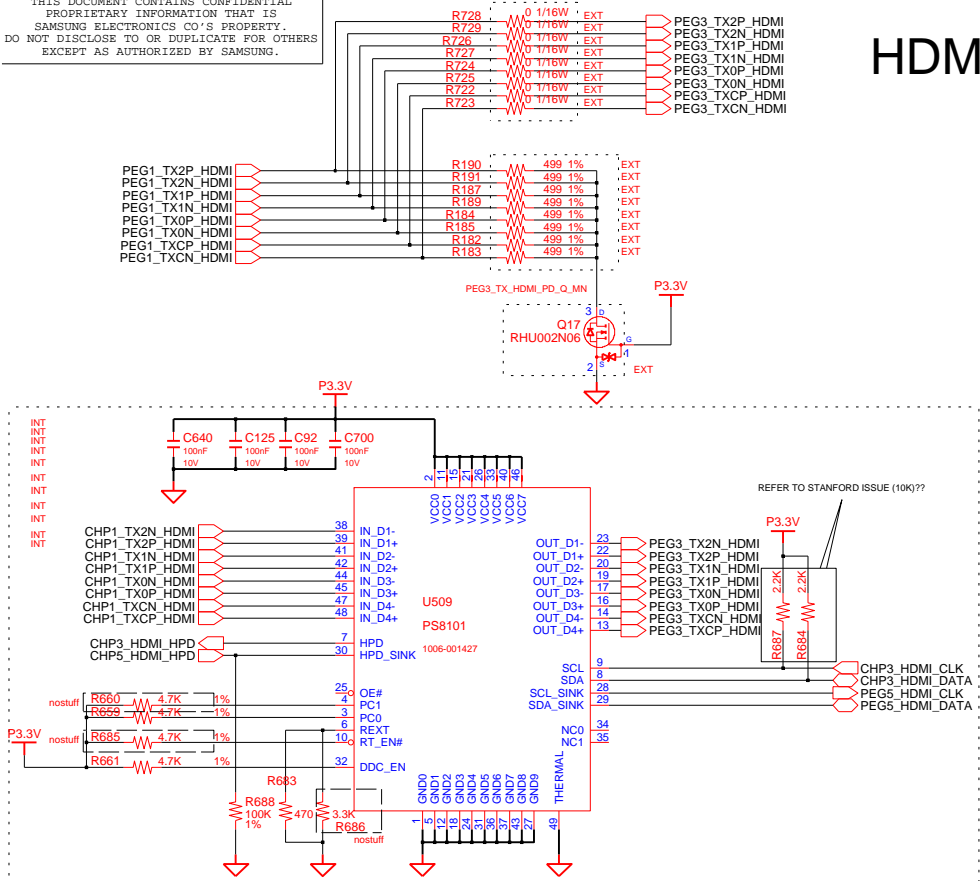


Chip Select Straps (N11M)

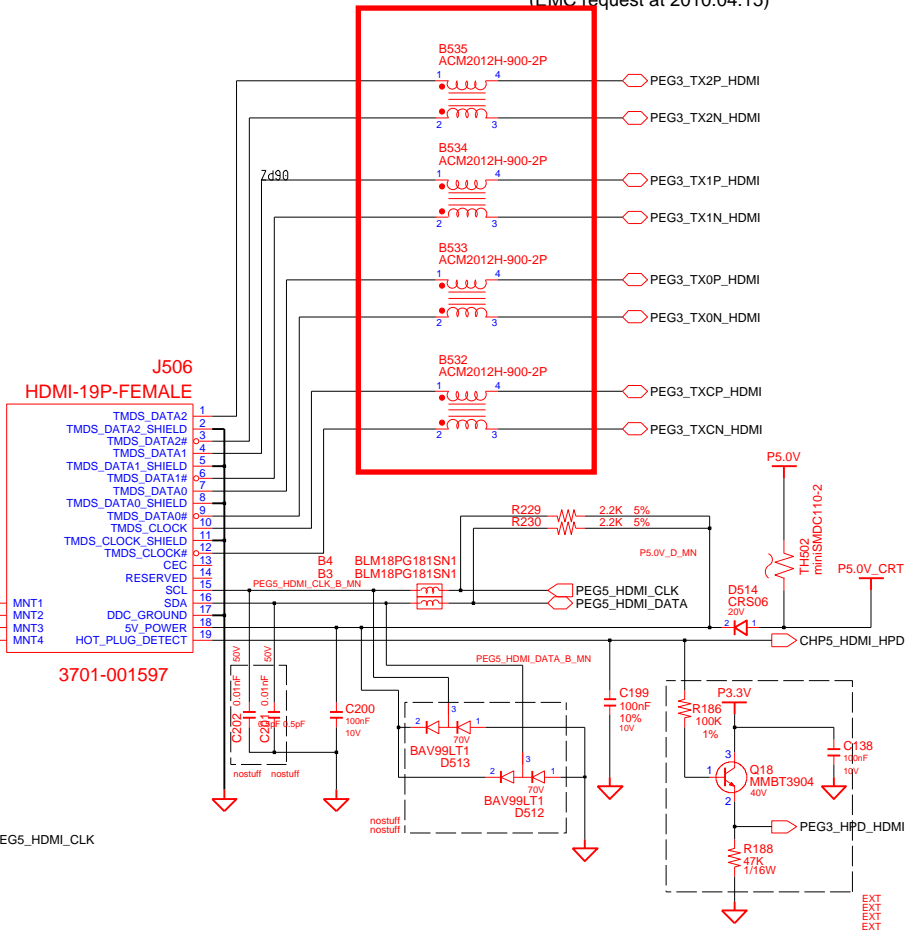


SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

HDMI Graphic



After checking, Houston need to use CMC for each signal.
(EMC request at 2010.04.15)



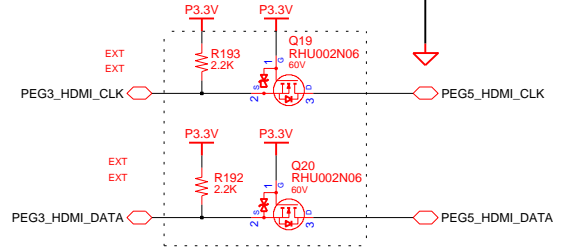
Vinafix.com

FOR PS8101

FOR ASM1442

PC1	PC0
00	8dB
01	4dB
10	12dB
11	0dB

CG_2	CG_1	CG_0	Swing	Pre-amp	Slew rate
0	0	0	450mV	0dB	0dB
0	0	1	490mV	0dB	-3dB
0	1	0	450mV	0dB	-3dB
0	1	1	460mV	0dB	-4dB
1	0	0	340mV	0dB	0dB
1	0	1	400mV	2dB	0dB
1	1	0	400mV	2dB	0dB
1	1	1	420mV	0dB	0dB



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

FOR ASM1442

EQ_1	EQ_0	Equalization
0	0	12dB
0	1	9dB
1	0	6dB
1	1	3dB

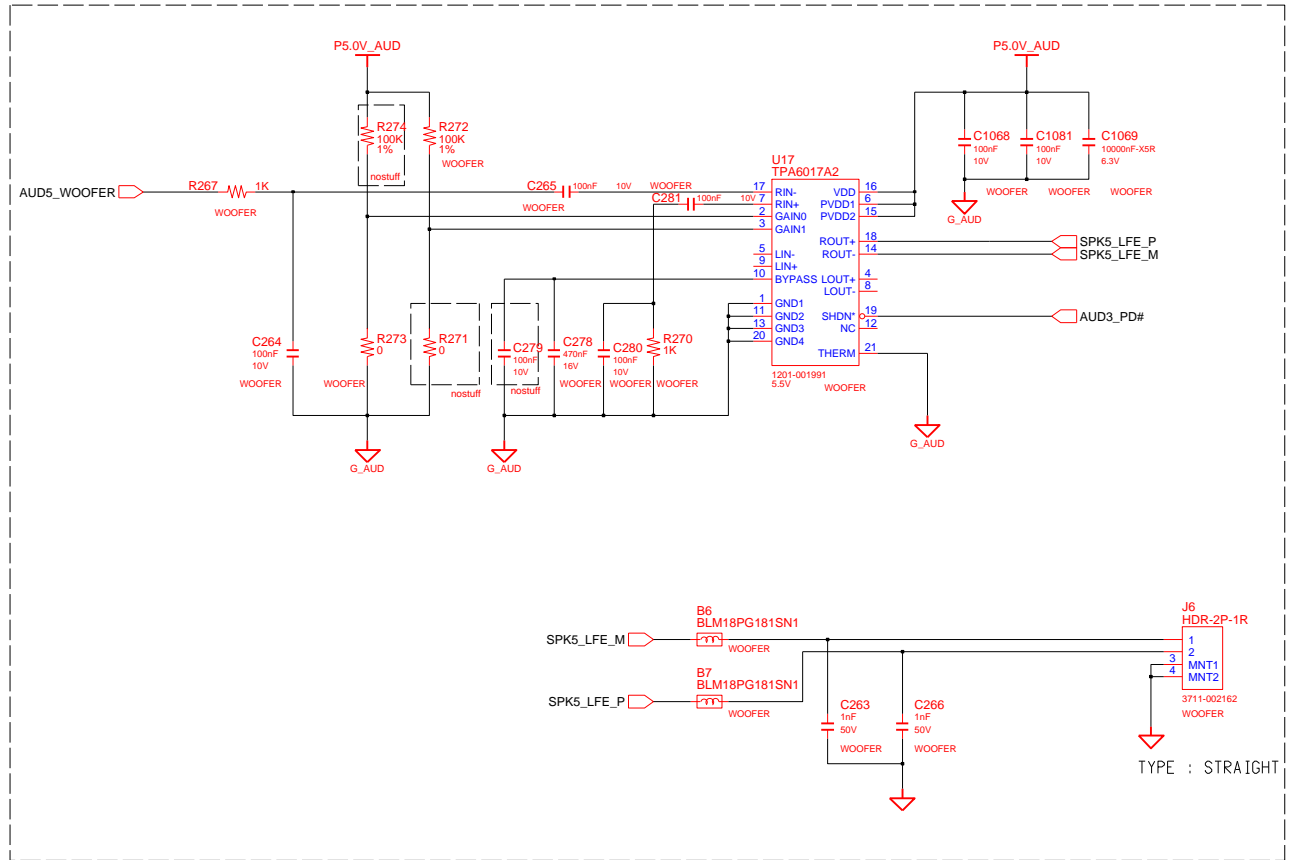
Internal Default Value

HDMI Level Shifter	REXT(Pin6)	PC1_CG0(Pin3)	PC1_CG1(Pin4)	RT_EN#_CG2(Pin10)	NC_EQ_0(Pin34)	NC_EQ_1(Pin35)	Note	4-6 CODE
PS8101	499 phm	stuff	nostuff	nostuff	NC	NC		1006-001427
ASM1442	3.4K(3.24~3.3K)	nostuff	nostuff	nostuff	nostuff	nostuff	Internal PUI/PD exist CGs nostuff is 450mV swing	1006-001471

DESIGN	WK YEO	DATE	9/23/2008	TITLE	HOUSTON GRAPHICS_IF HDMI	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1	REV	REV 1.0	PART NO. BA41-####A
APPROVAL	SH LEE	LAST EDIT				
MODULE CODE						

April 28, 2010 12:02:14 PM PAGE 35 OF 59

WOOFER (2.1CH)



Vinafix.com

DRAW	WK YEO	DATE	9/23/2008	TITLE	HOUSTON MAIN WOOFER	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1	REV	REV 1.0	PART NO. BA41-####A
APPROVAL	SH LEE	REV	REV 1.0	LAST EDIT	April 28, 2010 12:02:14 PM	PAGE 38 OF 59
MODULE CODE	undefined	LAST EDIT				

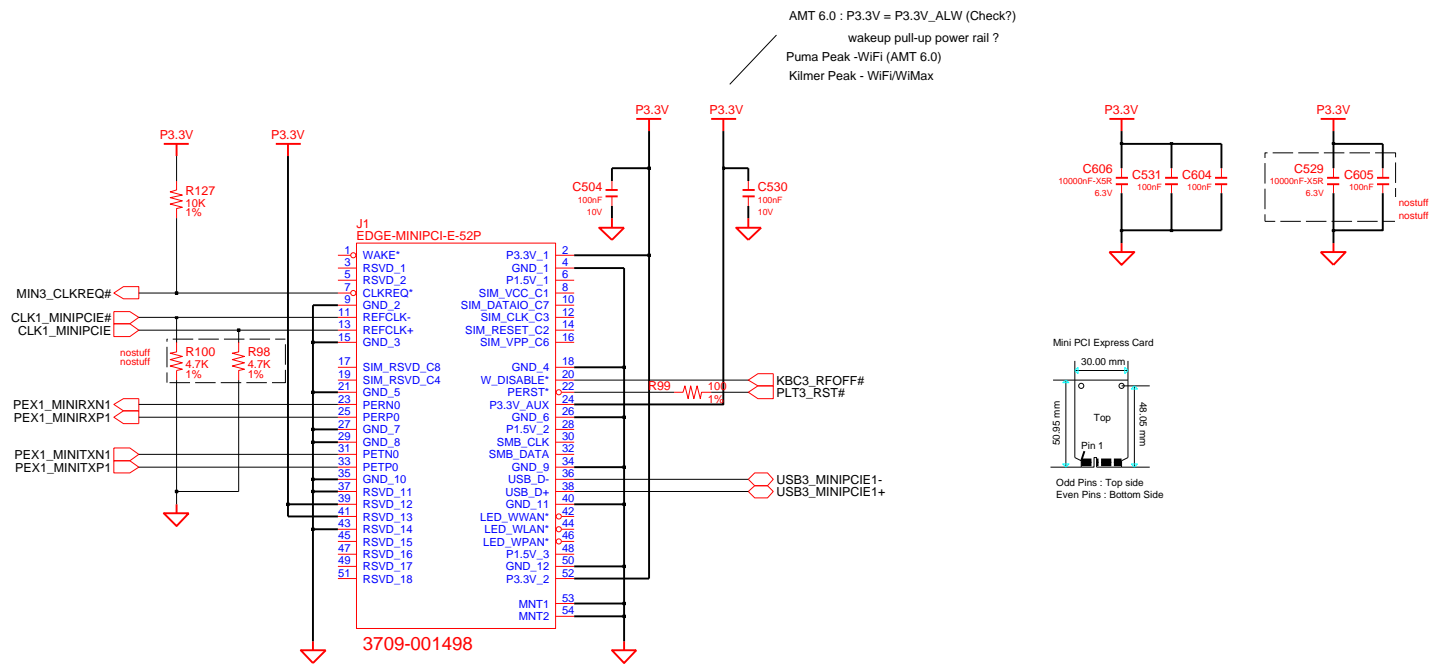


SAMSUNG PROPRIETARY

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.

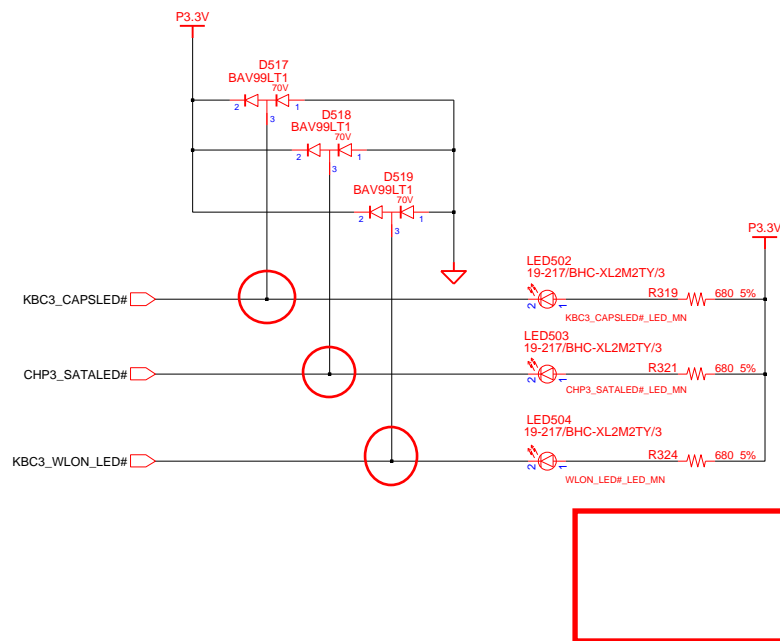
Vinafix.com

WLAN, 4mm

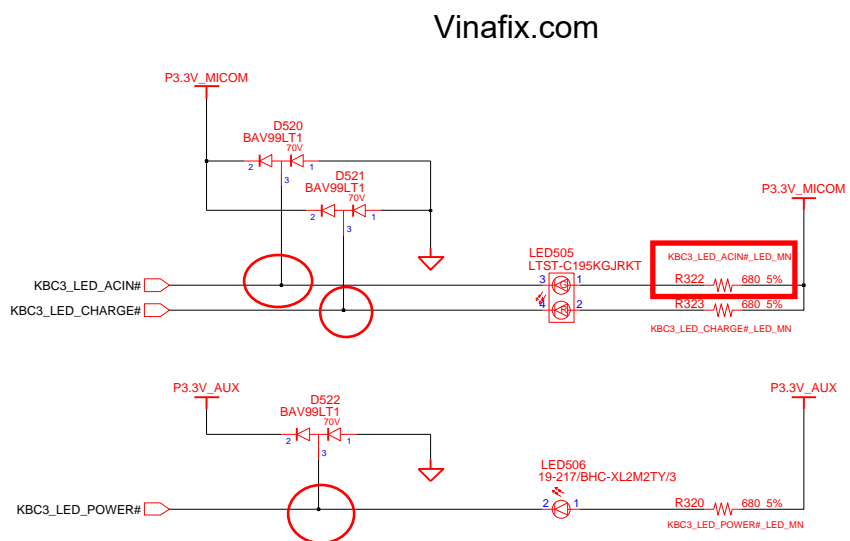


DESIGN	WK YEO	DATE	9/23/2008	TITLE	HOUSTON MINI_PCIE_CONN WLAN	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1			PART NO. BA41-####A
APPROVAL	SH LEE	REV	REV 1.0			
MODULE CODE		LAST EDIT	April 28, 2010 12:02:14 PM	PAGE	41	OF 59

FUNCTION KEY LED



ADAPTERIN/CHARGING LED



Houston R vakue is changed from 475 to 680 ohm for DFM Issue(2010.04.17)

DRAW	WK YEO	DATE	9/23/2008	TITLE	HOUSTON LED_SWITCH	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1			PART NO.
APPROVAL	SH LEE	REV	REV 1.0		LED_SWITCH	BA41-####A
MODULE CODE		LAST EDIT	April 28, 2010 12:02:14 PM	PAGE	45	OF 59

DCM1
HDR-4P-1

1	
2	
3	
4	
MNT1	5
MNT2	6

3711-007003

VCHG=12.597V @2600Cell
VCHG=13.05V @2950Cell
IPRECHG=0.27A
ICHG=2.56A FOR 5200mAh & 4000mAh

	Adapter configuration			
	60W / 3.03A / 96%		90W / 4.32A / 91.2%	
	Value	SEC Code	Value	SEC Code
Rtop	200K	2007-007334	10K	2007-007142
Rbot	27.4K	2007-007274	30K	2007-008275

SHORT502 (ACTIVE LOW)

DRAW	WK YEO	DATE	9/23/2008
CHECK	BW YOO	DEV. STEP	PR1
APPROVAL	SH LEE	REV	REV 1.0
MODULE CODE	undefined	LAST EDIT	

HOUSTON
CHARGER
Intersil ISL6256A

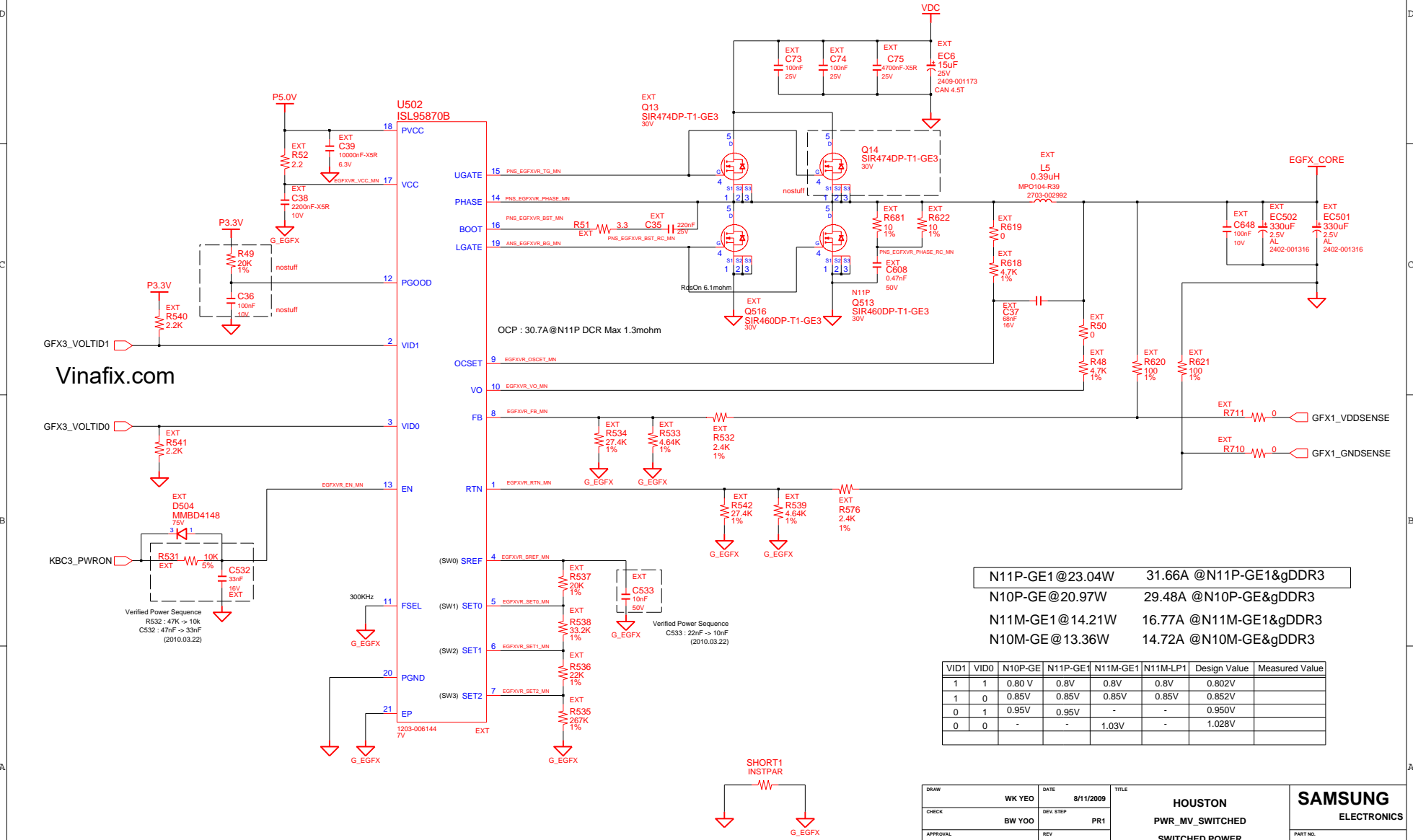
SAMSUNG
ELECTRONICS

PART NO. BA41-*****

April 28, 2010 12:02:14 PM PAGE 48 OF 59

External Graphic Core Power

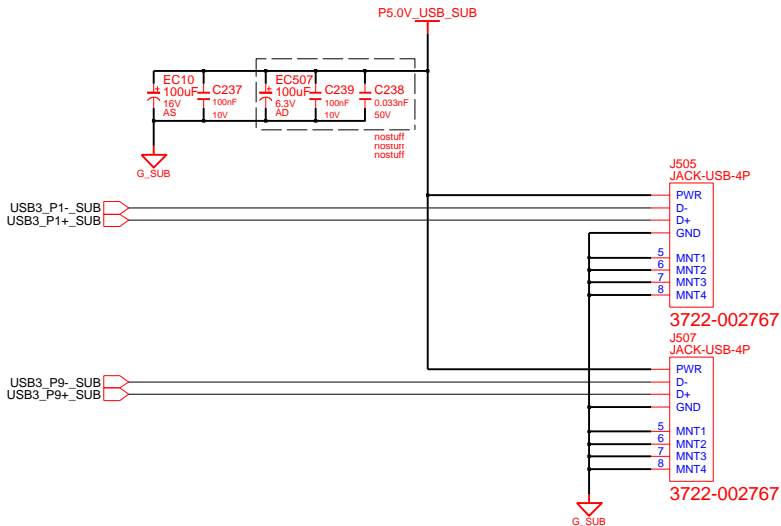
Referred from PocaFeb14



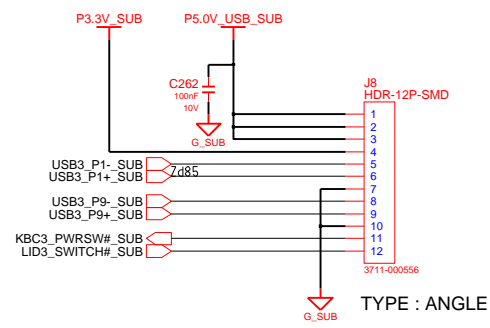
N11P-GE1@23.04W	31.66A @N11P-GE1&gDDR3
N10P-GE@20.97W	29.48A @N10P-GE&gDDR3
N11M-GE1@14.21W	16.77A @N11M-GE1&gDDR3
N10M-GE@13.36W	14.72A @N10M-GE&gDDR3

VID1	VID0	N10P-GE	N11P-GE1	N11M-GE1	N11M-LP1	Design Value	Measured Value
1	1	0.80 V	0.8V	0.8V	0.8V	0.802V	
1	0	0.85V	0.85V	0.85V	0.85V	0.852V	
0	1	0.95V	0.95V	-	-	0.950V	
0	0	-	-	1.03V	-	1.028V	

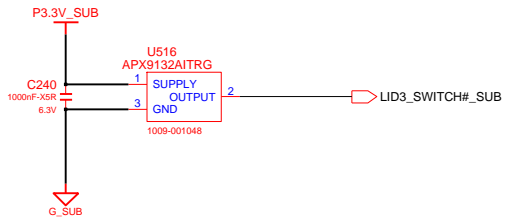
2 USB PORT & POWER S/W SUB B'D



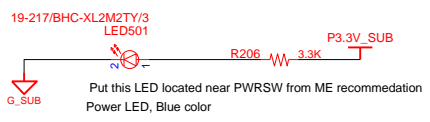
SUB TO MAIN USB CONN



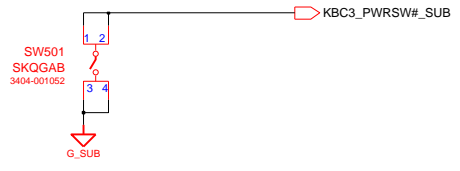
LID_SWITCH



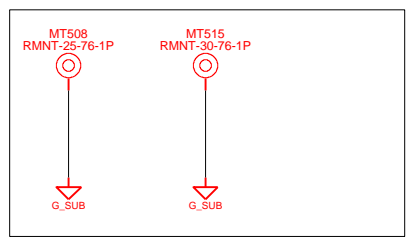
Power ON LED



Power Switch Button



Vinafix.com



USB sub board mount hole

DESIGN	WK YEO	DATE	9/23/2008	TITLE	HOUSTON SUB BOARD1	SAMSUNG ELECTRONICS
CHECK	BW YOO	DEV. STEP	PR1			
APPROVAL	SH LEE	REV	REV 1.0		2 USB & POWER SW	PART NO. BA41-####A
MODULE CODE		LAST EDIT				

FOR EMC(2010.02.19)

TP501	
1	VDC
2	KBC3
3	GFX
4	DDR
5	CHIP
6	P1.5V
7	P1.8V
8	P3.3V
9	P5.0V
10	GND